

MRSA TRANSMISSION

How does hand hygiene contribute to MRSA transmission in a hospital setting?

Figure 1. Gonzalez, S. (2016) MRSA. Retrieved from <http://images.medicinenet.com/images/share-article-images/share-mrsa-infection.jpg>

CLINICAL ISSUE:

MRSA (Methicillin-resistant staphylococcus aureus) is an increasing global issue. MRSA can be ultimately life threatening as its multi resistance to various treatments, leaving patients at risk of entering a debilitating state, which results in longer hospital stays and larger economical burden. Hand hygiene helps diminish cross contamination with staff and the environment. Outbreaks of MRSA throughout the world are raising concerns with health care worker (HCW) competence in hand hygiene practices. Its been revealed that MRSA is equally distributed across the hands of doctors, nurses and other support staff making this a collective issue throughout a clinical setting.

FACTS:

- MRSA is resistant to beta-lactam antibiotics, making them ineffective for treatment.
- HCWs hands are the most common vehicle for transmission of hospital associated pathogens.
- Wearing gloves does NOT eliminate the risk for transmission or infection
- Alcohol based hand rub (ABHR) effectively decontaminates hands
- Hand hygiene is the leading element for inhibiting the spread of MRSA and all staff, visitors and patients play a crucial role in preventing cross transmission

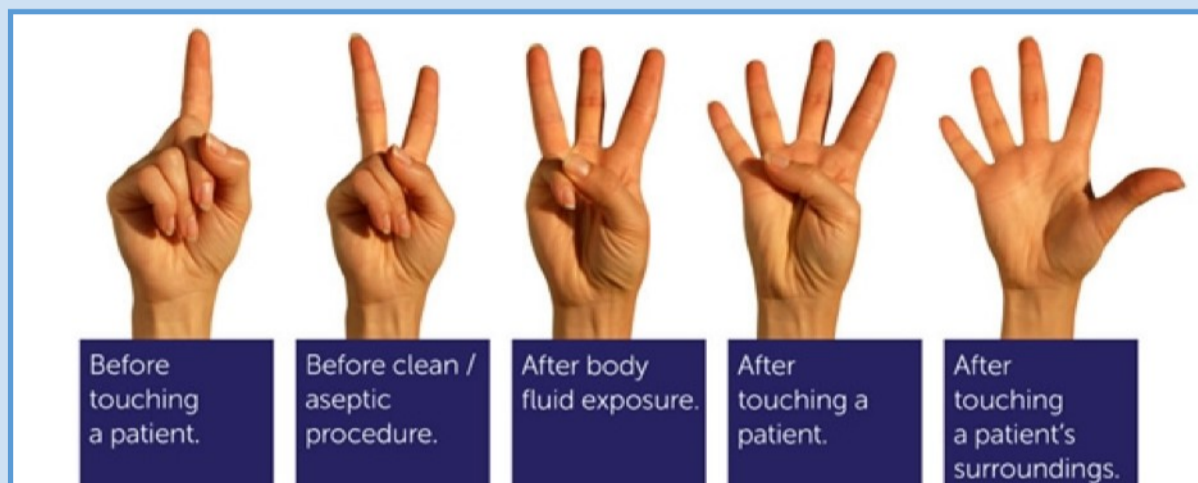


Figure 2. Asante (2017) Hand Hygiene. Retrieved from <http://www.asante.org/app/files/public/2590/Hand-Hygiene-example-article.png>

MANAGEMENT:

New Zealand is currently implementing the 'Five Moments of Hand Washing' after the World Health Organisation (WHO) stated it as a critical factor in preventing MRSA transmission. (Figure 2)

WHO guidelines to increase hand hygiene compliance:

- 1) System change to make hand washing more accessible
- 2) Hand hygiene education
- 3) Promotion and facilitation of skin care of HCWs hands
- 4) Routine observation and feedback
- 5) Reminders in the workplace
- 6) Improve institutional safety; including understaff and overcrowding

Non-compliant hand washing can be improved by implementing other measures such as online learning packages, oral presentations, posters and ward competitions.

When fellow peers and superiors demonstrate similar positive attitudes and behaviours toward hand washing and patient safety, then it can flow throughout the team to reveal collaborative results.

Determinants of poor hand hygiene

Determinants of good hand hygiene

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| <ul style="list-style-type: none"> • Understaffing / lack of time • Hand washing agents causing irritation • Lack of washing equipment • Lack of role models • Use of gloves instead | <ul style="list-style-type: none"> • Having ABHR readily available • Institutional support, praise and participation • Risk perception • Education and correct hand washing techniques |
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CONCLUSION:

Hand hygiene is the foundation for reducing MRSA and strict compliance has the ability to reduce MRSA transmission rates by 31%. HCWs must support and promote hand hygiene behaviours for the safety of themselves and their patients safety within a clinical setting. Visual reminders throughout the wards encourage and promote staff and visitors that hand hygiene is crucial in these environments.

By: Amber Dewar

PECOT TABLE

Population/Patient:

Information relating to question: Adults in an acute health care setting

Explanation: I chose this range of people as I witnessed various contact isolation and precaution methods being executed while on placement. The current outbreaks that our New Zealand hospitals are facing are contained within an adult setting. Although high levels of MRSA transmission are prevalent in NICU and ICU environments, I thought they could possibly have alternative medical situations that could influence the transmission rates.

Exposure/Intervention:

Information relating to question: Adults who have contracted MRSA in an acute health setting

Explanation: I will be focusing on articles with means to reduce MRSA transmission rates within hospitals. WHO reports that total estimated prevalence of current MRSA colonization, without any hand hygiene, is sitting at 30% (World Health Organization, 2009). This is an alarming statistic and without any interventions will continue to grow and cause further problems. I will also be investigating HWCs (Health care workers) perspective on why hand hygiene compliance is so low.

Comparison/Control:

Information relating to question: Adults who are at risk of contracting MRSA in an acute setting

Explanation: Evidence based research suggested that lack of compliance has a strong correlation to increasing levels of MRSA. WHO revealed that when hand hygiene compliance increases about 40% - 60%, then there is beneficial impact on reducing MRSA transmission (World Health Organization, 2009). Therefore, I wanted to explore why hand hygiene compliance is so low, and what constructive steps need to be made to rise these levels.

Outcome:

Information relating to question: To determine the barriers to compliant hand hygiene and reasons why MRSA is still so prevalent

Explanation: Dempsey states that 'hand hygiene is the most effective way to help prevent the spread of organisms' (Dempsey, et al., 2014), and with MRSA being so prevalent in our hospitals we need to explore the options and interventions available to utilise and manage this issue. I will also investigate from HCWs perspective on how to make this change.

Time:

Information relating to question: Time is not relevant as effects are highly deferrable

Explanation: New Zealand Hand Hygiene campaign states that DHB activity timelines can be anywhere from 1-18 months, proving far too long to evidently conclude research.

Rationale:

I have chosen to present my literature review findings in the form of a poster because of its ability to quickly convey information and key messages about the research (University of Edinburgh, 2015, para. 9). A poster allows you to creatively summarise main points and distribute these findings to a wide audience through a public forum of other creative minds. I personally am drawn to visual representations of work and this is why I have chosen to carefully present my knowledge in a manner which I am familiar with. By displaying posters in public areas, such as the hallways of The School of Nursing, it allows for wide discussion of the topic as many people will walk by and the information will be up for their own personal interpretation. (Schneider & Whitehead, 2013). By carefully selecting colour platforms and using a specific layout techniques which enhance flow of information throughout the poster, it draws attention to other creative minds to provoke discussion. It is a quick and effective way of enhancing knowledge and promoting positive change.

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