Infection Control in Ambulatory Care (ACS) Settings

Why all the fuss?

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Ambulatory Care Settings

Healthcare facilities that care for patients who do not remain overnight and are seen on an outpatient basis.

- Physicians offices
- Urgent care centers
- Cancer clinics and infusion centers
- Imaging centers
- Endoscopy clinics
- Cardiology offices/clinics
- Alternative medicine clinics
- Public health clinics
- ASCs
- Dialysis clinics
- Hospital-based outpatient clinics

Health Care Associated Infections (HAIs)

- 25 Million people will be treated in U.S. hospitals this year.
- Approx. 2 million will develop nosocomial infections
- Approx. 90,000 will die!
- LOS will be increased by 8 million days & cost will be increased by 3-7 billion dollars!

Current Healthcare Delivery Status

- Health Care delivery has shifted toward the outpatient setting
- Medicare-certified ASCs in U.S. have seen a >50% increase in numbers from 1990-2000 (currently >5000 ASCs in U.S.)
- 2007 performed >6 million procedures
- Other outpatient facilities have flourished as well: endoscopy centers, dialysis centers, radiology centers, pain clinics, laser liposuction centers, wound care centers, vein clinics etc.

Ambulatory Care – Growth/concerns

- Approximately 1.2 billion outpatient visits/yr
  - Between 1995-2007 the avg. person made 3 visits/yr to MD office.
- Increasingly complex procedures, vulnerable patients
  - >1 million Ca patients receive OP chemotherapy &/or radiation therapy
- Expansion of services without parallel increases in attention to and oversight of infection control
- Lack systematic surveillance to detect infections originating in ambulatory settings

[Images of healthcare facilities: Ambulatory surgery centers, Dialysis centers, Hospital, Radiology centers, Wound centers, Chemo Infusion Center, Pain clinics, Endoscopy Center, Laser Liposuction – Body sculpting centers]
HAI BURDEN OUTSIDE OF ACUTE CARE

We know much less about this.

We are learning rapidly.

What has been learned is that there is a significant problem outside of acute care settings.

Hepatitis C - Nevada

Jan. 2, 2008 - cluster of 6 patients who had developed hepatitis C after undergoing procedures in endoscopy centers in southern Nevada.

Identified unsafe injection practices as the cause of these infections.

Resulted in over 63,000 patients being recalled for testing.

Cost to the public was between $16 million & $21 million dollars.

All preventable using basic infection control practices.

Viral Hepatitis Outbreaks in Outpatient Care Settings Due to Unsafe Injection Practices - CDC

<table>
<thead>
<tr>
<th>STATE</th>
<th>SETTING</th>
<th>YEAR</th>
<th>TYPE</th>
<th>CASES</th>
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<td>HCV &amp; HCV</td>
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<tr>
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<td>HCV</td>
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<td>Cardiology Clinic</td>
<td>2008</td>
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Infection Control Assessment of Ambulatory Surgical Centers

CDC Study

3 States, Between June & Oct. 2008

68 ASCs assessed (32 in MD., 16 in N.C., 20 in Ok.)

IC trained CMS inspectors looked at 5 areas:

1. Hand hygiene
2. Injection safety & medication handling
3. Equip. reprocessing,
4. Environmental cleaning and,
5. Handling of blood glucose monitoring.

Infection Control Assessment of Ambulatory Surgical Centers


Infection Control Assessment of Ambulatory Surgical Centers

<table>
<thead>
<tr>
<th>Findings</th>
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<tbody>
<tr>
<td>67.6% had at least one IC lapse</td>
</tr>
<tr>
<td>17.6 had 3 or more lapses</td>
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</table>

Common problems were:

- Using single dose vials for more than one patient
- Failing to adhere to recommended practices regarding reprocessing of equipment
- Lapses in handling glucose monitoring equipment

Conclusion

Lapses in IC were common.


6% (318) used single dose vial for more than one patient

9% (448) used a bag or bottle of IV solution for more than one patient.

15% reused a syringe to obtain additional doses from Same multi-dose vial for the Same patient.
Other Outbreaks/Exposures

- Wisconsin - August, 2011 - 2,345 Patients notified of possible exposure to BBP - reuse of insulin demonstration pen.
- Mississippi - July 2011 - 11 or 12 cases of invasive Pseudomonas aeruginosa & Klebsiella pneumonia due to IC breaches at Chemo Infusion center.
- West Virginia - May, 2009 - 3 patients hospitalized with severe S. aureus infections after epidural injections at Pain clinic.

Recent Outbreaks in Missouri

- 4 patients in Body Sculpting Center underwent Laser Liposuction procedures in 3 different centers operated by same physician.
  - All developed non-healing wounds which resemble those associated with Mycobacterial infections described in the literature.
  - No agent was identified, however during investigation several basic infection control lapses were found.
  - Center now out of business due to law suits.

- 3 cases of Streptococcus salivarius meningitis from one Radiology Center associated with a single radiologist.
  - 3 basic Infection Control deficiencies identified.
    1. Radiologist not wearing mask during myelogram procedure.
    2. Single use contrast used on multiple patients.
    3. No basic infection control training of staff.

IC in Outpatient Settings

- IC infrastructure and oversight has been sub-optimal.
- Approx. ½ ASCs surveyed by CMS and CDC had condition level, i.e., serious, non-compliance with Medicare ASC health and safety standards.
  - 28% had breaches in safe injection practices!

Outpatient Care Centers

- Have far less regulatory oversight than hospitals.
- IC training is minimal.
- Knowledge and IC sophistication varies dramatically.
- Problems are observed less frequently due to lower patient volumes and health of patients. (Good & Bad)
Sebelius Announces Release of Recovery Act Funding to Improve Care in Nation’s Ambulatory Surgical Centers

To reduce healthcare-associated infections (HAIs) in stand-alone or same-day surgical centers, the HHS Secretary Kathleen Sebelius today announced the availability of up to $9 million in funding from the American Recovery and Reinvestment Act (ARRA) to state survey agencies in 43 states. HAIs are infections some patients acquire when they are in a health care setting such as a hospital or outpatient clinic.

"Because of the Recovery Act, millions of patients who go to stand-alone surgical centers will have greater assurance that they won’t come home with a new infection," said Health and Human Services’ Secretary Kathleen Sebelius. "Residents in these 43 states will continue to see the benefits from the Recovery Act not only by addressing health care associated infections, but by putting people to work to solve an important issue and improve the quality of life for Americans."