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Kaiser Permanente's Innovation on the Front Lines

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Kaiser Permanente's Innovation on the Front Lines

Idea in Brief

In health care, the mother of all service industries, Kaiser Permanente is taking innovative approaches to designing better ways of delivering care. KP's relatively modest up-front investments can yield dramatic cost and quality benefits more quickly than any whizbang technology.

To achieve these benefits, Kaiser has adopted a "human-centered design" methodology that enlists health care providers and patients as collaborators in the innovation process.

Stakeholder participation helps direct the creative inquiry toward better questions, which lead, in turn, to more sharply defined problems. That reduces the level of innovation risk while producing superior—often breakthrough—solutions.

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Kaiser Permanente's Innovation on the Front Lines

by Lew McCreary

Chris McCarthy shows up for an early-morning interview wearing raspberry-colored scrubs. Later he'll head to one of Kaiser Permanente's Bay Area hospitals to watch nurses at work. McCarthy, a KP innovation specialist, is just beginning a project aimed at optimizing the time nurses spend with their patients. He's often in clinical settings, observing how health care providers do their jobs; how they interact with one another, with technology, and with patients; and how patients respond.

McCarthy is part of the Innovation Consultancy, a small team within Kaiser Permanente that was born of the company's involvement with the design firm IDEO. In 2003 KP hired IDEO to help it develop better, more-efficient ways of performing certain high-value activities, and gained a distinctive innovation methodology in the process.

What McCarthy will do all day is watch people, take notes, snap pictures, and make sketches. (He's a fly on the wall, but a very active fly.) Some of what matters to him will be physical or logistical: Who stands where, does

what, communicates most or least or best? What tools are used? Are they used easily, effectively, gracefully? How are they carried? If they're not carried, are they conveniently positioned? But McCarthy is also interested in subjective evidence. He will ask nurses how they feel about what they're doing and patients how they feel about what's being done. He will try to get some sense of the atmosphere—color, light, energy, mood. He knows that information that may at first seem unimportant can later mean a lot. So there's an unknown cost to overlooking anything. Or anyone.

After a day spent watching other people work, McCarthy tries to capture experiences from the points of view of everyone involved. It's a combination of anthropology, journalism, and empathy. The goal is to find hidden clues to the nature of the problem at hand and some line of inquiry for progressing toward possible solutions.

The Innovation Consultancy takes on carefully chosen projects throughout Kaiser Permanente, which is based in Oakland, California,

and serves the health needs of more than 8.6 million members in nine states and the District of Columbia. That's a huge laboratory for tackling opportunities to improve health care practice. McCarthy and his colleagues pursue an expansive, service-focused version of innovation, not the conventional one that by definition excludes everything but new technologies or tangible products. Surprisingly little attention has yet been paid to this version. But, as Kaiser is discovering, the bucks are relatively few and the bang can be disproportionately big. Compared with costly, long-horizon, research-driven innovation, service-focused innovation can be done both rapidly and economically.

If the Innovation Consultancy can be said to have a larger social purpose, it is to improve the quality of health care even beyond Kaiser Permanente's corporate boundaries. Its work is still in a relatively early stage—one in which there may be an abundance of low-hanging fruit. And given the depth and breadth of the problem, widespread improvements may be slow in coming. That's why McCarthy—eager to accelerate the pace of knowledge transfer among peers in the not-for-profit health care space—founded the Innovation Learning Network, a consortium of 16 health care organizations that meet regularly to share ideas and the results of their respective innovation efforts. It remains to be seen whether his goals will be achieved. But the innovators' experimental approach bears watching—no matter what your industry.

Consider, for example, the return on investment from a project called KP MedRite, an effort to reduce medication errors in KP hospitals. Developing it cost about \$470,000. The project was designed and piloted in 2007 and had been implemented in 75% of KP's hospitals by early 2008. Since then it has yielded \$965,000 in cost avoidance (for care associated with treating the consequences of medication errors). The process has also produced intangible, hard-to-measure benefits such as greater employee satisfaction and patient peace of mind. Savings are bound to grow as MedRite is implemented in the rest of the company's hospitals, with little additional investment required.

Nurse Knowledge Exchange

IDEO made its reputation by practicing "human-centered design" (see "Design Thinking," HBR June 2008). The firm's idea was that you

can't successfully innovate in a vacuum; you need to explore the ways people live, what they think, and how they feel about things before you can understand the problem your new product or service should address.

One of the first projects KP did with IDEO was meant to improve how nurses exchanged patient information between shifts—a process that typically took 45 minutes or more and delayed the arriving nurses' first contact with their patients. Not surprisingly, the project revealed that patients felt a "hole in their care" during shift changes. Worse, nurses compiled and exchanged patient information in idiosyncratic and unreliable ways (some even scrawled notes on their scrubs). Important details were often left out, or care that had already been provided was needlessly repeated.

What came to be called Nurse Knowledge Exchange created a process for passing on higher-quality information more quickly and reliably. Now the exchange occurs at the patient's bedside rather than at the nurses' station. Patients are encouraged to participate, making it less likely that anything important relating to their care will fall through the cracks. New software helps nurses compile information in a standard format throughout their shifts. And they are less likely hours later to experience a jolt of panic that they've forgotten to communicate something important. Nurse Knowledge Exchange has since been rolled out to all of KP's hospitals.

As the relationship between KP and IDEO progressed, what had been conceived as a three-month immersion turned into an eighteen-month apprenticeship. "We were trying to mold the DNA of IDEO into Kaiser Permanente, to create a kind of IDEO outpost here," McCarthy says. "By the end of that period it was pretty clear that the methodology worked really well for us."

The Innovation Consultancy was created to help institutionalize what KP had learned from its work with IDEO. At first, says McCarthy, the team supposed it would "sprinkle the method all over the organization," propagating innovation clusters that were familiar with the IDEO way and could initiate projects on their own. He now admits that assumption was naive. First, the methodology isn't so easy to master—after six years of using it, McCarthy says, his group is still learning and perfecting. And, of course, not everyone has the temperament

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or wants to be an innovator. It's more important for the team to sprinkle something else: an eagerness to try new things. That can be accomplished in part by deputizing line staffers to act as "codesigners" on a project basis.

Uncovering the Untold Story

In too many enterprises, innovation is treated as a sideshow. It may get its due in lip service without being appropriately supported or well understood. Worse, it isn't integrated into the fabric or behavior of the business. Potential breakthrough ideas struggle to survive amid entrenched systems and values. In a 2007 McKinsey Global Survey of more than 1,400 executives, 70% cited innovation as crucial to their companies' future growth, yet only 35% were "very" confident that they could execute innovation successfully. Imagine if 65% of CEOs doubted their company's ability to plan a winning strategy, run its supply chain, or manage its finances.

Kaiser Permanente is among a minority of enterprises that take innovative approaches to innovation itself. Within its industry, Kaiser enjoys some advantages:

It's a self-contained, full-service health care provider with its own hospitals and other facilities, its own network of salaried physicians, and its own insurance plans and administration infrastructure, meaning it can exert relatively frictionless control over all aspects of care for its 8.6 million members.

It has always rejected the now dominant fee-for-service model that is often blamed for rampaging growth in health care costs. Premiums fund whatever care members need. Because KP's physicians are salaried, rather than paid

on the basis of how many tests they order or procedures they perform, care is untainted by any economic conflict of interest.

Its enormous member population and the cooperative interlinking of its components enable it to compile massive amounts of evidence for the superiority of certain treatment regimens—and to do so at a level that approaches the ideal of personalized medical care.

It is currently the largest and most advanced private-sector adopter of electronic medical record (EMR) systems. Any member can enter any KP health care facility knowing that all his or her medical data are readily accessible by local clinicians. The database fueled by the EMR system constitutes a rich asset for nearly limitless lines of research.

In this context the Innovation Consultancy flourishes. One key to its success is a form of investigation that McCarthy calls "uncovering the untold story." For example, when asked to say what's wrong with the way medications are dispensed to their hospital patients, nurses will usually answer "nothing." But when they're asked to draw pictures of themselves in the midst of the task, "their frazzled hair is standing up on end," McCarthy says. "So you start exploring with them: 'Why do you draw yourself with a sad face and frazzled hair?' Then they start pouring out what the issues are: 'I'm overworked. I need help during the process. It's chaotic, it's full of interruptions, it's unclear.'"

That's what unfolded during the KP MedRite project. Dispensing meds correctly means giving the right prescribed drug in the right dose to the right patient at the right time. The consequences of medication error can be

How to Package Change

Every Innovation Consultancy project includes a "change package"—a set of detailed, clearly written guidebooks that fully describe the innovation, the reasoning behind its creation, the process by which it was developed (with shout-outs to staffers who participated), the benefits it's meant to produce for patients and staff alike, user testimonials gathered during pilot implementations, and the metrics that will be used to evaluate its performance over time. Three different versions of the package target business leaders, project managers, and

frontline staff members.

The Institute for Healthcare Improvement—cofounded by the Boston pediatrician and health care reformer Donald Berwick, President Obama's pick to head the Centers for Medicare and Medicaid Services in the Department of Health and Human Services—cited Kaiser Permanente's change packages as best practices in their own right. KP's Chris McCarthy says his company leans on IHI to help it with the back end of innovation. IHI's emphasis is, in part, on making sure that

change is well executed and fully embraced. No matter how brilliantly conceived, projects often go awry through neglect of the back-end work.

KP's change packages convey a real-world respect for the challenges and difficulties any innovation can bring. They not only provide sensible instructions for getting on with the program but also reinforce the cultural imperative that change is an important part of work life and innovation ultimately touches every corner of the enterprise.

catastrophic for the patient and very costly for both the institution's reputation and its bottom line.

A 1999 report by the Institute of Medicine ("To Err Is Human: Building a Safer Health System") documented the extent of the problem: Medication errors were causing measurable harm to 1.5 million people a year, costing \$3.5 billion in additional treatment for resulting injuries, and leading to some 7,000 preventable deaths. The observation phase of the MedRite project strongly suggested that interruptions and distractions were the leading cause of errors. "One nurse trying to give one medication to one person was interrupted 17 times during a single medication pass," McCarthy says.

For nurses, interruptions are a regular feature of hospital life. And they're generally not for idle chitchat about the previous night's Giants game or *Grey's Anatomy* episode. Important information is constantly being asked for and given out. Urgent tasks ebb and flow unpredictably, so distraction can't or shouldn't be eliminated entirely. The challenge for MedRite was to create situational "interruption-free zones" for nurses.

As the project progressed, nurses, physicians, pharmacists, and patients were enlisted in what is known as the deep-dive phase of KP's innovation process. This typically occurs at the Sidney R. Garfield Health Care Innovation Center, Kaiser's brainstorming and prototyping facility in Oakland. For two days a group of 70 deputized codesigners tackled the problem of medication errors. They produced about 400 ideas, ranging from incremental to

outlandish. One team proposed a "Med Bed"—a hospital bed equipped with an automated, patient-personalized dispensary unit.

"It was like the Ferrari of beds," says McCarthy. "It had a refrigerator built in. It had a microwave built in. I mean, it was a pretty crazy bed. But they prototyped it at the Garfield Center—stripped down a bed and taped all these devices onto it." The Med Bed wasn't ultimately adopted, but the prototype demonstration clarified desirable features that were incorporated into the eventual solution. "In showing us the process of using the Med Bed," McCarthy says, "what they were really asking for was to have everything within reach."

At the deep dive, he says, "a nurse came up with the idea of a smock that said 'Leave me alone' on it." Numerous prototypes led to one of MedRite's key physical innovations—"no-interruption wear"—a bright-yellow reflective sash that signals that its wearer is not to be disturbed. Another physical innovation involved color on the floor around the central medication dispensary to indicate a "sacred zone" that no one may enter if someone else is already working there. But the main innovation was a five-step process for ensuring that medications are dispensed correctly.

Care Coordinators

KP's emphasis has been on designing better means of delivery, which can improve the quality of care much more dramatically and quickly than any whizbang technology. Such reforms can also save money, by off-loading from expensive clinicians duties that lower-paid staffers can perform. (Kaiser is not without critics who question some of its motives and practices—sometimes alleging that its emphasis on cost control crosses the line into rationed care.)

Lyle Berkowitz is a Chicago primary-care physician who also runs the Szollosi Health-care Innovation Program, a charitable foundation that belongs to the Innovation Learning Network. Berkowitz has worked with the ILN on a process to help patients who've received a frightening diagnosis more easily negotiate the ensuing flurry of necessary activity: follow-up tests, visits to specialists, decision making about treatment and care.

The process is called Inflection Navigator, because a diagnosis of cancer or serious cardiac disease, for example, presents the patient with

Injecting Genius into the Process

The Indian cardiac surgeon Devi Shetty has shown that the speed and efficiency of coronary bypass can be increased without sacrificing the quality of outcomes. His surgeons have done many more operations than others their age who perform conventional bypass surgery, thus enhancing their proficiency.

Furthermore, Shetty's approach—almost in the tradition of time-and-motion studies—parses surgical procedures into their basic elements and actions. The mythic-heroic notion of surgeons as

uniquely gifted artists becomes a manufacturing model consisting of choreographed steps performed by a highly skilled team.

The hospitals in India's nonprofit Aravind Eye Care System drive cost out of eye surgery in the same way Shetty drives it out of coronary bypass—by creating surgical assembly lines and innovating processes, techniques, and materials. Revenue from the 30% of their customers who can afford market rates subsidizes free care for the rest.

“One nurse trying to give medication to one person was interrupted 17 times during a single medication pass,” says an Innovation Consultancy team member.

a profound inflection point. At such times many patients feel too overwhelmed to ask important questions or undertake important tasks. Inflection Navigator assigns to each patient a care coordinator, who explains, assists, sets up appointments, anticipates questions, and provides answers.

The care coordinator sequences activities to minimize the inconvenience to patients and maximize the value of the time they spend with doctors. For example, a patient's visit to a specialist might be scheduled only after the necessary tests have been done and the results can guide a recommendation. “It decreases the burden on both the patient and the doctor,” Berkowitz says.

It also bends the cost curve down. Care coordinators don't have to be highly trained and heavily compensated. They depend on a database of medical protocols reflecting best practices for diagnostic procedures and the latest treatments for various diseases. This frees physicians to spend more time where their expertise makes the greatest difference.

The process bends the learning curve, too. If, say, the standard treatment for atrial fibrillation changes, “the cool thing is I don't have to go and try to educate all my doctors,” Berkowitz says. “Because it can take years to do that. All I have to do is change the protocol that's already built into the system.” The physician makes the diagnosis and then hands the patient off to the care coordinator.

Democratizing Health Care

Lyle Berkowitz mans one corner of a small booth on the modest show floor of a conference and expo in Boston. The event is a joint production of the Innovation Learning Network and the Center for Integration of Medicine & Innovative Technology, a nonprofit

consortium of Boston-area teaching hospitals and engineering schools. The proceedings might best be described as a festival for health care geeks.

Berkowitz is busy explaining Inflection Navigator to interested attendees. The emphasis here is on sharing, not selling. No booth bunnies, blaring music, flashing lights, or branded tchotchkes, just conversation—enough conversation that superior listening skills are needed to hear above the din. The exhibitors have zeal in common. They want to make health care better, smarter, cheaper, and more accessible.

Chris McCarthy hovers and circulates. It's the last day of the event, and he has the semi-relaxed look of someone who has either dodged or dealt with whatever might have gone wrong and is finally surrendering to satisfaction. Sharing real-world evidence of what works—ideas, practices, protocols—exhilarates people like McCarthy and Berkowitz. To them, there's nothing odd about 16 independent organizations coming together to improve more quickly than they could if they were left to themselves. It simply makes sense to spread improvement as broadly as possible.

This is not the vision of health care that emerged in the grinding yet cartoonish debate leading up to the passage of what is now called Obamacare. It was easy then to imagine that the whole system was willfully committed to cruelty, greed, vanity, and ineptitude. Beyond the fray, however, creativity flourishes. McCarthy and others, by democratizing the methods of innovation, are democratizing health care, giving patients and nonphysician caregivers a louder voice in designing the future.

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