Diagnostic Error in Medicine
Opportunity to Improve Value-Based Care

Jennifer P. Lundblad, PhD, MBA
President and CEO, Stratis Health

Attention to diagnostic error has been raised across the country, including in Minnesota, by the Institute of Medicine (IOM) September 2015 report, “Improving Diagnosis in Health Care.” As the report clearly and urgently states:

The occurrence of diagnostic errors has been largely unappreciated in efforts to improve the quality and safety of health care. The result of this inattention is significant: Most people will experience at least one diagnostic error in their lifetime, sometimes with devastating consequences. Urgent change is warranted to address this challenge.

Improving diagnosis will require collaboration and a widespread commitment to change among health care professionals, health care organizations, patients and their families, researchers, and policy makers.

Rising to the IOM report’s call to action, the Minnesota Alliance for Patient Safety (MAPS), MMIC, and Stratis Health began convening a community dialogue to assess the level of interest and commitment among Minnesota health care leaders in addressing misdiagnosis in medicine through collaborative efforts. Convened four times in 2016, this group of Minnesota leaders developed a shared understanding of the complexity of diagnostic error, reviewed data and studies, and prioritized actions to be undertaken in our community.

As part of this effort, MMIC conducted an in-depth analysis of its data, which truly represents only the tip of the iceberg of diagnostic error, as its data is limited to malpractice claims. MMIC analyzed 442 diagnosis-related major and other allegations in medical professional liability claims and cases asserted against their policyholders during the five-year period 2010 and 2014. In this study, 19 different factors were identified as contributors to follow-up system failures of the diagnostic process that led to the clinical event and/or the assertion of the case. These system failure factors were present in 40 percent of the cases studied, accounting for $31 million in total incurred costs over the five-year period.

Notably, factors involving clinical judgment—such as patient assessment issues and narrow diagnostic focus—played significantly less of a role in system failure cases. Communication factors, failures and delays within clinical systems, and other administrative factors played a significantly higher role.

In addition, improving diagnosis in medicine was a theme at this year’s MAPS conference in October. The patient stories shared about missed and mis-diagnosis were compelling and motivating.

One of the key actions being undertaken by Minnesota leaders to decrease diagnostic error is a community collaborative project focused on follow-up to testing and communication of test results.

Stratis Health is pleased to be working with partners to lead the way in improving diagnosis in medicine in Minnesota. Improving diagnosis clearly links safety and costs, making it a critical component of improving value in health care.

We are taking seriously the IOM’s call for urgent change and invite you to join us.
Preparing Medical Students for Value-Based Care

Tomorrow’s physicians start their medical training within the context of value-based care, unlike today’s physicians who are challenged to adapt to this growing value-based world.

Having finished my family medicine residency 33 years ago, I’ve practiced medicine during the HMO era, the fee for service era, and now the evolving accountable care organization era. I’ve had to adapt.

For a time early in my career I worked in a clinic where patients were largely uninsured, or on Medical Assistance before our state developed Medicaid managed care. Working with patients with very limited resources to choose tests and treatments and to obtain access to specialists for them brought me straight into the morass of health care costs, and was a compelling lesson in navigating value and fundamental shared decision-making with patients and families. Like all physicians of my era, I had little training or background to guide my decisions about cost and quality.

The University of Minnesota, as well as other leading medical schools across the country, is preparing medical students for this transformational change in care delivery.

Medical students today begin their education on value-based care in their first days of medical school. As they examine their cadavers and review the limited data accompanying them, the faculty begin the teaching process of asking “what do you see, how do you know, which tests would be necessary to confirm, why those tests…”

In our “Foundations of Critical Thinking” first year course, students work through clinical cases in small groups and practice developing patient problem lists, differential diagnoses, and initial treatment plans. Faculty and peers challenge choices, seeking value—where cost and quality are factored in. Students role model shared decision-making discussions with patients.

Today we create frameworks to scaffold medical student and resident learning about value in health care.

To my family medicine department’s residency programs, resident physicians learn about overservice bias with fee for service, underservice bias with capitation, and misservice bias with salary, as well as the benefits and burdens of pay for performance.

Today, we create frameworks to scaffold medical student and resident learning about value in health care. We understand that when our trainees finish their formal education, they must be prepared with the perspective, the knowledge and the tools to engage fully in our health systems as team members providing competent value-based compassionate care.

* Quadruple aim: Triple Aim—enhancing patient experience, improving population health, and reducing costs—plus improving the work life of health care providers, including clinicians and staff.
The Improving Medicare Post-Acute Care Transformation Act of 2014 (IMPACT Act) is legislation designed to improve the Centers for Medicare & Medicaid Services (CMS) post-acute care (PAC) services. It contains requirements intended to further build the structural shift to patient-centered, value-based care instead of care fractured in setting silos.

Under the current Medicare system, patients can obtain PAC services from four different settings: a long-term care hospital, a hospital-based inpatient rehabilitation facility, a skilled nursing facility, or a home health agency. Each setting has its own set of multifaceted rules, procedures, and costs, managed within its own silo.

The goal of the IMPACT Act is to facilitate coordinated care to improve outcomes for Medicare consumers, and offer overall quality comparisons for use in improvement. Through the use of standardized quality measures and standardized data, the IMPACT Act aims to enable interoperability and access to information for providers.

To help achieve the goals of the IMPACT Act, a national CMS technical expert panel (TEP) will provide input on development of standardized cross-setting quality measures for use in PAC settings. It also will deliver feedback on various aspects of the measures, such as the proposed methodology for how to build, calculate, and report a measure.

Many aspects of these future measures focus on communication of specific person-centered information from setting to setting. In considering these measures, the TEP will need to address barriers to coordination, including electronic health record systems that don’t communicate with each other, providers with siloed roles, and lack of direct communication between settings.

I’m pleased to have been selected as a member of this expert panel. My input will be driven by my work as a geriatrician and a quality improvement proponent. When reviewing the measures, my touchstones will be: Will this improve patient care? Will this improve efficiency across the care delivery system?

The draft measures recognize that clinical data alone is insufficient to provide optimal care. I agree. The new measures should help providers share the types of information about patients valuable to other providers during transition stages. Transferring information such as care preferences from provider to provider delivers a blueprint for taking care of a person. The challenge is how to collect and transfer all of that information in a standard fashion that is clear and concise, and delivered at the time it is needed to care for the patient.

A challenge with transferring information across providers is balancing the amount of detail required with the reality of provider time constraints for data entry. For example, a measure could be created that accepted a patient’s functional status as “Ambulates with four-wheeled walker.” However, this is missing valuable information needed for the next setting to assume care, such as, how long they have been using the walker, distance they can ambulate, and if they have fallen.

The IMPACT Act also directs CMS to evaluate and recommend to Congress a PAC payment system that establishes payment rates according to characteristics of individual Medicare consumers instead of according to the PAC setting where they were treated. CMS must recommend to Congress a model for a PAC prospective payment system reimbursement method that could result in rebased payments for some services, and introduce aligned readmission policies that would hold PAC providers and hospitals jointly responsible for the care they furnish. That pushes care out of setting silos and fosters an even greater need to come together to support the patient.

As a physician, I admit to having concerns about how to strike the right balance for reasonable and effective measures. As a proponent of quality, I know quality improvement is an ongoing process. Where we start with these new quality measures is not where we’ll end up—we keep looking to improve.

We need to take the steps toward value set forth in the IMPACT Act as a way to help create a structure for effectively and consistently communicating information at the time of patient transitions. I, for one, am glad that the act recognizes the critical role PAC providers play in the quality of life for Medicare consumers.
Transforming to Achieve Patient-Centered Outcomes

Solutions focused across the care continuum

**Value-based payment models** are pushing organizations toward the disruptive innovation of patient-centered care across the continuum.

Minnesota shows a relatively high level of adoption of value-based payment models. According to the Minnesota Business Partnership, the state is tenth in the nation in the share of Medicare beneficiaries covered by Medicare ACOs, and 43 percent of the state’s primary care practices are certified as medical homes.

Early experimentation in these models has helped organizations understand the transformation needed. A full commitment to value-based care requires the business to align care delivery, financial management, and technology resources across settings of care. Those committed to value-based care are restructuring and changing culture.

**New business structure**

Organizations committed to value-based care have a strong central governance structure with physician leadership and engagement across the care network.

Over the last couple of years, HealthEast has moved from vertical silos to a holistic approach across the entire organization. “We went from individual responsibility for success in our business units to having a single strategic business unit across the whole continuum,” said Cathy Barr, senior vice president and chief operating officer at HealthEast. It extends from primary care to specialty clinics, hospitals, home health, hospice, and the EMS division.

Similarly, Lakewood Health System, a rural health system, restructured three years ago to eliminate silos and focus on improving value to patient. “The hospital, clinics, and care center all had their own worlds,” shared Tim Rice, Lakewood Health System, president and CEO. “Even though they worked well together, we restructured them all under one division and one leadership team, to drive value-based care.”

**Measure alignment**

This level of integration requires investment in data analytics and reporting capabilities. Internal and external sources of clinical and financial data need to be married and used for longitudinal management of risk.

Quality is under one leader no matter where you are in the Lakewood Health System. Six care coordination workgroups—care coordination, IT governance, quality, patient experience, payer relationships, and community health—report into a single value council. A consolidated scorecard brings together the measures of its six workgroups and serves as an overall driving mechanism.

“We needed to broaden our focus to a market basket of measures for flawless care that truly engages people across the continuum.”

HealthEast uses a balanced scorecard with true north metrics of clinical quality, employee/physician satisfaction, patient experience, and financial performance. “We are aligning our quality improvement initiatives with our payer incentives, from MSSP (Medicare Shared Savings Program) and various commercial products,” Kevin Garrett, MD, HealthEast senior vice president and chief medical officer, added. “This alignment is across the entire continuum.”

Its clinical quality pillar is driven by a “flawless care” metric—a set of about 70 individual process and outcome measures, which cross care settings. “We needed to broaden our focus to a market basket of measures for flawless care that truly engages people across the continuum,” Barr noted.

Every week, the health system completes a prescriptive, three-phase review process using frontline huddles, a business unit roll up, followed by executive leadership team review of the entire organization.

Just ending the first year of its flawless care philosophy, HealthEast saw a 10.4 percent year-over-year improvement in its quality measures, exceeding its goal of two percent improvement. Next year’s goal is four percent.

**Care delivery redesign**

Health care organizations are reimagining and redesigning care delivery. HealthEast and Lakewood are using multidisciplinary teams in primary care to serve as care coordination hubs for patients across care settings.

Teams consist of physicians, physician assistants, psychologists, social workers, diabetes educators, and others who are needed to support patients. These multidisciplinary teams increase value for the patient and reduce the workload on providers by distributing responsibilities to all the members of the team. They allow physicians to focus their time and skills, while the rest of the team supports the other aspects of care.

Both health systems have started to remodel physical spaces to enhance communication and connection for their multidisciplinary teams.

Lakewood Health System, one of the first to adopt the Medical Home model, is extending the approach to all of its patients. It is bringing care coordination to the entire system from clinics, the care center, to home-based services. Rice said, “Results showed the Medical Home approach improved quality, patient and provider
relationships, reduced admissions and ER visits, and helped address medication use. Why not do that for all of our patients?"

The system is growing its technical capabilities for care management across the continuum. Participating in the MSSP ACO of Essentia Health provided Lakewood access to a robust electronic health record system that gives Lakewood the ability to integrate data to gain further insight into its quality of care, and links care coordinators to patients to manage their overall health and wellness. The system is now testing and validating data consolidated through its population health software to support care coordination. “It’s been a three-year journey. I think we are just now getting to the point where we are comfortable with the data and we can do more with it,” said Rice.

Culture of innovation
Comparative performance data offers benchmarks for achievable levels of care and drives compensation in value-based payment programs. Reaching or staying ahead of the curve requires innovation. HealthEast is using a Lean-based approach to continuous improvement. Physician leaders are paired with an administrative partner to align and cascade the system’s Lean methodology, goals, and objectives to all providers and non-providers. The system recently celebrated a milestone of 100,000 ideas submitted overall by frontline staff, providers, and non-providers, on how to improve, enhance or be more efficient in the work that they do.

Lean improvement activities, such as Kaizen workshops take place across the system. During a Kaizen event, multidisciplinary teams come together for a week to work intensively on making significant improvements to a process or set of standards. Customers are always invited to participate. Non-owned organizations in the value chain have participated as well, such as a senior care organization for wound care and medical device companies related to the cardiac catheterization lab.

“We try to scale up very quickly if ideas are proving to make sense,” said Garrett. “We try to generalize care management approaches to the entire population and scale them up as rapidly as we can. We want to have one standard of care.”

HealthEast is rapidly identifying and testing new ideas using clinics as incubators. It has started a process of periodically designating one of its 14 locations as a “model clinic.” The location serves as a learning lab for continuous improvement activities. The model clinic chooses different areas to work on and holds Kaizen learning cycles every couple of weeks. Kaizen teams take about 15 percent of the clinic’s staff offline for a week.

Ideas that test successful move through two waves of spread and adaptation across all of the other clinics. This phased scaling allows for additional learning and adaptations.

Uncertainty
Health care strategists acknowledge there’s uncertainty as reimbursement models evolve. But, they advise organizations to continue moving along the path to value-based care. The structural and cultural shifts needed are extensive. Delays in building toward transformation may leave organizations playing catch up.

“You have to start early if you are going to be ready for payments based on value,” said Rice. “It takes a lot of time to really transform into a whole new model of how you view, deliver, and effectively execute on value.”

**IN BRIEF**

**Minnesota Hospital Executives Share Strategies for Success in VBP**

Minnesota health care executives with oversight authority of inpatient prospective payment system (IPPS) hospitals were interviewed to discover their strategies and processes to enable clinical and financial success in implementing the Hospital Value-Based Purchasing (VBP) Program under the Patient Protection and Affordable Care Act.

The 30 participants in the doctoral research interviews shared their practices for success in VBP:

1. **Realize we are in a transformational state**
2. **Rigorously pursue patient-centered care and believe the patient comes first**
3. **Understand current and future desired state of hospital VBP outcome measures in order to manage what you measure**
4. **Clearly state, define, and communicate goals, objectives, expectations, and accountability throughout the organization to ensure alignment of efforts**
5. **Lead and embrace change management for future success and sustainability**
6. **Champion standardized care through process improvement and evidence-based practice to ensure patient quality care**
7. **Prioritize and focus activities that achieve desired performance outcomes**
8. **Create and cultivate a dynamic culture that challenges status quo by adopting continuous learning system principles**
9. **Utilize local and national tools and resources**
10. **Have a command of the financial landscape and make the data meaningful**
11. **Possess expertise in the government landscape to optimize payer contracts, incentives, and new models**
12. **Champion challenges, obstacles, and barriers to seize opportunities to enhance value-based care**

Looking at the numbers:
Measuring skilled nursing facilities on quality and value

Two recent Medicare changes will measure the quality and value of the care provided by skilled nursing facilities (SNF) in new ways. The programs make more quality data publicly available and place a focus on outcomes through value-based payments.

Skilled Nursing Facility Quality Reporting Program (SNF QRP)
Recognizing that patients receive care in different places, through the Improving Medicare Post-Acute Care Transformation (IMPACT) Act, CMS has standardized six patient assessment data measures across post-acute care settings—long-term care hospitals, hospital-based inpatient rehabilitation facilities, skilled nursing facilities, and home health agencies:

- Falls with major injury
- Pressure ulcers that are new or worsened
- Assessments and care planning relating to a resident’s level of function
- Medicare spending per beneficiary post-acute care
- Discharge to community
- Potentially preventable readmissions

For SNFs, the first three measures will be captured in the Minimum Data Set (MDS) and the last three will come from Medicare fee for service (FFS) claims data.

The measures aim to improve person-centered, goal-driven discharge planning; enhance ability to exchange data; and help with coordinated care across the post-acute care spectrum. Public reporting of SNF QRP quality data is scheduled to begin fall 2018, through Nursing Home Compare.

Skilled Nursing Facility Value-Based Purchasing Program (SNF VBP)
Medicare has added SNFs to the health care settings being reimbursed using a value modifier. Starting October 1, 2018, SNFs can earn two percent (2%) of their Medicare incentive payments relative to national performance on two readmission measures:

- 30-Day All-Cause Readmission Measure
- 30-Day Potentially Preventable Readmission Measure

The data comes from Medicare FFS claims data. CMS has started baseline data collection to be used to establish performance standards and scoring methodology.

These four tables, based on data from Nursing Home Compare, offer a proxy to show how Minnesota skilled nursing facilities will fare in the new programs compared to facilities across the country.

Stratis Health conducts analytical work in support of assessing and improving health care quality and patient safety.
Building Plans to Act on Alzheimer’s

Minnesota can do better with care delivery and supports

Health care organizations in Minnesota are planning how to advance care and support for people with dementia and their caregivers. More than 135 health care leaders from across Minnesota participated in a working session, at the ACT on Alzheimer’s Health Care Leadership Summit on September 29, to explore creative solutions for improving dementia detection and care, and influencing the national discussion around this disease.

ACT on Alzheimer’s is a statewide, multidimensional collaboration seeking large-scale social change and building community capacity to transform Minnesota’s response to Alzheimer’s disease. A signature goal is to help health care providers and systems become dementia capable.

People with dementia and their caregivers at the summit asked that Alzheimer’s have similar care standards for diagnosis and follow-up as other chronic diseases and conditions, like heart disease, cancer, and pregnancy. Research shows that delayed diagnosis and failing to connect people to supports often results in preventable crises.

The summit’s call to action was clear: We need early detection and a team approach using care coordination to avoid more preventable crises and improve quality of life and care for people living with dementia.

“Early detection and diagnosis are important in making the cognitive and emotional transition from wide-ranging, independent self-directed activities to collaborative shared activities,” said Marv Lofquist, PhD, a person with dementia, diagnosed early and living well to his full capacity for over four years with the support of his wife.

Nearly everyone has been affected personally or professionally by dementia—every 66 seconds someone develops Alzheimer’s.

The risk is highest for older African Americans, Latinos, and women.

“We know how to do this, and we have the tools,” said Penny Wheeler, CEO of Allina Health. “We just need to ACT. The time is now.”

Wheeler’s message was that we all need to be part of the solution to reframe the challenge of dementia and focus on value-based care. We need to improve personal outcomes and experience, and reduce unnecessary utilization.

Summit attendees committed to implementing new action steps within their organizations after the event, including:

• Establish standardized protocols for identification, diagnosis and care coordination
• Implement use of the MiniCog screen for cognitive impairment in Medicare annual wellness visits, during clinic rooming process, and in all hospice and home health admissions
• Embed dementia algorithm in the electronic health record
• Form a care team and navigator to support people with dementia

Pilot a dementia chronic care management program

• Develop a clinical pathway similar to other chronic diseases for home health patients
• Incorporate dementia awareness into grand rounds
• Identify a physician champion
• Explore how dementia is incorporated into risk models

Shari Ling, MD, deputy chief medical officer, Centers for Medicare & Medicaid Services (CMS), Center for Clinical Standards and Quality, outlined the national perspective at the summit, conveying the role dementia plays in value-based care. She reviewed the current billing codes applicable to Alzheimer’s detection, diagnosis, and post-diagnostic care, as well as potential reimbursement opportunities through the proposed changes to the 2017 Medicare Physician Fee Schedule.

Minnesota can do better with our care delivery and supports, and is coming together to take action.

Alzheimer’s Provider Practice Tools

Tools and resources for health care providers and systems are available at www.ACTonALZ.org/provider-resources.

Clinical Provider Practice Tool: Protocol for managing cognitive impairment and guiding decisions for screening, diagnosis and disease management.

Delivering the Diagnosis [Video]: Portrays physician-to-patient interaction for delivering an Alzheimer’s diagnosis.

After a Diagnosis: Action steps and tips to share with individuals and their family when a dementia diagnosis is made.

Care Coordination Practice Tool: Supports patient care coordination, includes a dementia care plan checklist.

Managing Dementia Across the Continuum: Protocol for treating, managing and supporting persons with mid- to late-stage dementia.

Electronic Medical Record Decision Support Tool: A template for implementing a standardized approach to all aspects of dementia care within the health record.
Indian Health Service Hospital Project. Stratis Health is part of the HealthInsight team partnering with Indian Health Service (IHS) hospitals to help them continuously improve quality of care for their Medicare consumers.

Minnesota e-Health Roadmap Released. The roadmap provides recommendations and actions to support and accelerate adoption and use of e-health in behavioral health, local public health, long-term and post-acute care, and social services. The project was a collaborative effort led by the Minnesota Department of Health’s Office of Health Information Technology and Stratis Health. Stakeholder engagement and a consensus-based approach were used to create the roadmap.

Rural Palliative Care Impact Report highlights Stratis Health’s work with 26 rural communities that tested innovative methods to build palliative care services outside of the hospital setting.

QAPI Written Plan How-To Guide, developed through Lake Superior QIN, helps long-term care facilities meet new Quality Assurance Performance Improvement requirements to participate in Medicare and Medicaid programs.

100 Influential Minnesota Health Care Leaders. Jennifer P. Lundblad, Stratis Health president and CEO, was recognized as a 2016 Minnesota health care leader. In her remarks, she stated “Some of our most groundbreaking work has the community as the unit of improvement.”


CMS Technical Expert Panel for the MIPS Quality Measure Development Plan. Lisa Gall, Stratis Health clinical program manager, was selected for the 2016–2017 technical expert panel for the CMS MIPS Quality Measure Development Plan.

Gary Wingrove, chair, recognizes outgoing board member Kathy Brooks for nine years of service on the Stratis Health board of directors.

Stratis Health works with the health care community as a quality improvement expert and clearinghouse, educator and trainer, consultant and supporter, convener and facilitator, and data resource. Contact us to see how we can assist you with your quality improvement needs. Call 952-854-3306 or 1-877-787-2847 (toll-free), or email us at info@stratishealth.org.

Board of Directors
Donna Anderson, MPH
Art Berman, MBA
Kathleen D. Brooks, MD, MBA
Connie Delaney, PhD, RN
Myron Falken, PhD, MPH
Renee Frauendienst, RN, BSN
Ken Johnson, MBA
Stephen Kolar, MD, FACP
Mary Jo Kreitzer, PhD, RN
Jan Malcolm
Beth Monsrud, CPA
Craig Svendsen, MD
Stella Whitney-West, MBA
Mike Wilcox, MD
Gary Wingrove, board chair

Quality Update is published twice a year by Stratis Health for Minnesota health care leaders. Jennifer P. Lundblad, PhD, MBA President and CEO jlundblad@stratishealth.org
Debra McKinley, MPH, Editor Director of Communications dmckinley@stratishealth.org

Stratis Health is a nonprofit organization that leads collaboration and innovation in health care quality and safety, and serves as a trusted expert in facilitating improvement for people and communities.

Stratis Health works toward its mission through initiatives funded by federal and state government contracts, and community and foundation grants, including serving as Minnesota’s Medicare Quality Innovation Network - Quality Improvement Organization.

Stratis Health is a nonprofit organization that leads collaboration and innovation in health care quality and safety, and serves as a trusted expert in facilitating improvement for people and communities.

Stratis Health works toward its mission through initiatives funded by federal and state government contracts, and community and foundation grants, including serving as Minnesota’s Medicare Quality Innovation Network - Quality Improvement Organization.