2023 Hospitalist – Clinical Performance Registry (H-CPR)
Measure Specifications Manual

H-CPR (Hospitalist – Clinical Performance Registry) Measure #16
Referenced Society of Post-Acute and Long-Term Care Medicine's Policy D-14: Promotion of Physician's Orders for Life-Sustaining Treatment Paradigm and the Institute of Medicine of the National Academies: Key Recommendations on Addressing End of Life

Measure Title: Physician's Orders for Life-Sustaining Treatment (POLST) Form

Inverse Measure: No

Measure Description: Percentage of Patients Aged 65 Years and Older with Physician's Orders for Life-Sustaining Treatment (POLST) Forms Completed

National Quality Strategy Domain: Communication and Care Coordination

Care Setting: Post-Acute Care, Hospital, Emergency Department

Published Specialty: Emergency Medicine; Hospitalist; Post-Acute Care

Telehealth?: Yes

Type of Measure: Process, High Priority

High Priority Type: Care Coordination

Meaningful Measure Area: End of Life Care According to Preferences

Current Clinical Guideline: AMDA (The Society of Post-Acute and Long-Term Care Medicine) and the Institute of Medicine (IOM) of the National Academies support and promote the Physician's Orders for Life-Sustaining Treatment Paradigm

Published Clinical Category: End of Life Care

Number of Performance Rates: 1

Measure Scoring: Proportion

Risk Adjustment: No

Submission Pathway: Traditional MIPS

Numerator: Patients with a completed Physician's Orders for Life-Sustaining Treatment (POLST) form

Definitions:

- Physician's Orders for Life-Sustaining Treatment (POLST) form is defined as a legally recognized, transportable and actionable medical order – intended for seriously ill patients at high risk for mortality – that remains with the patient whether at home, in the hospital, or in a care facility; the form indicates patient-specified medical treatment preferences and is signed by the authorizing physician, physician assistant (PA), or nurse practitioner (NP)
- The following elements must be present and completed in the Physician's Orders for

Life-Sustaining Treatment (POLST) form:
    - Legally recognized decision maker verification
    - Cardiopulmonary Resuscitation (CPR) preferences (e.g., attempt CPR, DNR)
    - Medical Intervention (e.g., full code, comfort measures, limited/selective treatments)
    - Signed by eligible healthcare provider (e.g., physician, PA, or NP)
- NOTE: The approved version and title of the Physician's Orders for Life-Sustaining Treatment (POLST) form may differ slightly from state to state; variations in forms are acceptable as long as the elements listed above are present

Numerator Options
- Performance Met **(VH254)**:
    - Existing Physician's Orders for Life-Sustaining Treatment (POLST) form was acknowledged and documented in the medical record OR
    - Physician's Orders for Life-Sustaining Treatment (POLST) form was completed or updated and documented in the medical record OR
    - Documented reason for not acknowledging, completing or updating Physician's Orders for Life-Sustaining Treatment (POLST) form (e.g., patient refuses, patient is unresponsive or does not have capacity to complete, legally recognized decision maker is not present)
- Performance Not Met **(VH255)**: Physician's Orders for Life-Sustaining Treatment (POLST) form was not acknowledged, completed or updated, reason not specified

Numerator Exclusions: None

Denominator:
- Adult patients aged ≥ 65 years evaluated by the Eligible Professional (E/M Codes 99221-99223, 99231-99233, 99238-99239, 99291-99292, 99304-99310, 99315, 99316)
- NOTE: This measure is to be submitted a minimum of once per hospitalization for patients seen during the performance period.

Denominator Exclusions: None

Rationale:
For patients and their family caregivers, control over treatment decisions is a high priority with an illness diagnosed as serious and life-limiting. (Singer et al, 1999) The Physician Orders for Life-Sustaining Treatments (POLST) form is designed to supplement and build upon advanced care planning and advanced directives. Unlike advanced directives, which are often generalized and require intermediaries on the patient's behalf (Bomba et al, 2012), the POLST form allows patients to clearly communicate their wishes regarding medical treatment and ensure that those wishes are honored across the care continuum by codifying their advanced directives as portable medical orders. Clinicians are able to focus on treatments desired by patients and avoid treatments that are unwanted by patients. These legally recognized, HIPAA-compliant forms follow the patients wherever they go (e.g., home, skilled nursing facility, acute care facility), and are intended to be completed for patients who are seriously ill and unlikely to recover (Moss et al., 2008). The POLST form includes key preferences (e.g., DNR status) that can be missed during patient transfers between facilities. The use of the POLST form prevents unwanted hospitalizations, readmissions and invasive medical procedures for patients who are near death. (Lee et al, 2000) AMDA (The Society of Post-Acute and Long-Term Care Medicine)

and the Institute of Medicine (IOM) of the National Academies support and promote the Physician's Orders for Life-Sustaining Treatment Paradigm.

In a recent study, POLST completion was 49% in CA nursing home residents, identifying potential opportunity for quality improvement (Jennings).

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H-CPR (Hospitalist – Clinical Performance Registry) Measure #17
Referenced National Pressure Ulcer Advisory Panel's 2014 Prevention and Treatment of Pressure Ulcers: Clinical Practice Guidelines

Measure Title: Pressure Ulcers – Risk Assessment and Plan of Care

Inverse Measure: No

Measure Description: Percentage of Adult Post-acute Facility Patients That Had a Risk Assessment for Pressure Ulcers and a Plan of Care for Pressure Ulcer Prevention/Treatment Completed

National Quality Strategy Domain: Patient Safety

Care Setting: Post-Acute Care

Published Specialty: Post-Acute Care

Telehealth?: Yes

Type of Measure: Process, High Priority

High Priority Type: Patient Safety

Meaningful Measure Area: Preventable Healthcare Harm

Current Clinical Guideline: This measure aims to reduce the incidence of pressure ulcers which are included in the AHRQ PSI-90; it also supports the National Pressure Ulcer Advisory Panel's Prevention and Treatment of Pressure Ulcers Clinical Practice Guidelines

Published Clinical Category: Pressure Ulcers

Number of Performance Rates: 1

Measure Scoring: Proportion

Risk Adjustment: No

Submission Pathway: Traditional MIPS

Numerator: Adult Post-acute Facility Patients that Had a Risk Assessment for Pressure Ulcers and a Plan of Care for Pressure Ulcer Prevention OR Treatment Documented

Definitions

- Pressure ulcer: Localized damage to the skin and/or underlying soft tissue usually over a bony prominence or related to a medical or other device. The injury can present as intact skin or an open ulcer and may be painful. The injury occurs as a result of intense and/or prolonged pressure or pressure in combination with shear.
- Risk assessment:
    - Nationally recognized scale (e.g., Braden Scale or Braden Q Scale)
    - Nutrition

    - Activity and Mobility Limitations
    - History of skin breakdown
    - Cognition
- Plan of care – Prevention:
    - Scheduled skin integrity assessments
    - Minimize friction and shear
    - Minimize pressure with off-loading
    - Manage moisture
    - Maintain adequate nutrition and hydration
- Plan of care – Treatment:
    - Scheduled wound description/staging
    - Etiology of pressure (e.g., dementia, diapering)
    - Body repositioning
    - Nutritional status
    - Bacterial colonization/infection
    - Wound management (e.g., wound dressings, barrier creams, medicated creams, antibiotics, gauze)

Numerator Options

- Performance Met **(VH256)**: Patients who did have pressure ulcer risk assessment AND a plan of care for pressure ulcer prevention or treatment documented
- Performance Not Met **(VH257)**: Patients who did not have pressure ulcer risk assessment AND a plan of care for pressure ulcer prevention or treatment documented

Numerator Exclusions: None

Denominator:

- Adult patients aged ≥ 18 years evaluated by the Eligible Professional in the Post-acute Facility (E/M Codes 99304-99310, 99315, 99316)

Denominator Exclusions: None

Rationale:

Pressure ulcers have been associated with an extended length of hospitalization, sepsis and mortality. About 60,000 United States patients are estimated to die yearly from hospital-acquired pressure ulcers and their complications. (Sullivan, 2013) Pressure ulcers cause deep muscle and tissue damage that can require lengthy recovery times, depending on various risk factors, including age, blood pressure, body temperature, and protein intake. Pressure ulcers are also associated with fatal septic infections. (Redelings et al., 2005; Brem et al., 2010; Lyder, 2003) In addition, the risk of pressure ulcer development increases among older patients and among patients with cardiovascular and endocrine diseases. The total cost for treatment of pressure ulcers in the United States is estimated at $11 billion per year (Ackroyd-Stolarz, 2011), with an approximate financial impact of $18.8 million of Medicare program payments annually. (Kandilov et al., 2014) In post-acute care facilities, pressure ulcers can cost Medicare as much as $15,000 in treatments (Kandilov et al., 2014) and can range between $500 to $40,000 per pressure ulcer treated. (Lyder, 2003)

The care provided by clinicians, which includes implementation of an effective risk assessment and a plan of care for prevention of pressure ulcers or active treatment for patients with developing pressure ulcers, is critical to improving patient outcomes (Siem et al, 2003) and

saving costs through comprehensive prevention efforts (Tippett, 2009). The National Pressure Ulcer Advisory Panel's recommendations state that clinicians are responsible for the following: reviewing risk factors and identifying potential causes for development of pressure ulcers; implementing focused interventions to reduce, stabilize, and remove risk factors; and implementing targeted pressure injury management protocols as needed.

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H-CPR (Hospitalist – Clinical Performance Registry) Measure #20

Measure Title: Clostridium Difficile – Risk Assessment and Plan of Care

Inverse Measure: No

Measure Description: Percentage of Adult Patients Who Had a Risk Assessment for C. difficile Infection and, If High-Risk, Had a Plan of Care for C. difficile Completed on the Day Of or Day After Hospital Admission

National Quality Strategy Domain: Patient Safety

Care Setting: Inpatient/Hospital

Published Specialty: Critical Care; Hospitalist

Telehealth?: Yes

Type of Measure: Process, High Priority

High Priority Type: Patient Safety

Meaningful Measure Area: Healthcare-associated Infections

Current Clinical Guideline: This preventive screening is supported by the CDC, IDSA, SHEA, AHA, and Joint Commission.

Published Clinical Category: C. Diff

Number of Performance Rates: 1

Measure Scoring: Proportion

Risk Adjustment: No

Submission Pathway: Traditional MIPS

Numerator: Patients that had a risk assessment for C. difficile infection and, if high-risk, a plan of care documented on the day of or day after hospital admission

Definitions:

- Risk assessment (e.g., IDSA score, SHEA score, ZAR criteria):
  - Previous C. difficile infection
  - Recent antibiotic use (60-90 days prior to current admission)
  - Recent contact with healthcare facility (60-90 days prior to current admission)
  - Age ≥ 65
  - Recent use of proton pump inhibitor (PPI) or histamine receptor 2 antagonists (H2RA)
  - Diagnosis and procedure history (e.g., IBD, immunosuppression or hemodialysis)
- Plan of Care
  - Contact precautions if diarrhea is present

- Stool assay
- Initiation of antibiotics if indicated

Numerator Options:

- Performance Met **(VH260)**: Patients who did have a C. difficile infection risk assessment, AND if high-risk, a plan of care for C. difficile documented on the day of or day after hospital admission
- Medical Performance Exclusion (Denominator Exception) **(VH261)**: Patients who did not have a C. difficile infection risk assessment, AND if high risk, a plan of care for C. difficile for medical reasons documented by the Eligible Professional (e.g., C. difficile infection already documented prior to hospital admission, patients unable to provide history, patients on comfort measures)
- Performance Not Met **(VH262)**: Patients who did not have a C. difficile infection risk assessment, AND if high risk, a plan of care for C. difficile documented on the day of or day after hospital admission, no reason specified

Denominator:

- Any patient ≥ 18 years of age evaluated by the Eligible Professional (E/M Codes 99221-99223, 99231- 99233, & 99291-99292 AND Place of Service Indicator: 21)
- Transferred, eloped or AMA patients are excluded

Denominator Exclusions: None

Rationale:

Clostridium difficile is recognized as one of the most challenging pathogens in hospital and community healthcare settings, with a steadily rising global incidence of infection and concordant increase in mortality. (Tavetin 2013, LoVechio 2012) The Centers for Disease Control and Prevention (CDC) has assigned *C. difficile* infections (CDI) as an urgent threat because of its association with antibiotic use and high mortality and morbidity. (CDC 2013) Approximately 83,000 of the half a million patients who developed C. difficile in 2011 experienced at least one recurrence, and 29,000 died within 30 days of the initial diagnosis (CDC 2013). Hospitalized CDI patients have a 2.5 times increased 30-day mortality rate compared to in-patients without diarrhea; the CDI-related mortality is approximately 10%. (CDC 2013)

C. difficile infections can be prevented by using infection control recommendations and more careful antibiotic use. Numerous guidelines from the Centers for Disease Control and Prevention (CDC), the Infectious Diseases Society of America (IDSA), the Society for Healthcare Epidemiology of America (SHEA), the American Hospital Association (AHA), European Society of Clinical Microbiology and Infectious Diseases (ESCMID), and the Joint Commission recommend risk assessment of hospitalized patients to guide prevention and treatment. (Dubberke 2014, Cohen 2010, Bauer 2009). Multiple risk assessment tools have been developed (Cohen 2010, Tabak 2015, Kuntz 2016, Smith 2014) and different hospitals implement these assessments according to local protocols. Key risk factors identified in these assessment tools include previous CDI, recent contact with a healthcare facility, recent antibiotic use, immune status, and stomach acid reducing medications.

In the United States, the proportion of hospital discharges in which a patient received a discharge diagnosis for CDI more than doubled between 2000 and 2009. (Lucado 2012) Approximately 96% of patients with symptomatic C. difficile infection had received antimicrobials

within the 14 days before the onset of diarrhea and that all had received an antimicrobial within the previous 3 months. (Olson 1994) There is an increased risk of CDI that can persist for many weeks after cessation of antimicrobial therapy and which results from prolonged perturbation of the normal intestinal flora. (Anand 1994) Evidence also suggests that CDI resulting from exposure to C. difficile in a healthcare facility can have onset after discharge. (Palmore 2005, Chang 2006, Mayfield 2006). Advanced age is also an important risk factor for CDI, as evidenced by the several fold higher age-adjusted rate of CDI among persons more than 64 years of age. (McDonald 2006, Pepin 2004). Immunosuppression (chemotherapy, HIV, etc) is another risk factor for CDI. (Bilgrami 1999, Gorshulter 2001, Sanchez 2005) Epidemiologic associations with CDI have also been found for acid-suppressing medications such as histamine-2 blockers (HR2A) and proton pump inhibitors (PPI). (Dial 2005, Cunningham 2003, Dial 2004).

The CDC, IDSA, and SHEA currently recommend placing patients with diarrhea under contact precautions while C. difficile testing is pending. To decrease transmission, it is essential to place symptomatic patients under contact precautions as soon as diarrhea symptoms are recognized, as this is the period of greatest C. difficile shedding and
Contamination (Sethi 2010, Dubberke 2014) Contact precautions should remain in place for the duration of CDI illness when caring for patients with CDI, and some experts recommend continuing contact precautions for at least 48 hours after diarrhea resolves. (Sethi 2010). Assuring that patients with CDI are receiving appropriate severity-based treatment for their infection should be an additional goal for antimicrobial stewardship programs and may improve clinical outcome of CDI in these patients. (Dubberke 2014).

Despite recent CDI infection and control efforts, CDI remains at historically high rates. (Dubberke 2014) The CDC's *2015 Annual Report for the Emerging Infections Program for Clostridium difficile Infection* reported the incidence of healthcare associated CDI to be 82 per 100,000, community acquired to be 65 per 100,000, and the overall incidence rate to be 148 per 100,000. (CDC 2015) Multiple states have reported increased rates of C. difficile infection and mortality, noting more severe disease that is more virulent, and more resistant to traditional antibiotics for treatment. (CDC 2017 Fact Sheet)

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H-CPR (Hospitalist – Clinical Performance Registry) Measure #23

Measure Title: Avoidance of Echocardiogram and Carotid Ultrasound for Syncope

Inverse Measure: No

Measure Description: Percentage of Patients Presenting with Syncope Who Did Not Have an Echocardiogram or Carotid Ultrasound Ordered

National Quality Strategy Domain: Efficiency and Cost Reduction

Care Setting: Inpatient/Hospital

Published Specialty: Hospitalist

Telehealth?: Yes

Type of Measure: Process, High Priority

High Priority Type: Appropriate Use

Meaningful Measure Area: Appropriate Use of Healthcare

Current Clinical Guideline: American College of Cardiology, American Heart Association, European Society of Cardiology

Published Clinical Category: Syncope

Number of Performance Rates: 1

Measure Scoring: Proportion

Risk Adjustment: No

Submission Pathway: Traditional MIPS

Numerator: Patients That Did NOT Have an Echocardiogram or Carotid Ultrasound Ordered

- Performance Met **(VH268):** Echocardiogram AND Carotid Ultrasound NOT ordered
- Medical Performance Exclusion (Denominator Exception) **(VH269)**: Echocardiogram or Carotid Ultrasound ordered with documentation of 1) cardiac etiology of syncope suspected or determined (i.e., abnormal cardiac exam (new murmur, bruit), abnormal EKG, cardiac dysrhythmia, abnormal cardiac biomarkers, chest pain, shortness of breath, known heart disease, known or suspected structural heart disease) OR 2) neurologic etiology of syncope suspected or determined (i.e., abnormal neurologic exam, focal neurologic deficit)
- Performance Not Met **(VH270)**: Echocardiogram and/or Carotid Ultrasound ordered

Numerator Exclusions: None

Denominator:

- Any patient ≥ 18 years of age evaluated by the Eligible Professional PLUS
- Admitted or Placed in Observation Status **(V0717)** PLUS
- Diagnosis of Syncope
    - ICD-10: R55
- Transferred, eloped, AMA or expired patients are excluded

Denominator Exclusions: None

Rationale:
Syncope, defined as a transient loss of consciousness with rapid spontaneous recovery, is a common condition for which patients seek medical attention. It accounts for up to 6% of all hospital admissions. Given the broad range of causes (neurologic, vascular, metabolic, cardiac, psychologic, etc.) for syncope, clinicians may pursue many different diagnostic tests as part of their evaluation. Several studies have shown that many of these tests, including routine use of echocardiography and carotid ultrasonography, can be unnecessary and unlikely to contribute to the etiologic diagnosis and management of syncope. In a study of 2106 patients who received a battery of diagnostic testing during admission following a syncope episode, only 2% of echocardiograms performed revealed findings that contributed to the syncopal episode. An even smaller percentage of performed carotid ultrasounds affected the diagnosis or helped to determine the etiology of syncope. (Mendu) Another retrospective review of 128 patients admitted for syncope found that "for patients without suspected cardiac disease after history, physical examination, and electrocardiography, the echocardiogram did not appear to provide additional useful information." (Recchia) Another study of 1038 patient records coded as "syncope" revealed that only 0.94% of performed echocardiograms and 0% of performed carotid ultrasounds helped to establish the cause of syncope. (Johnson)

Per the 2017 ACC/AHA/HRS Guideline for the Evaluation and Management of Patients with Syncope, "routine cardiac imaging [transthoracic echocardiography] is not useful in the evaluation of patients with syncope unless cardiac etiology is suspected on the basis of an initial evaluation, including history, physical examination, or ECG." Also, carotid artery imaging is not recommended in the routine evaluation of patients with syncope in the absence of focal neurological findings that support further evaluation. "The evidence suggests that routine neurologic testing [including carotid ultrasound] is of very limited value in the context of syncope evaluation and management; the diagnostic yield is low, with very high cost per diagnosis." (Shen)

According to the 2018 European Society of Cardiology (ESC) Guidelines for the Diagnosis and Management of Syncope, echocardiogram is only indicated if there is previous known heart disease or data suggestive of structural heart disease or syncope secondary to cardiovascular cause. (Brignole)

Selected References:

Brignole M, Moya A, de Lange FJ, et al. 2018 ESC Guidelines for the Diagnosis and Management of Syncope. European Heart Journal. 39(21) 01 Jun 2018; 1883-1948.

Johnson PC, Ammar H, Zohdy W, et al. Yield of diagnostic tests in evaluating syncope presenting to a community hospital. South Med J. 2014; 107: 707-14.

Shen WK, Sheldon RS, Benditt DG, et al. 2017 ACC/AHA/HRS Guideline for the Evaluation and Management of Patients with Syncope: A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines and the Hearth Rhythm Society. Circulation. 2017; 136: e60-e122.

Mendu ML, McAvay G, Lampert R, et al. Yield of diagnostic tests in evaluating syncopal episodes in older patients. Arch Intern Med. 2009;169:1299–305.

Recchia D, Barzilai B. Echocardiography in the evaluation of patients with syncope. J Gen Intern Med. 1995;10:649–55

H-CPR (Hospitalist – Clinical Performance Registry) Measure #24

Measure Title: Appropriate Utilization of Vancomycin for Cellulitis

Inverse Measure: No

Measure Description: Percentage of Patients with Cellulitis Who Did Not Receive Vancomycin Unless MRSA Infection or Risk for MRSA Infection Was Identified

National Quality Strategy Domain: Efficiency and Cost Reduction

Care Setting: Emergency Department and Services, Hospital; Hospital Inpatient

Published Specialty: Acute Care; Critical Care; Emergency Medicine; Hospitalist

Telehealth?: Yes

Type of Measure: Process, High Priority

High Priority Type: Appropriate Use

Meaningful Measure Area: Appropriate Use of Healthcare

Current Clinical Guideline: IDSA Guidelines

Published Clinical Category: Cellulitis

Number of Performance Rates: 1

Measure Scoring: Proportion

Risk Adjustment: No

Submission Pathway: Traditional MIPS

Numerator: Patients Who Did NOT have Vancomycin (IV) Ordered Unless Known MRSA Infection Was Identified or Specific Risk for MRSA Infection Was Indicated

- Performance Met **(VH271):**
    - Vancomycin NOT ordered OR Vancomycin discontinued at admission
    OR
    - Vancomycin ordered AND MRSA infection identified or risk for MRSA infection documented (i.e., nasal colonization, prior MRSA infection, recent hospitalization, recent antibiotics, penetrating injury, IVDU, purulent cellulitis, SIRS criteria, sepsis, impaired host defense)
- Medical Performance Exclusion (Denominator Exception): None
- Performance Not Met **(VH272)**: Vancomycin ordered AND no MRSA infection identified OR no risk for MRSA infection documented

Numerator Exclusions: None

Denominator:

- Any patient greater than or equal to 18 years of age evaluated by the Eligible Professional PLUS
- Admitted or Placed in Observation Status **(V0717)** PLUS (E/M Codes 99218-23, 99234-36, 99281-85, 99291-92) PLUS
- Diagnosis of Cellulitis
    - A48.0, H05.011, H05.012, H05.013, H05.019, H60.10, H60.11, H60.12, H60.13, J34.0, J36, J38.3, J38.7, J39.1, K12.2, K13.0, K61.0, K61.1, L03.011, L03.012, L03.019, L03.031, L03.032, L03.039, L03.111, L03.112, L03.113, L03.114, L03.115, L03.116, L03.119, L03.211, L03.212, L03.213, L03.221, L03.311, L03.312, L03.313, L03.314, L03.315, L03.316, L03.317, L03.319, L03.811, L03.818, L03.90, L98.3, N48.22, N49.9, N61.0, N73.0, N73.1, N73.2
- Transferred, eloped, AMA or expired patients are excluded

Denominator Exclusions: None

Risk Adjustment: No

Submission Pathway: Traditional MIPS

Rationale:

The emergence of community-associated Methicillin-Resistant Staphylococcus Aureus (CA-MRSA) contributed to a significant increase in the incidence and severity of skin and soft tissue infections (SSTIs). A nearly 30% increase in hospital admissions for SSTIs occurred between 2000 and 2004. Annually, over 6 million visits to physician's offices are attributable to SSTIs. From 1993 to 2005, the number of annual emergency department visits for SSTIs increased from 1.2 million to 3.4 million. (Stevens) As a result of the emergence of community-associated MRSA, clinicians increased use of antibiotics targeted at MRSA. According to data from the National Hospital Ambulatory Medical Care Survey (NHAMCS), by 2010, 74% of all antibiotic regimens prescribed at emergency department visits for skin infections included an agent typically active against CA-MRSA. (Pallin)

Despite the drastic increase in use of antibiotics active against CA-MRSA, beta-hemolytic streptococci are still thought to be the predominant cause for non-purulent SSTIs. A large prospective investigation performed in the current era of CA-MRSA found that beta hemolytic streptococci remain the primary cause of diffuse, nonculturable cellulitis. Additionally, the use of antibiotic polypharmacy including vancomycin, if unnecessary, leads to increased drug reactions, risk for renal toxicity, increased medication costs, and emergence of antibiotic resistant bacteria. (Jeng)

In 2014, the Infectious Diseases Society of America (IDSA) updated practice guidelines regarding management of SSTIs and addressed the appropriate use of antibiotics active against CA-MRSA. According to the guidelines, non-purulent cellulitis due to MRSA is uncommon and treatment for MRSA is typically not necessary. The indications for MRSA coverage include penetrating trauma, injection drug use, purulent drainage, evidence of MRSA infection elsewhere, nasal colonization with MRSA, prior MRSA infection, recent hospitalization, recent antibiotic use, markedly impaired host defenses, and patients with SIRS. (Stevens)

Per a multicenter, double-blind, randomized superiority trial conducted by Moran et al., for patients with uncomplicated cellulitis, the addition of an antibiotic for CA-MRSA coverage did not result in higher rates of clinical resolution of cellulitis as compared to coverage for beta-hemolytic streptococcus alone. (Moran)

Despite the emergency of CA-MRSA, beta-hemolytic streptococci remain the predominant cause of non-purulent SSTIs (e.g. cellulitis) and universal treatment for these infections with an antibiotic active against CA-MRSA, such as vancomycin, is not necessary and may contribute to adverse drug reactions, increased medical costs, and the further emergence of antibiotic resistance.

Selected References:

Haran JP, Goulding M, Campion M, et al. Reduction of Inappropriate Antibiotic Use and Improved Outcomes by Implementation of an Algorithm-Based Clinical Guideline for Nonpurulent Skin and Soft Tissue Infections. Annals of Emergency Medicine. 2020 July; 76(1): 56-66.

Jeng A, Beheshti M, Li J, et al. The Role of Beta-Hemolytic Streptococci in Causing Diffuse, Nonculturable Cellulitis. Medicine (Baltimore). 2010 Jul; 89(4):217-226.

Moran GJ, Krishnadasan A, Mower WR, et al. Effect of Cephalexin Plus Trimethoprim-Sulfamethoxazole vs Cephalexin Alone on Clinical Cure of Uncomplicated Cellulitis. JAMA. 2017 May 23; 317(20): 2088-2096.

Pallin DJ, Binder WD, Allen MB, et al. Clinical Trial: Comparative Effectiveness of Cephalexin Plus Trimethoprim-Sulfamethoxazole Versus Cephalexin Alone for Treatment of Uncomplicated Cellulitis: A Randomized Controlled Trial. Clinical Infectious Diseases. 2013 June; 56(12): 1754-1762.

Shuman EK, Malani PN. Empirical MRSA Coverage for Nonpurulent Cellulitis; Swinging the Pendulum Away From Routine Use. JAMA. 2017 May 23/30; 317(20). 2070.

Stevens DL, Bisno AL, Chambers HF, et al. Practice Guidelines for the Diagnosis and Management of Skin and Soft Tissue Infections: 2014 Update by the Infectious Diseases Society of America. Clinical Infectious Diseases. 2014; 59(2):e10-52.

E-CPR (Emergency – Clinical Performance Registry) Measure #51

Measure Title: Discharge Prescription of Naloxone after Opioid Poisoning or Overdose

Inverse Measure: No

Measure Description: Percentage of Opioid Poisoning or Overdose Patients Presenting to An Acute Care Facility Who Were Prescribed Naloxone at Discharge

National Quality Strategy Domain: Effective Clinical Care

Care Setting: Multiple Care Settings

Published Specialty: Emergency Medicine; Hospitalist

Telehealth?: Yes

Type of Measure: Process, High Priority

High Priority Type: Opioid-Related

Meaningful Measure Area: Prevention and Treatment of Opioid and Substance Use Disorders

Current Clinical Guideline: Numerous organizations, including the American Medical Association and American Society of Addiction Medicine, recommend increased access to Naloxone for patients who are at high risk to reverse the effects and reduce the chance of death in the event of an opioid overdose, which includes expanded prescribing practices by clinicians

Published Clinical Category: Opioids

Number of Performance Rates: 1

Measure Scoring: Proportion

Risk Adjustment: No

Submission Pathway: Traditional MIPS

Numerator: Patients Who Were Prescribed Naloxone AND Educated About Utilization at Discharge

- **Performance Met (VE269):** Naloxone was prescribed at discharge AND patient was educated about use
- **Medical Performance Exclusion (Denominator Exception) (VE270):** Naloxone was not prescribed at discharge due to medical reasons such as allergy
- **Performance Not Met (VE271):** Naloxone medication was not prescribed at discharge OR patient was not educated about use
- **NOTE: Distribution of Naloxone to patient at discharge is also acceptable in lieu of Naloxone prescription**

Numerator Exclusions: None

Denominator:

- Any patient evaluated by the Eligible Professional (E/M Codes 99217, 99234-99236, 99238-99239, 99281-99285) PLUS
- Diagnosis of opioid poisoning from heroin, methadone, morphine, opium, codeine, hydrocodone, or another opioid substance
    - ICD-10: T40.0X1A, T40.0X1D, T40.0X1S, T40.0X2A, T40.0X2D, T40.0X2S, T40.0X3A, T40.0X3D, T40.0X3S, T40.0X4A, T40.0X4D, T40.0X4S, T40.1X1A, T40.1X1D, T40.1X1S, T40.1X2A, T40.1X2D, T40.1X2S, T40.1X3A, T40.1X3D, T40.1X3S, T40.1X4A, T40.1X4D, T40.1X4S, T40.2X1A, T40.2X1D, T40.2X1S, T40.2X2A, T40.2X2D, T40.2X2S, T40.2X3A, T40.2X3D, T40.2X3S, T40.2X4A, T40.2X4D, T40.2X4S, T40.3X1A, T40.3X1D, T40.3X1S, T40.3X2A, T40.3X2D, T40.3X2S, T40.3X3A, T40.3X3D, T40.3X3S, T40.3X4A, T40.3X4D, T40.3X4S, , T40.411A, T40.411D, T40.411S, T40.412A, T40.412D, T40.412S, T40.413A, T40.413D, T40.413S, T40.414A, T40.414D, T40.414S, T40.421A, T40.421D, T40.421S, T40.422A, T40.422D, T40.422S, T40.423A, T40.423D, T40.423S, T40.424A, T40.424D, T40.424S, T40.491A, T40.491D, T40.491S, T40.492A, T40.492D, T40.492S, T40.493A, T40.493D, T40.493S, T40.494A, T40.494D, T40.494S, T40.601A, T40.601D, T40.601S, T40.602A, T40.602D, T40.602S, T40.603A, T40.603D, T40.603S, T40.604A, T40.604D, T40.604S, T40.691A, T40.691D, T40.691S, T40.692A, T40.692D, T40.692S, T40.693A, T40.693D, T40.693S, T40.694A, T40.694D, T40.694S
- Disposition of Discharged
- Transferred, eloped or AMA patients are excluded **(V0700)**

Denominator Exclusions: None

Rationale:
The opioid epidemic in the United States claims hundreds of lives every day. One of medicine's best tools against this epidemic is Naloxone. Naloxone has proven to be the most effective method for reversing an opioid overdose in patients of all characteristics and has been shown to greatly reduce the chance of fatality. Naloxone is a non-selective, short-acting opioid receptor antagonist used to treat opioid induced respiratory depression. It is safe, has no addictive potential, and has mild side effects. The use of naloxone has been consistently recommended and promoted by numerous health organizations including the American Medical Association. Increasing the availability of Naloxone among the public, law enforcement, and community organizations is advocated by many organizations including the American Society of Addiction Medicine and is a priority of numerous states and federal health agencies. Despite these recommendations, a survey of opioid-related policies in New England emergency departments found that only 12% of departments would prescribe naloxone for patients at risk of opioid overdose after discharge. Promoting the prescription of Naloxone for patients discharged after an opioid overdose will ensure that the chance of fatality across all patient populations is significantly reduced.

Selected References:

- Bird, S. M., McAuley, A., Perry, S., & Hunter, C. (2016). Effectiveness of Scotland's National Naloxone Programme for reducing opioid-related deaths: a before (2006–10) versus after (2011–13) comparison. Addiction, 111(5), 883-891.
- CMS finalizes measures to help combat opioid crisis. (2018, April 16). Retrieved from https://www.the-hospitalist.org/hospitalist/article/162747/pain/cms-finalizes-measures-help-combat-opioid-crisis/page/0/3
- Dorp, E. L., Yassen, A., & Dahan, A. (2007). Naloxone treatment in opioid addiction: The risks and benefits. Expert Opinion on Drug Safety, 6(2), 125-132. doi:10.1517/14740338.6.2.125
- Dunne, R. B. (2018). Prescribing naloxone for opioid overdose intervention. Pain Management, 8(3).
- Dwyer, K., Walley, A. Y., Langlois, B. K., Mitchell, P. M., Nelson, K. P., Cromwell, J., & Bernstein, E. (2015). Opioid education and nasal naloxone rescue kits in the emergency department. Western Journal of Emergency Medicine, 16(3), 381.
- Help save lives: Co-prescribe naloxone to patients at risk of overdose. (2017). AMA Opioid Task Force. Retrieved from https://www.end-opioid-epidemic.org/wp-content/uploads/2017/08/AMA-Opioid-Task-Force-naloxone-one-pager-updated-August-2017-FINAL-1.pdf
- Kestler, A., Buxton, J., Meckling, G., Giesler, A., Lee, M., Fuller, K., Scheuermeyer, F. (2017). Factors associated with participation in an emergency department–based take-home naloxone program for at-risk opioid users. *Annals of emergency medicine*, *69*(3), 340-346.
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- Kounang, N. (2017, October 30). Naloxone reverses 93% of overdoses. Retrieved from https://www.cnn.com/2017/10/30/health/naloxone-reversal-success-study/index.html
- Public Policy Statement on the Use of Naloxone for the Prevention of Opioid Overdose Deaths. (n.d.). Retrieved June 13, 2018, from https://www.asam.org/docs/default-source/public-policy-statements/use-of-naloxone-for-the-prevention-of-opioid-overdose-deaths-final.pdf?sfvrsn=4 American Society of Addiction Medicine
- Reardon, J. M., Harmon, K. J., Schult, G. C., Staton, C. A., & Waller, A. E. (2016). Use of diagnosis codes for detection of clinically significant opioid poisoning in the emergency department: A retrospective analysis of a surveillance case definition. BMC emergency medicine, 16(1), 11.
- Wong, F., Edwards, C. J., Jarrell, D. H., & Patanwala, A. E. (2018). Comparison of lower-dose versus higher-dose intravenous naloxone on time to recurrence of opioid toxicity in the emergency department. Clinical Toxicology, 1-6.

E-CPR (Emergency – Clinical Performance Registry) Measure #56

Measure Title: Opioid Withdrawal: Initiation of Medication-Assisted Treatment (MAT) and Referral to Outpatient Opioid Treatment

Inverse Measure: No

Measure Description: Percentage of Patients Presenting with Opioid Withdrawal Who Were Given Medication-Assisted Treatment and Referred to Outpatient Opioid Treatment

National Quality Strategy Domain: Patient Safety

Care Setting: Multiple Care Settings

Published Specialty: Emergency Medicine; Family Medicine; Hospitalist; Internal Medicine; Primary Care; Urgent Care

Telehealth?: Yes

Type of Measure: Process, High Priority

High Priority Type: Opioid-Related

Meaningful Measure Area: Prevention and Treatment of Opioid and Substance Use Disorders

Current Clinical Guideline: U.S.Department of Health and Human Services, Substance Abuse and Mental Health Services Administration (HHS SAMHSA)

Published Clinical Category: Opioids

Number of Performance Rates: 1

Measure Scoring: Proportion

Risk Adjustment: No

Submission Pathway: Traditional MIPS

Numerator: Patients Who Were Given Medication-Assisted Treatment (MAT) and, at Time of Discharge to Home or Home Health, Referred to Outpatient Opioid Treatment

- Performance Met**: (VE281)** Buprenorphine or Methadone ordered AND, at time of discharge to home or home health, outpatient opioid treatment referral made
- Medical Performance Exclusion (Denominator Exception): **(VE282)** Refusal of care, allergy to medicine, altered mental status, Buprenorphine or Methadone not clinically indicated
- Performance Not Met: **(VE283)** Buprenorphine or Methadone not ordered OR Buprenorphine or Methadone ordered BUT outpatient opioid treatment referral not made at time of discharge to home or home health

- Note: Combination therapies ordered that include Buprenorphine or Methadone (such as Suboxone) are also acceptable
- Note: For patients who are not discharged in an encounter, an order of Buprenorphine or Methadone is sufficient to meet the Numerator criteria

Numerator Exclusions: None

Denominator:

- Any patient ≥ 18 years of age evaluated by the Eligible Professional (E/M Codes 99217, 99234-99236, 99238-99239, 99281-99285, 99291-99292, 99202-99205, 99212-99215) PLUS
- Diagnosis of opioid abuse or dependence with withdrawal
    - ICD-10: F11.13, F11.23
- Transferred to another acute care facility (same or higher level of care), eloped, AMA or expired patients are excluded **(V0704)**

Denominator Exclusions: None

Rationale:

According to the 2019 National Survey on Drug Use and Health, 2 million people in the United States had an opioid use disorder in 2018. In 2018, 47,600 people died from overdosing on opioids – that means that more than 130 deaths occurred every day from opioid-related drug overdoses.

Patients with opioid use disorder represent a vulnerable population that often seeks care in Emergency Departments and acute care hospitals. Often, they seek care due to withdrawal symptoms which may include abdominal cramping, nausea, vomiting, diarrhea, anxiety, restlessness, tremor, and muscle aches. Without appropriate treatment, these individuals may seek continued use of prescription opioids and/or illegal opioids such as heroin to transiently alleviate their symptoms. Medication Assisted Treatment (MAT) with opioid agonist treatment including Buprenorphine and Methadone has been shown to be effective in treating these individuals. These medications decrease withdrawal, craving, and opioid use.

A randomized clinical trial performed involving 329 opioid-dependent patients from 2009-2013 demonstrated superiority of buprenorphine treatment compared to brief intervention and referral. Treatment led to increased engagement in addiction treatment, reduced self-reported illicit opioid use, and decreased use of inpatient addiction treatment services.

Selected References:

1. Emergency department-initiated buprenorphine/naloxone treatment for opioid dependence: a randomized clinical trial.
2. Emergency Department-Initiated Buprenorphine for Opioid Dependence with Continuation in Primary Care: Outcomes During and After Intervention.

3. A Quality Framework for Emergency Department Treatment of Opioid Use Disorder.
    a. This is a good review that includes recommendations for opioid-related quality measures (including an MAT measure)
4. Emergency Departments — A 24/7/365 Option for Combating the Opioid Crisis
5. https://www.hhs.gov/opioids/sites/default/files/2019-11/Opioids%20Infographic_letterSizePDF_10-02-19.pdf
6. https://www.samhsa.gov/medication-assisted-treatment/medications-counseling-related-conditions#opioid-dependency-medications