the formulary." Initially, unacceptable prescribing was more often noted in offices of general practitioners than in the hospital setting. In retrospect, this experiment was the more remarkable in that it was conducted in the face of the influx of new drugs which occurred in the 1950's. Furstenberg, interested in policy, program money, and quality, showed researchers how prescription records could be used as an index of rationality of drug therapy when compared with official listings of acceptable drugs.

The presence, composition, and intent of formularies and their implications as to staff organization, sanctions, and communication can be studied by perusal and comparison of actual formularies in printed form. Interviews with important responsible parties are a useful supplement to review of the printed material, but the author's experience is that the intention to have a mandatory formulary, or a permissive one, and the quality of staff resources applied to the effort, are quickly evident in the document itself—in the statement of procedures, the attempt to assign drugs to therapeutic classes, and the care given to dosage schedules, available forms, and counter-indications.

Compliance with formularies within an institution can quickly be estimated by comparing purchase records with the list of approved drugs. At one teaching hospital about 95 per cent of purchases by dollar volume went to drugs approved by the medical staff committee on formulary.[15] The "deviant" purchases were for a scattering of items, many of which appeared on a single prescription during the year.

One hundred per cent compliance is not to be accepted at face value, whether estimated from purchase accounts, charts or prescriptions, because of the possibility that drugs previously taken are being brought in by the patient at hospitalization (or by his family afterward). Provision for exception shows thought in designing rules—if exceptions are not prepared for, a variety of pressures leads to a variety of evasions.

Dispensing: Communication, Standardization, Authority

Research into the dispensing of drugs, again using routine records as the source, helps illuminate certain conflict situations involving the changing role of the pharmacist within a hospital system which is also changing—with more formal institutional rules and evolving authority of the medical staff. An example of such situations is found in New York City hospitals where the pharmacy routine calls for indicating on the prescription any changes in quantity or strength of the medicine which has had to be made because the pharmacy did not have exactly what was ordered.[16] Review of frequency of such noted changes would permit appraisal of communication between medical staff and pharmacy. Effective communication means that the medical staff keeps the pharmacy well informed on its preferences and the pharmacy's standard inventory of package sizes and strengths is well known to the doctors. Labor time in the pharmacy is conserved when doctors and pharmacy make these connections. The same applies to review of prescriptions in which another drug has had to be substituted, and this occurrence can be used to study the relevant communication chain: whom did the pharmacist consult when confronted with an order for an out-of-stock drug; how much autonomy did the pharmacist have under hospital rules; did the selection of the original drug reflect inadequate linkage between medical staff and pharmacy; did the need for substitution arise from unavoidable intervals between deliveries, or from purchase practices ill coordinated with hospital needs? One could compare the man-