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Using science to improve health care delivery and patient care

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The explosion of biomedical information in the past two decades or so has created attractive new opportunities for treating and preventing human diseases. But the new body of knowledge—which will only continue to expand—also presents health care providers enormous new challenges.

How should we organize and utilize the new information in the most practical and efficient ways to improve patient care? How do we balance new information and practices with existing factors such as payer constraints, patient needs, and teaching responsibilities?

Such questions quickly lead to additional—and, at times, disturbing—concerns relating to quality of care: What are we currently doing that may be wasting scarce resources and possibly exposing patients to unnecessary dangers?

In addition, how do we really use evidence-based medicine most effectively? And, is there a better way of interfacing with individual patients and, perhaps more importantly, populations of patients, than the methods physicians have used for centuries?

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The science of health care delivery, or health services research, addresses these fundamental issues. It encompasses the analysis, discovery, development, teaching, and dissemination of knowledge about the effective practice of contemporary medicine.

Together with some other academic health centers, UW Health has made an institutional commitment to such research. Given the complexity of the issues, we know our work will not be easy. Nevertheless, we believe that it is critically important to allocate time, resources, and intellectual energy to finding answers to these vexing questions. New ways of thinking must be cultivated.

To this end, we are building toward an academic and clinical infrastructure consisting of health services scientists based on our research-rich campus. These include faculty from the Medical School's Department of Population Health Sciences and several of its clinical departments, the School of Nursing and the School of Engineering's Department of Industrial Engineering. We expect to attract additional creative people to this new endeavor.

As an example of the valuable collaborative relationships that are growing, industrial engineering researchers are using our institution as their "laboratory," examining the way hospital systems and

human factors affect delivery of care in our intensive care and ambulatory surgery units. The overarching goal of this and all future research is the delivery of better patient care.

This new initiative is a natural extension of the organizational investment UW Health has made to improving quality of care. Over the past several years, we have instituted innovative programs to reduce patient falls, decrease medication errors, and improve communication among intensivists, all of which have contributed to making us a national leader in patient safety.

For example, the Institute for Healthcare Improvement (IHI) recently selected UW Health to participate in a conference at Harvard University, where we were one of four institutions asked to describe initiatives used to achieve quality in the clinical environment. The IHI selected us based on observed versus expected mortality rates of hospitalized patients. We do very well on this metric; the care we give our sickest patients is exceptional.

Last fall, UW Hospital also was listed as one of the nation's top hospitals by Solucient, a health care information company. Each year Solucient compiles a list of the nation's 100 "benchmark" hospitals—top achievers in both quality of patient care and financial performance. The ranking is based on eight stan-

dards, including mortality and complication rates (adjusted for illness severity); average length of stay; productivity; and expense per discharge.

Also this past year, the American Hospital Association honored UW Hospital with a “Quest for Quality” prize for leadership and innovation in quality, safety, and commitment to patient care. This significant kudo, which recognizes the creation of a “culture of safety,” was given to only four hospitals nationally.

By almost any measure, we stand out among our peers as leaders in the delivery of quality care. But the success only fuels our desire to keep getting better and to contribute to the science that will make American medicine more effective and safer for every patient.

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