

MEMO / NOTE DE SERVICE



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| To / Destinataire | City of Ottawa Physicians Emergency Departments Community Health Centers Urgent Care Clinics Infection Control Departments | File/N° de fichier: |
| From / Expéditeur | Dr. David Salisbury Medical Officer of Health Ottawa Public Health | |
| Subject / Objet | Community Associated MRSA | Date: October 30, 2006 |

Throughout August and September 2006, community-associated methicillin-resistant *Staphylococcus aureus* (CA-MRSA) infections have been seen at a significantly increased rate in emergency departments, hospitals, and clinics in the Ottawa area. The emergence of this organism impacts empiric management of suspected *S. aureus* infections, as β -lactam antibiotics are not effective against CA-MRSA.

Background

Methicillin resistance is present in up to 75% of *S. aureus* isolates in some communities in the United States. In Canada, outbreaks of CA-MRSA infections have been reported but the prevalence of CA-MRSA is currently unknown. In the Ottawa area, several severe CA-MRSA infections requiring surgery, and at least two deaths, have been reported to Public Health over the past several months.

CA-MRSA differs from hospital-acquired MRSA (HA-MRSA) in the following ways:

1. None of the typical risk factors associated with HA-MRSA is present. Features consistent with HA-MRSA include: a) isolation of MRSA more than 48h after hospital admission; b) isolation of MRSA within 12 months of hospitalization, surgery, dialysis or residence in a long-term care facility; c) the presence of an indwelling catheter or percutaneous device at the time of MRSA isolation; d) prior isolation of MRSA. ¹
2. Patient risk factors also differ in that many CA-MRSA cases have been reported in young individuals with or without underlying illness, but who have been incarcerated, living in shelters or group homes, or who are IV drug users. Outbreaks in the US have been reported in otherwise healthy athletes on sports teams.
3. Clinical presentations typically include severe skin and soft tissue infections (SSTIs) such as abscesses that require drainage or severe cellulitis, and necrotizing pneumonia.
4. Antimicrobial susceptibility patterns differ. Both CA- and HA-MRSA are by definition resistant to all β -lactam antibiotics (such as cloxacillin, cefazolin, cephalexin, etc.), but CA isolates may be susceptible to additional antibiotics (e.g., clindamycin, trimethoprim-sulfamethoxazole, doxycycline) whereas HA isolates are more often resistant to these antibiotics.

Recommendations

A working group including infectious disease physicians, microbiologists, infection control professionals and Ottawa Public Health met to develop the following collaborative recommendations for Ottawa practitioners.

1. **Broaden admission screening criteria in acute care facilities** to include those who have had a 24 hour stay within the preceding 12 months in:
 - Acute and long-term care facilities
 - Correctional facilities
 - Other group residences (including shelters and group homes)
2. **CA-MRSA should be suspected and wound cultures obtained** if possible in the following clinical settings:
 - Likely *S. aureus* infection not responding after 48-72 hours of empiric antimicrobial therapy
 - Severe skin and soft tissue infections
 - Recurrent SSTIs requiring hospitalization or surgery (2 or more in six months)
3. **Treatment of CA-MRSA infections**
 - For patients without identified risk factors for CA-MRSA, no change in empiric therapy for presumed *S. aureus* infections is recommended.
 - For *S. aureus* infections suspected or known to be caused by CA-MRSA, therapy should be based on susceptibility results (if available). Empiric therapy should include trimethoprim-sulfamethoxazole, clindamycin, or doxycycline orally, or intravenous vancomycin. Rifampin may be added to either oral or IV therapy, but rifampin alone is NOT recommended. Consultation with an Infectious Diseases physician and / or transfer to an acute care facility may be indicated.
4. **Prevention**

Routine infection control practices are recommended to reduce the transmission of CA-MRSA. For patients and individuals with or at risk for CA-MRSA, these include measures such as:

 - Regular and frequent hand hygiene with soap and water or alcohol based hand rub, especially after contact with non-intact skin (e.g. dressing changes)
 - Regular bathing with soap and water
 - Covering skin lesions with bandages or dressings to minimize drainage
 - No sharing of personal care items (soaps, combs, razors, towels) or other personal items (beverages, cigarettes, cosmetics)

Contact Ottawa Public Health if an outbreak is suspected (spread beyond a family unit to a community group) - 613-580-6744 ext. 26325

¹ Barton M, Hawkes M, Moore D et al. Guidelines for the prevention and management of community-associated methicillin-resistant *Staphylococcus aureus* (CA-MRSA). A perspective for Canadian health care practitioners. In press, Can J Infect Dis Med Microbiol. Available online at http://www.chica.org/pdf/MRSA_draft-Pulsus-Final.pdf