Infection Prevention and Control in the Dialysis Facility
Objectives

1. Describe the rules governing dialysis facilities specific to infection control.
2. List two areas of concern for infection control in the dialysis unit.
3. Describe practices which the dialysis facility should follow to improve their infection control processes.
Infections and ESRD

- Approximately 10% of individuals with ESRD died in 2012 due to infections.\(^1\)
- Approximately 63,690 dialysis patients died from infectious complications in 2012.\(^1\)
- While overall mortality rate and death from heart disease have improved in recent years, infection-related morbidity and mortality have not.

Infection Control and Infection Prevention

- Some use the terms interchangeably
- Infection Prevention—doing everything possible to keep an infection from happening
- Infection Control—doing everything possible to keep an infection that has occurred from spreading
Why Are We Worried About Infections?

- A dialysis facility is a complex healthcare delivery area
- Many opportunities to breach standard infection control practices
- Old habits, short cuts, no time
- Less staff, more patients
- Water, chemicals, blood, needles...
- Immunocompromised patients
Environmental Risk Areas

Identify at least 5 potential infection risk areas in this picture.
Areas Requiring Attention

• Water
• Dialysate
• Surfaces (high touched surfaces, equipment)
• Intrinsically contaminated products (e.g., antimicrobial soaps, mouth wash, saline, povidone iodine, antiseptic wipes, etc.)
• Extrinsically contaminated products (e.g., saline, flushes, refillable soap containers, medications, etc.)
Common Source Exposure Outbreak

- Machine surfaces that were not thoroughly cleaned and disinfected between patients.
- Blood spills that were not cleaned up promptly or correctly.
- Multiple opportunities for cross-contamination.
- Supply carts were moved from one station to another and contained both clean supplies and blood-contaminated items, including small biohazard containers, sharps disposal boxes, and used vacutainers containing patients' blood.
Sterile?
Clean?
Dirty?
Conditions for Coverage (CfC)

• Regulations that the dialysis facility must follow in order to remain in the Medicare ESRD program
• Detail all rules for operation of the facility and care of the patients
• Rules enforced by the state Department of Health and CMS
Interpretive Guidelines

- Provides more information on the formal CfC rules
- Gives the State Surveyors more information on what CMS intended in the rules
- Should be used by dialysis facilities as a guide to good infection prevention and infection control practices
What are the Rules?

• Wear disposable gloves when caring for the patient or touching the patient’s equipment at the dialysis station; remove gloves and wash hands between each patient or station.

• Gloves must be provided to patients and visitors if these individuals assist with procedures which risk exposure to blood or body fluids.

• In addition, a new pair of clean gloves must be used each time of access site care, vascular access cannulation, administration of parenteral medication or to perform invasive procedure.
• Staff members should wear gowns, face shields, eye wear, or masks to protect themselves and prevent soiling of clothing when performing procedures during which spurting or spattering of blood might occur. Staff members should not eat, drink, or smoke in the dialysis treatment area or in the laboratory.
  • The protective garment should fully cover the arms and torso from the neck area to the thigh/knee area.
  • Aprons without sleeves are not sufficient PPE for procedures which may result in spurting or spattering of blood.
• Items taken into the dialysis station should either be disposed of, dedicated for use only on a single patient, or cleaned and disinfected before being taken to a common clean area or used on another patient.

• Non-disposable items that cannot be cleaned and disinfected (e.g., adhesive tape, cloth covered BP cuffs) should be dedicated for use only on a single patient.

• Unused medications (including multiple dose vials containing diluents) or supplies (syringes, alcohol swabs, etc) taken to the patient’s station should be used only for that patient and should not be returned to a common clean area or used on other patients. Do not carry multiple dose medication vials from station to station.
If a common supply cart is used to store clean supplies in the patient treatment area, this cart should remain in a designated area at a sufficient distance from patient stations to avoid contamination with blood. Such carts should not be moved between stations to distribute supplies.
If the machine has a transducer filter, and if blood contaminates the pressure transducer filter... it must be changed immediately and the side of the external transducer that faces the machine must be inspected for visible fluid. If there is visible blood, contact your biomed technician.
With the revision in the CfCs in 2008, a separate isolation room is required

- February 9, 2009 all new facilities must have a separate isolation room (waiver)
- Separate isolation area
- If there are current HBV+ patients on census, the isolation area/room cannot be used for HBV- patients on other shifts or days due to the risk of cross-contamination.
• Each isolation room must have separate, dedicated supplies and equipment, including blood glucose monitors, and concentrate containers

• Equipment must be labeled “isolation”
• Staff members caring for HBsAg positive patients should not care for HBV susceptible patients at the same time, including during the period when dialysis is terminated on one patient and initiated on another (e.g., during the same shift or during patient change-over).

• If a staff member assigned to care for an HBV+ patient must concurrently care for someone other than another HBV+ patient, the additional patient must be HBV immune.
• Intensive efforts must be made to educate new staff members and re-educate existing staff members on infection prevention and infection control processes.

• OSHA mandates dialysis staff receive bloodborne pathogen training annually and CDC recommends infection control training initially on employment and annually.

• Personnel records must reflect staff having received appropriate infection control training.
Included by reference in the CfCs...
Infection Control Practices

- No food / drink in unit
- Limited visitors
- HAND WASHING and hand sanitization
- Proper use of PPE
- Appropriate handling and disposal of bio-hazard trash
- Appropriate disinfection of all equipment

- Monitoring staff and patient hepatitis status
- Clear designation of clean and dirty areas in the unit
- On-going staff and patient education
- Close supervision of all staff
- Internal audits and active QAPI programs
- Comprehensive facility IC plan
Reporting

The facility must report incidences of communicable diseases as required by Federal, State, and local regulations.
“It may not be an issue of adding extra precautions, but simply following current standard precautions, or the more exacting contact precautions with specific patients for whom this is indicated.”

Kathy Dix 2007
<table>
<thead>
<tr>
<th>Tag #</th>
<th>Tag Description</th>
<th># Citations</th>
<th>% Providers Cited</th>
<th>% Surveys Cited</th>
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<tbody>
<tr>
<td>V0113</td>
<td>IC - WEAR GLOVES/HAND HYGIENE</td>
<td>371</td>
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<td>V0122</td>
<td>IC - CLEAN, DISINFECT SURFACES &amp; EQUIPMENT/Written Protocols</td>
<td>300</td>
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<td>V0403</td>
<td>PE - EQUIPMENT MAINTENANCE/Manufacturer's Del.</td>
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<td>V0715</td>
<td>MD RESP - ENSURE ALL ADHERE TO P&amp;P</td>
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<td>V0541</td>
<td>PATIENT PLAN OF CARE - GOALS - COMMUNITY-BASED STANDARDS</td>
<td>227</td>
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<td>V0401</td>
<td>PE - SAFE, FUNCTIONAL, COMFORTABLE ENVIRONMENT</td>
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<td>V0726</td>
<td>MEDICAL RECORDS - COMPLETE, ACCURATE, ACCESSIBLE</td>
<td>164</td>
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<td>V0543</td>
<td>MANAGE VOLUME STATUS</td>
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<td>V0116</td>
<td>IC - ITEMS TAKEN TO STATION DISPOSED/DEDICATED OR DISINFECTED</td>
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<td>V0402</td>
<td>PE - BUILDING - CONSTRUCTED/MAINTAINED TO ENSURE SAFETY</td>
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<td>V0117</td>
<td>IC - CLEAN/DIRTY AREAS, MED PREP AREA, NO COMMON MED CARTS</td>
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<td>V0143</td>
<td>IC - ASEPTIC TECHNIQUES FOR IV MDDS</td>
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<td>V0115</td>
<td>IC - WEAR GOWNS, SHIELDS/MASKS; STAFF NOT EAT/DREAD IN TX AREA</td>
<td>143</td>
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<td>V0196</td>
<td>CARBON ADSORPTION - MONITORING, TESTING FREQUENCY</td>
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<td>V0501</td>
<td>PATIENT ASSESSMENT - INTERDISCIPLINARY TEAM MBRS/RESP.</td>
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<td>V0407</td>
<td>PE - HEMODIALYSIS PATIENTS IN VIEW DURING TREATMENTS</td>
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<td>V0504</td>
<td>ASSESS B/P &amp; FLUID MANAGEMENT NEEDS</td>
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<td>V0111</td>
<td>IC - SANITARY ENVIRONMENT</td>
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<td>V0114</td>
<td>IC - SINKS AVAILABLE</td>
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What is wrong in this photo?
What is wrong in this photo?
In Conclusion

• There are many areas within the dialysis unit which are of special concern for infection control and infection prevention.
• Patients with ESRD are a high risk population due to their immune status.
• Biohazards abound in the dialysis environment.
• Infection control citations remain consistent in the most frequently cited conditions.
• There is ALWAYS opportunity to improve!
For additional information, please visit the 5-Diamond Patient Safety Program website at [http://www.5diamondpatientsafety.org](http://www.5diamondpatientsafety.org).

*The 5-Diamond Patient Safety Program is endorsed by the:*

- Renal Physicians Association (RPA),
- National Renal Administrators Association (NRAA),
- American Nephrology Nurses’ Association (ANNA),
- American Association of Kidney Patients (AAKP),
- Dialysis Clinics Incorporated (DCI),
- Fresenius Medical Care (FMC/FKC), and
- U.S. Renal Care.

*Module Created 2016*