Hand hygiene – when and how should it be done?

In this article...

- Why health professionals are unsure when to clean their hands
- The Five Moments of Hand Hygiene
- How hands should be cleaned

Authors
Claire Kilpatrick is independent consultant, patient safety and infection prevention; Linda Hosie is infection prevention nurse, Royal Berkshire Foundation Trust; Julie Storr is an independent consultant in patient safety and infection prevention, and president of the Infection Prevention Society.

Abstract

Changing hand hygiene practice among healthcare staff requires a multifaceted approach focusing on how and when hands should be cleaned.

There is almost universal acceptance in healthcare that hand hygiene is one of the simplest yet most effective measures to prevent patient harm. However, something as simple as a hand hygiene action is more complex than it may appear; this is because health professionals are expected to clean their hands at particular times, many of which are not intuitive. Often, there are no natural cues prompting hands to be cleaned.

In the past, the approach was to develop policies containing detailed lists of indications when to perform hand hygiene “before” and “after” certain tasks and procedures. Some policies categorised these into high, medium and low risk – and health professionals had to rely on memory and risk assessment to make sense of a confusing array of instructions for the “when” of hand hygiene.

The scenario in Box 1 illustrates the reality of a typical patient care sequence; it is typical of a day in the life of a busy nurse in an acute hospital. Multiple demands, multiple patient encounters, multiple physical skin-on-skin contacts – a time when potentially harmful microorganisms can spread. The simple act of hand hygiene should take place within this workflow sequence, but it is difficult to break it down and note specifically when hand hygiene should occur, and whether that hand hygiene should be with a hand sanitiser or soap and water following World Health Organization (2009) recommendations.

When hands should be cleaned
Until recently, if you asked health professionals to monitor hand hygiene and record compliance rates in the same type of setting at the same time while using their organisations’ policies, it is highly likely they would produce a range of scores. This is because indications for hand hygiene and the score sheets used to check compliance varied from hospital to hospital.

In 2007, an innovation took place in hand hygiene training, monitoring and promotion. The WHO Five Moments for Hand Hygiene (Sax et al, 2007) removes ambiguity, promotes a standardised approach to monitoring and – most importantly – clarifies when hand hygiene should occur. Rather than a long list of indications, the Five Moments approach clusters all the possible indications into five simple chunks and indicates a “patient zone” through the use of a dotted line (Fig 1).
Applying the 5 Moments makes it much easier to determine the “when” of hand hygiene. With strained resources and staffing levels, it provides a tested way to streamline the action of cleaning hands for patient safety (Allegranzi et al, 2013).

**Practical application**

In your practice, think about each encounter with a patient in terms of a simple, sequence of care delivery. Each patient is at the centre of an individual “patient zone”.

A nurse crosses the dotted line, enters “the patient zone” and performs hand hygiene before touching the patient (Moment 1). Once inside the zone, there is no need to clean the hands again, unless the nurse is performing a task or procedure that breaches the patient’s intact skin or involves a device that breaches the skin (Moment 2). If such a breach occurs, for example touching the cannula site in the scenario in Box 1, the nurse performs hand hygiene; hand hygiene must be performed after touching a site that may have resulted in blood/body fluid exposure (Moment 3).

If the nurse touches the patient after the procedure – for example to help make the patient comfortable – then leaves one patient’s zone to return to the general ward area, hand hygiene should be performed again (Moment 4). Moment 5 is concerned with situations where a nurse enters a patient zone and there is no need to touch the patient. For example, if the patient has gone to another department.
and the nurse has contact with the patient's bed or bed linen, hand hygiene should be performed on leaving the patient zone to prevent microbes from the patient being transported outside the zone, and potentially coming into contact with other patients.

How to clean hands
A great deal of effort has gone into promoting six-step or eight-step hand cleaning techniques over the past few decades, usually through posters and training sessions. However, the need for such a step-wise technique has been challenged (Chow et al, 2012).

According to Pittet et al (2008), Gould et al (2007) and Smith (2009), only a limited number of studies focus on how to clean hands (hand hygiene technique).

More recently, there has been an explosion of videos demonstrating hand hygiene techniques on social media channels, which suggest that healthcare organisations worldwide use this method to improve compliance with hand hygiene.

Conclusion
The act of hand hygiene is performed in order to significantly reduce the level of microbes on the hands to make it safe to touch a patient or perform a procedure.

However, in an era of heightened activity in healthcare and limited human and financial resources, it is important to question where effort and energy should be invested. We are not questioning the importance of hand hygiene technique - the WHO (2009) promotes an eight-step technique (Fig 2). However, we challenge everyone to think about how increasing awareness and action on hand hygiene at the right times can be both achieved and sustained.

References