Hand hygiene reminder system

ASSIGN BUSTER

Quantitative Article:

Ellison, R. T., Barysauskas, C. M., Rundensteiner, E. A., Wang, D., & Barton, B. (2015). A Prospective Controlled Trial of an Electronic Hand Hygiene Reminder System . *Open Forum Infectious Diseases* , 2(4). doi: 10. 1093/ofid/ofv121

Background or Introduction	This study was conducted to find ways to raise the number of times hand hygiene is completed. The study used three phases to

	accomplish/ measure the outcomes. The study is easy to follow and well organized.
Review of the Literature	Prevention and education were key points made by the author. We already have many excellent sources of education material that has been completed by reputable

sources such as the CDC, WHO and Joint commission. Unfortunately, even when health care facilities implement infection control efforts there is a large discrepancy in the actual completion of hand hygiene. In completing this article the writer researched 36 other articles. This

	gave plenty of research to complete the study.
Discussion of Methodology	This clinical study was controlled and used two different ICU’s. The ICU’s were comparable in census, size, and admission demographics. They ICU’s did have one mentioned variable. One ICU had one less bed available.

	An automatic hand hygiene system was installed. When staff entered or exited a room they were both monitored and reminded by the machine to perform hand hygiene. This study was a quantitative study.
Data Analysis	The Study lasted 4 months –

	one week.
	The results
	of the study
	were set
	side by side.
	The number
	of uses of
	the hand
	sanitizer
	against how
	often the
	alarm
	sounded
	when
	coming in or
	going out of
	a room.
	Ratios were
	figured and
	recorded.
Researche	During the
r’s	trial when
Conclusion	the chime
	reminded
	staff to

complete hand hygiene it was noted that there was a 24% increase in compliance but throughout the washout phase health care workers tended to regress back to their baseline. The increase in hand hygiene compliance shows that a reminder di have a

positive impact on hand hygiene. Education was also reviewed. The negative impact that not complying with hand hygiene has on both patients, hospital staff and the general population. Research such as this helps to show the importance of simple

things such as hand washing in general overall health.

Researcher’s Conclusion

An increase in hand hygiene was noted with supervision and electronic monitoring. Conclusion shows an increase in compliance. This study allowed around the clock examination of the focus group. This proved to be a benefit compared to observational only studies. These are often completed only during business day hours. Using already known material from the Joint Commission, CDC, and WHO assisted with educating educate the researchers giving them reasons why hand hygiene and HAI’s continue to remain around the same compliance. The ICU’s continued the study for 25 weeks. It showed that reminder systems do have a positive impact.

Protection of Human Subjects and Cultural Considerations

The author did not use any specific staff for completion of this research study. The study was mostly done by using working hospital staff and was measured by entry and exit alarms and automatic hand hygiene reminders. Since we know that observation alone can cause deviations, an automatic system was used to increase reliability and conclude the study with factual results. Throughout this study it did not matter who the staff person was.

This was not needed in the study so identities were not shared. Consent forms were not an issue in this study as people were never identified.

Strengths and Limitations

The study took 25 weeks to complete this is a relatively long time and assisted with the ability to obtain more accurate ratios. The sample size used was small. An ICU with 15 available beds and one with 16 available beds. It was also noted that the door alarm counts cannot fully noted as 100% accurate. For example staff can step in the doorway to converse with patients or family or can leave one room, sanitize, and go into the next room. Evaluating hand hygiene activity was the most influential component of this study. The conclusion shows that answers were obtained about the effectiveness of electric hand hygiene monitors.

Evidence Applicationto Nursing Practice

This study can affect a hospice nurse. Our patient population often have weakened immune systems and not remembering to complete hand hygiene can be detrimental to the patient’s last days and in having the time to complete the goals and life experiences that they are able to finish. Hand Hygiene also affects hospice nurses as we are often exposed to an increase in body fluids and infections. In order to keep ourselves safe and healthy we must remember hand hygiene. This study shows us that we have a lot of work to do when it comes to hand hygiene. It shows that the electronic monitors does increase use of hand hygiene practices, but also shows that without reminders we do not continue the hand hygiene practice at the high

percentage. The study was also able to keep anonymity among healthcare workers, this may or may not have a positive impact on infection control.

Qualitative Article:

Jain, S., Edgar, D., Bothe, J., Newman, H., Wilson, A., Bint, B., . . . Harris, J. (2015). Reflection on observation: A qualitative study using practice development methods to explore the experience of being a hand hygiene auditor in Australia. *American Journal of Infection Control* , 43(12), 1310-1315. doi: 10. 1016/j. ajic. 2015. 07. 009	
Backgroun d or Introductio n	The article was written with the intention of trying to

understand barriers to hand hygiene. The study witnessed persons coming into and going out of a patient’s room. The study used a focus group. Results of this study give healthcare workers a better view of the influence observation has when it comes to

	hand hygiene and the influence we have on each other in the regard of hand hygiene.
Review of the Literature	The study is trying to lessen the spread of staphylococcus aureus bacteremia. It was completed by hospital staff washing their hand or using alcohol-

based
sanitizer
more often.
Observation
was used
by the
researchers
to formulate
concepts
and
establish
obstacles
that could
cause
hospital
employees
not to
complete
hand
hygiene.
There were
27
reference
articles
utilized by

	the authors.
Discussion of Methodology	The researchers used an observational approach when conducting this study. The outcome was to figure out how to improve the health care staff's compliance with hand hygiene when going into or leaving a patient's room. This

study was conducted by using 25 hand hygiene auditors. The auditors were divided into three groups. Assigning members to different focus groups plus using people who didn’t have immediate involvement with the study helped to give a more

widespread idea of findings. The focus groups took comprehensive notes of what they saw. The study was concluded after 2. 5 hours. Ideas and suggestions were then talked about in a large group conversation. This discussion came up with ideas about how to make

	hand hygiene more compliant and reasons as to why it is missed.
Data Analysis	The researchers used focus groups and observations to gather knowledge.. Information was gathered from the focus groups. it was conclusive, because there was only a small

	amount of differences among the different groups. Facts were analyzed and information recorded then the group talked about the study and recorded the findings.
Researcher's Conclusion	The goal in this study is to reduce focusing a study on this topic is to reduce staphylococcus aureus

bacteremia by use of frequent hand hygiene. Taking a group approach and discussing the barriers that were found to not performing hand hygiene especially since hand hygiene is the main prevention tool to decrease these infections.

Researcher’s Conclusion

It is important to utilize infection control staff and monitor hand hygiene in health care facilities. It is in the best interest of both patients and employees to complete hand hygiene. A study like this one helps us figure out why hand hygiene is getting missed and helps figure out how to change practices within a facility so that it will not be missed.

The authors that wrote this article are able to make conclusions because they gathered data that showed that this process improves hand hygiene compliance. It is also know that compliance will not likely stay this high after the study. It will probably drop down closer to baseline after time.

Including cliniations in studies could make them feel they have more input in infection control. It may encourage increased hand hygiene. If staff are satisfied they often participate in hospital policies more.

Protection of Human Subjects and Cultural Considerations

The auditors part in this study was a volunteer mode. They were able decline prior to the making of the study groups. Screening and invitations were delivered by e-mail. Focus groups were told that results would be posted and they would not be hidden. Consents were not required.

Strengths and Limitations

Observation was the primary approach to gather data on the use of hand hygiene. the small size of the auditors could have skewed the results of this study. With such a small group things could have been missed. This problem

could have been improved if more people would have agreed to participate. initially, 150 people were asked to be auditors but only 25 agreed. It would be difficult to monitor if more than one staff member were exiting or entering a room at the same time or friends or relatives would need to be identified from hospital staff. Distractions throughout a busy day can also skew results.

Evidence Application to Nursing Practice

The results of this study prove that if proper hand hygiene is used, conversations happen and plans are made it is possible to conquer the hurdles of not using hand hygiene. Hand Hygiene does lead to lower rates of staphylococcus aureus bacteremia. In Hospice nursing many patients are immunocompromised. Hand Hygiene is very important in not spreading infection from patient to patient. Many of our clients also have drains, lines and wounds which can easily introduce infection into the body. Hand hygiene is the number one barrier to keep both patients and health care staff healthy.

These kinds of studies are needed. Hospital staff need continued education and reminders as to why hand hygiene is important. Short cuts happen when staff get busy. We often need to be reminded why it is so important to be compliant with hand hygiene.

References

- Ellison, R. T., Barysauskas, C. M., Rundensteiner, E. A., Wang, D., & Barton, B. (2015). A Prospective Controlled Trial of an Electronic Hand

Hygiene Reminder System. *Open Forum Infectious Diseases, 2* (4). doi: 10. 1093/ofid/ofv121

- Jain, S., Edgar, D., Bothe, J., Newman, H., Wilson, A., Bint, B., . . . Harris, J. (2015). Reflection on observation: A qualitative study using practice development methods to explore the experience of being a hand hygiene auditor in Australia. *American Journal of Infection Control, 43* (12), 1310-1315. doi: 10. 1016/j. ajic. 2015. 07. 009