It should be recognized that some of the most vocal critics of the UGDP have raised issues regarding experimental design, statistical methodology, and some basic aspects of the approach to clinical trials without necessarily tending to promote the use of the oral agents, as such. But, this has then been misinterpreted as a validation of the oral agents. Specifically, one of my own colleagues at Yale, Dr. Albert Feinstein, has been a notable critic of the UGDP study. Dr. Feinstein is an outstanding biostatician, clinical epidemiologist, as well as internist. The basis of his criticism is not directed at trying to promote the use of the oral agents; but he has looked upon this particular study and has raised some statistical questions. Others have unfortunately used his objections as evidence for the perpetuation of a treatment which they themselves say is hardly effective.

Mr. GORDON. Dr. Feinstein, as I understand it, has never made that clear, that he is not really pushing the drugs.

Dr. FELIG. Well, while this may not be clear from his public statements, knowing him well and having worked closely with him, and since we both have appeared on panels on this issue in New Haven, it is quite clear that he does not particularly favor the utilization of these agents; but, he is merely raising questions of experimental design.

Dr. SIMS. If I could just add a word.

I do agree with Dr. Felig that, as ordinarily carried out, the partial regulation of blood glucose has not had demonstrable effect in preventing gross cardiovascular lesions in the group of largely overweight people in the UGDP, most of whom did not actually need insulin.

I do believe, however, and Dr. Crout made this point yesterday, that we do not have the evidence from the UGDP to justify extending a spirit of therapeutic nihilism with respect to blood sugar regulation to all types of lesions and in all types of diabetes.

I do feel that with Dr. Felig, that has ordinarily accomplished the regulation of blood glucose, it is not altering the cardiovascular effects from all the measurements we have up to now in the group of overweight people who do not actually need insulin anyway.

I do feel, and I think Dr. Crout made the point yesterday, that we do not have the evidence on that study to extend the therapeutic nihilism in applying it to all parts of the body.

Would you agree with that?

Dr. FELIG. I would agree.

Mr. GORDON. Dr. Chester, please proceed.

Dr. CHESTER. Two, that education of physicians lags well behind the knowledge developed through research. Unfortunately, drug company literature provides the major source of information for many physicians.

Three, the lack of adequate patient education in their understanding of diabetes and the hazards of oral hypoglycemic agents.

Four, the failure adequately to impress the patients with sufficient understanding of the importance of a calculated isocaloric diet and their failure to comply in this respect.

Five, the case of using oral medication compared with the injection of insulin.

The UGDP study clearly demonstrated that standard doses of oral hypoglycemic agents did not effectively reduce levels of blood