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Search details

Infection risks of lanyards

Resources searched

NHS Evidence; TRIP Database; Cochrane Library; CINAHL; EMBASE; MEDLINE; PsychINFO; Google Scholar; Google Advanced Search

Database search terms: lanyard*; lanyard*; neck adj2 strap*; infect*; contaminat*; exp INFECTION

Evidence / Google Scholar search string(s): (lanyard OR lanyards OR laniard OR laniards OR "neck strap") (infection OR infectious OR infected OR contamination OR contaminated)

Summary

There is not a lot of research I’m afraid, and most seems to quote research published in 2008. Some Trusts do seem to have banned their use for the same reason as neck ties were banned although as the only recent guidance I could find says ‘lanyards and neckties may play a role in transmission of infection but it is difficult to demonstrate the precise role.’ The risk of cross-infection would seem to be small but presumably will also depend on other precautions being taken to prevent the spread of infection. Anyway take a look at the research; if you need any papers let me know.
There is some evidence to suggest that lanyards and neckties may play a role in transmission of infection but it is difficult to demonstrate the precise role (Kotsanas et al 2008).

Evidence-based reviews
None found.

Published research – Databases

1. Pathogenic colonisation of hospital badges and neck lanyards

Author(s) Lobaz S., Diddee R., Collins J., White D.

Citation: Anaesthesia, May 2012, vol./is. 67/5(562), 0003-2409 (May 2012)

Publication Date: May 2012

Abstract: Healthcare-associated infection can cause considerable morbidity and mortality as well as carrying a significant financial burden. Simple observations have demonstrated that identification badges and neck lanyards are frequently handled for computer security and door access. Patient contact following touching of badges poses an infection transmission risk [1, 2]. The aim of our study was to quantify any pathogenic colonisation of badges in the theatre environment and assess whether such colonisation poses a risk to patients undergoing surgery. We also evaluated the efficacy of cleaning using Clinell universal sanitising wipes (Gama Healthcare Ltd, London, UK). Methods The badges and lanyards of 83 healthcare workers in our operating theatres were swabbed with a microbiological sponge and cultured. If pathogenic organisms were identified, the participant was recalled to undergo a repeat pre-cleaning swab. Following this, a Clinell wipe was used to clean the badge, and a further swab was taken after it had dried. Control samples were taken from brand new badges to assess baseline contamination. Results A total of 25% of all badges and lanyards contained potential pathogens; 93% contained normal bacterial flora compared to 75% of controls. A greater proportion of pathogens were found from badges and lanyards combined compared to badges alone (25 vs 8% respectively). Within one month, 11 participants with previously identified pathogens were followed up and pre-cleaning swabs taken. No pre-cleaning swabs contained the same pathogens as originally identified and 73% contained no bacteria at all. All pathogens identified at pre-cleaning were destroyed following the use of the Clinell wipe. Overall, the average percentage reduction in colony forming units of normal flora after using the Clinell wipe was 72%. Discussion A significant number of badges and lanyards worn routinely by staff in the theatre environment were contaminated. This may pose an infection transmission risk to patients undergoing surgery. Pathogenic contamination appears to be a transient but ever-changing phenomenon similar to hand contamination. Clinell universal wipes were found to be effective in reducing the normal bacterial burden.

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2. Pathogenic colonisation of hospital badges and neck lanyards in the anaesthetic/theatre environment
Abstract: Healthcare associated infections (HCAI) cause considerable morbidity and mortality to patients and carries significant financial burden.

Simple observations show that identification badges and neck lanyards (B&L) are frequently handled for computer security and door access. Contact between B&L and hands and inadvertent patient contact poses a HCAI transmission risk. The aim of our service evaluation was to first quantify any pathogenic colonisation of B&L in the theatre environment and whether such colonisation poses a risk to patients undergoing surgery. Secondly, we evaluated the efficacy of a cleaning intervention using Clinell Universal Sanitising wipes (Gama Healthcare Ltd) in reducing HCAI risk on B&L.

Methods The B&L of 83 healthcare workers in theatres were swabbed with a microbiological sponge and then cultured. If pathogenic organisms were identified, the participant was recalled to undergo a repeat B&L pre-cleaning swab. Following this, a cleaning intervention with a Clinell Universal wipe was made, with a post-cleaning swab being taken after the B&L had dried. Control samples were taken from brand new B&L to assess baseline contamination.

Ethical approval submission through the Trust research development department and regional ethics committee deemed the project to be a service evaluation and therefore not require formal ethical approval. Results 25% of all B&L contained potential pathogens associated with HCAI. 93% of B&L contained normal bacterial flora. 75% of controls contained normal flora. A greater proportion of pathogens were found from B&L combined compared to badge samples alone (25 vs. 8% respectively). Within one month, 11 participants with previously identified pathogens were followed up and pre-cleaning swabs taken from their B&L. No pre-cleaning swabs contained the same pathogens as originally identified. 73% contained no bacteria with 27% containing pathogens on pre-cleaning culture. All pathogens identified on B&L at pre-cleaning were destroyed following Clinell wipe intervention. Overall the average percentage reduction in colony forming units of normal flora on B&L following Clinell was 72%. Discussion B&L worn routinely by staff in the anaesthetic theatre environment contained significant pathogens associated with HCAI. This may pose a transmission risk to patients undergoing surgery. Pathogenic contamination of B&L appears to be a transient, but ever-changing phenomenon similar to hand contamination. Clinell universal wipes were found to be an effective cleaning intervention against pathogens associated with HCAI and in reducing the normal bacterial burden of B&L.

Source: EMBASE

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3. Are lanyards a risk for nosocomial transmission of potentially pathogenic bacteria?

Author(s) Alexander R., Volpe N.G., Catchpole C., Allen R., Cope S.

Citation: Journal of Hospital Infection, September 2008, vol./is. 70/1(92-93), 0195-6701 (September 2008)

Publication Date: September 2008

Source: EMBASE

Available in fulltext from Journal of Hospital Infection at the ULHT Library and Knowledge Services' eJournal collection

Available in print at Lincoln County Hospital Professional Library

4. Deadly pathogens found on lanyards.

Author(s)

Citation: Australian Nursing Journal, 01 February 2008, vol./is. 15/7(12-12), 13203185
5. What's hanging around your neck? Pathogenic bacteria on identity badges and lanyards

**Author(s)** Kotsanas D., Scott C., Gillespie E.E., Korman T.M., Stuart R.L.

**Citation**: Medical Journal of Australia, January 2008, vol./is. 188/1(5-8), 0025-729X;1326-5377 (07 Jan 2008)

**Abstract**: Objective: To determine whether identity badges and lanyards worn by health care workers (HCWs) are capable of harbouring potentially pathogenic bacteria. Design, setting and participants: Cross-sectional study of 71 HCWs (59 clinical ward staff and 12 infection control staff) at Monash Medical Centre, a university teaching hospital. Samples from lanyards, identity badge surfaces and connections (eg, clips, keys, pens) were cultured. The study was conducted from July to August 2006. Main outcome measures: Presence of pathogenic bacteria on identity badges and lanyards; differences in bacterial counts on items carried by nurses and doctors. Results: A total of 27 lanyards were identified with pathogenic bacteria, compared with 18 badges. Analysing lanyards and badges as a combined group, seven had methicillin-resistant Staphylococcus aureus, 29 had methicillin-sensitive S. aureus (MSSA), four had Enterococcus spp and five had aerobic gram-negative bacilli. Lanyards were found to be contaminated with 10 times the median bacterial load per area sampled compared with identity badges. There were no significant differences between nurses and doctors in total median bacterial counts on items carried, but doctors had 4.41 times the risk of carrying MSSA on lanyards (95% CI, 1.14-13.75). Conclusion: Identity badges and lanyards worn by HCWs may be contaminated with pathogenic bacteria, which could be transmitted to patients. In view of this finding we suggest appropriate infection control interventions.

**Source**: EMBASE

Available in fulltext at Medical Journal of Australia: Collection notes: On first login to a ProQuest journal you will need to select 'Athens (OpenAthens Federation)' from Select Region, and then 'NHS England' from Choose your Library.

Available in fulltext from Medical Journal of Australia at Free Access Content

6. Lanyard lesson

**Author(s)** McPherson M.

**Citation**: Australian nursing journal (July 1993), November 2005, vol./is. 13/5(3), 1320-3185 (Nov 2005)

**Publication Date**: November 2005

**Source**: EMBASE

Available in fulltext from Australian Nursing Journal at EBSCOhost

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**Published Research - Google Scholar**

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**Bacterial contamination of surgical scrub suits worn outside the operating theatre: a randomised crossover study**

HI Hee, S Lee, SN Chia, QS Lu, APQ Liew, A Ng - Anaesthesia, 2014 - Wiley Online Library

... is warranted to assess the potential impact of wearing stethoscopes and lanyards on bacterial ... Role of the environment of the operating suite in surgical wound infection. Reviews of Infectious Diseases 1991; 13: S800–4. CrossRef. 9 AORN Recommended
Preventing healthcare-associated infection: risks, healthcare systems and behaviour
JK Ferguson - Internal Medicine Journal, 2009 - Wiley Online Library
... 2007 Guidelines for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings. ... Ten commandments of infection prevention for physicians. ... 2
Dress well for safer care – abandon ties and lanyards, bare your arms to the elbow – no wrist watches or ...
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... Encouragingly from this study no multi-drug resistant (MDR) bacteria have been isolated from IDs. However lanyards may act as a vector to infection. Based on this information we plan to remove lanyards from the clinical setting and commence an ID cleaning policy. ...
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Microbiological isolates from identification badges in the intensive care and operating theatre environment: 17AP1-4
M Malik, E Todman, M Hacking - European Journal of Anaesthesiology (...) journals.lww.com
... This suggested IDs could become contaminated with bacteria from infected surfaces as demonstrated in studies from Canada1 and Australia2, and then be transmitted to patients. ... However lanyards may act as a vector to infection. ...
Methicillin-resistant Staphylococcus aureus (MRSA): “missing the wood for the trees”


... be found on environmental surfaces — this time on identity badges and lanyards. This meaningful comparison, so that institutions with higher rates of infection can learn ...

Author details Peter J Collignon, FASM, FRCPA, FRACP, Director, Infectious Diseases and Microbiology ...

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Physician Attire: A Scholarly Look

J Van Blarcom - Hospital pediatrics, 2012 - hospitalpediatrics.org

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