



# SIMPLE SOLUTIONS SPARK SWEEPING CHANGES IN MEDICINE

by Jennifer Reardon

Atul Gawande, MD, MPH  
photos: Stu Rosner

“JUST BECAUSE A PATIENT HAS THE BEST DRUGS, TECHNOLOGIES, AND SPECIALISTS—AND THE MOST EXPENSIVE CARE—DOES NOT MEAN THE PATIENT IS RECEIVING THE BEST CARE.” ATUL GAWANDE, MD, MPH

Such statements have propelled Atul Gawande, MD, MPH, to the vanguard of global discussions of healthcare. The Brigham and Women’s Hospital (BWH) surgeon, Harvard Medical School and Harvard T.H. Chan School of Public Health professor, best-selling author (see sidebar), and staff writer for *The New Yorker* has been named one of the 100 most influential thinkers by *Time* and *Foreign Policy* magazines. Known for his critical examination of the healthcare system, Gawande advocates for innovations to improve public health for people everywhere.

#### Checklist yields staggering results

In 2007, of the 234 million surgeries performed annually worldwide, more than 7 million led to complications, with 1 million resulting in death. With many of these complications—including infection and injury—considered preventable, the World Health Organization (WHO) turned to Gawande to lead a team of international experts charged with improving surgical outcomes around the globe.

The team looked for ideas in other high-risk industries, such as skyscraper construction and aviation. They found that as with surgery, these fields involved high levels of technology and training, but they possessed something surgery lacked: checklists.

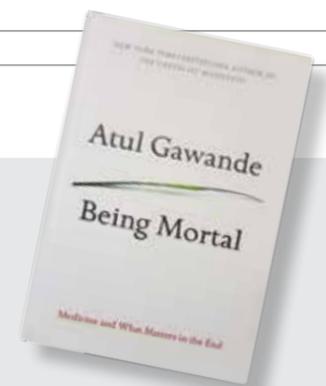
“We created a 19-item, two-minute checklist for surgical teams and implemented it in eight hospitals on five continents, from Seattle, Washington, to rural Tanzania,” says Gawande. “Complication rates lowered in every hospital, on average by 35 percent—and death rates fell 47 percent. If a new drug were as effective at saving lives, everyone would be rushing to buy it.”

The power of the checklist is twofold. It rallies large teams around common goals and identifies crucial times to catch a problem before it becomes a danger, such as verifying the surgical site before making an incision.

“The checklist is now used in tens of millions of operations globally each year,” Gawande says. “In my own surgeries at BWH, there’s not a week where the checklist has not caught a problem.”

#### An innovation lab is born

The worldwide adoption and success of the surgical checklist inspired Gawande to seek other ways to transform medicine. In 2012, with philanthropic support, Gawande launched Ariadne Labs, a joint center for health systems innovation at Brigham and Women’s Hospital and the Harvard T.H. Chan School of Public Health. The vision: develop practical, scalable solutions and apply them in healthcare settings around



Atul Gawande’s book “*Being Mortal: Medicine and What Matters in the End*” has been on *The New York Times* Best Sellers List for more than a year, and has been translated into five languages, including Spanish, Polish, and Korean.

Filled with stories of patients and care providers, as well as his personal struggles with his father’s end of life, Gawande critiques current practices in end-of-life care, while seeking ways for the medical profession to learn what matters most to patients and their families and to help them achieve it.

“Lacking a coherent view of how people might live successfully all the way to their very end, we have allowed our fates to be controlled by the imperatives of medicine, technology, and strangers,” he writes. “What if there are better approaches, right in front of our eyes, waiting to be recognized?”

Later in the book, Gawande offers a new approach to help practitioners lead conversations with patients about their goals of care. With a conversation guide, training program, and other tools provided through Ariadne Labs’ *Serious Illness Care Program*, his goal is to create systemic, transformative change in serious illness care planning.

“ATUL NEVER STOPS ASKING HOW WE CAN MAKE SOMETHING BETTER. AND HIS COLLABORATIONS CREATE STRAIGHTFORWARD AND LIFESAVING TOOLS THAT ARE CHANGING THE PRACTICE OF MEDICINE AROUND THE WORLD.”

BETSY NABEL, MD

the globe to give people better care at critical moments in their lives, including childbirth, surgery, and serious illness.

“At each of these moments, health systems routinely have major failures that cause tremendous harm to people,” Gawande says. “We’ve identified clear, simple steps for improvement that are spreading around the world.”

“No one else in the world is taking Ariadne’s unique approach to tackling complex healthcare problems,” says Betsy Nabel, MD, president of Brigham and Women’s Health Care and member of Ariadne’s advisory board. “The collaboration among all the thought leaders Atul has assembled—physicians, nurses, public health experts, scientists, data experts, and project managers—has delivered tremendous results in a short time.”

The success of Ariadne’s projects goes beyond developing interventions and encouraging their use. A vital element of their approach uses sophisticated implementation science

and data monitoring to track progress, outcomes, and the spread of innovation.

#### Widening the impact

To lead Ariadne’s Safe Surgery Program, Gawande called on Bill Berry, MD, MPH, his chief collaborator on the WHO surgical checklist. One of Berry’s key efforts has been to help hospitals throughout the United States adopt the checklist. The national effort began in South Carolina, where an estimated 500 surgery-related deaths have been prevented.

“The checklist is more than a list of processes,” Berry says. “It’s a powerful tool to help improve communication and teamwork.”

The Safe Surgery Program is also developing new initiatives such as Operating Room Crisis Checklists, which guide surgical teams through 12 potential crises, ranging from cardiac arrest to life-threatening allergic reactions. A simulation trial of operating room emergencies showed that checklists improved adherence to critical steps by 75 percent.



The Ariadne Labs leadership team. Front row, left to right: Susan Block, MD; Lisa Hirschhorn, MD, MPH; Atul Gawande, MD, MPH; Katherine Semrau, PhD, MPH; and Bill Berry, MD, MPH. Back row: Athelia Tilson and Louise Knabe, MEng. Foreground: Megan McLean, JD, MBA.

#### Transforming the practice of medicine

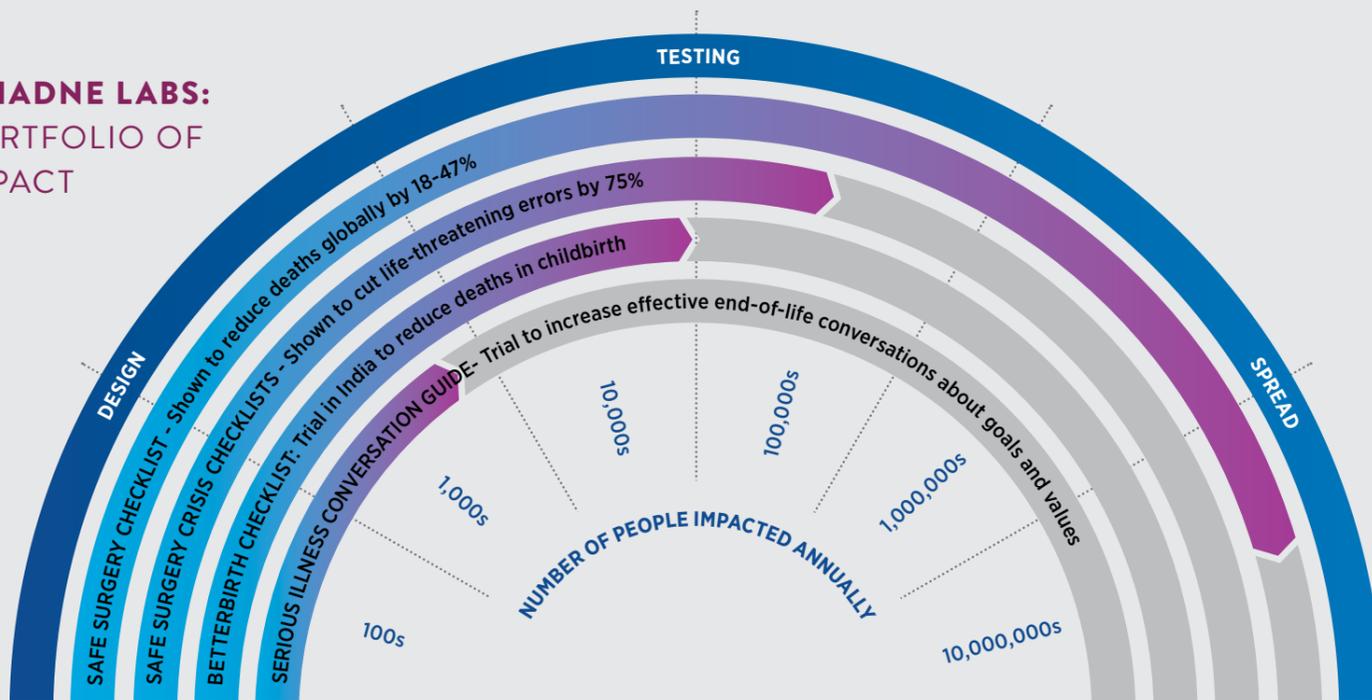
Every day, caregivers around the globe face complexity, uncertainty, and the risk of failure, Gawande observes.

“When a death happens in surgery after something has gone wrong, scientists call this ‘a failure to rescue,’” he says. “The sooner you admit the plan has gone awry, the better chance you have to act—and to rescue success from failure.”

The same is true at a systemwide level.

“We need health systems that are introducing new ways patients get care, and that pivot and change as they go along,” says Gawande. “Only by recognizing our failures will we be able to devise and implement solutions on a wide scale.”

#### ARIADNE LABS: PORTFOLIO OF IMPACT



#### Increasing safety in childbirth

Using the approach of the Safe Surgery Program, Ariadne’s BetterBirth Program is tackling the number one cause of death for women and children in low-income countries: childbirth.

The program’s trial in Uttar Pradesh, India—an area where one in 20 babies are stillborn or die within days of birth—has tested a new safe childbirth protocol in 48 facilities, and will expand to 120 total sites in the next year. The centerpiece of the program is WHO’s Safe Childbirth Checklist, which is supported by peer-to-peer coaching and data feedback from primary care facilities.

“Our approach to childbirth safety has shown an increase in the number of lifesaving practices followed in low-income settings from just 10 out of 29 to 25 out of 29,” says Katherine Semrau, PhD, MPH, BetterBirth program director. “We’re passionate about finding solutions and believe this intervention can really make a difference.”

#### Improving care for serious illness

Ariadne’s Serious Illness Care Program is led by Susan Block, MD, a national leader in the development of palliative medicine.

“Many seriously ill patients never have a chance to voice their goals and priorities for care with their clinicians,” says Block. “Our team created a seven-step conversation guide to help clinicians have more, earlier, and better conversations that help patients get the care they want and live better with their illness.”

Her team’s largest study is following 90 physicians and nurses and more than 400 patients at the Dana-Farber/Brigham and Women’s Cancer Center.

“Our findings strongly suggest these conversations improve patients’ quality of life,” Block says. “Clinicians and patients in the program find the guide valuable. We are now expanding our program to offer training and online support for clinicians around the world to use it in their own settings.”

To that end, Gawande and his colleagues at Ariadne Labs have numerous global initiatives, including a study examining the growing rates of cesarean section childbirth deliveries. For another project, strengthening primary care to improve health in low- and middle-income nations, Ariadne is partnering with the Bill & Melinda Gates Foundation, the World Bank, and WHO.

“Atul never stops asking how we can make something better,” Nabel says. “And his collaborations create straightforward and lifesaving tools that are changing the practice of medicine around the world.” ■

**Bring high-impact solutions to millions.** Give today to help Atul Gawande, MD, MPH, and his team transform care for patients worldwide. Contact Athelia Tilson at 617-424-4386 or [atilson@partners.org](mailto:atilson@partners.org).