

*Healthcare Associated Infection Advisory Committee
 March 27, 2015, 9:30AM
 Jesse Cooper Building, 417 Federal St. Dover, Delaware
 Minutes*

Attendance:

Infection Control Professional		
BayHealth – Kent	Kelly Gardner	C
BayHealth – Milford	Holly Helmick	C
Beebe	Donna Anderson	C
Christiana Care	Kathy Wroten	C
Genesis Healthcare	Maria Eckart	P
Nanticoke	Kimberly Adkins	C
Nemours/Al DuPont	Eileen Sherman	P
St. Francis	Helene Paxton	C
Wilmington VA		
Infectious Disease Physician		
1 of 4	Marci Drees	C
2 of 4	Steve Eppes	C
3 of 4		
4 of 4		
DE Hlth Care Facility Assn.	Yrene Waldron	P
Freestanding Surgical Center		
Dialysis Center		
Psychiatric Facility		
DE Division of Public Health	Awe Maduka-Ezeh	V-NC
DE DPH HAI Specialist	Judy Walrath	C

Direct Care Nursing Staff		
Academic Researcher		
Consumer Organization	Joanne Hasse	V-NC
Health Insurer		
Health Maintenance Org.		
Organized Labor		
Purchaser of Health Care		
Department of Corrections		
Guests		
Mary Peterson (Interagency Forms)		V-NC
Abby Wild		V-NC
Brenda Tincher (QI)		P
Michele Powers		P
Corinna Getchell		P
Rene (Maureen) Tomczak		P
Kim ??		P
Barbara Robbins (DE APIC)		C

- I. Call to Order
 - a. Kelly Gardner, Chair, called meeting to order at 9:40 AM.

- II. Approval of minutes
 - a. The minutes for December 12, 2014 were approved as distributed.

- III. Old Business
 - a. Quality Insights, Brenda Tincher: Stakeholder Support Letter discussion
 - i. Reviewed transcript of correspondence between Brenda and Kelly ([transcript attached at end of Minutes](#)). Quality Insights (QI) has a five year commitment to provide a professional relationship to:
 1. Provide free collaboration, resources, webinars, etc. as requested by the HAIAC, healthcare professionals, and the public;
 2. QI can collect and disseminate information;
 3. QI works with five states (DE, MD, PA, WV, and LA), and over 100 hospitals, information gathered from each state is available to all states and to the local communities;
 4. Acute Care facilities with the QI umbrella range widely in size and scope, from small local or rural hospitals to large metropolitan and teaching hospitals, and provides for wide range of experiences to draw upon
 5. Singular, narrow or wide ranging topics can be brought to the table
 6. QI will provide biweekly and bimonthly newsletters.
 - ii. HAIAC Subcommittees may reach out individually to QI

1. Both Reports/Communications and Prevention Subcommittees have already reached out to QI.
- iii. Facilities must verify their participation with QI by July.
- iv. [Sent Brenda the membership list with email addresses on 3/30/2015.](#)

b. Election Results

- i. Kelly announced results of ballot:
 1. Committee Chair – Kelly Gardner
 2. Committee Vice Chair – Helene Paxton
 3. Communications/Reports Subcommittee – Judy Walrath with Marci Drees agreeing to serve as Co-chair
 4. Membership – Donna Anderson
 5. Prevention – Eileen Sherman
 6. Regulations – Kathy Wroten
 - a. Reminder – all HAIAC members are to participate on at least one subcommittee.
- ii. Discussion to clarify by-laws related to terms of subcommittee chairs – discussion lead to unanimous agreement to leave by-laws as-is, and to use the two year election of the committee chair and vice chair as an opportunity to review the subcommittee leadership.

IV. New Business

- a. HAI Reports, Development of Timeline, & Discussion, Awe Maduka-Ezeh and Judy Walrath [attached at the end of the Minutes.](#)
 - i. Awe Maduka-Ezeh expressed appreciation to committee members for their patience with regard to delays in release of HAI reports as DPH worked through an event-filled 2014 (particularly with regard to the response to Ebola and to a difficult flu season)
 - ii. Judy discussed timeline, immediate needs, best way to depict information within reports – expected vs. observed; annually vs. quarterly for some info; align state reports to CMS. Judy will expand timeline to include healthcare worker vaccinations, dialysis centers, etc. per CMS requirements.
 - iii. Due to nature of reporting requirements, would Quality Insights be helpful with data and support, expected changes in 2016?
- b. HAI Coordinator's Role and Role of non-HAI DPH Staff (Immunization, TB, & Lab), Awe Maduka-Ezeh
 - i. Judy Walrath's role is to coordinate HAI activities and conduct flu surveillance;. Judy is to serve as the 'Face of DPH,' with regards to HAIs with Dr. Maduka as backup.
 - ii. Website will be updated with Judy's contact information, and Judy will update the website with reports.
 - iii. Prior to next HAIAC meeting, Dr. Maduka will produce communication for dissemination through HAIAC summarizing Judy's role.
 - iv. Judy will sit on all HAIAC Subcommittees.
- c. The inter-agency forms – Mary Peterson,
 - i. Regulations require use of a "uniform" form; failure to use the form can result in citations for 'non-professional practice.'

- ii. [The Interagency Facility Transfer Process and forms are attached to the Minutes.](#)
- iii. The Interagency Transfer forms have been approved by both state regulatory agencies; Form A is used to transfer a patient from Emergency Department to Inpatient Care; Form B is used to transfer a patient from Inpatient Care to Post-acute Care.
 - 1. Revisions to the Interagency Forms should be brought to the Post Acute Care Council (PACC) through the Delaware Healthcare Association, Susan Robb-Long. All revision requests or ideas must go through Susan Robb-Long in order to maintain a single point of contact.
 - a. The next PACC meeting is in late May, submit any revision recommendations to the DHA by April 30.
 - 2. Mary Peterson and Corinna Getchell will send the Interagency Transfer Process and Forms to all licensed Delaware agencies.
- iv. Mary Peterson is in contact with DE Healthcare Association
- v. Working on a grant application for funds to establish consistent messaging between agencies.
 - 1. For facilities that do not have electronic medical records: Direct Secure Medical Messaging to include necessary information to treat patients.
 - 2. For facilities with electronic medical records: ability to deposit patient data from acute to post acute care facilities
- d. **NHSN Updates** – NHSN has made changes to some of the HAI definitions and reporting requirements. Judy will post Powerpoint files from February website training as soon as the final, revised files become available.
- e. Ebola
 - i. All off-site offices should have state approved algorithm for Ebola. Awe will update and send out to include:
 - 1. Screening Questions
 - 2. Reminder to remain hyper-vigilant
 - 3. The number of people being monitored; high or low risk, pregnant
 - ii. A two week schedule will be set up for alert/reminder messaging
 - 1. Delaware does not have data for neighboring states and those populations can easily contact/infect Delawareans.
- f. One and Only Campaign.
 - i. One and Only campaign is a Safe Injection Practices education campaign from the Centers for Disease Control and Prevention (CDC)
 - 1. Judy will send out the link and information regarding the program and update the state website.
- g. Pneumococcal disease. Helene Paxton brought up a question about Prevnar 13 versus Pneumovax 23. The concern is regarding knowing which patients have been immunized against pneumococcal disease and with which vaccine. This is important to ensure patients are fully vaccinated while avoiding duplication of efforts. Judy Walrath will reach out to the DE Immunization Registry to find out if DelVax would be a resource to help with this.

V. Subcommittee Reports

- a. Regulations – Kathy Wroten
 - i. HAIAC meetings are open to the general public, public notice must be given 2 weeks prior to meeting dates, and the minutes must be published on the website. Click the following link for the Delaware Code Title 16, Health and Safety; Regulatory, Provisions Concerning Public Health; Chapter 10A. Healthcare

Associated Infections Disclosure Act:

<http://delcode.delaware.gov/title16/c010a/index.shtml>

Link to Title 16 sent to Kathy Wroten 3-30-2015.

- b. Reports & Communications –Marci Drees & Judy Walrath
 - i. Judy will serve as Chair, Marci as Co-chair.
 - ii. Target dates in Action Plan are being updated.
 - iii. Updating HAI website to include consumer groups
 - 1. Judy requested that recommendations for documents to include on the website, both for the professional and consumer sections, be sent to her.
 - 2. We have the ability to count hits to the website, but no information regarding who is looking.

- c. Membership – Yrene Waldron
 - i. Donna Anderson is the new chair for the Membership Subcommittee
 - ii. Kelly and Donna will meet to determine appointed members that have not attended meetings, and will send reminder/commitment letters.
 - iii. Should Preparedness be included on the HAIAC?
 - 1. Would Title 16 need to be changed to include Preparedness?

- d. Prevention – Eileen Sherman, working primarily on the Hand Hygiene Self-assessment, refining efforts to areas of greatest opportunity and greatest risk to patient
 - i. The invitation letter to include self-assessment framework, is on track for early April
 - ii. DE APIC supports parallel work to increase awareness at worksites. May need measurement tool
 - 1. How do facilities document hand hygiene
 - iii. Marketing campaign would be helpful
 - 1. Is it possible to get an intern whose interest is in marketing, website development to address both needs?
 - iv. Data collection
 - v. How to incorporate hand hygiene tools in surgery, anesthesia, outpatient, etc. areas
 - 1. Need to work on Tool Kit
 - a. Target efforts: common themes, greatest risk, etc.; for example patient medication administration
 - b. Define terms such as “Patient Environment”
 - c. Define expectations of glove changes
 - d. Checklist for CMS surveyors, and Feedback process
 - vi. Corinna Getchell will participate on next Prevention Subcommittee call

VI. Open Discussion

- a. Guidelines for the Management of Multidrug Resistant and Other Epidemiologically Important Organisms along the Health Care Continuum, Marci Drees, [attached at the end of the minutes](#).
 - i. Marci discussed 2015 updates,
 - ii. Request feedback by April 15 regarding:
 - 1. Revisions
 - 2. HAIAC member contact information

3. HAIAC member credentials
 4. Norovirus
 5. Hand hygiene, page 20, appendix I
- b. *Send by April 30, vote is May 15 by ballot for all HAIAC Committee members*

VII. Adjournment
 a. 11:44 AM

Respectfully submitted,

Kelly Gardner
Chair

Suzanne Mihok
Recorder

Next meeting: ~~June 26th~~. **June 19th, 9:30-Noon**

VIDEO CONFERENCE SITES: Available at the: Adams State Service Center in Georgetown, Library *and* Holloway Main Admin Bldg, New Castle, Room CR 198.

Telephone Bridge Lines:

The bridge phone numbers are:

New Castle County	302-255-2900
Kent County	302-741-8695
Sussex County	302-424-8675
From an Avaya site	52900

All numbers listed below access this bridge. Please use the number that is local to your county.

Start time of bridge access: 9:30am
 End time of bridge access: 12:00noon
 Duration of bridge access: 2.5 hours

Passcode (pin) for bridge access: will be set up

2015 Meeting Dates

March 27

~~June 26th~~. **June 19th, 9:30-Noon**

September 25

December 11

HAIAC meetings are held the 4th Friday of the last month of each yearly quarter, with the exception of the fourth quarter when the meeting is held on the 2nd Friday of December.

Quality Insights - HAI Project
 Confer Rights/Stakeholder
 Kelly Gardner and Brenda Tincher Transcript, December 2014

From: Kelly_Gardner@Bayhealth.org Sent: Friday, December 12, 2014 1:41 PM To: Tincher, Brenda	From: Tincher, Brenda" <btincher@wvmi.org> To: Kelly_Gardner@Bayhealth.org" Date: 12/18/2014 12:11 PM
When does the initiative start?	It started as soon as we started recruiting—but will be more active once our participant group is finalized. So we have activities ongoing
How will the start be communicated?	There won't really be a kick-off per se, but we have a intro video with voice over by Eve Esslinger and I have included the link: http://www.qualityinsights-qin.org/Initiatives/Hospital-Infections/Introduction-to-HAIs.aspx . I would encourage you to watch.
Many of the entities on the committee have already signed organizational commitment letters.....is it necessary/required that this group also do the same?	We recently received further clarification from CMS and no you are not required to sign the letter. By acknowledging that you have received our letter is an agreement in itself. I have the new email we are sending out if you would like to have the information. It does state “we are assuring that our partnership efforts will not duplicate State- and Federally-sponsored efforts.” I will be happy to send it.
How will signing this letter benefit the state wide initiatives in reducing HAI's?	By collaborating, the participants have more resources, more support
What is expected from the HAIA group?	Collaboration as they are able)
Are you willing to assist our Infection Prevention Sub-Committee and be an active participant with that group?	I will need to know what is involved.
Would you be willing to be a participant at the next meeting (conference call is available) to further discuss?	Yes and I will ask my Task Lead Eve Esslinger to join us.

TIMELINE FOR REPORTS ON HEALTHCARE-ASSOCIATED INFECTIONS

A. Hospital HAI Data (CLABSI, CAUTI, SSI-COLO, SSI-HYST, MRSA, CDI)

(1) 2013 Reports

- a. Quarterly
 - i. 3/24: All quarterly report data for 2013 compiled and sent out for review.
 - ii. 4/2: All discrepancies reported back from hospitals.
 - iii. 4/5: 2013 quarterly reports finalized.
 - iv. 4/7: 2013 quarterly reports posted on website.
- b. Annual
 - i. 4/6: Data table completed for 2013 Annual Report
 - ii. 4/13: All discrepancies reported back from hospitals.
 - iii. 5/30: Final draft of 2013 Annual Report completed and sent out for review.
 - iv. 6/30: Annual Report 2013 completed and posted on website.

(2) 2014 Reports

- a. Quarterly
 - i. 3/26: All quarterly HAI data for 2014 compiled and sent out for review.
 - ii. 4/2: All discrepancies reported back from hospitals.
 - iii. 4/7: 2014 quarterly reports finalized.
 - iv. 4/9: 2014 quarterly reports posted on website.
- b. Annual
 - i. 4/13: Annual HAI data for 2014 compiled and sent out for review.
 - ii. 4/20: All discrepancies reported back from hospitals.
 - iii. 9/30: Final draft of 2014 Annual Report completed and sent out for review.
 - iv. 10/30: Annual Report 2014 completed and posted on website.

Going forward, quarterly reports for each quarter will be sent out for review by COB on the last day of the following quarter and the full annual report will be sent out for review five months after the end of the year and finalized by 6/30 of the subsequent year.

- a. 1st quarter of 2015: Send out report for review on 6/30/15. Finalize by 7/16/15
- b. 2nd quarter of 2015: Send out report for review on 9/30/15. Finalize by 10/14/15
- c. 3rd quarter of 2015: Send out report for review on 12/31/15. Finalize by 1/14/16
- d. 4th quarter of 2015: Send out report for review on 3/31/2016. Finalize by 4/14/2016
- e. Annual report for 2015: Send out report for review on 5/31/2016. Finalize by 6/30/2016

The Who, What, When, and Why, of the Interagency Statewide Facility Transfer Forms

Background: In early February of 2006 a pilot program was launched to incorporate the use of the then newly created Interagency Transfer Forms for use when transferring patients/residents from one facility to another. The forms were originally introduced to healthcare providers in the fall of 2005 through means of meetings and presentations to providers, which also allowed an opportunity for comments and feedback. **The pilot period is slated to end December 31, 2006 and mandatory implementation will begin January 1, 2007.** We had also asked for comments and suggestions to make any appropriate revisions prior to the go live date of January 1, 2007.

WHO should be using the Interagency Statewide Facility Transfer Forms?

- All healthcare providers in the state of Delaware who are transferring patients/residents from one healthcare facility to another, whether you are
 - discharging a patient from a hospital to a long-term care facility,
 - transferring a resident from a long-term care facility to a hospital or hospital emergency room, or
 - transferring a patient from one healthcare provider to another within the State.

WHAT are the forms and where can I find them?

The Interagency Transfer Forms consist of three universal user friendly forms; found at www.deha.org. The templates are designed to be printed with each facility's letterhead.

1. Form A – Interagency Clinical Status Information (2 pages),
2. Form B – Interagency Nursing Communication Record (single page); and
3. Interagency Process Form.

WHEN should I start using the Interagency Statewide Facility Transfer Forms and do they replace existing transfer forms we are currently using?

Right now! **The pilot period will end December 31, 2006 and mandatory implementation will begin January 1, 2007.** Use the Interagency Transfer Forms in place of any other forms you are currently using within your facility.

WHY should I use the forms?

To improve the quality of care by providing pertinent clinical information to providers transferring or discharging patients/residents throughout the healthcare continuum. This process is an opportunity to improve the quality of care for those we serve in the State through collaboration, increased communication, and information sharing. If that isn't enough reason, **it will also soon be State Regulation. Is this now State Regulation?**

Interagency Statewide Facility Transfer Process, March 2015
INTERAGENCY INTRODUCTION LETTER

TO: Delaware Healthcare Providers

FROM: Joseph Letnaunchyn
Delaware Healthcare Association

Yrene Waldron
Delaware Health Facilities Association

Carol Ellis
Division of Long Term Care Residents' Protection

Mary Peterson
Office of Health Facilities Licensing and Certification

DATE:

SUBJECT: **Development and Implementation of New Statewide Interagency Transfer Forms**

For two years, a small task force has been working diligently to revise the current Interagency Transfer Form utilized by healthcare facilities when transferring patients/residents from one facility to another. The first phase of project development established a clear picture of the current situation, set specific measurable objectives and committed leaders to a vision for change. These activities served to tailor the change process to address the problems with the current form and its use in various settings. The charge of the task force was to develop a form(s) that would be truly universal; would facilitate the treatment of the patient/resident through the provision of necessary information; and, would be user friendly. We believe that we have developed such a product.

All healthcare providers share a vision of quality. We view this process as an opportunity to improve the quality of care for those we serve through collaboration, increased communication and information sharing. These forms will help develop the infrastructure for an improved continuum of care in the State of Delaware.

This memorandum is the second step in the process and serves as an invitation to join us in this change process and share our goal for improved communication. The next steps?

- The forms will be introduced to healthcare providers this fall. Meetings will be held, presentations will be made, and providers will have the opportunity to ask questions. Each healthcare provider will be provided with a template for the forms and may utilize the template with facility letterhead.
- Prior to December 31, 2005, healthcare providers should educate staff on the use of the forms.
- Use of the forms will begin on January 1, 2006. The forms will be piloted for one calendar year during which time providers may submit comments or suggestions.
 - Comments/suggestions may be submitted to Yrene Waldron, Delaware Health Care Facilities Association, at: DHCFA@aol.com.
- The pilot will end on December 31, 2006.
 - If comments indicate that the forms need to be revised, the task force will make appropriate revisions and will introduce the newly-revised forms for use.
 - If no revisions are necessary, the forms will become the standard for interagency transfers between providers.

We look forward to continuing to improve quality of care through our shared vision of a true care continuum.

Interagency Statewide Facility Transfer Process, March 2015

Action Required	Responsible Party	
	Long-Term Care Facility	Acute Care Facility
FORM – A		
INTERAGENCY CLINICAL STATUS INFORMATION		
Long-term care facility should complete when sending a resident to an Emergency Department or for direct/elective admission to hospital.	X	
Long-term care facility should also send copies of the Face Sheet, Medication Administration Record and any other applicable information that would assist the ED/Admitting physician should also be sent.	X	
FORM – B		
INTERAGENCY NURSING COMMUNICATION RECORD		
Acute care facility should contact long-term care requesting Interagency Nursing Communication Record be faxed within 2 hours.		
Acute care facility should provide: <ul style="list-style-type: none"> ➤ Name of unit ➤ Patient’s location on unit ➤ Unit phone number and fax number 		X
Long-term care facility should fax Interagency Nursing Communication Record (Form – B) to the acute care facility within 2 hours.	X	
When a patient is discharged from the acute care facility, the acute care facility should fax the following to the long-term care facility: <ul style="list-style-type: none"> ➤ Interagency Nursing Communication Record (Form – B) ➤ Patient/Family Discharge/Transfer Instructions sheet ➤ Interagency Discharge Orders ➤ PASARR <p>In addition to faxing the above, copies of the above records should be sent with the patient.</p>		X

Interagency Statewide Facility Transfer Process, March 2015

Patient name:
Date of birth:
Social Security #:

Form - A
INTERAGENCY CLINICAL STATUS INFORMATION

Purpose: To provide pertinent clinical information when sending a long term care resident to the Emergency Department or for direct elective admission to hospital.

Date of status change: _____ Time: _____

Instructions: To be completed by nurse and sent along with the Face Sheet, Medication Administration Record and any other pertinent information. Side 1

SENDING FACILITY		RECEIVING FACILITY		
Facility name: _____		Facility name: _____		
Address: _____		Contact name: _____		
Phone number: _____				
Name of physician notified: _____ Phone #: _____		Date: _____ Time: _____		
Name of family notified: _____		Date: _____ Time: _____		
Allergies/Reactions (include medications, food, latex environmental etc.): <input type="checkbox"/> No known allergies				
Isolation Precautions: <input type="checkbox"/> MRSA <input type="checkbox"/> VRE <input type="checkbox"/> C-Diff <input type="checkbox"/> Tuberculosis <input type="checkbox"/> Other: _____				
Risk: <input type="checkbox"/> aspiration <input type="checkbox"/> falls <input type="checkbox"/> skin breakdown Devices (i.e. pacer): _____				
Reason for transfer (Describe how the status of this resident has changed): _____				
Diet: _____				
COM PLETE THIS SECTION FOR EMERGENCY DEPARTMENT (ED) ADMISSION ONLY				
DETERMINED PRIOR TO ED VISIT TO ADDRESS CHANGE				
VITAL SIGNS Date: _____ Time: _____		TEST		
Temperature: _____ Pulse: _____		<input type="checkbox"/> Urinalysis		
Respiration: _____ Blood pressure: _____		<input type="checkbox"/> Pulse Oximetry		
		<input type="checkbox"/> Initial Glasgow		
		Coma Scale (if completed) _____		
PAIN LEVEL: <input type="checkbox"/> mild <input type="checkbox"/> moderate <input type="checkbox"/> severe		<input type="checkbox"/> Blood Sugar		
Pain location: _____		If insulin given: Type: _____ Time: _____ Dose: _____		
Time of last medication: _____				
Date of last bowel movement: _____		Date of last urine void: _____		
Any recent medication changes: <input type="checkbox"/> No <input type="checkbox"/> Yes, specify: _____				
<u>Resident is usually:</u>				
<input type="checkbox"/> alert & oriented x 3 <input type="checkbox"/> alert but disoriented/confused <input type="checkbox"/> poor alertness/somnolent				
<input type="checkbox"/> agitated <input type="checkbox"/> combative <input type="checkbox"/> other: _____				
TYPE OF CHANGE: (mark all that apply)				
<u>Respiratory/Cardiac:</u>				
<input type="checkbox"/> Shortness of breath: <input type="checkbox"/> room air <input type="checkbox"/> O ₂ at: _____ liters per minute: <input type="checkbox"/> Nasal Cannula <input type="checkbox"/> Mask				
<input type="checkbox"/> Cough: <input type="checkbox"/> productive <input type="checkbox"/> non-productive <input type="checkbox"/> wheeze <input type="checkbox"/> blood tinged sputum <input type="checkbox"/> frank hemoptysis				
<input type="checkbox"/> Chest pain: relieved with sublingual Nitroglycerin: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> palpitations				
<u>Change in Mental Status/Condition:</u>				
<input type="checkbox"/> disoriented/confused <input type="checkbox"/> seizure activity <input type="checkbox"/> decreased responsiveness				
<input type="checkbox"/> agitated <input type="checkbox"/> combative <input type="checkbox"/> unresponsive <input type="checkbox"/> other: _____				

Form -A Rev. 1/1/06

Patient Name: _____
 Date of Birth: _____
 Social Security #: _____

Form – A
INTERAGENCY CLINICAL STATUS INFORMATION

Side 2

TYPE OF CHANGE CONTINUED: (mark all that apply)

Fall: No Yes If yes, witnessed unwitnessed **History of falls:** No Yes, date of last fall: _____
 Fell from: bed chair standing other: _____
 Height of fall: _____ onto: carpet linoleum cement grass tile other: _____
 Cause of fall, if known (slip, trip, dizziness, etc.): _____
 Can resident recall fall? No Yes, resident's statement: _____

Head injury: Yes No Unknown **Loss of consciousness:** Yes No Unknown
 Resident on Anticoagulation/blood thinner therapy (Coumadin, Heparin, Aspirin, NSAIDS, Plavix, Lovanox): No Yes
 If on Coumadin, date of last INR: _____ Results: _____

Other changes in condition: _____
 Skin integrity status: _____
 Recent Surgery (date & describe): _____
 Recent Hospitalization (date & describe): _____

Resident has a history of:

<input type="checkbox"/> Alcohol abuse	<input type="checkbox"/> Deep vein thrombosis/ Pulmonary Embolism	<input type="checkbox"/> Hypertension	<input type="checkbox"/> Recent infection
<input type="checkbox"/> Asthma/Chronic Obstructive Pulmonary Disease	<input type="checkbox"/> Delirium	<input type="checkbox"/> Liver disease	<input type="checkbox"/> Seizure disorder
<input type="checkbox"/> Bleeding disorder/coagulopathy	<input type="checkbox"/> Dementia	<input type="checkbox"/> Myocardial Infarction/Heart Attack	<input type="checkbox"/> Stroke
<input type="checkbox"/> Cancer	<input type="checkbox"/> Depression	<input type="checkbox"/> Osteoporosis	<input type="checkbox"/> Syncope
<input type="checkbox"/> Chest pain/angina	<input type="checkbox"/> Diabetes	<input type="checkbox"/> Parkinson's disease	<input type="checkbox"/> Urinary Tract Infection
<input type="checkbox"/> Chronic renal disease	<input type="checkbox"/> Fever	<input type="checkbox"/> Pneumonia	<input type="checkbox"/> Other: _____
<input type="checkbox"/> Congestive Heart Failure	<input type="checkbox"/> Gait/balance disorder	<input type="checkbox"/> Postural hypotension	_____
<input type="checkbox"/> Constipation	<input type="checkbox"/> Gastrointestinal bleeding	<input type="checkbox"/> Psychiatric disorder (specify): _____	_____

Code Status/Hospital Status (mark as applicable):
 Full code Do not intubate Do not resuscitate Do not hospitalize (ED visit for acute care is permissible.)
 Copy of Advance Directive / Living Will / Treatment Limitations/ DNR / DNH order form sent with resident if applicable.

Sent with resident: Medication Administration Record History & Physical Face Sheet
 Electrocardiogram (EKG) Recent Labs Chest X-Ray
 Physician Progress Notes (last 3 dates) Nursing Progress Notes (last 3 dates)
 Other: _____

Signature/Title: _____ Print Name: _____
 Unit Name: _____ Phone #: _____ Date: _____

Interagency Statewide Facility Transfer Process, March 2015

Form – B
INTERAGENCY NURSING COMMUNICATION RECORD

Purpose: To provide pertinent information for patients being discharged or transferred throughout the health care continuum.

Instructions: To be sent to the receiving facility upon discharge.

Patient name: _____

Date of birth: _____

Social Security #: _____

Discharge to: home health agency long term care rehabilitation outpatient services other: _____
Admit from: nursing home: _____ assisted living other: _____
Allergies/Reactions (include medications, food, latex environmental etc.): No known allergies

Height: _____ cm inches **Weight:** _____ kg. lb. **Diabetes:** yes no
Pulse: _____ **Temperature:** _____ **Respiration rate:** _____ **Blood pressure:** _____
Adult assuming care: N/A **Name:** _____
Relationship: _____ **Phone #:** (____) _____

Vision: adequate poor blind **Glasses/Contacts:** no yes with patient
Hearing: adequate poor deaf **Hearing aid:** right left with patient
Dentures: full upper lower partial with patient
Mental status: alert confused unresponsive **Oriented:** person place time
Behavior: cooperative uncooperative wandering noisy aggressive
Communication: speaks writes gestures **Understanding:** speaks writes gestures
Language: English other: _____ needs interpreter
Mobility aids: walker wheelchair cane other: _____
History of falls: yes no **Fall risk:** yes no

ACTIVITIES OF DAILY LIVING (mark as appropriate)

Activities	Total Assist	Partial Assist	Self Care	Activities	Total Assist	Partial Assist	Self Care
Bathing				Bowel			
Dressing				Bladder			
Eating				Bowel incontinence: <input type="checkbox"/> yes <input type="checkbox"/> no			
Turning				Date of last bowel movement: _____			
Transfers				Bladder incontinence: <input type="checkbox"/> yes <input type="checkbox"/> no Last urine void: _____			
Ambulating				Date Foley inserted/changed: _____ time: _____			
Diet				If Foley discontinued, date: _____			

Type of infusion catheter: Peripheral IV PICC line **Dialysis access:** _____
Type of central line: _____ insertion date: _____ # Lumens: _____
Isolation precautions: MRSA VRE C-Diff Tuberculosis other: _____
Date Influenza vaccine given: _____ **Date Pneumococcal vaccine given:** _____

Physicians Involved in Care of Patient		Patient aware of diagnosis: <input type="checkbox"/> yes <input type="checkbox"/> no, explain:
Physician Name	Procedure/Service	
		Family/Designee aware of transfer: <input type="checkbox"/> yes <input type="checkbox"/> no, explain:
		DNR: <input type="checkbox"/> yes <input type="checkbox"/> no

Significant care issues/assessments [include psychosocial, fall interventions, Braden Score, full description of skin integrity including wounds, incision and ulcers – including size (length and depth), location, color, drainage, odor and stage, if pressure ulcer, dressing, tubes, aspiration risk special equipment, etc.]:

Signature/Title: _____ Print Name: _____ Date: _____ Time: _____

Form –B Rev. 1/1/06

**Guidelines for the Management of
Multidrug Resistant and Other
Epidemiologically Important Organisms
along the Health Care Continuum**

**Delaware Health and Social Services
Division of Public Health**

Originally published January 2010

Review & Update, 2015

Guideline for the Management of Multidrug Resistant and Other Epidemiologically Important Organisms along the Health Care Continuum

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Available on the DPH website at: <http://www.dhss.delaware.gov/dhss/dph/index.html>.

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Acknowledgement:

The Advisory Group would like to thank and acknowledge the authors of the *Guideline for the Management of Antimicrobial Resistant Microorganisms in Minnesota Long-Term Care Facilities*,¹ produced by the Minnesota Department of Health in October 2000 (revised 2004). This document was revised, updated and expanded by the Advisory Group to develop the Delaware guidelines.

Introduction:

The Delaware Division of Public Health (DPH) receives many inquiries from non-acute, residential care facilities along the health care continuum, including but not limited to nursing homes, rehabilitation centers, psychiatric and assisted living facilities, regarding the appropriateness of placement and care of persons with multidrug resistant organisms (MDRO). The most common questions concern persons who are colonized or infected with methicillin resistant *Staphylococcus aureus* (MRSA) or vancomycin resistant enterococcus (VRE), and increasingly those with highly resistant Gram-negative bacilli (GNB), such as carbapenem-resistant *Enterobacteriaceae* (CRE), *Pseudomonas*, and *Acinetobacter* species. Due to concern about MDRO, some facilities have restricted the admission of persons known to be infected or colonized with MDRO, or have required negative screening cultures prior to transfer.² This has caused persons with MDRO to experience delays or denial of admission to long term care, psychiatric and other facilities.^{3,4} There is no evidence that restricting the admission of persons with MDRO is effective in keeping such facilities free of MDRO. Because residents are not generally screened for MDRO, colonization is often not detected. Therefore, a policy restricting the admission of persons with MDRO may lead to a false sense of security that a facility is free of MDRO.⁵ In addition, there is often concern regarding the transfer of patients recovering from transmissible gastrointestinal infections, particularly *Clostridium difficile* and Norovirus (Norwalk-like virus).

This guideline is intended to address all of the above “epidemiologically important” organisms, which for the purposes of this document will be collectively referred to using the general term MDRO. Guidance that is pertinent only to specific organisms will be designated as such. In addition, the term extended care facilities (ECF) will refer to all non-acute, residential care facilities along the health care continuum, including but not limited to nursing homes, rehabilitation centers, psychiatric and assisted living facilities.

DPH Position Statement:

Based on currently available knowledge from the Centers for Disease Control and Prevention (CDC), the Society for Healthcare Epidemiology of America (SHEA), the Association of Professionals in Infection Control and Hospital Epidemiology (APIC), and other sources, persons with MDRO should not be denied admission solely on the basis of a positive MDRO culture from any site, past history of any MDRO, or because they have recently been diagnosed with an MDRO.^{5,6} Also, it is not appropriate for ECFs to refuse to re-admit residents who have been found to have MDRO after transfer from the ECF to an acute care facility. New or returning residents should be admitted to ECFs based on the ability of the facility to provide necessary care to the resident and should not be based on MDRO status. Denying admission or re-admission based on MDRO status alone is discriminatory, may lead to review by government agencies, and is in violation of 16 Del. C., 1121(18). The CDC, SHEA, APIC, the American Hospital Association (AHA) task force and the Veterans’ Affairs (VA) consensus panel all oppose restricting the access of MRSA colonized residents to ECF.⁶⁻⁸ Guidelines published by other states also oppose such restrictions.⁹⁻¹¹

ECFs should be prepared to implement appropriate infection control measures for all prospective or current

residents colonized or infected with MDRO. This guideline, which is based on the best current recommendations, describes infection control measures for ECF residents with MDRO in non-outbreak situations. It is important to note that due to incomplete data specific to certain issues in the community extended care setting, extrapolation from studies done in other settings and/or situations has been necessary. As additional research is published, this guideline will be revised as necessary.

Background:

- The presence of MDRO colonization in ECF residents appears to be quite common. Studies have estimated that more than 20% of ECF residents may be colonized with MRSA and more than 10% may be colonized with VRE.¹²⁻²⁵ Among patients hospitalized with invasive MRSA infections with onset in the community, one-third were admitted from ECFs.²⁶ In addition to MRSA and VRE, antibiotic resistant gram-negative bacilli (GNB) are also common in this setting (e.g., *E. coli*, *Pseudomonas aeruginosa*, *Klebsiella* species, and *Acinetobacter* species).^{15,16,27,28} The most highly resistant examples with this group are CRE, which may be common in some ECF while never seen in others.²⁹ In addition, increasing numbers of *C. difficile* infections have also been reported,³⁰ as well as higher hospital burden of *C. difficile* in facilities with higher rates of transfer from ECF.³¹ It has been shown that a significant portion of residents are already colonized with MRSA and VRE upon admission to ECFs and fewer residents acquire MRSA or VRE during their ECF stay.^{12,32} The admission of persons with MDRO into ECFs does not appear to increase ECF infection rates or commonly result in excess morbidity or mortality.³³
- Although MDRO colonization may result in infection, it has been demonstrated that ECF residents colonized with MRSA and VRE are less likely to develop infections due to these organisms than are hospitalized patients.³⁴ Despite more frequent colonization, infections were less commonly due to MRSA or VRE than resistant GNB.³⁵ In studies of VA-affiliated ECF, few deaths resulted from MRSA infection^{12,13} and in a study of VRE colonization in an ECF found subsequent development of infection to be rare.¹⁴ One study indicated that patients colonized with MRSA had higher 3-year mortality than non-colonized patients, but only among those with severe cognitive impairment.³⁶ A point-prevalence study of VA nursing homes demonstrated a 5.2% prevalence of nursing home-associated infections, with residents with any indwelling device having a 3-fold greater risk of infection.³⁷ Studies involving MRSA and VRE indicate that roommate to roommate transmission of these MDROs in the ECF setting, although possible, is not common.^{14,38-40} Therefore, control measures that may be appropriate in the acute care setting are not generally indicated in the ECF setting. As in acute care hospitals, however, person-to-person spread via direct contact, particularly between residents and the transiently colonized hands of health care workers, is considered the principal mode of transmission.⁵ The importance of hand hygiene cannot be overemphasized in either the acute care or ECF setting.
- The prevalence of *C. difficile* in ECF in the absence of a recognized outbreak has ranged from 4-20%. Between 10-20% may acquire *C. difficile* during their stay; however, most residents may remain asymptomatic.⁴¹ There has been a shift in *C. difficile* disease epidemiology, with increasing proportion of cases originating in the community, including ECFs. One study found nearly half of *C. difficile* cases originated in ECFs, and only 15% of these patients had diarrhea as an acute presenting complaint upon transfer to acute care settings.⁴² Viral gastroenteritis (caused by rotavirus, enteroviruses or norovirus) and bacterial gastroenteritis (including *C. difficile*) are well-known causes of diarrhea outbreaks in ECF. The elderly in particular are at increased risk for infectious gastroenteritis because of age-related decreases in gastric acid. Person-to-person spread, especially when bathrooms, dining and rehabilitation facilities are shared, plays an important role in viral gastroenteritis and *C. difficile* transmission.⁴³ However, while patients recovering from these infections may continue to shed organisms in their feces,⁴⁴ the cessation of diarrhea significantly decreases their infectivity to others.⁴³

Risk Factors for MDROs:

The following factors have been found to be associated with MDRO colonization: general disability, underlying

illness; intravenous, urinary, or enteral feeding devices; antibiotic use; wounds; previous hospitalizations; decline in functional status; advanced dementia; chronic obstructive pulmonary disease; and increased intensity of nursing care.^{16–19,24,27} Factors that favor the spread of MDROs include high resident to staff ratios, lack of attention to basic infection control measures, use of common equipment without disinfection between residents, limited facilities for handwashing and the inappropriate use of antimicrobials.⁶ ECFs must follow acceptable infection control standards of practice as indicated by the CDC, APIC, SHEA, and state health authorities.

Diagnostic Testing:

While active surveillance cultures have been recommended for acute care hospitals to limit spread of MRSA and/or VRE,^{45–47} this practice remains controversial^{48,49} and active surveillance in ECF is not recommended.³⁹ Requiring negative screening cultures for MDRO prior to acceptance of patients from acute care settings leads to a false sense of security for several reasons:

- (1) Imperfect sensitivity of screening cultures, particularly if only one site (i.e., the nares for MRSA) is sampled;¹⁸
- (2) Increasing prevalence of community-associated MRSA in patients admitted directly from the community or from acute-care settings, who may never have had this colonization detected;^{34,50}
- (3) Colonization may be intermittent,¹⁷ resulting in a patient whose initial screening cultures were negative but later becomes positive (but is undetected), particularly if the patient is placed on antimicrobial therapy.

It is not appropriate to require or request follow-up cultures of patients who have recovered from *C. difficile* or norovirus infection (i.e., a “test-of-cure”) and stool samples should never be sent for these pathogens from asymptomatic patients.⁴³ If a patient with a history of *C. difficile* develops diarrhea after transfer to the ECF, it would be appropriate at this time to send an unformed stool sample for analysis, as recurrent disease is common. An unformed stool is defined as one which takes the shape of the container it is placed in. Formed stool samples should never be sent for *C. difficile* testing.

Infection Control Measures:

In 2006 the CDC published the guideline *Management of Multidrug-Resistant Organisms in Healthcare Settings*.³⁴ This guideline expanded on previous similar guidelines in part by incorporating recommendations not only for acute care facilities but also including ECF. This guidance acknowledged that “all healthcare settings are affected by the emergence and transmission of antimicrobial-resistant microbes” but that institutions “vary widely in physical and functional characteristics....Because of this, the approaches to prevention and control of these pathogens need to be tailored to the specific needs of each population and individual institution.” Modification of the recommendations is encouraged if the principles of epidemiology and disease transmission are maintained, and precautions are included to interrupt spread of infection by all routes that are likely to be encountered. In addition, the CDC published the *Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings 2007*,⁴⁰ and the *Guidance for Control of*

Carbapenem-resistant Enterobacteriaceae (CRE): 2012 Toolkit,²⁹ both of which also incorporate recommendations for non-acute care settings. Information from these guidelines is summarized below.

Standard Precautions:

- Standard Precautions are based on the principle that all blood, body fluids, secretions, excretions (except sweat), non-intact skin, and mucous membranes may contain transmissible infectious agents. Standard Precautions include a group of infection prevention practices that apply to all patients, regardless of suspected or confirmed infection status, in any setting in which healthcare is delivered. These include: hand hygiene; use of gloves, gown, mask, eye protection, or face shield, depending on the anticipated exposure; and respiratory hygiene/cough etiquette.⁴⁰
- Most ECF residents with MDROs can be cared for using Standard Precautions (Attachment 1). Unless otherwise indicated (see below), Standard Precautions are adequate for ECF residents who have contained MDRO colonized or infected secretions/excretions.
 - Secretions/excretions (including wound drainage, stool and urine) are contained when they are unable to leak out of containment products. This includes wound dressings, incontinence products, urine bags, ostomy bags, etc.
- Because colonization with MDROs is often unrecognized and because other infectious organisms may also spread in ECFs, it cannot be emphasized too strongly that adherence with Standard Precautions is important in the care of all residents, whether or not they are known to have an MDRO. Emphasis should be placed on appropriate glove use and hand hygiene in ECF.^{6,34,40}

Hand Hygiene:

- MDROs are transmitted primarily via the contaminated hands of staff. The *single most effective means* of reducing the potential for MDRO transmission is hand hygiene (destroying or removing transient microorganisms from the hands) before and after contact with residents with MDROs, including after glove removal.
- Hand hygiene can be accomplished by cleaning hands with antimicrobial soap or by using a waterless alcohol-based hand sanitizer.^{51,52} The use of a waterless alcohol-based hand sanitizer should be *strongly considered* in the care of all ECF residents. Recent studies show that such products are as effective as antimicrobial soaps, may increase handwashing compliance, and are not harmful to hands.⁵³⁻⁵⁵
- If hands are not visibly soiled and a waterless alcohol-based product is to be used for hand antisepsis, apply a sufficient amount of the product to wet hands thoroughly, rub hands together and cover entire surface of hands (including nails) and allow to dry. However, if hands feel sticky, or are visibly soiled with organic material or debris (e.g., feces, dirt), hands should be cleaned with soap and running water, rather than or prior to using a waterless product.
- Convenient access to hand hygiene products will improve adherence, therefore it is helpful to install pump dispensers of waterless alcohol-based hand sanitizer in or near each resident room. Small containers of waterless alcohol-based hand sanitizer may also be carried by staff and residents for use when handwashing facilities or pump dispensers are not readily accessible. This may be particularly useful for facilities/areas where placement of pump dispensers of alcohol-based products is not appropriate, such as psychiatric and dementia units.
- Caregivers should be cognizant of providing hand hygiene to the dependent resident population, especially before meals and after toileting, and should ensure educational efforts are provided for the residents in this area.
- For patients with *C. difficile* infection, alcohol-based products are not effective in removal of spores, although they will destroy any vegetative organisms present. Preferential use of soap and water instead of alcohol-based products for handwashing is a recommended consideration for outbreak situations.⁴³ Glove use has been shown to significantly reduce the spread of *C. difficile* in hospitals.⁵⁶

Respiratory Hygiene/Cough Etiquette:⁴⁰

- This strategy is targeted at patients and accompanying family members and friends with undiagnosed transmissible respiratory infections, and applies to any person with signs of illness including cough, congestion, rhinorrhea, or increased production of respiratory secretions when entering a healthcare facility

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- The elements of Respiratory Hygiene/Cough Etiquette include 1) education of healthcare facility staff, patients, and visitors; 2) posted signs, in language(s) appropriate to the population served, with instructions to patients and accompanying family members or friends; 3) source control measures (e.g., covering the mouth/nose with a tissue when coughing and prompt disposal of used tissues, using surgical masks on the coughing person when tolerated and appropriate); 4) hand hygiene after contact with respiratory secretions; and 5) spatial separation, ideally >3 feet, of persons with respiratory infections in common waiting areas when possible.
- Healthcare personnel are advised to observe Droplet Precautions (i.e., wearing a mask) and perform hand hygiene when examining and caring for patients with signs and symptoms of a respiratory infection.
- Healthcare personnel who have a respiratory infection are advised to avoid direct patient contact, especially with high risk patients. If this is not possible, a mask should be worn while providing patient care. Institutional sick leave policies should be flexible and non-punitive, to allow ill healthcare workers to remain home rather than working while ill and exposing patients/residents.⁵⁷

Room Placement:

Residents with MDROs are not required to be placed in a private or single room. Single rooms may be limited in number and should be prioritized for those who have conditions that pose a risk of transmission to other residents/roommates either due to the specific MDRO or the ability to contain the infectious material (e.g., draining wounds, uncontained secretions). Single rooms are preferred for residents requiring Contact (see pg. 11) or Droplet precautions⁴⁰ and for patients with active *C. difficile* infection and fecal incontinence. If available, a single room should be considered for all *C. difficile* patients until diarrhea resolves.⁴¹ Patients transferred from acute care facilities after treatment for an episode of *C. difficile* infection do not require private rooms or cohorting, presuming diarrhea is resolved.

If a single room is not available, residents with MDROs may be placed with appropriate roommates.⁴⁰ An appropriate roommate is either a resident with the same MDRO (cohorting) **or** a resident who:

- has intact skin with no significant open wounds or breaks in skin (superficial tears or breaks in the skin, such as minor scratches, are acceptable) *and*
- has no invasive devices, indwelling vascular or urinary catheters or drainage devices (e.g., tracheostomy or tracheal tubes, chest tubes, gastrostomy tubes, central venous catheters, intravenous lines, etc.) *and*
- is not significantly immunocompromised (e.g., due to organ transplantation, neutropenia, serious acute or chronic infection, systemic steroids or chemotherapy)
 - please note that based on age alone, most “healthy” elderly residents are not considered significantly immunocompromised,
- and is not colonized or infected with a different MDRO.

Contact DPH’s Bureau of Epidemiology at 1-888-295-5156 if assistance is needed with placement issues. Situations in which a current resident is found to have an MDRO and there is concern about risk in a roommate should be evaluated on a case by case basis.

Staff cohorting:

In certain circumstances, limiting the number of unique staff who care for MDRO-colonized or -infected residents may be advisable. Examples include:

- Assigning staff who have recently recovered from suspected/confirmed norovirus infection to care for residents who are ill with gastroenteritis (as they may be temporarily immune from re-infection).⁵⁷

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- Housing residents with CRE in the same ward, if not the same room, and designating certain staff to care for them.²⁹

Group Activities:

Residents with MDROs may use common living areas, recreational areas, and group dining facilities. Such activities serve an important purpose in maintaining quality of life for ECF residents. Control measures that limit resident activity and movement, such as those used in the acute care setting, are generally not necessary and may result in emotional and social deprivation in the ECF setting.^{5,6} The following factors should be considered in terms of group activities:

- Hand antisepsis is a very important component of participation in group activities. Residents with MDROs should have their hands cleaned with soap and water or a waterless alcohol based hand sanitizer prior to leaving their room and whenever they again become contaminated, when the resident is outside of their room.
- Residents with MDROs should have clean, dry wound dressings that adequately contain any drainage. Residents with MDROs in stool or urine, who are incontinent of either, should be clean and wear an incontinence product when leaving their room. In addition, all residents with MDROs should wear clean clothes or a clean cover gown when leaving their rooms.
- Residents with MDROs who are cognitively or behaviorally impaired and cannot maintain hygienic practices present challenges for ECFs. However, in most cases strategies can be devised that will address infection control issues as well as allow the resident the opportunity for movement and socialization. In rare cases some restriction of movement may be necessary (e.g., residents who may be shedding large numbers of MDRO bacteria and who have been linked to the development of infection in other residents). To discuss specific situations, please contact the DPH Bureau of Epidemiology at **1-888-295-5156**.
- Temporary suspension of group activities may be considered in the setting of an outbreak of an MDRO or other transmissible disease (such as norovirus).⁵⁷

Environmental Cleaning:

While the immediate patient environment (e.g., bed rails and tables) may become contaminated with MDRO, environmental cultures from common patient areas, including dining rooms, therapy areas, etc., are seldom positive.³⁹

- **Room cleaning** - Standard facility procedures can be followed for cleaning the rooms of residents with MDRO in the ECF setting. Use of the facility's standard disinfectant is adequate, but it is important to monitor compliance with manufacturer's recommended application procedures and contact times. *C. difficile* spores and norovirus are relatively resistant to standard disinfection. Facilities may consider use of sodium hypochlorite (bleach)-containing cleaning agents for rooms housing patients with these organisms, particularly if the facility is experiencing high rates of infection that have not been controlled using standard means.^{41,43}
- **Physical and recreational therapy equipment** - The hands of residents with MDROs should be cleaned before the resident uses recreational or physical therapy equipment. Standard facility procedures should be followed for routine cleaning and disinfection of recreational and physical therapy equipment used by residents with MDROs. However, this equipment should be disinfected before use by another resident if it becomes soiled with body secretions/excretions.
- **Trash disposal** - Follow standard facility procedures for trash and medical waste disposal. No special handling is necessary.⁴⁰

Shared Bathrooms, Showers, Tubs:

As previously stated, roommate to roommate transmission does not appear to be common in ECFs. Hygienic

toileting practices (including thorough hand cleaning) are important for all residents, especially those dependent upon staff.

- **Bathrooms** - In situations where a resident with an MDRO shares a bathroom with a roommate who does not have the same MDRO, the bathroom should be cleaned and disinfected using standard facility procedure (e.g., daily and when visibly soiled). Commodes may be useful for certain residents with MDROs and should not be shared with roommates who do not have MDROs.
- **Showers, Tubs** - Shared tubs and showers should be cleaned and disinfected per standard facility procedure after use by residents with MDROs. It may be practical to bathe residents with MDROs after other residents.

Dishes, Glasses, Cups and Eating Utensils:

No special precautions are needed for dishes, glasses, cups or eating utensils. The combination of hot water and detergents used in institutional dishwashers is sufficient to decontaminate these items. All residents should be discouraged from sharing any of these items.

Laundry:

Standard precautions are adequate for handling laundry from all residents. However, soiled laundry, especially bed linens and towels from residents with uncontained stool, urine or other secretions/excretions, should be handled in such a way as to minimize contamination of staff and the environment. Gloves and long sleeved gowns should be worn when changing the beds of residents with uncontained stool, urine or other secretions/excretions and all soiled laundry should be placed directly in a moisture resistant container and not on the floor or other room surfaces. Special handling (i.e., double bagging, etc.) is not necessary. Laundry should not be rinsed at point of use. Laundry staff should wear gloves and long sleeved gowns when sorting laundry. No special laundering procedure is required.

Decolonization:

Routine decolonization for MRSA is not recommended for ECF residents.^{5,34} Decolonization should not be required prior to admittance to an ECF.⁵ Decolonization therapy for MRSA may result in the emergence of resistance to the agents used and because recolonization is common, decolonization has had little impact on the incidence of infections experienced by ECF residents. There is no proven decolonization regimen for VRE, resistant GNB, or *C. difficile*. Among ECF residents, VRE colonization is likely to persist for extended periods of time and perhaps indefinitely.¹² The duration of CRE colonization is unknown but likely persists >6 months.²⁹

Indications for Contact Precautions (in addition to Standard Precautions):

Although Standard Precautions and hand antisepsis are sufficient for most residents with MDROs, Contact Precautions (see below) may be indicated for residents with MDROs who are potentially more likely to shed MDRO bacteria into their environment. A private room for ECF residents on Contact Precautions is recommended if available,⁶ but is not required.

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The components of Contact Precautions that should be emphasized in this population are glove use and hand antisepsis. Residents for whom Contact Precautions, in addition to Standard Precautions, are indicated include the following:

- Residents who have MDRO-infected or -colonized wounds that cannot be fully covered by dressings or who have drainage that cannot be contained by dressings.
- Residents with fecal or urinary carriage of MDROs whose urine or stool cannot be contained in incontinence products, urine bags or ostomy bags.
- Residents who are ventilator-dependent.
- Residents with a tracheostomy who have an MDRO-colonized or -infected respiratory tract and large amounts of uncontained respiratory secretions.
- Residents who are totally dependent on health care workers for their activities of daily living.
- Residents who have been epidemiologically linked to MDRO infections in other residents (or additional residents if an MDRO outbreak occurs).

Contact Precautions: Gloves

- In addition to wearing gloves as necessary for Standard Precautions, gloves (clean, nonsterile gloves are adequate) should be worn when providing direct care (changing clothing, toileting, bathing, dressing changes, etc.) to residents with MDROs.
- Gloves should also be worn when handling items potentially contaminated by MDROs. Potentially contaminated items include bedside tables, overbed tables, bed rails, bathroom fixtures, television and bed controls, IV poles, suction and oxygen tubing and electronic equipment, especially control knobs. Gloves should be worn when handling urine/stool containers or bags, but then promptly removed and hand hygiene performed..
- During the course of providing care for residents, gloves should be changed and hands cleaned after contact with material that could contain high concentrations of microorganisms (e.g., stool, urine or wound drainage).
- Wearing gloves is not a substitute for hand antisepsis. Gloves should be removed and discarded and hands cleaned (see Hand Antisepsis above) after providing care to a resident with an MDRO and before leaving the resident's immediate environment or providing care to another resident. Avoid touching items in the resident's room with contaminated gloves and avoid touching potentially contaminated surfaces or items after glove removal and hand antisepsis.

Contact Precautions: Gowns

- For all residents, gowns should be worn as necessary for Standard Precautions. In addition, when caring for residents on Contact Precautions clean, non-sterile gowns should be worn if direct care (e.g., bathing, lifting) will be provided or when substantial contact with secretions/excretions (e.g., linen changes) is anticipated. When such contact is anticipated it is generally most practical to put on a gown before entering the room or before approaching the resident. Long-sleeved gowns should be used to protect contamination of the forearms.
- Gowns should also be worn when contact with environmental surfaces and items in the resident's room which are likely to be contaminated (those close to or used by the resident) is anticipated. This is particularly true if the resident is incontinent of urine or stool or has diarrhea, an ileostomy, a colostomy, or wound drainage not contained by a dressing.
- Gowns should be removed and discarded before leaving the resident's environment. After gown removal, ensure that clothing does not contact potentially contaminated environmental surfaces.
- Gowns should not be reused, even by the same staff member, making multiple trips into the same room.

Contact Precautions: Patient Care Equipment

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- Dedicate patient care equipment to a single resident (e.g., commodes, thermometers, blood pressure cuffs, and stethoscopes). If equipment is to be shared it must be cleaned and disinfected before use by another resident. Use of standard facility disinfectants is adequate. Personal items of residents with MDROs should not be shared with other residents unless they have been cleaned and disinfected. (See Environmental Cleaning)

Masks, Eye Protection, Face Shields:

MRSA, VRE, CRE and other resistant GNB, and *C. difficile* are not known to be transmitted via the airborne route and masks are not a routine component of Contact Precautions. However, masks and eye protection or face shields should be worn during the care of any resident if indicated by Standard Precautions. Masks and eye protection or face shields should be worn during resident care activities that are likely to generate splashes or sprays of blood, body fluids, secretions or excretions. Such activities include suctioning or working within 3 feet of a resident who is likely to expel droplet secretions (e.g., those with uncontained respiratory secretions, those with tracheitis and a tracheostomy tube in place, or those with suspected norovirus infection who are actively vomiting).

Discontinuing Contact Precautions:

When the condition of a resident with an MDRO changes (e.g., drainage is contained) and they therefore no longer meet the criteria for needing Contact Precautions, they may be cared for using Standard Precautions. However, if the resident continues to have secretions or excretions that are not contained, Contact Precautions should be continued.

It is appropriate to obtain cultures for clinical reasons, such as determining if infection is present or to guide antimicrobial treatment. However, non-clinically indicated cultures to determine if a resident remains colonized with an MDRO are not generally recommended. It is likely that ECF residents who are colonized with MDROs will continue to be colonized for significant lengths of time and repeated culturing will not be beneficial.

Communication with Other Facilities:

It is important for ECF and acute care facilities to work together in an attempt to control the spread of MDROs. Effective communication between ECF and acute care facilities is important in ensuring that the MDRO status of residents is known and that appropriate precautions are instituted or maintained in both types of facilities. Because of the acuity level, the frequent presence of invasive devices, and the vulnerability of many patients in the acute care setting, Contact Precautions are generally implemented for all patients known to have MDROs in the acute care setting. Because Contact Precautions may not be indicated for the same resident in the ECF, the rationale for the difference in precautions (as described above) should be explained to the resident and their family. When a resident is discharged from an acute care facility or transferred from an ECF, an adequate history should be provided to ensure that the receiving facility can institute the proper precautions.

Staff Education:

Continuing education programs for staff who have direct contact with residents or the items in the residents' environment is strongly encouraged. Staff who are responsible for making decisions regarding the care of residents should receive information about MDROs and should thoroughly review the information presented in this guideline. When educating staff about MDRO it should be noted that healthy people are at very little risk of developing an infection with MDRO. In addition, there are no special precautions for pregnant staff who work with residents with MDRO.

Resident, Family, Visitor Education:

- Residents and their families and visitors should be educated about the MDRO and the precautions to be taken in the ECF, including hand antisepsis and methods to limit environmental contamination with stool, urine, and respiratory secretions.
- Family and visitors should clean their hands before entering and leaving the room of a resident with an MDRO. Family/visitors should wear gloves when handling the secretions/excretions of residents with MDROs or when providing direct care (e.g., bathing). Hands should be cleaned after glove removal.
- Regardless of whether additional infection control precautions (Contact Precautions) are in place for a particular resident, it is important to encourage all family/visitors to clean their hands before and after visiting any resident.
- In addition, families, visitors and other residents must have sufficient education to alleviate their concerns, ensure that precautions are maintained, and understand that residents with MDROs need not be avoided.²⁷

Surveillance:

- Surveillance is an important component of all infection control programs, including those in ECF.^{6,40} Surveillance should include the regular review of all microbiology culture and susceptibility data to detect MDRO and other epidemiologically important organisms.^{5,6,40}
- Although residents known to have MRSA and VRE are likely to represent only a portion of the residents with MDRO, screening residents for MDRO is **not** indicated as a routine infection control measure in ECF.⁴⁰
- Facilities should ensure that the laboratories to which patient cultures are sent have protocols in place that facilitate the rapid notification of appropriate clinical and infection prevention staff whenever MDRO are identified from clinical specimens to ensure timely implementation of control measures. This is true for both facilities with on-site laboratories and those sending cultures off-site.²⁹
- A confidential line list of residents with MDROs should be maintained.
- Surveillance of cultures obtained for clinical reasons can establish baseline rates of MDRO infections for a facility. High rates of endemic infection (e.g., more than 1 case per 1,000 resident-care days) or an outbreak (e.g., > 3 infections in one week or twice the number of infections per month observed for 3 consecutive months) may be identified by surveillance.^{6,40}
- Facilities can use surveillance data in educational programs to reinforce infection control practices and to prioritize infection control activities.
- Culture and susceptibility data can be used to guide the choice of empiric therapy. Empiric therapy is the antimicrobial treatment that is prescribed based on a presumed diagnosis before culture and susceptibility results are known. Monitoring culture and susceptibility data will provide information on antimicrobial susceptibility and resistance patterns in a particular facility. Communicating this information can help guide physicians in the selection of the most appropriate empiric therapy for residents with infections.

Because of its emerging nature, CRE screening is recommended as a core measure for all healthcare settings.²⁹ This could take the form of screening epidemiologically linked residents (such as a former roommate of a resident found to have CRE, or ones with the same nursing assignments) or a point prevalence survey

(screening all residents in a given location at one time to determine if CRE is present). Aggressive screening and control measures are warranted in facilities that have little/no CRE, to prevent these organisms from becoming established in the facility. Please refer to the CDC and APIC CRE toolkits for further guidance.^{29,58}

Discharge Home:

- Family members should be advised that healthy persons have very little risk of developing an infection due to an MDRO.
- Family members should wear gloves when handling secretions/excretions that are known to contain MDROs and should clean their hands with soap and water or a waterless alcohol based hand sanitizer after glove removal. When gloves have not been used, family members should clean their hands after providing direct care.
- The resident's usual healthcare providers should be informed of the MDRO.
- The person with an MDRO should clean his/her hands frequently with soap and water or a waterless alcohol based hand sanitizer.
- No special laundering procedures are necessary. The clothes of all family members can be washed together using standard detergent. Bleach can be added for items that are heavily soiled with body secretions/excretions.
- Regular cleaning with household disinfectants of surfaces and items frequently touched by hands or contaminated by secretions/excretions is recommended.
- Family members of persons with MDRO should clean their hands with soap or a waterless alcohol based hand sanitizer before preparing food and before eating.
- Persons who are very ill or have compromised immune systems should avoid handling secretions/excretions known to contain MDRO. Such persons should also clean their hands with soap and water or a waterless alcohol based hand sanitizer after contact with a person with an MDRO.

Antimicrobial Use:

The appropriate use of antimicrobials is **the most important** method of controlling antimicrobial resistance. One of the ways resistance develops is through the use and overuse of antimicrobials (antimicrobial pressure). When bacteria are exposed to an antimicrobial, those bacteria that are susceptible to the antimicrobial are killed and those that are resistant survive and may become predominant. These antimicrobial resistant organisms may then be transmitted to other persons. Overuse of antimicrobials is a problem in ALL healthcare settings. Studies have repeatedly documented that much of the antimicrobial use in ECF is inappropriate,⁵⁹ and antibiotic exposure is associated with MDRO colonization in ECF settings.⁶⁰

Attempts to control antimicrobial use in ECF are complicated by many factors, including the fact that clinical diagnosis is often difficult in this population due to the frequent absence of typical signs and symptoms of infection (e.g., fever). However, ECFs should attempt to develop and institute programs and policies to monitor and control the use of antimicrobials in all residents. The CDC's "Get Smart for Healthcare" program (<http://www.cdc.gov/getsmart/healthcare/>) is a useful source of information and resources about appropriate antimicrobial use in healthcare settings. SHEA has published a position paper on antimicrobial use in long-term care facilities.⁵⁹ This position paper outlines concerns about inappropriate antimicrobial use and recommends approaches to promote the rational use of antimicrobials in this setting. The CDC has also published a guideline regarding the prudent use of vancomycin.⁶¹

- In particular, treatment of asymptomatic bacteriuria is very common in ECF. Such treatment is often inappropriate and can induce the development of resistant organisms. More than 30% of non-

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catheterized residents and almost all chronically catheterized residents have asymptomatic bacteriuria.⁵⁹

- The use of antimicrobials for the treatment of viral upper respiratory infections is common and also considered to be inappropriate.⁶²
- Evaluation of residents' clinical signs and symptoms in conjunction with appropriate culture and susceptibility testing should be used to guide therapy.⁵⁹
- Although empiric antimicrobial therapy may be indicated in some situations, it is important that physicians are informed of culture and susceptibility results so that applicable changes in treatment can be made. Broad spectrum antimicrobials (which are often used for empiric therapy) should be replaced by narrower spectrum antimicrobials once culture and susceptibility results are known. The use of narrower spectrum antimicrobials that target specific microorganisms will lessen antimicrobial pressure. In addition, stopping empiric antimicrobials promptly if no bacterial infection is identified, and using antimicrobials for the shortest duration necessary to treat the infection (i.e., 7-8 days rather than 14 days for most healthcare-associated pneumonia),⁶³ are both important strategies to reduce antimicrobial pressure.
- Because residents with invasive devices are at greater risk of acquiring an MDRO, minimizing the use of invasive devices such as urinary catheters, feeding tubes, tracheostomies, etc., may be helpful in controlling MDROs in ECFs.⁵
- Avoiding antimicrobial use in patients with a history of *C. difficile* infection is particularly important, as repeated or continued antimicrobial use can lead to recurrent *C. difficile* infections that may be severe. For patients with a history of *C. difficile* who require antimicrobials, appropriate surveillance should be in place so that if diarrhea does recur, prompt diagnostic testing, infection control measures, and treatment if necessary can be instituted.

Summary:

This guideline was developed to assist Delaware ECF in achieving the goal of prevention and control of MDRO while maintaining quality of life for those residents who are colonized or infected with these organisms. Using this guideline as a reference, ECF will be able to assess individual residents with MDRO and develop specific care plans to minimize both the restrictions imposed on the resident and the risk of transmission of MDRO to others. It is important that the staff who develop care plans and those who implement them have sufficient knowledge to make appropriate decisions.

Please remember that the DPH Bureau of Epidemiology (1-888-295-5156) is available for consultation regarding questionable or difficult situations, including possible outbreaks, at any time. DPH does not report any issues related to MDRO to any state or other regulatory agency.

Abbreviations:

- **APIC** = Association of Professionals in Infection Control and Hospital Epidemiology
- **CDC** = Centers for Disease Control and Prevention
- **CRE** = carbapenem-resistant *Enterobacteriaceae*
- **ECF** = extended care facilities
- **DPH** = Division of Public Health
- **GNB** = Gram-negative bacilli
- **MDRO** = multi-drug resistant organisms
- **MRSA** = methicillin resistant *Staphylococcus aureus*
- **SHEA** = Society for Healthcare Epidemiology of America
- **VRE** = vancomycin resistant Enterococcus

Additional Resources:

Long-term care-specific guidance and toolkits are available from the following sites:

- CDC prevention resources for long term care: <http://www.cdc.gov/longtermcare/>
- Advancing Excellence in America's Nursing Homes: Infections: <https://www.nhqualitycampaign.org/goalDetail.aspx?g=inf>
- Get Smart: Know When Antibiotic Work (healthcare-specific): <http://www.cdc.gov/getsmart/specific-groups/hcp/index.html>

Definitions:

- **Carbapenems:** Class of broad-spectrum antibiotics that includes imipenem, ertapenem, meropenem, and doripenem.
- **Carbapenem-resistant *Enterobacteriaceae* (CRE):** *Enterobacteriaceae* are a class of Gram-negative bacteria that includes *E. coli*, Klebsiella, Enterobacter, Proteus, and many other species. Typically live in the GI tract. Resistant to antibiotics in the carbapenem class, including imipenem, meropenem, and others.
- ***Clostridium difficile* (C diff):** anaerobic bacteria that are the most common cause of antibiotic-associated diarrhea. May lead to asymptomatic infection or cause varying severity of diarrhea, pseudomembranous colitis, toxic megacolon, and death.
- **Cohort:** two or more patients colonized or infected with a specific MDRO, who are physically separated from other patients who are not known to be colonized or infected with the same MDRO.
- **Colonization:** the presence of microorganisms in or on a host with growth and multiplication but without tissue invasion or damage (vs. *Infection*).
- **Contact Precautions (or Isolation):** Additional procedures put in place to reduce spread of microorganisms that are spread by direct contact with patients or their environment.
- **Decolonization:** the administration of topical, oral, or systemic antibiotics or antiseptics for the purpose of eradicating MDRO colonization.
- **Decontamination:** the process of removing microorganisms and making an object safe for handling.
- **Disinfection:** a process that kills or destroys nearly all microorganisms, with the exception of bacterial spores, on inanimate objects.
- **Droplet Precautions (or Isolation):** Additional procedures put in place to reduce spread of microorganisms that are spread by large respiratory particles produced by coughing or sneezing. These droplets typically do not persist in the air beyond 3 – 6 feet of the patient, and standard surgical masks are used to protect healthcare workers.
- ***Enterococcus* species** (includes *E. faecium* and *E. faecalis*): common gram-positive microorganisms that are part of the normal flora in the gastrointestinal and female genital tract.
- **Extended care facilities (ECF):** in this document, refers to all non-acute, residential care facilities along the health care continuum, including but not limited to nursing homes, rehabilitation centers, psychiatric and assisted living facilities.
- **Highly resistant Gram-negative bacteria (GNB):** a heterogeneous group of Gram-negative bacteria that have acquired resistance to commonly used antimicrobials. Includes organisms that produce extended spectrum beta-lactamases (ESBL) and carbapenemases, which inactivate beta-lactam (such as penicillins and cephalosporins) and carbapenem antibiotics, respectively. Common organisms include but are not limited to *E. coli*, *Klebsiella*, *Acinetobacter*, and *Pseudomonas* species. CRE are one type of highly resistant GNB.
- **Infection:** the entry and multiplication of microorganisms in the tissues of the host accompanied by clinical signs and symptoms (vs. *Colonization*).
- **Methicillin Resistant *Staphylococcus aureus* (MRSA):** strains of *S. aureus* that are resistant to the antibiotics methicillin, oxacillin, nafcillin and frequently other antimicrobials.
- **Multidrug-resistant organisms (MDRO):** a term that is used collectively to refer to bacteria that have acquired resistance to 2 or more commonly used antimicrobials. Includes MRSA, VRE, and resistant GNB. For the purposes of this document, also refers to any epidemiologically important organism, such as *C. difficile* and norovirus, which are not technically multidrug-resistant.
- **Norovirus (also known as Norwalk-like viruses):** a type of calicivirus that causes highly contagious viral gastroenteritis characterized by nausea, vomiting and diarrhea that typically lasts 1-3 days.
- **Outbreak:** a definite increase in the number of new MDRO-infected patients above the endemic rate in a defined period of time (e.g., a month).
- **Prevalence:** the proportion of persons in the facility with MDRO during a specific time period.
- **Sanitation:** a process that decreases microorganisms on an inanimate object to a safe or relatively safe level.
- **Standard Precautions:** Procedures intended to be used for all patients to reduce spread of microorganisms (see Attachment 1).
- ***Staphylococcus aureus*:** a common species of gram-positive bacteria found on the skin and in the anterior nares of many people.
- **Surveillance:** monitoring the distribution of illnesses in a population.

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- **Transmission:** the method or route by which microorganisms move from one location to another (e.g., by direct contact, airborne, droplet, or indirect contact with inanimate objects such as equipment).
- **Vancomycin Resistant Enterococcus (VRE):** strains of enterococcus (*E. faecalis* and *E. faecium*) that are resistant to the antibiotic vancomycin and other antimicrobial.

The Delaware Division of Public Health wishes to express appreciation to the members of the Advisory Group for their assistance in the development of this guideline.

For more information or additional copies, please call the DPH Bureau of Epidemiology at 1-888-295-5156.

This document may also be downloaded at: <http://www.dhss.delaware.gov/dhss/dph/index.html>.

Attachment 1:

STANDARD PRECAUTIONS

From: Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings 2007.²⁹

RECOMMENDATIONS FOR APPLICATION OF STANDARD PRECAUTIONS FOR THE CARE OF ALL PATIENTS IN ALL HEALTHCARE SETTINGS

The application of Standard Precautions during patient care is determined by the nature of the health care worker-patient interaction and the extent of anticipated blood, body fluid, or pathogen exposure. For some interactions (e.g., performing venipuncture), only gloves may be needed; during other interactions (e.g., suctioning), use of gloves, gown, and face shield or mask and goggles is necessary.

COMPONENT RECOMMENDATIONS

A. Hand hygiene

- (1) After touching blood, body fluids, secretions, excretions, contaminated items; immediately after removing gloves; between patient contacts.
- (2) Wash hands regardless of whether gloves are worn.
- (3) It may be necessary to wash hands between tasks and procedures on the same patient to prevent cross-contamination of different body sites.

B. Personal protective equipment (PPE)

- (1) Gloves for touching blood, body fluids, secretions, excretions, contaminated items; for touching mucous membranes and non-intact skin
- (2) Gown during procedures and patient-care activities when contact of clothing/exposed skin with blood/body fluids, secretions, and excretions is anticipated..
- (3) Mask, eye protection (goggles), face shield* during procedures and patient-care activities likely to generate splashes or sprays of blood, body fluids, secretions, especially suctioning, endotracheal intubation

*During aerosol-generating procedures on patients with suspected or proven infections transmitted by respiratory aerosols (e.g., SARS), wear a fit-tested N95 or higher respirator in addition to gloves, gown, and face/eye protection.

C. Respiratory hygiene/cough etiquette (source containment of infectious respiratory secretions in symptomatic patients, beginning at initial point of encounter e.g., triage and reception areas in emergency departments and physician offices)

- (1) Instruct symptomatic persons to cover mouth/nose when sneezing/coughing
- (2) Use tissues and dispose in no-touch receptacle

- (3) Observe hand hygiene after soiling of hands with respiratory secretions
- (4) Wear surgical mask if tolerated or maintain spatial separation, >3 feet if possible.

D. Patient placement

- (1) Prioritize single-patient rooms for patients at increased risk of transmission, likely to contaminate the environment, does not maintain appropriate hygiene, or is at increased risk of acquiring infection or developing adverse outcome following infection.

E. Soiled patient-care equipment

- (1) Handle in a manner that prevents transfer of microorganisms to others and to the environment; wear gloves if visibly contaminated; perform hand hygiene.

F. Environmental control

- (1) Develop procedures for routine care, cleaning, and disinfection of environmental surfaces, especially frequently touched surfaces in patient-care areas.

G. Textiles and laundry

- (1) Handle in a manner that prevents transfer of microorganisms to others and to the environment

H. Needles and other sharps

- (1) Do not recap, bend, break, or hand-manipulate used needles; if recapping is required, use a one-handed scoop technique only
- (2) Use safety features when available
- (3) Place used sharps in puncture-resistant container

I. Patient resuscitation

- (1) Use mouthpiece, resuscitation bag, other ventilation devices to prevent contact with mouth and oral secretions

REFERENCES

1. Minnesota Department of Health. Guideline for the management of antimicrobial resistant microorganisms in Minnesota long-term care facilities. 2000. Available at: <http://www.health.state.mn.us/divs/idepc/dtopics/infectioncontrol/ltcguideline.html>.
2. Thurn JR, Crossley K, Gerdt A. Bacterial colonization of nursing home residents on admission to an acute care hospital. *J Hosp Infect*. 1996;32(2):127–133.
3. Bryce EA, Tiffin SM, Isaac-Renton JL, Wright CJ. Evidence of delays in transferring patients with methicillin-resistant *Staphylococcus aureus* or vancomycin-resistant *Enterococcus* to long-term-care facilities. *Infect Control Hosp Epidemiol*. 2000;21(4):270–271. doi:10.1086/501757.
4. Reynolds C, Kim D, Kaplan SH, et al. Are nursing homes less likely to admit methicillin-resistant *Staphylococcus aureus* carriers? *Am J Infect Control*. 2014;42:63–65. doi:10.1016/j.ajic.2013.07.015.
5. Strausbaugh LJ, Crossley KB, Nurse BA, Thrupp LD. Antimicrobial resistance in long-term-care facilities. *Infect Control Hosp Epidemiol*. 1996;17(2):129–140.
6. Smith PW, Bennett G, Bradley S, et al. SHEA/APIC Guideline: Infection prevention and control in the long-term care facility. *Am J Infect Control*. 2008;36(7):504–535.
7. Boyce JM, Jackson MM, Pugliese G, et al. Methicillin-resistant *Staphylococcus aureus* (MRSA): a briefing for acute care hospitals and nursing facilities. *Infect Control Hosp Epidemiol*. 1994;15(2):105–115.
8. Mulligan ME, Murray-Leisure KA, Ribner BS, et al. Methicillin-resistant *Staphylococcus aureus*: a consensus review of the microbiology, pathogenesis, and epidemiology with implications for prevention and management. *Am J Med*. 1993;94(3):313–328.
9. Cahill CK, Rosenberg J. Guideline for prevention and control of antibiotic-resistant microorganisms in California long-term care facilities. Centers for Disease Control. *J Gerontol Nurs*. 1996;22(5):40–47.
10. Colorado Medical Directors Association, Colorado Department of Public Health and Environment. Recommendations for Prevention and Control of Methicillin-resistant *Staphylococcus aureus* in Long-term-care Facilities. 2009. Available at: https://www.colorado.gov/pacific/sites/default/files/DC_CD_HAI-Recommendations-for-Prevention-and-Control-of-MRSA-in-LTCF.pdf.
11. New York State Department of Health. Supplemental infection control guidelines for the care of patients colonized or infected with vancomycin-resistant *Enterococci* (VRE) in hospitals, long-term care facilities and home health care. 2009(10/8/2009). Available at: https://www.health.ny.gov/professionals/diseases/reporting/communicable/infection/95-14_vre_control_guidelines.htm.
12. Bradley SF, Terpenning MS, Ramsey MA, et al. Methicillin-resistant *Staphylococcus aureus*: colonization and infection in a long-term care facility. *Ann Intern Med*. 1991;115(6):417–422.

13. Strausbaugh LJ, Jacobson C, Sewell DL, Potter S, Ward TT. Methicillin-resistant *Staphylococcus aureus* in extended-care facilities: experiences in a Veterans' Affairs nursing home and a review of the literature. *Infect Control Hosp Epidemiol*. 1991;12(1):36–45.
14. Bonilla HF, Zervos MA, Lyons MJ, et al. Colonization with vancomycin-resistant *Enterococcus faecium*: comparison of a long-term-care unit with an acute-care hospital. *Infect Control Hosp Epidemiol*. 1997;18(5):333–339.
15. Furuno JP, Hebden JN, Standiford HC, et al. Prevalence of methicillin-resistant *Staphylococcus aureus* and *Acinetobacter baumannii* in a long-term acute care facility. *Am J Infect Control*. 2008;36(7):468–471.
16. Pop-Vicas A, Mitchell SL, Kandel R, Schreiber R, D'Agata EM. Multidrug-resistant gram-negative bacteria in a long-term care facility: prevalence and risk factors. *J Am Geriatr Soc*. 2008;56(7):1276–1280.
17. Stone ND, Lewis DR, Lowery HK, et al. Importance of bacterial burden among methicillin-resistant *Staphylococcus aureus* carriers in a long-term care facility. *Infect Control Hosp Epidemiol*. 2008;29(2):143–148.
18. Mody L, Kauffman CA, Donabedian S, Zervos M, Bradley SF. Epidemiology of *Staphylococcus aureus* colonization in nursing home residents. *Clin Infect Dis*. 2008;46(9):1368–1373. doi:10.1086/586751.
19. March A, Aschbacher R, Dhanji H, et al. Colonization of residents and staff of a long-term-care facility and adjacent acute-care hospital geriatric unit by multiresistant bacteria. *Clin Microbiol Infect*. 2010;16(7):934–944.
20. March A, Aschbacher R, Pagani E, et al. Changes in colonization of residents and staff of a long-term care facility and an adjacent acute-care hospital geriatric unit by multidrug-resistant bacteria over a four-year period. *Scand J Infect Dis*. 2014;46(2):114–122.
21. Caffrey AR, LaPlante KL. Changing epidemiology of methicillin-resistant *Staphylococcus aureus* in the Veterans Affairs Healthcare System, 2002-2009. *Infection*. 2012;40(3):291–297.
22. Munoz-Price LS, Stemer A. Four years of surveillance cultures at a long-term acute care hospital. *Infect Control Hosp Epidemiol*. 2010;31(1):59–63.
23. Schwaber MJ, Masarwa S, Navon-Venezia S, et al. High prevalence of methicillin-resistant *Staphylococcus aureus* among residents and staff of long-term care facilities, involving joint and parallel evolution. *Clin Infect Dis*. 2011;53(9):910–913.
24. Mossong J, Gelhausen E, Decruyenaere F, et al. Prevalence, risk factors and molecular epidemiology of methicillin-resistant *Staphylococcus aureus* (MRSA) colonization in residents of long-term care facilities in Luxembourg, 2010. *Epidemiol Infect*. 2013;141(6):1199–1206.
25. Manzur A, Gudiol F. Methicillin-resistant *Staphylococcus aureus* in long-term-care facilities. *Clin Microbiol Infect*. 2009;7:26–30.

26. Dantes R, Mu Y, Belflower R, et al. National burden of invasive methicillin-resistant *Staphylococcus aureus* infections, United States, 2011. *JAMA Intern Med.* 2013;173(21):1970–1978. Available at: <http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=medl&NEWS=N&AN=24043270>.
27. Bradley SF. Issues in the management of resistant bacteria in long-term-care facilities. *Infect Control Hosp Epidemiol.* 1999;20(5):362–366.
28. Venkatachalam I, Yang HL, Fisher D, et al. Multidrug-resistant gram-negative bloodstream infections among residents of long-term care facilities. *Infect Control Hosp Epidemiol.* 2014;35:519–26. doi:10.1086/675823.
29. Centers for Disease Control and Prevention. 2012 CRE Toolkit - Guidance for Control of Carbapenem-resistant Enterobacteriaceae (CRE). *MMWR - Morb Mortal Wkly Rep.* 2012;2013(8/20).
30. Crnich CJ, Safdar N, Robinson J, Zimmerman D. Longitudinal trends in antibiotic resistance in US nursing homes, 2000-2004. *Infect Control Hosp Epidemiol.* 2007;28(8):1006–1008.
31. Ricciardi R, Nelson J, Griffith JL, Concannon TW. Do admissions and discharges to long-term care facilities influence hospital burden of *Clostridium difficile* infection?. *J Hosp Infect.* 2012;80(2):156–161.
32. Brennen C, Wagener MM, Muder RR. Vancomycin-resistant *Enterococcus faecium* in a long-term care facility. *J Am Geriatr Soc.* 1998;46(2):157–160.
33. Spindel SJ, Strausbaugh LJ, Jacobson C. Infections caused by *Staphylococcus aureus* in a Veterans' Affairs nursing home care unit: a 5-year experience. *Infect Control Hosp Epidemiol.* 1995;16(4):217–223.
34. Siegel JD, Rhinehart E, Jackson M, Chiarello L, Committee the HICA. Management of multi-drug resistant organisms in healthcare settings, 2006. *Am J Infect Control.* 2007;35(10 Suppl 2):S165–93.
35. Terpenning MS, Bradley SF, Wan JY, Chenoweth CE, Jorgensen KA, Kauffman CA. Colonization and infection with antibiotic-resistant bacteria in a long-term care facility. *J Am Geriatr Soc.* 1994;42(10):1062–1069.
36. Suetens C, Niclaes L, Jans B, et al. Methicillin-resistant *Staphylococcus aureus* colonization is associated with higher mortality in nursing home residents with impaired cognitive status. *J Am Geriatr Soc.* 2006;54(12):1854–1860.
37. Tsan L, Davis C, Langberg R, et al. Prevalence of nursing home-associated infections in the Department of Veterans Affairs nursing home care units. *Am J Infect Control.* 2008;36(3):173–179.
38. Hsu CC. Serial survey of methicillin-resistant *Staphylococcus aureus* nasal carriage among residents in a nursing home. *Infect Control Hosp Epidemiol.* 1991;12(7):416–421.

39. Nicolle LE. Infection control in long-term care facilities. *Clin Infect Dis*. 2000;31(3):752–756. doi:10.1086/314010.
40. Siegel JD, Rhinehart E, Jackson M, Chiarello L, Committee HCICPA. 2007 Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Health Care Settings. *Am J Infect Control*. 2007;35(10 Suppl 2):S65–164. doi:10.1016/j.ajic.2007.10.007.
41. Simor AE, Bradley SF, Strausbaugh LJ, Crossley K, Nicolle LE, SHEA Long-Term-Care C. Clostridium difficile in long-term-care facilities for the elderly. *Infect Control Hosp Epidemiol*. 2002;23(11):696–703.
42. Garg S, Mirza YR, Girotra M, et al. Epidemiology of Clostridium difficile-associated disease (CDAD): a shift from hospital-acquired infection to long-term care facility-based infection. *Dig Dis Sci*. 2013;58(12):3407–3412. Available at: <http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=medl&NEWS=N&AN=24154638>.
43. Dubberke ER, Gerding DN, Classen D, et al. Strategies to prevent clostridium difficile infections in acute care hospitals. *Infect Control Hosp Epidemiol*. 2008;29 Suppl 1:S81–92. doi:10.1086/591065.
44. Siebenga JJ, Beersma MF, Vennema H, van Biezen P, Hartwig NJ, Koopmans M. High prevalence of prolonged norovirus shedding and illness among hospitalized patients: a model for in vivo molecular evolution. *J Infect Dis*. 2008;198(7):994–1001. doi:10.1086/591627.
45. Coia JE, Duckworth GJ, Edwards DI, et al. Guidelines for the control and prevention of methicillin-resistant Staphylococcus aureus (MRSA) in healthcare facilities. *J Hosp Infect*. 2006;Suppl 1:S1–44.
46. Muto CA, Jernigan JA, Ostrowsky BE, et al. SHEA guideline for preventing nosocomial transmission of multidrug-resistant strains of Staphylococcus aureus and enterococcus. *Infect Control Hosp Epidemiol*. 2003;24(5):362–386.
47. Farr BM. What to think if the results of the National Institutes of Health randomized trial of methicillin-resistant Staphylococcus aureus and vancomycin-resistant enterococcus control measures are negative (and other advice to young epidemiologists): a review and. *Infect Control Hosp Epidemiol*. 2006;27(10):1096–1106.
48. Farr BM. Political versus epidemiological correctness. *Infect Control Hosp Epidemiol*. 2007;28(5):589–593.
49. Muto CA. Methicillin-resistant Staphylococcus aureus control: we didn't start the fire, but it's time to put it out. *Infect Control Hosp Epidemiol*. 2006;27(2):111–115.
50. Weber JT. Community-associated methicillin-resistant Staphylococcus aureus. *Clin Infect Dis*. 2005;41 Suppl 4:S269–72. doi:10.1086/430788.
51. Larson EL. APIC guideline for handwashing and hand antisepsis in health care settings. *Am J Infect Control*. 1995;23(4):251–269.

52. Boyce JM, Pittet D, Healthcare Infection Control Practices Advisory Committee, HICPAC/SHEA/APIC/IDSA Hand Hygiene Task Force. Guideline for hand hygiene in health-care settings: Recommendations of the Healthcare Infection Control Practices Advisory Committee and the HICPAC/SHEA/APIC/IDSA Hand Hygiene Task Force. *MMWR - Morb Mortal Wkly Rep.* 2002;51(RR-16):1–45.
53. Bischoff WE, Reynolds TM, Sessler CN, Edmond MB, Wenzel RP. Handwashing compliance by health care workers: The impact of introducing an accessible, alcohol-based hand antiseptic. *Arch Intern Med.* 2000;160(7):1017–1021.
54. Boyce JM. Using alcohol for hand antisepsis: dispelling old myths. *Infect Control Hosp Epidemiol.* 2000;21(7):438–441. doi:10.1086/501784.
55. Boyce JM, Kelliher S, Vallande N. Skin irritation and dryness associated with two hand-hygiene regimens: soap-and-water hand washing versus hand antisepsis with an alcoholic hand gel. *Infect Control Hosp Epidemiol.* 2000;21(7):442–448. doi:10.1086/501785.
56. Johnson S, Gerding DN, Olson MM, et al. Prospective, controlled study of vinyl glove use to interrupt *Clostridium difficile* nosocomial transmission. *Am J Med.* 1990;88(2):137–140.
57. MacCannell T, Umscheid CA, Agarwal RA, Lee I, Kuntz G, Stevenson KB. *Guideline for the prevention and control of norovirus gastroenteritis outbreaks in healthcare settings, 2011.*; 2011. Available at: http://www.cdc.gov/hicpac/norovirus/002_norovirus-toc.html.
58. Parker VA, Logan CK, Currie B. Carbapenem-Resistant Enterobacteriaceae (CRE) Control and Prevention Toolkit. 2014. Available at: <http://www.ahrq.gov/professionals/quality-patient-safety/patient-safety-resources/resources/cretoolkit/index.html#Contents>.
59. Nicolle LE, Bentley DW, Garibaldi R, Neuhaus EG, Smith PW. Antimicrobial use in long-term-care facilities. SHEA Long-Term-Care Committee. *Infect Control Hosp Epidemiol.* 2000;21(8):537–545. doi:10.1086/501798.
60. Mitchell SL, Shaffer ML, Loeb MB, et al. Infection management and multidrug-resistant organisms in nursing home residents with advanced dementia. *JAMA Intern Med.* 2014;174(10):1660–1667. Available at: <http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=medl&NEWS=N&AN=25133863>.
61. Recommendations for preventing the spread of vancomycin resistance: recommendations of the Hospital Infection Control Practices Advisory Committee (HICPAC). *Am J Infect Control.* 1995;23(2):87–94.
62. Gonzales R, Steiner JF, Sande MA. Antibiotic prescribing for adults with colds, upper respiratory tract infections, and bronchitis by ambulatory care physicians. *JAMA.* 1997;278(11):901–904.
63. American Thoracic Society, Infectious Diseases Society of America. Guidelines for the management of adults with hospital-acquired, ventilator-associated, and healthcare-

Delaware Extended Care Facilities Guidelines, Updated 2015
associated pneumonia. *Am J Respir Crit Care Med.* 2005;171(4):388–416.
doi:10.1164/rccm.200405-644ST.

