Quality Improvement: Transforming Pediatric Health Care

Population Health Sciences

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As a primary care pediatrician at Children's Hospital of Philadelphia (CHOP), I have the privilege of working with an amazing health care team to care for children and families in West Philadelphia. Each day, I do my very best to provide high-quality care to every child and family I see in clinic.

But what does "quality" really look like in health care? It's an important question to pose this National Healthcare Quality Week, and one I ask whenever I teach students and pediatricians-in-training about Quality Improvement (QI). In their responses, I often hear some of the six domains of health care quality that the National Academy of Medicine (then the Institute of Medicine) defined 20 years ago: safe, effective, timely, patient-centered, efficient and equitable. Put simply, Dr. Carolyn Clancy, deputy undersecretary for Veterans Health Affairs, describes health care quality as "…providing the right care for the right person at the right time, every time."

Over the last two decades, quality and safety have been institutional priorities at CHOP. In addition to developing a robust team of quality and safety champions across the organization, CHOP is also building the data infrastructure and training necessary to support impactful, sustainable QI initiatives. In 2015, I was selected to take one of the first iterations of CHOP's "Leading Improvement" course. In those classes, I learned how health care QI has adopted strategies for efficiency from the business world and incorporated principles of safety from high reliability organizations, like aviation.

I also learned about the importance of measuring outcomes from an eye-opening history lesson about Florence Nightingale: not only was she the "Lady with the Lamp" who made rounds on the battlefield caring for wounded soldiers during the Crimean War, but Florence Nightingale was also a skilled statistician. By carefully measuring, analyzing, and graphing data, she demonstrated that handwashing and hygiene practices reduced infection and drastically decreased the death rate at the war hospitals. Armed with these outcome measures, depicted in elegant but simple data visualizations, Florence Nightingale was able to convince the British government to invest in and prioritize sanitation in hospitals.

Inspired by these lessons from history and ideas from other professions, I have made QI a core component of my role at CHOP. As the director of Quality for CHOP Primary Care, I help lead and support improvement initiatives in our 30 primary care practices. One aspect of QI that I love is that frontline staff engagement is crucial to the success of an improvement project; our staff who interact with patients every hour of their workday are the true experts. During a recent networkwide QI initiative to improve HPV vaccination rates among preteens, it was our frontline clinical providers who told us how many families were not swayed by scientific research, but rather it was the power of stories about teens and young adults who suffered from HPV-related cancers that motivated them to get their child vaccinated. In addition to multiple networkwide interventions, many of our primary care providers have incorporated this strategy of "stories" into their daily practice.

But as QI leaders, we can't just conduct improvement projects; we must also teach others about QI and why it's so important. Nursing and medical schools have begun to include quality improvement and patient safety (QI/PS) into their curricula. Residency and fellowship programs are now required by the Accreditation Council for Graduate Medical Education (ACGME) to provide their trainees with QI education and the opportunity to engage in interprofessional improvement activities. Still, although most medical boards have a "continuous improvement" component for maintenance of certification, many experienced health care providers are finding themselves unprepared to support and teach trainees about QI/PS, much less help them lead improvement projects. If we really want to reach the goal of providing "the right care for the right person at the right time, every time," health care institutions must incorporate fundamental QI/PS competencies into their employee training for frontline staff, as well as for executive leadership.

CHOP's model of institutional commitment to QI and safety has succeeded in teaching hundreds of CHOP staff about the basics of improvement methodology and hundreds of CHOP leaders about guiding improvement initiatives and facilitating change management. As a result, we are poised to work with our colleagues at CHOP and at children's hospitals across the country to transform pediatric health care through improvement efforts that are child focused and evidence based.

In order to achieve this transformation, we need to use data analysis and visualization as effectively as Florence Nightingale did hundreds of years ago. Our health care systems must continue building measurement capacity and develop an agile data infrastructure that can support and guide frontline providers and hospital leaders to deliver safe, effective, timely and equitable care. In the words of Paul Batalden, a pioneer in health care quality, "…everyone in healthcare really has two jobs when they come to work every day: to do their work and to improve it."

If you're a health care provider interested in learning about QI, the Institute for Healthcare Improvement (IHI) Open School is an incredible resource, and American Academy of Pediatrics (AAP) members can access basic QI training and clinical improvement projects through EQIPP. Want to take an even deeper dive into health care quality and safety in an interprofessional learning environment? The Center for Healthcare Improvement and Patient Safety (Penn CHIPS) at the University of Pennsylvania offers multiple educational programs intended to help develop the next generation of quality improvement leaders.

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