HMS
MICHIGAN HOSPITAL MEDICINE SAFETY CONSORTIUM

MVC Michigan Value Collaborative

Sepsis Workgroup

January 25, 2024

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Today's Presenters

Eileen Creutz, RN, BSN
Program Evaluation Specialist,
Michigan Hospital Medicine Safety Consortium (HMS)

Kelli Souheaver, MSN, RN, CPEN
Program Evaluation Specialist,
Michigan Hospital Medicine Safety Consortium (HMS)

Housekeeping

Recording

- This session is being recorded; slides and the recording will be shared with attendees following the workgroup.

Questions

- We will be monitoring the chat throughout the presentation so feel free to add questions.

Post-Workgroup Survey

- Your feedback is important! Please complete the post-workgroup survey (link to be provided).

MVC Sepsis Workgroup: An Overview of HMS's Sepsis Work

Thursday, January 25, 2024

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Introduction

Eileen Creutz, BSN, RN

Sepsis Co-Lead

HMS Sepsis Initiative

Clinical Experience: Eileen worked as a Registered Nurse at Michigan Medicine's Intermediate Care Unit for 7 years. Her clinical expertise includes management of both invasive & non-invasive ventilated patients, artificial airways, pre-and post-lung transplants, and acutely ill surgical patients

Kelli Souheaver, MSN, RN, CPEN

Sepsis Co-Lead

HMS Sepsis Initiative

Clinical Experience: Kelli worked as a nurse in Michigan Medicine's Mott Children's Peri-anesthesia Care Unit and Mott Children's Emergency. Her clinical expertise includes Pediatric Emergency, peri-procedural care, radiology services, and OB/Gyn patients.

Goals and Objectives

- Introduction to HMS and HMS Sepsis
- Sepsis Process Measures
- Sepsis Peri-Discharge Processes & Outcomes
- HMS Partnership with the CDC
- Sepsis Toolkit Review

Introduction to HMS

Hospital Medicine Safety

HMS
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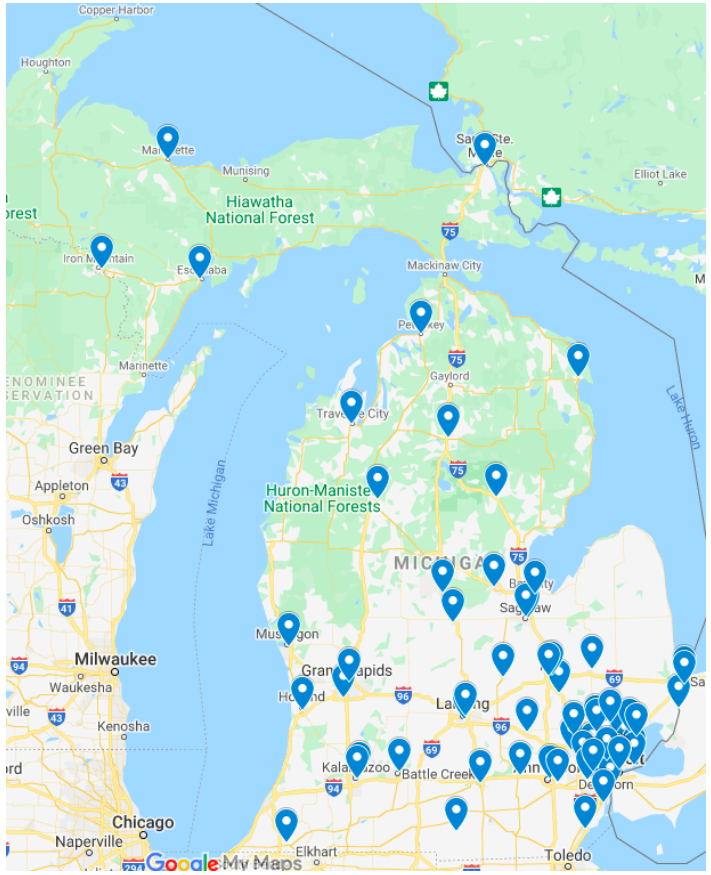
69 diverse hospitals



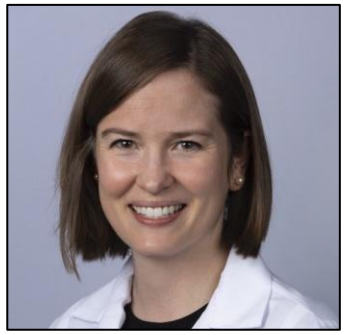
MVC Sepsis Workgroup with HMS Sepsis 1/25/2024

HMS Coordinating Center Team

Goal: to improve the care of hospitalized medical patients

- Blood clot prevention
- Catheter Use
- Antimicrobial Use
- COVID-19
- Sepsis

HMS Sepsis Initiative



Hallie Prescott, MD, MSc
Sepsis Lead

Elizabeth McLaughlin, RN, MS
HMS Program Manager

Eileen Creutz, BSN, RN
QA Coordinator

Kelli Souheaver, BSN, RN, MSN
QA Coordinator

Jakob McSparron, MD
QI consultant &
sepsis expert

Megan Heath, PhD
HMS Sepsis Statistician

Pat Posa, RN, BSN
QI consultant &
sepsis expert

Scott Flanders, MD
HMS Program Director

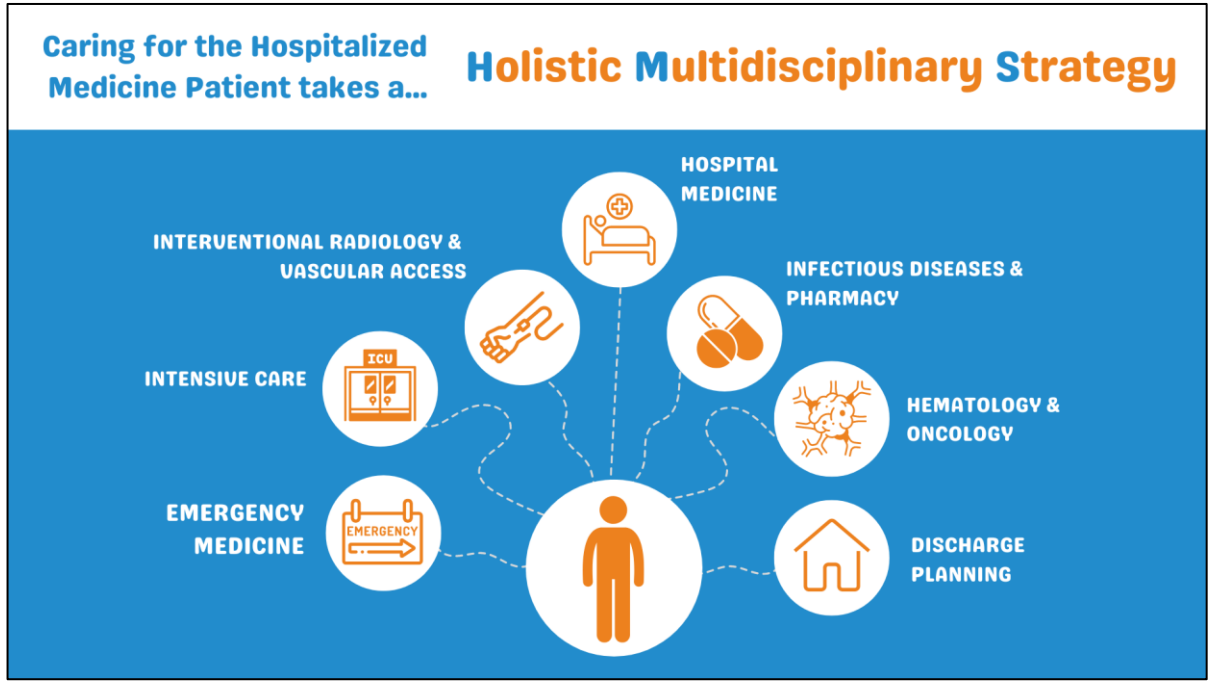
HMS-Sepsis Vision

Michigan is the best place in the world to get sepsis care, with coordinated, evidence-based management from presentation through post-hospital follow-up.

IT TAKES A TEAM TO STOP SEPSIS

It takes a team to stop sepsis!

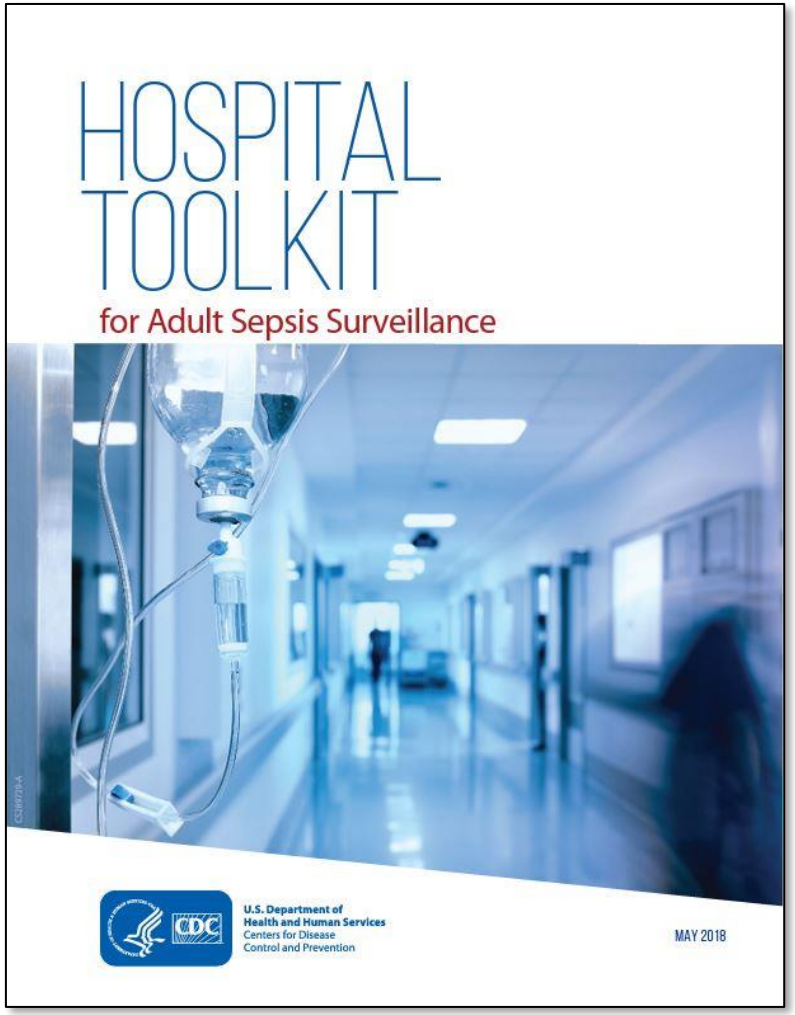
Partnership with our Emergency Medicine, Infectious Disease, Antimicrobial Stewardship, and Critical Care colleagues is essential to improving care for patients with sepsis.



Sepsis Process Measures

How does HMS identify sepsis hospitalizations?

- Random sample of sepsis hospitalization (18 cases manually abstracted per 2-week period)
- Two-step process: (1) diagnostic coding, (2) surveillance criteria for sepsis
- Lists are generated for case eligibility review, including all hospitalizations and observation stays with a qualifying primary discharge diagnosis
  - Surgical cases are excluded, as well as standard exclusions of comfort care/hospice, transfers, left AMA, etc.
- The abstractor then enters clinical data into the Organ Function Calculator, which determines if organ dysfunction is present during first 2 days of hospitalization
  - Organ Dysfunction = Eligible for Abstraction



HMS Sepsis Bundle Elements

Early Sepsis Bundle

- Initial lactate resulted within 3 hours of arrival to hospital/ED
- Repeat lactate resulted within 4 hours of first lactate (if elevated)
- Blood culture collected within 3 hours of arrival (non-viral sepsis)
- Blood culture collected before antibiotic administration
- Antibiotic delivered within 5 hours of hospital/ED arrival (3 hours if hypotensive) for non viral sepsis
- ≥ 30 ml/kg ideal body weight (IBW) fluid within 6 hours if indicated
- Receipt of vasopressors within 6 hours for persistent hypotension

Additional Sepsis 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 over other fluids
- Antibiotics delivered in recommended sequence
- Initial antibiotic delivered within 1 hour of order
- Lung protective ventilation strategy used

ICU/Floor Transition of Care Elements

- Temporary CVC removal prior to transfer out of ICU
- Temporary CVC removal or documentation of need to keep prior to transfer out of ICU
- Urinary catheter removal prior to transfer out of ICU
- Urinary catheter removal or documentation of need to keep prior to transfer out of ICU
- Communication of volume status at ICU transfer
- Communication of antibiotic plan at ICU transfer
- Discontinuation or non-use of controlled substances at ICU transfer
- Delirium assessment at ICU transfer and in ward

Recovery Sepsis Elements

- Baseline functional status was assessed (≥ 4 I/ADLs documented)
- PT/OT Consultation
- Appropriate continuation of medications on discharge
- Appropriate discontinuation/non-use of controlled substances on discharge
- Assessment of care goals
- Hospital contact provided for issues post-discharge
- Scheduled for PCP follow-up within 2 weeks
- Post-discharge care coordination

HMS 2024 Pay for Performance Measures

Sepsis Peri-Discharge Processes & Outcomes

Outcomes

	N / Eligible	%
Mortality		
In-hospital mortality	2307 / 18204	12.7%
30-day mortality (from encounter date)	3617 / 18204	19.9%
90-day mortality (from encounter date)	4678 / 18204	25.7%
90-day rehospitalization (from discharge date)	4633 / 13763	33.7%
Return to work (among previously working and completed phone follow-up)		
Not yet	171 / 788	21.7%
Missed > 1 month post-discharge	138 / 788	17.5%
Modified duties due to health	141 / 788	17.9%
Substantial new disability*	772 / 4309	17.9%

*cumulative data from project inception

Recovery Bundle

Bundle Element	N / Eligible	% Received
Baseline functional status assessed	14680 / 18204	80.6%
PT/OT consulted	3586 / 6820	52.6%
Appropriate continuation of medications on discharge	6094 / 6841	89.1%
Appropriate stopping of controlled meds on discharge	9548 / 9785	97.6%
Assessment of Care Goals	4412 / 8544	51.6%
Hospital contact information for issues post-discharge	2694 / 9785	27.5%
Scheduled for PCP follow-up within 2 weeks	1866 / 9785	19.1%
Post-discharge care coordination	4340 / 9785	44.4%
≥ 1 of 3 above discharge measures	**6459 / 9785**	**66.0%**
Met all eligible bundle elements	3567 / 18204	19.6%

*cumulative data from project inception

HMS Process Measures – Care Coordination at Discharge/Post - Discharge

Among patients discharged to a home-like setting, how many received a hospital contact for issues post-discharge?

Collaborative Wide Average = 27%

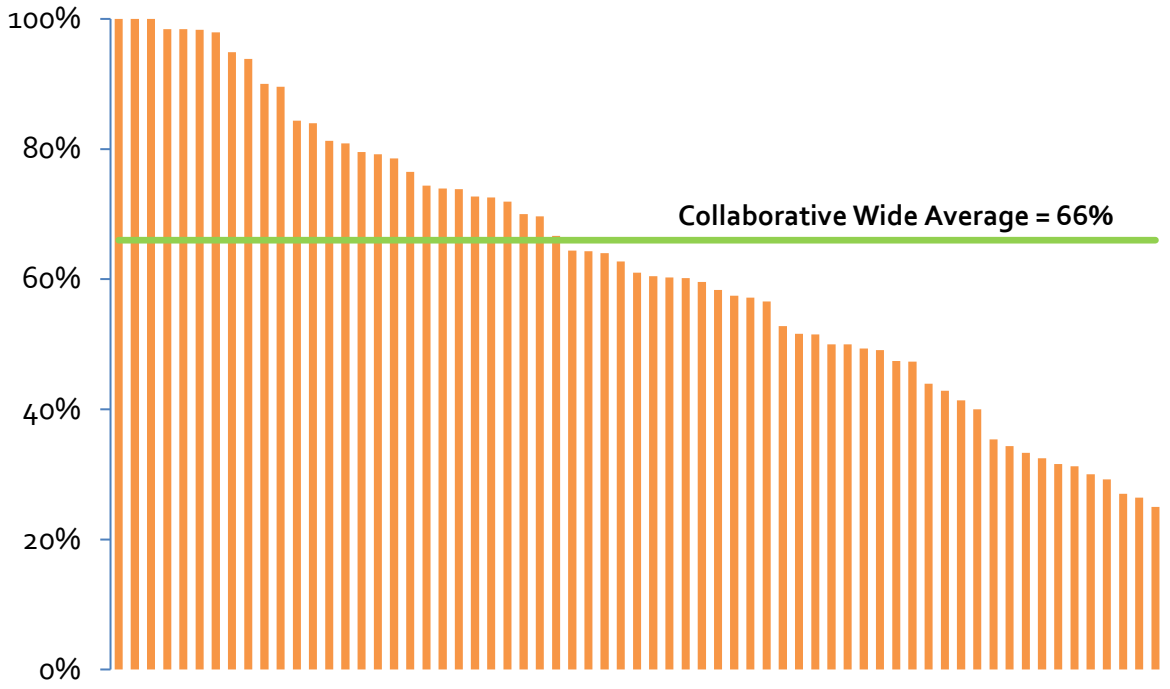
Among patients discharged to a home-like setting, how many had a PCP/Specialist follow-up appointment scheduled within 2 weeks time at discharged?

Collaborative Wide Average = 19%

Among patients discharged to a home-like setting, how many received a post-discharge phone call*?

Collaborative Wide Average = 44%

≥65% of sepsis cases discharged to home-like setting received at least **1 of 3** discharge/post-discharge coordination of care measures



HMS Partnership with the CDC

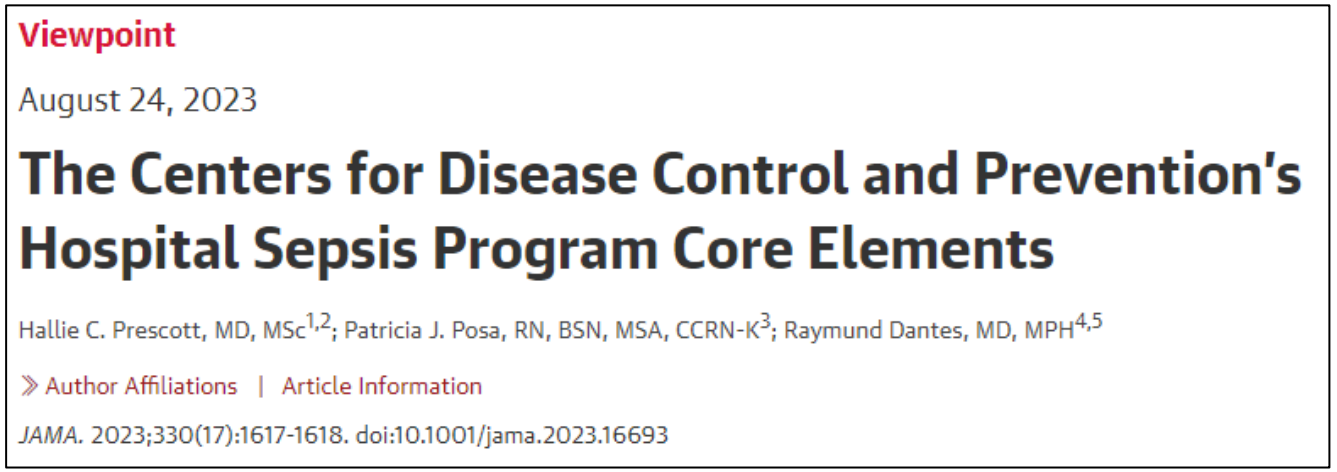
Developing the Core Elements of Sepsis Programs

Core Elements of Hospital Sepsis Programs

- In 2022, HMS was approached by the CDC to assist in the creation of the Core Elements of Hospital Sepsis Programs.
- Throughout 2023, members of the HMS Sepsis team worked closely with Dr. Ray Dantes of the CDC to create the core elements.
  - Experts from a variety of Michigan hospitals were consulted and their input was incorporated
- During this time, HMS began construction of the HMS Sepsis Toolkit to match the framework being created for the core elements

Publications

- In August of 2023, the Hospital Sepsis Program Core Elements was released.
- JAMA published a viewpoint article titled:
  - "The Centers for Disease Control and Prevention's Hospital Sepsis Program Core Elements" written by Dr. Prescott, Dr. Dantes, & Pat Posa regarding their work the project.



Viewpoint

August 24, 2023

The Centers for Disease Control and Prevention's Hospital Sepsis Program Core Elements

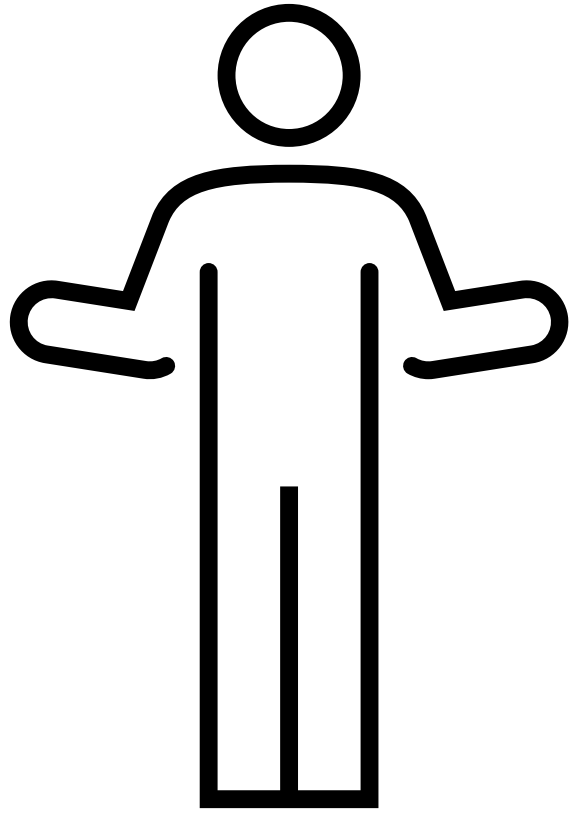
Hallie C. Prescott, MD, MSc[1,2]; Patricia J. Posa, RN, BSN, MSA, CCRN-K[3]; Raymund Dantes, MD, MPH[4,5]

» Author Affiliations | Article Information

JAMA. 2023;330(17):1617-1618. doi:10.1001/jama.2023.16693

What Now?

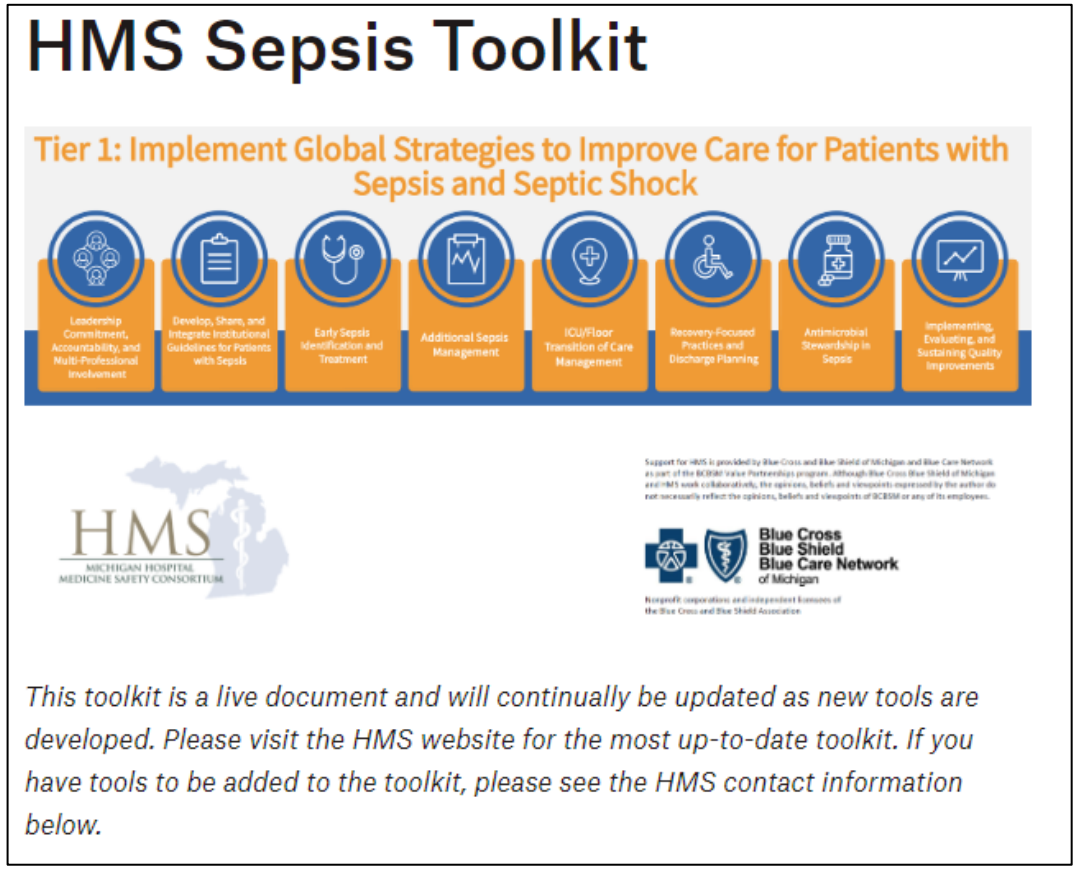
- With the release of the core elements, sites are motivated to begin quality improvement work but are looking for guidance on how and where to start.
  - The HMS Sepsis Toolkit was created to aid sites in their pursuit to establish or refine their sepsis programs regardless of size, resources, or patient population.



Sepsis Toolkit

Background & Goals

- The Toolkit was released 11/16/2023
- Provides hospitals with evidence and tools to support HMS Sepsis Performance Measures and CDC Core Elements of Hospital Sepsis Programs
- Disseminate successful tools developed by HMS hospitals
- Designed to be a living document – we will add resources and update the toolkit in real-time



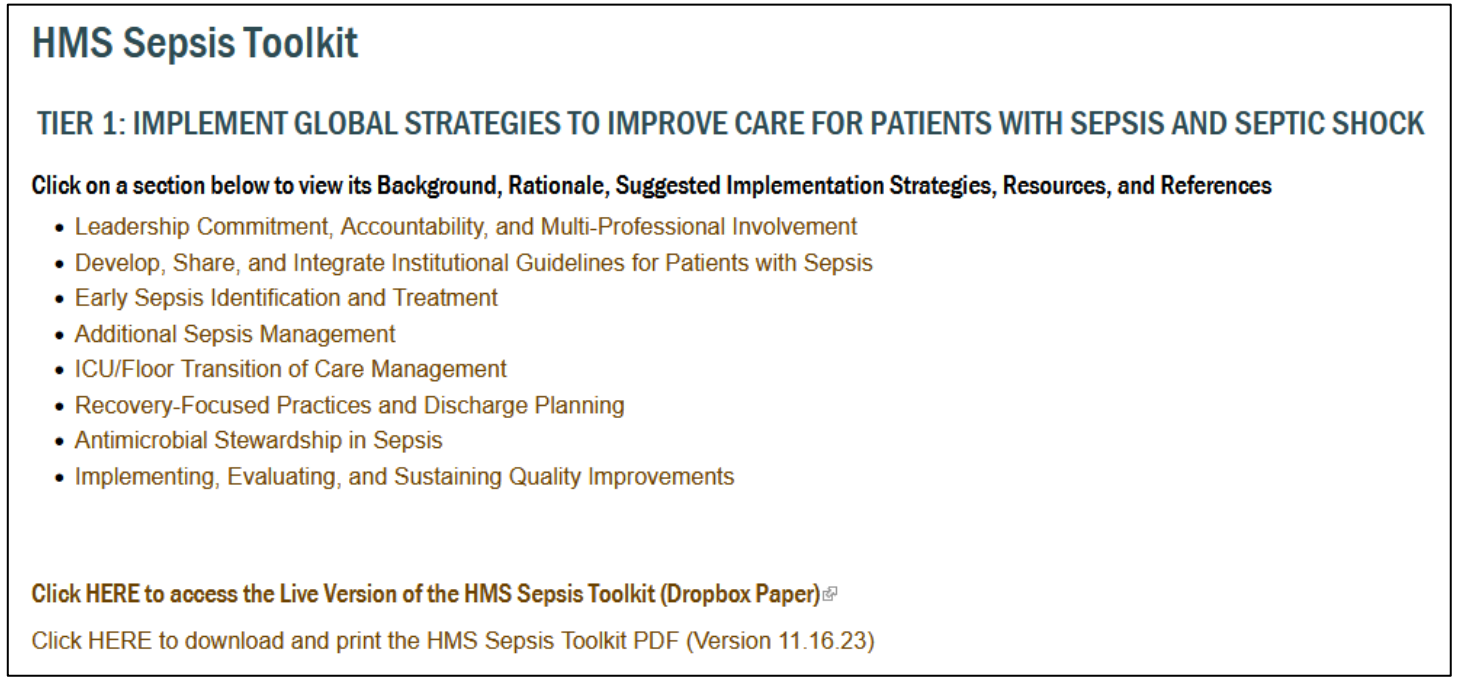
How to Access the HMS Sepsis Toolkit

Toolkit available on HMS Website

- https://mi-hms.org/hms-sepsis-toolkit

Formats

- Static PDF version (updated quarterly)
- Live Dropbox Paper version (updated in real-time)



HMS Sepsis Toolkit

TIER 1: IMPLEMENT GLOBAL STRATEGIES TO IMPROVE CARE FOR PATIENTS WITH SEPSIS AND SEPTIC SHOCK

Click on a section below to view its Background, Rationale, Suggested Implementation Strategies, Resources, and References

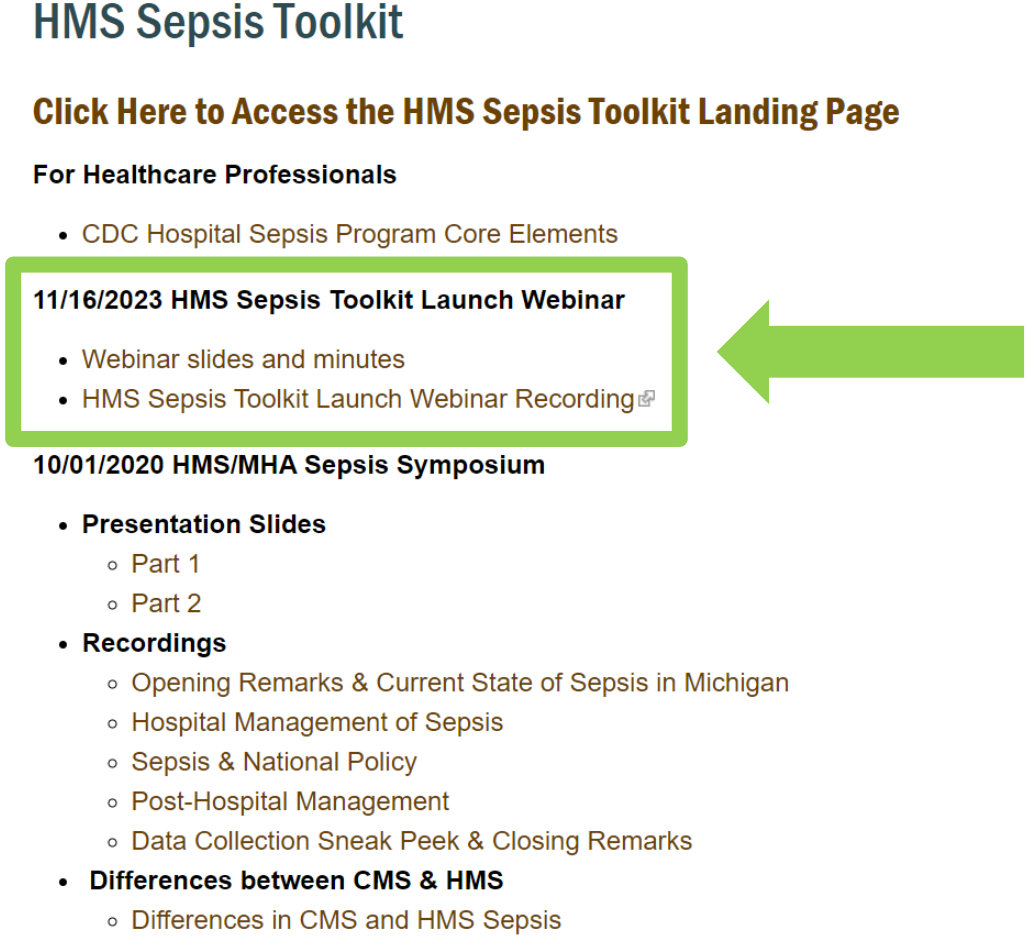
- Leadership Commitment, Accountability, and Multi-Professional Involvement
- Develop, Share, and Integrate Institutional Guidelines for Patients with Sepsis
- Early Sepsis Identification and Treatment
- Additional Sepsis Management
- ICU/Floor Transition of Care Management
- Recovery-Focused Practices and Discharge Planning
- Antimicrobial Stewardship in Sepsis
- Implementing, Evaluating, and Sustaining Quality Improvements

Click HERE to access the Live Version of the HMS Sepsis Toolkit (Dropbox Paper)

Click HERE to download and print the HMS Sepsis Toolkit PDF (Version 11.16.23)

Sepsis Toolkit Launch: An Informative Webinar

- The toolkit webinar was recorded and posted to the HMS website
- Webinar slides and Minutes
- Toolkit Launch Recording



HMS Sepsis Toolkit

Click Here to Access the HMS Sepsis Toolkit Landing Page

For Healthcare Professionals

- CDC Hospital Sepsis Program Core Elements

11/16/2023 HMS Sepsis Toolkit Launch Webinar

- Webinar slides and minutes
- HMS Sepsis Toolkit Launch Webinar Recording

10/01/2020 HMS/MHA Sepsis Symposium

- **Presentation Slides**
  - Part 1
  - Part 2
- **Recordings**
  - Opening Remarks & Current State of Sepsis in Michigan
  - Hospital Management of Sepsis
  - Sepsis & National Policy
  - Post-Hospital Management
  - Data Collection Sneak Peek & Closing Remarks
- **Differences between CMS & HMS**
  - Differences in CMS and HMS Sepsis

Overall structure: 8 sections

1.

2. Institutional Guidelines & Supporting Structures

3. Early Sepsis Bundle

4. Additional Sepsis Bundle

5. Transitions of Care Bundle

6. Recovery Bundle

7. Antimicrobial stewardship

8. Quality Improvement Approaches

Implementation Science Techniques

Section 1: Leadership Commitment, Accountability, and Multi-Professional Involvement

Leadership commitment

- Obtain support from hospital leadership
- Identify sepsis as a hospital priority

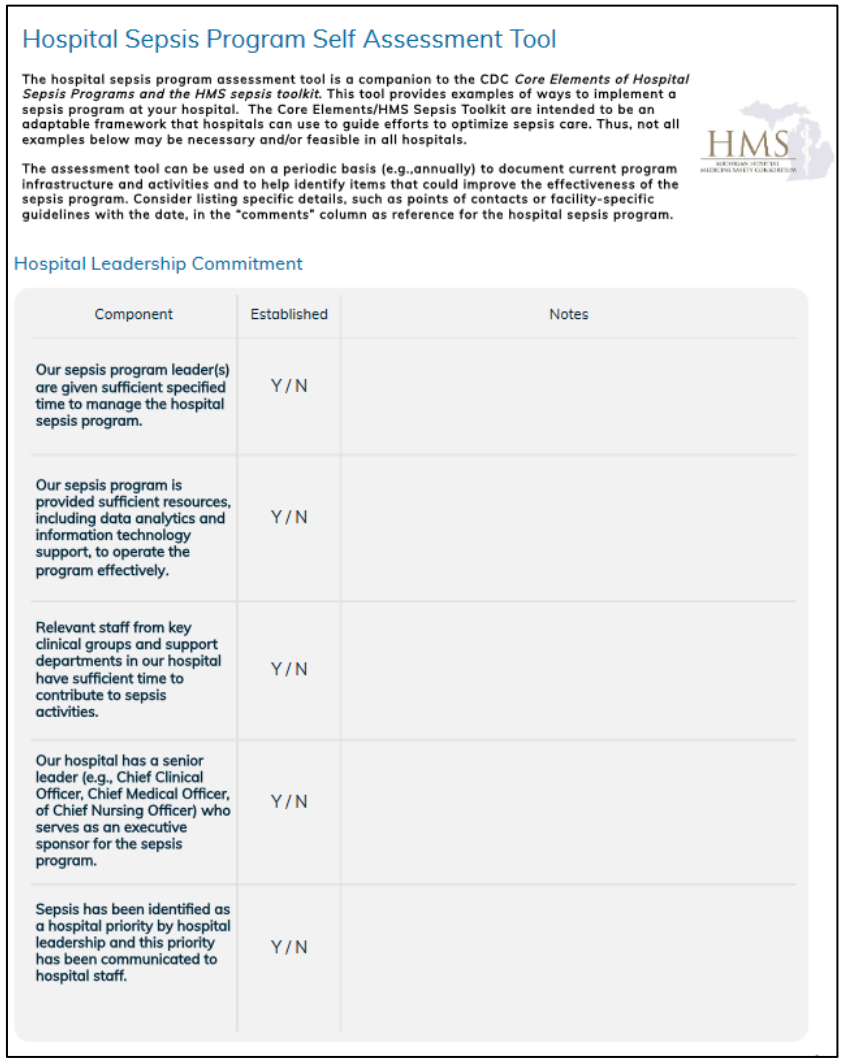
Accountability

- Identify a sepsis program lead (or two co-leaders)
- Set ambitious but achievable goals for the hospital sepsis program, track progress, update

Multi-professional involvement

- Assemble a team with relevant expertise (e.g., antimicrobial stewardship, critical care, emergency medicine, hospital medicine, infectious diseases, nursing, other primary services, pharmacy, and social work).
- Identify local/unit physician and nurse champions to ensure engagement

Unsure Where to Start?



Hospital Sepsis Program Self Assessment Tool

The hospital sepsis program assessment tool is a companion to the CDC *Core Elements of Hospital Sepsis Programs and the HMS sepsis toolkit*. This tool provides examples of ways to implement a sepsis program at your hospital. The Core Elements/HMS Sepsis Toolkit are intended to be an adaptable framework that hospitals can use to guide efforts to optimize sepsis care. Thus, not all examples below may be necessary and/or feasible in all hospitals.

The assessment tool can be used on a periodic basis (e.g.,annually) to document current program infrastructure and activities and to help identify items that could improve the effectiveness of the sepsis program. Consider listing specific details, such as points of contacts or facility-specific guidelines with the date, in the "comments" column as reference for the hospital sepsis program.

Hospital Leadership Commitment

Component	Established	Notes
Our sepsis program leader(s) are given sufficient specified time to manage the hospital sepsis program.	Y / N	
Our sepsis program is provided sufficient resources, including data analytics and information technology support, to operate the program effectively.	Y / N	
Relevant staff from key clinical groups and support departments in our hospital have sufficient time to contribute to sepsis activities.	Y / N	
Our hospital has a senior leader (e.g., Chief Clinical Officer, Chief Medical Officer, of Chief Nursing Officer) who serves as an executive sponsor for the sepsis program.	Y / N	
Sepsis has been identified as a hospital priority by hospital leadership and this priority has been communicated to hospital staff.	Y / N	

- The HMS Hospital Sepsis Program Self Assessment Tool is a great place to kick off!
- Identify gaps, strengths, barriers, and strategies to improve sepsis care

Section 2: Institutional Guidelines for Patients with Sepsis

Developing institutional guidelines

- Locally adapted from national and example hospital guidelines, for identification and management of sepsis
- Updated regularly

Making it easy to do the right thing

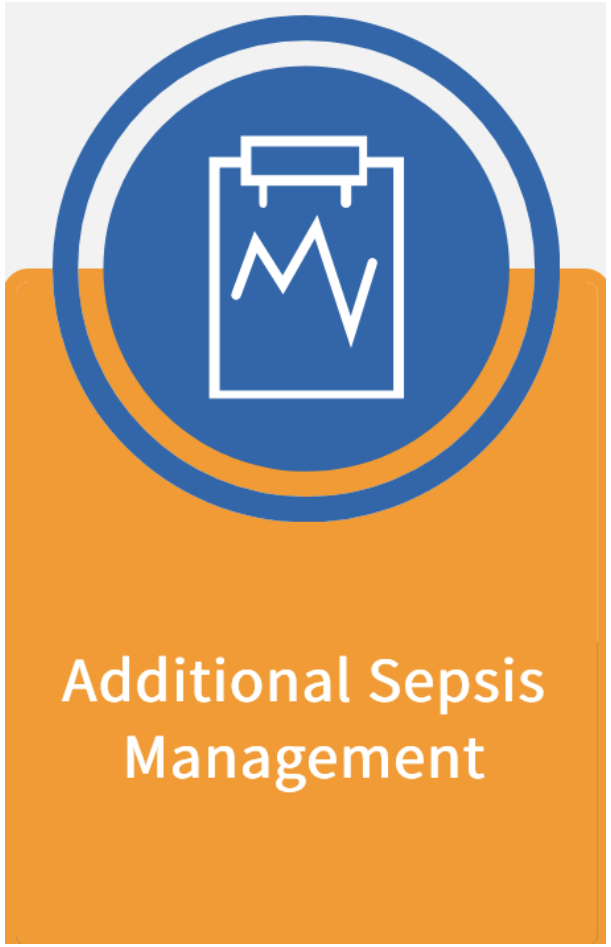
- Order sets
- Care pathways
- Documentation templates

Section 3: Early Sepsis Identification & Treatment

HMS Early Sepsis Measures

- Early evaluation: lactate, repeat lactate, and blood cultures
- Early treatment: antibiotics, fluids, vasopressors

Section 4: Additional Sepsis Management



HMS Bundle Measures Included in this Section:

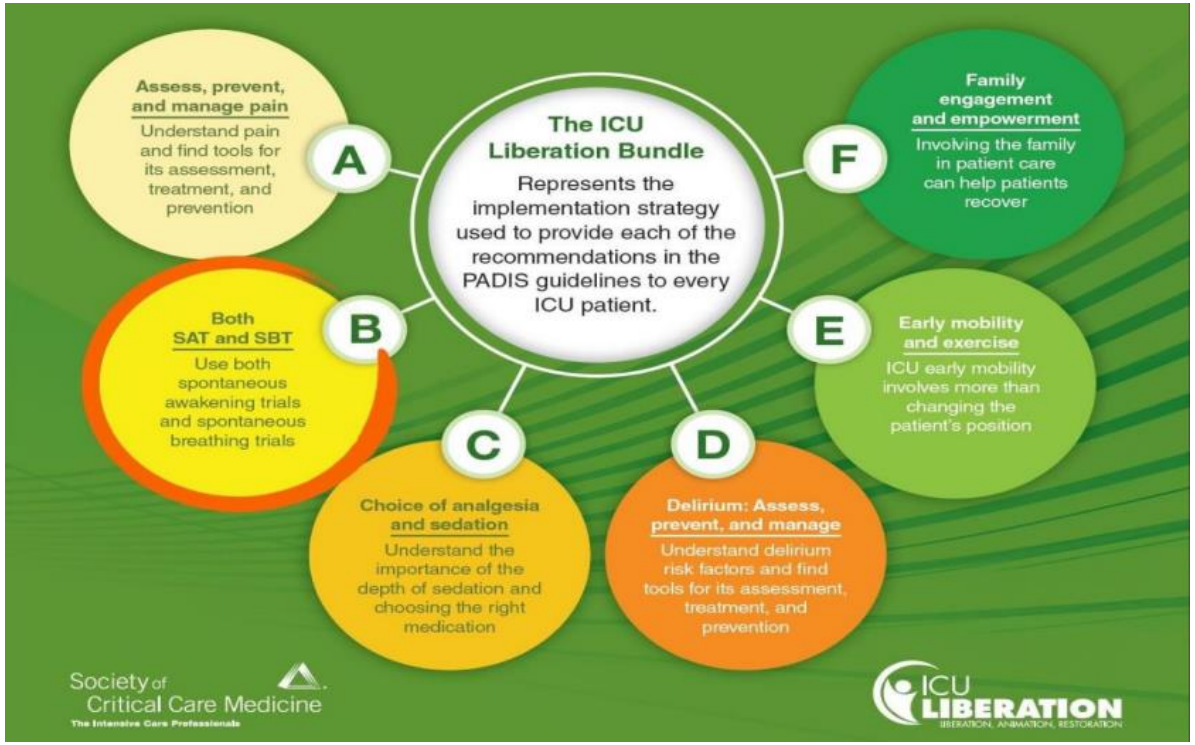
- Antibiotic sequencing
- Use of balanced solutions
- Adjunctive steroids in persistent shock
- Lung-protective ventilation strategy

Section 5: ICU/Floor Transition of Care Management

- HMS Measures Included in This Section
  - Removal (or documentation of need to keep) temporary CVCs
  - Removal (or documentation of need to keep) urinary catheters
  - Communication of ongoing management plan
    - Antibiotics, volume status, medication changes, and delirium assessments

Example Too: ICU Liberation

- Facilitating an optimal transition of care is essential for patients that spend time in an ICU due to their high risk for developing Post-Intensive Care Syndrome (PICS).
  - PICS: A condition that results in new or worsening impairments in physical, cognitive, or mental health that persist beyond hospitalization.



ICU Liberation Bundle

The longer patients are in the ICU, the more likely they are to develop PICS which leads to longer length of stays and readmissions.

Example Tool: ICU-PAUSE Tool

- ATS developed the ICU PAUSE program to address barriers and gaps in care that occur during transitions.

Transitions from the ICU are an inherently high-risk time as critical information is often lost at the time of transfer. Using a tool that creates a communication framework can prevent gaps in patient care

Sample EPIC dotphrase .icutoward

Use the following text to copy and paste into your EMR and customize as needed

```
.icutoward

ICU to Ward Transfer Summary (Progress Note Template) ICU-PAUSE Framework

I  ICU Admission Reason & Brief ICU Course: ***

C Code Status/DPOA Info/Goals of Care/ACP Note
{ACP Documentation:31370}

U Unprescribing & Pertinent High-Risk Medications
 Changes to home meds: ***
 Anticoagulation: ***
[ ] VTE Prophylaxis - *** dose
[ ] None - reason:
[ ] Therapeutic anticoagulation - ***
Antibiotics: ***
 [ ] N/A - no current planned antimicrobioals
 [ ] *** indication *** start date *** planned duration ***

P Pending Tests at the Time of Transfer
***

A Active consultants, including Rehab:
[ ] Subspecialty Consultants: ***
[ ] PT
[ ] OT
[ ] SLP
[ ] Wound Care

U Uncertainty Measure/Diagnostic Pause:
Working diagnosis at the time of transfer ***, though ddx includes ***
Select from the following:
1: High degree of certainty about the clinical diagnosis.
2. Some uncertainty about the clinical diagnosis.
3. Marked uncertainty about the clinical diagnosis.

S Summary of Major Problems and To-Dos:
#***
#***
To-do list prior to transfer:
[ ] ***
[ ] ***

E Exam at the time of transfer, including Lines/Drains/Airways & Data Review:
***
[ ] Difficult airway?
[ ] Lines/drains assessed for removal?
```

Section 6: Recovery-Focused Practices and Discharge Planning

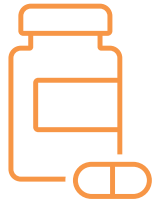
HMS Measures included in this section:

- Baseline functional status assessment
- PT/OT consultation when indicate
- Assessment of goals of care
- **Discharge planning**

Strategies to Achieve Discharge Planning Measures

- Consider implementing AHRQ Project RED (Re-Engineered Discharge) discharge process
  - The intent of this toolkit it to reduce hospital readmissions for many different conditions
- Evaluate current state of discharge processes and recovery focused practices
  - Perform self assessment to identify areas of need – link above to Project RED Discharge Toolkit "How to Begin" document
- National Quality Forum: Safe Practices for Better Healthcare
  - "One readmission or emergency department visit was prevented for every 7.3 subjects receiving the (RED) intervention"

Discharge Planning Recommendations



- Perform medication reconciliation at discharge
  - To make the transition home smoother, and safer for our patients by removing unnecessary medications and ensuring usual home medications are continued if needed

- Provide anticipatory guidance for symptom monitoring
  - To help guide patients when to get care, so interventions can start early

- Provide hospital contact for issues post-discharge
  - For patients to contact someone who is familiar with the care they received while in the hospital if needed

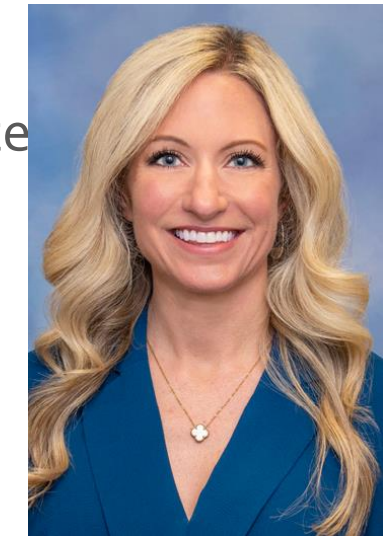
Discharge Planning Recommendations

- **Prior** to patient discharge, schedule outpatient PCP follow-up within 2 weeks
  - To ensure follow-up care is coordinated and available

- Conduct post-discharge phone call within 3 calendar days
  - For continuation of care, answering questions, and patient status updates

Evidence: Sepsis Transition and Recovery Program (STAR)

- Multisite randomized clinical trial in patients with Sepsis
  - Usual care
    - No changes in care
  - STAR
    - Throughout 30 days post-discharge, nurse navigator facilitate
      - Post discharge medication review
      - Evaluation for new impairments or symptoms
      - Monitoring of comorbidities
      - Palliative care, if appropriate
  - STAR Group Outcomes
    - More patient follow-up within 10 days of discharge
    - 25% more had medication reconciliation
    - 5 times more patients had depression screenings
    - 50% more had more care alignment



Stephanie Parks Taylor, MD, MSc
Michigan Medicine
Chief, Division of Hospital Medicine

Evidence: Sepsis Transition and Recovery Program (STAR)

- Multisite randomized clinical trial in patients with Sepsis
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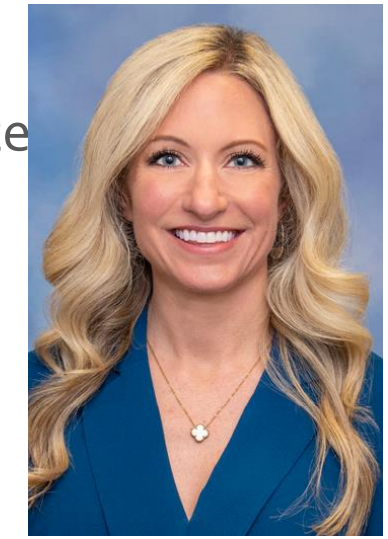
    - No changes in care
  - STAR
    - Th
  - STAR
    - Mo
    - 25% more had medication reconciliation
    - 5 times more patients had depression screenings
    - 50% more had more care alignment

Patients in STAR Intervention group had a 30-day all-cause mortality or readmission rate of 28.7% vs. 33.3% in the Usual Care Grouping



Stephanie Parks Taylor, MD, MSc
Michigan Medicine
Chief, Division of Hospital Medicine

Example Tool: Overall Hospital Discharge Planning

- AHRQ Care Transitions From Hospital to Home: IDEAL Discharge Planning
- Ideal Discharge of the Older Adult Patient: A Hospitalist Checklist

Discharge planning guidance and instructions to help with consistent discharges

Ideal discharge of the older adult patient: A hospitalist checklist

Data elements	Processes		
	Discharge summary	Patient instructions	Communication to follow-up clinician on day of discharge
Presenting problem that precipitated hospitalization	x	x	x
Key findings and test results	x		x
Final primary and secondary diagnoses	x	x	x
Brief hospital course	x		x
Condition at discharge, including functional status and cognitive status if relevant	x - functional status o - cognitive status		
Discharge destination (and rationale if not obvious)	x		x
Discharge medications:			
Written schedule	x	x	x
Include purpose and cautions (if appropriate) for each	o	x	o
Comparison with pre-admission medications (new, changes in dose/frequency, unchanged, meds should no longer take)	x	x	x
Follow-up appointments with name of provider, date, address, phone number, visit purpose, suggested management plan	x	x	x
All pending labs or tests, responsible person to whom results will be sent	x		x
Recommendations of any sub-specialty consultants	x		o
Documentation of patient education and understanding	x		
Any anticipated problems and suggested interventions	x	x	x
24/7 call-back number	x	x	
Identify referring and receiving providers	x	x	
Resuscitation status and any other pertinent end-of-life issues	o		

x: required element; o: optional element.

Derived and expanded from: Halasyamani L, Kripalani S, Coleman E, et al. Transition of care for hospitalized elderly patients: Development of a discharge checklist for hospitalists. J Hosp Med 2006; 1:354.

Example Tool: Improving Medication Reconciliation at Discharge

- National Transitions of Care Coalition Medication Reconciliation Elements

Review your current medication reconciliation process – are all these items included?

Medication Reconciliation Elements

Suggested Common/Essential Data Elements for Medication Reconciliation

Category	Element	Source(s)	Barrier(s)	Comments
ASSESSMENT ON ACCESS TO CARE SETTING (E.G, HOSPITAL ADMISSION, NURSING HOME ADMISSION)				
Demographic	Name	Patient/caregiver	Cognitive status	Universally available unique identifier information
	Date of birth			
	ID Number			
	Gender			
	Contact information			
	Caregiver name and contact information	Caregiver	Caregiver knowledge of patient	
	Allergies/intolerances	Patient/caregiver		
	Date of assessment	Interviewer		May also include time of transport of info
Medications (active, taken chronically)	Name – generic/trade	Patient/caregiver	Patient/caregiver knowledge of complete medication list, cognitive status	NDC will be used in automated systems – name + dose
	Dose			
	Form			
	Frequency			
	Reason for use			
Other medications/OTC/herbal remedies/nutritional supplements/time-limited medications	Name – generic/trade			Stop dates for short term medications
	Dose			
	Form			
	Frequency			
Other elements for consideration				
Demographic	Primary language	Patient/caregiver	Patient/caregiver knowledge of complete medication list, cognitive status	
	Religious, cultural factors			
Medications	Prescriber			Variety of methods to provide info on compliance
	Compliance level			
Medical history	Known medical conditions			To be able to identify conditions that may not be treated
Primary health care provider	NPI#			

Example Tool: Providing Anticipatory Guidance for Symptom Monitoring

- Henry Ford Health [Sepsis Patient Education Guide]

Sepsis Action Plan

Your Plan for Action

- Use this guide to help you tell your doctor or nurse about changes in your symptoms.
- You are less likely to have to go to the hospital for treatment when you notice your symptoms early and take action.

You are in control and doing well.

You feel like your usual self:

- You do not have fever or chills
- You do not have shortness of breath
- You have your usual energy level
- You are thinking clearly with no confusion

Take action today. Call your doctor now.

- You have a temperature more than 101°F or less than 96.8°F
- You are shivering or feel very cold
- Your heart feels like its beating faster than normal
- You feel short of breath
- You feel very tired and it is hard to do daily activities
- You have not urinated for 5 or more hours, or when you do urinate it burns, is cloudy, or smells bad
- Your wound or IV site is painful, red, smells, or has pus

Take action now! Call 9-1-1 right away!

- It is hard to wake up and you cannot do any daily activities
- You are confused
- You are breathing very fast
- Your skin is pale or a different color
- You have very bad pain
- You feel like you might die

Life After Sepsis

Many people who have sepsis eventually have a full recovery. Some people may be at risk for long-term symptoms. It takes time for your mind and body to heal from sepsis. **Call your doctor if you have questions or concerns at any time.**

What is Post Sepsis Syndrome (PSS)?

PSS is a group of symptoms that affects some people who have had severe sepsis or septic shock. You may not notice these symptoms until after you go home from the hospital. **Most often these symptoms get better over time**. This is why it is very important to go to all of your follow-up appointments and talk to your doctor if you have a concern or question.

Symptoms

These symptoms are often normal, but it is important to talk to your doctor if you have them.

- Feel weak
- Fatigue
- Feel out of breath
- Body aches and pains
- Trouble moving
- Trouble sleeping
- Weight loss, lack of appetite
- Dry, itchy, peeling skin
- Brittle nails
- Feel unsure of yourself
- Want to be alone
- Nightmares or flashbacks
- Trouble concentrating
- Feel depressed or angry

How can I recover?

Take your time and rest as you recover. There are many resources av
time coping with recovery. Talk to your doctor about resources that c

Tips for Recovery

Some things that might help you recover at home are:

- Set small goals each week, such as walking up the stairs or taki
- Rest as you need and let your body rebuild strength.
- Talk to family and friends about your feelings.
- Write your thoughts, feelings, and progress in a journal.
- Focus on a healthful eating plan.
- Exercise as you are able.
- Make a list of questions and concerns to take with you to your

Educate patients on signs/symptoms to watch for after discharge and about Post-Sepsis Syndrome

Example Tool: Hospital Discharge Morbidity Education

- JAMA Patient Page on Post Sepsis Morbidity

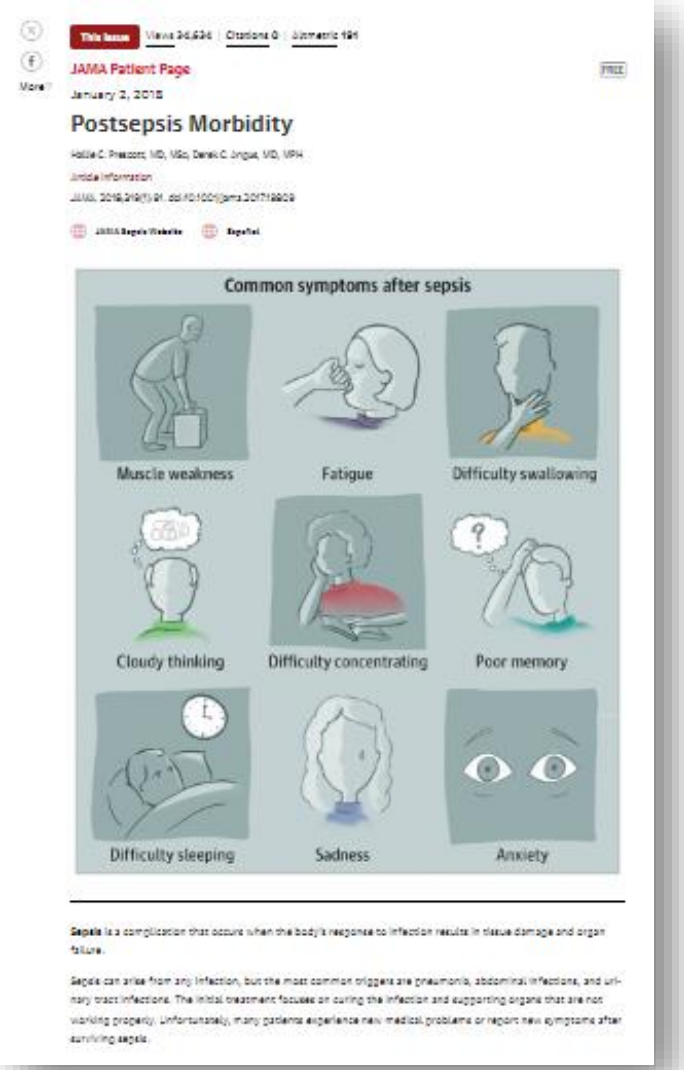
Treatment and Prognosis

It is important for patients to follow up with their doctor after sepsis hospitalization. Early follow-up visits should focus on ensuring proper medications, evaluating and reducing risk of further medical setbacks, setting up rehabilitation when necessary, and referring patients to support programs.

- **Medications:** Medications are often stopped or started temporarily during a hospitalization, so it is important to ensure that the right medications are resumed after hospitalization. Medication dosages may also need to be changed as a result of weight loss, reduced kidney function, or other physiological changes after sepsis.
- **Evaluating and reducing risk of medical setbacks:** Doctors should screen for treatable conditions that commonly result in repeat hospitalization, such as infection, heart failure, renal failure, and difficulty swallowing. If needed, patients should have vaccines updated to reduce risk of infection.
- **Rehabilitation:** New muscle weakness is common. Doctors may refer patients to physical therapy, occupational therapy, or speech therapy. Even if this type of therapy is not necessary, it is important for patients to gradually increase their activity level each day to rebuild strength.
- **Support programs:** There is a growing network of support groups for patients who have survived critical illness.

The prognosis for patients after sepsis varies. About a third of patients die in the year after sepsis, one-sixth experience severe persistent weakness or difficulty with memory, concentration, or decision making, and half have a complete or near-complete recovery.

Medication monitoring, reducing risk of medical setbacks, rehabilitation information, and support programs for patients to improve their recovery

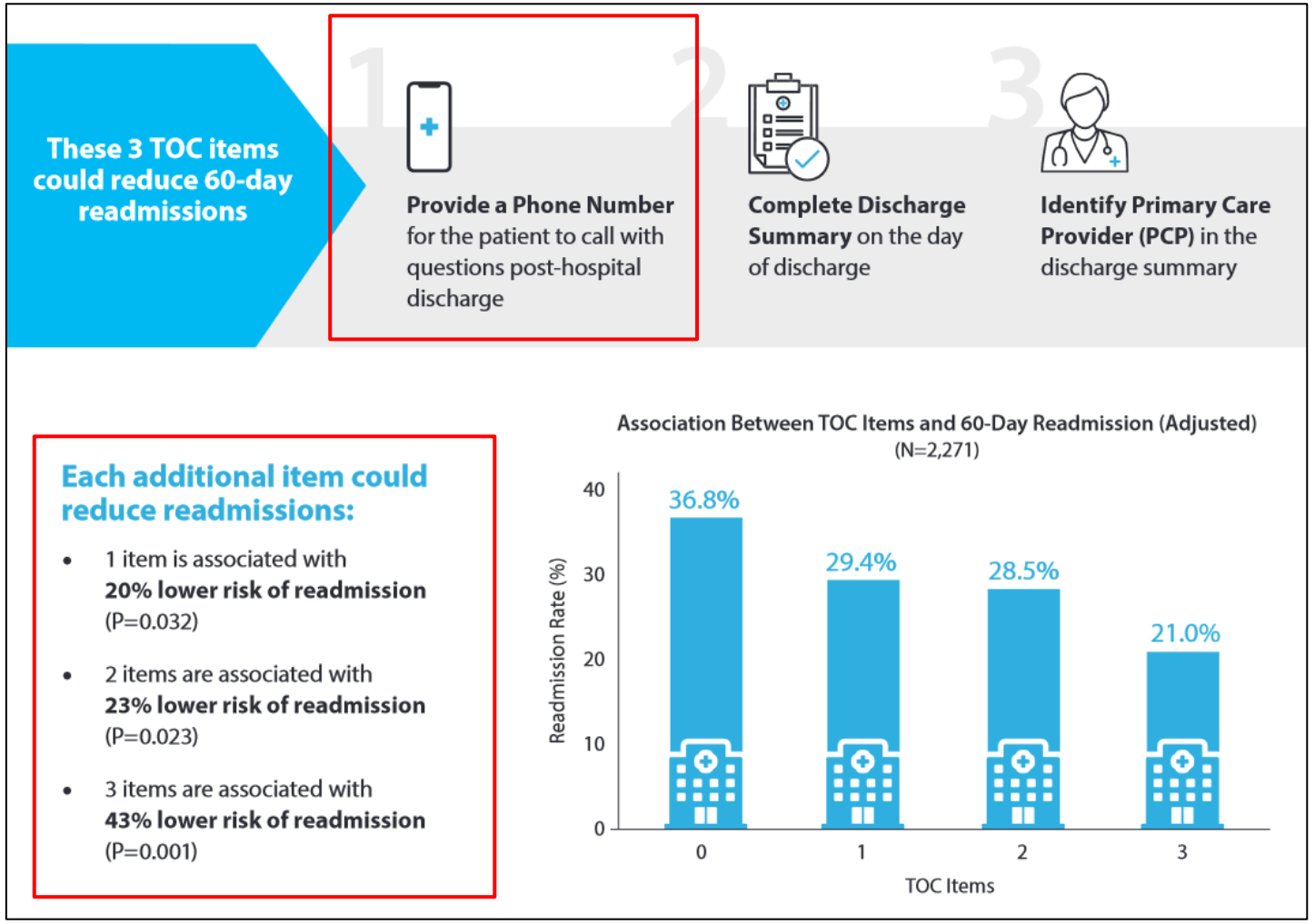


Example Tool: Provide Hospital Contact for Issues Post-Discharge

HMS
MICHIGAN HOSPITAL MEDICINE SAFETY CONSORTIUM

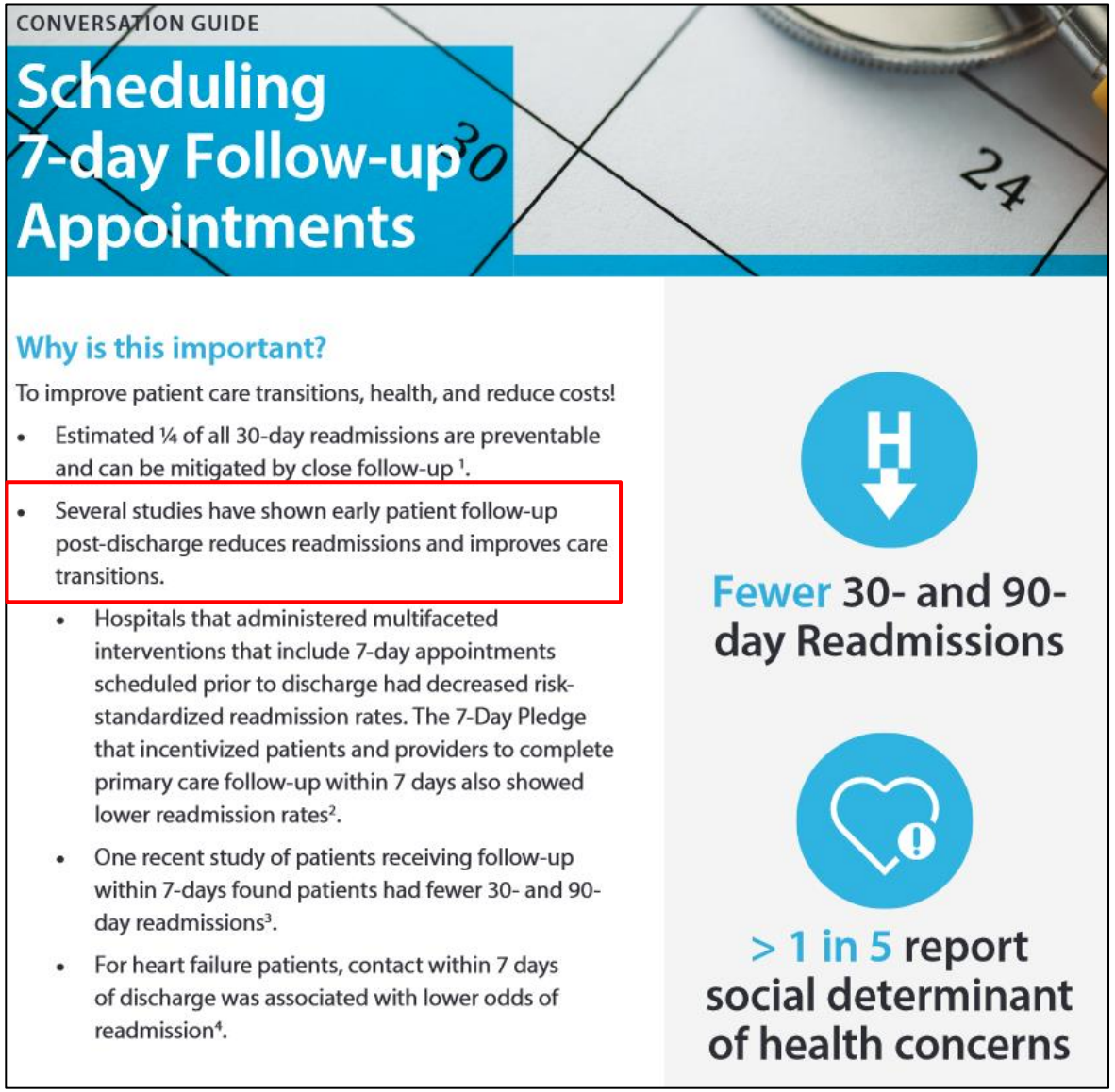
I-MPACT
INTEGRATED MICHIGAN PATIENT-CENTERED ALLIANCE IN CARE TRANSITIONS

- Integrated Michigan Patient-Centered Alliance in Care Transitions (IMPACT) [Reducing Readmissions Guide]



Example Tools: Scheduling Outpatient Follow Up Within 2 Weeks Post-Discharge

- Integrated Michigan Patient-Centered Alliance in Care Transitions (IMPACT) Provider Conversation Guide



CONVERSATION GUIDE

Scheduling 7-day Follow-up Appointments

Why is this important?

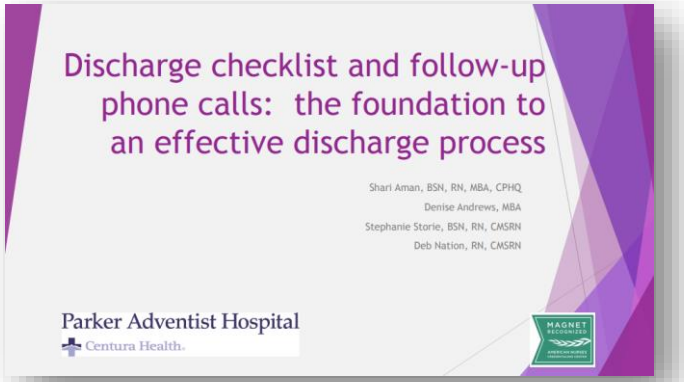
To improve patient care transitions, health, and reduce costs!

- Estimated ¼ of all 30-day readmissions are preventable and can be mitigated by close follow-up [1].
- Several studies have shown early patient follow-up post-discharge reduces readmissions and improves care transitions.
  - Hospitals that administered multifaceted interventions that include 7-day appointments scheduled prior to discharge had decreased risk-standardized readmission rates. The 7-Day Pledge that incentivized patients and providers to complete primary care follow-up within 7 days also showed lower readmission rates[2].
  - One recent study of patients receiving follow-up within 7-days found patients had fewer 30- and 90-day readmissions[3].
  - For heart failure patients, contact within 7 days of discharge was associated with lower odds of readmission[4].

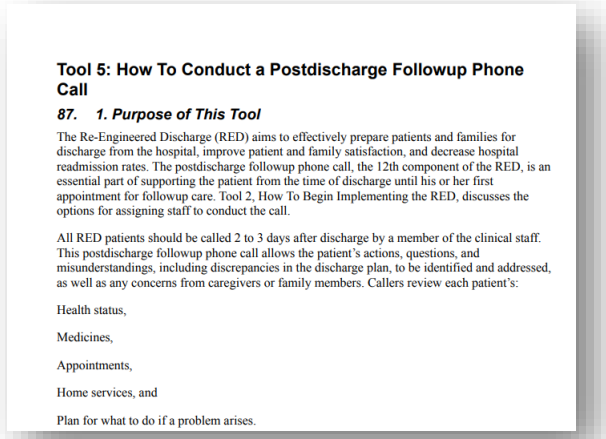
Fewer 30- and 90-day Readmissions

> 1 in 5 report social determinant of health concerns

Example Tools: Post Discharge Follow-up Calls



- Centura Health Presentation



Tool 5: How To Conduct a Postdischarge Followup Phone Call

87. 1. Purpose of This Tool

The Re-Engineered Discharge (RED) aims to effectively prepare patients and families for discharge from the hospital, improve patient and family satisfaction, and decrease hospital readmission rates. The postdischarge followup phone call, the 12th component of the RED, is an essential part of supporting the patient from the time of discharge until his or her first appointment for followup care. Tool 2, How To Begin Implementing the RED, discusses the options for assigning staff to conduct the call.

All RED patients should be called 2 to 3 days after discharge by a member of the clinical staff. This postdischarge followup phone call allows the patient's actions, questions, and misunderstandings, including discrepancies in the discharge plan, to be identified and addressed, as well as any concerns from caregivers or family members. Callers review each patient's:

Health status,

Medicines,

Appointments,

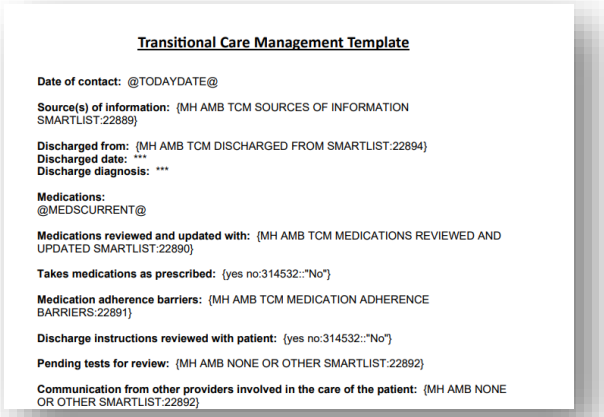
Home services, and

Plan for what to do if a problem arises.

- Project Re-Engenieered Discharge (RED)

Follow-up call scripts, and processes to help improve continuation of care once the patient leaves the hospital, and to identify any potential needs for early intervention

- Kentucky Hospital Association



Transitional Care Management Template

Date of contact: @TODAYDATE@

Source(s) of information: {MH AMB TCM SOURCES OF INFORMATION SMARTLIST:22889}

Discharged from: {MH AMB TCM DISCHARGED FROM SMARTLIST:22894}
Discharged date: ***
Discharge diagnosis: ***

Medications:
@MEDSCURRENT@

Medications reviewed and updated with: {MH AMB TCM MEDICATIONS REVIEWED AND UPDATED SMARTLIST:22890}

Takes medications as prescribed: {yes no:314532::"No"}

Medication adherence barriers: {MH AMB TCM MEDICATION ADHERENCE BARRIERS:22891}

Discharge instructions reviewed with patient: {yes no:314532::"No"}

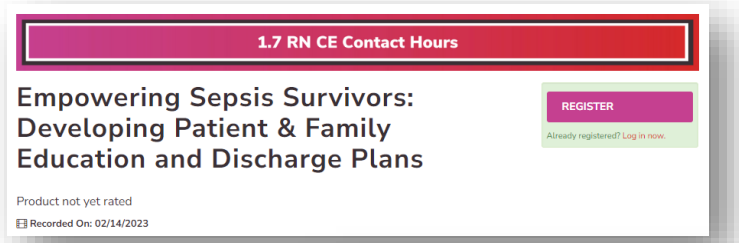
Pending tests for review: {MH AMB NONE OR OTHER SMARTLIST:22892}

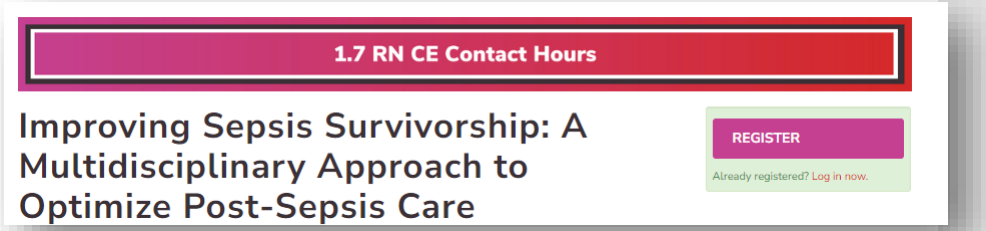
Communication from other providers involved in the care of the patient: {MH AMB NONE OR OTHER SMARTLIST:22892}

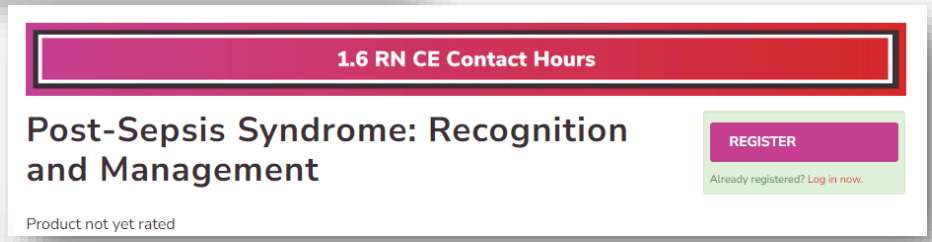
- University of Michigan – West

Sepsis Alliance Webinars

- Sepsis Alliance webinars, some with CEs (links are in the notes)

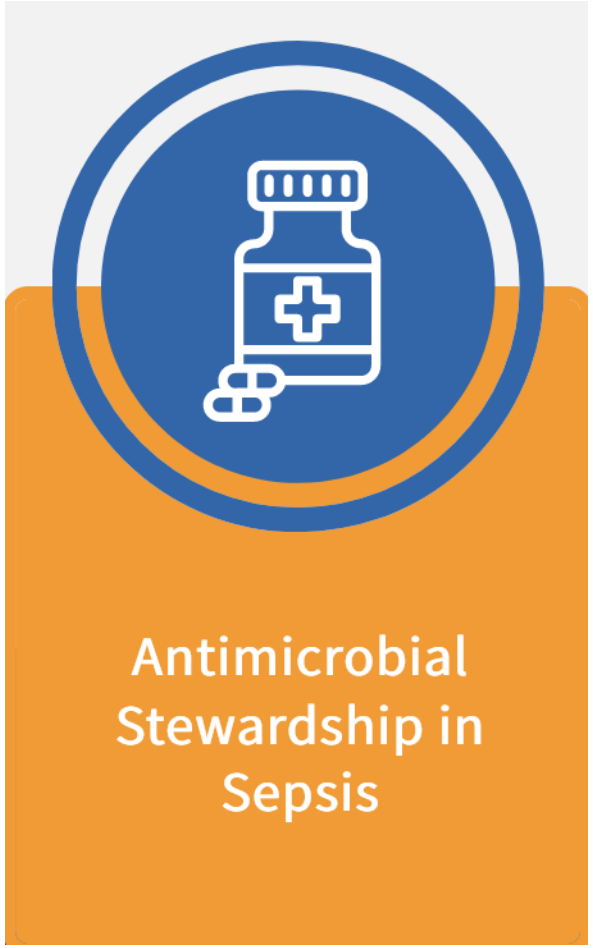






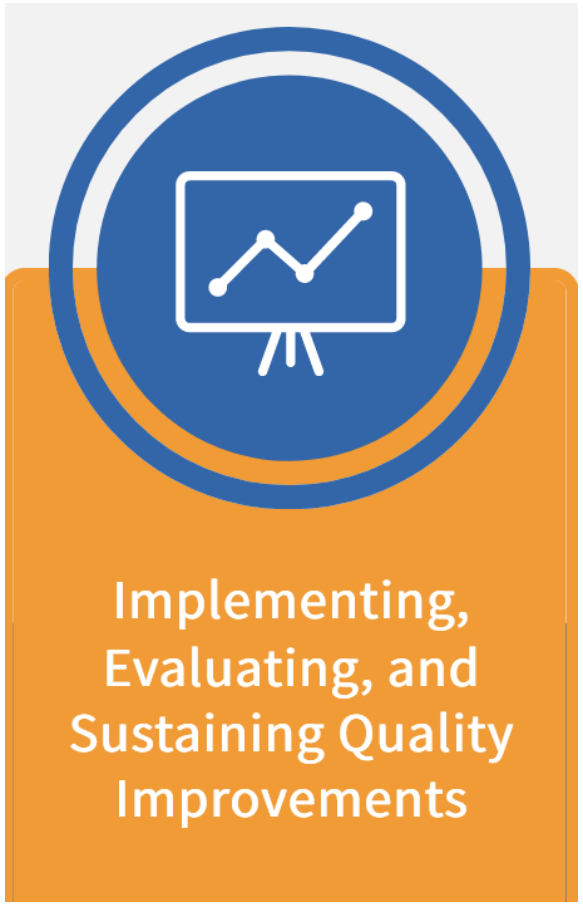
Free CEs AND Sepsis Education! Resources for post-sepsis care, discharge planning, and Post-Sepsis Syndrome for guidance in post-sepsis care

Section 7: Antimicrobial Stewardship in Sepsis



- Best practices in antibiotic treatment of sepsis
- Using local microbiology data to develop recommendations
- De-escalation tools

Section 8: Implementing, Evaluating, & Sustaining QI



Implementing quality improvements

- Resources from HMS hospitals including scorecards, feedback templates, and value analysis program
- Engaging stakeholders and prioritizing interventions

Evaluation of effectiveness

- Obtaining feedback, developing systems and processes, and analyzing data

Sustaining improvement

- Long term success tools, sustainability models

In summary

- The HMS Sepsis Toolkit covers the continuum of care for patients with sepsis
- The HMS Sepsis Toolkit provides a wide variety of references, resources, and tools
  - Find examples to best fit your organization's needs and context
  - Resources for both larger hospital systems, and smaller critical care access hospitals

Check out HMS-Toolkit

Send us feedback and new/updated resources at
HMS-SepsisToolkitTeam@med.umich.edu

Sepsis Alliance Webinar

- At the beginning of each new year, Sepsis Alliance identifies an influential program to highlight and share with their members. For 2024, HMS Sepsis has been invited to share ongoing work within the state of Michigan.
  - The webinar will introduce the viewers to HMS and HMS Sepsis and include a panel session with the following members:
    - Dr. Scott Flanders – HMS Program Director
    - Dr. Hallie Prescott - HMS Sepsis Physician Champion
    - Pat Posa, RN, BSN, MSA, CCRN, FAAN - Sepsis QI Expert
    - Dr. Amy McKenzie – Vice President of Clinical Partnerships and Associate Chief Medical Officer at Blue Cross Blue Shield of Michigan
    - Dr. Megan Cahill – Physician Champion for Henry Ford Macomb

SEPSIS ALLIANCE

Save the date!

Thursday, February 1st, 2024

2:00 – 3:30PM

REGISTER HERE

Questions

February Workgroups

- **Preoperative Testing Workgroup, February 6**
  Preoperative Testing Approaches and Updates from Across the Collaborative

  Discussion facilitated by the MVC Coordinating Center

- **Cardiac Rehabilitation Workgroup, February 22**
  Lessons Learned from Liaison-Mediated Cardiac Rehabilitation Referrals
  Presenter: Devraj Sukul, MD, MSc, Co-Director, MiCR & Associate Director, BMC2 PCI

All workgroups occur virtually from 12:00-1:00 p.m.

REGISTER HERE

Thank you!

MVC Coordinating Center:

Michigan-Value-Collaborative@med.umich.edu

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