Testimony of

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Improving Quality, Lowering Costs: The Role of Health Care Delivery System Reform

Committee on Health, Education, Labor and Pensions

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Health care is hungry for something truly new – less a fad than a new way to be. We are staggering under the burden of too many defects, too much cost, and too much variation in care, all described with scientific rigor and social commitment a decade ago in the landmark Institute of Medicine reports To Err is Human *(1999) and* Crossing the Quality Chasm *(2001). Even one convincing example of a major health care organization that crossed the chasm might be enough to give us both the confidence and the template we need. Transformation, in that regard isn't vague at all; it refers to* results*, unprecedented performance in all important dimensions of care, at a cost we can embrace as sustainable.*

Virginia Mason Medical Center (VMMC) is not yet quite that beacon, but it has a better shot at becoming one than almost any other large health care organization in America today (Kenney, 2011, p. xii).

Donald M. Berwick, MD, MPP
Administrator of the Centers for Medicare and Medicaid Services

Good afternoon, Chairman Harkin, Ranking Member Enzi and members of the committee. I want to thank you for this opportunity to present the work of Virginia Mason Health System and our efforts to transform the delivery of health care. I am Dr. Gary Kaplan, Chairman and CEO of Virginia Mason Health System in Seattle, Washington.

Virginia Mason was founded in 1920. Our founders came from the University of Virginia and the Mayo Clinic. Our organization is patterned after the Mayo model, combining a primary and specialty care group practice of nearly 500 physicians with a 336-bed acute-care hospital. We also operate clinics in eight locations around the Puget Sound area.

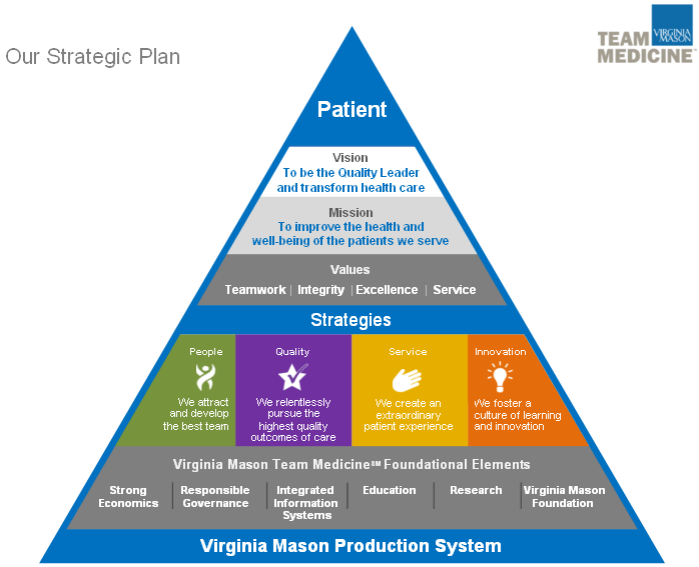
In addition to my duties as Chairman and CEO, I continue to practice internal medicine at Virginia Mason. I am a product of American medicine and I am proud of American health care. We produce some of the world's best health care in spite of a fragmented, financially unsustainable health care system.

Redesigning care delivery

Virginia Mason has a long-standing reputation for innovation and clinical excellence, but our journey to design a better system of care delivery began just over 10 years ago. Our cultural transformation was prompted by a simple question from our Board, "Who is your customer?" Of course, our immediate response was "It's the patient." However, upon reflection we realized that our systems were not designed for the safety and convenience of our patients but based on the preferences of our providers and designed around us, the doctors, nurses, technicians, managers and those of us

working in health care. An example would be waiting rooms where patients hurry to be on time and then wait for us!

In 2001, Virginia Mason leadership developed a new strategic plan, accompanied by a graphic representation in the form of a pyramid. All of the elements of the plan, as depicted in the pyramid, support Virginia Mason's patients who are at the top of the pyramid, signifying our intention to place our patients first in all we do.



Also in 2001, Virginia Mason physician leadership developed a physician compact detailing the organization's responsibilities to physicians and each physician's responsibility to the organization, to each other and to their patients.

Our cultural transformation had begun but we knew we needed a management method that supported high quality, safe care at a sustainable cost. In our quest, we looked at what other hospitals were doing – and we looked at the very best out there. Yet we didn't find anything that we believed would truly transform health care.

When we were willing to look at companies outside of the health care industry, we discovered that Boeing had adopted the Toyota Production System as their management methodology. They shortened the lead time to make a 737 from 22 days to 10 days and we soon found that this methodology is applicable to just about any work that involves complex processes and systems.

So we adapted it to what we call the Virginia Mason Production System (VMPS). By using the tools and methods of VMPS, we've seen tremendous benefits for our patients, our staff and our organization. Patients benefit with greater safety, less delay in getting care, more timely results and treatment,

and more time with their care providers. Our staff members benefit by having less rework and frustration, and greater opportunities and more time to care for patients; which, by the way, is the reason they chose health care as a profession in the first place. Virginia Mason benefits by operating more efficiently, providing higher quality and safer care, at a lower cost.

Achieving results with the Virginia Mason Production System

Today, Virginia Mason's costs are among the lowest in our market. We recognize skyrocketing cost escalation is a contributor to many of the problems associated with our health care system. We have worked hard to decrease our costs and, at the same time, increase the quality of care we provide to our patients. We utilize our management methodology to identify and eliminate wasteful processes.

An example of waste is waiting. Waiting rooms by design are places patients, who are on time, go to wait for providers who are running behind schedule. Not only do patients wait in the waiting room, they wait in the exam room, they wait for test results, they wait for diagnosis and treatment, and they even wait to receive their bill. All of that after an initial wait to see the doctor after their appointment has been scheduled.

VMPS also provides a consistent approach for measuring performance across the organization. Virginia Mason teams have achieved significant organizational and departmental improvements since adopting VMPS:

- Saved $11 million in planned capital investment by using space more efficiently and freed an estimated 25,000 square feet of space using better space design.

- Reduced inventory costs by $2 million through supply chain expense reduction and standardization efforts.

- Reduced staff walking distance by 60 miles per day.

- Reduced labor expense in overtime and temporary labor by $500,000 in just one year.

- Reduced professional liability insurance 56 percent from 2004 to 2010.

- Reduced the time it takes to report lab test results to the patient by more than 85 percent.

- Improved medication distribution from physician order to availability for administration from 2.5 hours to 10 minutes, and reduced incomplete inpatient medication orders from 20 to 40 percent to less than 0.2 percent; both were achieved through process improvement and computer physician order entry (CPOE) implementation.

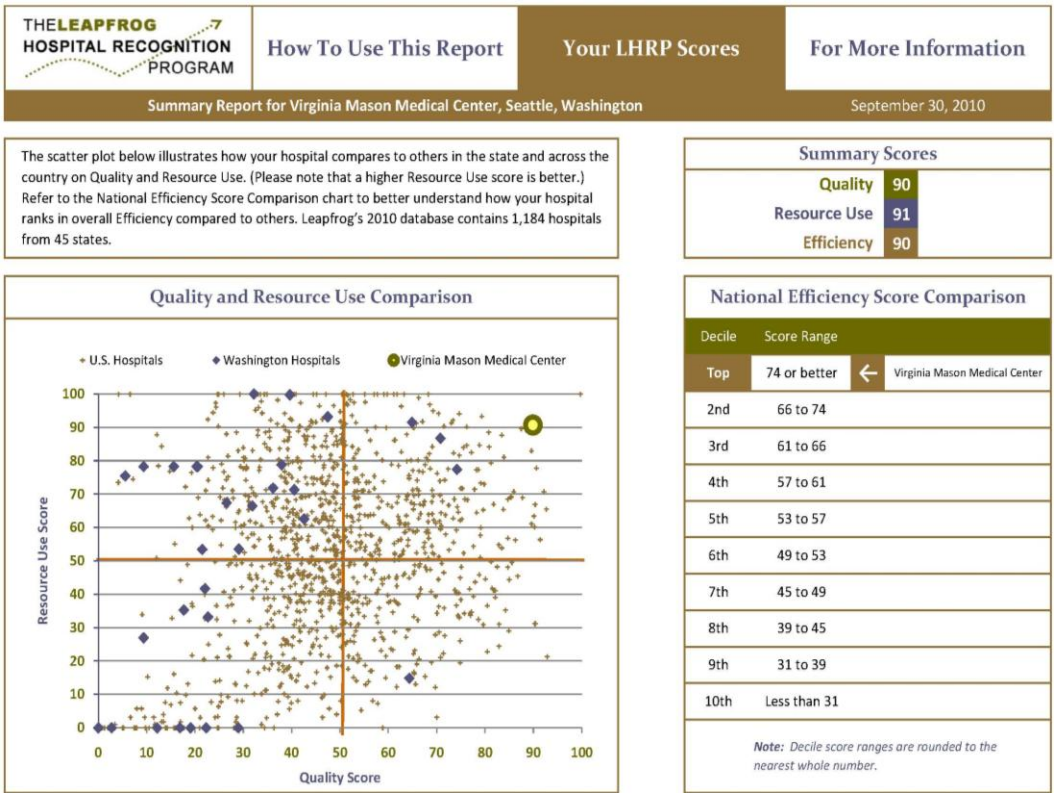
- Reduced the time from when a patient first calls Virginia Mason's Breast Clinic with a concern to receiving a diagnosis from 21 days to three days. Many patients receive their results on the same day.

Receiving external recognition

Our efforts to provide higher quality, safer care at a lower cost have not gone unnoticed. Late last year, we were named one of two Top Hospitals of the Decade by the Leapfrog Group. The Leapfrog Group is a coalition of large employers who came together more than 10 years ago with the goal of influencing the quality and cost of health care. Today the Leapfrog Group produces the most respected indicator of efficiency and effectiveness in hospital care.

Efficiency is a Leapfrog measure that combines scores for quality and resource use. Leapfrog's 2010 database contained 1,184 hospitals from 45 states. We know that better quality also means higher efficiency. Proving that rapid access to reliable systems delivering evidence-based care is less costly for all concerned.

As this fall 2010 diagram illustrates, Virginia Mason ranks among the top 1 percent of all hospitals measured for both quality and efficiency, according to the Leapfrog Hospital Recognition Program.



Fall 2010 Leapfrog Summary Report

Applying production system principles to facility design

Another example of our success with adopting production system principles to health care is our new Emergency Department at our downtown Seattle location, which opened for the first time last week.

People typically come to emergency rooms because they are acutely ill. Making them wait just makes them sicker. We used the Virginia Mason Production System to design the ideal process and flows so we can efficiently move our patients from arrival to assessment, treatment and either discharge or admission to the hospital. Then, using a 3P process (Production Preparation Process), we brought together the construction team, the architects, our doctors and nurses, paramedics and most importantly our patients, to design the ideal physical facility to support that flow. This inclusive process revealed that a large waiting room is unnecessary.

A key to the efficiency of the new ED is the addition of what Virginia Mason calls the PACE unit – which stands for Patient Accelerated Care Environment. In most EDs, patients who are not acutely ill, but cannot be immediately discharged or admitted, are cared for in the ED as "observation" patients.

At Virginia Mason, those patients are moved to the adjacent PACE unit, where they receive individualized care to efficiently move them toward either discharge or inpatient admission. This not only provides better care for the patient, but removes the bottleneck from the ED and makes those resources available for more acutely ill patients who might otherwise be forced to wait.

As you may know, hospitals all over the country are spending millions of dollars to build huge emergency departments to cope with the rising demand for care – instead of putting resources into figuring out how to deliver the care that people need more efficiently.

Through the application of production system principles and the broad participation from all of those involved in patient care, we built a unique facility. We rethought everything – from how to eliminate waiting to the way people, information and supplies move through the building. I genuinely believe the care we provide in this emergency department will be a model for the entire nation.

Partnering to deliver greater value

We know that we can make many improvements on our own, but to transform our nation's health care delivery system, we need to partner with like-minded organizations.

We are working with health care organizations that share our vision of a value-driven system. In December 2010, Cleveland Clinic, Dartmouth-Hitchcock, Denver Health, Intermountain Healthcare, Mayo Clinic, and The Dartmouth Institute for Health Policy and Clinical Practice announced the

formation of the High Value Healthcare Collaborative (HVHC) with the goal of improving care, lowering costs and sharing best practices nationally. On June 1, eight major health systems, including Virginia Mason, joined the Collaborative.

The medical groups will share data on outcomes and clinical protocols for selected conditions and treatments to arrive at optimal care models, which can then be implemented by many other health care systems. The Collaborative aims to see these best practices replicated across the country.

Currently, the HVHC is working together in nine areas that have wide variation in rates, costs and outcomes. These are total knee replacement, diabetes, asthma, hip surgery, heart failure, perinatal care, depression, spine surgery and weight loss surgery. In the future, the HVHC will expand their focus to additional high variation, high cost conditions affecting diverse populations. The HVHC will determine best practices for delivering care for these conditions and will rapidly disseminate actionable recommendations to providers and health systems across the US (Adams & Kimbell, 2011). We are hopeful that this work will ultimately be used by the Centers for Medicare and Medicaid Services to set Medicare payment rates.

Collaborating with the marketplace

We also believe that the market has a place in driving health care reform. In 2004, we began working with some of our region's largest employers. Through that collaboration, we improved patient satisfaction and provided care more quickly and cost-effectively, all while realizing ever-better medical outcomes. We started working with employer and health plan representatives forming Marketplace Collaboratives to identify and align our interests, with the goal of reducing variation in quality and access.

We began by identifying the highest cost conditions; we developed quality measures, relied on evidence-based care and utilized VMPS. The collaborative developed five product specifications essentially defining quality from the customer/employer perspective:

- Same-day access
- 100 percent patient satisfaction
- Evidence-based care
- Absence management
- Affordable price for purchasers and providers – reimbursement must be aligned with value

In the first year of the back pain collaborative, we saw 2,000 patients and purchasers saved $1.7 million. The time needed to complete care for back pain was reduced by 67 percent. Course of care went from 66 days to 12 days. We were very close to same-day access and increased available patient appointments from 500 to 2,000. Importantly, patient satisfaction was 98 percent.

We utilized evidence-based care, which we learned through this process, hadn't always been the case. Ninety-six percent of Virginia Mason patients required no work loss (beyond the time needed to receive care); of those who did miss work they lost 4.3 work days, compared to nine work days lost for care delivered by other local providers.

We committed to doing the right thing, even though in the short term we would likely lose money. As it turned out, the margin to Virginia Mason increased because throughput quadrupled at the same time the cost to deliver care was reduced.

We also have value streams, in our marketplace collaborative work with employers, for breast nodules, headache, upper respiratory infection, screening and prevention, and shoulders, knees and hips. Payment for value, not volume, would accelerate this work across the country, allowing patients to receive better care, faster and more affordably.

Working with Intel, we have expanded Marketplace Collaboratives into the Portland, Oregon area. Intel is collaborating with a payor and providers in Portland to use clinical value streams developed at Virginia Mason. Intel's success is similar to ours and demonstrates that this methodology is portable and transferrable.

To reach the full potential of these types of strategies requires realigning payment so that reimbursement is determined by value not volume. Approaches such as bundled payment, shared risk, capitated payment and other pay-for-value programs are necessary in order to promote widespread, value-driven care innovations.

Patient Protection and Affordable Care Act

In March 2010, the Patient Protection and Affordable Care Act, which was passed by Congress and signed by President Obama, became law. In addition to much needed insurance industry reform, it incorporates incentives for delivery system reform. We can finally turn our attention from a health care financing model that rewards quantity in a fragmented system to one that encourages quality in a coordinated approach. The health reform law includes many provisions that will undoubtedly improve care delivery.

Emphasizing primary care

As a practicing physician, I've known for more than three decades that to shift the paradigm from a system that treats illness to one that promotes health requires a sharp focus on primary care.

Thankfully the Patient Protection and Affordable Care Act requires incentive payments for primary care providers and reallocation of unused residency positions to primary care programs.

An example of our experience with higher quality and lower cost in primary care is a pilot we began with Boeing in 2007. Virginia Mason worked with Boeing to reduce health care costs for their employees with the most expensive health conditions while improving their health status. The new model, intensive primary care, included detailed patient education, personal care plans, intensive and appropriate use of case managers, 24/7 phone and email access to providers, and the use of electronic medical records. Additionally, care was coordinated among primary care providers, specialists and the hospital. In partnership with Boeing, Virginia Mason reduced annual per capita claims by nearly 30 percent.

The success of the Boeing project led to the implementation of the Virginia Mason's Intensive Primary Care program at all of our primary care sites. To appropriately align incentives, contractual arrangements for this expanded program include a per member/per month stipend, a mechanism for shared savings and payment for achievement of quality metrics.

Ensuring better coordination

Multi-specialty group practices and integrated delivery systems provide many of the attributes necessary for accountable patient care. Unfortunately fewer than 20 percent of physicians practice in groups with 11 or more doctors. As a result, fragmented care leads to unnecessary tests and treatments, emergency department overutilization and alarmingly high hospital readmission rates (Washington Post, 2010, p. 142).

The health reform law will encourage care coordination in a framework not unlike an integrated delivery system. Accountable Care Organizations will be rewarded for keeping patients healthy and out of both emergency rooms and hospitals. Patients will benefit from additional services such as intensive education, monitoring and medication management. A bundled fee per patient will translate into shared savings for Medicare and for providers.

My colleagues and I at Virginia Mason are pleased with the recently released ACO regulations and we are continuing to explore pursuit of an ACO designation for our organization.

Promoting innovative models of care

Perhaps the most promising component in the health reform law is the Center for Medicare and Medicaid Innovation (CMMI) with its mission of better health care, better health and reduced cost.

Through our experience with the Virginia Mason Production System, we have demonstrated that the path to better health and better health care is the same path to reduced costs. As you might imagine, we are in conversation with CMMI regarding potential pilot projects.

In conclusion, I'd like to thank each of the committee members and my colleagues on the panel today for your role in reforming America's health care delivery system. Sound legislation must support delivery system reform that begins in each of our organizations, because our patients and communities are counting on us and can wait no longer.

I am happy to answer any questions.

Resources cited

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