Disclosure

I disclose, I have no potential or direct conflict of interest.

This presentation contains my observations, knowledge and does not necessarily reflect the opinions of my employer the City of Greater Sudbury Paramedic Services.
Overview
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Challenges

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Challenges

Expected rapid “turn around time” to get back into service following transfer of care at ED.

Spaulding Classification System

<table>
<thead>
<tr>
<th>Device Classification</th>
<th>Invasiveness</th>
<th>Required Process</th>
<th>Device Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-critical</td>
<td>Only touches intact skin</td>
<td>Low-level Disinfection</td>
<td>Blood Pressure Cuffs</td>
</tr>
<tr>
<td>Certain Semi-critical</td>
<td>Touches non-intact skin</td>
<td>Intermediate-level Disinfection</td>
<td>Hydro-therapy Tanks</td>
</tr>
<tr>
<td>Semi-critical</td>
<td>Touches mucous membranes or non-intact skin</td>
<td>High-level Disinfection (HLD)</td>
<td>Bronchoscopes Laryngoscope Blades</td>
</tr>
<tr>
<td>Critical</td>
<td>Enters sterile tissue or vascular system</td>
<td>Sterilization</td>
<td>Surgical instruments Cardiac catheters</td>
</tr>
</tbody>
</table>

Studies have determined bacterial pathogens in ambulances on sample collections grew skin and environmental flora.

Paramedics and health care workers may carry staph as part of skin flora in fact a study published in JEMS October 2015 determined Paramedics are 10x higher risk of carrying MRSA if they don’t wash their hands after removing their gloves.

The higher rate of colonization than the normal population can lead to the bacteria being found in ambulances.
Cleaning Process
Established process/policy
Checklist, cards for reference
Proper product
Clean to dirty
Use PPE as required
No spray bottles
Ensure wet contact time as per product requirements

Paramedic Knowledge
Canada: formal in College,
In Ontario approx. 4-6 hrs brief education based on National Occupational Competency Profile (NOCP) for Paramedics

Service Providers:
Limited time to provide ongoing training, varied depending on the service, operational demand and current focus ie Ebola, H1N1, SARS
Ontario mandatory: “Designated Officers”

IPAC CANADA
Very few services have “Infection Control Practitioners” or staff members Certified in Infection Control “CIC”
Research

Nigel Barr, Mark Holmes, Anne Roiko, William Lord

Stated relatively little research about transmission of pathogens in pre-hospital setting.  
Concludes that the mobile paramedic environment presents unique challenges to provide recommended IPC practices, and targeted research into staff compliance is required to identify barriers and enablers to increase the uptake of IPC practices.

Reports suggest paramedics have limited understanding of infectious disease that may demonstrate poor compliance with infection prevention and control protocols when caring for patients.

EMS Provider Compliance with Infection Control Recommendations is Suboptimal

• Study done in USA.  
• Published in Prehospital Emergency Care 2014  
• Observational study in large ED  
• 423 EMS deliveries observed  
• 899 providers  
• Use of gloves in 512  (56.9%)  
• Hand washing observed in 250  (27.8%)  
• Equipment disinfections 31.6 %  
• Most commonly disinfected item was the stretcher

Determination IPAC practice suboptimal and strategies must be developed to improve compliance with established recognized guidelines

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Aseptic procedure always possible in Paramedic Practice?

Aseptic/no touch

Best practice for IV: palpate vein, HH, clean the site, let skin dry 30 seconds, prepare equipment, HH, don gloves, DO NOT REPALPATE VEIN, insert cannula, secure with sterile op site,

Emergency situations

situation requiring may prevent all steps being taken.

In the UK medics notify staff so cannula can be replaced ASAP (within 24 hrs)

Emergency Intubation in the field with aspiration prior or during procedure increases risk of VAP. Highest in Trauma patients. American Study 2015

Point of Care Risk Assessment

Purpose: to assess and reduce risk of transmission of microorganisms and determine appropriate actions/precautions possible PPE requires to provide safe interaction with patient and/or environment:

WHAT IS MY PURPOSE/TASK?

• Done as approaching patient – look for possible risks of exposure to blood, body fluids, excretions, secretions, mucous membranes, non intact skin.

• Perform hand hygiene before touching patient or donning gloves if required

• Verbal ARI risk tool as required - new cough/SOB, chills/ feel feverish, travel history

• Look for rashes, hx diarrhea, vomiting, draining wounds/cellulitis

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Point of Care Risk Assessment

• Determine if require contact and/or droplet precautions - fluid splash, respiratory secretions
• Don a gown if uniform is likely to become contaminated during direct patient care or from environment
• Ensure to perform hand hygiene
• Ensure to pre-notify receiving facility if transporting patient with suspected communicable disease

PPE

• Designed to go over scrubs, can present a challenge to medics
• Used as a barrier to assist in preventing exposure
• Must be readily accessible
• Must be appropriate size
• Should be put on just before interaction with patient based on point of care risk assessment and/or signage knowledge (e.g. transfer)
• Selection of PPE depends on mode of transmission
PPE

• When interaction with patient is concluded, PPE should be removed and discarded appropriately
• Contaminated PPE must NEVER be worn in driver’s cab
• Regular education and review of donning and doffing of PPE must be provided
• Fit testing of Respirators required, paramedics must be trained in use
• Gowns/coveralls – consider fluid resistant
• Eye protection- personal issue and/or disposable

Gloves

• Paramedics often wear gloves for a “whole call” only changing if ripped or visibly soiled
• DO NOT wear gloves for routine health care activities in which contact is limited to intact skin of patient
• Wear gloves when it is anticipated that the hands will be in contact with mucous membranes, non-intact skin, tissue, blood, body fluids, secretions, excretions, or equipment environmental surfaces contaminated with the above

GLOVES ARE NOT REQUIRED ON EVERY CALL
PPE Enhanced Precautions

Moving Forward

- Canadian Paramedic Services Standards Report 2014 – Identified IPAC as one of the top 5 priority areas as a strategic recommendation for the path forward
- Review your program with Infection Control Standards – IPAC has one for Canada also an Audit toolkit for Prehospital for members
- Immunization Protocols for all first responders starting with Paramedics
- Further the education of paramedics and increase number of Infection Control Professionals in services
- Increase network of Paramedic ICPs, Canada, USA – potential of Prehospital Interest Group globally
- If you do not have service expertise seek assistance from IPAC Canada, Local Hospital ICPs, Public Health

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Thank you

Questions?

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Webber Training Teleclass

Thanks to Teleclass Education

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