

Hand Hygiene Compliance: Are gloves really such a problem?

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Conflict of Interest



- I have nothing to declare, apart from...





Background



- National Hand Hygiene Initiative (NHHI) began in 2010
- Overall Victorian hand hygiene compliance (HHC) is increasing often exceeding the national and state benchmarks
- To date in Victorian hospitals, almost 1.2 million moments have been submitted
- Data collected can be analysed to identify targets for education and intervention



Rationale



- This study was developed to look at the impact glove use has on HHC by moment and HCW
- Historically glove use is often associated with lower HHC
- At times gloves are used as a substitute for HH
- Gloves are often continued to be worn during one episode of care with a patient, despite requiring further opportunities for HH
- Inappropriate glove use often undermines efforts to sustain correct hand hygiene according to the 5 Moments of Hand Hygiene

ORIGINAL ARTICLE

“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 by healthcare workers' hands but is not a substitute for hand hygiene. Results of previous studies have varied as to whether hand hygiene is worse when gloves are worn. Most studies have been small and used nonstandardized assessments of glove use and hand hygiene. We sought to observe whether gloves were worn when appropriate and whether hand hygiene compliance differed when gloves were worn.

DESIGN. Observational study.

RESULTS. Gloves were used in 1,983 (26.2%) of the 7,578 moments for hand hygiene and in 551 (16.7%) of 3,292 low-risk contacts; gloves were not used in 141 (21.1%) of 669 high-risk contacts. The rate of hand hygiene compliance with glove use was 41.4% (415 of 1,002 moments), and the rate without glove use was 50.0% (1,344 of 2,686 moments). After adjusting for ward, healthcare worker type, contact risk level, and whether the hand hygiene opportunity occurred before or after a patient contact, glove use was strongly associated with lower levels of hand hygiene (adjusted odds ratio, 0.65 [95% confidence interval, 0.54–0.79]; $P < .0001$).

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CONCLUSION. The rate of glove usage is lower than previously reported. Gloves are often worn when not indicated and vice versa. The rate of compliance with hand hygiene was significantly lower when gloves were worn. Hand hygiene campaigns should consider placing greater emphasis on the World Health Organization indications for gloving and associated hand hygiene.

TRIAL REGISTRATION. National Research Register N0256159318.

Glove Use – PPE considerations



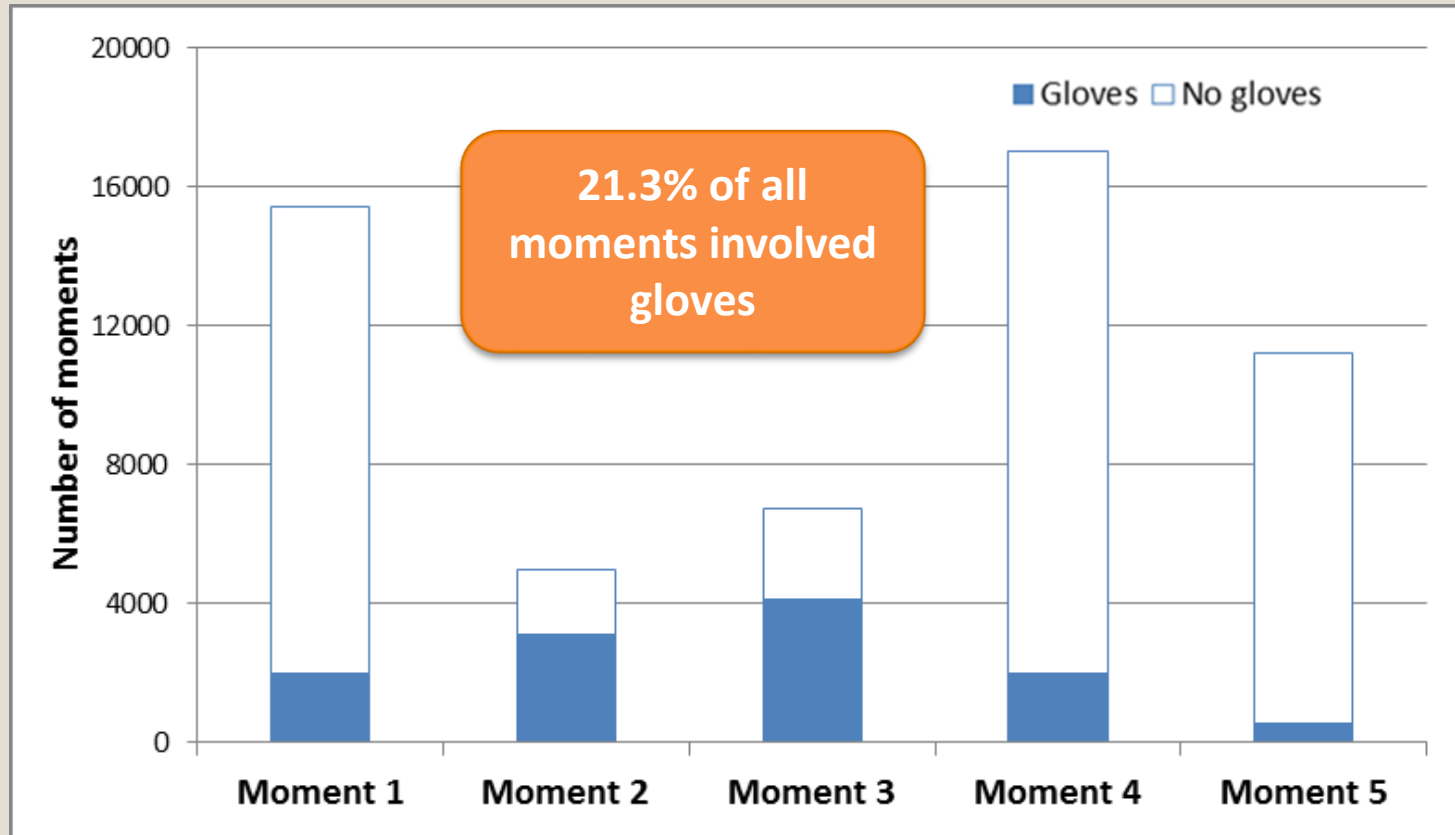
- NHMRC Infection Control Guidelines (2010)
 - who is at risk (whether it is the patient or the healthcare worker)
 - whether sterile or non-sterile gloves are required
 - the potential for exposure to blood or body fluids
 - whether there will be contact with non-intact skin or mucous membranes during general care and invasive procedures
 - whether contaminated instruments will be handled
- However, gloves do not provide complete protection against hand contamination

Methods



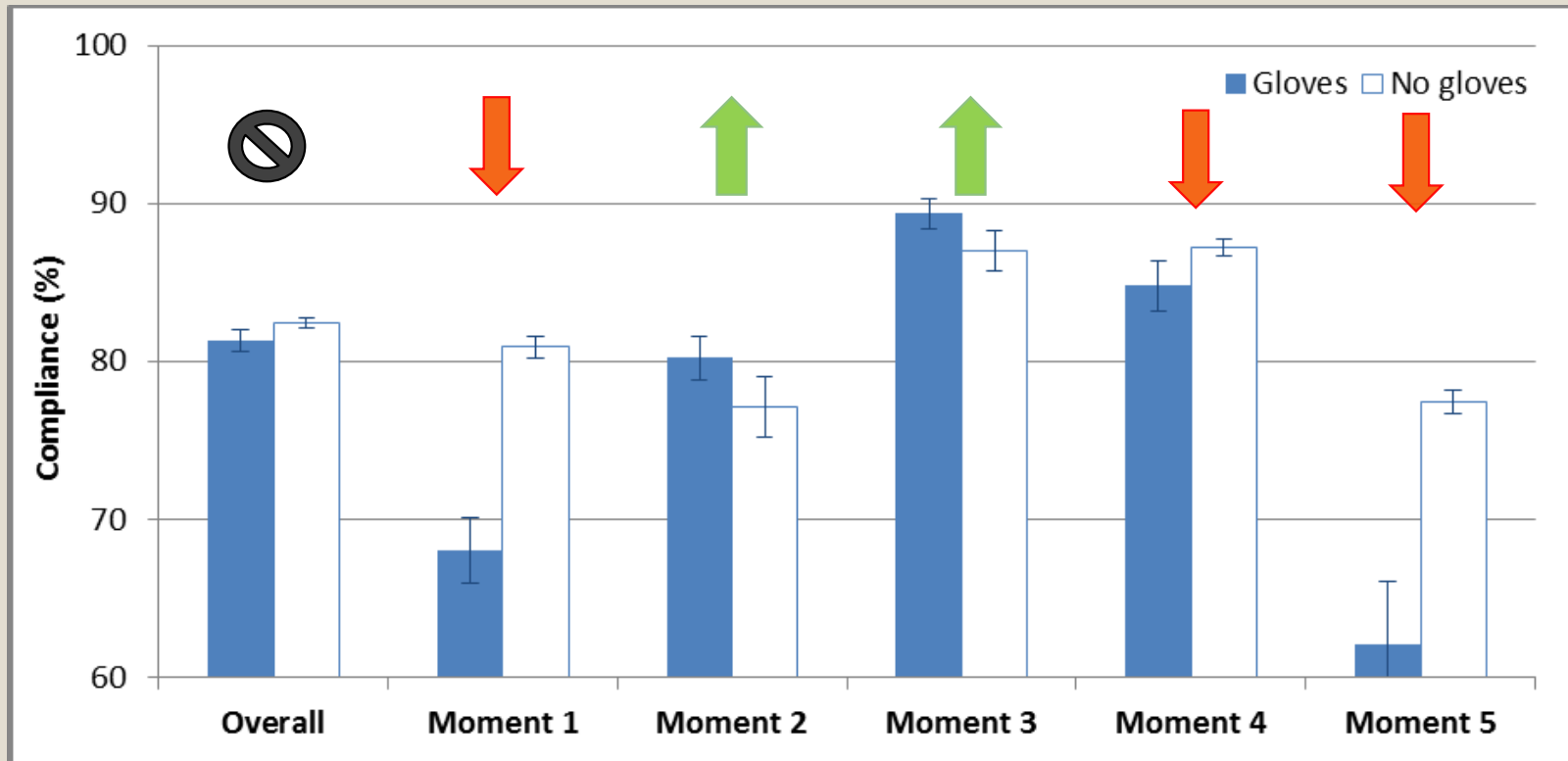
- Data collected by trained HH auditors across 117 Victorian hospitals
- NHHI Audit 1 2015 (1st November 2014 - 31st March 2015)
- HH assessed as:
 - Compliant – used ABHR or soap and water
 - Missed – failed to perform HH
- Glove use – used or not used
- Categorised into occupational groups as per HH coding classification
- Total number of moments and percentage of correct moments were reported by moment and HCW groups

Results



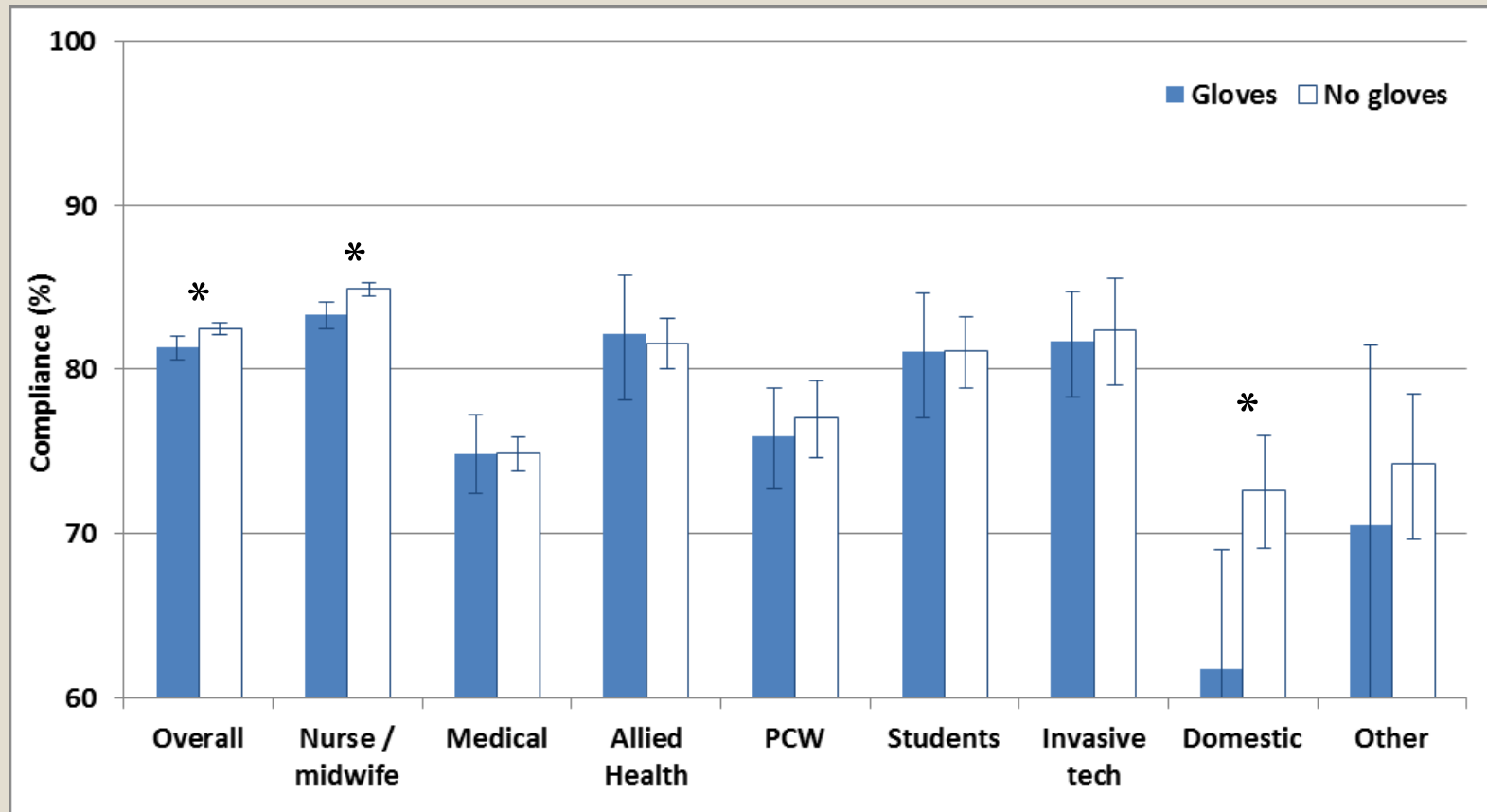
Audit 1 2015: 55,445 moments were collected across 117 Victorian hospitals

Compliance by Moment



Audit 1 2015: Victorian Overall Compliance 82.2%

Compliance by HCW



Conclusion



- Glove use and the associated HHC vary across the 5 moments and by occupation
- HHC with gloves was highest before and after procedures and higher with the use of gloves versus no gloves in these moments
- Findings show that education throughout glove use has impacted clinical practice
- Increasing HHC over time may also have contributed to the higher compliance with glove use

Next Steps



- Continue to educate the importance of applying HH before and after glove use
- Education should continue to focus on wearing gloves only when indicated such as if anticipated to come in contact with body fluids
- Educate minimising glove usage in the other moments as their HHC is lower in these moments with glove use



Questions

