

Case Study: Improving Communication and Sustainability in Surgical Environments Through Reusable Scrub Hats with Detachable Name Badges.

Authors

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Hospital location

Musgrove Park Hospital, Somerset, UK

Product

Badge hats by Eco Ninjas

Implementation

Pilot project implementation supported by the Services & Solutions team from Johnson & Johnson MedTech.



Aim

This pilot study trialled centrally laundered reusable scrub hats with detachable name badges to assess their acceptability and impact on communication and sustainability in surgical environments.

Methodology

The study involved the procurement and implementation of **424 reusable scrub hats** and **112 detachable name badges** in various sizes and styles, including elastic backs, bandanas and surgical hoods.

Pilot period: 24 March – 24 April 2025, Trauma & Orthopaedics, Musgrove Park Hospital.

The initiative was evaluated based on communication improvements, patient experience, environmental impact, and financial viability.

Why Embroidered Hats Were Not Selected

Although embroidered hats are used in some hospitals, we opted against them due to ordering complexity, frequent loss when staff leave, and incompatibility with central laundering. They also fail to identify visitors and students. Our focus remains on sustainable, practical solutions that support long-term usability and operational efficiency.

Key Findings & Outcomes

1. Enhanced Communication

- Pre-implementation name/role recognition rate: **41%**
- Post-implementation recognition rate: **96%**
- Staff reported increased usage of names, improving inclusivity and reducing hierarchical barriers.
- Improved engagement with visitors and students in surgical environments.

2. Improved Patient Experience

- Patients felt more **confident and reassured** when they could easily identify their care providers.
- Reduced anxiety through clearer role identification.

3. Sustainability Benefits

- Projected reduction of **hospital waste** (on full Trust conversion)- over **90,000 disposable caps** prevented from incineration annually.
- Lower environmental footprint: **1,712.9 kg CO₂e** saved per year (based on **three** operating theatres).

4. Financial Impact

- **48% cost savings** projected with reusable scrub caps vs. disposable caps.
- **Annual cost savings:** £1,289
- **Three-year projected savings:** £3,868.40

Rationale for Implementation

While staff traditionally wear name badges or ID lanyards, these are often inaccessible or obscured, particularly for scrubbed personnel who wear sterile gowns. This contributes to communication difficulties, hierarchical barriers, inefficiencies, and potential microaggressions, especially in high-pressure situations.

By introducing detachable name badges on reusable scrub hats, staff no longer struggle to identify colleagues, allowing for quicker responses during emergencies and greater team cohesion. Additionally, hospital visitors and trainees can be clearly distinguished, improving safety and inclusion.

Laundering Process & Adoption Strategy

A **centralised laundering system** was implemented in partnership with Yeovil Hospital, part of Somerset Trust, ensuring infection control compliance. The reusable hats were chosen for their **durability, cost-efficiency, and waste reduction potential**.

Conclusion & Next Steps

The overwhelmingly positive response to this initiative supports **permanent adoption** at Musgrove Park Hospital and further expansion across regional and national surgical departments. Future considerations include:

- Trust-wide implementation
- Ongoing sustainability and cost-benefit evaluations
- Adaptations and improvements of Eco Ninja range- colour coding the hat sizes was one improvement.

Public interest also highlighted enthusiasm for the project, with a **promotional video garnering 556,000 views and engagement from 26,000 users which included over 900 comments.**

Staff & Patient Testimonials

Staff:

- "Flattens hierarchy by encouraging first-name interactions."
- "Increases rapport and teamwork."
- "Essential for emergency situations- easy to direct questions, even when unfamiliar with staff."
- "Helps when you have forgotten a name and in emergency situations. Anyone can direct questions, even when they are new".
- "I can name people much easier, even if I've missed their name at the brief or forgotten it. Lots of staff changeover so the badges on caps helped".

Patients:

- "As an autistic person, this is an excellent initiative!"
- "Reassuring to immediately recognise the healthcare team."
- "Supports informed consent by clarifying roles in surgical teams."
- "I had orthopaedic surgery yesterday at MPH and must say as a patient this was lovely. People wear ID lanyards but often have them tucked in pockets to keep them out of the way. I could talk to people and immediately know who they were and what their role was. Very reassuring".
- "This is fantastic. Aside from the benefits in an emergency, patients knowing exactly who everyone is (and their role) plays a larger part in ensuring they're giving informed consent".

Financial & Environmental Impact Summary (based on 3 theatres)

Category	Disposable Caps	Reusable Badge Hats	Savings
Annual Cost	£2,737	£4,099 (one-time)	£1,289/year
Three-Year Projection	£8,211	£4,342 (including badges)	£3,868 total
Carbon Emissions	2,688.1 kg CO ₂ e/year	975.2 kg CO ₂ e/year	1,712.9 kg CO ₂ e saved

This pilot study demonstrates that **reusable scrub hats with detachable name badges** significantly enhance communication, patient experience, and sustainability while offering **cost-effective** and **environmentally responsible** solutions for modern surgical practices.