Letter from . . . Chicago

Confusion orientated medical records

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In the 15 years since Dr William Bean wrote his *Tower of Babel*, 1963,[1] hospital medical records have become increasingly bulky and incomprehensible. The caligraphic efforts of the few have given way to the team approach of the multitude, and to the cryptic cuneiforms of the harassed houseman have been added the voluminous written opinions of an army of specialised nurses, dietitians, social workers, psychologists, physiotherapists, consultants, and consultoids in training. To which must be added a modern passion for documentation based on the needs of government, malpractice lawyers, accrediting bodies, educators, administrators, auditors, and medical record librarians. So that if you visit a hospital ward you find that everybody is poring over paper and furiously scribbling away—and if you should ever manage to detach a nurse from her desk she is likely to hand you a patient's chart the size of a telephone book, or perhaps even a whole stack of volumes—the *Greater Babylon Area Directory*, detailed and complete, with all the suburbs and townships that once graced the fertile plain between the Tigris and the Euphrates.

You feel faint at this stage and must sit down. You desperately turn over pages of forms and reports and nurses' notes, clothes lists and itemised accounts of services rendered, insurance forms and graphic charts, computerised laboratory data, and an informed consent form detailing the hazards of having a television set installed in the sickroom. It takes five minutes to find yesterday's temperature, twenty to understand the history, and an eternity to determine on which day the penicillin was begun. Suddenly the folder springs open, the papers fly all over the room, and the nurse and you are crawling all over the floor to pick them up; it takes another five minutes to reassemble the record in some sort of order, and then you may start your research all over again. Or you may continue your studies at the outpatient clinic, where the patients are already waiting, each with his own personal telephone directory—some dating back to the second world war. The pages are yellow and stiff and crumbling, the writing has begun to fade, the story makes no sense because the inpatient records are stored separately on microfilm in a warehouse out of the State—so you give up and just renew the digoxin for the eleventh year.

It was to correct this that Dr Lawrence Weed first introduced his famous problem orientated records system.[2] Convinced that the traditional source orientated record had become unmanageable and that radical changes were necessary, he developed a new system based on a longitudinal recording of the patients' problems rather than diagnoses, a problem being defined as anything that worried the patient or the doctor or anybody else.

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The new format was to consist of a problem list, a data base (that is, the history, physical examination, and laboratory findings), and then, written out separately for each problem, a plan (diagnostic, therapeutic, and educational), a daily SOAP (subjective, objective, assessment, and plan) progress note, and a summary. The problem list, kept at the front of the medical record, would serve as an index for the reader so that each individual problem could be followed through until it was resolved. The system also offered educational and auditing possibilities, since only one particular problem might be reviewed or discussed at any one time.

It was a brilliantly conceived system, seemingly foolproof, and based on an irrefutable theology, with ready answers for every objection. After all, the system was to be a crutch for the average doctor, not a substitute for one hour spent with Osler and one with Freud. And to attend a seminar chaired by Dr Weed was to be immediately converted to the rapidly growing fold of proselytes. A wave of enthusiasm spread through the academic community. No longer were we to struggle with Babylonian telephone directories, but instead everything was to be as neatly organised as Webster's dictionary. Perhaps enthusiasm might have been tempered after a visit to one of the early testing grounds where Dr Weed's system was being applied. It was obvious in some of the teaching hospitals that the problem list was being prepared by the junior students, that most patients had over 20 problems—such as (1) urinary tract infection, (2) fever, (3) white cells in the urine, etc—and that the possibilities for future mischief were infinite. Still, it was impressive to see the system in action, not how well it was done but that it was done at all. And within a short period everybody jumped on the band-wagon, most teaching hospitals adopted the Weed system, and even the Washington central office of the Veterans Administration ruled that henceforth its hospitals will be problem orientated.

A decade later the problem orientated medical record system has been adopted by all self-respecting teaching hospitals, and what is left of the original creed has become institutionalised. A problem list is now affixed to every chart, and if left blank by the interns, at least in one hospital, the ward clerk has been instructed to write something down. The telephone directory has grown even fatter than before, there is more writing than ever, and more paper to wade through than ever before. It is now even more difficult to understand what is going on because generations of students and house officers have become so indoctrinated that they cannot write down a simple statement such as "The patient is being obnoxious and is annoying the nurses" without splitting it into its subjective, objective, assessment, and plan components. Frequent lapses into the earlier idolatry of source orientation are followed by prompt repentance and return to the new creed, but now with a different set of numbers for each problem, so that the original problem list soon becomes useless. In addition, the surgeons and other reactionaries are being particularly obtuse about becoming proselytised—and the confusion is compounded by having nurses and paramedical personnel write on the same sheets as the doctors.

The medical intern may have a fair understanding of his suspected case of hyperparathyroidism and its problematic bones, stones, and abdominal groans. But now comes the urology resident, who has never heard of Dr Weed, and who puts down a rude source-orientated note about sending the patient down for cystoscopy. The endocrinology fellow, with little else to do, writes a three-page essay on receptors and phosphodiesterase and cyclic AMP. The intern fights back with a neat SOAP note, but now the social worker joins the urology-endocrinology axis and writes down that the patient has neither money nor family nor a place where to go. The dietitian joins the conspiracy, the nurse puts down a note about the temperature being normal and the excretory functions sluggish, and the urologist comes back with a ready-marker and scribbles down the results of the cystoscopy. Then comes some more problem orientated stuff. But now the attending physician appears and is upset because nobody has noticed the patient's hernia—same problem as "abdominal groans" or a new one? Then serum for the parahormone levels have to be drawn again because the ice has melted on the way to California. The calcium concentrations are now strangely normal. It turns out that the patient is a Jehovah's Witness anyway, and would not think of letting them touch his hernia, let alone his parathyroid glands. The nursing home situation is rather tight, writes the social worker in her simplistic source-orientated way. There is a note from the audit committee that you had better orient the patient out of here pretty fast. The dietitian puts down another disorientated note about the calcium content of carrots. And meanwhile the intern doggedly writes his daily SOAP note. The second attending physician has never used weeds, and is not inclined to start now. The chart swells, the patient has fallen out of bed (new problem or still part of number 26?), an elder sister decides to take the patient home, a distraught resident tries to summarise the chart a la Weed, and the record librarian throws up her hands in despair, takes to drink, elopes to Mexico, or enters a convent and prays for a computer.

Dr Weed may console himself by recollecting not only *by whom* but likewise *to whom* the new revelation was given. His older disciples continue to laud his systems approach to medicine as offering untold advantages to the practising physician and assuring a high level of quality control.[3] Newer proselytes believe that this management tool provides substantial intellectual rewards, improves patient care, and leads to "increased productivity in the classic economic sense."[4] A heretic finds the system useless in evaluating anaemia and is ignored or burnt at the stake.[5] But in the office of the dean the Weed system remains an unqualified success, and a protocol for a problem orientated peer review is being typed to help the embattled intern in his conflict with the urology-endocrinology axis.

Only the nephrologists remain dissatisfied. For them the Weed system does not work because their patients on dialysis have altogether too many problems. SOAP will not do here, and what is needed is a series of "complex feedback systems that relate therapeutic interventions to clinical and laboratory information relevant to multiple-organ systems over prolonged periods."[6] This "time orientated system," hailed as a possible solution to deteriorating patient care and physicians' psyches,[7] starts off with a 1500-word dictionary converting symptoms, signs, and laboratory data into a numeric code that can be neatly tabulated on colour-coded charts. The physician will no longer have to contend with the telephone directory system, but instead, armed with his pocket dictionary, he will sail through the most perilous clinical situations without ever wishing to return to the ways of his primitive ancestors.

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And primitive indeed the system was. Less than a decade ago the outpatient clinic at the hospital was Siberia, shunned by house officers and staff physicians alike. In those days patients rarely saw the same doctor twice, and there was a famous diabetic-hypertensive woman who in nine years had seen 33 different house officers—one five times, one three times, five twice, and the others once. Her voluminous source disorientated record indicated that she displayed a most remarkable tendency toward abrupt fluctuations in body weight. She first came in 1965 because her legs were swelling from venous insufficiency, and at the time she weighed 96 kg. She received diuretics, and later, inexplicably, digitalis, and remained well until mid-1967 when she was lost to follow-up. In 1970, however, she returned to the clinic, having developed diabetes and lost some 30 kg. Treatment was begun with tolbutamide, and within a year her weight increased to 85 kg, her oedema returned, and she developed hypertension.

For the next two years, the record shows, she received both antidiabetic and antihypertensive medicines. She remained in good health, but her weight continued to fluctuate sharply—and this affected the control of her illness. When she weighed 90 kg her diabetes was well controlled but her hypertension was not; when she slimmed down to 60 kg her blood pressure was normal but she had glycosuria. One time her weight dropped from 90 to 60 kg within two days, to the gratification of the house officer, who noted that she was sticking to her diet. Two months later her weight was up again. This pattern continued until 1974, when the clinic was reorganised and an astute observer suddenly stumbled upon the truth: there were two ladies, one fat, the other thin, one oedematous and hypertensive, the other diabetic, who happened to have not only the same name but also the same medical record, and who for nine years had eluded the vigilance of 33 highly trained house officers, though responding quite well to the universal elixir of tolbutamide, hydrochlorothiazide, and potassium chloride.

References

1 Bean, W B, *Archives of Internal Medicine*, 1963, **112**, 815.
2 Weed, L L, *Medical Records, Medical Education, and Patient Care. The Problem-Oriented Record as a Basic Tool.* Cleveland, Case, Western Reserve University Press, 1969.
3 Walker, H K, *Journal of the American Medical Association*, 1976, **236**, 2397.
4 Tufo, H M, *et al*, *Journal of the American Medical Association*, 1977, **238**, 502.
5 Switz, D, *Archives of Internal Medicine*, 1976, **136**, 119.
6 Pollak, V E, *et al*, *Archives of Internal Medicine*, 1977, **137**, 446.
7 Levin, M L, *Archives of Internal Medicine*, 1977, **137**, 436.

ONE HUNDRED YEARS AGO In the recent trial at Chester, the woman Heeson, who was proved to have destroyed by poison her mother and two of her children, pleaded pregnancy in bar of execution. Thereupon, according to the provision of the criminal law, a jury of women was taken from among those casually present in court (*de circumstantibus*); and they were sworn to try not only whether the convict was pregnant, but whether she was quick with child or not. The learned judge who tried the case very properly directed that the surgeon of the gaol, Dr McEwen, should be associated with the twelve matrons or discreet women required by the law. He was sworn to assist the jury; and, after due consultation, they returned a verdict that the woman was with child of a quick nature; whereupon, although judgment was passed upon her, her execution was suspended until she had been delivered, and until a reasonable time after that event, or until such a time after that it is proved by the course of nature she could not have been with child at all. The law does not provide for a medical assessor to assist the matrons or mothers taken by chance on these occasions; but few judges now place reliance upon the opinion expressed by them unless it has been confirmed by the judgment of a medical man. It would be better, in order to prevent mistakes and ensure a proper verdict, that the duty of examining a woman under these circumstances should be assigned to two local medical men nominated by the judge. A short Act of Parliament might be introduced to dispense with the services of the jury of matrons altogether. (*British Medical Journal*, 1898.)