

Quality Improvement Activity: Personal Protective Equipment.

On December 15, 2021, a 60-year-old man presented to the emergency department after experiencing weakness on his left side which was occurring gradually. On admission, the patient's blood pressure was 140/85 mmHg, respiratory rate of 17 breaths per minute, regular pulse of 81 beats per minute, and temperature of 98.2°F. On assessment, a bruit was heard over the right carotid artery and no gag reflex was detected. The CT of the head indicated unremarkable contrast and the stroke team concluded that no acute intervention was needed. The patient was then admitted. The patient was put under the care of the same nurse who was handling a pneumonia patient. On several occasions, the nurse was seen using the same gloves she had used to handle the pneumonia patient on this same patient over the days. On the fifth day of hospitalization, the patient's temperature increased to 103.1°F accompanied by frequent productive coughs. On Auscultation, basilar rales were audible on the left base of the patient's lung. Radiography of the chest indicated a new infiltrate on the left lower lobe. The blood cell count was found to be 21,000 cells / μ L dominated by neutrophils. Purulent sputum was also expectorated.

Describe the scenario. In what way did the patient care or environment lack? Is this a common occurrence?

From the above scenario, the patient was elderly and at high risk of hospital-acquired infection. After the patient's admission to the medical unit, he was put under the same nurse who provided care to another patient suffering from pneumonia. This increased the risk of the patient contracting hospital-acquired pneumonia. However, if the nurse made proper use of personal protective equipment including proper change of gloves and use of masks while also hand washing regularly after handling each patient, it would have been possible to prevent the cross-

contamination. The nurse was not following the personal protective protocol since she handled another patient with the gloves that she had used on a patient with a highly infectious disease. The nurse should have upheld the protocol for the use of personal protective equipment by changing her gloves, washing her hands, and using a mask when handling these two patients. Errors when handling personal protective equipment are common within the hospital setup and are one of the main causes of the spread of hospital-acquired infections.

What circumstances led to the occurrence?

The spread of pneumonia to the elderly patient was directly linked to the nurse that did not follow the personal protective equipment protocol by failing to change her gloves, wash her hands, and use a mask to prevent the spread of pneumonia from the diagnosed case to the other patient who was highly at risk.

In what way could you measure the frequency of the occurrence? (Interviewing nurses, examining charts, patient surveys, observation, etc)

The frequency of occurrence of the spread of hospital-acquired infections as a result of lack of adherence to the personal protective equipment protocol could be measured through different ways including interviewing the nurses, observation, reviewing incident reports, and reviewing the number of cases of hospital-acquired infections reported within the facility over a given period. The findings have indicated that the high number of hospital-acquired infections are significantly linked to poor adherence to the personal protective equipment protocol including improper handling of gloves, masks, and hand washing techniques.

What Evidence-based ideas do you have for implementing interventions to address the problem?

Implementing the personal protective equipment protocol when handling patients is essential in addressing the problem. These include providing education to the nurses on the use of disposable gloves including the procedure on using the same. Requiring that the nurses who handle patients who are at risk of hospital-acquired infections properly make use of protective gears including masks and gloves. The final intervention is emphasizing the need for handwashing after handling patients or procedures to prevent cross-contamination.

How will you measure the efficacy of the interventions?

Measuring the efficacy of the above interventions can be achieved by looking at the number of cases of hospital-acquired infections within the facility that are associated with cross-contamination due to poor handling and use of personal protective equipment.