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Brief report

Patient empowerment begins with knowledge: Consumer perceptions and knowledge sources for hand hygiene compliance rates

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A survey of 1,000 US consumers quantified their knowledge of health care worker hand hygiene compliance, their information sources on hand hygiene rates, and their past behavior of asking health care workers to perform hand hygiene. Sixty-nine percent of respondents believed compliance is above 50%; 17% of respondents had asked a health care worker to perform hand hygiene. Our findings suggest that an organized plan of disclosure about hand hygiene rates may be a way to empower through knowledge.

Hand hygiene (HH) is one of the most effective methods to reduce the spread of infections in hospitals,[1] yet health care worker (HCW) compliance with HH practices is at or below 50%.[2] In 1999, McGuckin et al[3] studied the influence of a novel patient empowerment program for reminding HCWs to perform HH. Subsequent studies in the United States[4] and United Kingdom[5] suggest patient empowerment increases HH compliance.

The World Health Organization includes patient participation as a key intervention for improving HCW HH compliance, and identifies knowledge-gathering, skill development, and establishing a facilitating environment as necessary for a successful program.[1]

Patient willingness and behaviors in asking HCWs to perform HH, as well as patient perception of compliance, have been investigated.[6] To add to this knowledge base we investigated HH compliance knowledge and perceptions, information sources on compliance rates, and past behavior in asking HCWs to perform HH among a sample of the general population of US consumers.

METHODS

ORC International, an organization experienced in measuring consumer awareness and engagement with infection prevention programs, surveyed a sample of 1,000 adults via the Internet.[7] To ensure reliable and accurate representation of the total US population aged 18 years and older, each respondent was assigned a single weight derived from the relationship between the actual proportion of the population based on US Census data with its specific combination of standard demographics in the sample. Significance testing (*t* test) was done to the 95% confidence level.

The survey had 4 topics: beliefs regarding HCW HH compliance before and after treating a patient, the respondent's source of information regarding compliance rates, the respondent's history of asking HCWs to perform HH, and the respondent's demographic information.

RESULTS

One thousand sixteen adults (506 men and 510 women) completed the survey. Results are reported on a weighted response of 1,000.

Asking HCWs to perform HH

Only a small percentage of respondents (16.9%) had asked their HCW to perform HH.

Compliance estimates

Figure 1 shows respondents' estimation of HCW HH compliance, comparing those who reported having asked an HCW to perform HH to the total response pool (TRP).

Of those respondents who had asked an HCW to perform HH, 54% believed compliance was at or above 75%. An additional 7% said compliance was 51%-74%, brining the total respondents who think compliance is >50% to 61% of those who asked their HCW to perform

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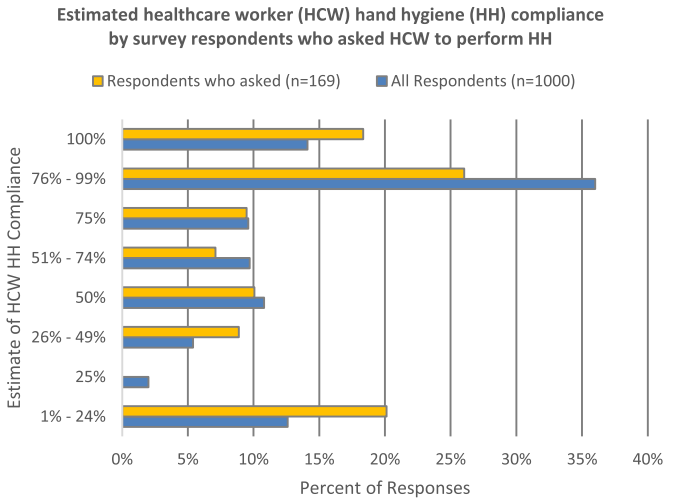

Fig 1. Respondents' estimation of health care worker (HCW) hand hygiene (HH) compliance, comparing those who asked their HCW to perform HH to the total response pool.

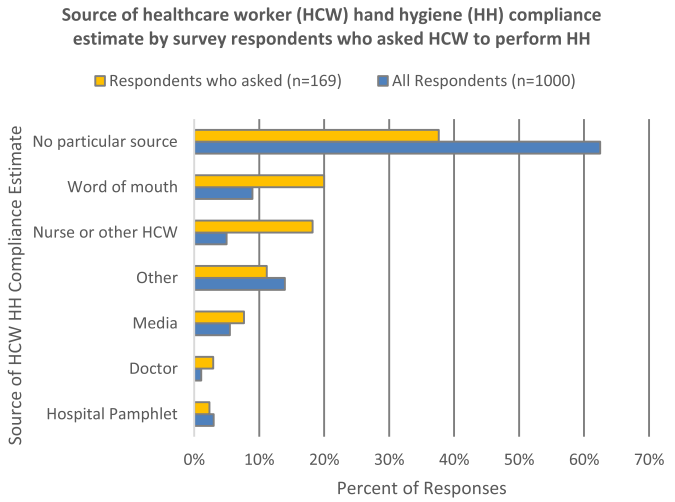

Fig 2. Sources that informed the survey respondents' compliance estimates, comparing those who asked their health care worker (HCW) to perform hand hygiene (HH) to the total response pool.

HH. In the TRP, 50% believed that HH compliance was 75%. An additional 19% said compliance was 51%-75%, brining the total respondents who think compliance is >50% to 69% of the TRP.

Sources of knowledge for compliance estimates

Figure 2 shows sources that informed the respondents' compliance estimates, comparing those who had asked an HCW to perform HH with the TRP.

Of those respondents who had asked an HCW to perform HH, 57% cited "no particular source" or "word of mouth" as their information source, whereas 24% of respondents cited "doctors," "nurses or other HCWs," or "hospital pamphlets" as their sources. In the TRP, 63% chose "no particular source" as their information source, whereas 9% cited "doctors," "nurses or other HCWs," or "hospital pamphlets" as their sources.

Demographic differences

Significant differences among some response categories were determined by *t* test:

- More men said compliance was 1%-24%, whereas more women said compliance was 76%-99%. More men cited "media" as a knowledge source. Other compliance categories or knowledge sources did not show significant differences by gender, nor was there a gender difference in asking HCWs to perform HH.
- Several response categories showed significant differences for the 25-34 years age group. More than other age groups, these respondents estimated compliance at 1%-24%; cited "word of mouth," "nurse or other HCW," or "hospital pamphlet" as their knowledge source; and had asked an HCW to perform HH.
- Of the 3 race categories tested (ie, non-white Hispanic, Hispanic of any race, and African American), Hispanic respondents were more likely to cite "word of mouth" or "media" as sources of information, and they were more likely to ask HCWs to perform HH.
- Other demographic information—such as income, education, or any children in the household—did not reveal patterns in compliance estimates or knowledge sources. Respondents with incomes <$35,000/y or >$100,000/y, households with any children aged 17 years and younger, and those with high school or less education were more likely to ask HCWs to perform HH than respondents from other demographic categories.

DISCUSSION

Most respondents (69%) estimated that HCW HH compliance is >50%, much higher than what infection prevention experts know it to be. Considering most cite "no source" for their compliance rate knowledge, the results suggest an uninformed consumer population. Practitioners and health educators have a clean slate to design empowerment programs that introduce the importance of HH in health care settings, state the HH compliance facts, and encourage patients to remind their HCWs to perform HH. An organized plan of disclosure, as suggested by authors from the National Institutes of Health Clinical Center,[8] can be a way to empower through knowledge.

Our results reveal potential program designs. Because the lower compliance category was chosen more by respondents aged 25-34 years and these respondents were more likely to ask HCWs to perform HH (thereby demonstrating knowledge and action), outreach efforts to that age group via word of mouth, nurses, or pamphlets (the information sources chosen more by this group) could encourage them to be advocates and thought-leaders on issues of patient empowerment and HH. By providing individuals ages 25-34 years with easy-to-share facts, skill-building tips, links to online resources that can be shared with others, and ideas for empowerment, we partner with a group that could empower more consumers.

Our results suggest opportunities for further research. The portion of people who already ask HCWs to perform HH chose lower compliance estimates (compared with the portion of the TRP) and cited "word of mouth" and "nurses" as their information sources. What information are people discussing, and via which modes of discussion (ie, in person or social media)? In general, if doctors and nurses are not cited frequently, then what are the emerging sources of health information? Why were men more likely to choose a lower HH compliance category and women a higher one? Why do individuals from the lowest and highest income categories ask HCWs to perform HH more than do individuals from middle income levels?

As empowerment programs and research grow and evolve, knowledge remains a fundamental component of empowerment. Knowledge is power.

LIMITATIONS

Respondents for our survey were selected from among people who volunteered to participate in online surveys.