Assuring Quality
Ambulatory Health Care:
The Dr. Martin Luther King Jr.
Health Center
In its ten-year existence the Dr. Martin Luther King Jr. Health Center has been pledged to quality health care and has developed detailed procedures to assure its staff and consumers that such care can and does exist. An essential part of its program has been a committee established early in the center's history to continually monitor and evaluate all aspects of the health care provided. Drs. Smith and Mukerjee describe here the various methods the committee has devised to evaluate and assure quality care. More important, they document their own experience with each method, so that other health centers and practitioners may be able to evaluate and, where necessary, improve their practices. The committee's evaluation techniques range from patient-satisfaction questionnaires to chart audits and outcome audits, and the editors include the forms they use as well as the results they produced.

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Preface

Over the past few years, the Health Care Evaluation Committee at the Dr. Martin Luther King Jr. Health Center has attempted to assure the quality of health care within the Department of Health Services. This book collects the pertinent materials we use to achieve our goals. Since 1973 we have presented some of them at meetings across the United States and have shared them with other institutions that looked to the Dr. Martin Luther King Jr. Health Center as a model. Now that these materials are available in book form, we hope dissemination will continue even more rapidly and efficiently.

I want to thank all those who have contributed their expertise as individuals or in groups from their departments. Special thanks go to Mrs. Gloria Plummer for helping to collect and arrange the materials, to Mrs. Anna Salabarria for painstakingly typing the manuscript, to Mr. Carl Fagin for his encouragement, and to Mr. Daniel Raymond Stein for his invaluable editing.

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Chief of Pediatrics
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History and Overview

Donald A. Smith, M.D.
Eleanor D. Minor, A.R.T.

The Dr. Martin Luther King Jr. Health Center (MLK) began as one of the first and largest of the Neighborhood Medical Care Demonstration Projects funded by the Office of Economic Opportunity. The site was chosen by determining where patients came from who in 1966 were using the emergency room of the Morrisania Hospital for their primary source of care. The catchment area covers health areas 24 and 26 in the South Bronx. The residents of this area are 47 percent black, 45 percent Puerto Rican, and 8 percent other. Incomes are low for those who are able to work and can find a job; the majority of the people manage on social assistance income (especially Aid to Dependent Children), social security income (the disabled or elderly), and supplemental security income.

Numerous problems existed in the health care that was available to these people prior to the establishment of MLK. Most of the available care was through hospital emergency rooms and out-patient clinics. The care tended to be episodic and symptom oriented. Long term physician-patient relationships were difficult if not impossible because of the high turnover of resident physicians in training and the fragmentation of care through numerous specialty clinics. Social services tended, practically speaking, to be inaccessible. Medical care emphasized the technical rather than the caring, nourishing aspects of medicine. At times the demeaning quality of the
long trips, the long waiting, and the impersonal attention threatened to undermine the more technical medical skills which were finally brought to bear on patients’ problems. At that time the local community had little or no input into the planning of care given by hospitals.

One of the purposes of MLK was to counteract some of these deficiencies in the delivery of care. A primary goal was thus to provide easily accessible, high quality, comprehensive, family-oriented long term health care to persons living in the surrounding catchment area. Another and equally important goal was to train and subsequently hire people from the community to provide personnel in the center with whom patients could easily interact. A side benefit of achieving this second goal was that federal funds would be available to the community through salaries given to health workers who lived in the neighborhood.

Early on it was thought that teams would be the most effective vehicle to accomplish the primary goal. Most physicians available at the time had specialty training in internal medicine or pediatrics and it was thought that the team would be one way in which these specialty-trained physicians could work together to deliver family care. Each team was also to have public health nurses trained in prenatal and postnatal care and well-child care. The family health worker was to be a new type of health worker hired from community residents and trained in the center in the delivery of both nursing and social services. This health worker became an important coordinator of care and was the liaison person between the patients and the physicians and nurses on the team.

In the early days of MLK, assurance of quality of care within this structure was an informal procedure. Although quality of care was a goal underlying all our developmental efforts, no systematic approach to guarantee it was provided. We relied on the professional qualifications of the providers on the teams, bolstered by occasional chart reviews performed by the medical director or by professional supervisors.

Occasionally, specific physicians’ work was reviewed, prompted by the “feel” of the medical director that the practitioner was not providing care of adequate quality. Such
informal audits suffered from several disadvantages. Because they were nonrandom, the work of a poor practitioner could often be missed. They were rarely performed on a large scale because of pressures of time and because of the discomfort engendered in the auditor and the audited. Considerable practitioner anxiety arose because this nonrandom informal method seemed to target certain individuals and not others. No group standards were available against which care provided by the practitioner could be judged.

A major step towards improving the quality of care was taken in 1968 with the initial implementation of the problem-oriented medical record (POMR) developed by Dr. Lawrence Weed. (Our use of POMR is described in detail in Chapter 6.) The introduction of this method was not, however, accompanied by the development of an audit process and its initial use by practitioners throughout the center was sporadic.

Formal quality of care review at MLK began in late 1971 with the establishment of the Health Care Evaluation Committee (HCEC). This committee, composed of the chiefs of medicine, pediatrics, ob-gyn, nursing, family health workers, dentistry, director of training, and the patients' rights advocate, was charged with developing a variety of types of quality of care review. Included in this book are the procedures and forms which have been utilized.

The procedures for health care evaluation are classified below into four groups, starting with the simplest to administer and ending with the most complex. The procedures for dental evaluation are described in Chapter 10.

I. Determination of Patient Satisfaction

II. Unusual Episode Review
   A. Deaths
   B. Restriction of Antibiotic Usage
   C. Patient Complaints

III. Process Audit through Chart Review
   A. Chart Standardization
   B. Single Disease Entity Review
   C. Comprehensive Family Chart Review

IV. Outcome Audit: Hypertension
Determination of Patient Satisfaction

The center developed two simple questionnaires which it periodically gave to samples of the patient population to determine how satisfied patients were with the practitioners and personnel with whom they interacted. The questionnaires and results are described in Chapter 2.

Such simple measures of patient satisfaction are important to determine the accessibility and comfort of services rendered. The drawback in such methods is that patient satisfaction is not necessarily related to the technical quality of the services. A patient may be satisfied with a practitioner who is making technically poor decisions about diagnosis and treatment. Therefore, additional systems of quality audit are needed.

Unusual Episode Review

This type of review is a systematic check of undesirable outcomes or unusual usage of certain medications. All deaths or severe drug reactions that come to the attention of any team member at MLK must be reported on a special form to the Health Care Evaluation Committee. Review of these charts will establish whether any oversight or lack of follow-up may have led to the death and whether a specific drug reaction could have been prevented. Our experience with death review and severe drug reactions is described in Chapter 3.

It was felt at the center that some antibiotics should have restricted usage because of potential toxicity, the high cost of the drug, or a limited therapeutic indication coupled with concern about increasing antibiotic resistance in certain organisms. Our experience with restricting the use of certain antibiotics is described in Chapter 4.

The development of a system to encourage and handle patient complaints has been a somewhat unique activity begun here at MLK. There is a full-time paid patient advocate whose main function is to listen to patient complaints, try to resolve the problems, and to bring them to the Health Care Evaluation Committee meeting for discussion and further action. Patients are informed of this channel of complaint by receiving a booklet at the time of registration called “Your
Rights as a Patient” (see Appendix B). Such investigations are at times rather highly charged. Most often they lead to better understanding by both patient and practitioner about the problems of communication. However, where there is gross insensitivity by a physician or other staff member, disciplinary action can and does occur. Details of this process are described in Chapter 5.

There are several problems with review of unusual incidents as a technique for maintaining quality of care. First, only the most severe errors will usually be found. Second, a physician may feel he's being “framed” by the Health Care Evaluation Committee because the selection of charts is not random. For example, a member of the Health Care Evaluation Committee may be upset with a consistently eccentric member of his subspecialty group or may disagree with his new, non-standard type of treatment for certain problems. Increased chart audit of such a practitioner may result in the discovery of more unwanted side effects of therapy solely because of the volume of charts reviewed. If these data are looked at alone, the practitioner may be unfairly condemned when compared with his colleagues.

Process Audit

The purpose of this type of audit is to look at charts as a reflection of treatment patterns both for specific diseases and for total patient care.

Chart Standardization

The first obstacle to chart review was the disorderly and illegible state of the charts. Solo practitioners may afford the luxury of a highly unique style of making notes because they alone must review their notes. However, within a group where cross coverage is important, where there may be a turnover of practitioner staff, and where several members of a team add continuing notes to the chart, legible and orderly charts are a necessity.

Although the problem-oriented medical record (POMR) was instituted at MLK in 1968, a manual detailing the process was not completed until 1974 (see Appendix A). Problem
Sheets, Flow Sheets, and Subjective-Objective-Assessment-Plan (SOAP) notes were required. To insure that such a style was implemented to the greatest measure a chart audit was performed on random afternoons by medical assistants on charts used by their practitioners. The audit process and the results are described in Chapter 6.

**Single Disease Entity Review**

Once a chart is auditable, one may begin to review particular disease entities. The only disease so studied by chart review at MLK to date has been gonorrhea. The process and results are documented in Chapter 7.

Single disease review as an approach to assuring quality of care is somewhat limited. Generally, the review concentrates on the technical aspects of treatment of the disease. Evaluation of the practitioner's sensitivity to what such a disease means to the patient or to his social setting is usually impossible from a single encounter on a chart. For example, each patient with gonorrhea may be treated adequately, but the fact that such a patient's contacts remain untreated or that marital dissolution is occurring may be overlooked.

Single disease review also does not permit evaluation of the type of care neighborhood health centers were set up to provide: comprehensive continuous care. Fragmentation of care, mistakes in diagnosis, failure to coordinate the total care of the patient, and the failure to be alert to psychosocial problems are examples of comprehensive health care requirements which may be missed in a single disease entity review.

**Comprehensive Family Care Audit**

This type of process audit is based on the periodic review of a family’s chart chosen at random. The chart review is performed by one team (internist, pediatrician, nurse practitioner, family health worker) and evaluates the function of another team who is giving care to that family. This procedure is the central core of quality of care efforts at MLK. A standardized form and instructions have been designed at MLK to monitor this process (see Chapter 8).

There are several problems with such a comprehensive
family chart review. First, it requires extra effort by hard working teams to perform the review itself and then to find time to discuss the review with tightly scheduled members of the reviewed team. It also requires weekly meetings of the Health Care Evaluation Committee and seemingly endless checking of chart reviews by the chiefs of service. Most important, only a small number of charts per practitioner can be reviewed.

For example, when hypertension or obesity or diabetes is uncontrolled, should one look for a cause to the doctor, to the appointment system, to the patient, or to their mutual interaction or lack thereof? To answer this, one must look at differences in outcomes on larger numbers of patients treated by different practitioners and compare their results.

Outcome Review

To evaluate one encounter in the chart of a patient with a chronic disease and see that appropriate questions are asked and that appropriate tests and medications are ordered is only part of the issue of quality. A practitioner dedicated to avoiding any side effect of anti-hypertensive medications may have a much higher percentage of uncontrolled hypertensives than another practitioner who is more flexible in handling such side effects. The practitioner who is a nihilist about alcoholism, obesity, and smoking may have much less success in modifying these habits than one who encourages the newer behavioral approaches to such problems. The assessment of chronic disease management will not be found by looking at any single chart or patient, but only by looking at the total population of patients of one practitioner or team and comparing outcomes of treatment among themselves and with other "expert" groups of practitioners.

The Martin Luther King Jr. Health Center is now reviewing all its hypertensives in an effort to monitor on a long term basis the percentage of patients with controlled blood pressures. A detailed description of this effort may be seen in Chapter 9. It is hoped that identifying differences among practitioners will stimulate an increase in the percentage of controlled patients. Additionally, comparisons with success rates of other health care groups may encourage more effort
by practitioners at MLK. Thus, for example, it was recently reported that one-third of hypertensives enrolled in the Seattle Model Cities Prepaid Health Care Project study had pressures that were uncontrolled. (*JAMA* 233:245, 1975) Is our center doing better or worse?

A review of outcome for even one chronic disease is extremely time-consuming. First, a registry of hypertensive patients must be established through review of charts of all patients registered at the center. Second, a record system must be developed to easily monitor the fraction of controlled hypertensives by team or physician on an ongoing basis. Third, the agency must have available the personnel to intensively follow-up patients whose pressures do not reflect adequate control.

The problem with such an intensive effort at controlling one chronic disease is that other important health problems may be overlooked because of lack of resources. For example, are persons on prophylactic isoniazid being followed adequately? Are all women up-to-date on Pap smears? We trust that in the future more efficient systems may be developed that will allow us to manage long term follow-up of several chronic conditions and screening procedures simultaneously. This will add a new dimension to the measurement of quality of care.

**Outside Evaluation**

To monitor how one is doing as an agency in quality assurance, one needs either to be able to monitor one's own success in achieving one's predetermined goals or to be able to compare oneself with similar institutions and how they perform. To initiate the former, one might tally all the health maintenance procedures done on the cumulative charts reviewed for one year to see if the agency is reaching a predetermined performance goal for each procedure. For example, are 80 percent of women up-to-date on Pap smears? Or one might have an impartial outside agency come for several days, evaluate many random charts, measure performance goals as mentioned above, and then compare these results with other health centers where they performed the same procedure.
In 1976 the Evaluation Unit of the Albert Einstein College of Medicine under the direction of Dr. Mildred Morehead evaluated MLK in comparison with over 100 other health centers. Verbatim sections of her report are reproduced in Chapter 11. Her summary of the audit of quality at MLK was as follows:

The quality of medical care provided is excellent. As in the past, ratings in all primary care areas are above the neighborhood health center average in both assessment and maintenance care and in the management of more serious illnesses. The sole exception to this was the management of problem obstetrical patients where ratings were slightly below average.

Such outside evaluations are important because they stimulate reexamination of one's own goals of quality assurance and one's methods of monitoring them. In the area of health maintenance, for example, the Morehead report showed that the impact of tallying a number of charts over time with direct feedback to teams may be a potentially more impressive tool for change than feedback on individual charts to individual practitioners where individual deficiencies may be too often easily explained away by patient noncompliance. The fact that we do better than the average health center is less important than the jolt we received when we discovered we were not doing as well as we thought. The evaluation may have helped stimulate us to begin to go beyond individual chart review to analysis of subpopulations of charts (see, for example, Chapter 9 on hypertension).

The limits of the outside review are several. First, the agency is seen through only a few charts, e.g. 100 charts in a registered population of 40,000 people, at one point in time. Such a slice gives an important evaluation at one point in time, but may miss a trend toward improvement or deterioration in care unless it can be performed periodically, say, once every two years. More important, if part of the objective is to stimulate improvement in care within an agency, a one-time look does not assure that an agency will
do anything to make the recommended changes. Too often, failure to attain certain goals may be blamed on inability to change the patient population. Above average evaluations can lull an agency into thinking it is doing well enough and it can rest on its laurels. Rather than going to an agency with a set of standards, the evaluators should request the agency's own set of quality standards prior to evaluation, such as 90 percent of children up-to-date on immunizations. The evaluation unit can then review to see if the agency is reaching its own goals, and simultaneously can evaluate the goals themselves to see if they are comparable to standards set throughout the country. In this way, the center becomes part of the evaluation and can continue to strive toward its own goals after the evaluators have left.

Cost of Financing Quality of Care Efforts

The cost of monitoring quality of care at MLK is not insignificant. The cost of the two to three hours spent by each of the eight HCEC members and the eleven hours spent by the secretary per week totaled $20,400 in 1975. In addition, the team/team audit performed eleven months out of the year by four members of each team spending approximately one hour per review cost $5,000.

These figures do not include the costs of such specific projects as gonorrhea review, the hypertensive monitoring project, the problem-oriented medical record audit, or the clinical dental evaluation. Each of these significantly raises the total cost. For example, our most expensive program has been the Hypertension Surveillance System whose main costs are for a 50 percent physician manager and the equivalent of a full-time clerk—a total of $35,000. To expand this system to include the entire center will necessitate a full-time manager costing $15,000. This person can do much of the work of the physician, but will nonetheless increase the cost of the program to $45,000. The center agreed to fund this person from patient visit income, but fortunately the state, using federal funds will provide the salary for this person under a grant from their Bureau of Disease Control. This money is not provided for quality assurance per se, but for a
management system for better controlling hypertensives. Fortunately the ultimate objectives are the same: better controlled hypertensives.

To summarize, MLK has been spending $25,000 or 0.3 percent of its annual budget on its own quality monitoring efforts. If one adds the cost of the Hypertension Surveillance System, the annual cost rises to $60,000 or 0.7 percent of the budget. These figures are difficult to assess in terms of standard figures budgeted for quality assurance because comparable figures are unavailable. They do raise several questions:

1. What expenditure should be made by any health center on such activities; and
2. Are such efforts truly effective in maintaining high quality care?

This book does not deal with the first question, and only begins to explore the second in the chapters on gonorrhea, hypertension, and the Morehead report. Its purpose is to present our experience and our methods as baseline data from the field; as more data accumulate from other centers, these questions may be more fruitfully attacked. The forms and methods presented in this book will hopefully serve as tested models for other agencies also involved in ambulatory quality care assurance.

No formal bibliography is presented in this book. The field of ambulatory care quality assurance is young. Our activities have been generated by what we felt was necessary for our center at this time. For those interested in a bibliography of the field, a recently published review may be recommended: Ambulatory Care Quality Assurance Project, Vol. 3, Bibliography & Selected Abstracts, published in December 1976 by the Bureau of Quality Assurance, U.S. Dept. of HEW and available for $2.00 from the Supt. of Documents, U.S. Government Printing Office, Washington, D.C. 20402.