For 2 years prior to my going to the bureau, I administered the medical services for the planned parenthood mobile unit in New York. So my experience with patients in providing personal medical care in the field of contraception to patients, I think, is fairly considerable.

In rendering contraceptive care to a woman, there is no consideration more important than the choice of method. For unless the method is one which is right for her, it is little better than no method at all.

If you were to ask me my golden rule for rendering contraceptive care, I would give you this:

There is no best method of contraception. Suit the method to the woman. In order to do this, I must evaluate her from the standpoint of her medical history, her physical findings, her sexual history and coital practices, her present social situation into which the use of contraception will now need to fit, to some degree her financial situation, her intellectual capacities, her degree of motivation, the strength and the reality of her desire not to become pregnant, the attitudes she holds about her own sexuality and about various methods of contraception as well as the attitudes of her sexual partner with respect to the same things.

My function and responsibility as a physician are manifold. It is to assess all these variables and to help my patient come to grips with them. It is to see that she is knowledgeable about the methods, each sharing equal time with the others, the mechanical with the hormonal. It is also to inform her of what she might expect from each of the methods from the standpoint of effectiveness and of the most common and the more important side effects, to the best of my knowledge. But it is also my responsibility to help her see these possible effects in perspective, to allay irrational fears, certainly not to intensify them or create new ones.

In this way, my patient and I together may arrive at an intelligent choice. She has come asking me for advice. She leaves me confident that I have rendered that for which she has asked to the best of my medical knowledge, experience and judgment, and that I have neither made the decision with regard to method for her nor left the decision entirely up to her.

A method that is theoretically most effective (that is, the hormonal agents) will not prove to be the best method for my patient if she is psychologically not disposed to use it through fear, lack of motivation, or what-have-you. She will not use it or will use it poorly, risking pregnancy either way. Just as important, a mechanical method such as the diaphragm for which my patient is unable or unwilling to assume the responsibility is going to be equally ineffective. In most cases, if contraception is needed at all, it needs to be a method that can be relied upon, given a woman with a particular temperament and given a particular set of circumstances. A nebulous potential risk of low, almost negligible magnitude measures poorly against the immediacy of remaining not pregnant and what to do with a not wanted pregnancy.

This is not to say that all should have the pill, any more than I would feel that all couples wanting to space their children should use the diaphragm. This is to say only that as a physician, I must

equate all the known risks involved in an individual situation and let my medical judgment prevail.

The same judgment must be brought to bear with respect to the intrauterine device. Not only is it sometimes not possible to insert it, but it does not afford the complete reliability that is necessary in many cases, and by no means have all the risks of the method been ironed out.

For the older but not yet menopausal woman, I have prescribed the pill with great advantage from the standpoint of emotional well-being and the continued (or sometimes new-found) tranquility of her sexual life.

The pill is a powerful force. I have seen women undergo a metamorphosis of appearance, mood, attitude about themselves, and a widening of their horizons on the pill that was never possible for them with the less-efficient forms of birth control. I have seen women go to pieces emotionally when deprived of the use of the pill upon which they have become dependent for their sexual happiness. And I have seen unfortunate and unwanted pregnancies in the interval during which they have stopped to give their system "a rest," or to test whether or not they can still ovulate.

I recognize that there are no perfect forms of contraception—that they all have medical, physiological, psychological, technical drawbacks of one sort or another. But I handle the pill as I handle all the other methods, prescribing it judiciously, following my patients carefully, and discontinuing it when it is no longer serving a useful purpose or when it is creating discomfort for my patient out of all proportion to its benefits. In fact, is this not the way that any medication is handled by any knowledgeable physician?

Thank you.

Senator NELSON. Thank you very much, Doctor. Obviously, you discuss the method of contraception in great detail with your patients. What, if anything do you tell them about side effects or symptoms which should cause them to consult you?

Dr. LANE. I do this personally with my patients, and in addition to this, the nursing staff at the bureau now, and in the mobile unit when I was there, also assumed a great deal of this responsibility. We tell them, by and large, the side effects which they are most likely to encounter. We tell them also, now, "this is the one thing that we know definitely about the risk from the use of the pill, it has to do with the question of thromboembolic phenomena." And we give them statistics in this respect.

However, the nurses usually stop pretty much at that point and say to the patient, "now, it is up to you and the physician who sees you from this point on. The physician is going to very carefully review your medical history, go over all of this with you. There are certainly certain contradications to your using the pill, but the physician will take of this." This, then, is where we take up the responsibility.

I go through all of this with the patient before, usually, she has made her final decision. There are certainly certain contraindications which I pay very strict attention to. If these exist, of course, the patient must use some other method.

But in taking all of these other factors into consideration would have a bearing on the method that the patient chooses, I act to emphasize only those things which I feel are of personal, immediate importance to her. Therefore, I can say that rarely would I go down a list of potential hazards if I am not prepared to state that they are terribly important to her at the moment.

Senator NELSON. What do you think the user ought to be advised about the symptoms that may demonstrate problems, then or later?

Dr. LANE. Certainly I think she should know what the most common symptoms are of thrombophlebitis. This we not only tell her, but we list as part of our information that we give her in writing. I think also that she should be told about migraine headache, either the occurrence for the first time or an increase in the severity of it or frequency of it.

As I previously said, aside from the usual things that a patient just going on the pill will be concerned about, such as nausea, perhaps, mild headaches, perhaps, fatigue, mild depression—this sort of thing—then I do not go any deeper unless there is a particular reason for doing so.

Senator NELSON. You do advise them about mild depression and fatigue?

Dr. LANE. Yes.

Senator NELSON. And that under those circumstances, they ought to consult you?

Dr. LANE. Well, of course, we tell our patients in general that if anything at all occurs which they have not been familiar with before, to assume that it might have something to do with their contraceptive method and let us know about it so that we can be sure, and our patients do this.

Senator NELSON. How often do you require all patients on the pill to have a regular physical examination?

Dr. LANE. Absolutely we do. She gets an examination when she chooses her contraceptive method, no matter what it is. She is seen again, no matter what the method is, within a month to 6 weeks. Then, on the pill, she is seen every 4 to 6 months thereafter; usually every 6, but occasionally every 4.

Senator NELSON. Do you agree with the statement I read sometime back from the "Dear Doctor" letter of Dr. Edwards to all the physicians in the country, sent in January? It says:

> In most cases, a full disclosure of the potential adverse effects of these products would seem advisable, thus permitting the participation of the patient in the assessment of the risks associated with this method.

Dr. LANE. I agree with it in principle, and I think in principle, I do this. But I do not feel that it is practical to go down a list of vague complaints with a patient. I myself have noticed in practicing medicine that the more you suggest to a patient, the more she will turn up to complain about. People are suggestible beings.

I would like at this point—I think this is a good time to mention it—to say something about the statistics that Newsweek came up with with respect to the number of patients who say that they were no told anything with respect to side effects or possible hazards of the pill. You know, Senator Nelson, I just cannot accept that statis-

tic as gospel, because I have learned that patients frequently hear what they are prepared to hear, and they reject what thy are not prepared to accept. I can give you a very good example of this.

If there is anything that they are very, very careful about when we are informing patients about the IUD, it is that there is anywhere from a 2 to 3 percent risk of accidental pregnancies associated with the use of the IUD. We think that this is extremely important in order for them to decide whether or not they want to use it. We never omit this in our general lecture to the group of new patients or when the physician sees the patient personally or during the sign-out, the individual sign-out by the nurse. Yet so many times, when the patient does become pregnant, she has never heard that before—"no, you never told me that, or I never would have accepted this method in the first place."

Therefore, I cannot accept necessarily that two-thirds of those women really were not told anything about the possible side effects.

Senator NELSON. Then if that is the case, does that not make the reason all the more compelling that something should be given that is understandable to the patient?

Dr. LANE. On the——

Senator NELSON. If they cannot remember that they were told that, how can they remember, if they get a migraine headache which they might think is normal, how can they remember 2 or 3 years later to consult the doctor?

Dr. LANE. On the surface, this would seem very sensible. Yet I wonder how many of the patients would have this information at hand when they needed it? Our patients lose their appointment cards, they lose the telephone number of the clinic and the statement of clinic hours; they lose the thing that we write for them very diligently with respect to how to go about it when they call for supplies or to ask questions and so forth. We give them long, printed instructions. They are not tedious, but they are long, with respect to the use of every method that we give. They take home with them a copy of the instructions to keep, we do not care where—in their dresser drawer, on the bulletin board, anywhere. Yet how many times do patients call us or come back to the clinic and say, well, I had breakthrough bleeding on the pill, what do I do?

Or they come back and have omitted the pills because they had breakthrough bleeding and were anxious about it and did not take any more until they came. We say, well, where were your instructions? They were very clearly printed. The answer is, I don't know were they are.

Senator NELSON. Does not Dr. Ley's suggestion avoid all of that, which was to put those instructions in the pill package so that every 30 days, they have it when they open the package?

Dr. LANE. I do not think they will read the pill package. When they come back to us, we encourage them to make telephone calls if they have any problem at all. We encourage this. We tell them, we are going to follow you to the best of our ability and insofar as you will allow us to do so. So we pick up things when they come. When they come back to us—I really do not see any useful purpose, either—I might be anticipating your question, but I do not see any real

advantage in even at that time going down a series of possible symptoms, 25 or 50 or so, and saying, have you had in the past 6 months this, this, this, or this?

Now, we do this, mind you, in the running of our research studies for particular methods, because a pharmaceutical company has to have this information, the FDA has to have this information. But if it is not such a method, what is the purpose of doing all of this?

I think I get much more valuable and reliable information from the patient by saying to her in a warm, friendly manner, how are you feeling? How have you been getting along? Is the method still serving your purposes? Do you feel as though you have had any ill effects? And giving her time to answer these questions, rather than suggesting symptoms to her.

Senator NELSON. As I understand it, you are suggesting that many people will not remember what you tell them. Therefore, why tell them? Many people would not read the literature, so why put it in the package?

All I am saying is, I think there are a large number of very intelligent, conscientious women. Why should not those people have available in their hands the information that they themselves can make use of? Some percentage of people, not knowing what the medicine is, will look at it, some of them will not.

What I am puzzled about is why the resistance to putting the information where those people who want to use it can use it?

Dr. LANE. I am not resisting this at all, Senator Nelson. And I am not denying that most patients, when it comes to their own contraceptive care, are intelligent and conscientious. I think most of them are, and this cuts across all barriers of financial status, race, ethnic background, educational status, everything. I am not promoting the denial of important information to them, and I think we give them important information. But I see no reason to burden them when they are trying to make a choice between methods or when they have already chosen a method, which, from every standpoint, is going to be best for them, to burden them with symptoms which might suggest something nebulous going on which they are going to ask us about anyhow if they have any kind of rapport with us as a clinic or as a medical service. They do ask us.

Senator NELSON. But you are talking about a case situation where, if everything is perfect, as it may be in your clinic. What about the women who are told nothing? You say you do not believe they are not informed. Everybody seems to want to believe that part of Newsweek survey that they would like to believe. But let us assume that you are correct, that some people would not remember. Let us assume that two-thirds is a high figure. Let us say it is only one-third. Certainly the poll isn't totally incorrect. Certainly they do not all have very bad memories. One-third is a massive number. Should not there be something in the package that they get, since they are not getting it from their doctor and they are not going to a well-controlled clinic, such as you have. Many, many of them, in fact, are not going back for regular physical exams. Should not the literature say you should have an exam every 6 months at least?

Dr. LANE. Of course, I would expect the doctor to tell her this. But if the doctor does not, certainly she should have some way of knowing it. She should have regular checkups.

Senator NELSON. Unless the statistics in the Gallup poll are totally invalid and not a single one, or not even 10 percent of that two-thirds remember correctly, which I doubt very much, then there is a compelling necessity, it seems to me, to put something in the hands of the user unless it is the position of the medical profession that we know what is best in all these matters and we should not tell the patient anything.

Dr. LANE. I think certainly the patient should be told, and I think all our literature attests to that fact, that we do tell them.

Senator NELSON. You hand them literature?

Dr. LANE. As I say, we hand them printed instructions with respect to their method in which we tell them again of the most common side effects which they should look for, which would certainly be worth reporting to us. But we also invite them, in the instance of any question at all, that they should call us and that they should be very careful to keep their appointments. If for some unavoidable reason, they cannot keep their appointments, we tell them they should call for another one—this is all in the written literature.

Senator NELSON. You issue pills for what period of time? A supply for what period?

Dr. LANE. No more than 6 months' supply. We might give them seven packages at a time, but that is because a package actually covers a cycle, not a month, and we do not want them to run out.

Senator NELSON. This is a control factor in the sense that unless they go some place else, they have to come back to the clinic and that gives you the opportunity for physical examination and consultation?

Dr. LANE. Exactly. We also insist that they get their supplies from us so we can be absolutely sure that they are taking what we told them to take and not what somebody else has suggested that they take.

Senator NELSON. Thank you very much, Doctor.

Senator Dole, do you have an questions?

Senator DOLE. First I want to thank Dr. Lane for an excellent statement. It is based on practical experience dealing with great numbers of people.

You feel that the benefits far outweigh the risks of taking the pill?

Dr. LANE. Yes.

Senator DOLE. It might also be helpful if we could have a copy of the literature that you distribute. It may be different from that that we have found.

Dr. LANE. Yes, I can make that available, too.

Senator DOLE. The patient is more apt to read it if it is given to her by the doctor and by the clinic than if it comes in a box, though I do not see any quarrel with inserting a circular along with the pills. We must use every means available to communicate with the patient.

It would be very dramatic and would indicate to the women of America how you view the pill yourself, if you could tell us whether or not you take the pill. I do not want to be impertinent or ask embarrassing questions. It would be most helpful if you have enough confidence in the pill to tell us, have you ever used it yourself?

Dr. LANE. Yes, I have used the pill.

Senator DOLE. And you are aware of all the side effects?

Dr. LANE. Oh, indeed.

Senator DOLE. You have made a value judgment and determined that it is safe?

Dr. LANE. I have precisely. I have three children, all of whom I love very dearly. But I could not tolerate another pregnancy. I hope that I have many fertile years ahead of me. So I feel that with my medical responsibilities, with my career responsibilities, it has been my own choice, the kind of life that I have carved out for myself, that it is absolutely important that I use something which I could have complete faith in. Now, this is not to say that I could not perhaps have complete faith in one of the other methods—not the IUD, because there are accidental pregnancies. I think I could have faith in the diaphragm, but for various reasons, I have decided not to use that method of contraception.

I think my reasons are valid. I help my patient to arrive at this sort of judgment, what is going to be best for her. This is a very, very personal thing and has absolutely nothing to do with population pressures or anything else as far as I am concerned.

Senator DOLE. It is probably very helpful if the patient knows that you have enough confidence in these pills, whatever brand it may be, not only to prescribe it for others but to use it yourself.

Dr. LANE. I do not give my patients this information because I do not want to bias them in that respect. I suppose they will all have it now.

Senator DOLE. But you are personally aware of some of the side effects and have experienced some?

Dr. LANE. Yes, this is a risk that I choose to take.

Senator DOLE. Have you experienced any that caused you any great difficulty, any side effects?

Dr. LANE. Occasional headache, that is all. I am not even sure that that was due to the pill. I am under much pressure much of the time.

Senator DOLE. Your last paragraph indicates that the pill is not significantly different from other medications. It is a delicate question involving judgment. I imagine most physicians have great respect for their patients and do what they must to protect the patient.

I assume on page 1, you neither try to make judgment for your patient nor let them make it without information and assume it is a doctor-patient relationship——

Dr. LANE. It is precisely this, a relationship, with a rather delicate balance many times.

Senator DOLE. You are not trying to push people into using the pill?

Dr. LANE. No, absolutely not.

Senator DOLE. Thank you very much.

Senator NELSON. Thank you, Dr. Lane, for your very thoughtful contribution. We appreciate your taking the time to come before us.

Our next witness is Dr. Edward F. Lewison, surgeon, and chief of the breast clinic, Johns Hopkins Hospital, Baltimore Md.

Dr. Lewison, we are very happy to have you here today, we appreciate your taking the time to come. Your statement will be inserted in the record. You may read it or summarize from it in any way you wish. Thank you for being so patient.

STATEMENT OF DR. EDWARD F. LEWISON, SURGEON; AND CHIEF, BREAST CLINIC, JOHNS HOPKINS HOSPITAL, BALTIMORE, MD.

Dr. LEWISON. Senator Nelson, Senator Dole, members of this Select Committee, as a surgeon and breast specialist, I would like to make it clear that I will take the liberty to broaden the topic and conform with the suggestions that you have given me in your letter. I will discuss the pill and estrogens and breast cancer. I am including estrogens because the two previous speakers spoke of the pill and indicated the hormonal relationships, in my particular type of practice, I find estrogens, given during the menopausal period, as being perhaps one of the most important drugs that I have to contend with.

Now, cancer of the breast is indeed, the most common single organ site of malignancy in women. It is unfortunately a monstrously destructive disease which has claimed its many victims in all walks of life, at almost every age from adolescence onward and from time immemorial. It is in fact an arrant world affliction whose cellular turmoil shows little predilection for race, country, or geographical area.

In the United States alone about one woman in 17—6 percent of the female population—is destined to develop this malign disease and the risk of this possibility increases with each decade of life. A woman of 80 has a better chance of developing breast cancer than a woman of 70 and a woman of 70 a better chance than a woman of 60. There is no point when this disease turns downward in its malevolent course.

More than 300,000 American women will develop breast cancer within the next 5 years and the magnitude of this problem appears to be increasing. Benign breast disease such as chronic cystic mastitis (cysts) and benign tumors (fibroadenomas) are even more common, occurring in about 25 to 35 percent of all adult women. Thus, it is readily apparent that the breast is indeed a most frequent site of both benign and malignant disease.

It is also topical knowledge that the breast is a highly glamorized, hormone sensitive, satellite sex organ. Many years ago it was demonstrated that extracts from the ovary (estrogenic hormones) were remarkably potent growth stimulants for the epithelial cells of the female genital tract including the breast. Cancer is the uncontrolled growth of these same epithelial cells.

There is ample evidence to indicate a close relationship between estrogenic hormones and the breast. For instance, development of the breast begins at puberty with the onset of hormonal activity. Breast cancer has almost never been known to occur prior to the dawn of this hormonal secretion. Many women experience cyclic swelling and painful engorgement of the breasts related to the periodic hormonal changes which occurs during the month. Some patients with chronic cystic mastitis have noted an increase in the size of their cysts and an aggravation of their pain when taking estrogenic hormones or the pill.

Pregnancy causes a marked enlargment of the breasts and this is considered to be predominantly an estrogenic hormonal effect. Breast cancer occurring during pregnancy with its high estrogenic stimulation has a most ominous prognosis. Clinical experience bears said witness to the fact that the coexistence of pregnancy, again with its elevated level of estrogens, and breast cancer carries a most pessimistic outlook. Few, if any, of the young mothers have ever survived. Enlargement of the male breast (gynecomastia) by the female sex hormone (estrogen) can be caused by hormonal stimulation in men receiving estrogens for the treatment of certain male diseases. Gynecomastia has been observed in factory workers making estrogenic hormones (the female sex hormones) and in men with estrogen-producing tumors. Therefore, it seems quite clear that estrogenic hormones and the pill which may contain an estrogen can cause epithelial cell changes within both normal and abnormal breast tissue.

As noted by Hertz and many others throughout the world, breast cancer can be induced experimentally, and I stress experimentally—in a wide variety of animals by the administration of estrogens. Breast cancer in rats produced by prolonged stimulation with an estrogen will even disappear when the source of this estrogen is removed. Breast cancers in dogs have occurred following prolonged ingestion of an estrogen-progestogen pill. The clinical trial of a mini pill in France, Mexico, and England has been recently suspended because of suspicious "tissues masses" which developed in the mammary area of dogs.

Senator NELSON. May I interrupt?

Dr. LEWISON. Yes.

Senator NELSON. In your reference to the clinical trial on the mini pill, were not there trials in this country, too?

Dr. LEWISON. I really do not know, Senator, I read of these experiments with the mini pill abroad and this is not particularly my area of special interest. I do not know whether there were trials in this country as well.

Senator NELSON. Thank you.

Dr. LEWISON. It seems to me that although there is a wide generic gap between man and mouse, yet most cancer investigators agree that there is a close correlation between those drugs which cause cancer both in animal and in man, also, it is my opinion that perhaps time and dose relationships may be the unknown dimension. I know that some of the witnesses have testified that perhaps in prolonged use the dose factor may be very important in the pill, and I assume it to be the same with estrogens as well.

Now, important statistical studies in humans by Dr. Feinleib at Harvard have shown that women who undergo an artificial menopause early in life by the removal of their ovaries (for diseases totally unrelated to breast cancer) have a reduced risk (by about 75 percent) of developing breast cancer in later life. In other words, removing the ovarian influence, the estrogenic influence, reduces the risk of breast cancer.

Another striking example of the close relationship between breast cancer in humans and estrogenic hormones can be demonstrated by the following clinical results. Women with advanced breast cancer, these are women who actually have cancer who have metastasis or advanced disease, if they have their ovaries removed therapeutically, removal of the primary source of estrogenic hormones; namely, the ovary—then these women show a remarkable improvement of their metastatic or advanced breast cancer in about one-third of the cases. Also, I have observed that estrogens taken in small doses unwittingly may aggravate a preexisting breast cancer. You must remember, this does not mean that estrogens will initiate a cancer, but they may aggravate or make worse a preexisting cancer, one that has not yet become discernible, either to the patient or the doctor.

Stopping the pill or discontinuing the drug will slow the tempo of this type of tumor growth.

A recent report in the British Medical Journal describes the tragedy of two male transvestites both of whom developed breast cancer after long-term estrogen therapy. Therefore, being profoundly aware of these clinical relationships and being a clinical surgeon myself, I am naturally concerned in my day to day practice about the potentially harmful effect of long-term low-dose estrogen administration as occurs in young women taking the birth control pill or middle aged women taking estrogens during the menopause. Whereas, some women take estrogens with the illusion of being "a thing of beauty and joy forever," other women take estrogens during the menopause for medically sound and legitimate reasons.

Although breast cancer is "easy to see" it is "hard to foresee." Prudence, however, requires that certain women with suggestive premalignant breast lesions and women with a "high-risk" predisposition for breast cancer should in my opinion avoid the long-term stimulation of estrogens or the pill.

Mr. GORDON. Doctor, is it easy to ascertain who are the high-risk women?

Dr. LEWISON. Mr. Gordon, in the next page in this same report, I have outlined the high-risk group and I will read them to you.

Whereas individual sensitivity to hormonal stimulation may vary greatly from person to person and from age to age, yet in my opinion it is wiser to be safe than sorry for malignancy makes no moratorium. Thus, for practical purposes and in my own practice I would recommend particular caution in the following categories of women who are known to have a higher than normal risk of developing breast cancer:

(1) Women with a strong family history of cancer especially breast cancer, more especially breast cancer.

(2) Women having had cancer of one breast. It is perfectly obvious to all doctors that women who have had cancer of one breast

have a much greater predisposition for developing a second cancer on the other side.

(3) Women with recurrent benign breast disease. There are the metastasis and fibroadenomas that I mentioned earlier.

(4) Women with lobular carcinoma in situ or other proliferative epithelial breast lesions. These are a specific category of breast lesions where the cells seem to have growth or hyperplastic potential.

Senator NELSON. As to item 3, you are saying, I take it, women with recurrent benign breast disease, which I recollect you say on page 2 of your statement, 25 to 35 percent of the women, you conclude are more susceptible to the inducement of cancer if they are using estrogens over a long period of time?

Dr. LEWISON. Senator, on page 1, I mention the fact that between 25 and 35 percent of the women have been known by anatomical dissection to have chronic cystic metastasis or benign breast tumors. These are not women who have recurrent benign disease, but only have this condition at one time.

Now, in this category of the high risk group, I have narrowed this group by saying women who have recurrent cysts and fibroadenomas, not just for the first time.

Senator NELSON. I see. Have there been any studies of any size to indicate the predisposition of those who have recurring benign tumors of one kind or another developing carcinomas subsequently?

Dr. LEWISON. Yes, there are a number of studies in text books that have been published on this subject, including my own. There have been studies abroad, monograph reports, and the references of these are available. Most of them agree that the risk of developing breast cancer is three to five times as great in women who have recurrent or proliferative types of benign breast disease.

Senator NELSON. Three to five times? The development of cancer is indicated three to five times more frequently in those with benign breast disease?

Dr. LEWISON. For the same age range.

Senator NELSON. Are there any studies which indicate that for those who do have this high incidence of benign breast disease, that extended use of an estrogen for some purpose or other does produce cancer in a higher percentage?

Dr. LEWISON. These studies, Senator Nelson, are at present ongoing. Our own study is one of these studies that are at present in the process of accumulating this very necessary information. It is not yet available.

Senator NELSON. So that I understand it in the perspective you intend, is it correct that you are saying that since women who have recurring benign breast disease do in fact develop carcinoma three to five times more frequently than those without it, that you consider it risky to add to that the prolonged treatment for either contraceptive reasons or other reasons, the introduction of estrogen into the system, is that what you are saying?

Dr. LEWISON. By all means, yes, sir.

Senator NELSON. We do not have the facts at this time that that would show an increased incidence?

Dr. LEWISON. That is correct.

The fifth group would be a relatively recent high-risk group, women who are seen by their doctors and referred for a mammogram. That is a special type of x-ray study of the breast alone. These women occasionally show up with rather peculiar changes or abnormalities or suspicious findings within the x-ray, and it would be these women also that I personally would consider suspect and would not be willing to give either estrogens or the pill to.

In these women, then, the whispers of nature call for caution and not complacency.

In the United States during 1969, as indicated in these hearings, an estimated 8.5 million women took the pill as an oral contraceptive. The clinical efficacy of these pills as a contraceptive measure is indeed striking and very well established. They have been hailed by many, including my very good friend, Dr. Guttmacher, and others, as a drug of great value in controlling the population explosion. A survey of prescriptions in the United States suggests that almost as many women also may have taken estrogens for the control of menopausal problems during the same time. That such potent drugs should have certain biologic dangers seems almost inevitable in medicine. Nevertheless, more than 50 metabolic changes which modify important biochemical processes in all body tissues have been reported to be associated with estrogens and the pill. Most of these changes as noted in Lancet "are unnecessary for contraception and their ultimate effect on the health of the user is unknown." The development of newer and more satisfactory contraceptive agents without the possible harmful effects of long-term estrogen administration would certainly be highly desirable.

The ultimate clinical significance of prolonged use of the pill or estrogens in relation to breast cancer will require and I stress this—due to a long latent period—many years of agonizingly slow accumulation of epidemiologic data. Our own clinical study of patients at the Johns Hopkins Hospital which is being currently conducted by Dr. Sartwell, Dr. Arthes and myself was started only last year and even preliminary statistical results of this type of cancer and control group are not yet available.

However, as doctors, we must practice our art by balancing the known risks with the best known scientific data presently available. The experimental evidence relating breast cancer in animals to estrogens and the pill is suggestive. The clinical evidence indicating a close relationship between estrogenic hormones, the breast and breast cancer is strongly persuasive. Yet, there is no known clinical evidence at the present time indicating that estrogens or the pill will definitely cause breast cancer in human beings.

Perhaps as indicated by Dr. Guttmacher, the benefits of the pill may ultimately outweigh its possibility for harm. Certainly, the pill is at present a proficient and convenient contraceptive agent used by many women the world over. However, as Osler has said, "medicine is a science of uncertainty and an art of probability." In this negotiation with nature, I can find no relevant olive branch with which to equate the ban on babies with the bane of breast cancer.

While awaiting the tyrant of time to tell us these vital answers, I would favor caution in the clinical use of estrogens or the pill, par-

ticularly in women who are in a "high-risk" group. To safeguard their health in later years, we must try to see today with the eyes of tomorrow.

Thank you.

Senator NELSON. Thank you very much, Doctor.

Is there any—are you aware of any studies, or do you have them with you, about the potential difference from physiological effect, such as you have mentioned here between, say, the 100 micrograms and a 75 or 50 microgram estrogen or lower? In other words, is the amount of the dosage a factor?

Dr. LEWISON. Senator Nelson, the amount of the dosage is a factor. We have reasonably good clinical evidence to indicate this.

For instance, in my own practice, in my own clinic, we will see women with breast cancer. Now, these are women who actually have breast cancer. By giving them massive doses of estrogen, unphysiologic high doses of estrogen, we can actually suppress or cause a regression of their disease. By giving them small doses, physiologic doses of estrogen, we can cause an acceleration of this same disease. So that it is perfectly obvious that there is a dose-time relationship.

Senator NELSON. Are there any studies that indicate the kind of dilemma that occurs when high dosages are used? Dr. Wynn's studies and some U.S. studies indicate that the high dosage of estrogens increase the incidence of thromboembolism. Are you suggesting that for, say, a patient who as a predisposition in one of the categories you listed or a recurring benign breast disease, that the higher the dosage of estrogen, the less the chance they will develop carcinoma?

Dr. LEWISON. I think these time-dose relationships have to be very carefully worked out in future research. We do know that the very small dose will stimulate or aggravate a breast cancer that is already in existence. We do know that the larger dose of this same estrogen presumably, according to the testimony of Dr. Wynn and others, will aggravate thromboembolic disease. But I am talking about therapeutic doses of estrogen for breast cancer that are in the very, very high range. For instance, doses that may be 100 to 200 times the dosage that you are talking about. This is therapy for advanced breast cancer.

Senator NELSON. So we do not know whether or not, in that woman with some predisposition, that in fact 100 or 75 micrograms of estrogen are more serious in terms of inducing carcinoma than 50 or 25 micrograms of estrogen?

Dr. LEWISON. In that range, we do not know. That is correct.

Senator NELSON. Mr. Duffy, do you have questions?

Mr. DUFFY. Yes, thank you.

Doctor, just one question, if I may. You indicated earlier that the risk of breast cancer increases with age, is that right?

Dr. LEWISON. Yes, many cancers show a downturn after the menopause, but unfortunately, breast cancer is ever increasing with each decade of life.

Mr. DUFFY. You would feel, then, that as a woman ages, she should be more careful if she chooses to use the pill?

Dr. LEWISON. Yes, I certainly agree with this. And since breast cancer also occurs at the ages of 50, 60, and 70, I would be even

more careful about recommending the use of estrogens. These are for women who want to take hormones for the remainder of their days, as I said, to be a thing of beauty and a joy forever. But I would be very, very careful and cautious in the high-risk group in recommending hormones to them.

Senator NELSON. Thank you very much, Doctor.

Our next witness is Dr. Elsie Carrington, professor and chairman, Department of Obstetrics and Gynecology, Woman's Medical College of Pennsylvania.

Dr. Carrington, we appreciate very much your patience in waiting to testify. We appreciate your willingness to come here today and present your views to the committee.

Your statement will be printed in full in the record. You may present it as you desire. If you wish to extemporize from it from time to time, please do so.

STATEMENT OF DR. ELSIE R. CARRINGTON, PROFESSOR AND CHAIRMAN, DEPARTMENT OF OBSTETRICS AND GYNECOLOGY, WOMAN'S MEDICAL COLLEGE, PHILADELPHIA, PA.

Dr. CARRINGTON. Thank you, Senator Nelson.

Your committee has invited me to discuss certain metabolic effects of oral contraceptive drugs. A summary of my report as a member of the task forces on endocrine and metabolic effects of oral contraceptives for the Advisory Committee on Obstetrics and Gynecology for the Food and Drug Administration will provide the first part of my testimony.

I have also been asked to comment on the use of oral contraceptive drugs from the standpoint of my role as professor and chairman of the Department of Obstetrics and Gynecology at the Woman's Medical College of Pennsylvania. This is the second part of my testimony. The concerns for maternal health and optimal family life are the same in each but the pressing needs of our women and the responsibilities involved in meeting these needs are more immediately evident in the latter. I would like to say that I can appreciate your concerns and am most gratified with the fairness in the positions that I have seen expressed this morning from your group.

At the time of the first meeting of the advisory committee in November 1965 the number of oral contraceptive users was estimated at about 5 million women. The efficacy of the combined estrogen-progesterone preparations was known to be close to the absolute. Evaluation of their safety was recognized as a formidable task. This is so because little enough is known about normal endogenous steroid metabolism. Normal endocrine function depends not only upon the secretory activity of a given gland but also upon the feedback effect of one hormone as opposed to another, the mechanism for transport in the circulation, the response of the target organ and the enzyme activities influencing the cellular response. So we come to a very complicated type of evaluation.

The steroids used in oral contraceptives have certain similarities to their natural-occurring prototypes, the estrogens and progesterones. However, modifications in their chemical structure even of a

minor nature may result in profound changes in biologic activity. Some of the effects of the progestins mimic changes seen in pregnant women. This is not unexpected. During pregnancy the estrogenic hormones are increased 100- to 1,000-fold and progesterone is increased approximately tenfold. Many of the important physiologic and metabolic alterations seen in normal pregnancy are due directly or indirectly to these naturally occurring hormones, and comparisons have been made between these effects and those occurring in response to the synthetic progestins. Secretion of thyroid hormones, for example, is increased by approximately 25 to 40 percent above prepregnancy or pretreatment levels, yet the functional status of the thyroid remains unchanged in either case. The cause for this change is related to the known effect of estrogen in inducing increases in thyroxine-binding protein. Protein-bound thyroxine is rendered biologically less active. "Free" thyroxine remains within the normal range. Circulating levels return to normal values after pregnancy and after discontinuance of oral contraceptives respectively. Both natural and synthetic estrogens cause an increase in cortisol-binding protein. This is reflected in an increase in adrenal corticosteroid hormone secretion similarly in pregnant women and in women on oral contraceptives. Adverse effects on thyroid or adrenal function have not appeared in short-term or long-term use of oral contraceptives.

Gonadal steroid hormones are known to modify carbohydrate metabolism. Similarities in the diabetogenic effects of pregnancy and oral contraceptive drugs have been noted, particularly in women with a known genetic predisposition to diabetes. Our work with diabetic mothers and their offspring over the course of the past 15 years has led us to conclude that pregnancy does not alter carbohydrate metabolism significantly in normal women. In genetically predisposed mothers diabetes may be temporarily unmasked, or permanent diabetes may be precipitated. In women with pre-existing diabetes the disease is usually aggravated during the course of gestation. As a rule insulin requirements which are elevated during pregnancy return to the prepregnancy dosage or approximately that dosage thereafter. It is not yet clear which of the women showing a transient abnormality in carbohydrate metabolism during pregnancy will ultimately develop overt diabetes in later life. Our studies and others—O'Sullivan in Boston, as well as several prospective and retrospective studies—would indicate that approximately one-fourth of the group showing reduced glucose tolerance during gestation and improvement after delivery progress to permanent diabetes within 5½ years. Far less is accurately known regarding the potential diabetogenic effects of oral contraceptives despite a very large number of carefully conducted research studies in this specific area. Many of these have shown that glucose tolerance is impaired in genetically predisposed women taking oral contraceptives. Evidence is not as convincing that the progestins produce abnormalities in glucose tolerance in the absence of a diabetic diathesis. On the basis of our own studies of subclinical diabetic pregnancies I can attest to the difficulties in separating these subjects from normals. In the early prediabetic stage, the disease is virtually asymptomatic, histories are frequently poor and laboratory tests are lacking in specificity or sensitivity at this particular stage of the disease.

Significant information derived from the best controlled studies of the effects of oral contraceptives on carbohydrate metabolism is as follows: Glucose tolerance may be reduced during short-term or long-term use of the drugs. In the same subjects plasma insulin levels also rise above normal levels in response to a glucose load. In some cases glucose tolerance returns to normal with continued use of the pill. It is not clear whether or not this is due to the increased amount of circulating insulin. In other cases glucose tolerance remains impaired for several weeks or months after discontinuance of the pill. It then returns to normal if the patient is nondiabetic. Hyperinsulinism appears to persist for longer periods of time than hyperglycemia after the pill is stopped. I do not know the cause for this except as it may relate to the effects of high doses of circulating insulin in reversing the hyperglycemia effect.

Growth hormone is known to have a diabetogenic effect and is also known to be elevated in response to estrogen administration. Increases in this hormone have been noted during oral contraceptive treatment. Lipid metabolism is related to the metabolism of carbohydrates. Blood cholesterol and free fatty acids are not altered significantly by oral contraceptives but the triglycerides are increased and may remain so for several weeks after discontinuance of the pill.

Senator NELSON. May I interrupt a moment?

Dr. CARRINGTON. Yes.

Senator NELSON. Just to refresh my memory, you stated that blood cholesterol and free fatty acids are not altered by oral contraceptives, but cholesterol may be increased. Does that square with Dr. Wynn's study?

Dr. CARRINGTON. Yes, it does. Dr. Wynn's original study showed that blood cholesterol and free fatty acids were mildly increased. His subsequent attempt to reproduce the same effects failed, so that he does not have confirmation of these increases—certainly this is true in free fatty acids, in his free fatty acids study. His triglycerides showed consistent increases and this is his particular concern with respect to the effects upon the vascular system.

Senator NELSON. I had not remembered. I thought he had said blood cholesterol——

Dr. CARRINGTON. This is a very small factor and is pretty hard to document. A number of investigators have worked in this particular area. The increases in free fatty acids have not been reduplicated.

Mr. DUFFY. Excuse me, Dr. Carrington. Did you indicate just a moment ago that Dr. Wynn could not confirm his early findings?

Dr. CARRINGTON. On free fatty acid elevations. On triglycerides, he not only confirmed them, but had an almost 100 percent effect, a very high, a very significant effect in the increases in triglycerides under the therapy. His blood cholesterol was very controversial.

Mr. GORDON. Which are the ones that cause arteriosclerosis?

Dr. CARRINGTON. Blood cholesterol and triglycerides are the main ones here. This is not my particular area of expertise, but I do know that triglycerides are increased and this is of importance to us because lipid metabolism has an effect upon carbohydrate metabolism. I think in the testimony presented to you by Dr. Wynn and by Dr. Spellacy, both of whose work I think is really excellent, will

document or will give you a much more accurate appraisal of blood cholesterol and free fatty acid changes than I can.

There are marked differences in the degree of influence the various chemical compounds used as oral contraceptives exert on carbohydrate metabolism. For example an ethinyl estradiol component does not produce hyperglycemia as readily as its 3-methyl ether, mestranol. Some of the Swedish investigators have shown that various oral contraceptive preparations also differ in respect to their effects on plasma lipids. It is possible that better balanced compounds, more closely approaching established ideals for drugs can be found but a great deal of research remains to be accomplished. This is what Senator Javits and Senator Nelson have alluded to. I think this is a critical part of what I have to say.

The necessity for birth control measures for our women and for our society and our concern for their safety should be self-evident. Extension of investigative efforts is mandatory along with fuller recognition of the magnitude and diversity of the problems and the urgency of the need for adequate support for their solution.

In the meantime the needs for fertility regulation and family planning must be met. The oral contraceptives provide one important and effective means of accomplishing these objectives. But they are not the only means. It is the physician's responsibility to sort out those individuals for whom other methods of birth control are more appropriate.

In practice and in our family planning clinics the patient's history, general physical and pelvic examinations and certain inexpensive laboratory examinations, including cervical-vaginal cytology, provide the safeguards necessary prior to treatment. In our experience the motivation for patient visits to the doctor, stemming from the desire for birth control measures, is exceptional and has often resulted in detection of significant preexisting disorders. These have included premalignant and preinvasive cancer of the cervix for which surgical treatment is curative, metabolic disorders such as diabetes for which early metabolic control is of great importance, and menstrual disorders frequently associated with anovulation and infertility. If the pill had been prescribed without disclosure of these abnormalities it is likely that a cause-and-effect relationship would be ascribed. The use of oral contraceptive compounds in patients with menstrual disorders, whether for birth control purposes or for the treatment of menstrual irregularities, deserves further comment. In women with families this treatment is useful and effective but in young women who have not borne children evaluation of fertility status is well-advised before the pill is prescribed. Infertility rates in apparently healthy women range from 10 to 15 percent. Since normal ovulation—and I disagree with your little brochure intensely—since normal ovulation is dependent upon delicately balanced secretion of hypothalamic-pituitary-ovarian hormones, it is not surprising that derangement and anovulation are relatively common occurrences in untreated patients. The contraceptive effect of progestins is due primarily to prevention of ovulation through suppression of the hypothalamic-pituitary system and secondarily to alterations in the uterine endometrium and cervical

mucus. Recovery of hormonal balance is usually prompt after oral contraceptives are discontinued. Occasionally return of the menstrual cycle is delayed for 3 to 6 months or more. In such instances it is not known which cases represent persistent over-suppression of previously normal ovarian function and which represent preexisting hormonal imbalance and anovulation unless ovarian function has been evaluated prior to treatment.

No drugs can be considered completely safe. The risks of penicillin in causing serious reaction and death are widely known, yet penicillin is prescribed with great frequency by practicing physicians. The physician's knowledge is expected and relied upon to identify individuals sensitive to the drug and to provide an alternate drug for treatment when appropriate. Selection is just as important and feasible for oral contraceptives. The argument that such comparisons are invalid because oral contraceptives are not therapeutic agents or agents used in the prevention of illness is open to criticism. It depends to a large extent upon one's definition of illness. Medical and social benefits of such effective contraceptive agents are undeniable. Continuance of their use is warranted and in fact essential for many of our individual patients and certainly for our society. Even in their present less-than-ideal form appropriate selection among different oral contraceptive compounds or selection of entirely different methods of contraception when indicated is not only possible for a high percentage of patients but should constitute regular medical practice.

Senator NELSON. Thank you very much, Doctor, for your very fine testimony. We appreciate your taking the time to come today and having the patience to wait.

Did you have an questions?

Mr. DUFFY. No questions.

Senator NELSON. Mr. Gordon?

Mr. GORDON. I have none.

Senator NELSON. The hearings will resume on March 3 in the Caucus Room.

(Whereupon, at 12:55 p.m., the hearing was recessed to reconvene Tuesday, March 3, 1970, at 10 a.m.)

COMPETITIVE PROBLEMS IN THE DRUG INDUSTRY

(Present Status of Competition In the Pharmaceutical Industry)

TUESDAY, MARCH 3, 1970

U.S. SENATE,
SUBCOMMITTEE ON MONOPOLY OF THE
SELECT COMMITTEE ON SMALL BUSINESS,
Washington, D.C.

The subcommittee met, pursuant to notice, at 9:45 a.m., in room 4221, New Senate Office Building, Hon. Gaylord Nelson (chairman of the subcommittee) presiding.

Present: Senators Nelson, Javits, McIntyre, and Dole.

Also present: Benjamin Gordon, staff economist; Elaine C. Dye, clerical assistant; James P. Duffy III, minority counsel; and Dennison Young, Jr., associate minority counsel.

Senator NELSON. Our first witness this morning is Dr. Max Cutler, Department of Surgery, Cedars of Lebanon Hospital and Saint Johns Hospital, Los Angeles. Congressman Glenn Anderson from Los Angeles is here this morning to introduce Dr. Cutler.

Congressman Anderson, the committee is very pleased to have you come over from the House to our side of the Capitol which is a rare honor that most House Members will not pay to Senators. They expect us to come over to their side. So we are very pleased to have you here this morning.

Senator DOLE. Mr. Chairman, before Congressman Anderson proceeds, might I insert in the record the most recent Gallup Poll showing the effect these hearings have had on American women? A carefully drawn sample indicates that the weight of opinion is 2 to 1 on the side that birth control pills are dangerous.

This poll was taken since the hearing started in January. It might be helpful to have this in the record.

Senator NELSON. We would be pleased to put it in the record at this point.

(The article follows:)

[From the Washington Post, Mar. 1, 1970]

THE GALLUP POLL—PILL'S SAFETY IS DOUBTED BY WOMEN

(By George Gallup)

PRINCETON, N.J.—The recent hearings on birth control pills have apparently had a profound effect on the view of American women regarding the safety of oral contraceptives.

A carefully-drawn sample of the nation's female adult population, completed following the hearings which began Jan. 14, shows the weight of opinion 2-to-1

on the side that birth control pills are dangerous to a person's health. These findings represent a near reversal of opinion from that recorded in a survey conducted three years ago.

In addition, more women today than in the earlier survey express uncertainty about the safety of birth control pills.

The doctors and other experts who testified at the Senate hearings were divided in their testimony. Some said the pill may be a factor in causing blood clotting, breast cancer, diabetes, sterility, birth of malformed children and long-range damage to future generations.

However, others at the hearings said that "the pill" is safe for most women.

The Senate hearings, while apparently having had a marked effect on attitudes toward the safety of birth control pills, seem not to have changed opinions regarding their effectiveness.

In both the latest and the 1967 surveys, a majority of 67 per cent of women think that birth control pills are an effective contraceptive.

This question was asked first:

Do you think birth control pills can be used safely—that is, without danger to person's health?

	1970 (percent)	1967 (percent)
Yes	22	45
No	46	30
Unsure	32	25

This question was asked next:

Would you recommend birth control pills to a woman who does not want more children?

	1970 (percent)	1967 (percent)
Yes	37	53
No	48	35
Unsure	15	12

The question asked next:

Do you think these pills are effective—that is, do they work, or not?

	1970 (percent)	1967 (percent)
Yes	67	67
No	9	8
Unsure	24	25

Senator NELSON. Congressman Anderson.

STATEMENT OF THE HONORABLE GLENN ANDERSON, A U.S. REPRESENTATIVE FROM THE 17TH CONGRESSIONAL DISTRICT OF THE STATE OF CALIFORNIA

Representative ANDERSON. Mr. Chairman and members of the committee. It is a distinct honor and a privilege to present to you Dr. Max Cutler, perhaps the foremost authority on breast cancer in the world.

I asked for this privilege to present Dr. Cutler because if I have one criticism of him, it is that he is perhaps too modest and too humble, and so I felt maybe to get him off on the right foot—I know he does not need that—I did want to make this presentation.

Dr. Cutler received a Bachelor of Science from the University of Georgia at the age of 18—9 years after he entered the country. He received his medical degree from the Johns Hopkins Medical School in 1922, at the age of 22, and served his surgical internship in the Johns Hopkins Hospital.

In 1924, he began his training in cancer research at the Memorial Hospital, New York, under a Rockefeller fellowship. In 1930 and 1931 he was the director of the New York City Cancer Institute.

Dr. Cutler studied at the Curie Institute of Paris where he worked with Madame Curie and her staff and became a foreign member of the Curie Foundation.

In 1931 he was called to Chicago to found and direct the Tumor Clinic in the Michael Reese Hospital.

In 1937 he occupied the chair of visiting professor of surgery in the Peking Union Medical College. During this period, he lectured in Peking, Nanking and Shanghai and acted as consultant to the Chinese Government on the cancer problem.

Dr. Cutler founded the Chicago Tumor Institute in 1938. The institute has made significant contributions to the cure of cancer of the throat.

From 1931 to 1946 he served as Consultant Director of Cancer and Cancer Research in the United States Veterans Administration. In addition, he served as a member of the National Advisory Cancer Council of the National Cancer Institute, for a 3-year period.

In addition to his work in the public interest, he has authored three books and published over 100 papers on various aspects of cancer. Perhaps his best known work was a book on cancer of the breast where he collaborated with a celebrated English surgeon, Sir Lenthal Cheatle. This book, published in 1931 and revised in 1961, was awarded the Walker Prize by the Royal College of Surgeons of England as the most important contribution in cancer research in the British Empire during the 5-year period of 1926–1931. In 1961 the president of Royal College of Surgeons of England said that the revised edition "will be the standard reference for another 30 years."

Dr. Cutler has appeared as an expert witness on cancer before committees of the United States House and Senate. He has also been called as an expert witness to testify in trials involving malpractice by cancer quacks.

Dr. Cutler is currently on the surgical staffs of the Cedars of Lebanon Hospital and the Saint Johns Hospital in the Los Angeles area.

I have a more detailed account for the record.

(The information follows:)

BIOGRAPHY OF DR. MAX CUTLER

B.S. graduate of University of Georgia, 1918.

M.D. graduate of Johns Hopkins Medical School, 1922.

Curie Institute of Paris graduate study and Radiumhemmet, Stockholm, 1922.

Resident House Surgeon, Johns Hopkins Hospital, 1922–23.
Assistant in Surgery, Michael Reese Hospital, Chicago, 1923–24.
Instructor In Pathology, Cornell Medical School & Memorial Hospital, 1924–26.
First Rockefeller Fellow in Cancer Research, Memorial Hospital, 1926–30.
Director New York City Cancer Institute, New York City, 1930–31.
Founder & Director, Tumor Clinic, Michael Reese Hospital, 1931–37.
Consultant in cancer and Director cancer research, Edward H. Veteran's Hospital & U.S. Veteran's Administration, 1931–46.
First President of the American Association for the Study of Neoplastic Diseases, 1933–34.
Visiting Professor of Surgery (Rockefeller Foundation), Peking Union Medical College, Peking, China, 1936–37.
Director of Chicago Tumor Institute, 1938–52.
Member of the National Advisory Cancer Council, 1939–42.
Member of: New York Academy of Medicine, Chicago Institute of Medicine, American Radium Society, American Association of Cancer Research, International College of Surgeons, Johns Hopkins Medical & Surgical Association, American Board of Radiology, Honorary member of Cuban Radiological Society, Radiological Society, Chile, Northern Radiological Society, Scandinavia.
Author (with Sir George Lenthal Cheatle) of *Tumours of the Breast*, 1931, *Cancer, Its Diagnosis and Treatment, Tumors of the Breast*, rev. 1962, and approximately 100 contributions to medical journals on various aspects of cancer.

STATEMENT OF DR. MAX CUTLER'S CONTRIBUTIONS IN THE FIELD OF CANCER BY BEN SILBERSTEIN, PRESIDENT, BEVERLY HILLS CANCER RESEARCH FOUNDATION

Dr. Cutler is a graduate of the University of Georgia. He received his medical degree from the Johns Hopkins Medical School and served his surgical internship in the Johns Hopkins Hospital.
He received his basic training in cancer in the Memorial Hospital, New York, where he spent seven years (1924–1931) under a Rockefeller Fellowship.
He concentrated most of his studies abroad in the Curie Institute of Paris where he worked with Madame Curie and her staff and became a foreign member of the Curie Foundation.
In 1929, he spent one year in London, where he collaborated with a celebrated English surgeon, Sir Lenthal Cheatle in writing a book on Cancer of the Breast. This book, published in 1931 and revised in 1961, was awarded the Walker Prize by the Royal College of Surgeons of England as the most important contribution in cancer research in the British Empire during the five year period of 1926–1931. (The award is made every five years).
In a review, in the British Medical Journal, of the 1961 revision of the Cheatle-Cutler book, Professor Hedley Atkins, President of the Royal College of Surgeons of England, said in part:
"Thirty-one years ago Lenthal Cheatle and Max Cutler published their famous book on Tumours of the Breast, which commanded the admiration of the surgical world"
"As was its predecessor, this work will be a standard reference for another 30 years and the surgical world is much in debt to its author, etc."
Between 1930, and 1931, Dr. Cutler served as Director of the New York City Cancer Institute; and, in 1931, he was called to Chicago, to found and direct the Tumor Clinic in the Michael Reese Hospital.
In 1937, he was invited by the Rockefeller Foundation to occupy the chair of visiting Professor of Surgery in the Peking Union Medical College for one year. During this period, he lectured in Peking, Nanking, and Shanghai and acted as Consultant to the Chinese Government on the cancer problem.
In 1938, he founded the Chicago Tumor Institute, which made a significant contribution to the cure of cancer of the throat. In 1951, it was affiliated with the University of Chicago.
For fifteen years (1931–1946), Dr. Cutler served as Consultant Director of Cancer and Cancer Research in the United States Veterans Administration under General Hines. He served as a member of the National Advisory Cancer Council of the National Cancer Institute for a three year period.

He has written three books and published over one-hundred papers on various aspects of cancer, in local and foreign medical journals.

He has appeared as an expert witness on cancer before committees of the U.S. Congress and Senate. He also has been called as an expert witness in some famous trials against Cancer quacks by the American Medical Association, the State of Illinois, the United States Food and Drug Administration and the United States Post Office Department.

He is currently on the surgical staffs of the Cedars of Lebanon Hospital and the St. Johns Hospital.

Representative ANDERSON. I did want you to know that knowing many of the people who have used the service of Dr. Cutler, it looks like a Who's Who in the theatrical world and the Government world and in the business world, and it gives me a great deal of pleasure to present to you, I think the greatest authority in the field, if there is an authority, Dr. Max Cutler.

Senator NELSON. Thank you, Congressman Anderson.

Dr. Cutler, we are very pleased to have you here today. Your statement will be printed in the record. You may present it in any way you desire.

STATEMENT OF DR. MAX CUTLER, DEPARTMENT OF SURGERY, CEDARS OF LEBANON AND ST. JOHNS HOSPITALS, LOS ANGELES, CALIF.; AND DIRECTOR, BEVERLY HILLS CANCER RESEARCH FOUNDATION

Dr. CUTLER. Thank you, Congressman Anderson, for this very unexpected honor and courtesy.

Mr. Chairman, members of the subcommittee. I will dispense with reading of the first page and a half of my prepared statement, and will begin on the middle of page 2.[1]

The statement which I shall present this morning deals exclusively with the question as to whether the protracted use of the oral contraceptive increases the risk of breast cancer in women. In approaching this problem, I have reviewed what I consider to be the most reliable reports in the scientific literature pertinent to this subject. I have also studied some of the conflicting evidence that has been presented before your committee.

Without minimizing the seriousness of the established side effects of the oral contraceptives, such as thromboembolism and certain metabolic disorders, the very nature of breast cancer as a suspected hazard places it in a special category. So cancer-conscious has the public become that mere mention of the word is enough to throw most people into utter panic. In order to understand the complexity of the problem, it is necessary to point out some of the salient features of cancer of the breast and its relation to the ovarian hormones.

The intimate relation between the ovaries and breast cancer has been known for many years. Surgical removal or radiation treatment of the ovaries results in remissions in about 40 percent of premenopausal women with breast cancer. This effect occurs as a result of a dimunition of estrogen production in the body. In clinical prac-

[1] See information at p. 6670.

tice, we avoid the use of estrogens for fear of increasing the activity of existing disease or stimulating the growth of clinically latent foci of breast cancer.

Recent studies have shown that the incidence of breast cancer increases before the age 55 but remains constant beyond this age. These findings suggest that the risk from breast cancer is related to the quality of ovarian function.

The incidence of breast cancer in childless women is higher than in women who bear children. Even more important is the recent finding that a woman who has her first child under the age of twenty has a connsiderable protection against breast cancer. From epidemiological studies. it would seem that the decade following puberty (13–23) is a critical period in establishing the future risk of breast cancer.

The fact that breast cancer is common in women who have passed the menopause when the estrogen levels are lower can be readily explained on the basis that those cancers are the end-result of a process which began many years before.

The carcinogenic effect in humans and in lower animals is characterized by a long latent period of some 10 to 20 years or even longer. A carcinogenic agent exerting its effect over a relatively short period can induce biological changes in cells that progress slowly over a period of many years and end up as clinical cancer. One classical example related to workers in aniline factories who are exposed to the carcinogenic dyes for as short a period as 1 year and develop cancer of the bladder some 20 years later. Withdrawal of the carcinogenic agent did not arrest the progress of the latent lesions. Clinical, pathological and experimental evidence support the view that breast cancer follows a similar pattern.

Our studies of whole serial sections of the breast supported by clinical experience have shown that cancer of the breast is not a sudden event or an accident in a previously normal tissue, but rather the end-result of a series of changes which began many years before. Benign tumors change into precancerous lesions before ending up as fully established cancers. It is not inconceivable that the causative agents that result in breast cancer exert their initial effect at a young age, possibly in that critical postpuberty decade.

The tissues of the breast present a highly sensitive target for the ovarian hormones and have a great potential for the development of cancer. In all probability there is no direct etiological relationship between the estrogens and breast cancer. It is more probably that the carcinogenic effect of the hormones is to alter the biological state of the cells and thus render them vulnerable to the action of another agent—possibly, if not probably, a latent virus.

Recognizing the possible risk of breast cancer as a side effect of the oral contraceptive, the American Cancer Society, as early as 1961, supported research studies on this problem and a recent report of the Advisory Committee on Obstetrics and Gynecology referred to the need for well designed studies and long-term support for research on the breast and uterus.

Senator NELSON. May I interrupt a moment, Doctor. You are referring to the second FDA report on obstetrics and gynecology?

Dr. CUTLER. I am not certain, sir. I did not check back on the original reference, but I have seen this referred to in the literature by several authors.

Senator NELSON. Do I conclude from what you have said here that the research in this field has been inadequate?

Dr. CUTLER. Very inadequate.

Senator NELSON. Are you aware of what on-going research there may be at this time on this specific problem?

Dr. CUTLER. Not in detail. I know in a general way that some retrospective studies have begun under the National Cancer Institute.

Senator NELSON. If this issue was raised by the American Cancer Society as early as 1961, what would be the explanation for our failure to proceed with the appropriate protocols for an investigation of this kind?

Dr. CUTLER. Your question is why?

Senator NELSON. That is 9 years ago.

Dr. CUTLER. Yes; I do understand.

Senator NELSON. Do you have an explanation as to why we have failed to proceed with adequate research in this field?

Dr. CUTLER. Well, I think it is probably due to multiple factors. One is the complexity of the problem. Second, the answer must come from epidemiological studies, and those studies can only be of relevance when a sufficient time has passed. Actually, not enough time had passed to warrant any conclusions.

I would think that those are some of the factors in operation. But it is a sad fact that long—many years go by between the time that a significant observation is made and adequate studies are undertaken. That has been the rule.

Senator NELSON. But are the studies that are being done of adequate scope to evaluate the problems, once they are concluded?

Dr. CUTLER. So far as I know, the studies that are underway are totally inadequate to cope with this very critical situation.

Senator NELSON. Thank you; go ahead, Doctor.

Dr. CUTLER. The early detection of breast cancer often presents formidable difficulties. Not infrequently when a lump is first felt in the breast, either by the patient or by her physician, it is already in a relatively advanced stage of cancer. This is further complicated by the patient's delay—which now averages about 7 months—in consulting her physician for fear of facing a diagnosis of cancer with possible loss of the breast. Periodic biannual examination of the breast helps greatly in early detection and prevention by surgical removal of precancerous lesions.

Recent progress in the technique of X-ray examination of the breasts, known as mammography, has led to the detection of breast cancers that are too small to be felt manually. Users of oral contraceptives should have periodic X-ray examinations of the breast.

Women using the oral contraceptives often develop fullness and tenderness of the breasts and in some cases actual enlargement which persists. Microscopic studies of biopsy material from patients who have taken the oral contraceptives show increased cellular activity, reflecting the stimulating effects of the estrogens. In my own surgi-

cal practice, I have a series of patients who have had two or three breast biopsies. In some, the biopsies were performed before the patient started to take the contraceptive, and a second or third biopsy was performed after the patient had been on the contraceptive pill for several years. Study of surgical specimens under these circumstances presents a unique opportunity to observe the tissue changes that may be related to the stimulating effect of the estrogenic component of the oral contraceptive.

One has to be careful, however, in interpreting microscopic changes in tissues under the influence of hormonal stimulation because such changes can be so pronounced as to be indistinguishable from fully established cancer. I cite the following example: My colleague, the late Sir Lenthal Cheatle of London, removed the breasts of a female infant who had died at birth. He prepared microscopic slides of the breast tissue and without divulging their source submitted them to five distinguished pathologists, several of them professors of pathology. Four of the five pathologists reported the tissue as cancer of the breast. The hyperhormonal stimulation of the sensitive breast tissues caused by the high estrogen levels in the mother's circulation resulted in an erroneous microscopic diagnosis, by highly sophisticated pathologists. It is important to understand that microscopic changes of this magnitude can be reversible.

We know that every 20th woman will develop cancer of the breast sometime during her lifetime. We also know that if the mother, the sister, or the maternal aunt had breast cancer, the risk is at least doubled, so that approximately one woman in ten will develop the disease. It is manifestly imprudent to prescribe oral contraceptives as a first-choice birth control method to patients with a family history of breast cancer.

Senator McINTYRE. May I interrupt you at that point for a question. You just said, "it is manifestly imprudent to prescribe oral contraceptives as a first-choice birth control method to patients with a family history of breast cancer."

My question is this, does the current labeling of these drugs or the recent letter from the FDA contraindicate the use of birth control pills in patients with such a family history?

Dr. CUTLER. Senator McIntyre, I cannot answer that question, because having received the letter, I do not recall in detail whether that point is mentioned.

Senator NELSON. I might say that it does not.

Senator MCINTYRE. Do you have the letter before you?

Senator NELSON. This is the package insert for the layman. What it says is under contraindictions, No. 3, "known or suspected carcinoma of the breast." It does not refer to the sister, mother, or aunt.

Dr. CUTLER. That would refer to a patient who has had breast cancer or perhaps had a recurrence of the disease; in other words, in the presence of clinical cancer, but it apparently says nothing about family history.

Senator NELSON. You would recommend that the information that goes to the physician and the information on the package insert specifically include the contraindication that you have just discussed?

Dr. CUTLER. Without question.

Senator McINTYRE. Thank you, Doctor.

Dr. CUTLER. In this controversy, those who suspect a possible link between the oral contraceptives and breast cancer point to the following evidence:

(1) Removal of the ovaries in lower animals and in women markedly reduces the risk of breast cancer.

(2) Breast cancer has been induced in five different animal species by the administration of estrogens.

(3) Chemical agents having carcinogenic effects in man also induce cancer in animals—often at the same site.

(4) Bilateral breast cancers have developed in two male transsexual individuals treated with estrogenic hormones, and

(5) The discovery of a high incidence of breast cancer among males, 6.6 percent compared to the general incidence of 1 percent, in certain parts of Egypt where a parasitic infection of the liver interferes with the destruction of estrogens.

Those who argue against a possible link, point to the lack of convincing evidence now available, after some 10 years of use of the oral contraceptive, that breast cancer is caused by the pill. They call attention to the extensive use of estrogens by millions of women for many years in the treatment of menopausal symptoms without definite evidence of a carcinogenic effect, and finally, they are not willing to accept the animal experiments as being applicable to women.

With respect to the effect of estrogens on menopausal women, it should be pointed out that here we are dealing with replacement therapy. This cannot be compared to the prolonged addition of estrogens to a young woman's natural hormones. Furthermore, when one considers the prolonged latent period of carcinogenicity, many women in their menopausal and postmenopausal age brackets (late forties and fifties) may not live long enough for the carcinogenic effect to exert itself as clinical cancer.

Considering the question of the transferability of animal data to man, it is difficult for me to escape the conclusion that the results are relevant and must be regarded as significant.

The difficulty of demonstrating a causative relationship between the oral contraceptives and breast cancer obviously relates to the long latent period between exposure and final effect. A minimum of 10 years is required before reliable results can be expected. Unfortunately, this experiment upon millions of women might prove to be too costly to contemplate.

When the oral contraceptives were introduced some 10 years ago, they were hailed as a solution to the world's population explosion and a safe means of preventing birth of unwanted children. The simplicity and effectiveness of the pill have constituted a veritable blessing to millions of women. Unfortunately a broad area of disagreement as to their safety has developed. Thus a serious cloud has appeared, and the question has arisen as to whether the benefits outweigh the risks.

Although there is no conclusive evidence that oral contraceptives cause breast cancer, the potential hazards involved in their protracted use—and I emphasize protracted—by young, healthy women

cannot be ignored. Both physician and patient must be made aware of the possible risks and give due consideration to alternative contraceptive methods.

I cannot help being greatly concerned for the millions of women who are bound to be frightened by the mere suggestion that in using the oral contraceptives they face a potential risk of breast cancer, and I think it would be utterly wrong to frighten millions of women unnecessarily over a potential risk which can be controlled, minimized, and perhaps even eliminated.

Senator McIntyre. May I interrupt you at that point, Doctor. You just told us, "it would be utterly wrong to frighten millions of women unnecessarily over a potential risk which can be controlled, minimized, and perhaps even eliminated."

Would you please tell the committee a little bit more about how this can be accomplished.

Dr. Cutler. By use of the weaker pill, 50 micrograms, instead of the stronger pill. This has been pointed out by the British scientists and is being more and more accepted by the profession in this country. The use of a weaker pill, and second, by its use over a limited period of time.

I will explain this point in greater detail, later in my statement.

Senator McIntyre. Well, all right; thank you.

Senator Nelson. May I ask a question. When you say over a limited period of time, what is that period?

Dr. Cutler. I have said in this statement 2 or 3 years. That figure is quite arbitrary. We are guessing and compromising. We have no definite knowledge. No one can say at what point it becomes a little more or a little less safe.

But experimental evidence in animals shows that the carcinogenicity is dose-related and time-related. The larger the dose, the more cancers that are produced. The longer the waiting period, the more cancers appear. It is on the basis of this time and dose relationship that we make this estimate, which is purely arbitrary. It could be 3 or 4 years, it could be 4 or 5 years. This is about as far as we can go with it. It is a compromise.

Senator Nelson. I would assume from what you previously said, when you refer to minimizing the risk, that you would recommend a 50 microgram of estrogens in the pill, that you would recommend a limited period of use. You also testified earlier in your statement as to need for a regular breast examination. You would include that with these other two; is that correct?

Dr. Cutler. That is right, sir.

Senator McIntyre. Doctor, in view of this, is there any reason why the high estrogen pills should remain available, in your opinion?

Dr. Cutler. I am not certain that I am competent to answer that question because I am not a gynecologist, and actually do not dispense the pill. I refer my own patients and friends who come to me to a gynecologist. But in discussing this matter with men who are highly sophisticated and experienced in this area, I get the clear impression that there is no real use for the larger pill. I am not absolutely sure about that. That is my impression.

Senator McINTYRE. Thank you very much, doctor.

Dr. CUTLER. In the final analysis, we are faced with this dilemma: Do the "blessings" of the pill outweigh its long-range potential hazards?

The available evidence indicating a relationship between the steroid hormones and the induction of breast cancer suggests that this relationship is dose-related and time-related. The higher the dose given and the longer the exposure, the greater the number of cancers produced in animals. It becomes obvious that it should be a matter of good medical practice to use the lowest doses which are effective, and to avoid the chronic use of oral contraceptives altogether.

Senator NELSON. What do you mean by chronic use?

Dr. CUTLER. I mean over a period of many years. Referring to a couple who had their family at a certain age, 35/36, and are considering the use of the contraceptive pill until the menopause, I think that perhaps should be dispensed with and perhaps another contraceptive considered under those circumstances. The combination type of pill containing 50 micrograms or less of estrogenic component is equally effective contraceptive as pills containing far higher doses and their use should be encouraged. This information I get from the gynecologists who have studied this problem extensively.

The chronic use of the pill for many years as a form of chemical sterilization is dangerous from the point of view of its potential carcinogenesis. Other methods of birth control which are strictly local in their mechanism of action, such as the diaphragm or the intrauterine device, provide perfectly adequate means of spacing children. If termination of a reproductive career for medical or other reasons is desired, the option of surgical sterilization should be available. I am told, and I was shocked to learn, that nearly one-half of the States in our country still have archaic laws on the books which either prohibit or discourage the use of voluntary sterilization. I hold that the fallopian tubes are the property of the woman and not government property. After completing its family, a mature couple should be able to elect other methods of birth control than the prolonged chronic use of the pill.

It has been said that the proven risks of taking the pill are less than the proven risks of pregnancy. No doubt this is true, and would be a valid argument if the sole alternative to the pill were pregnancy. It is also true that the potential long-range hazards of inappropriate chronic use of the pill may be considerably greater than anyone can really assess for another 10 to 20 years.

The women who have been taking the pill for 5 years or more are too few and too young to demonstrate any changes with respect to the risks of increasing the incidence of breast cancer. That risk is a potential time bomb with a fuse at least 15 to 20 years in length. I share the hope that the concern about this danger may be unfounded, and that the considerable experimental evidence may be inapplicable to women, but this is a gamble which is difficult to justify because of the large numbers of women at risk.

It seems to me that official policy and sound medicine should strongly dictate that the lowest effective doses of the pill be used for child-spacing purposes not to exceed 2 to 3 years, perhaps 3 or 4

years, perhaps 5 years; the figure is purely arbitrary. A broad range of effective alternative methods of birth control should be made available, and women should be discouraged from using the pill as a form of chemical sterilization. The pill is neither dangerous enough to condemn it out-of-hand, nor safe enough to prescribe it as a universal panacea. The circumstances of its use should be carefully defined and steps thoughtfully taken to protect women from the consequences of slipping into the tabit of taking the pill indefinitely.

Senator NELSON. Thank you very much, Doctor.

(The complete prepared statement submitted by Dr. Cutler follows:)

STATEMENT BY DR. MAX CUTLER*

Mr. Chairman and Members of the Subcommittee: I am Dr. Max Cutler, Medical Director of the Beverly Hills Cancer Research Foundation and a member of the surgical staffs of the Cedars of Lebanon and St. Johns Hospitals in Los Angeles. My interest in cancer extends over a period of almost half a century. I received my early training in cancer between 1924 and 1931 in the Memorial Cancer Hospital, New York, most of it under a Rockefeller Fellowship.

In 1931, I founded the Tumor Clinic of the Michael Reese Hospital in Chicago and served as its director for five years. In 1936, I served as Visiting Professor of Surgery in the Peiping Union Medical College, Peiping, China, under the auspices of the Rockefeller Foundation. In 1938, I founded the Chicago Tumor Institute and served as its director for thirteen years. Between 1931 and 1946, I was consultant in cancer to the U.S. Veterans Administration. I was a member of the National Advisory Cancer Council for three years and have served in an advisory capacity to the Food and Drug Administration as an expert witness.

In 1929–1930, I was engaged in a research project in collaboration with Sir Lenthal Cheatle at Kings College Hospital, London. Cheatle had developed a new technique for the preparation of whole serial sections of the breast. Microscopic study of these giant sections yielded the first significant information on precancerous lesions of the breast. The results were published in a monograph, *Tumors of the Breast*, in 1931 of which I was the junior author. In 1938 we donated approximately a thousand of these historic sections to the Army Museum of Pathology in Washington, D.C.

The statement which I shall present this morning deals exclusively with the question as to whether the protracted use of the oral contraceptive increases the risk of breast cancer in women. In approaching this problem, I have reviewed what I consider to be the most reliable reports in the scientific literature pertinent to this subject. I have also studied some of the conflicting evidence that has been presented before your committee.

Without minimizing the seriousness of the established side effects of the oral contraceptives, such as thromboembolism and certain metabolic disorders, the very nature of breast cancer as a suspected hazard places it in a special category. So cancer conscious has the public become that mere mention of the word is enough to throw most people into utter panic. In order to understand the complexity of the problem, it is necessary to point out some of the salient features of cancer of the breast and its relation to the ovarian hormones.

The intimate relation between the ovaries and breast cancer has been known for many years. Surgical removal or radiation treatment of the ovaries results in remissions in about 40 per cent of premenopausal women with breast cancer. This effect occurs as a result of a dimunition of estrogen production in the body. In clinical practice, we avoid the use of estrogens for fear of increasing the activity of existing disease or stimulating the growth of clinically latent foci of breast cancer.

Recent studies have shown that the incidence of breast cancer increases before the age 55 but remains constant beyond this age. These findings suggest that the risk from breast cancer is related to the quality of ovarian function.

* Medical Director of the Beverly Hills Cancer Research Foundation and Surgical Staffs of the Cedars of Lebanon and St. Johns Hospital in Los Angeles.

The incidence of breast cancer in childless women is higher than in women who bear children. Even more important is the recent finding that a woman who has her first child under the age of twenty has a considerable protection against breast cancer. From epidemiological studies, it would seem that the decade following puberty (13–23) is a critical period in establishing the future risk of breast cancer.

The fact that breast cancer is common in women who have passed the menapause when the estrogen levels are lower can be readily explained on the basis that those cancers are the end result of a process which began many years before.

The carcinogenic effect in humans and in lower animals is characterized by a long latent period of some ten to twenty years or even longer. A carcinogenic agent exerting its effect over a relatively short period can induce biological changes in cells that progress slowly over a period of many years and end up as clinical cancer. One classical example relate to workers in aniline factories who are exposed to the carcinogenic dyes for as short a period as one year and develop cancer of the bladder some twenty years later. Withdrawal of the carcinogenic agent did not arrest the progress of the latent lesions. Clinical, pathological and experimental evidence support the view that breast cancer follows a similar pattern.

Our studies of whole serial sections of the breast, supported by clinical experience have shown that cancer of the breast is not a sudden event or an accident in a previously normal tissue, but rather the end result of a series of changes which began many years before. Benign tumors change into precancerous lesions before ending up as fully established cancers. It is not inconceivable that the causative agents that result in breast cancer exert their initial effect at a young age, possibly in that critical post-puberty decade.

The tissues of the breast present a highly sensitive target for the ovarian hormones and have a great potential for the development of cancer. In all probability there is no direct etiological relationship between the estrogens and breast cancer. It is more probably that the carcinogenic effect of the hormones is to alter the biological state of the cells and thus render them vulnerable to the action of another agent—possibly a latent virus.

Recognizing the possible risk of breast cancer as a side effect of the oral contraceptive, the American Cancer Society, as early as 1961, supported research studies on this problem and a recent report of the Advisory Committee on Obstetrics and Gynecology referred to the need for well-designed studies and long-term support for research on the breast and uterus.

The early detection of breast cancer often presents formidable difficulties. Not infrequently when a lump is first felt, either by the patient or by her physician, it is already in a relatively advanced stage of cancer. This is further complicated by the patient's delay in consulting her physician for fear of facing a diagnosis of cancer with possible loss of the breast. Periodic biannual examination of the breasts helps greatly in early detection and prevention by surgical removal of precancerous lesions.

Recent progress in the technique of X-ray examination of the breasts (mammography) has led to the detection of breast cancers that are too small to be felt manually. Users of oral contraceptives should have periodic X-ray examination of the breasts.

Women using the oral contraceptives often develop fullness and tenderness of the breasts and in some cases actual enlargement which persists. Microscopic studies of biopsy material from patients who have taken the oral contraceptives show increased cellular activity, reflecting the stimulating effects of the estrogens. In my own surgical practice, I have a series of patients who have had two or three breast biopsies. In some, the biopsies were performed before the patient started to take the contraceptive and a second or third biopsy was performed after the patient had been on the contraceptive pill for several years. Study of surgical specimens under these circumstances presents a unique opportunity to observe the tissue changes that may be related to the stimulating effect of the estrogenic component of the oral contraceptive.

One has to be careful, however, in interpreting microscopic changes in tissues under the influence of hormonal stimulation because such changes can be so pronounced as to be indistinguishable from fully established cancer. I cite the following example: My colleague, the late Sir Lenthal Cheatle, removed the breasts of a female infant who had died at birth. He prepared microscopic

slides of the breast tissue and without divulging their source submitted them to five distinguished pathologists. Four of the five pathologists reported the tissue as cancer of the breast. The hyperhormonal stimulation of the sensitive breast tissues caused by the high estrogen levels in the mother's circulation results in an erroneous microscopic diagnosis. It is important to understand that microscopic changes of this magnitude can be reversible.

We know that every twentieth woman will develop cancer of the breast. We also know that if the mother, the sister or the maternal aunt had breast cancer, the risk is at least doubled, so that approximately one woman in ten will develop the disease. It is manifestly imprudent to prescribe oral contraceptives as a first choice birth control method to patients with a family history of breast cancer.

In this controversy, those who suspect a possible link between the oral contraceptives and breast cancer point to the following evidence: (1) Removal of the ovaries in lower animals and in women markedly reduces the risk of breast cancer. (2) Breast cancer has been induced in five different animal species by the administration of estrogens. (3) Chemical agents having carcinogenic effects in man also induce cancer in animals—often at the same site. (4) Bilateral breast cancers have developed in two male trans-sexual individuals treated with estrogenic hormones, and (5) The discovery of a high incidence of breast cancer among males (6.6 per cent compared to the general incidence of 1 per cent) in certain parts of Egypt where a parasitic infection of the liver interferes with the destruction of estrogens.

Those who argue against a possible link point to the lack of convincing evidence now available, after some ten years of use of the oral contraceptive, that breast cancer is caused by the pill. They call attention to the extensive use of estrogens by millions of women for many years in the treatment of menopausal symptoms without definite evidence of a carcinogenic effect, and finally, they are not willing to accept the animal experiments as being applicable to women.

With respect to the effect of estrogens on menopausal women, it should be pointed out that here we are dealing with replacement therapy. This cannot be compared to the prolonged addition of estrogens to a young woman's natural hormones. Furthermore, when one considers the prolonged latent period of carcinogenicity, many women in their menopausal and post-menopausal age brackets (late forties and fifties) may not live long enough for the carcinogenic effect to exert itself as clinical cancer.

Considering the question of the transferability of animal data to man, it is difficult for me to escape the conclusion that the results are relevant and must be regarded as significant.

The difficulty of demonstrating a causative relationship between the oral contraceptives and breast cancer obviously relates to the long latent period between exposure and final effect. A minimum of ten years is required before reliable results can be expected. Unfortunately, this experiment upon millions of women might prove to be too costly to contemplate.

When the oral contraceptives were introduced some ten years ago, they were hailed as a solution to the world's population explosion and a safe means of preventing birth of unwanted children. The simplicity and effectiveness of the pill have constituted a veritable blessing to millions of women. Unfortunately a broad area of disagreement as to their safety has developed. Thus a serious cloud has appeared, and the question has arisen as to whether the benefits outweigh the risks.

Although there is no conclusive evidence that oral contraceptives cause breast cancer, the *potential* hazards involved in their protracted use by young healthy women cannot be ignored. Both physician and patient must be made aware of the possible risks and give due consideration to alternative contraceptive methods.

I cannot help being greatly concerned for the millions of women who are bound to be frightened by the mere suggestion that in using the oral contraceptives they face a potential risk of breast cancer, and I think it would be utterly wrong to frighten millions of women unnecessarily over a potential risk which can be controlled, minimized, and perhaps even eliminated. In the final analysis, we are faced with this dilemma: Do the "blessings" of the pill outweigh its longrange potential hazards?

The available evidence indicating a relationship between the steroid hormones and the induction of breast cancer suggests that this relationship is dose related and time related. The higher the dose given and the longer the exposure, the greater the number of cancers produced. It becomes obvious that it should be a matter of good medical practice, to use the lowest doses which are effective, and to avoid the chronic use of oral contraceptives altogether. The combination type of pill containing 50 micrograms or less of estrogenic component is an equally effective contraceptive as pills containing far higher doses and their use should be encouraged.

The chronic use of the pill for many years as a form of chemical sterilization is dangerous from the point of view of its potential carcinogenesis. Other methods of birth control which are strictly local in their mechanism of action, such as the diaphragm or the intrauterine device, provide perfectly adequate means of spacing children. If termination of a reproductive career for medical or other reasons is desired, the option of surgical sterilization should be available. I am told nearly one-half of the states in our country still have archaic laws on the books which either prohibit or discourage the use of voluntary sterilization. I hold that the fallopian tubes are the property of the woman and not government property. After completing its family, a mature couple should be able to elect other methods of birth control than chronic use of the pill.

It has been said that the proven risks of taking the pill are less than the proven risks of pregnancy. No doubt this is true, and would be a valid argument if the sole alternative to the pill were pregnancy. It is also true that the potential long-range hazards of inappropriate chronic use of the pill may be considerably greater than anyone can really assess for another ten to twenty years.

The women who have been taking the pill for five years or more are too few and too young to demonstrate any changes with respect to the risks of increasing the incidence of breast cancer. That risk is a potential time bomb with a fuse at least fifteen to twenty years in length. I share the hope that the concern about this danger may be unfounded, and that the considerable experimental evidence may be inapplicable to women, but this is a gamble which is difficult to justify because of the large numbers of women at risk.

It seems to me that official policy and sound medicine should strongly dictate that the lowest effective doses of the pill be used for child spacing purposes not to exceed two to three years. A broad range of effective alternative methods of birth control should be made available, and women should be discouraged from using the pill as a form of chemical sterilization. The pill is neither dangerous enough to condemn it out of hand, nor safe enough to prescribe it as a universal panacea. The circumstances of its use should be carefully defined and steps thoughtfully taken to protect women from the consequences of slipping into the habit of taking the pill indefinitely.

Senator NELSON. When you say women should be discouraged from using the pill as a form of chemical sterilization, you are referring to long-term use?

Dr. CUTLER. Long term, yes, sir.

Senator NELSON. Senator Dole.

Senator DOLE. Just briefly, Dr. Cutler, Mr. Chairman, I would like at this time to place in the record a statement of Dr. Edward T. Tyler, medical director, Family Planning Centers of Greater Los Angeles.

(The document follows:)

FAMILY PLANNING CENTERS OF GREATER LOS ANGELES,
Los Angeles, Calif., February 24, 1970.

A Report For Senator Gaylord Nelson's Subcommittee.
From: Edward T. Tyler, M.D.

HONORABLE SENATORS: I have been invited to present my views to your Committee on oral contraceptives and the possible problems related to the use of these agents, particularly in the United States. While I am not certain it will

be possible for me to appear personally (since no specific date has been set for my testimony at the time of this writing), I have prepared some remarks that I believe may be pertinent for the record, regardless of a personal appearance.

Since, by the time my presentation would have been reached, virtually all of the major scientific data concerning serious side-effects will undoubtedly have already been presented, it would be a waste of this Committee's time for me to attempt to present the same type of discussion. Rather than presenting data concerning our own specific scientific studies which are virtually all in print (and referred to in an attached bibliography), I would prefer to direct my remarks to other issues that have been raised during and perhaps preceding these Hearings.

Firstly, in connection with much of the data that has already been presented by the eminent scientific spokesmen who have already appeared, I believe one important point should be emphasized. It would be an insult to these scientists to argue with the *facts* that may have been stated during these Hearings as derived from particular specific investigations, but I must emphasize that many scientists would have differing views on the *interpretation of these facts*. I doubt that there are any sets of experimental findings or statistics or data of any kind concerning which there would not be varying interpretations by different statisticians. In short, it is not the data with which one would reasonably take issue, particularly with reference to reliability, but rather with the question of whether the data merits the conclusions that may have been drawn during these Hearings.

In this vein, therefore, I would like to address myself to several important points that may not have been sufficiently discussed during the Hearings. One of the most important of these would involve the question of "public good" served by the presentations. Presumably, a basic reason for the initiation of these proceedings was the question of whether users of oral contraceptives were being sufficiently informed of the risks involved in their use. It would obviously be impossible for me to comment on whether or not this has been the case, because I can only relate to our own practices and those of others I know who are also actively involved in this field. Certainly, the knowledgeable physician has likely not been negligent in advising his patients of the potential hazards.

On the other hand, no one will deny that a certain percentage of doctors, although possibly a very small percentage, have not been as conscientious about their prescribing of the pills and examination of patients as they might have been. For these physicians, at least, and for their patients undoubtedly this purpose of the Hearings has been accomplished. But an important question is: Has this been *over*-accomplished? It is one thing to make sure women are aware of the statistical risk of thromboembolism, but it is another to frighten millions of women into worrying about a relationship between carcinoma and use of the pills when no such relationship has as yet been established. On the basis of comments I've heard from patients recently in our family planning clinics, I am convinced that these Hearings have led many women and their husbands to believe that oral contraceptive pills cause cancer. As a matter of fact, I suspect the Hearings have even led many *physicians* to believe that pills cause cancer. The fact of the matter is that no one knows whether or not pills cause cancer and it will undoubtedly take many years before any one *does* know, assuming a possible relationship can eventually be proved or disproved.

I would like to amplify this area of discussion a little further because I am certain the Honorable Senators as well as millions of people across the country do not really understand the difference between questioning a cause-and-effect relationship between pills and cancer and actually demonstrating that one exists.

In the early days of these Hearings, an eminent gynecologist spoke about the possibility of the pills causing cancer of the breast. As I recall the testimony, he spoke specifically about studies that were done on dogs and then gave the impression that it was reasonable to transpose the drug experiments to humans. Apparently, by mistake he suggested that one could make this assumption on the basis of the fact that all agents that are known to produce cancer in humans will also produce cancer in experimental animals. This statement could sound to the lay individual as a direct inference that if an agent

causes cancer in animals it will also cause it in humans, which is not actually the meaning of the statement. The statement simply indicated that if an agent does knowingly produce cancer in humans, when this agent is given to experimental animals, they will also develop cancer. The real question is actually the reverse: Do all agents that produce cancer in experimental animals also produce cancer in humans? The answer to that question is that it is not true that all agents producing cancer in experimental animals can be arbitrarily stated to produce these tumors in humans. As a matter of fact, certain agents may apparently produce cancer or tumors under one set of circumstances in a specific group of animals, even of the same strain or breed, while other groups exposed to the same agent may not develop these lesions.

A case very recently in point relates to the production of breast tumors in a group of beagles by one of the hormones present in a particular birth control pill. This agent, known as chlormadinone, was given in one series of experiments to a group of dogs (specifically, beagles) and a substantial percentage of these animals developed breast tunors, which, according to interpretation, may have been malignant. Because of these observations, the United States Food and Drug Administration removed this particular chemical from its list of approved experimental compounds for contraceptive study. This was done at a time when chlormadinone in the same dosage, used as a "mini-pill", had already been marketed for some time in England and, I believe, Canada and other countries. It has also been for several years a constituent of one of the major sequential oral contraceptives on the market in the United States. Of great interest here is the fact that on the basis of dosage in a given menstrual cycle, chlormadinone as a mini-pill, given at a dose of ½ mg. daily for 28 days (the average length of a menstrual cycle), would require a total of 14 mgs. per cycle. At the same time, chlormadinone in the present compound still on the market would provide 2 mgs. a day for 5 days in a sequential preparation for a total of 10 mgs. per cycle. In addition, the marketed preparation also provides .08 mgs. of mestranol daily for 20 days, one of the estrogens used in many contraceptives and an agent which has been accused by those claiming cancer is related to oral contraceptives as being the agent most likely to produce these tumors. In other words, we have a situation now in which 10 mgs. of chlormadinone may be used commercially per cycle by millions of women while in the experimental preparation which was apparently virtually on the verge of FDA approval, a total mini-pill dose per cycle, with no estrogen at all, was 14 mgs. I was told, when I questioned this, that beagles who had been treated with the marketed sequential product containing the estrogen developed no tumors of the breast. It might therefore be deduced that perhaps the added estrogen which some claim causes cancer, might have actually protected the animals against this. Either that, or the daily dose of a mini-amount of the progestogen was more carcinogenic than the intermittent, every fourth week dose of more concentrated amounts of the hormone along with daily estrogen. Here, again, we have an area where facts were obtained on the basis of experimental observations and these facts required interpretation which, despite their seeming lack of logic, led the FDA to remove the experimental drug from further study and permit the marketed preparation to remain available. Thus far, regardless of one's logic, this may seem purposeful in order to protect the public on the basis of observations that were suspicious. Yet, consider one additional piece of information that has just become known. Another company testing a similar hormone for a mini-pill, in addition to using non-treated control beagles also started for its own information another series of what might be termed "controls in therapy" and gave a similar set of their beagles chlormadinone in the same experimental design as described above and which had resulted in withdrawal of chlormadinone from the study. Strikingly, none of the chlormadinone-treated animals in this company's studies developed breast tumors!

These facts are important to note, not because they prove anything, but simply to illustrate how *extremely difficult it is to prove anything.* I would leave it to pathologists and those experts in veterinary medicine to explain why one group of the same animals under the same investigational conditions developed a substantial percentage of breast lesions while another group of the same animals under the same conditions failed to develop any. I would also wonder about the statistical validity of interpretation of positive findings in relatively small groups of animals.

So much for animals. Now let's go on briefly to the real issue—the question of the induction of cancer in humans by oral contraceptives. I would like to say at the beginning that I do not know the answer to this question, and I strongly believe that *no one* knows the answer. For this reason, I believe the entire subject should be treated not with exaggerated headlines and publicity but with a certain degree of circumspection. Unfortunately, this has not been the case. As I mentioned previously, these Hearings have also accomplished dissemination of an unproved fact: that pills are producing cancer. The Hearings have also apparently publicized an accusation that there is a vast conspiracy between drug companies, the American Medical Association, clinical investigators, and possibly practicing physicians, to conceal from the general public and from other physicians the fact that the pills are causing cancer. For example, early in these Hearings there was considerable press coverage of remarks suggesting that a clinical study emanating from a group of Planned Parenthood clinics in New York City and Memorial Hospital had been suppressed in the medical literature. It was suggested that suppression of the report of this study was instigated by the pharmaceutical companies, who because of their vested interests, were afraid that the publicity would result in a considerable drop in sales of birth control pills. As something of an "insider" in this matter, I would like to set the record straight.

First of all, studies designed to prove or disprove a relationship between any agent and cancer are extremely difficult to perform and sometimes virtually impossible. With use of tobacco dating back hundreds of years, it was only very recently that the United States Public Health Service felt that it had enough conclusive information to relate cigarette smoking with cancer. (It is my personal opinion that these Hearings might have served a far greater public service by concentrating on cigarettes and cancer, which is a problem of far greater magnitude than concentrating on the subject matter which has been before this committee the past several weeks—but that's a different story!) As far as the New York oral contraceptive study is concerned, this investigation was under the direction of Doctors Malemed and Dubrow. If there were any attempts to suppress publication of their report, this undoubtedly came from scientific areas and not from commercial interests. About two years ago these investigators accumulated data as a result of collaborative efforts in New York Planned Parenthood clinics. The reliability of the data depended to a certain extent on the veracity of women who were attending these clinics, the records of the clinics, the adequacy of patients' visits to the clinics, as well as adequacy of comparisons between pill users and non-pill users. Malemed and Dubrow reported their data at various local medical meetings (I believe in the New York area) and, as is usually the case, word got around that there had been an investigation completed which proved that the birth control pills were causing cancer of the cervix. Naturally, this information also reached the U.S. Food and Drug Administration, a federal agency which has often been unjustly maligned, and one which I believe has really done a remarkable job considering the limitations of its finances, as well as staff. The FDA promptly requested its Advisory Committee, led by Dr. Louis Hellman, who testified at these Hearings, to hold a meeting in Washington, inviting several groups of investigators who have had long-term experience with oral contraceptives in the hope that they would bring their data relative to the pills and carcinoma of the cervix. My understanding is that four groups of investigators were invited: the Malemed and Dubrow group which had the study in New York; those representing the Puerto Rico study, the first one done anywhere; a group led by an eminent pathologist, Dr. George Wied in Chicago; and our own group from Los Angeles, which has a study dating back to 1956—the longest in the United States per se, and one which started a short time after the Pincus, Rock and Garcia study in Puerto Rico. All were invited to present their data at the Advisory Committee meeting in the FDA offices in Washington. The only ones who came with data were Doctor Malemed with the material that he had been reporting and Doctor Moyer and me with our data. Present at the meeting were most of the members of the Advisory Committee along with FDA Commissioner Herbert Ley, as well as several members of his staff. Dr. Malemed presented his data and suggested that the information implied that women using birth control pills had a substantially increased risk of developing cancer of the cervix. We presented our data and after prior consultation with a number of statisticians as well as with members of the

National Institutes of Health, we gave the conclusion that despite a substantial amount of material and a lengthy period of observation, our data provided no conclusions at all. Word was also received that Dr. Wied had reached a similar conclusion concerning his own voluminous data and therefore had not come to present it.

Following the presentations at this meeting, several participants suggested that Dr. Malemed refrain from submitting his report for publication until he had more data himself, or at least until one other group anywhere had confirmed his conclusions on the basis of their own studies. Dr. Malemed objected to these recommendations and felt that the study should be published at least as a preliminary warning.

Following the meeting in Washington, it is my understanding that Dr. Malemed submitted his report to the Journal of the American Medical Association. As is customary, the J.A.M.A. distributes copies of any submitted articles to several consultants to determine whether it is suitable for publication. *My understanding is* that the Journal editors were advised not to accept the report for publication, primarily because of major questions concerning the interpretation of the data. Subsequently, the article was submitted to other major medical journals and similarly was not accepted in the United States. Finally, the authors submitted the article to one of the major medical journals in England and it was published in the British Medical Journal although there were significant modifications in the article that was finally published, as compared to the one originally submitted in the United States.

In short, there was no conspiracy to keep this report from publication, but rather an honest, scientific doubt as to whether the publication of a very preliminary and controversial report, in a major medical journal such as the J.A.M.A., would lend too much weight to the conclusions drawn. With our present rapid communications and the quick transfer of information published in scientific journals to the press and broadcasting media, conservative scientists felt that such a report might cause great hysteria, among women using the pills, as well as their husbands. This, of course, could be acceptable if the conclusions were really definitive but in the absence of combined informed opinion there was little justification in causing such a tremendous scare.

While I am on the subject of publication of articles and again referring to the so-called conspiracy between the J.A.M.A. and the drug industry and some physicians; I would like to relate briefly my own experiences with the J.A.M.A. For many years, I have served with no compensation as a consultant (as have other doctors) to the Journal in reviewing articles that are submitted for publication which happen to be in my own particular area of interest. Over the years, I have had a substantial number of reports referred to me for review and recommendation. In looking over my files, I find that beginning about 1960 when oral contraceptive reports began to be prepared in increasing numbers, and I was consulted because of our early studies, I have suggested that the J.A.M.A. publish substantially more articles relating to side-effects than those that related to pro-pill data. Appended to this report will be photocopies of excerpts of correspondence between the editors and me relating to several reports which were favorably reviewed by me and then accepted by the J.A.M.A., and, when published, related to pill side-effects.

Specifically, in reviewing some of these reports I find, for example, that in October 1962, an article was submitted for publication by Doctor David O. Weiner and associates, of Dallas, Texas, which was entitled "Phlebitis Developing While Under Treatment with Norethynodrel-Mestranol (Enovid). This referred to only a single case report, and my note reads: "I feel that this case report is an interesting one and merits publication particularly in view of the recent (lay) publicity concerning oral contraception and its possible relationship to thrombophlebitis." My review sheet states "Accept" and, I believe, this was one of the earliest medical reports to link the pills with thrombophlebitis. The report was accepted for publication by the Journal at that time.

In November 1963, there was a report submitted by Doctor Ervin Schatz, from Henry Ford Hospital in Detroit, also relating thromboembolism to oral contraceptives and my recommendation was this article be published with perhaps some slight editorial revisions that appeared necessary. It is my understanding that this article was also published with subsequent revisions suggested by the Journal.

Also in November 1963, there was a report submitted by Doctor Charles

Farris covering changes in the uterine lining under the influence of oral contraceptives and I again recommended the publication of this report.

In 1965, there was a critical article submitted to the J.A.M.A. entitled "Is Fertility Altered by Oral Contraception?" Here again, this article was accepted for publication but as a "Letter to the Editor" since it did not contain a great deal of original data.

In addition, in August 1964, there was an article by Robert Burtket of Cincinnati General Hospital, which was reviewed and accepted for publication relating to "The Incidence of Idiopathic Thromboembolism in Women."

In November 1966, an article was submitted from Scott Air Force Base by Doctor S. S. Resnick describing "Melasma Induced by Oral Contraceptive Drugs." This presented a possible new side effect and I recommended its publication.

In addition, more recently, February 1968, there was an article entitled "Ovulation Suppression, Psychological Functioning and Marital Adjustment" and this article was also accepted for publication.

These are just a few illustrations of some of the types of articles that were considered acceptable and that primarily dealt with problems of side effects related to use of the pills.

On other occasions where there were articles submitted relating to new modifications of present pills which did not seem to present any major scientific advances, and I went on record as suggesting that these not be published and in almost all instances the Editors went along with these recommendations. This, despite the fact, that their publication would have undoubtedly been desired by advertisers.

It is, therefore, I am sure most unfair for any statement to remain in the record implying that the J.A.M.A. had acted in any prejudicial fashion regarding publication of reports relating to oral contraceptives.

There are other major concerns that I have regarding the government's relationship to oral contraceptives and the lack of a keen interest in them, dating back to the start of these programs. It appears to me that during the several years since the introduction of oral contraceptives, government research funds have been extremely limited in the direction of exploring possible side effects. As a matter of fact, I am certain that the amount of money available from NIH for research into these fields was extremely limited and it was apparently felt that the pharmaceutical industry should take care of any other necessary studies on these medications even after they were approved for marketing. This might be to some extent reasonable if one were to assume that there was only limited numbers of women using a very specialized medication. On the other hand, when the numbers became so great that it appeared that only extensive studies on large population groups could provide meaningful information, this would have been a time for the government to step in and exert its influence as well as provide cooperation to investigators. My impression is that only in the last few years has there been any real government policy toward encouraging contraceptive research.

In addition, The Population Council and Ford Foundation which originally supported limited oral contraceptive research then decided that this was not in their field of interest and also indicated it was the drug industry's concern.

I will send you correspondence to verify each of these statements, should you indicate you would like copies.

At the time I started this report it appeared indefinite as to whether my testimony would be desired in Washington to present a more objective viewpoint than had appeared to date. Since I find that some of the recent presentations have made more sense it is unlikely that it will be necessary for me to come personally. Therefore, not knowing what use will be made of these written remarks, I will discontinue them at this point and simply indicate that if you should care to have more data for the records I would be glad to discuss in writing what I know about the FDA's attitude toward oral contraceptives over the past decade, as well as the WHO, where industry has stood, how the present coverage has to some extent been manipulated, how TV has very obviously taken sides and how, in general, this subject has become more of a political football than a matter for objective scientific evaluation.

Yours respectfully,

EDWARD T. TYLER, M.D.

Medical Director, Family Planning Centers of Greater Los Angeles.

(Enclosure omitted.)

Senator DOLE. One of the points Dr. Tyler raises is the need for more funds for research. We are generally in accord on this point on the Committee.

In his rather lengthy statement, he questions whether the hearings really serve a public good. In discussing that, there is a question I would like to ask. He says that the knowledgeable physician has likely not been negligent in advising his patients of the potential hazards—some of the hazards you have discussed.

On the other hand, no one will deny that a certain percentage of doctors, although possibly a very small percentage, have not been as consciencious about their prescribing of the pills and examination of patients as they might have been. For these physicians, at least, and for their patients undoubtedly their purpose of the hearings has been accomplished. But an important question is: Has this been *over*-accomplished? It is one thing to make sure women are aware of these statistical risks of thromboembolism, but it is another to frighten millions of women into worrying about a relationship between carcinoma and use of the pills when no such relationship has as yet been established.

Do you agree with the statement that there has been a relationship established between the use of the pills and carcinoma?

Dr. CUTLER. No, I said in my testimony there has been no definite evidence of that etiological relationship.

Senator DOLE. Dr. Tyler goes on,

On the basis of comments I've heard from patients recently in our family planning clinics, I am convinced that these hearings have led many women and their husbands to believe that all contraceptive pills cause cancer. As a matter of fact, I suspect the hearings have even led many physicians to believe that pills cause cancer. The fact of the matter is that no one knows whether or not pills cause cancer and it will undoubtedly take many years before anyone does know, assuming a possible relationship can eventually be proved or disproved.

Do you agree with that statement, no one does know if there is a relationship between the use of the pill and cancer?

I want to emphasize that point, because the first headline I read about these hearings was "Pill may Cause Cancer." I assume that you agree with that headline, it may or it may conceivably cause something else. But how do we give comfort to some of the people who have been frightened because of what may have been said or not said at the hearings? Is there anyway we can, except through more research?

Dr. CUTLER. Yes, of course. I am completely concerned about the fear that can be caused and to some extent has been caused among women with respect to cancer. As I said in my testimony, there is such tremendous fear about the disease itself that the mere mention of it in a newspaper or anywhere will cause alarm. However, I do not agree that because of that we should ignore these hazards.

These hazards are very definite. They have a considerable background and there is reason for concern. I hope very much that the news media will fully appreciate the importance of accurate reporting on this sensitive subject. I would hope that they will state that there is no definite evidence of a causative relationship between the pill and breast cancer, but that there is sufficient reason for concern, and I hope that they will point out that women with a positive history of breast cancer in the family should avoid the pill.

I should add that patients who have been operated on for removal of so-called benign tumors of the breast, in which the pathologist has been concerned about an overactivity of the cells under the microscope, should be considered in the high risk group.

I think we simply have to realize that there is reason for concern and do everything we can not to frighten the public by emphasizing that there has been no proof.

Senator DOLE. Do you think the physician generally is aware of the point you made in your testimony that where there is a history, family history of breast cancer, that the pill should not be prescribed? Is that general information or is it something new this morning?

Dr. CUTLER. That depends on the gynecologist. Many of my gynecological colleagues have called me over the years to ask whether a certain patient whom we are taking care of mutually should have the pill. I cannot say how widespread this knowledge is, it certainly is not new this morning, nor is it common knowledge among the profession.

Senator DOLE. That is a good point. As far as I know it has not been called to our attention previously, and it is something that should be conveyed at least to the physician, the gynecologist, who prescribes the pill.

You summarized quite well—that it is neither a panacea nor should it be condemned out of hand. You also indicate on page 10, that probably the potential risk can be controlled, minimized, or perhaps even eliminated. I assume it is to be inferred from your statement that with more research we can achieve this goal. How do you eliminate the risks?

Dr. CUTLER. Only by more research, and there are many avenues, clear cut areas, in which important information can be gleaned even before these many years pass from epidemiological studies. Hopefully, two things, one is that some information will come along as a result of research within the next few years that will give us some lead as to which way we are going and, of course, the other, hopefully, is that something altogether new in a contraceptive will come which will be more safe than anything we have now.

Senator DOLE. There has been a Corfman-Siegel study. Would additional studies of this type be helpful?

Dr. CUTLER. Yes. The Corfman study is extremely helpful and a very important epidemiological contribution. You see, epidemiology has become a science only in the last 8 or 10 years. Before that time, the results of some statistical studies have been quite uncertain. In recent years, epidemiological studies are far more scientific and more accurate and more reliable. And it is upon these that we really have to base our ultimate conclusions.

Senator DOLE. Thank you, Mr. Chairman.

Senator MCINTYRE. Doctor, back on page 6 you point out that recent progress in X-ray techniques have led to the detection of breast cancers that are too small to be detected manually, and for this reason you recommend that users of oral contraceptives have periodic X-ray examinations of the breast; I take it, along with other recommendations that you are making here about low estrogen content of the pill, trying to control the period for which it is taken,

along with this indication that a family history of cancer of the breast should constitute a red flag indicating that the pill is not a first-choice contraceptive.

Now, on this X-ray of the breast, do you have any idea of the frequency with which this is being done now?

Dr. CUTLER. It is being done very frequently. X-ray examination of the breast has been known for some 30 years. But it is only in the last 10 years and more particularly, in the last 5 years, where the technique has improved to such a degree and the accuracy of interpretation has improved that it has become widely used. Very often, when a doctor does not recommend a mammogram, the patient will come in and ask for one. It is being widely used and more and more used. And it is still in its relative infancy. There are improvements going on almost every month in the apparatus and technique and interpretation, and we can hope for much more accuracy as time goes on.

Senator MCINTYRE. Would you be able to state how frequently it is being done in women who are users of the pill?

Dr. CUTLER. Whether it is being done more often with users?

Senator MCINTYRE. Yes.

Dr. CUTLER. I have no knowledge of that. I do not know. I have recommended that it be used among my patients and friends and colleagues.

Senator MCINTYRE. Thank you very much, Doctor.

Senator NELSON. Well, for a patient on the sustained dosage of estrogens, how often would you yourself recommend that there be a mammogram done?

Dr. CUTLER. How often should it be done? Well, I think that it would be very wise if it could be done once a year. That is not too often to be concerned about any exposure to X-rays. And I think it would be very useful. There are many of us who recommend annual mammograms even for those who are not taking the pill.

Senator NELSON. So you recommend in your testimony that a user of the oral contraceptive have a regular physical exam, which includes a breast examination. How often are you suggesting that the regular exam be given?

Dr. CUTLER. Most physicians and much of the teaching speak of annual examinations. Now, I have been doing this work for some 40 years and I have always recommended to my patients that they have their breasts examined a minimum of twice a year, preferably four times a year. And I do that because it is not infrequent when I see a patient 6 months after a previous examination, to find a cancer of the breast. Actually, I have currently under my care approximately 1,000 patients who come regularly every 3 or 4 months.

I also find that the reassurance that they get from this examination seems to be great, evidenced by the fact that they keep coming back year after year. I do find many early cancers by this method.

Senator NELSON. Many what?

Dr. CUTLER. I do discover many cancers in their early stages by these frequent examinations.

Senator NELSON. I was wondering if you understood my question correctly, when I inquired what the recommendation would be for physical examination which would include breast examination of a

user of an oral contraceptive. I do not know whether you are saying this is a routine examination of a patient of yours who is not under oral contraceptive or one who was. All of the testimony, save two witnesses, has said every 6 months. One of them said 6 to 7 or 8 months. One doctor, a specialist in the vascular area, said once every 3 months. Doctor Kistner said once every 12 months.

Dr. CUTLER. What is your question, sir?

Senator NELSON. My question is, how often would you recommend a physical for somebody on oral contraceptives, you replied, for most people once a year. I was wondering whether you had understood my question. Were you simply referring to how often somebody ought to have a breast examination whether or not they are on oral contraceptives?

Dr. CUTLER. Yes. The frequency with which a patient should be examined, the opinions of the profession on that question vary widely as you have already indicated, whether they take the pill or not. It is a matter of philosophy as to how often a patient should go to their doctor with respect to cancer. Again, in the early part of the century, the American society for the control of cancer, which is now called the American Cancer Society, took the leadership in urging people to have periodic cancer examinations. The British have never agreed to that even to this day.

I think that insofar as patients who are taking the oral contraceptives, and insofar as the breast is concerned, I think that examination of the breast, at least twice a year, would be a logical procedure.

I think that also depends a little bit on the patient's age. You see, cancer of the breast is almost unknown under the age of 25. They are rare between 25 and 30. So I think the frequency with which such examinations are done, including X-rays, would depend a little bit upon the age of the patient. Certainly, a patient with a positive family history of breast cancer should be examined every 3 months.

Senator NELSON. Thank you very much, Doctor. We appreciate your taking your time to come this morning.

Dr. Anna Southam, of the Department of Obstetrics and Gynecology, College of Physicians and Surgeons, Columbia University, called to say she was unable to appear this morning. She requested permission to file along with her statement a supplementary statement. That will be printed in full in the record.

(The information follows:)

STATEMENT BY ANNA L. SOUTHAM, M.D., LECTURER IN OBSTETRICS AND GYNECOLOGY, COLLEGE OF PHYSICIANS & SURGEONS, COLUMBIA UNIVERSITY, NEW YORK, N.Y.

I am Anna L. Southam and I testify before this Subcommittee on the written invitation of Senator Gaylord Nelson. The views I express are my own and not those of the institutions with which I am affiliated.

As a member of the faculty of the Department of Obstetrics and Gynecology of Columbia University's College of Physicians & Surgeons, I have been involved in the clinical evaluation of the synthetic steroids used in birth control pills since 1955. I have carefully followed the literature relating to the metabolic and pathologic effects of oral contraception which was reviewed before this Subcommittee during January.

Although birth control pills have been used in clinical trials beginning in 1956 and were approved for marketing in the United States in 1960, it is

impossible to find a group of users who have taken oral contraception long enough to allow for epidemiologic studies or statistical analysis of side effects. Half of all women who start using oral contraceptives discontinue the method before one year of use. In some studies half discontinue in less than six months. The number of women using oral contraception for two years or more has been too small to permit meaningful studies. Hence, the long-term effects of the medication have yet to be determined and are relevant to few users.

Polls taken after the January Nelson Subcommittee indicate that 40 percent of United States women currently using oral contraception have been disturbed because unfavorable comments in the lay press during last month's Senate hearings led them to conclude that the pills were a serious hazard to health.

The known side effects and complications of oral contraception are being continually monitored by task forces, groups of experts advising the United States Food and Drug Administration. Two reports, one published in 1966 and one in 1969, report the current state of knowledge and advise specific studies. The reports have been distributed to the medical community of the United States. The World Health Organization has likewise convened groups of experts and distributed technical bulletins to the world medical community. I maintain, therefore, that physicians have been adequately informed and possess the information necessary to make the proper decision concerning the prescription of oral contraceptives.

The rash of books and articles written by non-medical science writers for the most part tend to be sensational rather than scientific and are a disservice to the consumer, who should depend on her physician for advice.

The pharmaceutical industry, I believe, has been conscientious in reporting side effects. There is a need, however, for a systematic and collaborative evaluation of the effects of hormonal contraceptive agents. An admirable example of an evaluation of a new contraceptive is the collaborative statistical study of intrauterine devices organized on a world wide basis by a private agency, the Population Council, in 1962. This study led to the rapid accumulation of significant information on the effectiveness, acceptability and risks associated with intrauterine contraception.

Hormonal contraceptives are important drugs for the treatment of gynecological abnormalities. Cyclic administration will control abnormal bleeding and painful menstruation. Continuous administration will prevent the pain due to endometriosis which is usually associated with menstrual periods. There is no evidence that these preparations have a beneficial effect on infertility. They have been used in attempts to prevent threatened or habitual abortion, but convincing evidence of effectiveness is lacking.

Oral contraceptives prevent ovulation and do so at the level of the central nervous system. Thus, the entire metabolism of the individual may be affected. We believe the ideal contraceptive should interfere with some peripheral reproductive event such as fertilization or implantation. The need for funds to support research leading to the development of new contraceptives is urgent. Until the time when we have simpler methods, however, I plead with the women of the world to calmly rely on the advice of their physicians concerning the contraceptive of choice. I beg the press to report accurately or not at all. No new information was disclosed during the January hearings, and there is no cause for panic.

SUPPLEMENTAL STATEMENT OF DR. ANNA L. SOUTHAM

The continuation rates quoted apply to foreign users chiefly from Asian countries. Continuation rates in the United States are somewhat better, particularly if medical follow-up is good.

The Indian Council of Medical Research has evaluated the reports issuing from the Monopoly Subcommittee on the adverse effect of oral contraceptive pills. Expert consultants in India are not impressed by data that have been presented. They have conducted their own studies and feel that the oral contraceptives are safe to use.

Senator NELSON. Our next witness will be Gen. William H. Draper, Jr., Honorary Chairman, Population Crisis Committee,

Washington, D.C.; accompanied by Mrs. Phyllis Piotrow, secretary and member of the board, Population Crisis Committee.

We are very pleased to have both of you here before the committee today and we are well aware of the fine contribution to the public that your organization and the people in it are making.

You may present your statement however you desire. It will be printed in full in the record.

STATEMENT OF GEN. WILLIAM H. DRAPER, JR., HONORARY CHAIRMAN, POPULATION CRISIS COMMITTEE, WASHINGTON, D.C.; ACCOMPANIED BY MRS. PHYLLIS PIOTROW, SECRETARY AND MEMBER OF THE BOARD OF DIRECTORS, POPULATION CRISIS COMMITTEE

General DRAPER. Mr. Chairman and Senators.

My name is William H. Draper, Jr. I appreciate very much indeed the privilege and courtesy of being invited to appear here today, but before testifying and with your permission, I should like to introduce Mrs. Phyllis Piotrow, who, as you have said, is the secretary and a member of the board of directors of the Population Crisis Committee.

For the past 5 years and until very recently, she was also executive director of the committee. Prior to that, she had been legislative assistant to two Senators, Senator McGovern and Senator Keating. I should add that her work as executive director of the Population Crisis Committee has resulted very largely indeed in whatever success our work has accomplished.

She is married, has two children, her husband is Dean of the School of International Service at American University.

I think it is particularly appropriate that this important question before this committee be discussed from a woman's point of view. Obviously, whatever risks are entailed because of childbirth or from using the pill are not borne by any of us men, and I think that the point of view of a woman, particularly one who is as qualified as Mrs. Piotrow is in this particular field, would be useful to your committee.

Mrs. Piotrow.

Mrs. PIOTROW. Thank you, General Draper.

Mr. Chairman, I appreciate your invitation to appear with General Draper and comment upon some of the issues which have arisen or may arise in connection with the use of oral contraceptives.

My name is Phyllis Piotrow. As indicated, I formerly served as executive director of the Population Crisis Committee, and am currently studying and doing research on a fellowship at Johns Hopkins University. I have been married for 14 years and have two children.

The testimony which was presented before this committee during the initial hearings in January, and somewhat later, can be divided into five general categories:

1. There was technical testimony from scientific researchers which indicated a number of specific abnormalities that might be associated with use of oral contraceptives, including delayed return of fertility,

genetic or teratogenic effects, rheumatoid complications, thromboembolism, liver, blood and metabolic changes. Some of these effects have actually been recorded in a small number of cases, others are merely suspected. Virtually all of these witnesses strongly recommended that further research be undertaken to determine whether these apparent associations were real, what the actual hazards might be, and how the vulnerable patients might be identified.

2. There was repetition of the arguments, many of which have been repeated for a decade, that steroids may either cause or prevent cancer. In the absence of any evidence whatsoever of human cancer due to oral contraceptives and in light of the long latent period of development of many cancers, both sides admit that the argument cannot be settled upon existing data and that additional research is needed to answer this most disturbing question raised.

3. There were several witnesses who were critical of the promotional material and other activities of drug companies in downgrading certain data or reported adverse reactions to oral contraceptives. Here, too, further research plus full and objective reporting of results is necessary.

4. There were witnesses who spoke more generally, in terms of the broad perspectives of pregnancy, of other contraceptives available, and of the need to weigh benefit and risk in each case. Because little is really known of how oral contraceptives—or most drugs, in fact—actually operate, to weigh a known benefit against an unknown risk is not a simple task—even when the risk is not demonstrably great.

5. There were, unfortunately, also charges made which, although supported by no new data, have in fact aroused considerable new anxiety among the 20 million women on five continents estimated to be using oral contraceptives. I would like, if I may, to include following this testimony an article from the New York Times of February 15, 1970, reporting an increase in unwanted pregnancies among women who discontinued use of orals because of widely circulated news stories and reports of possible danger.

Senator NELSON. May I ask a question at this stage.

This is an article from February 15, New York Times?

Mrs. PIOTROW. Yes, sir, it is.

Senator NELSON. What puzzles me is that that is 31 days after hearings started. I wonder how they accumulate these statistics of pregnancy since stopping the pill for such a short period?

Mrs. PIOTROW. I imagine that as soon as the women think they may be pregnant they go to the doctors rather promptly.

Senator NELSON. The story had to be researched, they had to go find some basis for this story, so at best you had a pregnant woman in 20 days or so.

It puzzles me the way these stories are thrown around by doctors who have no statistics and no proof, asserting that pregnancies occurred and some of them were asserting it within 14 days after the hearings had started. I think it indicates careless and hysterical comments by the medical profession. One doctor got out his computer and said this will cause 100,000 babies. They did not comment on the fact that, as Dr. Connell said last week, they had 116, I guess it was, requests, to transfer to another contraceptive.

You assume because somebody quits an oral contraceptive that she does not go to something else. And to assume everybody who quits is never going to use anything else and therefore becomes pregnant, is a pretty careless piece of reporting, it seems to me. I am puzzled about a New York Times piece that was printed in the paper stating statistics on pregnancies, which they would have had to gather within 20 days after the hearing started.

Mrs. PIOTROW. There have been subsequent articles which I would be glad to gather for the record, if you wish, Senator. The subsequent ones may be based on additional data.

You mention the computer. Actually, the estimate of 100,000 births is rather conservative. The figure suggested is that 1.7 million women may have discontinued oral contraceptives, which on the face of it might look like about 1.7 million births. It is by calculating this downward and by considering the relative effectiveness of various other means of contraceptives that one arrives at a figure that is no larger than 100,000 when you are dealing with 1.7 million women.

I could, if you wish, go into a little more detail as to how that figure is arrived at. It is, of course, an estimate. Only time will tell the exact number.

Senator NELSON. Well, what baffles me a bit is that the Newsweek article starts out saying their survey showed 18 percent quitting the pill, and that 6 percent of those said they were quitting the pill because of the hearings. Dr. Guttmacher testifies that 18 percent quit because of the hearings, using the same survey of Newsweek.

So, Dr. Guttmacher, whose profession is this field, was misleading the country by three times the percentage that Newsweek had. The people who believe in planned parenthood are being scared to death by statistics which are imagined.

I would like to point out that 6 percent of the women are quitting the pill. We do not know how many transferred to a diaphragm or IUD, but certainly if they were motivated to take the pill, they would go to something else, at least a high percentage would.

I would like to have you address yourself to these statistics, if 100,000 people—which I extrapolate from the 6-percent figure—100,000 are going to have an unwanted baby, which I think is nonsense, but let us assume it is correct—let me quote to you from Dr. Hugh Davis, and then you tell me how many people are getting pregnant by quitting on their own. And that had nothing to do with the hearings.

Dr. Hugh Davis quoted from a Chicago study that: "Frank found that 40 percent of those patients started on oral contraceptives abandoned the method within 2 months."

And then, in Maryland's Planned Parenthood Clinic, "Half the pill patients abandoned the method in less than a year."

So if you have half of the people in America starting the pill, quitting in a year, how many of them got pregnant because of the hearings? All of this occurred before the hearings. Could we not have for the record the extrapolation of the planned parenthood and population crisis people of the disaster that is occurring because women voluntarily quit the pill? I think it would help put the hearings in balance, which we have been trying to do here for so long.

Mrs. PIOTROW. I would say two things. First of all, we are extrapolating now, but with pregnancy, you do not have to extrapolate forever. Within 9 months the figures will be available. So we may have a scholarly dispute at this point as to what the precise figures are. We will know in the fall. It will be possible to determine from the seasonally adjusted birth rates, adjusting for trends and for monthly differences.

It will be possible to determine within a fair margin how many babies born, for instance, in the last 3 months of 1970, might conceivably be traced to these hearings.

So we can argue now, but this is not something we have to wait 10 years to have an answer on. We will have an answer before that.

Secondly, I would say that I am not entirely sure how others arrived at their figure of 100,000 births. The way I arrived at it, and I saw later that others had arrived at it, too—was to figure approximately 1.7, 1.8 million women discontinuing pills. Now, we do not even know precisely from the existing data how many women are taking pills now because there is no count of patients. It is only a count of how many pills drug companies think they are selling. There is no actual count of women taking them, so that this amounts to an estimate.

But if there are approximately 1.8 million women taking pills who discontinue taking pills because of publicity, and this comes from a survey, whether you rely on survey data generally or not——

Senator NELSON. What survey was that?

Mrs. PIOTROW. That was a Gallup survey that was reprinted in Newsweek.

Senator NELSON. What did that survey say?

Mrs. PIOTROW. That survey, I believe, indicated that 18 percent of those taking oral contraceptives had discontinued and another 23 percent might discontinue.

Senator NELSON. Because of these hearings?

Mrs. PIOTROW. Yes. I do not count those 23 percent who might discontinue. I do not know what that means. And I do not know the precise methods by which the survey was conducted. But I think Gallup surveys are fairly well thought of in the survey field.

Senator NELSON. This is the point I made a few minutes ago: that the planned parenthood people and population crisis people, by misstating the facts, are frightening people who believe in population control. The Gallup survey did not say that 18 percent of the women were quitting the pill because of the hearings.

All you have to do is read the article. Dr. Guttmacher apparently did not understand the article either. It was very simple. They said one-third of those surveyed of the 18 percent who said they were quitting the pill did so because of the hearings. That is 6 percent, not 18 percent.

I think it is a dangerous business for responsible organizations to exaggerate the statistics.

Mrs. PIOTROW. I have here from the report that appeared in the New York Times giving these figures: "Polls indicate that 18 percent of pill users—or about 1.7 million women—have dropped the pill as the result of these adverse reports."

This is a story by Jane Brody that appeared in the New York Times.

Senator NELSON. Was that based on the Newsweek survey?

Mrs. PIOTROW. The date of this was February 22, 1970, and it appeared in the medicine section of the News of the Week of the New York Times.

General DRAPER. May I read into the record, Senator, from Newsweek, which reports the Gallup survey.

The result was an eyeopener. Largely because all of the recent publicity, 18 percent of the 8.5 million U.S. women on the pill, nearly 1 in 5 say they have stopped using it altogether. In addition, 23 percent say they are giving serious consideration to quitting.

This says largely because of the recent publicity.

Senator NELSON. Doesn't it say in there that one-third of the 18 percent said they were quitting on account of the publicity of the hearings?

General DRAPER. I do not find it; it may be.

Senator NELSON. That is the Newsweek article?

General DRAPER. I will read it again.

Senator NELSON. What is that from?

General DRAPER. Newsweek reporting the Gallup poll. Newsweek had the Gallup poll made.

"The result was an eyeopener. Largely because of all of the recent publicity"—there was publicity besides the committee hearings, I realize—"18 percent of the 8.5 million U.S. women on the pill, nearly 1 in 5 say they have stopped using it altogether. In addition, 23 percent say they are giving serious consideration to quitting."

Senator NELSON. May I see that a moment? I am not familiar with that one.

General DRAPER. This is a Xeroxed copy of the Newsweek article.

Senator DOLE. I do not think they were asked precisely Mr. Chairman, whether or not they were stopping the pill because of the hearings. There has been some publicity about these hearings.

Senator NELSON. Now, this is the same article I read in Newsweek, but I am in the habit, if I am interested, in reading the whole article. It says a small number of women say they have given them up for no particular reason, but the biggest single group of defectors—roughly one-third—said their doubts about the pill were directly related to the hearings.

I calculate one-third of 18 would be six. All I am saying is that I think that the public should not be frightened by misrepresenting statistics as newspapers and reporters and readers have been doing.

One-third said their stopping the pill was related to the hearing. But that is one-third of 18 percent.

I would hope that people who write about it would at least get their facts straight and people whose full-time business it is to be informed about this question would be careful enough to come in and recite accurate statistics. I do not think it is unreasonable to expect.

General DRAPER. But, Senator, may I point out that long before the hearings were started there were stories and news reports and television programs related to this subject. I do not say that they all

came from the hearings. It results largely because of the publicity which was not only at the hearings.

There was a good deal of it before the hearings, as you know, and then it goes on.

Senator NELSON. I do not have the total, you know.

General DRAPER. I am not blaming anyone, and I have not, nor has Mrs. Piotrow.

Senator NELSON. But I would like to point out, I think the story is misleading when it says largely due to the hearings, and then they qualify it by saying——

General DRAPER. Largely due to the publicity.

Senator NELSON. They qualify it by getting down further in the article and saying one-third of the women attribute it to the hearings.

Let us take that piece of careless reporting, which it is, which states that 18 percent were quitting the pill and then qualify it by saying but only one-third said it was attributed to the hearings.

These statistics, then, suggest the following question: How many of that 18 percent and how many of the 23 percent who are thinking of quitting are in the category who quit automatically? According to Dr. Hugh Davis, in a Chicago study by Frank, 40 percent of those patients started on the pill abandoned the method within 2 months, and then in the Maryland Planned Parenthood Clinic half the pill patients quit in less than a year. These high percentages of drop outs are not related to the hearings.

Now, I think you ought to include these statistics on how many pregnancies result from such a situation. When you get 50 percent quitting, that is about 900,000. So there are 900,000 unwanted pregnancies occurring as a result of women voluntarily quitting before the hearings were ever heard of. Is that right?

Mrs. PIOTROW. You heard testimony already, I believe, indicating that every year there are something like 750,000 unwanted pregnancies, in addition to the ones that may arrive this year, which can be attributed basically, I think, to the lack of really adequate, completely effective means of birth control, and to the fact that abortion is unfortunately illegal in many States. Women who become pregnant because of contraceptive failure or because they stop taking pills, or stop some other method, because they may be nervous, have no recourse whatsoever.

There are admittedly—and I would be happy to emphasize this for the record—a very large number of unwanted children because of the failure of one kind of method or another. But I think that the facts—I would be prepared to predict that in 9 months, the facts will show that there will be more unwanted babies in the last 3 months of this year than previously. And whether you want to call these babies "Nelson babies" because they were caused by these committee hearings, or whether you want to call them unwanted babies for some other reason, to me that makes less difference than the tragedy of unwanted children being born altogether.

And anything which contributes in any way to unwanted children being born to families that do not want them and do not love them

and are not able to take care of them, from a woman's point of view that is a tragedy.

Senator NELSON. What baffles me is that people are so excited about 6 percent quitting but unconcerned and not even reciting the statistics of 50 percent who quit voluntarily. I think there has been a rather great con game played on the American public, that you have a perfectly safe pill, that it works perfectly, and that you were controlling population growth with it when half the people stop taking it voluntarily.

Tremendous excitement when 6 percent quit, when they are getting some information that they should have had in the first place and if they had had it, they would not be frightened. They would already have known.

According to the same Newsweek article, two-thirds of the women said they were told nothing about side effects. Practically every single expert we have had, save for Dr. Guttmacher, have said they ought to be told, informed about the pill. Dr. Edwards sent a letter to 324,000 doctors saying, you should tell them about the pill.

Now, if these two-thirds who were never told anything had been told what the other one-third apparently had been told, then when the truth came out they would not have been frightened, would they?

Mrs. PIOTROW. Senator, you say this excitement is new. I have been excited about this issue for the past 5 years. That is why I am working in this field.

Senator NELSON. So have I.

Mrs. PIOTROW. I have been working in this field for the last 5 years. We have been urging more research, better family planning services, in order to eliminate this large number of unwanted children. I have been excited about this a long time and I am delighted you are excited about it, too, now. Nothing pleases us more than to see the degree of concern and excitement and despair over this problem of unwanted children and unwanted pregnancies. I would certainly hope one of the really constructive results of this hearing would be that the concern over the inadequacy of existing birth control methods would lead towards additional research and better methods in this field, better than the existing pills, better than any of the existing methods.

My concern is not that this pill, that these pills were the best method that exist in the world and should be taken by women forever; my concern is that the situation for women today, with alarming reports in the papers that are very difficult to assess, is creating an increase in the number of unwanted children.

Senator NELSON. I understood you to say my interest is sudden. I might say that for a good many years I have been speaking and have spoken in over half of the States of the Union, saying that the disaster that is coming is overpopulation. It is a disaster right now. America is overpopulated probably by 100 million. We have demonstrated our incapacity to preserve a decent environment for 200 million, and it will be a catastrophe at 300 million, which is surely coming.

What is disturbing to me is to see all of these attacks on the hearings upon the grounds that the public is being told what the facts are. The argument seems to be that the public should not have the facts, therefore, we should not have hearings.

There are serious problems with the pill and they do not want it publicized because it will frighten people. Some of the facts about the pill are of great concern to individuals, and they ought to be told, and that is one of the things these hearings are about.

And if anybody thinks that this pill, which is in about the model T stage in this field, is the solution to the world's population problems, it is nonsense.

If we do not get this out in the open and if, unfortunately, some very substantial and serious side effects develop that are not now specifically known, leaving out carcinoma—just say metabolic imbalances that create a serious problem for women for the last 20 years in their life—if that occurred—and nobody knows that it will not, and the FDA report is very concerned about it—if it does occur, it will wipe out all birth control pills all over the world all at once. It is a whole lot better to have 6 percent of them fussing and worrying now and get at the business of having the public understand the issue and get the money for the research and do something about expanding studies for planned parenthood and research in this field, than to run around concerned only about the fright which occurred when you start telling the American women the truth—facts they should have been told 10 years ago.

That is my view.

Senator DOLE. Mrs. Piotrow, did you say 100,000 even at 6 percent? I do not want to take any credit from the Chairman. You referred to them as "Nelson babies" and that is all right with me. Do you consider that a conservative estimate?

Mrs. PIOTROW. I arrive at the figure 100,000 babies on the estimate that two-thirds of the women who had discontinued pills manage to find some other effective method and do not become pregnant. That is a fairly conservative estimate, that two-thirds of the women who stopped taking orals managed to avoid pregnancy some other way. I was only considering on the basis of one-third of those who discontinued, which is 600,000 women. One-third of those were then being exposed to pregnancy for a period of 3 months.

And again, figuring conservatively, the 600,000 women are exposed to pregnancy for a period of 3 months when the likelihood is about 80 percent for married women at risk to become pregnant over a 12-month period. Over 3 months, there would be a 20-percent chance of becoming pregnant, so that would be about 120,000 pregnancies. I would assume a considerable number of those would not lead to births, either because of spontaneous miscarriages or, in a great many cases, abortion, even though it is not legal.

So when I get the figure down to 100,000 unwanted births in 1970, that is conservative. One could say it was going to be 1.6 million. But I think the figure 100,000 is probably a conservative figure for this particular group that may be the result of these hearings, Nelson subcommittee babies.

Senator DOLE. There is no doubt in my mind that the hearings have had a profound effect on American women and also some physicians all over the country.

There has been a profound impact, and I placed in the record earlier this morning the most recent Gallup poll, and I am not certain what a poll would show today insofar as the number who have stopped using the pill. It may be higher than 18 percent for various reasons, maybe lower. There is nothing we can do about what happened the first few days of these hearings. Since that time the hearings have been more balanced, and both pros and cons have been presented.

But the first headline I saw following the January 14 hearing was "The Pill May Cause Cancer." Well, that word, as has been pointed out by Dr. Cutler and others, frightens everyone. You should read the entire article as the Chairman pointed out, but many people do not—they read the bold print, they read the headline, and they never read the balance of the story.

But I would hope that when we complete our hearings that we will publish the results of the committee's findings in a balanced way, so we can set the record straight.

General DRAPER. Mr. Chairman, could I comment?

I have never attacked the hearings. My own point of view at this stage of the hearings is that for the shortrange probably there will be considerable increase in unwanted births. But my own conviction is that the long-range effect of these hearings will be constructive and in the interest of the American people, because I think for the first time throughout the country with adequate publicity, it has been brought home to the American people and I am sure to the Congress that there has been inadequate research in this field.

I think our Government, both the executive branch, and I should say the Congress, too, largely because of lack of information and lack of publicity on this problem, have been derelict in not furnishing the funds or asking for the funds on the part of the executive branch to carry out adequate research and contraceptive sidelights.

Senator NELSON. I thank you very much, General, for that statement. The reason I talk so much here is I am about the only one in the United States defending the hearings. I might say in retrospect that if we could back up to January 14, I would start them again, because I think it is in the interest of the public, for which you and I are concerned, and I appreciate your comments on that matter.

Mrs. PIOTROW. Shall I continue?

From a woman's point of view there are several issues which stand out in this controversy and which have not been sufficiently emphasized, perhaps because most of the initial witnesses were men.

First and foremost, it is a biological fact that all the mortality associated with human reproduction is borne by the female. There are no male fatalities from pregnancy or childbirth. Yet, every woman must face this risk in one way or another. For married women, the choice is either to practice some form of birth control or to bear the 10–12 children estimated to be the natural reproductive capacity of a healthy female married from ages 15 to 45.[1]

[1] Christopher Tietze, "Pregnancy Rates and Birth Rates," Population Studies July 1962, p. 31.

Until this century, it was natural for women to bear many children and it was necessary for women to take these risks to assure survival of the human race. It was also considered natural for many, many women to die in childbirth and it was natural for men and women both to have a life expectancy well under 50 years. Even today it is still common to see high mortality from childbirth and relatively low life expectancies in most of the world.

In the United States, and in other developed countries, people enjoy the unnatural but great benefits of potable drinking water, immunization, antibiotics, advanced medical care, nutritious diet, well-heated homes, and a variety of modern improvements which have unquestionably produced a greater life expectancy than any previous generation of human beings has ever enjoyed. If that longevity is in danger today, if it is threatened—as I believe it may be—by increasing pollution of air and water, the basic cause is rapid multiplication of the human race over the last half century.

And I would certainly commend the Chairman of this committee for the many statements he has made recognizing that challenge. He has indeed been a pioneer in that respect.

From a woman's point of view then, whether looking at the health and economic needs of her own family or the broader challenges to all of society, the argument that it is natural to have children and unnatural to take oral contraceptives does not seem very convincing Actually, women have been looking for an orally administered contraceptive for thousands of years and there is no doubt at all that the present ones are safer and more effective than any previously available.[2]

I might add that the greatest biological experiment that most women undertake throughout their whole lives is not contraception but pregnancy itself, and the decision to seek pregnancy is usually made without any consultation with a physician at all.

Secondly, and again from a woman's point of view, I am glad to note the genuine and growing concern over female morbidity and mortality, especially during the years when women are most involved in having and raising a family. In this connection, it is appropriate to mention that, among the complications associated with pregnancy and childbearing, it is widely estimated that a major cause of death is abortion—either self-induced abortion or what is currently described as criminal abortion.

There may be as many as 1 million so-called criminal abortions every year in the United States—abortions undertaken by women who so desperately want to avoid childbirth that they seriously risk and often lose their lives. In Atlanta, a study showed that 22 percent of maternal mortality was associated with criminal abortion. Some cities had rates twice as high—the National Institute of Mental Health suggests—although official vital statistics reveal a

[2] B. E. Finch, H. Green, *"Contraception Through the Ages,"* Springfield, Ill., Charles C. Thomas, 1963, p. 88. "One of the earliest mentions of a metallic contraceptive originates from the Chinese *Book of Changes* which dates from 2736 B.C." See also N. Hines, *Medical History of Contraception,* New York, Gamut Press, 1963, p. 109.

rate of 2.4 deaths per 100,000 live births for whites, and 13.2 maternal deaths for nonwhites.[3]

As usual, nonwhites are more often the victims. Throughout the world it has been estimated that there may be as many as 25 million illegal abortions annually.

I have here a table on the relative risk of mortality for American females. The figures are derived from the British study, and more or less confirmed by the American one. They suggest that the use of oral contraceptives lead to an excess of maternal mortality of three deaths per 100,000 users of oral contraceptives.

Senator NELSON. I do not quite understand that. What is the cause of the death in that case?

Mrs. PIOTROW. This is the thromboembolism studies to date. There have been no other proven causes of death from oral contraceptives at all, to my knowledge, but there are, as indicated, some suspicions.

Secondly, complications of pregnancy, childbirth, and puerperium, and excluding abortion, can be estimated at approximately 20 deaths per 100,000 pregnancies. This excludes abortion deaths and the denominator is pregnancies rather than live births. So it is a somewhat smaller ratio than the ordinary rate for maternal mortality in the United States.

Then the figure for criminal abortions performed out of hospital by lay abortionists is estimated by Dr. Tietze—because these figures cannot be completely solid—as 100 deaths per 100,000 abortions.

So the differential risk in taking oral contraceptives, becoming pregnant and having an abortion, I think, stand out as well as one can deal with this kind of admittedly unsatisfactory statistics at this time.

Mr. GORDON. May I interrupt at this time?

Concerning the 20 deaths for 100,000 pregnancies, complication of pregnancy, childbirth, and puerperium, have you a breakdown for the income groups on that?

In other words, would it be the same for healthy women with good medical attention and good prenatal/postnatal attention? This figure is an average, is it not?

Mrs. PIOTROW. For both mortalities from abortion and complications of pregnancy, there would be probably a considerable differential based on socioeconomic status, which is reflected in the health condition of the woman as well as the services available. I will be glad to provide those figures for the record.

Mr. GORDON. I think it would be very good, Mr. Chairman.

Senator NELSON. Fine.

(The information to be furnished, above-referred to, follows:)

Maternal mortality rates broken down exclusively by social and economic status are not available. Maternal mortality by State, broken down by race, give some indication of mortality differences which may be considerably determined by differences in social and economic status.

[3] National Institute of Child Health and Human Development and National Institute of Mental Health, *"Abortion: A National Public Health Problem,"* conference, October 1958, p. 31.

MATERNITY MORTALITY RATES BY COLOR: UNITED STATES, EACH DIVISION AND STATE, 1965–67 (3-YEAR AVERAGE)

Maternal deaths are those assigned to deliveries and complications of pregnancy, childbirth, and the puerperium, category numbers 640–689 of the Seventh Revision of the International Lists, 1955. Rates per 100,000 live births in specified group, 1965–67. Asterisk indicates rate based on a frequency of less than 20. Maternal mortality rates are subject to sampling error; see Technical Appendix]

Division and State	Total	White	Nonwhite
United States	29.6	20.3	75.4
Geographic divisions:			
New England	12.6	10.8	*45.7
Middle Atlantic	32.4	21.1	94.3
East North Central	26.0	19.3	71.8
West North Central	20.5	18.3	47.9
South Atlantic	36.9	20.2	76.3
East South Central	45.7	24.1	99.2
West South Central	36.5	27.0	69.4
Mountain	24.6	20.4	64.9
Pacific	23.6	20.1	45.9
New England:			
Maine	*5.3	*5.4	–
New Hampshire	*7.9	*7.9	–
Vermont	*4.2	*4.2	–
Massachusetts	14.3	12.9	*41.4
Rhode Island	*10.1	*10.6	–
Connecticut	15.3	*10.6	*60.0
Middle Atlantic:			
New York	36.4	22.8	103.7
New Jersey	35.9	22.5	101.8
Pennsylvania	23.6	17.7	66.1
East North Central:			
Ohio	23.6	19.2	59.3
Indiana	23.6	21.7	*44.1
Illinois	29.4	18.5	76.1
Michigan	30.4	22.0	84.7
Wisconsin	16.7	13.2	*83.5
West North Central:			
Minnesota	15.3	15.2	*20.0
Iowa	15.0	14.6	*35.9
Missouri	24.4	19.8	*49.4
North Dakota	*27.6	*26.3	*49.7
South Dakota	*23.8	*14.8	*96.2
Nebraska	*18.0	*16.3	*48.9
Kansas	27.1	26.3	*36.9
South Atlantic:			
Delaware	*25.8	*24.2	*32.0
Maryland	30.3	18.0	73.1
District of Columbia	61.5	*19.9	71.9
Virginia	29.6	16.0	71.5
West Virginia	30.5	27.5	*69.3
North Carolina	36.0	17.5	77.0
South Carolina	52.1	23.1	94.1
Georgia	43.6	25.1	77.6
Florida	33.9	19.6	71.0
East South Central:			
Kentucky	27.3	26.1	*39.7
Tennessee	36.2	21.4	87.9
Alabama	54.5	23.9	109.2
Mississippi	69.4	*25.9	108.4
West South Central:			
Arkansas	30.5	*13.5	72.3
Louisiana	47.3	29.4	74.2
Oklahoma	25.5	22.0	*42.7
Texas	35.8	29.3	69.2
Mountain:			
Montana	*18.3	*14.3	*59.8
Idaho	*23.0	*21.0	*105.4
Wyoming	*33.2	*34.7	–
Colorado	21.5	*18.7	*72.7
New Mexico	35.3	*29.2	*72.2
Arizona	21.2	*15.9	*46.4
Utah	*19.1	*13.6	*214.6
Nevada	*40.6	*38.6	*53.0
Pacific:			
Washington	20.7	16.8	*77.4
Oregon	*7.2	*7.5	–
California	26.2	22.4	52.4
Alaska	°30.2	*15.1	*60.5
Hawaii	*8.7	–	*12.2

Source: Vital Statistics of the United States, 1969, Mortality, vol. A.

Mrs. PIOTROW. That is indeed a factor.

Surely these figures bear witness to the desperate search of women for a sure method of fertility control. Unfortunately, today legislation in many States deprives women of the right to a relatively safe hospital abortion except in highly restricted circumstances. At the same time, the lack of adequate research has greatly delayed the development of absolutely safe and effective contraceptives. It should be noted, of course, that if abortion were readily available in cases of contraceptive failure, as it is, for instance, in Turkey today, it would be easier both to develop and to use less-effective measures of birth control that would probably be safer than measures which have to be near 100-percent effective. If concern over the morbidity and mortality of women is serious and sincere, attention should be given to the issue of abortion.

I believe the day is past when any woman should be forced to bear a child she does not want.

Thirdly, when we speak of any birth-control method, we must be concerned not only with physiological factors but also with psychological ones. Family planning, unlike many forms of direct medical care, depends very heavily for its effectiveness upon the feelings and attitudes of the user. If a woman does not like the method, she will not use it.

Even though laboratory researchers may consider diaphragms, or foams, or IUD's, or sterilization to be nearly as good as orals, most women would not agree. The evidence is overwhelming that women who have been offered a choice of contraceptive methods—whether they be high- or low-income, well or poorly educated, United States or foreign—prefer an oral, self-administered method.

This preference, I may add, appears to be strongest in their first attempts at family planning.

Senator NELSON. May I ask a question here?

How important do you think the advice and the attitude of the physician is in the user's selection of a method?

Mrs. PIOTROW. I think it can be extremely important. It can range from the situation in certain countries where the physicians administering a Government program simply exclude or prohibit use of one method or another, all the way to the quiet advice that an obstetrician will give his own patient, to a clinic situation where, in effect, you might have three or four doctors, each of which had completely different choices and, therefore, the woman is given a fairly unbiased account of all methods.

It can make a great deal of difference. But as I was going to say, it is interesting to look at the Government family planning programs around the world, because they are cases where you can document what choice is provided. Where there was a choice, in Hong Kong and Singapore, for example, both of those programs started out with the expectation that 80 percent of the women would want IUD's and they were prepared to insert IUD's for most of the women who turned up at the clinic.

As it turned out, for various reasons, some of which I think have been corrected, the women did not like the IUD's and started stay-

ing away from the clinics in droves until the program shifted over to oral contraceptives. And with a shift over to oral contraceptives, new publicity and new enthusiasm generated, the programs reached what might be called the takeoff point, and have gone better since.

Those are two interesting examples where attempts on the part of the doctors to put across a method did not work. But, in general, I think an individual doctor can exert quite a considerable degree of influence over the method that is used.

Senator NELSON. I thought it was interesting that Dr. Hellman, who directed the FDA study on obstetrics and gynecology, testified that in his clinic——

Mrs. PIOTROW. Yes, I have been there. It is a very fine clinic.

Senator NELSON (continuing). The record will speak for itself, but something like 55 percent used IUD's, the balance used the pill or the diaphragm—but here was a case where over half selected the IUD.

Now, his testimony was that the doctor operating the clinic very strongly believed in the IUD. But it is interesting to note that because of his feeling about it, he ended up with over half the women using the IUD against the pill and the diaphragm.

Mrs. PIOTROW. This can happen. There is another effect that I think perhaps obstetricians do not mention, and that is if women do not like the method being offered in one clinic, they might very well go to another clinic that offers another method. The clinic figures do not always reflect what the women are doing.

But I will go on. I reported Singapore and Hong Kong shifted emphasis to IUD's as against the original intent of the administrators.

Two other programs—Korea and Taiwan—are expanding use of pills because the existing IUD-oriented programs seemed to have reached a plateau of acceptors.

Both India and Pakistan, where the need for birth control is great and maternal mortality high, have refused to introduce pills, and at present IUD insertions and other methods are apparently on the decline in both countries.

In other words, the preference of the user cannot be ignored if any family planning effort is going to succeed. In light of the fact that women, especially younger women, prefer pills, the recommendation of some researchers that women should now use old-fashioned methods instead is unrealistic, and, in fact, even naive.

Most women, I believe, would respond, "Well, if you think these pills are not 100-percent safe, then please hurry up and test them more carefully, or develop a new kind of pill that is safe."

In that conclusion, I believe the women of this country and the responsible scientific community, are fully agreed. Billions of dollars have been spent by the National Institutes of Health in searching for cures to diseases that only a fraction of the population will ever have. Yet every married woman—and apparently many unmarried ones—faces the problem of fertility control, and every man and woman and child will face the problems of pollution and overcrowding that will press upon us if population growth is not checked.

Surely, research to produce more knowledge and better methods toward the control of fertility deserves a higher priority than it has so far received in Government-sponsored health programs.

Thank you, Senator.

(The New York Times article, above referred to, follows:)

[From the New York Times, Feb. 15, 1970]

PREGNANCIES FOLLOW BIRTH PILL PUBLICITY

(By Jane E. Brody)

Doctors across the country say they are beginning to see the first round of unwanted pregnancies among women who stopped using birth control pills after adverse publicity in the last few months.

"I'm now looking for some one to abort a 14-year-old who panicked," said a New York obstetrician who specializes in family planning among the poor.

Another New York physician, a Park Avenue obstetrician, said a patient of his who dropped the pill after reading a "scare report" is in London this weekend to get an abortion.

In California, Dr. R. Elgin Orcutt, president of the San Francisco Planned Parenthood Association, reports that "many are coming in for therapeutic abortions, many are going to England and many others are getting criminal abortions."

These women, who stopped the pill in a panic and are now trying to deal with an unwanted pregnancy, are experiencing "the most serious side effect," Dr. Orcutt remarked.

Dr. Orcutt and about a score of other birth control experts interviewed last week said that they expect the number of unwanted pregnancies to soar in the next few weeks and months among women who have recently given up the pill in favor of less effective contraceptive methods and, in some cases, no contraception at all.

"We regularly see a crop of unwanted pregnancies—a disturbing number of them—after each batch of bad publicity," commented Dr. Selig Neubardt, a New Rochelle obstetrician who is the author of "A Concept of Contraception," a popular book on family planning.

A Gallup poll taken during the first week of this month for Newsweek magazine, revealed that largely because of recent reports of suspected health hazards, 18 per cent of women have stopped taking the pill and 23 per cent more said that they were giving serious consideration to doing so.

Most of the adverse reports on the pill grew out of the Senate hearings on oral contraceptives held last month by the monopoly subcommittee of Senator Gaylord Nelson, Democrat of Wisconsin.

Testimony at the hearings linked the pill to a long list of disorders, including blood clots, strokes, heart attacks, diabetes, high blood pressure, cancer and arthritis.

Many physicians in the family-planning field have charged that the hearings were heavily stacked in favor of pill critics who overemphasized health hazards that are at best speculative.

Just prior to the hearings, the long-simmering debate about the pill's safety became intensified with the publication of several books and lay articles and the presentation of broadcasts proclaiming the pill to be dangerous.

SOME REACTIONS TO REPORTS

"Unfortunately," Dr. Orcutt said, "many women who heard and read these reports stopped the pill without calling their doctors and without using any other form of contraception."

Interviews with obstetricians in various parts of the country disclosed that, of the women who did call their doctors, many decided to stay with the pill after being told that the Senate hearings had produced no new evidence of health hazards.

But a far greater number of women, these physicians said, were so disturbed and upset by the reports that they decided to switch to other methods of contraception.

Many doctors reported "a run on diaphragms" and, to a lesser extent, on intrauterine devices (IUD'). A check of pharmacies in and around New York disclosed a small but significant increase in the sales of contraceptive foams, jellies and creams and condoms, and a definite falling off in sales of oral contraceptives.

Dr. Nathan Chaste, a Providence, R. I., urologist, said he has had a tripling in requests for male sterilization procedures (vasectomies) since the Senate hearings.

Several doctors interviewed said that the turn away from oral contraceptives would not cause too many problems among middle-class and upperclass women who, for the most part, are highly motivated to use other contraceptive methods effectively and who could support another child or obtain an abortion should an unwanted conception occur.

"But among clinic patients, who cannot afford another child and cannot back up a contraceptive failure with abortion, the defection from the pill to less effective methods could be disastrous," a spokesman for Planned Parenthood of New York said.

Dr. Edwin Daily, director of the city's Maternal and Infant Care program, said that the percentage of new patients who requested and received oral contraceptives dropped from 68 per cent in December to 47 per cent during the last week in January.

Dr. Daily pointed out that, except for sterilization, the pill is the most effective contraceptive currently available.

Senator NELSON. Thank you very much, Mrs. Piotrow.

Please proceed, General.

General DRAPER. As I said, my name is William H. Draper, Jr. For the past 5 years, I have devoted my entire time on a voluntary basis trying to solve population problems here and abroad. I serve as honorary chairman of the Population Crisis Committee, as honorary vice chairman of the Planned Parenthood/World Population in this country, as a member of the governing body of the International Planned Parenthood Federation, and as president of the Population Crisis Foundation of Texas, whose entire activities are concerned with contraceptive research. However, I am testifying today as a concerned individual, and not as spokesman for any organization.

I first became aware of the problems of too rapid population growth more than a decade ago when President Eisenhower appointed me chairman of his committee on Military and Economic Assistance. Our 10-man committee had a staff of 50 and worked continuously for nearly a year. We visited most of the developing countries, and concluded that their exploding population was in many cases holding back their economic development. We unanimously recommended that the United States should assist any of them that wanted such help in dealing with their population problems—in other words, we should help them install birth control programs.

In November 1959, President Eisenhower answered us publicly and said, "So long as I am President, this Government will have nothing to do with birth control—this is something for private organizations alone to deal with."

Ten years later, almost to the day, in November 1969, President Nixon appointed me the United States Representative on the Population Commission of the United Nations, thus recognizing officially that the world's population explosion is not only the concern of the United States Government, but of all other governments, and of the United Nations as well. So far have we come in a single decade.

In the meantime, President Eisenhower himself had seen the light, and became honorary chairman of the planned parenthood movement in this country and had openly declared that governments and private organizations must work together energetically to solve the population problem or future generations would castigate us.

President Kennedy, a Catholic, authorized our Government for the first time to help other nations achieve population limitation. President Johnson stressed its importance in more than 40 speeches, and last year President Nixon, for the first time, addressed a special message to the Congress asking that family planning facilities be made available to our entire population within 5 years, and that our foreign aid in this field be greatly increased.

Nor has the Congress lagged behind. Over the opposition of some in the executive branch 2 years ago, $35 million of foreign aid funds were earmarked for population programs only. Fifty million dollars were so earmarked last year, $75 million this year, and $100 million have now been earmarked for such use in fiscal year 1971.

Appropriations for domestic family planning services and research, while still inadequate, have been keeping pace with foreign aid programs; the budget request totaled $75 million this year. The budget request for next year adds up to $120 million, despite present fiscal restraint. And forward-looking legislation is now before both Houses of Congress—the Tydings, Scheuer, Bush bills—which when enacted, will greatly speed up our own domestic family planning programs.

Senator NELSON. May I interrupt, General?

General DRAPER. Surely.

Senator NELSON. What level of funding for family planning and for research would you consider to be, your organization or you personally, the optimum amount we should have and at what stage?

General DRAPER. The timing, of course, has a great deal to do with that, because you cannot start these programs overnight.

Senator NELSON. Right now, for example, say for this year, next year, the next 3 or 4 or 5 years, at what level could we usefully spend money on family planning and on research, in your estimation?

General DRAPER. The Tydings bill—and I see no real objection to the levels in that—range in the research field from $35 million a year this year, this current year, to $100 million a year in 5 years.

Senator NELSON. Do you think that is high?

General DRAPER. I do not think it is high: I think it is probably low.

Senator NELSON. That is what I mean, you do not think it is high enough.

General DRAPER. However, a 5-year authorization of that kind is so far beyond anything that has been on the books before, that it would be a tremendous increase, a tremendous improvement. After a year or two of experience, if the scientists are drawn into the program, then the programs that are undertaken—not only there that would be carried on by the Federal Government itself with direct laboratory research but also the grants that would be made by Health, Education, and Welfare, to at least, I would hope, four or

five contraceptive research centers throughout the country—will develop their own impetus and their own requirements, which may well be beyond what this Tydings legislation now includes.

But I believe firmly, because legislation that is already before the Congress has a far better chance of enactment, obviously, than something else, that if this legislation is promptly enacted this session, with the bipartisan support of Democrats and Republicans—and I would hope with full administration support—a beginning of a substantial enough program to assure reasonable success in this country will have been achieved.

I was delighted to learn recently that you are now a cosponsor of that legislation. There are something like 90 cosponsors in both the House and the Senate. I know of no direct opposition in the House or Senate, and I would hope that that legislation would become law within the next few months.

Senator NELSON. What is our current level? I assume that during those hearings all the background for current expenditures was put into the record?

General DRAPER. That is correct.

Let me illustrate it without having the exact figures in mind. Over the years, the National Institutes of Health have had increasing appropriations ranging from several hundred million a year and gradually going to almost a billion dollars a year for normal health purposes. The amounts that the National Institutes of Health had devoted, partly because of their own inclination, I assume, and partly because there were very few specific appropriations for both basic research in human reproduction and direct operational research looking toward finding better contraceptives, have been in the neighborhood of 4 or 5 or 6 million a year.

They got up this past year to something like 10 or 12 million. The administration recommended, based on the old Johnson appropriations, something like 15 million but they were cut down in the House by 2 or 3 million. Through Senator Tydings' championing, at least the restoration of that 2 or 3 million on the Senate Floor was accepted by the conference committee. So it is now somewhere around $15 million.

On the service side, there has been considerably more than that made available, starting about 3 years ago. And that has been divided between the Office of Economic Opportunity, OEO, which really under our present Ambassador to France, who was then head of OEO, showed more courage in this then-controversial field, than any other executive officers, I believe.

Anyway, OEO started out about 4 years ago with a small but active program which has increased. HEW has started also through its offices to fund programs, and I would estimate the total figures for the last 3 or 4 years are something like $25 million, increasing to $30 or $40 million, and then about to about $60 million last year, and maybe $70 or $75 million this year, and the range of something around $100 million or a little more, if the present requests of the administration are approved.

These are very minor, minimum figures, as compared to our national requirement and the tremendous effect on our national life—

on the environment, on the pollution of the air and water, on all of the other things that too many people too quickly bring to our country, aside from the poverty—the race problems and the city core problems that are brought about by overcrowding. I believe, along with many others, that the population problem now in this country is one of the two or three most difficult and threatening problems that we face. It will directly affect our own children and grandchildren unless we as a nation—it cannot be done by a few people—realize that smaller families are better able to provide more education, more care, better housing, better clothing, and all that goes with the smaller family. For the Nation as a whole, it represents the only way we are going to solve in the end our question of resources, of rising incomes, of environment, of pollution, of health, and of national stability.

Does that answer your question sufficiently?

Senator NELSON. Yes, sir. Thank you.

General DRAPER. Shall I proceed?

Senator NELSON. Go ahead, General.

General DRAPER. Fortunately, those responsible in the executive branch for carrying out both our domestic and our foreign population and family planning programs are sincerely concerned themselves, and are giving the highest priority to this problem.

I have talked with all of these gentlemen and I am sure I am stating the fact, Secretary Robert Finch, Assistant Secretary Roger Egberg, and Deputy Assistant Secretary Louis Hellman, in the Department of Health, Education, and Welfare, and Mr. Donald Rumsfeld, of OEO, are loyally devoted to carrying out President Nixon's 5-year program.

AID Administrator John R. Hannah and his Deputy, Rutherford Poats, and those more directly responsible for population activities in the developing world, Joel Bernstein and Dr. Reimert Ravenholt, are carrying on a magnificent worldwide program of growing size and effectiveness. And that program is because the Congress has earmarked the money and they have then gone loyally to work.

Even the man in the street and the boys and girls on our college campuses are fast becoming concerned. For the first time they see that our own environment is being ruined, and that the much admired American "quality of life" is gradually being destroyed. They see that it is people and more and more people who are rapidly using up the earth's limited resources, and who are polluting its air and its water.

They begin to see that the population explosion is no longer far off in either space or time. It is no longer only a problem, say, in India, nor a problem that is years off in the future. The population explosion is here in the United States, and it is here today.

Fortunately, the American people are beginning to realize that we must reduce our rate of population growth—and very soon—or our children and grandchildren will pay a horrendous price.

The decade of the sixties has been the decade of comprehension. The decade of the seventies must become the decade of all-out action.

No longer can we listen complacently as the demographers tell us that if present rates continue the 3½ billions of men and women on earth today, the resultant of tens of centuries of growth, will now double in only three decades—30 short years—and then to 28 billions, and then to 56 billions and then to what? Over a hundred billions? Standing room only? We know it can't and won't happen. The only question is, when it starts happening, whether we, the people of the world, are going to stop this madness ourselves by using our God-given intelligence and our own will power, or whether we will let nature stop it by her own time-honored, effective, but brutal weapons—malnutrition, disease, and then mass starvation. And as that starvation grows, I can see man helping nature along by political conflict and war to just start the thing going faster.

It is true that we in this country have made some progress. During the past decade, motivated toward small families, and with the help of the much maligned pill, and other contraceptives, we have cut our rate of natural increase in half—from nearly 2 percent to less than 1 percent.

Eight and one-half million American women have been taking the pill—nearly one-quarter of our women of child-bearing age.

Senator NELSON. We had our lowest birth rate in history during the depression, did we not?

General DRAPER. No, sir, we passed that last year.

Senator NELSON. Last year?

General DRAPER. Yes, sir. The year before, 1968.

Senator NELSON. 1968?

General DRAPER. We got lower, that is right.

Senator NELSON. I had in my head an old statistic.

General DRAPER. It was lower for a long time on account of the depression.

Senator NELSON. Up until 1968, the lowest birth rate was during that period in the depression, the thirties?

General DRAPER. That is true.

Senator NELSON. That was before there was any pill.

Does that not really indicate that a critically important factor in the whole business is motivation?

General DRAPER. It is the most critical factor, it is more important than the pill or any other contraceptive or anything else. If the people of this country or of any country decide—and it is not the legislators or the government—if the people of this country decide that they want smaller families, by and large they will find a way to have it come out.

But these various contraceptives, methods, are improved greatly over the past, and should be greatly improved again to help that along when there is the right motivation.

Senator NELSON. But it does, does it not, demonstrate something very significant, when you consider——

General DRAPER. Let me point out that in France and Italy where contraception has been illegal, they have perhaps the lowest birth rates in the world. And it probably is not all done by prayer.

Senator NELSON. I think it is interesting to note that even though the pill has been on the market for six years up to 1968, without any pill at all, well motivated people during the depression had a lower birth rate in this country than afterwards, which ought to tell us something about those who are worried about the fear caused by the hearings.

General DRAPER. It has some bearing.

Senator NELSON. Please continue.

General DRAPER. A few million others have been using other but less effective methods. As a result—and I ought to add their motivation, although I mentioned motivation just before that—our growth rate has been steadily declining almost a tenth of 1 percent a year, although 1969 for the first time saw a slight upward turn in the number of births and in the birth rate itself.

That is probably the result of the baby boom after the end of the war with those babies now coming of fertile age, and adding to the number of babies born, though not necessarily to the percentage.

Senator NELSON. When you are using a percentage figure here, it is a percent of the total population, is it not?

General DRAPER. That is right.

Senator NELSON. So it is still 2 percent birth rate with 100 million people, is it not?

General DRAPER. Equivalent of 1 percent with 200 million.

Senator NELSON. One percent with 200 million. So, since we do have 200 million, even the increase at this rate is a very serious matter.

Now, what is the increase that you estimate would result in zero population increase?

General DRAPER. About slightly over two children per family would bring that about.

Senator NELSON. Are you using percentages here, you say we have gone——

General DRAPER. Well, zero percentage rate would be zero. Zero growth rate means simply that.

Senator NELSON. Zero indicates increase in population, I am talking about that.

General DRAPER. I am, too.

Senator NELSON. But the birth rate?

General DRAPER. The birth rate would have to be approximately, under present death rate conditions, approximately seven-tenths of 1 percent. The last 2 or 3 years, the death rate has been approximately nine-tenths of 1 percent. Now, we have to take into account the fact that we do have some immigration into this country. We have about two-tenths of 1 percent immigration a year. So to have a zero growth rate, we would have to have at present seven-tenths of 1 percent birth rate, as compared to approximately 1.8 percent at the present time. Birth rate, I am talking about. That is birth rate.

Senator NELSON. Maybe I do not understand this.

General DRAPER. Under present conditions, seven-tenths of 1 percent birth rate would be offset by nine-tenths of 1 percent death rate and two-tenths of 1 percent immigration rate, and would result in a net zero growth rate.

Senator NELSON. You said, at what percent birth rate?

General DRAPER. Seven-tenths of 1 percent.

Senator NELSON. That is seven-tenths of 1 percent of what?

General DRAPER. Of the total population. We have 200 million people. We have now approximately 3 million, six births in this country, and approximately 1 million, eight deaths a year. So that we would have to bring 3 million, six births down to about 1½ million, which would be approximately offset by a million, 800,000 deaths and 400,000 immigrations, and practically result in a net zero growth rate for this country.

Senator NELSON. I will examine those figures later.

Go ahead, General.

General DRAPER. What long-run effect the widely publicized testimony of these hearings may have is hard to say. One Gallup poll—we have been all over that this morning, but I will repeat it—has recently indicated that 18 percent of women taking the pill were abandoning it—I don't say why— and that 23 percent more were considering doing so. This, I believe would be a disaster.

I am hopeful enough to believe that most of these women, after they and their doctors have weighed the relative risks of taking or of not taking the pill—and I will go into that a little more later—will gradually resume its use until equally effective but better and safer contraceptives are available.

Broadly speaking, there seems to have been very little, if any, new information disclosed that was not already known to the Food and Drug Administration and to the special Advisory Committee on whose advise the pill was found sufficiently safe for continued use under medical supervision. I understand that this position has been reaffirmed after much of the testimony before this committee has been recorded.

The hearings have certainly showed that some doctors disagree as to the seriousness of the pill's acknowledged side effects, and as to possible other dangers. Like any drug, the pill has some drawbacks and some dangers, but the benefits are very great indeed for those women wishing to limit or space their families, and for society as a whole. As one witness put it, "The pill is safe. It is safer than pregnancy, but not as safe as continence."

I believe that it is now clear that—

(1) The pill is virtually a 100-percent effective contraceptive if taken regularly, and is more effective than any other known method of contraception;

(2) It has side effects which are sufficiently serious for a small percentage of women so that it should be used only under appropriate supervision. That would normally be medical supervision;

(3) Many of the feared side effects, such as developing or bringing on cancer, have not been proved for women using the pill, as brought out again this morning;

(4) While metabolic alterations affecting the liver and other organs do result from use of the pill, there is no evidence at this time that they pose serious hazards to health;

(5) The most serious known threat is blood-clotting or thromboembolism; taking the pill appears to increase the risk of death from this cause from one-half per hundred thousand to

three or four per hundred thousand, although less estrogen content may reduce this risk;

(6) However, if unwanted pregnancy results from discontinuance of the pill, mortality rate associated with pregnancy and child-bearing, excluding abortion in the United States today, is some 20 per hundred thousand for white women and more than three times as high for non-white women;

(7) When an unwanted pregnancy caused by discontinuance or any other reason is terminated by an induced illegal abortion, performed by a layman outside of a hospital—it is estimated on a theoretical basis, these are not hard figures, the risk of death increases again to at least 100 per hundred thousand; [1]

(8) The relative risks of taking the pill, of discontinuing its use, or alternatively of using some less effective contraceptive, should be kept in proper perspective by those women who wish to avoid pregnancy, and by their doctors; I think that is the most important conclusion that I could reach about this, but the relative effectiveness and relative risk should be known—this committee's hearings have certainly made the risk of the pill known, but the relative risk should be kept in mind as decisions are made;

(9) For the American people as a whole, the lesson brought home conclusively by these hearings is the fact that neither the pill nor any other known contraceptive method is ideal or without drawbacks and dangers, and that only through a greatly increased program of contraceptive research can either the many questions raised in these hearings, or the population explosion itself here and abroad be satisfactorily solved. Certainly, since a present lack of data is admitted by all witnesses, future large-scale studies are very necessary to determine much more definitely the effect of using the pill on both the present and future generations; also research designed to produce better contraceptives is of equal or even greater importance.

Mr. Chairman, these hearings have had the news headlines for days on end in every town and village in this country. They have been reported on every radio station and every television chain simply because the American people—almost all of them—are interested in reducing or limiting the size of their own families, that is the motivation you spoke of yourself, Mr. Chairman, and are groping for a sure and safe method of accomplishing this by avoiding unwanted pregnancies. At least 15 million women in this country who use some contraceptive method, and including those whose husbands use the condom, must represent, together with their immediate families and close relatives, a clear majority of the people of this country. This means that 100 million Americans, more or less, are directly interested in improving present contraceptive methods.

This committee has clearly proved that we need better methods of preventing conception. This committee can perform a great public service if it will adopt and equally publicize the broad conclusion that the scientific community, whose medical miracles have reduced

[1] C. Tietze, "Mortality with Contraception and Induced Abortion," Studies in Family Planning, September 1969, pp. 6–8.

death rate and brought about the population explosion, must now concentrate on making new contraceptive breakthroughs and so bringing the birth rate back into balance.

Senator JAVITS. Would the witness mind interruption?

General DRAPER. Not at all.

Senator JAVITS. This has been charged by others, but I think our Chairman has taken it very, very seriously.

Could you make any practical suggestion, now or later, as to how something could be done to give a complete balance to the picture in the eyes of the public, which you intimate was not given?

Now, bear in mind that the Chair feels he has done his best to try to add balance.

Therefore, if you do have some suggestion, General, which could help us to do what you say, I am sure that our Chairman and I am sure that the committee would give it the utmost consideration.

General DRAPER. Senator Javits, I said before you came in, in the interplay of conversation with the Chairman, that the effect of these hearings short-range would be to bring about a certain number—and I do not know what the number is, nobody else does either—a certain number of unwanted pregnancies greater than there were before because of the scare headlines. I also believe that the long-range effect of these hearings is going to be most constructive, because I do believe that the hearings have brought about a consciousness of this problem and the need for better contraceptives, that this country never would have gotten in any other way, or the Congress perhaps either.

And it will result, I certainly hope, in freely increased contraceptive research, both basic, human reproduction research and looking for specific, better contraceptives.

Senator JAVITS. Thank you.

General DRAPER. On your specific question, I believe that the country perhaps without quite realizing it is awaiting whatever conclusions this committee itself may arrive at. Now, no one can blame the Chairman for headlines that come because you had to call all of those interested in this problem, the doctors for and against the pill. The newspapers are just like life itself, there is no news in something that agrees with what is going on. The newspapers and the television cameras naturally are going to pick up the spectacular, the sensational, and that is what they have done.

I believe though that there has been enough on the other side, and some of it publicized, so that the public realizes there are two sides to the question. And I would believe that if the Chairman and the committee, when as I hope they will, they reach some conclusions that they can publish in due course, after appropriate consideration, and if those conclusions are as you suggest and I believe they would be, balanced and appropriate, and suggesting the need for greater contraceptive research, I believe those will get great publicity and I think they will do a great deal of good.

Senator JAVITS. Thank you, Mr. Chairman.

Senator NELSON. Another witness made a similar suggestion to the committee, but I would just say for myself that I do not have the qualifications for evaluating the conflicting testimony.

General DRAPER. Somebody has to.

Senator NELSON. And then drawing the conclusion to present to the public and the scientific community, that community itself being sharply divided. I think anybody who reads the testimony does not have any difficulty reaching a conclusion, that certain things are clear, one, we are not able to specifically predict whether or not there will be serious consequences to a user over a short period or long period. It is a matter of concern we do not yet have any answer for. However, all of these things are pretty much agreed to. The physician will say "I am satisfied, having used it over the years, and on balance vis-a-vis the problems the user may have psychologically or physiologically and otherwise, we ought to use it, and I have no reservations." And another one, looking at the same patient, will say, "I think my reservations are such that I would recommend, as one witness did today, that it should not be used for longer than 2 or 3 years without interruption."

I think it is a pretty simple matter for anyone reading the hearings to come to a conclusion about what people have said but not for a committee to draw a conclusion unless somebody has a clearer insight into what the committee can say, more so than I have. Maybe somebody does.

General DRAPER. After all, the scientist and the doctor—of course, they are divided on this point—after all, they are only witnesses, they are each of them testifying. That happens on every bill we have before Congress. There are technical witnesses on any subject. But the Congress and the committees then with the evidence before them, and the American people, and the women that we are talking about, all have to come, each to their own conclusion.

All I am urging is to take the varied testimony as it has been, as you have read and heard it, as all of the committee will read it, and then the committee deciding what the upshot of all of this means, and no one can do it as well as you and your committee, in my opinion. And if that conclusion, that deduction that you take from the varied testimony and the weight that you give to each is carried out, as I am sure it would be, in a balanced way, that gives to the American people the conclusions that this committee has reached as a result of all of the testimony heard, and then ending up on a note that is not in controversy at all, mainly that the proof of the hearing has certainly been that there are not good enough contraceptives available and that a great deal of research is needed. I believe this would have a tremendous effect on the future of the human race.

Senator NELSON. It might very well be possible.

Senator JAVITS. Would the Chair yield?

What you are calling for is a report by this committee.

General DRAPER. Yes, sir.

Senator JAVITS. And that is precisely what I want, a report by this committee. I do not think that you can just leave this up in the air and I shall do my utmost to bring such a report about.

Another thing I would like to ask you is this: The figures are important, that is, if there is a risk, X testifies to a risk, Y testifies to no risk, there is still a residual question, a risk to how many out of how many.

General DRAPER. There is not so much difference in the figures, Senator.

Senator JAVITS. No, let us not get to the difference.

General DRAPER. There is a difference in the conclusion sometimes.

Senator JAVITS. The point is when you speak of risk, you do not speak of it up in the air.

General DRAPER. That is right.

Senator JAVITS. You speak of an actuarial proposition.

General DRAPER. That is correct.

Senator JAVITS. And the question that has to be balanced, as against the admitted risk, even by the most extreme commentator, what is the proportion who are adverse; is that correct, sir?

General DRAPER. That is correct, and what are the benefits from those taking the risk.

Senator JAVITS. Right.

Senator NELSON. Please proceed.

General DRAPER. This committee has clearly proved that we need better methods of preventing conception. This committee can perform a great public service if it will adopt and equally—and I use the word "report to the public", that is what I had in mind—equally publicize the broad conclusion that the scientific community, whose medical miracles have reduced death rate and brought about the population explosion, must now concentrate on making new contracaptive breakthroughs and so bringing the birth rate back into balance.

The scientists must be told this quest is so important that they must go all out; the sky is the limit. After all we have been spending a billion dollars a year in research to reduce the death rate; we can afford whatever it takes for research now to help bring down the birth rate. This committee has attracted the attention of the ears and the eyes of the American people. If it will now champion the need for better contraceptives publicly and here in the Congress the necessary increased appropriations for more contraceptive research can and will be made available.

This is something necessary for the future welfare and perhaps even the survival of the people of this country, and for all the people of the world, as well. Scientific contraceptive research is not a controversial issue. It is not a political issue. It should, and I believe will, have complete bipartisan support.

President Nixon in his message last year to the Congress on population gave contraceptive research a very high priority. He said, "First, increased research is essential. It is clear that we need additional research on birth control methods of all types * * *."

Senator Tydings in the Senate and Congressmen Scheuer and Bush in the House of Representatives have introduced proposed legislation to this end, with some 90 cosponsors from both parties. Senator Jacob Javits and Representative Steiger have introduced an administration bill on family planning which, hopefully, can be combined by some administrative adjustments with the Tydings bill and should then receive general bipartisan support.

I congratulate the chairman on his recent sponsorship and testimony on behalf of the Tydings bill and hope that the entire subcom-

mittee will join in this support. I hope that its members from both parties will give the strongest possible support to the program for greatly increased contraceptive research during the coming 5 years as proposed in the Tydings bill.

It has been estimated that during the past decade, about 20 percent of all births in this country were unwanted. The parents either did not have contraceptive services available, or they failed in use. This would indicate that more than 600,000 births—somebody estimated before this committee, 750,000, somewhere in that range—last year were not planned or wanted. If these estimates are correct, and if improved effective contraceptives actually become available and are used successfully by the parents involved, so that broadly speaking, unwanted children have become relics of the past—and I hope that they will soon come—our present rate of growth of 1 percent per annum—eight-tenths of 1 percent natural increase, plus two-tenths of 1 percent immigration—would drop to seven-tenths of 1 percent—five-tenths of 1 percent natural increase plus two-tenths of 1 percent immigration.

And, of course, we can control the immigration if we find that that is necessary.

While this could not all happen immediately, obviously, the trend with better contraceptives would be in that direction and would have a profound effect on our national future. It would help materially to continue the declining growth rate trend-line of the past decade, and could greatly reduce the 100 million people which President Nixon estimated in his message would be added to our population in the next 30 years.

The future hoped-for improved contraceptives, whether an annual shot in the arm, a once-a-month pill, a morning-after pill, or whatever they may be, would accomplish a great humanitarian good by reducing the numbers of unwanted children, so many of whom now lack the loving care and the economic and social opportunities to which every human being should be entitled.

I should like to refer again to the risks of induced abortion. It is estimated that as many as a million illegal abortions may take place in this country each year and that about 400 of these women may be dying each year to avoid childbirth. That is that theoretical 20 to 100,000 now. This shows what terrible risks women are taking today to avoid unwanted children. How much better if they had only taken the pill, with all its reported risks or used some other contraceptive.

But let us look at the situation from society's standpoint. If these abortions had not taken place, and if a million more human beings were being added to our population each year, our growth rate would be back to 1½ percent, and no longer 1 percent as now. We would add nearly 150 millions rather than 100 millions to our population in the next 30 years, and so compound our problems of education, of deteriorating enviroment, of urban breakdown, and of air and water pollution. Despite the ethical and religious issues involved, our society owes these million women each year a great debt indeed.

Again, better contraceptives can be a God-send to these million

women each year by helping them to avoid the very high risks of illegal abortion and still keep down the rate of population growth.

But there is still another approach. The courts in California and also here in the District of Columbia have recently thrown out overly restrictive abortion laws as unconstitutional. Sooner or later the Supreme Court will have to decide whether or not a woman can be forced by society to have a child she does not want. Many States have liberalized or are considering liberalizing their laws on abortion, as Great Britain has already done, and as India is debating. Legal abortions, if performed under hospital conditions during the first 2 or 3 months of pregnancy involve only nominal risk. A newly perfected suction method—which came, I believe from Hungary, where it is legal—and perhaps a new abortive drug may make surgery unnecessary.

Japan cut its population growth in half during the 10 years following the war by legalizing abortion. They also had motivation.

Senator NELSON. Aren't they now to six-tenths of 1 percent?

General DRAPER. No. five-tenths of 1 percent, during the year of the Horse, which in Japanese mythology, I suppose you would call it, means that any child born in that year cannot become pregnant and the rate went lower than it had ever been to about one-half of 1 percent growth rate, and then it went up the following year to seven-tenths.

It is a little less than ours. It came down between 1948 and 1958, or 1960, some 2 percent to 1 percent, and then kept on dropping.

Senator NELSON. Is this annual growth rate, you are talking about?

General DRAPER. Annual growth rate. I am not talking birth rate; annual growth rate, which is the net of the births and deaths.

Worldwide, there is little doubt that legal abortion, as in Japan and in many East European countries, and criminal abortion elsewhere, even now prevent more births than all methods of contraception combined. That is, I am sure, a fact, and it is one I do not think is realized in many quarters.

If greater leeway is given to the medical profession to perform legal abortions by liberalizing or eliminating present laws, many relatively safe abortions may well supplement the improved contraception that can hopefully be anticipated.

I have been discussing the continental United States and its serious population and environmental problems. You, Mr. Chairman, who have proposed a constitutional amendment guaranteeing every American "an inalienable right to a decent environment," understand very well the difficulties of bringing this about. Your proposal fortunately is leading to the environmental teach-in on college campuses and high schools throughout the country next month. I feel sure these campus discussions will help greatly to bring the youth of this country face to face with future realities, and above all to a clear understanding that our national environment cannot be saved for posterity unless our population growth is curbed.

However, the situation in the developing nations of Asia, Africa, and Latin America is far more terrifying. Their 2½ billion people are expanding two and a half to three times as fast as we are in this

country. They have far less resources with which to cope with the education, health, economic, social, and political problems inevitably raised when their populations almost double with each new generation. Increased poverty, disease, and starvation certainly lie ahead, and the threat of turmoil and political chaos. Many of them have very little time left to turn the demographic clock around.

Fortunately, the interested private organizations—and particularly the International Planned Parenthood Federation with its 64 member associations in 64 different countries—have been persuading government after government to announce policies calling for lower population growth rates and to adopt national population and family planning programs. In the past 3 years nearly 30 governments have made such a beginning.

And only 6 weeks ago the Commonwealth of Puerto Rico announced a governmental islandwide birth control program. On January 15 Governor Ferre in his State of the Commonwealth message announced "a vigorous and ample program of family planning." He called Puerto Rico's rapid population growth the "greatest obstacle to the realization of the Great Task which we have set before us." He went on to say, "All the jobs which we are able to create will not be enough; all the moneys spent to improve education and health will not be sufficient; we will not be able to construct enough homes; nor construct enough aqueducts; nor pave enough streets; nor equip enough hospitals.

"In other words, the Great Task will be impossible. By the year 2000 we will have 5,600,000 inhabitants"—they have about 2.7 million, something like that now—"and we will have doubled our population density." And 3 weeks ago, in an historic announcement by Archbishop Luis Aponte Martinez the Catholic bishops of Puerto Rico—and there are seven of them—stated publicly their approval and support of the government's family planning program, provided only that there is no coercion and the decision as to family size and the use of contraceptives is left freely to the conscience of each couple.

This example—both the government's decision and the supporting statement by the Catholic bishops—points the way for many Latin American Catholic countries which also find too rapid population growth the greatest obstacle to their economic and social development. It illustrates very well indeed how well the world's leaders everywhere are beginning to understand the meaning of the population explosion, and how governments on every continent are starting to take the necessary action to head it off. Better contraceptives would also help the Puerto Rico program.

Speaking of Puerto Rico, last Saturday I was in Puerto Rico, in San Juan, and called on Governor Ferre to extend to him at the suggestion of Dr. Moynihan in the White House, the White House congratulations and offer of help on this program in any way possible, and he is very hopeful, with the support of the Catholic bishops, and generally of the population of Puerto Rico, in which this population problem is probably as serious as anywhere in the world, to have a successful program there.

But I am sure he would appreciate better contraceptives. I should add, Mr. Chairman, that this great step forward in Puerto Rico

marks the culmination of over 30 years of devoted effort begun by your distinguished colleague, former Senator Ernest Gruening, when in 1935, representing President Franklin D. Roosevelt, he opened the first Birth Control Clinic in San Juan, P.R.

I might add that the following year, when the election was on, and there had been some complaints in this case from the Catholic bishop, Jim Farley told him to call it off. And he did.

Almost at the same time that the Puerto Rican Governor made an announcement, a Catholic governor in Asia also spoke out. On January 29, 1970, President Marcos of the Philippines in his State of the Nation message said, "We are faced by a population crisis. It is time that we take steps to arrest a population growth which, unless checked, threatens to compound our problems in the years ahead.

"I have decided to propose legislation making family planning an official policy of my administration." He told me last June when I talked with him in Manila, along with General Romulo, the former president, who is now the foreign minister, he told me then that if he were reelected in November, which he was, he would announce this policy, which is now done.

I quote from him further:

> The meaning of the population explosion is human misery—a deprivation of the basic necessities for sheer physical survival. This is the rightful concern of the Church for above all else it is committed to man as man. I, therefore, invite the church to join in a common enterprise to alleviate suffering—to help as its sister churches have helped in many lands where the population explosion is a persistent, an urgent, and above all an intensely human problem.

On the Population Commission which I met with in Manila about the same time last June, one of the Catholic bishops there, a very liberal and fine man, is also a member, and I am sure that his plea to the church was made with full knowledge of those to whom it was addressed.

I might add that the better contraceptives we must find will certainly help President Marcos also carry out his new official family planning program.

And only a month ago—a lot has been happening in these last 2 or 3 months—U Thant and Paul Hoffman initiated an active United Nations population and family planning program to help all member countries who wished such help. Paul Hoffman appointed Rafael Salas, a Filipino who had been the right hand man to President Marcos, as director of the Population Fund for the United Nations. They set a $15 million program for this year as a starter, a large part of which will be carried out by the World Health Organization, which obviously can offer help to many countries where a bilateral program from the United States would be unwelcome.

This historic action followed 5 years of discussion and debate which has now committed the entire United Nations family to help bring down the world's rate of population growth. U Thant himself has laid out an important and growing role for the United Nations, including WHO, ILO, UNICEF, UNESCO, FAO and the World Bank—we all know how Mr. McNamara as president of the World Bank has taken up this issue in the last year—and he hopes—that is, U Thant, and believes that during the decade of the seventies we will be finding a humanitarian solution to the world's population problem.

I certainly hope that turns out to be true.

I suggest, Mr. Chairman, that your committee, and the entire Congress, and the American people themselves, might usefully begin considering—and from your questions earlier, I see that you already were—what rate of population growth would best serve the future interests of our country. After full discussion and full consideration our people should reach a consensus, if possible, and decide on the optimum rate, the very best rate of growth for all of us. Then we should shape our tax laws, our social customs, our subsidies and our educational programs toward achieving that best rate on a voluntary basis as soon as possible.

I, myself, believe that the most favorable rate from all points of view would be a zero growth rate. We have gone down already from 2 percent a year to 1 percent a year, and if we give ourselves 20 to 30 years to go down from 1 percent to zero we would find ourselves with about 250 million people in this country by the year 2000. This should be enough for any of us. We would be well on our way to solving our pollution problems, our environment could be saved, and the threat from too many people would be over. Perhaps other countries would want to follow our example.

Finally, I should again like to emphasize that no single action could so surely speed up efforts in that direction here and throughout the world as a massive and well-financed program of contraceptive research carried on by our Federal Government. This committee has demonstrated the overpowering need for far better contraceptives—I hope, recommend, and respectfully urge that it help in every possible way to bring about the financing and the actual launching of a massive research program to provide them.

I should add as a last word that many high officials in India and many foreign observers as well fear that India's half billion people and its 600,000 villages can never successfully curb its overpowering population growth until new contraceptive methods are found which are much better adapted to the poverty, illiteracy and encrusted social customs that now plague its progress. This may be true in many other countries as well.

It is quite possible, Mr. Chairman, that the fate and the future of the human race is actually at stake.

Senator NELSON. General Draper and Mrs. Piotrow, the committee appreciates your taking the time to come here today. It has been a helpful addition to the hearing record.

Are there any questions?

Mr. DUFFY. General Draper, I understand someone has been in contact with you on behalf of Dr. Southam, with reference to a correction in her committee statement.

General DRAPER. Oh, yes, yesterday I was talking on the telephone with Dr. Harkavy of the Ford Foundation and he mentioned to me that in Dr. Southam's testimony, which was presented for the record today, that there had been misunderstanding by her or an omission by her, to state that the figures used in Dr. Southam's statement were based on the less-developed countries and not on the U.S. figures.

Somewhere she had referred to 50 percent going off the pill within a year, or something like that. And I will make available to

the committee staff the figures, and she is going to correct those anyway.

Senator NELSON. Are you knowledgeable about the studies that have been made, if they seem to vary some?

General DRAPER. On the discontinuance of the pill?

Senator NELSON. Yes. Dr. Hugh Davis, quoted from the Frank report, which stated that 40 percent quit in 2 months and then quoted from the Maryland Planned Parenthood Report, which stated that over 50 percent—or about 50 percent—went off the pill in less than 12 months. Now, are there other studies that have been made?

General DRAPER. Yes, the one that Dr. Harkavy referred to yesterday, and the one on which he assumed that Dr. Southam's figures were based, are in a publication of 2 years ago, "Use of Oral Contraceptives," put out by the Population Council in December 1967.

And the one thing I note from their table of figures is just what you pointed out, the studies vary so completely that it is very difficult to fix on one figure.

They vary in the foreign countries all the way, after one year, from 56 percent still using, continuation rate; in Puerto Rico, 75 percent; to 12 percent in Turkey; 53 percent in India; 71 in India under another study; 42 percent in Taiwan.

Now, for the United States, there are four studies here quoted at that time. And this is after 1 year, continuous rates at that time, 67 percent in one study, 77 in another, 68 in another, and 61 in another.

Senator NELSON. Over what period?

General DRAPER. After the first year.

And then, in a United Kingdom study, 85 percent. Then it gives it after 1½ years and 2 years. So all you can judge is, it depends on where the study was carried out.

Senator NELSON. Thank you very much.

The hearings will resume at 2 o'clock. Senator McIntyre and Senator Dole will be here. I have an appointment at that time. I will try to get back before the hearings are completed.

General DRAPER. Might I just add one word. I would like to give a copy of this to the staff, this is a booklet that does go into that question in some detail, "Use of Oral Contraceptives in Developing Countries," by Ravenholt and Piotrow, who has testified.

Senator NELSON. Do you have a copy for the committee?

General DRAPER. Will do.[1]

Senator NELSON. Thank you very much.

(Whereupon, at 12:30 p.m., the committee recessed, to reconvene at 2 p.m., this same day.)

AFTERNOON SESSION

Senator DOLE. Dr. Ratner, if you will, just take a seat. Senator McIntyre will be here momentarily and Senator Nelson has a commitment until about 2:30. You can either read your statement in full, paraphrase it, or summarize it. It will appear in full in the record.

So any way you wish to proceed is satisfactory.

[1] The booklet, "Use of Oral Contraceptives in Developing Countries," by Dr. R. T. Ravenholt and Phyllis Piotrow, has been retained in committee files.

STATEMENT OF DR. HERBERT RATNER, PUBLIC HEALTH DIRECTOR, OAK PARK, ILL.

Dr. RATNER. Senator, I think it is a relatively short statement, and I think it would really save time if I read it, after watching what went on today.

Senator DOLE. Go ahead.

Dr. RATNER. My name is Dr. Herbert Ratner. I am a full-time public health physician and Director of Public Health in Oak Park, Ill. I am a former editor of the "Bulletin of the American Association of Public Health Physicians" and am presently editor of "Child & Family Quarterly."

For many years I have been chairman of the Maternal and Child Health Committee of the Illinois Association of Medical Health Officers. I am also a member of the Family Planning Coordinating Council of Metropolitan Chicago, Inc., which is hosted by the Planned Parenthood Association of Chicago.

Because I believe each witness before this committee should make himself crystal clear on this score, I state, for the record, that I am not indebted to any of the manufacturers of the birth-control pill by virtue of being the recipient of grants, of clinical or research support, of consultant or writing fees, of expense accounts, or funds or favors of any kind. Nor do I own stock in any pharmaceutical firm.

Because of my public health training and experience in epidemic intelligence, I first became alerted to the actual dangers of the oral contraceptives—The Pill—early in 1962 when reports of thromboembolic deaths associated with the pill first appeared in the English medical literature.

Such reports by private physicians following the marketing of a new drug frequently forecast impending trouble. It was on the basis of such reports that the thalidomide disaster was averted in the United States: that the Salk vaccine was recalled for further evaluation in 1955: and that numerous drugs have been removed from the market in the past. A prominent example of the latter is MER-29.

As a result of this alert, as well as the many theoretical fears engendered by the use of a powerful systemic synthetic chemical, especially one intended to disrupt a major normal physiological process in healthy women, and the fact that the pill was intended as a mass prescription for a major segment of our society—women in the prime of life—the potential and actual dangers of the pill became an immediate professional interest to me and the subject of continuing study.

My first public statement questioning the pill was addressed to the Illinois Public Aid Commission, November 6, 1962.

At that time the Commission was contemplating underwriting an extensive birth-control program made possible, they believed, by the availability of what was taken to be an effective and safe birth-control pill. This 11-page memorandum was entitled "Practical and Financial Problems Associated with the Use of Oral Contraceptives in Tax Supported Programs."

The conclusion regarding the finances of such a program was that a conscientious observance of precautionary medical procedures

necessitated by the use of the pill—and we have heard some additional medical procedures this morning in the form of periodic X-rays up to four times a year.

Senator DOLE. Dr. Ratner, are you in the practice of medicine now? Do you see patients?

Dr. RATNER. I am in the full-time practice of medicine as a public health physician specialist.

Senator DOLE. In this area of oral contraceptives?

Dr. RATNER. My patients are my community and I have to be concerned about everything that affects the health of my community. I have a community of 60,000 and we are a medical center.

Senator DOLE. How many do you see personally?

Dr. RATNER. I do not see patients personally.

Senator DOLE. You have not seen any patients for how long?

Dr. RATNER. I have not seen patients for at least 10 years, but I am a consultant to physicians, and I am a consultant to the public at large. My primary work is health education.

This is the primary work of a public health physician.

Senator DOLE. What do you base your statements on, with reference to the pill?

Dr. RATNER. Well, Senator, you know there are about a thousand medical periodicals that are published, and practically each one has an article on the pill each month. I happen to get about 20 periodicals in my office, and somebody has to take the time out to read what is being reported.

The private practicing physician does not have the time——

Senator DOLE. Have you done any research on the pill?

Dr. RATNER. No.

Senator DOLE. You do not do research; you do not have any patients; you read articles; is that your base of expertise?

Dr. RATNER. Senator, the reason we have medical literature is for people to keep up——

Senator DOLE. We have had a lot of medical literature in this committee, but I do not know if I have learned anything or not.

Dr. RATNER. We have scientific publications that are intended for physicians who have responsibilities directly to people. And this is the thing that I have as an obligation, as a health officer, to keep up with the medical literature to know what is going on, and this is what leads to epidemic intelligence.

On the basis of this I have sent out warnings to my physicians from time to time. So that they are getting the results of my screening of the medical literature.

Senator DOLE. They could learn the same thing by reading the same periodicals?

Dr. RATNER. A busy practicing physician hardly has time even to read his own specialty journals.

Senator DOLE. The point is that you have not done any great research in this field other than reading, you have not seen any patients—I assume you have not personally had any experience with any of the side effects, and I assume you are here as an expert witness with reference to the pill. I just wonder what you base that on.

Dr. RATNER. I base this on my expertness as a public health spe-

cialist, and I have been invited here to talk about the public health aspects of the pill in that capacity.

Now, I would be quite an ignoramus as a physician if I did not read the medical literature that was coming out pertaining to this, and the person who reads and keeps up with the medical literature is better informed about the pill than the person practicing in his own office, seeing his own patients, which is simply a mirrored image of himself. Half the time, if his patients develop complications from the pill they go to another doctor.

As a result, he does not even know what is happening in his own practice.

Senator DOLE. Are you board certified?

Dr. RATNER. I am a qualified public health physician. I cannot hold my post unless I am certified by the State as being qualified to handle the public's health.

Senator DOLE. Proceed. Maybe there will be some questions later.

Dr. RATNER. Yes, sir.

And the treatment of medical complications resulting from the use of the pill, would make this an exorbitantly expensive method of family planning. I pointed out at that time that the pill would result in a "sharp increase in expensive, iatrogenic"—which means physician caused disease—and that "although medical committees hastily appointed by the Government and drug houses have concluded (in 1962) that these cases (of thrombophlebitis) seemed coincidental, one is circumspect in concluding that the last word has not been said."

When I became the editor of Child & Family Quarterly late in 1967, we initiated a section entitled, "Recent Setbacks in Medicine" to make clear to our readership that not all recent discoveries in medicine represent advance. In it we abstracted articles from the current medical literature reporting medical complications of the pill.

Appended to these collections of abstracts were editor's comments critically evaluating the status of the pill. The material on the pill from Child & Family was subsequently reprinted in a booklet entitled, "The Medical Hazards of the Birth Control Pill" (M.H.), and has just been received from the printer.

Because the collection of medical abstracts, editor's comments, the editor's preface commenting on the second report of the Hellman committee, and the introduction by Dr. Louis Lasagna, professor of clinical pharmacology at Johns Hopkins Medical School, is so germane to the subcommittee hearing, a copy of the booklet has been submitted in connection with this statement.

Although I do not wish to take the time to read them now, I would like the "Preface," "Introduction," and the "Editor's Comments" from this booklet to be included as a part of the record of these hearings.

Senator DOLE. Who is the editor?

Dr. RATNER. I am.

Senator DOLE. So the editor's comments you refer to are your comments?

Dr. RATNER. Right.

Senator McINTYRE. Without objection, they may be made a part of the record.

(The document follows:)

[Excerpts from Child and Family, December 1969]

THE MEDICAL HAZARDS OF THE BIRTH CONTROL PILL

PREFACE

In answer to the direct question, "Are the birth control pills safe?"—to which the public and the medical profession seek a candid, clear, unambiguous response—Dr. Louis Hellman, in his Chairman's Summary, (1), gives an elusive, evasive, equivocal reply. He concludes:

"When these potential hazards and the value of these drugs are balanced, the ratio of benefit to risk (is) sufficiently high to justify the designation safe within the intent of the (Kefauver-Harris) legislation."

That one Pill manufacturer promptly distributed free copies of H's summary to American physicians, is not, therefore, a surprise; nor a surprise that another Pill manufacturer utilized it in a letter to book editors and reviewers to undercut in advance three, current, responsible books documenting the dangers of The Pill for the public at large.

For H. to claim in defense of his conclusion that "no effective drug can be absolutely safe" is not only irrelevant but a type of sophistry unbecoming to a chairman of a committee with guardianship over the health of millions of women in the prime of life. The fact is that in the treatment of disease where the patient is in a state of imbalance, e.g., hypothyroidism or diabetes, effective drugs such as thyroxine and insulin *are* safe in proper therapeutic dosage. The unique problem with oral contraceptives is that powerful drugs are being given to healthy women already in a state of balance for which the term *therapeutic dose* doesn't exist, except as a metaphor. Even Aristotle knew that although effective drugs given to sick people may get them well, effective drugs given to the healthy are bound to lead to imbalance and disease (2).

In a different category we have antibiotics. Some are safe, and some are dangerous. The safety of penicillin in respect to toxicity of the therapeutic dose is not questioned, nor is it the subject of Congressional Hearings. Chloramphenicol (chloromycetin), on the other hand, which *was* the subject of a Congressional Hearing, is universally recognized among experts as a dangerous drug that should be strictly limited in its use. (Its lethality matches that of The Pill (3).

Again, no one questions the safety of condoms, diaphragms, spermatocides or rhythm—available alternatives to women interested in family planning. No committee, meeting over months and years, is necessary to proclaim this fact.

Were H. to have pronounced The Pill dangerous—and H. admits close to "3 per cent [additional deaths] to the total age-specific mortality in users," to say nothing of serious morbidities—but justified in certain, delimited categories of patients (as was done with chloramphenicol) the air would have been cleared and women and physicians alike would have benefited from highly useful guidelines.

H., instead, manages to rationalize the safety of The Pill by an overinflated estimate of the current Pill's effectiveness and an overinflated estimate of the diaphragm's ineffectiveness. Implicit in his comparison is that deaths from diaphragm-failure pregnancies, calculated from overall maternal mortality, equal thromboembolic deaths from The Pill, thereby making "the pill . . . as safe (or as dangerous) as the diaphragm." (4) By this gross comparison, H., and Pill enthusiasts emulating him (Dr. Robert Kistner of Harvard is a striking example) are dangerously misleading women and their physicians.

The fact is, as H. knows, "the risk in having a baby is not the same for all individuals. A healthy young girl runs a very negligible risk, but someone who has serious heart disease, or who is older, or who has hypertension, runs a real risk in having a baby. So to say the risk in taking the pill is less than the risk in having a baby doesn't make much sense. (5)"

NOTE.—Numbered references at end of Preface.

Furthermore, for women spacing children, the need for maximum effectiveness of The Pill at the risk of serious medical hazards ranging from thrombophlebitis to sterility is clearly unwarranted, since these women desire another baby anyway. Obviously, their need for effectiveness is different from those with completed families and radically different from those who have high risk vulnerability to the potential hazards of pregnancy. Had H. delineated the numerous categories which, in his terms, would have differentiated justified from dangerous usage of The Pill, he would have made a major, educational contribution to the prescribing physician in his task of intelligently advising women and in protecting patients from a wide spectrum of medical complications. Here H. could have benefited from Perkins *Guide in Establishing Priorities for Contraceptive Care* (6).

In 1966, the first report of the Hellman Committee concluded that it found "no adequate scientific data, at this time, proving these compounds unsafe for human use." (7) Notwithstanding, H., in press conference, interpreted that report as "a yellow light of caution." (8) Since the 1966 report, more than fifty metabolic changes have been recorded in women on The Pill (9) and its association with thromboembolism, depression, chemical diabetes, migraine, sterility, libido loss, hypercholesteremia, hypertension, jaundice and lesser conditions established. In the light of this it seems hardly acceptable three years later for the second report of the same Committee to find "the ratio of benefit to risk sufficiently high to justify the designation of safe."

Drug companies and Pill enthusiasts have interpreted this designation of safety as a green light. One wonders what new medical hazards have to be unfolded to deepen the yellow in the yellow light of caution or to change the light to red.

Disturbing is the fact that H. chose to be the sole author of the summary of the second report (1969)—that part of the report which receives the prime publicity. He apparently, preferred not to entrust the summary to the Committee as a whole which is normal procedure and which was an unexplained departure from the first report.

According to *Medical World News*, "There were indications that not all members of the blue-ribbon committee were in agreement with the general conclusions reached on the relative risks and benefits of the pill."

One committee member told *MWN* that the summary was "the chairman's synthesis of committee discussions." (10)

Why, then, wasn't there a committee synthesis? It is known that Dr. Philip Corfman, a prominent member of the Committee, and director of the Center for Population Research, National Institutes of Health, held a contrary position, more in harmony with the recorded facts. At the Family Planning Conference of the American Medical Colleges Association, Corfman concluded that The Pill's "use should be monitored and restricted to women who cannot use other methods effectively." (11) This recommendation received no publicity. It seems improper that his assessment of The Pill was ignored, or eliminated, and kept from the ears of those eager to be informed.

Because so much is at stake I urge the reader not only to carefully scrutinize the contents of this booklet, but also other recent books which critically reexamine The Pill. Some excerpts from these appear on the pages preceding the Preface. Perhaps, then, the reader will wonder—as we do—what pressures exist to retain Dr. Hellman as chairman of this important committee when he has failed in making available to us clear directives protective of the health of American women.

REFERENCES

1. Second Report on the Oral Contraceptives of the Advisory Committee on Obstetrics and Gynecology, Food and Drug Administration, Aug. 1, 1969, Superintendent of Documents, U.S. Government Printing Office, Washington, D.C.
2. *See* The Medical Hazards of the Birth Control Pill, p. 46.
3. R. O. Wallerstein, M.D. et al. *JAMA* 208:2045, 1969.
4. Louis M. Hellman, M.D. A Doctor's View of Birth-Control Pills, *Redbook Magazine*, April 1969.
5. Ibid.
6. Gordon W. Perkin, M.D. Assessment of Reproductive Risk in Non-Pregnant Women, *Am. J. Ob. & Gyn.* 101: 709–717, July 1, 1968.

7. Report on the Oral Contraceptives. Advisory Committee on Obstetrics and Gynecology, Food and Drug Administration, Aug. 1, 1966. Superintendent of Documents, U.S. Government Printing Office, Washington, D.C.
8. *Washington Post*, Aug. 16, 1966.
9. Metabolic Effects of Gonadal Hormones and Contraceptive Steroids. Ed. by Hilton A. Salhanick, M.D., David M. Kipnis, M.D., and Raymond L. Vande Wiele, M.D. Plenum Press, New York, 1969.
10. *Medical World News*, p. 5, Sept. 19, 1969.
11. Philip A. Corfman, M.D. Metabolic Effects of Oral Contraceptives, *J. Med. Education* Part 2, 44:67, Nov. 1969.

* * * * * * * * * *

INTRODUCTION

There are few medical controversies that have stirred up as much public discussion as the safety of "The Pill"—the oral contraceptives. Why, then, this booklet?

The answer lies in the history of oral contraceptives. To begin with, these chemicals proved extraordinarily effective in preventing conception, and were hailed (with good reason) as a major advance in individual, national, and global birth control efforts. Second, the convenience and psychological and esthetic advantages of the Pill over older mechanical devices, the rhythm method, etc. rapidly made oral contraceptives popular with women, their sexual partners, and doctors alike, especially since the technical skill required to fit a diaphragm, e.g., was not required of the physician, who could now confidently manage the contraceptive needs of his patients by the simple use of his prescription pad.

Third, these substances were, although not natural hormones, hormone-like in their actions, and were thus considered by some scientists as somehow less likely to cause mischief than "drugs." (The fact that even true hormones could be catastrophic in their effects, as in hyperthyroidism or the conditions associated with hyperfunction of the adrenal glands, seems to have been overlooked in this argument.)

Fourth, the Pill quickly became big business, so that drug manufacturers began to manipulate professional opinion at an early date, stressing the wonders of the Pill and minimizing its dangers. In this they were aided by medical journalists, who for a long time—with a few exceptions—filed "gee-whiz" stories that tended to condition lay readers to a positive orientation toward oral contraceptives.

Finally, the serious side effects of the Pill have been difficult to pin down in conclusive fashion. The various clotting disorders that have been reported are all conditions that occur with a frequency that is not sufficiently high to be detected with certainty by anything short of carefully planned studies. Furthermore, the voluntary reporting of pulmonary emboli, strokes, etc. has been generally so fragmentary as to make a travesty of several "expert committee" reports prepared for the Food and Drug Administration or the World Health Organization. The possibility of drug-induced cancer of the breast or reproductive system is still in scientific limbo, since the lag time between initiation of chemical insult and the appearance of clinical cancer (if it ever occurs) can be expected to be long.

Those who have been struggling for years to alert the public and the profession to the potential mischief inherent in the prolonged use of these powerful chemicals that affect almost every cell in the body have thus had to combat a host of forces arguing against their point of view. These include the women whose sex lives have been revolutionized by the Pill, the population control experts who sincerely believe that the population explosion is a far greater danger than any harm inherent in oral contraceptives, the pharmaceutical firms that have a substantial financial stake in the Pill's image, and the doctors who have been telling their patients for years that the Pill was "as safe as water."

Obfuscating the entire picture has been a series of Alice-in-Wonderland rationalizations that smack of science but are really so unscientific as to constitute an insult to the intelligent person. The risks of death are contrasted with the risks of pregnancy as if, a) no alternative, safe and effective methods

of birth control were available, b) oral contraceptives were not going to be taken for year after year, and c) women who don't use oral contraceptives would be pregnant almost continuously. As imprecise as the figures for death from the Pill are, comparison of the relative risks *over a reproductive lifetime* of oral contraceptives, other effective techniques, and ad lib pregnancies makes the Pill look anything but benign.

What is the situation today? In my opinion, the drawbacks of the Pill mount with each passing year, as the annotated bibliographies in this booklet indicate. The whole story of the Pill's mischief has yet to be told. Nevertheless, oral contraceptives remain one useful approach in the judicious physician's management of his patients. There are women for whom the Pill must be considered the contraceptive technique of choice. But there are many women for whom it is not, and some who should not take these drugs under any circumstances.

This booklet should help to weigh the scales so as to achieve a better balance about the Pill in the mind of the reader. It does not attempt to argue the case *for* the oral contraceptives, so that anyone who has somehow escaped exposure to the sunnyside of the story will end up with a biased point of view. But for most people, the pages that follow should prove informative and useful, provided one believes that a well educated public will make wiser decisions about health matters than one that is misinformed.

LOUIS LASAGNA, M.D.
The Johns Hopkins University School of Medicine.
BALTIMORE, M.D., *September 19, 1969.*

* * * * * * * * * *

Editor's Comment:

To withdraw a drug once on the market is considerably more difficult than to get a drug on the market. FDA originally approved The Pill (Enovid) as safe for marketing on the basis of studies on only 132 women who had taken The Pill consecutively for 12 or more months. (Morton Mintz, *By Prescription Only*, Houghton Mifflin Co., Boston, 1967, p. 271.) Since The Pill has been on the market, the number of deaths reported in association with The Pill has far exceeded this number. In fact, it is safe to say that The Pill is the most dangerous drug ever introduced for use by the healthy in respect to lethality and major complications. It is certainly the most talented drug ever introduced in its ability to produce diverse and varied disease phenomena and systematic abnormalities in normal women. Furthermore, "nobody knows fundamentally how the drugs work. For the biochemistry of inhibiting conception by taking drugs remains one of reproductive physiology's more fogbound research areas." (*Chemical & Engineering News*, March 27, 1967, p. 44.) Finally, we are ignorant of The Pill's long range effects, particularly as a contributing cause of cancer. This latter concern has led Dr. Hellman, Chairman of the most recent FDA Advisory Committee on Oral Contraceptives, to state, "If I were a young lady these days and had any fear of cancer, I'd probably use an intrauterine device." (*Ob. Gyn. News*, Aug. 1, 1967, p. 14.)

To admit mistakes is not characteristic of the American scene. Governmental agencies are no exceptions. In addition, the pressures and manipulations by drug firms—and the people they subsidize—to prevent a drug from being removed from the market can be extraordinary.

This is especially true of The Pill. Everyone prefers to believe that The Pill is safe. It is the most psychologically acceptable birth control agent for women because of its separation in time and place from the love act. It is a boon to the physician, because the writing of a prescription is the quickest and simplest of medical acts, and because the effects of The Pill necessitate keeping the patient under observation, returning her to the doctor in a continuing exercise of his medical skill and authority. It is a fabulous money-maker. Research workers and social engineers promoting The Pill—at university levels and in birth control clinics—never had it so good in terms of financial support.

But there comes a time in the history of a drug when it is imperative to take a sober second look: to compare the drug's initial promise with its subsequent performance. The issue, obviously, isn't effectiveness. We can all agree with Guttmacher (*Recent Setbacks: Action*) that the three fold effect—sterilization, contraception and abortion—"accounts for the extraordinary success"

of The Pill (provided, however, that one can motivate women to use it, or to stay on it, or to take it on 20 consecutive days).

The sober second look concerns itself with safety. The extent of the gap between promise and performance is highlighted by the accumulation of contraindications, precautions, warnings and adverse effects listed above, as well as by *The Sampler on The Pill.* The latter is only a token of the thousands of articles that have been written, since the introduction of The Pill, questioning safety, reporting deaths or lesser complications, or reporting unsuspected, newly discovered, systemic effects.

These reports are written by reputable physicians and are judged to be worthy of publication by editors of leading scientific periodicals. With England's recent statistical demonstration of a definitive association of The Pill with thromboembolism (*Brid. Med. J.* 5/6/67), the judgment of individual clinicians recording this association has been substantiated and has proven superior to the judgment of the four committees appointed to determine safety. (Searle-AMA 9/2/62; Wright 8/3/63; WHO 12/6/65; and Hellman 8/15/66.)

The Pill was originally and erroneously introduced as a "natural" and "physiologic" means of birth control and, by implication, safe. (John Rock, M.D., *The Time Has Come,* Alfred A. Knopf, 1963, Ch. 14.) Early investigators, thereby, focussed their greater interest on effectiveness rather than safety. Protocols, as a result, were deficient in medical surveillance. This deficiency accounts for the innocent dismissal as "heart attacks" (author's quotes) of two deaths among the 838 women using The Pill in the Harvard School of Public Health-Puerto Rican field trials. (A. P. Satterthwaite, M.D. & C. J. Gamble, M.D., *Conception Control with Norethynodrel,* J. Am. Med. Women's Assoc., 17:797–802, Oct. 1962.) These women were young, in previous good health, were not seen during their illness by staff members conducting the study, and were not autopsied. Subsequent investigations by Puerto Rican physicians (A. M. de Andino, Jr., M.D., et al *Informe Preliminar Del Comite De La Associacion Medica De Puerto Rico Nombrado Para El Estudio De Las Reacciones Adversas A La Droga Enovid,* Aug. 28, 1962; Ramon Sifre, M.D., *Statement on Enovid,* April 20, 1963) as well as a representative of the FDA (Heino Trees, M.D., Meeting conducted by Sen. E. Gruening, Aug. 7, 1963), confirmed that thromboembolism and deaths were occurring in association with The Pill, contrary to the denials of the promoters of The Pill in Puerto Rico. Because The Pill had acquired "diplomatic immunity from criticism" (D. B. Clark, M.D., *Annual Meeting, American Academy of Neurology,* Philadelphia, 1967), unknown to any other marketed drug, no publicity of these facts was forthcoming.

Klopper (*Recent Setbacks*) makes clear that The Pill is not natural and physiologic in its action. This theory was also effectively dismissed by Robert E. Hall, M.D., of the Columbia University School of Medicine: "Rock's rationalization of The Pill is to me a little short of preposterous . . . As a birth control enthusiast I would like to dismiss this theory as a harmless euphemism; as a doctor I must aver it is medical fantasy." (*N.Y. Times* Book Review Section, May 12, 1963.)

The Pill acquired its diplomatic immunity because it was promoted as the solution to the population problem in undeveloped countries, and to the growing welfare problem in the U.S. Under the thesis that the end justifies the means, imputing danger to The Pill was branded as unhumanitarian. The fact is that The Pill has not solved the population problem and, with the exception of a few episodic successes, has not received significant acceptance in developing countries and among the poor. This accounts for the subsequent major shift to other contraceptives as a solution to the problem: first to the IUD—the loop or coil, and following its failure, to new and then to old contraceptives. The Agency for International Development, for instance, is now shipping condoms to India.

When *Time* went all out for The Pill (April 7, 1967), it referred to the "latest" report of Dr. John Cobb to prove that The Pill was being successfully used in Pakistan. But *Time* was ignorant of his latest report, from which I quote: "Enthusiasm was contagious . . . But then we began to analyze our data, checking off the women who had received the IUD and other contraceptives, against our census roster for the village . . . At the most, this would reduce the birth rate from the estimated level of 50 to about 47, a long way

from the goal of reducing the birth rate to 30. . . . Oral contraceptives were moderately sucessful for a very few selected women, but were not practical . . . . Something more than contraception is needed." (John C. Cobb, M.D., M.P.H., *Obstacles to Population Control In West Pakistan*, American Association of Planned Parenthood Physicians, Denver, Colorado, April 27, 1966.)

The net result of propaganda which led to pronouncements of Pill safety out of so-called humanitarian considerations was that the real users of The Pill, the middle and upper classes of the U.S., were seduced away from well established and safe means of birth control. To attribute the present reduction of the U.S. birth rate to this seduction is erroneous. The recent decline in birth rate began in 1957, four years before The Pill was on the market, and more years before it was used popularly. The lowest birth rate in the history of the U.S. occurred 35 years ago without the benefit of The Pill.

Perhaps the most fallacious argument in defense of The Pill is that it prevents the hazards of pregnancy. How a Pill which places the woman in a continuous state of false pregnancy, which in turn reproduces the illnesses of occasional pregnancies, can be considered an advantage is beyond scientific comprehension. The English, in an attempt to water down their finding of 3 deaths per 100,000 women from thromboembolism by alleging that The Pill prevents 12 deaths per 100,000 from pregnancy, ignore two essential facts. The first is that the alternative to The Pill is not pregnancy but other and safer means of conception control. The second is that prior poor health contributes to most of the deaths in pregnancy. Contrasting the death rate of healthy women on The Pill to healthy pregnant women results in an entirely different comparison.

There is even a more basic error: viz., the failure to realize that false pregnancy is a disease, not a normal state. What is ignored in true pregnancy is the compensating factor of a growing and developing fetus, and the adaptation of the mother's body to gestation. As far as I know, no one has discussed this.

Three examples suffice. In pregnancy, the vascular system of the body adjusts to accommodate a rapidly enlarging uterus. In false or Pill pseudopregnancy, the pelvic vascular system increases the blood supply, but there is no enlarging uterus to utilize the increase. This results in extensive pelvis venous congestion, a condition which has already caused distress to surgeons. Such unnatural congestion introduces a whole series of factors predisposing to thrombosis and embolic phenomena.

The second example relates to the hypercoaguable state of pregnancy. This state was described prior to the introduction of The Pill. (B. Alexander, M.D., et al, *Increased Clotting Factors in Pregnancy*, New Eng. J. Med. 256:1093–1097, Nov. 30, 1961.) "This (state) provides a means where by rapid clotting may take place at the site of placental separation." (Louise L. Phillips, Ch. 12, "Modifications of the Coagulation Mechanism During Pregnancy," in *Modern Trends in Human Reproductive Physiology*, Ed. H. M. Carey, Butterworths, 1963.) The Pill duplicates the hypercoaguable state. Because it serves no function in false pregnancy, its only contribution is to make the "patient potentially more susceptible to intravascular thrombosis." (Ibid.) The Pill introduces the risk without compensatory advantage.

The third example relates to the well known protection pregnancy or embryonic tissue confer against certain induced cancers in the lower animal. In the absence of fetal tissue this protection is not conferred. Projecting this fetal-maternal relationship to human beings, we cannot assume in using The Pill contraceptively, via the mechanism of a false pregnancy, that the protection against cancer is present in the absence of the fetus.

It would seem that if we had any respect for nature's economics, subtleties and the ordering of health, and any humility in respect to our multiple ignorances of the fetal-maternal relationship, we would more readily recongize that a state of false pregnancy is pathologic and a monstrosity of nature.

On the basis of the original norm for safety, "no method of pregnancy spacing, even though highly effective, is justifiable if it endangers life or health" (*Recent Setbacks*: Norm for safety), The Pill should have been removed from the market years ago. Since the FDA has failed to follow the original norm, it should inform us of its present norm. How many deaths, how many disabilities, how many newly discovered disease conditions associated with The Pill must there be before the FDA, in terms of its regulatory responsibility, feels

obligated to act? Is it to wait until the dangers become fully apparent to the consumer herself? One out of five women (estimated to be 1,232,000) once having used The Pill, has already decided on her own never to use The Pill again. (*Science* 153:1199, Sept. 9, 1966; 155:951, Feb. 24, 1967.) Do we wait until all women reject The Pill? Obviously not, since the FDA is supposed to supply expert epidemiologic knowledge in advance of the obvious fact.

In the spring of 1955, the government reluctantly removed Salk vaccine from the market, because its dangers became apparent to the man on the street. With the later Sabin vaccine, and the bitter Salk vaccine experience behind it, the government took a more sophisticated and responsible position. When doubts arose, it was ready to recall the Sabin vaccine if cases of paralytic polio caused by the vaccine exceeded one per million inoculations. It has now been established that The Pill causes 30 deaths per million women from thromboembolism, to say nothing of severe disabilities from the same condition. Again, we ask, at what point will the FDA act on The Pill?

Presumably, The Pill would have been recalled from the market if any of the four committees in considering the association of The Pill to thromboembolism found a significant relationship.

Is FDA's inaction a preview of things to come? Are we going to witness a series of future rationalizations as associations are established between The Pill and pseudo-carcinoma, chromosome damage, depression, diabetes mellitus, hypertension, liver disease, magnesium deficiency, migraine, sterility, cerebral arterial insufficiency, vaginitis, vision impairment and perhaps cancer?

Medicine's ultimate goal is the prevention of disease and the promotion of life. When one takes the incidence of individual adverse effects and calculates the numbers of women suffering from ailments generated by The Pill, the total number of women converted from a state of health to a state of illness is in the hundreds of thousands, if not in the millions. Estimated deaths from thromboembolism now amount to 180 for the six million women on The Pill in the U.S. For as long as records have been kept in the U.S., with the exception of 1916, the incidence of deaths from polio has never reached this level.

A major reason for failure to obtain a more objective assessment of the problem, including its public health dimensions, rests with the method of selecting experts for advisory committees.

Some of the experts chosen are deeply obligated to drug firms for subsidization of their research and other activities. *Chemical and Engineering News* quotes a scientist on the latter situation as follows: "Another hindrance to objective results, and I think this ought to be said, is that too many investigators have too personal an interest in the drugs they work with. All in all I get the feeling that the experimental aspects of (The Pill) are so fluid and controversial that you must be careful over who says what and why he says it." (Ibid. p. 48.)

Such investigators are capable of stating publicly that The Pill "is a perfectly safe method," (*Medical Science*, Nov. 1963, p. 47) and again, as late as January, 1968, that The Pill when "taken under the supervision of a competent physician, and directions followed, is perfectly safe." (John Rock, M.D., *Family Circle*, Jan. 1968, p. 33.) The fact is that perfect safety cannot be attributed to any drug, not even aspirin.

The opposite ploy is also used to defend The Pill; e.g., "I think we agree that there is nothing in life that is absolutely safe. 'Safe' then becomes a relative term, and we have to consider safer than what, or less safe than what." (Don Carlos Hines, M.D., Director of the Medical Special Services Division of Eli Lilly and Co. on *The Open Mind*, WNBC Television, Feb. 6, 1966, "*Are Birth Control Pills Safe?*")

The first committee appointed to study the question of thromboembolism, was sponsored by the manufacturers of Enovid, not the government, and conducted by the American Medical Association. (*Proceedings of a Conference: Thromboembolic Phenomena in Women*, Sept. 10, 1962, Chicago.) The latter has a well known bias in favor of the pharmaceutical industry. Within several hours of convening this meeting, before participants had an adequate opportunity to study and discuss the data presented at the meeting, the Chairman called for a vote that would, in effect, be a whitewash of The Pill. (Ibid. pp. 69, 81, 82.) He commented, ". . . so far there has not been a single shred of evidence that has been presented in any of these figures to suggest that it con-

tributes to a greater incidence of this disease . . . Will everyone agree with that?" The Chairman ultimately got the vote he requested. That it was not unanimous is a tribute to Stanford Wessler, M.D., a leading authority on thrombosis, who with courage and perspicacity, was the single dissenting voice.

Concerning the selection of experts for committees, the conclusion of a Johns Hopkins conference held in November, 1963, to explore the major problems in making safe and effective drugs available to the public is pertinent. The following is taken from a section dealing with "experts and decisions" from the summary of the conference.

"Experts . . . at any point in time are frequently considered to be those who espouse the most popular and widely held views of the predominant orthodoxy. The history of medicine abounds with examples of the perpetuation of totally illogical treatments or the irrational resistance to significant therapeutic advances because of the powerful influence of an authoritarian orthodoxy . . . Experts should be replaced periodically so that no single orthodoxy exerts a dominant opinion. The opinion of experts should be subject to challenge by way of a wide variety of media and channels." (*Drugs in Our Society*, Ed. Paul Talalay, Johns Hopkins Press, 1964, pp. 284–285.)

If, for reasons of its own, FDA feels it cannot remove The Pill from the market on the same basis as other drugs, we would urge the FDA to appoint another committee. The appointment of experts to this committee should be governed by the conclusion of the Johns Hopkins conference. If the safety of the public is paramount, such a committee should be sympathetic to a long established principle of medicine; viz., to lean toward the worst diagnosis.

With all due respect to the concept of statistical safety, there are numerous individual women who are having their lives ruined by The Pill. ("Our Readers Talk Back About The Birth Control Pills," *Ladies Home Journal*, Nov. 1967.) This should be of deep concern to a medical profession dedicated to the personal welfare of the individual patient.

CHILD & FAMILY WINTER, 1968.

* * * * * * * * * *

Editor's Comment:

"TO THE EDITOR:

Yesterday I received my first copy of your magazine, with its thorough report on the pill. Yesterday, also, my obstetrician inserted an intrauterine device. I certainly admire and respect the cautious viewpoint of your magazine. Actually cautious really means honesty, and real and consistent honesty is pretty hard to find. Thanks."

Honesty among men makes possible a well functioning society. In two areas, in particular, man hungers for "real and consistent honesty": from science, since its goal is truth; from medicine, since its goal is individual well-being and longevity. In the latter, no hunger for honesty is greater than that of the person who is in the process of making a medical decision about life and health.

The number of other readers who expressed appreciation similar to that quoted above testifies that many women of child-bearing age hunger for the facts of The Pill. These women are concerned about risks to life and health; about their responsibilities as wives and mothers. They are concerned about their womanhood and the integrity of their bodies. The younger woman is especially concerned about the possibility of subsequent sterility or adverse effects on future babies. For most women, the overriding factor in choosing a method of conception control is safety. Since established safe methods of conception control are already available, they resent being seduced from these methods by false assurances of Pill safety. To the frequently repeated question, 'Is The Pill Really Safe', however, scarcely anywhere does the American woman get a knowledgeable or candid answer to help her in her personal decision.

Because of the pateint's right to the facts, we have compiled another Sampler on The Pill. Most of the articles abstracted have appeared or have become available since the original Sampler (*CF* 7:80–86 Winter 1968). These articles, for the most part, come from the daily reading of the editor in his capacity as a public health physician. They are not the result of a scrutiny of the literature. The second Sampler confirms the continuing concern of physicians with

Pill safety. Some of the abstracts confirm earlier reports. Others report additional associations of The Pill and pathology: blindness, uterine cervical lesions, gingivitis, lupus erythematosus reactions, hair loss, cholesteremia, lactation suppression, frigidity, hepatic porphyria, pulmonary vascular disease, psychoses, sunlight sensitivity and vascular occlusion of the colon and the hepatic veins (Budd-Chiari Syndrome). Of greatest interest are the final reports of two British studies demonstrating the cause and effect relationship of The Pill to thromboembolic (TE) disease and deaths with special reference to the lungs, brain and heart. (*Recent Setbacks: TE Disease*, Vessey & Doll; Inman & Vessey).

These studies definitely resolve a six year controversy in the U.S., a controversy in which it seems that every possible effort was made by promoters, propagandists or proponents of The Pill, to minimize the issue and prematurely claim safety. It is sufficient to note at this point that although The Pill was first discovered, researched, clinically tested, marketed and widely used in the U.S., and although the number of women using The Pill in the U.S. far exceeds use in other countries, and although there were four U.S. dominated committees appointed to look into safety, it was not the U.S. with its much vaunted scientific resources and superior health accomplishments that resolved this vital question. It was resolved by England, a medically socialized country whose resources, supposedly, do not compare to ours. Except for the dedicated reporting of Morton Mintz of *The Washington Post*, these important findings of deep interest to all women and most physicians received the sketchiest reporting in the mass media and minimal reporting through medical channels.

The use of the upper limits of thromboembolic disease (TE) incidence reported by the English, applied to the U.S., results in the following predicted number of cases: (In accordance with the English studies, pathology is restricted to hospitalized cases of TE and to deaths from TE in the lungs, brain and heart. Deaths from TE in other parts of the body, e.g., hepatic vein thrombosis resulting in the highly fatal Budd-Chiari Syndrome—see *Recent Setbacks: Thrombosis*—are excluded. Out of an estimated 6,000,000 women on The Pill in the U.S., The Pill would produce 2,520 hospitalized TE cases annually. Annual predicted deaths from pulmonary, cerebral and coronary TE would range from 242 to 1000. The calculation resulting in the smaller number is based on the assumption that 70% of American women on The Pill are under 34 years of age. If the over-all TE death rate were applied to American pill-users, the number of deaths would exceed 242. The higher figure is based on the English calculation that The Pill accounts for 2% of the total mortality of women in the child-bearing age.

It is the current technique of apologists for The Pill to dismiss the death risk as "very small" (Louis Hellman, M.D., *The Today Show*, 5/2/68). But similar numbers of deaths from other causes produce quite a contrary reaction. For instance, deaths from TE correspond to the incidence of deaths from chloramphenicol or dietary pills, both of which were the occasion of congressional investigations. The incidence of death in white women of child-bearing age from crimes of violence which include murder, forcible rape, robbery and aggravated assault is equivalent to the incidence of TE deaths from The Pill. More pointedly, for this suggests an opacity or lack of perspective on the part of the obstetrician, The Pill, which the obstetrician prescribes contraceptively, causes more deaths—approximately twice the number—than are prevented when the same obstetrician immunizes a pregnant woman against poliomyelitis. There are numerous additional lethal diseases in the U.S. to which public health devotes large sums of money and to which physicians devote great energy, in which the incidence of death is less than that caused by The Pill.

The final irony, however, is found in a comparison of the number of deaths from criminal abortion. Reported deaths from abortion in the U.S. in 1963 which were criminal, self-induced or without legal indications only amount to 114 (*CF* 7:39 Winter 1968). Christopher Tietze, who favors relaxation of abortion laws, estimates deaths from abortion as follows: "According to official statistics, the number of reported deaths from abortion in 1964 was 247 for the entire United States. Doubtless almost all of these deaths were associated with illegally induced abortion. Also without doubt some deaths from abortion were untruthfully or even mistakenly reported under other diagnoses, but I do not believe that the true total of deaths due to illegal abortion, recorded and

hidden, can be much larger than 500 per year." (*Statistics of Induced Abortion, International Conference on Abortion*, Sept. 1968, Washington, D.C.)

Most of the supporters of The Pill—the same physicians, who are minimizing deaths from The Pill—are in the forefront decrying deaths from illegal abortion as a rationale for relaxation of the abortion laws. They do this with humanistic fervor. All can lament these deaths, for each human life is precious. But where is their concern for women dying from The Pill, which match in number the deaths from criminal abortion? They dismiss the number of deaths from The Pill as inconsequential, a comment no abortion advocate has yet made concerning deaths from abortion.

Incidentally, these same physicians take pleasure in referring to the rhythm method of conception control as Vatican roulette (a term which at best can only be applied to unsupervised calendar rhythm). In Vatican roulette, however, when the woman loses, she at least gains a baby, a baby who very quickly becomes a precious asset. With The Pill, the woman plays real roulette —Russian roulette: when she loses, she loses her life!

It seems that Dr. Louis Hellman, who as Chairman and official spokesman of the Committee on Obstetrics and Gynecology of the FDA which weighs Pill safety, has become particularly negligent in his public interpretation of the English findings.

The Hellman Committee came into being because of the dissatisfaction of FDA with the reports of previous committees: the Searle sponsored American Medical Association Conference (Sept. 10, 1962), the Wright Committee of the FDA appointed by Dr. Goddard's predecessor (Aug. 4, 1963) and the World Health Organization Committee (December 6, 1965). To its credit, the Hellman Committee was the first of all committees to introduce a cautionary note. *Time Magazine* (8/19/68) expressed it as follows: "On the key issue of whether the pills are ready safe, the formal report took refuge behind a double negative "The committee finds no adequate scientific data, at this time, proving these compounds unsafe for human use.' A committee spokesman for human use.' A committee spokesman translated :'We wanted to put a word of caution, to put a yellow light, not a green light, on the matter.' " The committee's spokesman was subsequently identified by the Associated Press as the chairman, Dr. Hellman (*Washington Post* 8/16/66).

With subsequent proof of The Pill as a cause of death and serious disease, logic would dictate that Dr. Hellman switch from the yellow light to the red light. His public statements indicate his acceptance—sometimes perhaps with reluctance—of the validity of the English reports :"Discussing risks of birth control pills . . . Dr. Hellman said studies in Great Britain have shown that the pills have caused thromboembolism. But he said the risks are extremely small." (*Chicago Sun-Times* 1/22/68). "Dr. Hellman . . . concedes that there is a cause-and-effect relationship between birth control pills and sometimes fatal lung clots . . ." (*Science News* 2/3/68). According to Herbert Black and Carl Cobb of the *Boston Globe*, however, Hellman, "has been widely misquoted on his assessment of the British Study." In his statement to the *Globe* Dr. Hellman stated: "The study has demonstrated a very real relationship, but is only suggestive of a cause-and-effect relationship" (2/21/68).

But, lo and behold, it is not a red light he has "put on the matter" but a green light, as indicated by subsequent public statements: "I think the British data is conclusive. I think it proves, and this is a new item conclusively, what we have suspected for some time, that there is a cause and effect relationship between the taking of oral contraceptives and clots (but the British figures) should not be taken in themselves as at all alarming. It's a very small risk. The British say the risk is less than having a baby. Perhaps this isn't the proper way to evaluate the risk. I don't think personally that the way to talk about this risk is in comparison with the things we do every day that we don't have to do . . . I think the pill . . . has proved remarkably safe over the seven or eight years that it has been used . . . I would not hesitate a bit in prescribing it for teenagers . . . I don't think there is anything in the immediate future that will cast any serious doubt on the safety (of The Pill) beyond what we know right now." (*The Today Show*, 5/2/68). "There's no sense trying to hide the risk. These very responsible figures show (the) danger . . . The risk of thromboembolism in pregnancy is the same as that from The Pill. And the over-all risk of death in pregnancy is considerably higher" (*Medical World News* 5/24/68).

Wish-fulfillment may have bettered Dr. Hellman's scientific acumen and may account for his contradictions and unseemly statements. Certainly, it does not become the chairman of a committee investigating safety—a committee that has promised to turn in a report on safety in 1969 (which will not help the women who may be dying in 1968)—to prejudge safety in advance as in his statement: "I don't think there is anything in the immediate future that will cast any serious doubt on the safety (of The Pill) beyond what we know right now." Furthermore, he should make up his mind about comparing deaths from The Pill to deaths from pregnancy. For one thing, the claim that "the over-all risk of death in pregnancy is considerably higher" cannot be substantiated. Even if it could, it would have dubious application. He plainly misinterprets the British when they compare The Pill and pregnancy. (*Recent Setbacks*: TE. Inman & Vessey, last paragraph).

Dr. Hellman, at least for some audiences, accepts the causal relationship of The Pill to TE, a relationship which by his own statement he "suspected for some time." It has not served the public welfare, however, for him to have kept his suspicion from the public. The suspicion belongs to the patient who takes The Pill and risks her life, not to the physician who prescribes The Pill, nor the drug company which profits from The Pill. The physician has the obligation to share his suspicion with the patient.

Nor is it serving the public for other physician backers of The Pill, writing for the public, to ignore or dismiss the cause and effect relationship. An example of this is to be found in *Today's Health*, a lay periodical of the American Medical Association which is found in most physicians' waiting rooms. The May 1968 issue contains an article entitled, *The Pill—Is There a Danger?*, which followed the original Sampler on The Pill (*CF* Winter 1968). The author, Edward T. Tyler, M.D., of Los Angeles Planned Parenthood clinics, a pioneer on oral-contraceptive research, is knowledgeable and, no doubt, has his own suspicions. The article, however, reads like a skillfully written promotional piece from a pharmaceutical house. To refer back to the discredited two year old WHO Committee's whitewash of The Pill (*Recent Setbacks*: Scandal) and to keep silent about the English studies is, to say the least, misleading. To the credit of Dr. Tyler, however, he handles the question of the teenager and The Pill in conformity with FDA'S recommendation (*CF* 7:77 Winter 1968) and quite differently from Dr. Hellman who gave carte blanche to the use of The Pill by teenagers over a national network (supra). Dr. Tyler's guarded statement is: "There is no definite known reason why oral contraceptives cannot be prescribed for a *normal* girl when she has completed puberty and has reached her full height." Even then many would disagree with its advisability.

An earlier example of an article written to offset adverse criticisms of The Pill, and which used irrelevant data, appeared in *Parent's Magazine*, Oct., 1967. It was written by George Langmyhr, M.D., formerly associated with a leading manufacturer of The Pill and presently Medical Director of Planned Parenthood-World Population. He quoted data from a book entitled, *Oral Contraceptives*, by Dr. Victor Drill, whom he failed to identify as the Director of Biological Research for Searle & Co., the manufacturers of Enovid. The data purports to prove that since there is less TE reported in Pill users than in non-Pill users, The Pill cannot be the cause of TE. Neither Drs. Langmyhr nor Drill, however, make mention of the gross under-reporting of Pill complications in this country. As Vessey and Inman state in (*Recent Setbacks*), "The hypothesis that there was no relation between the use of oral contraceptives and fatal thrombosis depended on the assumption that there has been almost complete reporting of thromboembolic deaths. That this assumption is untenable has now been demonstrated." These authors point out that only 4% of the known deaths were reported by the attending physician. There is reason to believe that reporting is even less than that in the U.S. Dr. Drill quotes Dr. Winter of Searle's in support of lack of association, but fails to mention Dr. Winter's admission that, "The considerable discrepancy between the reported numbers and the predicted incidence is very likely a reflection of inadequate reporting" (*The Incidence of Thromboembolism in Enovid Users. Metabolisms* 14:422–431 March 1965).

A final example of biased interpretation to allay criticism, or in this case, perhaps, innocence, is found in an article by two sociologists, Drs. Charles F. Westhoff of Princeton and Norman B. Ryder of the University of Wisconsin

(*Duration of Use or Oral Contraceptives in the United States*, 1960–65; *Public Health Reports* 83:277–287 April 1968). These authors direct the National Fertility Study under a contract from the Public Health Service. Their bias or innocence is reflected both in the introduction and the conclusion. In their introduction they state that ". . . confidence in (The Pill's) safety has increased with time and accumulation of satisfactory experience." They are obviously opaque to the prolific recording of unsatisfactory experience. In their conclusion they state, "Based on these data, admittedly inadequate for diagnostic purposes, there does not appear to be any evidence of serious health problems associated with the use of the pill." Their data, however, belies the conclusion. Insofar as their data is interpretable and projectable to 6,000,000 users of The Pill, their data yields the following pathology: The Pill results in 1) 3,040 cases of thromboembolism (TE) or a rate of 74 per 100,000 users (which is comparable to the English findings); 2) of these cases of TE, 1580 cases are pulmonary emboli requiring hospitalization (naturally, they were not able to record deaths since they surveyed live patients). Of women who remained on The Pill, and whose symptoms were recorded at the time of the interview, 1) 792,000 women complained of weight change, fluid retention, breast tenderness or nausea; 2) 147,600 women complained of spotting, hemorrhage, irregularity or cramps; and 3) 198,000 complained of headaches and/or nervousness. If serious disease means imminent death and good health means the proliferation of headaches, nervousness and a variety of female ailments, then these two sociologists are right in their conclusion. All should agree, however, that none of these ailments contributes to either a satisfactory personal life or a harmonious relationship with other members of the family, although they do keep the practicing physician inordinately busy.

Space does not permit a full exposition of the sophistry and shallow science found in the writings of most promoters of The Pill since serious complications from The Pill were first reported seven years ago. Although promoters of The Pill had the earliest and largest clinic experiences with The Pill, they were not the ones who discovered and reported serious adverse findings. What was not looked for was not found. What was not surveyed was not seen. What perhaps happened was ignored. With rare exception, the clinical researchers ignored the firm warning of Prof. J. R. A. Mitchell of Oxford and the British Medical Research Council, given at the Searle & Company AMA *Conference on Thromboembolic Phenomena in Women* in Chicago, 1962: "the patients who drop out of the trials . . . are much more important than the patients who stay in them." This was the radical error of the highly touted and highly publicized Planned Parenthood-World Population study released April 2, 1965. No wonder it never found the deaths and the strokes and the multiple pathologies that caused women to discontinue The Pill—it only studied women who had survived Enovid for at least 24 months. This study was made despite the knowledge that the vast majority of the 132 cases of TE disease and death,—which was the basis for the Chicago Conference—occurred much earlier than the 24 month period and predominantly within the first six months of Pill use.

In general, favorable findings of drug company subsidized physician promoters of The Pill and naive physicians have been encouraged, widely distributed, scientifically inflated, maximized and extolled whereas unfavorable findings have either been ignored, suppressed, rationalized, minimized or ridiculed.

Concerning TE disease and death, the so-called authorities on The Pill in the U.S. have been consistently wrong on the issue of safety. It seems that this demands investigation—if necessary, congressional investigation. It seems, also, that the greatest support should be given the FDA, to protect it from the pressures of the pharmaceutical industry and from foundations, and from government and voluntary agencies whose real concern is not individual health but the alleged social health associated with the use of any type of population control, whose scientists and swivelchair physicians tend to view people as statistical numbers rather than as patients and persons. Mass prescription must not displace the individualized therapeutic decision. Here, if we believe in the principle that the state is ordered to the good of the individual, we must agree with Walter L. Hermann, M.D.: "If widespread and generalized use of these progestins (The Pill) will provide humanity with a first early formula for solution to the population problem, are we not then entitled to think in terms of over-all results, and deviate just one step from the traditional *primum nos nocere*—first do no harm—of the healing profession? The answer is a very emphatic no." (*Introduction to A Symposium on Oral Contraception, Metabolism* 14:422–431, March 1965).

Finally, it must be emphasized, in this era of consumer protection, that the woman has a right to protection from manipulation and victimization. No right is more firmly established than the right of the patient to informed consent (*CF* 7:75 Winter 1968) to a prescription directed at his body, whether surgical or medicinal. Knowledge sufficient for enlightened consent is a moral, medical and legal right to which malpractice suits testify. The classic statement of this right is found in Plato's Laws (Greek pagination 491) where Plato distinguishes between the physician who took care of slaves, and the one who took care of freemen. Whereas the slave-doctor prescribed "as if he had exact knowledge" and gave orders "like a tyrant," the doctor of freemen went "into the nature of the disorder," entered "into discourse with the patient and his friends" and would not "prescribe for him until he has first convinced him." The reader can determine for himself whether the American woman, as patient, is treated as slave or free person. It is our belief that the decline of responsibility to the individual patient in the area of family planning by groups and individuals working in this field is resulting in a national scandal.

CHILD & FAMILY SPRING, 1968.

* * * * * * * * * *

Editor's Comment:

The above contraindications, warnings, precautions and adverse reactions are the 'fine print' which are required by law in drug labeling and advertisements of The Pill to the medical profession. These Pill complications have been drawn up by an ad hoc committee of the FDA. No other drug on the market lists as many and such varied complications—testimony to the pervasive and universal action of sex hormones on virtually every cell of the body. Furthermore, one must never forget that in the case of the oral contraceptives one deals not with natural hormones but with artificial or synthetic substances capable of abnormal, unpredictable and possibly disastrous effects.

Despite the extensive complications enumerated, many believe that the Committee's formulation reflects a partiality favoring the interests of Pill manufacturers: that the Ad Hoc Committee exhibits a reluctance to share with the prescribing physician and the patient the deep concern it and others have over the complications arising from the use of powerful synthetic steroids in the normal healthy woman. Information raising doubts about the true safety of The Pill is frequently withheld. Premature reassurances are released to the press in the absence of supporting data.

As one might suspect the manufacturers of The Pill abet this situation. They support research which confirms their bias and furthers their self-interest. They seek advocates and promoters. They favor supporters of The Pill with subtle forms of payola: research grants, subsidized trips to national and international meetings, and consultant fees, to name a few.

The burden of demonstrating and communicating The Pill's dangers to physicians and the public at large, therefore, falls to those who do not have the official responsibility for the safety of The Pill and who have little source of financial subsidy to pursue unbiased investigations to evaluate safety. This burden is inappropriate for the prime responsibility for the safety of The Pill rests with the Ad Hoc Committee and the FDA. Theirs, however, seems to be a timid and reluctant guardianship. Once again we remind the FDA of the recommendation of the Johns Hopkins 1963 conference on drugs (*CF* 7:93 Winter 1968) that experts appointed to advisory committees "should be replaced periodically so that no single orthodoxy exerts a dominant opinion."

An example of deference to the interests of drug manufacturers is the inclusion of the paragraph implying that recent British data causally relating The Pill to disease and death from thromboembolism (TE) are not applicable to women in the U.S. Rhetorically, the statement casts doubt on the significance of the British findings for American women. Taken literally, however, the paragraph discounting the British findings introduces the alternative possibility that TE dangers of The Pill may be greater for American women. Were the Committee concerned more about the health of 6,000,000 American women for whom safe conception control alternatives are available, rather than for the health of the pharmaceutical industry of the social engineering proclivities of sociologists, the importance of the British studies demonstrating unequivocal associations with death and disease requiring hospitalization could not be treated so lightly nor rationalized so readily.

Actually, the sophistry of the pharmaceutical industry and those who work with them is apparent. In earlier studies, representatives and allies of drug

manufacturers did not hesitate to use foreign data on TE to support contentions that The Pill was not a cause of TE in the U.S. Eden Berman, M.D. of the Division of Clinical Research of G. D. Searle & Co., manufacturer of Enovid, and Dr. Robert I. Cien, Searle's Director of Market Research, utilized Saskatchewan and British Columbia data to support their contention that The Pill was not associated with TE in the U.S. (*Proceedings of a Conference: Thromboembolic Phenomena in Women*, Sept. 10, 1962 Chicago).

Christopher Tietze, M.D. at the same meeting, likened the death rate from non-puerperal thrombophlebitis and pulmonary embolism in American women of reproductive age to the death rate from the same causes in British women: he reported the former as experiencing 7 deaths per million, whereas the British experienced 6 deaths per million (Ibid. p. 74). This contradicts the current claim that British and American women are not comparable. (Dr. Tietze even went on to say that "The number of reported deaths among (American) users of Enovid is . . . almost twice as high as the number of expected deaths. . . .")

Dr. Victor Drill, Director of Biological Research for Searle has also utilized statistics on TE from foreign countries to argue for the safety of The Pill in the U.S. (*Oral Contraceptives*. 1966, McGraw-Hill, N.Y.) There, he equates the incidence of TE in England and Wales to that reported by the *National Disease and Therapeutic Index* for the U.S. The difference is less than 1% (p. 173).

When representatives of the drug industry (and others) advance British statistics as comparable when they serve the purpose of protecting the sale of The Pill to American women, but reject analagous British statistics as not comparable when they do the opposite, sophistry has pre-empted truth and bias has sabotaged science.

Of relevance is the fact that safety studies leading to acceptance of The Pill by the FDA were carried out on Puerto Rican women. If one argues that British women are not comparable to women of the United States, a fortiori, Puerto Rican women, in terms of climate, nutrition, ethnic background and activity, are even less comparable. In other words, the FDA's acceptance of the thesis that women of different countries are not comparable negates the original studies allegedly proving the safety of The Pill. It was these studies upon which the approval of the FDA was based.

The new labeling requirements continue to reflect a minimalistic approach to the adverse effects of The Pill. In this regard, the FDA seems to demand only what it feels forced to accept in matters critical of The Pill. The benefit of the doubt would seem to favor the use and sale of The Pill rather than the best interests of the woman who may be victimized by its taking. Does this not echo the old Scotch verdict, "Not guilty! But, don't do it again"?

The language of the original article by Inman and Vessey, upon which TE warnings required by the FDA were primarily based, is ". . . irrespective of age, the risk of death from pulmonary embolism or cerebral thrombosis was increased seven to eight times in users of oral contraceptives." (*CF* 7:179 Spring 1968). Is there not therefore, a glaring inconsistency to be noted when a statistical correlation is admitted for one (pulmonary embolism) and not for the other (cerebrovascular accidents)? To admit the relationship of one finding with no qualification and to downgrade the other, somewhat arbitrarily, to a "suggestive association"? Or, to declare, as explained at length previously, that an English study has relevance to American women in one case but not in another?

Could it be that the drug industry, the Ad Hoc Committee and the FDA are playing a specious game? The continuing apparent capitulation of the FDA to interests more concerned with sales than with safety remains most alarming and disappointing. If the practicing physicians, the wives and future mothers of this country cannot look to the FDA in complete trust, to whom can they turn?

CHILD & FAMILY SUMMER, 1968.

* * * * * * * * * *

Editor's Comment:

The Third Sampler on The Pill contains abstracts of unusual interest from the scientific literature:

1. Under *Blood Coagulation*, Poller reports that "clotting changes do not appear to be dose dependent." Accordingly, the new low-dose oral contracep-

tives cannot be construed to be any less dangerous than the old high-dose orals in respect to thromboembolic phenomena. This is to be expected since what are euphemistically termed "side effects" are in reality "direct effects," as characteristic of the oral steroids as contraceptive effects.

2. Under *Blood Platelets*, Bolton reports that, unlike natural estrogens, the synthetic estrogens used in The Pill produce a "pattern of platelet behavior (which) resembles that of patients with arterial disease or multiple sclerosis." The effect is mediated through an abnormal enzyme produced by the synthetic estrogens. This finding helps elucidate the multiple mechanism which accounts for the increased incidence of thrombosis in women on The Pill reported by the English (*CF* 7:178–80 Spring 1968). It further exposes the illusion of protagonists of The Pill and the fantasy of pharmaceutical advertising that The Pill is a natural and phsyiologic form of contraception. Others have been critical of this claim (*CF* 7:89 Winter 1968).

3. Under *Carcinoma-in-Situ*, Mintz' report of the unpublicized meeting of the American Cancer Society at which secrecy was imposed on a finding linking The Pill with precancerous uterine cervical changes is most disturbing. Secrecy in such matters is completely foreign to medical tradition. The suspicions and findings of clinical medicine belong to the patient and to the prescribing physician responsible for the therapeutic decision.When, under the guise of social engineering, population control or alleged prudence, knowledge is withheld which pre-eminently belongs to the medical profession and public, physician and patient rights are transgressed. Unfortunately, suppression of knowledge associating The Pill with cancer is more prevalent than this isolated report indicates. In certain elite circles it is common knowledge (which until published cannot be substantiated) that one of the major hospitals in the East is observing a sixfold increase of precancerous cervical changes in women on The Pill. One also hears that grant money has been withdrawn from a study at an Eastern medical school which uncovered breast cancer in monkeys on The Pill. Additionally, one gynecologist has informed me that he has recently seen an increased incidence of cervical cancer in girls in their early twenties who are on The Pill, a phenomenon uncommon to his experience of approximately 3,000 cases of cervical cancer. Furthermore, it is public knowledge that one oral contraceptive was kept off the market because of breast cancer produced in dogs.

In an age in which preventive medicine has high priority, it is distressing to have women exploited as guinea pigs in order to establish absolute certitude of the causal relationship of The Pill to cancer and other complications. Though it must be admitted women make superb guinea pigs—they don't cost anything, feed themselves, clean their own 'cages,' pay for their own Pills and remunerate the clinical observer—the letter and spirit of the Kefauver Bill was to the contrary: that safety be established before, not after, placing the drugs on the market.

4. Under *Depression*, Nilssen, in a prospective psychiatric and psychologic investigation of postpartum women on The Pill and not on The Pill, reports a "significantly higher frequency of psychiatric symptoms" in Pill users. This confirms an earlier prospective study on depression (*CF* 7:171 Spring 1968). If medicine's goal is high-level wellness, using a contraceptive that causes depression in up to 1 out of 4 women is hardly a contribution in that direction, nor can it be much of a contribution to domestic bliss.

5. The findings under *Diabetes Mellitus* are equally disturbing. Spellacy, for instance, reports that "77% (of women on) the combination type (of oral contraceptives) have abnormal glucose tolerance curves" after being placed on The Pill.

Assuming there are 5 million women in the reproductive years on combination oral contraceptives, close to 4 million are undergoing a detectable alteration of carbohydrate metabolism in the prime of their life. This pathologic condition is potential to many serious late complications such as stroke, coronary infarction, gangrene and cataracts. Vaginitis Candida, communicable to husbands, has already been established as an immediate complication (Supra, *Vaginitis;* also *CF* 7:87 Winter 1968).

Four million human guinea pigs at no charge is an attractive gift to physicians doing clinical research. One would be happier, however, if these physicians displayed more of a public health conscience and raised their voices against a mass experiment proceeding more from ignorance than from knowledge.

6. A particularly unwarranted threat to the young woman using The Pill to postpone initiation of a family is post-Pill sterility. (Supra *Sterility*). There is no greater and more ironic retribution nature exacts than to rob The Pill user of the gift of motherhood she gratuitously takes for granted.

7. Finally, under *Pulmonary Embolism*, "The gross inadequacy of physician reporting" of adverse reactions to The Pill is reaffirmed (*CF* 7:185 Spring 1968). This can only mean one thing: that the actual damage The Pill is causing in the most active years of a woman's life is considerably worse than the Samplers on The Pill indicate.

* * * * * * * * * *

Editor's Comment:

The scientific papers abstracted above in the *Fourth Sampler* testify anew to the inadequacy of the original studies sponsored by the manufacturers of The Pill to detect and uncover the medical hazards of The Pill; and the innocence of its discoverers in promoting The Pill as "natural and physiological." Rather than being natural and physiologic, these scientific articles show that, on the contrary, The Pill produces 1.) significant abnormalties of the intermediate metabolism of glucose in brain and of acetate in the aorta in vivo, 2.) abnormality in platelet behavior in the direction of thrombus formation, 3.) alteration of the electric activity of the brain as registered by the encephalogram, 4.) increased pathological changes in uterine cervical cells and tissue, 5.) chromosomal damage resulting in subsequent spontaneous abortions, 6.) a marked increase in the concentration of serum copper, 7.) changes in monoamine oxidase metabolism associated with depression and loss of libido ranging from 7 to 28% in Pill users, 8.) abnormal alterations in carbohydrate metabolism necessitating special precautions for women with a family history of diabetes or who have a diabetic prednisone glucose tolerance test, 9.) green plasma, an abnormality which is also found in women with rheumatoid arthritis, 10.) a high incidence of endometrial arteriolar development associated with hypertension and cerebral thrombosis, 11.) a significant lowering of the cholesterol content of menstrual discharge, 12.) a striking increase in the concentration of plasma angiotensinogen and plasma renin each of which are associated causally with hypertension, 13.) persistent weight gain, 14.) suppression of immune factors, 15.) suppression of lactation even with a new low-dose oral contraceptive, 16.) an increase in psychiatric pathology, 17.) amenorrhea and sterility and 18.) thromboembolic disease and deaths initiated by thrombi in a variety of blood vessels in the body.

Can there be any remaining doubts that the steroid components of The Pill have a pharmacologic effect that far exceeds the simplistic and stubborn belief of the discoverers and promoters of The Pill who limited the significant effects of The Pill to its contraceptive, sterilizing and abortifacient action? It would seem that they should have known better. They could have listened, for instance, to the prophetic words of Dr. Alan Guttmacher, President of Planned Parenthood-World Population, who, in 1959—one year before The Pill was marketed—commented on the essential dangers of the birth control pills:

"The steroid pills violate a general medical principle. It is deemed safer to affect a target organ, in this case the uterus, tubes, or ovaries, directly, rather than to tinker with that affect through another organ, particularly when that organ is as important and complex as the pituitary gland. This master gland produces more than a dozen other chemicals and hormones, each regulating a vital body process, such as thyroid activity, water metabolism, and body growth." (*Babies By Choice Or By Chance*, Doubleday & Co. pp. 66–67).

Unfortunately, not even Dr. Guttmacher heeded his basic clinical and physiological insight. In his ardent pursuit of population control even he permitted extra-medical considerations to dull his medical acumen. In doing so, he relinquished his professional obligation to individual patients not to violate "the medical maxim *primum non nocere* [first do no harm]."
(see Common Problems).

Markush's paper *(see Thromboembolic Deaths)*, which confirms, in American women, the increased incidence of thromboembolic deaths among Pill users reported by the English, should not go unnoticed. It highlights the weakness of the FDA in capitulating to the demands of drug manufacturers that the new warnings on thromboembolism in Pill users contain a modifying paragraph stating (as if the English were a peculiar species physiologically) that the

English findings do not necessarily apply to American women (*see CF* 7:274–5). How much longer will the FDA continue to grant The Pill a diplomatic immunity not accorded any other drug?

CHILD & FAMILY FALL, 1968

* * * * * * * * * *

Senator MCINTYRE. I want to ask you, doctor, back there on page 2, who sponsored this publication, Child & Family Quarterly?

Dr. RATNER. It is a group of physicians who are deeply interested in human life and reproduction, and incidentally, interested in the rhythm method and they have incorporated as a nonprofit organization.

And I am the editor for them, of this quarterly, which has had a long history of concern with things pertaining to maternity and family and child——

Senator MCINTYRE. Thank you very much, Dr. Ratner.

Dr. RATNER. Right.

As a public health physician I am deeply concerned with the narrowed vision of the private physician and the narrow interests of birth control clinics and clinics restricted to special diseases.

It limits them from appreciating what is happening to the health of the country as a whole. We are losing sight of the whole person and we are losing sight of the whole community. We have become insensitive, epidemiologically and ecologically speaking, to our affluent and indulgent approach to medical problems.

The following observations, then, are intended to give a broader view and a better insight into the ramifications in our society of the birth control pill.

IATROGENIC DISEASE

I trust that all physicians, including those who have testified at this hearing, would be in agreement that the ultimate goal of medicine is not simply the cure or prevention of disease but the promotion of optimum health and the achievement of high level wellness.

In practice, however, we seem to ignore, or at least fail to accomplish this goal. Physicians and patients alike tend to be overenthusiastic about treatment. We have become a pill-swallowing civilization and man a paying animal as if health were a commodity to be bought at the marketplace rather than to be sought through an intelligent respect for nature's norms.

I might add here that when the Center for the Study of Democratic Institutions in Santa Barbara, headed by Robert Maynard Hutchins, did a series, the American Character Series, and it was initiated at the Hotel Shoreham, Washington, in 1962, I was chosen to write a critique of American medicine, which was entitled "The Interview on Medicine." The above thought is to be found in the Interview.

As a result it is generally recognized that America is the most overmedicated, most overoperated and most overinnoculated country in the world. This has brought about an increasing prevalence of iatrogenic—physician caused—disease and the medical literature abounds with case studies, review articles and books dealing with this malady.

With the widespread use of the oral contraceptives—the pill—iatrogenic disease has hit epidemic proportions. The reason for this is clear. Up until now physicians, for the most part, have only been producing iatrogenic disease as a byproduct of treating the already sick person. For the first time in medicine's history, however, the drug industry has placed at our disposal a powerful, disease-producing chemical for use in the healthy rather than the sick.

In 1969, this made available to the medical profession a target of 8½ million healthy women in the prime of life. We have had no better target for making obvious our talent for producing iatrogenic disease. How have we made out?

The following represent numbers of healthy women who have become diseased as the result of using the pill.

The first estimates are based on data from the national fertility study carried out for the Public Health Service by Westhoff, of Princeton, and Ryder, of Wisconsin.[1]

I have listed what they found and I will not spell it out because I think everybody here has a copy. But on the day they made this interview they asked people what symptoms they had, which their doctors attributed to the pill. It resulted in 1,603,500 episodes of disease, which is a ratio of about one out of five, which fits in with a lot of other figures we have on the incidence of complications from the pill.

(The information follows:)

	Cases
Thromboembolism (total)	4, 306
hospitalized cases of pulmonary embolism	2, 238
Of women who remained on the pill, and whose symptoms were recorded at the time of the interview:	
Weight change, fluid retention, breast tenderness or nausea, accounted for	1, 122, 000
Spotting, hemorrhage, irregularity or cramps accounted for	209, 000
Headaches and/or nervousness accounted for	272, 500
Total	1, 603, 500

Dr. RATNER. Newsweek reported that of the women asked about complication, 51 percent of them said they had complications. It is on this basis, since they were healthy to begin with, that one is concerned about the extent of iatrogenic disease caused by the pill.

The following estimates of incidence are conservative and are applied to the 8½ million women on the pill in 1969. The basis for them can be found in either the Medical Hazards of the Pill or supplementary literature. All disease conditions are not represented, nor are most of the more than 50 metabolic abnormalities represented.

For instance, in this paper I omitted chloasma, abnormal pigmentation of the skin—usually of a permanent nature—which occurs in 29 percent of the women on the pill. This means that 1,650,000 women end up with disfiguring skin pigmentation, not previously present, brought about basically by mechanisms associated with the adrenal glands.

[1] See reference 1 of Bibliography, beginning at p. 6757.

(The information follows:)

Thromboembolic diseases requiring hospitalization, 42 per 100,000; 3,570 cases:

Depression (16 percent)	1, 360, 000
Libido loss (16 percent)	1, 360, 000
Vaginitis (15 percent)	1, 275, 000
Chemical diabetes (13 percent)	1, 105, 000
Absolute sterility (1.5 percent)	127, 500
Partial sterility (15 percent)	1, 275, 000

The following are based on an estimate of 1 case per 2,000 users:

Migraine	4, 250
Liver disease	4, 250
Uterine cervical pathology	4, 250
Hypertension	4, 250
Hypercholesteremia	4, 250
Lupus erythematosus	4, 250
Erythema nodosum	4, 250
Ureteral dilatation	4, 250
Hearing difficulties	4, 250
Vision difficulties	4, 250
Hypertrophic gingivitis	4, 250
Herpes gestationis	4, 250
Hair loss	4, 250

Dr. RATNER. Without running through all of these conditions and these diseases——

Mr. DUFFY. Let me interrupt you for a moment. You use the word "disease" here. Disease to me seems to be a pretty strong word and I am just curious why you would consider weight change to be a disease.

Dr. RATNER. You realize that obesity is one of our major problems in this country.

Mr. DUFFY. Weight changes is a bit different, in my mind. If a person simply gains 5 or 10 pounds, is that a disease?

Dr. RATNER. The optimum weight for a human being relating to——

Mr. DUFFY. Let us move on.

Dr. RATNER (continuing). Extension of life is ten pounds under the standard figures. Our No. 1 disease in this country is obesity, because with it comes malfunctioning of organs, and any time you put on 3 extra pounds, which consists of whatever it consists of as long as it is not muscle tissue and things like that, you are beginning to introduce a health hazard.

Mr. DUFFY. What characterizes a disease? When is a headache a disease? I have a headache right now; is that a disease caused by those bright TV lights we had this morning.

Dr. RATNER. Of course, it produces dysfunctions. You are not functioning as well when you have a headache.

Mr. DUFFY. I still have very great difficulty in accepting these as diseases.

Dr. RATNER. You may have a difficulty with a few of them but you do not have difficulties with migraine and liver disease and you do not have difficulty with uterine cervical pathology, you do not have difficulty with hypertension, you do not have difficulty with hypercholesteremia, you do not have difficulty with lupus erythematosus, you do not have difficulty with erythema nodosum——

Mr. DUFFY. I do not understand that.

Dr. RATNER. That is part of the difficulty here. You do not have difficulty with vaginitis.

Mr. DUFFY. You say 1,122,000 cases of disease involving weight gain?

Dr. RATNER. Say that again?

Mr. DUFFY. You say here weight changes account for 1,122,000 cases of disease.

Dr. RATNER. I am quoting from a study by Westhoff and Ryder. It was directed to what was happening in respect to illnesses among people taking the pill, and they saw fit to list these things. These are not my figures. These are people who are associated with Planned Parenthood. They are working under a grant from the U.S. Public Health Service. They happen to be the official recorders of what is happening at large with the pill.

This is their data, so argue with them. But they saw fit in an article that was published—and I have it here, and I will be happy to show it to you afterwards—in the "Public Health Report" to list these as the complications of the pill.

Mr. DUFFY. They did not call it disease, though, they called it complications. Is that what you say?

Dr. RATNER. Now we are getting into semantics about what you say are complications and what another person says is a disease. I want to make it clear to you that optimum and high-level wellness consists of neither. And I have already said that the goal of American medicine is not simply to prevent disease, it is to promote optimum health. This is what good nutrition is all about, and a lot of other things are all about. And this is what we are concerned about in this country, we are not concerned about making distinctions between disease and complications.

Without enumerating them further, to give you just a notion of the extent of disease conditions that the pill is producing, I say here, because I have added it up, that the last group of individual disease conditions caused by the pill total 6,561,500 disease conditions in 8,500,000 women.

Senator DOLE. You just added everything on page 5 to reach that total?

Dr. RATNER. On the latter half of page 5.

Senator DOLE. What about the upper half?

Dr. RATNER. The upper half, I already gave you those figures when I read them to you; 1,600,000.

Senator DOLE. If you add those to the other, you get over 10 million disease conditions in 8 million women?

Dr. RATNER. Yes.

No, a lot of these are duplicates. You can see they are duplicates. One is headaches and nervousness up above, and the other——

Senator DOLE. You get one credit for headache and credit for being nervous?

Dr. RATNER. These are conditions that are happening in women. It is not one woman for each condition. Some women, unfortunately, have several conditions. They can have pigmentation, they can have

depression, they can have libido loss, they can have vaginitis. This makes them just more of a cripple.

Senator DOLE. Are you saying that there are 6,561,500 diseased women out of 8,500,000?

Dr. RATNER. No, I did not say that. I said diseased conditions in 8.5 million.

Senator DOLE. How many women are you talking about?

Dr. RATNER. This would be less than 8.5 million women. I only give you one total figure to give you an idea of the problem.

Senator DOLE. You gave a whole page of figures.

Dr. RATNER. If you want a clarification at this point, I would point out two things. In terms of the Westhoff and Ryder report, this constituted 20 percent of the women. In terms of the Newsweek Gallup poll, which was referred to earlier, which came out a couple of weeks ago, 51 percent of the women said they had complications.

So this will give you an idea of the amount of women who have complications. They range anywhere from 20 to 50 percent.

Senator DOLE. You believe the poll was accurate?

Dr. RATNER. Well, it is as accurate information as we have and it supports many other studies, including the Westhoff-Ryder study, which pointed out—I think I am coming to that later—that one out of five women give up the pill, and they say they will never use it again, and the main reason is because of medical complications.

That is one datum. OK?

Senator DOLE. It is OK with me. I do not add quickly.

Dr. RATNER. I did not expect everybody—I thought the least I could do was add it up for you.

Senator DOLE. That is fine.

Dr. RATNER. Let there be no doubt about the medical dangers of the pill. I think it sufficient to recognize that we never had congressional hearings on the safety of other methods of conception control such as foam, diaphragm, condom, or rhythm.

The incidence of death from the pill is of the same order as deaths from chloramphenicol (M.H. pp. 2, 59) and diet pills—and both of these have been subject to congressional investigation by your subcommittee. The deaths from chloramphenicol is three per 100,000, and this is precisely what the pills are, three per 100,000.

To place the dangers of the pill in sharp perspective, let me translate a mostly ignored conclusion from the "Chairman's Summary" of the "Second (1969) Report of the Advisory Committee on Obstetrics and Gynecology."

Dr. Hellman states that of all causes that kill women annually in their child-bearing years almost 3 percent of deaths in women users of the pill are caused by the pill. This was in his "Chairman's Summary" of the report that came out in August.

Many a voluntary health agency launched to save lives from a particular disease have been launched on an incidence of deaths less than that caused by the pill. To illustrate, the pill which the obstetrician prescribes contraceptively causes more deaths—approximately twice the number—than are prevented when the same obstetrician immunizes a pregnant woman against poliomyelitis.

Mr. DUFFY. Do you have a cite for that, Doctor?

Dr. RATNER. Yes.

Mr. DUFFY. Would you supply that for the record?

Dr. RATNER. Yes. It is written up in a Medical Hazards and you will find it in the index on the policy—I will leave the exact reference, OK?

Senator DOLE. Leave it with the reporter, please.

Dr. RATNER. Yes. The citation is M.H. pp. 44–45.

Overlooked is the fact that the incidence of thromboembolic deaths from the pill is equivalent to the incidence of deaths in white women of child-bearing age from crimes of violence which include murder, forcible rape, robbery, and aggravated assault (M.H. p. 49. "Homicide rates for whites of all ages and both sexes is 3.1 deaths per 100,000 people." Statistical Bulletin of the Metropolitan Life Insurance Co., February 1968, p. 5.)

Senator DOLE. Do you say they mention the pill in that study?

Dr. RATNER. No, sir; I am trying to give you comparable figures so you can have a perspective on what we are dealing with when we admit three out of 100,000 die because of the pill. This perspective is sadly lacking in discussion of the pill. I am obviously talking now as a public health man.

Furthermore, deaths from the pill compare to deaths from both legal and illegal abortions. Dr. Connell last week lamented "the helpless feeling that comes over you as you watch women die following criminal abortions" which she attributes to the nonuse of the pill. The life of a woman dying from a "therapeutic misadventure" is the English term used as a cause of death on death certificates in England when death occurs from iatrogenic or drug disease.

The life of a woman dying from a "therapeutic misadventure" with the pill is equally precious. The helpless feeling of the attending physician in many instances is even worse. Unfortunately, Dr. Connell's chief experience with death relates to obstetrical cases. She doesn't normally see deaths from the pill, since the women in whom pulmonary embolism or cerebral accidents occur don't return to the birth control clinic prescribing the pill for medical care, because birth control clinics do not give total medical care. Therefore, when a woman is getting the pill from the birth control clinic and 3 weeks later has a stroke and is indigent, she goes to the county hospital, and the county hospital takes care of it and there is no followup on these cases in all of the birth control clinics I am associated with professionally.

The person instead is seen by an internist or chest surgeon or neurologist. This conforms to a medical adage that states: Specialists do not see their own mistakes. Other specialists, however, do see them and for the most part in the case of the pill these other specialists know more about what is happening than obstetricians and gynecologists.

The chest surgeon or neurologist can tell more about serious complications than the obstetrician.

The trouble here is that Dr. Connell is apparently unaware or unmindful of the fact that the number of women dying from the

pill in the United States is of the same order as the number of women dying from legal and illegal abortion combined (M.H. p. 59). A death is a death. Loyalty to one's biases should not elevate the significance of one cause of untoward death over another.

Now, to make this point clear here, I mean to make my evidence clear, I am using the estimate of abortion deaths of Dr. Christopher Tietze, who you know is for the pill, and is the leading statistician for the Population Council and many other organizations promoting the pill (M.H. pp. 59–60). According to official statistics, the number of reported deaths from all abortions in 1964 was only 247 for the entire United States.

Without doubt, some deaths from abortion were untruthfully or mistakenly reported and therefore underdiagnosed, but, with Dr. Tietze I do not believe that the true total of deaths can be much larger than 500 per year.

Now with the rate of three deaths from the pill per 100,000 pill-users, a conservative figure according to the original English studies, 8.5 million women on the pill resulted in 255 deaths. This is comparable to Tietze's estimate of minimum deaths from all abortions, legal and illegal, vis 247 deaths.

This is what permits me to place pill deaths in the same numerical category as abortion deaths.

So I concluded: A death is a death and that loyalty to one's biases should not elevate the significance of one cause of untoward death over another. We should weep equally for the woman dying from the pill as we weep for the woman dying from a criminal abortion.

The huge amount of iatrogenic disease caused by the pill and the numerous medical examinations and laboratory tests required in order to monitor the patient against the potential inroads of the pill on the woman's health, raises the question whether the medical care system of the United States can carry this burden. Pill complications are making excessive inroads on limited medical personnel and facilities. The cost of medical care in this country is becoming astronomical. Is our nation really in a position to absorb the additional costs brought about by a careless and indulgent use of the pill, without doing grave injustices to the more important medical needs of our country?

If I had the time in preparing the statement, I would have worked out a cost analysis associated with the medical supervision of the pill such as repeat mammography, glucose tolerance tests, repeat physical examinations, and pap smears. It becomes quite an expensive drain on our limited medical resources.

Finally, I would like to say in passing as we move on from the topic of introgenic disease that the scientist in the laboratory has never had it so good in his pursuit of metabolic abnormalities. He has had available to him hordes of experimental animals. Women on the pill are readymade and superb guinea pigs: They don't cost anything, they clean their own "cages," feed themselves, pay for their own pills and, in many instances, even remunerate the clinical observer.

VICTIMS OF SOCIAL ENGINEERS.

The American woman, both rich and poor, black and white, is being victimized by social engineers. Population control rather than the health of the individual has become the new directing force of the family planning movement. The Planned Parenthood Federation's name change in the early 1960's to Planned Parenthood-World Population illustrates this.

When preoccupation is with control rather than planning, people are viewed numerically as statistics, and concern for the welfare of the individual, the person, diminishes. An effective contraceptive rather than a safe one becomes the prime consideration and the technological achievement replaces the humanistic goal.

Were the original Puerto Rican studies equally concerned with safety as they were with effectiveness, we would not have had to wait 10 years later for the committee hearing to bring out the dangers of the pill.

For the first time in the history of conception control, a dangerous contraceptive remains on the market despite its dangers because the birth control movement in this country has become population-control-oriented rather than family-health-oriented. Despite the fact that we knew in advance that a powerful chemical disruptive of normal physiological mechanisms was being introduced. The pill has been the most poorly tested drug ever approved by the FDA.

Mr. DUFFY. Do you have a citation for that, Doctor? Your last sentence?

Dr. RATNER. I think the evidence is clear cut, that since the pill came out and was put on the market in 1960, we have uncovered 50 metabolic disturbances and thromboembolism, and a whole series of diseases caused by the pill. I have a whole page somewhere and I can give you all of the references, but this would require a book of references alone to record for you all of the things that have been discovered since the pill was originally approved as safe.

Now, the spirit of the Kefauver—the legislation inspired by the Kefauver bill—intended that before a drug gets on the market it should be proven safe, not afterwards. It has been the reverse with this drug.

If this is not self-evident, you just tell me what you think is necessary to make this clear to you and I will be happy to go to work.

Actually, I believe my booklet, "The Medical Hazards of The Pill," which has about 140 abstracts of the medical literature, is the documentation. The medical hazards are not to be found in the original studies allegedly demonstrating safety. This is what I am saying. I have listed these hazards in the form of abstracts from the scientific literature. They are indexed and represent the medical hazards discovered since the pill was put on the market in 1960. The booklet is the measure of how inadequate the early studies were.

Satisfied?

Mr. DUFFY. Proceed, please.

Dr. RATNER. Although many other drugs have been removed from the market for lesser reasons, we must wonder why the pill has been retained despite the massive accumulation of medical hazards and

metabolic disturbances reported from clinical medicine and the laboratories.

It should be distressing to American physicians that although the pill was first discovered, researched, clinically tested, marketed and widely used in the United States, and although the number of women using the pill in the United States far exceeds the number in other countries, and although there were four United States-dominated committees appointed to investigate safety, it was not the United States with its much vaunted scientific resources and superior health accomplishments that resolved the vital question of the association of thromboembolism with the pill.

It was resolved by England, a medically socialized country whose resources, supposedly, do not compare to ours.

Well, we had 6 million on the pill and now 8.5 million. England never had more than 600,000, but they managed to get the studies done. And I would like to suggest to this committee that the reason we never have gotten good figures on the medical hazards of the pill are that the promoters of the pill, including the drug companies, are not interested in having these figures determined and made available. There is no other way of understanding why over a 10-year period we have not gotten answers to this. And I think it is near hypercritical for somebody to suggest that the Government spend all kinds of money to determine the hazards, not that they should not be done, but because by the time we hand out enough money, by the time the studies are completed, the pills will be off the market and we will have a new pill to contend with.

The fact remains that the question of thromboembolism was resolved by England, a medically socialized country whose resources, supposedly, do not compare to ours. Furthermore, although promoters of the pill had the earliest and largest clinical experiences with the pill—and this includes Dr. Guttmacher, who in his testimony last week pointed with pride to the fact that he personally, as president of Planned Parenthood-World Population had "one of the largest birth control practices in the world"—they were not the ones who discovered and reported serious adverse findings.

Apparently, what was not looked for was not found. What was not surveyed was not seen. What perhaps happened was ignored. With rare exception, the clinical researchers and promoters of the pill ignored the firm warning of Professor Mitchell of Oxford and the British Medical Research Council given at the Searle-AMA 1962 Conference (M.H. p. 63): "the patients who drop out of the trials * * * are much more important than the patients who stay in them."

To ignore the patients who dropped out was the radical failure of the highly touted and highly publicized Searle-Planned Parenthood study, released April 2, 1965, of women who had taken the pill for 25 months. They only studied women who had been on the pill 25 months, which meant that any woman who had died before 25 months was not part of the study, nor were the "51 percent" of the women who dropped out the first 12 months because of complications part of the study.

This automatically eliminated all of the "bad eggs" and that is why they had such a good propaganda piece. This study lulled the

medical profession into a false sense of security in respect to the safety of the pill.

I would like to conclude this section by saying that the social engineers—I am not talking now about people helping women not to have babies in birth control clinics—that the social engineers, i.e., the population control experts, in promoting the pill regardless of safety are practicing chemical warfare on the women of this country——

Senator DOLE. What page is that on?

Dr. RATNER. I just added this.

Senator DOLE. That is an indication?

Dr. RATNER. That is a conclusion and the young lady has it down. It is a conclusion to the section on iatrogenic disease, which listed over 6 million episodes of illnesses imposed on 8.5 million women. I call this chemical warfare.

And I only hope—and this is a word to the Senators—I only hope that since the Federal Government is tying up aid to developing countries so that family planning and birth control programs must be included, that somewhere along the line developing countries like the Asiatic and Latin American countries do not end up accusing the U.S. of practicing chemical warfare against their women.

EFFECTIVENESS OF THE PILL

I cannot help but remind you here preliminarily, that when General Draper said this morning, "The pill is virtually 100 percent effective contraceptive if taken regularly," that frankly everything is 100 percent effective if done regularly, including abstinence. If you practice abstinence regularly you will have 100 percent effectiveness and the trouble with every birth control device, including the pill, is that there are multiple psychological reasons why none of them are practiced regularly.

The effectiveness of the pill in the field is lower than the publicized claim of virtually 100 percent effectiveness; furthermore, the acceptance rate of the pill over a period of time is in actuality as low or lower than other birth control methods.

1. Drug companies and enthusiasts promoting the pill consistently compare the effectiveness of the pill determined under advantageous circumstances to the effectiveness of other birth control methods measured under unfavorable conditions. When comparing the pill to the diaphragm, for instance, pill promoters use effectiveness rates of diaphragm users obtained from clinic figures which are approximately 18 times higher than rates in women under private gynecologic supervision. The latter constitute the majority of diaphragm users.

Although Dr. Guttmacher reported last week that "the pill is simple to take, requiring little effort on the part of the user," he neglected to mention what he has complained about on other occasions: The inability of the American woman "to count up to 20" and therefore to take the pill as directed. The failure of patients in general to take drugs as directed is noteworthy and has been thoroughly documented in numerous studies.

Forgetfulness occurs even when it involves serious threats to life.

Forgetfulness in the area of birth control is particularly striking in women and is attributed to their underlying ambivalence about pregnancy. (Incidentally, leaving the pill out in the open so as not to forget it has led to numerous child poisonings.)

Senator DOLE. Do we have some evidence on how many cases you know of?

Dr. RATNER. Of accidental poisoning, child poisoning, it was the number two cause 2 years ago in Missouri, and it has a high incidence in the United States.

Senator DOLE. From the pill?

Dr. RATNER. Yes—child poisoning. Now, remember, the problem is that the woman does not want to forget to take the pill. And there are underlying psychological reasons why she has ambivalence about taking the pill, so she always keeps it where she can see it, which means the child can see it, and so this became the number two cause of child poisoning reported in the Government literature and reported in the newspapers and it came as a cause——

Senator DOLE. Not to hold you up, but have there been numerous child poisonings because of the pill? If you will just insert some evidence on that, it would be helpful.[2]

Dr. RATNER. 2. Presently publicized effectiveness rates are derived primarily from the original pills marketed in the early sixties. These pills are four to 10 times stronger than the reduced dosage pills. In the hope of reducing the so-called side-effects (pharmacologically speaking the so-called side effects are equally the effects of the pill as the desired effects), the antiovulatory effect of the pill has been reduced two thirds.

Mr. DUFFY. Would you supply that cite? You left it blank.

Dr. RATNER. I would be glad to tend to it.[3]

Obviously, the latter pill cannot be as effective a contraceptive as the former pill with the high antiovulatory effect. The British Committee on Safety of Drugs, in contrast to those promoting the pill in the United States, has alerted British physicians to the decreased effectiveness of the lower dosage pills (M.H. p. 84).

3. In field use, effectiveness of the pill is sharply reduced because of the high dropout rate associated primarily with undesirable effects and medical complications. Authoritative national surveys (M.H. p. 44) report that one out of five women who were on the pill and went off it state they will "never use it again." In the age group 30 to 34, one out of 3.6 users state they will never use the pill again. Overall studies show that because of dissatisfactions, approximately 30 percent discontinue the pill by the end of the first year and about 40 percent by the end of 2 years in this country. The notion, therefore, that the solution to population growth is the pill is fallacious. Medical complications prevent it from achieving high acceptance rates particularly in undeveloped countries. Although Dr. Guttmacher, in last week's testimony, singled out Singapore as one foreign country where "the oral contraceptive is used exclusively" by the health ministry, he was in error. With the Singapore example, he apparently was trying to make the point that the pill is necessary for world population control. The fact of the matter is that in Sin-

[2] See reference 2 of Bibliography.
[3] See reference 3 of Bibliography.

gapore the pill only achieved maximum usage of 61 percent among people offered birth control. Thirty-nine percent of the people used other methods offered by the health ministry. Furthermore, in a study "covering a possible maximum of 18 months use" "the percentage of acceptors of oral contraception still using the method" was 55 percent. "Medical reasons contributed the most to the discontinuation rate in each cycle," and 65 percent of the women discontinuing the pill turned to the condom which was "the most popular alternative method of protection." This casts quite a different light on the Singapore situation. (Studies on Family Planning. Singapore: The Use of Oral Contraceptives in the National Program. December 1969. The Population Council).

THE PILL AND POPULATION CONTROL

The pill was originally introduced and acclaimed as the solution to the world population problem. The subsequent ascendency of the IUD as the chief method for population control was silent testimony to the fact that the pill did not live up to its expectations. More recently, we have witnessed the Agency for International Development shipping condoms to India, and the Ford Foundation granting over one half million dollars to a gynecologist at Mount Sinai Hospital, New York, to perfect the much ridiculed rhythm method. The fact is that in no nation of the world, including the United States, has it been demonstrated, that national birth rates have been reduced by virtue of the unique or indispensable properties of the pill as a contraceptive. Some of the reasons for its failure have been suggested above. Actually, when women and couples are serious about controlling conception, they will make any one of a variety of traditional methods work. This was demonstrated in the depression years of the thirties at which time the United States had the lowest birth rate in its history, a birth rate only matched this past year. The low rate of the thirties occurred 30 years before the new dangerous contraceptives were introduced. Again it should be remembered that the post-war decline in birth rates started in the United States in 1957, 3 years before the pill was approved by the FDA and another 4 years before the pill became popular. So there is no evidence anywhere on a national basis to attribute to the pill a unique contribution to the reduction of birth rates.

UNWANTED PREGNANCIES

In Dr. Guttmacher's testimony of last week he stated that "The pill is the most effective means yet known to prevent a very serious affliction, unwanted pregnancy."

The concept of unwanted pregnancy is one of the most confused, misused concepts ever to enter the vocabulary of the social engineers.

To be very candid, let me first state that according to all of the large scale studies made about wanted and unwanted pregnancies in the United States the evidence clearly indicates that most Americans, and that includes the majority of us in this chamber, are the result of unwanted pregnancies at the time of conception. And I had two references, standard references for you. I won't bother reading them to you.[4]

[4] See reference 4 of Bibliography.

Mr. DUFFY. Would that suggest, Doctor, there was contraceptive failure?

Dr. RATNER. No, the way they are using the term now is to say, and I am quoting from Dr. Guttmacher—unwanted pregnancy at the time of conception, he reported, 40 percent of the babies are the result of unwanted pregnancies at the time of conception. This was given at the last annual meeting of the planned parenthood in New York. Now, this means that if 2 weeks after the woman becomes pregnant she is happy about it, it is still listed as an unwanted pregnancy. And when this term was originally introduced to mean excessive fertility, it included unwanted pregnancies, even if only one of the partners did not want it.

Now, to make this point clear, evolution has been also deeply concerned about this problem otherwise we might not have made it here. There are mechanisms in the baby to convert it from being unwanted to wanted. Prior to quickening—the silent period frequently associated with nausea and fatigue—a woman may be receptive to the idea of an abortion. But once the baby starts kicking sufficiently to produce the sensation of quickening the woman's attitude changes. The woman now knows she has a baby inside and her attitude to an abortion radically changes. When the baby first smiles at the end of the first 6 weeks—the smile is actually an atypical facial reflex to colic—from an evolutionary point of view, the smile contributes to the conversion of an unwanted baby into a wanted baby.

Evolution has worked out a whole series of events in the baby's life which helps to make him wanted. To be wanted is the most imperative need in this little defenseless human being's life.

An authoritative study on unwanted conceptions conducted under the auspices of the Social Science Committee of the Planned Parenthood Federation of America was published in "Eugenics Quarterly" in 1967 (47:143–154) under the title, "Unwanted Conceptions: Research on Undesirable Consequences." After an exhaustive study of the literature its author, Professor Edward Pohlman, concluded as follows:

> There is a contention that unwanted conceptions tend to have undesirable effects. This article has implied some channels whereby such a causal relationship is almost completely lacking, except for a few fragments of retrospective evidence . . . at a common-sense level one may feel fairly confident that induced abortions, out-of-wedlock conceptions, and illegitimate births are the results of unwanted conception and produce undesirable effects. But these common-sense observations are available from the armchair. It was the hope of this article to find more convincing systematic research evidence and to give some idea of the amount of relationship between unwanted conception and undesirable effects. This hope has been disappointed . . . the present writer attended a conference at (a) Population Crisis Committee. The writer and others found it somewhat embarrassing to have to confess that there was little clear evidence that unwanted conceptions were in a worse light than other conceptions.

So I want to emphasize to this committee that when people assume and imply all of the dire consequences to the unwanted child there is little scientific research or data to back this up.

Dr. Blau also points this out in an article on unwanted children appearing in a population crisis book. He made it clear that "a pregnancy may be unwanted and yet good affectional attitudes may develop after the birth under the influence of the child. Or the reverse may happen—the pregnancy is wanted, and then the baby for one reason or another is rejected."[5]

There is no evidence to support Dr. Guttmacher's contention that unwanted conceptions result in abused or battered children. I have had a lot of experience with battered children since I investigate them in my community. Try to take a battered child away from his mother. It is difficult. She has a certain complex personal relationship with that child which she wants to retain. There is no evidence to show that the battered child could have been predicted in advance and prevented by an abortion.

It seems to me that we are in a treacherous period in our country's history. People today are bracketed with pesticides as environmental pollutants. People in prominent places prefer to limit numbers of children rather than numbers of automobiles which are a direct cause of air pollution. If a recent governmental figure really wanted to act on air pollution, he would not say "let us limit families to two children." He would say "let us limit families to one automobile." Reducing automobile traffic by half would immediately reduce air pollution by half. Paul Ehrlich is proclaiming to our nation that the United States would be better off with 100 million less people. It is natural to wonder who they should be. We also have with us the slogan of the unwanted child. I think it should interest you, Senators, that at the world population meeting in Belgrade about 3 years ago, our American representative, Mr. Lorimer, made the same point: "We have 200 million people now, we will have 300 million by 1980. Wouldn't we be better off with 100 million people less." The Russian delegate's response was, "What is the matter with you Americans, don't you like people?"

Here I would like to suggest that the road to social maturity is wanting the unwanted human being and that the road to responsible parenthood is not technology but the inculcation of responsible attitudes. As Professor Westhoff pointed out in population: "The Vital Revolution" (Aldine Press)—and General Draper supports this—for "family planning effectiveness * * * the problem of motivation rather than only information about (birth control)methods appears vital."

PANIC AND THE PILL

The charge of "panic promotion" has been leveled against these hearings. Such charges should not distract you from the responsibility you have undertaken, the protection of the health of American women. These charges appear to be but one more name calling technique designed to protect and preserve the salvation aura of the pill. There is no evidence to support these charges.

Women who have dropped the pill as a result of these hearings are, in all probability, women who were never told of the dangers of this pill prior to going on the pill.

---

[5] See reference 5 of Bibliography.

Despite Dr. Guttmacher's testimony last week that the majority of physicians acquaint their patients with the complications of the pill, this is not true. The Newsweek-Gallup poll, February 9, 1970, a source which Dr. Guttmacher used to illustrate the "great alarm" caused by these hearings, reported that a "startling two-thirds of pill-taking women say they have never been told about possible hazards by their physicians." It is on this basis that Newsweek states that the "subcommittee's concern was well founded, that women were inadequately informed."

It is my experience as a public health physician that this is the case. The literature contains many accounts of pill pushing and 6-month prescriptions in both Government and private birth control programs.[6] The pill is probably the most casually refilled prescription ever written. Numerous women are taking the pill who are no longer under medical supervision.

And I can show you letters and give you names to support this, because I have been on radio and television, frequently, on the medical hazards of the pill and this is what you constantly hear from women in response, for example that some doctor in Seattle will refill a prescription over the phone for a patient who has moved to San Francisco and the woman never sees a physician again until she develops a complication.

The real panic makers are those supporters of the pill who are trying to make the pill appear safe by exaggerating the dangers of pregnancy. They are contributing to panic in three ways:

1. By frightening women about the alleged ineffectiveness of methods of birth control other than the pill.

2. By threatening instant pregnancy for those going off the pill.

3. By portraying pregnancy as a pathologic state with a high incidence of deaths. Such dramatization, I assure you, is no comfort to millions of women in the United States presently pregnant or considering pregnancy.

Mr. GORDON. How many women died from pregnancy in any given year?

Dr. RATNER. I will have to give you a little——

Mr. GORDON. If you do not have the figures, would you please send it to us?

Dr. RATNER. Yes, I just have to give you a little background, because I think this is very important.

Even the English point out that without the pill—over the last 30 years, this applies to the United States as well—the average number of children the family has is between two and three children. Let us call it three children. That means over a reproductive period of 30 years, they are only having on the average one child every 10 years. Therefore, when you talk about death from the pill, three per hundred thousand, and contrast it to the higher overall death rate from pregnancy per year it is not as if the woman is exposed to the risk of having a baby every year as she is to the pill every year. She just is not having a baby yearly and has not from time immemorial and has had only three to four babies totally on the average since certainly the early part of the century. So there is misunderstand-

[6] See reference 6 of Bibliography.

ing here that the average woman is essentially so highly fertile that she has a baby yearly.

Mr. GORDON. Could you give us the figure?

I would very much like to have it.

Dr. RATNER. Okay, I would be happy to.

To answer the question of risk of pregnancy by simply giving the gross overall maternal mortality rate only deceives, since the maternal mortality rate varies with the characteristics of the women under consideration. Thus, a woman who is white, young, free of serious disease, of low parity, of upper socioeconomic status, undergoing a well-conducted pregnancy has a radically lower maternal risk than a woman who is nonwhite, older, seriously diseased, of high parity, of low socioeconomic status and undergoing a poorly conducted pregnancy. The latter rate is radically higher.

The relevant scientific question to be answered is as follows: What is the potential maternal mortality rate—the lethal risk of pregnancy—of women on the pill were they not using the pill, nor practicing birth control of any kind, and were active sexually. To help you understand how one arrives at a scientifically valid answer to such a question I will assume a resulting pregnancy and will proceed step by step in arriving at the estimate.

1. 28.0 maternal deaths per 1,000,000 live births represent the total maternal death rate for all women in the United States. (The data is from the official Vital Statistics of the United States for 1967.)

(*a*) 19.5 is the rate for white women;

(*b*) 69.5 is the rate for nonwhite women.

Since nonwhites only constitute approximately 10 percent of the population and since a considerably smaller percent of nonwhite women use the pill than white women, we will assume the rate for white women of.

2. 19.5 maternal deaths per 100,000 live births.

According to Ryder and Westhoff (Use of Oral Contraception in the United States, 1965. Science 153: 199–1204, Sept. 9, 1966) the largest category of women (married) using the pill are in the age bracket of 20–24.

These women according to official Vital Statistics for 1967 have,

3. 11.0 maternal deaths per 100,000 live births.

The reproductive risk, however, varies considerably for individual women within this group. See "Assessment of Reproductive Risk in Nonpregnant Women." A guide to establishing priorities for contraceptive care. Gordon W. Perkins, M.D., formerly medical director of Planned Parenthood-World Population and now of the Ford Foundation. Am. J. Obst. & Gynec. 101: 709–717, July 1, 1968. The author points out that "maternal risk increases with . . . increasing maternal age above 30": "with each pregnancy beyond three"; with the "presence of specific disease entities which . . . includes the following: cancer, cardiovascular renal disease, collagen diseases, diabetes, epilepsy, psychoses, repeated toxemias of pregnancy and severe anemia" and with "the poor." Furthermore, maternal mortality is significantly increased by a poorly conducted pregnancy. Since the greatest users of the pill are to be found in the upper classes, since the great majority of them are free from the serious diseases enu-

merated above, since the bulk of them have available to them competent medical supervision—the bulk of prescriptions written for the pill are prescribed by physicians capable of a well-conducted pregnancy—maternity mortality is radically reduced in this group. We estimate a 95 percent reduction of maternal mortality in this group. This results in,

4. 0.6 maternal deaths per 100,000 live births.

Two further considerations are in order:

(*a*) Many of the women using the pill in this age bracket are taking the pill for the sake of postponing the first birth. Let us assume this applies to 50 percent of the women. Ten percent of these women will subsequently discover they are sterile, and accordingly will not undergo the risk of becoming pregnant were they not to take the pill. This results in,

5. 0.57 maternal deaths per 100,000 live births.

(*b*) Finally, it should not be forgotten that since the pill in large part in this age group is being employed to postpone having babies, not to eliminate them, the risk of pregnancy is irrelevant since this is the price tag that comes with the joy of having a baby when they do become pregnant.

It should be apparent, in conclusion, that the risk of death from pregnancy for the large number of pill users described above is less than the risk from the pill. Furthermore, and this cannot be overemphasized, the risk of pregnancy is even more sharply reduced by using alternative safe methods of contraception even though allegedly less effective. Again one can achieve the effectiveness of the pill without the risk of the pill or of pregnancy by a combination of contraceptives, for example, the condom, diaphragm, jelly, and/or rhythm.

To substantiate in a general way that the above calculations correspond to reality I have analyzed the actual maternal mortality figures of the Oak Park and West Suburban Hospitals both of which are under my jurisdiction as the Oak Park Public Health Director. The data is from the official "Annual Summary of Hospital Maternal Services" of the Illinois Department of Public Health.

The clientele of these hospitals are predominantly middle class and white, and with rare exception have well-conducted pregnancies. They include women of all reproductive ages, of varying parity—numbers of children—and with the usual spectrum of serious diseases.

The last 5 years for which figures are available—1964–68—show a total of 16,863 deliveries for both hospitals. According to the overall maternal mortality rate for white women given above for 1967, namely 19.5 the expected number of deaths would be over three. Actually, none occurred. This is confirmatory, in general, of the slight risk to pregnancy to be found among the majority woman users of the pill were they to become pregnant were the pill discontinued.

I trust this gives the committee a better picture of the reality than that obtained from overall maternal mortality rates which do not correspond to this large segment of pill users.

The fact is that today the United States is one of the safest countries in the world in which to have a baby for the vast majority of women. Pill promoters are doing American women a disservice by not differentiating the small handful of women who are at high risk from the great majority of women who are at negligible risk.

If they did distinguish, and here I include the failure of the Chairman of the FDA Committee on Obstetrics and Gynecology to make such a distinction in his "Summary of the Second Report, 1969," they would of necessity conclude that for approximately 85 percent of the women on the pill at the time the hearings began, that is, 7¼ of 8½ million women on the pill, the risk to health from pregnancy is negligible, whereas the risk from the pill is real.

It is for this reason that I agree with the position of Dr. Philip Corfman of the FDA Committee—a position which did not find its way into the Chairman's summary report either because it was suppressed or ignored—that the pill's "use should be monitored and restricted to women who cannot use other methods effectively." [7]

And I do hope the committee will see that Dr. Corfman's suppressed or ignored conclusions, because apparently he was not consulted in the Chairman's summary, gets publicity.

Mr. DUFFY. Did he sign the report, Dr. Ratner?

Dr. RATNER. No, the Chairman's summary was written by the Chairman; by nobody else. He signed his own section.

Mr. DUFFY. Dr. Hertz did not agree, by the way, he is the new chairman of the committee.

Dr. RATNER. You have a reference to support my statement in M.H. pages 3–48. Dr. Guttmacher was again in error in his testimony when he attributed the conclusion of the Chairman's summary to the 14 eminent unbiased physicians, public health experts, and highly qualified research scientists. The evidence is that not all the committee members concurred in Dr. Hellman's conclusion (Medical World News, Sept. 19, 1965, p. 5).

Now, Mr. Duffy, I would like to point out one thing, perhaps in answer to what you just said. In 1966, when the first report came out with Hellman as chairman, that summary was written by the whole committee. I think somebody should find out why in 1969 the position was switched so that he alone wrote the summary, because it does not seem coincidental that a drug firm immediately had the summary circularized all over the United States.

We do not yet live in Orwell's society, although some of our colleagues in both medicine and Government do not wish to admit this. For Dr. Guttmacher to say, in effect, that the hearings have produced nothing new in regard to risks, that those who are well-informed have known these things all along, that they—the well-informed—have balanced the hazards against the values and decided as groups of experts what is best for the less well-informed, the misinformed, and the uninformed is an affront to the principles of good medicine, as well as the foundations of the form of government under which we live and which you have been elected to uphold.

---

[7] See reference 7 of Bibliography.

I am saying, simply, it is not part of our medical tradition for doctors to make decisions for people without getting informed consent.

Who is so well-informed, so highly qualified, so distinguished an expert as to decide for someone else what values outweigh the hazards of preventable injury, illness, and death?

ALLEGED ABORTION OUTBREAK RESULTING FROM THE HEARINGS

The alleged unwanted pregnancy-abortion outbreak resulting from adverse pill publicity generated by the committee hearings is a charge that insults the intelligence of the educated person. The charge was first made in Newsweek (2/9) and repeated in a round-up story in the New York Times (2/15) of several Planned Parenthood physicians and others. In a later New York Times story (2/25) Dr. Elizabeth Connell was alleged to have stated in Washington that, "New York doctors were performing operations on women who have had undesired pregnancies since the subcommittee hearings started six weeks ago."

Two comments are in order:

(*a*) Any woman who, by virtue of discontinuing the pill on January 15 when the hearings started, had an abortion because of a subsequent pregnancy was operated on by a quack.

Senator DOLE. In other words, you are saying it is not possible, then?

Dr. RATNER. That is right.

No physician could have known this early with requisite certitude that the woman on whom he performed an abortion was actually pregnant. Furthermore, the woman couldn't have known she was pregnant.

Mr. DUFFY. You are quite certain about this?

Dr. RATNER. I am saying this publicly for the record. Let me make that clear to you.

Mr. DUFFY. There is no way you could be wrong?

Dr. RATNER. That the earliest possible time you can tell a woman is pregnant, a woman normally suspects she is pregnant when she misses a period 2 weeks after ovulation, and the earliest possible time you can have a test which can determine a pregnancy is 2 weeks later. So you already have 28 days there, so you have to assume it would be possible for the woman to become pregnant 2 hours after she discontinued the pill, which is highly improbable.

Mr. DUFFY. Doctor, would you just answer that question. Is there absolutely no way you could be wrong on these particular statements that you are making?

Dr. RATNER. Well, now, I am not infallible. I decide on the basis of my medical knowledge. I would not be making such a statement without having medical knowledge backing it up. And I would assume that every obstetrician would agree with me.

Now, Dr. Alcock [8] was called up by one of my doctor friends. He first said he knew of three abortions—and I think you should look

[8] See reference 8 of Bibliography.

into this—however, one, a woman was never on the pill but was using a foam contraceptive when she got pregnant and her abortion had nothing to do with the hearings. He was vague about the other abortions. So I think doctors can talk loosely, to New York reporters, and I do not think we should use the New York Times as an authority for the fact pregnancies and abortions have taken place as the result of these pill hearings because it is virtually impossible, because they only started January 15.

General Draper had enough sense to realize that if they occurred it was not because of the hearings, but because of earlier reports of pill dangers.

The need to stimulate propaganda, and I mean this literally—I was a bit shocked when a person who is doing graduate work at Hopkins, who was executive director for a population council, uses as her authority not the original article in Newsweek but a news reporter's version of the Newsweek poll in the New York Times instead. I do not think we should be making charges on the basis of secondhand information.

The need to stimulate this type of story by pill supporters should alert all readers to the characteristic type of propaganda that has been used to promote the pill since its introduction.

(b) That women become pregnant as a result of being panicked off the pill goes counter to the claim of Planned Parenthood personnel and others that the physician sees to it that the client "is knowledgeable about the methods, each sharing equal time with the others, the mechanical with the hormonal." This is what Dr. Mary Lane of Planned Parenthood-World Population testified to on February 25 before your committee.

Furthermore, patients who are capable of panicking off the pill as a result of adverse publicity were obviously not prescribed the birth control method best suited and most acceptable to them.

CONCLUSION

In bringing my statement to a close, I respectfully suggest that each member of the Subcommittee read Judith Blake's criticism of the social engineers in Science, May 2, 1969. Professor Blake is chairman of the Department of Demography, University of California, Berkeley. Her paper is entitled "Population Policy for Americans: Is the Government Being Misled?" And I will quote from her writing—"but until now this has not been made clear."

Senator DOLE. Could you just submit that for the record, we are running out of time.

Dr. RATNER. I am at the conclusion, so I will be through shortly, but I think you really want to hear these three sentences.

"The Government has been sold a risky program as part of a population control package" (namely, that 5 million poor women want birth control. She says it is much less than 2 million.) "This program * * * invites charges of genocide, dissemination of dangerous drugs, and subversion of moral standards. Ironically, it now appears for the purpose of health and a dubious welfare goal." [9]

[9] See reference 9 of Bibliography.

She challenges the claim of Planned Parenthood and others, "that the Government should give highest priority to ghetto-oriented family-planning programs designed to deliver birth control services to the poor and uneducated, among whom, it is claimed, there are at least 5 million women who are in need of such federally sponsored birth-control assistance." [10]

This latter figure that 5 million indigent people want birth control but can't obtain it is one of the most unscientific estimates ever foisted on the American people. It becomes the excuse by which the pill is exploited among the indigent. The pill is actually a rich man's contraceptive since it needs so much medical followup and ready access to a doctor. Life for the poor is miserable enough without adding to it the miserable and depressing complications associated with the pill.

I have spoken as a public health physician who is deeply concerned about the current trend in this country to manipulate, rather than enlighten, people. Mass prescription and misleading slogans are no substitute for honest health education. I am concerned that money-eyed interests play such an influential role in the whole spectrum of mass education.

This is an era of consumer protection. The woman has a right to protection from manipulation and victimization. No right is more firmly established than the right of each patient to informed consent to a prescription directed at her body. Knowledge sufficient for enlightened consent is a moral, medical, and legal right to which malpractice suits testify. The classic statement of this right is found in Plato's Laws where Plato distinguishes between the physician who took care of slaves, and the one who took care of freemen.

Whereas, the slave doctor prescribed "as if he had exact knowledge" and gave orders "like a tyrant," the doctor of freemen went "into discourse with the patient and friends" and would not "prescribe for him until he has first convinced him."

I, therefore, congratulate the committee for treating the American woman as a free person rather than a slave.

Senator DOLE. First, I would like to insert in the record an excerpt of a letter which appears written by you and answered by Mr. Ryder and Mr. Westoff, in the February 24, 1967, issue of Science.

Dr. RATNER. Yes. What about it?

Senator DOLE. I am going to put it in the record.

Dr. RATNER. Thank you very much.

Senator DOLE. You read it; in fact, you wrote it.

Dr. RATNER. I was modest about putting it in. Thank you very much.

(The document above-referred to, follows:)

[From Science *155*, 951, Feb. 24, 1967]

LETTERS—ORAL CONTRACEPTION DROPOUT RATE

Because the Ryder-Westoff study of oral contraception usage ("Use of oral contraception in the United States, 1965," 9 Sept., p. 1199) is so widely quoted as an index of extensive pill acceptance, the following datum from their report

[10] See reference 10 of Bibliography.

—which for some reason is not commented on despite considerable interpretation of other data—deserves emphasis. One out of five women who have ever used the pill stated that they "will not use [it] again." The ratio runs as high as one out of 3.6 users in the age group of 30 to 34.

This is a strikingly high rejection rate for a drug. There is none that I know of which is comparable. It supports the contention of many that the untoward effects of this drug are extensive and that there is gross underreporting of these effects to surveillance agencies. The dropout is also consonant with the continuing reporting of the dangers of the drug in the medical literature, and the concern expressed in the Hellman report to the Food and Drug Administration.[1]

The fact that this contraceptive is the most desirable to women psychologically (because it dissociates itself in time and place from coitus) and that its use is initiated in a state of health heightens the significance of this finding.

HERBERT RATNER,
Department of Public Health,
Box 31, Oak Park, Illinois 60303.

We did not comment on the admittedly high proportion of women who have used the pill but who have stopped using, and report that they will not use it again, because this measure is totally inadequate as an index of the dropout rate, not to mention the "untoward effects of this drug." The reasons for its inadequacy are:

1) The ratio calculated by Ratner does not take into account the length of time the pill was used; it includes women who have used it for less than a month as well as those who have used it for 5 years. The implications of termination obviously differ by length of use.

2) Our analysis of the use of the pill included women who used it for reasons other than contraception. Some of these women have now stopped using it because it had satisfied (or had proven ineffective in satisfying) the original medical complaint—such as menstrual discomfort.

3) Some women who had used the pill stopped because they no longer needed it; their contraceptive needs vanished with the onset of menopause or sterility.

4) A small group of women used the pill in order to promote fertility, and accomplished this purpose.

5) Some women stopped using the pill because of problems unassociated with side effects—such as questions of morality, or cost, or difficulties in remembering to take the pill.

6) Some women reported stopping because of "doctor's orders." Although part of this may be atributable to the occurrence of undesirable symptoms, it is likely that much of the category represents the doctor's precaution without specific indications.

The remaining women who do not intend to resume can be classified as interrupting use because of reported undesirable reactions. Admittedly they constitute a majority of the total group referred to by Ratner, but it is evident that the symptoms they reported cover a wide range from real to imaginary, and from significant to trivial. We are currently in process of trying to estimate the dropout rate over time by type of reason, in order to achieve refined estimates appropriate to the question Ratner has raised.

NORMAN B. RYDER,
Department of Sociology,
University of Wisconsin, Madison 53706.
CHARLES F. WESTOFF,
Department of Sociology,
Princeton University, Princeton, New Jersey.

Dr. RATNER. Since you are putting that in, it should be made clear that I quoted from their work which took cognizance of what I said

[1] "Food and Drug Administration Report on Oral Contraceptives" by the Advisory Committee on Obstetrics and Gynecology, FDA, 1 August 1966. Available from the U.S. Government Printing Office, Washington, D.C. 20402.

2 years later and which, in effect, agreed with my February 24, 1967, communication. My statement stimulated them to do what they did and it was from this latter work that I quoted the figures.[11]

Senator DOLE. It is a very interesting statement. We appreciate it.

Dr. RATNER. Thank you very much.

(The supplemental information submitted by Dr. Ratner follows:)

BIBLIOGRAPHY

1. Charles F. Westhoff, Ph. D & Norman B. Ryder, Ph. D. Duration of Use of Oral Contraceptives in the United States, 1960–65. Public Health Reports. 83: 277–287, April 1968.

2. a. "Birth control pills are secondary to aspirin as the cause of accidental poisoning among children treated at St. Louis Children's Hospital. . ." New York Times. March 19, 1966.

b. "Contraceptive pills have become a major . . . source of childhood poisoning, the Public Health Service Reports. There were 962 reported childhood poisonings due to the pill during 1962 to 1965, according to Mr. Henry L. Verhulst, chief of the Poison Control Branch of the P.H.S." Modern Medicine, May 9, 1966. p. 28.

c. Oral contraceptives are listed among "Products Most Frequently Ingested in 1968." National Clearinghouse for Poison Control Centers Bulletin. Nov.-Dec. 1969.

3. Appendix 1. Report of the Task Force on Utilization, Effectiveness and Current Investigations. S. J. Segal, Ph. D., Chairman. Report on the Oral Contraceptives. Advisory Committee on Obstetrics and Gynecology. Food and Drug Administration, August 1, 1966.

4. a. *Family Planning, Sterility and Population Growth.* R. Freedman, P. K. Whelpton & A. A. Campbell. New York 1959.

b. *The Third Child.* C. F. Westoff, R. G. Potter & P. C. Sagi. Princeton, 1963.

5. *The Population Crisis and the Use of World Resources.* Ed. Stuart Mudd. In the chapter, The Unwanted Child. by Dr. Abram Blau.

6. Oral Contraceptives: Government Supported Programs are Questioned. Science. 163:553–555, Feb. 7, 1969.

7. Metabolic Effects of Oral Contraceptives. Philip A. Corfman, M.D. J. Med. Education. Part 2, 44:67, Nov. 1969 (M.H. pp. 3–4).

8. Unwanted Pregnancies Follow Adverse Publicity on Birth Pills. Jane E. Brody. New York Times. Feb. 15, 1970.

9. Family Planning & Public Policy: Who is Misleading Whom. Judith Blake. Science, Sept. 19, 1969 pp. 1203–4.

10. Population Policy for Americans. Is the Government Being Misled? Population limitation by means of federally aided birth-control programs for the poor is questioned. Judith Blake. Science 164:522–529, May 2, 1969.

Curriculum Vitae of HERBERT RATNER, M.D.

UNIVERSITY EDUCATION

Undergraduate: B.A. University of Michigan, Feb. 1929.
Graduate: Bacteriology: 1929–1930 Ibid. Public Health: 1934–1935 Ibid.
Professional: M.D., 1935 Ibid.

PRESENTLY

Public Health Director of Oak Park, Ill. 1949– —
Associate Clinical Professor of Family and Community Medicine 1947– — Stritch School of Medicine, Hines, Ill.
Editor of CHILD AND FAMILY QUARTERLY 1967– —
Secretary Treasurer, National Commission on Human Life, Reproduction and Rhythm. 1964– —
Medical Advisory Board La Leche International. 1957—

[11] See reference 1 of Bibliography.

Scientific Consultant, Human Life Foundation 1970—
Chairman of the Maternal And Child Committee Illinois Association of Medical Health Officers 1960—
Registrar of Vital Statistics, Oak Park Health Department 1949– —
Board of Directors of The American Council for Medical and Social Legislation 1970– —
Fellow of the American Public Health Association. 1947– —

FORMERLY

Instructor in the Department of Bacteriology and Hygiene at the University of Michigan Medical School 1929–1931.
Research Assistant to the Pasteur Institute, University of Michigan 1929–1931.
Research Assistant in Hematology, Mt. Sinai Hospital, N.Y. 1933.
Research Assistant in the Division of Experimental Medicine and Nutrition in the Department of Internal Medicine of the University of Michigan 1934–1936.
Senior Member in Science on the Committee of the Liberal Arts, University of Chicago 1937–1940.
Medical Consultant to the Syntopicon, Encyclopedia Brittanica 1945–1947.
Editor of the Bulletin of the American Association of Public Health Physicians 1954–1956.

MEMBER

American Association of University Professors.
American Medical Association
American Public Health Association
And additional associations.

Senator DOLE. The next witness is Dr. Peterson.

Dr. Peterson, you can either summarize your statement any way you wish, or you can read it in full. It will be made a part of the record, the complete statement. You may proceed in any way you wish.

STATEMENT OF DR. WILLIAM F. PETERSON, CHAIRMAN, DEPARTMENT OF OBSTETRICS AND GYNECOLOGY, WASHINGTON HOSPITAL CENTER, WASHINGTON, D.C.

Dr. PETERSON. Thank you, Mr. Chairman and members of the subcommittee.

I am Dr. William F. Peterson, a Clinical Board certified obstetrician and gynecologist, with over 23 years of active practice as a member of U.S. Air Force.

In this capacity, I have consistently been directly responsible for large numbers of Air Force dependents. Most recently, as chairman of the Department of Obstetrics and Gynecology at Malcolm Grow USAF Medical Center at Andrews here in Maryland. Over 1,500 deliveries per year in excess of 33,000 outpatients visits yearly, have been my direct area of concern and responsibility.

Since my recent retirement from the U.S. Air Force, I have been appointed chairman of the Department of Obstetrics and Gynecology at the Washington Hospital Center here in the District of Columbia. I am here today to testify in behalf of the American woman.

The problems and responsibilities of reproduction are of necessity being brought from the bedroom to the national scene; but rather than gaining clarity and purpose are becoming more complex and confused.

The population explosion sincerely troubles learned heads and far-sighted leaders have advocated numerous measures to control the situation—even to altering portions of the tax structure. Worry is evinced as to how to house and feed future generations. Educational facilities are even now bursting at the seams and standards continue to fall in spite of the most intensive efforts. Scarcely a magazine or newspaper can be found wherein this subject has not been discussed—some portraying a rather dismal future for our children—and their children.

Abortion has become a burning issue throughout the country and while a few enlightened States have changed their laws, and thus met the problem head-on—instead of losing themselves in theoretical and theological labyrinths, most have not. Even in those permitting termination of pregnancy there is considerable difference of opinion not only from one area to another but from one hospital to another within the same city. We do not have to look further than our own city of Washington for an all too clear example of this problem.

These discussions, studies, and investigations have begun to crystallize the problem all too well—but, gentlemen, I fear, at an increasing and unnecessary cost to our women.

The past decade or two while bringing improved social and cultural liberties to the American woman has in addition brought the light of sexual emancipation—and long overdue it has been. Orgasm is now a polite word and a heritage she has the right to expect. Her physical and emotional needs have been unveiled in order that man can recognize his woman as a sexual partner rather than a recipient.

While these changes have brought the opportunity for a bright new horizon to the American woman, they still have not exonerated her from the basic responsibility for pregnancy. No matter what changes may yet occur—the male will still not be able to get pregnant—and right or wrong, its prevention is generally left to the woman—too often at the last and the most inopportune moment. The male too frequently expects his partner to provide complete contraceptive protection, as long as it does not interfere with his enjoyment or her availability.

The introduction of the pill about a decade ago has done much to bring the sexual emancipation of women to fuller fruition. Last minute, hurried, and often unromantic preparations are no longer required and she has been freed to experience the pleasure of sex on the highest emotional plane—content and relaxed in the knowledge that she is completely protected against an unplanned pregnancy.

This approach to simple and effective family planning measures has been so successful that millions of American women have requested and have been given this protection. As a recent member of the U.S. Air Force and a senior obstetrician/gynecologist, I was deeply involved in the institution of family planning clinics in the Armed Forces following the DOD directives of late 1967.

Senator DOLE. Could you go into detail. I am not familiar with the DOD directive of late 1967.

Dr. PETERSON. This was an instance wherein Mr. McNamara and the Department of Defense authorized the Institution of Family Planning Clinics throughout the Armed Forces in the dispensing of not only the oral contraceptive, but mechanical contraceptive meas-

ures through military hospital pharmacies, which had not been possible prior to that time.

We were not allowed to dispense any form of contraceptive measures through the pharmacies to any dependents, even though they were authorized that type of care.

Senator DOLE. Thank you.

Dr. PETERSON. Currently an estimated 258,000 Air Force dependents take the pill—by and large most of whom are using it for contraceptive measures. Each patient is given an appropriate supply of medication after undergoing a breast and pelvic examination, including a Pap smear.

I might add for the record, in response to Dr. Ratner's commentary about 6 months' supplies, the Armed Services only gives out 3 months' supply of oral contraceptives at a time. Further supplies are dispensed at appropriate intervals, again only after an examination, as determined by the patient's age and her clinical course. I might also inject further for the record that if the patient is under 30, she is examined yearly; if she is 30 to 35, she is examined every 9 months; and if she is 35 and over, she is examined every 6 months.

In spite of this intensive program—341,644 such visits were reported by the Air Force in 1969—a recent study at the Malcolm Grow USAF Medical Center showed that over 50 percent of the babies delivered over the study period were unplanned. These findings are similar to those reported by Ryder and Westoff—Fertility Planning Status: United States 1965 Demography 6:#4, Nov 1969—on a sample of 4,810 married women who were respondents in the 1965 national Fertility Study.

These are dismal statistics if we are truly concerned about the population explosion and its effect on the welfare of future generations. Yet in spite of this most serious situation the American woman, faced with the responsibility of proper family planning, has been consistently exposed to articles in magazines and the national press describing myriads of so-called dangers inherent in the use of the pill—the most effective contraceptive currently available on a national level.

They have been led to believe that they will either die of blood clots or if they live will develop diabetes, liver damage, cancer or migraine headaches, and if they survive these perils, may give birth to defective babies—or if avoiding this are placed in an excellent position to become promiscuous or have other psychological problems.

The doctors faced with the tasks of supporting these patients find an increasing amount of their energies occupied by repititious reassurances, thus losing precious time needed for proper followup care or the management of other problems.

The recent hearings conducted by this committee, rather than bringing forth a more enlightened atmosphere, have precipitated a state of confusion and chaos among a large segment of our population. Women have been scared so successfully that an estimated 20-odd percent have summarily stopped the pill—many without consulting their physician for his opinion—or even advice regarding other means of contraception.

The number of unplanned, unwanted pregnancies resulting from this situation awaits further study—the number of deaths from illegal abortion or complications of the pregnancy frightens the imagination. The only group that appears to have benefited is the telephone company—if the number of frantic long-distance phone calls I have personally received is an accurate indication.

As a clinical gynecologist, meeting the needs of the female on an everyday basis, I am deeply concerned over the position in which our women are being placed. It is now time for someone to stand in their behalf and raise a real sense of concern for their interests and needs—physical and, above all, emotional. Much has been said against the pill—yet little factual information is currently available, and less that has been presented in simple everyday language, upon which each woman or family can base an intelligent decision within their own personal and individual needs.

Information has come from England on the incidence of thromboembolic disease, received wide national attention, and caused serious concern in many quarters because of the death rates reported. Yet it has been based on studies that have been by and large retrospective in nature, and composed of a different patient population than exists in the United States.

Until more accurate prospective data has been collected on a proper scale, in our own country, the exact relationship between the pill and thromboembolic disease will remain exactly what it is not —an impression—and one that may be hazier than suspected. It is not proper to hide factual data nor falsify current findings or impressions from the national eye—nor is it proper on the other side of the coin to magnify incomplete information into undeserved prominence.

Until such time as medical science can accurately diagnose pulmonary embolism in all instances—and it cannot do so at this time—it is not possible to even know the usual incidence of this problem in the general population, much less whether a given patient is afflicted with the disease or some other entity.

Women, if they are to continue to be informed of this disorder in such detailed manner must also be informed of these facts—and told that it is not unknown for a diagnosis to be swayed by the simple fact that she is on the pill. They must also have these findings places in their proper prospective—rather than be left as simple rates of three or 10 per 100,000.

Show how these compare with the risk of smoking, driving a car, living in a city with its polluted air, illegal abortion or simply taking aspirin which has been reported to cause 20,000 deaths a year in the United States.

Senator DOLE. I might say there, Doctor, we have just had a witness who has given us reverse analogy, that the pill causes more deaths than murder, rape, several examples. So I assume this is a fair statement to give the other side of the coin, as you say, at the top of the page.

Dr. PETERSON. Well, I don't know, you all are running late and I did not intend to go into some of Dr. Ratner's findings. I thought I would just present my side of the coin here.

Senator DOLE. Fine.

Mr. GORDON. Concerning these ostensible deaths, could you tell us, who are the victims? Are they children or——

Dr. PETERSON. I am sure that this is child poisoning to a large extent, yes.

Mr. GORDON. Can you give us the information for the record?

Dr. PETERSON. I can give you the reference on this. It came out of an article I recently read and I did not have the reference immediately available when I put this together.

Mr. GORDON. Would you send it to us?

Dr. PETERSON. I will do my best.[1]

Our women must be given greater consideration and no longer treated like a cockleshell boat in a toy pool to be buffeted about at someone's whim.

The potentialities of diabetes have been emphasized out of all proportion to the facts. Peterson and Steel in reporting their findings in 61 patients, who had taken the pill for periods ranging from 3 months to 7 years, noted decreased glucose tolerance in 39 percent with 18 percent showing diabetic-type tolerance curves ("Analysis of the Effect of Ovulatory Suppressants on Glucose Tolerance," Peterson, W. F., Steel, M. W., and Coyne, R. V.—AM J.OB/GYN 95:484, 1966).

Six of ten patients whose initial curves were diabetic in nature were restudied over a period of 3 to 28 months. Three returned to normal levels even tough still on the pill. One continued to show a diabetic curve 18 months later while still on therapy even though she had no other stigma of diabetes. Two were taken off the pill and the curve reverted to normal in one without additional measures, while the other was placed on tolbutamide therapy.

Since putting this paper together, I have gotten further data on these 10 patients. All of these patients in this group have since had followup evaluations. One is normal, off therapy; three were transferred and are lost to followup; one is still on tolbutamide therapy; and six have normal curves while still on the pill.

These results would indicate that while the pill exerts an influence on carbohydrate metabolism, possibly by increased plasma protein binding of insulin, the effect is variable and currently unpredictable. They are, however, not necessarily a reason to avoid pill therapy when appropriate nor a reason to discontinue such medication if an abnormal laboratory result is obtained.

As there is no evidence that continued use of the pill will eventuate in clinical diabetes, the patient should be fully appraised of her findings and carefully followed at appropriate intervals if she elects to continue using the pill as it best meets her individual needs. Much the same situation exists where clinical diabetes is present. Even though the pill may raise insulin requirements in some diabetics, this group of patients require meticulous conception control to a higher degree than almost any other group—for their own welfare. To arbitrarily deny them this simple and effective agent is the antitheses of good medical practice and should be deplored by all.

A recent report, emanating from these hearings, suggests that all

[1] At the time of going to press, no reference had been received by the committee.

women who have never been pregnant should avoid using the pill until their fertility has been proven. This statement, based on the finding that occasionally women experience difficulty in establishing pregnancy following use of the pill, arbitrarily compromises the majority for a small minority.

Consider the plight of the single girl who indulges in sexual activity—in view of a current rate of illegitimacy of about 10 percent—or on a larger scale the problem of the young bride-to-be. Are we to return to the centuries-old problem of planning the wedding around nebulous menstrual periods or conducting the honeymoon—with its expected frequency of intercourse—around the 8-hour postcoital mechanical restrictions because a few women may or will have difficulty after pill therapy.

Here again romance and freedom has been extended to the young woman, an opportunity to start marital life on the most desirable emotional plane, and then snatched away because of half truths incompletely and improperly reported to the public. Are we to deny the therapeutic benefits of the pill to those with severe dysmenorrhea, or profuse and prolonged menses, and subject them to surgical measures, with its more serious risks and increased costs?

The facts of the matter are that only a small number of women will have this problem, they are usually those who reflect compromised menstrual function prior to instituting pill therapy, and relatively simple and effective therapy is available to them.

In a recent study of 1,141 women, the incidence and timing of conception was almost identical in the group that had taken the pill and stopped in order to conceive, when compared to the control group using other methods, or none at all. Of the pill group, 62 percent were pregnant within 3 months as compared to 60 percent of the control group. This, incidentally, did not seem to be altered if the patient took the pill in excess of 24 months. These findings are in accord with those reported by other—Watts et al., Am. J. OB/GYN 90:401, 1964.

The potentialities of genetic defects have been repeatedly raised during these hearings leaving a dark cloud hanging over the head of young America. Turning again to the same study for information made available to physicians through the specialty literature last year—and, incidentally, unmentioned by the investigators of this committee, many of the people testifying in front of this committee—it was noted that 9 percent of pregnancies following use of the pill terminated in spontaneous abortion as compared to an abortion rate of 8.6 percent among those who had used other measures or nothing at all.

Mr. GORDON. May I interrupt here for a moment. I understand you were a consultant to the B. & K. Dynamics pilot study for the Food and Drug Administration.

Dr. PETERSON. Yes, sir.

Mr. GORDON. In the conclusions, we have the following statement:

However, the facts that nine out of 44 births that occurred subsequent to OC usage were abnormal in some way, indicates further research in this area may be fruitful. The percentage of abnormal births was surprisingly high, however, no procedural sampling technique was found which would account for this fact.

In other words, there were 20.5 percent, that is nine out of 44 births that were abnormal. Could you give us some more information about that?

Dr. PETERSON. This was a sampling area that they took. This is a very complicated and complex situation. B & K Dynamics was asked to run a pilot study on, I believe, 100 or 200 charts at the hospital, which they did willy-nilly in their own fashion, in an effort to determine whether a study on our population at the hospital would be worthwhile and productive.

The basic idea behind this was to run a large sample prospective pill study effort. This was to be funded by the FDA.

This is the data that they pulled out of the charts. I had nothing to do with this and I did not consult in that portion of their investigation whatsoever.

Mr. GORDON. But they found that nine out of 44 births of those taking the pill were abnormal births. Is that correct?

Dr. PETERSON. Well, I will not dispute this because I do not know. This was now 3 years or so ago, and I do not recall their original figures because they took this information. We were not apprised of it and they worked with it.

Mr. GORDON. One more point. I notice that in the "Results" on page 21, volume 1 of the pilot study we have the following information:

> In the course of this study a total recruitment of 321 ever-users was determined with total of 159 present users. Since the OC's were obtainable from private sources, these figures merely reflect the record data, not necessarily the true picture. This represents a total attrition of 162 or 50.5 percent. It is interesting to note that in the report of the Advisory Committee on Obstetrics and Gynecology, FDA report on the oral contraceptives, dated 1, 1966, the assumption is made that 60 percent of ever-users are current users.

I am not sure I understand what this means. Does that mean there was a dropout rate of 51.5 percent?

Dr. PETERSON. This data was compiled before the Air Force dispensed its medication, sir. So the patients were getting their pills from private sources, or paying for it on their own. It was not available and we had no formal so-called birth control or family planning type clinics in existence at that time. So, in order to give you the information on what the dropout rate was, there is no way for us to know because of the fact the patients were not getting most of their medication through military channels.

Mr. GORDON. Thank you.

Dr. PETERSON. It is interesting that you bring that particular study up. The FDA on several different occasions stated that the military services are the best study population available in the United States today.

Insofar as population, socioeconomic sampling, racial and cultural standards. In spite of a willingness of the Armed Forces to conduct this study, a prospective study to delineate exactly what problems are or are not associated with the pill, inasmuch as the study would have been considerably cheaper to be done by the armed services, the FDA for reasons known to itself decided that they would not do that, but rather took the money that eventually became available

and sent them overseas for studies to be done in Europe—at a time that we are all involved with "Buy America." And it is a little difficult to understand.

To continue, the incidence of congenital anomalies of any degree, as evaluated by qualified pediatricians, in the pill group was 3.7 percent—15—of 401 births as compared to 4.8 percent of 641 births in the control group of patients. Since this report was released an additional 4,124 patients have been studied—1,835 of whom had taken the pill prior to conception.

The pregnancy terminated in spontaneous abortion in 6.8 percent of those women who had taken the pill and 8.3 percent of those in the control series. The incidence of congenital anomalies of all types in those having been on the pill was 3.9 percent or 68 in 1,711 births. In the control series the incidence was 3.7 percent or 77 in 2,098 births. While all of this new data must await more detailed computer study, it is permissible at this time to state that the use of the oral contraceptive prior to conception does not appear to exert any important genetic affects on that pregnancy.

Another problem of relatively minor concern, yet of major discomfort to the patient, is that of monilial vaginitis. About 2 or 3 years after the pill appeared on the national scene articles began to appear in the various medical journals stating that the incidence of this disease was higher in those on the pill. Several suggested a cause and effect relationship and the hyperhormonal influence of the pill was given as the probable etiological explanation.

This has crept into our teaching and today is a relatively widely accepted concept. A recent unpublished study from the Malcolm Grow USAF Medical Center reveals that the incidence of positive cultures of monilia is only slightly higer in the pill-taker, as compared to a control grup—15 percent versus 12 percent.

The study further suggests that the difference is related to the use of mechanical means of contraception rather than any direct influence of the pill, for similar problems are noted in those who have undergone hysterectomy.

Gentlemen, it is facts such as those that must be presented to the American women, rather than half-truths incompletely detailed in a sensationalistic manner. We must no longer permit incomplete medical findings to appear in the press before they have been made available to physicians who must weigh their importance in the light of each patient's individual situation.

Witness to current discussions regarding the low dose estrogen pill —how are we as physicians to answer the patient's inquiries if we have not had an opportunity to properly evaluate the findings in detail. If it is this committee's purpose to see that the patient is more completely and properly informed then here is an opportunity for it to provide a great service to the patient and physician alike and the Nation as a whole. Let us stop attacking the pill in an indiscriminate manner just because it makes good copy.

Let us provide the full picture—develop all of the truths, detail its values, its side reactions and its disadvantages. Yes, and stimulate every opportunity to find answers wherein they are absent and

questions cloud the horizon. We must not continue this policy of denying the American woman the inherent right to factually, complete information. We cannot compromise her ability to select optimum family planning measures according to her own individual circumstances and need—abortion after the fact is not a proper answer to the confusion created.

Senator DOLE. Dr. Peterson, first, we appreciate your statement and regret that you have had to wait so long.

First of all, do you feel through your contact with men in your specialty, and also general practitioners, that most physicians are aware of some of the side effects or complications caused by the pill, and relate them to their patients who take the pill.

Dr. PETERSON. I am not clear I understand your question.

Senator DOLE. Well, there has been at least some testimony that the pill is very casually given, and other witnesses have said doctors rarely explain the side effects.

Dr. PETERSON. I think by and large most physicians inform their patients of the advantages and the disadvantages of this method, and some of the problems that the patients may encounter. Nowadays, it is a rare patient that you can encounter that does not enumerate all of the dangers to you and ask you your opinion of every single one of them right down the line.

For instance, I had a premarital counseling a short time ago with a young lady and I spent 2 hours with her.

Senator DOLE. Dr. Guttmacher made the same observation, after reading all of the literature and after some discussion, the patient turns to the doctor and says, "Is it safe?

Dr. PETERSON. This is what the final analysis is, and this is what it boils down to, and the patient is with you as an individual. And I think this is the crux of the whole situation. Each patient is an individual, her needs are personal, and highly centralized in herself. And only the physician that attends to her is in the position to help her make the proper decision as to what is best for her.

Senator DOLE. That is right.

Dr. PETERSON. The pill may be best for Mary and the diaphragm may be best for Sally. And it is the doctor's position and prerogative to help them choose the best.

Senator DOLE. Do you have any record of maybe the number of patients you have seen about the pill and have told not to take the pill, and use some other device? Is it a high percentage, or do you have any idea?

Dr. PETERSON. Most of my personal patients that require contraceptive medication are on the pill. I think that there is an awful lot that has not been said about the pill to the American woman, to the family as a unit. If one has to get involved with mechanical measures they lose an awful lot of the closeness that comes in true love. To have to wait until the last minute and then get involved in the last minute preparations is detrimental to romance and the closeness of the family circle.

These are the problems that we see when we are seeing patients every day. It is very simple for a surgeon or an internist or a dermatologist or a public health officer to say the patient should not be

on the pill, it is not safe. Because they do not have to face the patient as a female with marital problems, marital difficulties, pelvic complaints, coming from inadequate or incomplete sex life. This is our business. And you will find that by and large most men who are gynecologists and have seen the patient or at least seen the patient for gynecological problems, uses the pill in a high percentage of his patients.

None of us use the pill 100 percent of the time. The pill is not adapted to 100 percent of the women.

Senator DOLE. Dr. Cutler testified this morning that where there was a history of breast cancer in the family that the pill should not be prescribed. Would you agree with that statement?

Dr. PETERSON. No, I do not. I can say something for off the record, but I cannot say something on the record. Is that permitted in these hearings?

Senator DOLE. Well, probably not. We are trying to make the record.

Dr. PETERSON. This was not involving Dr. Cutler or anything else like that. But, many men have come along and said, and I think they have a very well-taken point, that we may well find that this time bomb that the American woman has been scared into believing may occur 20 years hence, as far as breast cancer, may actually turn out to be a boon and that the pill, the chronic pill-taker, may actually have a lower incidence of breast cancer than expected in the normal population because she is being exposed to more consistent proper levels of ovarian hormones, artificially supplied, than her own body is going to give her.

No one ovulates every month. And we know that it is progesterone produced after ovulation, by the ovaries that exerts the modifying influence on the breast. We know also that estrogen stimulates it. But these pills all contain progesterone.

Senator DOLE. I inserted in the record this morning a statement of Dr. Edward T. Tyler, Medical Director for Family Planning Center, Greater Los Angeles, and he discusses the same general topic you just discussed in your statement, that it may be a boon. He does not use those exact words, but he did indicate as much.

Hopefully the committee will publish objective findings at the conclusion of the testimony.

We have had people here whose motives are unquestioned, unassailable, who feel that the pill should not be given under any condition, but you indicate some of them have not had contact with the female, they have read many articles, maybe they are in some other area of medicine——

Dr. PETERSON. I think that is a very, very important point to make, sir. I have had any number of physicians with whom I am in association, in other specialties, advise patients to stop the pill because of one finding or another. I have talked to them and invariably there is not one yet that can give me a specific reason why that patient should come off the pill, except that maybe it will do her some good, or her symptoms will disappear.

Hypertension is one of them. Some with migraine headaches, which, incidentally, I have had as many patients benefited by the

pill as I have had made worse. I have had patients with rheumatoid arthritis, which has been brought up in this. I have two specifically who are failures to medical therapy who were put upon the pill, in what we call amenorrheic doses, like a false pregnancy, because pregnancy may be so beneficial temporarily to rheumatoid arthritis.

We know those with rheumatoid arthritis who become pregnant often are symptomatically improved.

I had one patient, a doctor's wife, she could not write or sew, which was her love in life. She has better hands than I do. Another one, who was a bed patient—this does not make the pill good for all rheumatoid arthritis, because it is not. But we have to bring these things into proper perspective.

It also does not mean that the pill should not be given when a person has rheumatoid arthritis. These facts must be brought out in the proper perspective and they must be detailed by men meeting and handling women, not those that are treating a piece of a woman, a heart, a lung, a kidney, a blood pressure. This is a combined thing and it has not been, and it must be if we are to get the real picture.

Senator DOLE. Thank you very much.

Dr. Schulman, you have a rather brief statement, you can either read it in its entirety or summarize. It will be made a part of the record completely.[1]

And I apologize, you have been waiting some time, also, and we appreciate very much your taking your time to come here today and testify on a very important topic.

STATEMENT OF DR. HAROLD SCHULMAN, ASSOCIATE PROFESSOR, DEPARTMENT OF OBSTETRICS AND GYNECOLOGY, ALBERT EINSTEIN COLLEGE OF MEDICINE, NEW YORK, N.Y.

Dr. SCHULMAN. Thank you, Senator Dole, and members of the committee.

My name is Harold Schulman. I am an associate professor of obstetrics and gynecology at the Albert Einstein College of Medicine in New York City. I would like to present a point of view based upon my position in which I am responsible for teaching obstetrics and gynecology to medical students and residents, as one who is engaged in private practice, and in addition responsible for the supervision and care of women in a large municipal hospital setting. Our hospital—Jacobi Hospital—contains 91 obstetric and gynecologic beds which are filled to capacity most of the time and we see an average of 500 women per week in our outpatient offices.

In Senator Nelson's opening statement he indicated a desire to learn if women and physicians are being adequately informed about the merits and risks of oral contraceptive pills. I do not believe that the committee has uncovered any data to suggest that there is any information that has been withheld or kept secret from doctors or the public. Furthermore, I do not believe that the committee is qualified or should get involved in attempting to determine the validity of a scientific analysis of possible long-range effects of a drug. Sci-

[1] See information beginning at p. 6775.

entific information cannot be resolved in a democratic approach, for example, or by a majority vote.

I have no reason to believe or even suspect that the two reports of the Advisory Committee on Obstetrics and Gynecology to the FDA and a WHO report are not accurate or reasonable summaries of the state of knowledge regarding the pills and their effects on women who use them—Advisory Committee on Obstetrics and Gynecology report to Food and Drug Administration, Aug. 1, 1969.

The members of the Hellman committee are known to me either personally or through the quality of their published works. I believe the conclusions of this committee are reasonable and moderate and are similar to those arrived at by most gynecologists who have made an effort to survey and keep abreast of the published scientific reports on the pill. Whether all gynecologists are as fully informed about medical advances as they should be is open to question, but it is clear from several polls that the majority of gynecologists prescribe the pill because that is what their patients ask for, and most require annual examinations before renewing prescriptions—American College of Obstetricians and Gynecologists "Report on a Survey of Experience with Oral Contraceptives," October 1967.

The selection of a contraceptive technique reflects a decision based upon multiple considerations. First and foremost, "How important is it not to become pregnant." I don't believe that the vast majority of physicians understand how the fear of pregnancy can pervade a woman's entire life and activities. A number of years ago the gynecologist used to see a fairly common clinical picture which was called the tired housewife syndrome.

Characteristically, this was a woman in her late twenties or early thirties with two or three children who came to the office with multiple vague complaints. Physical and laboratory examination did not reveal any physical cause for her complaints. Greater exploration into her social history reveals a woman tied down to raising three children, her husband rarely home because of this critical period in his career development and, therefore, there is very little external social life.

She knows that another pregnancy will just add to an already burdensome and frustrating existence. Consequently, the frequency of sexual activity and her ability to respond sexually are considerably diminished by her fear of further pregnancy and eventually leads to her psychosomatic complaints as well. The pill has provided her with a form of security she has never had before.

The diaphragm has never been a technique which a large number of women have enjoyed using. Many find it distasteful to insert, although it is highly effective when used properly. This dislike for the method leads to the temptation not to use it during certain days of the month. An additional problem is to have to interrupt love play to insert the diaphragm. The intrauterine contraceptive device has far too many local side effects to be widely accepted. The use of the condom is aesthetically unsatisfactory and, finally, intravaginal foam suffers from a high failure rate.

In short, if the pill is safe, it bypasses all of the previous mentioned deficiencies of other methods: namely, a remarkable degree of

effectiveness with minimal side effects, some beneficial effects such as reduced menstrual flow and the elimination of premenstrual tension and painful menstruation. Finally, it allows spontaneous, uninhibited and uninterrupted lovemaking.

The question must be asked then, "Why has the pill been a subject of such hot debate?" There are at least two major health hazards which are indisputable which have generated much less discussion and virtually no action. I am speaking of the automobile which abruptly kills young and old each year in terrifying numbers. For those spared abrupt death by the automobile, there are the hazards of air pollution. Secondly, cigarettes clearly cause chronic lung disease and have a striking association with the development of lung cancer.

Is the furor over the pill genuinely related to a fear of its unknown effects, such as an ability to produce cancer? Biology does not enjoy the precision of physics or mathematics. One cannot write down a precise formula and predict what its effects will be. These effects are determined by experimentation: namely, giving the drug under controlled conditions and observing and recording its effects—Lasagna, L., "The Pharmaceutical Revolution: Its impact on Science and Society." Science: 166:1227, Dec. 5, 1969.

The pills have probably been the most carefully scrutinized medication in medical history, and we have been hard pressed to find any significant permanent or harmful effect from using these agents. At this point, the margin of safety of these tablets certainly exceeds those of penicillin and aspirin.

Senator DOLE. That statement is directly contradictory to a statement made by an earlier witness, who indicated there had not been anything done, or very little done concerning the safety of these pills.

Dr. SCHULMAN. I think it is perhaps a difference of degree. I could not really analyze the amount of investigation which went into the pills or other medication, say, prior to their release, but certainly since their release they have been more heavily scrutinized and I think we have more data—general systematic data on the pill which we do have on almost every other medication we use.

It is argued also that 10 or 20 years may be needed to know if these agents will produce breast or uterine cancer. The breast cancers produced in rats, rabbits, or dogs do not take 10 or 20 years to develop but develop within months. This type of argument accrues from such indirect evidence that people begin smoking in their teens and twenties but don't develop their cancers until they reach 40 or 50.

Or excessive X-radiation such as that experienced by the surviving Japanese at Hiroshima or Hagasaki has led to increased risk of developing leukemia following a period of 6 years. The time period clearly varies a great deal, and this kind of yardstick cannot be applied irresponsibly for if it were, penicillin would only have been released for usage during the past 2 or 3 years, and thereby have deprived millions of its benefits.

Why the furor then? It is my belief that one of the underlying currents that has not been faced in this meeting as well as in medi-

cal and lay circles is that what we are really talking about is sex. The pill is being taken for sex. Our society has not handled sex well, and in general has imposed a terrible burden on women. For example, she has been forbidden until she is married to participate in sexual activity, and after this type of santification she may release or attempt to release 20 or 25 years of imposed inhibitions. Some religions may forbid her to use birth control or not allow her to have relations until she has stopped menstruating for one week, so she is being reminded that she may be dirty or kept in her place.

If she should become pregnant by accident or out of wedlock, by rape or by indiscretion she is forced to bear the products of this moment or go to London, Japan, or Puerto Rico to obtain help, or go to back alleys, or be preyed upon financially by amoral physicians.

The pills have been primarily responsible for the blossoming of family planning in our society and up to now represent the choice of approximately 70 percent of our patients. They are a positive source of mental and social health. The average municipal hospital now sees more women for family planning visits than they do prenatal visits.

A common sight in municipal hospitals a few years ago were women having somewhere between their fifth and 18th baby. These patients are becoming increasingly rare. The pill is probably doing more to eliminate and diminish poverty and problems of the urban poor than any other political action program devised, by giving women the freedom of only having one or two children and raising them properly. If you look at the critics of the pill you will see that very few of them are gynecologists.

Most gynecologists appreciate how important it is for a woman to be able to control when she is to get pregnant. Gynecologists are facing the bold facts of sex and sexuality every day and are forced to become comfortable with these issues whereas the vast majority of our society, including physicians, are not nearly as comfortable. When medical students are assigned to work in obstetrics and gynecology, we see the highest incidence of psychosomatic illnesses, and in addition we find them reacting very strongly in either a positive or negative way to this area of medicine.

There is little doubt that the reporting of these hearings by the press, radio and television has created widespread alarm among women, and many have stopped taking oral contraceptives because of this. Tragically, it is once again the poor who are discriminated against in this type of situation, because they stop their method of birth control, and do not have easy access to a physician to obtain other methods.

We have already seen several women seeking abortion because of these developments. If hearings such as this are going to be held, I believe the committee must carefully plan and screen all individuals who are invited to testify as to the content of their testimony.

Mr. GORDON. Doctor, doesn't that sound something like censorship? Are you saying that the testimony of a witness should be examined thoroughly before he be allowed to testify?

Dr. SCHULMAN. No, I am certainly not advocating the suppression of minority opinion.

Mr. GORDON. Or majority opinion? What kind of opinion are you referring to?

Dr. SCHULMAN. I think opinion expressed in a responsible way, and I amplify this statement in the remaining paragraph.

Mr. GORDON. Who would make the decision whether it is responsible or not?

Dr. SCHULMAN. I think in years past, newspapers and magazines have hired science writers and deliberately trained them so they would have some ability to present information in a way which it does not alarm the public, regardless of what the content might be.

Mr. GORDON. You are saying that the committee must carefully plan and screen all individuals who are invited to testify, as to the contents of their testimony. Do you think that the content of the testimony of various witnesses should be screened before it is allowed to be presented to the public? Is that what you are saying?

Dr. SCHULMAN. I think in an area such as this, I think that is necessary, yes. Because you screen it does not mean you would not allow it to be heard.

Mr. GORDON. But the committee, you say, should determine what should be stated publicly?

Dr. SCHULMAN. No, I think it should determine how it is said publicly.

Mr. GORDON. You do not think that is a type of censorship?

Dr. SCHULMAN. Well, I do not see it as a type of censorship. It is conceivable that it could be, but if a Committee has broad representation, presumably there would be a majority opinion or at least another opinion expressed where it would not be censorship. The Committee does not have a uniform viewpoint towards this issue, either, I would presume.

Mr. GORDON. Thank you very much.

Senator DOLE. Perhaps the hearing should have been held in executive session because of the somewhat sensational nature of the publicity they generated. If we were concerned only with the problem, we may have been able to explore it more quickly and perhaps have a more detailed examination of witnesses in executive session.

Certainly, no one here suggests censorship, but it does seem we are dealing with a very delicate medical problem, one we Senators are not at all well qualified to deal with. We can ask questions, we can enlist the witnesses, and we can listen to their statements, but we really do not understand the problem. We have had no experience at all with the problem, except in the work we have done—I cannot speak for Mr. Gordon, because he does have great knowledge in this area—that is in the record.

Dr. SCHULMAN. Well, I am certainly not advocating censorship, but freedom also implies responsibility and I think the minority should be responsibly expressed.

As I mentioned, reputable newspapers and magazines have employed science writers to ensure that the public gets accurate information without unduly alarming the public. Furthermore, the committee must use its legal skills to question and deliberately point out to witnesses and the public at the time of testimony when inflammatory statements such as "mass experiment", and a number of others that have been made today, are being used. I think this

committee now also has an obligation to provide the public with a written statement of its findings.

In regard to what the physician should tell the patient, I don't think this is too much a problem. The choice of a contraceptive is a personal decision made by the patient and if she selects an oral contraceptive the physician should give the patient written pamphlets which describe potential side effects of these drugs. The difficulty of evaluating side effects of a drug was beautifully illustrated in a recent study from Mexico. In this study there were 147 women who had recently experienced a spontaneous abortion and were interested in having further children. However, they volunteered to participate in a 1-year study to evaluate a new oral contraceptive. At least, that is what they were told. This new pill was composed of sugar and starch only. And I hope you will agree these are harmless.

These patients while taking these tablets developed 31 different kinds of side effects, including percentages of headache, bloating, weight gain, pain in veins, and many others in equal or greater numbers than those which have been attributed to real oral contraceptives—Agner-Ramos, R. Incidence of Side Effects with Contractive Placebos. Amer. J. Obst. & Gynec. 105 :1144, Dec. 1, 1969.

In summary——

Senator DOLE. Do you have either a summary of that study, or do you have available a copy of the study itself?

Dr. SCHULMAN. I have listed it as reference 2 in my statement.

Senator DOLE. We can obtain that.

Dr. SCHULMAN. The Incidence of Side Effects with Contraceptive Placebos.

Senator DOLE. Thank you very much.

Dr. SCHULMAN. In summary, I would say that continued efforts should be made to continue to study and quantitate the biologic and social effects of oral contraceptives. I would like to add from listening to the discussion today, I think everyone in making this sort of a statement is assuming that something grand is just over the horizon and I think this is a very dangerous sort of thinking to get into. I do not think the human body is that easy and there are many major medical areas such as cancer where we have had these kinds of promises for 50 or 60 years, we are now getting these kinds of promises for transplantation and the body's ability to reject an organ, and I think perhaps the body is not going to be easily thwarted in terms of conception, either.

I believe that for the most part physicians and their patients have been adequately informed and are continually informed about the status of the known factual information.

Thank you.

Senator DOLE. Is it possible for a woman to be known to be pregnant by, say, February 19, as a result of stopping the pill on or about January 14th? That is the day the hearings started.

Dr. SCHULMAN. I think she would have to stop it a little bit sooner. I think if she stopped around January 8 or 9, it is conceivable that she could conceive sometime in the next 10 days. That would make it the 19th, and that a pregnancy test could be positive by early or midFebruary. Yes.

Senator DOLE. Have you had any contact with patients who stopped using the pill as a result of what they may have read or heard about the hearings?

Dr. SCHULMAN. Yes, we have had many.

Senator DOLE. You mention inflammatory statements and headlines, such as, "Pill May Cause Cancer." Were these the overriding concern of those who have contacted you?

Dr. SCHULMAN. I think this is the principal problem, the linking of the pill with cancer does present a significant fright to anyone.

Mr. GORDON. Doctor, when you say they went off the pill, did they go to another form of contraceptive?

Dr. SCHULMAN. No, they did not. These were patients in a municipal hospital setting.

Mr. DUFFY. Doctor, just to pursue the line of questioning begun by Senator Dole.

Of these patients that you have seen that have left the pill, for whatever reasons, do you know any of them that have become pregnant at this point?

Dr. SCHULMAN. Well, I am aware of three patients, one of which I would think probably stopped taking the pill because of the preliminary discussions regarding the hearings, and this patient did receive an abortion in our institution last week. There are two other women who have applied for abortion within the past week, who claim they stopped taking the oral contraceptives on the basis of the information which they heard.

Mr. DUFFY. I ask you that question again, and I would like to remind you that a prior witness was quite definite, he said this was just not possible. And in view of that statement, is your answer still the same?

Dr. SCHULMAN. I think it is possible if a woman had stopped taking the pills the 8th or 9th of January. Then ovulation could easily have occurred 10 or 11 days later, therefore, pregnancy would become apparent toward the end of the first week or the second week of February. These patients appeared in the last week of February with their pregnancies.

Senator DOLE. I think it is probably common knowledge now that these hearings have had great impact on American women who were using the pill. Now, since no one knows about some of the side effects, the complications or dangers of the pill, whether this impact may have been beneficial or not, but I think we all agree it has had an impact. We have had letters in our offices and telephone calls and conversations with physicians that we know, and as you say, you have had telephone calls, Dr. Peterson has, and I am certain every other physician who may have prescribed the pill has been contacted.

But I think you make one good suggestion, which was stressed by Senator Javits earlier today, and that is what we should do now, of course, and what we will do is issue a report of our findings and hope that they are widely publicized. As I believe, if we can reach an agreement, if we are not going to decide the issue of whether or not it causes cancer or any other side effect, as you say, by majority vote, but we can perform a service, I think, by working very hard in

our objective study and reporting our findings and publicizing them very widely.

And we will have a chance from the committee, all of us, to review the testimony and come up with some objective findings and release a report at the earliest possible time. I think it is important that it be done very quickly because tomorrow we have our final witness, Dr. Edwards of the FDA.

Is there anything else that you want to add that you did not mention in your statement?

Dr. SCHULMAN. I do not think so.

Senator DOLE. Thank you very much.

(The complete prepared statement submitted by Dr. Schulman follows:)

STATEMENT OF DR. HAROLD SCHULMAN, ASSOCIATE PROFESSOR, DEPARTMENT OF OBSTETRICS AND GYNECOLOGY, ALBERT EINSTEIN COLLEGE OF MEDICINE

My name is Harold Schulman. I am an Associate Professor of Obstetrics and Gynecology at the Albert Einstein College of Medicine in New York City. I would like to present a point of view based upon my position in which I am responsible for teaching obstetrics and gynecology to medical students and residents, as one who is engaged in private practice, and in addition responsible for the supervision and care of women in a large municipal hospital setting. Our hospital (Jacobi Hospital) contains 91 obstetric and gynecologic beds which are filled to capacity most of the time and we see an average of 500 women per week in our outpatient offices.

In Senator Nelson's opening statement he indicated a desire to learn if women and physicians are being adequately informed about the merits and risks of oral contraceptive pills. I do not believe that the committee has uncovered any data to suggest that there is any information that has been withheld or kept secret from doctors or the public. Furthermore I do not believe that the committee is qualified or should get involved in attempting to determine the validity of a scientific analysis of possible long range effects of a drug. Scientific information can not be resolved in a democratic approach or by a majority vote.

I have no reason to believe or even suspect that the two reports of the Advisory Committee on Obstetrics and Gynecology to the FDA and a W.H.O. report are not accurate or reasonable summaries of the state of knowledge regarding the pills and their effects on women who use them (1). The members of the Hellman Committee are known to me either personally or through the quality of their published works. I believe the conclusions of this commtitee are reasonable and moderate and are similar to those arrived at by most gynecologists who have made an effort to survey and keep abreast of the published scientific reports on the pill. Whether all gynecologists are as fully informed about medical advances as they should be is open to question, but it is clear from several polls that the majority of gynecologists prescribe the pill because that is what their patients ask for, and most require annual examinations before renewing prescriptions (3).

The selection of a contraceptive technique reflects a decision based upon multiple considerations. First and foremost, "How important is it not to become pregnant?" I don't believe that the vast majority of physicians understand how the fear of pregnancy can pervade a woman's entire life and activities. A number of years ago the gynecologist used to see a fairly common clinical picture which was called the tired housewife syndrome. Characteristically, this was a woman in her late 20's or early 30's with 2 or 3 children who came to the office with multiple vague complaints. Physical and laboratory examination did not reveal any physical cause for her complaints. Greater exploration into her social history reveals a woman tied down to raising three children, her husband rarely home because of this critical period in his career development, and, therefore, there is very little external social life. She knows that

NOTE.—Numbered references at end of statement.

another pregnancy will just add to an already burdensome and frustrating existence. Consequently, the frequency of sexual activity and her ability to respond sexually are considerably diminished by her fear of further pregnancy and eventually leads to her psychosomatic complaints as well. The pill has provided her with a form of security she has never had before.

The diaphragm has never been a technique which a large number of women have enjoyed using. Many find it distasteful to insert, although it is highly effective when used properly. This dislike for the method leads to the temptation not to use it during certain days of the month. An additional problem is to have to interrupt love play to insert the diaphragm. The intra-uterine contraceptive device has far too many local side effects to be widely accepted. The use of condom is aesthetically unsatisfactory and finally intravaginal foam suffers from a high failure rate. In short, if the pill is safe, it bypasses all of the previous mentioned deficiencies of other methods, namely a remarkable degree of effectiveness with minimal side effects, some beneficial effects such as reduced menstrual flow and the elimination of premenstrual tension and painful menstruation. Finally, it allows spontaneous, uninhibited and interrupted love making.

The question must be asked then, "Why has the pill been a subject of such hot debate?" There are at least two major health hazards which are indisputable which have generated much less discussion and virtually no action. I am speaking of the automobile which abruptly kills young and old each year in terrifying numbers. For those spared abrupt death by the automobile, there are the hazards of air pollution. Secondly, cigarettes clearly cause chronic lung disease and have a striking association with the development of lung cancer.

Is the furor over the pill genuinely related to a fear of its unknown effects, such as an ability to produce cancer? Biology does not enjoy the precision of physics or mathematics. One cannot write down a precise formula and predict what its effects will be. These effects are determined by experimentation, namely giving the drug under controlled conditions and observing and recording its effects (4). The pills have probably been the most carefully scrutinized medication in medical history, and we have been hard pressed to find any significant permanent or harmful effect from using these agents. At this point, the margin of safety of these tablets certainly exceeds those of penicillin and aspirin.

It is argued also that 10 or 20 years may be needed to know if these agents will produce breast or uterine cancer. The breast cancers produced in rats, rabbits, or dogs do not take 10 or 20 years to develop but develop within months. This type of argument accrues from such indirect evidence that people begin smoking in their teens and 20's but don't develop their cancers until they reach 40 or 50. Or excessive x-radiation such as that experienced by the surviving Japanese at Hiroshima or Nagasaki has led to increased risk of developing leukemia following a period of 6 years. The time period clearly varies a great deal, and this kind of yardstick cannot be applied irresponsibly for if it were, penicillin would only have been released for usage during the past 2 or 3 years, and thereby have deprived millions of its benefits.

Why the furor then? It is my belief that one of the underlying currents that has not been faced in this meeting as well as in medical and lay circles is that what we are really talking about is sex. The pill is being taken *for sex*. Our society has not handled sex well, and in general has imposed a terrible burden on women. For example, she has been forbidden until she is married to participate in sexual activity, and after this type of sanctification she may release or attempt to release 20 to 25 years of imposed inhibitions. Some religions may forbid her to use birth control or not allow her to have relations until she has stopped menstruating for one week, so she is being reminded that she may be dirty or kept in her place. If she should become pregnant by accident or out of wedlock, by rape or by indiscretion she is forced to bear the products of this moment or go to London, Japan or Puerto Rico to obtain help, or go to back alleys, or be preyed upon financially by amoral physicians. The pills have been primarily responsible for the blossoming of family planning in our society and up to now represent the choice of approximately 70% of our patients. They are a positive source of mental and social health. The average municipal hospital now sees more women for family planning visits than they do prenatal visits. A common sight in municipal hospitals a few years ago were women

having somewhere between their 5th and 18th baby. These patients are becoming increasingly rare. The pill is probably doing more to eliminate and diminish poverty and problems of the urban poor than any other political action program devised, by giving women the freedom of only having one or two children and raising them properly. If you look at the critics of the pill you will see that very few of them are gynecologists. Most gynecologists appreciate how important it is for a woman to be able to control when she is to get pregnant. Gynecologists are facing the bold facts of sex and sexuality every day and are forced to become comfortable with these issues whereas the vast majority of our society including physicians are not nearly as comfortable. When medical students are assigned to work in obstetrics and gynecology, we see the highest incidence of psychosomatic illnesses, and in addition we find them reacting very strongly in either a positive or negative way to this area of medicine.

There is little doubt that the reporting of these hearings by the press, radio and television has created widespread alarm among women, and many have stopped taking oral contraceptives because of this. Tragically it is once again the poor who are discriminated against in this type of situation, because they stop their method of birth control, and do not have easy access to a physician to obtain other methods. We have already seen several women seeking abortion because of these developments. If hearings such as this are going to be held I believe the committee must carefully plan and screen all individuals who are invited to testify as to the content of their testimony. Reputable newspapers and magazines have employed science writers to ensure that the public gets accurate information without unduly alarming the public. Furthermore the committee must use its legal skills to question and deliberately point out to witnesses and the public at the time of testimony when inflammatory statements such as "mass experiment" are being used. I think this committee now also has an obligation to provide the public with a written statement of its findings.

In regard to what the physician should tell the patient, I don't think this is too much a problem. The choice of a contraceptive is a personal decision made by the patient and if she selects an oral contraceptive the physician should give the patient written pamphlets which describe potential side effects of these drugs. The difficulty of evaluating side effects of a drug was beautifully illustrated in a recent study from Mexico. In this study there were 147 women who had recently experienced a spontaneous abortion and were interested in having further children. However, they volunteered to participate in a one year study to evaluate a new oral contraceptive. This new pill was composed of sugar and starch only. These patients while taking these tablets developed 31 different kinds of side effects including percentages of headache, bloating, weight gain, pain in veins, and many others in equal or greater numbers than those which have been attributed to real oral contraceptives (2).

In summary, I would say that continued efforts should be made to continue to study and quantitate the biologic and social effects of oral contraceptives. I believe that for the most part physicians and their patients have been adequately informed and are continually informed about the status of the known factual information.

REFERENCES

1. Advisory Committee on Obstetrics and Gynecology Report to Food and Drug Administration, Aug. 1, 1969.
2. Agner-Ramos, R. Incidence of side effects with contraceptive placebos. Amer. J. Obst. & Gynec. 105:1144, Dec. 1, 1969.
3. American College of Obstetricians and Gynecologists Report on a Survey of Experience With Oral Contraceptives Oct., 1967.
4. Lasagna, L. The Pharmaceutical Revolution: Its impact on science and society. Science:166:1227, Dec. 5, 1969.
5. Miller, R. W. Delayed radiation effects in atomic-bomb survivors. Science:569, Oct. 31, 1969.

Senator DOLE. The hearings are adjourned until 9:30 tomorrow morning.

(Whereupon, at 4:35 p.m., the committee adjourned, to reconvene at 9:30 a.m., on Wednesday, March 4, 1970.)

COMPETITIVE PROBLEMS IN THE DRUG INDUSTRY

(Present Status of Competition In the Pharmaceutical Industry)

WEDNESDAY, MARCH 4, 1970

U.S. SENATE,
SUBCOMMITTEE ON MONOPOLY OF THE
SELECT COMMITTEE ON SMALL BUSINESS,
Washington, D.C.

The subcommittee met, pursuant to recess, at 9:35 a.m., in room 318, Old Senate Office Building, Hon. Gaylord Nelson (Chairman of the Subcommittee) presiding.

Present: Senators Nelson, McIntyre, and Dole.

Also present: Benjamin Gordon, Staff Economist; Elaine C. Dye, Clerical Assistant; James P. Duffy III, Minority Counsel; and Dennison Young, Jr., Associate Minority Counsel.

Senator NELSON. Our witness today is Dr. Charles Edwards, Commissioner, Food and Drug Administration.

Dr. Edwards, the committee is very pleased to have you appear here today. Your statement will be printed in full in the record.

You may present it as you desire, and if you wish to extemporize from it at any time, or elaborate on it, feel free to do so.

I assume you do not mind if we interrupt with questions as you go along.

Dr. EDWARDS. Not at all.

Senator NELSON. All right, go ahead, Doctor.

STATEMENT OF DR. CHARLES C. EDWARDS, COMMISSIONER, FOOD AND DRUG ADMINISTRATION; ACCOMPANIED BY DR. JOHN JENNINGS, DIRECTOR, BUREAU OF MEDICINE, FOOD AND DRUG ADMINISTRATION; WILLIAM W. GOODRICH, GENERAL COUNSEL, FOOD AND DRUG ADMINISTRATION; AND DR. JOHN SCHROGIE, FOOD AND DRUG ADMINISTRATION

Dr. EDWARDS. Thank you, Senator Nelson, Senator Dole.

I would like to begin by introducing my colleagues. On my right, Dr. John Jennings, who is Director of the Bureau of Drugs, and on my left is Mr. William Goodrich, who is the general counsel for the Food and Drug Administration.

We certainly appreciate this opportunity to present to the committee the views of the Food and Drug Administration on some of the issues raised during these hearings. The primary issue, as we see

it, has been the relative safety of oral contraceptives and a concern for public understanding of the risks associated with them.

We have, needless to say, carefully followed the progress of these hearings. You have heard a wide range of opinion concerning the safety of oral contraceptives. The opinions of these witnesses have been expressed intelligently and sincerely. They certainly merit serious consideration, both by you and by the Food and Drug Administration.

However, the expression of an informed opinion is not the same as making a decision. We, in the Food and Drug Administration, also have expert opinions; but it is our responsibility to study the available scientific data, consider the advice of our consultants and render a decision on the safety and efficacy of new drugs under the Federal Food, Drug, and Cosmetic Act.

At this point I wish to summarize the Food and Drug Administration's current position. I would like to emphasize "current", because this is a situation that can change from month to month, year to year. However, our position is that the oral contraceptives are an effective and safe method of birth control, but as with other potent drugs there are both contraindications and complications.

Women whose history and present medical condition include thromboembolic disorders, impaired liver function, known or suspected cancer of the breast, estrogen dependent tumors, and abnormal bleeding should not take oral contraceptives.

Senator NELSON. Doctor, may I ask a question at this point?

Dr. EDWARDS. You certainly may.

Senator NELSON. On the use of the word "safe" in respect to the oral contraceptives, I think that there is considerable confusion within the medical profession and the public alike as to how the word "safe" was being used when the Hellman committee came to that conclusion and used the phrase "Safe within the intent of the law."

I would just like to read to you what Dr. Hellman said before the committee, and ask for your comment on it. I shall read out of context a couple of excerpts of his testimony.

This is Dr. Hellman speaking when he appeared before the committee—

It is quite apparent if you read the report, in the first report the committee recognized certain very serious problems with oral contraceptives. They, however, were unwilling, and rightfully, I believe, to say these things ought to come off the market.

Now, I skip down further where Dr. Hellman states:

Now, in discussing the Chairman's report, the second report, with the committee, I said to them that a more forthright statement has to be made. We cannot just hide behind rhetoric, we are going to have to say something and we have an option. These are not safe and then the commissioner might have to take them off the market, if you believe this. We can say these are safe, and our scientific data really did not permit that kind of statement.

I doubt whether one doctor in 10,000 in the country knows that this was what Dr. Hellman, the Chairman, said and understands the context within which the word "safe" was used in reaching the conclusion when the Chairman of FDA's Advisory Committee said "safe within the meaning of the intent of the law."

Would you mind elaborating on that?

Dr. EDWARDS. Certainly. In categorizing this drug as safe, I do not want to imply, by any stretch of the imagination, that this is an innocuous drug. It is a very potent drug, and when arriving at this decision to call it a safe drug we had to utilize the same standards we use for all other drugs.

As you well know, most of the other "safe" drugs, the powerful drugs, have certain contraindications. There are certain dangers in taking any drug, and they have to be taken under the conditions which are stated very clearly in the labeling.

So again, I would like to emphasize that in establishing this classification, we applied the same standards for the oral contraceptives as we have for all other drugs in categorizing them as safe.

Senator NELSON. The use in this context, then, was not in the ordinary dictionary use of the word——

Dr. EDWARDS. It certainly was not. It was a Food and Drug Administration description of the word "safe", which really is "safe under the conditions of labeling," and which perhaps is a more accurate definition.

Senator NELSON. This is a legal question. Dr. Hellman mentioned that he discussed the phrasing—do you have Dr. Hellman's phrasing?

In any event, he discussed how it should be phrased with your counsel, Mr. Goodrich. Perhaps you may wish Mr. Goodrich to respond to this. But it raises another question of some significance, it seems to me.

Dr. Hellman said:

> Now, I therefore wrote the sentence that has caused you and Mr. Gordon and other people some difficulty. I take full responsibility for writing this sentence "safe within the intent of the legislation." But I did have consultation in writing the sentence.

And so forth, and he refers to your counsel, Mr. Goodrich.

If it had been my responsibility, I might have come to the same conclusion, but it does raise a question about the intent of the law and its meaning.

In 1938 Congress passed the statute requiring that to market a drug proof of safety must be submitted, adequate proof of safety or proof of safety acceptable to the FDA must be presented.

I would just like to ask Mr. Goodrich what he thinks was intended at that time. Let me state it this way:

In 1938 there were no oral contraceptives. In 1938, I would assume that the Congress was thinking of a drug for treatment of a specific target organism in a specific disease situation. In fact, it was in response to a particular safety problem that arose at that time respecting sulfanilamide, and maybe Mr. Goodrich will have a different view—and correct me if you do—that Congress was thinking then of a drug in which the issue was, is it safe for the particular disease situation which it is being used for, that is, the drug does have side effects, we are well aware of that; however, under the circumstance the illness of the patient indicates that on balance the risks of the side effects from the use of the drug are far outweighed by the benefits that the patient would get from the use of the drug for the particular disease situation that exists.

And just to delineate it a little further, let us take the case of chloramphenicol on which we had substantial hearings. This is a very potent drug and everybody knows it. It has in a certain incidence, some dramatic side effects involving blood dyscrasias, including aplastic anemia.

In today's circumstance, chloramphenicol, according to the National Research Council of the Natonal Academy of Science, is not the drug of choice in any disease. It is the choice only when the target organism is subject to control by chloramphenicol, when no other drug will do the job, and when the disease situation is very serious.

So clearly, if you had some disease organisms that would not respond to treatment by tetracycline or any other drug, and the patient was seriously ill and the target organism was sensitive to chloramphenicol, the drug under that situation is safe within the meaning of the law.

However, if the disease is subject to treatment by tetracycline, it is not safe within the meaning of the law or if the patient has a serious disease or if the target organism is not subject to control by chloramphenicol, it is unsafe.

Is that your understanding of what the law means?

Mr. GOODRICH. Yes. My understanding is that all safety decisions have to be made in the context of the conditions for which the drug is prescribed, recommended or suggested.

Now, going back to what Congress had in mind in 1938 when they focused on an acute episode of poisoning, it happened to be due to the vehicle and not the drug itself. But as soon as we began passing on safety from the very first drug, the sulfanilamides, that were involved there, those drugs were not safe in any absolute sense of the term but they were quite safe in treating infectious disease at that time, because many of those were lift threatening.

Now, in that class of drugs, of course, it is relatively easy to balance benefit-to-risk, which is the test here. But there are other types of drugs that we have had to deal with over the years, drugs used for prophylaxis, or that type of drug, and in each instance it is essential that the agency balance benefit to risk, because there are very few drugs that have no side effects whatever, if they do anything.

There are some inoccuous drugs that do not do anything, but if they are innocuous, then they do not have any benefit or any risk; they are just ineffective.

But from the beginning of time we had to deal with the sulfanilamides, first as a class, with the corticosteroids, and many other classes of drugs that came on the market after 1938. And this was really kind of the beginning of a new era of chemotherapy that had both beneficial effects and side effects and contraindications that were necessary to be observed in using the drug.

Now, you had drugs effective against specific target organisms and effective as prophylactic measures.

Senator NELSON. Let me ask this question, though. Is it not correct when using the word "safe" that you do not mean safe in general, you mean safe for this particular patient who has a particular

disease situation which the doctor decides that this drug will effectively treat, that is, target organism is subject to control by this drug, and on balance it is better that the patient risk whatever side effect this drug has rather than risk letting the disease run its course untreated by any drug.

It is an individual case, an individual disease, an individual prescription under an individual circumstance; is that not what we mean by "safe"?

Mr. GOODRICH. That is the decision for the individual prescriber, but the decision for the Food and Drug Administration has to take into account different circumstances in which the drug will be used, some in private practice, others in university medical centers.

It has to take into account the total experience with the drug in the total prescribing population, and make a judgment there on all of these circumstances, this drug will be reasonably safe, that is, its benefits outweigh its risk under the circumstances in which it enters the market.

There have been a few instances in which drugs were allowed to enter the market only for use in university-type hospital settings, but in others the drug is permitted for widespread prescribing in most instance. But the Food and Drug decision has to take into account all of these circumstances in reaching a safety decision.

Senator NELSON. Maybe I am not making myself clear. When you say "safe within the meaning of the law" are you not saying that we mean safe for the appropriate use of that drug under an appropriate circumstance in a specific disease situation?

Mr. GOODRICH. Certainly.

Senator NELSON. Now, then, how do we bring the word "safe" to bear in the circumstance here of the oral contraceptive when: (1) There are alternative methods; (2) when, let us say, you are dealing with an intelligent, healthy, well-motivated prospective user? How does the word "safe" apply in that respect?

The person has available medical care and a good hospital, has a good physician, has all of the facilities of the medical profession available as contrasted with the situation in which the patient has diabetes, or the patient has a history of high blood pressure, or carcinoma in the immediate family, something like that. How do you evaluate that specific case, the healthy patient with the finest medical facilities available with respect to the phrase "safe within the intent of the law"?

Mr. GOODRICH. As you pointed out, that individual evaluation is for the prescriber, but as I approach it, as I see the responsibility of the Food and Drug Administration, it is to make sure that that prescriber has before him the information that is necessary for the safe, effective use of this drug.

Now, the drugs are essentially very effective. They have two classes of side effects, some troublesome, but not serious; some serious. Our role is to make sure that the material going from the sponors of these drugs to the prescribers fully discloses both the benefits and the risk and that for the doctor to make a judgment there, after he has taken this lady's history, after he has made the typical examination, the physical examination, and after he has taken into

account all of the things that he is warned about, or cautioned about, or precautioned about, or contraindicated about in the labeling, to make the choice that this is a safe medication for this patient and that this is the one most likely to be effective.

Senator NELSON. If the patient is a healthy, well-motivated user, or prospective user, who could afford the best medical care, you do not have a problem of weighing the risk of a baby being born not in a hospital, but in a very poor circumstance. You are not weighing the question of whether the woman has psychological problems or diabetes, or disease; we are aiming at the problem of the perfectly healthy person.

Then under those circumstances, where there are alternative methods of birth control and we are dealing with the question of safety, is there any obligation by the doctor to disclose to that patient the benefits and side effects of this contraceptive versus those of alternative methods of contraception?

Dr. EDWARDS. I think there is an absolute responsibility of the physician to: (1) Point out the alternative methods of contraception, and the contraindictions to each, and then I think it is a judgmental consideration on the part of both the physician and the patient in arriving at an appropriate choice of contraceptive methods.

But certainly the physician has a primary responsibility, as we see it, in bringing this information on the safety of this particular product to the patient.

Senator NELSON. To the patient's attention?

Dr. EDWARDS. Right.

Senator NELSON. Because the situation is quite different if there is no disease problem, when there is no other problem.

Dr. EDWARDS. Absolutely.

Senator NELSON. The patient is entitled then to know the facts on thromboembolism or other risks, with a right then to decide, along with the doctor, whether she would use an oral contraceptive or another device; is that right?

Dr. EDWARDS. Absolutely. And I would again emphasize that in our judgment this is a potent, powerful drug that has to be utilized under the supervision of a competent physician.

Senator NELSON. Then does not the Newsweek poll raise quite a dramatic problem nationwide, when it is your position as well as the position of the former Commissioner Dr. Ley, as well as many witnesses before the committee, that there should be disclosure to the user? Are we not confronted with a very serious situation when the Newsweek poll says that two-thirds of the women interviewed said they were told nothing about side effects?

Dr. EDWARDS. I think very definitely, yes. I think that, unfortunately, the subject of the oral contraceptive has become somewhat of an emotional one in the eyes of many women, in the eyes of the public generally.

I think one of the responsibilities of the Food and Drug Administration is to bring the facts to bear so that they are available to the patient. I think that there have been more women taking the pill than perhaps should have been taking the pill.

I am not sure that this number is absolute, but I think it does indicate there is a need to better inform the patient of the potential dangers of the pill and the risks involved.

Senator NELSON. If, as you and many others state, it is important to share the knowledge of the side effects with the user, what do we do about the fact that according to the Newsweek pool two-thirds of the doctors are telling the patients nothing about side effects?

Dr. EDWARDS. As I am going to suggest in my prepared testimony, Senator Nelson, I think that the Food and Drug Administration has a responsibility to make sure that these individuals taking the oral contraceptives have received this information, and this is what we are going to propose.

This is what we are planning to do immediately, as a matter of fact.

Senator NELSON. Excuse me. You are planning immediately to do what?

Dr. EDWARDS. We are going to publish in the Federal Register a patient information sheet that we are proposing be placed in all containers of oral contraceptives.

Senator NELSON. That are received by the user?

Dr. EDWARDS. By the user, right.

Senator NELSON. Has that ever been done with any other drug?

Mr. GOODRICH. Yes. There have been a few instances in which it was necessary to have the prescribing information with the package.

Senator NELSON. What drugs are they?

Mr. GOODRICH. Well, I think back——

Dr. JENNINGS. I do not think we have ever required it to the extent that is contemplated in this case. However, we have in at least one recent instance gone contrary to the traditional approach of requiring only the information the doctor wants on the dispense package of a prescription drug. In this instance, we required a warning directed to the patient in a certain class of drugs, the isoproterenol aerosol inhalants. The reasons they were somewhat comparable to what we are facing today, in that the drugs were prescribed in such a way that they could be refilled, the prescriptions could be refilled repeatedly, and the patient therefore had more control over the medication than they would with most prescription drugs.

So we did require a warning on the dispensed containers, directed to the patient.

Senator NELSON. What did the warning say?

Dr. JENNINGS. It simply warned against certain hazards here, associated with overdosage, and that if the usual or desired effect of release of difficult breathing was not obtained, that the physician should be consulted.

That, of course, does not approach in scope what is contemplated with the oral contraceptives.

Senator NELSON. So this is the first time that you will be proposing that there be a user, so to speak, a user package insert that tells the patient something in detail about the drug?

Dr. EDWARDS. Certainly in the detail that we propose this one in, yes.

Senator NELSON. Will that be in all packages dispensed to the user?

Dr. EDWARDS. We visualize it being in all of the oral contraceptive packages, yes.

Senator NELSON. Well, I certainly want to commend you for moving in that direction. I had thought maybe there was a legal question, and I had had the counsel draft a bill to accomplish the same purpose, which we introduced yesterday, but which your action will make unnecessary.

Is there any legal problem about the authority of the FDA to require a user package insert?

Mr. GOODRICH. Not if a finding is made as to the product here that is necessary for the safe use of the drug. The legal point being raised, I suppose, has to do with the ordinary rule that prescription drugs dispensed to the user do not themselves carry the warning of hazards, but that information is normally directed to the physician himself, and the law requires that the package dispensed contain such warnings as the prescriber requires in his prescription.

In this case, upon a finding that this kind of information cannot be safely left to word of mouth, that it must be communicated in a more orderly way, this is a safety factor that enters into the new drug decision and can be required, in my opinion.

Senator NELSON. We missed that aspect of the law. I had assumed that it would take some additional legislation, but I am pleased to hear that it does not.

Pardon me for interrupting, Doctor. I had another question I might as well ask right now, because it comes within the next sentence of your prepared statement

In reading your sentence below, the one we just discussed, "Women whose history and present medical condition include thromboembolic disorders, impaired liver function," as you were reading it, you inserted a "family history of diabetes." This is not in my text.

Dr. EDWARDS. No, I inserted it.

Senator NELSON. So it would read "impaired liver function, family history of diabetes"?

Dr. EDWARDS. Strong family history of diabetes.

Senator NELSON. "Known or suspected cancer of the breast."

This is the question we discussed yesterday with Dr. Cutler, in which he would use, I guess, about the same language you would as to diabetes. We asked him this question, whether the package insert which I believe uses the language "known or suspected cancer of the breast," whether that was adequate. He feels, if I recollect his testimony correctly, that it ought to say about what you said, about diabetes, but that if, as he put it, a sister, mother, or an aunt had cancer of the breast, it should be a contraindication.

Would you agree with that?

Dr. EDWARDS. No, I would not. I would not be quite that forceful in my statement. I think certainly there is an area that we have to keep a very careful eye on, but at this point in time I do not think that our information, our data, would substantiate a statement of that magnitude.

Senator NELSON. So you would not be inclined to even use the words "family history", as you do with diabetes?

Dr. EDWARDS. Not at this point in time. Again, this is one of those areas I think we have to watch very, very carefully, and very shortly we might have to add that.

Senator DOLE. Mr. Chairman, we had a subsequent witness yesterday afternoon, Dr. Peterson, who is chairman of the Department of Obstetrics and Gynecology at the Washington Hospital Center, who had much the same indication, that he would not include the family history.

I might also say, Mr. Chairman, that later on in the statement we will be apprised fully of the knowledge of the leaflet that will become the insert. Is that correct?

Dr. EDWARDS. That is correct, yes.

Senator NELSON. Please proceed, Doctor.

Dr. EDWARDS. Thank you.

The risk of having thromboembolic disorders is four to nine times greater for users than for nonusers. Perhaps more accurately stated, the mortality for users—I emphasize mortality—is approximately three women per hundred thousand versus 0.5 per hundred thousand in the nonusers. Consequently a few apparently healthy women taking this drug will be affected. For all women, an understanding of this risk and other less-serious adverse reactions will reduce the possibility of serious consequences.

In fact, I must say that the question of the safety of all contraceptives which has come out in these hearings can be clarified only through better public education as to what is involved.

I believe only one witness thus far has suggested to the subcommittee that oral contraceptives be taken off the market. What has been suggested, I think, is that the question of safety is directly related to understanding of risk. I certainly agree and I am prepared today to suggest how we can help the physician better inform his patients on the safe use of oral contraceptives.

First I would like to review the history of the Food and Drug Administration's action with respect to oral contraceptives.

The first oral contraceptive, a combination of mestranol and norethynodrel, was approved for sale in this country in June of 1960. During the next few years the Food and Drug Administration received increasing reports that this oral contraceptive was associated with certain thromboembolic phenomena. A committee of experts was formed by FDA to review and analyze available data and to determine if use of this oral contraceptive resulted in an increase in the incidence of thromboembolic conditions. The committee chaired by Dr. Irving S. Wright, reported in September 1963, that in their opinion no significant increases in the risk of thromboembolic disease had been demonstrated.

Less than 2 years later, in April 1965, the first two sequential products were approved. These new products stimulated wider interest in birth control through use of oral contraceptives.

It was estimated that during 1965 the average number of users of all marketed oral contraceptives in the United States had reached 5 million.

Although the Wright committee found no demonstrated increased risk, the Food and Drug Administration continued its surveillance of adverse reactions. An FDA Advisory Committee on Obstetrics and Gynecology was established under the chairmanship of Dr. Hellman. This committee was asked to consider all of the available

evidence and to provide the Food and Drug Administration with the best possible advice.

This committee of experts issued their first report in August of 1966. They found no adequate scientific evidence at the time to say that these compounds were unsafe for human use. However, the committee noted their concern for better data and made several recommendations which were subsequently acted upon by the Food and Drug Administration.

Included among these were the following:

First of all, the funding of a retrospective study to determine the possible relationship of oral contraceptives to thromboembolic disease.

Second, to support prospective studies utilizing groups of subjects especially amenable to long-term follow-up.

Third, the continuation and strengthening of FDA surveillance system.

Fourth, review of the mechanism for storage, retrieval and analysis of oral contraceptive surveillance data.

Fifth, to support laboratory investigation on carbohydrate metabolism, lipid metabolism, renal function, blood coagulation mechanisms, and potential carcinogenic effects in animals and man.

Sixth, to establish uniform labeling of contraceptive drugs.

Seventh, discontinuation of time limitation for administration of contraceptive drugs.

Lastly, to expedite approval of low dosage oral contraceptives.

The retrospective study was initiated; uniform labeling was achieved; the 2-year limitation was dropped; computer improvements were made in the storage, retrieval, and analysis of surveillance data; better reporting was discussed with the manufacturers; and effects were made to obtain better reporting from hospitals and from prescribers.

By 1966 competition in the oral contraceptive market had resulted in exaggerated and misleading claims. Advertising to physicians and some promotion materials attempted to establish ideas of product superiority which in our judgment had no scientific basis.

As a result, the Food and Drug Administration's efforts to correct this situation led us to the uniform label approach for oral contraceptives.

By early 1968, the improved surveillance system was reporting increasing numbers of thromboembolic diseases associated with women taking the oral contraceptive. At about the same time results of epidemeological studies in Great Britain became available. For the first time these studies demonstrated an increased incidence of thromboembolic disease in users of oral contraceptives. The British data, compiled by Dr. Inman, Dr. Vessey, and Dr. Doll, were reviewed by our experts who also considered the available U.S. data. These experts concluded that there was "a definite association between the use of oral contraceptives and the incidence of thromboembolic disorders."

Based on this conclusion, in June of 1968, FDA sent a letter to all physicians advising them of the British findings.

Senator NELSON. How many cases of thromboembolic disorders

had been reported to the department by the end of 1969? Do you happen to have that information?

Dr. EDWARDS. I would like to refer that question to Dr. Jennings, or a member of his staff.

Senator NELSON. On both deaths and morbidity.

Dr. JENNINGS. We have been compiling these on an annual basis for the past couple of years, and as of December 31, 1969, the total number of reported reactions for that period, July 1, to December 31, 1969, included 15 deaths and 28 nonfatal thromboembolic cases.

Senator NELSON. Over what period of time?

Dr. EDWARDS. From July to December. Is that not correct?

Dr. JENNINGS. That is right. That was for that particular year.

Senator NELSON. How many deaths?

Dr. EDWARDS. Fifteen.

Senator NELSON. And what was the other, thromboembolic?

Dr. JENNINGS. Yes, nonfatal thromboembolic, 28, with about six other miscellaneous adverse reactions.

Mr. DUFFY. Doctor, so I can understand these figures now, are these figures that are actually documented? In other words, it is clear that these are pill-related or are these just incidents which have occurred in people who have used the pill? You may or may not know.

Dr. JENNINGS. Deaths and the nonfatal. In fact, all of these adverse reactions are ones that we attribute to the use of the drug.

Mr. DUFFY. I would assume, then, that if you just looked at the gross number of deaths from thromboembolic accidents of women using the pill, there would be a larger number than 15?

Dr. JENNINGS. Yes, I am sure there would.

Mr. DUFFY. And you narrowed this down to instances where you could be sure it was pill-related?

Dr. JENNINGS. In attempting to establish a cause and effect relationship in any adverse reaction to a drug, where the adverse reaction is one that occurs for other reasons, but the linking of the two is extremely difficult. I think that we cannot always say with absolute certainty that a cause and effect relationship exists.

Now, therefore, even in our labeling, the retrospective studies, for instance, that were done, can establish only that; that they do not establish the precise cause and effect relationship.

We have here the tabulation that we do on these, and although I do not have handy the figure that I think the Senator was asking for, the total that we have to date, we can tabulate this fairly rapidly for you, if you want us to do that.

Senator NELSON. Do you want to submit it for the record?

Dr. JENNINGS. Yes, sir.[1]

Senator NELSON. I was getting at another aspect of this. We have had witnesses over the past 3 years, distinguished physicians, who deplored the state of reporting on various diseases as being wholly inadequate. By coincidence, last week we had an internist before the committee, who talked about the forms he had to fill out and that he used to religiously report but never got any playback from FDA—this was several years ago—and finally he stopped reporting entirely.

[1] See p. 682.

I would like to ask your view about the status of reporting to the FDA on side effects, which you would like to know about. But first, let me read what Dr. Best said before the committee, about 2 years ago.

This is from a statement of William R. Best, chief, Midwest Research Support Center, Veterans Administration, Edward Hines, Jr. Hospital, Hines, Ill. He said:

> I am not sure how much effect the reporting system would have itself. It would produce a universal reporting system . . . that would have a little more meaning than those I have written about that I related to voluntary reporting.
>
> In other words, we would have a better feel for what the total number of cases are. I think we still would not have the whole picture.
>
> I know that in a recent study in Philadelphia, for example, five of the medical school affiliated hospitals tried to set up their own reporting system to catch all the adverse reactions occurring in all of these hospitals. People being people, the way they are, when they went back to check and see how complete their reporting system was, even though the chief of every service told all of his residents and internes to report every case that came through, I think they reported somewhere in the neighborhood of 5 percent. About 95 percent still did not get reported, even though this was the rule of the particular hospital.

This would seem to have been a case where there was a conscientious, specific effort, and according to Dr. Best, about 5 percent of the side effects were reported.

Do you think in your experience, in your judgment, that figure is anywhere near in the ball park of any kind of voluntary reporting the FDA gets on side effects?

Dr. EDWARDS. I do not think I am in a position to give you an absolute figure. I would say without any hesitation our reporting system is poor. As long as we continue to have a reporting system that is voluntary, as it is right now, where we have very little access to the medical records in both hospitals and in doctors' offices, I think the likelihood of our establishing a really accurate, up to date reporting system is not going to be very encouraging.

I think that we have to move in this direction for all drugs, not just for the oral contraceptives. I think a complete adverse reporting system has to be established in this country eventually, if we are really going to provide the surveillance for these powerful drugs that is necessary.

Senator NELSON. I bring this up just to make the point that if the Philadelphia study and the five hospitals with the chiefs of all the services cooperating produced only a 5-percent reporting result, all of your reports on the incidence of deaths and other side effects from the pill, would have to be multiplied by 20 to get an accurate figure.

Dr. EDWARDS. I have some reservation as to whether this is an accurate figure. I would add if I were chief of the service in a major teaching hospital and if I could not get my residents and internes to do better than that, I think that maybe I would look at myself, not my staff.

I think we can do better than that. I think maybe some do better than this, but I think the situation is generally poor throughout the country.

Senator MCINTYRE. Mr. Chairman, you asked the question back there, or called for the figures on the number of reports that FDA

had received on thromboembolic disease and deaths associated with the pill, and I just want to make sure the answer you gave includes all reports which have been received by FDA from all sources since these drugs came on the market. And if your answer was not inclusive as far as that is concerned, would you please supply it for the record? Do I make myself clear?

Dr. EDWARDS. Yes, I believe they were, were they not?

Dr. JENNINGS. No, they were not, and that is what I pointed out to the Senator and said we would compile the figures I think he wants.

Dr. EDWARDS. I was thinking of something else.

Senator MCINTYRE. We had a feeling the figures you gave in response to the chairman's questions were only partial and I wanted to make sure.

Dr. EDWARDS. The period was from July to December, 1969. We will give you the total compilation of the figures.

Senator MCINTYRE. Thank you very much.

Dr. EDWARDS. Again, referring to the letter that the Food and Drug Administration sent to all physicians in 1968, the letter expressed the Food and Drug Admistration's conclusion that a definite association had been established—this is between the oral contraceptive and thromboembolic disease, and called their attention to the revised labeling, and asked for their assistance in monitoring adverse reactions.

In 1969, FDA's OB-GYN committee made another comprehensive review of the oral contraceptive problem.

The second report was published on August 1, 1969. In addition to a comprehensive review of the problem, the report contained the results of a well-defined retrospective study on thromboembolic phenomena by Dr. Philip E. Sartwell of Johns Hopkins. The Sartwell study established the association of increased risk of some thromboembolic disorders, confirming the earlier British studies.

Although the committee had also studied the problems relating to carcinogenesis and metabolic effects, they could not point to conclusive evidence associating these conditions with the use of oral contraceptives.

The committee concluded that "When these potential hazards and the value of the drugs are balanced, the ratio of benefit to risk is sufficiently high to justify the designation safe within the intent of the legislation."

As in their first report, the committee made a number of recommendations.

First of all, they recommended we investigate the carcinogenic and metabolic effect of oral contraceptives in humans.

They recommended we support development of new methods of contraception.

They recommended we support the National Fertility Survey in 1970 by the National Institute of Health.

They recommended that we improve the present system of reporting adverse reaction by financially supporting the use of centers to report reactions on oral contraceptives and by strengthening the present surveillance system of the Food and Drug Administration.

Lastly, they recommended that we sponsor an annual conference of scientific writers on contraceptive knowledge and accomplishments.

The FDA's review of the committee report and the Sartwell study led to a decision that a change in the uniform labeling was necessary. Accordingly, on November 14, 1969, we met with industry representatives to discuss the revised uniform labeling which has been required since January 1 of this year.

In December when I became Commissioner, the decision was made to issue a letter to all U.S. physicians, hospital pharmacists, and hospital administrators. In it, I warned that "carefully designed retrospective studies show that users of oral contraceptives are more likely to have thrombophlebitis and pulmonary embolism than nonusers" and I strongly urged physicians to familiarize themselves with the revised labeling.

I suggested that "a full disclosure of the potential adverse effects" to patients is advisable, and I also again requested their assistance in reporting adverse reactions to the Food and Drug Administration.

In addition, in December of 1969, reports came to our attention of the British announcement advising practitioners to prescribe only products containing .05 milligrams or less of estrogen. I indicated then that the Food and Drug Administration would await full data from England and evaluate this and our own data before making a decision on whether any action should be taken with regard to the oral contraceptives containing high doses of estrogen.

I would like to say in this regard, we just yesterday or the day before received a message from the British, inviting us to come to London on March 18 with appropriate individuals from the Food and Drug Administration and the National Institute of Health, to review their data.

So this month we will have the British information.

Senator NELSON. You will be sending a delegation shortly, did I understand you to say?

Dr. EDWARDS. That is right. We are to be there on March 18.

Senator NELSON. Are you, as Commissioner, going with the delegation?

Dr. EDWARDS. Yes, sir, I am. Three people from the Food and Drug Administration, in addition to two from the National Institute of Health.

Senator NELSON. If their data satisfies you and the group with you that oral contraceptives with more than 50 micrograms of estrogen do in fact induce a higher incidence of thromboembolism, will it be the decision of the FDA to order from the market all of those in this country that exceed 50 micrograms?

Dr. EDWARDS. Obviously, I think it would depend to a certain degree on the quality, or at least our interpretation of the quality of their data.

I think we have to continually bear in mind the formulation of these products, and this is certainly one of the alternatives that we have to think about if the data warrant it such a decision.

Senator NELSON. That is what I am getting at. If you and your scientists are satisfied with the quality of the research and conclude that they are correct, that over 50 micrograms increases the incid-

ence of thromboembolism, would you be inclined then to order from the market all of our oral contraceptives that exceed that?

Dr. EDWARDS. Again, I think we would have to give this very serious consideration. If the data were of the quality that we insist upon in the studies that we currently have ongoing in this country, I think we would have to consider this, yes.

Senator NELSON. Is there any question of the effectiveness of the 50 microgram tablet—I am not talking about the side effects—the effectiveness in preventing pregnancy, inhibiting ovulation?

Dr. EDWARDS. I would like to have Dr. Jennings answer that question, if I may. I think he perhaps is a little more familiar with it.

Dr. JENNINGS. I think that the picture is perhaps not quite as simple as simply a difference between .05 milligrams of estrogen and .08 milligrams. The two commonly used estrogens are ethinyl estradiol, which is usually present in a quantity of .05 milligrams, and mestranol, which is usually present in the higher dosage.

Both of these seem to be effective at those respective levels. There was some indication that a lesser amount of mestranol, the one that is usually present in the higher amount, might not be as effective as manifested by breakthrough bleeding, I believe, and also by pregnancy rates in some of the studies where this amount was lowered.

So I think that in addition to simply considering the two levels of estrogen, a certain difference in the estrogenic strength of the two products, the two compounds, has to be considered.

In addition, the products currently on the market all include progesterones, either to be taken in combination throughout the period of medication, or to be taken in sequence. The progesterones vary also in their estrogenic effect. So that this also has some bearing on the potential for the side effects that might be attributed to estrogenic activity.

I think all of this will have to be taken into consideration when the British data are available to us.

Senator NELSON. Thank you.

Senator MCINTYRE. Mr. Chairman, a question. I would like to know if you have received any of the British data as of now.

Dr. EDWARDS. No.

Senator MCINTYRE. Thank you.

Dr. EDWARDS. I think with all due respect, it is a matter of their not having been able to tabulate their information. I think it has been rather substantial. And I think they have had trouble pulling it all together. It has not been because they have been trying to keep it from us, it is just they wanted to get it in order before we had an opportunity to look at it.

Senator MCINTYRE. Thank you.

Dr. EDWARDS. Another action taken soon after I became Commissioner was to convene a meeting of our OB-GYN Advisory Committee. I met with this group on January 21 to re-evaluate available information on oral contraceptives. I believe the advice and counsel of this group is important to our work in this area, and I intend to meet with them every 30 to 60 days.

I think this is perhaps an appropriate occasion to announce that Dr. Allan C. Barnes, professor and chairman of the Department of

Obstetrics and Gynecology at Johns Hopkins University is the new chairman of our advisory committee, replacing Dr. Hellman.

Dr. Barnes will chair our meeting next Wednesday when we will review some of our present research projects.

I would like at this time to review some of our studies which are now under way. There are several general areas on which the total scope of the Food and Drug Administration's present program is based.

Information is being sought on the degree and mechanism of changes brought about by the oral contraceptive and the indications of these changes.

Also, we are trying to determine whether certain of these drugs, or their ingredients, have unique pharmacological properties; whether high risk subpopulations can be identified; and to what degree can findings observed in animals be extrapolated to the human population.

Clinical and animal studies presently under way and supported by the Food and Drug Administration include:

A retrospective study of a cost of $175,000 on the relationship between thromboembolic phenomena and oral contraceptive use conducted by Dr. Philip Sartwell at the Johns Hopkins University School of Hygiene and Public Health. Here we are planning to extend this for another year, beginning next month, at a cost of approximately $75,000.

We have an investigation going on of the carcinogenic potential, hematologic, and endocrine effects of two experimental oral contraceptive formulations using dogs and monkeys treated over a prolonged period of time. This continuing study by the International Research and Development Corp., was begun late in 1968 at a cost of $372,000.

We have an intensive study of changes in blood coagulation and fibrinolysis in women using oral contraceptives, which was initiated at the New York University School of Medicine in May 1969, at an annual cost of $27,000. Results are expected early in 1971.

We have the study of the University of Rochester on the possible effects in women of oral contraceptives on renal, bladder and ureteral function and the incidence of infection which was initiated in May 1969, at an annual cost of $77,000.

We have the study at Temple University on the effects of oral contraceptives on lipid metabolism in subhuman primates and women of reproductive age, which was initiated in May of 1968 at an annual cost of $118,000.

We have a prospective study on the effects of prolonged use of oral contraceptives on carbohydrate metabolism in a large group of women, and this has been underway at the University of Miami since June 1967, at annual cost of $63,000.

Lastly, we have a study at Temple University on the effects of oral contraceptives on cervical cytology which was initiated in July of 1969 at a cost of $95,000.

All of these studies are currently costing the Food and Drug Administration $380,000 annually.

Senator DOLE. Dr. Edwards, there has been some testimony that additional funds are needed to research oral contraceptive research.

Do you feel additional funds are needed, and if so, in what specific areas?

Dr. EDWARDS. I think without any hesitation I would say that our research efforts in this whole general field have to be increased, both within the Food and Drug Administration and at the National Institute of Health.

Senator DOLE. You indicated on page 10 an increase of $700,000 to in excess of $3 million.

Dr. EDWARDS. When I say the 3 million, I am talking a ballpark figure and I am talking about total research. Again I do not mean that we are capable of taking this kind of increase all at once, but I think over a period of several years. I think this is the ballpark figure that we are talking about.

Senator DOLE. There are specific areas now with reference to oral contraceptives, where research could be done if you had the money, is that your opinion?

Dr. EDWARDS. I think additional research needs to be done in a number of these areas. This whole area of the carbohydrate metabolism, lipid metabolism, the possible effect or relationship between the oral contraceptive and carcinogenic effects have to be looked into in much greater depth than we have at this point in time. I am speaking only for the Food and Drug Administration, of course. Our research funds are extremely limited, and we have had to establish priorities. And as I can assure you, in establishing these priorities, the oral contraceptives have been up at the top of our list. So we have spent most of our funds on research in the oral contraceptives.

There are other areas, but I think these are certainly some of the main areas where additional research needs to be done.

Senator DOLE. Thank you.

Senator NELSON. May I pursue that subject a little further?

I guess every witness has commented on the question, including General Draper and Dr. Guttmacher, as well as various physicians and specialists who have appeared before the committee. They have all deplored the lack of adequate amounts of research. One of the points raised, I think by Dr. Corfman of NIH, although the record will correct me if it were not he, was that unfortunately there has been no dosage level research done in terms of trying to find out how low a dosage of progesterones and estrogens may be given and still be effective and what reduction in incidence of side effects might occur as a consequence of lower dosages or lower dosages in various combinations.

And you know, of course, that the first pills were 150 micrograms of estrogen and were effective, and 100 were effective, and 75 were effective. The British seem to think 50 are effective.

Would you consider it an important piece of research to establish some protocol for comprehensive investigation of this aspect of the oral contraceptive?

Dr. EDWARDS. Very definitely. I think this is an area in which far too little has been done. I am thinking in terms of the formulation of these products, the minimum amount that will provide the efficacy that we want.

I think some of this, however, has to also be done by the industry.

And who does what is a rather difficult question for me. The answer is a difficult one. But I think without any question this is an area I should have mentioned in greater detail. I think much more has to be done, and I think we have to play an important role in stimulating this research, either we do it or we stimulate industry to do it.

But I think without any question this is one of the most important areas.

Senator NELSON. Again, this is a legal question: What authority does the FDA have to require drug companies to do additional research after a drug has been placed on the market? In this case dose level studies?

Do you have authority to require such data?

Dr. EDWARDS. I would like to have Mr. Goodrich answer that. I am not sure about our authority, but after all, in approving new drugs, we have to evaluate and judge the adequacy of the clinical investigations that have led up to the marketing of this drug, and in our judgment, if these are not adequate, then I think we certainly can go back to that particular company and say more study needs to be done in these particular areas; but legally, I would like to turn to Mr. Goodrich.

Mr. GOODRICH. Our legal authority is to require the companies to make either a regular or special report. A report could be called for on any phase of the safety decision. If we attempt to require the research, our ultimate administrative step would be to withdraw approval.

We have legal authority to withdraw approval at any time we find that there is a lack of adequate evidence, either of safety or of effectiveness.

So what would have to be done would be to identify with the company those areas in which additional research was needed, some kind of time within which this could be done, and say that if it were not done, they would be risking the loss of the product by the withdrawal of approval.

We do not have any direct authority to say do this research, but the ultimate withdrawal possibility does facilitate a good deal of research.

Senator NELSON. In the specific case at hand, or with any drug, a potent one, anyway, extensive use over a period of years develops information that could not have been developed by FDA, so you have a case here where thromboembolism was proven quite early, and statistics have accumulated to support it.

Do you have the authority to say it is pretty clear that a drug could be developed with less dramatic side effects, a lower incidence, therefore you must proceed with some protocol for investigating this possibility?

Mr. GOODRICH. We think so. But as I say, our ultimate, if they refuse to do it, our ultimate step would have to be to withdraw approval.

Senator NELSON. I understand.

I would like to ask another question in the research field. This concerns the report based on the workshop sponsored by NIH on "Metabolic Effects of Gonadal Hormone and Contraceptive Steroids." In the preface on page 9, I quote:

Until recently, the metabolic effects of the contraceptive steroids have been inadequately investigated or ignored. These accumulated data and other suggest that no tissue or organ system is * * * a biological function and/or more * * * effect of contraceptive steroids. Many of these changes appear to be reversible after short periods of treatment. But it is impossible to form judgments on the reversibility of some of the changes resulting from prolonged administration. This question becomes more important daily for the many patients who already had long-term contraceptive steroid treatment.

It seems to me this raises a very serious question, since we really do not know what the consequences of these metabolic changes are over a long period of time.

My question is: Are you satisfied that we are doing enough research on this aspect of the problem, and if not, do you have some view about what we ought to be doing?

Dr. EDWARDS. By "this aspect of the problem," you are referring to the time period over which the oral contraceptive is given a particular patient; right?

Senator NELSON. And the metabolic effects of it.

Dr. EDWARDS. And the permanent effects this might have on the patient's metabolic system, et cetera.

I share with you concern about this, and certainly I think this is an area that we have to look at very seriously, along with groups at the National Institute. I have personal reservations about allowing the oral contraceptive to be given over indefinite periods of time. I have no knowledge of scientific evidence at the moment that would substantiate this view, but I think that some of the retrospective and prospective studies we are proposing or actually have in progress at the moment will help answer some of these questions. But it is a very serious subject of concern and I think it is one I hope our advisory group will address themselves to this next week.

Senator NELSON. That is the question of extended administration without interruption?

Dr. EDWARDS. Right, and what kind of studies would best allow us to make some scientific judgment on the advisability of this, or what is the ideal length of time over which one of the oral contraceptives can be given.

Senator NELSON. As you know, we have had a number of witnesses who have expressed their opinion, again without having the proof, as you said, who had reservations such as you have indicated you have.

One of the witnesses said that he would not want to have it used more than 2 or 3 years continuously without interruption.

Others expressed a similar viewpoint about long-term usage, simply because we do not have the studies that would indicate whether or not the metabolic changes that are effectuated on account of the administration of the pill have any long-term damaging effects.

Do I understand you to say that the new committee being constituted now on obstetrics and gynecology will address itself to the question of length of time the drug should be administered?

Dr. EDWARDS. I think there are a number of areas that we would like to have them address their attention to, but this certainly is one of the areas that should receive a high priority on the agenda of the committee.

To complete the review of our studies in which we are indirectly involved, I will mention that we have participated in the monitoring of the prospective study of oral contraceptive users being conducted under support from the National Institute of Child Health and Development at the Kaiser Permanente Foundation in Walnut Creek, Calif.

In addition, we have participated in the review of two planned retrospective studies relating to the possible effects of oral contraceptives on carcinoma of the breast submitted to and approved by the National Institute of Child Health and Development. Funding for these studies has not yet been approved.

This investment in research, in our judgment, is necessary to better define the hazards of the oral contraceptive.

The questions of safety must be answered in so far as is possible for science to find the answers. And we at the Food and Drug Administration must continuously review our previous decisions in light of new scientific knowledge.

We have plans underway to develop other studies. These include the effect of oral contraceptive drugs in prediabetic and diabetic patients; cytogenetic studies in spontaneous and induced abortions; development of other techniques to assess the effects of oral contraceptives on endocrine function during adolescence; and the metabolism of the hormonal contraceptives and possible interaction with other drugs.

In order to get these studies under way, it will require an increase in our current research budget from approximately $700,000 in fiscal year 1970, to over $3 million.

I would like to turn to another subject which will require very substantial funding if we are to do an effective job. This is the need for a comprehensive drug surveillance system.

Because of the limited nature of premarketing clinical trials, we cannot expect to observe all of the adverse reactions that may occur. We are dealing with comparatively small numbers of patients who are screened carefully and regularly. The difficulty of detecting adverse reactions is great. Our statisticians tell us that an adverse reaction expected to occur at a rate of 1 in every 1,000 will not be observed at all in 37 percent of studies using 1,000 subjects. In other words, to be 90 percent certain of observing such a high rate of adverse reaction, a study would need to include 10,000 or more subjects.

Therefore, it is essential that all approved drugs be kept under close surveillance through an effective adverse reaction reporting system. At present this system in the United States depends for the most part on voluntary submission of adverse reactions by physicians and hospitals and, of course, the required reports from the drug manufacturers. It is unfortunate, but true, that we receive reports on only a small percentage of the total number of adverse reactions that occur. This limited access to the medical record makes it extremely difficult to evaluate cause and effect. We must move in the direction of significantly improving our surveillance system. I would estimate it would take at least a third of our present budget to establish such a comprehensive reporting system.

Senator NELSON. Would this be compulsory?

Dr. EDWARDS. No. At least we are not in any position at this point to make reporting compulsory. But I think with the right kind of a system, a computerized system, where the medical record is far more computerized than it is at the present time would be helpful. I do not think it would have to be a compulsory system to get a reasonably good response in terms of drug reporting.

Senator NELSON. We had that, of course, in some of the communicable diseases.

Dr. EDWARDS. I think though that for this, Senator Nelson, for this to be effective, really an effective reporting system, we are eventually going to have to get the record out of the doctor's office. Obviously this is where some of the minor reactions occur and it is not just the hospital record.

I think the time is coming when we will have a medical record that is automated, a centralized medical record, if you will. When this happens, I do not believe it will be a matter of whether reporting will be compulsory or noncompulsory, it will be on the record.

And I think all of this is within the realm of possibility.

Senator NELSON. I must say, in looking at one of the reports submitted to the physician by the FDA, the number of questions and the fine lines, that it is a kind of discouraging thing for the physician to fill out. As you know, all Federal forms somehow or another get to be enormously detailed. It might help, I suppose, if there were some way to simplify it.

Dr. EDWARDS. I suspect you are correct, and I have not had an opportunity to look at the system that we use, but I am certain that what you say is true.

And I think in terms of developing an adverse reporting system, we have to look at what the FDA requires, as well as what the system provides generally. So we will be looking at our capabilities in this regard, too.

Senator NELSON. Thank you.

Dr. EDWARDS. Under the present system we try to keep the physician abreast of adverse reactions as we become aware of them. This is certainly true with regard to the oral contraceptives. There is no question that it is vitally important to communicate this information to the physician, but there is also corresponding need to keep the patient well informed. I believe that the patient should receive as much accurate information as is necessary for her to make certain decisions.

Let me examine for just a moment how women are currently being informed as regards the oral contraceptive.

They get a good deal of information and misinformation from sources other than the physician—through newspapers, pamphlets, books, television, and from discussion with others. This additional information is reaching a large number of people in a short period of time. While we can control the prescribing information which goes to the physician and any printed or graphic matter that may ultimately reach the patient through him, we have no such opportunity to see that other presentations are accurate, balanced, and properly informative.

I have come to the conclusion that the information being supplied to the patient in the case of the oral contraceptive is insufficient and that a reevaluation of our present policies is in order.

Accordingly, I have asked our Bureau of Drugs to examine this area of consumer information and to give me their recommendations.

I have with me today, which I will submit to you, a statement which we are going to publish in the Federal Register so that all interested parties will have an opportunity to comment on it. This statement is the proposed language for a reminder leaflet of uniform content which will be placed by the manufacturer into each package of oral contraceptives produced.

This leaflet is designed to reinforce the information provided the patient by her physician. I emphasize the word "reminder" as its purpose is to recall to the patient her discussion with the physician when she made her decision to begin taking an oral contraceptive.

I will not read this unless you would like.

(The statement follows:)

WHAT YOU SHOULD KNOW ABOUT BIRTH CONTROL PILLS
(ORAL CONTRACEPTIVE PRODUCTS)

All of the oral contraceptive pills are highly effective for preventing pregnancy, when taken according to the approved directions. Your doctor has taken your medical history and has given you a careful physical examination. He has discussed with you the risks of oral contraceptives, and has decided that you can take this drug safely.

This leaflet is your reminder of what your doctor has told you. Keep it handy and talk to him if you think you are experiencing any of the conditions you find described.

A WARNING ABOUT "BLOOD CLOTS"

There is a definite association between blood-clotting disorders and the use of oral contraceptives. The risk of this complication is six times higher for users than for non-users. The majority of blood-clotting disorders are not fatal. The estimated death rate from blood-clotting in women *not* taking the pill is one in 200,000 each year; for users, the death rate is about six in 200,000. Women who have or who have had blood clots in the legs, lung, or brain should not take this drug. You should stop taking it and call your doctor immediately if you develop severe leg or chest pain, if you cough up blood, if you experience sudden and severe headaches, or if you cannot see clearly.

WHO SHOULD NOT TAKE BIRTH CONTROL PILLS

Besides women who have or who have had blood clots, other women who should not use oral contraceptives are those who have serious liver disease, cancer of the breast or certain other cancers, and vaginal bleeding of unknown cause.

SPECIAL PROBLEMS

If you have heart or kidney disease, asthma, high blood pressure, diabetes, epilepsy, fibroids of the uterus, migraine headaches, or if you have had any problems with mental depression, your doctor has indicated you need special supervision while taking oral contraceptives. Even if you don't have special problems, he will want to see you regularly to check your blood pressure, examine your breasts, and make certain other tests.

When you take the pill as directed, you should have your period each month. If you miss a period, and if you are sure you have been taking the pill as directed, continue your schedule. If you have not been taking the pill as directed and if you miss one period, stop taking it and call your doctor. If you miss two periods, see your doctor even though you have been taking the pill as

directed. When you stop taking the pill, your periods may be irregular for some time. During this time you may have trouble becoming pregnant.

If you have had a baby which you are breast feeding, you should know that if you start taking the pill its hormones are in your milk. The pill may also cause a decrease in your milk flow. After you have had a baby, check with your doctor before starting to take oral contraceptives again.

WHAT TO EXPECT

Oral contraceptives normally produce certain reactions which are more frequent the first few weeks after you start taking them. You may notive unexpected bleeding or spotting and experience changes in your period. Your breasts may feel tender, look larger, and discharge slightly. Some women gain weight while others lose it. You may also have episodes of nausea and vomiting. You may notice a darkening of the skin in certain areas.

OTHER REACTIONS TO ORAL CONTRACEPTIVES

In addition to blood clots, other reactions produced by the pill may be serious. These include mental depression, swelling, skin rash, jaundice or yellow pigment in your eyes, increase in blood pressure, and increase in the sugar content of your blood similar to that seen in diabetes.

POSSIBLE REACTIONS

Women taking the pill have reported headaches, nervousness, dizziness, fatigue, and backache. Changes in appetite and sex drive, pain when urinating, growth of more body hair, loss of scalp hair, and nervousness and irritability before the period also have been reported. These reactions may or may not be directly related to the pill.

NOTE ABOUT CANCER

Scientists know the hormones in the pill (estrogen and progestrone) have caused cancer in animals, but they have no proof that the pill causes cancer in humans. Because your doctor knows this, he will want to examine you regularly.

REMEMBER

While you are taking ———, call your doctor promptly if you notice any unusual change in your health. Have regular checkups and your doctor's approval for a new prescription.

Senator NELSON. I would appreciate it if you would read it. I have not read it yet. I might have a question.

Dr. EDWARDS. I might read the first page and then summarize the rest of it and any of the technical matter. The title of this is "What You Should Know About Birth Control Pills."

All of the oral contraceptive pills are highly effective for preventing pregnancy, when taken according to the approved directions. Your doctor has taken your medical history and has given you the risks of oral contraceptives, and has decided that you can take this drug safely.

This leaflet is your reminder of what your doctor has told you. Keep it handy and talk to him if you think you are experiencing any of the conditions you find described.

Then the next section is a warning about blood clots. Here we indicate there is a definite association between bloodclotting disorders and the use of oral contraceptives. The risk of this complication is six times higher for users than for nonusers. And although the majority of blood-clotting disorders are not fatal, the estimated death rate from blood clotting in women not taking the pill is 1 in 200,000 each year. For the user, the death rate is about 6 in 200,000.

Women who have blood clots in the legs, lungs, or brain, should not take this drug. You should stop taking it and call your doctor immediately if you develop severe leg or chest pain, if you cough up blood, if you experience sudden or severe headaches, or if you cannot see clearly.

Senator NELSON. The figures that have been used frequently before the committee indicate that hospitalization from blood clotting occurs in 1 of every 2,000 users. Is there any reason for not using that figure in here?

Dr. JENNINGS. I think, Senator, there are any number of ways we could express this. All the data we have on this particular phenomenon, both morbidity and mortality, are somewhat inexact. I think what we attempted to do here was zero in on the most serious aspect of this, and to give the woman some idea of the magnitude of the problem.

In other words, it would not be enough for her to know that the rate was increased for users by a certain number, four to nine times, unless she had some idea of the magnitude; one in a thousand multiplied by four to nine times would be a large number.

One in 200,000 multiplied by approximately six or four to nine would be a much smaller number. And I think that is what we are trying to get across here, that there is an increased risk among users compared to nonusers and that for the most serious result of this complication, the fatality, occurs in this order of frequency.

Senator NELSON. I notice that in the Dear Doctor letter of June 28, 1968, which included the package insert, the hospitalization rates of morbidity age 20 to 24, it is 47 per 100,000. If I interpret this correctly, you have the hospitalization rate of almost one in 2,000. Am I interpreting it correctly?

Dr. JENNINGS. Yes, I think that would be one way of putting it. That was a hospitalization rate, which is one indication of morbidity. I think what we attempted to do here was not a literal translation of the information given to the physician, who is, after all, much more sophisticated and capable of handling these numbers, but to try in a simple fashion to alert the woman to the fact that there was an increased risk and then to give her some idea of the magnitude of this, especially in relation to the most important, that is, the fatality.

Senator NELSON. Well, all I say, as just a layman reading it, is that when you talk about the death rate being one in 200,000 for women not taking the pill and for users six in 200,000, those are very large figures. But when you get down to the more practical aspect in a higher incidence and talk about almost one in 2,000 being hospitalized, which is a very high incidence, it is a figure that is much easier to understand, and does not just talk about deaths, it talks about hospitalization rates.

I just raise the question because it seems to me, a very significant statistic to include. If I were a patient, I would want to know that one in 200,000 die who were not taking the pill and six in 200,000 do who are taking it, and I might say to myself, well, that six out of 200,000 is very low.

On the other hand, if you would say one out of 2,000 is going to be hospitalized by blood clots alone, that is a pretty dramatic figure,

and I would think it is one that is quite understandable and ought to be used.

Dr. EDWARDS. I think your point is well taken, and I would emphasize that this is not the final package. This is for discussion purposes primarily, and we certainly anticipate making changes, as requested by groups such as your committee and others.

I think your particular point is a good one.

Senator DOLE. Dr. Edwards, this insert has been in the making for sometime; is that correct?

Dr. EDWARDS. Right.

Senator DOLE. I am not certain whether the average person realizes there is any great risk if it is one out of 200,000 or six out of 200,000. We have had witnesses indicate we should not include a laundry list with medication, because to do so would confuse the patient.

I am not certain where you draw the line, whether you should indicate any numbers, whether you should indicate there is some risk. The question is how to best communicate with patients, but we do not want to frighten the few people left who are not frightened as a result of these hearings.

I would hope that we do not try to rewrite the memorandum in committee hearing.

Senator NELSON. I hope the Commissioner did not think I was trying to rewrite the memorandum; I was just asking the question for information purposes because I thought it was a good question. I would not think of trying to write the memorandum, but I would think it is within the province of a member of the committee or any citizen in America, and there are 200 million of them, to ask a question.

Senator DOLE. We have asked several questions.

Dr. EDWARDS. Certainly our intent is not to frighten anyone away from the pill, but it is our intent to prepare a document, and as I say, I will not stand on this particular document, but prepare a document that gives the facts in an unemotional way so that the many, many patients in this country who are receiving the oral contraceptive by renewal of prescriptions, et cetera, will at least have some access to appropriate information.

Senator DOLE. Will this be an additional piece of information, in addition to what the drugmaker himself may include? Are we going to have two pieces of literature to read, or does this supersede anything else?

Dr. EDWARDS. I believe I am correct—Dr. Jennings can correct me—that at the present time there are no inserts in these packages per se, are there?

Dr. JENNINGS. No, there are not.

Dr. EDWARDS. Except for the physician.

Dr. JENNINGS. That is right. But I think the Senator is referring to the booklets that are frequently prepared.

Senator DOLE. Right.

Dr. JENNINGS. For patient use.

Senator DOLE. You have one entitled "So Close to Nature" which we had last week.

Dr. JENNINGS. That is right. No, sir, those are devised and distributed by the companies on a voluntary basis. And they are subject to regulation in the sense that they cannot exceed the approved package insert.

The dispensed package to the patient contains, as a rule, a simple set of directions for use, which we have approved for these products. This does not in any way refer to the safety or efficacy of the products, but simply tells the patient how to take the dose, and gives her a few cautions. We feel that this has not served the purpose for which the leaflet under discussion today was designed.

Senator DOLE. We still rely, I assume, on the doctor-patient relationship, we are not trying to preempt the doctor's role in dealing with patients.

Dr. EDWARDS. Absolutely not. As a matter of fact, we certainly do not want to do anything in our action that is going to interfere with this doctor-patient relationship. Being a physician, I am extremely aware of it and feel it is an absolute essential to get patient care.

You certainly know, as well as I, that we are talking about something a little bit different in the case of the oral contraceptive—and I will show you an example of what we are talking about, the patient information on the oral contraceptive package written here on the front of the package, the package insert which has all of this information which goes to the physician.

This is a difficult question, though, as to what kind of information you provide the patient——

Senator DOLE. We have had well-qualified witnesses who have discussed the pros and cons of information. Some indicate they rely solely on the physician; others indicate that we should have the insert. Perhaps this is sort of the middle ground and does not interfere with the doctor-patient relationship.

It is a relative thing to say two out of 200,000 or six out of 200,000, compared to all of the other risks that we contend with daily. I am not certain what the benefits of numbers are. It may have some effect on a person to read she may be one of the six. Perhaps not.

Dr. EDWARDS. Unless you would like, I could just indicate the sections we have here. The next section is who should not take the birth control pills.

Then the next section of the document is special problems. And here we talk about if you have heart disease, kidney, and so forth, your doctor has indicated—maybe I had better read this.

If you have heart or kidney disease, asthma, high blood pressure, diabetes, epilepsy, fibroids of the uterus, migraine headaches, or if you have had any problems with mental depression, your doctor has indicated you need special supervision while taking oral contraceptives. Even if you do not have special problems, he will want to see you regularly to check your blood pressure.

The next paragraph, we indicate some of the pregnancy warnings.

And in the last paragraph, if one has a baby, the dangers of taking the pill at that particular point in time while nursing the baby.

Next, we go into a section what to expect.

The next section is other reactions to the oral contraceptive.

The next section is possible reactions.

Then we have a special note about cancer:

Scientists know the hormones in the pill, estrogen and progesterone, have caused cancer in animals, but they have no proof that the pill causes cancer in humans. Because your doctor knows this, he will want to examine you regularly.

Senator NELSON. May I ask a question at this point?

On the phrasing, "because your doctor knows this he wants to examine you regularly", I guess the one thing that there was universal agreement about by all witnesses who testified was on the point of physical examinations. They were all agreed that, without any question whatsoever, there should be a regular physical. A specialist in cardiovascular disease recommended an examination once in three months for blood pressure. Another said once a year, all other witnesses saying six months, or one witness saying six to eight months. Most recommended every six months.

I am wondering—and it appears some significant percentage are not examined at all—I am wondering if it would be worthwhile to have a statement that all doctors agree that there should be a regular physical examination without trying to designate a time.

Dr. EDWARDS. I think that would be very appropriate. I think we certainly would agree with you, that anyone taking the oral contraceptive should have a regular physical examination.

Senator NELSON. Let me say, Doctor, I think this is a tremendously significant step that you have taken and that it requires considerable courage to do so, since it has never been done before. And I have some understanding of the kinds of problems that are raised by requiring a packaging insert for the user.

So I do commend you for your courage and far-sightedness in doing it.

This is the specific issue that we raised last year. We called the hearing for the purpose of informing the public, and I expressed my opinion at that time that I thought it was very important for the user to have some information about it, because of the nature and the widespread use of these drugs and the difference between them and drugs prescribed for disease situations. So I think this is a significant step forward. I commend you for it.

Senator MCINTYRE. Mr. Commissioner, a question has risen in my mind that I think you can help me with.

Now, this proposed official draft of information that you feel should be known to the potential user, it is my understanding that many of the pharmaceutical houses put out pamphlets which explain problems, and which discuss the product that they have, and give general information on its characteristics.

I have been wondering if under the Food and Drug Administration regulations, would it be required that these pamphlets that are put out by individual business concerns contain a summary of this, I will call it, official enclosure in the package. Would it be required under your regulations that a summary of this information be contained in all of the pharmaceutical houses' promotional material?

Dr. EDWARDS. I would like to have Mr. Goodrich answer that.

Mr. GOODRICH. Under the existing situation, Senator, if the company chooses to put out a consumer book on a voluntary basis, as of now it is required to have a full disclosure in terms understandable to the ladies, which is a summary of the package insert material we now propose to make mandatory in all of the packets.

Senator MCINTYRE. The answer is generally yes, a summary of this information would be included in future pamphlets that are put out by various pharmaceutical houses concerning the pill?

Mr. GOODRICH. This document itself is the summary of the necessary information.

Senator NELSON. Did I understand you correctly, that in the literature put out by the companies, they will be required to put a summary of this?

Mr. GOODRICH. Yes. If they have a separate little booklet, like the one you were examining the other day on "So Close to Nature", that kind of booklet would have to have the essence of what is in this consumer message we are preparing now.

Senator NELSON. I want to commend you again. I did not realize it extended to the literature put out by the company, and I think it is a very sound step.

Senator DOLE. You say in the first paragraph that the patient has discussed this with his doctor, and I quote:

> He has discussed with you the risk of all contraceptives and has decided that you can take this drug safely.

Then on the same page, in bold type:

> Who Should Not Take Birth Control Pills.

Are we saying in effect that no doctor would prescribe birth control pills to anyone who has had any history of blood clots or liver disease, and the other things you mention in that paragraph? Are we getting into a contest here with the physician?

Dr. EDWARDS. Absolutely not. I think the point being here that in our judgment, although we certainly do not have the actual figures, there are an awful lot of ladies in this country who are taking the oral contraceptive, and are not under the supervision of a doctor. And here we are trying to accomplish two things:

We are trying to remind the lady who is under the observation of a physician that she should see her physician regularly without just calling and getting a renewal of her prescription.

We are also trying to direct it to that particular lady who gets her prescription through another friend, or someone that she never bothers to see.

We certainly do not want to get ourselves in a position where we are trying to be the doctor, because we in no way are attempting to do such.

Senator DOLE. In other words, if the doctor prescribes under any conditions, if he were qualified, and said it was safe, you are not taking issue with what he says.

Dr. EDWARDS. Yes. Our problem, as you well know, is not that we are particularly concerned with the patient who is under the good care of a physician. We are not worried about that patient.

But we are worried about the patient who visits the physician once every 2 or 3 years or not at all. This is the patient we are trying to direct our attention to.

Senator DOLE. I know it is difficult to cover all situations in a memo, I can understand it is directed primarily to those who do not have a regular checkup and maybe have not seen the doctor in the first instance, may have some other way acquired the pill, but it will be published in the Federal Register and there will be comments, unquestionably.

Dr. EDWARDS. This is a long way from being the final document, but at least it is a start, in our judgment, in the right direction.

In conclusion, Mr. Chairman, there is no question about the effectiveness of oral contraceptives. Some questions of safety have arisen during this first decade of widespread use. We have examined the evidence of risk and we have resolved the safety issue for the present, as I have testified. I have indicated our need to continue and expand research projects for the discovery of vital safety information, and I have emphasized our lack of a comprehensive surveillance system. These are, to be sure, future needs.

The action we must take now, immediately, in my opinion, is to help inform the 8.5 million American women now taking oral contraceptives of the risk involved.

This action is commensurate with our mandate for assuring the public of safe and effective new drugs. In this and all matters, we will continue to exercise scientifically sound, legally correct, and administratively mature judgment on behalf of the public health.

Thank you.

Senator MCINTYRE. Referring to page 2 of your statement, you noted that the first oral contraceptive was approved for sale in this country on June 23, 1960. Would you please comment on the quantity and quality of the data submitted in support of this New Drug Application?

Dr. EDWARDS. If I may, I would like to have Dr. Jennings answer that question.

Dr. JENNINGS. I cannot at this moment, Mr. Senator, give you the exact number of cases that were included. The data probably by today's standard would seem somewhat scanty. There were field trials conducted in large numbers of women, and in relatively smaller amounts for fairly long periods of time, so that at the time the drug was approved for marketing in this country, the people concerned with the approval felt that they could approve it for a period of time of 2 years.

The first products were limited in duration of use for 2 years.

Senator MCINTYRE. I take it from your answer and from previous testimony, that the data that was available at that time, prior to the approval of these drugs would not be adequate in terms of the rules that we have today?

Dr. JENNINGS. I am not sure of that, Senator. I say that by today's standard, I am sure it would be considered somewhat skimpy.

Senator MCINTYRE. Somewhat what?

Dr. JENNINGS. Scanty. That is, the numbers were not large, but there were, I believe, some 300 women who had completed the 2 years for which the product was originally approved.

Now, the quality of the data, I am not prepared to comment on at this time, but I think that is something that also enters into the picture. Since approval, of course, there have been considerable data required and submitted to the Food and Drug Administration, regarding both the safety and efficacy of these products.

Senator MCINTYRE. In your answer, you have indicated as far as quantity was concerned it was rather skimpy.

Dr. JENNINGS. That is right, sir.

Senator MCINTYRE. And you have also asked for an opportunity, and I will request it, that you comment on the quality of that information at that time. Would you provide that for the record?

Dr. JENNINGS. Yes, sir.[1]

Senator MCINTYRE. How soon after the approval of the original New Drug Application did the first report of thromboembolic side effects come to the agency's attention?

Dr. JENNINGS. I cannot answer that with any degree of exactitude, but I believe that it was within a matter of months.

Senator MCINTYRE. Pardon me?

Dr. JENNINGS. A matter of months.

Senator MCINTYRE. Somewhere between one and 12 months?

Dr. JENNINGS. Probably within our first—well, I am not sure, I would rather not give you an exact answer until I have had a chance to check it.

Senator MCINTYRE. Will you furnish the exact answer for the record, please.[1]

You quoted the September 12, 1963, report of the Wright Committee to the effect that "No significant increases in the risk of thromboembolic disease had been demonstrated."

Did FDA not, in fact, issue two different versions of the Wright Committee report?

Dr. JENNINGS. I am unaware of that, sir. Mr. Goodrich may be able to answer.

Mr. GOODRICH. There was a first report which was found by Dr. Wright to have some statistical errors in it and those errors were corrected.

Senator MCINTYRE. How did the finding of the August 4, 1963, version differ from the one you quoted, from the September 12, 1963, version?

Mr. GOODRICH. The first report of the Wright Committee indicated that on the basis of the statistical figures, the statistical calculations made, that there was an increased risk of thromboembolic disorder in ladies, as I remember, age 35 or older. I would have to go back to the record, but the problem there was that statisticians that looked at the information concluded that the incidence of thromboembolic disorders in nonusers, the data on which the comparison had been made, were inadequate and therefore there was no basis on which

[1] See p. 6821.

they could find a statistically significant difference in the appearance of thromboembolic disorders in these age groups.

Dr. Wright wrote to the Commissioner almost immediately to say that the statistical error had been discovered. The first report had been sent to the Journal of the American Medical Association, and the error was corrected.

But the problem was identified as a statistical error by the calculation of the normal risk based on the nonuser experience.

Senator McINTYRE. Well, the reason for the change was based on the lack of what was considered to be sufficiently definite statistical information on the occurrence of thromboembolic disease in nonusers?

Mr. GOODRICH. Yes. Of course, Senator, the reporting of the experience with the users, as we have indicated here today, is probably underreported. That figure was not a perfect figure, either. But the company had had reported to it a number of these episodes, we had received some through our own reporting system, so we had one figure there. Then we had to learn what the incidence of these thromboembolic episodes would be in a normal population within these age groups before you could determine that what was being observed among the users was an increase in thromboembolic disorders.

When the figures were turned over to a statistician, his conclusion was that there was no basis on which to draw a statistical significant result. Dr. Wright communicated that to the Commissioner in an urgent fashion, and the report was corrected in September.

Senator McINTYRE. Well, I think I ought to move along. I just ask that excerpts from these two reports showing the deletion that took place on page 14 of the September 12 version as compared with the August 4 version, be included in the record at this point, without objection.

Did both the August and September versions of the report not conclude that on the basis of the available information, the deficiencies of which have already been pointed out, a relationship between use of the pill and thromboembolic disorders, should be regarded as "neither established nor excluded?"

Mr. GOODRICH. Right.

(The information follows:)

EXCERPT FROM AUGUST 4, 1963, REPORT ON ENOVID

In summary; on the basis of the available data and if the above outlined assumptions are reasonably correct, no significant increase in the risk of thromboembolic death from the use of Enovid in this population group (under the age of 35) has been demonstrated. The relative risk, from the available data, of death from thromboembolism does appear to be increased for Enovid users at ages 35 or over. The reasons for this are not clear at this time.

EXCERPT FROM SEPTEMBER 12, 1963, REPORT ON ENOVID

In summary, on the basis of the available data and if the above outlined assumptions are reasonably correct, no significant increase in the risk of thromboembolic death from the use of Enovid in this population group has been demonstrated.

Senator McINTYRE. Because of these deficiencies in the available information, the Wright Committee recommended:

> That a carefully planned and controlled prospective study be initiated with the objective of obtaining more conclusive data regarding the incidence of thromboembolism and death from such conditions in both untreated females and those under treatment of this type among the pertinent age groups.

What actions were taken by FDA to implement this recommendation in the 3-year period between the issuance of the Wright Committee report and the first report of the Advisory Committee on Obstetrics and Gynecology in August of 1966?

Mr. GOODRICH. Dr. Wright did make that recommendation in the report. He also sent a letter to the Commissioner with it, in which he recognized that the preparation and execution of a prospective study would be difficult, if not impossible. We would be glad to supply that letter to the Senator, if he would like to have it.

Nonetheless, the problem there was that in order to do a meaningful prospective study involved thousands of ladies, under carefully controlled circumstances, by that I mean having number of patients in the order of 10,000 examined at intervals of about 6 months, which was simply beyond our capability of financing, and the conclusion was reached about the time of the first Hellman report that the quickest and most effective way of obtaining information—reliable information about thromboembolic episodes—was to do a controlled retrospective study. That retrospective study was financed and completed.

We, in the meantime, got the retrospective experience from England. Even today, it is not possible for us within the resources Dr. Edwards has explained here, to mount a prospective study with the numbers of patients that would be necessary. We think a prospective study is no longer necessary with respect to thromboembolic episodes, but a prospective study may very well be meaningful in some other parameters.

Senator McINTYRE. On pages 3 and 4 of the Commissioner's statement, you list eight recommendations contained in the 1966 report of the Hellman Committee, and describe efforts made by FDA to implement six of them. However, you make no mention of efforts to implement the other two. One of these was the restatement of the Wright Committee recommendation to support prospective studies utilizing groups of subjects especially amenable to long-term follow-ups.

Now, your answer, I suppose, covers it, but I want to ask it for the record: has FDA as yet undertaken or caused to be undertaken studies such as these, and if so, when?

Mr. GOODRICH. Again, the prospective study recommended by the Hellman Committee in 1966 was not undertaken. Instead, the retrospective study was planned and executed. We have recently, as outlined on Dr. Edwards' statement, beginning on pages 8 through 9, summarized the research that is underway and given the dates.

No. 6, on page 9, describes a prospective study at the University of Miami. I believe there is also one underway at Temple University, and the Walnut Hill Study.

Senator McINTYRE. That is a carbohydrate metabolism study?

Mr. GOODRICH. These are parameters, I thought I made it clear we had enough data from the retrospective studies to say that a cause and effect had been established for thromboembolic disorders. We have now tied the proof to that effect. These other issues are the issues that have been identified to us, which do need a prospective study, and we are trying to fund those within the limits of our resources.

Senator MCINTYRE. Some of that information you got from the retrospective study made in England; right?

Mr. GOODRICH. Yes, we did. We received that and we put out a notice in 1968 of the British experience. In addition, the Sartwell study was underway at our financing at that moment, and when we received the results, we thought it was highly pertinent to advise physicians in the United States what this experience had been, that the same experience had been encounterd in conditions in this country. That was the purpose of the January letter to the profession.

Senator MCINTYRE. The other recommendation in the 1966 report of the Hellman Committee, for which you described no efforts at implementation, was the one calling for support of laboratory investigation on carbohydrate metabolism, lipid metabolism, renal function, blood coagulation mechanisms, and potential carcinogenic effects in animals and man.

On the basis of our earlier hearings, we know that studies have been done in virtually all of these categories by scientists at various institutions. What role, if any, did FDA play in causing these studies to be undertaken or in supporting them?

Mr. GOODRICH. We will have to yield to Dr. Schrogie on the exact details of the financing.

Dr. SCHROGIE. Each of the subject areas includes studies under support from the Food and Drug Administration. In other words, we were directly responsible for developing and funding studies on these specific subjects and if you refer to the list of projects, somewhat later in the testimony, I think you will see the correlation between the projects that we are presently supporting and recommendation No. 5 on page 3.

Senator MCINTYRE. You are telling us what FDA is doing now. My question was directed at what were you doing in 1965 and 1966 to support these programs and studies that we now have knowledge of by virtue of witnesses that have been here?

Dr. SCHROGIE. These studies were started at different points in time since 1966. It was in 1966 that as a result of the Advisory Committee report that additional funding was given to FDA to initiate such studies.

The Sartwell study was initiated at that time, the study on carbohydrate metabolism was initiated during 1967, and a feasibility study relating to a prospective study on carcinogenesis was also undertaken at that time. The other studies were phased in during 1968 and 1969, as they could be developed and as funds became available to support them. So the program developed in an orderly fashion over the space of 3 or 4 years.

Senator MCINTYRE. Assuming you are familiar with the witnesses who have appeared before this committee and described their var-

ious studies, can you name any one or two of these studies that FDA has supported?

Dr. SCHROGIE. Among the witnesses?

Senator MCINTYRE. From the witnesses who have been here.

Dr. SCHROGIE. Dr. Spellacy has been under support from the Food and Drug Administration since 1967.

Senator MCINTYRE. Any others?

Senator DOLE. How about Dr. Wynn?

Dr. SCHROGIE. Dr. Wynn is funded by the National Institute of Child Health and Human Development. I would add in terms of timing, both Dr. Wynn's study of carbohydrate metabolism and lipid metabolism, and also the prospective multiphasic study of oral contraceptive users being conducted at the Kaiser Permanente Foundation at Walnut Creek, Calif., were initiated by NIH around 1966.

Senator MCINTYRE. You have now described to me all of the studies that FDA has supported among the witnesses who have appeared here and described their studies for this committee.

Dr. SCHROGIE. To the best of my present recollection, yes.

Senator MCINTYRE. Well, to me anyway—I may be wrong, in 1960, the drug went on the market. And FDA seems to be getting into the act by 1966, in a concerted way by starting some of these studies. Anyway, on page 5, you quote the conclusions of the Hellman committee's second report, that:

> When these potential hazards and the value of the drugs are balanced, the ratio of benefit to risk is sufficiently high to justify the designation safe within the intent of the legislation.

Now, I appreciate that you probably touched on that before I got here. Now, this last phase, "safe within the intent of the legislation," has given us in this committee considerable concern, because we could not know exactly what it means. The law itself does not define the word "safe". Although Dr. Hellman confirmed that he wrote the statement, he says he obtained this phrase from Mr. Goodrich.

So perhaps Mr. Goodrich will tell us what it means and cite for us the appropriate reference in which the legislative intent was stated.

Now, I do not know whether you got into this before I got here.

Mr. GOODRICH. We did, but I do not mind repeating it, Senator.

Senator MCINTYRE. In deference to the members of the committee, you can make a succinct reply.

Mr. GOODRICH. I will do that. The issue balancing benefit to risk in reaching a safety decision came to the Food and Drug Administration very shortly after the enactment of the first new drug provision in 1938. We could never have approved a number of classes of drugs, such as the corticosteroids, without balancing benefit to risk.

When Dr. Hellman called me, he asked if there was in the legislative development anywhere that I knew of a discussion of this point. It happened that there had been a very comprehensive discussion of this before the Intergovernmental Relations Subcommittee of the House and before the Committee on Interstate and Foreign Commerce and before the Antitrust Subcommittee at the time of the enactment of the 1962 Drug Amendments.

If we review the history of those, you will find that it was pointed out that the Food and Drug Administration from the very first had been reaching safety decisions on balancing benefit to risk. Else there could not have been the drugs on the market we have today.

Senator McINTYRE. It is my understanding that in your answer you are not talking about the legislative history of the enactment of the 1938 law, but about the hearings and discussions before the Intergovernmental Relations Subcommittee of the House.

Mr. GOODRICH. Intergovernmental Relations Subcommittee of the House Committee on Government Operations was one group. Senator Humphrey had a drug investigation here in the Senate, so did Senator Kefauver. This issue has been a recurring one at every discussion of the activities of the Food and Drug Administration in this area. I am simply trying to summarize it briefly, to say that any drug that has any benefit at all is very likely to have side effects and contraindications.

A medical judgment has to be made on that basis. We did elucidate our thinking in this in more detail before the Fountain Subcommittee than any other place I know of.

Senator McINTYRE. Well, actually, as I understand it, what you have given us here is a summary of what FDA's interpretation has been as explained to various committees in the Congress.

Mr. GOODRICH. Yes.

Senator McINTYRE. Wouldn't it have been better to have said that, instead of talking about the intent of the legislation? Wouldn't this be more accurate?

Mr. GOODRICH. Probably so, I did not write the sentence, and I might not have chosen those words. But I do accept full responsibility for having talked with Dr. Hellman about this and having directed him to that discussion of the benefit-to-risk issue that was elucidated before the Fountain Subcommittee. That was the place that I knew that it had been explained in most detail.

I sent him a photocopy or Xeroxed copy of that discussion.

Senator McINTYRE. I understand what this is now. Actually, in 1938, the law was just absent of any legislative history explaining the intent with respect to the statutory meaning of the word "safe".

Mr. GOODRICH. And the reason was that the revision of the Federal Food and Drug Cosmetic Act started in 1933. It was practically at the end point in 1937. The bill, indeed, had passed both Houses of Congress, when the elixir sulfanilamide episode occurred. This focused on the need for new drug provisions.

These provision were proposed as separate legislation and were added on to that legislation at the very end, and there was no real discussion of the legislative intent there, other than to be sure that we protected the public from episodes of acute poisoning, which was what had been involved in the elixir sulfanilamide case.

Senator McINTYRE. Thank you.

On page 6, Mr. Commissioner, you state that FDA met with industry representatives on November 14, 1969, to discuss labeling changes pursuant to the second part of the Hellman Committee report.

Since the report was issued on August 1, 1969, would you please tell the committee why it took 3½ months just to get together with the industry to discuss labeling changes?

Dr. EDWARDS. Again, Senator, if I could turn this over to Dr. Jennings. I did not happen to be on board at that time.

Dr. JENNINGS. Senator McIntyre, I was aboard at that time, but not in any capacity where I could have expedited that review. It does take a certain amount of time, first of all, to decide exactly what the report meant to us in the way of labeling. The committee, after all, did not address themselves directly to the matter of labeling. And then we had discussions individually with various representatives of industry about the labeling.

I can only blame what seems to be an inordinate delay at this time on our rather occasionally cumbersome administrative procedures.

Remember, that we were making rather significant changes in the labeling, we were in a position of persuading and sometimes with considerable resistance, some of the members of industry to go along with us. And it just took that period of time.

Senator MCINTYRE. Thank you for your frankness.

Now, on page eight, you list a number of studies presently underway which are supported by FDA. Item No. 2 is an investigation of the carcinogenic potential and other effects of two experimental oral contraceptives.

Would you please identify these compounds for us and tell us why they are being investigated.

Dr. SCHROGIE. These compounds are MK 665 and WY 4355.

Senator MCINTYRE. Just a minute. You sound like the Pentagon now.

Dr. SCHROGIE. Because they are experimental compounds, brand or generic names are not commonly used. These compounds had been in clinical investigation some years ago. Limited studies in dogs being performed at the same time, showed that they were associated with the production of breast tumors. For this reason, the clinical investigations were terminated.

It was felt as a result of these findings, which at that time were quite preliminary and limited to dogs, that much more detailed and extensive studies in both dogs and another species, the monkey, should be undertaken, not only to further evaluate what might happen under chronic dosing with these particular drugs, but also as an early warning to identify similar effects with either other investigational compounds or compounds that are presently on the market.

The FDA for its part is supporting the studies of these two particular drugs. Industry is supporting a much more extensive array of studies on investigational and some of the marketed compounds, following the same protocol which was devised by the Food and Drug Administration.

Senator MCINTYRE. Doctor, would you please tell us whether and how closely these two products may be related to products now on the market.

Dr. SCHROGIE. In terms of chemical structure, of course, there are some similarities, since they all belong to the same general series of

compounds. They are different, though, in the fact they do have unique structural arrangements.

Senator McINTYRE. In describing the prospective studies now underway at the University of Miami, you say many important findings have been revealed already. Would you please describe some of them for us.

Dr. SCHROGIE. Findings to date, first of all, indicated the extent to which there are disturbances in carbohydrate metabolism as measured by a variety of standard procedures, such as glucose tolerance and plasma insulin levels. When the studies first started there was no real idea as to what degree these changes would occur or how significant they would be. Over the years, experience has indicated that the changes, while they are consistent, are generally not of severe magnitude. I think this is one of the most important findings.

Our goal in this project has been directed toward getting at the mechanism of the effect, and to date the work that has been done, particularly in animals, has not verified some of the questions that have been raised concerning mechanism. More recently, studies being conducted there have indicated that certain compounds have a greater propensity for changes in glucose tolerance or carbohydrate metabolism. This finding, which indicates differences between compounds, is very important.

Senator McINTYRE. On page 10, Commissioner, you say that in order to get certain proposed studies underway, FDA must increase its research support from $700,000, its budget in fiscal 1970, to over $3 million. Does your budget request for fiscal 1971 include any increase for this purpose and, if so, how much?

Dr. EDWARDS. It does include, Senator, an increase. I cannot give you the specific answer to this in terms of our total research effort. As you well know, the research at Food and Drug Administration, permits a minimal amount of basic research, far more immediate research, and the budgeting system that has been in use is a difficult one to evaluate.

I do not have this information today. I can provide it to you, however.

Senator McINTYRE. I think we could take that for the record.[1]

We want a new ballgame in this field and a great deal more emphasis than we have in the past.

This question is directed to Dr. Jennings. It relates to one of the answers that you were giving about low estrogen.

Dr. JENNINGS. Yes, sir.

Senator McINTYRE. Of the two estrogenic substances in the pills now on the market, is ethinyl estradiol not more potent, on a milligram-to-milligram basis, than mestranol?

Dr. JENNINGS. I will have to preface my answer, Senator, by saying that I am not an expert in this area, but, yes, we have reason to believe that is so.

Senator McINTYRE. What is the difference in potency of these two substances?

Dr. JENNINGS. I do not think that has been established with abso-

[1] See p. 6819.

lute certainty, but generally speaking, it is accepted that the ratio of potency is roughly comparable to the ratio in which they appear in these marketed products. That is, that the .05 milligrams of ethinyl estradiol is approximately equal to the .08 milligrams of mestranol.

Senator McIntyre. If this is so, if you decide to establish upper limits on the amount of estrogen in the pills, you will actually have to set different limits on each of the substances in order to assure comparability, will you not?

Dr. Jennings. Earlier in the testimony, Senator, we did discuss this to some extent, when we thought that the British data had not taken sufficient cognizance of this possibility to be directly applicable to our situation here.

Yes, I think that if we attempt to establish an upper limit, we will have to take into account not only the estrogenisity of the two estrogens, ethinyl estradiol and mestranol, but also when the products are used in combination, the estrogenisity of the progesterones, as well.

So, it may turn out to be a fairly complicated process.

Senator McIntyre. Thank you very much, Doctor.

Senator Dole. Just one or two questions.

Dr. Edwards, first of all, I appreciate your testimony and the testimony of Dr. Jennings and Mr. Goodrich. It has been very helpful to the committee.

Do you feel there be any implication of excessive risks because this reminder is inserted in every package?

Dr. Edwards. Well, as I said at the beginning, Senator, I feel that with any potent drug, like the drugs that are used in the oral contraceptive, there are significant risks.

Senator Dole. Are you saying that the risks are accepted as a medical fact by the FDA?

Dr. Edwards. I beg your pardon?

Senator Dole. Are we saying necessary risks set forth in the memorandum are accepted by FDA as a matter of fact?

Dr. Edwards. Yes. And under the right supervision, these are acceptable risks to take; right.

This is an informative process, as far as we are concerned, but within the conditions of labeling we feel these are acceptable risks to take.

Senator McIntyre. Mr. Chairman, at what now appears to be the conclusion of these hearings, I would like to say I am both surprised and disappointed to find that the Food and Drug Administration, which has legal responsibility for assuring the safety of all drugs on the market, after allowing the birth control pill to come on the market on the basis of questionable evidence, has also failed to take the lead in seeing that adequate studies are being done to answer the questions which have been raised about the safety of these drugs since they came on the market.

Instead, FDA's posture has consistently been one of reacting to studies done elsewhere, and in many instances, in other countries. I think these hearings have made it quite clear that there are a number of still unresolved questions about the safety of the birth control pill. I hope that in the future FDA will be more aggressive

and will take the lead in seeing that adequate research is undertaken to answer these questions.

In the meantime, Mr. Chairman, I am happy to learn that FDA will take action to see that the known and potential side effects and complications of these products are brought directly to the attention of potential users so that a woman will be able to make a rational decision as to whether she wants to use this or some other method of contraception.

I believe this action is a direct result of these hearings, and for this, if for no other reason, I believe the hearings have served a very worthwhile purpose.

Thank you, Mr. Chairman.

Senator NELSON. Let me say that I do not think there is any question from the testimony that there has been a failure to have the kind of broad-scale studies starting back in 1960 that we should have had. Where the responsibility lies for that, I am not sure, but I do want to say Commissioner Edwards, who has only been in office for a few months, has moved vigorously in this area and has taken an historic action that no previous Commissioner before has ever taken, that it certainly required courage to do so, because I am familiar with the medical politics involved.

I think it was a sound decision and I want to commend the Commissioner for his actions on this issue, and I am satisfied from what I know of him that he understands and will lend his strong support to necessary research that I think every expert recognizes ought to be done and should have been commenced earlier.

So I commend the Commissioner and thank you for appearing here today.

Dr. EDWARDS. Thank you.

Senator DOLE. Mr. Chairman, I have a brief statement. First of all, I share the view expressed by the chairman; we certainly appreciate the aggressive interest demonstrated by Dr. Edwards.

Mr. Chairman, I assume this will be the final day of the pill hearings, is that correct?

Senator NELSON. Unless there is some vacuum in the record that ought to be filled in order to have a balanced and complete record.

Senator DOLE. That would be helpful, but we can assume that perhaps this is the final day. Perhaps some reflection is in order.

There is some difficulty in my mind in trying to place the hearings within the subcommittee's jurisdiction. The chairman has expressed his idea of the hearings' purpose. The desire to know whether the American public has been properly informed is admirable, but it lacks germaneness to the subcommittee's mandate.

Regardless of the authority under which we are pursuing this investigation, we must recognize that the impact has been substantial. We have at least belatedly seen some elements of balance established for the record, if not in the publicity surrounding the hearings. Headlines such as "Pill Takers Held More Cancer Prone" were the hallmarks of January's hearings. Testimony raising questions casting doubt dominated the hearings and the headlines. Risks predominated over benefits. Fears were emphasized over effectiveness.

The interval between the January and February hearings began to show the dimensions of the reaction. It is accurate to say that these hearings may not have originated the fear evidenced the past few months. Nonetheless, these hearings have amplified the doubts and uncertainties the American woman has had about oral contraceptives. Another unfortunate aspect of these hearings is that no new knowledge has been disclosed. Several witnesses have related that all of the "disclosures" made are well known by the medical profession.

The witnesses appearing at the February hearings have been less prone toward total emphasis on the dangers of oral contraceptives. The headlines have reflected this trend and perhaps some assurance has been provided to America's 8.5 million pilltaking women.

Dr. Edwards' testimony has been especially valuable in establishing a broad and balanced record. And certainly, the overview he provided brings a sense of perspective to bear on the issues and the questions we are dealing with as we conclude these hearings.

Hopefully, some of the unanswered questions may be answered quickly. I believe the American woman is entitled to know. She is perhaps frightened and confused as a result of these hearings, and hopefully, this committee will now carry on quickly through some written findings or written report as suggested by Senator Javits, and hopefully this will be of some assistance, not only to the American public, but to Dr. Edwards and the FDA.

Senator NELSON. I will not take the time to respond, except to say that although very little of the information presented here or perhaps none of it was new to the experts in the field, quite obviously a lot of it was not known to the practicing physician who prescribes the pill and the public which consumes it. And the fact that the Commissioner himself recognized the necessity for producing a package insert which I announced as one of the purposes of the hearings last year, I think amply justifies the hearings.

The people of the country are entitled to know the facts about the pill, and since two-thirds of the doctors were not informing the user, this package insert will perform that function.

I happen to be one of those who believes that the public is intelligent enough to receive and evaluate and make decisions on information that the Government has. And this was all Government information, unpublicized previously.

It is a little bit like Laos. A lot of people in the Pentagon do not want us to know what is going on in Laos because it would frighten us, but I think the public ought to know.

That concludes the hearings.

Senator DOLE. Mr. Chairman, I certainly do not have any quarrel with the public's right to know, but they could have known without sensational publicity had we held executive hearings. We would not have frightened 3 or 4 million women. There would not be a group described yesterday as "unwanted Nelson babies" down the pike about 7 or 8 months from now.

Senator NELSON. Thank you.

(The subsequent information submitted by the Food and Drug Administration follows:)

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE,
PUBLIC HEALTH SERVICE,
FOOD AND DRUG ADMINISTRATION,
Rockville, Md., 20852 June 3 1970.

HON. GAYLORD A. NELSON,
Chairman, Subcommittee on Monopoly, Select Committee on Small Business, U.S. Senate, Washington, D.C.

DEAR MR. CHAIRMAN: During the hearings on the Pharmaceutical Industry conducted on March 4, 1970 by the Subcommittee on Monopoly of the Select Committee on Small Business, several requests were made for additional information.

During the testimony, Senator McIntyre asked if the budget request for Fiscal Year 1971 included any increase for additional research involving oral contraceptives. The Food and Drug Administration's budget for Fiscal Year 1971 does not include an increase over that budgeted for Fiscal Year 1970 ($700,000) for research projects concerning oral contraceptives.

In addition the following are enclosed:

1. Copy of "Report on ENOVID" (August 4, 1963)
2. Copy of "Final Report on ENOVID" (September 12, 1963)
3. Copies of correspondence regarding the change from the first version (8/4/63) of the Wright Committee report to the final version (9/12/63) of the report.

The remaining information requested for the record will follow as soon as it is available.

Sincerely yours,

ROBERT C. WETHERELL
For M. J. Ryan, Acting Director,
Office of Legislative Services.

3 Enclosures ["Report on Enovid," August 4, 1963, and "Final Report on Enovid," September 12, 1963, appears in Oral Contraceptives—Volume Three—Appendixes.]

CONFIDENTIAL

New York, N.Y., August 30, 1963.

DR. LEONARD SCHUMAN,
School of Public Health,
University of Minnesota,
Minneapolis 14, Minnesota

DEAR DR. SCHUMAN: A careful rechecking of the statistical data prepared for the Ad Hoc Committee on Enovid of the Federal Drug Administration by Drs. Leonard Schuman and Peter James has resulted in the discovery of an arithmetical error in the computation. This has been explained to me in some detail by Dr. Schuman. The result of correction of this error is that the apparent risk associated with the use of Enovid in women from 35 years to 45 years has been found to be non-existent. In other words, the conclusion of the statistical study is that no increased risk of deaths from thromboembolism in Enovid users has been established. This correction was verified by the Federal Drug Administration and it was decided to try to have the corrected version published in the JAMA. The original version was in the course of going to press. I had a lengthy telephone conversation with John Talbot and I was confronted with the immediate choice of either allowing the original version to be printed or to make an editorial deletion over the phone which resulted in the removal of reference to increased risk in the older age groups. The latter choice seemed obviously best since publishing the erroneous report in the JAMA would have established a situation whereby we would be correcting it for years to come. It is unfortunate that any reports were released prior to this but the position can be taken that these were preliminary and that the final summary report is the one which will appear in the September 7th issue of the JAMA.

I hope that you understand the position in which I found myself and will approve of the action which I took. Dr. Schuman will forward the details of

the corrected data to each of you shortly. The JAMA article will not contain data tables so this did not present a problem.

With very best regards I remain,

Sincerely yours,

IRVING S. WRIGHT, M.D.

(Cc: Dr. L. Schuman, Colonel W. Crosby, Dr. J. Spittell, Jr., Dr. G. D. Penick, Dr. B. Alexander, Dr. W. M. Allen, Dr. C. L. Spurling, Dr. Roy Hertz, Commissioner G. P. Larrick, Dr. M. S. Calderone, Dr. G. Douglas.)

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE,
PUBLIC HEALTH SERVICE,
Washington 25, D.C. August 29, 1963.

DR. IRVING S. WRIGHT,
Cornell University Medical College,
New York, N.Y.

DEAR IRV: I have had occasion to repeat tests of significance on the rate differences contained in Table VI of our report on Enovid. This was prompted by a question from an outside source as to how a rate of 46.0 per million among Enovid users at the age group 40–44 could be statistically significantly different from the general population rate of 12.3 per million (even though large) when it was based on but 2 deaths.

Retesting of significance leads me to the embarrassing discovery that an error in entering the Poisson table was made. I was under the impression that this had been rechecked but apparently it was not. The correction now reveals that *neither* the differences for the 35–39 year age-group *nor* for the 40–44 year age-group are statistically significant.

I would suggest that you circulate this fact among the other members of the Committee. I am including my suggested revision of the pertinent sections in the text of the report for circulation to the Committee. Following their comment and approval of a new final version, I would suggest you notify the Food and Drug Administration for whatever action they may need to take.

May I also suggest that the new version be circulated widely, possibly in the A.M.A. Journal.

Sincerely yours,

LEONARD M. SCHUMAN, M.D.,
Professor of Epidemiology.

(Enclosure.)

MEMORANDUM OF TELEPHONE CONVERSATION BETWEEN DR. SCHUMAN, AD HOC COMMITTEE (ENOVID) AND MATTHEW J. ELLENHORN, M.D., ACTING CHIEF, INVESTIGATIONAL DRUG BRANCH, AUGUST 27, 1963 (4:30 p.m.)

Dr. Schuman called me and stated that he had spoken to Dr. Irving Wright, Chairman of the AD HOC Committee on Enovid. I had previously spoken to Dr. Wright this afternoon at approximately 3:00 p.m. and told him that Dr. Schuman, Dr. Chien of Searle and our own Mr. Peter James of our Statistical Department had conferred yesterday and discovered errors in the statistical evaluation of the Enovid report. The statistical errors in the Enovid report were brought to Dr. Chien's attention by another individual and Dr. Chien immediately sought conference with Dr. Schuman and Mr. James. I stated to Dr. Wright that he should confer with Dr. Schuman for the particulars in this matter. Dr. Schuman called and said that Dr. Wright thought we had sent this report to the AMA and if so to hold it up until we have the necessary changes incorporated. I asked Dr. Schuman about the bibliography which was absent from the final printed report. He stated that he had it and would send it to Dr. Wright who would in turn send it to us to incorporate as part of the report. Dr. Schuman will write a revision of the report to incorporate the recent statistical changes. He will then submit it to the members of the committee and to Dr. Wright. After the committee has had time to study this revision they will meet with Dr. Wright and Dr. Wright will then write a letter to the FDA incorporating these changes. Dr. Schuman said that he and Dr. Wright were holding up their drafts to the Humphrey Committee. He also

stated that Dr. Wright wants some copies of the final report. I stated that I would supply those to him. I relayed this information to Mr. Rankin who stated that he wanted to discuss this with Mr. Larrick this afternoon.

MATTHEW J. ELLENHORN, M.D.

(Cc: WBRankin, OC, RGSmith, BM, ARuskin, DND.)

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE,
PUBLIC HEALTH SERVICE,
FOOD AND DRUG ADMINISTRATION,
Rockville, Md., June 3 1970.

HON. GAYLORD A. NELSON,
Chairman, Subcommittee on Monopoly, Select Committee on Small Business, U.S. Senate, Washington, D.C.

DEAR MR. CHAIRMAN: The information requested for the record during Commissioner Charles C. Edwards' testimony on March 4, 1970, before the Senate Select Committee on Small Business, Subcommittee on Monopoly is herewith submitted:

Your request and that of Senator McIntyre for thromboembolic data are essentially the same. The following tabulation provides the requested information.

ORAL CONTRACEPTIVES—NUMBER OF CASES OF THROMBOEMBOLIC PHENOMENA REPORTED TO FDA FROM ALL SOURCES BY YEAR OF REPORTING, MAY 1, 1970

Year	Fatal	Nonfatal	Total
1966-67	58	310	368
1968	29	152	181
1969	29	167	196
Total	116	629	745

NOTE: Data prior to 1966 is not available in any meaningful form to make a comparative determination; as the standards at that time were quite different from those during the period of 1966 through 1969. The Committee on Obstetrics and Gynecology came to the conclusion that the pre-1966 data would not be very useful and recommended use of more comprehensive data starting with the year 1966.

Senator McIntyre requested that we comment on the quality of the data submitted in support of the first oral contraceptive approved for sale in this country on June 23, 1960.

Much of the data submitted in support of this oral contraceptive seems to be rather superficial in content in the light of our present state of knowledge regarding oral contraceptives. Some of the data is little more than testimonial or opinionative in character. Many areas of investigation that would now be required were either not carried out or were not evaluated to an acceptable extent. The studies conducted were certainly not of as high a quality as we now demand, based in part on our hindsight.

The material submitted appears to have been deficient with regards to data relative to 1) carbohydrate and lipid metabolism, 2) ophthalmological evaluation, 3) follow-up on newborns (resulting either subsequent to method discontinuance or as a result of method or patient failure) for anomalies or genetic defects, 4) cervical cytological studies, conducted before, during, and after medication, 5) renal function studies, 6) cardiovascular evaluation, 7) thorough physical examinations including breast examinations, prior to, during, and after termination of drug use, 8) adequate liver function studies, 9) long term efficacy studies, 10) animal studies, 11) coagulation and other clinical pathology studies.

Senator McIntyre asked how soon after the approval of the original new drug application for an oral contraceptive did the first report of thromboembolism side effects come to the Agency's attention.

A report in our files indicates that a number of reports of thromboembolic episodes associated with the use of oral contraceptives appeared in the literature in 1961. One report was in *The Lancet* on November 18, 1961. While we

do not believe that it is possible to determine from our files when the first report of this effect first came to the attention of the FDA, we were certainly aware of them when they appeared in the literature.

Under separate cover, we have submitted additional information concerning the Wright Committee Reports. If we can supply additional information or be of further assistance, please call us.

Sincerely yours,

M. J. RYAN,
Acting Director, Office of Legislative Services.

(Whereupon, at 12:05 p.m., the committee adjourned.)

(Upon the direction of the Chairman, information pertaining to the subject of the hearings is included:)

[From the Evening Star, January 22, 1970]

WASHINGTON CLOSE-UP—ASSESSING BLAME IN 'PILL' CONFUSION

(By Judith Randal)

To this observer, the sheer, unadulterated confusion that now prevails about the safety of "the pill" is less the fault of either the pharmaceutical manufacturers or the Food and Drug Administration than the failure of government on a somewhat different score.

This is not to say that—in their eagerness for profits—the makers of oral contraceptives have been entirely candid about the risks. It has come to light during the course of current Senate hearings, for example, that as early as the first clinical trials in Puerto Rico in the 1950s, there were some sudden and unexplained deaths which were never officially reported in the medical literature and were likely traceable to the pill.

Nor can the FDA be entirely exonerated. The same Senate hearings are making it clear that the agency has not always done all it could have to inform the medical profession of the nature of the risks involved in the long-term use of chemical contraception.

The importance of the first British study linking the pill to thromboembolisms or blood clots, for instance, was deemphasized by the FDA on the grounds that British and American racial stocks are somewhat dissimilar genetically and that therefore the experience of the one country might not be applicable to the other. This strange line of reasoning with regard to foreign data of this caliber has no other precedent. Had the evidence that thalidomide caused deformities in European children been ignored, there would have been many more such children born here.

However, the real problem with the pill goes back to the days when Richard M. Nixon was vice president, and his chief, President Eisenhower, was averse to assuming leadership of the family planning movement in a world already threatened by the population explosion. (Eisenhower was to change his views after leaving office, but that is another story.)

In 1960, when oral contraceptives were licensed, government officials felt that because the subject might be politically embarrassing, birth control measures, insofar as possible, should be none of its concern. The then struggling family planning movement, therefore, had little choice but to make common cause with the profit-oriented drug companies, and the lion's share of the funding for research and development then passed by default to them.

Progestin and, particularly, estrogen, the hormones of which the many formulations of the "pill" are made, influence not only the reproductive tract, but also many other organs and tissues, including the pituitary gland, the master switch of the nervous system.

By the time of the pill's introduction, many of these influences were known. With what one of last week's witnesses called "the retropecttoscope," it is easy to see that testing should have taken them into account—particularly because oral contraceptives were designed to deal with overpopulation, a social rather than a physical ill.

A concurrent approach to this same problem was, of course, the intra-uterine device (IUD), which, whatever its other drawbacks, didn't affect the body as a whole and has since proved to be almost as effective and about twice as safe as the pill.

This reporter remembers that in the middle 1960s, when she worked on a magazine for doctors supported entirely by drug advertising (as most publications for physicians are), orders were to give more coverage to oral contraceptives than to the IUD. The reason? The IUD costs only pennies and has to be brought only once, and if it is lost can be cheaply replaced. The pill, on the other hand, requires dollars of investment month-in and month-out, giving the drug companies the opportunity to sell the same protection over and over again.

Economic considerations dictated that the pill become the darling of pharmaceutical-manufacturer marketing efforts to physicians and the public, and thus the birth control method of choice for the middle class. This, in turn, made it the preference in public family planning projects, where women of lower economic strata who were given a choice of methods quite naturally opted for what they had heard to be the best.

Word gets around abroad as at home, so that when women in underdeveloped countries are urged to accept the "loop," many of them want to know why they can't have "the pill," suspecting on the basis of sound precedent that they are being made the targets of a colonialist plot.

The pill, for all its established and alleged hazards—cancer, stroke, blood-vessel and rheumatic diseases, to mention but a few—has revolutionized public attitudes toward birth control and is thus a powerful force for population stability in the world today.

The danger is that the whole concept of family planning will be discredited by the drawbacks of the present generation of the pill. This would be—to use a not-altogether-inept simile—like throwing the baby out with the bath water.

[From The Washington Post, March 24, 1970]

BIRTH PILL WARNING IS DILUTED

(By Stuart Auerbach)

The Food and Drug Administration is watering down its detailed listing of potential dangers from birth control pills after organized medicine, drug manufacturers and population control groups put pressure on government officials.

"The more we got to thinking about it, the more we thought that we had put too much clinical material in it," said FDA Commissioner Charles C. Edwards, who released the warning with a flourish at a recent Senate hearing.

"We decided it wasn't our role to play doctor or to scare people away from the pill," he said.

The decision to rewrite the warning, which will go directly to the 8½ million American women who use the pill—something not done with any other prescription drug—was made after talks with doctors, manufacturers and Planned Parenthood, Dr. Edwards said.

But he insisted that the final version will be an effective warning.

He said his two aims are to tell women that the pill is "a safe but potent drug" and to remind doctors that they have to keep close checks on patients for whom they prescribe oral contraceptives.

One draft, printed yesterday in the McGraw-Hill Washington Drug Letter, is 96 words long compared to the 600-word original.

The new version mentions only one complication—blood clotting—without saying as the original did, that the risk of this to women taking the pill is six times greater than for non-users.

Omitted from this draft, but in the original, are warnings that women with liver disease, cancers and unexplained vaginal bleeding should not take the pill.

Also omitted are cautionary statements concerning the use of the pill by women with a history of heart or kidney diseases, high blood pressure, diabetes, epilepsy, fiberous tissue in the uterus, migraine headaches or emotional problems.

"That is not a final draft," said Frank Acosta, FDA's press spokesman, "We are still working on it. They (the Washington Drug Letter reporters) got a draft along the way."

But neither Acosta nor Edwards would reveal how detailed the final version would be.

Dr. Roger O. Egeberg, the assistant secretary of health, education and welfare for health and and Edwards' boss, reportedly persuaded the FDA commissioner to rewrite the pill warning.

"Dr. Egeberg thought it was too long," Acosta said.

The American Medical Association's role in influencing the changes was revealed by AMA President Gerald D. Dorman in a recent issue of the AMA News.

"What appeared in the press (after the Senate hearing) was an early draft that was being considered within FDA," Dr. Dorman said.

"We have reason to assume significant changes will be made before the final proposal will be published."

Dorman's statement is at variance with what Edwards told the Senate subcommittee when he released the original version, which he said would be published within 10 days in the Federal Register "so all interested parties will have an opportunity to comment on it."

The AMA, reportedly, is opposed to the warning because it might weaken the traditional doctor-patient relationship and lead to malpractice suits.

Drug companies thought the warning gave too much emphasis to the dangers of the pill and not enough to its benefits.

Agencies such as Planned Parenthood, concerned about the world population explosion, feared that the pill warning would lead to unwanted pregnancies.

[From The New York Times, March 24, 1970]

F.D.A. RESTRICTING WARNING ON PILL—A DRAFT REVISION INDICATES ORIGINAL IS TONED DOWN

WASHINGTON, March 23 (AP)—The Food and Drug Administration is toning down its announced package warning for 8.5 million users of oral contraceptives after pressure from physicians, drug manufacturers and high Government officials.

An F.D.A. spokesman and sources in the Department of Health, Education and Welfare confirmed today that the 600-word leaflet announced earlier this month was being extensively reworded.

The original leaflet referred to such serious possible reactions to the pill as blood clots, mental depression, swelling, skin rash, jaundice, high blood pressure, and elevation of blood sugar levels similar * * *.

One draft revision runs less than 100 words, mentions only a single specific danger from oral contraceptive use, and deletes detailed suggestions on when women using the pill should see a physician.

"Any similarity between this draft and what the F.D.A. proposed is purely coincidental," said one knowledgeable Senate source.

Dr. Charles C. Edwards, F.D.A. commissioner, to read to a Senate monopoly subcommittee on March 4 the leaflet's specific wording, which he said, "We are going to publish in The Federal Register so that all interested parties will have an opportunity to comment on it."

WARNING ON PACKAGES

The warning would be contained in all packages of oral contraceptives for the education of users.

It is not unusual for an agency to revise a proposed regulation after publication and after receipt of comments. But it is unusual, informed sources said, for the regulation to be drastically reworded before publication and before formal comment is received.

When asked about the revision, Dr. Edwards said today that the drafting process still was under way and the agency would require some kind of a warning leaflet—a first for prescription drugs.

He did not disavow the authenticity of one draft revision obtained by a reporter. Other F.D.A. officials said the draft had been ordered lengthened.

Sources in the office of the Assistant Secretary of Health, Education and Welfare said revision of the leaflet was necessary for "legal and professional acceptance."

Dr. Edwards ruffled bureaucratic feathers when he told the Senate subcommittee about the leaflet and its specific warning without first informing his superior, Dr. Roger O. Egeberg, Assistant Secretary of Health, Education, and Welfare.

COMPLAINT BY A.M.A.

The American Medical Association complained to Dr. Egeberg and the H.E.W. Secretary Robert H. Finch, that the leaflet would interfere with the doctor-patient relationship and possibly could lead to malpractice suits.

The drug industry objected, contending that the leaflet overemphasized dangers and minimized benefits from oral contraceptives.

The revised draft leaflet has this to say about the pill's dangers:

"As with all effective drugs, they may cause side effects in some cases and should not be taken at all by some. Rare instances of blood clotting are the most important known complications of the oral contraceptives."

The original wording was much sharper on clots. It said:

"There is a definite association between blood clotting disorders and the use of contraceptives. The risk of this complication is six times higher for users than for nonusers."

The original warning offered signpost symptoms requiring immediate medical attention. It also said:

"Your doctor has taken your medical history and has given you a careful physical examination."

The revised draft said the contraceptives "should be taken only under the supervision of a physician," and users should have "periodic examinations at intervals set by your doctors."

[Press Release, March 23, 1970]

(From the Office of U.S. Senator Thomas J. McIntyre)

WASHINGTON, D.C.—Senator Thomas J. McIntyre (D–N.H.) today made the following statement concerning news stories that the Food and Drug Administration has watered down its proposed consumer label warning on known and potential dangers of birth control pills:

"I am deeply disturbed by press stories indicating that the Food and Drug Administration has watered down the consumer labeling for birth control pills which the agency proposed before the Monopoly Subcommittee on Small Business earlier this month.

"As a member of the subcommittee I had been concerned that women who might be considering use of the Pill were not being provided the necessary information concerning its known and potential dangers to enable them to make an informed and rational decision as to whether they wanted to use the Pill or some other method of contraception. I thought that the labeling proposed by Commissioner Edwards at the hearings went a long way toward answering this need. I anticipated that it would be published in essentially the same form in the Federal Register so that all interested parties would have opportunity to comment before the order was finalized.

"Needless to say, I was amazed to hear that the agency had shortened the label statement from 600 words to 96 words, and if the text carried in press accounts is accurate, deleted much of the essential information, even before the order was published.

"It is my understanding that since the story broke in the press, FDA is again re-writing the label statement to put some of the original information back in. I hope that this is true and I shall look forward to reviewing the final version when it is printed."

[From The Washington Post, April 6, 1970]

PILL ADVICE STILL UNCLEAR AS FDA SPURNS NEW WORDING—AGENCY PREFERS SHORT WARNING, DESPITE PROTESTS

(By Morton Mintz)

An entirely new warning to users of the Pill has been recommended to the Food and Drug Administration by its outside advisers on birth control.

At least temporarily, however, the FDA is rejecting the recommendation in favor of a proposal of its own.

Thus it was still unclear yesterday what advice an estimated 8.5 million women eventually will get with each package of oral contraceptive pills.

The recommended new warning resulted from a hitherto undisclosed development last Wednesday—the invasion by two members of the Women's Liberation Movement of a closed meeting of the Advisory Committee on Obstetrics and Gynecology at FDA headquarters in Rockville.

After hearing the Women's Liberation protests, Dr. Roy Hertz, a committee member, wrote this draft for a sticker to be affixed to every package of pills:

"Do not take these pills without your doctor's continued supervision. Contact him if you experience any unusual symptoms, particularly the following: 1. Severe headache. 2. Blurred vision. 3. Pain in the legs. 4. Pain in the chest or cough. 5. Irregular or missed periods."

All but "5" can be symptoms of blood-clotting diseases.

The committee suggested that the FDA publish the draft in the Federal Register and drop a 96-word agency proposal that would tell women about the Pill in general terms, with none of the committee's emphasis on symptoms and what to do about them. A Women's Liberation member denounced the 96-word statement as "worse than no warning at all."

However, Commissioner Charles C. Edwards told a reporter last week that if the Secretary of Health, Education, and Welfare approves, the FDA soon will publish the 96-word statement "without any change." At the end of a 30-day period for filing of comments, he said, the agency will consider modifications, giving "very top priority" to the advisory committee draft.

Dr. Edwards emphasized that he was not foreclosing the possibility that the statement ultimately adopted will be stronger than the 96-word version. His primary goal is to start the legal process by which a warning of some kind will go directly to users, he said.

The Women's Liberation members—Alice Wolfson (who was accompanied by her husband) and Judy Spelman—used a ruse to get into the advisory committee meeting.

After an uproar, an agreement was reached under which they would be present for discussion of the package insert problem but absent for discussion of data—which is to be published soon—indicating lower clotting rates with pills that are of the low-estrogen variety.

The protests were directed mainly at the FDA's abandonment of "What You Should Know About Birth Control Pills," a 600-word package insert that Dr. Edwards unveiled on March 4 at a hearing held by Sen. Gaylord Nelson (D-Wis.).

"What You Should Know . . ."—which Edwards, at that time, said would be published in the Federal Register—says clotting diseases in users of the Pill occur six times as frequently as in non-users, points out that these diseases annually kill six users in 200,000,and specifies numerous other known and possible hazards.

Nelson told the commissioner that he saw no reason why "What You Should Know . . ." should not be revised to state the clotting rates more understandably—one user in 2,000 hospitalized every year for example. He termed both the fatality and hospitalization rates "very high."

The FDA did not dispute this at the hearing. But Dr. Edwards later abandoned "What You Should Know . . ." for the 96-word version, which mentions only one complication, clotting, and says instances of it are "rare."

Dr. Edwards has said he abandoned "What You Should Know . . ." because it contains "too much clinical material," and because "it wasn't our job to play doctor or to scare people away from the Pill." He denied he was pressured by top HEW officials.

The medical profession and population-control forces are known to have been deeply upset by "What You Should Know . . ." There was major unhappiness, too, in the FDA Advisory Committee, which is composed of physicians.

AMERICAN PATIENTS ASSOCIATION,
Washington, D.C., March 27, 1970.

COMMISSIONER CHARLES C. EDWARDS,
Food and Drug Administration,
Washington, D.C.

DEAR COMMISSIONER EDWARDS: Reports in the press concerning revisions of your proposed labeling for oral contraceptives are quite disturbing. While the text you released March 3 may have had some rough spots, we are alarmed to learn that the proposed patient information is to be drastically revised in order to protect physicians, rather than patients. We hope the press reports are incomplete; but we are led to believe they are accurate in all respects.

If you are heeding the advice of non-governmental interest groups in the drafting of a final OC label, then we ask for an opportunity to participate also. In any case, we would remind you that the final printed labeling of any approved drug is a public document. If the FDA—which, in your appearance before Senator Nelson, seemed to take an important step forward in the public interest—cannot handle patient information equitably and responsibly, our Association and its sister Foundation will have to consider what actions they may pursue to fill a vacuum of responsibility in the handling of these public, albeit arcane, documents.

We look forward to an early reply.

Cordially,

THEODORE O. CRON, *President.*

cc: Senator Gaylord Nelson
Representative L. H. Fountain

[From the Washington Post, April 8, 1970]

HEW PUBLISHES WARNING ON PILL

The Department of Health, Education, and Welfare settled yesterday on a fourth version of a warning to be enclosed in every package of birth control pills.

The language is not necessarily final. After publication today in the Federal Register comments can be filed for 30 days. Then this language or a modification will be ordered into effect, provided there is not a court challenge.

The fourth version, announced by HEW Secretary Robert H. Finch at the end of a press conference on civil rights, follows:

"The oral contraceptives are powerful, effective drugs. Do not take these drugs without your doctor's continued supervision. As with all effective drugs they may cause side effects in some cases and should not be taken at all by some. Rare instances of abnormal blood clotting are the most important known complications of the oral contraceptives. These points were discussed with you when you chose this method of contraception.

"While you are taking this drug, you should have periodic examinations at intervals set by your doctor. Tell your doctor if you notice any of the following: 1. Severe headache; 2. Blurred vision; 3. Pain in the legs; 4. Pain in the chest or unexplained cough; 5. Irregular or missed periods.

The portion of the warning dealing generally with the pill was taken from a 96-word proposal that Dr. Charles C. Edwards had wanted to publish and which, in turn, was a watered-down version of an 800 word warning he had endorsed on March 4 at a hearing before Sen. Gaylord Nelson (D-Wis.).

The second portion of the warning—advising women to be alert to possible symptoms of blood-clotting and gynecological disorders—had been recommended by the FDA's outside advisers on the pill.

HEW overrode Dr. Edwards, who had tentatively rejected the advice of the consultants. Secretary Finch acknowledged that he now has endorsed a compromise, which he called "a delicate balance." He said he believed the shorter statement is more likely to be read.

[From the Evening Star, April 7, 1970]

FDA MOVES TO ENFORCE REVISED WARNING ON "PILL"

(By Judith Randal)

In the Federal Register tomorrow the Food and Drug Administration will publish a statement on the birth control pill which, unless there are further changes, will be included in every package of oral contraceptives that reaches a consumer's hands.

The 120-word statement, released today at a press conference by Secretary of Health, Education and Welfare Robert H. Finch and Dr. Jessie Steinfeld, the surgeon general, is considerably shorter than the 600-word preliminary version which was read to a Senate committee on March 4 by FDA Commissioner Charles C. Edwards.

It tells women that "oral contraceptives are powerful, effective drugs" which should not be taken without a "doctor's constant supervision" and that "they may cause side effects in some cases and should not be taken at all by some."

This is the full statement:

"The oral contraceptives are powerful, effective drugs. Do not take these drugs without your doctor's continued supervision. As with all effective drugs they may cause side effects in some cases and should not be taken at all by some. Rare instances of abnormal blood clotting are the most important known complication of the oral contraceptives. These points were discussed with you when you chose this method of contraception.

"While you are taking this drug, you should have a periodic examination at intervals set by your doctor. Tell your doctor should you notice any of the following:

"1. Severe headache
"2. Blurred vision
"3. Pain in the legs
"4. Pain in the chest or unexplained cough
"5. Irregular or missed periods."

After tomorrow's publication physicians, drug manufacturers and other interested parties will have 30 days to register comments and complaints with the FDA. Unless these are deemed sufficiently significant to warrant changes, the message will be included in every package of contraceptives in a few months' time.

[From the Federal Register, Vol. 35, No. 70, April 10, 1970, pp. 5962–5963]

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE—FOOD AND DRUG ADMINISTRATION

[21 CFR Part 130]

NEW DRUGS

Proposed Statement of Policy Concerning Oral Contraceptive Labeling Directed to Laymen

Pursuant to the provisions of the Federal Food, Drug, and Cosmetic Act (secs. 502 (a), (f), 505, 701(a), 52 Stat. 1050-53, as amended, 1055; 21 U.S.C. 352 (a), (f), 355, 371(a)) and under the authority delegated to the Commissioner of Food and Drugs (21 CFR 2.120), it is proposed that he following new section be added to Subpart A of Part 130:

§ *130. Oral contraceptive preparations; labeling directed to the patient.*

(a) The Food and Drug Administration is charged with assuring both physicians and patients that drugs are safe and effective for their intended uses. The full disclosure of information to physicians concerning such things as the effectiveness, contraindications, warnings, precautions and adverse reactions is an important element in the discharge of this responsibility. In view of this, the Administration has reviewed the oral contraceptive products, taking into account the following factors: the products contain potent steriod horomones which affect many organ systems; they are used for long periods of time by large numbers of women who, for the most part, are healthy and take them as a matter of choice for prophylaxis against pregnancy, in full knowledge of other means of contraception; and because of their indications they are sometimes used without adequate medical supervision. They represent, therefore, the prototype of drugs for which well-founded patient information is desirable.

(b) In view of the foregoing, it is deemed to be in the public interest to present to users of oral contraceptives factual information as to the risks and possible side effects associated with their use by requiring, as part of their labeling, appropriate information in lay language. The information would emphasize to the patient the need for continuing surveillance and supervision by a physician. The Commissioner of Food and Drugs is aware that this represents a departure from the traditional approach to the dissemination of information regarding prescription drugs via the doctor/patient relationship, and stresses that it is not intended to weaken or replace that channel, but rather because of the unusual pattern of use by these drugs, to reinforce the efforts of the physician to inform the patient in a balanced fashion of the risks attendant upon the use of oral contraceptives.

(c) (1) The oral contraceptives are restricted to prescription sale, and their labeling is required to bear information under which practitioners licensed to administer the drugs can use them safely and for the purpose for which they are intended. In addition, in the case of oral contraceptive drugs, the Commissioner concludes that it is necessary in the best interests of users that the following printed information for patients be included in the package dispensed to the patient:

"ORAL CONTRACEPTIVES (BIRTH CONTROL PILLS)

"The oral contraceptives are powerful, effective drugs. Do not take these drugs without your doctor's continued supervision. As with all effective drugs, they may cause side effects in some cases and should not be taken at all by some. Rare instances of abnormal blood clotting are the most important known complication of the oral contraceptives. These points were discussed with you when you chose this method of contraception.

"While you are taking this drug, you should have peridoic examinations at intervals set by your doctor. Notify your doctor if you notice any of the following:

"1. Severe headache.

"2. Blurred vision.

"3. Pain in the legs.

"4. Pain in the chest or unexplained cough.

"5. Irregular or missed periods."

(2) Providing this information to users may be accomplished by including it in each package of the type intended for the user as follows:

(i) If such package includes other printed materials for the patient (e.g., dosage schedules), the text of the information in subparagraph (1) of this paragraph shall be an integral part of the printed material and be in boldface type set out in a box, preceding all other printed text.

(ii) If such package does not include printed material for the patient, the text of the information in subparagraph (1) of this paragraph shall be provided as a printed leaflet in boldface type.

(iii) Include in each bulk package intended for multiple dispensing, a sufficient number of the information leaflets, with instructions to the pharmacist to include one with each prescription dispensed.

(d) Written, printed, or graphic materials on the use of a drug that are disseminated by or on behalf of the manufacturer, packager, or distributor to the patient, are regarded as labeling. The Commissioner also concludes that it is necessary that full information in lay language, concerning effectiveness, contraindications, warnings, precautions, and adverse reactions be incorporated prominently in the beginning of any such materials.

(e) The marketing of oral contraceptives may be continued if all the following conditions are met within 30 days of the date of publication of this section in the FEDERAL REGISTER.

(1) The labeling of such preparations shipped within the jurisdiction of the Act is in accord with paragraphs (c) (1) and (2), and (d) of this section.

(2) The holder of an approved new-drug application for such preparation submits a supplement to his new-drug application under the provisions of § 130.9(d) of this chapter to provide for labeling as described in paragraphs (c) and (d) of this section. Such labeling may be put into use without advance approval of the Food and Drug Administration.

All interested persons are invited to submit their views in writing, preferably in quintuplicate, regarding this proposal. Such views and comments should be addressed to the Hearing Clerk, Department of Health, Education, and Welfare Room 6–62, 5600 Fishers Lane, Rockville, Md. 20852, within 30 days following the date of publication of this notice in the FEDERAL REGISTER. Comments may be accompanied by a memorandum or brief in support thereof.

(Secs. 502 (a), (f), 505, 701(a), 52 Stat. 1050–53, as amended, 1055; 21 U.S.C. 352 (a), (f), 355, 371(a))

Dated: March 26, 1970.

CHARLES C. EDWARDS,
Commissioner of Food and Drugs.

[F.R. Doc. 70–4403; Filed, Apr. 9, 1970; 8:48 a.m.]

U.S. SENATE,
SELECT COMMITTEE ON SMALL BUSINESS,
Washington, D.C., May 7, 1970.

THE HEARING CLERK,
Department of Health, Education, and Welfare,
Rockville, Md.

DEAR SIR: I am writing to comment on the proposed package insert that will be a part of each package of oral contraceptives received by the user.

Dr. Charles Edwards, Commissioner of the Food and Drug Administration, is to be commended for his positive recognition of the importance of the concept of informed consent in the use of oral contraceptives. This prescription drug differs from all others in that it is very widely prescribed for healthy users and in that for a substantial percentage of users, at least, there are effective alternative methods of birth control.

The issue is whether the user is entitled to be informed about the benefits, risks, and side effects of oral contraceptives and alternative methods. This is the essence of the matter. It is my view that users are entitled to know what the government and the experts know.

Obviously this poses difficult practical problems. The fundamental responsibility rests with the prescribing physician. Nevertheless, a simple, direct reminder notice should be available to the user at all times since it cannot be expected that millions of people are going to remember their physician's advice for long periods of time. Furthermore, it is clear that a substantial percentage of users were not given any advice on risks and side effects at all.

It seems to me that contra-indications ought to be listed since the scientific community is agreed that those with certain histories should not use the oral contraceptive. This will help assure that they do not.

One sentence in the proposed reminder notice raises, I think, a serious question. That sentence is, "Rare instances of abnormal blood clotting are the most important known complication of the oral contraceptives." The word rare is a subjective term that means something different to each reader. In my own subjective judgment, the word rare is inaccurate as used here, since the hospitalization rates due to thrombo-embolic disease in users is one in two thousand.

Serious questions are also being raised concerning the metabolic effects of long-term use. In the comprehensive volume edited by Drs. H. A. Salhanick, D. M. Kipnis, and R. L. Vande Wiele, the editors state in the preface, "Until recently, the metabolic effects of the sex steroids have been inadequately investigated or ignored. These accumulated data and others suggest that no tissue or organ system is free from a biological, functional, and/or morphological effect of a contraceptive steroids. Many of these changes appear to be reversible after short periods of treatment, but it is impossible to form judgments on the reversibility of some of the changes resulting from prolonged administration. This question becomes more important daily for the many patients who have already had long-term contraceptive steroid treatment."

All of these matters pose serious, difficult medical and public policy questions. It is doubtful whether any individual has at his fingertips the final best answer.

I would suggest, therefore, that public hearings be conducted on this issue so that the collective wisdom of the scientific community and the public may be focused on the issue. It would, I think, be a valuable source of information and opinion for developing the most useful and practicable reminder insert.

Sincerely yours,

GAYLORD NELSON,
U.S. Senator.

[From Science News, March 14, 1970]

FDA GOES TO THE CONSUMER

According to the Food and Drug Administration's last pronouncement on the subject, oral contraceptives are safe—at least by legal definition. But in its September report (SN: 9/13, p. 198), the outgrowth of three years of evaluation by the FDA's Advisory Committee on Obstetrics and Gynecology, the agency raised as many questions as it answered about the side effects of birth control pills, and by no means gave them a clean slate.

In the decade since oral contraceptives were first marketed, reports of known

and suspected hazards have circulated through the medical literature and the press with steadily increasing frequency. Recent Senate hearings held by Gaylord Nelson (D-Wis.), provided a public forum at which experts recited accumulated data linking the pills to everything from weight gain to blood clots and cancer.

Moved by mounting evidence of danger and by public and political pressure, FDA Commissioner Charles C. Edwards first circulated a warning to doctors in a special letter (SN: 1/24, p. 93), then took the final day of the Nelson hearings as the occasion for announcing a virtually unprecedented action.

The FDA, Dr. Edwards said, will require drug houses to include in every package of oral contraceptives a pamphlet cataloguing in lay language the risks linked to their use. While it is standard procedure to have manufacturers supply physicians and pharmacists with details of side effects of prescription drugs, the information ordinarily goes to the patient only at the discretion of his physician.

At present, there is only one exception. Persons with bronchial asthma who inhale a drug called Isoproteronal receive a leaflet cautioning them against overdosing themselves and instructing them in the drug's proper use with every prescription. "However," says FDA's chief counsel William Goodrich, "the information is nowhere near as detailed as that proposed for birth control pills."

Further, Goodrich says, FDA has no intention of extending its requirement that information on risks go directly to the patient on other types of drugs. Though oral contraceptives are no different than other prescription drugs from a legal view, FDA considers them unique in that they are taken by overwhelming numbers of healthy individuals. An estimated eight and a half million women in the United States are or have been on the pill.

In spite of FDA's avowed intention to control pills, spokesmen for the Pharmaceutical Manufacturers Association and for individual drug companies fear it could set a dangerous precedent. A representative of G. D. Searle & Co., makers of Enovids, finds, for example, that it is not inconceivable that similar cautionary information might be proposed for individuals taking amphetamines or smallpox vaccinations from their physicians. On a risk versus benefit basis, amphetamines have long been and vaccinations (SN: 1/31, p. 129) are now under fire.

For the present, however, neither the drug makers nor the American Medical Association is raising a hue and cry against Dr. Edwards' plan. Generally, they say, they have no objection to informing patients directly about the side effects of the pill. And an official statement from the AMA goes as far as to say, "The medical profession regards the pill, in most cases, as a convenience rather than a traditional medication and hence the patient must bear her share of the legal and moral responsibility for taking it."

Nevertheless, it is naive to suppose that the proposed warning pamphlet will be included in packages within the next two months.

Delays are expected to occur when the process of establishing the precise way. Spokesmen * * * drug manufacturers indicate that they have objections to portions of the wording of the proposed statement, which spells out a definite association between oral contraceptives and blood clots—"the risk is six times higher for users"—cites connections with mental depression, jaundice, high blood pressure and diabetes, and declares that while there is no evidence that the pill causes cancer in women, doctors will want to examine patients regularly on this score.

Goodrich and lawyers for the PMA affirm that at present the drug manufacturers have no plans to try to block FDA's move on legal grounds. However, if the final wording turns out to be too strong for their liking, the lawyers speculate that the issue could be taken to court on grounds that, because physicians inform their patients about birth control pills, the pamphlet is unnecessary or that it interferes with the physician-patient relationships.

While protesting any intention of interfering with that relationship, Dr. Edwards says, "I have come to the conclusion that the information being supplied to the patient in the case of oral contraceptives is insufficient."

And that, says Nelson, is why he held the hearings.

[From the Washington Post, May 11, 1970]

AMA OPPOSES "PILL" WARNING

(By Morton Mintz)

The American Medical Association has attacked a proposed warning to users of birth-control pills as "a dangerous departure from present practice" and has urged the Food and Drug Administration to renounce the whole idea.

Indications are that most doctors generally agree.

But Sen. Gaylord Nelson (D–Wis.), persuaded by his recent hearings that women have been inadequately informed about demonstrated and possible risks, told the FDA that "users are entitled to know what the government and the experts know." He urged the FDA to hold public hearings on the issue.

His position is supported by consumer advocates, some scientists and the Women's Liberation Movement, among others.

The AMA and Nelson statements are among about 500 formal comments filed with the Department of Health, Education and Welfare since April 10, when HEW published the warning statement proposed for inclusion in every package of oral contraceptives. Yesterday was the deadline for submission of mailed comments.

William W. Goodrich, FDA's counsel, said that all of the statements filed by organized medical groups take positions similar to the AMA's, which is that "the best way to inform patients effectively is through the physician."

During the Nelson hearings, Newsweek for Feb. 9 reported that two out of every three women on the pills told poll-takers that their doctors had not advised them of the risks.

The proposed warning leaflet, which is subject to modification, blends the views of HEW Secretary Robert H. Finch and FDA Commissioner Charles C. Edwards. It is a dilution of a long, strong statement that Dr. Edwards originally had proposed.

The statement says the pills are "powerful, effective drugs," should not be taken "without your doctor's continued supervision," "may cause side effects in some cases" and cause "rare instances of abnormal blood clotting." Five symptoms are listed which if experienced should cause a user to notify her doctor.

In a speech last Tuesday in Philadelphia, Dr. Edwards said the FDA is "giving careful consideration to all views, but it is our intention to carry through with a final order" requiring a leaflet in every package of pills.

He said he saw no other answer to the fact that "a very substantial number" of pill users "are not under medical supervision." His hope is that a leaflet in the package "would lead them to seek medical advice before continuing to take the pill."

For the AMA, Dr. Ernest B. Howard, executive vice president, said there should be no statement to the user at all, "in the best interests of the patient and the practice of quality medicine . . . It intrudes upon the patient-physician relationship" and "would lead to confusion and alarm among many patients and could result in harm to some."

Because the pills are prescription drugs, it is "the responsibility of the physician to inform his patients of the potential hazards," Dr. Howard continued.

"In counseling on family planning . . . he should provide information that will enable the patient to make an intelligent decision," Dr. Howard added. "When medical supervision is lacking, however, it is unlikely that the proposed leaflet will correct the situation."

Nelson, in his formal comment to FDA, commended Commissioner Edwards for giving "positive recognition" to "the importance of the concept of informed consent in the use of oral contraceptives."

The senator agreed that "the fundamental responsibility rests with the prescribing physicians." But, he said, "a simple, direct reminder notice should be available to the user at all times since it cannot be expected that millions of people are going to remember their physician's advice for long periods of time."

* * * * * * *

[From the Washington Post, June 24, 1970]

AMA Pledges All-Out Fight Against Birth-Pill Warning

(By Victor Cohn)

CHICAGO, *June 23*—The American Medical Association today promised a "legal and legislative battle" against a printed warning due soon in every package of birth control pills.

But Dr. Charles C. Edwards, commissioner of the Food and Drug administration, defended the warning as a kind of "insurance policy" in the patient's interest.

The warning—ordered by the FDA this month despite AMA and other medical opposition—would tell women of possible side effects such as increased risk of blood clotting and advise "careful discussion with your doctor."

"We must remember that we are long past the medicine man times when no patient knew anything about medicine except where it hurt," Edwards told a meeting here of the Pharmaceutical Advertising Club.

At almost the same hour, the AMA house of delegates voted to oppose "any requirement that interjects a federal agency between a physician and his patient."

The resolution listed these objections:

"The proposal to supply information on side effects . . . intrudes on the patient-physician relationship and compromises individual medical evaluation . . . The proposed statement would confuse and alarm many patients. The package insert is an inappropriate means of providing a patient with information regarding any prescription drug; the most effective way to inform the patient is through the physician."

The resolution also stressed "the importance of making certain this FDA requirement not be extended to other prescription drugs."

The AMA also attacked the FDA for withdrawing drugs from the market on the basis of recommendations made by review panels "without consulting clinical practitioners." It criticized release of drug information to the public before informing doctors.

This last was specifically triggered by an FDA statement that pills for diabetes control may be ineffective and even harmful. That statement was based on a new University of Maryland study, one which is being questioned now by a number of diabetes specialists.

The AMA delegates—this time in agreement with federal health officials—strongly opposed Justice Department rather than health agency jurisdiction over dangerous and potentially dangerous drugs. Justice officials want the authority both to declare drugs dangerous and to decide who may use them in research.

AMA delegates then turned to an even broader health issue the health of the public, especially those who are poor and lack care. Sunday an AMA committee heard a series of consumer delegations complain for three hours over medical and hospital failures.

The meeting was sometimes unruly, and the chairmanship was seized by a consumer spokesman. One AMA delegate today said such sessions should be held again only if there are "no takeovers" and there is "protection of AMA members and guests from obscenities."

His view did not prevail. The delegates voted to consider holding such a forum at every AMA meeting, as well as establishing a "multi-ethnic advisory committee" on the special health care problems of minority groups.

[From The Progressive, May 1970, pp. 25–27]

THE PILL AND THE PUBLIC'S RIGHT TO KNOW

(By Morton Mintz)

MORTON MINTZ, a seasoned student of the drug industry, is the author of "The Pill: An Alarming Report," just published by Beacon Press in hardcover and Fawcett in paperback.

During the recent hearings on The Pill, spokesmen for population control organizations charged that vast numbers of women were being scared off the drugs, would become pregnant, and would bear children who, being unwanted, would be beaten by their parents.

Phyllis Piotrow, former executive director of the Population Crisis Committee, went so far as to suggest that there will be a crop of "Nelson babies," in dubious honor of Senator Gaylord A. Nelson, the Wisconsin Democrat who is chairman of the Senate Monopoly Subcommittee. His Republican colleague from Kansas, Senator Robert J. Dole, who can be counted upon by the drug industry for support at climactic moments, came through again. The "Nelson babies" phrase, he said, "is all right with me."

If it really is all right, which it really isn't, then it also is all right, presumably, to personalize any diseases caused by The Pill—say, "Piotrow strokes" or "Dole thromboembolisms."

This mean little episode would not be worth recounting were it not for a couple of facts. One is that the "Nelson babies" phrase attracted substantial attention in news media. A second fact is that a troubling impression emerges from a reading of the hearing transcript: that the slur on Nelson was symptomatic of the attitudes of certain population control advocates. They were angry not only at Nelson, who happens to be one of the most ardent and articulate supporters of family planning on Capitol Hill, but also at much of the press and even, far-fetched as it may sound, at the application of democratic process to their particular cause, worthy and important as it is.

Consider Dr. Harold Schulman of Albert Einstein College of Medicine. While denying that he was uring "a type of censorship," he said, "If hearings such as this are going to be held, I believe the committee must carefully plan and screen all individuals who are invited to testify as to the content of their testimony." The ABM, Vietnam, Laos—subjects such as these may be the subject of Congressional hearings but not, he was suggesting, something as sensitive as The Pill.

Dr. Anna L. Southam, of Columbia College of Physicians & Surgeons, told the Subcommittee, "I beg the press to report accurately or not at all." But she created a strong impression that, deep down, she would prefer no reporting at all to accurate reporting of, say, a statement that The Pill "should be monitored and restricted to women who cannot use other methods effectively." That statement happens to have been made by Dr. Philip A. Corfman, director of the Center for Population Research at the National Institute for Child Health and Human Development. Dr. Southam did not say if she was troubled by the accurate reporting of the uneasiness about widespread use of The Pill acknowledged by Dr. Louis M. Hellman, former chairman of the Food and Drug Administration's outside consultants on contraception.

So far as is known, no one has complained of inaccuracy in the reporting of another authoritative statement: that until recently the effects of The Pill were "inadequately investigated or ignored. . . . No tissue or organ system is free from a biological, functional and/or morphological effect. . . . Many of the changes appear to be reversible after short periods of treatment, but it is impossible to form judgments on the reversibility of some of the changes resulting from prolonged administration." That statement was made by Dr. Hilton A. Salhanik of Harvard and two other scientists who, in behalf of the National Institutes of Health, ran a workshop on the metabolic effects of The Pill.

Dr. Southam also was upset by "nonmedical science writers" (possibly including the generalist writing this article), as was Dr. Schulman. This was a way of saying that they disapprove of those reporters who disclosed, among other things, that the safety of The Pill had not been demonstrated before massive use began. In Dr. Southam's view, such reporters do "a disservice to the consumer who should depend on her doctor for advice." Which doctor? Southam or Corfman? Schulman or Salhanik? Perhaps Alan F. Guttmacher, president of Planned Parenthood-World Federation. His case may be the most interesting of the lot.

Physicians have prescribed The Pill for millions of American women—far more than the 8.5 million estimated to be taking it currently. In his prepared statement, Dr. Guttmacher cited a Gallup Poll in the February 9 issue of *Newsweek*. One highly revealing disclosure in the article was that two-thirds of the women quitting The Pill said their doctors had failed to apprise them of the risks—some of which, especially blood-clotting diseases, have been demonstrated. When asked about the disclosure by Senator Nelson, Guttmacher said, "No, I do not remember that."

Guttmacher did not assert that doctors had educated themselves about The Pill before massively prescribing it; indeed, he conceded—under questioning—that "perhaps the American physician has been remiss in not trying to educate himself about the intricacies of The Pill." For such hope as it may offer, his claim was that the medical profession is "educable."

Nelson brought up one of the numerous drug company pamphlets that made blatantly misleading, and sometimes downright false, euphoric statements about safety. Guttmacher agreed, as he had to do, that such statements were far out of line. But he had not, and other population-control advocates had not, protested the pamphlets when protest might have done some good—during the decade of the 1960s when doctors were handing them out by the millions. The protests came from the FDA and the "nonmedical science writers" disdained by the Southams and the Schulmans.

It was with poor grace that the population-control leaders laid down a barrage of attacks on Nelson for holding hearings, the entire purpose of which was to

determine if women were being adequately informed about known and possible hazards of The Pill. In an exchange with the Senator, Guttmacher did say that the hearings had "served a useful purpose in making the doctor more careful," and General William H. Draper, Jr., honorary chairman of the Population Crisis Committee, predicted that "the long-range effect . . . will be constructive and in the interest of the American people."

But on the whole Guttmacher's performance was badly flawed. He went through the tired and meaningless routine of comparing the fatality rates of women on The Pill and women in auto accidents. He kept saying that it hasn't been proved, or that it is "conjecture," that The Pill may cause cancer, heart disease, diabetes, or other diseases. That is true, but he failed to say that the *testing* which would establish whether The Pill does or does not cause these and other dread maladies has not been done.

Last September the FDA's consultants on The Pill produced a report of almost unrelieved grimness. To escape it they came up with a legalistic gimmick. Saying that the law does not define safety, they drew the conclusion that The Pill earns "the designation safe within the intent of the legislation." Dr. Guttmacher approved of that conclusion. It is "verbiage which is difficult to define," he testified. "But at least it is verbiage which does create a certain sense of complacency in the user.

Dr. Guttmacher himself has produced verbiage which tranquilized women so they could be hormonized. Until studies demonstrated a cause-effect relation between The Pill and clotting, he was saying it hadn't been proved that there was such a connection. "It can be stated flatly that the pills do not interfere with a woman's ability to bear children when she stops taking them," he said in a signed article in the February, 1966 issue of *Good Housekeeping*. It can be stated flatly that this statement, challengeable even before he made it, is in error: Some women *do* become infertile.

In the February 9 *Newsweek* article, it was noted that eighteen percent of the women polled recently had stopped using The Pill, and that only one-third of them, or six percent, had given as their reason doubts generated by the Nelson hearings. But on February 24, Dr. Elizabeth B. Connell of Columbia, and the next day Dr. Guttmacher, put the blame on Nelson for the entire eighteen percent. With the eighteen percent as a base, they made extrapolations about the ultimate number of resulting pregnancies (with scant regard for those women who switched to methods other than The Pill) and child batterings (without acknowledging the lack of an established correlation between children who were unwanted at the time of conception and children who are beaten). It was even suggested that large numbers of women, because of the hearings, already had become pregnant and were seeking abortions. This suggestion was knocked down by the calendar.

The Nelson hearings began on January 14. Dr. Connell's testimony was figured to have been completed and mailed off to the Subcommittee on February 19. That was five or six days short of the time needed for a number of women to be frightened by the hearings, stopp using The Pill, become fertile, conceive, and be reliably tested for pregnancy.

Some other points got buried in the rather fast shuffle in which witnesses such as Dr. Connell engaged. For example, millions of women have given up The Pill over the years because they didn't like the synthetic hormones, or because of other reasons unrelated to criticism of the drugs. Nelson cited a Chicago study showing that within two months of inception of use, forty percent of a group of women stopped using The Pill.

At one point in the hearings Nelson said in exasperation, "I think there has been a rather great con game played on the American public." But why would such a thing be done? The answer is in significant part that The Pill drove a wedge between "woman" and "women"—between the individual and social engineering, between safety for one person and efficacy among millions.

Once evidence of hazards began to develop and be reported, the population control people were put in a dilemma. How could attention be called to the risks without peril to their cause? How could they call attention to dishonesty in pamphlets published by manufacturers and distributed by doctors without simultaneously faulting, say, an assertion such as one made by Dr. John Rock, in the January, 1968 issue of *Family Circle*, that The Pill "is perfectly safe"? How could they help but be nervous about fair reporting? How could they not be privately terrified by the prospects of Senate hearings intended to elicit literally vital facts, rather than "verbiage" which creates "complacency" in the user?

During an exchange with Guttmacher, Nelson asked, "Do we have a right not to have public hearings and not to make the information available on the ground that all the press may not carry it the way some people think they ought to carry it? Or that it is too complicated for the public to understand? Is this the kind of decision that we have a right to make, to withhold knowledge developed by the [Government itself], or should these matters be made a matter of public knowledge, counting, as it seems we always have to do, upon the ultimate good judgement of the public to come to a reasonable conclusion?

"Very frequently, in a free country, people do not come to reasonable conclusions," Nelson went on. "That is no reason for substituting an arbitrary system. . . . This is one of the risks, it seems to me, of having a free society in which there are many risks."

It is useful to see The Pill first of all as a piece of technology, much as DDT, say, is a piece of technology, albeit in a vastly different area. We did not know what we were doing when we bought The Pill, just as we did not know what we were doing when we bought DDT. The testing of The Pill having been ludicrously inadequate, and massive unscientific and sometimes dishonest promotion of The Pill having proceeded apace despite the inadequacy of testing, we are today, and will remain for a long time, ignorant of the full range of its potentials for pollution of the bodies of millions of human beings. We have not even undertaken the studies which would tell us of possible effects on the offspring of some of those human beings.

The issue is not whether sales of The Pill would be halted (among other things, this would create a bootleg market). Neither is population control the issue (not only because Senator Nelson is for it, but also because the effectiveness of The Pill in controlling world population has been drastically oversold). The issue, rather, is the rational and humane use of technology. It is not easy to forgive a con game in which women who do not need The Pill, because they have acceptable alternatives, are induced to use it in order to provide reassurance to women who do need it.

[From the Evening Star, March 13, 1970]

WASHINGTON CLOSE-UP—'PILL' RAISES ISSUE OF RIGHT TO KNOW

(By Judith Randal)

Two weeks ago today, Sen. Gaylord Nelson, D-Wis., then conducting hearings on oral contraceptives, raised one of the most crucial issues confronting society in the 1970s.

By that time, Nelson had been charged with inciting the press to sensationalism, fostering scare headlines, and—by bringing to public attention what the scientific community already knew about possible risks from "the pill"—threatening efforts to contain the population explosion. But what no one else had said in so many words was that the real issue raised was the public's right to know.

Nelson saw the opportunity to bring this issue to the fore when Dr. Alan F. Buttmacher, president of Planned Parenthood-World Population, came to the witness table. After pointing out that other contraceptive measures, as well as pregnancy, also carry risks, Guttmacher indicated that the dangers of the pill would better have been aired behind closed doors.

"I have little faith in detailing the hazards of a drug . . . to a patient," he said, explaining that scientific data is too complicated for laymen to understand.

Nelson saw this as a "right-to-know" issue and decided to attack it head-on. Said he:

"We debated on the floor of the Senate at great length the antiballistic missile, which is an incredibly complicated mechanical device which probably nobody in the Congress could explain from a technical standpoint. Should that be discussed because it is complicated and the public really cannot understand it, or should it not?

". . . Do we have a right . . . to withhold knowledge developed by the Federal government itself through research and studies and conferences like (those held by) the National Institutes of Health, or should these matters be made a matter of public knowledge, counting, as it seems we always have to do, upon the ultimate good judgment of the public to come to a reasonable conclusion?"

Nelson, who is on record in favor of family planning and who is an advocate of zero population growth in this country and abroad, has touched a sensitive

nerve. We are increasingly finding in our society that too little public advance consideration of possible results from scientific or technological progress may cause a dangerous, even catastrophic, overreaction. The process goes about like this:

A scientific advance is made, and its manifest promise causes it to be oversold to the public. At the same time, research on what now seems a solved problem slows or grinds to a halt. The public adopts the new advance and uses it enthusiastically without really understanding its pluses and minuses.

In time, drawbacks begin to come to public attention. General revulsion sets in and, lacking possible benefits of continuing research, the public tunes out. At this point, the very real possibility exists that efforts to solve the problem will be abandoned for good.

What is even more serious, perhaps, is that changing attitudes in advanced countries like ours bring themselves to bear in other parts of the world that rely on us for technological inputs. The pill is one example, and DDT is another.

There is no question DDT has been overused in the United States, where it is threatening the environment. Developed countries may well get along nicely without it, but if they decide to abandon it for more expensive forms of pest control, underdeveloped countries that cannot afford such options are likely to follow suit.

If this happens, countless deaths from malaria may occur in Southeast Asia and tropical Africa because of decisions made in the United States and Sweden.

This, of course, is written with 20-20 hindsight. Nevertheless, where both the pill and DDT are concerned, something very like what has happened could easily have been predicted—in the case of the pill because its hormonal components exert an influence on many body systems, in the case of DDT because its poisonous properties persist in the environment long after their initial purpose is served.

Which brings us back to the public's right to know. Had society at large been informed of the hazards of DDT that were known or suspected 10 years ago, perhaps laws regarding its use would be different from those on the books.

Similarly, if women had been told about the hazards in the pill of which the medical profession long has had inklings, two things might have happened. First, many women might have opted for other measures of birth control, which would have been further developed than they now are; and, second, research into safer and equally effective "pills" might have had top-priority attention, which to date it has not.

○