



# Indiana State Department of Health

## Epidemiology Resource Center

### **Methicillin-resistant *Staphylococcus aureus* (MRSA) Resource Manual**

MRSA infection is caused by *Staphylococcus aureus* bacteria, often called “staph”. MRSA is a type of staph that has developed resistance to the antibiotic methicillin and other antibiotics that are commonly used to treat it.

Most serious MRSA infections occur in hospitals or other healthcare settings, such as nursing homes and dialysis centers. This type of MRSA is known as healthcare-associated MRSA, or HA-MRSA. Older adults and people with weakened immune systems are at most risk for HA-MRSA.

Another type of MRSA occurs among otherwise healthy people in the community outside the healthcare facility setting. This form, known as community-associated MRSA (or CA-MRSA), is most often responsible for skin and soft tissue infections such as abscesses, boils or other pus-filled lesions and a type of pneumonia, which can be serious. CA-MRSA has become more commonly reported in recent years, and outbreaks or clusters of cases have been described in schools, athletic teams, correction facilities, and occasionally the workplace. Factors that have been associated with the spread of CA-MRSA skin infections include: close skin-to-skin contact, openings in the skin such as cuts or abrasions, contact with contaminated items and surfaces, crowded living conditions, and poor hygiene.

Although staph and MRSA infections have been recognized for many years (*Staphylococcus aureus* became resistant to penicillin in the 1940s), recent media attention has raised public awareness, particularly regarding MRSA infections. However, using appropriate prevention measures and infection control guidelines at all times can reduce the spread of MRSA. The Indiana State Department of Health (ISDH) is pleased to offer the resources below to assist individuals and organizations in their efforts to prevent and control MRSA infections.

The MRSA Resource Manual which follows includes information from the ISDH, Centers for Disease Control and Prevention (CDC), Healthcare Infection Control Practices Advisory Committee (HICPAC), World Health Organization (WHO), Association for Professionals in Infection Control (APIC), Indiana Coalition for Antibiotic Resistance Education Strategies (ICARES), and other state health departments. These resources include links to a variety of information from fact sheets, brochures, posters, and other sources for the general public, schools, and other organizations/facilities and links to detailed medical guidelines for healthcare professionals. We hope this information will be helpful in reducing the risk of infection in the community and providing healthcare personnel with the most current information on MRSA.

This manual is divided into six major categories with subtopics under each. By clicking on a category or subtopic in the table of contents, you will be directed to the resources (links) available for that specific subject.

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<h3><b>General Information Concerning MRSA (Fact Sheets, Guides and Brochures)</b></h3>
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#### ➤ **General Public Information**

- MRSA Quick Facts, ISDH  
[http://www.in.gov/isdh/files/2011QuickFact\\_MRSA.pdf](http://www.in.gov/isdh/files/2011QuickFact_MRSA.pdf)
- MRSA Prevention Brochure, ISDH  
[http://www.in.gov/isdh/files/MRSA\\_Brochure.pdf](http://www.in.gov/isdh/files/MRSA_Brochure.pdf)

- MRSA Infections, CDC  
<http://www.cdc.gov/mrsa/>
- MRSA Educational Materials, CDC  
<http://www.cdc.gov/mrsa/library/posters.html>
- MRSA Educational Materials, Texas Department of State Health Services  
<http://www.dshs.state.tx.us/layouts/contentpage.aspx?pageid=8589936670&id=28571&terms=mrsa>
- Questions & Answers: Staph/MRSA Skin Infections, Los Angeles Department of Public Health  
<http://lapublichealth.org/acd/docs/StaphBrochureENG.pdf>

### ➤ **MRSA in the Home**

- 10 Tips for Preventing the Spread of Infection Flyer, APIC  
[http://www.apic.org/AM/Template.cfm?Section=Education\\_Resources&Template=/TaggedPage/TaggedPageDisplay.cfm&TPLID=91&ContentID=8738](http://www.apic.org/AM/Template.cfm?Section=Education_Resources&Template=/TaggedPage/TaggedPageDisplay.cfm&TPLID=91&ContentID=8738)
- Taking Care of Wounds That Are Draining or Have Not Healed Fact Sheet, Texas State Department of Health Services  
[http://www.dshs.state.tx.us/idcu/health/antibiotic\\_resistance/mrsa/Taking\\_care\\_wounds.pdf](http://www.dshs.state.tx.us/idcu/health/antibiotic_resistance/mrsa/Taking_care_wounds.pdf)
- Care of Your Skin Infection Poster, ISDH  
[http://www.in.gov/isdh/files/MRSA\\_SkinInfectionPoster.pdf](http://www.in.gov/isdh/files/MRSA_SkinInfectionPoster.pdf)
- Learning About MRSA: A Guide for Patients, Minnesota Department of Health  
<http://www.health.state.mn.us/divs/idepc/diseases/mrsa/book.pdf>
- Living With MRSA booklet, Washington State Department of Health  
<http://here.doh.wa.gov/materials/living-with-mrsa>

<b>MRSA Information for Healthcare Professionals</b>
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### ➤ **Healthcare Guidelines**

- Guide to the Elimination of MRSA Transmission in Hospital Settings, APIC  
[http://www.apic.org/AM/Template.cfm?Section=APIC\\_Elimination\\_Guides&Template=/CM/HTMLDisplay.cfm&ContentID=13194](http://www.apic.org/AM/Template.cfm?Section=APIC_Elimination_Guides&Template=/CM/HTMLDisplay.cfm&ContentID=13194)
- Guide to MRSA in Long-Term Care Settings, APIC  
[http://www.apic.org/AM/Template.cfm?Section=APIC\\_Elimination\\_Guides&Template=/CM/HTMLDisplay.cfm&ContentID=13194](http://www.apic.org/AM/Template.cfm?Section=APIC_Elimination_Guides&Template=/CM/HTMLDisplay.cfm&ContentID=13194)
- Precautions to Prevent the Spread of MRSA in Healthcare Settings, CDC  
<http://www.cdc.gov/mrsa/prevent/healthcare/precautions.html>

- Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings, 2007, HICPAC  
<http://www.cdc.gov/hicpac/2007IP/2007isolationPrecautions.html>
- Guideline for the Prevention and Management of MRSA, VRE, and VISA/VRSA in Indiana Health Care, 2004, ISDH/APIC-IN  
<http://www.in.gov/isdh/23462.htm>
- Guideline for Hand Hygiene in Healthcare Settings, 2002, CDC  
<http://www.cdc.gov/handhygiene/Guidelines.html>
- Guidelines on Hand Hygiene in Health Care, 2009, WHO  
[http://whqlibdoc.who.int/publications/2009/9789241597906\\_eng.pdf](http://whqlibdoc.who.int/publications/2009/9789241597906_eng.pdf)

#### ➤ **Medical Providers**

- Treatment of MRSA Infections, CDC  
<http://www.cdc.gov/mrsa/treatment/#healthcare>
- Information for Healthcare Providers, Massachusetts Office of Health and Human Services  
<http://www.mass.gov/eohhs/provider/guidelines-resources/clinical-treatment/diseases-conditions/communicable-diseases/mrsa/information-about-mrsa-for-healthcare-providers.html>
- Pocketcard 2011 Guidelines MRSA in Adults and Children, Infectious Diseases Society of America (IDSA)  
<http://www.guidelinecentral.com/viewers/MRSA.html>
- Photographs of MRSA Infections, CDC  
<http://www.cdc.gov/mrsa/symptoms/index.html>

#### ➤ **Healthcare Settings (Facilities)**

- Toolkit for Outpatient Clinics/Offices, Tacoma/Pierce County Health Department  
<http://www.tpchd.org/health-wellness-1/diseases-conditions/methicillin-resistant-staphylococcus-aureus-mrsa/mrsa-toolkit-outpatient-clinics-offices/>
- Management of Multidrug Resistant Organisms in Healthcare Settings 2006, HICPAC  
[www.cdc.gov/hicpac/pdf/guidelines/MDROGuideline2006.pdf](http://www.cdc.gov/hicpac/pdf/guidelines/MDROGuideline2006.pdf)

<b>MRSA Information for Schools and Childcare Facilities</b>
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#### ➤ **School Information**

- Information and advice about MRSA for Schools Officials, CDC  
<http://www.cdc.gov/mrsa/groups/advice-for-school-officials.html>
- Communicable Disease Reference Guide for School Personnel, ISDH  
<http://www.in.gov/isdh/23291.htm>
- A Parent's Guide to MRSA, California Dept. of Public Health  
<http://www.cdph.ca.gov/HealthInfo/discond/Documents/MRSAParentsGuide.pdf>
- Toolkit for Elementary Schools, Tacoma/Pierce County Health Department  
<http://www.tpchd.org/health-wellness-1/diseases-conditions/methicillin-resistant-staphylococcus-aureus-mrsa/mrsa-toolkit-elementary-schools/>
- Toolkit for Middle & High Schools, Tacoma/Pierce County Health Department  
<http://www.tpchd.org/health-wellness-1/diseases-conditions/methicillin-resistant-staphylococcus-aureus-mrsa/mrsa-toolkit-middle-high-schools/>

### ➤ **Childcare Information**

- Information on Staphylococcal Infections for Day Care Administrators and Care Givers, Texas State Department of Health Services  
[http://www.dshs.state.tx.us/idcu/health/antibiotic\\_resistance/mrsa/mrsa\\_daycareadmin.pdf](http://www.dshs.state.tx.us/idcu/health/antibiotic_resistance/mrsa/mrsa_daycareadmin.pdf)
- Information on Staphylococcal Infections in Day Care Facilities for the Parents, Texas State Department of Health Services  
[http://www.dshs.state.tx.us/idcu/health/antibiotic\\_resistance/mrsa/mrsaparents.pdf](http://www.dshs.state.tx.us/idcu/health/antibiotic_resistance/mrsa/mrsaparents.pdf)
- Toolkit for Childcare Programs, Tacoma/Pierce County Health Department  
<http://www.tpchd.org/health-wellness-1/diseases-conditions/methicillin-resistant-staphylococcus-aureus-mrsa/mrsa-toolkit-childcare-programs/>

## **MRSA Information for Athletes and Athletic Departments**

### ➤ **General Information for Athletes and Athletic Departments (Brochures, Fact sheets)**

- Information on Staphylococcal Infections in School Athletic Departments: Instructions for the Athlete, Texas State Department of Health Services  
[http://www.dshs.state.tx.us/idcu/health/antibiotic\\_resistance/mrsa/mrsa\\_athlete.pdf](http://www.dshs.state.tx.us/idcu/health/antibiotic_resistance/mrsa/mrsa_athlete.pdf)
- MRSA Information for Athletes booklet  
<http://www.cdph.ca.gov/HealthInfo/discond/Documents/CAMRSAForAthletes.pdf>
- Skin Infections in Athletes, Minnesota Department of Health  
<http://www.health.state.mn.us/divs/idepc/dtopics/athlete>
- Information on Staphylococcal Infections For School Athletic Departments, Texas State Department of Health Services

[http://www.dshs.state.tx.us/idcu/health/antibiotic\\_resistance/mrsa/mrsaathleticdepartment.pdf](http://www.dshs.state.tx.us/idcu/health/antibiotic_resistance/mrsa/mrsaathleticdepartment.pdf)

- A Guide for Coaches: Preventing the Spread of Bacteria Among Your Athletes brochure, New York State Department of Health  
<http://www.health.state.ny.us/publications/signature/1496.pdf>
- Information about MRSA for School Athletic Professionals, Massachusetts Office of Health and Human Services  
<http://www.mass.gov/eohhs/provider/guidelines-resources/services-planning/school-health/mrsa/information-about-mrsa-for-school-athletics.html>
- *Staphylococcus aureus* and the School Athletics Quick Facts, ISDH  
[http://www.in.gov/isdh/files/2011QuickFact\\_StaphandAthletics.pdf](http://www.in.gov/isdh/files/2011QuickFact_StaphandAthletics.pdf)

#### ➤ **Videos and Posters for the Athletic Setting**

- Prevention of MRSA in Athletic Setting – Video, Mecklenburg County Health Department  
<http://charmeck.org/mecklenburg/county/HealthDepartment/TopNews/features/Pages/MRSA.aspx>
- A Good Offense is Still the Best Defense – Poster, Texas State Department of Health Services  
[http://www.dshs.state.tx.us/idcu/health/antibiotic\\_resistance/educational/best\\_defense.pdf](http://www.dshs.state.tx.us/idcu/health/antibiotic_resistance/educational/best_defense.pdf)

### Correctional Facilities

#### ➤ **Correctional Facility - General Information**

- Management of MRSA Infections, 2005, Federal Bureau of Prisons  
<http://www.bop.gov/news/PDFs/mrsa.pdf>
- MRSA prevention slide presentation for correctional facility employees, Texas State Department of Health Services  
[http://www.dshs.state.tx.us/idcu/health/antibiotic\\_resistance/mrsa/mrsa\\_protect.ppt#256,2,MRSA](http://www.dshs.state.tx.us/idcu/health/antibiotic_resistance/mrsa/mrsa_protect.ppt#256,2,MRSA)
- Prevention, Treatment, and Containment of MRSA in County Jails, Texas State Department of Health Services  
[http://www.dshs.state.tx.us/idcu/health/antibiotic\\_resistance/mrsa/prevention\\_treatment.pdf](http://www.dshs.state.tx.us/idcu/health/antibiotic_resistance/mrsa/prevention_treatment.pdf)

#### ➤ **Videos and Poster for Correctional Facilities**

- MRSA Awareness - Video, 2007, Federal Bureau of Prisons  
<http://www.bop.gov/news/medresources.jsp>
- Unlock Your Skin's Health Poster, Texas State Department of Health Services  
<http://www.dshs.state.tx.us/layouts/contentpage.aspx?pageid=8589936670&id=28571&terms=mrsa+poster>

## Related MRSA Topics

### ➤ Antibiotic Resistance

- Get Smart: Know When Antibiotics Work, CDC  
<http://www.cdc.gov/getsmart/>
- Get Smart for Healthcare, CDC  
<http://www.cdc.gov/drugresistance/healthcare/default.htm>
- Indiana Coalition for Antibiotics Resistance Education Strategies (ICARES), Marion County Public Health Department  
<http://www.icares.org/>
- Antibiotic Use and Antibiotic Resistance Quick Facts, ISDH  
<http://www.in.gov/isdh/files/2010ATBResistanceQF.pdf>
- Anti-B's Coloring Sheet, Texas State Department of Health Services  
[http://www.dshs.state.tx.us/idcu/health/antibiotic\\_resistance/educational/antibio\\_edu\\_coloring\\_sheet.pdf](http://www.dshs.state.tx.us/idcu/health/antibiotic_resistance/educational/antibio_edu_coloring_sheet.pdf)
- Hospital vs. Home Setting Precautions for Antibiotic Resistant Bacteria Fact Sheet, Texas State Department of Health Services  
[http://www.dshs.state.tx.us/idcu/health/antibiotic\\_resistance/mrsa/antibio\\_edu\\_home\\_hospital.pdf](http://www.dshs.state.tx.us/idcu/health/antibiotic_resistance/mrsa/antibio_edu_home_hospital.pdf)

### ➤ Hand Hygiene

- Handwashing Campaign, ISDH  
<http://www.in.gov/isdh/24036.htm>
- Handwashing Quick Facts, ISDH  
[http://www.in.gov/isdh/files/2011QuickFact\\_Hand\\_washing.pdf](http://www.in.gov/isdh/files/2011QuickFact_Hand_washing.pdf)
- Clean Care is Safer Care, World Health Organization Campaign  
<http://www.who.int/qpsc/en/>
- General Hand Hygiene Posters, Department of Veterans Affairs  
[http://www.publichealth.va.gov/flu/materials/posters\\_hand\\_hygiene.asp](http://www.publichealth.va.gov/flu/materials/posters_hand_hygiene.asp)
- Hand Hygiene Educational Training, CDC  
<http://www.cdc.gov/handhygiene/training.html>

- Hand Hygiene Saves Lives: Patient Admission Video, CDC  
[http://www.cdc.gov/handhygiene/Patient\\_materials.html](http://www.cdc.gov/handhygiene/Patient_materials.html)
- Wash Your Hands poster, Texas State Department of Health Services  
[http://www.dshs.state.tx.us/idcu/health/antibiotic\\_resistance/mrsa/Handwashing\\_poster.pdf](http://www.dshs.state.tx.us/idcu/health/antibiotic_resistance/mrsa/Handwashing_poster.pdf)

➤ **Men Who Have Sex With Men**

- MSM fact sheet  
<http://www.cdph.ca.gov/HealthInfo/discond/Pages/MRSA.aspx>
- Clinical Update on MRSA in MSM  
[http://www.cdph.ca.gov/HealthInfo/discond/Documents/MRSA\\_MSM\\_Consumer.pdf](http://www.cdph.ca.gov/HealthInfo/discond/Documents/MRSA_MSM_Consumer.pdf)

➤ **Veterinarians**

- Facts for Veterinarians brochure, Ohio State University, College of Veterinary Medicine  
[http://www.odh.ohio.gov/ASSETS/4FF0B27FC779400284CB5EB6FFE09156/OSUMRS\\_AVets.pdf](http://www.odh.ohio.gov/ASSETS/4FF0B27FC779400284CB5EB6FFE09156/OSUMRS_AVets.pdf)
- Facts for Pet Owners brochure, Ohio State University, College of Veterinary Medicine  
<http://www.odh.ohio.gov/ASSETS/9C5A177A034D47C3BBF7DA81732A0A9D/OSUMRSAPets.pdf>

➤ **Workplace Setting**

- MRSA and the Workplace fact sheet, National Institute for Occupational Safety and Health  
<http://www.cdc.gov/niosh/topics/mrsa/>

➤ **Translations**

- A Parent's Guide brochure in Arabic, Chinese, Farsi, German, Hebrew, Japanese, Khmer, Korean, Lao, Pilipino, Portuguese, Russian, Spanish and Vietnamese, California Dept. of Education  
<http://inet2.cde.ca.gov/cmd/translatedparentaldoc.aspx?docid=883-914>

All information presented is intended for public use.  
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