



**Alliance of Independent Academic
Medical Centers' National Initiative:
*Improving Patient Care Through GME***

**Literature Review Team Resource
Infections: MRSA**

December 1, 2007



This document is a compilation of resources and publications identified by the AIAMC Literature Review Team under the category of "Infections: MRSA." This document contains web resources, guidelines, and a bibliography with categories of articles that pertain to MRSA.

Web Resources

- Getting Started Kit: Reduce Methicillin-Resistant Staphylococcus aureus (MRSA) Infection: How-to Guide. Available at: <http://www.ihl.org/IHI/Programs/Campaign/MRSAInfection.htm>. Accessed November 21, 2007.
- MRSA Post-Screening Labels. Available at: <http://www.ihl.org/NR/rdonlyres/AF7F9290-2D84-45B3-93103C01497A6DAE/0/2MRSAPostTreatmentScreeninglabels.pdf>. Accessed November 21, 2007. Description: A sheet of labels for documentation and tracking of MRSA screening. The labels were developed to increase reliability and compliance of treatment for patients who are Methicillin-resistant Staphylococcus aureus (MRSA) positive. Created by the [Luton and Dunstable Hospital NHS Trust](#), which is part of the [Safer Patients Initiative](#). Funded by [The Health Foundation](#), an independent charity based in London, the initiative is designed to improve the quality and safety of health care in the UK by encouraging the uptake and spread of best practices.
- Outpatient Management of Skin and Soft Tissue Infections in the Era of Community-Associated MRSA. Available at http://www.ama-assn.org/ama1/pub/upload/mm/36/ca_mrsa_desk_102007.pdf. Accessed November 19, 2007. Description: Informational flyer produced by the American Medical Association in collaboration with the Centers for Disease Control and Prevention (CDC) and the Infectious Diseases Society of America (IDSA) designed to help facilitate outpatient management of skin and soft tissue infections in the era of community-associated methicillin-resistant Staphylococcus aureus (CA-MRSA) infections.
- Ranji SR, Shetty K, Posley KA, Lewis R, Sundaram V, Galvin CM, Winston LG. Prevention of Healthcare-Associated Infections. Vol 6 of: Shojania KG, McDonald KM, Wachter RM, Owens DK, editors. Closing the Quality Gap: A Critical Analysis of Quality Improvement Strategies. Technical Review 9 (Prepared by the Stanford University-UCSF Evidence-based Practice Center under Contract No. 290-02-0017). AHRQ Publication No. 04(07)-0051-6. Rockville, MD: Agency for Healthcare Research and Quality. January 2007. Available at: <http://www.ahrq.gov/downloads/pub/evidence/pdf/qualgap6/hainfgap.pdf>. Accessed November 21, 2007. Description: Systematic review of the literature designed to determine the effects of quality improvement strategies on promoting adherence to interventions for prevention of selected (surgical site infections (SSI), central line-associated bloodstream infections (CLABSI), ventilator-associated pneumonia (VAP), and catheter associated urinary tract infections (CAUTI)) healthcare-associated infections (HAIs), and on HAI rates.
- Richmond I, Bernstein A, Creen C, Cunningham C, Rudy M. Best-practice protocols: Reducing harm from MRSA. Available at: <http://www.nursingcenter.com/pdf.asp>. Accessed November 21, 2007. Description: This article focuses on reducing methicillin-resistant Staphylococcus aureus (MRSA) infections as part of the Institute for Healthcare Improvement's 5 Million Lives Campaign to protect patients from five million incidents of medical harm. The series of articles presents a nursing management perspective on the six interventions recommended by the Campaign. Originally published in *Nursing Management*, citation: Forsha B, Richmond I. Best-practice protocols: Reducing harm from MRSA. *Nursing Management* 2007;38(8):22-27.

- Shojania KG, Duncan BW, McDonald KM, et al., eds. Making Health Care Safer: A Critical Analysis of Patient Safety Practices. Evidence Report/Technology Assessment No. 43 (Prepared by the University of California at San Francisco–Stanford Evidence-based Practice Center under Contract No. 290-97-0013), AHRQ Publication No. 01-E058, Rockville, MD: Agency for Healthcare Research and Quality. July 2001. Available at: <http://www.ahrq.gov/clinic/ptsafety/pdf/ptsafety.pdf>. Accessed November 21, 2007.
Description: This project aimed to collect and critically review the existing evidence on practices relevant to improving patient safety. The report contains a section on infection control practices.
- Zeller JL, Burke AE, Glass RM. MRSA Infections. *JAMA* 2007;298:1826 Available at: <http://jama.ama-assn.org/cgi/reprint/298/15/1826>. Accessed November 21, 2007.
Description: A patient fact sheet that defines the methicillin-resistant Staphylococcus aureus (MRSA) bacterium, identifies causes of infection and risk factors, and provides information on treatment and prevention.

Guidelines

- Kluytmans-VandenBergh MFO, Kluytmans JAJW, Voss A. Dutch guideline for preventing nosocomial transmission of highly resistant microorganisms (HRMO). *Infection* 2005;33:309-313. Available at: <http://www.springerlink.com/content/b841575n57056h4w/fulltext.pdf>. Accessed November 21, 2007.
- Coia JE, Duckworth GJ, Edwards DI, Farington M, Fry C, Humphreys H, Mallaghan C, Tucker DR, for the Joint Working Party of the British Society of Antimicrobial Chemotherapy, the Hospital Infection Society, and the Infection Control Nurses Association. Guidelines for the control and prevention of methicillin-resistant Staphylococcus aureus (MRSA) in healthcare facilities. *Journal of Hospital Infection* 2006;63S:S1-S44. Available at: http://www.his.org.uk/db/documents/MRSA_Guidelines_PDF.pdf. Accessed November 21, 2007.
- Guide to the Elimination of Methicillin-Resistant Staphylococcus aureus (MRSA) Transmission in Hospital Settings. Available at: <http://www.apic.org/Content/NavigationMenu/GovernmentAdvocacy/MethicillinResistantStaphylococcusAureusMRSA/Resources/MRSAguide.pdf>. Accessed November 21, 2007.
- Siegel JD, Rhinehart E, Jackson M, Chiarello L, for the Healthcare Infection Control Practices Advisory Committee. Management of multidrug-resistant organisms in healthcare settings, 2006. HICPAC Guideline, Centers for Disease Control and Prevention. 2006. Available at: <http://cdc.gov/ncidod/dhqp/pdf/ar/mdroGuideline2006.pdf>. Accessed November 21, 2007.

Web Sites of Interest

- Agency for Healthcare Research and Quality (AHRQ): <http://www.ahrq.gov/>
- Institute for Healthcare Improvement (IHI): <http://www.ihl.org/ihl>
- AHRQ Patient Safety Net (PSNet): <http://www.psnet.ahrq.gov/>

Articles

Categories of articles include: Prevalence/Incidence, Cost, Morbidity/Mortality, Interventions, Review Articles, General, Decontamination, Hand Washing and Hygiene, and Isolation (in this order).

Prevalence/Incidence

- Fridkin SK, Hageman JC, Morrison M, Sanza LT, Como-Sabetti K, Jernigan JA, Harriman K, Harrison LH, Lynfield R, Farley MM. Methicillin-resistant *Staphylococcus aureus* disease in three communities. *N Engl J Med* 2005;352:1436-1444.
- Grundmann H, Aires-de-Sousa M, Boyce J, Tiemersma E. Emergence and resurgence of methicillin-resistant *Staphylococcus aureus* as a public-health threat. *Lancet* 2006;368: 874-885.
- Klevens RM, Edwards JR, Tenover FC, McDonald LC, Horan T, Gaynes R, for the National Nosocomial Infections Surveillance System. Changes in the epidemiology of methicillin-resistant *Staphylococcus aureus* in intensive care units in US hospitals, 1992–2003. *Clin Infect Dis* 2006;42:389-391.
- Kuehnert MJ, Hill HA, Kupronis BA, Tokars JI, Solomon SL, Jernigan DB. Methicillin-resistant-*Staphylococcus aureus* hospitalizations: United States. *Emerging Infectious Diseases* 2005;11(6):868-872.
- Kuehnert MJ, Kruszon-Moran D, Hill HA, McQuillan G, McAllister SK, Fosheim G, McDougal LK, Chaitram J, Jensen B, Fridkin SK, Killgore G, Tenover FC. Prevalence of *Staphylococcus aureus* nasal colonization in the United States: 2001-2002. *Journal of Infectious Diseases* 2006;193(2):172-179.
- Moran GJ, Krishnadasan A, Gorwitz RJ, Fosheim GE, McDougal LK, Carey RB, Talan DA. Methicillin-resistant *S. aureus* infections among patients in the emergency department. *NEJM* 2006;355(7):666-674.
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- Rubin RJ, Harrington CA, Poon A, Dietrich K, Greene JA, Moiduddin A. The economic impact of *Staphylococcus aureus* infection in New York City hospitals. *Emerging Infectious Diseases* 1999;5(1):9-17.

Costs

- Chaix C, Durand-Zaleski I, Alberti C, Brun-Buisson C. Control of endemic methicillin-resistant *Staphylococcus aureus*: A cost benefits analysis in an intensive care unit. *JAMA* 1999;282:1745-1751.
- Kim T, Simor AE. The economic impact of methicillin-resistant *Staphylococcus aureus* in Canadian hospitals. *Infection Control Hospital Epidemiology* 2001;22:99-104.
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- Rubin RJ, Harrington CA, Poon A, Dietrich K, Greene JA, Moiduddin A. The economic impact of *Staphylococcus aureus* infection in New York City hospitals. *Emerging Infectious Diseases*

1999;5(1):9-17.

Morbidity/Mortality

Noskin G, Rubin RJ, Schentag JJ, Kluytmans J, Hedblom EC, Smulders M, Lapetina E, Gemmen E. The burden of *Staphylococcus aureus* infections on hospitals in the United States. *Arch Intern Med* 2005;165:1756-1761.

Rubin RJ, Harrington CA, Poon A, Dietrich K, Greene JA, Moiduddin A. The economic impact of *Staphylococcus aureus* infection in New York City hospitals. *Emerging Infectious Diseases* 1999;5(1):9-17.

Interventions

Bootsma MCJ, Diekmann O, Bonten MJM. Controlling methicillin-resistant *Staphylococcus aureus*: Quantifying the effects of interventions and rapid diagnostic testing. *PNAS* 2006;103:5620-5625.

Boyce JM, Havill NL, Kohan C, Dumigan DG, Ligi CE. Do infection control measures work for methicillin-resistant *Staphylococcus aureus*? *Infection Control and Hospital Epidemiology* 2004;25:395-401.

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Harbarth S, Martin Y, Rohner P, Henry N, Auckenthaler R, Pittet D. Effect of delayed infection control measures on a hospital outbreak of methicillin-resistant *Staphylococcus aureus*. *Journal of Hospital Infection* 2000;46:43-49.

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Muto CA, Jernigan JA, Ostrowsky BE, Richet HM, Jarvis WR, Boyce JM, Farr BM. SHEA guideline for preventing nosocomial transmission of multidrug-resistant strains of *Staphylococcus aureus* and enterococcus. *Infect Control Hosp Epidemiol* 2003;24:362-386.

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Verhoef J, Beaujean D, Blok H, Baars A, Meyler A, van der Werken C, Weersink A. A Dutch approach to methicillin-resistant *Staphylococcus aureus*. *European Journal of Clinical Microbiology & Infectious*

Diseases 1999;18:461-466.

Vriens M, Blok H, Fluit A, Troelstra A, Van Der Werken C, Verhoef J. Costs associated with a strict policy to eradicate methicillin-resistant *Staphylococcus aureus* in a Dutch University Medical Center: A 10-year survey. *European Journal of Clinical Microbiology & Infectious Diseases* 2002;21:782-786.

Review Articles

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Chen SF. *Staphylococcus aureus* decolonization. *Pediatric Infectious Disease* 2005;24(1):79-80.

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General

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Decontamination

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