

Optimizing the Hand Hygiene Program at the BC Children's and Women's Hospital

For
IPAC and QPS Teams
BC Children's and Women's Hospital
Vancouver, British Columbia

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Abstract

The proposed multimodal campaign for HH compliance at the BC Children's and Woman's Hospital has been emphasized as a key preventative measure in light of COVID-19. In order to ensure awareness and effective implementation of this program, details must be further clarified. Hand hygiene is of equal importance in all populations in the hospital, a potential gap in knowledge that can be resolved through education. Following hand hygiene protocol and knowing what it entails is essential to effectively increasing hand hygiene rates. Despite the increase in hand hygiene compliance after COVID-19, the current levels of hand hygiene must be maintained or increased through implementation of the campus-wide program. Healthcare workers and students, who represent the patient and family population, have deemed accessibility and accountability to be the two most effective methodologies in the proposed campaign for increasing hand hygiene compliance. Conversely, visuals such as posters and pamphlets have been found to be the least effective.

The campus-wide hand hygiene program implementation can be further optimized by adhering to the following recommendations:

- Considering implementation of patient, visitor and healthcare worker education programs to allow for knowledge gaps to be filled and equal understanding of hand hygiene
- Gathering patient, healthcare worker and visitor feedback after implementation to determine individual component efficacy of the multimodal campaign
- Ensuring that healthcare workers are reassuring patients to feel free to communicate their hand hygiene needs
- Promoting evidence-based compliance data from progress reports and auditing to definitively determine program effectiveness

Introduction

Background. Hand hygiene (HH) in a hospital setting such as the BC Children's and Women's Hospital (BCCH) has the potential to reduce antibiotic-resistant organisms, leading to reduced nosocomial pathogenesis (Mathur, 1). Following school closures due to COVID-19 emergence, HH performance improved at acute care hospitals by 16% (Moore et al., 1). More recent data in August suggests this number has dropped 6% (Moore et al., 1). Despite the increase in HH performance, visitor, patient, and healthcare worker (HCW) HH must be maintained or even increased for optimal compliance rates.

Proper Performance of Hand Hygiene. HH must be performed at 4 key "moments" in hospital settings: before an aseptic procedure, after contact with bodily fluids, and before and after entering the patient's room (Mathur, 1). Patient and visitor HH is similar in nature, yet it is important to differentiate the two (Fernando and Srigley). In the midst of the COVID-19 pandemic, HH with alcohol-based hand rub (ABHR, ~70% alcohol) has been proven to be the most effective low-cost procedure in transmission prevention via virucide (Lotfinejad et al., 1). HCW adherence to the 4 moments, as well as those required of patients and visitors ensures reduced transmission of infection, saving lives (Lotfinejad et al., 1).

Associations/Teams Tasked with Hand Hygiene Standardization. A part of the provincial health services authority (PHSA), the infection prevention and control (IPAC) team are tasked with ensuring the protection of patients, staff and visitors from preventable infections (Fernando and Srigley). The PHSA has identified HH as a key preventative measure for COVID-19 and other nosocomial pathogens (Srigley, 4). IPAC's responsibility in this regard is to ensure an evidence based HH program is in place during the pandemic (Srigley, 4). In addition, the quality and patient safety (QPS) team are intimately involved, as the hygiene program in question both

involves patient safety and must be monitored for quality improvement (Fernando and Srigley). Many more stakeholders are involved, most noticeably the frontline hospital leaders, managers at different units, and managers of different staff (Fernando and Srigley). All fronts must be aware and have representation in the project team (Fernando and Srigley).

Past Initiatives. In the BCCH, a number of initiatives have been trialled to improve HH rates. Examples include a pilot intervention in 2016-17, a survey for patients, families and visitors as well as a gap analysis and multimodal HH pilot in 2018 (Srigley, 11). In 2018-2019, multi-media work on HH was facilitated, and in 2019 a patient HH education pilot in the antepartum ward and quality improvement (QI) project were performed (Srigley, 11).

Problem Statement. Recent auditing results from the BCCH in 2019-2020 on patients and visitors in the inpatient surgical unit surveyed the 4 moments of HH. Compliance was determined to be 4.7%, although implementation of an improvement strategy had to be arrested due to the onset of COVID-19. In addition, it has been found that HCW compliance rates are not as high as reported (Erasmus et al., 1). Changing HH behavior was found to be challenging, with current efforts proving to be insufficient (Srigley et al., 1). The primary purpose of this report is to provide new perspectives and recommendations for optimization of the HH program present at the BCCH.

Methods. Primary data sources include two interviews consisting of 15 questions conducted with Dr. Jocelyn Srigley (via Skype for business), a medical microbiologist at the BCCH and IPAC physician as well as the PHSA QI initiative lead, Joanne Fernando (via Zoom). The interviews (performed using Qualtrics) allowed for elucidation of the current BCCH HH program proposal and expert ideas for improvement. Online surveying was performed on HCWs (28 multiple-choice, 6 short answer) and students (23 multiple-choice, 2 short answer, primarily

attendees of the University of British Columbia), who provided HCW, patient, and visitor perspectives on the project.

Secondary sources were used for understanding and history, with review studies, progress reports, and recommended readings written and suggested by Dr. Srigley on the subject.

Intended Audience. The target audience of this Formal Report is the IPAC and QPS teams, who are tasked with development and implementation of the HH project in question. Specifically, Dr. Jocelyn Srigley and Joanne Fernando will be sent the final report, for further distribution if necessary. These two healthcare workers are spearheading the implementation and optimization of HH at the BCCH and thus have the capacity to turn the suggestions of the Formal Report into reality.

Scope of the Inquiry. In order to determine the details and efficacy of implementing such a program in the BCCH, the four lines of inquiry will be pursued: HH importance, HH compliance and understanding, the most effective elements of the proposed campaign, and potential solutions to low HH compliance.

Summary. This report concludes by acknowledging its potential limitations in extrapolation as well as identifying where continued focus is most required, also recommending additional measures in ensuring successful HH program implementation.

Body (Data Section)

Demographics. The interviews with Dr. Srigley and Fernando were 30 and 15 minutes long, respectively. The HCW survey had 9 respondents, mostly physicians, with one nurse. The student survey had 33 responses with students diverse in study area.

HH Importance According to HCWs. The HCW survey shows HH importance according to population in a healthcare setting. (**Figure 1**).

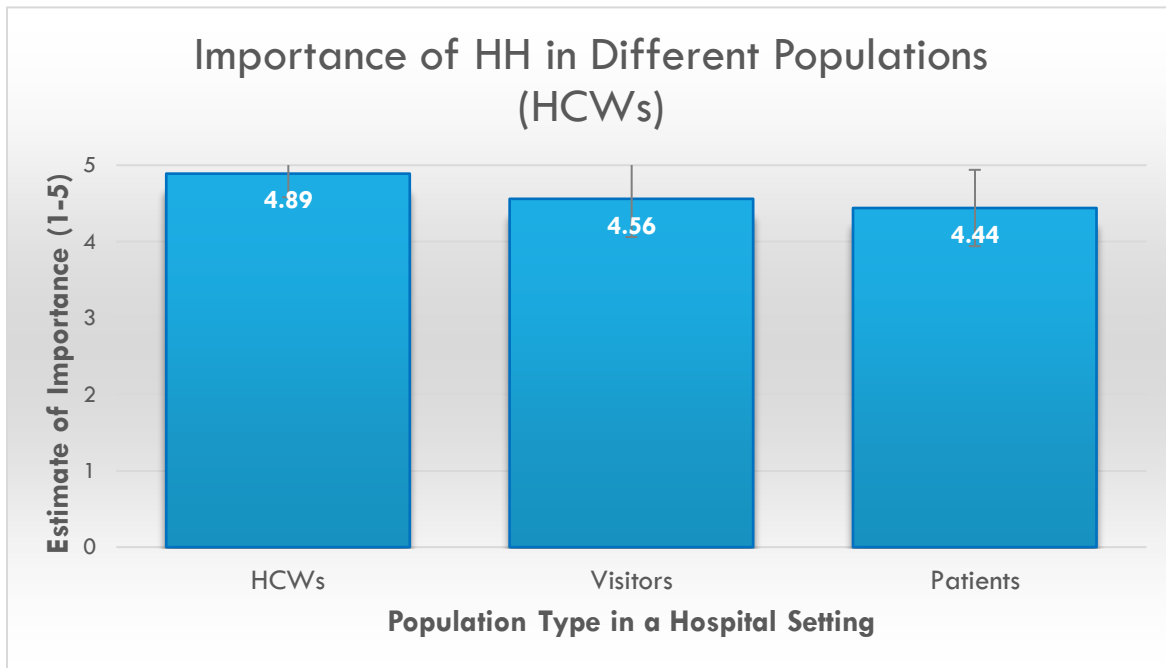


Figure 1. HH Importance among HCWs, visitors and patients according to 9 HCWs. On a scale of 1-5 where 5 is most important and 1 is least important. Data is represented as a mean +/- standard deviation (error bars, cut off above 5). HH = hand hygiene, HCW = healthcare worker

HCWs deem their HH most important in relation to other clinical concerns, followed by visitors, and finally patients. This is further emphasized in the interview with Dr. Srigley, who describes the focus of HH research being on HCWs, however “patients and visitors can pick things up on their own hands just as easily as they can from HCWs” (Fernando and Srigley). Although the proposed HH program is primarily targeted towards patient and visitor populations, it is of note that the physicians’ impression is biased towards themselves. This should be addressed in the program implementation, where physicians should be trained to understand the inherent equality of HH practice.

HH compliance and understanding in HCWs and students. In both HCW and student surveys, participants provide personal estimates of HH knowledge and compliance before

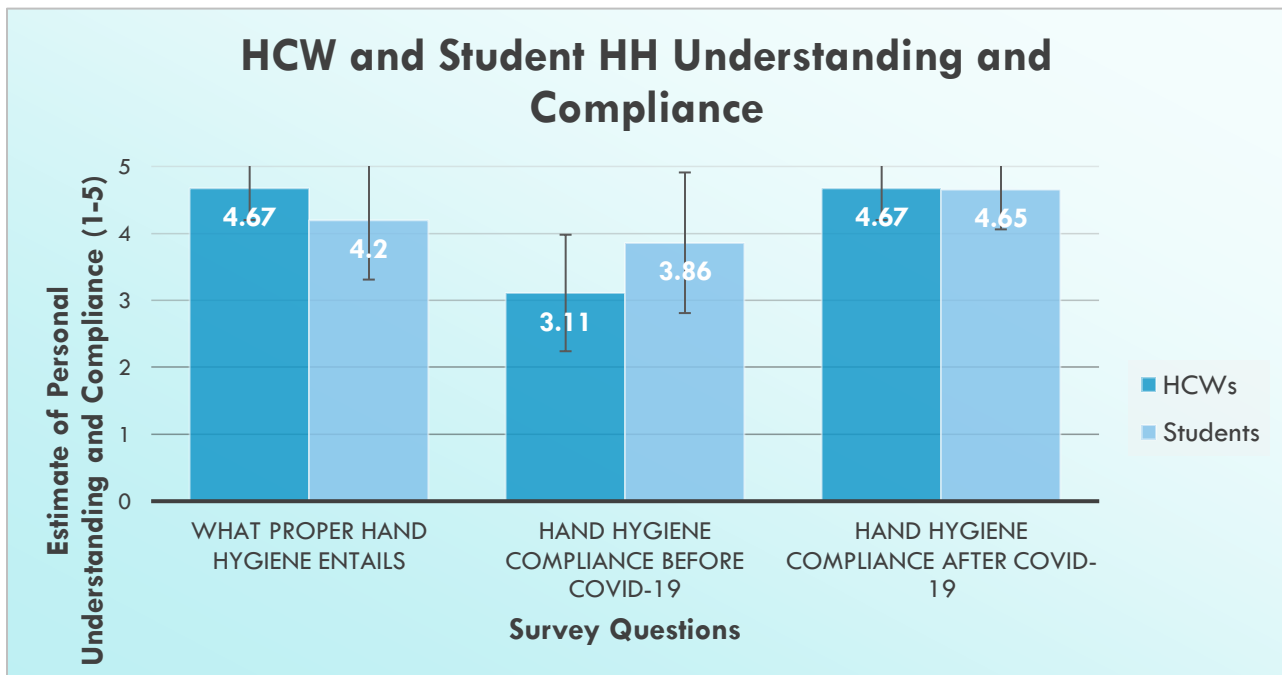


Figure 2. Personal understanding of HH and compliance before and after COVID-19 as estimated by 33 students and 9 HCWs. On a scale of 1-5 where 5 is perfect understanding/compliance and 1 no understanding/compliance. Data is represented as a mean +/- standard deviation (error bars, cut off above 5). HH = hand hygiene, HCW = healthcare worker

and after COVID-19 (**Figure 2**).

HCWs report greater understanding of HH than students, however students report higher compliance before COVID-19, with similar rates as HCWs afterward. In addition, increase in HH compliance following COVID-19 among HCWs is statistically significant (student's t-test, $p=0.0002$).

Student Compliance. It is interesting that students estimate their HH compliance to be above that of HCWs pre-COVID-19 (**Figure 2**). A US study potentiates this line of thought when applied to hospitals, primarily focused on patients and visitors, demonstrating decreased HH in hospital settings than when at home, as well as home practices strongly correlating with hospital practices (Barker et al., 1). Comparative HH rates showed marked decreases after using the restroom, before eating, patients with mobility problems, with a ten-fold increase in those

barely or never washing their hands (Barker et al., 2). Patients that were immobile yet comfortable with asking for HCW assistance experienced an increase in HH in the hospital (Barker et al., 2). These results may demonstrate a predominant hospital culture does not promote patient and visitor HH, however extrapolation is limited due to the survey-based methodology, which is subject to bias (Barker et al., 3). It also points to a need for increased ease of communication between HCWs and patients. This would allow patients and visitors to be more confident when asking for HH in order to do their part in reducing bacterial spread. The survey, along with the study demonstrate a need for increased HH accessibility and communication among patients and HCW, as Dr. Srigley explains, “getting up is impractical for hospitalized and immobile patients” (Fernando and Srigley).

HCW Compliance. It is noteworthy that HCWs had lower compliance pre-COVID than students (**Figure 2**), with literature to support this. Among HCWs, a study in Italy was conducted among 6 ICUs where HH compliance rates were found to be highly variable, from 3% to 100% (Musu et al., E233). This variation may have been due to knowledge gaps, which could not be filled in by signage, as only 12 of the 15 required protocols and procedures were readily available (Musu et al., E232). One limitation, however, was the Hawthorne effect, as despite auditing 5 hours a day for 5 days, observation may have resulted in artificially high compliance. Although a lack of knowledge may be a contributing factor, Dr. Srigley and Fernando suggest otherwise, opting for high mental burden, lack of habituation and skepticism about HH as the cause of lower than optimal compliance in HCWs (Fernando and Srigley).

Most Effective HH Improvement Methodologies. The list of 15 methods proposed in the campus-wide HH program were surveyed for expected effectiveness by both students and HCWs, presented from most to least effective (**Figures 3,4**).

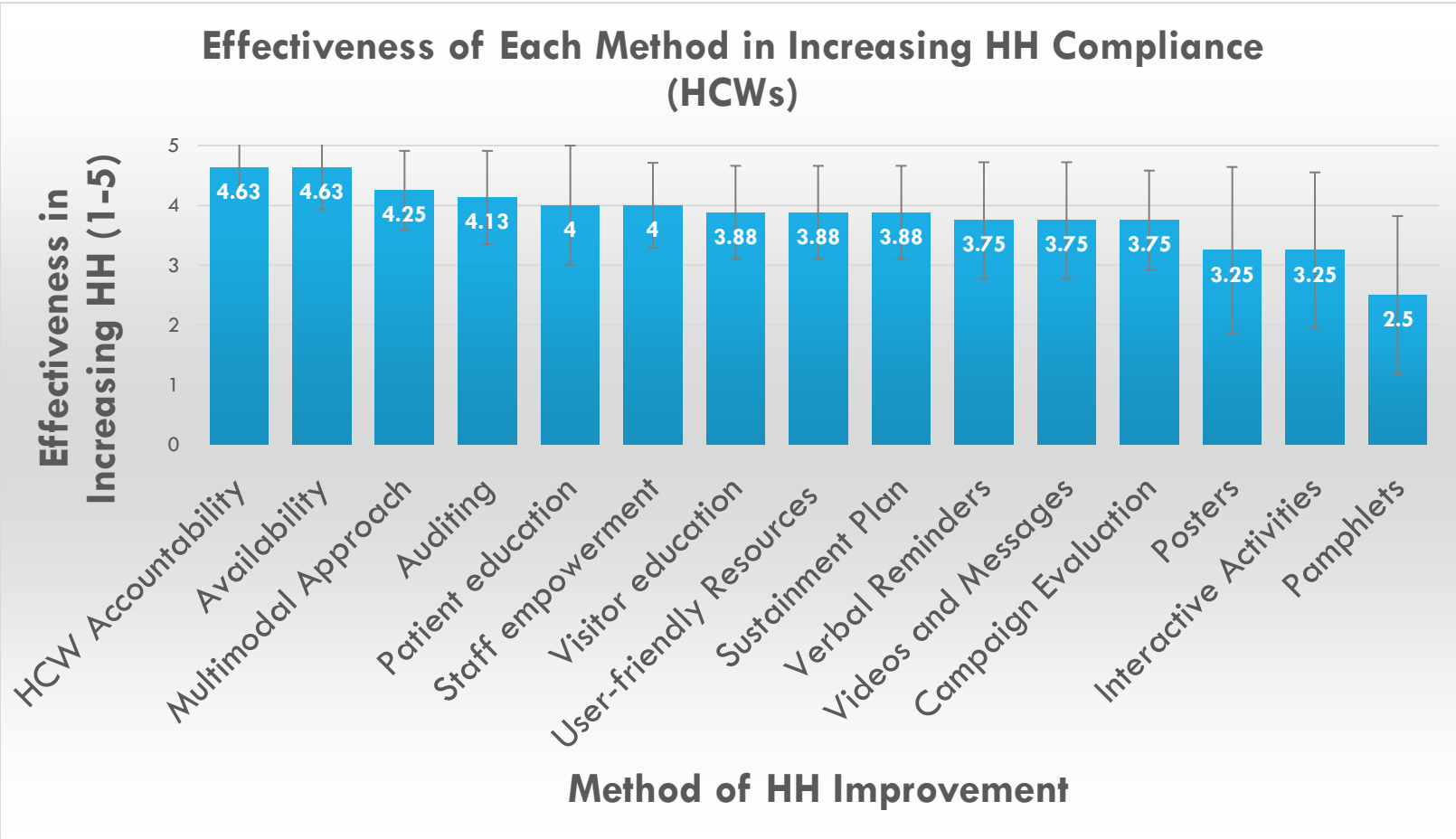


Figure 3. Effectiveness of proposed methodologies in increasing HH compliance according to 9 HCWs. On a scale of 1-5 where 5 is most effective and 1 is least effective. Data is represented as a mean +/- standard deviation (error bars, cut off above 5). HH = hand hygiene, HCW = healthcare worker

HCW Opinion. **Figure 3** shows HCW accountability and availability of HH to be most important in increasing HH compliance, followed by a multimodal approach, which is the overarching idea proposed in this program. Thus, within the HH program, HCWs deem it important to focus efforts on HCW accountability and HH availability, with visuals such as pamphlets the least effective in invoking cultural change.

Effectiveness of Each Method in Increasing HH Compliance (Students)

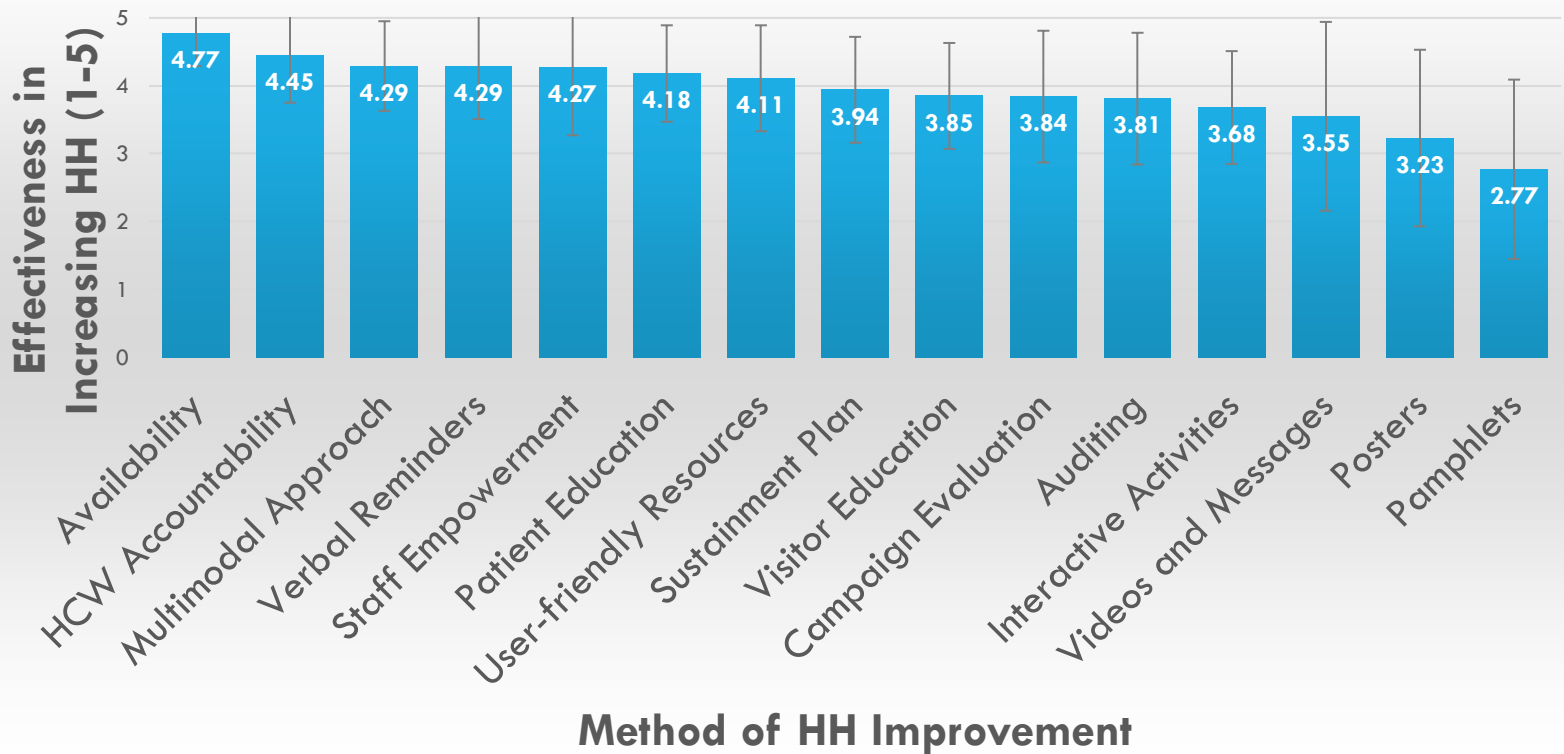


Figure 4. Effectiveness of proposed methodologies in increasing HH compliance according to 33 students. On a scale of 1 -5 where 5 is most effective and 1 is least effective. Data is represented as a mean +/- standard deviation (error bars, cut off above 5). HH = hand hygiene

Student Opinion. **Figure 4** shows that students find availability of HH to be most important in increasing HH compliance, followed by HCW accountability, then the overarching idea of a multimodal approach. Thus, students deem it important to focus efforts on HH availability, with visuals such as pamphlets the least effective in promoting compliance.

The Best Methods. Both students and HCWs deem HH availability the most important in increasing compliance, however HCWs also deem their accountability equally important, while students do not. This is a subtle difference, suggesting that HCWs might believe that their position as a role model may have a bigger impact on patients than students believe to be true. In addition, both students and HCWs believe that pamphlets are the worst method for improving

HH practice. Other visuals such as posters, interactive activities and videos and messages are also non-efficacious. This prevailing opinion leads one to believe that perhaps visual methods are not as successful in promoting behavioural change, as they can choose to be ignored. Two noticeable differences in opinion concern the effectiveness of verbal reminders and auditing. While students advocate for verbal reminders as the third-most important strategy, HCWs believe it is third-least important. Perhaps the HCWs do not feel that their voices are being heard, especially due to the multitude of information that must be provided upon patient admission, or it may be a knowledge gap for HCWs (Fernando and Srigley). For auditing, the positions are reversed, where HCWs find auditing the 4th-most effective strategy and students believe it to be the 5th-least effective. This may be due to a student knowledge gap on the advantages of auditing, and conversely, HCWs may not be aware of the Hawthorne effect, which may bias auditing results (Fernando and Srigley).

Possible Solutions.

Benefits. The biggest benefit of the HH program is reduction of nosocomial pathogenesis, although this can be broadened once HH becomes a habit in the community, at home, at school, etc. (Fernando and Srigley). Increasing partnership with those beyond HCWs is another benefit, providing feedback on HH from unique perspectives.

Challenges. Through survey and interview collection, it is clear that students believe the biggest barriers are noncompliance, apathy and complacency. In 2019, a QI project revealed that HH is deemed unimportant compared to other admission and treatment messages (Srigley, 11). This can definitely be tackled through education and stressing the importance of HH. In the BCCH, the pilot intervention determined that HCW education is more effective than passive interventions (Srigley, 11). Cost is another brought up ubiquitously, as HH budget is normally

quite extraneous to that of usual hospital budget, except recently with COVID-19 (Fernando and Srigley). This report does not address costs, however increased enforcement through volunteering may be one method to ensure minimal costs. In the long-term, sustainment is thought to be a challenge, with competing priorities, time management, and magnitude of auditing already present for other purposes being a significant issue. This should be tackled as a part of the suggested 30/60/90-day sustainment plan, where feedback can allow for modifications to the program. Finally, HCWs bring up their own awareness, as they must empower themselves and the patients, where language/culture clashes may occur, and “COVID fatigue”, where COVID-19 may negatively impact the views of HH and its benefits. This can be tackled through training sessions for staff to attend if lacking in HH knowledge, reiterating the importance of HH especially during COVID, and perhaps seeking posters/pamphlets if a language barrier is met.

Solutions. It is integral to acknowledge, as explained by Dr. Srigley, that a multimodal approach is the best way to invoke a change in HH practice (Fernando and Srigley). A gap analysis determined that accountability for HCWs in teaching HH is not provided, and the multimodal HH pilot in 2018 identified key elements in HH improvement: hygiene product labelling, reducing ABHR refill delays, clear poster content and patient-centred brochures, with trialling of support of the multimodal campaign at HCW huddles (Srigley, 11). Many different methods must be used in combination in order for habituation of HH compliance.

From the data gathered, it is clear that the current approach is tackling the problem from all sides, however, certain aspects must be emphasized. As explained by Fernando, the top 3 most efficacious methods according to the survey are focused on: 1. accessibility via nurses bringing HH to the patient, 2. education/knowledge gaps of family members and patients engaged continually by nurses, and 3. HCW accountability being addressed by a checklist

system (Fernando and Srigley). It was found through the survey and gap analysis in 2018 that patient and family HH practice may be based on preference to soap and water (the gold standard being ABHR), and HCWs are instrumental in increasing HH awareness (Srigley, 11), supporting the education and HCW accountability initiatives. However, something that may require approval, yet deemed important to consider for the future would be feedback from HCWs, patients, and visitors on what specific aspect of the multimodal program was most effective. This way, a dialogue between HCWs and patients/visitors can be maintained, ensuring that focus is adapted to meet needs, while involving the public in a previously HCW-oriented field (Fernando and Srigley). Of course, results can only be definitively determined through auditing, and thus it must be maintained.

Interesting Ideas. Students have suggested many different methods, including frequent reminders and accessible teaching tools. Visibly placing HH products that are easy to use, or have instructions, with frequent refills and posters by the HH stations in different languages combines multiple ideas presented. Ensuring patient-HCW reciprocal accountability, reminding patients that they can also suggest that the HCW performs HH in case they forget is another terrific idea. HH can be further improved by introducing high-quality, interactive education, clearly laying out and enforcing HH rules once inside the hospital and mapping out key locations for ABHR and sinks. Multi-media work in 2018-2019 has allowed for animated videos for future initiatives (Srigley, 11). HCWs suggest similar methodologies, including their own accountability through fellow staff reminders, video/picture handouts, ensuring readily available tools even after patient-HCW contact, and HH videos playing in waiting rooms. Dr. Srigley suggests a promotional campaign with a celebrity/sports figure involved and Fernando recommends reminders of how rapidly COVID

moved through the population, especially since it brought a lot of public “buy-in” (Fernando and Srigley).

Conclusion

Interpretation of Findings

In comparing the literature and surveys/interviews, it is evident that HH availability and accountability are the two main factors that are thought to improve compliance. In addition, it is integral that education programs be implemented, in order for all knowledge gaps to be filled, and for equal knowledge of HH. Finally, it may be ideal to promote a retrospective survey to determine what was most effective in increasing HH compliance. Elucidating the specific part of the campaign that changed ones' behaviour will make for an optimized HH program and determine where to continue to focus, while potentially bringing new ideas to the table.

Summary of Findings

The pandemic situation threatens the healthcare system, and increased HH compliance plays a more important role than ever in reducing pathogenesis. Thus, it is integral that even despite the pandemic-related recent increase in HH, current levels are maintained, with the eventual goal of invoking a cultural change in the BCCH workplace (Moore et al., 1).

- In relation to HH in all populations: Ensure to remind or train HCWs that it is equally important that all populations follow HH guidelines
- In relation to COVID-19 impact on HH: Provide reminders surrounding COVID-19 and making HCWs and patients/visitors aware of the impact it has had on HH
- The most important elements of the proposed campaign: Increasing HH availability, checklists for HCW accountability, and a sustained multimodal approach including auditing

- HCW accountability methodologies for improvement: Approachability of HCWs in need of HH and reciprocated HH reminders among patients, families and HCWs
- How HH improvement can be maintained in the future: Surveying of HCWs, patients and families for feedback on the most efficacious strategies employed, adjusting the program accordingly

Limitations. This report has several limitations: the small sample size limits extrapolation, the surveying of students may not represent patients and their families accurately, and the surveying itself, which is prospective, when retrospective would be more useful in program optimization.

Recommendations

- Consider surveying patients, HCWs and visitors after implementation of the hand hygiene program to determine efficacy of different components of the multimodal campaign
- Ensuring that HCWs are reassuring patients to feel free to communicate their HH needs
- Ultimately, the compliance results will come from progress reports and auditing. Consider relying on these to definitively determine program effectiveness

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Appendices

Appendix A: Surveys for HCWs and Students

Survey for Students:

The surveyor is an undergraduate student at UBC engaged in a technical writing project. **The purpose of this survey is to obtain primary data for an analysis and investigation that aims to provide recommendations for** optimizing and implementing a hand hygiene program at the BC Children's and Women's Hospital Campus.

The final report will be addressed to the Infection Prevention and Control and Quality and Patient Safety teams, who are tasked with development and implementation of the hand hygiene project in question. Together with public reports, the data gathered from **this survey will serve the ultimate purpose of providing recommendations for** optimizing and implementing a campus-wide hand hygiene program.

The survey contains 23 multiple-choice questions (5 descriptive, 18 numerical) and 2 short answer questions and should take about 10 minutes of your time. Your responses are voluntary and anonymous. Thank you for generously participating in the survey.

To expand on: Gather student demographics (year, major, etc.)

On a scale of 1-5 rate your estimate of the following where 5 is perfect understanding/compliance and 1 is no understanding/compliance:

What proper hand hygiene entails

Hand hygiene compliance before COVID-19

Hand hygiene compliance after COVID-19

Multiple Choice (4 options: completely unnecessary, sometimes unnecessary, sometimes necessary, necessary):

In your opinion, to what extent are the following needed?

Healthcare providers discussing hand hygiene with their patients

Healthcare providers ensuring the hand hygiene discussion is clear

Healthcare providers performing hand hygiene before/after touching the patient or patient environment

Direct observation audits in determining hand hygiene compliance among patients and visitors

Direct observation audits in determining hand hygiene compliance among healthcare providers

Patient and visitor education on hand hygiene practices

On a scale of 1-5, how effective do you think the following would be in increasing hand hygiene compliance, regardless of feasibility:

Education

- Patient education
- Visitor education

Staff Empowerment

- Front-line staff enablement/empowerment in educating patients and visitors
- User-friendly resources and tools for patient education
- Increasing health care worker hand hygiene accountability

Promotion and Communication

- A multimodal approach emphasizing healthcare providers promoting and communicating regarding hand hygiene to patients and visitors
- Providing a pamphlet upon hospital admission
- Verbal reminders provided during vitals
- Poster use
- Interactive activities
- Hand hygiene videos and messages
- Readily available hand hygiene products (e.g. at the bedside)

Mechanism of Evaluation for Sustained Improvement

- A 30-60-90-day sustainment plan after implementation, ensuring the plan is on track for projected improvements
- Quarterly hand hygiene audits
- Mid-year and end-year campaign evaluation points and potential adjustment

Short answer:

Please provide input on the following to the best of your ability:

1. Potential ideas for improving hand hygiene at hospitals
2. Anticipated barriers to implementation of the hand hygiene program

Survey for Healthcare Workers:

The surveyor is an undergraduate student at UBC engaged in a technical writing project. **The purpose of this survey is to obtain primary data for an analysis and investigation that aims to provide recommendations for** optimizing and implementing a hand hygiene program at the BC Children's and Women's Hospital Campus.

The final report will be addressed to the Infection Prevention and Control and Quality and Patient Safety teams, who are tasked with development and implementation of the hand hygiene project in question. Together with public reports, the data gathered from **this survey will serve the ultimate purpose of providing recommendations for** optimizing and implementing a campus-wide hand hygiene program.

The survey contains 28 multiple-choice questions (8 descriptive, 20 numerical) and 6 short answer questions and should take about 15 minutes of your time. Your responses are voluntary and anonymous. Thank you for generously participating in the survey.

On a scale of 1-5 rate your estimate of the following where 5 is perfect understanding/compliance and 1 is no understanding/compliance:

What proper hand hygiene entails

Hand hygiene compliance before COVID-19

Hand hygiene compliance after COVID-19

Similarly, rate how important you believe patient hand hygiene is in relation to other clinical concerns

How about visitor hand hygiene in relation to other clinical concerns

How about healthcare provider hand hygiene in relation to other clinical concerns

Multiple Choice (4 options: completely unnecessary, sometimes unnecessary, sometimes necessary, necessary):

In your opinion, to what extent are the following needed?

Patient understanding of expected hand hygiene practices in the hospital

Visitor understanding of expected hand hygiene practices in the hospital

Healthcare providers discussing hand hygiene with their patients

Healthcare providers ensuring the hand hygiene discussion is clear

Healthcare providers performing hand hygiene before/after touching the patient or patient environment

Direct observation audits in determining hand hygiene compliance among patients and visitors

Direct observation audits in determining hand hygiene compliance among healthcare providers

Patient and visitor education on hand hygiene practices

On a scale of 1-5, how effective do you think the following would be in increasing hand hygiene compliance, regardless of feasibility:

Education

- Patient education
- Visitor education

Staff Empowerment

- Front-line staff enablement/empowerment in educating patients and visitors
- User-friendly resources and tools for patient education
- Increasing health care worker hand hygiene accountability

Promotion and Communication

- A multimodal approach emphasizing healthcare providers promoting and communicating hand hygiene to patients and visitors
- Providing a pamphlet upon hospital admission
- Verbal reminders provided during vitals
- Poster use
- Interactive activities
- Hand hygiene videos and messages
- Readily available hand hygiene products (e.g. at the bedside)

Mechanism of Evaluation for Sustained Improvement

- A 30-60-90-day sustainment plan after implementation, ensuring the plan is on track for projected improvements
- Quarterly hand hygiene audits
- Mid-year and end-year campaign evaluation points and potential adjustment

Short answer:

Please provide input on the following to the best of your ability:

1. What is your position/title?
2. How much do you know about this hand hygiene program?
3. What proportion of your time should be allocated to patient hand hygiene education? Why?
4. Do you have all the tools needed for hand hygiene discussion? If not, which ones are missing?
5. Potential ideas for improving hand hygiene at the BCCH
6. Anticipated barriers to implementation of the hand hygiene program

Appendix B: Interview Questions**Interview for Infection Prevention and Control, Quality and Patient Safety Staff:**

The surveyor is an undergraduate student at UBC engaged in a technical writing project. **The purpose of this survey is to obtain primary data for an analysis and investigation that aims to provide recommendations for** optimizing and implementing a hand hygiene program at the BC Children's and Women's Hospital Campus.

The final report will be addressed to the Infection Control and Prevention and Quality and Patient Safety teams, who are tasked with development and implementation of the hand hygiene project in question. Together with public reports, the data gathered from **this survey will serve the ultimate purpose of providing recommendations for** optimizing and implementing a campus-wide hand hygiene program.

The interview contains 15 questions and should take about 15 minutes of your time. Your responses are voluntary and anonymous. Thank you for generously participating in the interview.

1. Can you tell me a bit about yourself?
2. How much do you know about this hand hygiene program?
3. What role do you play in the implementation of this hand hygiene project?
4. What potential mechanisms or theories do you have regarding the low hand hygiene compliance in patients?
5. How about visitors?
6. How about healthcare workers?
7. In your opinion, how effective is your current proposed program and what does it consist of?
8. What are some drawbacks to the implementation of this campus-wide hand hygiene program?
9. What are the benefits?
10. What proportion of healthcare workers' time should be allocated to patient hand hygiene education? Why?
11. Do healthcare workers have the tools needed for hand hygiene discussion?

12. What are your potential ideas for improving hand hygiene at the BCCH?
13. How can the program implementation be optimized?
14. What are some anticipated barriers to the implementation of the hand hygiene program?
15. In what way I can I help your implementation of this hand hygiene program the most in this report?