Chapter One

A New Idea

They journeyed west in 1920, six physicians from the Mayo Clinic and the University of Virginia, seeking to create something special in the practice of medicine. They believed in the heretical idea of *team* medicine; they believed that working together—pooling their resources and, more importantly, their thinking—they could break down silos and work collaboratively as teachers, researchers, and providers of the finest quality care. "They were considered radicals for their time because they actually wanted to work together, modeling their approach after the Mayo Clinic, the first big group practice," says Gary S. Kaplan, MD, Chairman and CEO of Virginia Mason Medical Center (VMMC). "So we have these innovative, revolutionary genes."

Over the course of eight decades the practice grew exponentially as it evolved into a world-class medical facility. On the cusp of the twenty-first century, however, Virginia Mason was in trouble. In 1998, for the first time ever, Virginia Mason lost money for the year and then suffered an additional loss the following year. This trend was disturbing enough by itself, but in the context of the sharply competitive medical marketplace in Seattle, the results were alarming. Virginia Mason was a not-for-profit system with a 336-bed acute care hospital, 445 doctors, and multiple clinics located throughout the Puget Sound area. In a city with two larger competitors, Virginia Mason was medium-sized and relatively undercapitalized. The fact that many medical centers throughout the country were facing similar financial difficulties—in part due to the siege of ill-conceived forms of managed care—was little consolation.

For in addition to the financial woes, something deeper and more profound was roiling Virginia Mason. As the medical center grappled with harsh

financial realities, a group of leaders within Virginia Mason—doctors and senior administrators—were engaged in assessing the most fundamental of all issues in medicine—the quality of care. Two landmark reports from the Institute of Medicine (IOM) of the National Academies—*To Err Is Human* (1999) and *Crossing the Quality Chasm* (2001)—painted a disturbing portrait of American medicine as a system that wasted tens of billions of dollars annually even as it provided care that was far too often inadequate and even harmful. The IOM found that perhaps as many as 98,000 preventable deaths occurred annually in U.S. hospitals and that many other patients were subjected to medication errors. Perhaps most shocking, however, was the finding by the IOM that in the United States, "health care harms too frequently and *routinely* fails to deliver its potential benefits."

This notion that the system *routinely* failed to deliver its potential benefits did nothing less than contradict the bedrock belief that Americans enjoyed the finest health care in the world. To Virginia Mason doctors passionately committed to the highest quality care for their patients, the IOM reports were deeply unsettling. Although the reports caught many medical centers throughout the country by surprise, Virginia Mason was not among them. In fact, it could be argued that at the start of the new millennium it was one of a relative handful of pioneers actively pursuing a quality improvement agenda. Years before those reports were published, Virginia Mason had embarked on a serious quality improvement effort, but the work failed to stick, in part because it lacked the consistent attention of clinicians and the medical center leadership at the time.

It was abundantly clear by 2000 that Virginia Mason needed to change. Dr. Kaplan had practiced internal medicine at Virginia Mason for many years, and he possessed an intimate understanding of the institution. After taking over as CEO, Kaplan quickly recognized that a "sense of crisis" had settled over the medical center. On the surface, that crisis concerned finances, but just beneath the surface, intense conversations were taking place throughout the medical center about clinical quality. The quality issue was less quantifiable than finance, of course, but for Kaplan and other doctors, it was more urgent because it struck at the heart of their mission.

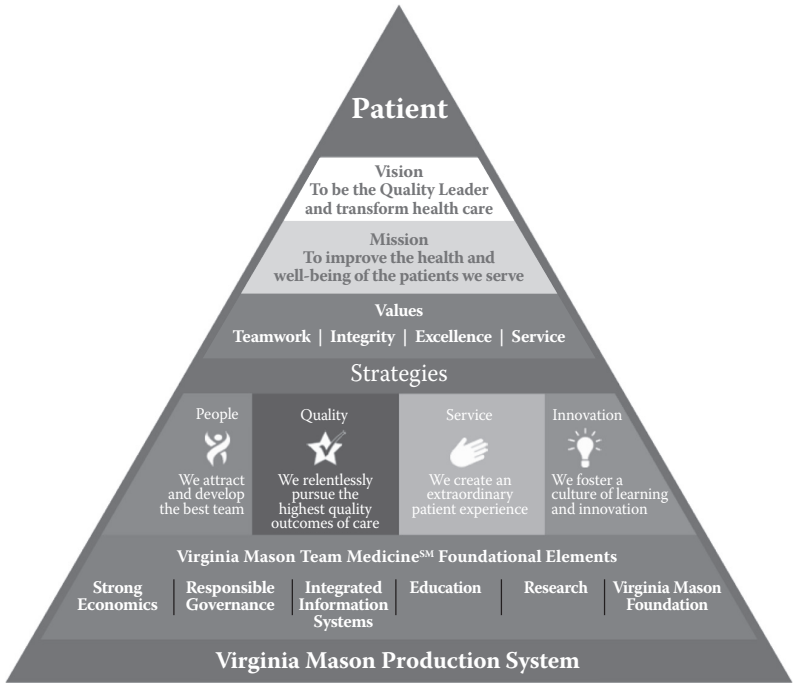
Dr. Robert Caplan, who played a pivotal role in the Virginia Mason work to improve safety, says he and his colleagues took a very hard look at reality. "We just began to look at each other and say, 'Everybody says they're great. We say we're great, our competitors say they're great. *Where's the proof?'* We knew people weren't really as great as they said because we read reports from the Rand Corporation, the IOM, and Dartmouth, and we knew there was variation in cost and variation in outcome. But I think it was a group of people looking around and being honest—that's what really energized us."

Where's the proof? Dr. Caplan's question was as brave as it was vexing, for it raised the possibility that perhaps the proof might *not* be there; perhaps Virginia Mason clinicians were not providing the level of quality they had always assumed they were. "We had always believed in the quality of the medicine we practiced," says Caplan. "And we were all really committed to safety, committed to quality, and as we have this conversation we think we're doing a good job. It's why we get up in the morning, but we just can't *prove* it."

Sarah Patterson, then Virginia Mason senior vice president, shared Dr. Caplan's concerns. "We realized around 2000 that just because we brought ourselves together in one building and we had what we called 'team medicine' didn't mean that on any given day in any given interaction we were actually optimizing care for our patients," says Patterson. She and her colleagues read about the epidemic of medical errors in the United States and wondered aloud whether that was happening at Virginia Mason. "And I remember there were people on our team who said, 'I believe it's happening, but I don't believe it's happening at Virginia Mason.' And then there were others who said, 'I believe it's happening, and I don't know why we *wouldn't* believe it's happening at Virginia Mason. Why would we be different?'"

Change or Die

When he took over as CEO, Dr. Kaplan recognized the urgent need for change and innovation. But change *what,* exactly? Innovate *how,* exactly? It was not at all clear what direction made the most sense. Kaplan had been part of the informal, ongoing discussions about quality, of course, and under the guidance of the Virginia Mason board the quality discussions quickly morphed into a formal project to create a new strategic plan for the medical center. It was that plan, developed over about a year's time and completed in late 2001, that defined the Virginia Mason mission as being all about the patient. In retrospect, this could hardly seem more obvious, yet the reality in American health care in 2001—and to a significant extent even today—was that medicine was anything but patient-focused. And, initially, when Kaplan met with his board, he assured them that the medical center was patient-centered. This was a reflexive reaction, for he had always believed this, but board members pressed him to look more closely. When Kaplan did so, he saw quite clearly that Virginia Mason was organized not around patients but around the doctors. As he thought more about it, he knew from personal experience this was true. For years, Kaplan had invariably promoted Virginia Mason to other doctors as a physician-driven, physician-led place. "Everything was designed around us," he says.



That had to change. "We need to be a great place for doctors, and we need to have physicians in leadership roles," says Kaplan, "but we need to keep in front of us all of the time that it is all about the patient."

The strategic plan, completed in late 2001, yielded a visual reminder of this—a pyramid with the patient at the top—above doctors, nurses, administrators, board members, budget considerations—above *everything and everyone.* This was pivotal. It was emphatically clear that change at Virginia Mason would focus on quality rather than finances. Kaplan believed providing high-quality care would solve the financial issue, and he was supported in this belief by the clinical and administrative leadership as well as the board of directors. Many medical centers would have focused more energy and time on a dollars-and-cents solution to their financial problem, but Virginia Mason's leaders believed that if it was truly all about the patient, then the solution had to focus on quality care. Yes, governance changes would be required, budgets trimmed, and personnel shifted. But at its core, the journey Virginia Mason would embark on was not about any of those things; it was not to be a conventional journey. Yet, it would have a straightforward goal: to become the finest provider of health care anywhere.

Organizational goals and visions—in health care and other sectors—have a long and distinguished history of being ten parts rhetoric and one part reality. Gary Kaplan was well aware of this, and he believed the way to avoid that trap was to identify a tangible method—a *management framework*—to achieve the vision. Neither Kaplan nor any member of his team knew what that method would be, but he believed the right approach existed out there somewhere in the health care universe. They just had to find it. The search was aided by Kaplan's active involvement in a variety of medical organizations throughout the country including the Medical Group Management Association, the largest group practice association in the nation, where he served as board chair. He was also a member of the executive committee of the American Medical Group Association, representing 95,000 doctors nationwide, and Chair of the AMA Group Practice Advisory Committee. In these capacities, he traveled extensively and had come to know scores of physicians and administrators at other hospitals, universities, physician groups, think tanks, and medical associations. With contacts nationwide, Kaplan embarked on a search to find an organization that had cracked the code and figured out how to transform itself into an entity capable of providing the finest possible patient-centered care.

"I was convinced that somebody must have this figured out," Kaplan recalls. He visited numerous organizations from the Mayo Clinic to Johns Hopkins, from Massachusetts General Hospital to the University of Michigan, where he had gone to medical school. Although many of these organizations were doing great work in particular areas, he found none that had transformed itself into the kind of patient-centered entity he and his team aspired to lead. Kaplan heard some thoughtful observations about the quality and cost challenges, about safety issues, but he did not hear or see a *method* to get to zero defects.

"We were looking for ideas around innovation, around quality, safety and economics," he says. "I wanted ideas that we could steal, shamelessly, that would help us. But what I found was that there was no method to get there. We realized that nobody had a management method in health care to achieve this."

How was this possible? How was it that in an industry with literally millions of the finest minds in the world—an industry comprising more than 16 percent of the U.S. economy—no one had figured it out?

"I think a lot of factors come into play in trying to understand it," he says. "The natural trajectory of the profession and the industry, first of all, was not one to look outside of itself. Health care professionals have always felt that we had a noble calling, that we were serving the communities and our patients, and with that sometimes comes, I think, a certain amount of elitism. Some might call it arrogance and an unwillingness to look outside. So one construct is all we really had was ourselves to benchmark against and when you don't look outside, you

don't necessarily see what's possible. Also the industry had grown up around the caregiver, not the patient.

"And I think another factor—no matter where you sat in health care organizations, and I'll speak for myself as well—there is a surprising lack of understanding of the work at a granular level. What is the value stream of work? And if you don't understand the current state and, even worse, you *don't know* that you don't understand the current state, it becomes limiting and you don't think about something that ties it all together."

Kaplan discovered that no one had yet developed "a unifying theme or construct—a system, a common language, a common way of thinking about things, conceptualizing work so that you could then train people and all be moving in the same direction using the same methods. We needed a unifying way of thinking, as opposed to what I read in the *Harvard Business Review* last month, and I'm going to try some of that and I'm going to try a little of this."

Kaplan and his leadership team were convinced a piecemeal approach would not work. "We'd always had a history of being innovative, lots of pilot projects, demonstration projects," recalls Sarah Patterson. "That was our culture. But when it came to actual execution across the system, when there was something that really appeared to work, we were not effective in saying, 'This works, it's good for patients, let's roll it out across the system.' So we had well-intended people, good people, but we didn't have a *system*."

And this surprised, concerned, and excited Kaplan: Surprised because with so many really smart men and women in health care in the United States you would think *somebody* would have figured it out. Concerned because if it had not been done that meant it clearly would not be a simple matter. And excited because, well, he and his team were just going to have to go out and do it themselves.

Early in September 2000, soon after Kaplan had taken over as CEO, Virginia Mason's clinical and administrative leaders gathered for a two-day retreat. Kaplan stood before the group and said: "We change or we die." A sense of mourning seemed to pervade the retreat. It was clear that doctors were losing the tried-and-true old way of doing business, a cultural approach so many physicians had worn like a comfortable old coat for decades. The changes precipitating that loss had already begun during the early 1990s managed care phase if not earlier. But now it was clear that change would accelerate, and it would do so in an environment where the very life of the institution was at risk.

Dr. Joyce Lammert, who organized the retreat, says some doctors actually grew tearful at the changes they saw coming. "People were feeling the loss," she says. "You go through college and medical school and training and all those years and all that hard work and you think you're going to get one thing and you get something else. There was an expectation of autonomy—that's a really

big thing with doctors, calling the shots on how you practice and what you do. It's gone from doctor-knows-best to twenty-first century medicine where it's patient-centered, collaborative, team medicine—all about working together."

And that was a shift in the tectonic plates, a change that was difficult for many physicians but particularly those who had been practicing for any length of time. And although Kaplan recognized that—and very much empathized with it—he also knew it was essential to move beyond this difficult moment and turn to the future. Toward that end, he invited John Nance to speak to the group about the kinds of changes that might be required moving forward. A Seattle resident, Nance was an intriguing choice for a speaker to a medical group. He was a decorated Air Force and commercial pilot, a veteran of the Vietnam and Gulf wars, and an aviation analyst for the ABC television network. What made him an interesting speaker for the Virginia Mason meeting was his expertise in human factors in flight safety and how aviation's Crew Resource Management (CRM) might apply in other industries. Nance's topic—"teamwork for our future"—focused on safety in the cockpit. He talked about the precision of aviation safety procedures that were designed to get as close to eliminating human error as possible. It was not that flying airplanes and taking care of patients were the same thing, but that both required comprehensive *systems* to prevent mistakes. He maintained that aviation had such a system but medicine did not.

Nance had preached the CRM gospel to executives in countless industries, but he was new to health care. (That would change in the years to come as Nance waded hip deep into health care work. Eight years after he appeared at the Virginia Mason retreat, in fact, Nance published an acclaimed book entitled *Why Hospitals Should Fly*.) Nance argued that significant change would be required if the institution was to succeed in transforming itself into a high-reliability organization distinguished by superior quality.

A critically important change would involve the arrangement between the medical center and the doctors. Gary Kaplan viewed an explicit new deal with the doctors as an essential building block for the future. Without a clear understanding of what was expected from the physicians—and what they should expect from the institution—he believed no real progress was possible. Kaplan knew this would be neither easy nor pleasant, but he also knew it was a prerequisite to any sort of meaningful innovation. He made it clear that the old deal with the doctors would no longer work; the deal that said, as he put it, "'As a doctor I am entitled to patients because I work with a group. I'm protected from worry about business decisions because there are administrators and physicians who also have some business training, and I'm autonomous because I'm a professional.' That didn't sync up with where we needed to go. In some ways, that's what the mourning was about."

Physician-Centric

Part of the problem, Kaplan knew, was that the Virginia Mason culture was very much physician-centric—even as the new strategic plan explicitly stated that the patient always came first. As Dr. Lammert put it, "People would say to physician job applicants 'you really want to work here—*doctors call the shots here.*'"

The reality and aspiration were in direct conflict and something had to give. Clearly, a new deal was needed, yet Kaplan knew that it would be unwise to dictate what that deal would be. That would have to come from the doctors themselves or it would have zero chance of working. Kaplan knew that process mattered to the doctors; the right process would have a chance of yielding a positive outcome, and the wrong process would generate resentment. Thus, Kaplan turned to a consultant who specialized in helping organizations build new compacts, particularly involving doctors. Dr. Jack Silversin—a dentist by training—had worked for twenty years with doctors, board members, and other stakeholders attempting to reach consensus on difficult issues. Silversin was the founder of Amicus, a consulting firm based in Cambridge, Massachusetts, and he had successfully worked with physicians in a variety of states as well as the United Kingdom. Over more than twenty-five years, Silversin had gained a deep understanding of physician cultures and how to help guide them in a positive, evolutionary process. In various organizations he had proven to be an effective catalyst and leader of organizational change.

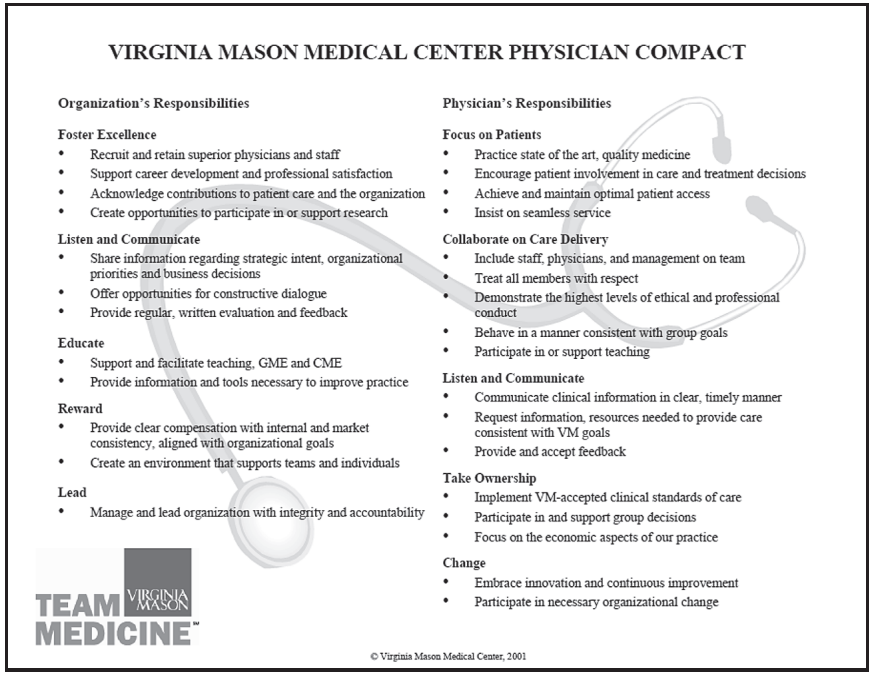
At the Virginia Mason retreat in September 2000, Silversin spoke about how dramatically the medical landscape had changed and how a new deal was essential to future success. In fact, the aligned vision that a compact would bring about would prove foundational to virtually all of the progress VM would be able to achieve. He pointedly entitled his presentation "Changing Expectations." He had traveled to Seattle a month prior to the retreat to spend a day gathering information—talking to doctors and trying to understand their thinking. He quickly saw that many physicians clung to the traditions of the past, angry about the shifting medical tides.

On the first day of the retreat, after listening to Kaplan's "Preparing for the Future" presentation, doctors broke up into smaller groups to discuss "the GETS—things that providers felt they should get from the organization," says Dr. Lammert. Individual groups were assigned one of five topics from the GETS list: "Participation in decision making, participation in the organization's improvements, compensation, communication, and work expectations." On the second day of the retreat the small groups focused on the "GIVES—what the group owed to the organization, each other, and patients," says Lammert.

Those five areas included "citizenship in VM medical group, relationships with patients and patients' families, administrative staff relationships, support staff relationships, and other VM physician relationships."

When the retreat was over, Kaplan asked Dr. Lammert to chair a compact committee which began its work in January 2001, building on the foundation established at the retreat. The committee worked for six months discussing a variety of ideas, gradually putting pen to paper. With a draft document in place during the summer of 2001, Lammert and her team went around the medical center and sat down with physicians in every department to explain, discuss, and revise—requiring an additional three months of work. Not everybody was happy with the result, of course, but it was difficult to argue with a process so deliberate and inclusive. Everyone had a voice, including some experienced doctors who were deeply angry and resentful about how the world around them was changing.

The process resulted in a compact that embodied a shared vision between doctors and the medical center administration and clarified expectations in the new world as never before. The compact explicitly detailed the responsibilities of Virginia Mason to its physicians and the responsibilities of the doctors to Virginia Mason.



VIRGINIA MASON MEDICAL CENTER PHYSICIAN COMPACT

Organization's Responsibilities

Foster Excellence
- Recruit and retain superior physicians and staff
- Support career development and professional satisfaction
- Acknowledge contributions to patient care and the organization
- Create opportunities to participate in or support research

Listen and Communicate
- Share information regarding strategic intent, organizational priorities and business decisions
- Offer opportunities for constructive dialogue
- Provide regular, written evaluation and feedback

Educate
- Support and facilitate teaching, GME and CME
- Provide information and tools necessary to improve practice

Reward
- Provide clear compensation with internal and market consistency, aligned with organizational goals
- Create an environment that supports teams and individuals

Lead
- Manage and lead organization with integrity and accountability

Physician's Responsibilities

Focus on Patients
- Practice state of the art, quality medicine
- Encourage patient involvement in care and treatment decisions
- Achieve and maintain optimal patient access
- Insist on seamless service

Collaborate on Care Delivery
- Include staff, physicians, and management on team
- Treat all members with respect
- Demonstrate the highest levels of ethical and professional conduct
- Behave in a manner consistent with group goals
- Participate in or support teaching

Listen and Communicate
- Communicate clinical information in clear, timely manner
- Request information, resources needed to provide care consistent with VM goals
- Provide and accept feedback

Take Ownership
- Implement VM-accepted clinical standards of care
- Participate in and support group decisions
- Focus on the economic aspects of our practice

Change
- Embrace innovation and continuous improvement
- Participate in necessary organizational change

TEAM MEDICINE™ VIRGINIA MASON

Germ of a New Idea

Eight months before the completion of the compact, a serendipitous event occurred that, in retrospect, can be seen as the first step on the Virginia Mason road to emulate the Toyota path. On November 9, 2000, during a flight from Seattle to Atlanta, then Virginia Mason president Mike Rona found himself seated next to John Black, formerly a leader at Boeing. Black had been an Army officer who had served two tours in Vietnam and gone on to work at Boeing for twenty-one years, retiring from the aerospace company in 1999 and setting up his own consulting practice. Black recounted some of his work and showed Rona a PowerPoint presentation about the Toyota Production System (TPS). Rona was fascinated by the conversation and on his return to Seattle, he read Black's book, *A World Class Production System,* in which Black explained the Toyota approach to management and quality improvement.

Rona told Gary Kaplan about Black and Kaplan was intrigued. The fact that Boeing used the TPS gave it instant credibility with Kaplan. He was even more impressed after reading Black's book, and he was instinctively drawn to the notion that other industries operating in competitive global marketplaces might very well have lessons to benefit health care. "The premise of the book is you can do twice what you're doing today with the same resources and create a higher quality, defect-free product," says Kaplan. "Anybody that tells me that—I'd at least like to hear more."

In the ensuing months, Kaplan and many members of his senior leadership team delved into the Toyota methods, reading and studying the system's application at various companies, including Seattle-based Genie Industries, a global company manufacturing industrial lifting equipment. Rona and Kaplan met with Black in 2001 and talked at some length. To be convinced of the applicability of the Toyota system to health care, Kaplan and his team had to understand the concept of waste, which was at the heart of the TPS thinking. (The elimination of waste in the manufacturing process was so central to the Toyota approach that it was also sometimes referred to as *lean manufacturing,* or, simply, *lean*.) Black wrote in his book *The Toyota Way to Health Care Excellence* that "waste is not the fault of the individuals in [a] system, but the system itself, which is overly complex, rife with outdated procedures, and redundant." He observed that "lean operations give us a new understanding of waste. With this new understanding, we find waste in all the ways work is done. With the principles and processes of Lean, we know how to reduce and eliminate waste, including the reduction and elimination of errors (defects)."

There were other approaches out there, of course, including Six Sigma, and the Baldrige performance criteria. Kaplan and his colleagues looked at those and considered Toyota a better fit for them. "We thought Toyota had all the right

components, and their emphasis on speed was really important," says Sarah Patterson. "We needed one system, one common language that we could all use, and one set of tools that we could all learn."

Toyota Mantra: Eliminate Waste

The Toyota system was based on identifying and eliminating seven types of waste—waste of time, motion, inventory, processing, defects, transportation, and overproduction. If the task at hand did not help meet a customer's (patient's) needs, it was waste. If the customer was unwilling to pay for it, it was waste. An example of "processing waste" might involve compiling a report that someone used to rely on but that was no longer needed or used. "Waste of motion" might be nurses going off in search of supplies that should be readily at hand. "Defect waste" might involve a doctor's illegible handwriting on an order or prescription. "Inventory waste" meant stockpiling more supplies or materials than necessary.

The idea of waste as a drag on health care was not new. The IOM had suggested that as much as one third of the money spent on health care in the United States was wasted. The IOM recognized that health care was plagued by redundancies and an avalanche of non-value-added services.

"By eliminating waste, you improve quality, safety and reduce cost," Kaplan observes. "When you eliminate waste, you create repetitive processes that can easily be standardized." Early in the process of discovery it was clear to Kaplan that waste—non-value-added variation—was not only of no benefit to patients, but actually served, as the IOM found, as a drag on the system. Sarah Patterson observes that "most people think of waste in very simple terms, and we've learned it's more sophisticated; there are different forms of waste. Part of what we've learned is to identify all the different types of waste and measure them."

The elimination of waste means the patient is receiving only value-added care. It means whoever is paying for the care—the patient, an insurance company, the government, the patient's employer—is receiving excellent value for their dollar. It means the payer does not waste valuable dollars subsidizing an inefficient, wasteful, system. An important benefit to eliminating waste in the health care delivery process, says Patterson, is that it would save enormous amounts of time. "That's where we say there's capacity in our hospital," she says. "If we were to eliminate all the time patients spend waiting in our hospital for things to happen to them or having tests done that didn't need to be done, if we were to eliminate that, they may leave the hospital one or two days earlier than they do now."

Like waste, standardization is also at the core of the Toyota system. Standard work, in theory, means a drastic reduction in defects. Yet Kaplan could see a formidable obstacle looming. He knew that if Virginia Mason were to go down

this path and adopt the Toyota approach embracing standard work, he would be confronted by physicians decrying the notion as antithetical to everything they'd been taught throughout their careers—that they were in charge; that they should decide what is best for their patients; that they were independent to act as they pleased and should not be dictated to. Critics would come to derisively refer to standard work as "cookbook medicine."

Was it true that the elimination of waste and standardization could mean greater quality care? More stable finances? The father of the TPS, Taiichi Ohno wrote in his book *Toyota Production System: Beyond Large-Scale Production* that the Toyota approach "is not just a production system," but is "a management system adapted to today's era of global markets and high-level computerized information systems."

The theory—or perhaps the promise—of the TPS was that managers who learned to understand and eliminate waste could help identify process improvement opportunities, improve customer and staff satisfaction, increase productivity, and decrease costs. In theory, the Toyota approach could enable an organization such as Virginia Mason to improve quality while cutting costs. The notion that this might be remotely possible captured Dr. Kaplan's imagination.