Planning for Infectious Disease Disasters in Ambulatory Care Settings

Dr. Teri Rebman

A Webber Training Teleclass

Objectives

- Describe threat of IDDs
- Planning for IDDs in ACCs
  - Triage/screening, isolation, decon, etc
- Address infection prevention in ACCs during disasters
- Occupational health concerns in ACCs during disasters

Types of Disasters/Mass Casualty Events

Natural vs man-made
Infected diseases related vs non infections disease related

Infectious Disease Disasters

- Pandemic
- Bioterrorism
- Emerging infectious disease

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Germs Travel With People

Germs Travel with Animals
Usually not a healthcare issue..
Pets in ambulatory care centers

Germs & the Environment

Impact of 2003 SARS Outbreak

SARS Demographics 2003 Outbreak

| Total cases: | 8,096 |
| Mortality rate: | 9.6% |

44% of cases in Toronto were HCWs

Impact of 2009 H1N1 Pandemic

- Pandemic considered “moderate” in terms of morb & mort
  - Some areas/populations affected worse
- 43 – 69 million cases in U.S.
- 8,900 – 18,300 deaths in U.S.
- Ended June 23rd in U.S.
- Ended worldwide Aug 10, 2010

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Potential Future Impact of Pandemic
- Potential for high morb & mort
- Costs: $71 - $166 billion
- 865,000 – 9.9 million hospital stays
- 45 million additional outpatient visits

Pandemic
- National and global event
  - Difficult to get outside help
- Longer event than other disasters
  - Wave: 6 – 12 weeks
- High absenteeism rate (>40%)
  - Sick HCWs may contribute to the outbreak

Infection Transmission in Ambulatory Care Center
- Communicable disease spread
  - Likely to be endemic disease in community
    - Measles, chickenpox, influenza
- Healthcare associated infections
  - Urinary tract infection
  - Bloodstream infection
  - Surgical site infection

Infection Prevention Coverage
- Best if Infection Preventionist involved
  - At least as consultant in planning stages
- Need IP designee for coverage on site

May Need to Increase Surge Capacity
- Increase number of pts that can be seen
  - Extra beds, staff, supplies, linens, PPE
- Expand into non-clinical areas or buildings
- Stretcher, cot, other makeshift beds
- Double-up pts in rooms/areas
  - Screen pts for contagious illness first

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Use Social Distancing Principles

| 3 feet | 3 feet |

Bed/stretch/cot configuration

Screening/Identifying Potentially Contagious Individuals

- Screening extent will depend on event
  - Formal vs informal screening
- Contagious disease involved
  - Extensive screening needed
  - Patients, staff & visitors need to be screened

Formal Screening

- Best to use HCW
- If resources do not allow, train the screener well
- Screeners wear PPE

Student screeners used during SARS outbreak in Canada

Picture source: Jennie Mayfield

Screening

- Set up outside, if possible
- Otherwise right inside entrance
- Lock off other entrances to center

Screening outside of ambulatory care clinic

Picture source: Jennie Mayfield

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Staff Screening
- Frequency during infectious disease disaster:
  - Formal screening before each shift
  - Report symptoms between shifts
- Consider separate entrance
- Medically evaluate sick staff or send home

Picture source: Jennie Mayfield

Furloughing Staff
- Do not want sick staff working
- Length of furlough depends on disease/event
- Need policy on work restriction

SARS Outbreak in Taiwan
Infected laundry worker
137 Secondary Cases

Anti-Infective Therapy & Prophylaxis
- Administer to patients & staff
  - Follow case definition & public health protocols
- USDHHS’ pre-exposure prophylaxis recommendation

Vaccine
- Before an event:
  - Encourage annual flu vaccine
  - Monitor compliance rate
- During an event:
  - Administer to pts & staff as needed
  - Follow public health protocols

Prioritization Plan for Pharmaceuticals
- Shortages of meds & vaccine likely
- Have prioritization plan for staff
  - Define high risk staff
  - Define high risk exposure
  - Example: When meds are limited during flu pandemic, reserve for staff performing aerosolizing procedures or providing direct care to pts

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Personal Protective Equipment
• Have sufficient amounts
• Be sure it is appropriate to the hazard or task
  – Educate staff

Incorrect respirator removal

Teach & observe staff for compliance with PPE

Correct

Obtaining Extra Supplies
• Stockpile on-site
• Partner with health system
• Obtain from local/regional stockpile
  – Get involved in local planning efforts
• MOA with vendor

Extending the Use or Reusing Respirators
• N95s can be more than single use items
• Follow published guidelines
• www.apic.org

Managing Contagious Individual in Ambulatory Care Center
• Reschedule pt if possible
  – Until not contagious or last case of day
• Isolation can be implemented
  – Follow HICPAC guidelines
  – Standard & transmission-based precautions

Standard Precautions

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Respiratory Etiquette
- Only use a tissue once
- Then throw it away

Choosing Isolation Category
- Disease known: Follow HICPAC
- Undiagnosed: transmission based precautions

Symptoms Isolation Precautions Needed
- Cough, runny nose, watery eyes = Standard
- Fever & cough (adults) = Droplet
- Fever & cough (kids) = Droplet & Contact
- Fever, cough, bloody sputum, & wt loss = Airborne
- Eye infection or drainage = Standard

Improvised PPE cart

Isolation in Ambulatory Care Center
- Place in private room
- Put PPE for staff outside of room
- Post isolation sign

Improvised Isolation Area
- Improvising isolation area
  - Physically separate the pt
  - Building or area outside can be used
  - Best if room/area has walls & a door
  - Makeshift walls/doors
    - Plastic or other barrier material
  - Hang isolation sign near entrance

Airborne Isolation in Ambulatory Care Center
- Hospital better
- Bronchoscopy room may be AIIR
- Improvise negative pressure

Temporary negative pressure rooms/areas used in Toronto during SARS

Environmental Decontamination
- Cleaning pt care areas
- Reprocessing equipment
- “White powder” incidents

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Cleaning Patient Care Areas
- Clean all horizontal surfaces daily
- Clean between pts for Contact Isolation
- Allow for adequate contact/dwell time
- Focus on high-touch areas

Cohort Staff
- Assign dedicated staff to contagious pts
  - Minimizes number of staff exposed
- Use vaccinated staff whenever possible
  - Disease/event specific guidelines

Visitor Management
- Limit visitors
- Do not allow sick visitors in (i.e., screen)
  - Exception: parent of sick pediatric patient
- Limit entrances
- May need crowd control

If Your Site Performs Surgery
- Should have good infection prevention
  protocols for routine practice in place
- During an IDD:
  - Reschedule contagious pts if possible
  - Until not contagious or last case of day
- Perform vigilant environmental decon

Managing Surgical Equipment
- Use disposable equipment once then discard
- Reprocess reusable medical equipment
  between uses

Reprocessing Equipment

<table>
<thead>
<tr>
<th>Device classification</th>
<th>Device examples</th>
<th>Disinfection Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>Critical: Enters sterile tissue or vascular system</td>
<td>Surgical instruments, needles, implants, IUD's, etc</td>
<td>Sterilization</td>
</tr>
<tr>
<td>Semicritical:</td>
<td>Speculum, respiratory therapy equipment, laryngoscope blades, etc</td>
<td>Intermediate or High-level</td>
</tr>
<tr>
<td>Noncritical:</td>
<td>Stethoscope, exam table, blood pressure cuff, etc</td>
<td>Low level</td>
</tr>
</tbody>
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Animal Management
• Only service animals allowed in ACC
• Coordinate with community disaster planners for emergency pet kennels

Photo courtesy of FEMA

Staff Education
• Before event & just-in-time during event
  – Triage/screening
  – Employee exposure management
  – Basic infection prevention (disease transmission, isolation, hand hygiene, etc)
  – Social distancing
  – Environmental decon, cleaning, disinfection

Talk to Staff about Having a Personal/Family Disaster Plan

In Conclusion
• Infectious disease spread likely during an IDD
• Need good infection prevention practices
• Get involved in local disaster planning
• Have a personal disaster plan & encourage staff to have one

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The Next Few Teleclasses

16 Sep. 10
Lessons Learned from the Canadian Listeriosis Outbreak
Speaker: Dr. Franco Pagotto, Health Canada

20 Sep. 10
(Feed British Teleclass ... Live Broadcast from the IPS Conference, UK)
The Emerging Role of Epidemiology in Infection Prevention
Speaker: Prof. Jacqui Reilly, Health Protection Scotland

22 Sep. 10
(Feed British Teleclass ... Live Broadcast from the IPS Conference, UK)
Preventing and Controlling ESBL s. The Future is Here
Speaker: Prof. Hilary Murphree, Royal College of Surgeons

29 Sep. 10
(Feed Teleclass) Voices of CHIQA – Part 2
Speaker: Community and Hospital Infection Control
Association of Canada Board Members and Guests

30 Sep. 10
Prevention of Mother to Child Transmission of HIV
Speaker: Dr. Kay Libbus, University of Missouri

13 Oct. 10
(South Pacific Teleclass)
Infection Control in the Tropics
Speaker: Chris Boothroyd, ACN-NESS Australia

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