realistic expectations that entrenched, longstanding behavior patterns will be changed in a sustained fashion solely by the introduction of a new hand hygiene product.

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What is the Optimum Location of Alcohol-Based Hand Cleanser?

TO THE EDITOR—Approximately 10% of hospital patients acquire a healthcare-associated infection, and it has been estimated that approximately one-third of these infections could be prevented. Improving compliance with hand hygiene is recognized as a key intervention which is likely to be cost saving.[1] Alcohol-based preparations remove organisms effectively and more efficiently than antiseptic soap.[2] Their use is also less time consuming, irritates hands less, and can improve compliance among healthcare workers.[3] These preparations have been proposed as an alternative to conventional hand washing in many situations and have been widely adopted.[4] We undertook a study to evaluate the optimum location of alcohol-based handwashing products to promote their use and improve hand hygiene.

The study was carried out in the general surgical unit at the Royal Infirmary of Edinburgh. The unit comprises 6 wards where approximately 100 members of medical, nursing, and ancillary staff work. On these wards there are a total of 72 beds, 56 in quadruple-bed rooms and 16 single-bed side rooms. Each room contains a sink equipped with alcohol and soap dispensers and a bathroom with a sink and soap dispenser. There was also an alcohol-based hand cleanser (ABHC) dispenser at the foot of every bed. Staff at the Royal Infirmary of Edinburgh do not routinely carry personal ABHC gel dispensers, but they have had access to ABHC on the walls by the sinks since the opening of the hospital (approximately 1 year prior to the study). The ABHC dispensers at the end of the bed had been in place for 2 weeks prior to commencement of this study.

Soap and ABHC dispensers were weighed after hours, when a minimum number of staff would be present. No information was given as to why the measurements were being taken and the study was not publicized, to minimize the effect that knowledge of the study might have on compliance. All dispensers were nearly full at the beginning of this study and none were emptied completely over the course of the study. Each week it was verified that the same dispenser was in situ and had not been replaced. Dispensers were weighed at baseline and once weekly for 2 consecutive weeks. ABHC dispensers at the foot of beds had the level marked with pen at baseline and weekly for 2 consecutive weeks. The data was compiled in an Excel spreadsheet (Microsoft) and analyzed with SPSS software (SPSS) using the Friedman test.

There was a significant difference in the quantity of ABHC used per patient per week, depending on whether the ABHC was dispensed at the foot of the bed or at the wall by the sink (mean weight dispensed, 23.75 vs 15.44 g; $P = .005$) (Figure). There was no significant difference between the amount of ABHC used in the consecutive weeks of the study ($P = .42$), so the results were combined for further analysis. There was no significant difference in the amount of ABHC or soap used per patient in single-bed rooms and quadruple-bed rooms.

Our study demonstrates that hands are cleansed both with

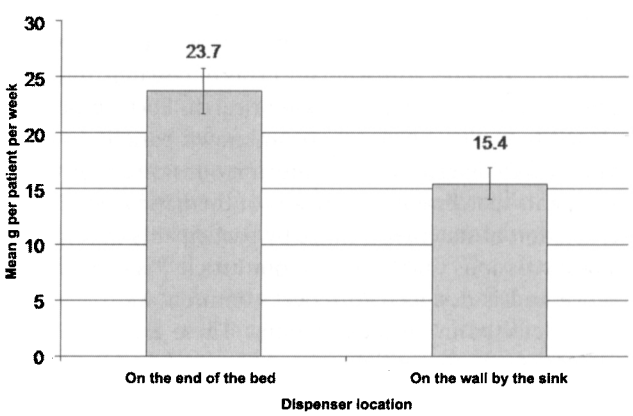

FIGURE. Mean weight of alcohol-based hand cleanser used per patient per week for the 2 types of dispensers evaluated. *Whiskers*, standard error of the mean

soap and ABHC on the wards. Most ABHC is used from dispensers placed at the foot of the bed, in easy reach of the patient. This is in contrast to other studies involving improved access to sinks that failed to show an associated improvement in handwashing compliance.[5,6] This disparity is perhaps explained by the difference in distance from the patient; our study showed that more ABHC is used if it is in proximity to the patient than if it is by the sink. The problem is perhaps that sinks are too far from patients. This finding is given credence by the fact that pocket-sized bottles of ABHC carried on the healthcare worker's person have also been shown to improve compliance with hand hygiene,[7] as has increasing the availability of dispensers from 1 unit per 4 beds, to 1 unit per bed.[8] Interestingly, there was no difference in the amount of soap used between single-bed and quadruple-bed rooms, a finding in contrast with the results of another study, which showed that significantly more hand washes were performed when the ratio of sinks to beds was 1 : 1.[9] This disparity may be explained by differences in the use of ABHC and soap. For instance, washing heavily soiled hands may call for soap, whereas more routine hand cleansing may be done with ABHC.

Use of ABHC seems more popular if it is placed at the foot of the bed than if it is placed elsewhere. It may be that this difference represents usage for a number of tasks at the bedside other than hand washing—this study did not observe handwashing behavior. However, it is equally possible that this represents a simple intervention that can promote hand cleansing by making this easy and convenient for healthcare workers, patients, and visitors to the wards.

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No Room at the Inn: Fever and Respiratory Illness Precautions and the Placement of Patients Within an Ontario Acute Care Institution

TO THE EDITOR—Following the severe acute respiratory syndrome (SARS) outbreak, the province of Ontario, Canada, instituted standards for the control of and surveillance for febrile respiratory illness (FRI) in acute care institutions.[1,2] FRI is defined as a new or worsening episode of either cough or shortness of breath, in conjunction with fever (temperature, 38°C or higher) or chills in the past 24 hours. North York General Hospital is a 420-bed community teaching hospital in Toronto in which all pediatric beds are in single-bed rooms but only 25% of beds in the medicine service and 20% of beds in the surgery service are in private rooms. In accordance with published recommendations, patients with FRI are preferentially admitted to single-bed rooms and placed under droplet and contact precautions, with occasional cohorting.

We investigated the difference in the median interval between hospital admission and placement in an inpatient acute care bed (defined as the time-to-bed [TTB]) for patients who presented to the hospital's emergency department with or without FRI. Data on these patients, including the TTB, the length of hospital stay, and the service they were admitted to, were obtained from medical records by means of Med 2020 (Health Care Software). Between September 1, 2003, and June 30, 2005, the infection prevention and control department at the hospital collected data on all admitted patients who met the FRI definition.[1,2]

The peak time for most respiratory illnesses is between November 1 and March 31.[3] The peak season of respiratory illness during 2003-2004 was defined as the period from November 1, 2003, to March 31, 2004, and the peak season during 2004-2005 was defined as the period from November 1, 2004, to March 31, 2005. The period from November 1,