How to Meet the Challenge: Preventing and Controlling Infections in Home Care and Hospice
Presented by: Mary McGoldrick, MS, RN, CRNI®

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Home Care and Hospice Consultant
Saint Simons Island, GA
“Nothing to Disclose”

Learning Objectives

By the conclusion of this presentation, the learner will be able to:

- Describe infection prevention and control challenges specific to providing care in the home setting.
- Describe methods to reduce the risk of infection transmission by implementing infection prevention strategies in the home.
- Describe infection prevention and control strategies specific to patients with multidrug-resistant organisms (MDROs) receiving care in the home.
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Infection Prevention Challenges Unique to Care in the Home

- Lack of control over the home environment:
  - Environmental contamination
  - Lack of general cleanliness
  - Lack of utilities
  - Lack of major appliances
  - Pets and pests
  - Lack of control over caregiver

Challenges in Planning an Infection Prevention and Control Program

- Responsibility
- Surveillance data collection and analysis
- Risk assessment and program evaluation
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Top 5 Home Care and Hospice “Hand Hygiene Challenges”

1. Technique
2. Indications
3. Product and storage
4. Other adjunct considerations
5. Measuring and monitoring hand hygiene compliance in the home setting

Levels of Evidence for Categorizing Recommendations

CDC/HICPAC Ranking System for Categorizing Recommendations
• **Category IA.** Strongly recommended for implementation and strongly supported by well-designed experimental, clinical, or epidemiologic studies.
• **Category IB.** Strongly recommended for implementation and supported by certain experimental, clinical, or epidemiologic studies and a strong theoretical rationale.
• **Category IC.** Required for implementation, as mandated by federal or state regulation or standard.
• **Category II.** Suggested for implementation and supported by suggestive clinical or epidemiologic studies or a theoretical rationale.
• **No recommendation.** Unresolved issue. Practices for which insufficient evidence or no consensus regarding efficacy exist.
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How to Prevent Hand Hygiene “Technique Challenges”

- Soap and Water:
  - Rub hands together vigorously for a minimum of 15 seconds covering all surfaces. *(CDC IB)*
  - Use towel to turn off faucet/tap. *(CDC & WHO IB)*
- Alcohol-based hand hygiene product:
  - Cover all surfaces of hands & fingers, until hands are dry. *(CDC IB)*
- Both: Vigorously perform rotational handrubbing on both hand palms and backs, interlace and interlock fingers to cover all surfaces. *(WHO IB)*

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Hand Hygiene Technique: Frequently Missed Locations

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Indications for Hand Hygiene:

- Transfer of organisms during patient greeting
- Before having direct contact with patients (CDC IB, WHO IB)

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Hand Hygiene Indications

- After contact with a patient's intact skin (CDC IB)
- After contact with inanimate objects in the immediate vicinity of the patient (WHO IB, CDC II)
- After removing gloves (CDC IB, WHO IB)²


Hand Hygiene Products: Can Staff Use the Patient’s Supplies in the Home?

- Plain soap vs. antimicrobial
- Liquid vs. bar
- Dry the hands with a disposable towel (CDC IB)
- Dry the hands with a single use towel, not used multiple times or by multiple people (WHO IB)
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How to Prevent “Hand Hygiene Challenges” with the Products Used

- Hand lotion or cream access (CDC IA, WHO IA)
- Partially empty container refill technique (CDC IA)
- Preparations used
- Alcohol-based hand hygiene:
  - Storage location
  - Expiration dating
  - When not to use

How to Prevent “Hand Hygiene Challenges”

- Other Considerations:
  - Rings
  - Jewelry
  - Nail polish
  - Artificial nails
  - Nail tip length
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How to Monitor & Measure Hand Hygiene Compliance in the Home Setting

- Measuring product use
- Surveys:
  - Self-reported
  - Patient/family
- Technology
- Direct observation

MEASURING HAND HYGIENE ADHERENCE: OVERCOMING THE CHALLENGES

Home Care and Hospice Hand Hygiene Competence Assessment Tool

Available for download at HomeCareandHospice.com
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### Spaulding’s Classification Scheme

<table>
<thead>
<tr>
<th>Items</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Critical Items</td>
<td>Enter directly into the blood stream or into other normally sterile areas of the body</td>
</tr>
<tr>
<td>Semicritical Items</td>
<td>Direct contact with non-intact skin and mucous membranes</td>
</tr>
<tr>
<td>Noncritical Items</td>
<td>Direct contact with intact skin</td>
</tr>
</tbody>
</table>

### Level of Disinfection and Level of Microbial Inactivation

<table>
<thead>
<tr>
<th>Level of Disinfection</th>
<th>Level of Microbial Inactivation</th>
</tr>
</thead>
<tbody>
<tr>
<td>High-level disinfection (HLD)</td>
<td>Destroys all microorganisms, except high numbers of bacterial spores</td>
</tr>
<tr>
<td>Intermediate-level disinfection</td>
<td>Destroys vegetative bacteria, mycobacteria, most fungi and viruses, but does not bacterial spores</td>
</tr>
<tr>
<td>Low-level disinfection</td>
<td>Destroys vegetative bacteria, some fungi and viruses, but not mycobacteria or spores</td>
</tr>
</tbody>
</table>

How to Manage Critical and Semicritical Items

- Critical equipment and supplies:
  - Exceptions
- Semicritical equipment and supplies:
  - Respiratory therapy items
  - Oral thermometer
  - Oral suction device

How to Sanitize Soft Surfaces in Home Care and Hospice

- Sanitizing vs. disinfection
- Examples of soft surfaces in home care and hospice
- Role in transmission of healthcare-associated infections
- Facility-based hospice services
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How to Clean, Disinfect and Sanitize Noncritical Equipment

- Patient assessment equipment used by home care and hospice staff:
  - Frequency
  - Product
  - Contact time

How to Clean and Disinfect Noncritical Equipment

- Electronic equipment used by staff and patients:
  - Product
  - Contact time
  - Frequency
  - Method
  - Staff training
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How to Clean and Disinfect Point of Care Testing Equipment

- When to disinfect
- What disinfectant to use

Infection Control Breaches Referred to Public Health Authorities

1. Using the same needle for more than one individual;
2. Using the same syringe, pen or injection device for more than one individual;
3. Re-using a needle or syringe which has already been used to administer medication to an individual to subsequently enter a medication container, and then using contents from that medication container for another individual; and/or
4. Using the same lancing/fingerstick device for more than one individual, even if the lancet is changed.

### Hepatitis B Outbreaks in Patients Receiving Care from a HHA

<table>
<thead>
<tr>
<th>Year</th>
<th>State</th>
<th>Setting</th>
<th>Outbreak-associated Infections</th>
</tr>
</thead>
</table>
| 2010 | TX    | Assisted living facilities (ALF) (n=10) in the same metropolitan area served by the same home health agency (HHA) for diabetic care (Zheteyeva, Y, et al., 2014) | • 23 patients in an ALF, plus one family member of an infected facility resident who experienced a needlestick injury while assisting with the resident’s blood glucose monitoring.  
  • 1 patient at home.  
  • All patients received care by the same HHA. |
| 2009 | FL    | Assisted living facilities (n=2). Blood glucose monitoring activities at both assisted-living facilities were provided by HHA (Forero, S., et al., 2010) | • 9 patients in an ALF |
| 2010 | CA    | Assisted living facility (Bancroft, E., Hathaway S., 2010). | • 3 diabetic patients, newly diagnosed with hepatitis B  
  • All 3 patients received assisted blood glucose monitoring from same HHA during incubation period of the acute hepatitis B case. |

**Total**: 35 patients residing in an ALF and 1 patient residing at their personal residence.


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### How to Prevent Breaches in Infection Control

- **Never use a fingerstick device on more than one person.**
- **Remove a reusable fingerstick device from glucometer storage container.**
- **Use an auto-disabling, single-use fingerstick devices and discard at the point of use.**
- **Store unused auto-disabling, single-use fingerstick devices separate from the blood glucose meter.**

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How to Prevent Home Care “Disinfection Challenges”

- Single vs. roll of towelettes
- Repackaging of disinfectants
- Towelette size and surface area
- Antiseptic vs. disinfectant

How to Transport and Store Products and Supplies

- Storage in personal vehicle or delivery vehicle:
  - Event-related shelf life
  - Time-related shelf life
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Nursing Bag Contamination

- Outside nurses’ bags: 83.6% positive for human pathogens; 15.9% MDROs
- Inside nurses’ bag: 48.4% positive for human pathogens; 6.3% MDROs
- Patient care equipment inside nurses’ bags 43.7% positive for human pathogens; 5.6% MDROs


The Nursing Bag as a Fomite for Pathogenic Organisms

How to prevent transmission:
- In-home placement
- Surface barrier
- Cleaning
- Hand hygiene

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Dressed to Suppress: Bare Below the Elbows

How to prevent cross-contamination via:
- Scrubs/uniform/street clothes
- Lab coats
- Stethoscopes
- Name tags, identification badges and lanyards
- Hair


How to Implement Isolation Precautions in the Home

- Standards precautions
- Transmission-based precautions:
  - Airborne precautions
  - Droplet precautions
  - Contact precautions
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How to Care for a Patient with a MDRO or a Clostridium difficile Infection

When to implement:
- Standard precautions only
- Contact precautions, in addition to Standard Precautions

Equipment Management:
- Limit non-essential supplies
- Dedicate equipment
- Clean and disinfect
- Environmental measures
- Visit schedule
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Pets: Vectors for Transmission of Organisms in the Home Setting

- How to prevent/control infections in the presence of domestic companion animals in the home:
  - Dogs
  - Cats

How to Manage Medical Waste and Lab Specimens Safely in Home Care

- Types of regulated waste generated
- Disposal or transport
  - Regulated waste
  - Lab specimens
- Interim storage
  - Vehicle
  - Office
Summary: How to Prevent and Control Infections in Home Care and Hospice

- How to reduce the risk of infection transmission by implementing infection prevention strategies.
- How to manage and prevent infections when caring for patients with MDROs.
- How to strengthen and implement an evidenced-based infection prevention and control program for care provided in the home setting.

Questions?

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