

cleanyourhands: Reducing Healthcare Associated Infections

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Abstract

In the UK, healthcare associated infection is estimated to cause the deaths of 5,000 patients a year, while one in three healthcare associated infections in the UK is preventable.

cleanyourhands is an initiative in England and Wales to improve the hand hygiene of healthcare workers and help reduce the spread of preventable, healthcare-associated infections. The project was started by a government body, the National Patient Safety Agency, in 2002, and has now been adopted by all NHS acute trusts (hospitals) in England and Wales.

The cleanyourhands campaign was the first national approach to hand hygiene improvement and is cited as an example of good practice in the World Health Organization Guidelines on Hand Hygiene in Health Care.

The cornerstone of the campaign is the provision of alcohol handrub, which enables healthcare workers to de-contaminate their hands where and when they need to, even if there is no sink. A range of educational materials and prompts are also provided, to ensure healthcare workers understand the reasons behind the campaign, and are reminded to take action before every patient contact.

Delivery of the first year of the campaign for every acute trust (hospital) in England and Wales cost £490,000 (\$686,000 US). Economic evaluation suggested that, even if infection rates were reduced by as little as 0.1%, the campaign would result in an overall cost saving for the NHS.

Results for all acute (hospital) trusts from 2005 to 2007 show a threefold increase in procurement of soap and alcohol handrub; 94% of hospitals providing alcohol handrub by the bedside in most wards; and 85% of hospitals considering hand hygiene a 'top priority'. Declines in MRSA bacteremia and MSSA bacteremia have also been recorded.

Project Overview

The cleanyourhands campaign is a national initiative in England and Wales to combat preventable, healthcare associated infection by improving the hand hygiene of health-care staff.

The campaign was launched to National Health Service (NHS)ⁱ acute trustsⁱⁱ in September 2004 with a phased roll-out, and has now been adopted by all NHS acute trusts (~187 in England and Wales). National support for the campaign will run until the end of 2009.

In April 2008, the campaign was extended to NHS primary care, mental health, ambulance and care trustsⁱⁱⁱ in England and Wales. Over 97% of these trusts (~210) are now participating in the campaign, which will run until 2011. The campaign uses a marketing mix to educate, prompt and en-

Figure 1. cleanyourhands information poster



ⁱ The NHS has been in existence for over 60 years and is one of the world's largest publicly funded health services. With a few exceptions, it remains free at the point of use for anyone who is resident in the UK – more than 60m people. It covers everything from antenatal screening and routine treatments for coughs and colds to open heart surgery, emergency treatment and end-of-life care. Nationwide, the NHS employs more than 1.5m people, almost half of which are clinically qualified. Available at: <http://www.nhs.uk/aboutnhs/Pages/About.aspx>

ⁱⁱ Hospitals are managed by **acute trusts**, which make sure that hospitals provide high-quality healthcare, and that they spend their money efficiently. They also decide on a strategy for how the hospital will develop, so that services improve. One acute trust can be responsible for a number of different hospitals. Available at: <http://www.nhs.uk/aboutnhs/HowtheNHSworks/authoritiesandtrusts/Pages/authoritiesandtrusts.aspx>

ⁱⁱⁱ **Primary care trusts (PCTs)** work with local authorities and other agencies that provide health and social care locally to make sure that communities' health needs are being met. PCTs are in charge of local doctor's practices, which are usually a patient's first port of call for healthcare services. PCTs are now at the centre of the NHS and control 80% of the NHS budget. There are currently 152 PCTs in England.

Mental health trusts: there are currently 60 covering England, which provide health and social care services for people with mental health problems.

Ambulance trusts: there are currently 11 ambulance services covering England, which provide emergency access to healthcare.

Care trusts: organisations that work in both health and social care. They may carry out a range of services, including social care, mental health services or primary care services. Care trusts are set up when the NHS and local government authorities agree to work together. At the moment there are only a small number of care trusts, though more will be set up in the future. See: <http://www.nhs.uk/aboutnhs/HowtheNHSworks/authoritiesandtrusts/Pages/authoritiesandtrusts.aspx>

able healthcare staff to clean their hands at the right time, every time, for every patient contact.

The cornerstone of the campaign approach

is alcohol handrub, enabling healthcare workers to effectively and efficiently clean their hands at the right time, every time, even if there is no sink.

Budget

Delivery of the first year of the campaign, including the development and production of a range of materials for every acute trust (hospital) in England and Wales (approximately 187), cost £490,000 (\$686,000 US).

An economic evaluation prior to national implementation suggested that, even if infection rates were reduced by as little as 0.1%, the campaign would result in an overall cost saving for the NHS.

Results Overview for Acute Trusts (November 2005 – December 2007)

- Threefold increase in procurement of soap and alcohol handrub
- Alcohol handrub at point of care (by the bedside) in most wards in 94% of hospitals
- Hand hygiene still considered a top priority by 85% of hospitals
- Increase in number of hospitals auditing hand hygiene compliance and feeding results back internally
- Declines in MRSA bacteremia and MSSA bacteremia

Background and Context

Healthcare associated infection (HCAI) is estimated to cause the deaths of 5000 patients a year, with up to eight per cent of patients in England and six per cent in Wales having an infection at any one time.^{1,2} On average, it adds three to ten days onto a patient's length of stay in hospital and can cost between £4,000 and £10,000 more to treat a patient with an infection.³ The overall cost of the NHS is estimated to be in ex-

cess of £1 billion a year.⁴ Furthermore, one in three healthcare associated infections in the UK is thought to be preventable.

cleanyourhands is a national initiative in England and Wales to improve the hand hygiene of NHS healthcare staff and help reduce the spread of preventable, healthcare associated infections.⁵ The project was initiated by a government body, the National Pa-

tient Safety Agency (NPSA) in 2002 in its capacity to develop preventative measures that make the NHS safer for patients.^{iv}

The NPSA is responsible for driving **cleanyourhands** nationally, but the aim is to empower local NHS trusts to ‘own’ the issue and to act. The initiative has been well received since its launch in 2004 and has now been adopted by all NHS acute trusts (hospitals) in England and Wales.

From April 2008, the initiative was extended to NHS primary care, mental health, ambulance and care trusts. Over 97% of these trusts are now participating in the campaign.

In September 2004 the NPSA issued a ‘Patient Safety Alert’ on hand hygiene, which instructed acute NHS trusts in England and Wales to install alcohol handrub at the point of care and invited them to join the **cleanyourhands** campaign. A revised Alert was reissued in September 2008 to re-emphasise point of care as the critical moment for hand hygiene. The revised Alert applied to all providers of NHS care in England and Wales, clarified the circumstances when soap and water should be used, and provided advice on managing the risks associated with alcohol handrub.

In 2008, **cleanyourhands** won the award for Strategic Communication Campaign of the year in the Good Communication Awards and the bronze award of the Design Business Association (DBA) Design Effectiveness Awards. It has previously won a CIPR Excellence Awards and the overall Grand Prix prize from the DBA.

The **cleanyourhands** campaign was the first national approach in the world to hand hygiene improvement and is cited as an example of good practice in the World Health Organization (WHO) Guidelines on Hand Hygiene in Health Care (2009). A number of other countries have subsequently adopted the same approach and the **cleanyourhands** materials have been shared with different hospitals and healthcare systems globally, including the USA, Canada, Ireland and Mexico.

The program is relevant to key policy areas, including:

- WHO Guidelines on Hand Hygiene and Health Care (2008)
- Department of Health national target of a 60% reduction in MRSA blood stream infections in England by 2007/8

^{iv} The National Patient Safety Agency leads and contributes to improved, safe patient care by informing, supporting and influencing the health sector. Available at: <http://www.npsa.nhs.uk/>

The Social Marketing Benchmark Criteria

Benchmark 1: Customer Orientation

Maintains a strong focus on the customer at all times, seeking to understand as much as possible about the presenting issue and the target audience, by using a mix of quantitative and qualitative research.

In 2002 the NPSA began a program of work to assess the barriers to hand hygiene compliance, and learn from good practice in this area. Research included studies of work in Geneva (Switzerland), Pennsylvania (US) and Oxford and Lewisham (UK).⁶⁻⁹ However, challenges were identified to designing a solution that would work on a national scale across England and Wales.

To develop the campaign approach and toolkit, the NPSA worked with a range of individuals and agencies including the Department of Health, NHS Estates,^v NHS Purchasing and Supply Agency,^{vi} The Welsh Assembly Government, Welsh Health Supplies, Hospital Infection Society, Infection Prevention Society and other stakeholders. Their insights and experience were invaluable.

Prior to national roll-out, the campaign was piloted in several hospitals over six months

(July 2003-January 2004). In this way, the actual audience for the campaign contributed to its design and development.

When developing the third year of the campaign in hospitals, NPSA carried out further research to guide design. This included interviews with NHS staff, visual audits of hospitals and a survey of more than 300 healthcare workers in England and Wales.

A similar process has guided year four of the initiative, with an online survey of 165 campaign coordinators being used to assess campaign effectiveness and inform future delivery. The emphasis for year four is on facilitating trusts to act with resources and materials provided and equip them with the knowledge and skills to do so.

^v NHS Estates and facilities management oversees NHS properties to ensure strategic development of a flexible and responsive environment for health and social care. Available at: <http://www.dh.gov.uk/en/Managingyourorganisation/Estatesandfacilitiesmanagement/index.htm>

^{vi} The NHS Purchasing and Supply Agency works to ensure that the NHS in England makes the most effective use of its resources by getting the best possible value for money when purchasing goods and services. Available at: <http://www.pasa.nhs.uk/PASAweb>

Benchmark 2: Insight

Uses the research phase to identify ‘actionable insights’: key pieces of understanding that will be used to underpin program development.

Research identified a range of factors which prevent healthcare workers from carrying out optimum hand hygiene. In general, staff believed that handwashing was time-consuming and inconvenient and, in a busy hospital environment where time is at a premium, infrequent hand washing had become a shortcut that most staff would take throughout their working day.

In addition, infrastructural barriers were identified, with too few sinks being available for healthcare workers to wash their hands conveniently before every patient contact. Skin problems such as eczema, chapped hands and redness were also associated with frequent handwashing, causing reluctance among staff. The negative influence of other colleagues created an environment where strict adherence to handwashing protocol was NOT the social norm. The combination of these factors meant that infrequent handwashing had become an ‘accepted violation’ within the healthcare community in England and Wales.

In addition to these practical and perceived barriers, one key obstacle was identified as the general low prioritization of hand hygiene by staff, and the widespread acceptance that **if hands don’t look visibly dirty, they’re probably ‘clean enough’**.

In response to this, cleanyourhands works to emphasize that hand hygiene in healthcare is not the same as hand hygiene in everyday life: staff have to clean their hands when there is often **no obvious or apparent reason to do so**. The motivation for hand hygiene in this context thus has to be to protect somebody else (the patient) rather than yourself (as is normally the case).

Based on key insights, cleanyourhands aims to make hand hygiene a routine element of care provision, shifting the prompt from ‘*Are your hands clean?*’ to ‘*Are your hands safe?*’. It also aims to maximize the convenience of hand cleaning facilities and reduce barriers to use as far as possible (see ‘Exchange’).

Benchmark 3: Behavioral Goals

Focuses on changing people's actual behavior: identifies baselines and sets clear behavioral goals, which, where possible, are specific, measurable and time-bound.

The overarching aim of **cleanyourhands** is to reduce preventable healthcare associated infection by improving the hand hygiene of healthcare staff, supporting NHS trusts to take an organization-wide approach to improvement. The campaign is part of a range of infection prevention measures introduced that contributed to the NHS in England achieving its target of a 60% reduction in MRSA bloodstream infections by 2007/8, compared to a 2003/4 baseline.

Awareness-raising is important (the campaign aims to educate about the risks of poor hand hygiene), but behavioral change is the fundamental objective.

The intended behavioral outcome of the program is to change the hand hygiene behavior of healthcare staff, so that hand hygiene takes place at the point of patient care (where and when care is provided); and

according to the World Health Organization (WHO) Five Moments for Hand Hygiene:

- I. Before patient contact
- II. Before a clean/ aseptic task
- III. After body fluid exposure risk
- IV. After patient contact
- V. After contact with patient surroundings^{vii}

For the initial phases of **cleanyourhands**, the behavioral goal was for healthcare staff to clean their hands *at the right time, every time*. This meant that work was initially focused on educating and prompting staff about *when* rather than *how* to clean their hands (i.e. hand cleaning technique). However, as the campaign has evolved its scope has become more complex, so that it now incorporates messages about *how* to clean hands and which products to use for different situations (soap or alcohol handrub).

^{vii} Five Moments for Hand Hygiene has emerged from WHO Guidelines on Hand Hygiene in Health Care to add value to any hand hygiene improvement strategy. Quite simply, it defines the key moments for hand hygiene, overcoming misleading language and complicated descriptions. It presents a unified vision and promotes a strong sense of ownership. Not only does the Five Moments align with the evidence base concerning the spread of HAI but it is interwoven with the natural workflow of care and is designed to be easy to learn, logical and applicable in a wide range of settings. Available at: http://www.who.int/gpsc/tools/Five_moments/en/index.html.

Benchmark 4: Segmentation

Avoids a 'one size fits all' approach: identifies audience 'segments', which have common characteristics (e.g. socioeconomic; geographic; demographic; attitudinal; behavioral), then tailors interventions appropriately.

Primary audience

The **cleanyourhands** campaign targets the hand hygiene of healthcare staff. This audience was chosen specifically because hands are a repository for microorganisms that cause infection, and healthcare staff have the greatest chance of transferring microorganisms within the care setting, since they move between multiple patients and different care activities for each patient.

cleanyourhands targets all healthcare staff who have hands-on contact with patients, including:

- Nurses
- Doctors
- Healthcare assistants
- Allied health professionals
- Ambulance staff

The campaign started in the acute sector, which meant that it initially only targeted staff working in these environments. However, it has subsequently been extended to include primary care, mental health, ambulance and care trusts so that it now targets staff working in these organizations as well.

Secondary audience

Patients and hospital visitors are a key secondary audience for **cleanyourhands**: involving patients in improving the hand hygiene of staff has been part of the campaign from the outset. Patients and visitors are encouraged to remind staff if they think

they have forgotten to clean their hands, using the phrase: *'It's OK to Ask'*. One of the posters provided to hospitals is directly aimed at patients and features this message. A leaflet is also provided for hospitals to help them explain the importance of hand hygiene to patients and the role of the campaign in encouraging patient prompts.

The campaign does not aim to improve the hand hygiene of patients and visitors. However, it is increasingly interested in the idea that patients could have a more influential role in changing the behavior of staff. Promoting this idea, the Chief Medical Officer for England, Sir Liam Donaldson, called for **cleanyourhands** to be strengthened to further involve patients and proposed an initiative in which patients would be given their own alcohol handrub, which they can then ask staff to use¹⁰:

"the cleanyourhands campaign should be further strengthened to support patient involvement, with alcohol handrub given to patients so that they can ensure that healthcare professionals clean their hands before touching them. This scheme is currently in the early pilot stages - if successful, it will offer an additional mechanism to combat infection and support safer care in the future." (Sir Liam Donaldson, launching year three of **cleanyourhands**, October 2007)

A pilot project is underway to explore this concept further and explore different ways

of engaging and empowering patients in the inpatient setting. Research undertaken as part of this has identified that patients are unsure about when staff *should* clean their

hands and would be more likely to ask them about whether they had cleaned their hands if they were given the authorization to do so.

Benchmark 5: Exchange

Considers both the benefits and the costs of adopting a new behavior, aiming to maximize the benefits and minimize the costs to create an attractive exchange.

The exchange process for cleanyourhands works on two fronts to overcome possible barriers to good hand hygiene:

1. NHS trusts: some barriers to overcome

NHS trusts have complained that the campaign looks expensive, and they ‘don’t see the point’ of it

Despite the common assumption that cleanyourhands has been an expensive exercise, the whole campaign (including Year 1 design, development, and delivery), cost less than one penny per patient per day.

The cost of the acute trusts (hospitals) campaign was less than 0.1% of the cost of healthcare associated infections in England for the same period: in the acute sector alone, the campaign has the potential to save at least £140 million (\$196 million US) and save 450 lives a year. In terms of return on investment, hand hygiene improvement of this nature has been described as one of the most cost-effective improvement strategies possible.

Although cleanyourhands materials are provided free-of-charge, the alcohol handrub has to be purchased locally, which adds an extra financial burden to trusts

NPSA worked with NHS Purchasing and Supply Chain and Welsh Health Supplies to put national contracts for alcohol handrub in place for England and Wales. This ensured that the NHS had access to high quality products at competitive prices. A ‘cost calculator’ was also provided to enable trusts to calculate the cost of implementation versus the cost-savings generated by reducing infection rates.

There will be an extra burden on hospital infection control teams^{viii} to ensure that ward areas are taking responsibility and displaying the campaign materials appropriately

The implementation guidance supports and encourages an organization-wide approach to implementation, while campaign materials are distributed directly to ward level alongside clinical supplies. For example, individuals in each of a hospital’s different

^{viii} Infection Control Teams are a dedicated department, with responsibility for advising and educating staff at all levels on how to prevent and reduce cross-infection within hospitals.

areas are required to take responsibility for changing the campaign posters and replenishing the alcohol handrub.

However dramatic the posters are, staff will get used to seeing them in their workplace and won't be prompted by them anymore

For the first two years of cleanyourhands, posters were designed to be changed monthly, thereby avoiding the 'wallpaper effect'.

2. Healthcare staff

“Couldn't we just wear gloves?”

Gloves should be worn for appropriate tasks and then removed and hands cleaned. The use of gloves does not replace the need for hand cleaning by either handrub or handwashing. Gloves should be removed after caring for a patient. cleanyourhands also emphasizes that the same pair of gloves should not be worn for the care of more than one patient. Glove usage can be related to self-protection rather protecting the patient.

“Doesn't alcohol dry the hands when applied?”

Modern alcohol handrub should not dry the hands. Today's generation of alcohol handrubs all contain skin-softeners, which will help prevent drying. Prior to being accepted on the national contract in England, the alcohol handrub products went through rigorous testing and in-use product acceptability assessment.

Sensitivity to skin irritation

Of the published studies available, many describe that nurses who routinely use alcohol handrubs have less skin irritation and dryness than those using purely soap and water. Allergic contact dermatitis due to alcohol handrubs is very rare.

“I am not doing anything different from others”

As an additional way of breaking down reluctance, cleanyourhands uses the concept of 'champions' to create role models for best practice and professional aspiration. Promoting the benefits of hand cleaning to staff has been a challenge because of the lack of obvious causal relationship between a single missed hand hygiene opportunity and a patient getting an infection.

However, the benefits of avoiding the feeling that your professional misconduct may have led to another person's illness are summed up by Dr. Atul Gawande, and have been used to underpin the drive for better hand hygiene compliance in the UK:

“I had one patient for whom I was convinced I had done great work by removing an adrenal tumor, but he still hadn't left the intensive therapy unit six months later. Somehow, he caught an infection and just wasn't strong enough to recover. Our best guess is that someone on the operating team didn't wash their hands properly. And, you know what? It could have been me.”

Benchmark 6: Competition

Aims to understand what competes for people's time, attention, and inclination to change, and to work with or learn from the competition.

Research in preparation for the third year of the campaign in hospitals revealed that the materials needed to stand out more in the hospital environment, where they are competing with a wealth of other information. This was factored into year three of the campaign, which featured stronger images and a black-and-white color scheme, to ensure that the campaign stood out against a background of competing information.

Other initiatives, which also aim to improve infection control, could potentially be considered competition and make the impact of **cleanyourhands** on infection rates difficult

to prove exclusively. Therefore, it is important that the campaign works in conjunction with, rather than against, these initiatives. The Department of Health's *Saving Lives* program in England is one such example of this 'good' competition, which works towards the same ends as **cleanyourhands** and so competes for the audience's attention.

Saving Lives was launched in June 2005 and also aims to reduce healthcare associated infections, such as MRSA and *Clostridium difficile* by providing tools and resources to enable trusts to deliver clean and safe care.¹¹

Benchmark 7: Methods Mix

Uses a mix of methods to prompt and facilitate behavior change, including education, support, control and design techniques. Does not rely solely on raising awareness.

cleanyourhands uses a multimodal approach to educate, prompt and enable healthcare staff to clean their hands at the right time, every time. Materials are provided free-of-charge to NHS trusts, although alcohol handrubs are purchased locally.

Alcohol handrub at the point of care

By ensuring that alcohol handrub is provided at the point of care (e.g. at the bedside or in treatment areas), **cleanyourhands**

enables healthcare staff to quickly and effectively clean their hands when there is greatest risk of infection. This overcomes the traditional difficulties around access to hand cleaning facilities, as handrub dispensers can be positioned wherever care is provided, as well as being carried by staff.

In conjunction with soap and water hand-washing, the widespread introduction of alcohol handrub offers the system-change needed to make optimal hand hygiene possible. It also means that patients can see healthcare staff cleaning their hands, giving them confidence in the care they receive.

To ensure that the NHS has access to commercially-tested, high quality products at reasonable prices, and that uptake is supported by an effective delivery mechanism, cleanyourhands worked to ensure that national contracts were put in place across England and Wales.

Posters and other materials

These are used to act as a prompt for behavior change, while raising awareness of the need for appropriate hand hygiene. For the early stages of the intervention, posters are changed every month to avoid them becoming part of the hospital ‘wallpaper’. Other materials provided include signs to highlight hand cleaning facilities; posters promoting local champions who support the campaign; point of care prompts – reusable stickers that can be placed at the point of care; and guidance videos for use in staff training events.

Patient involvement

Patients are encouraged to remind staff if they think they have forgotten to clean their hands. The message *‘It’s OK to ask’* is now

being used on some of the campaign materials, in response to patients’ and visitors’ belief that they have a role in supporting the improvement of staff hand hygiene.

Resources to support local implementation and staff engagement

A three-month preparation period is undertaken prior to going ‘live’ with the program, guided by the campaign handbook: *‘Ready, Steady, Go!’*. Each of the hospitals also has a lead campaign coordinator, who is the main point of contact for the NPSA regarding the campaign. Some trusts have appointed a dedicated ‘Hand Hygiene Coordinator’ whose sole purpose is to focus on hand hygiene improvement within their trust.

In addition, updated guidance is provided for each year of the campaign, with current information about healthcare associated infection and prevention. Templates are also provided to trusts, to enable them to adapt generic letters, briefing documents and press releases for use locally.

Benchmark 8: Theory

Uses behavioral theories to understand human behavior, and to develop programs around this understanding.

cleanyourhands works on the principles of Habit-Forming Theory. As Derek Butler, Chairman of the charity MRSA Action UK, said: *“Hand Hygiene should be a process of excellence that is the cornerstone of good infection prevention and control. Aristotle once said ‘We are what we repeatedly do. Excellence, then, is not an act but a habit.’ Hand hygiene has to become habit forming.”*

The ‘21 Day Habit Theory’, propounded by Dr. Maxwell Maltz, suggests that it takes 21 days to create a new habit. Brain circuits take engrams (memory traces) and produce neuro-connections and neuropathways, if they are bombarded for 21 days in a row. This means that our brain does not accept ‘new’ data for a change of habit unless it is repeated each day for 21 days in a row.¹²

cleanyourhands does not strictly adhere to the 21 day rule, but works on the principle that, if staff are prompted repeatedly and in a sustained manner to clean their hands according to the WHO Five Moments, the action will eventually become routine and habitual.

Social Norms Theory is also relevant. This states that people's behavior is strongly influenced by their perception of how other members of their social group behave

and their level of desire for conformity with the group.

Thus, if individuals perceive unhealthy behavior to be the norm in their social group (e.g. not washing hands adequately), they are more likely to engage in that type of behavior. Therefore, if a group can be educated about healthy behaviors that are the norm among their peers, behavior can be affected in a positive manner.¹³

Evaluation and Results

All 187 NHS acute trusts in England and Wales are now enrolled in **cleanyourhands** and, since broadening to include primary care, mental health, ambulance and care trusts in April 2008, over 97% of these trusts are now participating.

The effectiveness of the national campaign is being independently assessed via the NOSEC (National Observational Study of the Effectiveness of the **cleanyourhands** campaign) Study. This evaluation is being funded by the Department of Health in England and commissioned via the Patient Safety Research Portfolio.

The study surveys infection control teams in hospitals about campaign implementation and infection rates every six months (from December 2005 – June 2008). NHS Supply Chain also provides data on product usage (soap and alcohol handrub) and Hospital Episode Statistics¹⁴ provide the number of patient bed days per month for each trust.

The latest available results have concluded that the campaign has led to a sustained change in the hand hygiene behavior of healthcare workers in hospitals:

- Significant increase in NHS procurement of both soap and alcohol handrub (alcohol hand rub up from 3mls per bed-day in July 2004 to 28mls per bed-day in Jan 2008; soap up from 17mls per bed-day in July 2004 to 37mls per bed-day in Jan 2008 giving a combined threefold increase.)
- Approximately 90% of trusts have alcohol handrub available at the point of

care.

- The campaign remains a priority in approximately 80% of trusts.
- The number of trusts auditing hand hygiene compliance and feeding those results back internally has risen substantially to 65% while the proportion doing very little has fallen sharply to 10%.
- Although the posters are in nearly all wards of 75% of trusts, there is a steady fall in this figure with 47% reporting posters in all wards compared with 66% a year previously.
- Patient-focused materials remain the least successful component of the campaign with the belief that it has changed patient behavior in 36% of trusts.

Impact on infection rates is harder to establish due to the different variables involved (such as the *Saving Lives* program in England – see ‘Competition’) and the research team involved continue to examine this area. However, based on the data provided by infection control teams, early indications show declines in both MRSA bacteremia (supported by the mandatory surveillance data) and MSSA bacteremia.

An assessment undertaken on behalf by the Department of Health, found the campaign to be cost effective, even if the reductions in healthcare associated infection rates were as low as 0.1%.

The campaign is also being informally evaluated via surveys as it is implemented and a survey of the local campaign coordinators in May 2008 (165 responses) found that:

- 72% thought the campaign was very effective or effective at improving hand hygiene compliance among healthcare workers
- 89% thought the campaign was very effective or effective at raising staff awareness of hand hygiene
- 78% agreed or strongly agreed that the campaign prompted staff to clean their hands at the point of care

Lessons Learned

cleanyourhands was originally conceived as a four-year program, but has evolved along the way, based on research and the changing needs of the audience. Going forward, the key focus will be on hand hygiene at the point of care. To help healthcare staff to understand the important opportunities when they need to clean their hands at the point of care, it will be utilizing the 'Five Moments' concept developed by the WHO.

There will also be added emphasis on using the appropriate hand hygiene method in the appropriate circumstances; in particular when soap and water must be used (e.g. if hands are visibly dirty, or in instances of diarrhea and vomiting). The campaign is strongly associated with alcohol handrub and in the future will attempt to balance

this message so it is clean your hands at the point of care, whether that be through the use of soap and water or alcohol handrub.

Patients have a role – during the campaign pilot, 50% admitted they would NOT ask a healthcare worker about cleaning their hands; this increased to 75% when confronted with a real life situation. However, 71% of patients and visitors stated that they wanted to be involved in improving hand hygiene practice. Further work is being undertaken to explore the further potential contribution of patients in changing the behavior of staff.

Leadership, top-level buy-in and role models are critical to success.

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