New Guidelines Take Aim at MRSA Infections

BY ELIZABETH MECHCATIE

The Infectious Diseases Society of America rolled out its first-ever guidelines for treating methicillin-resistant *Staphylococcus aureus* – including recommendations to battle the growing threat posed by MRSA-related skin and soft-tissue infections.

The comprehensive guidelines also outline evidence-based approaches on topics ranging from personal hygiene and wound care to antibiotic therapies for invasive MRSA, as well as options after vancomycin treatment failure.

The guidelines' primary objective is "to provide recommendations on the management of some of the most common clinical syndromes encountered by adult and pediatric clinicians who care for patients with MRSA infections," according to the executive summary (Clin. Infect. Dis. 2011;52:e18-55).

The guidelines provide adult and pediatric clinicians with guidance on how to treat relatively uncomplicated MRSA infections, as well as more serious infections, according to Dr. Catherine Liu, the guidelines' lead author and assistant clinical professor in the division of infectious diseases, University of California, San Francisco.

The new recommendations cover community- and hospital-associated MRSA infections, Dr. Liu added.

MRSA infections account for about 60% of skin infections seen in U.S. emergency departments, and invasive MRSA infections cause about 18,000 deaths a year, according to the Infectious Diseases Society of America (IDSA).

The evidence-based guidelines have been endorsed by the Pediatric Infectious Diseases Society, the American College of Emergency Physicians, and the American Academy of Pediatrics.

The guidelines are voluntary and "are not intended to take the place of a doctor's judgment, but rather support the decision-making process, which must be individualized according to each patient's circumstances," according to a statement issued by IDSA, which funded the guidelines.

A 13-member expert panel reviewed hundreds of scientific studies, papers, and presentations to create the recommendations.

The guidelines' sections start with a clinical question, followed by a numbered list of recommendations and a summary of the most relevant evidence to support the recommendations.

In most cases, the sections include information on pediatric considerations.

The guidelines also highlight areas that are controversial because of limited or conflicting data.

The first topic addressed is the management of skin and soft tissue infections due to MRSA, which have become a significant problem over the last decade, Dr. Liu said in an interview.

For example, MRSA is now the predominant organism causing purulent skin infections in patients who present to emergency departments, she noted.

The guidelines address several types of skin infections, including abscesses, cellulitis, and more complicated skin infections.

The guidelines also offer recommendations on the role of antibiotics, including situations in which they may not be indicated, and circumstances where they are recommended.

They also offer guidance "on specific antibiotic choices for the different types of skin infections," Dr. Liu noted.

Other topics covered include the management of MRSA pneumonia, bacteremia, and infective endocarditis; central nervous system infections; and bone and joint infections.

Additional sections review the role of adjunctive therapies in the treatment of MRSA infections, MRSA infections in neonates, and specific recommendations on vancomycin dosing and monitoring.

IDSA will update the guidelines as more information and newer antibiotics become available.

However, timely updating can be difficult because of the review and publication process, Dr. Liu commented.

For example, the Food and Drug Administration approved the intravenous cephalosporin antibiotic ceftaroline in October 2010 for acute bacterial skin and soft tissue infections, including cases caused by MRSA.

But approval came after the IDSA guidelines were finalized, and that information was not included.

Nonetheless, the guidelines note that ceftaroline "may become available in the near future for the treatment" of complicated skin and skin structure infections, Dr. Liu said.

The guidelines do not address active surveillance testing or other strategies aimed at preventing MRSA in health care settings, topics that have been addressed in previously released guidelines. ■

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Major Finding: Evidence-based clinical practice guidelines provide information on the treatment of infections caused by MRSA. The guidelines are the first released by IDSA on this condition.

Data Source: Hundreds of scientific studies, papers, and presentations reviewed by a 13-member panel of MRSA experts from across the United States.

Disclosures: IDSA funded the development of the guidelines. Of the expert panel's 13 members, 9 reported having potential conflicts of interest that included honoraria or research support from, or having served as a consultant or adviser to, pharmaceutical companies, including Astellas, Cubist Pharmaceutical, Forest, Merck, Ortho-McNeil, Pfizer, Sanofi-Aventis, Schering-Plough, and Theravance. The remaining authors of the guidelines, including the lead author, Dr. Catherine Liu, reported no conflicts.

Primary Care to Medical Schools: Teach the Medical Home

BY MARY ELLEN SCHNEIDER

Medical schools should devote more time to teaching students about care coordination, population health, and electronic health records so that students will be ready to be a part of the patient-centered medical home, according to a new report from four groups representing primary care physicians.

In a joint principles document, the American Academy of Family Physicians, American Academy of Pediatrics, American College of Physicians, and American Osteopathic Association outlined how all medical schools can provide students with a foundation in the elements of the medical home, regardless of whether they plan to pursue a career in primary care.

The groups recommend that students learn about the principles of the medical home, such as being a personal physician, leading a team of providers, providing care for the "whole person," coordinating care across the health care system, improving the quality and safety of care, and providing enhanced access.

For example, as part of the principle of whole-person orientation, the groups recommend that medical students practice motivational interviewing as way of encouraging behavioral change.

They also recommend that students work with health coaches who support the care of patients with complex conditions.

In learning about care coordination, the groups call for students to become familiar with electronic health records, e-visits, and electronic billing; learn to access online medical information; and use health information technology to support their own continuing education.

Students should learn about principles such as being a personal physician, leading a team of providers, and coordinating care across the health care system.

The report also recommends that medical schools teach students about various physician payment methodologies and current trends in health care costs.

For many medical schools, this will be a shift, said Dr. O. Marion Burton, president of the American Academy of Pediatrics and associate dean for clinical affairs at the University of South Carolina, Columbia.

While medical schools today teach some elements of the medical home model, such as the continuum of care, there's not a focus on the medical home itself, he said.

Dr. Burton said that he expects medical schools to embrace the recommendations for teaching the medical home, but that it will take 3-4 years for most institutions to do so.

The first step, which could take a year or more, will be to recruit new faculty members with experience with the medical home concepts.

The next step will be to determine exactly how to teach the model, whether through lectures or more hands-on training, or some combination of approaches.

And it may take another year to integrate the subject matter into the existing curriculum, he said.

"I don't see this as [happening] overnight," Dr. Burton explained in an interview.

Dr. Boyd R. Buser, vice president and dean of the Pikeville (Ky.) College School of Osteopathic Medicine, said that he believes it will be challenging to find faculty with expertise in the medical home elements.

Students, however, should not have a problem with the medical home concept, he said, adding that medical students are likely to be much more comfortable with the technology of the medical home, from using electronic health records to providing e-visits. "I think the students will embrace it," he said in an interview.

The major sticking point may simply be finding the time in an already packed curriculum, said Dr. Michael S. Barr, a senior vice president at the American College of Physicians.

The challenge for medical school officials, Dr. Barr said in an interview, will be figuring out what to take out of the current curriculum while still ensuring that physicians are prepared to enter residency training. ■