Hands up: how clean are your hands?

As a greater number of invasive procedures are now taking place in primary care, the risk of healthcare associated infections has increased, prompting the need for improved hand hygiene across practices, workplaces and in the community. Carol Pellowe outlines the best procedures for ensuring your hands are clean

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Recent government reports have highlighted the current concern about healthcare associated infections (HCAIs).[1,2] Although the prevalence of HCAIs in primary and community care settings is not known, the early discharge of patients from hospital, the increasing use of medical devices, and the number of invasive procedures being undertaken in primary care, mean that the risk of HCAIs is an increasingly important issue in the community. Many regard cleaning one's hands as something learnt for life in childhood, yet failures in hand decontamination in healthcare practice are a major cause of HCAIs. As this summer the clean-**your**hands campaign expands to include primary and community care settings, it is an opportunity to consider facilities in your workplace and your own practice.

What should be available in primary practice?

One of the commonest reasons cited in primary care for not washing hands is the lack of proper facilities.[3] Each treatment area should have a sink, ideally with elbow mixer taps and no plug. It should be dedicated for handwashing only and therefore free of clutter and not used for cleaning equipment. Bar soap and nailbrushes should be removed and instead, liquid soap in a wall-mounted dispenser should be available. However, for invasive clinical procedures antimicrobial liquid soap and sterile, single-use nailbrushes need to be available.

Good quality paper towels in a dispenser should be available for hand drying and disposed of in a foot operated pedal bin. Terry towels should never be used

IMAGE 100

for hand drying in care facilities, as they become heavily contaminated during use and remain moist. Much interested has been expressed in the use of warm air hand dryers but the evidence does not currently support their use.[4]

There is now good evidence to support the use of disinfectant handrubs when hands are not visibly soiled or contaminated.[5] These are not only more effective than nonmedicated soap, they are quicker to use and therefore compliance is improved.[6]

Supplies of hand decontamination materials should be considered essential and ordered along with other practice items. They should not be purchased from supermarkets, nor should staff be dependent upon drug representatives for free samples.

When must you decontaminate your hands?

As hands are implicated in the transmission of infections, four key factors need to be considered when deciding whether or not to decontaminate them:

- The level of the anticipated contact with patients or objects.
- The extent of the contamination that may occur with that contact.
- The patient care activities being performed.
- The susceptibility of the patient.

The evidence is clear that hands must be decontaminated immediately before each and every episode of direct contact or care and after any activity or contact that could potentially result in hands becoming contaminated.[5] This includes after removing gloves.

Whether one uses soap and water or a disinfectant handrub depends on the extent of contamination. Handwashing with a nonmedicated liquid soap will remove transient microorganisms, leaving hands socially clean. Disinfectant handrub removes transient microorganisms and is therefore a suitable alternative to handwashing. However, handrubs do not remove dirt or organic material and therefore must only be used when hands are not visibly soiled. Use of antimicrobial liquid soap will remove transient microorganisms and reduce resident hand flora and is required for surgical procedures.

How to decontaminate your hands

For hand decontamination to be effective all wrist and ideally hand jewellery should be removed. Cuts and abrasions should be covered with a waterproof dressing and fingernails should be short, clean and free from nail polish or false nails.[5,6]

An effective handwashing technique involves three stages: preparation, washing and rinsing, and drying. Preparation requires wetting hands under tepid water before applying liquid soap. The handwash solution must come into contact with all of the surfaces of the hand. The hands must be rubbed together vigorously for a minimum of 10–15 seconds, paying particular attention to the tips of the fingers, the thumbs and the areas between the fingers. Hands should be rinsed thoroughly before drying with good quality paper towels.[5] It is a useful reminder to display a poster demonstrating the correct technique near the sink.

If using a disinfectant handrub, the solution must come into contact with all surfaces of the hand. The hands must be rubbed together vigorously, paying particular attention to the tips of the fingers, the thumbs and the areas between the fingers, until the solution has evaporated and the hands are dry.[5]

To check your technique you can view a video of both handwashing and applying handrub in the NHS infection control programme for clinical staff.[7] This online programme has a comprehensive module on hand hygiene, including an assessment.

Special considerations in the community

Caring for patients in their own homes poses other hand hygiene challenges. Although one can ask for a clean towel to be available when you visit, it might not always be as clean as you would wish. Soap and water may also be lacking.

A study has demonstrated the risk of cross infection resulting from inadequate hand decontamination in patients' homes.[8] Consequently, all staff should carry with them a supply of paper towels, liquid hand soap and disinfectant handrub. If conditions are very bad one can at least use disinfectant handrub on the premises and wash one's hands with soap and water as soon as possible thereafter.

Maximising good practice

There are many ways to maximise good practice, the most important one is that everyone should regard infection prevention a priority and work as a team. If your area of work is about to be refurbished or facilities appear to be below the recommended standard, contact your local community infection control nurse for advice. The Infection Control Nurses' Association has several publications regarding infection prevention, including advice for general practice surgeries, patients' homes, guidance on hand hygiene and an audit tool to assess practice.

Practices and health centres should have a written up-to-date policy on infection prevention. This can be used to audit practice and form the basis of ongoing in-service education. Feedback on hand hygiene performance has been shown to increase compliance with policy, especially if combined with an educational programme.[9]

All staff should be encouraged to access the NHS Infection Control programme, available on the internet. Course one is available in both a clinical and a nonclinical version. Currently, there are additional infection prevention courses for nonclinical staff and more clinical staff courses are planned.

Resources

Infection Control Nurses Association
W:www.icna.co.uk

Richard Wells Research Centre
W:www.richardwellsresearch.com

NHS Infection Control Programme
W:www.infectioncontrol.nhs.uk

Cleanyour**hands Campaign**
W:www.npsa.nhs.uk/cleanyourhands

Further reading

Lawrence J, May D. *Infection control in the community*. London: Churchill Livingstone; 2003

Conclusion

Effective hand hygiene is pivotal in infection prevention. It requires good facilities and a commitment from everyone. Part of the clean**your**hands campaign is to encourage the public to become involved in monitoring good practice – surely this is the opportunity to ensure everything possible is in place so that we can confidently confirm our hands are clean. ❖

References

1. Department of Health. *Getting ahead of the curve: a strategy for combating infectious diseases*. A report by the Chief Medical Officer. London: Department of Health; 2002.

2. Department of Health. *Winning ways: working together to reduce healthcare associated infection in England*. Report from the Chief Medical Officer. London: Department of Health; 2003.

3. Finn L, McCulloch J. Infection control in GP surgeries: safe practices. *Br J Nurs* 1996;5(6)341-8.

4. Yamamoto Y, Ugai K, Takahashi Y. Efficiency of hand dryers for removing bacteria from washed hands: comparison of paper towel drying with warm air drying. *Infect Control Hosp Epidemiol* 2005;26(3):316-20.

5. Pellowe CM, Pratt RJ, Harper P, Loveday HP, Robinson N, et al. Infection control: prevention of healthcare associated infection in primary and community care. *J Hosp Infect* 2003;55(S2):S1-127. Available from URL: http://www.richardwellsresearch.com

6. Pellowe C, Pratt R, Loveday H, Harper P, Robinson N, et al. The epic project: updating the evidence base for national evidence-based guidelines for preventing healthcare-associated infections in NHS hospitals in England. A report with recommendations. *Br J Infect Control* 2004;5(6):10-6.

7. NHS Infection Control Programme. Available at URL: http://www.infectioncontrol.nhs.uk/lms/nhs_splash/nhs_splash.asp

8. Gould D, Gammon J, Donnelly M et al. Improving hand hygiene in community healthcare settings: the impact of research and clinical collaboration. *J Clin Nurs* 2000;9:95-102.

9. Rosenthal VD, Guzman S, Safdar N. Reduction in nosocomial infection with improved hand hygiene in intensive care units of a tertiary care hospital in Argentina. *Am J Infect Control* 2005;33(7):392-7.