



MICHIGAN HOSPITAL
MEDICINE SAFETY
CONSORTIUM

NEWSLETTER

July 2023



MESSAGE FROM THE DIRECTOR

It was great seeing many of you at our meeting last week at Frederik Meijer Gardens in Grand Rapids. Thank you all for traveling from all over Michigan to come together to review data, collaborate and have robust discussions on ways to continue to improve quality in Michigan Hospitals! It is always amazing to see all of us in one place – we have certainly grown over the last several years! I often come away from our meetings with renewed energy to continue to drive our work forward and that is thanks to all of you for your passion, spirit, and dedication to our work. It was great to hear robust discussions with our system leaders. It is evident that they find immense value in the work that you all do.

I would like to take a moment to acknowledge and recognize all of you for the work that you do day-to-day to improve care for hospitalized medical patients across the state of Michigan. As we work together to accomplish our Collaborative goals, we know the work is not easy, especially now as we face financial headwinds, staffing challenges, and high levels of burnout within our teams. Despite these challenges, you all show up at our meetings with excitement and energy to continue to drive our efforts for the patients we serve. At the meeting, I spoke with several of you about how to continue to enhance the work of HMS. I was impressed to hear about the thirst for more data, resources, and interactions across the Collaborative both with fellow members and from Coordinating Center leadership. We will continue to listen to your feedback and provide the content you need to facilitate the work you do.

Looking ahead to the next 6 months of 2023, we are excited to share with you our next steps in our Sepsis journey as we strive to reduce complications and enhance the quality of life for these patients. This will include new toolkits and resources developed in partnership with the Centers for Disease Control and Prevention (CDC), and the development of sepsis performance measures to help drive our work. In an effort to continue to drive improvements in inpatient antibiotic use, we will be rolling out additional resources to support you in your efforts to reduce antimicrobial overuse at discharge. And finally, for our PICC and midline work, we will continue our efforts to identify and define best practices for device decision-making in critical care patients and those with active malignancy. I am looking forward to seeing many of you at our November Collaborative Wide meeting. We have been working on the content for this meeting in partnership with our emergency medicine colleagues for several months now and hope to see you there!

Thanks for the work you do every day and please let us know how we can better serve you, your hospital, and the patients you care for.

Sincerely,

Scott Flanders, MD



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www.mi-hms.org

RECENT HIGHLIGHTS

National Quality Forum (NQF) Endorsement!

Through years of unprecedented collaboration and data sharing among Michigan healthcare providers and health systems, HMS developed two quality improvement measures that earned [National Quality Forum endorsement](#) in January 2023.

Many hospitalized patients with community-acquired pneumonia or urinary tract infections receive unnecessary antibiotics, which can lead to adverse events, antibiotic resistance, and delays in diagnosing underlying conditions. HMS made improving the appropriate use of antibiotics in these populations a key initiative and dedicated its network of statewide partnerships to developing and validating related quality measures across a diverse set of hospitals.

The NQF* recognized HMS with prestigious endorsements for measures that can reduce unnecessary antibiotic use for two common and costly situations:

- Inappropriate diagnosis of community-acquired pneumonia (CAP) in hospitalized medical patients;
- Inappropriate diagnosis of urinary tract infection (UTI) in hospitalized medical patients.

“HMS is a collaborative focused on improving the quality of care for hospitalized medical patients throughout the state of Michigan,” said Scott Flanders, MD, HMS Program Director, and Michigan Medicine Chief Clinical Strategy Officer. “We are incredibly proud of the work our collaborative has accomplished. Having two of our quality measures validated by the National Quality Forum reinforces the value of our work in Michigan and across the nation.”

The NQF uses a rigorous evaluation process, led by expert multi-disciplinary committees to endorse initiatives that are intended to help healthcare providers make choices based on thoroughly vetted, consistent, and credible measures.

“I am so proud of what our hospitals have been able to do,” said Valerie Vaughn, MD, an HMS quality improvement consultant. “We are working hard to bring the best care possible to patients with infections and this endorsement shows that we really are at the leading edge nationally.”



*This March, CMS ended its contract with NQF and awarded the consensus-based entity (CBE) for performance measurement contract to Battelle, a long-time CMS contractor that assists with federal quality programs. Battelle will oversee what will now be referred to as the "Partnership for Quality Measurement (or PQM)."

RECENT HIGHLIGHTS

Sepsis Launches for Cohort B

The HMS Sepsis Initiative has officially launched to the entire HMS collaborative, bringing on 38 sites into Cohort B in early 2023! This is the last year of a two-year rollout of this initiative for our participating Michigan hospitals. To make this launch possible, thank you to the 12 volunteer pilot hospitals and Cohort A for helping us refine our data collection and identifying areas for improvement.



**January 2023 Sepsis Abstractor Training*

March 2023 Collaborative Wide Meeting

HMS held its March 2023 Collaborative Wide Meeting virtually on March 15, 2023. We kicked off the meeting by sharing our work in patient safety and quality in action. Many abstracts that were presented as posters or oral presentations at national conferences were highlighted. The annual national conferences include the Society of Hospital Medicine (SHM), the Society for Healthcare Epidemiology of America (SHEA), the Society of General Internal Medicine (SGIM), and the American Thoracic Society (ATS).

Our HMS physician leads shared hospital performance data across all three initiatives (ABX, PICC/Midline, & Sepsis). Dr. Hallie Prescott shared the risk-adjusted mortality model for sepsis with the goal of assessing for variation in healthy sepsis mortality across hospitals.

A new focus of our collaborative-wide meetings is to engage hospitals for presentations and discussion. We welcomed HMS members from Corewell Health East - Trenton Hospital, Corewell Health West - Spectrum, and Henry Ford Health Jackson to discuss their successes and recommendations related to specific sepsis measures. Members from Ascension St. John River District shared their journey of improving appropriate durations of antibiotics for patients with community-acquired pneumonia.

After our main collaborative-wide meeting, we held our first PICC Special Population Workgroup sessions for oncology/hematology and critical care. These are new sessions for our [HMS 2023 Pay for Performance Program](#) and our optional 2024 Value-Based Reimbursement Measures (VBR).

NEW HMS Data Reports are LIVE

At the March Collaborative-wide Meeting, HMS announced the launch of new live antimicrobial, PICC/midline, and sepsis data reports to assist in quality improvement efforts. To request access to these reports, please contact Jennifer Minock (cjennife@umich.edu)

RECENT HIGHLIGHTS

First Site Visit Conducted Since the Pandemic!

On April 25th, 2023, HMS conducted its first in-person half-day site visit since they were halted due to the pandemic. The site visit was held at Marshfield Medical Center - Dickinson in Iron Mountain, MI, with a focus on the HMS Antimicrobial Use Initiative. HMS Antimicrobial Physician Lead, Dr. Tejal Gandhi, and HMS Program Manager, Elizabeth McLaughlin, met with Marshfield Dickinson's hospitalist team, various physicians, quality administrators/directors, and abstractors to review their current performance in the antimicrobial initiative, as well as review cases deemed as fallouts, to get a better understanding of how we assess our measures and to help them improve. Dr. Gandhi then held a lunch and learn session for Internal Medicine attendees and presented, "CAP and UTI in Hospitalized Patients - Best Practice and Data Review". After the site visit, the HMS Dickinson team immediately began discussing ways to implement interventions presented during the meeting. The data abstractor expressed that the HMS team made the lunch and learn very fun and engaging, and encourages all hospitals to have a site visit, due to the many great takeaways from the meeting.

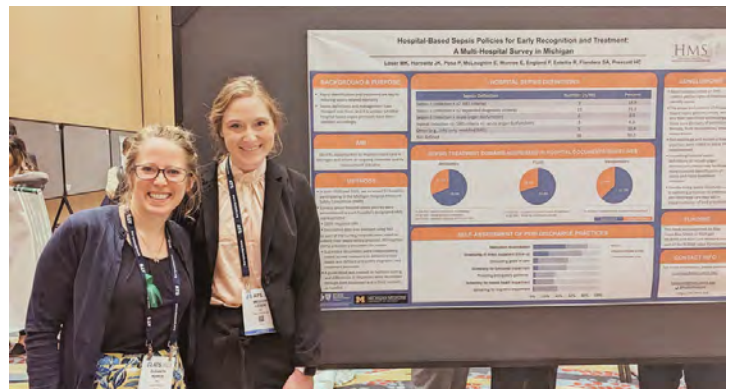
*If your hospital is interested in an all-day or half-day site visit or 1-hour grand rounds presentation, please contact Jennifer Minock (cjennife@umich.edu).

HMS @ ATS 2023!

HMS members attended and gave oral presentations at the American Thoracic Society 2023 International Conference held in Washington, DC, from May 19th to May 24th, 2023. See below for highlights.



Dr. Elizabeth Munroe and Danny Teng, gave an oral presentation titled, "Machine Learning Methods to Address Confounding in Sepsis Mortality Rate". A sepsis mortality risk model to facilitate benchmarking sepsis mortality across our HMS hospitals.



Drs. Meghan Lóser and Elizabeth Munroe presented their poster titled, "Hospital-based Sepsis Policies for Early Recognition and Treatment: A Multi-Hospital Survey in Michigan".

RECENT HIGHLIGHTS

AHRQ ROAD Home Grant

Members of the HMS antimicrobial leadership team and collaborative members including Valerie Vaughn, MD, MSc, Tejal Gandhi, MD, Lindsay Petty, MD Julie Szymczak, PhD, and Robert Neetz, PharmD, have been approved for a 2.5 million grant from the Agency for Healthcare Research (AHRQ) to study “Reducing Overuse of Antibiotics at Discharge: The ROAD Home Trial”.

The ROAD Home project consists of a [framework](#) of evidence-based stewardship strategies to improve discharge antibiotic prescribing. Discharge-specific stewardship strategies (e.g., audit and feedback at discharge) are effective at optimizing prescribing; however, they are resource-intensive and often infeasible to implement across hospitals with variable resources. Thus, there is a critical need for interventions to improve discharge prescribing tailored to the local context, feasible, and effective for diverse hospitals.

The ROAD Home Framework is the foundation for the ROAD Home Intervention, a participatory intervention that supports hospitals in implementing evidence-based stewardship strategies to improve discharge antibiotic use. The ROAD Home Intervention includes three components: 1) discharge stewardship needs assessment, 2) facilitated selection of strategies using the ROAD Home Framework, and 3) an implementation blueprint. The overarching goal of this study is to evaluate the effectiveness and understand the implementation context of the ROAD Home Intervention. As part of the grant, the team will develop a ROAD Home discharge stewardship toolkit that will be distributed to all Michigan hospitals.

The ROAD Home project is an extension of the quality improvement initiatives HMS has been focusing on related to appropriate diagnosis and treatment of pneumonia and urinary tract infection since 2017. Work on the ROAD Home project will begin at the November collaborative-wide meeting when the team will be inviting hospitals to join information sessions to learn more.

Society of Hospital Medicine (SHM) Learning Portal Credit Opportunity

Physicians and non-physicians can claim 1.00 credit by taking the free online webinar course, "[Rapid Clinical Updates: Antimicrobial Stewardship for Hospitalists](#)". HMS Antimicrobial Expert and Hospitalist, Dr. Valerie Vaughn is one of the panelists for this session.

Welcome New HMS Team Members!

This June and July HMS welcomed two new team members. Emily Walzl is a Statistician Intermediate and completed her Master of Science in Biostatistics from Virginia Commonwealth University. She earned her Bachelor of Science in Statistics and Psychology from the University of Delaware. Tirth Mehta is a Database Analyst/Programmer Intermediate. Before joining the HMS Coordinating Center, Tirth completed his Master of Science in Computer Science at Stony Brook University - SUNY. He earned his Bachelor of Technology in Information Technology from K.J. Somaiya College of Engineering - Mumbai, India.



RECENT HIGHLIGHTS



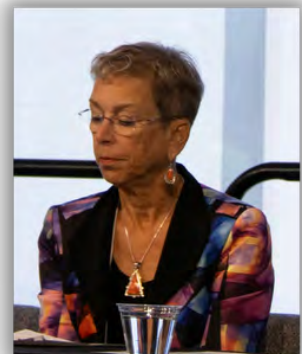
July 2023 Collaborative-Wide Meeting

HMS held our July Collaborative Wide meeting on July 12, 2023, at Frederik Meijer Gardens in Grand Rapids, Michigan. We began the day with Abstractor appreciation breakfasts for ABX/PICC and Sepsis (see pics above) to thank them for all the hard work they do to further HMS' mission of improving patient safety and quality improvement at their hospitals. Then during the main meeting, each of our initiative physician leads presented quarter 2 2023 performance data, showing great progress toward our performance measures.

Our theme for the meeting was driving quality improvement (QI) efforts in resource-limited environments. We held a panel session to discuss these strategies with healthcare system leaders across Michigan. Below are the panelists that participated in this session. Lastly, the system leaders participated in conducting interactive breakout sessions aimed at driving quality improvement efforts. The sessions focused on providing basic QI tools, spreading change across hospitals and systems, and developing a business case for QI.



- Brook Watts, MD, MS – Chief Quality Officer, Michigan Medicine
- Paul Entler, DO, CPE, MMM – Chief Clinical Officer and Senior Vice President, Sparrow Health System
- Rosalie Tocco-Bradley, Ph.D., MD, MHSA - Chief Clinical Officer, Trinity Health Michigan
- Kay Wagner, DHA, MSN, RN - System Vice President and Chief Quality Officer, MyMichigan Health
- Douglas Apple, MD, MS, FHM - Chief Clinical Officer at Ascension Michigan, Interim President & CEO, Ascension Genesys
- Eric Strucko, Ph.D., MPA, MPP – Chief Financial Officer, Michigan Medicine



RECENT HIGHLIGHTS

July 12, 2023 Highlights!



RECENT HIGHLIGHTS

July 2023 PICC Special Population Workgroup Meetings

After the July 12 Collaborative Wide Meeting, hospitals who joined HMS prior to 2020 (HMS legacy hospitals) split into two groups to discuss vascular device use in critical care patients and those with active malignancy. In addition to our main membership, we welcomed vascular access professionals, interventional radiologists, critical care physicians, and hematology/oncology physicians for these sessions. Hospitals reviewed cases in advance, and we discussed these cases during the sessions. A special thanks to those who completed case reviews and presentations during the session, as they contributed to robust discussion amongst the group. Please see below for several highlights of these sessions:

Critical Care

The critical care group began the discussion by acknowledging the need to think collectively about the ways in which to limit catheter complications in critically ill patients by making appropriate device choices at the time of insertion. However, it was acknowledged that decision-making for these patients is complicated by the high acuity of illness and uncertainty of the developing/eventual needs of the patient. This was noted as a contributing factor to a greater number of lumens selected at the time of device placement, as critically ill patients may need more incompatible medications, increased number of points of access, need for long-term antibiotics, and other clinical factors. There was an emphasis placed on the importance of training and involving vascular access nurses/teams in the orientation of new residents and other bedside providers. This was noted to have empowered teams to make more appropriate device and lumen decisions at the time of placement. Complicated cases were reviewed that demonstrated the placement of either double or single-lumen PICCs in critically ill patients, which demonstrated important Quality Improvement work and device choices in high-acuity situations and gave an example for others to follow.

Hematology/Oncology (Active Malignancy)

The clinical context for acute leukemia is distinctively different from that of lymphoma and solid malignancies warranting differences in decision-making related to vascular devices. Patients with acute leukemia are more likely to have an increase in the number of lumens and patients with lymphoma and solid malignancies are more likely to have shorter line dwell times (i.e. less than 5 days). Generally, the members concluded that a PICC was identified as the preferred choice for patients with acute leukemia during induction chemotherapy, noting that a double-lumen device is adequate. For patients with solid tumors, central access was identified as not necessary; however, barriers to understanding which agents are vesicants and the desire to have a stable line were noted as key variables that influence device decision-making. The members also identified several barriers to the use of ports.

We are looking forward to discussing additional cases at our next special populations workgroup meetings on November 28, 2023, which will be held virtually.

- Critical Care - November 28, 2023 (1-2 pm)
- Hematology/Oncology (Active Malignancy) - November 28, 2023 (3-4 pm)



RECENT HIGHLIGHTS

November 2023, Collaborative Wide Meeting – Co-sponsored with the Michigan Emergency Department Improvement Collaborative (MEDIC)

Our November Collaborative Wide meeting will be co-sponsored with [MEDIC](#), the BCBSM CQI focused on improving care and patient outcomes within emergency departments. There will be separate HMS-specific sessions and also joint sessions with our emergency medicine colleagues, largely focused on caring for patients with Sepsis. We will also be co-hosting a poster session at this meeting. We encourage you to bring posters showcasing your local quality improvement work and/or posters shared at National conferences. We are looking forward to this meeting to strengthen our partnership and identify opportunities for future collaborations. Please share with your Emergency colleagues!

SAVE THE DATE

November 2023

Co-Sponsored Collaborative Wide Meeting

HMS **MEDIC**

LIM Flint Riverfront Conference Center, Flint, MI

Co-Sponsored by the Michigan Emergency Department Improvement Collaborative (MEDIC) & the Michigan Hospital Medicine Safety (HMS) Consortium

Breakfast & Lunch Provided

Sessions focused on cross-CQI collaboration to foster new ideas for enhancing care delivery both in the Emergency Department and Inpatient Settings

- Working across multi-disciplinary teams with competing priorities
- Discuss possible areas of alignment to improve patient outcomes & identify areas of bi-directional learning
 - Sepsis - early identification & treatment
 - Antimicrobial stewardship
 - Imaging decision-making
 - Hospitalization decision-making

Separate MEDIC and HMS specific sessions

Networking opportunities

<https://mi-hms.org>
<https://mediqi.org>

PICC/Midline & ABX Abstractor Spotlight



Lisa Smith, BSN, RN
Trinity Health Livingston

Lisa Smith is a Registered Nurse for Trinity Health. Lisa is part of the Quality benchmarking and external reporting department in Ann Arbor and abstracts for HMS at Trinity Health Livingston Hospital. Prior to joining the HMS team, Lisa worked as a bedside nurse in ICUs for over 30 years. She worked for 23 years in the SICU in Ann Arbor and 10 years bedside in the ICU at Trinity Health Livingston. She attended nursing school at Madonna University in Livonia, Michigan. There she earned her BSN and minor in psychology.

We asked Lisa if she has any tips or suggestions for increased efficiency and quality of data abstraction and what she enjoys most about being part of HMS.

Lisa has learned a great deal from her mentors (Andreea Sandu and Stacey Roberts). Talking with other abstractors provides another perspective and additional learning skills. She uses a template for all her cases to help organize and increase her speed. Her audit with HMS (Tara Pearlman) was a wonderful learning experience. She viewed the audit as a positive event. She says when a mistake is made, we can learn, correct, and grow from that experience. Tara showed her different ways to access materials in the chart to help increase her speed. Lastly, she uses EPIC. Over to the far left under the patient's name is a search bar. She says to use that search bar! It has been helpful for her to find things such as if a patient had a PFT completed and what their FEV 1 is.

Lisa is very excited to be a part of HMS and feels blessed to have this opportunity to make a difference. She strongly believes in HMS' vision statement: To enhance clinical quality and patient safety for hospitalized medicine patients through data analysis and implementation of best practices. Everyone deserves a safe and high-quality stay at the hospital.

Sepsis Abstractor Spotlight



Elizabeth Luper, BSN, RN
Trinity Health Livingston

Elizabeth Luper is the sepsis abstractor for Trinity Health Livingston Hospital. She also abstracts for sepsis for Trinity Health Ann Arbor. Prior to joining HMS, she worked as a cardiac step-down nurse at another Southeast MI organization before joining Trinity Health as an outpatient care manager at a geriatric internal medicine clinic. She spent the years of the pandemic working as an inpatient float nurse across the various SE MI Trinity hospitals. Elizabeth received her BSN from Madonna University in Livonia, MI.

We asked Elizabeth if she has any tips or suggestions for increased efficiency and quality of data abstraction and what she enjoys most about being part of HMS.

Abstraction of such a large volume of data works best when it is done in a systematic way. Elizabeth uses a physical worksheet that groups together data points that are found in the same parts of the chart to avoid visiting the same sections of the chart multiple times. She finds that using the keyboard to toggle through much of the HMS database forms is much faster than using the mouse. To avoid oversight of more complex data such as medication and fluid administration or comorbid conditions, she reviews information in various places within Epic while abstracting.

As a step-down nurse, Elizabeth frequently cared for sepsis patients at the bedside and saw an opportunity to improve protocol standardization and enhance the systematic approach to provide timely and evidence-based care. She is excited that her participation in this collaborative will lead to quality improvement that will enable the hospital staff caring for this critically ill patient population to identify and respond to sepsis appropriately and efficiently. She hopes that our collaborative will have a meaningful impact on morbidity and mortality for these patients.

Hospital Spotlight

Trinity Health Livingston

Trinity Health Livingston is a 66 bed, Level 4 Trauma-designated hospital located in Howell, MI. The hospital originally opened in 1958 as the McPherson Community Health Center and is the only full-service hospital in Livingston County. Trinity Health Livingston works closely with the Trinity Health outpatient center and stand-alone ER in Brighton, MI. The two sites will be merging in 2025 at the site of the current Brighton center as a new hospital with 56 inpatient acuity-adaptable beds, 8 operating rooms, and 18 short stay beds in addition to the existing ER and outpatient services. This hospital will offer Primary Care, General Medicine, Gynecological Surgery, Urology, Cardiology & Intensive Cardiac Rehab, Orthopedics, Minimally Invasive General Surgery, Bariatric Surgery and Oncology.

TEAM STRUCTURE

Lisa Smith, BSN, RN	PICC/Midline/ABX Abstractor
Elizabeth Luper, BSN, RN	Sepsis Abstractor
Deanna Jozwiak, MSN, BSN, RN	Manager of Quality Benchmarking and External Reporting for Trinity Health Ann Arbor, Livingston, and Chelsea
Vanessa Hereford, MD	Site Medical Director for Trinity Health Livingston; HMS Physician Champion for PICC/Midline and Antimicrobial Use and Inpatient Sepsis
Alan Sielaff, MD	HMS Physician Champion for Emergency Department Sepsis
Anurag Malani, MD, CPE, FIDSA, FSHEA	Trinity Health Ann Arbor Medical Director, Hospital Epidemiology and Special Pathogens; Trinity Health Ann Arbor Medical Director, Antimicrobial Stewardship; Infectious Disease Specialist; Member of HMS Data, Design, and Publications Committee
Brian Smith, RPh	Pharmacy Specialist
Andrea Del Vecchio, MSN, RN, SANE-A, SANE-P	Vascular Access RN
William Light, RN	PICC Team RN

2500 PICCs inserted with NO infection rate!!



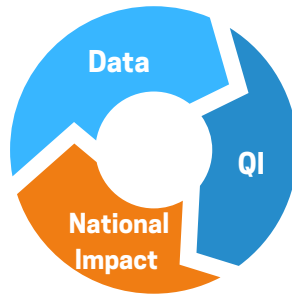
THL 2023 Priorities

- To support the launch of HMS Sepsis at our facility
- To identify where we need to improve as it relates to sepsis care based on the data abstracted through HMS and set goals to accomplish change
- To continue meeting performance measure goals as it relates to PICC/midline and antimicrobial use

THL 2024 Priorities

- To create a system for review of data and fallouts for HMS sepsis as guidance for quality improvement in sepsis care
- To create an engaged core team dedicated to sepsis work that can accomplish both the goals set forth by HMS as well as those identified at our hospital level

INFLUENCE OF QUALITY



Data

HMS has created many live database reports to provide detailed insights into the current performance measures. See below for the available reports, what they include, and how our members have utilized them. If you would like access to view these reports, please contact Jennifer Minock (cjennife@umich.edu).

Live PICC/Midline Detailed Reports

- **PICC/Mid – Dashboard (Collaborative Wide)**
 - Use this report to compare your site’s average to the Collaborative average
- **PICC – Non-Specialty Fallout Report (Site)**
 - Contains:
 - Your site’s raw and adjusted rates for the 2023 performance measures for the 2020/2021 Cohort
 - Fallout HMS IDs for cases that are not meeting the measures
 - Opportunities for quality improvement
- **PICC – Fallout Report for NON-PAIRED ICU/ONC Sites**
 - Contains:
 - Raw rates for the Prior to 2020 cohort who are not paired with another site in ICU and Oncology measures
 - Fallout cases for the 2023 performance measures for the Prior to 2020 Cohort
- **PICC – Fallout Reports for PAIRED ICU Sites/Onc Sites**
 - Contains:
 - 2023 performance measure raw rates for the Prior to 2020 cohort who are in the ICU/Critical Care or Hematology/Oncology special populations that are paired with other sites
 - Paired rate
 - Individual rate
 - Fallout HMS IDs for each performance measure
- **VBR (Site) – All cohorts**
 - Contains:
 - Your site’s raw rates for the 2023 VBR measures
 - Fallout HMS IDs for each VBR measure



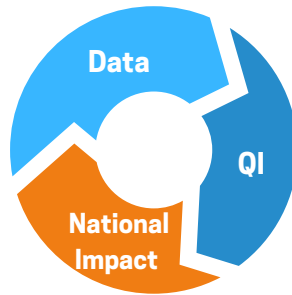
Examples of HMS PICC/Midline Report Utilization

Henry Ford Main

Data Abstractor: Kiera Kaiser

- Utilizes the HMS PICC/Midline live reports to:
 - Present details from the live reports at a system and site level
 - Run bi-annual meetings to review data and monitor PICC/Midline progress
 - Frequently conduct deep dives into each fallout case and try to disseminate patterns to look for ways to make process improvements or to develop education

INFLUENCE OF QUALITY



Data

Live Sepsis Detailed Reports

There are a variety of sepsis reports meant to aid abstractors and administrators to ensure data abstraction is complete and accurate:

- **Cycle Report**
 - Gives an overview of all active and complete sepsis cases entered in the database for the site.
- **Data Checker Report**
 - Gives an overview of all cases that have data errors.
- **Demographics Report**
 - Utilizes pie graphs to display different elements of the demographics and enrollment form.
- **Patient Who Still Needs Follow-Up Report**
 - Displays cases that are eligible for a follow-up phone call but are missing 1-3 phone call attempts
- **Required Forms Missing Report**
 - Lists cases that are missing a required form in the database.
- **Bundle Details Report**
 - Utilizes elements from various bundles

Bundle elements
Use of norepinephrine as first-line vasopressor
≥ 30 mL/kg IBW fluid within 2 hours of vasopressor initiation
Use of adjunctive steroids in septic shock
Use of balanced solutions (e.g., Lactated Ringers) over other fluids
Antibiotics delivered in recommended sequence
Initial antibiotic delivered within 1 hour of order
Lung protective ventilation strategy used
Met all eligible bundle elements

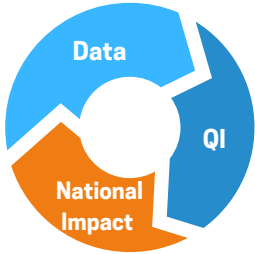
Recovery Sepsis Bundle
Baseline functional status assessed
PT/OT Consultation
Appropriate continuation of medications on discharge
Appropriate discontinuation of controlled meds on discharge
Assessment of Care Goals
Hospital contact information for issues post-discharge
Scheduled for PCP follow-up within 2 weeks
Met all eligible bundle elements

Bundle elements
Initial lactate resulted within 3 hours of arrival to hospital/ED
Repeat lactate resulted within 4 hours of first (if elevated)
Blood culture collected within 3 hours (non-viral sepsis only)
Blood culture before antibiotic administration
Antibiotic delivered w/in 5 hours of arrival (3 hours if hypotensive) for non-viral sepsis
Antibiotic delivered within 3 hours (hypotensive)
Antibiotic delivered within 5 hours (non-hypotensive)
≥ 30 mL/kg ideal body weight (IBW) fluid within 6 hours
Met all eligible bundle elements

Examples of How Sites are Utilizing HMS Sepsis Data

- Quarterly reporting to hospitalists
- Restarting sepsis committees
- Created a 1-page flyer using resources provided by HMS and presented it to the Sepsis Committee, Hospitalists, Critical Care, IM Department Meeting, and ED Department Meeting.
- Created sepsis-focused power plans
- Created best practice alerts (BPAs) in the EMR to encourage balanced fluids for fluid resuscitation.

INFLUENCE OF QUALITY



Quality Improvement

Trinity Health Abstractors Go Above and Beyond!

HMS Abstractors Lisa Smith (Trinity Livingston), Stacey Roberts (Chelsea Hospital), and Andreea Sandu (Trinity Health Ann Arbor) came together to conduct education beyond the hospital setting relating to the prevention of complications associated with PICC lines.

Lisa noted that Livingston, a small hospital with low PICC volumes, is heavily impacted by all fallouts and complications. She noticed that there appeared to be a high occlusion rate in the 30-day follow-up window and that these tend to occur after discharge into the community setting. She worked to identify an avenue for community education and was able to connect with a staff member of Trinity that works as a liaison between the inpatient setting and home health, skilled nursing facilities, and subacute rehabs. Lisa was provided with the opportunity to conduct a short presentation via Zoom at a huddle that reaches at least 60 of these home health/SNF/SAR teams. Due to the scope of the work, Lisa contacted her mentors, Stacey and Andreea for assistance.

Together, the three of them compiled resources and designed the following for their presentation:

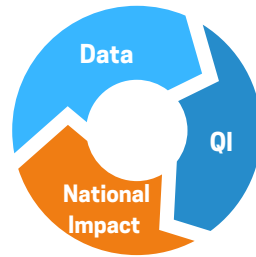
PICC/Midline Occlusion/Infection Prevention

Trinity Health Livingston, Ann Arbor and Chelsea

<p>BACKGROUND</p> <p>The Michigan Hospital Medicine Safety Consortium (HMS), is a Collaborative Quality Initiative sponsored by BCBSM. The data-driven collaborative is comprised of hospitals across the state of Michigan with the goal of improving the quality of care for hospitalized medical patients at risk for adverse events.</p> <p>HMS quality improvement work consists of: Robust data collection - Sharing of best practices -Compilation/creation of tools & resources - Tracking of site-specific interventions</p>	<p>PICC</p>	<p>PICC LINES AND PATIENT DISPOSITION</p> <p>PICC and Midlines Placed in 2022</p> <table border="1"> <tr><td>Initial Line Inserted</td><td>773</td></tr> <tr><td>Discharged with Line</td><td>561</td></tr> <tr><td>Discharged to Home</td><td>353</td></tr> <tr><td>Discharged to Hospice</td><td>204</td></tr> </table> <p>Line Complications in 2022</p> <table border="1"> <tr><td>Minor Complications</td><td>132</td></tr> <tr><td>Non-Occlusion</td><td>88</td></tr> <tr><td>Occlusion</td><td>54</td></tr> </table> <p>Opportunity For Improvement</p>	Initial Line Inserted	773	Discharged with Line	561	Discharged to Home	353	Discharged to Hospice	204	Minor Complications	132	Non-Occlusion	88	Occlusion	54	<p>PURPOSE</p> <p>The purpose of our meeting today is to identify current practice patterns and share best practices for patients discharged from the hospital to your care with PICC/Midlines. Complications including clotting, DVT/PE and PICC line associated infections are costly as they contribute to ED visits, readmissions and the need for long term antibiotic treatment.</p>
Initial Line Inserted	773																
Discharged with Line	561																
Discharged to Home	353																
Discharged to Hospice	204																
Minor Complications	132																
Non-Occlusion	88																
Occlusion	54																
<p>DESCRIPTION</p> <p>One of HMS initiatives aim to assess appropriate use of PICC's and identify factors associated with complications such as clotting and infection. Eliminating unnecessary PICC use and preventing complications improves the safety of hospitalized medical patients. Data collection continues to 30 days post discharge. The patient's journey on the road to health continues with SAR, SNF and HHC. Along with this journey, goals of clot prevention and infection are vital.</p>	<p>*FINANCIAL IMPACT OF OCCLUSION</p> <p>"Real-World" Data from 51 Michigan Hospitals</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>12% of PICCs Experienced Catheter Occlusion</p> </div> <div style="text-align: center;"> <p>21%</p> <p>of Occluded PICCs Were Removed Due to Irreversible Occlusion</p> </div> <div style="text-align: center;"> <p>\$249,500</p> <p>Spent on tPA administration* for Catheter Occlusion</p> </div> </div> <p><small>*The C.I.O.T. tool for identifying strategies to prevent PICC catheter... (n.d.). Retrieved February 28, 2023, from https://www.hca.wa.gov/sites/default/files/2023/02/CIOT-Tool-2023-02-28.pdf</small></p>		<p>CONCLUSIONS</p> <p>In conclusion, the goal of this PICC QI Collaborative is to share best practices. The PICC patient Care Guide, Patient Education Tool for PICC care, CLOT tools and strategies to prevent CLABSI are best practice resources available for use.</p>														

Poster presented by Lisa Smith BSN, RN, Stacey Roberts BSN, RN, CPHQ, MSBA & Andreea Sandu BSN, RN, Clinical Quality Nurses for Livingston, Chelsea & Ann Arbor

INFLUENCE OF QUALITY



Quality Improvement

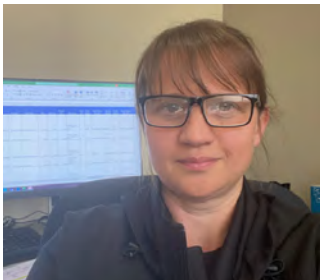
Trinity Health Abstractors Go Above and Beyond!

During the huddle, in an assessment of their current barriers to guideline-concordant care, staff from these settings reported various concerns, such as:

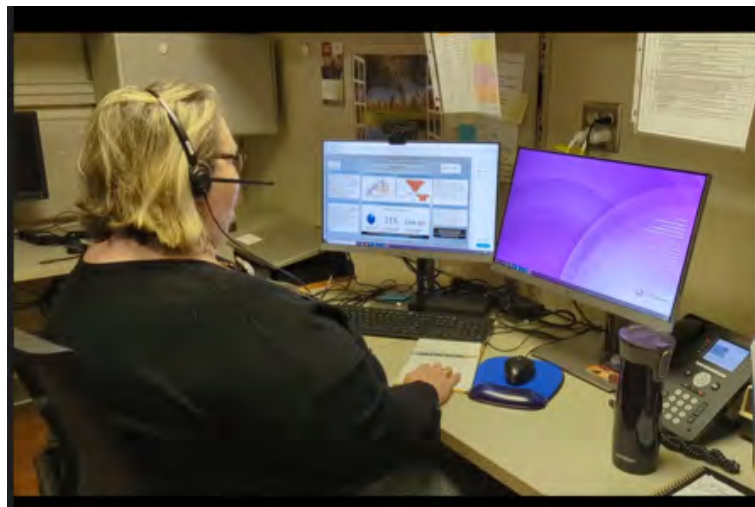
- Patients being admitted to the outpatient setting on a Friday with missing orders for flushes until the start of business on Monday
- Conflicting advice from PCPs, such as advising staff that they do not need to flush with heparin at all

After learning of these concerns, Lisa and her team offered to disseminate resources available from HMS.

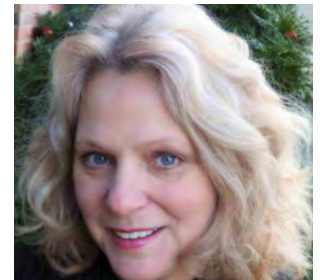
Prior to their presentation, Stacey discussed how it had been challenging to identify how they could reach beyond the hospital setting, and that they had been seeking opportunities to educate the community and improve outcomes. Their liaison to this huddle stated that these facilities have also been struggling with UTI/ASB treatment and would love further presentations from this abstractor team to disseminate best practices related to this concern as well. The team also expressed appreciation that data for retired measures remain available, as it would have been impossible to conduct this work without it.



Andreea Sandu, BSN, RN
Trinity Health Ann Arbor
HMS Data Abstractor

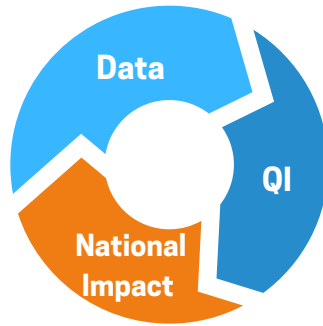


Lisa Smith, BSN, RN
Trinity Health Livingston
HMS Data Abstractor
(Conducting the PICC presentation during a Zoom huddle)



Stacey Roberts, RN, MSBA, CPHQ
Chelsea Hospital
HMS Data Abstractor

INFLUENCE OF QUALITY



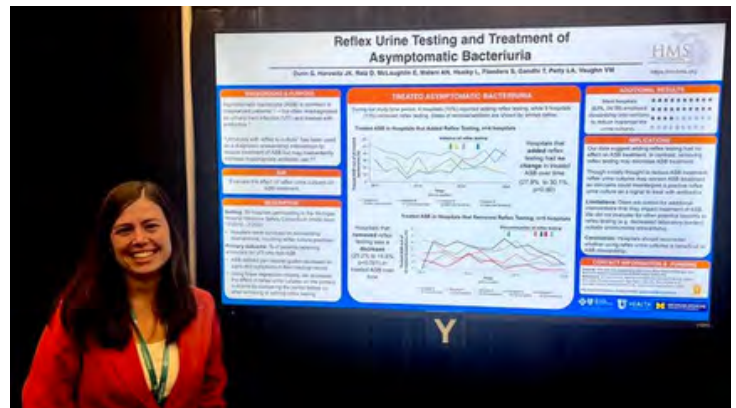
Driving HMS Quality Efforts Nationally

HMS @ SHM Converge 2023!

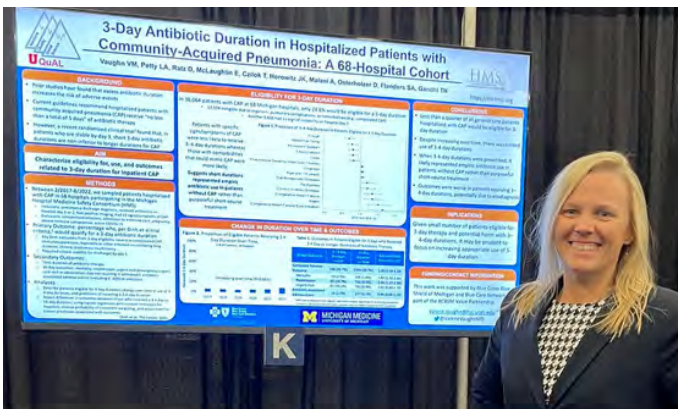
HMS members attended and held poster sessions at the Society of Hospital Medicine's (SHM) Converge Annual Meeting held in Austin, Texas from March 26th through March 29th, 2023.



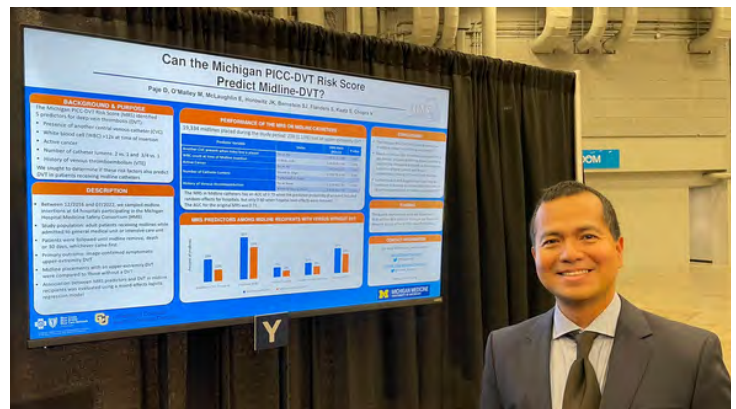
Comparing PICC Placement by Vascular Access Specialists Versus Interventional Radiologists
David Paje, MD, MPH



Reflex Urine Testing and Treatment of Asymptomatic Bacteriuria
Guinn Dunn, MD

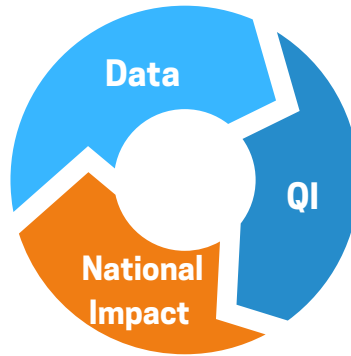


3-Day Antibiotic Duration in Patients with Pneumonia: A 68-hospital Cohort
Valerie Vaughn, MD, MS



Can the Michigan PICC-DVT Risk Score Predict Midline-DVT?
David Paje, MD, MPH

INFLUENCE OF QUALITY



Driving HMS Quality Efforts Nationally

The following posters were presented at various national conferences.

Society of Critical Care Medicine (SCCM), Congress 2023, 1/21-1/24/2023, San Francisco, CA

Presentation Title: *Use of Peripheral Vasopressors in Early Sepsis-Induced Hypotension Across Michigan Hospitals*

- Presenter: Elizabeth Munroe, MD – University of Michigan Health

Society of Hospital Medicine (SHM), Converge 2023, 3/26-3/29/2023, Austin, TX

*Other SHM posters not listed on the previous page

Presentation Title: *Does a Catheter-to-Vein Ratio >45 Increase PICC-related Venous Thromboembolism?*

- Presenter: David Paje, MD, MPH

Presentation Title: *Cost-effectiveness of Improving Appropriate Use of Peripherally Inserted Central Catheters*

- Presenter: David Paje, MD, MPH

Presentation Title: *A Multi-hospital Evaluation of Institutional Sepsis Policies and Protocols*

- Presenter: Scott Kaatz, DO, MSc

SHEA Spring Conference, 4/11-4/14/2023, Seattle, WA

Presentation Title: *3-Day Antibiotic Duration in Patients with Pneumonia: A 68-hospital Cohort*

- Presenter: Valerie Vaughn, MD, MSc

Presentation Title: *Risk Factors & Outcomes Associated with Inappropriate Empiric Broad-Spectrum Antibiotic Use in Hospitalized Patients with CAP*

- Presenter: Tejal Gandhi, MD

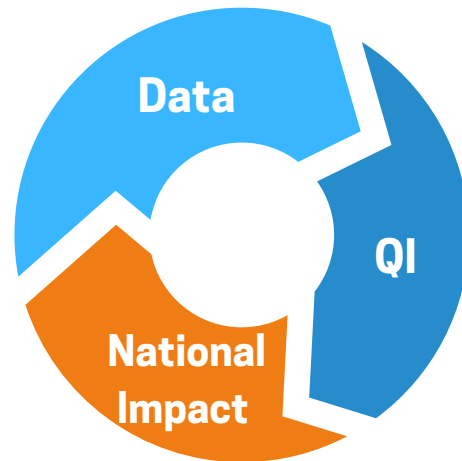
Presentation Title: *Prevalence and Risk Factors for Bacteremia UTIs in Hospitalized Adults without Definitive Signs or Symptoms of UTI*

- Presenter: Sonali Advani, MD

Presentation Title: *Identifying the Relationship between Hospital Rurality and Antibiotic Overuse*

- Presenter: Hannah Hardin, MD

INFLUENCE OF QUALITY



Driving HMS Quality Efforts Nationally

The following posters were presented at various national conferences.

Society of General Internal Medicine, SGIM Annual Meeting, 5/10-5/13/2023, Aurora, CA

Presentation Title: *Can the Michigan PICC-DVT Risk Score Predict Midline-DVT?*

- Presenter: Steve Bernstein, MD, MPH

Presentation Title: *Does a Catheter-to-Vein Ratio >45 Increase PICC-related Venous Thromboembolism?*

- Presenter: Steve Bernstein, MD, MPH

Presentation Title: *Identifying Relationship between Rurality and Antibiotic Overuse*

- Presenter: Hannah Hardin, MD

Presentation Title: *Comparing PICC Placement by Vascular Access Specialists Versus Interventional Radiologists*

- Presenter: Steve Bernstein, MD, MPH

Presentation Title: *Cost-effectiveness of Improving Appropriate Use of Peripherally Inserted Central Catheters*

- Presenter: Steve Bernstein, MD, MPH

Presentation Title: *Reflex Urine Cultures as a Diagnostic Stewardship Intervention*

- Presenter: Guinn Dunn, MD

American Thoracic Society (ATS) Annual Meeting 2023, 5/19-5/24/2023, Washington, DC.

*Posters not listed in recent highlights.

Presentation Title: *Prevalence and Variation in Goals of Care Assessment During Hospitalization for Sepsis*

- Presenter: Leigh Cagino, MD

Presentation Title: *Hospital-based Sepsis Policies for Early Recognition and Treatment: A Multi-Hospital Survey in Michigan*

- Presenter: Meghan Lóser, MD

IMPORTANT DATES

HMS Upcoming Dates

**Dates subject to change*

August	8/15/23	Data, Design & Publications Committee Meeting
September	9/19/23	Data, Design & Publications Committee Meeting
	9/25/23	Q3 2023 Data Pull Date
October	Early October	Fall QI Survey Distributed
	10/17/23	Data, Design & Publications Committee Meeting
November	11/1/2023	November 2023 Collaborative Wide Meeting (In-person)
	11/21/23	Data, Design & Publications Committee Meeting
	11/28/23	Virtual -PICC Special Populations Workgroup Meeting #3 - Critical Care (1-2p)
	11/28/23	Virtual -PICC Special Populations Workgroup Meeting #3 - Hem/Onc. (Active Malignancy) (3-4p)
December	12/19/23	Data, Design & Publications Committee Meeting

If you have someone that is in need of Clinical Data Abstractor Training on any one of these dates, the deadline for requesting enrollment in a training date is one week prior to the training date. Please reach out to your site's Quality Assurance Coordinator for more information.

2023 HMS Abstractor Training Dates

8/3/23

8/17/23

9/14/23

9/28/23

10/12/23

11/9/23

12/7/23

2023 National Conferences

- To view the 2023 national conferences HMS members attend and present at, click [HERE](#).
- If you would like your presentation or poster highlighted on our list of 2023 national conferences, click [HERE](#).

Check [HERE](#) for updates to our HMS Calendar !



MICHIGAN HOSPITAL
MEDICINE SAFETY
CONSORTIUM

Contact Us!



If you have any questions, please contact:

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