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**Emerging Partnerships
in Health Care
Quality Improvement**

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EMERGING PARTNERSHIPS IN HEALTH CARE QUALITY IMPROVEMENT

A Message From Eric Borgerding, WHA President and CEO



This year's Quality Report articulates many examples of how health care providers are creating and strengthening partnerships beyond

the boundaries of the inpatient experience. To be sure, the critical care provided in the hospital during a patient's illness is essential to recovery and regaining one's wellness.

Person-centered health care spans a lifetime of interactions with the health care system and requires delivery of care that is increasingly innovative and diverse.

Active support from hospital executives and boards, families, patient advisors, and legislators can positively influence the creation of healthy neighborhoods, communities, regions, and the nation.

While Wisconsin continues its positive example of high-quality, low-cost health care for its citizens, new sources of data and technology are identifying opportunities to provide that same high-quality care to more diverse populations. We can use social determinants such as homelessness, food or job insecurity, or literacy to anticipate and mitigate possible complications to modify traditional models of discharge planning and transitions of care.

Our 2018 Quality Report features great examples of how health care is being transformed from the inside—and beyond the hospital setting.

A handwritten signature in black ink that reads "Eric Borgerding". The signature is fluid and cursive.

Eric Borgerding
WHA President and CEO

State Policymaker Engagement is Key to Quality Improvement

Wisconsin enjoys health care that is consistently ranked among the best in the country—an important element of workforce recruitment, retention, and productivity for all industries. Wisconsin’s employers have a competitive economic advantage because of our state’s high-quality health care.

Yet, even with some of the best rankings in the country, Wisconsin hospitals and health systems continuously strive to improve the quality of care for patients. Process improvement in health care is different from other industries because it is more than simply creating efficiencies on

When lawmakers create a regulatory climate that supports rather than inhibits quality improvement, they become an important part of the state’s overall quality improvement efforts.

an assembly line. Hospitals, unlike most other Wisconsin businesses, work to improve their product so patients use it less.

Quality improvement is about meeting

the quadruple aim of better patient outcomes, lower costs, and improved experiences for patients and providers—all while providing preventive and life-saving health care services to 58,000 patients each day in Wisconsin hospitals.

Quality improvement does not happen by chance; it is made possible because of the hard work of clinicians, quality improvement managers, and hospital leaders—and these efforts are significantly impacted by government regulations. When lawmakers create a regulatory climate that supports rather than inhibits quality improvement, they become an important part of the state’s overall quality improvement efforts.

WHA proactively works with state lawmakers to ensure those dedicated to improving quality at their hospitals and health systems have the right public policy tools at their disposal. We educate policymakers about the unintended consequences of rules and regulations that can detract from local quality improvement efforts.

State Lawmakers Enact Policy to Strengthen Quality Improvement Tools

Over the last several legislative sessions, WHA has worked alongside elected officials to pass and protect laws that support the delivery of high-quality health care. Wisconsin’s patients and health care providers are fortunate to have a state Legislature that understands real quality improvement comes from providers, patients and families, and communities—not government regulations.

As demonstrated by this year’s report, this approach is working. This includes the Health Care Quality Improvement Act, a cornerstone policy for quality improvement that encourages communication among health care providers when care delivery can improve.

In addition, WHA worked with Wisconsin lawmakers to pass, enact and implement the Health Care Data Modernization Act. The legislation, put forward by a group of Republicans and Democrats in the Legislature, has enhanced the utility of Wisconsin’s hospital and ambulatory surgery center discharge data program to “put the water where the fire is,” according to Assembly Health Committee Chairman and lead author Rep. Joe Sanfelippo (R-New Berlin), by more efficiently deploying health care’s resources to address population health needs in Wisconsin communities.



Gov. Scott Walker signed the WHA-backed Health Care Data Modernization Act into law at WHA’s 2016 Advocacy Day.

A critical component of enabling a good outcome for patients and avoiding costly rehospitalizations is ensuring a patient has the support to succeed after discharge. This data will allow WHA and hospital leaders to better identify areas of a community that experience significantly higher levels of hospital readmissions, and evaluate if the needs of patients are being met by their community supports and managed care organizations.

Using data to link people who have physical health conditions like stroke, heart disease, and diabetes to their social determinants such as home, job, or food insecurity can assist local and regional health systems in improving health and health equity among all patient populations.

Wisconsin Hospitals Improve Patient Outcomes Without Regulation

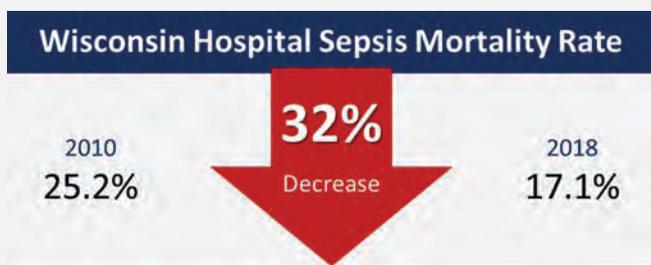
According to WHA’s CheckPoint website, Wisconsin hospitals do better than the national performance rates in:

- Hospital readmissions for patients with acute and chronic diseases;
- Patient satisfaction—in every category where satisfaction is surveyed;
- Hip and knee replacement complications and readmissions; and,
- Hospital-acquired infections.

These achievements are the result of a data-driven, transparent, and collaborative environment that Wisconsin has worked hard to create and sustain. Patients and providers benefit when hospitals can spend more time on evidence-based quality improvement initiatives rather than simply complying with government red tape.

For example, policymakers in other states have decided to spend time, energy, and government resources mandating sepsis care protocols that remain static in state law and create additional regulatory burden for providers, rather than giving hospital staff the tools to improve quality on their own and evolve patient care based on current evidence and technology.

Absent these government regulations and mandates, Wisconsin hospitals—in partnership with WHA’s nationally recognized quality improvement program—have reduced sepsis mortality rates by 32% since 2010. Wisconsin sepsis mortality rates are now well below the national average.



More Partnership in Store with WHA, Policymakers

As we look to the future, WHA is excited to continue our strong partnership with the Legislature by developing public policies that support the quality improvement efforts of WHA and our member hospitals.

We must work to remove regulatory barriers getting in the way of expanding telemedicine, develop policies that enhance post-acute care capacity once a patient is discharged from the hospital, and increase reimbursement for hospitals that serve Medicaid patients so they can sustain quality improvement programs and expand access to care.

State policymakers have been, and will continue to be, important members of our larger quality improvement team in Wisconsin. We look forward to working together to ensure public policy supports quality improvement efforts across the state, keeping Wisconsin health care quality ahead of the curve.



Hospital advocates from Fort HealthCare met with Rep. Don Vruwink (D-Milton). L to R: Carl Selvick, Fort HealthCare; Mike Wallace, President and CEO, Fort HealthCare; Rep. Don Vruwink; Lisa Rudolph, Fort HealthCare; Jim Nelson, Fort HealthCare



Hospital advocates in Mauston met with Rep. Tony Kurtz at Mile Bluff Medical Center. L to R: Larry Willer, Chair, Mile Bluff Medical Center Board of Directors; Jim O’Keefe, CEO, Mile Bluff Medical Center; Rep. Tony Kurtz (R-Wonewoc); Jean Surguy, Chief Nursing Officer, Mile Bluff Medical Center; Raymond Weiss, VP, Long Term Care, Mile Bluff Medical Center; Dr. Tim Bjelland, Chief Medical Officer, Mile Bluff Medical Center

Executive Summary

Wisconsin Health Care Quality Continues to Rank High

The core mission of every Wisconsin hospital is to provide excellent patient care, and frontline clinicians like physicians, advanced practice providers, and nurses are the foundation of that mission.

Each year, the quality team at WHA prioritizes a panel of evidence-based quality improvement topics to research, summarize, and disseminate to our state's clinical workforce as a means of ensuring Wisconsin's frontline providers are equipped with the tools they need to provide state-of-the-art, evidence-based care at the bedside.

We prioritize topics based on a variety of factors, including the publication of clinical innovations or updates in best-practice guidelines, the release of new quality measures by the Centers for Medicare & Medicaid Services (CMS) and other key stakeholders, the ability to scale improvement efforts to a regional or state level, and most importantly, the needs of our members.

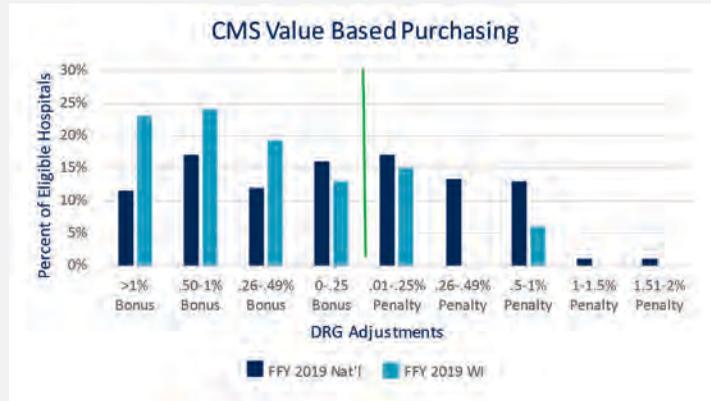
In 2018, Wisconsin was ranked first in the Midwest and fourth in the nation for providing high-quality systems of health care delivery by the federal Agency for Healthcare Research and Quality (AHRQ). Wisconsin has ranked in the top four states 11 of the past 12 years.

Wisconsin Quality Ranks Top in the Midwest & Fourth Highest in the Nation AHRQ State Snapshots – 2018 Scores	
Maine	72.53
New Hampshire	69.77
Rhode Island	68.89
Wisconsin	68.29
Massachusetts	67.48
Pennsylvania	65.38
Iowa	64.17
Minnesota	63.87
Vermont	62.87
North Carolina	62.20

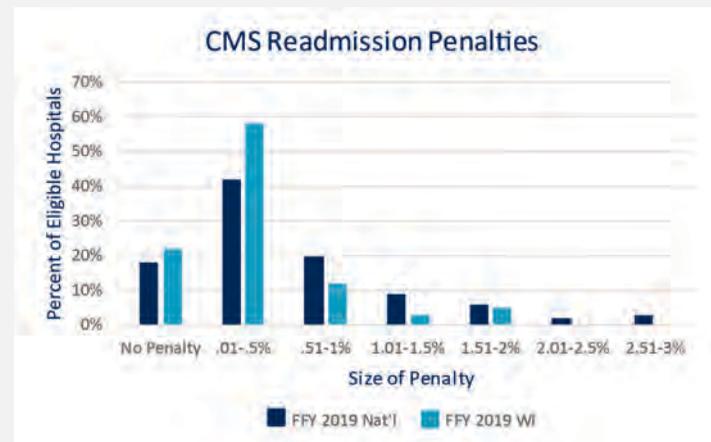
The AHRQ uses more than 120 statistical measures to evaluate health care performance, including care provided in outpatient clinics, hospitals, and post-acute home health and hospice settings for preventive, acute, and chronic condition care.

In addition to the AHRQ rankings, Wisconsin has consistently scored better than the national average in the CMS pay-for-performance programs.

- The CMS Value-Based Purchasing program measures a hospital's performance related to patient experience survey scores, patient mortality for certain conditions, rates of health care-acquired infections, and the overall cost of care. The program financially rewards high-performing hospitals and penalizes those with comparably lower scores. Wisconsin hospitals scored sixth best in the nation with 49 of the 62 eligible hospitals receiving an incentive bonus.



- Unplanned readmissions to hospitals are costly to the health care system and disruptive to patients and their families. CMS' readmissions program measured Medicare patients' excessive readmissions for six conditions and procedures from July 1, 2014 through June 30, 2017. Compared to the national average, fewer Wisconsin hospitals face CMS payment penalties and had smaller penalties overall.



WHA's CheckPoint Drives Improvement Through Transparency



Since 2004, providers, consumers, payers, and legislators have looked to WHA's CheckPoint website as a trusted source of health care performance data.

Throughout its history, CheckPoint has posted 115 different measures of clinical care and patient outcomes. WHA takes our members' trust in hosting and management seriously. The WHA Measures Team, representing more than 40 hospitals and health systems in Wisconsin, oversees more than 50 measures on the current site, ensuring the data reported is relevant, actionable, and representative of the care and services most hospitals provide.

Not all states share Wisconsin's vision for transparency. We encourage you to visit CheckPoint at www.wicheckpoint.org.

Great Lakes Partners for Patients Hospital Improvement Innovation Network



GREAT LAKES
PARTNERS FOR PATIENTS

More than 80 of Wisconsin's hospitals are partnering with another 230 hospitals across Michigan and Illinois in the

Great Lakes Partners for Patients Hospital Improvement Innovation Network.

Now in its third year, hospitals are collaborating in new ways to achieve significant reductions in patient adverse events and readmissions. Several of the hospital success stories published in this report link their achievements to the all-share, all-learn collaboration that is available to them through in-person and virtual events that support innovation and improvement.

The work of the Hospital Improvement Innovation Network is scheduled to continue through early 2020.

Superior Health Quality Alliance



In 2018, WHA joined seven other proven quality improvement

entities to create a new, non-profit corporation called Superior Health Quality Alliance (SHQA) and become a CMS Network of Quality Improvement and Innovation Contractor (NQIIC). NQIICs have the opportunity to bid for future CMS quality improvement initiatives across the care continuum.

The mission of SHQA is to improve the quality of health and health care for Medicare beneficiaries through innovation, effectiveness, and efficiency in designing and implementing CMS quality initiatives that are integrated across the continuum of care and services. Throughout its work, SHQA will focus on its customers, serving and supporting CMS and keeping patients and their families at the core of the work.

SHQA member organizations have long-standing success driving achievement of Medicare quality improvement program goals. The SHQA members are:

- Illinois Health and Hospital Association
- MetaStar
- Michigan Health & Hospital Association
- Midwest Kidney Network
- Minnesota Hospital Association
- MPRO
- Stratis Health
- Wisconsin Hospital Association

WHA played a key role in the creation of the Superior Health Quality Alliance and looks forward to contributing strong leadership and active representation of Wisconsin provider systems in the years ahead.

Physician's Perspective: Physician Engagement in Quality Improvement

By Bobby Redwood, MD, MPH, FACEP



Bobby Redwood, MD
WHA Physician Improvement Advisor

Quality improvement (QI) is a team-based activity and no QI team in health care is complete without a physician representative. To borrow a term from Dr. W. Edwards Deming, founder of the quality improvement movement, physicians are the "smart cogs" of the process of delivering health care.

Physicians have a high-level overview of the care plan at the patient and population level, they have the knowledge and expertise to suggest care innovations in a safe and patient-centered fashion, and they can effectively network across multiple departments or even health systems to help coordinate innovations that involve multiple stakeholders.

Unfortunately, physicians are also really, really busy and QI work is sometimes viewed as an administrative burden on top of an already heavy clinical load.

Recognizing the importance of physician leadership in QI, as well as the clinical production pressures that modern day physicians face, the WHA Quality Team challenged ourselves with a simple thought experiment: How can QI work be transformed to be physician-friendly?

Our response is the Physician Quality Academy, a conference curriculum to help physicians engage with QI and quality professionals in a way that harnesses a physician's passion for clinical topics of interest and emphasizes the personal and professional benefits of QI work done well. The Academy is a mix of lectures and small-group activities that cover topics ranging from data analysis and small tests of change to recruiting a QI team and developing a "QI portfolio" for a physician's CV.

Throughout the curriculum, we reject the concept of QI as an administrative burden and emphasize the importance of implementation science, that is, improving the health of individual patients and patient populations by creating care processes that bring evidence-based best practices to the bedside.



Physician Quality Academy, November 2018

Our first in-house Physician Quality Academy took place at North Central Healthcare in November 2018 and was met with very positive physician feedback. One psychiatrist's review of the curriculum really hit home for us: "I learned that QI can be enjoyable."

In 2019, WHA will be continuing the Physician Quality Academy, which is presented in-house at a member hospital in seven hours and is tailored toward engaging the general physician workforce in QI.



Journey to Zero

Hospitals are committed to creating highly reliable organizations where patients, families, staff, and providers feel safe about the environment in which they are giving and receiving care. Highly reliable organizations use systems thinking to promote patient safety, efficient health care delivery, and create an environment in which potential problems are anticipated, detected early, and responded to early enough to prevent catastrophic consequences. Leadership commits to zero-preventable harm, establishes a positive safety culture, and institutes robust process improvement goals.

The following stories illustrate how hospital teams are implementing best-practice strategies to reduce harmful infections and prevent patient falls. As you read about these projects, look for the following hallmarks of successful quality improvement and high reliability:

- Engaging multidisciplinary teams, including senior leaders who encourage those who do the work to drive the change;
- Actively including patients and families in improvement ideas and testing changes;
- Innovating through different ideas and solutions; and,
- Using data over time to drive decisions and sustain improvement gains

Patient Falls Prevention

According to the Agency for Healthcare Research and Quality's [Patient Safety Primer](#) updated in January 2019, an estimated 700,000 to 1,000,000 hospitalized patients fall each year, many of them elderly. More than one-third of those in-hospital falls result in injury, including serious injuries that could result in death. Even if a fall does not cause an injury, the fall is disruptive to the patient's care, can prolong hospital stays, and ultimately increase the cost of care.

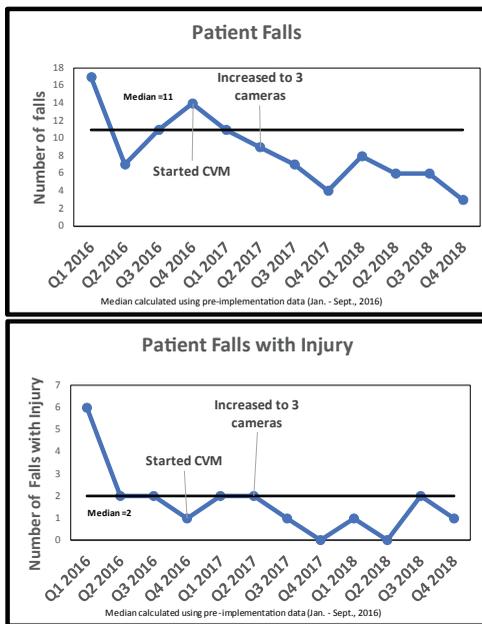
The following stories are examples of how hospitals are preventing patient falls. We are pleased to include stories from Aspirus Keweenaw and Ironwood locations in our report. As part of the Aspirus system, these hospitals have chosen to work with WHA in the Great Lakes Partners for Patients Hospital Improvement Innovation Network.

Hospital Highlights

UW Health – University Hospital: Using Video Monitoring in the Fight Against Patient Falls

Patient safety is a high priority for nurses, and fall prevention can be difficult to prevent with certain high-risk patients. Despite the use of assessment tools to identify those patients at risk of falling, significant and sustained reduction has proven elusive for the Neurosciences unit at UW Health University Hospital. After reviewing their performance data, they initiated continuous video monitoring (CVM) for certain patients at high risk for falls as a fall prevention intervention with a goal of decreasing the number of patient falls and falls with injury by 10% in six months.

Nurses selected patients considered to be at the highest risk for falling who would benefit from CVM and redirection from the video-monitoring technician (VMT). Nurses screened patients using the High Fall Risk Report and nursing judgment about patient risk behaviors, such as levels of impulsivity, mobility, and the ability to follow directions. If any high-risk patient behavior was observed, the VMT would intervene by either speaking to the patient directly or contacting nursing staff immediately.



The addition of dedicated CVM to the existing comprehensive fall program on this unit has proven to be successful. Patient falls decreased by 63% and falls with injury decreased 91%. This use of technology improved patient safety and prevented patients from falling without increasing the number of nursing staff.

Aspirus Langlade Hospital: Call Don't Fall!



When the Aspirus Langlade Hospital falls prevention program began, we recognized we had significant room for improvement. In fiscal year 2017, we had 19 falls, and eight of

those resulted in some form of patient injury. We knew there was work to be done and we needed to get serious about it.

Fiscal year 2018 began well as we proceeded to go 272 days without a fall. From March 17 to June 19, 2018, we recorded five patient falls. We realized that we needed to raise awareness of the fall prevention program again and bring it to the forefront of everyone's mind.

So, we planned. We re-launched the Hester-Davis (HD) learning modules to all staff, added the HD learning modules to the student orientation process, and posted new HD Safety Crosses as a visual reminder at the start of fiscal year 2019. We are happy to announce we are currently fall free!

Reedsburg Area Medical Center – Fall Prevention Team

Patient safety comes first! At Reedsburg Area Medical Center, we have an interdisciplinary fall prevention team consisting of Lindy Fabry, MSN, RN, Director of MultiCare; Craig Johnson, PT; Karen Knuth, RN, Patient Safety and Quality; Cassie Schaaf, RN; Krystal Ustianowski, RN; KayDee Maxwell, RN; Erin Nachreiner, RN; and Deb Rogers, Patient Care.

In 2018, the team introduced varying fall risk assessments and prevention strategies for different patient types (adults, pediatrics, and the birth center). This team meets quarterly and reviews all patient falls to ensure correct safety measures were implemented prior to and post fall.

In addition, the team provides annual safety education to the organization and audits all patient charts for accuracy in scoring on the fall risk assessment tool.

This year we set a new goal of going 125 days without a fall in the entire organization!



Staff practice assisting patients in safe transfers

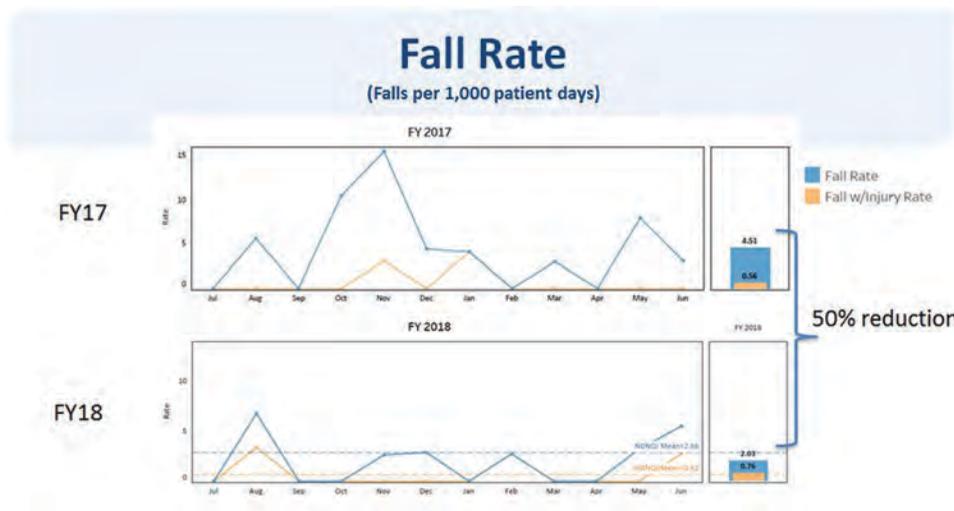
Aspirus Keweenaw Hospital – Falls Prevention

Aspirus Keweenaw Hospital implemented the HD (Hester-Davis) Falls Program™ in May 2017. The program emphasized training, education, and competency for nursing and provided tools for achieving and maintaining compliance.

An essential part of the HD Falls Program™ was introducing an extensive care planning model that maps specific interventions to individual risk factors, which is adjusted based upon the patient's current condition. There was a reduction in falls in September 2017 with sustained improvement through 2018. Post-fall huddles noted that with the earlier falls, bed alarms were not activated. Now, all fall prevention interventions are in place.

These charts highlight the adoption of the HD Falls Program™ consistently across all shifts and departments. The findings support that focused, continuous efforts by top leaders and nursing and ancillary departments are needed for sustained performance improvement.

Monitoring and control of the process needs to be integrated and embedded into the quality reporting and performance improvement committee structure to avoid complacency. Next steps include shifting focus from fall risk assessment to fall *injury* assessment with emphasis on individualizing plans of care to minimize injury.



Aspirus Ironwood Hospital and Clinics: Reducing Inpatient Falls

Falls are the single most common adverse event in hospitals and are the leading cause of injury and death in older adults. Aspirus Ironwood's fall rate was double the national performance benchmark. We identified an opportunity to improve fall rate performance and dedicated a team to this project.

Initially, this work was brought forward by the Quality team, but has evolved into an interdisciplinary team involving physical and occupational therapy, nursing (RNs and CNAs), and leadership teams.

Nursing staff created fall kits to use when patients are identified as high fall risk. Fall kits consist of clip alarms, yellow fall risk leaves (for identifying high fall risk patient rooms in a discreet manner), non-skid socks, chair pad sensor alarms, signs for patient visual cues, and patient and family fall risk education sheets.

We have ongoing education on the importance of purposeful/hourly rounding. Our nursing leadership team also focused efforts on improving the hourly rounding. In July 2016, we had a 74% rate of patients that were rounded on. By October 2016, we had increased that percentage to 91%.

We implemented leadership-focused bedside rounding. Nurses, pharmacists, PTs/OTs, dietitians, providers (when able) and anyone else who is involved in that patient's care meet at the bedside to discuss patient conditions, as well as the plan of care with the patient and family. Additional education on medications or therapy progress is also discussed. It provides the patient and family an opportunity to understand what is being done, why, and ask any questions they may have. One of our occupational therapists attends each new employee orientation to educate onboarding staff, both clinical and non-clinical, on the importance of safe patient transfers and gait belt use.

Patient and family fall information is placed into each fall risk patient’s room to share what we are doing to keep their loved one safe, what they can do to help, and who they should speak to if they have questions, concerns, or suggestions to keep their loved one safe. Therapy is also educating patients and families on fall reduction strategies in the home.

We have created a culture in our organization where every employee’s voice is important to the safety of our patients, staff, and visitors. This culture enhances our fall prevention work. By informing all employees about the fall kits, signs created and the importance of fall prevention, it allows us to have that many more eyes and ears watching out for our patients.

Our program has helped to reduce our fall rate, as well as our fall with injury rate:

Aspirus Ironwood	2016	2017	2018
Inpatient Falls Rate	4.56%	4.08%	2.76%
Falls with Injury Rate	2.15%	1.53%	0.28%



Reducing Infections

Infections and Antibiotics - From Patients to Populations

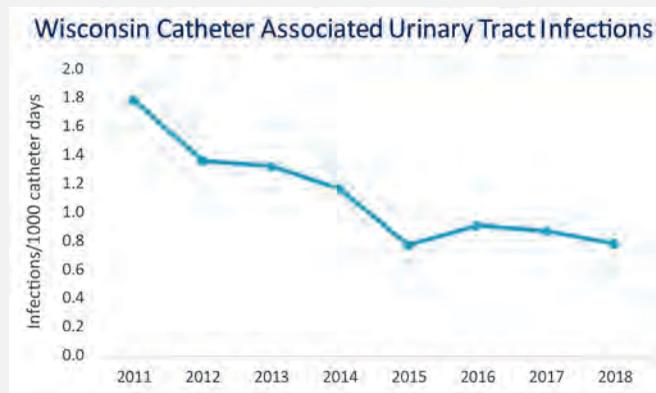
Infections can be serious and sometimes cause fatal complications. In this section, you will learn how preventing infections requires constant attention and implementation of not just one, but multiple best-practice strategies.

The most important prevention is good handwashing by everyone. There is another very important strategy: the appropriate selection of antibiotics for people who need them, called antibiotic or antimicrobial stewardship.

Finally, you will read about the continuing effort to identify and successfully treat patients who are admitted for or develop sepsis while they are in the hospital. Timely treatment of this serious condition can save lives.

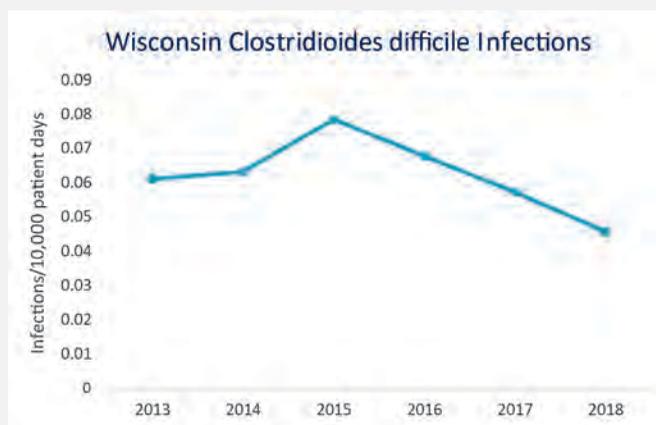
Catheter-Associated Urinary Tract Infections (CAUTI)

A catheter-associated urinary tract infection (CAUTI) is one of the most common hospital-acquired infections. The best prevention is to avoid use of a catheter if it is not needed. When a urinary catheter is not put in correctly, not kept clean, or left in a patient too long, germs can travel through the catheter and infect the bladder and kidneys.



Clostridioides difficile Infections

Almost half a million individuals develop a Clostridioides difficile infection (CDI) in the United States each year. When a person takes antibiotics, good bacteria that protect against infection are destroyed for several months. During this time, patients can get sick from CDI, a “superbug” bacteria that cause potentially deadly diarrhea, which can spread in health care settings.



Hospital Highlights

Bellin Health – Hospital Onset Clostridioides difficile Infection Reduction

Patients who experience Clostridioides difficile Infection (CDI) can have longer hospitalizations, increased cost of care, and life-threatening consequences. Bellin Health has been working on reducing hospital onset CDI with the help of Wisconsin Hospital Association Partners for Patients and MetaStar. The CDI Prevention Team, a multidisciplinary team, has worked to implement best practices in preventing CDI transmission and infection.

Using the WHA Partners for Patients and MetaStar CDI change package resources, we were able to:

- Update the Isolation policy to include proper personal protective equipment (PPE) requirements for family and visitors and updated signage on our isolation carts. In addition to the family and visitor focus, we were able to consistently reach 90% compliance with appropriate PPE of staff in isolation tools;
- Revise environmental cleaning checklists and implemented inspection of rooms using fluorescent marking;
- Develop a process to tag equipment when clean; and,
- Implement patient hand hygiene.

In addition to the above process changes, we also had an antimicrobial stewardship team actively working to reduce antibiotic prescribing.

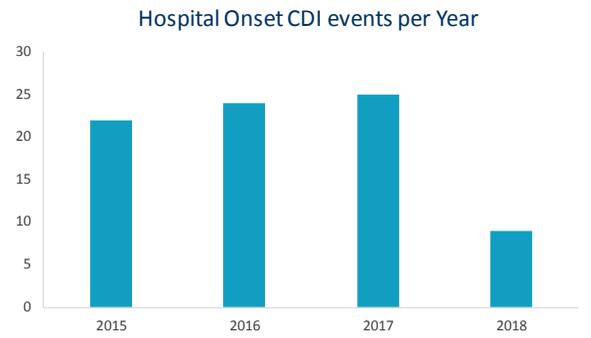
Despite the above strategies, there was not a significant reduction of hospital onset CDI. In 2017, we began to review every hospital onset CDI to identify gaps in practice. Through these reviews, we learned that specimens being sent for testing did not always meet criteria. Our current testing method is very sensitive, but does not distinguish between colonization and active infection. We felt we may have been over-testing and over-treating for CDI.

Education in the form of computer-based learning and nursing grand rounds was developed to support the front-line staff in proper identification of when to send a specimen for Clostridioides difficile testing. Every hospital onset CDI event is reviewed for proper specimen collection and testing.

In August 2018, Bellin Laboratory Services added a two-step testing protocol for Clostridioides difficile, which resulted in fewer cases of actual hospital onset CDI and fewer patients needing treatment with antibiotics. A short micro learning video was produced and narrated by our Infectious Disease

physician for providers to explain the two-step testing results with recommendation of when to treat and when not to treat. Since implementation of two-step testing, we have not reported a hospital onset CDI. We have made sure to celebrate these team successes.

We ended 2018 with a total of nine events. We were predicted to have 18.68 events giving us a Standard Infection Ratio (SIR) of 0.48, which is a statistically significant decrease in events. With the implementation of two-step testing and reviewing every event, we anticipate this reduction to continue.



Utilizing the Clostridioides difficile change package resources on the WHA Partners for Patients website (whaqualitycenter.org) allowed us to evaluate our current state of prevention. The CDI Assessment for Prevention tool helped to prioritize our improvement opportunities. Planning for sustainability at the start of the project and measuring changes ensure processes are implemented reliably.

SHS Eastern Wisconsin Division – Utilizing Human Factors Engineering in the Design of a Storage Cart for Personal Protective Equipment

Human Factors Engineering (HFE) is the science applied to understand how humans interact with devices or systems. These concepts were applied to create a new storage cart for Personal Protective Equipment (PPE) to increase end user compliance.

A multidisciplinary team trained in HFE studied the compliance of PPE use upon entering the room of patients on transmission-based precautions for Clostridioides difficile infection. A prototype cart was created after watching how visitors and staff interacted with the previous storage design. This cart, which included picture labels and instructions for use, was then piloted on one inpatient medical-surgical unit. The team collected additional observations and end user feedback. Final versions of the cart were standardized across all areas of the hospital.



The new design of the cart for PPE storage was intuitive to assist in use and to ensure those interacting with the cart, reliably donned and doffed PPE. Prior to the re-design, PPE compliance measured by the team was 47%. After the implementation of standardized carts

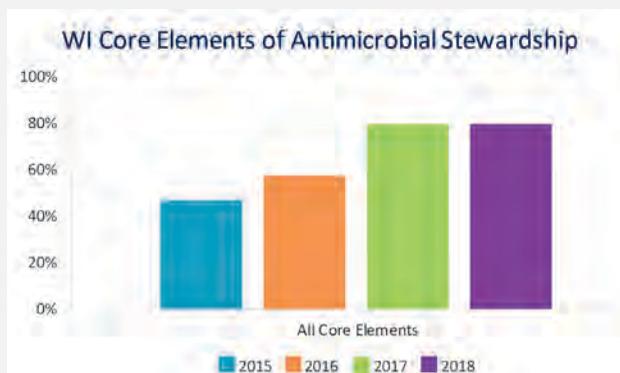
designed with HFE, the team measured compliance levels of 75-81%. When implementing a new device, analyzing HFE principles can result in high reliability and consistency.

Antimicrobial Stewardship in Hospitals Requires Team Effort

Hospital leaders, physicians, pharmacists, and clinical staff are coming together in hospitals across Wisconsin to create effective Antimicrobial Stewardship programs for their patients and communities.

These programs share seven critical elements:

1. Leadership that dedicates resources to developing and sustaining the program;
2. Physician or other clinician leaders to oversee and monitor the program;
3. Appointing a pharmacist with antibiotic expertise to the program;
4. Continually evaluating and improving the program;
5. Monitoring antimicrobial prescribing patterns and resistance;
6. Reporting progress regularly to clinical staff; and,
7. Educating staff about resistance and optimal prescribing.



Eighty percent (80%) of Wisconsin hospitals now have all seven critical components of an effective Antimicrobial Stewardship Program in place.

Physician's Perspective: Antimicrobial Stewardship

By Bobby Redwood, MD, MPH, FACEP



Bobby Redwood, MD
WHA Physician
Improvement Advisor

Antimicrobial Stewardship (AMS) was a hot topic in 2018 with nationwide reports of increased pathogenic resistance to common antimicrobials, increased incidence of carbapenem-resistant organisms ("superbugs"), and a newfound awareness of the severity and scope of antimicrobial-related complications like adverse drug reactions and Clostridioides difficile diarrhea.

Moreover, WHA member hospitals have repeatedly asked for assistance in starting or refining their own AMS programs and meeting AMS-related quality measures like CMS154 (Appropriate Treatment for Children with Upper Respiratory Infection) and CMS146 (Appropriate Testing for Children with Pharyngitis).

One notable 2018 innovation in this arena is the WHA Quality Center's AMS Journal Club Series. Piloted as four CME-approved webinars, each one-hour journal club begins with a review of best practices and specialty-specific guidelines related to AMS. The session ends with concrete suggestions about how to improve AMS at both the hospital and individual patient level.

Below are the topics presented thus far, and we welcome member requests for new topics as we plan our 2019 curriculum!

- When to Test and When to Treat...A Deep Dive on Asymptomatic Bacteriuria
- Evidence-based Strategies to Avoid Prescribing Unnecessary Antibiotics
- Evidence-based Strategies to Prescribe Antibiotics More Effectively
- Pre-op Urinalysis Before Orthopedic Surgery...What is the Current Evidence?

Infection Prevention Bootcamp

WHA partnered with state stakeholder groups to create and present the first-ever Infection Prevention Bootcamp in 2018. More than 125 infection prevention leaders from hospitals, nursing homes, and outpatient clinics attended the day-long event.



Bootcamp topics included best practice resources, and rules and regulations for all settings, including cleaning and disinfection. Attendees learned how to assess their program, complete a risk assessment, and received an introduction to quality improvement with a hands-on demonstration of the Plan-Do-Study-Act tool.

Infection surveillance strategies for a variety of practice settings, as well as the use of National Health and Safety Network reporting software, was also covered.



Breakout session opportunities included building construction risk assessment, long-term care final rules, and operating room inspections.

Sepsis

WHA's work with decreasing morbidity and mortality from sepsis and septic shock continued in 2018. As of October 2018, CMS is now publicly reporting hospital-level data pertaining to the SEP-1 core measure, an "all or nothing" quality metric that spans multiple departments (emergency department, medical floor, intensive care unit). It requires a multi-disciplinary team to deliver state-of-the-art critical care interventions in a very narrow timeframe (three hours for severe sepsis and six hours for septic shock).

SEP-1 has proven to be an ambitious and challenging core measure to comply with, and WHA member hospitals

are continuing to champion innovative solutions related to this metric. WHA's Physician Improvement Advisor, Bobby Redwood, MD, MPH, FACEP, has been working diligently with member hospitals to ensure sepsis care plans are evidence-based and operationalized in a safe and efficient manner.



Physician's Perspective: Sepsis

By Bobby Redwood, MD, MPH, FACEP



Bobby Redwood, MD
WHA Physician
Improvement Advisor

Wisconsin physicians and nurses have correctly identified the SEP-1 requirements of a 30mL/kg fluid bolus and the early administration of broad-spectrum antibiotics as areas where there is potential for significant patient benefit, but also patient harm. The WHA quality team has visited more than 10 Wisconsin

hospitals to deliver in-person education on the SEP-1 core measure and its nuances.

Of note, the Surviving Sepsis Campaign has recommended a new "Hour-1" sepsis bundle that would essentially condense the current three-hour timeline down to one hour. The Hour-1 bundle is not a CMS core measure at this time, but is being considered.

The Society of Critical Care Medicine and the American College of Emergency Physicians *"recommend that hospitals not implement the Hour-1 bundle in its present form in the United States at this time."* Both organizations understand the importance of prompt and optimal sepsis diagnostics and treatment, and will carefully review the recommendations with a multi-specialty panel of world experts.

WHA will be keeping abreast of the forthcoming recommendations and will keep our members informed every step of the way.



Expanding Partnerships

Successful Quality Improvement Includes the Patient's Perspective

In record numbers, hospitals are recognizing the benefits when patients and families are active participants on a health care improvement team, as well as the governance level. When a clinical care team includes the perspective of the patient and their caregivers as true partners, care transitions are improved, which can reduce readmissions.

Wisconsin hospitals participating in the Great Lakes Partners for Patients network have increased implementation of the critical components of a typical Patient and Family Engagement (PFE) program:

- **Pre-admission Planning Checklist:** activating the patient and family relationship well before an elective hospital stay to make sure the patient gets all the information they need and knows what to expect.
- **Shift Change Huddles:** sometimes referred to as bedside report, hospital staff review the care plans and goals with the patient and family to make sure that everyone clearly understands and supports both short and long-term objectives.
- **Responsible Party:** hospitals have a “point person” that staff can identify to lead patient and family engagement efforts in the hospital.
- **Patient Council or Advisor on a Quality Improvement Team:** an improvement team seeks and incorporates the perspective of a patient representative as they plan work that affects patient care.
- **Governing Board:** a dedicated place at the board of directors' meetings for the patient voice. This can be a board member who intentionally offers a patient's point of view on governance topics that come before the organization's board.

Since the baseline year in 2013, Wisconsin hospitals have improved implementation of each of these components. The following is a list of hospitals that have implemented all the critical elements of an effective Patient and Family Engagement program in their hospital.

Aspirus Ontonagon Hospital - Michigan

Beaver Dam Community Hospitals Inc - Beaver Dam

Columbus Community Hospital - Columbus

Cumberland Healthcare - Cumberland

Flambeau Hospital - Park Falls

Gundersen Boscobel Area Hospital and Clinics - Boscobel

Gundersen Moundview Hospital and Clinics - Friendship

Holy Family Memorial, Inc. - Manitowoc

HSHS St. Clare Memorial Hospital - Oconto Falls

HSHS St. Mary's Hospital Medical Center - Green Bay

HSHS St. Nicholas Hospital - Sheboygan

HSHS St. Vincent Hospital - Green Bay

SSM Health Monroe Clinic Hospital - Monroe

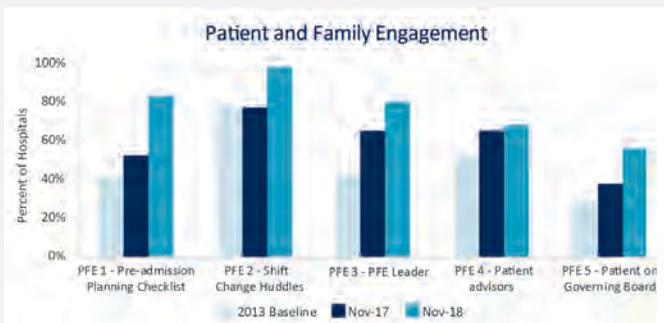
SSM Health Ripon Medical Center - Ripon

SSM Health St. Agnes Hospital - Fond du Lac

SSM Health Waupun Memorial Hospital - Waupun

Stoughton Hospital Association - Stoughton

We are pleased to share the following stories from our hospitals that illustrate the power of including patients in quality improvement work.



Hospital Highlights

Aspirus Ontonagon Hospital – Michigan

We have completed two process improvement projects with our patient advisors, and when asked if they would be interested in serving on an advisory committee, all four of them wanted to be part of this committee.



We have the best patient advisors any hospital could have!

Our patient advisors participated in the creation of the pre-scheduled admission checklist, and the creation of a new food menu for our inpatients. They also did a facility walk-through and gave us feedback on signage for our Long-Term Care Unit so that visitors can find the nurse's station easier.

Our Patient and Family Advisory Committee was officially created in June 2018. Our focus for the first committee meetings was to go over patient advisor education, create position descriptions, and a charter for this committee. We will be using half of our allotted time for work on a process improvement project. We recently reviewed the Healthcare-Acquired Infection education pamphlet our system infection prevention group had created to ensure patients could understand the information.

Aspirus Medford Hospital – Finding Value in their Voices

Aspirus Medford Hospital and Clinics' Patient Family Advisory Council was started in March 2018 with three patient advisors and four Aspirus Medford employees. It is currently co-chaired by one patient advisor and the Patient Experience Manager.

The very first day we offered a tour of various areas within the facility for the advisors to make observations. One advisor suggested we get a garbage can by our sanitizer station when you walk in the door, and by the next day we put a garbage can there. This opened the door for further suggestions as the advisors knew at that point we valued their feedback and took it seriously. We toured our Care and Rehab units, which received a lot of positive feedback. That feedback was

mostly related to better understanding all the areas within our organization.

The most recent meeting included a demonstration of our new telehealth equipment with a collaborating physician calling in to show us all about telemedicine. One family advisor said, “I pictured this robot-looking device that would be very cold, impersonal, and just not right. It was just the opposite.” She was very interested in the level of detail the provider could see through the monitor and asked him to read the writing on her pen. He zoomed his camera in and was able to read the writing. This was an amazing demonstration of the equipment and new service offered at our facility to better serve our patients.

The family advisors have felt a sense of purpose being a part of this group and appreciate that Aspirus Medford Hospital and clinics is collaborating with the customers to better understand the patient needs and wishes. We fully intend to continue listening to the voices of our customers in our improvement efforts as we grow in our community!

Reedsburg Area Medical Center – Our Patient and Family Advisory Council

Patient-centered care is vital for the success of any patient care initiative. Understanding the patient and caregiver perspective is key to achieving desired results for all involved: patients, practice staff, providers and the community. By creating an active partnership between staff and the patients, the patients will influence how we prioritize our practice and help guide the changes that we wish to implement within our organization.

The council consists of Lindy Fabry, MSN, RN, Director of MultiCare; Lisa Pertzborn, BSN, RN, from Patient Safety and Quality; Carla Mercer, VP of Marketing; Teresa Field, BSN, RN, and VP of Clinical Practice; Linda Olson, MSN, RN, and VP of Staff Development; Kelly Hamburg, Director of the Specialty Center, and five members of our community.

As a council, we meet quarterly and take the feedback we obtain from our community members and implement it into practice. One of the biggest initiatives this council is tackling is patient education. We have formed a patient education group at RAMC and have representatives from all departments and clinics. This is overseen by Heidi Finucan, MSN, RN, who works in our education department.

During our initial meeting, the community members discussed how pharmacy didn't have a printout with easy instructions with their medications and how at clinic visits patients didn't

receive After Visit Summaries. It seemed like a logical place to start. The community members felt that while patients received verbal education in all these situations, many times patients may be overwhelmed in the moment and may not have the best retention. The community members felt it would be beneficial to have something in writing that patients could refer back to later.

We are updating the education on our hospital website. We are also providing educational links. The surgery center has been working with the surgeons on making paper education handouts for nursing to give post-op patients to take home with them. We also have a video for patients having a colonoscopy for the first time to watch at their pre-op appointment. In addition, we are working on developing a teaching program for nurses on how to make them better teachers. Lastly, pharmacy reformatted their written education that is being handed out to patients with their medication pick-up.

We are looking not only at improving our written tools, but also how to introduce videos and other forms of technology. We received feedback on our total joint program and how we can keep more patients in the community. Our new ortho MD's bio and our Total Joint Handbook have been reviewed. We are working on sending bedside reporting script from the Med Surg unit to see if patients would understand the verbiage that nursing staff is using.

As an organization, we realize that everyone learns differently, and we need to be able to provide the tools that work for each patient in order for them to be successful post discharge.



Expanding Partnerships Using Technology

Using technology can also be considered an expanded partnership in health care delivery. Most of us have encountered a new diagnostic machine, the electronic health record, or even telemedicine. The expanded use of technology promotes timely information exchange, diagnostic accuracy, and the spread of best-practice and lessons learned. In the next stories, you will read two excellent examples of how hospitals are using technology to enhance information.

Hospital Highlights

Bellin Health – Micro E-Learnings Impact on Transfusion Practice Changes

In today’s health care environment, which is increasingly busy and diverse, we often struggle to get clinically significant concepts spread to all of the providers. In the past we have relied on CMEs, Grand Rounds or similar gatherings to spread information, but with our expanding geographical presence it is very difficult for providers to gather in one location to learn. An alternative and innovative way to spread information is “Micro e-Learning.” Micro e-learning includes a 5-10-minute video that can be accessed anywhere online, is succinct and is easily reviewed over a lunch break. This type of information sharing eliminates the need to fit into multiple schedules as well as the need to travel to obtain information.

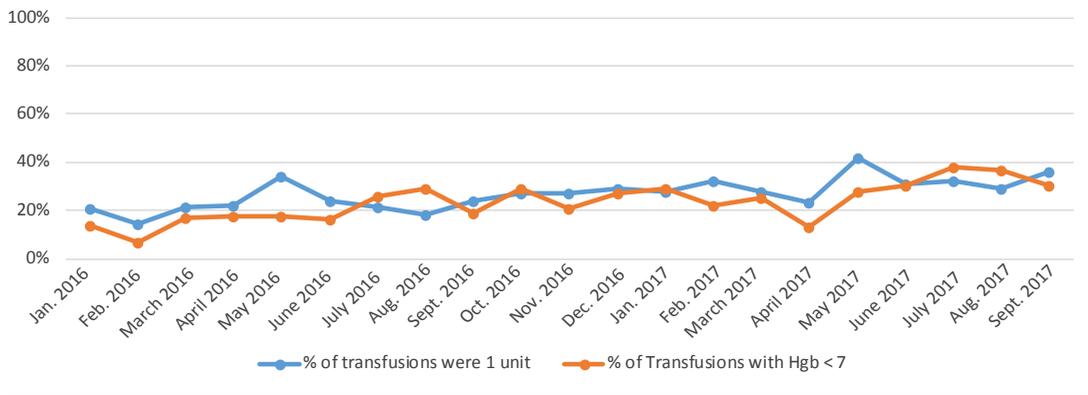
The American Association of Blood Banks (AABB) recommendations for appropriate blood transfusions were published in 2012 and we realized that we were not following the guidelines to the desired extent. The Bellin Hospital Transfusion Committee engaged a subgroup to investigate what could be done to improve guideline adherence. Topics included when it is clinically appropriate for transfusion, the number of units to order at one time to be consistent with the guideline of transfusing when the pre-transfusion Hgb is less than 7 (unless the patient is symptomatic), and re-checking the Hgb value between units.

A Blood Bank staff member selected as her graduate program capstone project to develop a training package to further staff education and order set changes. The educational package included a 15-minute micro e-learning video/voice over PowerPoint which was assigned in November of 2017. The Emergency Department Director and Transfusion Committee Chair filmed the micro e-learning with the following objectives:

- Define Patient Blood Management (PBM) and understand the importance to health system
- Understand indications for RBC transfusion
- Understand when to give RBC’s
- Understand the risks of transfusion
- Understand the 3 foundational “Pillars” of PBM
- Understand wide variance in transfusion practice
- Understand key elements of Bellin’s PBM program

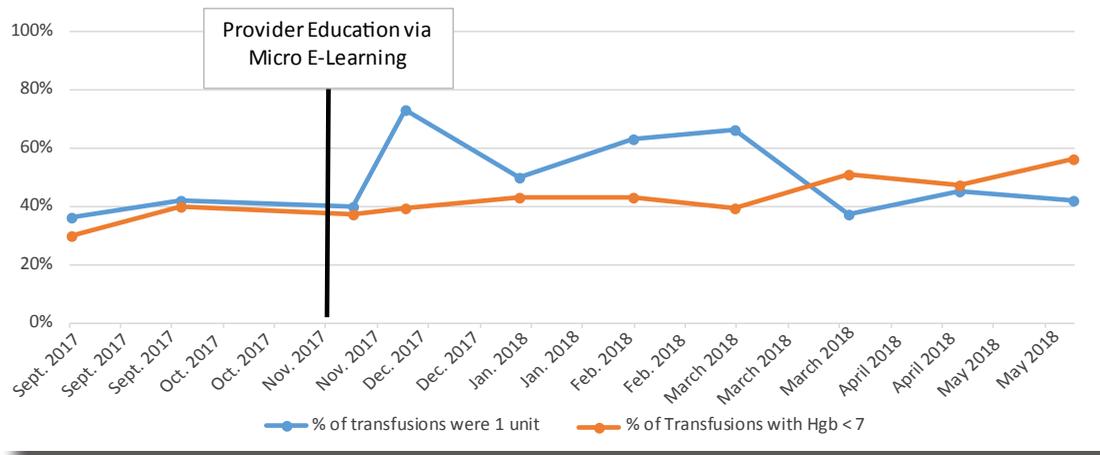
The micro e-learning was assigned to 316 medical staff providers, MDs, PAs, and APNs, via an electronic learning tool. The micro e-learning was not considered mandatory for the providers. The learning included a pre and post test to assess teaching effectiveness. 283 or 89.5% of the providers completed the assignment.

Additional order set changes were implemented in sequence with the micro e-learning. These changes were: if the patient’s last Hgb in the EMR is > 7 the prescriber needs to enter a reason for the transfusion and the one-unit order was



The first step was to edit the transfusion order set to make it easy to follow the recommended practices and provide a reason for the transfusion order. After the order set changes were implemented, we saw some improvement in the percent of transfusion with the Hgb <7 and one unit being ordered at a time, but not as much improvement as hoped. Prescribing practices were still only being followed around 30%.

pre-selected requiring a manual over-ride if the prescriber wanted to order more than one unit at a time. The Hgb re-check was pre-selected in the order set to assure the Hgb is being re-checked an hour after the transfusion is completed.



After the changes were made, there was a noticeable difference in our data.

Compliance with recommendations for ordering one unit at a time increased to about 65% but has declined after 4 months. A similar result was seen for pre-transfusion Hgb values of less than or equal to 7, though that has shown a more sustained improvement.

Monthly monitoring continues, and the results are shared with the medical department committees.

Since the change in November 2017, our blood utilization is down by an average of 34 units/month. By giving fewer units of blood, we are realizing a cost savings, but more importantly, we are reducing risks to our patients.

Bellin Health – Teleneurology

Telemedicine is defined as the ability to evaluate, diagnose and treat patients at a distance using technological devices. There is a large body of evidence in peer reviewed literature that supports the use of telemedicine, tele-neurology, and tele-stroke.

Stroke is the fifth leading cause of the death in the United States. According to the Wisconsin Department of Health Services, 2,500 people died of stroke in 2016. Moreover, there were more than 11,000 hospitalizations in Wisconsin related to stroke. With this in mind, Bellin Health and InTouch Health partnered and implemented a tele-neurology service, which includes a 24/7 acute tele-neurology service, as well as a general neurology rounding service.

In patients with possible acute strokes, a Bellin Health internal Code Stroke is first implemented. The patient is evaluated by an in-house physician and then taken emergently for an unenhanced head CT. Bellin then immediately contacts the InTouch acute care tele-neurologist, who assesses the patients,

reviews the CT scan, and makes a recommendation as to whether the patient is a rtPA candidate. If the patient is a rtPA candidate, it is administered by the emergency department staff. If rtPA, is not an option, the InTouch neurologist discusses the treatment plan with the Bellin treating physician.



Kathy Polum, Teleneurology Navigator; Dr. Bernadette Borte, Teleneurologist; Dr. Paul Casey, Emergency

Bellin Health utilizes a general neurology telehealth service from InTouch to provide inpatient neurological care and consultation for patients admitted to the hospital on the general floors, intensive care unit, and the rehabilitation unit. The response by patients and family has been overwhelmingly positive. The tele-neurology physicians, via a tele-robot, are able to offer timely management of patients with neurological health issues as well as have in-depth discussions with patients and families, which is also made more personal with the assistance of a tele-neurology nurse navigator who is physically present with the tele-neurologist.

Bellin is utilizing this cutting-edge technology to deliver fast, effective and still personalized care that is available 24/7 for patients in need of neurological care at both Bellin Hospital in Green Bay and the Bellin Health Oconto Hospital to improve patient outcomes.

Interdisciplinary Teams

Hospital Highlights

Reedsburg Area Medical Center – Wound Champion Team

The Wound Champion Team was created in May 2018 with the goal of bedside nurses having more involvement in and taking ownership of patients' wound care. We began by identifying nurses interested in and wanting more education in wound care, and we found them!

Our wound champions consist of Med Surg nurses, house supervisors, two Wound Care Certified RNs, two Wound Care Certified physical therapists, and a physician assistant. The group is interdepartmental and using a teamwork approach to promote better patient outcomes. This team meets monthly and has been meeting with vendors to review new cutting-edge products to offer our patients.

Some of the items this team has implemented are the Eclipse boot (dressing that wraps around the foot and lower leg that absorbs large amounts of drainage) and the hovermat (air transfer system that inflates around the patient to cradle them before moving them from cart to bed).

In addition, the team is receiving ongoing education in wound care. The focus currently is venous ulcerations (a wound on the leg or ankle caused by abnormal or damaged veins), ABI (ankle brachial index), and compression therapy.

The focus of the group is to have more staff resources available so Reedsburg Area Medical Center and the Senior Life Center have more wound care team coverage.



Reedsburg Area Medical Center

The Wound Champions hosted the wounds skills fair in July where nursing staff learned about wound assessment, documentation, measuring, how to take wound photos, clean dressing changes, wound vac application and the Prevena.

With this team, physical therapy is completing the inpatient wound consults and are collaborating with nursing who then provides ongoing measuring, documentation, and dressing changes. Post-discharge care is provided by the physician assistant in the outpatient wound clinic.

We are thrilled to have formed this exciting team to provide the best wound care to our patients!



Improving Life and Health in Communities

Throughout this report, we have presented examples of partnerships that improve patient outcomes through a focused, safe health care delivery system. The following submissions highlight how medication safety and chronic disease management impacts individual patients, as well as the communities they live in.



Opioids

One of the highest-profiled medication safety issues in our time is the misuse and tragic deaths related to opioid medications. According to the Centers for Disease Control website, Wisconsin ranked 25th in the nation in drug overdose mortality in 2017.

Wisconsin Hospital Association - ALTO Across Three States

In response to the ever-growing opioid crisis in Wisconsin, WHA launched the Alternatives to Opioids (ALTO) project in the fall of 2018. The Midwest ALTO project is a joint endeavor between the Wisconsin, Michigan, and Illinois Hospital Associations to reduce the number of opioids used and prescribed in hospital emergency departments (EDs).

The project encourages adaptation and implementation of the Wisconsin Chapter of the American College of

The goal of the Midwest ALTO project is for hospital EDs to achieve a 10% reduction in their opioid use/prescribing by fall of 2019.

Emergency Physician's "ALTO Recommendations for Pain Management in the ED," which contain pathways to address renal colic, musculoskeletal

pain, acute or chronic radicular lower back pain, headache, extremity fracture or joint dislocation, and chronic abdominal pain/gastroparesis.

These guidelines address the need to reduce opioid use and prescription, while respecting the need to provide analgesia to patients.

The goal of the Midwest ALTO project is for hospital EDs to achieve a 10% reduction in their opioid use/prescribing by fall of 2019.

To support this, hospitals participate in a bi-weekly call with representatives from each registered site and subject matter experts to discuss the guidelines and their implementation. In addition, hospitals share baseline data and performance data with the other hospital associations to help them track their progress throughout the project.

Currently, 25 hospitals among the three states are part of the pilot with the next cohort slated to begin in mid-2019.

Collaborating for ALTO Success

WHA focuses on producing results, and one of the ways to ensure and expedite success in Wisconsin is sharing best practices with others. In January 2018, the Colorado Hospital Association announced the results of a similar pilot program that was implemented in 10 emergency departments across its state in 2017.

During the six-month pilot, the participating Colorado facilities reduced the administration of opioids by an average of 36% and increased the usage of ALTOs by 31%.

WHA will utilize the lessons learned in Colorado while implementing the Midwest ALTO project.

Physician's Perspective: Opioids

By Bobby Redwood, MD, MPH, FACEP

Wisconsin is at the forefront of the nation's opioid epidemic with the highest increase in emergency department visits for opioid overdose in the U.S., a 109% increase in 2017 according to the Centers for Disease Control.



Bobby Redwood, MD
WHA Physician
Improvement Advisor

Wisconsin's hospitals, particularly the emergency departments, are in a strong position to integrate new and more effective pain management treatments that are tailored to each patient's unique pain experience.

WHA's goal is to help Wisconsin hospitals improve pain management for their patients and return them to a maximum quality of life while also recognizing and controlling the inherent risks of prescribing highly addictive medications like opioids.

Wisconsin's emergency clinicians are dedicated to understanding and responding appropriately to their patients' physical and emotional symptoms of pain in addition to taking steps to help the community combat the ongoing opioid epidemic.

Opioid medications have a very serious side effect profile that includes psychoperceptive effects, constipation, respiratory depression, and addiction.

We are very proud to be combatting the opioid epidemic in Wisconsin by working with our member hospitals to implement plans for alternative therapies to this potentially dangerous class of medication.

Hospital Highlights

Children’s Hospital of Wisconsin – Reducing Opioid Utilization After Appendectomy

Postoperative care after appendectomy may be the first exposure to opioids for many children. We implemented a quality improvement (QI) project to decrease inpatient and outpatient opioid utilization after laparoscopic appendectomy for acute appendicitis.

Using a multidisciplinary team, we applied quality improvement tools to understand the current state and develop interventions to optimize pain management. We compared the following variables between pre-implementation (2013-2016) to post-implementation (9/2017 through 7/2018) periods: demographic data, pain scores, inpatient post-operative intravenous (IV) and enteral narcotics use, number of opioid doses prescribed at discharge, length of stay, returns to system for pain or constipation.

We queried a state-based enhanced prescription drug monitoring program (ePDMP) to determine if narcotic prescriptions were filled. These included: 1) ice packs on incisions in the recovery unit; 2) pain scores within 30 minutes of arrival to the ward; 3) standardized order set with scheduled non-opioid analgesics; and 4) instructing surgery team on pre- and post-op communication with parents.

There were 815 patients pre-implementation and 193 post-implementation, with no statistically significant differences in age, gender, and median pain scores.

Post-implementation, there were statistically significant decreases in the use of IV and enteral opioids while in hospital, number of opioid doses prescribed at discharge, and mean length of stay (hours). 59.4% of patients filled narcotic prescriptions. Though not statistically significant, we found an overall reduction in return to the health care system for pain or constipation.

	Pre-Implementation 2013 to 2016	Post-Implementation 9/2017 to 7/ 2018	p-value
No. patients who underwent laparoscopic appendectomy for acute appendicitis	814	193	N/A
Male, n(%)	478 (58.7)	112 (57.7)	0.801 ^c
Median age, years (range)	12.3 (1.0 - 20.3)	12.0 (4.1 - 18.4)	0.506 ^w
Median postop pain score (range)	3.1 (0 - 10)	2.9 (0 - 10)	0.608 ^w
Median total IV postop opioid doses (range)	0 (0 - 7)	0 (0 - 1)	<.001 ^w
Median total enteral postop doses (range)	2 (0 - 14)	0 (0 - 7)	<.001 ^w
Patients with opioid prescription at discharge (%)	793 (97.4)	133 (68.9)	<.001 ^{c+}
Median number of opioid doses prescribed (range)	17 (2 - 139)	3.2 (0 - 20)	<.001 ^w
Opioid prescriptions filled (ePDMP Review) (%)	474 (78.9)	79 (40.9)	<.001 ^c
No. patients with return for pain	Readmission 3 Unscheduled Clinic Visit 1 Return to ED 6 Total: 10	Readmission 1 Unscheduled Clinic Visit 0 Return to ED 0 Total: 1	For Total: 0.701 ^{c+}
No. patients with return for constipation	Readmission 5 Unscheduled Clinic Visit 1 Return to ED 15 Total: 21	Readmission 2 Unscheduled Clinic Visit 1 Return to ED 1 Total: 4	For Total: 1.00 ^{c+}
Median length of stay, hours (range)	21.9 (2.0 – 95.6)	18.7 (3.5 – 68.5)	<.001 ^w

T--t-test; C--Chi-squared test; W--Wilcoxon rank-sum test; + --Exact test

Hospital Highlights

AboutHealth Network

AboutHealth is a Wisconsin-based clinically integrated network comprised of some of the largest health systems in the state: Aspirus, Advocate Aurora Health, Bellin Health, Gundersen Health System, ProHealth Care and ThedaCare. The owners of this organization seek to increase clinical quality and reduce costs by sharing expertise and experience on innovative ways to address conditions of importance. One such condition is the opioid crisis currently facing Wisconsin's hospitals and residents.

The next two submissions are examples of opioid reduction strategies that resulted from a 2018 AboutHealth collaborative.

ProHealth Care – Academic Detailing

Academic Detailing is a model of best-practice education for health care professionals delivered face-to-face. ProHealth Care wanted to participate in this initiative as part of the AboutHealth collaborative project on opioids and medication safety. Three staff members attended the DHS-sponsored training that AboutHealth set up in Madison in December 2017, and once we attended the training, it was clear how we could use this strategy to influence physician/prescriber patterns using best practice information.

We introduced the concept/applicability of Academic Detailing to the physician leadership at ProHealth Care and gained approval to do some Academic Detailing with physicians through a State of Wisconsin grant. We had the clinic physician chairs vote on which of topics related to the opioid initiatives they would be most interested in learning more about. We conducted Academic Detailing with the primary care physicians at five of our clinics. We focused on introducing the concept of Academic Detailing and the benefit to providers, and then covered a topic the physician chairs voted for which was non-narcotic treatment of pain. We used the CDC's "Nonopioid Treatments For Chronic Pain" handout to support our teaching.

What we learned was that primary care providers were often in situations where they inherited a patient from another prescriber who was on high doses of opioids with other complicating factors (ongoing pain management issues, potential substance use disorder, etc.). They didn't have a clear sense of what to do with these patients, and referrals to

Behavioral Health or our pain management services weren't always accepted due to the complex nature of the patients. They would often end up back at the primary care provider to manage as best he/she could. This was great feedback, and it gave us some direction in assisting the primary care provider.

Since then we've been working on a care guide on therapeutic opioid tapering to discontinuation as well as safe opioid prescribing. The care guide will clearly outline which patients are appropriate to keep and taper, which should be referred to Behavioral Health, to our psychiatrists in our Neuroscience Center for pain management, and in what instances there may need to be a multidisciplinary approach.

The care guides are still a work in progress, but once we have them completed and approved we'll look to get back out to the clinics and use these to conduct some more Academic Detailing.

Gundersen Health System – Blister Packs

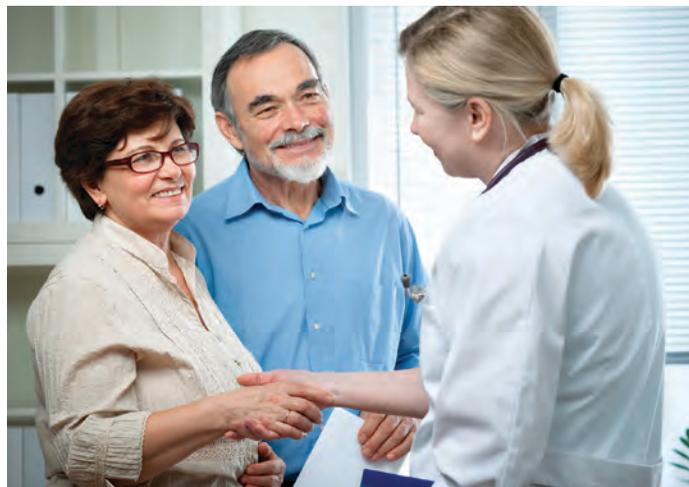
In 2018, AboutHealth received a grant to implement an innovative solution to combat the opioid epidemic. While attending a conference, the team from Gundersen Health System learned about a program undertaken initially by North Carolina-based Teater Health Solutions. This program provides physicians the option of handing patients being treated with acute pain a pre-packed blister pack containing three days' supply of Tylenol 500 mg and Ibuprofen 200 mg as an alternative to prescribing opioids.

Blister packs have been proven to provide patients with acute pain better pain relief than opioids. Having the blister packs readily available within departments makes it easy for physicians to easily offer over-the-counter pain medications in place of prescribing an opioid.

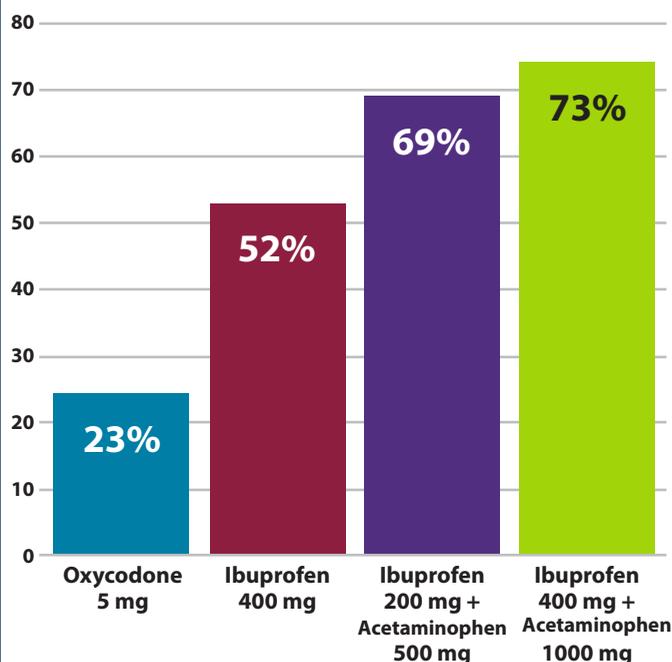
The blister packs are free of charge to patients. Although setting up this program is grant funded, the medications themselves are not. Gundersen covers this cost, ensuring the program's sustainability past the grant period.

Jamie Von Arx, Gundersen Quality Improvement Specialist, and Kim Hardy, MD, Gundersen Family Medicine, jointly lead this program. Currently, Gundersen Emergency Services and Urgent Care staff have been trained, with plans of expanding blister packs to all Gundersen primary care clinics within the next year.

The success of this program was made possible by the close relationships built between Gundersen departments during education and roll out. Equally important was the creation of an electronic health record order for blister packs that populates on Gundersen patients' medication list and automatically drops off after three days. This program has caused a shift in the way Gundersen approaches pain and has led to an expansion of the education patients receive when they receive care at Gundersen.



Percent of patients achieving $\geq 50\%$ pain reduction for 6 hours



Derry S, et al. Single dose ibuprofen plus oxycodone for acute postoperative pain in adults. *Cochrane Library 2013*

Derry CJ, et al. Single dose oral ibuprofen plus paracetamol (acetaminophen) for acute postoperative pain. *Cochrane Library 2013*

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Community Support Groups

Many hospitals have expanded community partnerships to improve post-hospital transitions of care and provide support for those living with chronic diseases like heart disease and diabetes.

These collaborations empower people to become full partners in the health care team.

Hospital Highlights

Flambeau Hospital – Reducing Unplanned Hospital Readmissions

The initiation of an inpatient Chronic Obstructive Pulmonary Disease (COPD) pathway has reduced COPD readmissions for Flambeau Hospital. Flambeau Hospital saw an increase of COPD readmissions in the spring of 2017, which resulted in the development of a multidisciplinary COPD steering committee consisting of representatives from nursing, quality, pharmacy, physical/occupational therapy, respiratory therapy, and case management.

The committee reviewed the COPD readmissions to find areas for improvement and researched what other facilities across the nation were doing to treat COPD patients. The committee developed an inpatient COPD pathway using gold standards for COPD care, discharge criteria, and collaboration with physicians.

The pathway is a guide rather than an order set that is followed by multiple disciplines including the physicians. Communication is the key. The pathway is discussed daily at multidisciplinary rounding and laminated patient goals are placed in the patient rooms every morning based on the day of the pathway the patients are on. This allows patients to be directly involved in their COPD care.

The pathway follows either a mild/moderate or severe path and addresses respiratory treatments including oxygen use, medications including home regimens, medication transitions, patient activity, smoking cessation, flu vaccinations, discharge criteria, post hospital follow up, use of a dyspnea scale, and education.



Flambeau Better Breathers Committee

A COPD educator was hired to focus on COPD education in and out of the hospital. She follows up closely with patients following discharge and there is an effort to get patients into pulmonary rehab if they qualify.

The COPD educator has also started a community support group called the “Better Breathers Club” that meets monthly. The physicians have started using a respiratory swing bed for those patients requiring additional treatment in the hospital. This has worked well for the severe/end stage COPD patients.

The pathway was rolled out in January 2018. In the 12 months before the pathway was in place, there were 20 same-facility COPD readmissions. In the first nine months since rolling the pathway out, there have been only two. The multidisciplinary approach of the pathway has proven to reduce COPD readmissions at Flambeau Hospital by providing best practice care to all the COPD patients both in and out of the hospital.



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