The case for a horizontal approach: IPs share their success story for VRE and MRSA

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There is an important place for both the horizontal, as well as the vertical approach to preventing healthcare-associated infections (HAIs). Knowing the advantages and disadvantages of each is important, and discerning when to use each strategy can be challenging. In August 2014, The University of Rochester Medical Center (URMC) in Rochester, New York, made the decision to discontinue granting "special status" to MRSA and VRE at two of their hospitals by no longer requiring patients colonized or infected with these organisms to be placed on contact precautions.

The horizontal approach to HAI prevention uses techniques that address all—rather than specific—organisms. It focuses on generic strategies such as standard precautions, hand hygiene, antimicrobial stewardship, and environmental cleaning and disinfection and daily chlorhexidine gluconate (CHG) bathing. They have implemented all of these horizontal prevention strategies. Daily CHG bathing is done on all patients in critical care and some step down units. The vertical approach targets specific epidemiologically significant organisms. Included in this category would be strategies such as active surveillance and implementation of contact precautions for any patient colonized or infected with those organisms such as ESBL, CRE, or *C. difficile*.

Switching to a horizontal approach for the prevention of MRSA and VRE might still be considered novel and controversial. In fact, URMC's Strong Memorial and Highland Hospitals are the only facilities in the region that practice it. However, the list of hospitals nationwide that no longer require contact precautions for MRSA or VRE is growing.

Post-implementation data at both Strong Memorial Hospital and Highland Hospital to date have shown no increase in MRSA or VRE infections. Significant cost savings and increased staff satisfaction have also been achieved.

Since August 2014, when contact precautions for MRSA and VRE were discontinued, the combined total savings for personal protective equipment and lab costs are estimated to be nearly $400,000. When surveyed, nursing staff reported that there was an improvement in work flow and increased time for patient interactions.

Prior to this approach, at certain times such as flu season, more than half of patients on certain patient care units were on contact precautions, making compliance difficult for staff.

Before implementing this approach, the following things should be carefully considered:

- Are your hand hygiene rates acceptable?
- What decolonization strategies are already in place, such as CHG bathing in intensive care units or for all patients with central lines?
- Do you need to augment infection control measures already in place?
- Are there any populations you might exclude?
- What is your baseline incidence rate for healthcare-associated MRSA and/or VRE?
- What are the cost implications?

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- Are there delays in patient placement due to lack of available patient rooms?
- How will you evaluate the effectiveness of a new program?

The URMC infection preventionists networked with other hospitals outside of their system that had already implemented this approach. They asked questions such as: How do regulatory and accrediting agencies respond to a horizontal approach? Many said they demonstrate to the agencies that, "We do what we say we do. We carefully develop our guidelines and protocols and then routinely monitor adherence to them."

Overall, the infection prevention staff found they needed both dissemination and diffusion for real change to take place. Dissemination is formal communication; diffusion is informal spread.

Implementation of a horizontal approach should incorporate the "4 E's," which include:

ENGAGEMENT

The infection prevention team spent many weeks preparing documents and proposal statements for senior leadership whose initial support was vital. Their support was immediate since they saw how patient flow would be facilitated. Provider support was gained by appealing to their intellect through dissemination of key studies in the literature. They engaged nurses and staff by emphasizing the advantage to work flow and patient safety.

EDUCATION

Widespread communication rather than formal didactic education was key. The infection prevention team was surprised to learn that many healthcare workers did not truly understand the concept of standard precautions, so re-education was needed. The team developed talking points and FAQs for patients, families, and staff. Public relations staff members assisted in the development and distribution of communication tools.

EXECUTION

There was unanticipated pushback from some of the local nursing homes despite distribution of an advance letter explaining our plan. Two weeks after implementation, Ann Marie Pettis, RN, BSN, CIC, director of infection prevention at URMC, received a call from the New York State Department of Health. A nursing home had called the health department to express their concern with the plan. "My epidemiologist and I participated in a phone conference with our epidemiologist state health department representatives, who were supportive once we shared our references and implementation plan," she said. The lesson learned is that long-term care facilities and the local health department are important stakeholders that need to be involved and consulted prior to implementation.

Intense coordination with the admitting department is also very important. The use of horizontal approaches such as hand hygiene, daily CHG bathing, sanitation of shared equipment such as stethoscopes and blood pressure cuffs, etc., as well as a robust environmental cleaning and antibiotic stewardship program are important components of a strong infection prevention program and are essential to a comprehensive horizontal approach to HAI prevention.

EVALUATION

Your HAI data must be carefully tracked. Staff and patients should be surveyed after implementation. Cost savings should be tracked and reported to senior leadership and staff. PS

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VRE

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