

Ward based medical simulation as an educational tool for patient safety

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Medical Simulation

“**Simulation** is a technique to replace or amplify real experiences with *guided experiences* that replicate aspects of the real world in a fully interactive manner”



A brief history of “Patient Safety” Simulation Training

- 2007 – NHS London – funding for “novel” methods of Infection Control training
 - Simulation Equipment
 - Full time Patient Safety Trainer post – 6 months
- Value recognised – funding continued
- Post development
 - Governance, patient safety and clinical education

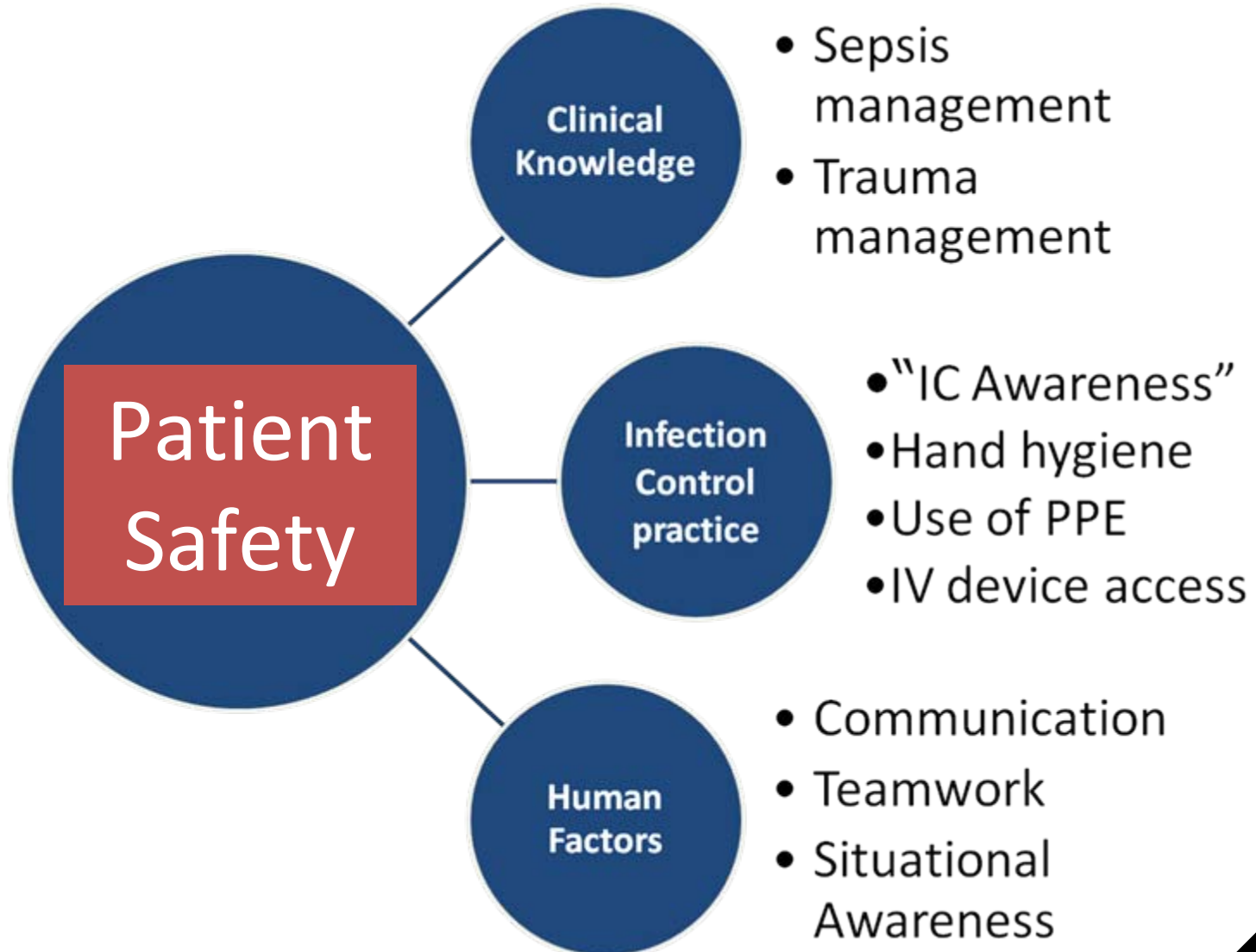


Project Outline

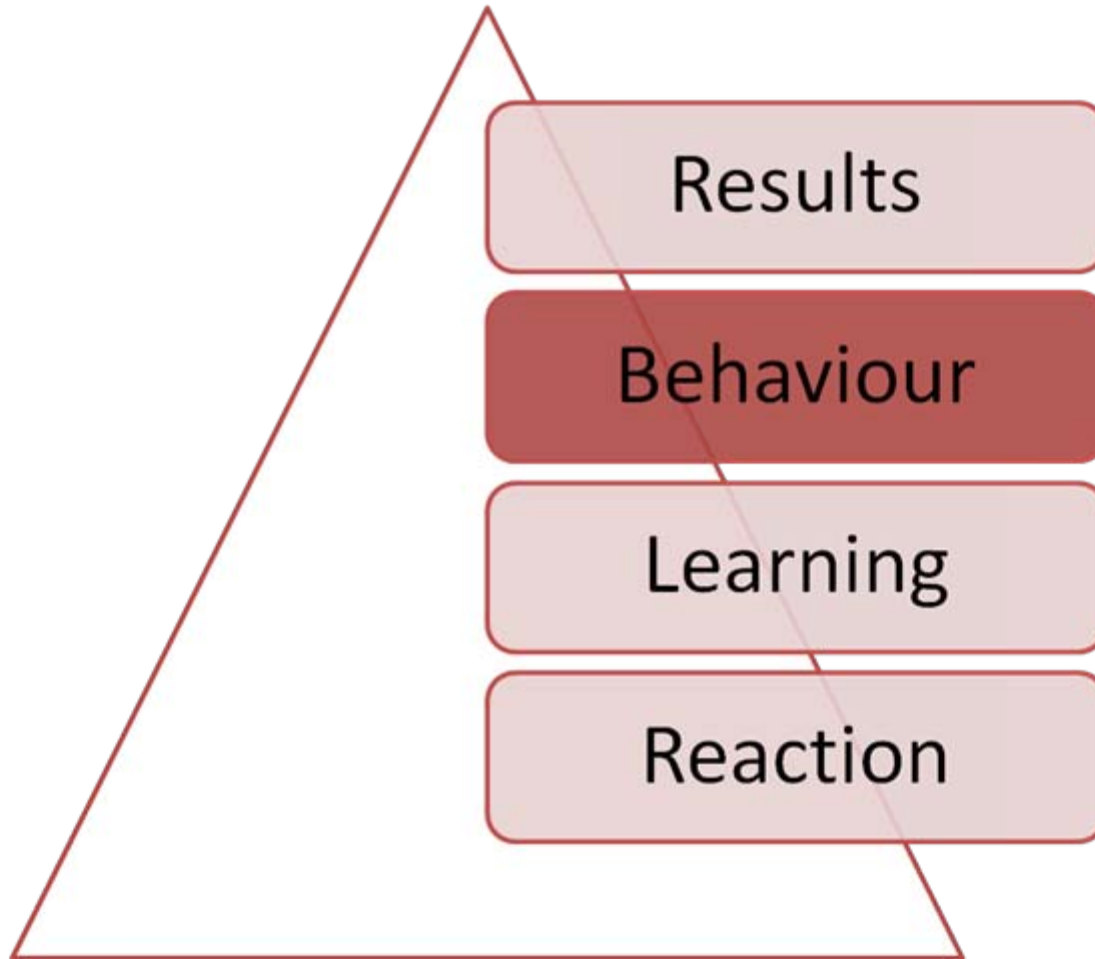
- Focus on ICU at Royal London Hospital
- Aim to include >90% of staff - ✓
- Weekly ½ day training – 8 teams / 10 weeks
- Faculty – Intensivist, Sim expert, Infection Control
- Pre/post data collection to assess impact



Learning objectives



Kirkpatrick's Hierarchy of Learning "The 4 Levels"



Level 1 data – post course questionnaire

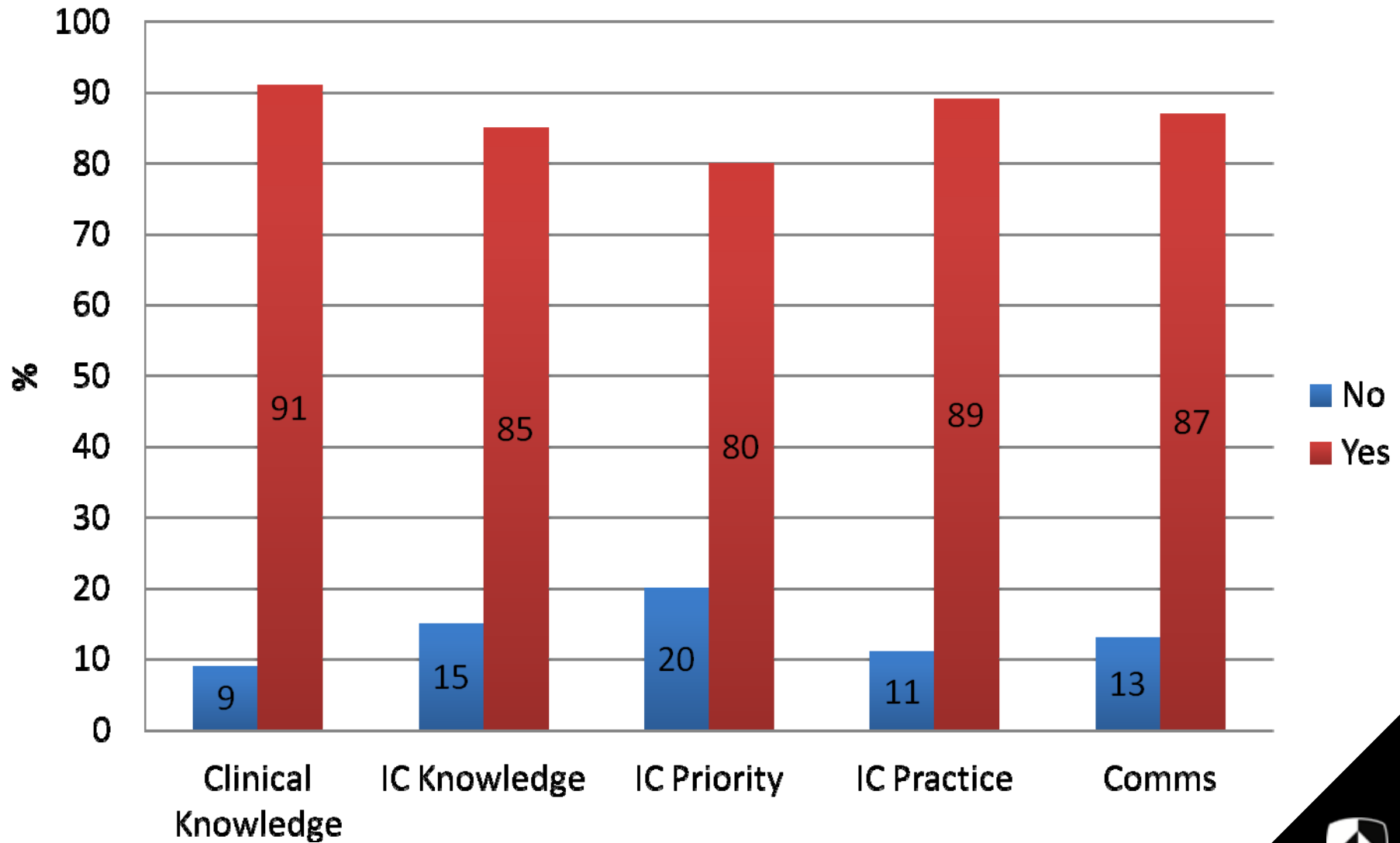
Questions:

Do you believe that today's course:

1. has improved your clinical skills / knowledge?
2. has improved your knowledge of infection control practice?
3. has made you consider infection control as a higher priority than previously?
4. is likely to impact on your future practice with regard to infection control?
5. is likely to enhance your communication skills?



Level 1 data - Self- assessment of impact (n = 123)



Level 2 data – pre/post infection control test

Question 1

Gloves should be worn for most patient contact
true / **false**

Question 2

Hand decontamination should occur after all environmental contact
true /false

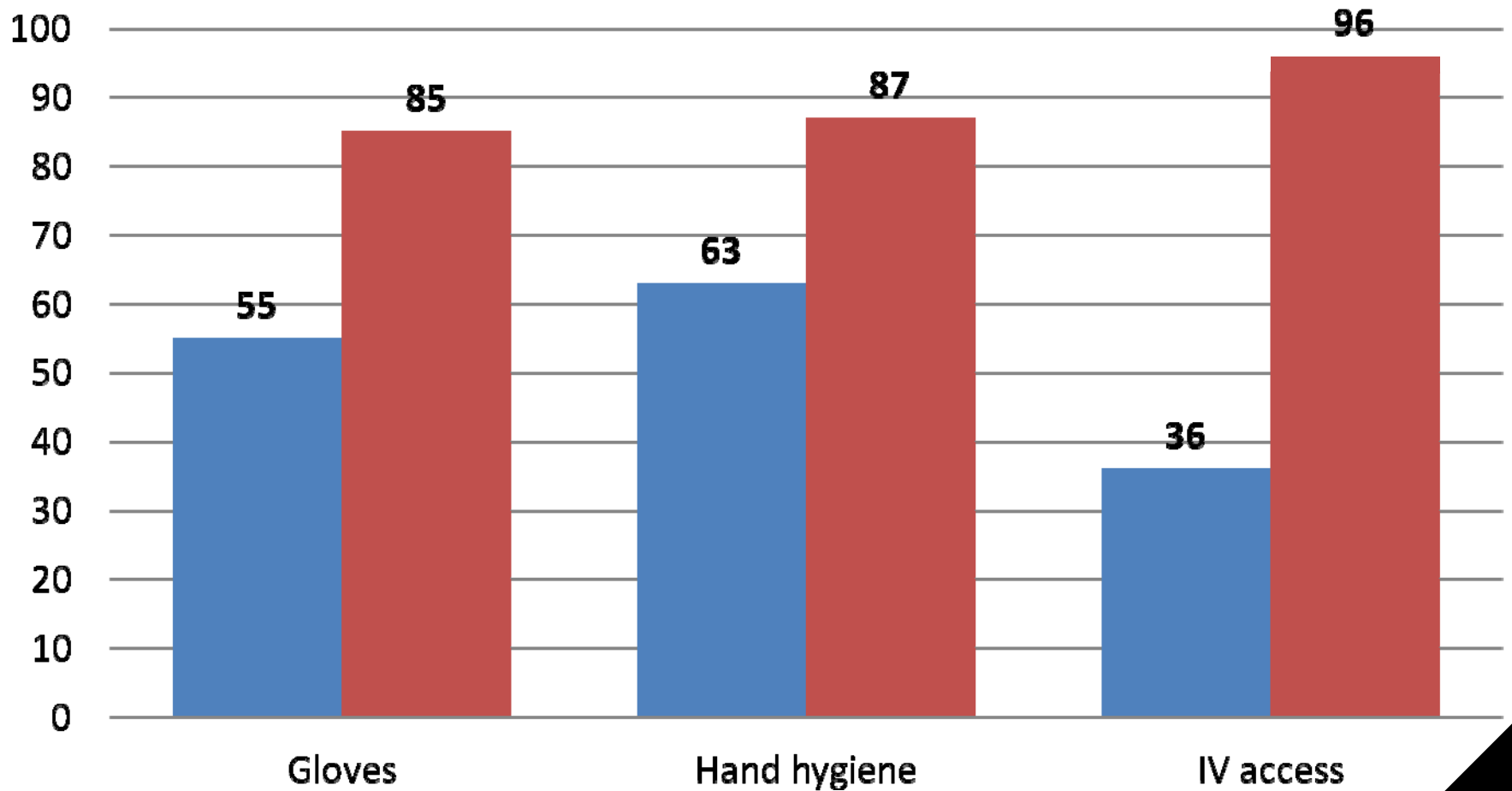
Question 3

When accessing lines the 2% chlorhexidine / 70% alcohol spray need to dry for 5 seconds to be effective
true / **false**



Level 2 data - Responses to Infection Control questions (n = 84)

Correct Pre (%) Correct Post (%)



Level 2 data – Learning & perceptions (free text answer; n=97)

“Name 3 things you have learnt today”

Key themes

1. The importance of effective communication (68%)

Prior to training 13% of staff cited communication as a Patient Safety Issue

2. The impact of infection control on patient safety (66%)

Prior to training 24% cited IC as a Patient Safety issue

3. Recognition of a deteriorating patient (28%)



Level 3 data – pre/post audit of Infection Control practice

Hand hygiene compliance

hand wash or decontamination after any contact with the patient or clinical environment

Glove use

only used when undertaking aseptic procedures and / or when there is a risk of contact with body fluids

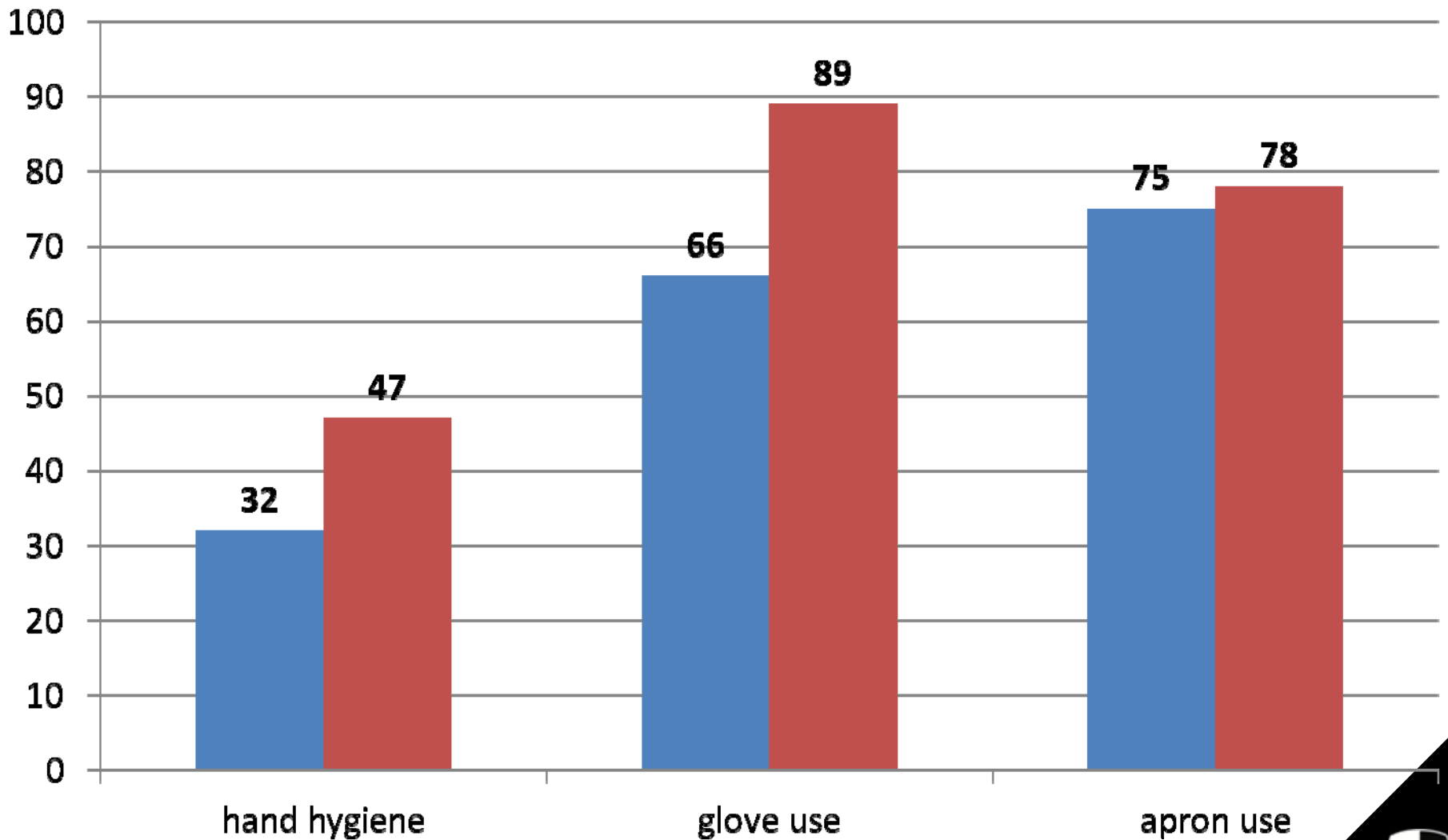
Apron use

used when there is any contact with the patient or the patient's environment



Level 3 data – Infection Control behaviour (n= 65 / 45)

■ Pre Course % ■ Post Course %



Level 4 data – HCAI rates pre/post

- Small numbers of cases of MRSA bacteraemias and C.Difficile at a unit level
- Multi-factoral causes of HCAs, especially in the ICU
- Secular trend of improvement over time
- Evaluation of impact on patient outcomes of clinical education generally lacking



Discussion - results

- Staff “value” this mode of training – relevant and contextualised
- Information dissemination + identification of latent bad practice
 - ‘Journey of the glove’
 - Cognitive dissonance
 - Allows reflection on practice
- Knowledge vs. behaviour / practice
- Not a ‘quick fix’
 - Theory to practice
 - Multi-faceted (repeated??) interventions required



Discussion

- Novel use of simulation for IC training
- Covering multiple aspects of patient care is complicated and time consuming – need focus.
- Continued emphasis on knowledge *plus* behaviour as both key to safe patient care
- Clear mandate to continue to strive for refinement of clinical practice to improve patient safety



WHO “Save Lives” – Guide to Implementation

- System change
- Training and education
- Reminders in the workplace
- Evaluation and feedback
- Institutional Safety Climate

Ward based simulation training can be an effective tool for behaviour change in the pursuit of improved patient safety

