

Statewide Anaesthesia and Perioperative Care Clinical Network Environmental Accountability Working Group

Communique – Operating theatre attire

Purpose

The purpose of this communique is to provide information and guidance in relation to the use of cloth head covers, dedicated footwear and reusable surgical gowns in restricted and semi-restricted hospital areas.

Issue

Surgical site infection (SSI) is one of the most prevalent and preventable complications associated with the treatment of patients in healthcare facilities across Australia. A standardised approach to selecting, wearing and laundering perioperative attire is recommended to reduce risk of SSI related harm to patients and healthcare workers due to transmission of microorganisms¹.

Supporting information

Disposable hats and shoe covers are large contributors to waste and carbon emissions within the perioperative environment². A twenty (20) theatre hospital will discard approximately 100,000 single use surgical hats per year².

It is highlighted that in comparison to disposable gowns, reusable surgical gowns have a significantly lower environmental impact demonstrated by an environmental analysis³.

The Australian College of Perioperative Nurses (ACORN) produces Standards for Safety and Quality Care in the Perioperative Environment (SSQCPE).

The SSQCPE provides recommendations in relation to the donning of clean perioperative attire daily before entering restricted areas including requirements for head coverings, footwear and gowning¹.

The Australian and New Zealand College of Anaesthetists (ANZCA) refers to theatre attire and prevention of infection in the Professional Document PG 28(A) Guideline on infection control in anaesthesia 2015⁴.

A study to directly compare the association of surgical hat type with postoperative wound events concluded that there is no association between the type of surgical hat worn and the incidence of postoperative wound events⁵.

Disposable medical devices and attire in the operating theatre do not mitigate the infectious risk to patients but have a greater environmental, financial and social impact than reusable products⁶.

Shoe covers are preferably replaced by appropriate shoes that are dedicated exclusively for use in the operating theatre^{1,4}. Research demonstrates that there is no significant difference in floor contamination between the wearing of shoe covers and ordinary dedicated shoes⁷.

The Royal Australasian College of Surgeons (RACS) recommends the use of reusable gowns as safe, effective and environmentally superior⁸.

Disclaimer: The content of this poster is provided as information only. Staff in Queensland Health facilities are advised to follow local practice and processes as required.



Recommendations

The use of reusable cloth hats, dedicated footwear and reusable surgical gowns in restricted and semi-restricted hospital areas may offer environmental and financial benefits. Ensure adherence to the following standards and recommendations:

- AS 3789.3:1994 Textiles for health care facilities and institutions
 - AS/NZS 4146: 2000 Laundry practice
 - AS/NZS 2210.1: 2010 Safety, protective and occupational footwear
 - AS/NZS 5369: 2023 Reprocessing of reusable medical devices and other devices in health and non-health related facilities.
1. Head coverings
 - a. Hair should be completely covered with a freshly laundered lint free hat or disposable theatre cap.
 - b. Shall be changed daily or when wet or soiled.
 2. Footwear
 - a. Dedicated footwear is preferred for restricted and semi-restricted areas.
 - b. Shoe covers are required to be worn if dedicated footwear is not available.
 - c. Attention should be paid to avoid contamination during doffing.
 3. Surgical gowns
 - a. Switching to reusable surgical gowns should be considered.
 - b. Local systems and processes must be robust to adhere to standards.

References

1. ACORN, 2023 Standards for Safety and Quality Care in the Perioperative Environment (SSQCPE) for Organisations. www.acorn.org.au.
2. Theatre Caps (2022), Disposable hats vs reusable: Personalised Scrub Caps For Medical Professionals <[Disposable hats vs reusable TheatreCaps for the environment – TheatreCaps.com](#)> Accessed 19 February 2024.
3. Vozolla E, Overcash M, Griffing E. An Environmental Analysis of Reusable and Disposable Surgical Gowns. AORN J. 2020; 111(3):315-325.
4. Australian and New Zealand College of Anaesthetists (ANZCA). PG28(A) Guideline on Infection control in anaesthesia. 2015 Melbourne. ANZCA 2015 [ANZCA | Professional documents Accessed 21 February 2024](#).
5. [Haskins IN, Prabhu AS, Krpata DM, et al. Is there an association between surgeon hat type and 30-day wound events following ventral hernia repair? Hernia. 2017;21\(4\):495-503.](#)
6. [Reynier T, Berahou M, Albaladejo P, Beloeil H. Moving towards green anaesthesia: Are patient safety and environmentally friendly practices compatible? A focus on single-use devices <Anaesth Crit Care Pain Med. 2021;40\(4\):100907.](#)
7. International Society for Infectious Diseases (2018), Guide to Infection Control in the Healthcare Setting: The operating room <[ISID GUIDE THE OPERATING ROOM.pdf](#)> Accessed 19 February 2024.
8. Royal Australasian College of Surgeons (RACS) Reusable surgical gowns position statement. [2023-11-08 Reusable-Gowns-Position-Statement_Final.pdf \(surgeons.org\) Accessed 20 March 2024](#).