Home Health Care Patient/Worker Health and Safety Issues

Robyn RM Gershon, MHS, DrPH
Mailman School of Public Health
Columbia University

ARC XVI Fort Washington, Inc

Home Health Care Health and Safety Conference
Columbia University Mailman School of Public Health
May 19, 2011

National Institute for Occupational Safety and Health
Outline

• Introduction
• Two Sources of Hazards in Home Healthcare (HHC)
• Two Populations at Risk
• Household Safety Checklist
• Findings from Pilot Study
• Next Steps
“Homes are designed for living…. not for providing healthcare.”

(Lang and Edwards, Safety in Home Care: Broadening the Patient Safety Agenda to Include Home Care Services, 2006)
In Home Healthcare

• **Two sources** of hazards:
  – The household environment
    AND
  – Those typically associated with the delivery of healthcare

• They may act individually AND synergistically to impact
  – Worker Health and Safety AND Quality
  – Patient Health and Safety AND Quality
Households Can Be Unsafe Environments

• Each year,
  – 42,000 unintentional fatalities
    • 15,000 Americans, aged 65 and older
      – Falls, fire/burns, poisoning, airway obstructions, and drowning
  – 12 million disabling injuries
    • 40% Falls
    • $150 billion/ year in medical care alone
Healthcare-related Hazards can affect Worker Safety, Patient Safety... and Quality

- Healthcare-related hazards for Workers
- Healthcare-related hazards for Patients:
  - Falls
  - Medication errors
  - Skin ulcers
  - Nosocomial spread of infectious agents
  - Resistant organisms
  - Both old and new technologies
  - Medical Errors and Medical Mismanagement
Significance

- Home Healthcare (HHC) is the **fastest** growing healthcare sector in the US.
- There are **1.7 million** HHC paraprofessionals – an occupation projected to grow by **48%** by 2018.

Significance

- **8-12 million** individuals in the US are enrolled in formal HHC, a number that will increase as the general population ages. Important **high risk transition zone.** ($17B)
Significance

Compared to hospitals....

- Lack of regulatory oversight, less structured, more unpredictable, combined with suboptimal/lacking safety resources (safety/infection control staff, supplies, and safety equipment) can increase the risk of adverse events.
Factors * Impacting HHC Safety-
for both patients and workers

• External Environment
  • Management
  • Physical Environment
  • Medical Devices and New Technology
    • Social/Community Environment
      • HHC Tasks
        • Provider Characteristics
        • Patient Characteristics

*Adapted from Henrickson K, Journal of Patient Safety, 2009
Reason’s Swiss Cheese Model

Hazards in the household and Hazards Associated with Healthcare

Workers ↔ Patients
Risk Management

Reduce adverse outcomes by reducing risk
Safety Management and Engineering

Identification of Hazards

Remediation of Hazards

Risk Reduction
Development of a HHC Household Safety Checklist to easily identify hazards

*Funded by The Agency for Healthcare Research and Quality (AHRQ)
Colleagues

• Maureen Dailey, RN, DNSc: National Center for Nursing Quality, American Nurses Association
• Jay Conolly, BA, Partners in Care
• Alexis Silver, RN, Home Care Association of New York State
• Faith Wiggins, MS, 1199SEIU Training and Employment Funds
• Peri Rosenfield, Ph.D., Visiting Nurse Service of New York
• Susan Klitzman, DrPH, MPH, Director of Urban Public Health Program, Hunter College
HHC Household Safety Checklist

Ideal tool would be…

• Easy to use
• Inexpensive
• Easy to adapt
• Target the most important hazards
• Guide the implementation of remediation steps
HHC Household Safety Checklist Pilot Study

- Designed for paraprofessionals
- Training program, 1 hour
- 50-item checklist—targeted households of elderly patients
  - Falls hazards
  - Fire/electrical hazards
  - Biological/sanitary hazards
  - Miscellaneous hazards, including threat of violence
- Fact Sheet for low/no cost-remediation
- Safety “goody bag”
- Pilot tested in 116 patient homes
Training Slides: Household Hazards

- Excessive Clutter
- Signs of Rats or Mice
- Flammable Near Stove Top
- Mold or Fungus
Household Safety Checklist

Today's Date: 

Did your patient sign the Consent Form: Yes  What time did you start the survey? 

A. Information on your patient:
   1. Age: 
   2. Gender (M/F): 
   3. Can your patient walk without help (e.g. a person or thing)? Yes No 
   4. What is your patient's overall health status (circle): Poor Fair Good Excellent 
   5. How many people live in the home: Please list them: 
   6. Do you know the medicines (prescription & nonprescription) your patient takes daily? Yes No N/A 
   7. How does your patient keep track of their medicines now?
      - "Pre-poured" or placed in a pillbox (see picture) 
      - Medicines lined up 
      - Other method 
      - No method to keep track 
   8. Does patient keep any medicine in the home that are no long taking? Yes No 
   9. Does the patient use a hearing aid? Yes No 

B. Please check if any of these hazardous conditions or safety risks are found in your patient's home:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Poor lighting</td>
</tr>
<tr>
<td>13</td>
<td>Mold or fungus</td>
</tr>
<tr>
<td>14</td>
<td>Dangerous space heater (uses flammables)</td>
</tr>
<tr>
<td>15</td>
<td>Dangerous electrical cords (easily tripped over, overloaded outlets, damaged cords)</td>
</tr>
<tr>
<td>11</td>
<td>Loose or worn-out rugs or carpets</td>
</tr>
<tr>
<td>12</td>
<td>Uneven or slippery floors</td>
</tr>
<tr>
<td>Code</td>
<td>Description</td>
</tr>
<tr>
<td>------</td>
<td>-------------</td>
</tr>
<tr>
<td>10</td>
<td>Excessive dust or animal hair</td>
</tr>
<tr>
<td>11</td>
<td>Awkwardly placed furniture (blocking exit)</td>
</tr>
<tr>
<td>12</td>
<td>Excessive clutter (it might block the exit out)</td>
</tr>
<tr>
<td>13</td>
<td>Food not generally stored in a sanitary manner</td>
</tr>
<tr>
<td>14</td>
<td>Trash builds up in the home</td>
</tr>
<tr>
<td>15</td>
<td>Non-food and food items kept in same cabinet</td>
</tr>
<tr>
<td>16</td>
<td>Cleaning products and other potential poisons that are not in the original containers (original labels are not in place)</td>
</tr>
<tr>
<td>17</td>
<td>Stove knobs hard to reach</td>
</tr>
<tr>
<td>18</td>
<td>Flammables (towels, curtains, paper) near stove tops</td>
</tr>
<tr>
<td>19</td>
<td>Rotten food or milk in the home</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2w</td>
<td>Threat of violence, like aggressive dogs and other pets, neighbors, or weapons</td>
</tr>
<tr>
<td>2x</td>
<td>Excessively loud noise in the home (from inside or outside the home or apartment)</td>
</tr>
<tr>
<td>2y</td>
<td>Doors are lacking good lock (e.g., dead bolts, chain lock, peep hole, etc.)</td>
</tr>
<tr>
<td>2z</td>
<td>Signs of cockroaches in the home</td>
</tr>
<tr>
<td>3w</td>
<td>Signs of other bugs in the home like bed bugs, fleas, or lice</td>
</tr>
<tr>
<td>3x</td>
<td>Signs of rats or mice in the home</td>
</tr>
<tr>
<td>3y</td>
<td>Unsafe use of smoking materials</td>
</tr>
<tr>
<td>3z</td>
<td>Carbon monoxide alarm in the home</td>
</tr>
<tr>
<td>3a</td>
<td>Smoke alarm in the home</td>
</tr>
</tbody>
</table>

C. Please check if these **safety items ARE PRESENT** in your patient’s home:
<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3a</td>
<td>Grab bars to get in/out of the shower/bathtub</td>
</tr>
<tr>
<td>3b</td>
<td>Non-slip shower mat or pads in the shower/bathtub</td>
</tr>
<tr>
<td>3c</td>
<td>Fire extinguisher in the home</td>
</tr>
<tr>
<td>3d</td>
<td>Non-slip rug on the bathroom floor next to the shower/bathtub</td>
</tr>
<tr>
<td>3e</td>
<td>If yes, is the pressure gauge arrow in the green section (i.e., is it working)</td>
</tr>
<tr>
<td>4c</td>
<td>Emergency contacts list available (e.g., family, doctor, superintendent, etc)</td>
</tr>
</tbody>
</table>

**D. Please check if the following safety and medical devices ARE in your patient’s home:**

- 4a Safe lifting device
  - If yes, have you been trained to use it?
    - Yes ☐ No ☐
- 4b Needles and other sharps
  - If yes, is there a sharps container?
    - Yes ☐ No ☐
<table>
<thead>
<tr>
<th>Item</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxygen tank</td>
<td></td>
</tr>
<tr>
<td>If yes, were you trained to use/store/handle it?</td>
<td></td>
</tr>
<tr>
<td>Yes □ No</td>
<td></td>
</tr>
<tr>
<td>Ventilator</td>
<td></td>
</tr>
<tr>
<td>If yes, were you trained to assist patient in its use?</td>
<td></td>
</tr>
<tr>
<td>Yes □ No</td>
<td></td>
</tr>
<tr>
<td>Portable toilet</td>
<td></td>
</tr>
<tr>
<td>If yes, were you trained to assist patient in its use?</td>
<td></td>
</tr>
<tr>
<td>Yes □ No</td>
<td></td>
</tr>
<tr>
<td>Nebulizer</td>
<td></td>
</tr>
<tr>
<td>If yes, were you trained to assist patient in its use?</td>
<td></td>
</tr>
<tr>
<td>Yes □ No</td>
<td></td>
</tr>
<tr>
<td>Wheelchair</td>
<td></td>
</tr>
<tr>
<td>If yes, were you trained to assist patient in its use?</td>
<td></td>
</tr>
<tr>
<td>Yes □ No</td>
<td></td>
</tr>
<tr>
<td>Walker</td>
<td></td>
</tr>
<tr>
<td>If yes, were you trained to assist patient in its use?</td>
<td></td>
</tr>
<tr>
<td>Yes □ No</td>
<td></td>
</tr>
<tr>
<td>Cane</td>
<td></td>
</tr>
<tr>
<td>If yes, were you trained to assist patient in its use?</td>
<td></td>
</tr>
<tr>
<td>Yes □ No</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
<tr>
<td>Please list:</td>
<td></td>
</tr>
<tr>
<td>If yes, were you trained to assist patient in its use?</td>
<td></td>
</tr>
<tr>
<td>Yes □ No</td>
<td></td>
</tr>
</tbody>
</table>

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Results

• Pre/ Post testing revealed that the training was effective (N= 54 aides)

• Qualitative Results:
  – Easy to use
  – Fact sheet useful
  – Patients/ families were positive
  – Visual inspection took < 10 minutes

• Quantitative Results:
  – 83% of households had 1 or more hazards
Results, quantitative

**Fire/ Electrical hazards**
- No fire extinguishers
- No carbon monoxide detectors
- No smoke alarms
- Electrical cords

**Falls hazards**
- Lack of “No slip” materials
- No grab bars
- Worn/torn rugs
- Slippery flooring
- Excessive clutter
Results, quantitative

**Biological/Unsanitary Conditions**
- Cockroaches
- Rats/Mice
- Bedbugs, lice
- Rotten Food
- Improper chemical storage

**Miscellaneous Hazards**
- No emergency contacts lists
- Loud noise
- Unsafe locks
- Threat of violence
Next Steps

• Next iteration of checklist*
• 100 households of elderly community members
• Grad student teams are conducting safety survey and remediation, with follow-up work orders
• Pre/post data on adverse incidents in community members
• Future work planned for impact of both process of inspections and interventions on workers’ health and safety

*Funded by the U.S. Department of Housing and Urban Development (HUD)
Thank you!

Dr. Robyn Gershon
Office Phone: 212-305-1186
E-mail: rg405@columbia.edu