Using the Guide to Patient Safety (GPS) to Assess MRSA Prevention Efforts

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Learning Objectives

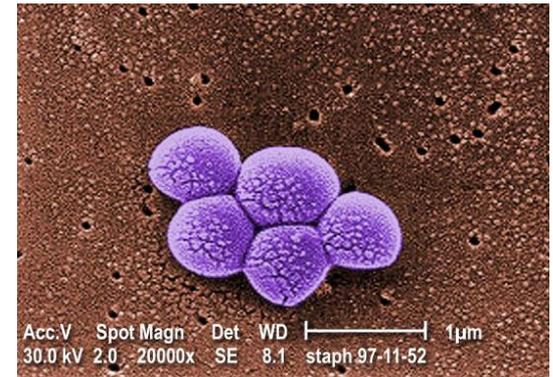Describe the components of the Guide to Patient Safety (GPS) tool

Explain how the GPS tool can be used to identify barriers to methicillin-resistant *staph aureus*, or MRSA, prevention

Discuss strategies for addressing these barriers in order to implement prevention practices in your unit or hospital

Background

- MRSA is a multidrug-resistant organism and a common cause of healthcare-associated infections (HAIs)

- MRSA causes infections in the community and can spread in health care settings

MRSA-focused infection prevention programs can reduce MRSA disease up to 70%

MRSA infections are an indicator of infection control effectiveness in a hospital
- Hospitals that can decrease MRSA infections can reduce other HAIs, like CLABSI, resulting in decreases in mortality

(Image Source: Biddle J, CDC, 1998; Ellingson K, presented at SHEA 2009, Abstract 512)
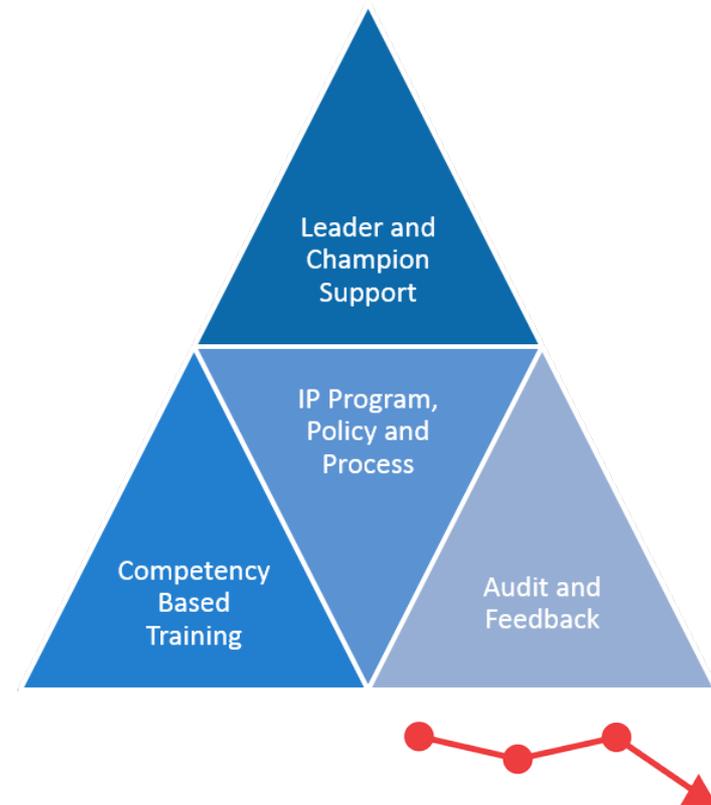
Surveillance of MRSA Infections and Assessing for Areas of Improvement

Initial assessments of gaps

Barriers exist to technical and adaptive practices

- Measures to assess MRSA infection transmission:
    - MRSA Infection Incidence Rate
    - Admission Prevalence of MRSA
    - Prevalence of MRSA colonization
    - Lab-Identified MRSA events
        - MRSA bloodstream infection rate
        - Percentage of *S. aureus* that is MRSA
        - Overall prevalence rate of MRSA

Leader and Champion Support

IP Program, Policy and Process

Competency Based Training

Audit and Feedback

Strategies to Prevent MRSA

MRSA Tier 1 – Basic strategies to prevent MRSA that have been proven to be effective

- Will be explored in GPS
- Include horizontal strategies such as hand hygiene, environmental hygiene, rapidly reporting MRSA lab results

MRSA Tier 2 – Advanced strategies that have less evidence, may be more expensive or labor-intensive

- Will be explored in Tier 2 Interventions module
- Includes chlorhexidine bathing

(Ellingson K, presented at SHEA 2009, Abstract 512)

6

A Place to Stop and Think and Improve Infection Prevention Efforts

Tier 1 Standardize Supplies, Procedures and Process
(complete all interventions: review and audit compliance with Tier 1 measures prior to moving to Tier 2)

Conduct basic MRSA Risk Assessment for facility infection burden and transmission risk.	Conduct case reviews of NHSN HO MRSA bacteremia LabID events (cases) to guide source-specific interventions.	Monitor and alert staff of patients with MRSA.	Promote and monitor hand hygiene compliance.	Initiate Contact Precautions for both colonized and infected patients and monitor adherence.	Assess effectiveness of cleaning and disinfection of environment of care and reusable patient care equipment.

(if MRSA bacteremia rates remain elevated, start with MRSA Guide to Patient Safety (GPS) and then proceed with additional interventions)

Perform HO MRSA bacteremia needs assessment with Guide to Patient Safety (GPS).

Tier 2 Enhanced Practices

Implement daily chlorhexidine bathing for populations at risk for developing MRSA bacteremia.	Consider decolonization for those patients colonized with MRSA and at high risk of infection.	Active Surveillance Testing (AST) for high-risk patient populations.	Consider gowning and gloving for all intensive care unit (ICU) patients.
AND/OR	**AND/OR**	**AND/OR**	

Guide to Patient Safety Purpose

Brief, self-administered troubleshooting guide

Help identify some key reasons why hospitals may not be successful in preventing MRSA infections

- Once barriers are identified, the MRSA GPS tool can then help identify possible strategies to overcome them

GPS for MRSA Questions

1. Do you currently have a well functioning team (or work group) focusing on MRSA prevention?

2. Do you have a team leader with dedicated time to coordinate your MRSA prevention activities?

3. Do you have an effective nurse champion for your MRSA prevention activities?

4. Do you have an effective physician champion for your MRSA prevention activities?

5. Is senior leadership supportive of MRSA prevention activities?

6. Do you currently assess or identify the source of MRSA BSIs (vascular catheter, surgical site, skin/soft tissue, etc.) to help focus MRSA prevention strategies?

7. Do you currently collect MRSA-related data (e.g., incidence, prevalence, adherence with prevention practices) in the unit(s) or populations in which you are intervening to reduce infections?

8. Do you routinely feed back MRSA-related data to frontline staff and physicians? (e.g., incidence, prevalence, adherence with prevention practices)

9. Do you have a system in place for communicating confirmed MRSA-positive cultures to frontline care staff?

10. Do you currently place patients colonized or infected with MRSA into Contact Precautions?

11. Are staff empowered to speak up if hand hygiene is not performed effectively?

12. Do frontline staff receive training about how to prevent transmission of MRSA and other multidrug-resistant organisms (MDROs)?

13. Do you have standardized processes for daily and discharge environmental cleaning/disinfection of patient rooms that includes monitoring of cleaning/disinfection quality?

MRSA Gaps, Action Plan and Challenges Scenario

Problem: Your hospital has the highest MRSA infection rate in the network of hospitals in your state

Gaps identified

- No formal observations of hand hygiene in place

- Staff members reported **NOT** feeling supported by other staff or physicians for their efforts to improve quality

Action Plan

- <u>Aim</u>: Initiate hand hygiene observations to target which units, types of health care personnel are lagging behind in hand hygiene

- <u>Action Plan</u>: View the educational modules, conduct an in-service with staff on importance of hand hygiene, place observers in units and get administration involved

MRSA Scenario: Strategies for Success

Possible Barriers	Solutions
Lack of attention to infection prevention including hand hygiene	• Identify a champion who is passionate about the program and take pride in providing excellent care. • Ensure they have some dedicated time to commit to the program, at least initially. • Consider co-champions to lighten the work load and provide mutual support. • Recognize them for their effort.
Lack of senior leadership support	• Engage executive leadership by providing data and a business case to demonstrate the need for time and resources for MRSA prevention.

Using GPS Results for Action

Identify barriers to improvement

Outline possible solutions

Integrate solutions into unit action plan

GPS

Act

Plan

Study

Do

Next Steps

Share the assessment tools with the multidisciplinary MRSA team

Work through the tool as a group to identify barriers, ensuring frontline staff are involved

Develop a PDSA to address barriers identified to executing your plan

Discuss how barriers might affect implementation of enhanced practices

References

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Speaker Notes

Speaker Notes: Slide 1

Welcome to the first module of the Tier 2, or enhanced interventions, to prevent methicillin-resistant *Staphylococcus aureus* (or MRSA) bacteremia. This module, titled "Using the Guide to Patient Safety (GPS) to Assess MRSA Prevention Efforts" will provide an overview of how the MRSA Guide to Patient Safety, or GPS, can be used to help re-examine your MRSA data and prevention efforts and help direct you towards specific enhanced MRSA prevention interventions. This module will provide you with practical tools and resources, as well as strategies, to augment your current quality improvement efforts.

Speaker Notes: Slide 2

This module was developed by national infection prevention experts devoted to improving patient safety and infection prevention efforts.

After completing this module, you will be able to:

- Describe the components of the Guide to Patient Safety (GPS) tool

- Explain how the GPS tool can be used to identify barriers to methicillin-resistant *staph aureus*, or MRSA, prevention

- Discuss strategies for addressing these barriers in order to implement prevention practices in your unit or hospital

18

As discussed in the Tier 1 course, MRSA, or methicillin-resistant *staph aureus*, is a multidrug-resistant organism and a common cause of healthcare-associated infections. If proper precautions are not taken, MRSA can easily be spread both in the community and health care settings. Studies have shown that MRSA-focused infection prevention programs can reduce disease from MRSA up to 70 percent. And, elevated MRSA infection rates may reflect deficiencies in general infection prevention practices or in device- or procedure-specific practices. So, looking closely at MRSA data can give you important new insight into MRSA infections as well as overall HAI challenges. Hospitals that can decrease MRSA infections will often see decreases in other HAIs as well.

Through initial gaps assessments, teams can identify both technical barriers, such as: lack of hand hygiene supplies, and adaptive barriers, like not having a process to feed back data to frontline staff.

In Tier 1 interventions, teams focus on improving their basic practices for MRSA prevention. As we move into Tier 2, or more enhanced interventions, it is important to take a moment to pause, review the progress and your MRSA infection data.

Speaker Notes: Slide 6

You have worked hard to implement the MRSA Tier 1 guidelines - the basic MRSA prevention strategies that are proven to be effective. You have conducted MRSA risk assessments of the facility infection burden and transmission risk, you perform case reviews of MRSA bacteremia cases, you have a process to notify frontline staff of patient MRSA status, promote hand hygiene adherence and the use of Contact Precautions for colonized patients, and assess effectiveness of cleaning and disinfection processes. Yet, lets say your MRSA rates remain high. What do you do next?

Speaker Notes: Slide 6 Continued

The MRSA Guide to Patient Safety (GPS), is the first step of moving on to Tier 2 MRSA strategies. These are enhanced strategies used to supplement basic prevention strategies. These interventions are supported by less evidence, and may be more expensive or labor-intensive to implement. The MRSA GPS tool will help you explore and revisit the Tier 1 MRSA strategies, highlighting barriers that might have hindered success, and recommending solutions to help achieve MRSA prevention.

Speaker Notes: Slide 7

This module will discuss how the GPS tool can provide an opportunity to pause and consider what barriers may be causing high MRSA rates in your hospital.

These tools are the pivot point to the Tier 2 prevention strategies. They should be used as a tool to pause and think about the next level of best practices.

Speaker Notes: Slide 8

The purpose of the GPS tool is to serve as a brief troubleshooting guide during infection prevention efforts. It was initially developed for CAUTI by the team at the University of Michigan, but the STRIVE national project team has worked to apply these principles in the creation of a MRSA specific tool. The GPS tool is designed to help identify some key reasons why hospitals, or a unit within a hospital, may not be as successful as they might like to be in preventing MRSA. Once barriers are identified, the MRSA GPS can help identify strategies to overcome these barriers.

Speaker Notes: Slide 9

For MRSA prevention, here are the Guide to Patient Safety questions that your team should answer:

1. Do you currently have a well functioning team (or work group) focusing on MRSA prevention?

2. Do you have a team leader with dedicated time to coordinate your MRSA prevention activities?

3. Do you have an effective nurse champion for your MRSA prevention activities?

4. Do you have an effective physician champion for your MRSA prevention activities?

5. Is senior leadership supportive of MRSA prevention activities?

6.   Do you currently assess or identify the source of MRSA BSIs (vascular catheter, surgical site, skin/soft tissue, etc.) to help focus MRSA prevention strategies?

7.   Do you currently collect MRSA-related data (e.g., incidence, prevalence, adherence with prevention practices) in the unit(s) or populations in which you are intervening to reduce infections?

8.   Do you routinely feed back MRSA-related data to frontline staff and physicians? (e.g., incidence, prevalence, adherence with prevention practices)

9.   Do you have a system in place for communicating confirmed MRSA-positive cultures to frontline care staff?

10. Do you currently place patients colonized or infected with MRSA into Contact Precautions?

11. Are staff empowered to speak up if hand hygiene is not performed effectively?

12. Do frontline staff receive training about how to prevent transmission of MRSA and other multidrug-resistant organisms (MDROs)?

13. Do you have standardized processes for daily and discharge environmental cleaning/disinfection of patient rooms that includes monitoring of cleaning/disinfection quality?

Speaker Notes: Slide 10

Let's consider a scenario for how this unit can use the GPS to improve their efforts at preventing MRSA Infections.

Your hospital has been able to identify the following two major gaps:

- First, although your hospital has a formal hand washing policy, observations are not conducted of how accurately and effectively staff are performing hand hygiene.

- Second, staff members reported **NOT** feeling supported by other staff or physicians for their efforts to improve quality.

The action plan for this particular hospital should include hand hygiene observations to help target which locations or units in the hospitals, and which type of health care personnel are lagging in hand hygiene.

Hospital leadership should also become involved in supporting hand hygiene by emailing unit specific rates and celebrating successes and giving infection control resources to help with hand hygiene promotion.

Speaker Notes: Slide 11

Hospitals can face a number of barriers including the lack of attention to infection prevention. Finding and labelling leaders within your organization helps ensure that someone is championing this cause.

Lack of senior leadership support can also be an immense barrier. Delineating how infection prevention can help economically and provide better patient care helps explain to senior leadership why this is important and can help change the culture.

Speaker Notes: Slide 12

Sometimes referred to as rapid cycle improvement, the PDSA model or plan, do, study and act model uses a trial-and-learning approach. This is considered an action-oriented model and is illustrated here.

The GPS tool can be easily integrated into this type of approach. By first answering the questions in the needs assessment tool and identifying barriers to improvement, one can take a look at possible options and solutions and implement those, and see if those actually impact MRSA rates.

Now that we have discussed what the needs assessment tools are and how teams can use them to help identify barriers to MRSA prevention, what are the next steps?

Share the GPS tool with your multidisciplinary MRSA team and encourage discussion. Consider working through the tool as a group to identify barriers and remember that diverse opinions will bring different perspectives. Use PDSA to address barriers identified and develop a lasting plan to create solutions to overcome these barriers.

And finally, discuss how barriers might affect implementation of enhanced practices.

Speaker Notes: Slide 14

No notes.