Hand washing

A modest measure—with big effects

Hospital acquired infection damages patients, prolongs hospital stays, consumes scarce hospital resources, and thus presents a major challenge for clinical governance.[1] In a seminal intervention study 150 years ago Semmelweis insisted that doctors performing necropsies washed their hands before delivering babies, so reducing mortality due to streptococcal puerperal sepsis from 22% to 3%.[2] Many studies since have confirmed that doctors decontaminating their hands between seeing patients can reduce hospital infection rates.[3] Nevertheless, healthcare workers still fail to wash their hands and fail to appreciate the importance of doing so.[3] This month the Department of Health has had another attempt at reminding them by sending a document and health circular to all NHS chief executives, public health directors, and microbiologists in England.

Many observational studies, mainly conducted in intensive care units, show low rates of hand washing, especially among doctors.[4] Bartzokas et al observed that, despite frequent patient contacts, senior doctors washed their hands only twice during 21 hours of ward rounds.[5] Though doctors spend less time than nurses in direct patient contact and may think that they need to decontaminate their hands less often, they have many transient contacts and move from ward to ward. The same is true for phlebotomists, physiotherapists, radiographers, and various technicians.

Self reporting overestimates compliance. After unobtrusive observation of doctors to obtain a baseline hand washing rate, Tibballs asked a sample to estimate their own hand washing rates before patient contact. Their perceived rate of 73% (range 50%-95%) contrasted sharply with the observed frequency of just 9%.[6] Pritchard and Raper were astonished that "doctors can be so extraordinarily self-delusional about their behaviour."[7]

Why is compliance so poor? Even when taught the theoretical basis of hand washing, healthcare workers do not seem to understand the risks associated with non-compliance.[8] Hospital acquired infections usually present as sporadic cases, perceived as insignificant or unrelated to non-compliance. Staff horrified by lice on a patient fail to consider the potentially far more serious consequences of bacteria present on their hands.

The failure of healthcare workers to decontaminate their hands reflects fundamentals of attitudes, beliefs, and behaviour, and there are no simple solutions. Many attempts have been made to improve hand washing compliance through education, and indeed elementary hygiene practice should be taught explicitly in medical schools. Principles taught in the lecture theatre can be reinforced by experiential learning, such as demonstrating the need for proper hand washing technique by showing microbial growth from unwashed hands[9] and by using fluorescent oil-based dyes to illustrate the effectiveness of hand washing. Such methods increase personal impact, but, though they may be temporarily improve compliance, behavioural changes tend not to be maintained.

Role models are important in hospital practice. Junior doctors washed their hands more often when consultants set an example (although they were not perfect, washing their hands on fewer than half the indicated occasions) (Larson and Larson, conference of Association of Practitioners in Infection Control, San Diego, 1983). Unfortunately, poor practice can also be learnt at the bedside. Junior staff and students taught to wash their hands abandoned the habit when others, especially more senior ward staff, did not bother.[10] Senior staff should take the lead to achieve lasting behavioural change. To increase compliance, medical staff could police each other,[11] and it has even been suggested that patients should be encouraged to ask their carers to wash their hands.

It is clear that healthcare workers fail to understand the importance of hand washing. This issue is so crucial that we need a greater commitment from management to influence their behaviour. It is now time for an explicit standard to be set, that hands should be decontaminated before each patient contact. If such a policy is not in place or being followed, the trust concerned may be liable in the event of litigation. The culture change required for this new practice may be forbidding, but similar challenges such as the safe disposal of sharps and, in another setting, the use of seat belts in cars, have been faced and overcome. Hand decontamination should have similar status to other health and safety policies, where individuals are accountable for day to day operational practices. Hand washing should be regarded as part of the normal duty of care.

Handwashing Liaison Group*

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