The Merging of the Work of Two Pioneers: Dr Weed & Dr Berwick

Attaining Comprehensive Health Care Improvement is Imperative

Lee Jacobs, MD

How about sitting with Lawrence Weed, MD, and Donald Berwick, MD, in the same week? Granted my time with Dr Weed was one-on-one for three hours in his living room in Vermont and my time "with" Dr Berwick was as part of an audience of 6000 attendees at his National Forum on Quality Improvement in Heatlh Care in Nashville, TN (December, 2008). I felt privileged to listen to the journeys of these two men who have had such a dramatic effect on how medicine is practiced today.

Dr Weed and Dr Berwick have much in common. Both have a passion for and a vision of how to improve health care. Both have played major roles in improving health care over the past few decades. Both are pioneers and as such have for years endured the criticism of their skeptics and the accolades of their followers. Both are leaders of significant movements that have and will continue to affect health care in the US and around the world. Both provide real solutions to waste in health care. And, most importantly, both want to increase the likelihood of a positive outcome for each individual patient encountering the health care system while at the same time lessening the chances of being harmed.

During my time with these two physicians, I heard both describe with similar language the state of disrepair of our present health care system; however, I found neither was pessimistic about the future. I was struck by the *can-do* attitude voiced by both—the problem is huge but there is a solution and they optimistically believe it can be attained.

In leaving their mark on how health care is practiced, however, these two physicians have taken two very distinct paths on their journey.

Lawrence Weed, MD

Dr Weed is an innovator in health information management and is best known as the champion for the problem-oriented medical record. Dr Weed described for me how his journey started, when, after years as a disciplined researcher, he was asked to lead rounds on a medical ward. [Full interview in the Summer, 2009 issue.] He was astonished that the residents and students were functioning in a most unscientific manner making decisions on the basis of fragments of information from patients each of whom had a complex array of problems. To arrive at a diagnosis, the physicians put this sparse information through a diagnostic filter that was totally dependent on their recall of possibly related facts. It was from such encounters that Dr Weed saw the need to link the medical record with the care of the patient and so in the late 1950s he developed the problem-oriented record now used worldwide.

Subsequently, Dr Weed saw the need for computer assistance to support a more systematic collection of patient data so physicians could be certain they had all the pertinent historical facts. I recall as a medical student in the early 1970s at the University of Vermont seeing patients inputting their own history on computer systems developed by Dr Weed—years ahead of any consideration of an automated medical record.

However, the pioneering work of Dr Weed did not end there. He saw the need for major changes in how medicine is practiced even beyond the medical record. Over the past 30 years he has eloquently challenged how medicine is taught ("Students are recruited and advanced on how well they memorize and regurgitate" [Lawrence Weed, MD, personal communication, 2008][a]); how practitioners are licensed and very importantly, how physicians make decisions based on recall ("The unaided human mind is not a reliable

Lee Jacobs, MD, residing in Atlanta, GA, is the Associate Editor-in-Chief of *The Permanente Journal*. E-mail: lee.jacobs@kp.org.

instrument for processing of information in the solution of patients' problems." [Lawrence Weed, MD, personal communication, 2008][a]). The recognition of the fact that the mind is not capable of managing complex data consistently is not unique to Dr Weed. A recent *Harvard Business Review* article discussed just this in an analysis of flawed decisions executives made on the basis of two characteristics of "brain hard wiring" —relying on "pattern recognition" and "emotional tagging."[1]

It will take a "Weedian" revolution of practitioner training and decision making PLUS dramatic "Berkwickian" refinement of the care processes for every patient to receive state-of-the-art care.

To address this need, Dr Weed has led a team in developing "knowledge couplers," computerized tools to assist decision making that link patient history and findings to the complexities of possible diagnostic and management possibilities. "These powerful tools embedded in a well-defined system of care can lead to a better science of medical practice." [Lawrence Weed, MD, personal communication, 2008].[a] Using computer tools such as these enables practitioners to make decisions on the basis of quality data input rather than on recall.

In summary, Dr Weed is leading a movement that addresses how practitioners process and apply information thereby challenging how medical students are taught, how practitioners are licensed and how they make decisions.

Donald M Berwick, MD

Dr Berwick is the President, CEO, and visionary leader of the Institute for Healthcare Improvement (IHI)– a quality improvement movement that has had a significant impact on care systems in the US and throughout the world. The recent 2008 IHI meeting in Nashville, TN was a celebration of the 20 years of the National Forum gatherings of "health care leaders and learners who are passionate about improving care,"[2] growing from a small room of participants in 1989 to 6000 at this year's meeting. IHI's 2009 Progress Report summarizes well the overall impact of this quality improvement movement:

> "We have traveled far since the day, 20 years ago, when 287 people gathered for what was to become IHI's first annual National Forum on Quality Improvement in Health Care. Those groundbreakers could not have imagined where the path they charted would lead, nor how many health professionals and quality leaders would join them on the journey. But now, with the benefit of 20/20 hindsight, we can see how much has changed. Theirs were among the first steps on a journey that would change the face of health care quality and improve the lives of hundreds of thousands of patients and providers. What started as a fringe philosophy for a few has now moved to the mainstream. Quality is on health care's center stage at last."[3]

In Nashville, Dr Berwick stated that he believes there are about 100 core work-flow processes that cover 95% of all patient care. The goal of IHI's quality improvement movement has been to instill health care leaders with an awareness of the need to understand the processes involved in patient care and then to improve each process by applying quality improvement principles and tools.

In Summary, Dr Berwick is leading a movement that addresses the broken work-flow processes in health care systems to improve the care to the patient.

Imperative: Merge These Two Movements!

Yes, these two movements are going the same direction—both with the goal of improving the care each patient receives. Although the swathes that they are cutting are broad, they are two very distinct paths. I do not believe that significant transformation in the health care system will be realized unless and until health care professionals intentionally incorporate both improvement approaches in their quality improvement change map.

Specifically, dramatic quality improvement will only result if:

1. The culture of *medical education* is changed to diminish the role of memorization and increase the understanding and use of information technology
2. All *practitioners* have access to these tools to assist in the diagnosis and the management of patients
3. The *care flow processes of health care* are well understood and improved.

Although these two pioneers are cutting separate paths on their journeys, it is my opinion that in the future their paths must intersect if, in fact, they are to comprehensively change the health care system. It will take a "Weedian" revolution of practitioner training and decision making PLUS dramatic "Berkwickian" refinement of the care processes for every patient to receive state-of-the-art care.

Even if the multitude of care-flow processes were improved by the approach that Dr Berwick and

his followers advocate, true improvement in health care will not be realized if the initial input (practitioner decision making) into these processes is flawed. For example, if new operating room guidelines that are proven to lessen preventable injury and death are implemented but the patient didn't need the surgery in the first place, it would be difficult to say from a patient-centered viewpoint that we have achieved quality improvement.

Conversely, if medical education and practitioner decision making was overhauled to integrate an entirely new approach as advocated by Dr Weed, but the patient then enters into a flawed care process, then again—the vision of improved health care will not be attained.

Closing

After sitting in the living room of one pioneer, and then the same week sitting among thousands listening to another pioneer, it was clear to me that both movements must be successful if in fact significant health care improvement is to be attained. When considering the movements of these two amazing men, it is not a question of *which one*—we need both!

In future articles, we will highlight some of the work presented at the 2008 IHI meeting in Nashville as well as articles from frontline physicians using Dr Weed's approach to decision making. We want to hear from you. Let the dialogue begin! ❖

[a] Interview with Lawrence Weed, MD, Underhill, VT. December 4, 2008.

References

1. Campbell A, Whitehead J, Finkelstein S. Why good leaders make bad decisions. Harvard Business Review 2009 Feb.
2. Brochure. Institute for Healthcare Improvement: National Forum on Quality Improvement in Heatlh Care, Nashville, TN (December 8-11, 2008). p i.
3. 20/20 Vision: 2009 Progress Report [monograph on the Internet]. Cambridge (MA): Institute for Healthcare Improvement; 2009 [cited 2009 Apr 6]. Available from: www.ihi.org/NR/rdonlyres/A8C4BFED-0204-4327-B03E-13C5798F737B/0/2009IHIProgressReport.pdf.

Achievements Never Imagined

Significant performance improvement will only be accomplished by tracking dramatic, system-level changes. The courageous among us will get there first, achieving performance levels never imagined by previous generations.

— 2004 Progress Report, *Donald M Berwick, MD, MPP, b 1947, President and CEO Institute for Healthcare Improvement*

Radical Change

The time has come to abandon the wrong premises and inadequate tools that underlie the current systems of medical education and care. If we are willing to adopt radical change, we may find that productivity can improve by an order of magnitude.

— *Lawrence L Weed, MD, President and Founder of PKC Foundation, developer of Problem-Knowledge Couplers*