Use of a patient empowerment tool for hand hygiene

Allison Lastinger MD a*, Kayeromi Gomez PhD b, Ellen Manegold BA c, Rashida Khakoo MD a

Section of Infectious Diseases, School of Medicine, West Virginia University, Morgantown, WV
Department of Biostatistics, School of Public Health, West Virginia University, Morgantown, WV
Department of Psychology, Eberly College of Arts and Sciences, West Virginia University, Morgantown, WV

Key Words:
Hand hygiene
Patient empowerment
Handwashing

Background:
Patient empowerment is recognized as an important component of a multimodal strategy to improve hand hygiene adherence. We examined the attitudes of adult patients and parents of pediatric patients toward a new patient empowerment tool (PET) at our hospital. We also surveyed physicians to determine their perceptions about the PET.

Methods:
A cross-sectional survey was performed of hospitalized children's parents and adult patients in a 531-bed tertiary care teaching hospital in West Virginia. Surveys were anonymous and self-administered. A separate survey was administered via e-mail to resident and attending physicians from the departments of internal medicine, pediatrics, and family medicine.

Results:
Most parents and adult patients felt it was their role to speak up if a provider did not perform hand hygiene, but a smaller number actually felt comfortable using the PET. Only 54.9% of physicians felt that patients should be involved in reminding providers to perform hand hygiene. Overall, physicians indicated that they would prefer a patient to use words rather than the PET to remind them to perform hand hygiene.

Conclusions:
In our study, parents and adult patients supported use of the PET, but physicians were less supportive. As the patient empowerment movement grows, we should work to improve physician acceptance of patient involvement if it is to be successful.

Health care–associated infections (HAIs) contribute to significant morbidity and mortality. It is estimated that 5%-10% of patients admitted to acute care hospitals in the United States will acquire an HAI.1 In 2011, the estimated number of HAIs in U.S. acute care hospitals was 721,800.2 A significant number of HAIs are preventable, and the single most effective measure to reduce HAIs is hand hygiene.3

Strategies to improve health care worker hand hygiene adherence include reminders, education, and direct observation with feedback. More recently, patient involvement is recognized as an important component of a multimodal strategy to improve health care workers' hand hygiene adherence. Major organizations, such as the Centers for Disease Control and Prevention, the World Health Organization, and the Joint Commission, recommend using patient participation as part of the plan to improve health care worker hand hygiene. The World Health Organization's SAVE LIVES: Clean Your Hands campaign identifies patient involvement as a crucial component when implementing a hand hygiene improvement strategy. In March 2002, the Joint Commission’s Speak Up campaign was established. The initiative focuses on methods to improve patient education and involvement, which in turn helps prevent medical errors. One of the campaigns is Speak Up: Prevent the Spread of Infection, in which patients are encouraged to remind health care providers to perform hand hygiene.

A number of studies have examined the role of patient involvement in health care worker hand hygiene. Some have used posters, patient videos, buttons, and brochures to promote patient empowerment.4-7 Most patients are interested in participating in their care, but many patients are hesitant to do so because of discomfort or embarrassment.8 Few studies have examined the role of family members in reminding health care providers to perform hand hygiene. Buser et al. showed that most parents (75%) are willing...
to help improve hand hygiene of providers, but only 67% would definitely act to remind a health care worker to wash his or her hands.\textsuperscript{9} When providers invite patients and families to be involved in their care, they are much more willing to remind health care workers.\textsuperscript{10} Patients and family members should feel that their input is welcome. Because nurses spend more face-to-face time with the patient, one might expect that patients would feel more comfortable reminding a nurse than a physician. Some studies have supported this theory,\textsuperscript{11} whereas other studies have shown that patients are just as comfortable reminding a physician as a nurse.\textsuperscript{10,12}

If patient involvement is to be successful, health care workers must accept it as helpful and not as a threat. Health care workers have expressed concern that patient empowerment will have a negative impact on the patient-physician relationship.\textsuperscript{13,14}

In our hospital, hand hygiene rates were 48\% in 2015, and they have improved to approximately 75\% in 2016. Strategies used in our hospital to improve hand hygiene adherence include posters, direct observations by health care professionals, and patient surveys. In December 2015, we added a new tool called a patient empowerment tool (PET) as part of our multimodal strategy (Fig 1). The PET consists of a picture with a reminder phrase (eg, “Did you wash your hands?”; “Please wash your hands. Thank you!”). The laminated picture is attached to a tongue depressor to allow patients to hold the PET up for providers to see.

Because of the novelty of this tool, it was important to assess its acceptability as an intervention. Patients and their families were given 1 of the 5 PETs on admission to the hospital and asked to use the PET to remind health care workers to perform hand hygiene. In this study, we surveyed parents of children admitted to the pediatric floor and adult patients admitted to the medicine floor to assess their comfort level in using the PET to remind both physicians and nurses to sanitize their hands. Because parents are often protective of their children, we hypothesized that parents would be more likely than adult patients to feel comfortable and willing to use the PET to remind providers to perform hand hygiene. Hussein et al reported that hand hygiene rates are significantly higher in pediatric compared with adult wards. We wondered if parents’ involvement in reminding physicians to perform hand hygiene might be partially responsible for this difference.\textsuperscript{15} We also hypothesized that parents and patients would feel more comfortable reminding a nurse than a physician to perform hand hygiene because families and patients have more face-to-face contact with nurses. To our knowledge, this is the first study to compare attitudes about a hand hygiene patient empowerment intervention between parents of hospitalized children and adult patients.

As part of the study, we also performed a survey of primary care attending and resident physicians to assess their attitudes toward the PET and whether physicians would prefer a patient use a PET over words to remind them to perform hand hygiene. We hypothesized that residents physicians would be more supportive of patient involvement than attending physicians because current medical education emphasizes the importance of patient involvement in making medical decisions. We also hypothesized that physicians would prefer patients use a PET over words to remind physicians to perform hand hygiene because the PET is less threatening.

**MATERIALS AND METHODS**

**Study design**

This was a cross-sectional survey study of parents of hospitalized children, adult patients, and primary care physicians performed at a single hospital using an anonymous, self-administered questionnaire. The parent and patient surveys were distributed from December 2015–June 2016, whereas the physician survey was distributed in November 2015. The hospital is a 531-bed tertiary care teaching hospital in West Virginia. The institution uses a multimodal strategy to improve hand hygiene. The study protocol was approved by the institutional review board.

**Study participants**

We targeted hospitalized patients on 3 floors of the hospital: 1 general pediatric floor and 2 general medicine floors. On the pediatric floor, patients’ parents were asked to participate in the survey, whereas on the medicine floors, adult patients were recruited. All survey participants were age ≥18 years. Patients who were too ill to participate were excluded, and patients who could not read or write were permitted to ask family members to help complete the survey on the patient’s behalf. Two researchers visited the floors and asked parents and patients to participate. The survey was left in the patient’s room to be completed at his or her leisure. Once the survey was completed, parents and patients were asked to place the survey in an envelope and deposit the envelope into a locked survey box available at the station clerk’s desk on each floor.

The physician survey was designed with REDCap (Vanderbilt University, Nashville, TN), and a link was distributed via e-mail to both residents and attending physicians in the internal medicine, family medicine, and pediatrics departments. Respondents completed the online survey anonymously.

**Parent and patient survey**

All surveys were developed by the authors because no similar surveys are published in the literature. The parent and adult patient surveys differed slightly because the parent survey requested demographic data about both the parent and his or her child, whereas the adult patient survey requested only demographic data about the patient. The parent survey consisted of 21 items: 7 demographic questions, 1 general hand hygiene question, and 13 questions about the PET. The adult patient survey consisted of 18 items: 4 demographic questions, 1 general hand hygiene question, and 13 questions about the PET. The questions were designed to assess the following (1) whether participants felt the PET was useful, (2) whether participants felt they should speak up when their health care provider did not perform hand hygiene. (3) whether patients would feel comfortable using the PET, (4) what were the reasons they would or would not feel comfortable using the PET, and (5) whether they
<table>
<thead>
<tr>
<th>کلاس</th>
<th>توضیحات</th>
</tr>
</thead>
<tbody>
<tr>
<td>✔️</td>
<td>امکان دانلود نسخه تمام متن مقالات انگلیسی</td>
</tr>
<tr>
<td>✔️</td>
<td>امکان دانلود نسخه ترجمه شده مقالات</td>
</tr>
<tr>
<td>✔️</td>
<td>پذیرش سفارش ترجمه تخصصی</td>
</tr>
<tr>
<td>✔️</td>
<td>امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله</td>
</tr>
<tr>
<td>✔️</td>
<td>امکان دانلود رایگان ۲ صفحه اول هر مقاله</td>
</tr>
<tr>
<td>✔️</td>
<td>امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب</td>
</tr>
<tr>
<td>✔️</td>
<td>دانلود فوری مقاله پس از پرداخت آنلاین</td>
</tr>
<tr>
<td>✔️</td>
<td>پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات</td>
</tr>
</tbody>
</table>