WEST VIRGINIA HOSPITAL ASSOCIATION
CRITICAL ACCESS HOSPITAL NETWORK

MBQIP PATIENT SAFETY - INPATIENT MEASURES TOOLKIT

MEDICARE BENEFICIAY QUALITY IMPROVEMENT PROJECT

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The West Virginia Hospital Association CAH Network, with support from the State FLEX program, administrated by the WV State Office of Rural Health, working with Cynosure Health, is pleased to provide a best practice Patient Safety and Inpatient Measures toolkit to support your CAH as you move forward with your quality improvement program.

I hope you find this toolkit useful, and I look forward to your feedback.

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MBQIP PATIENT SAFETY - INPATIENT MEASURES TOOLKIT

BACKGROUND

The Medicare Beneficiary Quality Improvement Project (MBQIP) Inpatient Measures include five measures that are used to assess and evaluate how well a Critical Access Hospital (CAH) adheres to evidence-based practices and how efficiently it provides care to patients. In 2017, the Centers for Medicare and Medicaid Services (CMS) added two measures to the MBQIP list of required measures for the Inpatient Patient Safety reporting program. These measures are related to Emergency Department (ED) throughput, or efficiency, and are considered Inpatient Measures since the patient population in the denominator for the measures includes patients admitted as inpatients to the hospital. In addition to the ED throughput measures, the Inpatient Patient Safety measures also include a measure for Antibiotic Stewardship and Influenza vaccination rates for both patients and caregivers.

While the Antibiotic Stewardship measure does not include a monthly rate of compliance with best practices to prevent unnecessary harm from antibiotics, it does include results of the facility's responses to the NHSN Annual Facility Survey that indicate they have met the core elements of the measure that includes leadership, accountability, drug expertise, action, tracking, reporting and education.

The ED throughput measures include two measures that measure both the median time from arrival in the ED to the time the patient is admitted to an inpatient unit and leaves the ED, plus the median time from the decision to admit the patient to the time the patient leaves the ED for an inpatient admission. These measures are a way of evaluating efficiency and flow both in the ED and in the inpatient units.

The two Influenza vaccination rate measures are a gauge of how well the hospital is screening for and providing vaccinations to inpatients, as well as the rate by which healthcare workers receive the vaccination. These measures are applicable during flu season, which is generally during the months of October through March, but subject to change based on rates of influenza in the community.

INPATIENT PATIENT - SAFETY MEASURES

Antibiotic Stewardship: Annual responses to specific NHSN survey questions

ED-1: Median time from ED arrival to ED departure for admitted ED patients

ED-2: Admit decision time to ED departure time for admitted patients

OP-27: Influenza vaccination among healthcare personnel (HCP)

IMM-2: Vaccination rates for applicable patients during influenza season

DRIVER DIAGRAM

A driver diagram visually depicts the causal relationship between your overall aim and the primary drivers, secondary drivers and change ideas that "drive" the improvement. This driver diagram is provided to help you and your team identify potential change ideas to implement at your hospital as you work to improve care transition documentation.

AIM	Primary Driver	Secondary Driver	Change Idea
		Secondary Driver	Change Idea
	Primary Driver	Secondary Driver	Change Idea
		Secondary Driver	Change Idea

AIM: A clearly articulated goal describing the desired outcome. It should be specific (What), measurable (How Much), and time limited (By When).

PRIMARY DRIVER: System component for factor that directly contributes to achieving the AIM

SECONDARY DRIVER: Processes and actions that are necessary to achieve the primary driver.

CHANGE IDEAS: Specific interventions and changes that support the secondary driver.

DRIVERS FOR INPATIENT - PATIENT SAFETY QUALITY IMPROVEMENT

Antibiotic Stewardship

Antibiotic Stewardship is defined as coordinated interventions designed to improve and measure the appropriate use of antimicrobials by promoting the selection of the optimal antimicrobial drug regimen, dose, duration of therapy, and route of administration. (IDSA, 2018) Antibiotic overuse is associated with antibiotic resistance and diseases such as *Clostridium difficile*, which is associated with many preventative deaths across the country each year. (CDC, 2018) Drivers for improvement in the area of antibiotic stewardship include leadership, expertise in the pharmacy, implementation of evidence-based practices and data analysis.

AIM: Set aims based upon obtainable metrics (what will be improved?, by how much?, and by when?). The Centers for Disease Control (CDC) recommends a goal of decreased days of antibiotic therapy (DOT) as the improvement goal for hospitals working on antibiotic stewardship.

Primary Driver:	Secondary Driver:
Leadership	Commitment of and accountability for an antibiotic stewardship program by organizational leadership **Change Ideas:** • Designate a physician to be accountable for the antibiotic stewardship program. • Identify a pharmacy antibiotic stewardship champion. • Integrate antibiotic stewardship into ongoing quality improvement reports to hospital and governing body meetings. • Provide financial support and time allotted to training physicians and clinical staff responsible for antibiotic stewardship.

Primary Driver:
 	
Expertise
	Secondary Driver:
	
	Provide the organization with education and the availability of subject matter experts in antimicrobial stewardship
	
	Change Ideas:
	
	• Participate in multi-hospital improvement collaboratives to allow for peer to peer learning.
	• Offer access to training for pharmacy and clinician staff.
	    o Enroll pharmacists in programs offered by the Society of Infectious Disease Pharmacists, found at http://www.sidp.org/page-1442823
	    o Enroll physicians, pharmacists, and infection preventionists into programs offered by Making A Difference in Infectious Diseases (MAD-ID), found at http://mad-id.org/antimicrobial-stewardship-programs/
	• Include stewardship activities in the job duties for pharmacists, and provide time dedicated to this activity.
	• If utilize outsourced pharmacy services, approach contracted pharmacy to determine their capacity and capability to support the work and/or explore other options such as remote/virtual clinical pharmacist support of the antibiotic stewardship program.

Primary Driver: Evidence Based Practices	**Secondary Driver:** Identify and implement safety practices related to improved antibiotic stewardship **Change Ideas:** • Perform a gap analysis to help identify critical process steps that have not been addressed or require further improvement. The CDC has published a tool, *Antimicrobial Management Program Gap Analysis Checklist* that can be utilized to guide and prioritize next steps.

	• Review national antibiotic treatment guidelines and compare with local antibiogram, if available.
	• Begin to develop local recommendations for antibiotic treatment based on bacteria cultured and source of infection.
	• Require documentation of diagnosis for antibiotic orders.
	• Test antibiotic order sets and algorithms; modify based upon experience. Start with a small number of physicians before spreading.
Primary Driver: Data Analysis	**Secondary Driver:** Analyze and disseminate data to drive improvement in stewardship practices **Change Ideas:** • Collect and analyze data related to antibiotic prescribing and treatment recommendations. • Perform antibiotic usage evaluations to identify opportunities for improvement. • Distribute data to clinicians to inform care practices. • Report analysis of data regularly in quality improvement and governing board meetings.

ED Throughput Measures (ED-1 and ED-2)

Drivers for improvement in the ED throughput measures include strategies that can effect positive change for both metrics. Effective planning, communication and execution of Emergency Department processes and protocols are necessary for improvements in the safe and timely treatment and inpatient admission of patients that present to Critical Access Hospital Emergency Departments. Situational awareness among the treatment team to identify that an emergency condition exists requires effective communication and collaboration strategies. The ability to efficiently triage and appropriately treat a patient is improved using standardized systems and processes developed by those involved in the care and treatment of emergency department patients. Routine analysis of data related to ED processes can help to quickly identify areas for improvement and focus.

AIM: Improve the timeliness and efficiency of treatment for patients that present to the Emergency Department (ED) in Critical Access Hospitals. [NOTE: Your organization's AIM statement should include a specific level of improvement for ED1 and ED2 by a specified date. Example: *Reduce ED1 to "x" minutes by August 31, 2019*.]

Primary Driver: Situational Awareness	**Secondary Driver:** Communication with pre-hospital care providers, ED staff and inpatient care providers

	Change Ideas: • Standardize communication with pre-hospital care providers (EMS) while patient en route to ED to better ensure appropriate staff and/or equipment are ready to assess the patient on arrival to the ED. • Identify staff responsible for inpatient care to be notified as soon as a decision to admit is made or designate a liaison to the inpatient care staff. • Standardized notification to all ED staff of timeliness goals for treatment and/or transfer • Synchronize all clocks in Emergency treatment and evaluation areas, including laboratory and EKG services • Utilize huddles to address throughput issues in real time
Primary Driver: Efficiency	**Secondary Driver:** Standardized process for rapid evaluation of patient needs and condition, and appropriate care **Change Ideas:** • Work with EMS providers to develop a protocol for communication of patient condition in the field to be communicated to the ED prior to arrival. • Develop a single call system for notification to CAH staff and care providers for patients en route with specific emergency conditions such as AMI to ensure needed personnel are in the ED when the patient arrives. • Develop a process for RN/Provider interview of patients upon arrival to ED to fast track ordering of labs or tests. • Instead of waiting for patients to be registered prior to treatment in the ED, provide bedside registration after triage. • Gather contact information for each patient upon arrival to ED. • Implement bedside transfer communication between ED and inpatient nurses
Primary Driver: Data Analysis	**Secondary Driver:** Routine review of data related to ED processes to identify areas for improvement and focus. **Change Ideas:** • Implement a process to capture data on each shift for treatment and disposition timelines for patients in the ED. • Review those data on at least a weekly basis to identify trends and opportunities to improve.

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	• Incorporate review of those data at monthly quality improvement meetings to gather input from staff about trends and potential causes.
	• Implement a multi-disciplinary team to improve processes related to Emergency Department timeliness and efficiency
	• Post ED throughput data in a location visible to staff, and share data widely
	• Analyze data for both ED measures to identify causes of delays.

Influenza Immunization Measures (OP-27 and IMM-2)

Influenza, or flu, can be a serious disease that is easily transmitted to others via droplets. Some people, including older adults, children and those with compromised immune systems may develop serious complications from flu, up to and including death from complications of the disease. Healthcare workers care for and come in contact with patients in this high-risk group and are at increased likelihood of spreading the disease to patients if they become infected. Annual vaccination against flu is recommended by the CDC as the best line of defense to prevent the spread of the disease. Drivers for improvement in vaccination rates for both patients and healthcare workers include education, access to vaccines, and data analysis and reporting.

AIM: Improve the rates of influenza vaccination for both applicable patient populations and healthcare workers in the organization. [NOTE: Your organization's AIM statement should include a specific rate of improvement for OP27 and IMM2 by a specified date. Example: *Increase OP27 and IMM2 to at least 95% by August 31, 2019*.]

Primary Driver:	**Secondary Driver:**
Education	Provide education to patients and staff about the value of immunization.
	Change Ideas:
	• Start an immunization education campaign with meetings, posters, flyers or inclusion in other communication channels such as newsletters to provide reasons for vaccination.
	• Provide education to applicable patients and their families on admission about the need for immunization during flu season.
	• Use motivational interviewing when talking with patients and staff that are hesitant to receive influenza vaccination.
Primary Driver:	**Secondary Driver:**
Access to vaccines	Make vaccines easily accessible to applicable patient populations and healthcare workers in the organization.

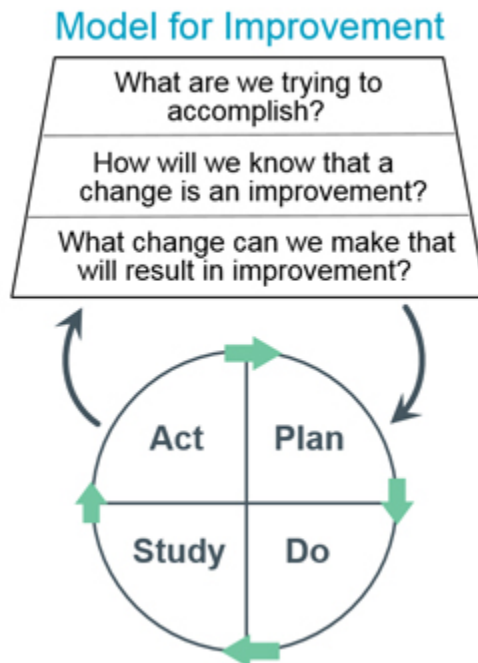|	**Change Ideas:**
	- Provide vaccination at no charge to healthcare workers in a location near their work areas. - Standardize the process for ordering of vaccinations at admission for applicable patient populations, and for the administration of vaccines at or near discharge. - Utilize a discharge "time-out" to verify vaccine administration before patient is discharged. - Standardize documentation of immunization and ensure this can be easily identified for subsequent visits or admissions. - Evaluate the vaccine administration process flow to identify opportunities for improvement.
Primary Driver: Data analysis and reporting	**Secondary Driver:** Routine review of data related to vaccination processes and rates. **Change Ideas:** - Review vaccination rates and reasons for refusal at regular intervals with infection prevention and hospital leadership staff. - Analyze data to identify reasons for refusal and reasons for missed vaccinations. - Post data in locations throughout the organizations, with reminders about the importance of vaccination.

QUALITY IMPROVEMENT PRINCIPLES

All improvement requires change. Unfortunately, not all change results in improvement. System changes intended to improve quality must be tested and assessed to determine whether they produce successful outcomes. This process of identifying needed change, planning for and making change, and then testing the outcomes of that change to evaluate effectiveness is fundamental to performance improvement in healthcare. Effective change requires an understanding not only of how one part of a system functions, but of how all the system parts are linked together and coordinated. For example, education and training for staff to enhance their knowledge and skills will only improve a system if the lack of such knowledge and skills was the major cause of deficient performance in that system. If the system has other unaddressed problems, such as lack of resources, inadequate staffing, or ineffective management or communication structures, even well-trained staff will not be able to accomplish their duties to the best of their abilities. Changes in one specific area may not lead to quality improvements if they do not significantly affect the overall quality of care the system provides.

The first step in the quality improvement process is the identification and prioritization of improvement needs, identification of an AIM statement, or improvement goal, followed by the identification of team members tasked with leading the improvement process. Key to success in team identification is the inclusion of team members involved with the system being analyzed, organizational leadership with the

ability to provide resources and direction, as well as team members with expertise in quality improvement principles. Once the team is formed, the quality improvement process starts with a series of questions, followed by short, rapid cycle tests of change called the "PDSA Cycle", as demonstrated with the graphics below.


Source: The Institute for Improvement, *How to Improve*, retrieved at:
http://www.ihi.org/resources/Pages/HowtoImprove/default.aspx

It is important that the team tasked with leading improvement be willing to test multiple ideas on a small scale, while searching for the changes that result in improved care at the local level. In quality improvement models, these multiple small tests of change are referred to as the PDSA, or Plan Do Study Act cycle.

The PDSA cycle is an improvement tool which promotes improvement via the implementation of rapid-cycle tests among an increasingly larger population and a wider range of conditions. The "Plan" step in the cycle involves identifying and planning the change to be tested. The "Do" portion of the cycle is the actual act of carrying out the test on a small scale. The "Study" phase of the PDSA cycle involves rapid data collection that is done during testing through a "huddle" or "debrief" with the staff or patients involved in the newly designed process. Finally, the "Act" portion of the cycle occurs when the decision to Adapt, Abandon or Adopt is made, based on the analysis of rapidly-collected information.

If revisions and changes are indicated, the process is revised or "adapted," and a new testing cycle is instituted. If the trials have been unsuccessful, the change idea may be "abandoned." The decision to "adopt" a new process occurs after it has been tested broadly under various circumstances and settings. PDSA cycles should be run among smaller groups (for example, one nurse, one physician, and during one

shift to start) before gradually expanding to a larger population within the system or organization if the change is determined to be successful.
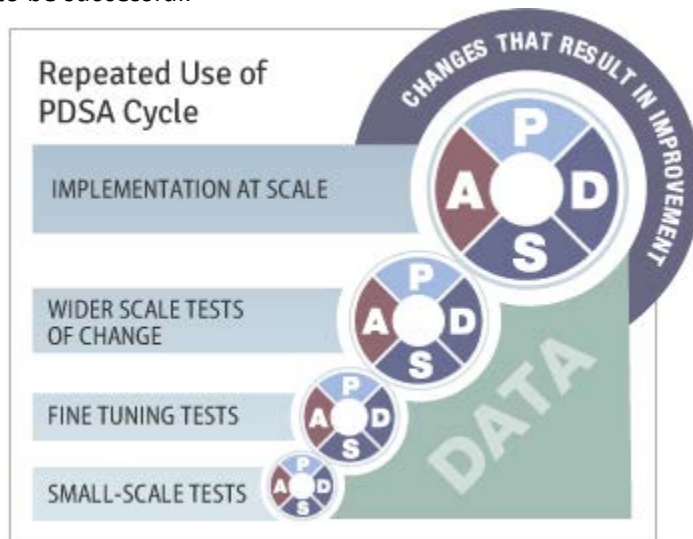
Quality improvement initiatives are best implemented by designated improvement teams composed of representatives from the relevant departments, units, or groups involved in the process or system to be addressed. Project management includes identification of team leadership and membership; creation of AIM statements; development of a Project Plan; selection of Tests of Change and tools for implementation, measurement, and analysis of change efforts; and communication with relevant stakeholders including senior management, medical staff, front-line staff, and patients and families about the progress and success of the improvement project. In the small hospital setting, large improvement groups may not be possible. In this setting a "hub and spoke" model for improvement work can be effective. Instead of convening large teams for every improvement initiative, one core quality and patient safety committee (the "hub"), led by a chairperson, initiates and oversees multiple improvement activities by designating a leader (or "spoke") for each initiative. Individual project leaders can be selected based on topic expertise, enthusiasm, or proximity to the process being improved. Active project implementation can be conducted in ad hoc working sessions, with the leader attending quality and patient safety meetings only upon request, if the leader is not a standing member of the quality and safety committee. This allows for improvement work to commence without interruption of duties for large groups of staff members.

BARRIERS AND CHALLENGES TO IMPROVEMENT

Partnering together to improve quality and safety is challenging work. In addition to what feels like a regular onslaught of new and competing priorities, getting on board with meaningful improvement requires a culture that supports the work, and eliminates barriers. A safety culture that supports this work requires an understanding of change management at all levels of the organization, because improvement requires change. One group that plays a significant role in the success or failure of an improvement initiative is middle managers. Without buy-in and effective leadership by middle managers to

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operationalize culture change, healthcare organizations will face many barriers to improvement. Few people relish the idea of changes to the comfortable status quo.

To exact positive change in the work that we do to keep patients and staff safe and improve outcomes, it takes small, incremental changes by all individuals in our organization that will build up to the large cultural shift that is needed for reliable improvement. Our frontline staff members are the eyes and ears of our organizations. Organizational leadership and middle managers can help to make this work safer and processes more reliable by listening to the frontline workforce when barriers and challenges are brought up and acting on the suggestions made. Organizational leadership input, encouragement and follow up can be the key to successful change.

A few keys to successful change management, and eventual cultural shifts includes the following:

- Create a sense of urgency: you are part of something big, we must make a difference now – reference not only what we know from research about the vast number of errors we are missing, but stories from actual events in your organization and your own department.
- Build a guiding coalition: organize opinion leaders and those in authority to help spread the message. Work with the willing before trying to engage those who are opposed to anything new. Let those who are enthusiastic about the new processes become the unit champions and help to spread the message.
- Form a strategic vision to help steer the change initiative: do you have a unit-specific strategic vision that is built by staff? Create that vision together at the outset.
- Enlist a volunteer army: Work with the willing. The others will come as they see enthusiasm grow.
- Enable action by removing barriers: what can you do to leverage work that is already being done? How can you help staff create time to make this a priority? Can you include a discussion about the new process in daily shift huddles and department meetings?
- Generate short term wins: Publicly celebrate the small, individual steps being made. Together they make a significant impact.
- Sustain acceleration: Keep the attention on the cultural shift by celebrating near misses that are caught and safety issues that are identified.
- Institute change: Hardwire new processes by showing how the new way of doing things has made a positive impact. Use the power of storytelling.

RESOURCES

- CDC Guide to Implementation of Antibiotic Stewardship Core Elements at Small and Critical Access Hospitals. https://www.cdc.gov/antibiotic-use/healthcare/implementation/core-elements-small-critical.html
- CDC Antibiotic Stewardship Gap Analysis. https://www.cdc.gov/getsmart/healthcare/improve-efforts/resources/pdf/AMP-GapAnalysisChecklist.pdf
- Health Research & Educational Trust (November 2017). Preventing Unnecessary Harm from Antibiotics Change Package. Chicago, IL: Health Research & Educational Trust. Accessed at www.hret-hiin.org.
- AHRQ Guide to Improving Patient Flow and Reducing Emergency Department Crowding. https://www.ahrq.gov/research/findings/final-reports/ptflow/index.html

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- National Rural Health Resource Center. CAH Quality Improvement Implementation Guide and Toolkit. https://www.ruralcenter.org/resource-library/quality-improvement-implementation-guide-and-toolkit-for-cahs

REFERENCES

CDC. (2018, May 3). *Implementation of Antibiotic Stewardship Core Elements at Small and Critical Access Hospitals.* Retrieved from Centers for Disease Control : https://www.cdc.gov/antibiotic-use/healthcare/implementation/core-elements-small-critical.html

IDSA. (2018, May 3). *Promoting Antimicrobial Stewardship in Human Medicine.* Retrieved from Infectious Disease Society of America: http://www.idsociety.ort/Stewardship_Policy/.

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