

MEDICAL RECORDS, MEDICAL EDUCATION, AND PATIENT CARE

LAWRENCE L. WEED, M.D.

■ In our approach to the everyday practice of medicine for all the people, we have with far-reaching consequences built a whole structure on certain principles which are in this book called into question. ■ 1. Physicians have never been assigned a definite population for which they are responsible. Patients entered the physician's care at random, often for symptomatic treatment, did not remain a stable population for the physician even then, often were not or could not be followed up, and rarely were the subjects of the practice of true preventive medicine. ■ 2. Influenced perhaps by the randomness of their patient populations, physicians have kept incomplete data and have randomly recorded what data they have obtained, without clearly associating each element of information with a well-defined problem. ■ 3. Physicians have functioned without a system of continuing audit that

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The Problem-Oriented Record as a Basic Tool

LAWRENCE L. WEED, M. D.

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PREFACE

If communities were the size of cells and if hospitals, pharmacies, laboratories, patients, and physicians were the size of subcellular particles, no doubt they would be the subjects of a great deal of research, and much more would be known about their interrelationships and pathophysiology. But the apparent ease with which the organization of medicine itself can be observed has discouraged examination of it and has even made the idea of that examination seem somehow naive and unscientific. Research and planning at the community level may be troublesome. Others besides you observe and are affected by what you are doing, and they are eager to point out imperfections when they see them. To deal with indirect evidence and the abstract at the molecular and microscopic level is not only sophisticated and intellectually satisfying but is a good deal safer, for imperfections are discernible to but a few, and the investigator himself sees flaws only in proportion to his capacity to develop and use analytical methods to reveal them. It is not surprising that so much of our nation's intellectual power has been directed out to space or in to the double helix, where rewards are well defined and the frustrations of dealing with a society that often seems essentially irrational and uncontrollable are largely absent. It is true that failures occur at the sophisticated levels, too, but they

are made in tolerable obscurity and rarely under conditions of frustration and social unrest.

All of us would like to correct this imbalance, to see the organization of medicine well studied and well ordered, without, at the same time, shifting the weight of research and planning so far that the undeniable benefits of a concentration on specialized subject areas are lost. Indeed, not only would the standard of medical care aspired to in this volume be impossible without medicine's long history of the closely focused and theoretical study of the science of health and disease, but it is precisely in the effort to apply the fruits of that research effectively and broadly and to order and integrate the elements of it that this volume has been prepared. We cannot help solve society's everyday problems by putting people under electron microscopes or out into the Van Allen belt; we can help not only by the intelligent use of the tools of systems analysis and sociology but also by a basic realization that to improve the quality of the practice of everyday medicine is worthy of our best efforts.

Two fundamental steps in working effectively at the community level are establishing a practical system of communication for use in caring for all people and fixing the standards for such a system so that problems and progress can be defined. Central in the present system of communication is the medical record, upon which patient care, much clinical investigation, and medical education depend, and even unrefined standards lead to the conclusion that it is in need of immediate attention. In its current state it is an instrument full of serious faults, being sometimes irregular, diffuse, subjective, and incomplete. Developed standards for the preparation of the medical record do not exist. Where would biochemistry or physics be if reports of their progress depended on journals without qualified boards of editors administering developed standards? One may conjecture that progress in such fields would seriously have been retarded. There is in existence at the present time no body of literature on how to structure the medical record, particularly progress notes on long-term problems, and so there is no framework within which discipline can develop.

My thesis is that this situation can be remedied. The medical record need not be simply a static, *pro forma* repository of medical observations and activities grouped in the meaningless order of source—whether doctor or nurse, laboratory or X-ray department—rather than with respect to the problems to which they pertain; it can be problem-oriented, and thereby it can become a dynamic, structured, creative instrument for facilitating comprehensive and highly specialized medical care. But in addition to being problem-oriented, the medical record must be concise, cogent, and complete, not diffuse, superficial, or fragmentary, for the latter characteristics lead to care out of context. The medical record must serve the experienced physician and yet be intelligible to the medical student; it must serve the student and yet not frustrate the practicing physician; it must be adaptable to computerization but not require it; it must give freedom of expression to the most perceptive and experienced physician, yet must establish form and order to prevent personalization of the record to the point at which subjectivity impairs communication. The medical record must serve the patient as well as the physician, so it must be equally intelligible to all physicians, since patients are likely to require the services of many physicians and as much as possible the progress of the patient among them must be easy and without confusion. The medical record must completely and honestly convey the many variables and complexities that surround every decision, thereby discouraging unreasonable demands upon the physician for supernatural understanding and superhuman competence; but at the same time it must faithfully represent events and decisions so that errors can be detected and proper corrective measures taken when lapses in thoroughness, disciplined thought, and reasonable follow-up occur. The medical record must be the natural extension of the basic science training of the physician; in short, it must be a scientific manuscript.

The pages that follow present specific steps in record-keeping that attempt to satisfy these sometimes paradoxical requirements. They can be satisfied. The contradictions in aims are apparent, not

real, as intelligent use of a well-structured, problem-oriented medical record will reveal.

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I note that, as will readily be apparent to the reader, the records presented as examples in the text have not been revised retrospectively for the purpose of quotation here. They contain jargon and unnecessary abbreviations, and the quality of the medicine practiced and the logic displayed in the pursuit of solutions to problems are not always exemplary. Many of the problem lists are not in the exact form prescribed; and many of the progress notes, though problem-oriented, do not contain concise analytical descriptions and conclusions. However, all are real and consequently are actual, not imagined, referents to day-by-day medical practice, and all are instructive stages in the direction of the system recommended.

Most of the examples used here represent care for acute, hospital-type problems, even though the text emphasizes the need for more attention to ambulatory care and preventive medicine and demographic approaches in defining and dealing with problems. Appendix E and a forthcoming volume by two general practitioners using problem-oriented records will better illustrate this emphasis.

L.L.W.

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INTRODUCTION

The beginning clinical clerk, the new intern, and the practicing physician are confronted with an apparent contradiction. Each is asked, as a “whole” physician, to accept the obligations of meeting many problems simultaneously and yet to give to all the single-minded attention that is fundamental to developing and mobilizing his enthusiasm and skill—for these two virtues do not arise except where an organized concentration upon a particular subject is possible. It is this multiplicity of problems with which the physician must deal in his daily work that constitutes the principal distinguishing feature between his activities and those of many other scientists. The multiplicity is inevitable, but a random approach to the difficulties it creates is not. The instruction of physicians should be based on a system that helps them to define and follow clinical problems one by one and then systematically to relate and resolve them. Doctors vary tremendously in their capacity to deal competently with widely varying numbers and types of challenges in medical practice. We must therefore sort out physicians in terms of what they *actually do* competently for patients and not in terms of how they trained, what specialty group they joined, or how well they fared in qualifying examinations. In other words, the basic criterion of the physician is how well he can identify the patient’s problems and organize them for solution.

What is done in medical education to prepare the physician for a lifelong scrutiny of the records on his patients? The answer is, very little, for in many medical schools, as in many specialty training programs, elaborate provisions are made for transmitting the facts of basic science and clinical medicine, but little is done to transmit to the student the scientific methodology that will eventually permit him to deal with complex biological systems successfully.

What is this methodology? The scientist defines a problem clearly, separates multifarious problems into their individual components, and clarifies their relationships to each other. He records data in a communicative and standard form and ultimately accepts an audit from objective peers by seeking publication in a journal. Basic scientists are neither better people nor better scholars than physicians; they do not pursue more scientific or intrinsically "better" problems. They are simply subject to better monitoring by a system that mobilizes the criticism of their peers throughout their lives. Clinical medicine, on the other hand, substitutes qualifying examinations at a single point in a career for a lifelong process of recurring audit and it must frankly be admitted that the customary methodology of medicine fails to provide the kind of structured context that promotes objectivity, sharpens skills, and permits progressive self-evaluation.

To focus the comparison more sharply, let us look at the clinical specialty board candidate and the basic science graduate-degree aspirant. The latter, after spending the first year or two mainly in course work, devotes an increasing proportion of his time to his thesis, to which all his other activities ultimately become secondary. Conferences, seminars, normal free time—all are set aside, if need be, because it is by his thesis that the candidate scientist will be judged. The thesis reveals both what he knows and what he is capable of doing with what he knows. Each day, as he works, his preceptor and his colleagues can study and criticize his data as he records them in his notebooks. Finally, everyone who sits on his examination board reviews a copy of his thesis, which is written in a very standard form so as to simplify critical analysis, as a precondition of acceptance. If he receives his degree, he proceeds to a

new problem, completes his research on it, prepares his report, and submits it for publication to a journal whose editors exercise the right to establish standards of form and content and may require him to rewrite his paper several times. As a consequence of this process, he develops a respect for order, logic, and consistency and cooperates with his critics without feeling that his creativity and originality are jeopardized by their guidance. It would not occur to the scientist to protest to the editors that there is much “art” in his laboratory work that never can be recorded and that the editors have to see him at work in order fully to appreciate him.

The clinical specialty board candidate, on the other hand, submits to examinations in which he is asked to recall memorized facts. No thesis composed of analyses and defenses of his cases recorded in a specific form is required of him. Instead, he is given an informal oral examination on the basis of a preselected case; preselected data are presented to him in a setting bearing little relationship to the realities of the clinical setting in which patients are normally “worked up” in the clinic and in the ward. The strategy and completeness of his own search for the data, the depth of his theoretical understanding and the delicacy of the analytical capacity that will permit him to make sound therapeutic decisions, and his ability to sustain quality and energy in his daily attack on all types of problems, esoteric and mundane, are poorly evaluated by such examining procedures.

In clinical situations there is in effect not a single thesis, but there are a thousand of them. Little time can be devoted to each, and the physician is confronted with biological variables that are exceptionally difficult to enumerate and control and that are complicated by concurrent human and social problems. The need for organization grows with increasing complexity and pressure of time. Yet the intellectual discipline addressed to clinical problems is often superficial; documentation may be haphazard; systems are ill-defined; and no audit ever takes place.

Figure 1 is a partial sequence of notes extracted from a complicated, unstructured record of a patient with a long list of problems. Facts are presented in language that suggests difficulties in