

GLOVES OFF!

A quality improvement project –
John Hunter Hospital (JHH)

ACIPC conference: November 2023

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Disclaimer: no conflicts of interest to declare

Gloves and Sustainability



Annually NSW Health produces 52,400 tonnes of waste

Hunter New England Local Health District (HNELHD) sends 75 tonnes of gloves to landfill per year

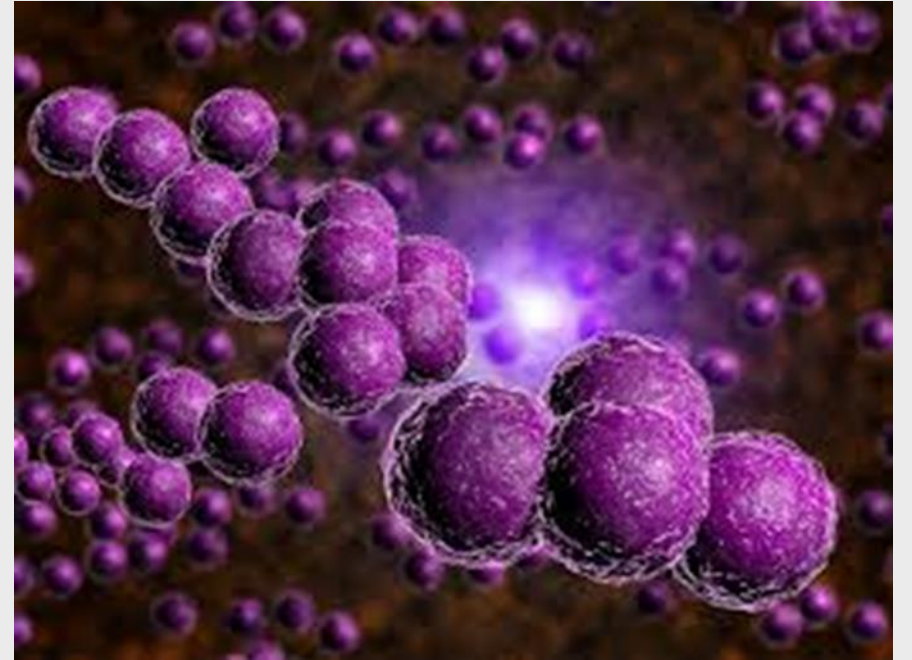
A typical JHH ward (32 beds) uses 30,000 non-sterile gloves/month, 360,000/year

The carbon footprint of annual glove use at the JHH is equivalent to driving around Australia sixty-eight times



Evidence against glove use

- Gloves do not provide complete protection against hand contamination
- Glove use is widely accepted to be associated with poor hand hygiene (HH) compliance
- HH compliance can be as low as 41% when gloves are utilised
- 49% of healthcare workers do not perform hand hygiene when removing gloves
- 37% of glove usage leads to cross contamination with healthcare workers touching multiple surfaces whilst wearing the same gloves.



Reference: Fuller et al, (2011). "the dirty hand in the latex glove": a study of hand hygiene compliance when gloves are worn

Gloves off! Clean hands, Safe patients



Gloves off program
concept
commenced in 2022

Net Zero Lead
Allied Health
Tina Wilkie

Team created
planning
commenced

Engagement with
stakeholders

Funding from
Ministry of health
climate risk and net
zero unit

Project Aims

01



Improve hand
hygiene compliance

02



Improve healthcare
worker risk
assessment
confidence and
understanding

03



Reduce un-
necessary use of
non-sterile gloves

04



Design and deliver a
quality improvement
package which can
be used by other
wards and across
HNE

GLOVES OFF! Quality improvement program



PILOT WARDS H3 AND J3 ACUTE SURGICAL WARDS JHH

BASELINE MEASURES: PRE EDUCATION AUDITS, DATA COLLECTION AND STAFF SURVEY

EDUCATION

WARDCHAMPIONS

NEWSLETTER

POST EDUCATION AUDIT , DATA COLLECTION AND SECOND STAFF SURVEY

EVALUATION

DEVELOP ROADMAP FOR BROADER JHH ROLL OUT AND DISTRICT PARTICIPATION

Gloves Off! Campaign



Pre and post intervention glove usage audit tool

Hand hygiene and glove use observation data collection form version 3									
Organisation				FIVE MOMENTS FOR HAND HYGIENE 1. Before touching a patient 2. Before a procedure 3. After a procedure or body fluid exposure risk 4. After touching a patient 5. After touching a patient's surroundings					
Dept / ward									
Date									
Auditor		Session #							
Start time		Finish time							
Duration of session				mins					
GLOVES NEEDED				GLOVES NOT NEEDED					
- contact with non-intact skin, or mucous membrane - contact with blood, body substances, secretions excretions - invasive procedure, eg, venepuncture or a finger or heel prick, IV cannula - contaminated waste / linen / environmental surfaces - Providing care to patients on transmission-based precautions				- Direct physical contact with intact skin - Activities of daily living, eg washing - Routine observations (eg blood pressure measurement) - Performing subcutaneous, intramuscular, intravenous or intradermal injections					
HCW	Moment	Action	Glove used	Glove needed?	HCW	Moment	Action	Glove used	Glove needed?
	1	1 Rub	1.On	YES		1	1 Rub	1.On	YES
	2	2 Wash	2. Off	NO		2	2 Wash	2. Off	NO
	3	3Missed	3.Cont			3	3Missed	3.Cont	
	4		NoGlove			4		NoGlove	
	5					5			
	1	1 Rub	1.On	YES		1	1 Rub	1.On	YES
	2	2 Wash	2. Off	NO		2	2 Wash	2. Off	NO
	3	3Missed	3.Cont			3	3Missed	3.Cont	
	4		NoGlove			4		NoGlove	
	5					5			
	1	1 Rub	1.On	YES		1	1 Rub	1.On	YES
	2	2 Wash	2. Off	NO		2	2 Wash	2. Off	NO
	3	3Missed	3.Cont			3	3Missed	3.Cont	
	4		NoGlove			4		NoGlove	
	5					5			
	1	1 Rub	1.On	YES		1	1 Rub	1.On	YES

- NHHI Hand hygiene audit tool adapted
- Glove usage recorded as moments
- Hand hygiene auditors – standardised approach
- Clear guidance provided for glove usage
- Approved by NSW Clinical Excellence Commission




Staff surveys - REDCap

- Pre and post pilot survey sent to staff on targeted wards
- Anonymous responses
- Questions: Roles/ward worked, five moments of hand hygiene quiz, attitudes and knowledge assessment
- **Pre-survey**: perceptions of climate change in the workplace
- **Post survey**: education assessment related questions
- Each survey open for two weeks, 2 reminders sent to non-responders

John Hunter Hospital

GLOVES OFF! Staff Survey



GLOVES OFF!
Clean hands.
Safe for all.

Thank you for taking the time to complete this anonymous survey on hand hygiene and glove use.

This survey will take approximately five minutes to complete.

If you have problems completing the survey, please contact Sally Munnoch
(sally.munnoch@health.nsw.gov.au)

By selecting Yes, I certify that I am 18 years or older

* must provide value

Yes

No

reset

By selecting Yes, I certify that I have given my consent freely to participate in this study

* must provide value

Yes

No

reset

What is your area of work at HNELHD?

* must provide value

Nursing

Medical

Allied Health

Wardsperson/OA

Healthshare

Other

reset

What gender do you identify as:

* must provide value

Female

Male

Transgender

Non binary/non-conforming

Prefer not to respond

Other

reset

On which ward do you predominantly work on?

* must provide value

H3

J3

reset

Submit



Education



- Formal: Infection Prevention Service (20-minute sessions)
- Informal: Team leaders and NUMs during safety huddles
- Safety huddles in front of poster on the ward
- Gloves Off! Champions allocated to wards
- Newsletter
- Support from Surgical services educators

Bribery and blackmail



Stop and think – do you need a glove?

→ Do your risk assessment.

Do you need cake?

→ Almost certainly.

Do you need lemon blondie or spiced apple?

→ Probably both.



Gloves Off! Jingle



(Sing to The Beatles "Love me do"!)

Glove, glove me do

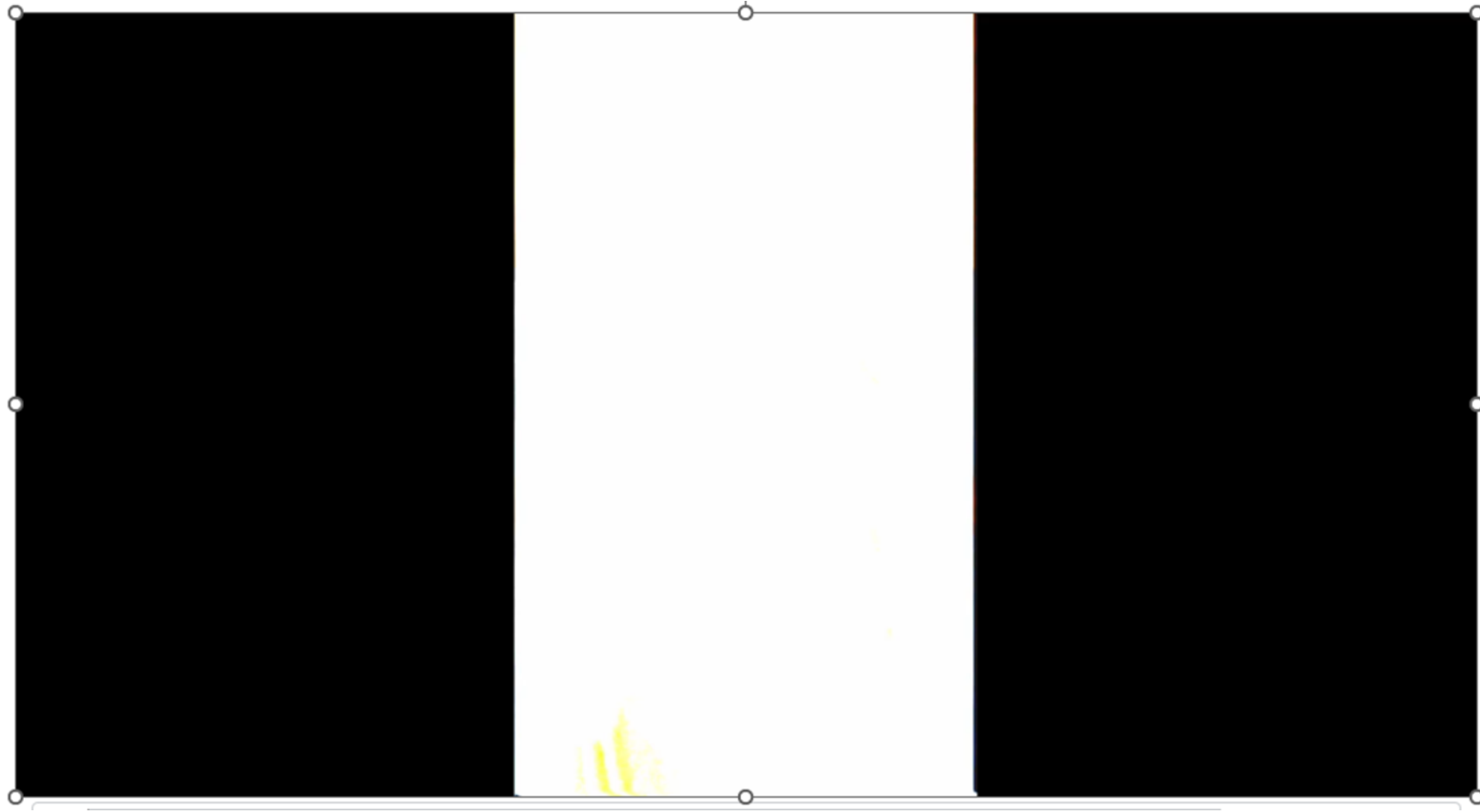
If it's wee, poo or spew

But for intact skin

Then Pleeeeeasee No gloves hand gel rub it in



Gloves Off! Rap





**GLOVES
OFF!**

Clean hands.
Safe for all.

Non-sterile gloves only need to be worn for:

- ✓ Contact with body fluids,
non-intact skin, or mucous membranes
- ✓ Transmission-based precautions
- ✓ Handling cytotoxic medications
- ✓ Handling contaminated waste,
linen or environmental surfaces
- ✓ Invasive procedures



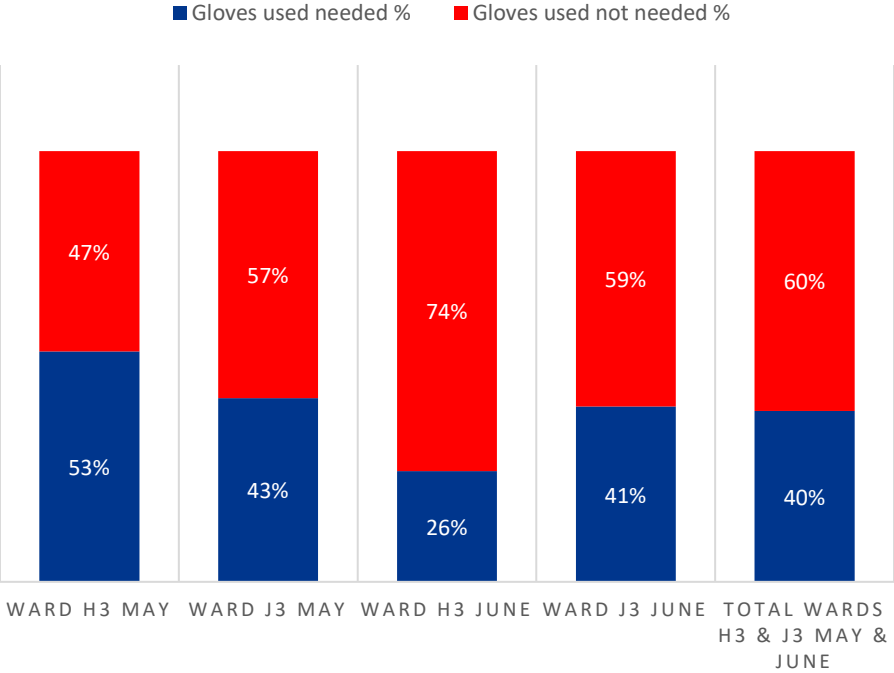
Results

Hand hygiene audit – were gloves needed?

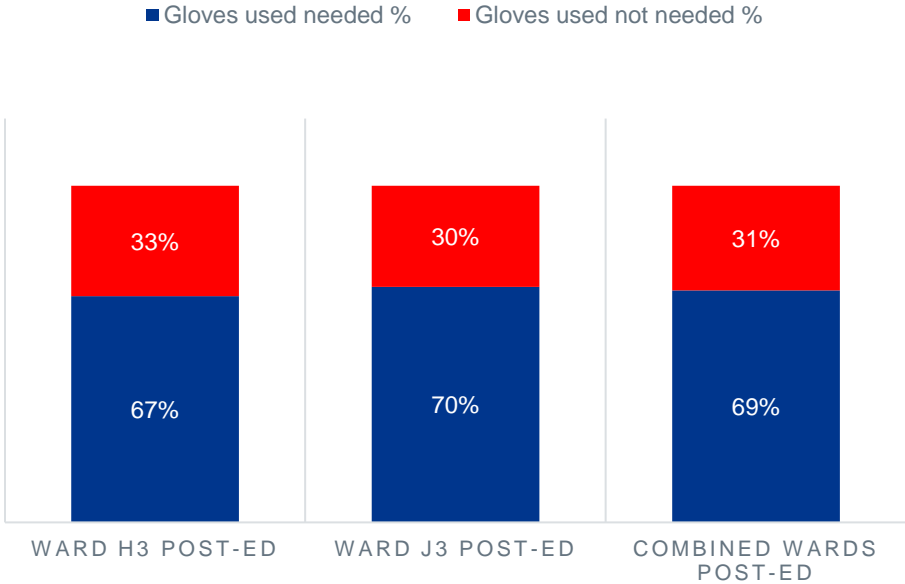
Pre and post intervention



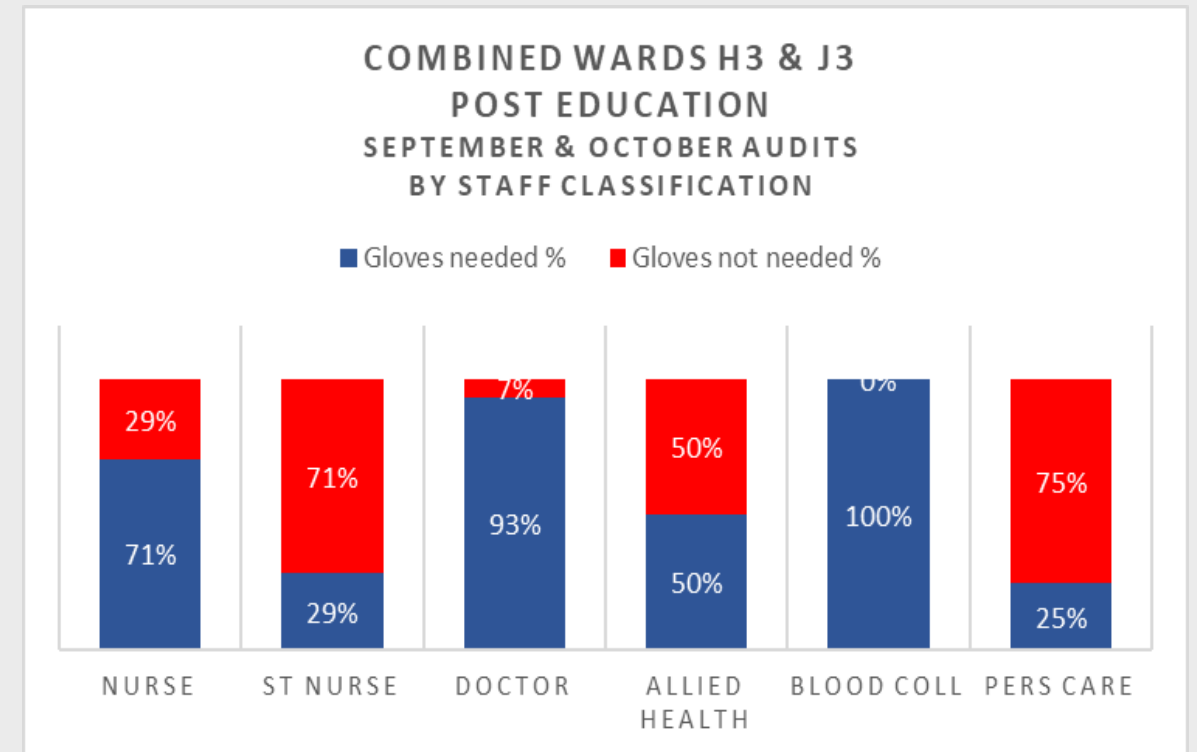
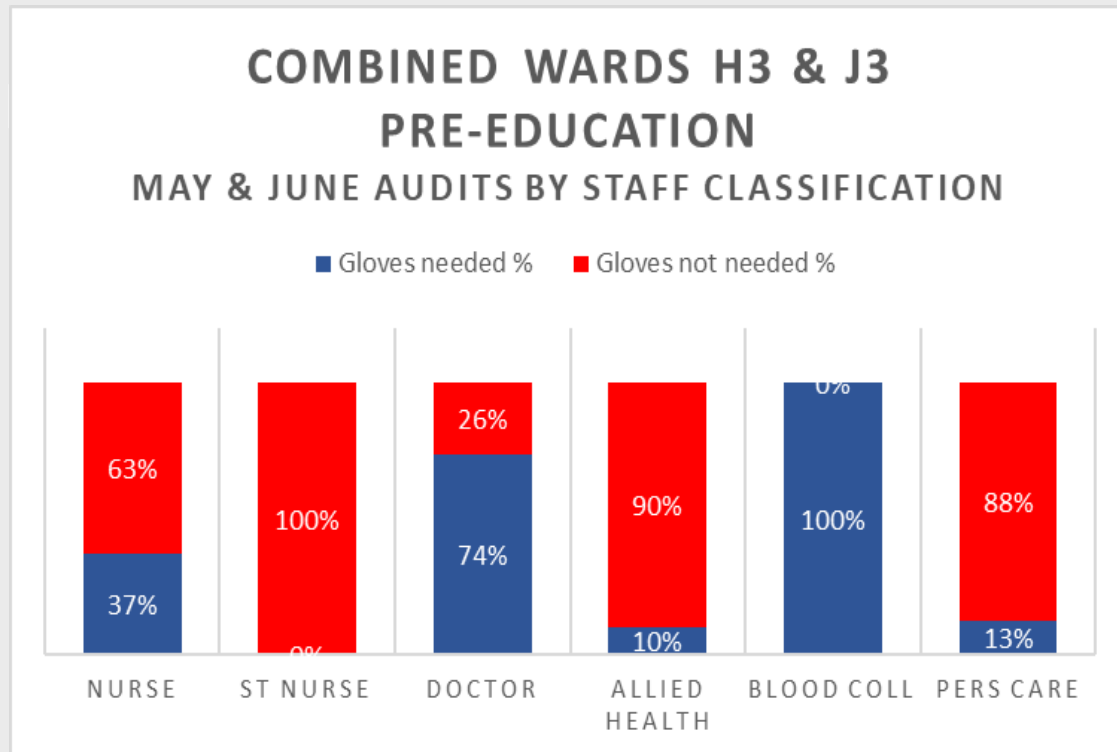
WHEN GLOVES USED WERE THEY NEEDED?
PRE EDUCATION



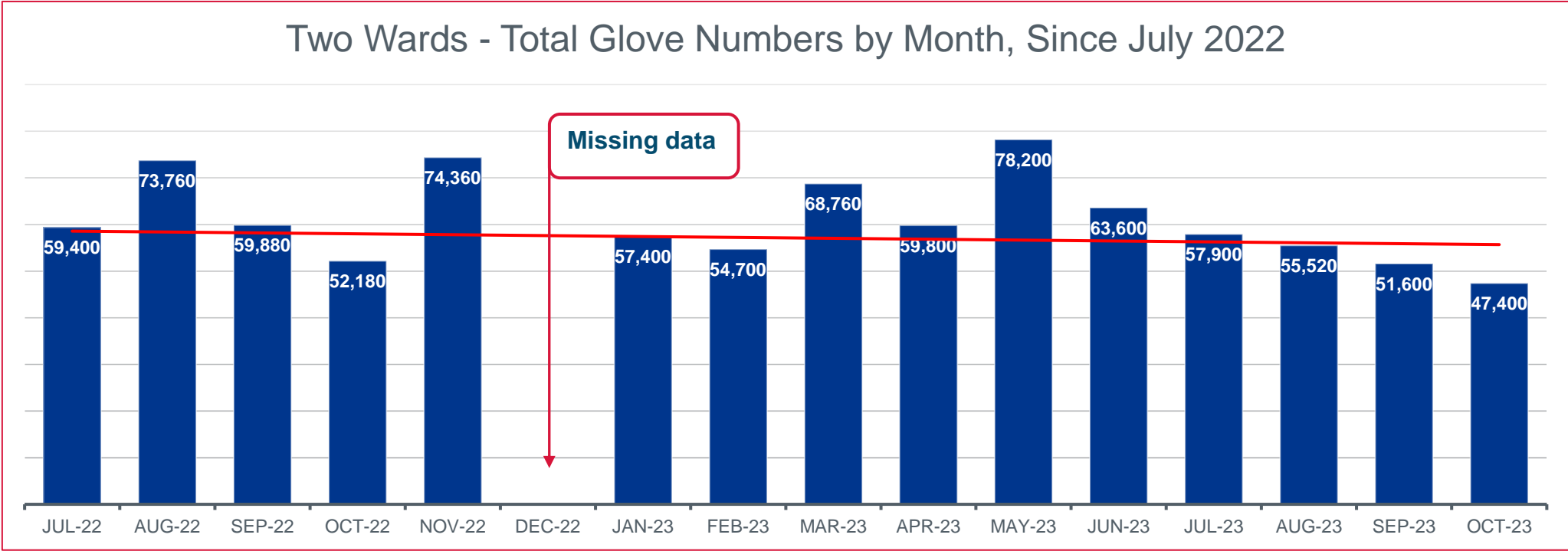
WHEN GLOVES WERE USED WERE THEY NEEDED?
POST EDUCATION



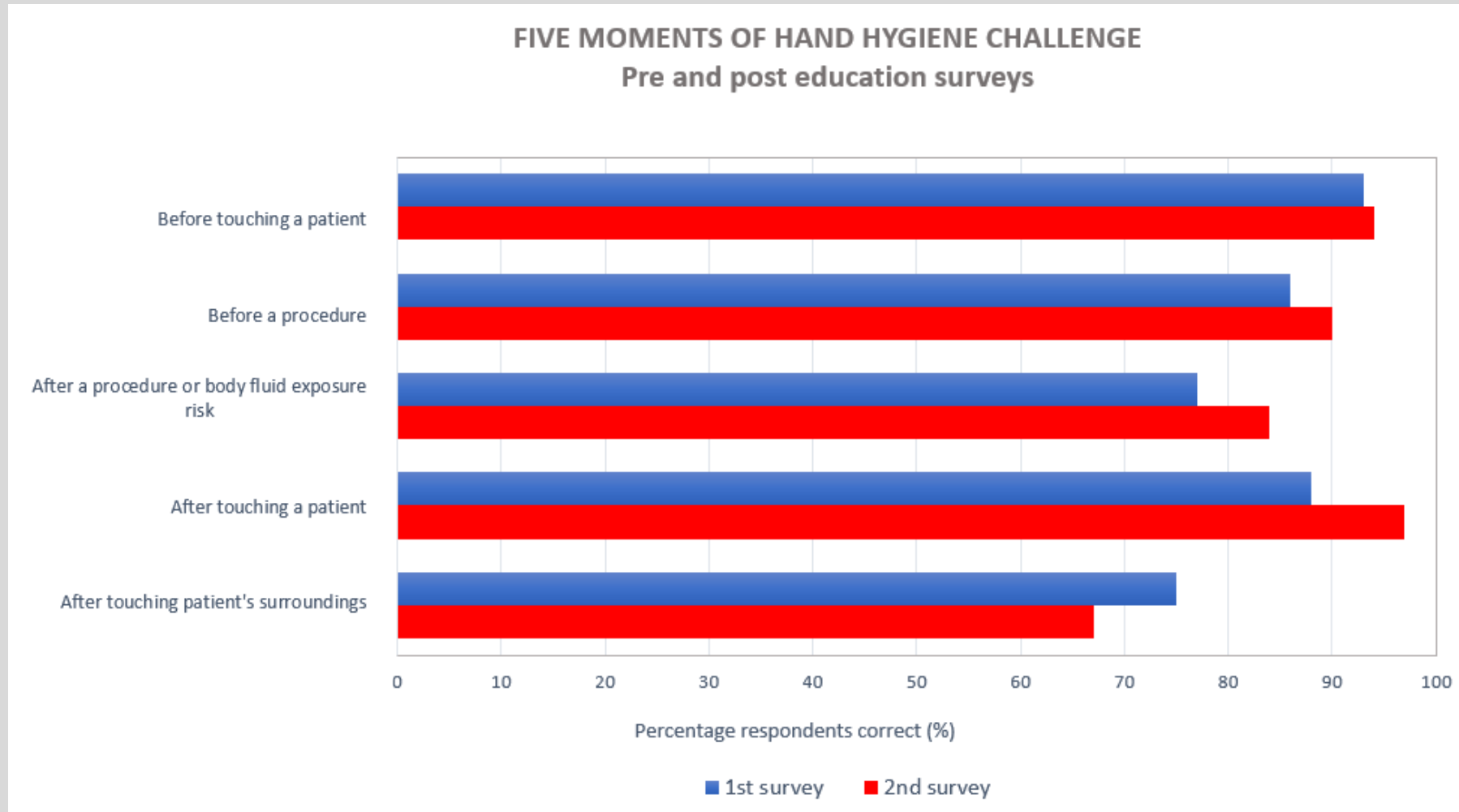
Pre-intervention audit results



Glove usage wards H3 and J3



Preliminary staff survey results



Preliminary staff survey results (2)



Scenario	Pre survey	Post survey	P value
Improved identification for when not to wear gloves (standard precautions, minimal risk body fluid exp	22.9%	55.9%	0.000
Improved knowledge: gel application to next task	74.8%	80.9%	0.41
Improved confidence: using ABHR to reduce infection risk to patient	24.6	60.9%	0.000
Improved confidence: using ABHR to reduce infection risk to staff member	24.6%	53.2%	0.0005

As a result of Gloves Off! have you changed the way you wear gloves for clinical practice?	Yes	84%
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Non-sterile gloves only need to be worn for:

- ✓ Contact with body fluids, non-intact skin, or mucous membranes
- ✓ Transmission-based precautions
- ✓ Handling cytotoxic medications
- ✓ Handling contaminated waste, linen or environmental surfaces
- ✓ Invasive procedures



Advertising/multi-media



'Gloves off' in hospital project to reduce waste, save money

Damon Cronshaw

THE overuse of gloves will be tackled at John Hunter Hospital in a pilot project to cut waste and save money, the NSW government says.

The project aimed to reduce "unnecessary non-sterile glove use and improve hand hygiene in clinical areas".

NSW Health Minister Ryan Park said the project, titled "Gloves Off, Clean Hands, Safe for All", would "reduce the overuse of gloves and decrease the amount of avoidable waste being sent to landfill".

Mr Park said the project could prevent millions of gloves being used by health workers, "leading to significant environmental and cost savings".

"Wearing disposable gloves is a common behaviour in our hospitals," he said.

"However, there are occasions such as direct contact with intact skin and routine observations, where clean hands can be used if staff aren't going to come into contact with a bodily fluid."

Hunter New England Health executive director Dr Ramsey Awad said the district used about 28 million gloves annually.

"The aim of the program is to significantly reduce unnecessary glove use by educating staff. Similar projects at other hospitals are

Mr Park said research showed that hand hygiene improved and the risk of infections fell when gloves were "used only when needed".

A World Health Organisation statement on the issue says "the use of gloves when not indicated represents a waste of resources and does not contribute to a reduction of cross-transmission".

Research from University of Gavle in Sweden in 2020 stated that: "Continued wearing of gloves may result in the transmission of organisms instead of preventing infections".

Wearing gloves can reportedly lead health workers to feel a false sense of security and wash their hands less frequently.

And contaminated gloves can spread germs.

When the pilot project ends next year, a permanent program is planned to be rolled out across the health district.

This forms part of Hunter New England Health's sustainability strategy to be carbon and waste neutral by 2030.

It also aligns with the NSW government's plan to reach zero emissions by 2050.

Wallsend MP Sonia Hornery said hospital staff were "leading the charge" on sustainability.

"Climate change and waste reduction is such an important issue which impacts

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Gloves off in the fight for a sustainable workplace



Two John Hunter Hospital wards are trial sites for a pilot project aiming to improve hand hygiene and reduce the unnecessary use of plastic gloves across our hospitals.

The **Gloves Off, Clean Hands, Safe for All** project which launched in H3 and J3 this month is a joint project between the District's Infection Prevention Service and Sustainability team, and Ministry of Health's Climate Risk and Net Zero Unit.

There is evidence that gloves are often used by healthcare workers in situations that are not required by guidelines, and that this is often associated with missed opportunities for hand hygiene. An audit of some JH3 wards echoed that result.

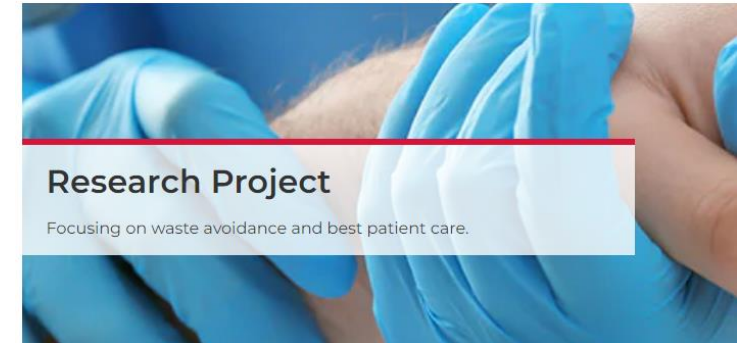
The District uses around 28 million non-sterile gloves annually. Similar projects at other hospitals have achieved reductions in glove use of up to 30 per cent, with improvements in hand hygiene and significant cost and environmental savings.

It's hoped the project can be rolled out at hospitals across the District in 2024.

Anyone wanting further information can contact Amy.Bernotas@health.nsw.gov.au or tina.wilkie@health.nsw.gov.au

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Gloves Off Project



Lessons learned

What worked well

A passionate, enthusiastic,
multi-disciplinary team
Infection control involvement
Dedicated time for the project

What could we do better

Promote a Facility Executive
Champion (ie. GM)
Engagement from Medical Officers and
ancillary staff were limited
Maintain momentum
Better data analysis plan
Consider three audits?

Our amazing team

Project Lead

Net Zero lead for allied health

Tina Wilkie, Speech pathologist
Tina.wilkie@health.nsw.gov.au

Sustainability Project Officer

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Senior staff specialist JHH General surgery ,

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Epidemiologist , JHH Infection Prevention Service

Sally Munnoch
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Questions?



Please scan QR code if you would like more
information

References



- Australian Commission on Safety and Quality in Healthcare, (2023). Glove use and Hand hygiene [What is hand hygiene? | Australian Commission on Safety and Quality in Health Care](#)
- CLINICAL EXCELLENCE COMMISSION (2020) Infection prevention and control practice handbook , Sydney, Australia
[Infection Prevention and Control Practice Handbook \(nsw.gov.au\)](#)
- National Health and medical research council. (2022). Australian Guidelines for the Prevention and Control of Infection in Healthcare, Canberra, Australia.
[Australian Guidelines for the Prevention and Control of Infection in Healthcare \(nhmrc.gov.au\)](#)
- National Health and medical research council. (2019). Clinical Educators Guide: Australian Guidelines for the Prevention and Control of Infection in Healthcare, Canberra, Australia.
[Clinical Educators Guide: Australian Guidelines for the Prevention and Control of Infection in Healthcare \(nhmrc.gov.au\)](#)
- Fuller, C., Savage, J., Besser, S., Haywood, A., Cookson, B., Cooper., B. & Stone, S. (2011). "the dirty hand in the latex glove": a study of hand hygiene compliance when gloves are worn. *Infection control and Hospital epidemiology*. 32(12).
- Jain, S., Clezy, K., & McClaws, M. (2019). Modified glove use for contact precautions: Health care workers Perceptions and acceptance. *American Journal of Infection Control* 47. <https://doi.org/10.1016/ajic.2019.01.009>
- Jamal, H., Lyne, A., Ashley, P., & Duane, B. (2021). Non-sterile examination gloves and sterile surgical gloves: which are more sustainable? *Journal of Hospital Infection*. <https://doi.org/10.1016/j.jhin.2021.10.001>