Using Prevention and Measurement to Drive Quality Improvement

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Introduction

The term "quality" can mean many things to many people. In healthcare, we speak of "quality of care" to mean "the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge."[1] In order to drive quality improvement, the Centers for Medicare & Medicaid Services (CMS) is pressing forward with the "triple aim" goals of: 1) better individual health care, 2) better population health, and 3) lower per-capita costs called for in health reform's Affordable Care Act.[2] CMS' Quality Road Map promotes a vision for "The right care for every person every time" with a goal of making care: safe, effective, efficient, patient-centered, timely and equitable: indicators of quality for care delivery.[3]

An assumption in healthcare was that clinical judgment was sufficient to guide wise decision making. This emphasis on the art of medicine was grounded in a tradition that education, the knowledge of pathophysiology, and sufficient clinical experience were all that was needed to develop sound treatment recommendations.[4] The result of basing care on such personal opinion is wide variations in clinical practice where the most effective treatment is not always used and ineffective treatments often persist. Such issues are indicators for a healthcare delivery system of poor quality. To address the goal of quality through the delivery of effective care, Eddy and others postulated that what happens to patients should be based upon "evidence" to produce recommendations that are valid, reliable and objective.[5]

The goal of Patient Centered Care (PCC) is an important component of prevention. Prevention of adverse outcomes is enhanced when patients comply with treatment recommendations, prescriptions, homecare and post-operative instructions. Studies show that PCC results in increased patient satisfaction and improved patient adherence with recommended care, each of which can improve care outcomes.[6]

Within oral healthcare, the "triple aim" can be best achieved through a focus on prevention consistent with evidence-based guidelines published by the National Guideline Clearinghouse, the American Academy of Pediatric Dentistry and the American Dental Association's Center for Evidence Based Dentistry.[7] A focus on prevention can improve health outcomes as shown in several evidence-based guidelines and can also lower per capita costs over time. However, in order to improve, we must measure the degree to which our dental care system supports the provision of preventive services.

In 2009, the Children's Health Insurance Program Reauthorization Act (CHIPRA) called for the Secretary of Health and Human Services to establish an evidence-based pediatric quality measures program for primary and specialized pediatric health care professionals, including dental professionals. A measure is a mathematical ratio expressed as a percentage, with exclusions of patients who should not be incorporated for various reasons. An example would be a measure for placement of sealants on first molars. This could be described as the number of patients with sealants ages 6 to 8 years who have had a restoration in the past three years divided by the total number of patients in the measured population ages 6 to 8 years who have had a restoration in the past three years. Included are those at risk for decay, as indicated by restorative history, while excluding children whose adult molar teeth have not erupted.[8] Measurement allows for tracking the success in delivering care to those in need and it can be benchmarked to incentivize care delivery.

To promote quality measurement, CMS encouraged the establishment of the Dental Qual-

ity Alliance (DQA) in 2010. The DQA is a multi-stakeholder alliance from across the oral health community, including federal agencies, payers, professional associations and public representation, with a mission to advance the field of performance measurement to improve oral health, patient care, and safety.[9] In 2012, the Dental Quality Alliance (DQA) approved its first fully tested set of ten measures: Dental Caries in Children: Prevention and Disease Management.[10] These were developed over two years after rigorous testing. These DQA measures are validated at the program and plan level and are meant for the purpose of holding health plans accountable for utilization and quality.

Through a consensus process of its stakeholders, the DQA builds measures that are evidence- based.[11] An example would be the DQA's sealant and fluoride measures. These are built off of anticipated outcomes found in the ADA's evidence-based clinical recommendations.[12] Measuring the delivery of care with proven outcomes will promote utilization of these services and raise the level of oral health for the targeted population. Tracking measurement performance will provide administrators with the tools that they need to be confident that their plans are designed to promote quality.

Measuring the delivery of preventive services with an anticipated outcome for at-risk patients will drive quality improvement. For example, reduction of caries incidence in children and adolescents after placement of resin-based sealants ranges from 58.6 percent at four years, and rises to 76.3 percent during this period when reapplied as needed.[13] Use of the DQA's sealant measure will provide assessment of a plan's performance that those covered individuals are receiving this evidence-based preventive service. Failure to achieve anticipated outcomes could signal administrators that flaws exist within their system that impacts the delivery of quality care.

The Institute of Medicine in its 2012 report "Best Care at a Lower Cost. The Pathway to Continuously Learning Health Care in America" called for "continuous learning health systems."[14] Measures are an integral component of this concept due to the cyclic nature of evidence, leading to anticipated outcomes, which lead to clinical guidelines for care decisions which are then measured. Once measured, the realized outcomes create new evidence and the process revolves.

The rapidly changing landscape of healthcare financing will result in greater reliance on quality measures. Employers and purchasers will drive accountability through measurement. Consumers and providers are often fearful that plan design will focus on cost containment at the expense of improving utilization and prevention. Measurement will identify when plan design restricts access to care or impedes improvement of oral health, patient care and safety.

Often measures are designed for reporting using administrative enrollment and claims data. This can pose issues with transparency as many administrators view this to be proprietary data. A solution seen in several states is the creation of "All Payer Claims Databases" (APCD).[15] These APCD may help address concerns for transparency, as well as the call for "continuous learning health systems" through the application of its data to a "dashboard of measures" to show how our providers, health systems and plan administrators are achieving measurement goals and improving the health and safety for covered populations.

Clinicians interested in elevating the quality of care in their practice can adapt measure concepts for individual use. Using sealants as an example, clinical software systems can generate a list of children ages 6 to 8 years that have had a filling in the past three years and those who have had sealants placed. Monthly tracking of performance becomes an exercise of data analysis. A more basic approach could use a spreadsheet where individual providers track patients seen at preventive visits who are at elevated risk for decay and are in need of sealant care. Regular reporting of results within a practice can provide incentive for utilization of preventive services and enhance overall quality of care.

Assuming that a covered population remains with a plan long enough to reap the benefit, access to preventive services and the delivery of that care will improve oral health and decrease health care costs by reducing the need for more costly care in the future. This is most likely to occur when evidence-based preventive services are targeted effectively to at-risk groups and individuals. The transparent use of measures will provide the incentive for the use of preventive services to drive quality improvement and build evidence on the effectiveness of these interventions for the development of future care recommendations.

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