20/20 vision

twenty years of improving health care quality...
and looking ahead to the next twenty

2009 Progress Report
We have travelled 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 then 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.

This report looks back at this journey and reflects on some of the key lessons we have learned — and results we have achieved — together in the last 20 years. Ideas that were not self-evident at the start now seem like simple “truths,” and they are among the core principles that drive our work forward:

- Working together accelerates the pace of improvement.
- Mortality is a system property of a hospital.
- Reliable application of evidence produces the best possible outcomes.
- Broad scale improvement depends on the steady spread of good ideas and proven practices.
- Leaders set the tone and agenda for change at top performing organizations.
- Breakthrough performance is achieved by engaging patients and families and empowering the front line.
- Acting with individuals enables us to learn what’s best for the population.
- The work will be sustained if we continually cultivate change agents.

Where will the road lead us in the next 20 years? What lessons and truths will be added to our ever-expanding knowledge of how to ensure that we deliver the best possible care to every patient, every place, every time?

We are by no means done. As we turn our eyes to the next horizon, we set our sights still higher.
Working together accelerates the pace of improvement.

Asking, “Who does what so we do better than we do it?” opens a wide front door to learning,” said Don Berwick in a 2002 speech. This has long been at the heart of IHI’s work: bringing people from different organizations and settings together to work on shared goals, leveraging the energy, camaraderie, and brain-power of teams who can both learn from and teach one another.

The belief that it is exponentially easier to improve together than alone has grown along with the size of IHI’s community, from the first National Demonstration Project Summit in 1987 with 287 participants to recent National Forum conferences with more than 6,000 attendees. Teamwork within and collaboration across organizations has led to decades of successful improvement work, as teams from throughout the world join together on a shared journey toward better health care.

That journey has been organized in a variety of ways, most notably through the Breakthrough Series Collaborative methodology, first introduced by IHI in 1995. Collaboratives bring together 30 to 40 improvement teams to work on shared goals for a defined period, usually nine to 12 months.

“Our first participants were hesitant to share information,” recalls Joanne Healy, Senior Vice President, who has been at IHI for 20 years. “But that disappeared when people realized they were all focusing on the same thing: caring for patients. They realized they could accomplish more together than they ever could alone.”

Collaboratives typically result in dramatic improvements, a testament to the power of bringing people together with focused aims, giving them proven tools and expert guidance, helping them quickly learn from each other, and tracking and communicating the results. IHI has led dozens of Collaboratives for hundreds of organizations, and it has trained many other health care organizations to lead their own Collaboratives using the Breakthrough Series model.

The power of collaboration propelled the work of Pursuing Perfection, a joint program of IHI and the Robert Wood Johnson Foundation, in which 13 hospitals in the US and Europe worked together to learn how to raise the bar on quality of care. The success of collaborative work led to the creation of the IMPACT network, IHI’s association for change in which over 200 organizations collaborate on breakthrough results. The spirit of teamwork also fueled the success of the 100,000 Lives and the 5 Million Lives Campaigns, seeding new formations such as the network of Mentor Hospitals, which points improvers to peers throughout the world who are willing to offer advice and guidance based on their own experience.

“The idea of working together with other organizations used to be uncommon.

But there is amazing power in convening and creating communities to learn together, and gathering together the most promising work. You get the best and brightest and most innovative together and they learn from the experts and each other by asking, ‘How did you do that?’ and ‘What did you learn?’ and ‘What if you look at this way?’”

Douglas Eby, MD, MPH
Vice President of Medical Services
South Central Foundation/Alaska Native Medical Center

Doug has been an active member of the IHI community since the days of the Quality Management Network in the early 1990s.
Mortality is a system property of a hospital.

In the “old days,” hospitals never would have spoken out loud about their death rates, and particularly not with other hospitals,” says IHI’s Diane Jacobsen, who has directed IHI’s Learning and Innovation Community on Reducing Hospital Mortality Rates.

Maybe that’s why the Institute of Medicine’s 1999 report, To Err Is Human, received so much attention when it stated that between 44,000 and 98,000 patients die in US hospitals each year from preventable medical errors. But it wasn’t just the prevailing culture that kept hospital leaders from discussing mortality. It was also that there was no widely accepted standardized way to measure it.

Since then, the science of measuring mortality rates has progressed significantly, thanks in large part to the work of Sir Brian Jarman, Emeritus Professor of Primary Health Care at Imperial College School of Medicine in London, UK. Jarman had been advancing measurement of quality in the UK before he spent 2002 in residence at IHI as a Senior Fellow. His work at IHI focused on analyzing US hospital mortality data and applying his methodology — called the hospital standardized mortality ratio (HSMR) — to it.

Jarman calculated the HSMRs for about 90 hospitals then in the IMPACT network. “I was at the meeting of those hospital leaders when they received their HSMRs,” recalls Jacobsen. “The CEO with the highest [worst] HSMR in the group stood up and said, ‘My hospital has the highest rate and we need to learn from the rest of you,’” she recalls. Later he announced the rate publicly, and vowed that the hospital would lower it. “This is what courage looks like,” said Don Berwick at the time.

The hospital — Tallahassee Memorial — went on to lower its mortality rate by nearly 31 percent in four years by implementing a number of interventions IHI had researched, including Rapid Response Teams, a concept pioneered in Australia. Available on a moment’s notice when a patient shows early signs of trouble, Rapid Response Teams work with bedside nurses to stabilize patients and prevent medical crises. Tallahassee was one of the pilot hospitals that began working with IHI in 2002 to test this and other evidence-based interventions aimed at reducing mortality rates.

HSMR is now an important and widely used tool. The evidence that mortality can be reduced, sometimes dramatically, fueled the successful 100,000 Lives Campaign, which demonstrated the power of broad-scale delivery of evidence-based interventions.

MISSOURI BAPTIST HOSPITAL
St. Louis, Missouri

Missouri Baptist Hospital, an IHI IMPACT member, has dramatically reduced its mortality rate in recent years, including a 22 percent drop between 2002 and 2006. Leaders there attribute part of their success to the interventions implemented from IHI’s 100,000 Lives Campaign, including successful use of Rapid Response Teams. Increased use of these teams has contributed to a lower overall mortality rate.

OWENSBORO MEDICAL HEALTH SYSTEM
Owensboro, Kentucky

From the board to the front-line staff, everyone at Owensboro Medical Health System (OMHS) is focused on quality improvement. Having implemented all the IHI Campaign interventions, OMHS has, among other things, reduced harm from pressure ulcers, patient falls, and medication errors, nearly eliminated ventilator-associated pneumonia, and significantly decreased its mortality rate to well below the national average.

ST. JOSEPH HOSPITAL/PEACEHEALTH
Bellingham, Washington

As a member of IHI’s Learning and Innovation Community on Improving Outcomes for High-Risk and Critically Ill Patients, St. Joseph Hospital has implemented intervention bundles that have helped to reduce ventilator-associated pneumonia and central line bloodstream infections (BSIs). Compliance is high, and the infection rate is low. In rare cases when infections do occur, improvements drill down to determine the cause and change processes accordingly.

“We had eight unexpected deaths the year before we started implementing systematic changes.

Now we haven’t had one in four years. Not one, and we’ve had no ‘codes’ either. Rapid Response was a big part of that, but every little thing you do shows up in your mortality rate. We have virtually eliminated nosocomial infections. Medications are about 98 percent reconciled. Mortality is our measure, but it reflects so much.”

Ben Chaskas, MD, MBA, CPE
Medical Director and Patient Safety Officer
St. Peter Community Hospital, St. Peter, Minnesota

A small critical access hospital, St. Peter was one of the pioneer Mentor Hospitals in the 100,000 Lives Campaign.
Reliable application of evidence produces the best possible outcomes.

Beginning in the late 1990s, studies began to reveal troubling gaps between what was known to be best clinical practice and the care that was actually delivered. One study showed that it took 17 years for research to reach clinical practice. Another found that American adults with common health problems typically received only about half the recommended care.

IHI and other like-minded quality experts were already researching the best ways to bring more reliability to health care through a systems-based approach. IHI’s Breakthrough Series Collaboratives — among the first programs to widely disseminate best practices — focused in the mid-1990s on generating reliable improvements at the microsystem level. Building on these achievements, IHI expanded its focus to whole systems of care through a series of Idealized Design projects intended to reinvent care delivery in the ICU, medication system, and office practice.

“Two things emerged from the early efforts that became foundational in our reliability work,” says IHI Director Fran Griffin. “We learned about Failure Mode and Effects Analysis (FMEA), a tool used in other industries, and adapted it for health care. And second, was the concept of bundles.”

“Bundles” are groups of interventions that, when executed together, result in better outcomes than when implemented individually. Most notable are the Ventilator and Central Line Bundles, which can reduce or even eliminate ventilator-associated pneumonia (VAP) and central line infections, dangerous conditions that were once viewed as unavoidable.

Pursuing Perfection, a multi-year project began in 2001, funded by the Robert Wood Johnson Foundation and led by IHI, sharpened the focus on reliability, as 13 organizations set goals for perfect care across the board.

All of this work provided the momentum for IHI’s two campaigns to reduce avoidable death and patient harm: the 100,000 Lives Campaign, launched in 2004, and its successor, the 5 Million Lives Campaign, launched in 2006.

These national efforts were built on mounting evidence that health care systems can be designed to reliably support best practices. “Once you understand reliability principles, you start seeing applications for them everywhere,” says Griffin.

**Doylestown Hospital**

**Doyletown, Pennsylvania**

Emergency staff at Doylestown Hospital improved care for patients suffering acute myocardial infarction (AMI) by re-evaluating roles, increasing teamwork, and applying proven solutions to increase the speed of care. Each change shaved precious minutes off the treatment time, reducing door-to-balloon time from a mean of 84.5 minutes to 65.6 minutes. Now, 97.8 percent of AMI patients get “perfect care,” meaning all the right steps are taken at the right times.

**Cape Coral Hospital**

**Cape Coral, Florida**

A member since 2005 of IHI’s Learning and Innovation Community on Improving Outcomes for High-Risk and Critically Ill Patients, Cape Coral Hospital, part of Lee Memorial Health System, watched its VAP rate plummet to zero (where it has remained for more than 21 months) as its compliance with the Ventilator Bundle rose. Leaders point to daily goal sheets, improved communication, and the establishment of reliable processes as foundations of this success.

**CareSouth Carolina**

**Hartsville, South Carolina**

CareSouth Carolina provides primary and preventive care for 35,000 medically underserved residents of the region, rated among the nation’s highest for incidence of diabetes and cardiovascular disease. As an early participant in an IHI Collaborative to reduce health care disparities, CareSouth is reaching high levels of reliability on challenging “all-or-none” measures for diabetes care in the office setting, and now aims to spread the lessons to the entire system.

---

Looking back, who would have thought that by doing simple things consistently, without great resources, we could make such dramatic changes? Improving reliability has changed everyone’s thinking. Now whenever a change is proposed, everyone asks, ‘Where’s the evidence?’ The staff take such pride in their work, and we’re all in awe of what we’ve been able to accomplish.”

Barry Evans, RN, CNS
Clinical Nurse Specialist for Critical Care
and Manager of Quality Outcomes
University of Rochester Medical Center

---

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995</td>
<td>Breakthrough Series Collaboratives generate microsystem improvements</td>
</tr>
<tr>
<td>2000</td>
<td>Study finds that it takes 17 years for research to reach clinical practice</td>
</tr>
<tr>
<td>2001</td>
<td>Idealized Design initiatives seek reliability methods</td>
</tr>
<tr>
<td>2002</td>
<td>Pursuing Perfection raises the bar toward perfect care</td>
</tr>
<tr>
<td>2003</td>
<td>Ventilator and Central Line Bundles tested</td>
</tr>
<tr>
<td>2004</td>
<td>RAND Corp. finds that American adults receive only about half the recommended care</td>
</tr>
<tr>
<td>2005</td>
<td>100,000 Lives Campaign includes “get to zero” goals</td>
</tr>
<tr>
<td>2006</td>
<td>5 Million Lives Campaign targets patient harm</td>
</tr>
<tr>
<td>2008</td>
<td>65 hospitals report being VAP-free for more than a year</td>
</tr>
</tbody>
</table>
Broadscale improvement depends on the steady spread of good ideas and proven practices.

The process of spreading better practice appears deceptively simple,” says IHI Vice President Joe McCannon. “We know that if we can offer excellent care to one patient then we should be able to offer the same to ten or a hundred or a million. But it’s never that easy.”

Still, by closely studying Everett Rogers’ theory on diffusion of innovation and other philosophies on how improvement spreads, IHI has helped organizations, regions, and states make large-scale changes. “We tapped into both theory and the experience of successful organizations to develop a framework for spread that could be applied to health care,” says IHI Director Marie Schall.

Some IHI “spread” projects have been within institutions, moving improvements from one unit to another, while others have been across large systems — like the Veterans Health Administration, where same-day appointment access has been instituted across the VA’s vast ambulatory care clinic system, or the Health Resources and Services Administration, which has improved how patients with chronic conditions are served at thousands of federally-funded community clinics, or Kaiser Permanente, which is spreading advanced health information technology throughout its system. “We have learned a lot about how the spread framework can be used, including the importance of infrastructure and communication,” says Schall. “You can’t count on changes to spread just because they are good ideas.”

And even the best practices for spreading improvement have to take into account different settings, cultures, and resources. Collaborating with partner organizations can be key. In Peru, for instance, IHI worked with Peruvian partners to rapidly spread its highly successful community-based treatment program for multidrug-resistant tuberculosis. Since then, similar on-the-ground learning and coalitions have helped spread best practices for HIV care to patients in South Africa, and better processes to reduce deaths and improve outcomes for pregnant women and newborns in Malawi.

The 100,000 Lives and 5 Million Lives Campaigns are IHI’s most ambitious spread initiatives yet, and — based on these successes — similar large-scale improvement efforts have been launched, with IHI’s help, on every continent except Antarctica. Says McCannon, “The lesson of the Campaigns is that spreading awareness is only the first step — changing behavior at the front lines of care is what’s critical. With thousands of hospitals participating, this requires developing hubs of expertise, like the Campaign’s field offices and Mentor Hospitals, who can manage local improvement and harvest great ideas for others to apply everywhere.”
Leaders set the tone and agenda for change at top performing organizations.

Prior to 2002, quality and safety were not on the list of things that hospital CEOs last sleep over,” says Jim Conway, IHI Senior Vice President. “That was someone else’s job.” This fit with the prevailing view that medical errors happened because of “bad” people. “In those days,” recalls Conway, “when an error happened — an error serious enough to come to light — a few staff would get fired and a few policies would get rewritten.” Errors were not regarded as opportunities to discover systemic flaws that might be compromising quality and safety.

A culture of safety requires that all errors, no matter how minor, be brought to light, not to punish those responsible, but to reveal system defects. It is up to leaders to establish that type of culture through a visible commitment to patient safety as a personal and corporate priority.

But commitment doesn’t automatically make CEOs and board members effective quality and safety leaders.

“Governing boards, mostly laypersons, traditionally have not seen themselves as qualified to oversee quality,” says Conway. That’s why in recent years IHI has launched several programs aimed at helping “C-suite” leaders and hospital trustees develop and hone the skills and knowledge they need to lead system-level improvement.

Through its Executive Quality Academy, CEO Summits, and professional development programs for trustees, executive clinical and administrative leaders, Patient Safety Officers, and Improvement Advisors, IHI has taught hundreds of leaders about reliability, human factors engineering, building a just culture, and the importance of making quality and safety part of an organization’s core strategy. In a 2005 white paper, IHI outlined seven leadership leverage points useful for executives working to achieve dramatic, system-level performance improvement. And building on that, the 5 Million Lives Campaign added “Get Boards on Board” to its roster of challenges as a high-priority intervention to improve safety.

Today, ensuring patient safety and quality is no longer just the job of front-line staff. Governance and executive leadership is now the crucial driver. Regulatory and oversight organizations agree. The Joint Commission has introduced new standards for 2009 that focus on a hospital’s safety culture and the engagement of governing boards and leadership.

Conway says in recent years exceptional leaders at the executive and board level have emerged who are showing the industry what is possible. “We used to point to a few leadership stars,” he says, “and now the number is exploding.”

**Onslow Memorial Hospital**

Jacksonville, North Carolina

Onslow Memorial Hospital significantly reduced the incidence of pressure ulcers by creating skin care champions on each unit, expanding education and training, incorporating daily risk assessments, identifying interventions, and using the Braden scale consistently for evaluation. Collection and sharing of data, and recognition of units with the highest compliance rate, led to greater than 95 percent compliance with IHI’s recommended interventions for pressure ulcer prevention and designation as a Campaign Mentor Hospital.

**Munson Medical Center**

Harrison City, Michigan

As the winner of the American Hospital Association’s 2007 Quest for Quality Award, Munson Medical Center is recognized for its commitment to quality and transparency. The board and senior leadership are actively engaged in developing the quality agenda. Compliance is consistently high with core “dashboard” measures, bundles of steps defined as best practice in the care of heart attack or post-surgical patients, or those with congestive heart failure or community-acquired pneumonia.

**Cooley Dickinson Hospital**

Northampton, Massachusetts

When leaders at Cooley Dickinson Hospital found that readmission of congestive heart failure (CHF) patients was highest among nursing home patients — not patients returning home, as was expected — they began doing something unusual: sharing best practices with nursing homes, including the deployment of CHF Coordinators and Readmit Teams. Since then, the hospital readmissions for CHF patients has fallen sharply, and length of stay has also dropped. Teams are working now to reduce readmissions for all patients.

**At its core every health care organization must stand for the highest-quality patient care. Leaders must articulate this core mission, describe the path to achieve it and walk the path with unwavering commitment. In the face of some 49 million uninsured, that commitment must include access to care for the most vulnerable, because without access there can be no quality.**

Patricia Gabow, MD
Chief Executive Officer
Denton Health
Breakthrough performance is achieved by engaging patients and families and empowering the front line.

When the Institute of Medicine (IOM) listed patient-centeredness as one of six aims for a high-quality health care system in its 2001 report, Crossing the Quality Chasm, some people may have felt confused. After all, hadn’t patients always been at the center of care?

In fact, the IOM was envisioning a whole new type of partnership among patients, families, caregivers and systems of care, advocating “care that is respectful of and responsive to individual patient preferences, needs, and values and that patient values guide all clinical decisions.”

Building on progress already made in the patient-centeredness arena by other like-minded organizations, IHI began working with participants in the Pursuing Perfection initiative to fully integrate patients and families as members of improvement teams. One pioneering institution, Cincinnati Children’s Hospital Medical Center (CCHMC), began including patients and family members on its cystic fibrosis (CF) program team. “This required strong leadership,” says IHI Vice President Andrea Kahanemull. “For the first time parents saw comparative data that showed that CCHMC did not have the best CF program in the country.” The outcome was only positive. Patients and families gave the team the best ideas for improvement and their presence on the team only added to the motivation.

At the same time that patients and families were being empowered, so were the front-line staff providing care, particularly through a program called Transforming Care at the Bedside (TCAB), launched in 2004 in partnership with the Robert Wood Johnson Foundation (RWJF). Piloted in 13 hospitals from 2006 to 2008, TCAB has been spread to hundreds more through IHI’s IMPACT network and collaborative programs offered through the American Organization of Nurse Executives. TCAB set out to develop, test, and spread effective strategies and processes that transform the care experience of patients in hospital medical-surgical units, in part by helping health care professionals on these units to drive process improvements that improve the work environment and lead to better outcomes for patients. “In TCAB, staff have been able to remove waste and redesign key clinical processes, and on average, most have been able to double nursing staff time at the bedside, enabling nurses to better meet patients’ needs in a timely manner,” says IHI Vice President Pat Rutherford.

Strengthening the partnership between patients and providers in the outpatient setting is the focus of more recent work through New Health Partnerships, an IHI initiative supported by RWJF and in coordination with the Institute for Family-Centered Care and the Institute for Healthcare Communication. The program boosts the capacity of ambulatory care providers and patients and families to engage in productive self-management support. “Increasing evidence shows that engaged, informed patients achieve the best outcomes,” says Rutherford.

**Medical College of Georgia**

Augusta, Georgia

The Medical College of Georgia Health System is nationally recognized for its commitment to patient- and family-centered care. Partnerships with patients and families at all levels of the organization have not only resulted in extremely high patient satisfaction rates, but have also positively impacted metrics such as finances, quality, safety, and market share. Malpractice claims and litigation have also steadily dropped.

**Buena Vista Regional Medical Center**

StormLake, Iowa

Buena Vista Regional Medical Center is a small critical access hospital and an IHI Campaign Mentor Hospital for prevention of adverse drug events. Key to this effort is medication reconciliation — a multi-faceted process of ensuring that patients’ medication records are accurate at admission, transfer, and discharge. Involving patients and families in this process has been critical to its success.

**Prairie Lakes Hospital**

Watertown, South Dakota

Research shows that outcomes improve when nurses spend more time in direct care. As one of 10 pilot hospitals to participate in Transforming Care at the Bedside, Prairie Lakes Hospital significantly increased nurse time at the bedside by redesigning documentation processes, reorganizing supplies and equipment, decentralizing medication supplies, and improving communication networks through daily team conferences and the use of walkie-talkies to facilitate easier contact.

**Cincinnati Children’s Hospital**

Cincinnati, Ohio

“Patients and families bring an abundance of skills and knowledge to improvement work. They open our eyes to the real experience of the system. They help us prioritize by telling us what is most important to them. They give us energy and a sense of urgency by telling us how our work affects their lives. And they roll up their sleeves to help make care better for their own families and for everyone else.”

Una Keugel, MBBS, MS;
Senior Vice President, Quality/Transformation and Director, Health Policy & Clinical Effectiveness;
Cincinnati Children’s Hospital Medical Center

---

**Number of Files, Claims and Litigation**

- **Leggitt**
- **Clark**
- **Hau**

**Medication Reconciliation Compliance**

- **MSS** (Medication Services System)
- **RAP** (Real-time Access to Patient)

**Nurse Time in Direct Patient Care**

- **Dana Lakes**
- **Specialty Nursing**
Acting with individuals enables us to learn what’s best for the population.

Health care delivery has always been about the patient in the room. It is the job of physicians and other caregivers to focus on the patient in front of them, and endeavor to diagnose and treat them appropriately. That one-on-one provider-patient relationship remains at the heart of medicine.

In the 1980s this lens began to widen to include the focus more commonly associated with public health: populations of patients. A provider might give individual patients excellent care for their diabetes, but what about the patients with diabetes who weren’t coming in for regular visits? How could practices take responsibility for this broader group using some of the lessons learned from caring for individuals?

IHI and many others have taken up this challenge as an aspect of fundamental health care reform. Tools such as electronic patient registries, that help physicians track populations of patients and highlight their individual needs, and the Chronic Care Model developed by Ed Wagner and colleagues, have advanced the science and art of population care, including how to measure it. Oversight and accreditation organizations have also begun to create standards for what constitutes excellent care for defined populations of patients.

IHI’s work with large systems that have this broader responsibility — such as the Indian Health Service and Jönköping County in Sweden — is building vital knowledge and experience in caring for individuals and the communities in which they live — knowledge that many others can harness.

“When you focus on caring for a population, or controlling costs for a population, there is a risk that you will stop focusing on the individual experience of care,” says IHI Senior Fellow Tom Nolan. IHI is now the driving force behind a initiative known as the Triple Aim. The idea is to find new ways to improve the individual patient experience and the health of entire communities, at a reasonable per capita cost — optimizing these three often-competing objectives. IHI is working with dozens of prototyping sites in this multi-year project, whose three dimensions are at odds with current health care business models. Embracing the Triple Aim requires strong leadership and innovative, integrative thinking, says Nolan.

**CareOregon**
CareOregon, a non-profit Medicaid managed health plan and dually-eligible Medicare Special Needs Plan, has aggressively pursued initiatives to strengthen primary care and provide stronger support for high-risk patients, efforts that correspond to the framework of IHI’s Triple Aim. The health plan’s CareSupport program focuses simultaneously on individuals and populations using multidisciplinary teams and a holistic model of care. Reducing hospitalization was a major reason the plan reduced costs by $7.3 million in 2007 for the 1,445 highest risk CareSupport members.

**Bellin Health System**
Bellin Health, with more than 1,800 employees, uses an innovative framework it calls the Total Health Model to address the goals of IHI’s Triple Aim initiative. The model has four interrelated components: generating health knowledge, providing customized health advancement support and resources, providing integrated productivity solutions, and supporting the right care at the lowest cost through a comprehensive health care navigation system.

**Indian Health Service**
The Indian Health Service (IHS), an agency of the US Department of Health and Human Services and an IHI strategic partner, provides comprehensive health services for about 1.9 million American Indians and Alaska Natives. Through a pilot program in 14 sites, the IHS built care teams and focused on about 20 indicators, including branded, all-or-none measures for such things as diabetes care, preventive screenings, and intake screenings. Results include increases in community and patient confidence, and decreases in emergency department visits.
The work will be sustained if we continually cultivate change agents.

The US health care system has responded to *Crescendo the Quality Chasm*, the Institute of Medicine's 2001 blueprint for change, through an enormous amount of on-the-job training. Health care professionals from all disciplines have negotiated a steep learning curve to become adept at leading and executing systems changes that promote better care and better outcomes.

While much progress has been made in helping mid-career professionals acquire the necessary skills to foster continuous quality improvement, "moving this learning to an earlier stage in the process, into the training of new doctors and nurses, has been a much bigger undertaking," says Paul Batalden, an IHI founder and Director of Health Care Improvement and Leadership Development at Dartmouth Medical School. Still, since its founding in 1991, IHI has been working to integrate quality-of-care competencies into health professional education.

The effort was helped immeasurably by the Accreditation Council for Graduate Medical Education, which in 1991 adopted general competencies for professional education and development. The competencies for residency programs include the ability to evaluate and improve care quality. The American Board of Medical Specialties adopted the same competencies for initial specialty certification. The Association of American Medical Colleges also defined what it thought most students should know about quality of care, and called for appropriate faculty development.

Building on this foundation, IHI launched the Health Professions Education Collaborative (HPEC) in 2002 to explore these issues. HPEC has now grown to include more than 50 medical schools, nursing schools, pharmacy schools, and health administration programs in 18 universities. Academic leaders from these four disciplines work together to integrate the competencies of quality improvement into their curricula, so that health professionals will begin their careers with the knowledge required to lead quality improvement.

Batalden traces this work back to pioneering "summer camp" programs. "About 15 years ago, IHI and Dartmouth started a one-week summer camp for teachers of medical, nursing, and health administration schools. A wide variety of faculty participated, and had the experience of learning together and trusting one another across disciplines. Many of these health professional educational initiatives have benefited from relationships that have grown out of this experience."

Now, to meet the growing interest among students enrolled in health professions schools for more training in quality and safety, IHI has created the IHI Open School for Health Professionals, a free resource for students in nursing, medicine, pharmacy, health administration, dentistry, and other allied professions. Through relevant and engaging online resources and an interprofessional community linking students to mentors and colleagues across the globe, students are acquiring the knowledge and skills they need to become more effective change agents when they enter the workforce.

**IHI helps cultivate mid-career change agents through:***

- Year-long fellowship programs onsite at the IHI office, made possible by support from the George W. Meck Family, The Health Foundation, and The Commonwealth Fund.
- These talented individuals have been Fellows at IHI:

  - Annette Bartley, NHS North Wales (Central)
  - Steven Bergeson, MD, Allina Hospitals and Clinics
  - Laura K. Borsack, formerly with Joint Commission International
  - David R. Calkins, MD, Harvard Medical School
  - Crystal Clark, MD, MPH, Bon Secours Baltimore Health System
  - John D. Dean, MBChB, MD, FRCP, NHS Bolton
  - Noeleen M. Devaney, MSc, MPH, FRCPych, N. Ireland HSC Safety Forum
  - Sharon I. Eroranta, MD, Qualis Health
  - Dr. David Gozard, North Wales NHS Trust
  - Jonathan R. Gray, MBChB, PhD, Wales Center for Health
  - Jacquelyn Hunt, RPh, PharmD, MS, Providence Physician Division
  - Stephen F. Jencks, MD, MPH, formerly with CMS
  - Peter L. Lacchman, MD, MPH, FRCPCH, Great Ormond Street Hospital for Children NHS Trust and Royal Free Hospital NHS Trust
  - Rae Lamb, Deputy Health and Disability Commissioner, New Zealand
  - Jason Leitch, BDS, FDSRCS, DDS, MPH, Scottish Government Health Directorates
  - Younsook Lim, MD, Children's Hospital Boston
  - Thomas Pinckney Millward, MD, Cape Fear Valley Health System
  - Dr. Jacqueline McLeod, MBChB, DFFP, MRCPGP, The Vale Medical Centre
  - Karen Metzger, BSN, University of North Carolina, Chapel Hill
  - Gail A. Nielsen, BS, MCH, Iowa Health System
  - Carol J. Peden MBChB, FRCA, MD, Royal United Hospital
  - Rocco J. Perla, EdD, MA, HealthAlliance Hospital
  - Maxine Power, PhD, Salford Royal NHS Trust Hospital
  - Brian Robson, MBChB, MRCPGP, DRCOG, National Services Scotland
  - Anna Roth, RN, BSN, MS, Centre Costa Regional Medical Center
  - Matt Stiefel, MPA, Kaiser Permanente
  - Peter C. Spivak, MBBS, PhD, FACEM, FACCH, National E-Health Transition Authority, Australia
  - David P. Stevens, MD, Dartmouth Institute for Health Policy and Clinical Practice
  - Charles R. V. Tomson, MBChB, DM, FRCPath, North Bristol NHS Trust
  - Joanne Watson, MD, FRCP, MBBS, Taunton and Somerset NHS Trust
  - Susan Went, Kingston Primary Care Trust, UK
  - Tim Wilson, MD, PrizewarrehouseCoopers LLP
  - Bonnie Zeil, MD, MS, Centers for Disease Control and Prevention

---

**"Cultivating the next generation of leaders who can implement and execute effective change is energizing.**

Equipping students with the tools to address suffering, inequity, lack of safety, and a fragmented health care system that leaves many people out is integral to motivating change. This type of leadership development is the most exciting aspect of the IHI Open School.”

Jay D. Bhart, MPH, DO
Resident Physician, Cambridge Health Alliance
Clinical Fellow in Medicine, Harvard Medical School

---

Jay is serving as a Relationship Manager in the development of the IHI Open School for Health Professionals.
What lies ahead?

A contagious movement for change has spread to countless dedicated health professionals, leaders, and quality improvers over the past two decades. As we mark the 20th anniversary of the National Forum, we at IHI look ahead with a great deal of optimism and determination to what we can all achieve together in the next 20 years. We have come so far, but there is still so much more to do. What will be required to sustain the momentum and raise the bar further in the months and years ahead?

We asked IHI Leaders Maureen Bisognano and Don Berwick, and board members Paul Batalden and Vinod Sahney, to share their thoughts on tomorrow’s truths – the principles most likely to succeed.

Bisognano envisions a “network of millions” doing the difficult on-the-ground work of improvement and, most importantly, “sharing, encouraging each other, reaching the many who would never know any other way.” This network, she says, will also be the engine for health care innovation and experimentation in the future.

Picking up on this theme, Berwick contemplates the “globalization of our shared health problems,” including disease outbreaks, and the need to respond as a global community. “We are more related, not less,” he says. In Berwick’s view, this is the underpinning of another critical movement sweeping the planet: slowing and reversing global warming. He predicts a “firm integration between health care and environmental or ‘green thinking’ in the days ahead. There are parallels between creating a health care system that’s effective and efficient and what we need to do to save the planet.” Berwick believes we’ll be hearing more about these connections in the days ahead.

Further on the theme of efficiency, Batalden notes that the past 20 years have prepared us well to move forward in challenging economic times. He suggests that health care leaders “seek and use good science” and “relentlessly reduce waste.” He is quick to point out that the Japanese word “muda,” which literally means “simple nothing,” carries an overtone of shame or embarrassment, and wonders when health care will become embarrassed by its waste. Berwick agrees. He predicts that we are entering a period in which wasteful practices in health care “will become even less tolerable.”

Eventually, we’ll have to face the music, he says, because waste in health care is integrally related to soaring and unsustainable costs. “We can’t whistle in the dark about this anymore. That’s not going to work. We have to bring total spending on health care down...way down,” says Berwick.

Some of the people who will lead us in these new directions are today’s health professions students. The next generation of doctors, nurses, pharmacists, and allied health professionals are already now learning in new ways, according to Bisognano. They’re learning from “patients, online searches, greater use of diagnostic tools, and greater collaboration.” All of this is remaking professionalism, says Berwick, into something more akin to “coaching, guiding, and helping.” Interdependence promises to be the watchword, replacing today’s independence for the sake of silos. Batalden echoes this theme, emphasizing the importance of “building community by cooperative work on unmet need.”

Perhaps no emerging voice will matter more over the next 20 years than that of the patient. Bisognano anticipates that “we’ll go from caring for patients to caring with patients; in the future patients will design their care and we’ll support them.” Berwick envisions patients and families having a much greater hand in all aspects of improvement design, including the processes that will reduce costs and lead to far better health outcomes. “Health care will not be something given,” says Berwick, “but managed by patients themselves, in evermore collaborative arrangements with providers.” Along these lines, Sahney anticipates that “chronically ill patients will have home monitoring devices with the capability of transmitting physiological data directly to providers, thus eliminating the need for many of the current office visits.”

Berwick believes this transformation is analogous to what is happening with access to health care information. “The Internet has revolutionized knowledge, giving all of us the keys and mastery. It’s only a matter of time before this same democratization spreads to the structure and organization of the health care delivery system itself.” Further on the democratization theme, Sahney envisions that “cost and quality data will be available to the public through state and national websites and patients and providers will have access to electronic medical records through the Internet.”

In a sea of change, Batalden says there are many principles of improvement that will and should withstand the test of time. We should “focus on the basics — illness burden in individuals and populations, system performance (quality, safety, cost), and professional competence and joy in work — while enabling continual change.”

It’s a starting point as we look ahead to the next 20 years. A challenging list for sure. But, reflecting on words from poet William Stafford, Batalden believes “it would be cruel for us to know the facts of inadequate quality, safety, and value and not recognize and act on them.”
The Institute for Healthcare Improvement (IHI) is an independent non-profit organization helping to lead the improvement of health care throughout the world. Founded in 1991 and based in Cambridge, Massachusetts, IHI works to accelerate improvement by building the will for change, cultivating promising concepts for improving patient care, and helping health care systems put those ideas into action.

Employing a staff of approximately 120 people and maintaining partnerships with hundreds of faculty members, IHI offers comprehensive programs that aim to improve the lives of patients, the health of communities, and the joy of the health care workforce.
“JUST CAN’T WAIT TO GET ON THE ROAD AGAIN.”

Willie Nelson