PRAXIS AND THE CONCEPT PROCESSOR:
"CHARTING BASS ACKWARDS"

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Introduction

The arrival of Praxis ® in the offices of a few early adopter physicians in 1994 heralded the use of concept processor technology in the construction of the medical record. Concept processing is a radically different way of handling medically related information or "cases." It contrasts sharply with our traditional approach, wherein the medical record has been constructed in a linear fashion: by hand-writing in earlier years and by typewriter, transcriptionist, and word processor in more recent eras.

Note our use of the word "linear." The traditional doctor performed a "history and physical," obtaining almost all the information directly from the patient or relative. Then the write-up was accomplished by hand. The write-up was more a series of notes or reminders to the doctor. It was generally not scrutinized by other people or agencies. Throughout the 1960's the SOAP note began to take its current place as the structure for the doctor's manually recorded medical record entries. The information was entered in the same sequence every time: subjective, objective, assessment and plan. As technology evolved, dictation to an audio tape allowed more rapid recording of the details of the case, leaving the actual medical record entry to be constructed by the transcriptionist.

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Over the past 18 years, he has served on the quality assurance and utilization review committees of all four hospitals in his area. For many years he was physician advisor in utilization review at two of those hospitals. He is a consultant for The Medical Board of California and The American Medical Forensic Specialists. He has served on IMCARE's quality improvement network, in constructing protocols for mammography, allergies and seizure disorders.

He has lectured extensively on Utilization Management and The Future of Health Care.

He has attended many courses on quality assurance, quality management, quality improvement and performance improvement. He is board certified with the American Board of Quality Assurance and Utilization Management and with the American Board of Medical Management. He has achieved fellowship status in The American College of Physicians, The Royal College of Physicians and Surgeons of Canada, and The American College of Physician Executives.

A strong believer in the idea that quality principles should be built into our computer systems, without intruding on the provider's ability and right to practice in an individual style, he recognized that Praxis® would do just that. He therefore undertook to be one of the first beta testers for Praxis® at its inception in 1992. He is a content developer for PrimeTime Medical Software, Inc.

Previous articles on the electronic medical record and its role in quality improvement have been published in Physicians and Computers and LACMA Physician.

Dictation allowed more information to be recorded, since speaking is more rapid than writing. Then along came the computer with word processing. Whole paragraphs could be copied and pasted from one case to the next. Efficiency improved and more information was available for review by the original doctor or whoever else had access to the medical record.

Nevertheless, the technique of constructing the medical record did not change. Every patient with a new problem became a case that was written or dictated as if it were a new and entirely unique one. Many cases had extremely personal and unique information embedded. For example, the write-up might start with these words: "This 32 year old man came to see me today for back pain. It occurred while he was getting off his lawn mower last Saturday. A previous episode had occurred 14 years ago when he was living in Seattle." Such write-ups did not lend themselves to replication to other patients' charts, no matter how similar the problems may have been from a medical management point of view.

Every case in theory had the following components: history of present illness, personal history, family history, past medical history, social and environmental history, surgical history, review of systems, physical examination, assessment with differential diagnosis and plan. Every case was recorded in the same linear fashion. Every case had information embedded in it that reflected and memorialized the relationship of the patient to the condition or diagnosis. Many cases had information embedded in them that reflected and memorialized the relationship of the patient to the doctor. This was "relationship charting." It was impossible for the doctor to state to the transcriptionist: "Find a case with **pharyngitis** as the *diagnosis* or *assessment* and repeat that write-up here, but change the medication to erythromycin and have the patient come back in two days instead of three." Any case with **pharyngitis** as the *diagnosis* or *assessment* undoubtedly had relationship-oriented information that would have to be expunged before the write-up could be transferred to the new case. During medical training, the doctor had learned that each patient was a person, each patient was unique and each write-up had to reflect those tenets. The doctor may as well write or dictate a new case. And that is what happened, hundreds or thousands of times over, during a doctor's professional career.

The use of Praxis necessitates a paradigm shift in the way we view medical cases and their write-up or charting. Every "first of its kind" case that presents itself to the healthcare provider (the intellectual heir to the doctor of previous times) is written in Praxis using the traditional linear fashion. Any identical or similar case that presents thereafter can be constructed (after the history and physical have been performed) by selecting the closest previous case and using it in toto as the current write-up or using it with minor modifications. The case can be recalled by its Objective elements, its Assessment elements or its Plan elements. Because concept processing allows charting of medical cases in this manner, it appears that Praxis can do charting "backwards," or, to use a vernacular phrase, "bass ackwards."

The task of the write-up of a case is to embed within the medical record as much relevant information as possible, in the most efficient manner possible. Praxis can recognize the uniqueness of each case while allowing charting by "task" as well as by "relationship." In this paper we shall show that charting by task is better than charting by relationship.

For this to happen, the modern healthcare provider must make the paradigm shift required before attempting to harness the power of the concept processor.

Relationship-oriented versus Task-oriented Charting

The concept processor, with Praxis® as its only example extant, allows both relationship-oriented charting and task-oriented charting. The way of thinking that underlies the development and use of the concept processor departs radically from the attitudes and ideas we absorbed during our years of medical training. Our formative years did not prepare us for several changes that have taken place within the past 20 years.

Our professors and teachers did not foresee the role of third party payers, the rise in the incidence of medical malpractice litigation, and the emergence of legislation to prevent, detect and prosecute fraud and abuse. Nor could they have foreseen the consequence of these changes: the vast amount of time the healthcare practitioner would spend in documentation.

The decision by Praxis's users to document by task rather than by relationship will result in best use of the computer technology now available and best documentation of medically-relevant information.

The concept processor works best by task-oriented charting. It can swing the balance in favor of the provider. As one Praxis user wisely stated: "A software war is being waged for control of the healthcare industry. It is being fought between medical insurance companies and providers. Insurance companies have been winning because they have better software." We can put an addendum that: "Insurance companies have been winning because we providers have allowed them to win."

Currently several thousand healthcare providers are using Praxis. Many others have requested demo disks or have the program on trial basis and are trying to decide whether to purchase it. If Praxis's task-oriented method feels natural and you are comfortable with it, you do not need to change your habits. If, however, Praxis does not appear natural and comfortable, it is time to re-evaluate your charting habits. You may be using the relationship approach to charting. This will bring you into conflict with the way in which Praxis works. Please read on and, if this analysis proves correct, consider changing your approach.

You are first and foremost a healer. Documentation of your cases should first of all allow you to be a healer. You should also use documentation to obtain compensation for your work, to protect you from the cost of malpractice claims settlement and to keep the regulatory agency wolves away from your door. Actually, there is no way to prevent malpractice claims from being filed. There is no way to keep regulatory agencies from perusing your charts for elements of fraud and abuse. But the proper use of Praxis will make it far less likely that you will lose a malpractice case or get fined for allegations of fraud and abuse.

Praxis does not work well with the old linear charting paradigm. If you try to use it in that fashion, you will become frustrated and waste the power of the concept processor. Take some time to re-think your current charting habits.

We have seen two different approaches to the write-up of cases by Praxis users. The two groups of users follow the two different paradigms: task-oriented and relationship-oriented. The former take to Praxis "like a duck to water." The latter get frustrated and declare Praxis to be "even worse than templates." The two groups are not segregated by specialty or other conditions of practice. They appear to be divided by their theoretical orientation to the medical record.

Defining the Relationship Approach

The healthcare provider who sits in front of a patient during a visit for a new problem and records verbatim everything related by the patient or relative is using the relationship school approach. This is the classical approach. It has not been questioned as a paradigm during its one hundred years of existence. In fact, since it was the only approach available until the advent of the concept processor, we should not have expected anyone to question its appropriateness or efficiency. All healthcare providers have been taught that way.

The relationship method has several corollaries.

> The first is that every case is new and unique. And indeed it is to the student, whether medical, nurse practitioner or physician assistant.

> The second is that medicine is a science and its practitioner is an unbiased and objective observer. The observer should make objective notes of what the patient has said. The observer should make objective notes of what the physical examination revealed.

> The third is that the practitioner cannot and should not arrive at a diagnosis until all the "objective" information is at hand. The method allows no preconceived notions of what is wrong with the patient.

> The fourth is the assumption that every case should be recorded differently- a unique record for each unique case. The focus is on the patient and the patient's relationship to the observer and to the rest of the world. The differential diagnosis leads to the plan of management, unique for each patient and problem.

The relationship method leads to such write-ups as the following. "Ms. Jones is a 56 year old female whose dog, Fido, died last month. The patient began to complain of headaches. She reported these repeatedly to her husband, Jim, to whom she has been married for 3 years (her first husband died accidentally five years ago). Jim finally told her to get a check-up so she made an appointment to see me. She found my name in the Yellow Pages and checked with her neighbor, who is also a patient of mine. Her neighbor gave a good recommendation on my behalf."

A write-up built entirely on the relationship model clearly demonstrates that the provider was very sympathetic and certainly listened to what the patient had to say. As we shall show, however, the time taken to produce such documentation over and over again should be better spent in the new method of working inherent in concept processing.

As they progress in their professional work, most practitioners of the healing arts progress from verbatim to selective recording. They gain experience and unconsciously become selective in their questioning and in their recording of information. Their experience allows them to take short-cuts without shortchanging the patient. They recognize patterns in disease presentation. They maintain their relationship with the patient but they perform their charting based on the tasks they have to perform. They are ready for Praxis.

Some other professionals do not make the transition to task-oriented documentation. They continue under the assumptions inherent in relationship-oriented charting. Their records do not succinctly explain the clinical problem to themselves or to other readers. They do not help the practitioners to practice better medicine. They do not protect against medical malpractice loss. They do not increase compensation for all the hard work and meticulous attention to detail. The worst aspect of relationship-oriented charting is the amount of time is steals from the busy life of the healthcare provider. That time could have been better spent with the patient or with other patients, expanding the provider's role in the practice of medicine. We are in favor of sympathetic listening and a real-time, meaningful relationship with all our patients. We submit, however, that the relationship with the write-up is not included in the relationship with the patient. Be sympathetic and empathetic with the patient but record your findings with the task-oriented method exemplified by Praxis.

Defining the Task-oriented Approach

Let us state a radical notion right here: *The diagnosis has much less to do with what is wrong with the patient than it has to do with what you think is wrong with the patient.*

The practice of medicine is more an art than it is a science, although its modern underpinnings are indeed scientific. Of course, we could not practice medicine as effectively as we do, nor could we effect as many cures as we can, if it were not for our scientific background. Yet it is a common and correct observation that no two doctors practice medicine the same way, the reliance on "community standards of care" notwithstanding.

Over some years of time the medical practitioner reaches a comfort zone in the practice of this art. With experience a Gestalt forms for the practice of medicine. Take the instance of a seasoned practitioner and a medical student who interview and examine the same patient. There are two observers and one patient and theoretically one set of diagnoses. The seasoned practitioner takes only five or ten minutes to discern as much information or more than a medical student can in two hours. Each will probably list a different major diagnosis. They will certainly have different elements in their Plan. The difference obviously is between the practitioner and the student, since

the patient and their medical problems are the same, regardless of the observer. The plan of management is likely to be more extensive when the student does the write-up but is not as likely to be as cost-effective in further defining the patient's problems and their status. The practitioner will probably have thought of as many possibilities in the differential diagnosis, but will have discarded many of them because of previous experience with similar cases.

Recently a writer contended that a computer program set up to arrive at medical diagnoses given certain clinical data would outdo any clinician and hence practice better medicine, because *it would produce a longer list of differential diagnoses*! Those of us who have practiced the art of medicine for some years realize that the shorter list is usually the more beneficial. We keep in the back of our minds the rare or less likely diseases, to be sought only after we exclude the more likely candidates.

Our point here is that if everything is so objective (as in the scientific method), then the write-up has to be done in the familiar linear fashion: Subjective, Objective, Assessment and Plan. You can't possibly start with the Assessment or the Plan. Or can't you? Why not focus on the tasks at hand rather than on the relationship with the patient and the chart?

In fact that is what you as a seasoned clinician have probably been doing all along, but you may not have been charting that way. Think about the process that you go through. You have been trained to ask directed questions or you figured it out for yourself, when random questions produced random answers. You have made diagnoses on the fly, as you elicited symptoms and signs. In frequently seen cases or in those for which the symptoms are almost pathognomonic, your arrival at the level of diagnosis may be almost instantaneous, such as when a patient presents with "severe right sided pain followed by blood in my urine." You likely have also returned to the subjective portion of the interview and questioned the patient based on an objective finding during the physical examination: an area of abdominal tenderness, for example. You have practiced in a non-scientific or artistic manner, all the while thinking that you were scientific through and through.

Examine some of your write-ups in light of what we have said. If you think in terms of tasks, which you probably do, learn to record your write-ups in the same fashion. Praxis will help you make use of the concept processor technology to accomplish the goal of better documentation.

Defining the Kind of Information That Should be Charted

While Praxis will improve your medical documentation, it will more importantly improve your medical practice. Every item you enter into Praxis should be selected to correspond with the patient in front of you and it should meet the following criteria. It serves to clarify your reason for making a particular diagnosis. It reminds you of the essential elements of the case in the future. Other healthcare providers can easily follow the description of the clinical events. It serves to protect you from medical malpractice liability. It supports your request for reimbursement at the appropriate rate. It optimizes the use of your time.

Given the reasoning above, we can answer the most crucial question about medical documentation: What kind of information should constitute the medical record by ending up in the chart?

1.   Clinically useful information. This would include the characteristics of a symptom, the relevant findings on physical examination, and the differential diagnosis.

2.   Medico-legal information. This would include details of an accident in a Workers' Compensation case, for example.

3.   Personal patient information. This would include the minimum amount of information required to remind you who the patient is.

Concern for the patient as an individual should be expressed, but one of the worst ways to express it is in the medical record. In taking time to record it, you are using valuable time that could be delegated elsewhere. You could spend a little more time with that very patient. You could be leaving the office or clinic much earlier each day with your medical chart documentation completed and with more time for yourself or your family.

The Superiority of Praxis's Task-oriented Approach to Charting

Praxis charts bass ackwards because that's the way the healthcare practitioner comes to a diagnosis 99 % of the time. You listen to the chief complaint, watch the patient's demeanor, perform a brief examination and form a strong impression of what is wrong. You have made **your** diagnosis. You can then open Praxis to the nearest or most closely identical case, ask some more questions, and perform a directed physical examination. You do not have to complete the entire subjective portion and proceed to the objective. You build the case by confirming certain aspects with the patient.

Why is the Praxis method better than the way we were all taught? Because no matter how you arrive at your working diagnosis, the subjective portion is already laid out in your mind. You know what symptoms are usually associated with a particular diagnosis, such as **pharyngitis**. You probably have a case of **pharyngitis** already stored in Praxis, in task-oriented format, without the unnecessary verbiage of the relationship-oriented approach. The concept processor is an efficient and unfailing extension of your mind. All you need to do is check some of your assumptions with your patient, make sure all the t's are crossed and the i's are dotted.

Suppose that, as you further talk with and examine the patient you elicit information that makes you change your mind (i.e. your working diagnosis). You've got Praxis open to **pharyngitis,** but now it seems more like **rhinitis with post-nasal drip**, masquerading as pharyngitis. The concept processor is electronic. It's just a computer program. It will do as you command it. You haven't yet "saved" the case. There's no harm done. You simply cancel out of **pharyngitis** and open **rhinitis with post-natal drip**. Proceed from there.

Does this mean you should rethink how you practice medicine? Does this mean that the diagnosis is all-important? Yes, indeed. You win no brownie points by practicing medicine and constructing the medical record the old-fashioned relationship-oriented way. Your notes are not read for pleasure by anyone, not even your closest colleagues. You and your colleagues look to the medical record for facts. These are difficult to extract from the previous-constructed records but are easy to extract from Praxis. Insurance companies certainly do not want to wade through discussion of relationships; they want the facts as well.

We believe that the key to proper use of the concept processor is the use of task-oriented charting. The time and effort you spend to make Praxis perform relationship-oriented charting are better put toward more time with your individual patients and more time with your family.

The proper use of Praxis will improve the quality of documentation and the quality of care you render to your patients.