Running Head: HAND HYGIENE

Hand Hygiene Project

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Hand hygiene is something that has been ingrained in most everyone's brain since childhood. It is something that eventually happens without thought and is instead a ritualized behavior in response to a need for cleanliness. This ritual is helpful because it results in protection from infection for both the person performing hand hygiene as well as everyone they come in contact with. In the hospital a healthcare worker must go beyond the usual expected norms of hand hygiene because of increased exposure to illnesses, bodily fluids, and many patients that are very susceptible to infection. Opportunities for hand hygiene are increased significantly and are not the same as those outside a healthcare environment. Healthcare workers must be educated about when it is necessary to perform hand hygiene and must remain compliant to the guidelines in place.

Healthcare compliance with hand hygiene has repeatedly been an issue in a variety of healthcare organizations including Hospital A. This is an important issue to focus on for Hospital A because adequate hand hygiene is the most effective intervention for the prevention of infection (Haas & Larson, 2007). If staff are not compliant with hand hygiene guidelines they are increasing the possibility of spread of infection from one patient to another. It has been reported that one out of five medical professionals carry potentially pathogenic antibiotic resistant pathogens on his or her hands (LeTexier, 2000). Infection is a bad outcome for the patient and can create a more complex problem with more extensive associated treatments and more time spent in the hospital. This creates more work for the hospital staff and also increases healthcare associated costs for the organization as a whole. The cost of care for hospitals with high hand hygiene compliance is significantly lower than those with poor compliance with a

(Littau, 2007). Healthcare costs in institutions with poor compliance are spending up to 153,811 dollars more per patient (Littau, 2007).

This issue is especially important on units one and two in Hospital A. Both units are composed of oncology patients who have increased susceptibility to infection. This is due to both their disease processes as well as the associated treatments. Oncology patients become more susceptible to infection because the cancer alters their blood cell counts as well as radiation and chemotherapy treatments. White blood cells are responsible for part of the immune response and help resist infection so when a patent's white blood cell count falls below the normal acceptable range the patient becomes immunosuppresed and thus more at risk for acquiring an infection.

Compliance rates have been disturbingly low in Hospital A which has made the administration aware of the need for new interventions to be put in place. On unit two in Hospital A the most recent compliance rates based on data collected by infection control show that the educational interventions being implemented currently are not being as effective as they should be. The data collected was whether or not healthcare workers were washing their hands before and after patient contact and was broken down to show the difference between nurses, physicians, nurse techs, and other staff. Nurses had the highest compliance rate of sixty percent compared to physicians at seven percent, nurse techs at fifty five percent and other staff at forty percent (Hospital A, 2007). This data shows that all staff on the unit need to be made more aware of the compliance issue and its associated effects.

The first step in attempting to increase healthcare worker hand hygiene compliance on both units was to gather current data on unit one. We accomplished this by using a pre-developed tool to monitor healthcare professionals during patient encounters. This tool was

created by Hospital A's infection control department and included instructions on how to accurately use it. Observations were recorded based on hand hygiene opportunities during patient and staff interaction. Before patient contact there is an opportunity for hand hygiene as well as after patient contact so if a healthcare worker is watched from beginning to end of a patient interaction there are at least two opportunities for hand hygiene. We were able to collect data on the unit during our clinical when we set aside time especially for observations during September and October.

When we finished collecting our data on the unit I compiled it into a chart so it would be easier to analyze and compare to the data available on unit two. The data we collected showed slightly lower amounts of compliance in comparison to unit two. Nurses were the most compliant with a compliance rate of fifty seven percent, physicians followed with forty four percent, techs at twenty nine percent, and other staff at sixteen percent compliance. After looking over data on both units it was very obvious that further staff education was going to be necessary.

Before we educated the staff we did some research in order to be able to compile accurate and up to date information. We looked at Hospital A's hand hygiene policy in addition to other reputable infection control resources. We also made to sure to find information on the importance of hand hygiene, interventions to help increase hand hygiene compliance, and potential barriers of hand hygiene compliance. We made sure that most of our research findings focused on hand hygiene compliance issues in hospitals.

Following our research we were able to create an educational presentation for the staff. We included the importance of hand hygiene, the data for both units on hand hygiene compliance, and Hospital A's hand hygiene policy details. We also included the potential barriers to hand

hygiene compliance such as lack of time, immediate patient needs, forgetfulness, and lack of positive role models (CDC, 2002). Other barriers were improper assumptions of low risk infection transmission and that wearing gloves eliminates the need for hand washing (CDC, 2002). We proceeded to give them suggestions on what exactly they were able to do in order to increase compliance on the unit. One of our suggestions was to talk to fellow hospital staff about possible hand hygiene opportunities and remind each other when an opportunity is missed (Whitby et al, 2006). Another suggestion was to use an alcohol-based hand rub when possible in appropriate situations in order to save time (Dedrick et al, 2007). We encouraged them to educate patients, their families, and other visitors the proper time, technique, and rationale behind hand hygiene (Sandlin, 2007). Lastly we mentioned the importance of realizing that even if a patient encounter is very brief it does not mean that there is a lower risk of infection transmission and that there are in fact a substantial amount of opportunities for transmission (Dedrick et al, 2007). Some of the examples of these brief encounters we gave them were taking vital signs, changing intravenous pump settings, and repositioning patients all of which occur often throughout every shift.

We followed the presentation with a short quiz in order for the information to be reviewed a second time and to help the staff retain it. We also left the poster containing the presentation details on the unit as a reference and so others unable to attend our presentation could see it. Our intervention as a whole will ideally increase staff awareness of appropriate hand hygiene opportunities and lead to increased compliance in the future. Our suggestions for how to make a difference in increasing hand hygiene compliance will hopefully be especially helpful on both units.

A management theory that this project is based on is the phenomenon of escalation of commitment. This is when an individual or group continues to make the make the same decision over and over again despite a presence of negative information (Robbins & DeCenzo, 2005). This is an error in the decision making process, but is something that should be able to be overcome. It is common knowledge to all medical professionals that hand hygiene is important especially in the hospital setting in order to prevent infection, yet as evidenced by hand hygiene compliance rates many are able to ignore that knowledge and continue to behave in the same way. This is the essential problem leading to the need for a hand hygiene project on these two units and why an intervention must be implemented. The knowledge that is in the back of all of their minds must be reinforced and made more important to them so they are unable to ignore it any longer.

A management theory that supports the implementation of this project is expectancy theory by Victor Vroom. Expectancy theory is based on an individual's tendency to behave a certain way in relation to what outcome they expect to see (Robbins & DeCenzo, 2005). This is applicable to our project because we are focusing our educational intervention and data presentation on what will most benefit the patients treated on the unit. This would not be an effective project if we thought that the staff members did not care about the patients and their treatment. All of my interactions with staff members and conversations with management on the unit have given me the impression that a high quality of patient care is what they all strive for and that it is important for them to do as much as they can for their patients. If this is true then they should view decreased infection rates as a reward for proper hand hygiene and as they continue to receive more information regarding hand hygiene and its effects on the quality of life their compliance should increase.

The mission statement of hospital A is "excellence and leadership in patient care, research, and education". Unit one and two both share this same mission statement and I feel that it is an accurate mission statement based on my time spent on both units. This mission statement is directly linked with the project that we completed on the units. Our project focused on all aspects of the mission statement; patient care, research and education. Our main focus was on excellence in patient care by working on an intervention that will benefit the care received by all of the patients on the units. This was accomplished by researching and collecting data in order to most accurately create our intervention. The research was then turned into a tool that would further the education of the staff on the unit.

I feel that the organizational structure in relation to both units will be very helpful when it comes to increasing compliance of staff. There is the director of cancer nursing who has both clinical nurse specialists as well as the manager responsible for both units reporting to her. The manager has both units' supervisors report to her and she collaborates with and delegates the clinical nurse specialists. There are also educational nurse coordinators on both units who work as floor nurses but also have projects they are responsible for. They report to and collaborate primarily to the clinical nurse specialists when it comes to the educational responsibilities of their jobs. With so many leadership roles on the units and so much collaboration between them I feel that they will have a huge effect on changing the behaviors and practices of other staff members when it comes to increasing hand hygiene compliance.

Both units have slightly different ways of doing things that may either help or hinder the attainment of increased hand hygiene compliance. On unit one there are quite a few new staff all the time due to a high turnover rate and the fact that many of the nurses use the unit as a stepping stone to different areas and levels of nursing. This type of a unit can be helpful in times of

change because they are so used to it already with a constant change in staff, but can also cause difficulties because of the constant need for education of new staff as they are trained and start working on the unit. On unit two the unit is composed of quite a few nurses who have been working there for years. The unit is very set in their ways and not as apt to change how they do their jobs. This will make things a little more difficult when it comes to changing hand hygiene behaviors, but once the change does happen it should be pretty ingrained.

Leadership can play a big part in implementing an intervention or any kind of change. Both of these units share the same manager who has a high concern for task management and slightly lower concern for interpersonal relationships. Her job involves a lot of coordination of both time and variety of activities as well as delegation, supervision, and overall responsibility for a smoothly run unit. Her organizational methods are extremely well thought out which helps her a lot in accomplishing tasks and staying productive. I feel that she does a good job when it comes to task management and in doing so her main focus in interaction with other employees is to make sure that these tasks are being accomplished.

When it comes to encouraging increased hand hygiene compliance among the staff on her units I feel that her leadership style will be effective, but with an altered style there would be a possibility for even more compliance. Our intervention is based on gathering research and data and presenting it in an educational session to the staff in order to increase awareness. This type of intervention does not require our manager to have a lot of good interpersonal relationships with the staff although it may increase compliance if she did. Managers have a positive influence on the hand hygiene compliance of their staff especially if they spend time around them during appropriate hand hygiene opportunities and take the time to remind them of hand hygiene importance as well as the organization's policy (Whitby et al, 2006).

I was able to complete a SWOT analysis of both units based on my personal observations, multiple conversations with my preceptor, and by interviewing various staff members. A SWOT analysis is an examination of an organization's specific strengths, weaknesses, opportunities, and threats in order to discover what makes them unique and to see what types of things may need improvement (Robbins & DeCenzo, 2005). This is helpful in relation to hand hygiene compliance on the unit because it shows the aspects of the unit that may be responsible for poor compliance as well as aspects that will help increase compliance.

I discovered quite a few strengths that will be helpful in increasing hand hygiene compliance on the unit. One strength is that the staff have a strong sense of what is best for the patient due to specialized cancer, chemotherapy, and end-of-life care knowledge. This is a strength because they are able to advocate for the patient well and interact better with the patient than those who have no knowledge of the cancer process and the care involved. Another strength is that the staff are unafraid to ask questions which is important because it isn't safe for a staff member to be unsure of a procedure or policy such as hand hygiene because it could cause negative results for the patient. There is also collaboration and respect between all different types of staff on the unit including nurses, nursing assistants, and doctors. This is strength because it makes caring for a patient easier and more effective because all of the staff are aware of the patient's condition and treatment.

One weakness I discovered was that there is a lack of necessary negative feedback and coaching between staff members. This is a weakness because increased communication could solve problems, help find discrepancies in how care is being given, and possibly clarify infection control guidelines such as when hand hygiene should be done. An important weakness of the unit is that the staff feel that they can't spend as much time with their patients as they should due

to the number of high acuity patients they are assigned. This is a weakness because it could make it so not all of a patient's needs are being met and can also prevent staff from having enough to compliant with hand hygiene guidelines.

According to SWOT analysis guidelines an opportunity is considered to be external environmental factors that are considered to be positive to the organization (Robbins & DeCenzo, 2005). A big opportunity for this organization is that it has a good status and a well known name in the outside community and even in the United States as a whole. This is an opportunity because it means that the units in the hospital also get some of the recognition and benefits from being part of such a successful organization. Another opportunity is that the University it is associated with makes research and many students readily available. This is an opportunity because patients benefit from new procedures, techniques, and technology associated with the research and results from the research. Having students available in all areas of healthcare provides fresh ideas for new patient care interventions such as the intervention that we have just put into place for infection control.

Threats are any external environmental factors that are considered to be negative to the organization (Robbins & DeCenzo, 2005). The main threat to this organization is a nursing and overall healthcare worker shortage. This is a threat because it makes the unit short-handed and makes it so there are less available healthcare workers to choose from to hire. Another threat is that there are other hospitals in the area with specialized oncology units as well as an institution that specializes in solely oncology patients and their needs. This is a threat because those suffering with cancer in the community may choose those other organizations for their care as opposed to this unit.

Now that we have completed our project we will be unable to personally evaluate its effectiveness. The effectiveness will eventually be evaluated by Hospital A's infection control department who will continue to collect observational data for both units on a monthly basis. When data from their observations is sent to the manager she will be able to see if our project made a difference to the compliance rates. Infection control will also analyze this new data and decide if it is necessary for them to provide more educational opportunities for the unit.

I would recommend continuing to research possible interventions in the future in order to continue to increase compliance on this unit. I feel that the compliance rates are not going to increase overnight, but will occur over a long period of time at a steady rate as long as interventions are frequently being implemented. Any new data gathered on compliance should be shared with the entire staff along with more suggestions for how to work on this issue. Staff will notice how big of a problem this really is and how they are involved especially if they are aware of the specific data that has been collected and how it affects the patients that they care for every time they come to work.

Throughout implementation of this project I learned a few things that will help me and possibly others work more effectively in the future. What I found to be extremely helpful in this project was researching hand hygiene guidelines and policies and how they had been effectively implemented in other institutions. It doesn't hurt to find out how other successful institutions are doing what they do as a basis for how to create your own intervention.

In the future it may be necessary for hospitals to report their hand hygiene compliance rates along with their infection rates. This makes it even more important for an increase in compliance rate because not only will a decreased compliance rate continue to create bad outcomes for patients in terms of infection rates, but the public will be able to see how poorly

both the units and organization as a whole are doing when it comes to this aspect of infection prevention. This will reflect badly on the organization and possibly cause a loss of status in the eyes of the public. This is an important outcome to avoid due to how beneficial the high status of this organization to its function. Every effort must be made in order to reach acceptable hand hygiene compliance rates.

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