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To Glove or Not to Glove?

How to answer the question

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
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Background

- Hands recognised as major vehicle for transmission of infection in healthcare settings
- Hand hygiene interrupts transmission
 - Removes microorganisms acquired transiently through touch
 - Soap and water
 - Alcohol hand gel/rub



Rationale for the use of clinical gloves

- Universal precautions (1987)
 - Guidance in response to HIV to protect HCW from acquiring BBV via damaged skin
 - disposable gloves for direct contact with blood and body fluid from all patients
- Standard precautions (mid-1990s)
 - Introduced gloves to routine clinical care
 - Dual purpose of protecting vs BBV and reducing risk of transmission of pathogens from BBF
 - Select to use by risk assessment of likely exposure to BBF

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WHO Hygiene Guideline 2009: Gloves use

EXAMINATION GLOVES INDICATED IN CLINICAL SITUATIONS

Potential for touching blood, body fluids, secretions, excretions and items visibly soiled by body fluids

DIRECT PATIENT EXPOSURE: contact with blood; contact with mucous membrane and with non-intact skin; potential presence of highly infectious and dangerous organism; epidemic or emergency situations; IV insertion and removal; drawing blood; discontinuation of venous line; pelvic and vaginal examination; suctioning non-closed systems of endotracheal tubes.

INDIRECT PATIENT EXPOSURE: emptying emesis basins; handling/cleaning instruments; handling waste; cleaning up spills of body fluids.

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But gloves should not be worn.....

GLOVES NOT INDICATED (except for CONTACT precautions)

No potential for exposure to blood or body fluids, or contaminated environment

DIRECT PATIENT EXPOSURE: taking blood pressure; temperature and pulse; performing SC and IM injections; bathing and dressing the patient; transporting patient; caring for eyes and ears (without secretions); any vascular line manipulation in absence of blood leakage.

INDIRECT PATIENT EXPOSURE: using the telephone, writing in the patient chart; giving oral medications; distributing or collecting patient dietary trays; removing and replacing linen for patient bed; placing non-invasive ventilation equipment and oxygen cannula; moving patient furniture.

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And if gloves are worn they.....

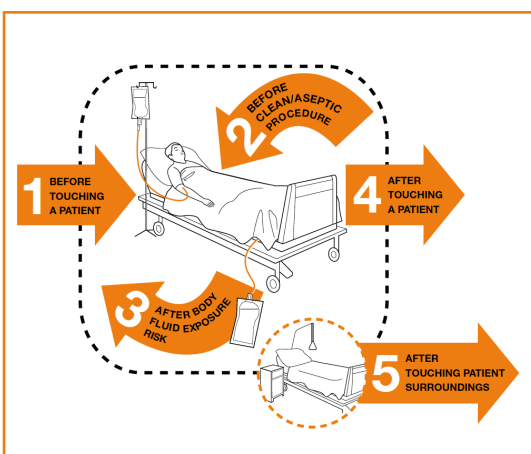
- Must be changed between patients
- Must be changed between procedures
- Hands must be decontaminated after removal

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Evolution of gloves use in healthcare: 1980 - 2015



How are clinical gloves integrated into My 5 Moments of Hand hygiene?



Non-sterile gloves:
'a second skin to prevent exposure of hands to body fluids'
'glove removal represents a strong cue for hand hygiene'
 Sax et al 2007

Gloves worn appropriately and associated with less hand hygiene



“The Dirty Hand in the Latex Glove”: A Study of Hand Hygiene Compliance When Gloves Are Worn

Christopher Fuller, MSc;¹ Joanne Savage, MSc;¹ Sarah Besser, MSc;² Andrew Hayward, MD;¹ Barry Cookson, FRCPath;³ Ben Cooper, PhD;⁴ Sheldon Stone, MD⁵

BACKGROUND AND OBJECTIVE. Wearing of gloves reduces transmission of organisms for hand hygiene. Results of previous studies have varied as to whether hand hygiene been small and used nonstandardized assessments of glove use and hand hygiene. We s appropriate and whether hand hygiene compliance differed when gloves were worn.

DESIGN. Observational study.

PARTICIPANTS AND SETTING. Healthcare workers in 56 medical or care of the eld across England and Wales.

METHODS. We observed hand hygiene and glove usage (7,578 moments for hand hyg recorded whether gloves were or were not worn for individual contacts.

- 7578 moments of HH
- Gloves worn for 26.7%
- 16.7% of moments when gloves were were low risk
- HH after glove use 40%; no glove use 50% ($p < 0.01$)

Fuller et al 2011, ICHE

Gloves become contaminated with pathogens



Misuse of gloves: the foundation for poor compliance with hand hygiene and potential for microbial transmission?

E. Girou^{a,*}, S.H.T. Chai^a, F. Oppein^a, P. Legrand^b, F. Cizeau^a, C. Brun-Buisson^a

^aInfection Control Unit, Hôpital Henri Mondor, Assistance Publique–Hô
^bMicrobiology Laboratory, Hôpital Henri Mondor, Assistance Publique–

- Observed 120 HCW
- 64% gloves not changed, after contact
- 18.3% potential microbial transmission
- 22 gloves sampled: 100% grew bacteria, 86% grew pathogens; 59% same m'org as patient

Girou et al 2004, JHI

Glove use widespread and often inappropriate



Clinical glove use: healthcare workers' actions and perceptions

H.P. Loveday^a, S. Lynam^a, J. Singleton^b, J. Wilson^{c,*}

^aRichard Wells Research Unit, University of West London, London, UK

^bInfection Prevention & Control Department, Imperial College Healthcare NHS

^cInstitute of Practice, Interdisciplinary Research & Enterprise, University of W

Loveday et al 2013, JHI

- Observed 163 glove use episodes
- 42% glove use inappropriate (used for low risk procedures)
- 37% associated with risk of cross contamination
- Interviewed 25 staff: Decision to wear gloves influenced by emotion and socialisation

Summary of current evidence



- Clinical gloves account for substantial NHS costs
- They are often used inappropriately (Bearman et al 2007, Chan et al 2011, Flores et al 2006)
- Associated with potential risk of cross contamination because not changed between procedures
- Little is known about the patients perspective
- Need to understand motivations for HCW using gloves to develop effective improvement strategies

Validated tool to measure appropriate glove use and risk of cross contamination



The misuse and overuse of non-sterile gloves: application of an audit tool to define the problem

Journal of Infection Prevention
2015, Vol. 16(1) 24–31
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Jennie Wilson¹, Jacqui Prieto², Julie Singleton³, Vivienne O'Connor³, Siobhan Lynam¹ and Heather Loveday¹


Wilson et al 2015, JIP

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Aim of this study





- Refine methods used in a previous study in a single teaching hospital (Loveday *et al* 2014) to 2 other acute hospitals to:
 - observe patterns of glove use behaviour in relation to 'My Five Moments of Hand Hygiene'
 - identify key influences on glove use behaviour
- Determine public perceptions of clinical glove use in acute healthcare settings




Study Design


| | |
|----------------|--------------------------|
| Phase 1 | • Observational Audit |
| Phase 2 | • Qualitative Interviews |
| Phase 3 | • Public survey |



Phase 1: Observation

- Conducted by IPCNs at 2 hospitals
- Followed an episode of care
 - with or without gloves
- Record every item touched
 - when gloves put on/taken off & HH performed
- Analyse sequence to determine if risk of cross contamination occurred





Clinical glove use audit
Commence observation when healthcare worker observed to be commencing a task/procedure and continue until the procedure is completed and gloves are removed or hands decontaminated

Ward: _____ Date: _____ Time start: _____
Time stop: _____

| | |
|--|---|
| 1. Discipline <input type="checkbox"/> Senior nurse <input type="checkbox"/> Domestic <input type="checkbox"/> Sister <input type="checkbox"/> Phlebotomist <input type="checkbox"/> Staff nurse <input type="checkbox"/> Porter <input type="checkbox"/> Agency Nurse <input type="checkbox"/> AHP <input type="checkbox"/> HCA <input type="checkbox"/> Junior doctor <input type="checkbox"/> Student <input type="checkbox"/> Senior doctor | 2. Location of task performed? <input type="checkbox"/> Clean utility <input type="checkbox"/> Sluice <input type="checkbox"/> In bay/room <input type="checkbox"/> Nurses station <input type="checkbox"/> Other <input type="checkbox"/> Unknown |
|--|---|

3. Sequence of items/objects touched in this episode of care with points of hand hygiene/glove use
Use to categorise the risk of cross-contamination in one or more of 'My 5 moments of hand hygiene' at end of the observation

| Item | HH | G | Item | HH | G |
|------|----|---|------|----|---|
| 1 | | | 7 | | |
| 2 | | | 8 | | |
| 3 | | | 9 | | |
| 4 | | | 10 | | |
| 5 | | | 11 | | |
| 6 | | | 12 | | |

4. If gloves used?

| | |
|--|---|
| Location put on? <input type="checkbox"/> Clean utility <input type="checkbox"/> Sluice <input type="checkbox"/> Inside bay/room <input type="checkbox"/> Nurses station <input type="checkbox"/> Other <input type="checkbox"/> Unknown | Location removed? <input type="checkbox"/> Clean utility <input type="checkbox"/> Sluice <input type="checkbox"/> Inside bay/room <input type="checkbox"/> Nurses station <input type="checkbox"/> Other <input type="checkbox"/> Unknown |
| Was this as close to the point of use as possible/practical? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> U/K | Was this as close to the point of use as possible/practical? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> U/K |

5. Adequate hand hygiene after gloves removed? Yes No U/K
According to local policy

Analysis

| Procedure(s) performed during this care episode | Glove used? | Risk of contact with BBF? Was highly likely to be contact | Glove use appropriate? |
|---|---|---|---|
| 1 <small>Procedure</small> <small>Check with healthcare worker if cannot observe</small> | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> U/K | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> U/K | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> U/K |
| 2 | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> U/K | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> U/K | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> U/K |
| 3 | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> U/K | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> U/K | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> U/K |
| 4 | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> U/K | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> U/K | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> U/K |


* Risk of contact with BBF, mucosa membranes, hazardous substances (e.g. chemicals, cytotoxic, drugs) or patient under isolation precaution.

| | |
|---|--|
| Was there a risk of cross contamination? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> U/K | If yes, which 'moments of hand hygiene'? 1 <input type="checkbox"/> Before contact with patient zone 2 <input type="checkbox"/> Before contact with susceptible site* 3 <input type="checkbox"/> After contact with blood/body fluid 4 <input type="checkbox"/> After contact with patient zone 5 <input type="checkbox"/> After contact with healthcare zone |
|---|--|

Assess from the list of items touched, time of glove use and hand hygiene and procedures undertaken, indicate at which 'moments' the potential for cross contamination occurred.

Comment _____

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Record sequence of items touched

3. Sequence of items/objects touched in this episode of care with points of hand hygiene/glove use
Use to categorise the risk of cross-contamination in one or more of 'My 5 moments of hand hygiene' at end of the observation

| Item | HH | G | Item | HH | G |
|------|----|---|------|----|---|
| 1 | | | 7 | | |
| 2 | | | 8 | | |
| 3 | | | 9 | | |
| 4 | | | 10 | | |
| 5 | | | 11 | | |
| 6 | | | 12 | | |

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Identifying inappropriate use and risk of cross contamination



| Analysis | | | |
|--|---|---|---|
| Procedure(s) performed during this care episode | | | |
| Procedure <i>Check with healthcare worker if cannot observe</i> | Glove used? | Risk of contact with BBF? <i>Was/highly likely to be contact</i> | Glove use appropriate*? |
| 1 | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> U/K | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> U/K | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> U/K |
| 2 | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> U/K | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> U/K | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> U/K |
| 3 | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> U/K | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> U/K | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> U/K |
| 4 | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> U/K | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> U/K | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> U/K |

** risk of contact with BBF, mucous membranes, hazardous substances (e.g. chemicals, cytotoxic drugs) or patient under isolation precaution.*

| Was there a risk of cross contamination? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> U/K | If yes, which 'moments of hand hygiene'? |
|--|--|
| <i>Assess from the list of items touched, time of glove use and hand hygiene and procedures undertaken. Indicate at which 'moment/s' the potential for cross contamination occurred.</i> | 1 <input type="checkbox"/> <i>Before contact with patient zone</i> |
| | 2 <input type="checkbox"/> <i>Before contact with susceptible site[^]</i> |
| | 3 <input type="checkbox"/> <i>After contact with blood/body fluid</i> |
| | 4 <input type="checkbox"/> <i>After contact with patient zone</i> |
| | 5 <input type="checkbox"/> <i>After contact with healthcare zone</i> |

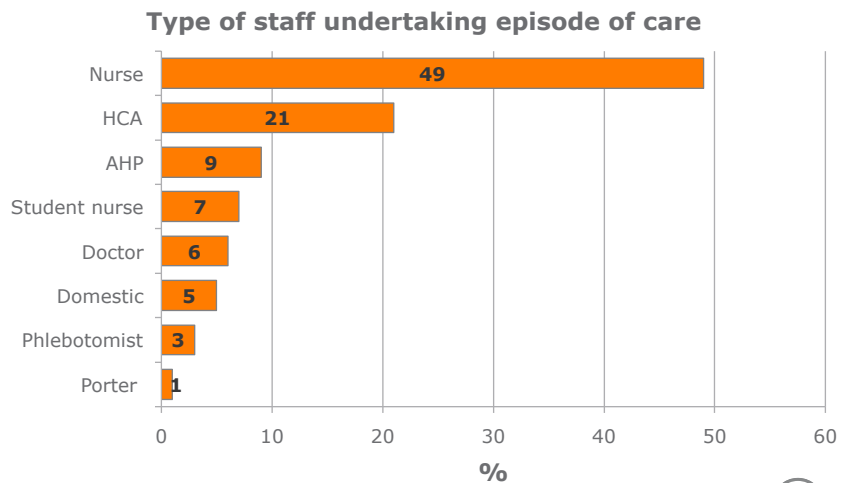
Defining risk of cross contamination linked to 5 moments



| Moment for hand hygiene | Risk of cross contamination | Definition |
|-------------------------|--|--|
| 1 | A patient touched by a contaminated glove/hand | Gloves/hands contaminated if they had contact with any part of the environment outside the patient's zone before direct contact with the patient's intact skin. <i>If the HCW touches their own clothing, skin or hair this is not considered part of the 'patient zone'</i> |
| 2 | A contaminated glove/hand touched a susceptible site e.g. wound, IV access site, phlebotomy | Gloves/hands contaminated if they had touched any other non-sterile objects or patient sites before the aseptic task e.g. patient skin, bed linen. |
| 3 | A glove/hand touched a surface or patient after contact with BBF | Gloves/hands contaminated if used for handling urine or assisting a patient with toileting then touched other surfaces or patient. |
| 4 | Gloves used for contact within patient zone not removed or hand hygiene not performed before contact with an object outside patient zone | Gloves/hands contaminated if touched another patient/objects outside patient zone; hand hygiene not performed after glove removal; or one glove/outer glove (where double-gloves used) removed part way through procedure. |
| 5 | Failure to remove gloves and/or perform hand hygiene after contact with patient surroundings | Gloves not removed or adequate hand hygiene not performed on leaving the healthcare zone. |



Type of staff observed



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Results:

Risk of cross-contamination and appropriateness

| | No. episodes | % cross contamination* | No. procedures | % use inappropriate# |
|----------------|--------------|------------------------|----------------|----------------------|
| Hospital A | 69 | 58% | 104 | 38% |
| Hospital B | 109 | 43% | 191 | 68% |
| OVERALL | 178 | 49% | 295 | 57% |

*p=0.065; #p<0.01

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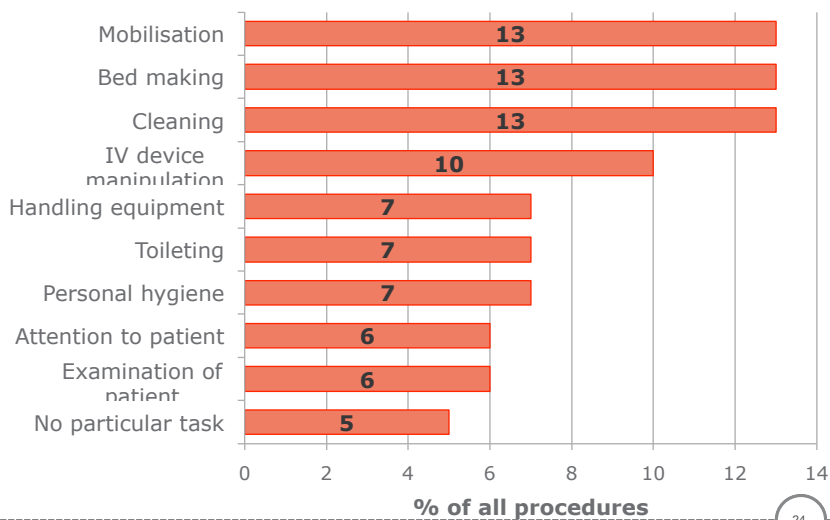
Differences between staff

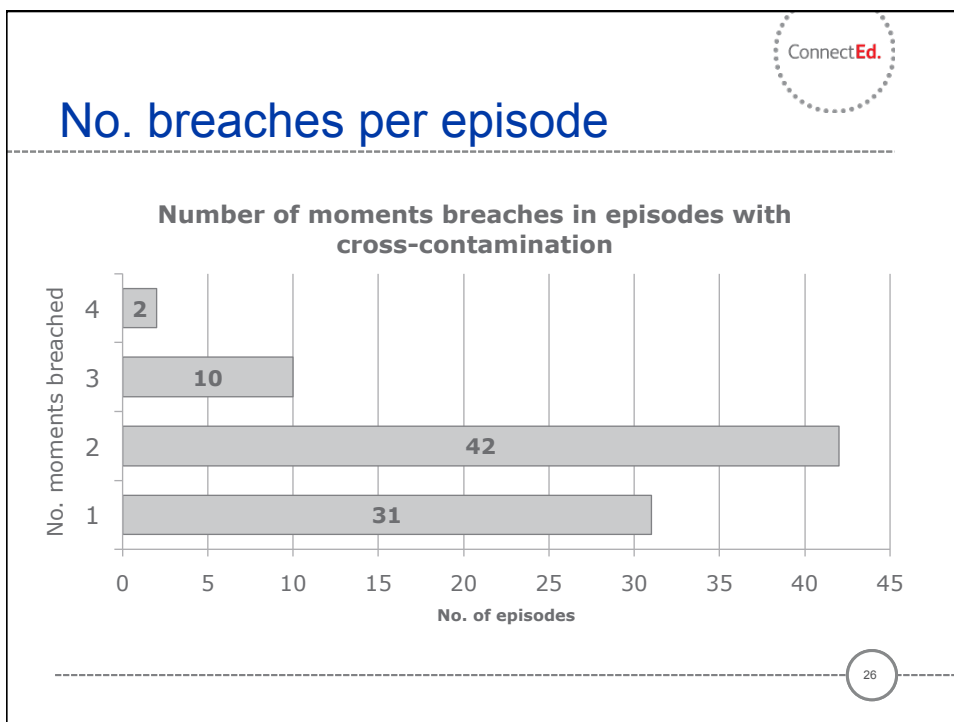
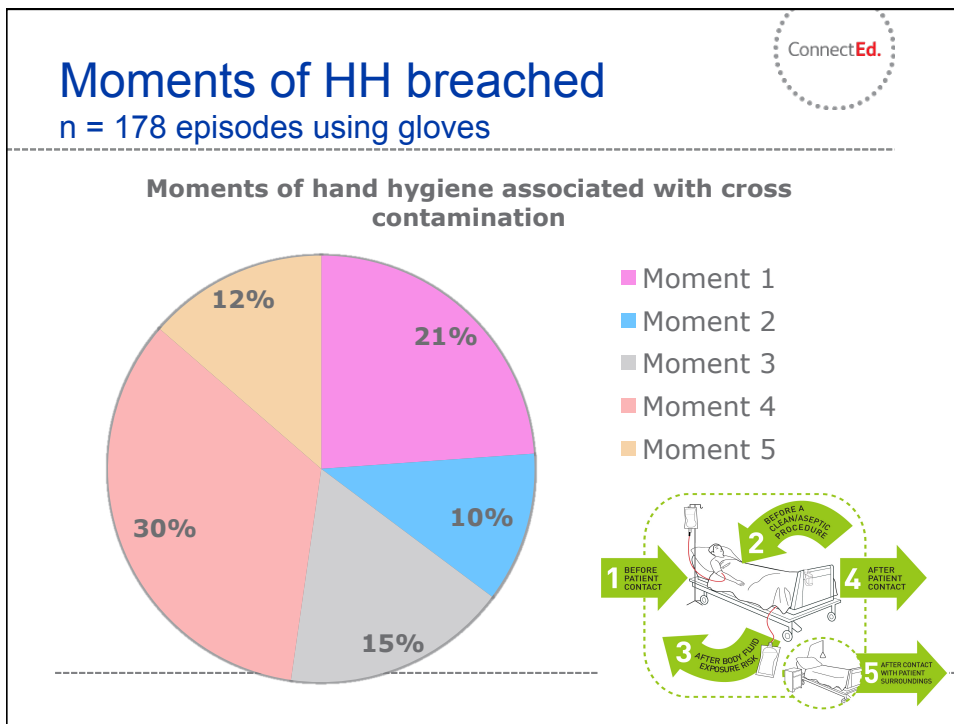
| Staff type | No. observed | No. risk of cross contamination | % risk of cross contamination |
|------------|--------------|---------------------------------|-------------------------------|
| Nurse | 102 | 50 | 49% |
| HCA | 38 | 21 | 55% |
| AHP | 19 | 8 | 42% |
| Doctor | 7 | 6 | 86% |

No. episodes of care with gloves = 178



Most common procedures observed








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Example of how gloves are used

IV drugs

- Prepare IV fluids in drug room
- Press button to open door
- Push door open
- Carry drug to bedside

Central IV line flush and disconnection

1. Equipment trolley
2. Central line flush 
3. IV monitor
4. Central line 
5. IV infusion lines
6. Central line flush 
7. IV pump
8. IV lines discarded into waste bin
9. Bed controls
10. IV pump

Same gloves: more than one task

- Emptied catheter bag
- Gave patient mouth care
- Checked patients blood sugar

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Gloves commonly used for contact isolation

- They should be used as indicated for SP and for contact with **infectious material**
- Hand hygiene (soap or gel*) is perfectly adequate for decontamination after contact with surfaces etc that may be contaminated
- Infectious material? Think about the route of transmission!

*Except *C. difficile* and norovirus

Hazards of glove use

- Porter puts on gloves to collect patient in isolation with Multi-resistant pathogen
- Helps patient into wheelchair
- Leaves room (still wearing gloves)
- Pushes green door release button to exit ward....
- Lift?, Xray department? Etc etc

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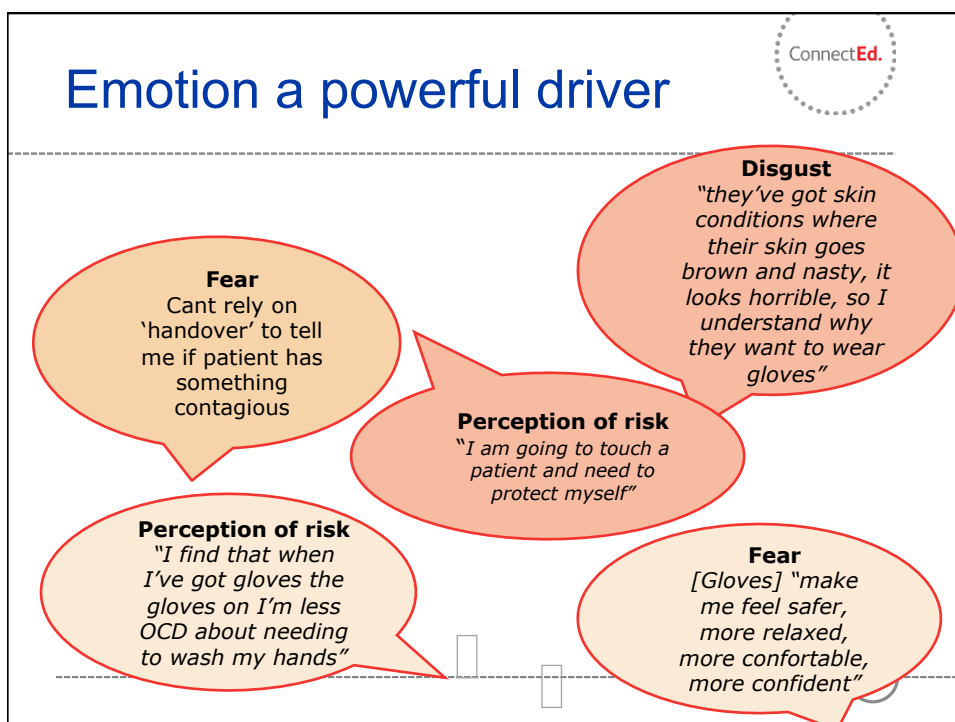
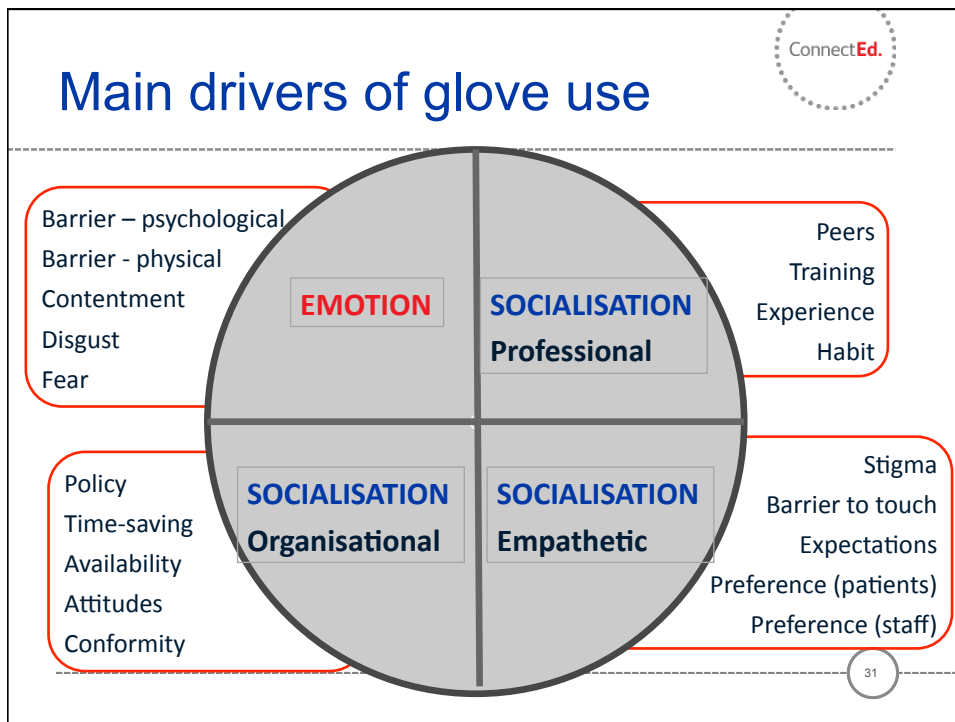
Phase 2: Qualitative Interviews

- Advert for volunteers in hospital newsletter
- 27 semi-structured interviews
- 16 Nurses; 5 HCA; 3 AHP; 1 Doctor; 2 other
- Questions:
 - Why/when wear gloves; has this changed
 - Influences on glove use; Challenging others; Changing practice
- Thematic analysis
 - Inductive, data-driven
 - Manually coded

Main themes emerging from interviews

- Protecting self/Protecting patient
 - Body fluids; dirt; chemicals; infections
 - From contamination; minimise spread of infection
- Influences on glove-use behaviour
 - Automatic – its second nature
 - Training (Ward sister; ICN)
 - Peers (told on ward; observe colleagues)
 - Used more now-a-days (Glove availability)
 - Policy (confusion)
 - Own decision
 - Emotion

"it's a routine that you put on gloves"... "you don't stop to think, oh I don't need them"



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Gloves provide a psychological barrier

Psychological barrier
 "if I wasn't wearing gloves [for washing a patient] I think I'd feel a bit kind of awkward"

Strangers...?
 "some of the nurses didn't wear gloves to suction"...
 "they've built up such a strong relationship with that family they see wearing gloves as quite impersonal"

'Personal areas'
 Obviously if its quite personal areas you're definitely going to wear your gloves...

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Empathetic socialisation?

Expectations
 "patients expect them to be worn – no-one washes their hands in Casualty"

"I guess for the patient, it might come across that you see them as dirty"

Interferes with therapeutic touch
 "you don't get to touch the patient, there's that barrier ..."

Psychological barrier (more 'clinical')
 "around their like private areas, I wear gloves just to protect myself and just for them it's a bit nicer as well"

Give impression of hygiene
 people I think like to see that you present yourself nice because they don't know if we've washed our hands"

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Professional socialisation

Peers
You get told on the ward and when you're doing your training when and where to wear the gloves.....its just something you do rather than something you overly think about

Training
Students say they are told in college – tutors say they don't

Habit
Its probably force of habit. Anything that I am doing away from the nurses station or in a bay, tend to wear gloves

Peer pressure
If everybody else in the room suddenly puts gloves on then you think maybe I should be putting gloves on as well... peer pressure in a sense

'Experience'
I would use personal experience and knowledge. I wouldn't be influenced by somebody saying you don't need to wear gloves if I feel I need to wear gloves I would wear them

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Organisational socialisation

Its quick & easy
"it takes what, 5 seconds to pull a pair of gloves from a dispenser and put them on"

Doing the right thing
"to make sure you are safe because if something were to happen [...] well you're liable for it because we've not taken proper care"

Attitudes
Student challenged about wearing gloves to receive a patient in theatre:
"she [said] she didn't know anything about the patient and she wanted to protect herself..."

Availability
What I like about here is that there are always gloves available everywhere and I think that's really important because if you need them, for example in an emergency

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Confusion about policy & practice

Efficacy of hand hygiene
 "even if you wash your hands you can't guarantee that they are totally clean"

"I mean I am not sure why some of them use gloves to wash patients and others don't"

"Obviously you'd wear them for washing, dressing and for taking patients to the toilet"

"we're not giving a clear enough message" "no-one's ever sure where the information originally came from and it gets twisted..."

"I know when we change the bedding on the ward, like, you have to wear aprons and gloves"

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Perceived to protect staff AND patients

Obviously the idea is to protect yourself and the patient from infection so I suppose you could say that you should wear them all the time, which all of us do to be honest, you don't know what patients have got infections you don't know that if you haven't got information then you need to treat everybody the same so you're protecting yourself and you're protecting the public

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Recognising inappropriate practice in others

"people just walk around in gloves and aprons from one bay to another""come back and pick up the phone, that sort of thing"

"things like bed-making – I don't think we should be wearing gloves for that"

"often X-ray people will come and what they're doing is putting an x-ray plate behind the patient, they're not actually touching the patient, and they'll put a pair of gloves on"

I might not tell [someone] he should be wearing gloves but ... sometimes. You think 'really'?

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Challenging practice of others

"Sometimes I have mentioned that actually you don't need gloves on and a couple of them have said, oh but I prefer to, and I am not going to say well take them off because that's not really my place"

Hierarchical constraints
"Because sometimes when you challenge them [the doctors] they sort of give you a look and it makes you feel about this sort of big"

"Because the patient is awake, you don't want to create a scene"

"If someone was challenging me, its like a form of aggression isn't it?"

'oh for God's sake , another hand hygiene audit"



Phase 3: The public perspective

Survey monkey questionnaire

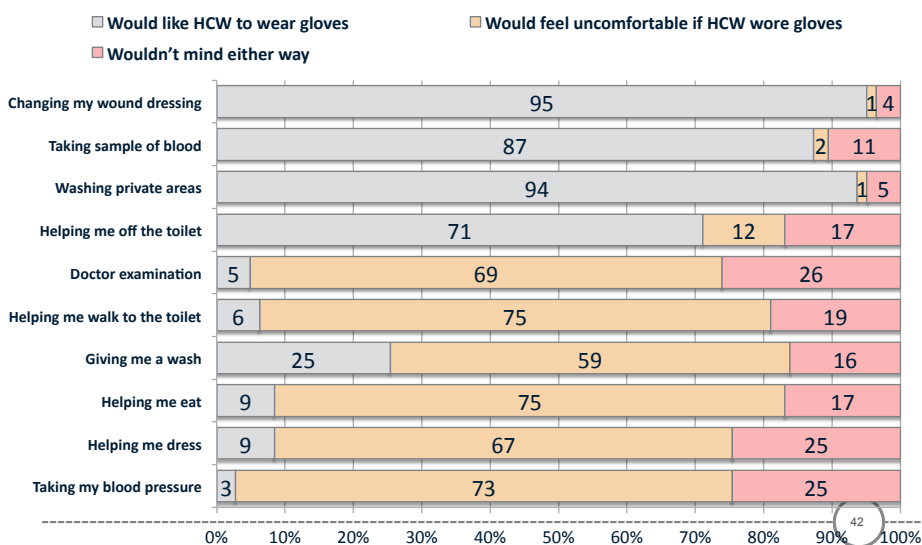
Sent out to HCAI Service Users Research forum

- Snowball sample via facebook

- 1) Views how they feel about HCW glove use (n= 142)
- 2) Experience of HCW glove use (hospital in last 6 months) (n = 59)
- 3) Experience of challenging HCW about glove use (n = 26)



Public responses to HCW glove use



Patients in hospital in last 6 months

- 29% (23/59) reported inappropriate use of gloves by HCW (admin task; no BBF)
- 36 comments
 - Used to protect staff not patient
 - Not changed
 - Used instead of hand hygiene
 - A barrier – touch is important
 - Gloves gave feeling of confidence
 - Expected gloves were clean – free from infection
 - Not asked about latex allergy

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I asked the Dr to change his gloves after he answered the phone, adjusted my table, collected bottles and opened doors before taking my blood. He told me they were for his benefit not mine. I politely and firmly insisted he change them, which he did but rather dramatically!

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Patients may prefer to see HCW wear gloves but not if they see it increases the risk of cross infection

A relative's story.....

My concern was about cross-contamination. I was concerned about it because the lady in the bed next to Mum had got MRSA, and I witnessed on more than one occasion them assisting this lady because she was unconscious, feeding her with gloves on. The lady across the bay wanted something doing with her catheter bag and the care assistant, as she was, left the lady with the MRSA still with the gloves on and went across the ward and did what she had to do with this catheter bag, and then returned to the patient with MRSA. I'm not medically trained, but to me it didn't ring right that that could happen. It just seems common sense if you are dealing with someone who has got something as serious as that wrong with them, that you need to at least wash your hands.



So does glove use matter?

- Compromises hand hygiene
 - HH audit data misleading as does not account for gloves use
 - Gloves used in place of hand gel
- Costs
 - £302,813 in 2013/14 in one 500 bed acute NHS Trust
- Environmental damage
 - disposed of as clinical waste when mostly not contaminated with BBF!



Facilitates transmission of infection



- 2 patients with Gp A Strep bacteraemia
 - 1 colonised patient; 1 HCW
- 33% (10 of 34) curtains contaminated with GAS

Factors that influence hand hygiene behaviour (Whitby et al 2006)

- Inherent 'community' hand washing
 - Attitudes developed in the community translated to healthcare setting
 - Patterns established early in life
 - Driven by emotional concepts of 'dirtyness' and 'cleanliness'
- Elective hand washing
 - Indications for had hygiene not covered by inherent drivers e.g. touching patient, environment

Dirt and disgust as key drivers in nurses' infection control behaviours (Jackson & Griffiths, 2014)

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- Fear of contact with dirt, particularly dirt belonging to those who were unknown, was a key driver in behaviour carried out to reduce threat.
- Familiarity with the patient resulted in a reduction of the protective behaviours required.
- These behaviours, which initially appeared as part of an infection prevention strategy, were primarily a form of self-protection from patients, who at first encounter were considered as dirty.

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Triggers for hand hygiene not the same if gloves worn

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- Emotion of disgust **increases** the triggers for using gloves (in place of hand hygiene)
- but if gloves are worn then lose focus on the critical points for glove removal and hand hygiene

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Indications for wearing gloves

| Gloves indicated | Gloves not indicated |
|-----------------------------------|-------------------------------------|
| Touching body fluids | Taking patient observations |
| Contact with mucous membranes | Handling used linen (unless soiled) |
| Insertion/removal invasive device | Injections |
| Contact with non-intact skin | Administration/preparation IV drugs |
| Vaginal examination | Manipulating IV lines |
| Tracheal suctioning | Bathing/dressing patient |
| Handling hazardous chemicals | Feeding patient |
| Taking blood | Mobilisation/Physiotherapy |

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How can this behaviour be changed?

- Identify problems with current practice
- Clearly define & communicate policy
 - *Vague references to 'risk assessment' not helpful*
 - *Tackle perverse perceptions of risk & 'infection control folklore'*
 - *May require dialogue and reaching a consensus*
 - *Discriminate infection prevention requirements*
 - *Discuss and agree what is acceptable*
 - *Be consistent*

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Innovative dissemination strategies

- Don't rely on mandatory training to get messages across

- *Chinese whispers are more powerful*

About mandatory training..

"I don't think people take it in properly, just something they have to do so they go and say they've been"

- Implement change at local level

- *Discuss scenarios*
 - *Audit & feedback*
 - *Address poor practice*



Structural changes?

- Location of gloves?
- More hand gel?
 - individual dispensers

"gloves are around everywhere [now, so] people tend to use them more"





Acknowledgements



Collaborative Research Award, 2013

Research Partners:

- Jenny Wyeth/Linda Hosie: Royal Berkshire Hospital NHS Trust
- Yvonne Carter & IPCNs: Royal free Hospital NHS Trust

Aggie Bak, Research Assistant, UWL

Siobhan Lynham, UWL

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Coming Soon

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Prof. William Rutala, University of North Carolina Medical School
- August 13 **ASSESSING THE IMPACT OF AN EDUCATIONAL INTERVENTION ON VENTILATOR-ASSOCIATED PNEUMONIA**
Prof. Arti Kapil, All India Institute of Medical Sciences, New Delhi, India
- September 3 (Free South Pacific Teleclass – Broadcast live from the 2015 IPCNC New Zealand Conference)
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Dr. Michael Gardam, University Health Network, Toronto
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