National Patient Safety Goals 2019: Goal 7B. Preventing MRSA (NPSG.07.03.01)

What We Know

› The Joint Commission (TJC) is an independent not-for-profit organization responsible for accrediting and certifying nearly 22,000 healthcare organizations in the United States\(^\text{(10,11,12)}\)
  • TJC evaluates and verifies that healthcare organizations provide consistently high quality, safe, and effective health care. Facilities evaluated by TJC include ambulatory care facilities, behavioral health facilities, hospitals, critical access hospitals (i.e., rural health facilities with ≤ 25 beds and length of stay of ≤ 96 hours), home health agencies, long-term care facilities, laboratory services, and outpatient clinician offices where office-based surgery is performed
  
› In 2002, TJC developed National Patient Safety Goals (NPSGs) to promote high quality health care and patient safety. The NPSGs require healthcare facilities to implement evidence-based practices to prevent adverse health care events\(^\text{(10,11,12,13,14)}\)
  • When developing NPSGs, TJC solicits input from provider organizations, clinicians, consumer groups and other stakeholders, and examines sentinel event reports, healthcare databases, and medical safety literature. Goals must be readily measurable, meet or exceed current health care regulations, positively impact health outcomes, and relate to quality of health care or patient safety\(^\text{(10,11,13)}\)
  • Each NPSG contains specific elements of performance (EP; i.e., implementation requirements), which are measurable evidence-and expert-based strategies for achieving the NPSG\(^\text{(10,11,13)}\)
  • TJC does not require healthcare organizations to report sentinel events related to NPSGs, but reporting organizations demonstrate support of transparency, which is a key factor in developing a nonpunitive culture of safety\(^\text{(10,11,13,14)}\)
  • Healthcare organizations that do not satisfactorily adopt the NPSG-associated safety practices risk losing accreditation\(^\text{(10,11,13,14)}\)
  
› TJC reviews existing NPGS annually to update and create new goals as necessary\(^\text{for more information, see the Evidence-Based Care Sheet: National Patient Safety Goals 2019}\)
  
› Once NPSGs become widely adopted, they are retired and recategorized as TJC continuing Standards of Compliance. Currently, there are more than 250 TJC Standards of Compliance that comprise\(^\text{(10)}\)
  • Preventing medical errors
  • Procedures for verifying qualification and competence among medical, nursing, allied health, and other staff members
  • Patient rights and education
  • Infection control
  • Medication management
  • Emergency preparation
  • Data collection and surveillance

Nearly 20% of pathogens included in HAI reports are from the following multidrug-resistant organisms (MDROs; i.e., microorganisms, usually bacteria,
that are resistant to one or more classes of antimicrobial agents. Commonly encountered MDROs include methicillin-resistant *Staphylococcus aureus* (MRSA), vancomycin-resistant *Enterococcus*, extended-spectrum cephalosporin-resistant *Klebsiella pneumoniae*, *K. oxytoca*, *Escherichia coli*, *Enterobacter* species, carbapenem-resistant *Pseudomonas aeruginosa*, and resistant *acinetobacter* species. The virulent coagulase-positive MRSA bacterium is distinguished from the coagulase-negative staphylococci species that normally lives on the skin of all healthy people. The primary reservoir for MRSA in acute care hospitals is colonized or infected patients. MRSA can cause illnesses ranging from skin disorders to deadly pneumonia, sepsis, and meningitis and is resistant to treatment by all beta-lactam antibiotics (e.g., penicillins and cephalosporins). MRSA is easily transmitted by direct contact with an infected person, inhaling infected droplets dispersed by sneezing or coughing, or using a contaminated object.

For 2019, TJC retained NPSG.07.03.01 without changes, to address reducing the risk of health care-associated infections resulting in adverse or sentinel events (i.e., unexpected healthcare event that results in serious physical or psychological injury or death). TJC reported a total of 3,365 sentinel events from 2015 through 2018; 24 sentinel events for infection-related events were reported for the same period. One infection-related event was reported for 2018.

The Centers for Disease Control and Prevention (CDC) reported that for 2018 more than 119,000 people were diagnosed with MRSA or methicillin-susceptible *Staphylococcus aureus* (MSSA) bacteremia, and nearly 20,000 died. The CDC Emerging Infections Program reported a decline in MRSA bacteremia infections from strains that are associated with healthcare associated infections (HAIs), but no change in the incidence from the USA300 strain that causes most community-acquired infections. The most currently available National and State Healthcare-Associated Infections Progress Report from the CDC states there was an approximate 8% statistically significant decrease in MRSA bacteremia between 2016 and 2017. The CDC and U.S. Department of Health and Human Services are collaborating with U.S. Healthcare facilities to reduce hospital-onset MRSA caused bacteremia by 50% by the year 2020 using the 2015 baseline of 8,898 reported infections.

The National Healthcare Safety Network (NHSN) of the CDC is a voluntary reporting surveillance program that tracks HAIs. According to NHSN data, over 4,515 hospitals reported 365,490 HAIs during the period January 2011 through December 2014. Of the HAIs reported, MRSA accounted for the second most common MDRO pathogen at 11.8% after extended-spectrum beta lactamase *Enterococcus coli* at 15.4%. Note: Vancomycin-resistant enterococci are included in this statistic.

Information about MRSA infection can be reviewed in the *Quick Lesson About ... Methicillin-Resistant Staphylococcus Aureus Infections* and the series of *Nursing Practice & Skills* about MRSA infection.

TJC has retained unchanged NSPG Goal 7 for 2019 with its focus on reducing the risk of HAIs, specifically implementation of evidence-based practices to prevent MDRO HAIs. MRSA HAIs have been specifically targeted for prevention activities because of their virulence, resistance profile, and extended length of hospital stay, particularly in the ICU.

NPSG.07.03.01, Goal 7B, requires acute care hospitals to develop evidence-based practices designed to prevent HAIs caused by MDROs, including MRSA Goal 7B contains 9 EPs, which obligates healthcare facilities to implement periodic risk assessments for MDRO acquisition and transmission. Implement education about MDROs and prevention strategies for staff and independent practitioners. Undertake education about HAI prevention strategies for patients and families, as appropriate, who are infected or colonized (i.e., presence of organism without symptoms, a carrier) with MDROs. Institute a surveillance program for MDROs related to the risk assessment. Record and monitor MDRO prevention efforts and outcomes. Provide MDRO process and outcome data to key stakeholders such as licensed independent practitioners, hospital leadership, and nurse clinicians. Initiate policies and practices designed to reduce the transmission risk of MRDOs. Implement a laboratory alert system to identify new patients with MDRO.
In connection with the third EP of Goal 7B, prevention strategies against MRSA HAI require a cultural shift in healthcare organizations such that an emphasis is placed on prevention and there is zero tolerance for noncompliance with prevention strategies.\(^3,7\) The CDC recommends that patients be cultured to assess efficacy of the following 7 prevention strategies:\(^4\)

- Administrative support: Make MDRO prevention an organizational priority
- Education: Educate and train all healthcare providers (HCPs) regarding MDRO prevention
- Judicial use of antimicrobial agents
- MDRO surveillance: Monitor trends in MDROs, including use of active surveillance cultures (i.e., culturing patients without clinical signs or symptoms of MDRO infection)
- Infection control precautions: Use Standard and Contact precautions for all patients who are colonized or infected with an MDRO
  - Contact precautions recommended by the CDC include
    - placing the patient in a private room when possible, or cohorting patients (i.e., placing patients in a room together who have similar diseases or disorders)
    - wearing gloves and a gown for all interactions with the patient or the patient’s environment
    - wearing masks, goggles, face shields, and other personal protective equipment (PPE) if there is a risk of contact with body fluids, including air droplets from sneezing or coughing, when providing patient care
    - moving the patient outside of his/her room only for medically necessary purposes
    - using disposable or patient-dedicated equipment
- Adherence to recommended environmental cleaning and disinfection practices
- Provide selective decolonization of patients who are colonized with MRDOs

The most current guidelines of the Society for Health Epidemiology of America (SHEA)/Infectious Diseases Society of America (ISDA) categorize prevention of MRSA as either basic practices or special methods.\(^11\)

- Basic practices (i.e., evidence-based recommendations for which the potential to impact HAIs risk outweighs the potential for undesirable effects) should be adopted by all acute care hospitals
- Special methods should be implemented in locations and/or populations in hospitals when HAIs are not controlled using basic practices (e.g., in settings of an epidemic or outbreak)

The SHEA/ISDA guidelines to prevent MRSA in acute care hospitals include the following.\(^10\)

- Conduct a risk assessment to include the incidence and prevalence of MRSA
  - Risk assessments must include evaluation of the opportunity for MRSA transmission and estimates of the facility-specific MRSA rates of transmission
- Implement a program to perform daily reviews of laboratory results to identify and track patients in whom MRSA has been identified through clinical or surveillance testing
- Promote compliance with CDC or World Health Organization recommendations for hand hygiene
- Inform hospital leadership of relevant information using a feedback system regarding MRSA-related processes (e.g., hand hygiene and contact precautions) and outcomes measures (e.g., MRSA tracking with electronic medical record)
- Use contact precautions for patients who are colonized or infected with MRSA
  - The use of masks when providing care for patients who are colonized or infected with MRSA remains controversial. Some hospitals require wearing a mask to reduce the risk for nasal colonization in healthcare workers and other hospitals require masks only if the patient is known to have MRSA infection of the respiratory tract.\(^2\)
- Promote the judicious use of antibiotics
- Provide selective decolonization of patients and HCP who are colonized with MRSA
- Frequently clean and disinfect patient rooms and equipment
- Educate HCP regarding the importance of maintaining contact precautions
- Implement a laboratory-based alert surveillance system to identify newly colonized or infected patients
- Implement an alert system to identify transferred or readmitted colonized or infected patients
- Provide MRSA colonization or infection data and outcomes measures
- Educate patients and their family members regarding MRSA
- Perform active surveillance to screen patients who are at risk for MRSA and to screen HCP for MRSA in settings of disease outbreak
• Bathe ICU patients routinely with chlorhexidine
  – Investigators report that daily bathing of ICU patients with chlorhexidine gluconate results in a significant decrease in MRSA transmission and HAI^{12}

• Provide selective MRSA decolonization for colonized patients
  › Veterans Affairs Hospitals have implemented a program of strategies referred to as an “MRSA bundle” to prevent MRSA^{15}
  The MRSA bundle includes^{9}
  – active surveillance for nasal colonization with MRSA within 24 hours of patient admission, transfer, or discharge
  – contact precautions for all patients who are colonized or infected with MRSA
  – strict compliance with hand hygiene recommendations
  – an organizational cultural change that makes MRSA prevention the responsibility of all HCPs, including staff nurses, hospital administrators, and infection control practitioners

• Implementation of the MRSA bundle resulted in a 43% overall decrease during the 2005-2017 study period, driven primarily by the decline in MRSA and MSSA HAIs, which decreased 66% and 19%, respectively^{16}

### What We Can Do

› Learn about TJC NPSG 07.03.01, Goal 7B, and the prevention of MRSA HAIs so you can accurately assess the ways in which your hospital is working on this issue; share this information with your colleagues

› Collaborate with nurse managers, nurse educators, infection control clinicians, and/or quality assurance department staff members in your facility to develop policies and procedures to prevent MRSA HAIs

› Collaborate with members of your administrative team and TJC accreditation team to develop procedures that will enhance compliance with TJC guidelines and promote patient safety regarding preventing MRSA HAIs

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**References**


