

Senator NELSON. Our next witness is Dr. Thomas Bryant, Associate Director for Health Affairs, Office of Economic Opportunity.

Dr. Bryant, we are pleased to have you appear today. Please introduce your associates for identification in the record. You may present your statement however you desire. If you wish to extemporize on it, feel free to do so. It will be printed in full in the record.

STATEMENT OF DR. THOMAS E. BRYANT, ASSOCIATE DIRECTOR FOR HEALTH AFFAIRS, OFFICE OF ECONOMIC OPPORTUNITY; ACCOMPANIED BY DONALD PUGLIESE, CHIEF OF OPERATIONS, COMPREHENSIVE HEALTH SERVICES, OEO; AND DR. STEPHEN PAUL, CHIEF PHARMACY CONSULTANT, OFFICE OF ECONOMIC OPPORTUNITY

Dr. BRYANT. Thank you, Senator. Let me first say it is an honor to appear before the committee.

First, on my left is Mr. Donald Pugliese, Chief of the Operations of OEO's neighborhood health center, and on my left is Steve Paul, Temple University, Philadelphia, our Chief Pharmacy Consultant.

I have a brief statement for the record here, and if it is all right with the Senator, I would like to give an overview of that statement and then we will be happy to respond to any questions you might have.

Senator NELSON. Thank you.

Dr. BRYANT. Before I get started with that, let me quite frankly admit the limitations of some of the data that we are presenting to the committee. That data was gathered at the committee's request, and what we have represents a rather hasty survey and it is far from complete. We are continuing to receive data from the individual projects and we will continue to update and make current that information.¹

The comprehensive health services program of the Office of Economic Opportunity is seeking more effective ways to make high-quality care available to poor Americans for whom such care has frequently been inadequate, inaccessible, impersonal, fragmented, and undignified.

The current effort is based on three fundamental assumptions. First, all Americans are entitled to an equal opportunity for quality health services. Second, good health is critical, if one is to realize the benefits of educational and employment opportunities and to take other steps to break the poverty cycle. Third, comprehensive health services for the poor require significant changes in current practices in order to overcome traditional barriers and to ensure that such services are fully responsive to urgent needs. The health programs of the OEO include five main activities: (1) Comprehensive health services, including neighborhood health centers; of which there are now 64 as of the first of July, 1970; (2) family planning services program; (3) drug rehabilitation; (4) emergency food and medical services; and (5) alcoholism counselling and recovery.

¹ See information beginning at p. 7729.

All projects are designed—in the words of the Economic Opportunity Act—to be “furnished in a manner most responsive to needs (of low-income families) and with their participation.”

Of the 64 comprehensive health services projects currently funded, 47 are serving urban populations, and generally involve some form of “neighborhood health center.” Seventeen projects are testing alternative models in rural settings.

In addition to providing health services, these programs offer training in health fields and new careers to poor persons. Over half of the present positions in the health centers are staffed by community residents. To date, these positions represent more than 6,000 new jobs, including potential new careers such as family health workers.

As additional health programs are developed, they will focus their attention on different mechanisms to deliver comprehensive health care. The various types of mechanisms include development of communitywide programs serving the health needs of about 100,000 to 200,000 patients, reorganization of hospital outpatient departments, special approaches for rural areas, expansion of existing programs, and the development of additional group practice systems which will include new prepayment systems.

The neighborhood health centers vary greatly in design and conditions and have the potential to provide services to residents of a target area. In a city, the program may deliver services to a compact neighborhood; in a rural area, to a group of counties. In either case, a well-organized center can provide services for a population ranging from 10,000 to more than 50,000 persons.

Among new approaches to health care being tested at the neighborhood health center is the grouping of their health staff into family care teams. A family care team may include an internist, a pediatrician, a dentist, a pharmacist, a public health nurse, several family health workers, and a social worker. All members of a family are served by the same group. In this manner health care is based upon a coordinated personal relationship between the patient and the health team.

Except for emergencies, all patients are seen by appointment. They are made to feel welcome, hopefully, and hopefully are treated with warmth, respect, sympathy, and understanding—the indispensable elements in helping people in trouble, everywhere.

The neighborhood health center provides comprehensive, high-quality, personalized, continuous health care. Services for the entire family are offered at a conveniently located facility, various ambulatory services are usually provided under one roof, and referrals to needed specialized services and in-patient facilities are arranged.

OEO usually funds health centers through a grantee agency, such as the local community action agency, which then delegates the program, for purposes of operation, to an administrative agency, such as a hospital or medical school, group practice, and increasingly to community health corporations. Since these groups usually have pre-existing managerial and business systems, OEO does not ordinarily require any different fiscal and management systems. No single system is prescribed as long as the existing one is responsive to com-

munity needs and conditions. The Office of Health Affairs does provide technical assistance to modify existing systems when the need arises and when a new program becomes operational. An example of this approach is pharmacy delivery systems. Neighborhood health centers attempt to utilize local resources to the maximum extent feasible. Health centers will accept proposals to utilize pharmacies or pharmacists in the community to provide pharmaceutical services to patients. A recent survey of programs in operation indicated 34 percent used only community pharmacy sources in the health programs, 30 percent utilized only in-house pharmaceutical programs, and 20 percent used a combination of in-house and community pharmacy programs. The remaining 16 percent used miscellaneous sources, such as hospital-type arrangements, for pharmaceutical services. The pharmacy programs of neighborhood health centers which were instituted were in response to the needs of the community and were designed to be an integral part of the comprehensive health services delivery system.

I would now like to describe some of the experiences which the Office of Health Affairs has encountered with drug purchasing in neighborhood health centers which I think will be of interest to the committee.

Drugs are presently purchased in neighborhood health centers by direct and indirect methods. Purchases through hospitals and community pharmacies we constitute as indirect buying of pharmaceuticals. Indirect sources of supply are usually more expensive than purchases of pharmaceuticals through, for example, the Veterans' Administration. This is due to the fact that the acquisition costs per unit are usually higher for hospitals and community pharmacies. Although a number of major pharmaceutical companies have instituted a one-price policy for the sale of their pharmaceuticals, this action has not entirely eliminated the differential in the prices of drugs among community pharmacies, hospitals, and governmental agencies.

Information OEO has gathered from a recent study, indicated that acquisition prices are the lowest to governmental agencies and programs, more costly for hospitals and still more expensive for community pharmacies. The community pharmacy acquisition costs can amount to 50 percent above a comparable governmental cost.

Mr. GORDON. Dr. Bryant, may I interrupt there? Have you ever calculated how much money could be saved if the purchases are made directly from the Veterans' Administration or Defense Supply Agency?

Dr. BRYANT. Well, as you know, I do not adhere exactly to that principle but I do not know that we have got an exact figure on how much money we could save.

Mr. GORDON. Can you give us an estimate? How many dollars could you save by doing that?

Dr. BRYANT. In fiscal 1970, for instance, our estimates are that we are spending somewhere in the neighborhood of four million, maybe more, of OEO dollars, in purchasing pharmaceuticals. It is through a combination of the figures I gave for direct and indirect purchases. I guess we probably could have somewhere in the neighbor-

hood of \$1½ million and that really is a "guesstimate" rather than an estimate, money that we could save if we in some way mandated each of our neighborhood health centers to buy only from some source like the VA.

As I go through my testimony I would like to at least give our position that perhaps is not totally desirable to do and some of the reasons why we think not.

The premium for hospital purchases can be about 20 to 30 percent above the prices secured under the Veterans' Administration contract.

The second major source for purchase is directly by neighborhood health center pharmacies. The sources of supply can be classified into the following categories:

1. Direct from manufacturer at the Federal supply schedule price.
2. Direct from manufacturer at the community pharmacy price.
3. Direct from manufacturer at the hospital price.
4. Direct from manufacturer at a contract or negotiated price.
5. Direct from Veterans' Administration Supply Depot or Veterans' Administration hospital.
6. Purchased from wholesaler at the regular community pharmacy price.
7. Purchased from wholesaler at a reduction in the regular community pharmacy price.
8. Purchased from a center-affiliated hospital pharmacy.
9. Purchased from a city, county or State institution.
10. Purchased from miscellaneous sources.

The policy and practice of the Office of Economic Opportunity has been to encourage and assist programs in purchases from Veterans' Administration and Federal supply schedules. The source of drugs usually resulting in the lowest cost to the health center is the Veterans' Administration. This is usually true whether the drug is purchased by its brand name or its generic name. The reason for this is due to the fact that VA prices are predicated upon a predetermined quantity of medication based upon historical data and forecasts for the current year's usage. However, there are instances in which a negotiated contract with a manufacturer will result in lower costs to health centers.

Neighborhood health center pharmacies are encouraged to purchase at the lowest price. Due to the fact that there are numerous products which are not in the VA catalog, the pharmacist may have to choose his supplier and the segment of the market in which he will purchase. There are numerous segments which can be utilized. These market prices include Federal supply schedule prices, governmental agency prices, contract prices, hospital prices, community pharmacy prices and wholesaler prices. Depending upon the pharmaceuticals required by the patient, one market source of procurement may be more advantageous than another.

Each comprehensive health services program has been designed to meet the special needs of the specific community in which it has been established. Full responsibility for planning and conducting services including the purchase of drugs and other consumable supplies is with the local project officials and not at the national level.

For example, physicians are not expected to prescribe according to a national formulary, but usually function through a therapeutics committee, established by the center. One of the committees' functions is the improvement of patient health through the utilization of the most effective pharmaceutical product for an intended therapeutic effect.

The present logistics of drug procurement among neighborhood health centers are relatively adequate. One problem experienced by some health centers results from imperfect transmission of knowledge concerning drug prices. This lack of information has created the situation whereby pharmacists occasionally pay different prices for the same drug. Sometimes this difference is due to the market segment in which the acquisition occurs. In other instances, it is due to purchasing the drug from a different supplier.

A second difficulty results from the distributing system. For the most part the procurement of pharmaceuticals through Veterans' Administration has been satisfactory. However, there have been some unexplained timelags between the ordering and consequent receipt of drugs which have necessitated ordering in the open market at higher prices per unit. Other problems relate to administrative issues. Early in the development of the health care program, drug volume may be only modest. Therefore, it is impractical to order pharmaceuticals from the VA or have special agreements worked out with pharmaceutical manufacturers. In other instances, due to the relatively small number of patients being seen by physicians, it is a better utilization of management time to purchase through non-Federal sources of supply. This practice requires a minimum of time being devoted to purchasing aspects and maximum time for the direct delivery of health services.

PREScribing PATTERNS

The Office of Health Affairs, Office of Economic Opportunity has encouraged the adoption of drug formularies in all individual neighborhood health centers whether or not the program utilizes an in-house pharmacy. The formulary concept enables all professional staff to become acquainted with the clinical aspects of the drugs considered most useful therapeutically and the amounts of medication needed to arrest a disease. The formulary concept does not interfere with medical practice; however, it does create a climate in which health practitioners can strive to attain better therapeutic results with patients. Various centers which utilize formularies have different policies concerning the restraints which are placed upon prescribing physicians. Some programs require written authorization to dispense a product which is not contained in the formulary. In other programs the physicians are encouraged to prescribe those items in the restricted drug listing.

Health centers usually evaluate a patient's progress on a continuing basis, using a peer group of health professionals. Part of their review involves the prescriptions written by physicians, to see whether the medication prescribed was appropriate for the condition diagnosed, whether the quantity prescribed was sufficient and whether the number of prescriptions utilized was excessive. During

the utilization review process, the peer committee looks at the initial quantity of medications prescribed and the dosage adjustment, multiple prescribing and drug-strength selection.

While all health centers have not reached the degree of sophistication and experience needed for a smoothly functioning utilization review program, several of the centers have started toward this goal.

OEO'S INTEREST IN PROMOTING RATIONAL DRUG THERAPY

Recognizing the importance of utilization review and its role in improving the quality of health care, neighborhood health centers are attempting to promote rationale drug therapy in the context of the team approach to health care. As just stated above, rationale drug therapy means prescribing the right pharmaceutical, supply or device for the right patient, at the right time, in the right amounts and with due consideration of the relative costs of alternative forms of therapy, expected clinical results, possible side effects, the most appropriate dosage form, the length and intensity of treatment and the possible effects of drug interaction. One very important part of rationale drug therapy concerns acquisition costs.

The Office of Health Affairs is presently preparing a listing of selected drugs which are purchased by each health center. Information has been obtained from a representative number of programs indicating their sources of supply and the amount paid for the products. This information will be sent to health center officials to alert them to the fact that drugs presently prescribed by physicians may be able to be obtained less expensively through a different market segment than the one they are presently using.

In addition, the Office of Health Affairs staff routinely reexamines the pharmacy portion of the refunding proposals of all health centers. The anticipated number of prescriptions and/or requests for drugs are evaluated in terms of the center's service population. Assistance is given to the health centers when it is necessary to modify their budgetary estimates or procurement practices. This assistance is structured toward making more effective utilization of funds and more consistent use projections.

That concludes the statement, Mr. Chairman. If there are any questions we will be glad to respond.

Senator NELSON. I have some comparative prices here. I suppose the problem you state is complicated in that you may have some small operations in various parts of the country where it is necessary to buy retail. I would like to put these comparisons in the record. But I notice that in the acquisition of chlordiazepoxide—Librium—500 tablets, OEO paid \$38, that DSA paid \$13.20, and that the Red Book price was \$32. This was a purchase, as I understand it, by OEO itself, an in-house purchase, not a retail market purchase, is that correct? Maybe I am wrong.

Dr. BRYANT. Which drug are you referring to?

Senator NELSON. Chlordiazepoxide. It is under table 1, "In-House Pharmacy Drug Purchases," by that you mean purchases by OEO itself.

Dr. BRYANT. No.

Senator NELSON. Table 3.

Dr. BRYANT. Dr. Paul will clarify that.

Senator NELSON. Table 3, page—

Dr. PAUL. Table 3 refers to the prices which are charged in neighborhood health centers by participating community pharmacies.

Mr. GORDON. This is in-house.

Senator NELSON. What does in-house mean, then?

Dr. PAUL. The "in-house" refers to pharmacies in the neighborhood health centers.

Senator NELSON. When you say in-house programs you are talking about OEO.

Dr. BRYANT. I think that is the point to be clarified.

Senator NELSON. What does in-house mean in your—

Dr. BRYANT. In-house means exactly that. It is a pharmacy located within the premises of the center itself, but I think an erroneous impression—

Senator NELSON. That is the way you are using the word "in-house"?

Dr. BRYANT. In-house means located within the premises of the neighborhood health center itself, within the facility.

Senator NELSON. You mean it is an OEO facility.

Dr. BRYANT. It is an OEO-assisted neighborhood health center. Let me explain: there is a grant for a health project, comprehensive health project. One aspect of that is most often a building or facility in which to render ambulatory health care. When we say we have an in-house pharmacy program that means within that building there is a room or series of rooms set aside to be a pharmacy.

Senator NELSON. But the pharmacy is operated by the OEO.

Dr. BRYANT. By the health center with OEO funds. That is an important distinction to make. It is not an arm of the OEO headquarters in Washington. It is a center that is operated by the grantee agency, the Community Action Agency or delegate agency.

Senator NELSON. It is not a privately owned pharmacy.

Dr. BRYANT. Not in the usual sense. It is "owned" by a private, nonprofit corporate entity, the grantee.

Senator NELSON. Then, how would you explain the price of \$38 being paid for chlorthalidone when the Red Book price—the price to the druggist—is \$32? In other words, any pharmacist can get it at \$32.

Dr. PAUL. The pricing in the Red Book, I believe, is an average wholesale price. One individual vendor goes to a wholesale distribution system. The \$38 may very well be a typographical error due to our haste in getting information for you and this we will check and submit for the record, just to clarify this specific point. I think what you may be alluding to is why in this particular instance a pharmacist is being charged \$32 and it is available to another institution such as VA for \$14 or \$17. This is due to the fact that the program in this case was not in operation for a very long period of time. It just commenced operation and so they needed drugs for immediate stocking and they went to the fastest source which was the local wholesaler and they paid this large price but in subsequent purchases they will be going through other systems which will minimize the cost of the program.

Senator NELSON. Is that the explanation for a number of these such as—

Dr. BRYANT. I think it will be, Senator. I think you will find, and I think we said flatly in the testimony, there is no doubt that we can save money by buying directly from places like the VA much cheaper than buying on the local market, but what we find, I think you commented earlier, that as some of our health centers begin to become operational it is just not feasible to buy in the type of bulk they would have to buy through the VA. Therefore, you will find some large discrepancies. I think you are going to find that is the main explanation for most of the discrepancies that we have provided. And there are lots of them, as I said.

Senator NELSON. It just seems to me that OEO should not pay a higher price than the average price paid by the private pharmacists around the country.

Dr. BRYANT. I would be the first to say that is not a desirable thing. We would not like for that to continue and I hope it will not. Our experience is, and we are getting a feel for it, the unfortunate thing is we do not have that much hard data to support it. We are getting it, as I said, but we are getting to feel as these centers become more operational and as they see more and more patients, as they are in existence over a period of 2 to 3 years and they begin to take greater advantage of the VA system and Federal Supply System. Many of them, as they start up, are in no position to take advantage of it, and quite frankly, a lot of it is just lack of communication and education which we have more of to do.

Mr. GORDON. We also have other tables supplied by you. Table 4 shows community pharmacy charges for selected drug products. What is the significance of those prices? You supplied them on a per-capsule basis, but we converted them to 100 capsules or 500 capsules to compare with the in-house pharmacy prices and they are, of course, considerably higher.

Now, let me ask you this. Is there an additional professional fee added on to these prices?

Dr. BRYANT. Yes.

Mr. GORDON. In other words, the prices you gave us are really not those paid by the OEO, but should include a professional fee; is that it?

Dr. BRYANT. No. This price includes the professional fee, I think. Let me ask Mr. Pugliese.

Mr. PUGLIESE. No. When we purchase through vendor programs, that is to say, when neighborhood health centers have patients get their prescriptions filled at local retail drug stores, the center will reimburse the pharmacy their acquisition cost, and the fee allowed by the medicaid program in that State for drugs for those patients not medicaid eligible. It is usually a cost plus a fixed fee or cost plus a percentage markup. This figure in the chart represents the cost of the material itself.

Mr. GORDON. The prices you gave us represent—

Dr. BRYANT. Represent the cost.

Mr. GORDON. Of the material. But it does not represent the total cost of the item to OEO?

Dr. BRYANT. The professional fee may be on top of that.

Mr. GORDON. Do you ever use a 66 $\frac{2}{3}$ -percent profit, or is it only on a fixed-fee basis?

Mr. PUGLIESE. It depends on how the medicaid program in the State reimburses retail pharmacies. We follow that pattern.

Mr. GORDON. I see.

Mr. Chairman, I ask that these data be put in the record at the appropriate place.

Dr. BRYANT. I think one of the things you are alluding to, the point you are making, which I think is a valid one, is that you go through the figures that we have and prove that it does indeed cost more or it takes more OEO dollars to buy pharmaceuticals from local pharmacies in many instances. The local pharmacies are not able to buy at competitive prices as GSA or VA hospitals.

One of the points that I wanted to stress is that we like to do business with local pharmacies. We encourage local pharmacists to come into the comprehensive health care team. That means encouraging local centers if the wishes of their communities are to continue to utilize existing community pharmacies, if we can upgrade the services provided by those existing community pharmacies, then we are all for it. We encourage that. We like for good local pharmacies to be active establishments in these neighborhoods. You do sometimes run into cost differentials when you do that, however. It is one of the prices you pay.

Senator NELSON. Thank you very much, Doctor. We appreciate your taking the time to come here today. Excuse me. Did you have a question?

Mr. JONES. No.

Senator NELSON. I will ask that certain documents and insertions be placed at the end of yesterday's record, which I neglected to take care of yesterday.

Thank you.

(The complete prepared statement and supplemental information submitted by Dr. Bryant follows:)

STATEMENT OF DR. THOMAS E. BRYANT, ASSOCIATE DIRECTOR FOR HEALTH AFFAIRS, OFFICE OF ECONOMIC OPPORTUNITY

INTRODUCTION

The Comprehensive Health Services Program of the Office of Economic Opportunity is seeking more effective ways to make high quality health care available to poor Americans for whom such care has frequently been inadequate, inaccessible, impersonal, fragmented and undignified.

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The programs of the Office of Health Affairs, Office of Economic Opportunity include five principal activities:

1. Comprehensive Health Services, including Neighborhood Health Centers;
2. Family Planning Services;
3. Drug Rehabilitation;

4. Emergency Food and Medical Services; and
5. Alcoholism Counselling and Recovery.

All projects are designed—in the words of the Economic Opportunity Act—to be “furnished in a manner most responsive to needs (of low-income families) and with their participation.”

Of the 64 comprehensive health services projects currently funded, 47 are serving urban populations, and generally involve some form of “neighborhood health center.” Seventeen projects are testing alternative models in rural settings.

In addition to providing health services, these programs offer training in health fields and new careers to poor persons. Over half of the present positions in the health centers are staffed by community residents. To date, these positions represent more than 6,000 new jobs, including potential new careers such as family health workers.

As additional health programs are developed, they will focus their attention on different mechanisms to deliver comprehensive health care. The various types of mechanisms include development of community programs serving the health needs of about 100-200,000 patients, reorganization of hospital out-patient departments, special approaches for rural areas, expansion of existing programs and the development of additional group practice systems which will include new prepayment systems.

The Neighborhood Health Centers vary greatly in design and conditions and have the potential to provide services to residents of a target area. In a city, the program may deliver services to a compact neighborhood; in a rural area, to a group of counties. In either case, a well-organized center can provide services for a population ranging from 10,000 to more than 50,000.

Among new approaches to health care being tested at the Neighborhood Health Center is the grouping of their health staff into family care teams. A family care team may include an internist, a pediatrician, a dentist, a pharmacist, a public health nurse, several family health workers and a social worker. All members of a family are served by the same group. In this manner health care is based upon a coordinated personal relationship between the patient and the health team.

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DRUG PURCHASING

I would now like to describe some of the experiences which the Office of Health Affairs has encountered with drug purchasing in Neighborhood Health Centers.

Drugs are presently purchased in Neighborhood Health Centers by direct and indirect methods. Purchases through hospitals and community pharmacies constitute indirect buying of pharmaceuticals. Indirect sources of supply are usually more expensive than purchases of pharmaceuticals through the Veterans Administration. This is due to the fact that the acquisition costs per unit are usually higher for hospitals and community pharmacies. Although a number of major pharmaceutical companies have instituted a one-price policy for the sale of their pharmaceuticals, this action has not eliminated the differential in the prices of drugs among community pharmacies, hospitals and governmental agencies.

Information OEO has gathered from a recent study, indicated that acquisition prices are the lowest to governmental agencies and programs, more costly for hospitals and still more expensive for community pharmacies. The community pharmacy acquisition costs can amount to 50% above a comparable governmental cost. The premium for hospital purchases can be about 20 to 30% above the prices secured under the Veterans Administration contract.

The second major source for purchase is directly by Neighborhood Health Center pharmacies. The sources of supply can be classified into the following categories:

1. Direct from manufacturer at the Federal Supply Schedule price;
2. Direct from manufacturer at the community pharmacy price;
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The practice of the Office of Economic Opportunity has been to encourage and assist programs in purchases from Veterans Administration and Federal Supply Schedules. The source of drugs usually resulting in the lowest cost to the health center is the Veterans Administration. This is usually true whether the drug is purchased by its brand name or its generic name. The reason for this is due to the fact that VA prices are predicated upon a pre-determined quantity of medication based upon historical data and forecasts for the current year. However, there are instances in which a negotiated contract with a manufacturer will result in lower costs to health centers.

Neighborhood Health Center pharmacists are encouraged to purchase at the lowest price. Due to the fact that there are numerous products which are not in the VA Catalogue, the pharmacist may have to choose his supplier and the segment of the market in which he will purchase. There are numerous segments which can be utilized. These market prices include Federal Supply Schedule prices, governmental agency prices, contract prices, hospital prices, community pharmacy prices and wholesaler prices. Depending upon the pharmaceuticals required by the patient, one market source of procurement may be more advantageous than another.

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For example, physicians are not expected to prescribe according to a national formulary, but usually function through a therapeutics committee, established by the center. One of the committees' functions is the improvement of patient health through the utilization of the most effective pharmaceutical product for an intended therapeutic effect.

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it is due to purchasing the drug from a different supplier. A second difficulty results from the distributing system. For the most part the procurement of pharmaceuticals through Veterans Administration has been satisfactory. However, there have been some unexplained time lags between the ordering and consequent receipt of drugs which have necessitated ordering in the open market at higher prices per unit. Other problems relate to administrative issues. Early in the development of the health care program, drug volume may be only modest. Therefore, it is impractical to order pharmaceuticals from the VA or have special agreements worked out with pharmaceutical manufacturers. In other instances, due to the relatively small number of patients being seen by physicians, it is a better utilization of management time to purchase through non-federal sources of supply. This practice requires a minimum of time being devoted to purchasing aspects and maximum time for the direct delivery of health services.

PREScribing PATTERNS

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The Office of Health Affairs is presently preparing a listing of selected drugs which are purchased by each health center. Information has been obtained from a representative number of programs indicating their sources of supply and the amount paid for the products. This information will be sent to health center officials to alert them to the fact that drugs presently prescribed by physicians may be able to be obtained less expensively through a different market segment than the one they are presently using.

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TEMPLE UNIVERSITY,
HEALTH SCIENCES CENTER,
SCHOOL OF PHARMACY,
Philadelphia, Pa., September 9, 1970.

MR. BENJAMIN GORDON,
Select Committee on Small Business,
U.S. Senate, Washington, D.C.

DEAR MR. GORDON: Pursuant to your request during the drug procurement hearings in August, I have verified the pharmaceutical price which you questioned. The pharmaceutical, Librium (chlordiazepoxide) 10 mg., was purchased at a price of \$31.50 per 500 capsules from the wholesaler, and not \$38.00 as reported in the Table III.

I hope this information will prove of interest to you in your data analysis.

Sincerely,

STEPHEN H. PAUL, PH.D.,
Pharmaceutical Consultant.

TABLE I.—IN-HOUSE PHARMACY DRUG PURCHASES

Year	Dollars spent ¹	Health centers reporting
1968.....	\$285,048	10
1969.....	774,393	12
1970.....	² 452,245	21

¹ This monetary sum includes pharmaceuticals purchased for physician utilization.

² This sum represents the money spent for pharmaceuticals during the 1st quarter of 1970. The estimated drug budget for in-house pharmacy programs for 1970 is projected to be \$1,722,087 for 22 health centers reporting.

TABLE II.—COMMUNITY PHARMACY CHARGES TO NEIGHBORHOOD HEALTH CENTERS

Year	Dollar charges	Health centers reporting
1968.....	\$139,231	12
1969.....	437,396	14
1970.....	¹ 195,604	13

¹ This sum represents funds paid to participating pharmacies during the 1st quarter of 1970. Medicaid prescription charges are not included in this figure.

TABLE III.—Inhouse Drug Costs For Selected Drug Products

Ampicillin, 250 mg. CAP:

Direct from manufacturer at the FSS price:

Bristol: \$29.20 per 500.

Bristol: \$32.75 per 500.

Squibb: \$33.00 per 500.

Bristol: \$6.67 per 100.

Ayerst: \$6.70 per 100.

Direct from manufacturer at the hospital price:

Bristol: \$42.50 per 500.

Direct from manufacturer at a contract or negotiated price:

Wyeth: \$28.75 per 500.

Bristol: \$5.50 per 100; \$5.60 per 100.

Wyeth: \$28.80 per 500; \$32.95 per 500.

Direct from VA Supply Depot or VA Hospital:

\$32.95 per 500.

\$6.67 per 100.

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Purchased from wholesaler at the regular community pharmacy price:
 Pacific Drugs: \$21.82 per 100.
 Bristol: \$21.99 per 100.
 Drugs purchased from the center affiliated hospital pharmacy:
 Ayerst: \$5.40 per 100.
 Drugs purchased from the United States Navy Department: \$37.00 per 500.

Chlordiazepoxide, 10 mg. CAP:

Direct from manufacturer at the community pharmacy price:
 Roche: \$23.95 per 500; \$7.12 per 100.
 Direct from manufacturer at the hospital price:
 Roche: \$27.72 per 500.
 Direct from manufacturer at a contract or negotiated price:
 Roche: \$17.50 per 500.
 Direct from VA Supply Depot or VA Hospital:
 \$14.17 per 500.
 Purchased from wholesaler at a reduction in the regular community pharmacy price:
 \$38.00 per 500.
 Drugs purchased from the center affiliated hospital pharmacy:
 Roche: \$57.40 per 1000.
 Drugs purchased from the U.S. Navy Department:
 \$14.20 per 500.

Chlorothiazide, 500 mg. TAB:

Direct from manufacturer at the FSS price:
 MSD: \$228.00 per 5,000.
 Direct from manufacturer at the community pharmacy price:
 MSD: \$48.35 per 1,000; \$5.10 per 100.
 Direct from manufacturer at the hospital price:
 MSD: \$48.45 per 1,000.
 Direct from VA Supply Depot or VA Hospital:
 MSD: \$7.95 per 1,000; \$8.90 per 1,000; \$22.31 per 1,000; \$22.44 per 1,000; \$22.98 per 1,000; \$57.71 per 1,000.
 Drugs purchased from the center affiliated hospital pharmacy:
 MSD: \$45.60 per 1,000.
 Drugs purchased from the U.S. Navy Department:
 \$19.10 per 1,000.

Chlorpromazine, 25 mg. TAB:

Direct from manufacturer at the FSS price:
 SKF: \$45.90 per 1,000.
 Direct from manufacturer at the community pharmacy price:
 SKF: \$34.65 per 1,000.
 Direct from manufacturer at a contract or negotiated price.
 SKF: \$172.04 per 5,000.
 Direct from VA Supply Depot or VA Hospital:
 \$35.34 per 1,000.
 Purchased from wholesaler at the regular community pharmacy price:
 SKF: \$36.00 per 1,000.
 Gilman: \$3.80 per 100; \$54.00 per 1,000; \$5.70 per 100.
 Purchased from wholesaler at a reduction in the regular community pharmacy price:
 SKF: \$36.00 per 1,000; \$40.00 per 1,000; \$49.68 per 1,000.
 Drugs purchased from the center affiliated hospital pharmacy:
 SKF: \$36.00 per 1,000; \$5.70 per 100.

Dexamethasone, 0.75 mg. TAB:

Direct from manufacturer at the FSS price:
 MSD: \$10.90 per 100.
 USV: \$58.00 per 1,000.
 Direct from manufacturer at the community pharmacy price:
 MSD: \$10.90 per 100.
 MSD: \$14.50 per 100.
 Direct from manufacturer at the hospital price:
 MSD: \$8.00 per 100.
 MSD: \$14.50 per 1,000.

Direct from VA Supply Depot or VA Hospital:

\$16.00 per 500.

Purchased from wholesaler at the regular community pharmacy price:

\$7.68 per 100.

Purchased from wholesaler at a reduction in the regular community pharmacy price:

MSD: \$14.50 per 100.

Drugs purchased from the center affiliated hospital pharmacy:

Organon: \$6.68 per 100.

Diazepam, 5 mg. TAB:

Direct from manufacturer at the community pharmacy price:

Roche: \$27.00 per 500; \$8.03 per 100.

Direct from manufacturer at the hospital price:

Roche: \$33.44 per 500.

Direct from manufacturer at a contract or negotiated price:

Roche: \$22.00 per 500; \$27.00 per 500.

Direct from VA Supply Depot or VA Hospital:

Roche: \$19.59 per 500; \$19.62 per 500; \$19.65 per 500.

Purchased from wholesaler at a reduction in the regular community pharmacy price:

Roche: \$38.00 per 500.

Drugs purchased from the center affiliated hospital pharmacy:

Roche: \$69.38 per 1,000.

Drugs purchased from U.S. Navy Department:

Roche: \$19.40 per 500.

Erythromycin, 250 mg. CAP/TAB:

Direct from manufacturer at the community pharmacy price:

Abbott: \$8.95 per 100; \$21.99 per 100.

Direct from manufacturer at the hospital price:

Abbott: \$13.50 per 1,000.

Direct from manufacturer at a contract or negotiated price:

Upjohn: \$8.09 per 100.

Direct from VA Supply Depot or VA Hospital:

Abbott: \$3.28 per 100; \$3.31 per 100; \$3.36 per 100; \$3.38 per 100.

Lilly: \$3.54 per 100; \$3.84 per 100.

Purchased from wholesaler at a reduction in the regular community pharmacy price:

Lilly: \$15.10 per 100.

Drugs purchased from the center affiliated hospital pharmacy:

\$13.90 per 100.

Drugs purchased from U.S. Navy Department:

\$2.67 per 100.

Meprobamate, 400 mg. TAB:

Direct from manufacturer at FSS price:

Wyeth: \$24.50 per 1,000.

Direct from manufacturer at direct community pharmacy price:

Ladco: \$3.80 per 100.

Direct from manufacturer at a contract or negotiated price:

Wallace: \$1.95 per 100; \$24.00 per 1,000.

Wyeth: \$24.50 per 1,000.

Wallace: \$12.50 per 500.

West-Ward: \$150.00 per 5,000.

Direct from VA Supply Depot or VA Hospital:

Syntetic: \$2.70 per 500; \$2.85 per 500; \$3.54 per 500.

Purchased from wholesale at the usual price:

Generix Drug Sales: \$12.95 per 1,000; \$34.85 per 1,000.

Purchased from wholesaler at a reduction in the usual price:

\$2.50 per 100.

Drugs purchased from miscellaneous sources:

U.S. Navy: \$1.81 per 500.

Penicillin G, 250 mg. TAB:

- Direct from manufacturer at the FSS price:
 - Wyeth: \$14.80 per 1,000; \$18.50 per 1,000.
- Direct from manufacturer at the community pharmacy price:
 - Pfizer: \$12.65 per 1,000; \$22.30 per 1,000; \$2.70 per 100.
- Direct from manufacturer at a contract or negotiated price:
 - Pfizer: \$11.50 per 1,000; \$13.50 per 1,000.
 - Pfizer: \$14.00 per 1,000.
 - Pfizer: \$16.75 per 1,000.
 - West-Ward: \$2.00 per 100.
 - Pfizer: \$15.40 per 1,000.
- Direct from VA Supply Depot or VA Hospital:
 - \$.78 per 100.
- Purchased from wholesaler at a reduction in the regular community pharmacy price:
 - \$15.50 per 1,000; \$2.00 per 100.
- Drugs purchased from the center affiliated hospital pharmacy:
 - Pfizer: \$17.50 per 1,000.

Prednisolone, 5 mg. TAB:

- Direct from manufacturer at the community pharmacy price:
 - Ladco: \$.83 per 100.
- Direct from manufacturer at a contract or negotiated price:
 - McKesson: \$5.36 per 1,000.
- Direct from VA Supply Depot or VA Hospital:
 - \$5.36 per 1,000.
- Purchased from wholesalers at a reduction in the regular community pharmacy price:
 - \$5.48 per 1,000.

Prednisone, 5 mg. TAB:

- Direct from manufacturer at the FSS price:
 - Upjohn: \$10.47 per 500.
- Direct from manufacturer at the community pharmacy price:
 - Ladco: \$.71 per 100.
 - Upjohn: \$10.95 per 500.
- Direct from manufacturer at the hospital price:
 - Upjohn: \$10.47 per 500.
- Direct from manufacturer at a contract or negotiated price:
 - West-Ward: \$3.80 per 1,000; \$35.00 per 5,000.
 - McKesson: \$4.61 per 1,000.
- Direct from VA Supply Depot or VA Hospital:
 - \$4.25 per 1,000; \$4.29 per 1,000; \$4.57 per 1,000; \$4.61 per 1,000.
- Purchased from wholesaler at a reduction in the regular community pharmacy price:
 - McKesson: \$5.30 per 1,000; \$5.40 per 1,000.
 - Premo: \$.828 per 1,000.
- Drugs purchased from the center affiliated hospital pharmacy:
 - Vitarine: \$.785 per 1,000.
- Drugs purchased from the U.S. Navy Department:
 - \$4.71 per 1,000.

Prochlorperazine, 10 mg. TAB:

- Direct from manufacturer at the FSS price:
 - SKF: \$63.48 per 1,000.
- Direct from manufacturer at the community pharmacy price:
 - SKF: \$52.05 per 1,000.
- Direct from manufacturer at the hospital price:
 - SKF: \$48.96 per 500.
- Direct from manufacturer at a contract or negotiated price:
 - SKF: \$3.34 per 100.
- Direct from VA Supply Depot or VA Hospital:
 - \$183.76 per 5,000; \$40.93 per 1,000; \$25.42 per 500.
- Purchased from wholesaler at the regular community pharmacy price:
 - SKF: \$74.68 per 1,000; \$7.86 per 100.

Purchased from wholesaler at a reduction in the regular community pharmacy price:

\$69.00 per 1,000.

Drugs purchased from the center affiliated hospital pharmacy:

SKF: \$7.47 per 100.

Propoxyphene, 32 mg. CAP:

Direct from VA Supply Depot or VA Hospital:

Lilly: \$7.11 per 500; \$7.13 per 500; \$7.17 per 500; \$7.69 per 500; \$7.76 per 500.

Purchased from wholesaler at the regular community pharmacy price:

Lilly: \$17.66 per 500; \$17.67 per 500; \$4.62 per 100.

Purchased from wholesaler at a reduction in the regular community pharmacy price:

\$11.00 per 500; \$13.30 per 500; \$16.26 per 500.

Drugs purchased from the center affiliated hospital pharmacy:

\$17.67 per 500.

Drugs purchased from U.S. Navy Department:

\$1.70 per 100.

Propoxyphene hydrochloride, aspirin and phenacetin, 65 mg. CAP:

Direct from VA Supply Depot or VA Hospital:

Lilly: \$13.53 per 500; \$13.54 per 500; \$13.99 per 500; \$14.11 per 500; \$14.12 per 500.

Purchased from wholesaler at the regular community pharmacy price:

Lilly: \$19.10 per 500; \$7.32 per 100.

Purchased from wholesaler at a reduction in the regular community pharmacy price:

Lilly: \$21.70 per 500; \$26.17 per 500, \$28.62 per 500.

Drugs purchased from the center affiliated hospital pharmacy:

Lilly: \$26.17 per 500.

Drugs purchased from the U.S. Navy Department:

Lilly: \$13.70 per 500.

Reserpine, 0.25 mg. TAB:

Direct from manufacturer at the FSS price:

Squibb: \$6.69 per 1,000.

Squibb: \$7.60 per 1,000.

Direct from manufacturer at the community pharmacy price:

Town and Paulsen: \$5.85 per 5,000; \$8.22 per 5,000.

Ladco: \$1.19 per 100.

McKesson: \$2.60 per 1,000.

Lannett: \$2.80 per 1,000.

Direct from manufacturer at the hospital price:

Ciba: \$160.00 per 5,000.

Direct from manufacturer at a contract or negotiated price:

Stayner: \$4.00 per 5,000.

West-Ward: \$10.00 per 5,000; \$2.40 per 1,000.

Squibb: \$4.00 per 1,000.

Upjohn: \$7.75 per 1,000.

Direct from VA Supply Depot or VA Hospital:

\$35.94 per 1,000.

\$45.87 per 1,000.

Purchased from wholesaler at the regular community pharmacy price:

Generix Drug Sales: \$4.95 per 5,000.

Stan Labs: \$2.50 per 1,000.

Purchased from wholesaler at a reduction in the regular community pharmacy price:

\$1.20 per 1,000.

Drugs purchased from the center affiliated hospital pharmacy:

Squibb: \$1.40 per 1,000.

Drugs purchased from the U.S. Navy Department:

\$.95 per 1,000.

Secobarbital, 100 mg. CAP:

Direct from manufacturer at the community pharmacy price:

\$2.16 per 100.

Direct from manufacturer at a contract or negotiated price:

West-Ward: \$4.00 per 1,000.

APC: \$6.50 per 1,000.

Direct from VA Supply Depot or VA Hospital:

\$1.50 per 500.

\$1.80 per 500.

\$1.97 per 500.

\$2.14 per 500.

\$2.21 per 500.

Purchased from wholesaler at the regular community pharmacy price:

Lilly: \$9.15 per 500; \$2.16 per 100.

Purchased from wholesaler at a reduction in the regular community pharmacy price:

Lilly: \$5.20 per 500; \$8.42 per 500; \$9.15 per 500.

Drugs purchased from the center affiliated hospital pharmacy:

Vitarine: \$7.14 per 1,000.

Sodium Warfarin, 5 mg. TAB:

Direct from manufacturer at the FSS price:

Endo: \$1.58 per 100.

Direct from manufacturer at the community pharmacy price:

Abbott: \$3.06 per 100.

Direct from manufacturer at the hospital price:

Stanford: \$14.50 per 1,000.

Abbott: \$2.75 per 100.

Direct from manufacturer at a contract or negotiated price:

Endo: \$10.12 per 1,000.

Direct from VA Supply Depot or VA Hospital:

\$14.50 per 1,000.

Purchased from wholesaler at the regular community pharmacy price:

Endo: \$4.00 per 100.

Endo: \$40.05 per 1,000.

Endo: \$4.50 per 100.

Purchased from wholesaler at a reduction in the regular community pharmacy price:

Endo: \$4.14 per 100.

Drugs purchased from the U.S. Navy Department:

\$1.60 per 100.

Sulfisoxazole, 500 mg. TAB:

Direct from manufacturer at the community pharmacy price:

Roche: \$100.00 per 5,000; \$2.94 per 100.

Direct from manufacturer at the hospital price:

Roche: \$100.00 per 5,000.

Direct from VA Supply Depot or VA Hospital:

Roche: \$9.18 per 1,000; \$9.27 per 1,000.

Purchased from wholesaler at the regular community pharmacy price:

\$25.00 per 1,000.

Purchased from wholesaler at a reduction in the regular community pharmacy price:

\$13.25 per 500.

Drugs purchased from the center affiliated hospital pharmacy:

Roche: \$21.50 per 1,000.

Drugs purchased from the U.S. Navy Department:

\$9.00 per 1,000.

Drugs purchased from a city, county, or State institution:

PREMO: \$13.80 per 1,000.

Tolbutamide, 500 mg. TAB:

Direct from manufacturer at the FSS price:

Upjohn: \$62.40 per 1,000.

Direct from manufacturer at the community pharmacy price:

Upjohn: \$32.91 per 500.

Upjohn: \$3.48 per 50.

Direct from manufacturer at the hospital price:

Upjohn: \$64.99 per 1,000.

Direct from manufacturer at a contract negotiated price:

Upjohn: \$12.16 per 200; \$32.50 per 500.

Direct from VA Supply Depot or VA Hospital:

\$15.01 per 500.

\$15.02 per 500.

Drugs purchased from the center affiliated hospital pharmacy:

Upjohn: \$13.20 per 200.

Drugs purchased from U.S. Navy Department:

\$6.00 per 200.

Tolbutamide, 500 mg. TAB:

Direct from manufacturer at the FSS price:

Upjohn: \$62.40 per 1,000.

Direct from manufacturer at the community pharmacy price:

Upjohn: \$32.91 per 500.

Upjohn: \$3.48 per 50.

Direct from manufacturer at the hospital price:

Upjohn: \$64.99 per 1,000.

Direct from manufacturer at a contract negotiated price:

Upjohn: \$12.16 per 200; \$32.50 per 500.

Direct from VA Supply Depot or VA Hospital?

\$15.01 per 500.

\$15.02 per 500.

Drugs purchased from the center affiliated hospital pharmacy:

Upjohn: \$13.20 per 200.

Drugs purchased from U.S. Navy Department:

\$6.00 per 200.

Tetracycline, 250 mg. CAP:

Direct from manufacturer at FSS price:

Squibb: \$3.25 per 100.

Direct from manufacturer at direct community pharmacy price:

Rachelle: \$15.30 per 1,000; \$25.50 per 1,000.

Ladco: \$4.00 per 100.

Direct from manufacturer at a contract or negotiated price:

West-Ward: \$100.00 per 5,000.

Progress Lab: \$22.00 per 1,000.

Squibb: \$3.05 per 100.

Roerig: \$3.12 per 100.

Squibb: \$3.15 per 100.

Orbit: \$3.75 per 100.

Direct from VA Supply Depot or VA Hospital:

Rachelle: \$1.70 per 100.

Zenith: \$19.00 per 1,000; \$1.99 per 100; \$2.07 per 100.

Purchased from wholesaler at the regular community pharmacy price:

Generix Drug Sales: \$18.95 per 1,000; \$20.12 per 1,000.

Purchased from wholesaler at a reduction in the regular community pharmacy price:

\$14.95 per 1,000.

\$18.33 per 1,000.

Tetracycline phosphate complex and sodium novobiocin,¹ 250 mg. CAP:

Direct from manufacturer at the community pharmacy price:

Upjohn: \$21.99 per 100; \$24.00 per 100; \$3.99 per 16.

Direct from VA Supply Depot or VA Hospital:

Upjohn: \$21.53 per 100.

Purchased from wholesaler at the regular community pharmacy price:

Upjohn: \$25.00 per 100.

Drugs purchased from the center affiliated hospital pharmacy:

Upjohn: \$24.00 per 100.

Triamcinolone, 0.1% Gm. TUBE:

Direct from manufacturer at the FSS price:

Squibb: \$1.52 per TUBE.

¹ This product is not used in Neighborhood Health Centers. The prices represent those programs which had purchased the product before it was withdrawn from distribution.

Direct from manufacturer at the community pharmacy price:
 Squibb: \$1.52 per TUBE; \$1.75 per TUBE.
 Lederle: \$1.78 per TUBE.
 Direct from manufacturer at the hospital price:
 Squibb: \$1.87 per TUBE.
 Direct from manufacturer at a contract or negotiated price:
 Squibb: \$1.00 per TUBE.
 Lederle: \$1.26 per TUBE.
 Direct from VA Supply Depot or VA Hospital:
 \$1.11 per TUBE.
 \$1.33 per TUBE.
 \$1.42 per TUBE.
 \$1.52 per TUBE.
 Purchased from wholesaler at the regular community pharmacy price:
 Syntex: \$1.25 per TUBE; \$1.87 per TUBE.
 Drugs purchased from a city, county, or State institution:
 \$1.06 per TUBE.
 Drugs purchased from the U.S. Navy Department:
 \$1.07 per TUBE.

TABLE IV.—Community pharmacy charges for selected drug products

Ampicillin, 250 mg. CAP., 100's:

Direct from manufacturer at the community pharmacy price:
 Squibb: .1900—\$19.00.
 Ayerst: .1914—\$19.14.
 Parke-Davis: .1920—\$19.20; .2060—\$20.60.
 Parke-Davis: .2100—\$21.00; .2182—\$21.82.
 Direct from manufacturer at a contract negotiated price:
 Wyeth: .1940—\$19.40.
 Purchased from wholesaler at the regular community pharmacy price:
 .2100—\$21.00.
 .2184—\$21.84.
 .2200—\$22.00.
 .2430—\$24.30.
 .2500—\$25.00.

Chlordiazepoxide,¹ 10 mg. CAP, 500's.

Direct from manufacturer at the community pharmacy price:
 Roche: .0606—\$30.30.
 .0630—\$31.50.
 .0633—\$31.65.
 .0700—\$35.00.
 Purchased from wholesaler at the regular community pharmacy price:
 .0630—\$31.50.
 .0700—\$35.00.

Chlorothiazide, 500 mg. TAB. 1,000's:

Direct from manufacturer at the community pharmacy price:
 MSD: .0500—\$50.
 MSD: .0510—\$51.
 MSD: .0570—\$57; .0650—\$65.
 MSD: .0740—\$74.
 Purchased from wholesaler at the regular community pharmacy price:
 .0484—\$48.40.

Chlorpromazine,¹ 25 mg. TAB, 1,000's:

Purchased from wholesaler at the regular community pharmacy price:
 .0570—\$57.
 .0600—\$60.

Dexamethasone, 0.75 mg. TAB, 100's:

Direct from manufacturer at the community pharmacy price:
 MSD: .1090—\$10.90; .1230—\$12.30.
 MSD: .1320—\$13.20.

¹ Sole source manufacturer.

Purchased from wholesaler at the regular community pharmacy price:

.0570—\$5.70.
.0800—\$8.00.
.0840—\$8.40.
.1090—\$10.90.
.1150—\$11.50.

Diazepam,¹ 5 mg. TAB, 500's:

Direct from manufacturer at the community pharmacy price:

.0653—\$32.65.
.0668—\$33.40.
.0700—\$35.00.
.0707—\$35.35.
.0760—\$38.00.

Purchased from wholesalers at the regular community pharmacy price:

.0760—\$38.00.
.0800—\$40.00.

Erythromycin, 250 mg. CAP, 100's:

Direct from manufacturer at the community pharmacy price:

.2199—\$21.99.
.2200—\$22.00.
.2339—\$23.39.
.2430—\$24.30.

Purchased from wholesalers at the regular community pharmacy price:

.2199—\$21.99.
.2200—\$22.00.

Meprobamate, 400 mg. TAB, 500's:

Direct from manufacturer at the community pharmacy price:

Carroll: .0200—\$10.00.
Halsey: .0400—\$20.00; .0514—\$25.70.
Wyeth: .0590—\$29.50.
Wyeth: .0600—\$30.00.
Ladco: .0610—\$30.50.

Purchased from wholesaler at the regular community pharmacy price:

.0169—\$8.45.
.0400—\$20.00.
.0450—\$22.50.
.0600—\$30.00.

Purchased from wholesaler at a reduction in the regular community pharmacy price:

.0400—\$20.00.

Penicillin G, 250 mg. TAB:

Direct from manufacturer at the community pharmacy price:

Halsey: .0100.
Pfizer: .0223.
Pfizer: .0230.
Pfizer: .0270.
Pfizer: .0300.
Pfizer: .0352; .0388.
Pfizer: .0500.

Direct from manufacturer at a contract negotiated price:

Wyeth: .0173.

Purchased from wholesaler at the regular community pharmacy price:

.0240.
.0375.
.0450.

Prochlorperazine,¹ 10 mg. TAB:

Purchased from wholesaler at the regular community pharmacy price:

.0786.
.0790.
.0800.

¹ Sole source manufacturer.

Propoxyphene,¹ 32 mg. CAP:

Purchased from wholesaler at the regular community pharmacy price:

.0353.

.0370.

Purchased from wholesaler at a reduction in the regular community pharmacy price:

.0372.

Propoxyphene hydrochloride, aspirin and phenacetin,¹ 65 mg. CAP:

Purchased from wholesaler at the regular community pharmacy price:

.0660.

.0690.

.0695.

.0730.

.0732.

.0872.

Prednisone, 5 mg. TAB:

Direct from manufacturer at the community pharmacy price:

Carroll: .0095.

Carroll: .0100.

Wales Chem: .0100.

Upjohn: .0209.

Ladco: .0300; .0315.

Direct from manufacturer at a contract negotiated price:

Upjohn: .0300.

Purchased from wholesalers at the regular community pharmacy price:

.0200.

.0250.

.0300.

.0900.

Purchased from wholesaler at a reduction in the regular community pharmacy price:

.0072.

Prednisolone, 5 mg. TAB:

Direct from manufacturer at the community pharmacy price:

Carroll: .0115.

Carroll: .0125.

Pfizer: .0174.

Ladco: .0315.

Pfizer: .0325.

McKesson: .0800.

Purchased from wholesaler at the regular community pharmacy price:

.0100.

.0200.

.0250.

.0350.

Purchased from wholesaler at a reduction in the regular community pharmacy price:

.0086.

Reserpine, 0.25 mg. TAB:

Direct from manufacturer at the community pharmacy price:

Carroll: .0030.

Carroll: .0040; .0200.

Ladco: .0250.

Ciba: .0412.

Ciba: .0450.

Direct from manufacturer at a contract negotiated price:

Bowman: .0250.

Purchased from wholesaler at the regular community pharmacy price:

.0015.

.0025.

.0400.

.0450.

.0600.

¹ Sole source manufacturer.

Secobarbital, 100 mg. CAP:

Purchased from wholesaler at the regular community pharmacy price:
 .0216.
 .0220.
 .0332.

Sodium Warfarin, 5 mg. TAB:

Purchased from wholesaler at the regular community pharmacy price:
 .0306.
 .0450.
 .0500.

Sulfisoxazole, 500 mg. TAB:

Direct from manufacturer at the community pharmacy price:
 Roche: .0225.
 Roche: .0247; .0265.
 Roche: .0290.

Purchased from wholesalers at the regular community pharmacy price:
 .0265.
 .0294.
 .0295.
 .0300.

Tolbutamide,¹ 500 mg. TAB:

Direct from manufacturer at the community pharmacy price:
 .0650.
 .0658.
 .0659.
 .0660.
 .0696.
 .0700.
 .0823.

Tetracycline, 250 mg. CAP:

Direct from manufacturer at the community pharmacy price:
 Squibb: .0425.
 Carroll: .0300.
 Upjohn: .0375.
 Squibb: .0400.
 Squibb: .0425; .0438.

Purchased from wholesaler at the regular community pharmacy price:
 .0297.
 .0300.

Tetracycline phosphate complex and sodium novobiocin,² 250 mg. CAP:

Direct from manufacturer at the community pharmacy price:
 .2000.
 .2400.

Purchased from wholesaler at the regular community pharmacy price:
 .2000.

Triamcinolone, 0.1%, 15 Gm.:

Direct from manufacturer at the community pharmacy price:
 Lederle: 1.20.
 Lederle: 1.78.
 Squibb: 1.87.
 Squibb: 2.00.

Purchased from wholesaler at a reduction in the regular community pharmacy price:
 Squibb: 2.10.

(Whereupon, at 11:35 a.m., the hearing was adjourned, subject to the call of the Chair.)

¹ Sole source manufacturer.

² Sole source supplier, unit costs represent charge when the product was utilized.

A P P E N D I X

APPENDIX I

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Effects of Chlordiazepoxide and Secobarbital on Film-Induced Anxiety*

RICHARD C. PILLARD and SEYMOUR FISHER

Psychopharmacology Laboratory, Division of Psychiatry
Boston University Medical Center, Boston, Massachusetts

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Introduction

The evaluation of minor tranquilizers is generally carried out on populations of neurotically anxious psychiatric patients. This is not a completely satisfactory situation: it takes time to gather enough patients, interactions with other treatments must be considered, and—most importantly—the use of patients reflects lack of appropriate models of psychopathology.

Attempts to evaluate tranquilizing effects in non-psychiatric populations have been made either by selecting subjects with natively high anxiety levels or by administering an anxiety-inducing procedure under which drug effects might appear. DiMASCIO and BARRETT (1965) treated college student volunteers with oxazepam and chlordiazepoxide (BARRETT and DiMASCIO, 1965). They found that the drugs reduced anxiety in those subjects with high scores on the Taylor Manifest Anxiety Scale, while those with low Taylor scores frequently showed paradoxical increases in anxiety. Thus if all subjects had been considered together without regard to their Taylor scores, no drug effect would have been found. CHESSICK *et al.* (1965) used a stress interview to induce anxiety in subjects treated with chlorpromazine, morphine, pentobarbital, or placebo. Throughout the experiment the subjects on drug were, if anything, more anxious than those on placebo, apparently interpreting the drug effects as threatening in the experimental situation. This increased their subjective anxiety despite whatever tranquilizing action the drug may otherwise have had.

In the present study we induced a temporary anxiety *state* by the use of a stressful motion picture film. We hoped to demonstrate the anti-anxiety effect of chlordiazepoxide under this condition and to see whether there was an interaction with the *trait* of anxiety as described by DIMAS-CIO and BARRETT. By using a barbiturate control and measures of anxiety and sedation we also hoped to show that the alleged anti-anxiety effect of the tranquilizer was distinct from a sedative effect.

Method

Subjects

These were recruited through advertisements at two universities. Men between 21 and 35 in good health were asked to participate in a study of "drugs and emotional responses to motion pictures". They were told that they would be given a "standard tranquilizer", watch several movies and fill out paper and pencil tests. Ten dollars payment was offered for the four hour experiment. *Ss* were required to fill out a health form in advance and were screened for drug sensitivity, liver and renal disease, allergies, psychiatric disturbances and current medication intake. Of 178 applicants, 53 were screened out and 12 withdrew prior to the experiment, leaving 113 who finally participated.

Measures

Three questionnaires were used: 1. A slightly modified version of the Psychiatric Outpatient Mood Scale (POMS) measures subjective anxiety, fatigue and five other mood factors on a five point scale (McNAIR and LORR, 1964). The tension-anxiety factor of this test has been shown to be sensitive to medication effects.

2. The Taylor Manifest Anxiety Scale (TMAS) in an abbreviated form contains 50 true-false items. These items reflect the more stable anxiety personality trait while the POMS measures a momentary state.

3. The Physical Inventory is a seventeen-item questionnaire asking *Ss* to record medication side effects including sedation, tremor and autonomic effects.

Design

Ss assembled in an auditorium and were randomly assigned to one of three groups: chlordiazepoxide, 15 mg ($N = 36$); secobarbital, 100 mg ($N = 39$); or placebo ($N = 38$). *Ss* took medication on signal and immediately filled out a POMS and TMAS. Then the film "Indian Summer" was shown to allow time for the medication to take effect. "Indian Summer" is a 30 min film chosen to be moderately interesting but not affectively arousing. After the film, *Ss* took a second POMS. Then there was a period of quiet study followed by a third POMS. 85 min after taking the medication, *Ss* were shown an anxiety-producing film "Basic

Autopsy Procedures." We selected a 25 min segment of this 51 min sound, color film which shows preparations being made for the autopsy, incisions on several bodies and internal organs being removed (PILLARD *et al.*, 1966). Directly following the autopsy film, Ss took a fourth POMS, after which another innocuous film was shown to allow time for the medication to wear off. At the end of the experiment Ss took a final POMS and the Physical Inventory. At this point we told Ss that they had been given one of three drugs, explained briefly the expected effects of each and asked them to guess which they had received. The experimental procedure is summarized in Fig. 1.

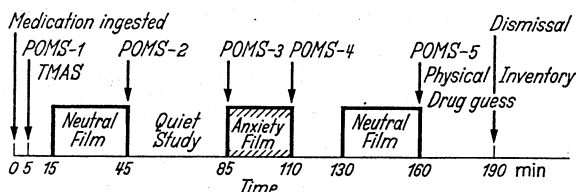


Fig. 1. Summary of experimental procedure

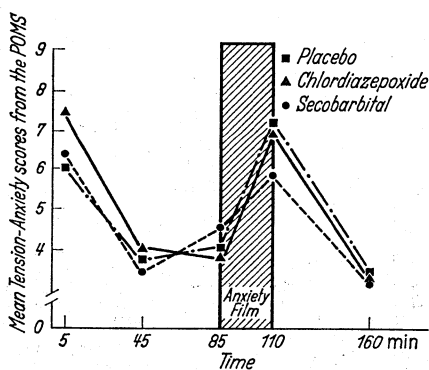


Fig. 2

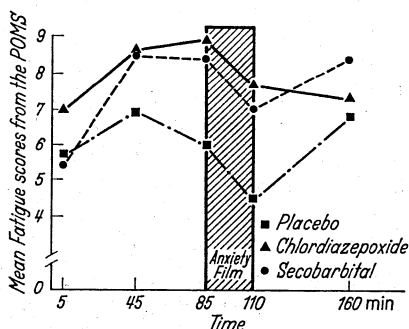


Fig. 3

Fig. 2. Mean tension-anxiety scores for three medications over 160 min

Fig. 3. Mean fatigue scores for three medications over 160 min

Results

Fig. 2 shows the anxiety scores from the POMS for three medication groups over the five testing occasions. Fig. 3 shows fatigue factor scores used as an index of sedation. A 3×2 analysis of variance was done comparing the three medication groups at the 85 and 110 min marks, i.e. just before and after the anxiety film. Ss became significantly more anxious after the autopsy film ($F = 33$, $p < .01$) but there was no difference among medication groups either before or after the film ($F =$

< 1 ; F for interaction = < 1). The analysis of fatigue scores shows not only that all groups became less fatigued after the anxiety film ($F = 18$, $p < .01$) but also that there was a medication difference ($F = 3.26$, $p < .05$): Both chlordiazepoxide and secobarbital Ss were more fatigued than placebo ($p < .05$, Dunnett test, one-tailed). Again the difference between medications was just as great before as after the anxiety film (F for interaction = < 1).

The other mood factors from the POMS were similarly analyzed. No drug or time effects were found on the vigor, depression, or anger factors. A significant decrease in friendliness appeared which was part of a monotonic trend over the first four testing sessions and did not seem to be related to the showing of the autopsy film. Finally, some unfactored items reflecting "disgust" showed an increase comparable to that seen in the anxiety factor.

Each of the items on the Physical Inventory was examined separately by a one-way analysis of variance. There was a trend for the secobarbital and chlordiazepoxide Ss to report having felt more "tired," "dopey," and "washed out." These differences were not significant but were consistent with scores on the fatigue factor.

Medication guesses were analyzed for accuracy. Our Ss showed no ability to guess what medication they had received or even if they had taken an active drug (χ^2 for each analysis < 1).

Another analysis of the data was done along the lines suggested by DiMASCIO and BARRETT splitting Ss into high and low anxiety groups on the basis of their TMAS scores. A score of 20 or above was called "high" and a score of 9 or below was called "low." These scores defined approximately the top and bottom quarter of each medication group. Using these divisions, POMS anxiety scores taken immediately after the autopsy film were compared across groups. Compared with placebo, the "high" TMAS Ss who got chlordiazepoxide or secobarbital were slightly less anxious while the "low" TMAS Ss were very similar. These differences among "high" groups were not significant.

Comments

The experiment revealed no difference between chlordiazepoxide and secobarbital: both showed mild sedative properties and neither showed a tranquilizing effect as measured by the POMS. The POMS fatigue factor contains items such as "Exhausted," "Weary" and "Worn out" which we considered to reflect sedation.

One explanation for these results may be that a single dose of medication was given. Treatment for several days prior to the film session might have been preferable but we had reason to believe that the tranquilizing effect of a single dose of chlordiazepoxide could be detected soon

after ingestion. GLESER *et al.* (1965) gave 20 mg of chlordiazepoxide and a placebo control to groups of delinquent boys. They observed diminished anxiety in boys who received the drug after only 40 min as measured by an analysis of verbal samples. No measure of sedation was made.

A second possibility is that anxiety induced by the autopsy film is not a suitable vehicle to demonstrate tranquilizing effects. This would agree with Chessick's study cited above and with other reports which indicate that tranquilizers may not be effective in anxiety induced by a ferriswheel ride (LATIES, 1959) or by dental surgery (SHERMAN *et al.*, 1964). Clinical drug trials with psychiatric patients generally aim to treat a more chronic or background anxiety level and it may be that tranquilizers act only on such "pathological" anxiety and do not impair normal, appropriate emotional responses. However, since all these observations were made after a single dose, the possibility of inadequate medication cannot be ruled out.

Several aspects of the experimental design deserve mention: To demonstrate a tranquilizing effect of chlordiazepoxide, it was reasonable to expect that this effect would be seen only *after* the autopsy film when Ss were reacting to an acute anxiety stimulus. This would support the hypothesis that the film experience served to induce a state susceptible to modification by the medication. However, as Fig.2 clearly shows, tension-anxiety scores are not affected by the medications either before or after the film. On the other hand we had no reason to believe that the film would make Ss either more or less susceptible to a sedative effect. It can be seen in Fig.3 that on the fatigue factor, where the two drug groups were significantly more fatigued than the placebo group, this difference was just as great before the film as after. The film served to reduce fatigue by the same amount in all groups.

Had any drug effects first emerged after the film, it would be necessary to repeat the experiment with an additional control: comparing an affectively neutral film with the anxiety-inducing film. This comparison would specifically establish the role of the anxiety film as a necessary condition for a medication effect. In this experimental situation the anti-anxiety effect of chlordiazepoxide, demonstrated clinically in psychiatric outpatients, was not found in our group of normal subjects.

Summary

Normal college students were given a single dose of chlordiazepoxide, secobarbital or placebo 85 min before being shown an anxiety-inducing film. Measures of sedation and of subjective anxiety were taken before and after the film. Results indicate that chlordiazepoxide and secobarbital had a measurable sedative action compared with placebo. Neither medication showed a significant anti-anxiety effect.

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Dr. RICHARD C. PILLARD
Division of Psychiatry
Boston University School of Medicine
80 East Concord Street
Boston, Massachusetts 02118, USA



