

# Infection control essay on hand hygiene

[Health & Medicine](#), [Body](#)



Healthcare-associated infections (HCAs) can be extremely detrimental in health and social care settings where patients are highly susceptible to disease. These are infections which the patient acquires during or after healthcare has been received which can be dangerous as contracting an infection whilst receiving healthcare from an unrelated problem could have a deteriorating effect on the patient in comparison to a healthy individual's reaction.

Patients in hospitals and other healthcare settings have increased vulnerability so consequently are easily receptive to pathogens due to examples such as reduced immunity or open wounds. Therefore the appropriate precautions and procedures must be set in place to ensure cross-infection cannot occur. It is crucial for health professionals to understand how infection spread so that they can consider and act upon the significant implications which are risked when improper measures are not followed hence why the knowledge of the chain of infection should be learnt.

Infection control is high on the agenda for healthcare providers because of its significance as it safeguards staff, patients and the public, promotes safe environments and practice but also indicates the quality of healthcare given. It is imperative to focus on legislation which applies to the National Health Service like the NHS Constitution and the Nursing and Midwifery Council code of conduct. Communication, competence, and care of the six C's can all be factored into how infection control is dealt with in the NHS.

One of the most common practices to lessen the risk of cross-infection is hand hygiene which has reduced overall infection rates in hospitals. (Bennett, Jarvis and Brachman 2007) Identify your new learning, giving

rationale for your choice of this topic The chain of infection should be learnt in order to apply the appropriate infection prevention methods at each point. The process simplifies how microorganisms spread and infection occurs. Microorganisms are named the “infectious agent” as they are able to produce infection in the body, they are always present but may be concentrated in some areas which are called “reservoirs”.

Reservoirs for possible infectious agents can be environments or people which can be transferred from one area to the next. The transmission of microorganisms from a person through exhaling or other bodily functions is labelled the “portal of exit”; the microorganisms are then able to be transmitted into a patient via contact, air, blood, meals or liquids. The “portal of entry” describes the susceptible area to which microorganisms can be introduced into the patient, such as by mouth, urinary tract or an aperture in the skin. (Brooker and Nicol, 2011)

Between the portal of exit and the portal of entry there is potential for cross-contamination and this is where the need for hand hygiene arises. Adequate hand hygiene by nurses lessen this risk of healthcare acquired infections as evidence shows that developing and bettering the technique that healthcare workers use to clean their hands contributes to the reduction of HCAs that occur (Pratt et al, 2007). Damani (1997) suggested that the most prevalent cause of cross-infection was transmission pathogens from one patient to another by pathogens occupying the hands of healthcare workers.

Contaminated hands easily transmit these microorganisms but so by cleaning hands appropriately hospitals can prevent (to an extent) harm to patients which is a fundamental concept in healthcare. (Pittel et al, 2000)

This raises the importance for nurses to learn a technique which will clean the hands physically and of invisible microorganisms as nurse's interactions towards patients account for roughly 80 percent of direct care patients receive. (Storr and Clayton-kent, 2004)

There are many documents on the different techniques of hand washing and when to do such techniques like the World Health Organisation's five moments for hand hygiene (2006). WHO recommends that hands should be washed before coming into contact with the patient and before aseptic tasks to protect the patient against germs occupying the healthcare worker's hands as well as immediately after an exposure risk to body fluids, after contact with the patient and their surroundings to protect yourself from pathogens exposed whilst carrying out these tasks.

This applies to the NMC's code of professional conduct (2004) which states that a nurse must "act to identify and minimise risk to patients and clients". This values the results of hand hygiene by identifying when to clean hands from the WHO's five moments of hand hygiene and to use the endorsed hand hygiene technique of the trust to minimise risk to the patient. The hand washing procedure originally outlined by Ayliffe et al (1978) has been adapted by many organisations to provide various routines.

Hands were wet by a running tap and antiseptic detergents or liquid soap (5ml was poured onto the hands, the technique consisted of five backwards and forwards strokes in the motion of; palm to palm, each palm over the other hand's back, interlocking palm to palm, each palm over the other hand's back interlocked and then the rotational scrubbing of the fingers into each palm finalised by the rubbing of the wrists during a 30-second time p.

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Then the hands were rinsed with water for 15-seconds and dried with two paper towels for 15-seconds. (Ayliffe et al, 1978)

Whilst this technique has strict timescales the WHO elects the timescale of roughly the time taken to sing “ Happy Birthday” twice. This raises concerns over the approximates as this will differ from person to person. The procedure itself remains nearly exact except from the addition of turning the tap off with a towel to avoid recontamination and the exact timings are lost. This technique only stated to use running water, however no temperature was specified.

Hand Washing for Life (200-) advises that water should not be above 110° F as this temperature would cause hands become damaged by loosing delicate tissues on the skin. This can cause bacteria to become trapped and more difficult to remove, as well as cause pain to the worker. It is a legal requirement for health professions to take the necessary measures to ensure that they protect themselves, which includes their hands and others around them by taking care of their hands.(Health and Safety at Work Act 1974)

Dougherty and Lister (2010) give a comprehensive guide to effective hand washing, stating the minimum time to rub lathered hand together is 10-15 seconds. The guide recommended that attention should be given to areas that are missed most frequently like between fingers, tips of fingers and thumbs. Single use towels to dry hands were used in all techniques. Damani (2011) suggests that paper towels should be used and also used to turn off taps if hands-free control is not available.

An experiment carried out by Redway and Fawdar of the University of Westminster backed up Damani (2011) suggestion as drying hands with a paper towel decreased the amount of bacteria compared to jet-air dryers and warm-air dryers which caused an increase. Given that the WHO technique has been used throughout the NHS by National Patient Safety Agency for hand cleaning techniques this would be a reliable technique to follow whilst also taking into consideration the detail given by Dougherty and Lister.

How has this learning made a difference to you Being aware of how many infectious opportunistic pathogens can be exposed to patients, which may lay dormant on healthcare workers hands, gives healthcare workers a better understanding of how to assess the risks of when passing infection can occur by referring to the chain of infection. The chain of infection makes nurses more aware of patients as susceptible hosts.

It is everyone's responsibility to take appropriate considerations to the prevention and control of infection; this would include all healthcare professionals, the patients themselves and the visitors. (Randle, Coffey and Bradbury. 2009) The Francis report states that visitors and staff should adhere to hygiene requirements as well as reminding anyone who is seen to not adhere to these requirements so that the high standard of hygiene is achieved and promoted. (2013)

The knowledge when to wash by the WHO's five moments enables nurses to make knowing when to wash their hands second nature. It also makes the nurse more aware of how serious it is to have clean hands as "clean hands save lives" as said by the National Patient Safety Alert from 2008 which states that the individual risks to patients are dramatically reduced if

healthcare workers washed or disinfected their patients every time they needed to perform patient contact.

The six C's devised by Cummins and Bennett in 2012 state that one of a nurse's prime responsibilities is to care, this means giving the care of controlling infection as it is extremely important to keep clear of potentially avoidable HCAs which can have a significant impact to the patient's physical and psychological state. This could worsen their condition, increase length of stay, increase pain and suffering and increase worry and stress. This all causes a massive impact on the economy as HCAs cost the NHS over the estimated ? 1 billion. (NAO, 2009)

The knowledge of appropriate hand hygiene also shows competence, another of the six C's, as nurses can use what they have learnt confidently to ensure they have controlled spreading infection. Hand hygiene is also a commitment, as a nurse may wash their hands but a commitment must be made to wash them to the standard that is appropriate. Communication is also vital in infection control as infection control is everyone's responsibility. (Randle, Coffey and Bradbury, 2009)

In all aspects of infection control communication must be at the heart of the process so that the right precautions are taken. Staff and researchers must communicate with each other in order to maintain the same level of knowledge on hand hygiene so that the most up to date method is used. It is important for staff to communicate with patients to teach and improve their own hygiene to ensure the safety of themselves and others around them.

It is also key for staff to communicate to patient relatives in order for them to carry out routine hygiene which is imperative for hospital or other healthcare settings infection control. Information given would be useful for the public to know to reduce general sickness therefore reducing burden on local NHS services. The actual technique should be addressed to all everyone as if it is not done adequately harmful microbes would still be on the hands and therefore infection can still occur. How will this learning influence your clinical practice

Applying the knowledge of hand hygiene learnt to clinical practice would mean to risk assess the situation at hand in environment by asking the assessment questions as described by Randle, Coffey and Bradbury (2009), then use the five moments given by WHO (2006) to demonstrate competence in when to wash or disinfect hands. Nurses will be influenced by which situation they are placed in, for example when moving from one patient to another hands must be washed by water and liquid soap method (WHO, 2006).

The six C's would also influence a nurse in hand hygiene as a nurse would think about caring for the patient, giving a commitment to safe care as well as being competent in this task. Electing the most effective hand washing technique must be done to successfully remove pathogens so that not to be transmitted from one patient to another or one area to another. The techniques discussed vaguely circle around the same routine with differences in times, in clinical practice these would all influence the nurse whilst performing hand hygiene but the standard practice would be used as it is the technique enforced by the NPSA adapted from the WHO.



The most recently updated hand hygiene method by the NPSA includes the use of alcohol gels, these should not be used as a constant alternative as they would lead to build up and therefore not effective for removing harmful microbes and are not suitable in some cases as they would not remove dirt or organic materials, cause a risk of ignition when handling medical gas cylinders and would not be effective against *Clostridium difficile* and Norovirus. (Brekke and Macqueen 2012) Therefore this would influence workers in clinical practice as alcohol gels should only be used out of these circumstances.

Describe how you will continue to develop this learning after this module The research into all hand hygiene methods should be regularly looked over as there will always be improvements to how the NHS handles infection control. One example of this would be the use of non-touch taps, a favourable option by many healthcare providers, but although creating minimal contact with a potentially easily contaminated area to control the outbreak of MRSA it has also led to the potential link between infrared taps and the outbreak of *Pseudomonas* bacteria due to increased surface area in the plumbing of these taps.

(Department of Health, 2012) This example demonstrates that there will always be constant reviews into infection control so it is important to keep up to date on the latest information on practice available and to comply with the NMC code of conduct. A nurse must take part in additional learning or training to develop competence in hand hygiene practice and to constantly review themselves on their development in order to assess what they could do to improve.

Randle, Coffey and Bradbury (2009) suggest that ongoing training will always be required in this area of practice. How does this personal and professional development relate to the NMC Code Developing and understanding the appropriate hand hygiene procedures for personal and profession practice is important to comprehend so that the nurse can continue to care of the patient their first concern. Caring for a patient means to not worsen their health by transmitting infection which could be preventable as by washing hands.

It is immensely important for nurses to act within their competencies which includes being able to competently hand wash appropriately to control infection as it is vital in performing any act of physical care to patient. (Dougherty and Lister 2011). Another section of the NMC code specifies that a nurse should administer care “ based on the best available evidence or best practice”. All nurses must strive and aspire to remain on top of the developing and constantly modifying information and research on infection control.

This also relates significantly to the NMC code which represents that all nurses must maintain and improve their knowledge and skills based on the most up to date information throughout their working lives. Providing high quality infection control at all times applies to the NMC code because it means that the nurse is complying with providing the high standard of practice and care at all times. How does your topic relate to the NHS Constitution The NHS constitution states the rights and commitments to patients, the public and the staff. (Department of Health, 2013)

The topic of hand washing relates to this document because the NHS constitution is the integral laws to which the NHS strives to stand by and infection control is high on constantly on the agenda for the NHS to improve upon. The constitution expresses that the NHS aims to provide the “ highest standards of excellence and professionalism” and providing a high calibre of care which is “ safe, effective and focused on the patient”. The terms safe and effective relate to hand hygiene as nurses must follow hand hygiene procedures so that the care given is is not hindered by the possibility of passing infection.

The constitution also gives the values of the NHS, which includes the value to improve lives. The NHS commits to improve lives and not to decrease the health of the patient due to HCAs and so it is paramount that infection control procedures are followed to lessen the risk of infections occurring whilst receiving healthcare. Patient rights are issued in the document, one particular is the right for the patient to be treated with a professional standard of care which has been administered by qualified professionals.

Service users of the NHS have the right to expect the quality of healthcare to be monitored and improved continuously, which includes safety, so hand hygiene of workers should be continuously reviewed to make sure it is up to the standard that will ensure safety. The NHS Constitution commits to establish a safe and hygienic setting which is fit for purpose which directly involves the matter of hand hygiene because of importance of it in infection control which promotes a safe and clean environment. (Department of Health, 2013)

Conclusion

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It is clear that transmitting infectious diseases can be reduced if staff, patients and visitors washed their hands before and after tasks, a routine hand hygiene technique cannot be stressed enough as it is paramount for all staff to adhere to so that the spread of infection is at bay. It is now valued that hand washing is not only important when hands are visibly contaminated but is also vital that they are washed when it is not visible that they are contaminated due to the microscopic pathogens hidden on the skin.

This knowledge is essential to be passed on to all those who flow through a healthcare setting so that education can be continued on infection control. With this given, it is key that communication skills are overly efficient at voicing and helping in infection control with caring for the patients at the heart of the education. With continued education and observations in this area more people would be able to show acceptable handwashing and therefore reduce the risk of infection. Hand hygiene techniques influence all nurses because of the strong link to many of the six C's and the vast importance to the health of all patients.