Background

- Anaesthesia & ICU
- Accident &
- Emergency &
- Transport medicine
The Risk

• Tiger Country!
• HBV
• HCV¹
• HIV²

¹ Thorburn et al. Gut 2003
² Goldberg et al. J Hosp Inf 2000
Precaution

- Stop transmission
- AAGB&I
- DoH
- CDC
General Precautionary Measures

- General principles
  - H&S at Work Act (1974)
  - COSHH-Regulations

- Infection control
  - National guidelines
  - Local protocols

- Environment

- Hand hygiene

General Precautionary Measures

• Universal / Standard Precautions\(^1\)
• Face mask
• Gown
• Apron

\(^1\) Hospital Infection Control Advisory Committee. *Am J Inf Contr* 1996
General Precautionary Measures
Glove Study - Background

• AAGB&I (2002) Guidelines: Glove wearing
• Poor compliance\(^1-4\)
• Objective:
  3 different types of surgical glove
  Comparison of touch sensitivity
• Any advantage?\(^5\)

1 Kristensen et al. *Anesthesiology* 1990
2 Harrison et al. *Anaesthesia* 1990
3 O’Donnell et al. *Anaesthesia* 1992
4 El Mikatti et al. *Anaesthesia* 1999
5 Kopka et al. *Acta Anaesthesiol Scand* 2004
Glove Study - Methods

- Assessment tool
  9 modified von Frey hairs
  Range 0.5 - 17 mN

- 3 Glove types

- 24 Anaesthetists

- Assessment
  Counterbalanced, randomized & blinded
  Dominant Index finger

- Sensibility threshold

Kopka et al. *Acta Anaesthesiol Scand* 2004
<table>
<thead>
<tr>
<th></th>
<th>Threshold Force [mN]</th>
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<tbody>
<tr>
<td></td>
<td>Median</td>
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<tr>
<td>Standard Latex</td>
<td>6.37</td>
</tr>
<tr>
<td>Latex Free</td>
<td>6.86</td>
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<tr>
<td>Micro-thin Latex</td>
<td>4.41</td>
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<table>
<thead>
<tr>
<th>H₀</th>
<th>Threshold Force</th>
<th>Glove A = Glove B</th>
<th>Raw P Value =</th>
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<tbody>
<tr>
<td>Standard Latex vs Micro-thin Latex</td>
<td>0.014*</td>
<td></td>
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<tr>
<td>Standard Latex vs Latex Free</td>
<td>0.166</td>
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<tr>
<td>Latex Free vs Micro-thin Latex</td>
<td>0.001*</td>
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*Significant @ P<0.05 after Bonferroni correction

Glove Study - Conclusions

• Ansell® *Micro-thin* latex surgical gloves
  Provided superior touch sensitivity

• NO sensitivity difference was detected
  Between Standard Biogel® latex & latex-free gloves

• *Micro-thin* latex surgical gloves
  May give enhanced dexterity
  May encourage glove-wearing compliance?

Kopka et al. *Acta Anaesthesiol Scand* 2004
Micro-thin Gloves

- Compliance?
- Study design?
- Safety?
  Micro-thin vs Standard
  ASTM F 1671-97a
  APT & ECT\(^1\)
- Cost implications?

\(^1\) Sohn et al. *Am Surg* 2000
Gloves

- Double gloving
  - Integrity\(^1\)
  - Blood volume\(^2\)
- Sensitivity & Dexterity\(^3\) \(^4\)
- Vial injury\(^5\)

5. Parker et al. *Anaesthesia* 1995
Indicator Gloves

• Glove perforation
  Common\(^1\-^3\)
  Unnoticed\(^4\)

• Indicator systems
  Chemical
  Electrical
  Optical

3 Sanders et al. *J Bone Joint* 1990
4 Maffulli et al. *J Hand Surg* 1991
Indicator Gloves
Needlestick Injuries

• PREVENTION most important¹
• Frequent occupational injury²
• Avoidable³
• Follow guidelines⁴
• Blunt needle⁵

Aspirating
Surgical

¹ Tan et al. Arch Intern Med 2001
² AAGB&I 2002
³ Ben-David et al. Anesth Analg 1996
⁴ Berry et al. Anesthesiology 1992
⁵ Berguer et al. J Am Coll Surg 2004
CPI - Prevention

- Sharps container
  Universally present
  Safe disposal
  Do not force open
  Do not overfill

AAGB&I 2002
CPI - Prevention
CPI - Prevention
CPI - Prevention

- Technique & Development
- Laparoscopic & Electric Surgery
- Hands-free Instrumentation
- Stapling devices

Airway Equipment

- Contamination\(^1-^3\)
- Decontamination?\(^4\)
- Disposable
- Laryngoscope
- Facemask & Tubes

\(^1\) Hall. *Anesth Analg* 1994
\(^2\) Parker et al. *Anaesthesia* 2000
\(^3\) Perry et al. *AANA* 2001
\(^4\) Esler et al. *Anaesthesia* 1999
Laryngeal Mask Airway

- LMA
- Trauma @ insertion
- A mediator of Infection?¹
- Contamination²
- Disposable?

¹ Chant et al. NSW PHB 1994
² Parker et al. Anaesthesia 2000
Heat & Moisture Exchanger

• HME Filter
  Artificial nose
  Hydrophobic
  Electrostatic

• Protection
  Bacterial
  Viral (MS-2)

Wilkes et al.

*Anaesthesia* 2000 & 2002
*BJA CEPD* 2002
Central Sterilization Unit
CASTELLA

CLASSIC
Fine Cigars

Smoking seriously harms you and others around you
Smoking seriously harms you and others around you.
CASTELLA

CLASSIC
Fine Cigars

Smoking seriously harms you and others around you

Smoking can cause a slow and painful death
General Precautionary
Measures

• Relevant
• Ongoing effort
• Simple & easy
• Bidirectional
• STOP Transmission
• A MUST for HCW!