Remembering Larry Weed, M.D.
A MEETING AT A BROWN BAG LUNCH CHANGED A PHYSICIAN’S LIFE

If you ask internists older than 70 how the Problem-Oriented Medical Record (POMR) and SOAP (Subjective, Objective, Assessment, and Plan) note format came to be, they can likely tell you how, when, and who promoted the idea. If you ask a medical student, resident, or young physician today, they will likely say, “That was invented?” and then admit they do not have a clue. In fact, very few physicians today understand why the SOAP format and Problem List were invented and how they are an architecture to guide thinking and care.

Before the late 1960s, paper records were not only illegible, but they had no organization and no common format or structure. Lawrence Weed, M.D., realized that a record organized around patient problems could guide diagnostic and critical thinking. He traveled across the United States evangelizing for a universal structure to medical records, and in doing so, he changed medicine.

So with deep sadness, I mourn the passing of Weed, the father of the POMR, the SOAP note and Problem Knowledge Couplers. He was also a father, a spouse to the late wonderful Laura Weed, and my friend.

Larry Weed was slightly ahead of his time. From 1969 to 1981, while professor of medicine at the University of Vermont, Weed led a multimillion-dollar federally funded research project, the computerized Problem-Oriented Medical Information System (PROMIS). In thinking now about the idea of implementing an electronic health record in the 1970s, it is hard to grasp not only how forward-thinking Weed was, but also the courage he must have had. After leaving PROMIS, he founded a medical software company, Problem Knowledge Couplers (PKC). Until the age of 93 and even just a month ago, he soldiered on, tirelessly advocating for a completely different approach to medical education, medical care, organizing medical knowledge, and patient engagement.

BROWN BAG

The 8 x 11 sign on our lecture room door said, “Brown Bag Lunch Series: Speaker Lawrence Weed, M.D.” It was 1984. I was a first-year medical student at the University of Vermont, and atypically, I had a lunch in a bag. As a result of his lecture, I went on to have two medical educations between 1984 and 1986: one at the medical school, and the other two miles away in the cramped attic office of the newly founded, three-employee PKC Corp.

I had two lives and lived in a perpetual state of cognitive dissonance. During the day, go to class, read, study, and take exams. Evenings and weekends, read more medical textbooks, probe Index Medicus, and input medical literature knowledge into the PKC “Knowledge Net,” all while listening to Weed critique my training at the medical school just down the road.

Tom Sawyer never had anyone painting fences as quickly as Larry Weed had me painting with. As a first-year medical student, I had no context or experience to reflect on the importance of the development of the POMR and SOAP, and what it took to transform the medical record from an unstructured, ad hoc mess to an aid for medical thinking.

However, in this small attic office, I was introduced to the problem of cognitive biases in medical decision making and the limitation of the human mind in handling complexity. I began to appreciate that individual practitioners could not possibly store every single diagnosis in their heads and — just as important — it was impossible to know all the right questions to ask for each potential complaint the patient might have.

I was experiencing something completely different from medical school, conversations ranging beyond medicine to history to philosophy to educational psychology to art, music, and more. I began to appreciate that individual practitioners could not possibly store every single diagnosis in their heads and — just as important — it was impossible to know all the right questions to ask for each potential complaint the patient might have.

IS A PRETENSE OF KNOWLEDGE, YOU WOULDN’T GET ON THE PLANE IF THE PILOT WAS MEMORIZING THE ROUTE AND HAD NO INSTRUMENTS IN THE COCKPIT, SO WHY ARE THEY TRAINING YOU AND ENCOURAGING DOCTORS TO PRACTICE SOLELY BY MEMORY?

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Tolerate the Ambiguity

Larry did not believe that physicians would lead the effort to fix the problems of medical care delivery. He was sympathetic to how overworked, in debt, and overwhelmed many physicians are, particularly those in primary care. However, he was optimistic about the role of the patient, and the possibility of an open source medical knowledge repository designed to improve decisions in the home and at the point of care.

He strongly recommended that the National Library of Medicine spearhead an effort to organize clinical knowledge beginning with patient inputs. He had a comprehensive vision of a new universal medical knowledge system, a repository of information leading to purposefully designed tools for patients and physicians. The envisioned open source system would have measurable inputs and outputs and would have feedback loops to improve the data and learn from the population.

Weed felt the focus of the great majority of health information technology tools were fragmented and misdirected, and too frequently about the commerce of medicine, rather than improving care for people. He would frequently caution, “If you misstate the problem, you cannot fix the problem.”

The near feverish media attention on what is new and amazing in medicine, such as genomics, biosimics, proteomics, and precision medicine — without attention to all the error, resultant harm, and inconsistent performance in clinical medicine — drew his constant ire. The focus on electronic health records as financial optimization tools discouraged him, as it does many of us. He would use more colorful terms and his great wit to characterize the poor outcomes we have in the United States for the $3 trillion we spend annually on healthcare. He never stopped trying to advocate for fundamental change. His sense of humor, intellect, drive and purpose were a force of nature. I am glad I had lunch in a bag that day.

Art Papier, M.D.'88, is the co-founder and CEO of VisualDx. A dermatologist and medical informatics expert, Papier is also an associate professor of dermatology and medical informatics at the University of Rochester School of Medicine and Dentistry. He is a thought leader in clinical informatics and healthcare solutions that improve diagnostic accuracy.