PICOT

Question: How do interventions involving staffing, PPE, and screening (I) better protect healthcare providers (P) from being susceptible to the Coronavirus (O) throughout the pandemic (T), in comparison to those whose workplaces do not have such interventions in place (C).

Response:

As Coronavirus continues to spread throughout the healthcare community, hospitals have been able to pursue the continuity of care by implementing and adapting to new protocols. Despite the protocols that are already established in some healthcare organizations, other workplaces still have high rates of employees getting sick. Evidence-based practice illustrates that measures involving personal protective equipment, staffing, and screening effectively protects healthcare providers from contracting the virus.

Proper use of personal protective equipment is an essential component in protecting healthcare providers. In a study conducted in Wuhan, China, healthcare workers were deployed to care for coronavirus patients. The study examined the effectiveness of appropriate personal protective equipment use. The healthcare workers followed several preventative measures. For example, they "received training in the correct use of personal protective equipment" (Liu et al., 2020). They carried this out by "mutually [observing] each other [put] on and [take] off personal protective equipment" (Liu et al., 2020). Other measures that were taken include "minimizing direct contact with patients… replacing gloves promptly when contaminated… hand washing when changing gloves... and maintaining at least one [meter] distance between each other" (Liu et al., 2020). In addition, "all healthcare professionals had performed at least one aerosol generating procedure", yet "none of the participants reported fever, cough, or dyspnoea during their 6-8 week deployment to Wuhan" (Liu et al., 2020). The protocols and procedures carried out in this study were so effective in protecting the healthcare providers, that at the end of the study "they all tested negative for SARS-CoV-2 specific nucleic acids and IgM or IgG antibodies" (Liu et al., 2020). Although, proper use of protective personal equipment is a vital component of protective measure, staffing plays a major role as well. For example, a hospital in New York adapted to staffing needs through the "divide and conquer" (Jameson et al., 2020) method. Staff members were hand-picked to work on certain floors based on qualifications, skills, expertise and experience. Evidently, the approach that this hospital adopted helped "limit cross-infection" (Jameson et al., 2020) between floors, thus protecting the healthcare providers. Judicious placement and use of staff members in a hospital setting benefits healthcare workers by creating well-equipped and competent teams to combat the virus and providing protection from the risk of contracting the disease. Nonetheless, screening is also an imperative element in keeping healthcare workers safe from the virus. Cambridge writes an article regarding policies that they implemented for their hospital institution to follow regarding screening measures. Some policies that they established involved "universal SARS-CoV-2 testing of all patients admitted to the hospital, regardless of symptomatology or reason for stay", including "all patients undergoing surgical procedures" (Burnett et al., 2020). In addition, universal symptom screening was conducted for all staff members before work. The results of this study determined that after a few months since the protective measures were implemented, compliance to

screening was “central to the safety of the hospital community and has contributed to the lack of positive testing among asymptomatic [health care workers]” (Burnett et al., 2020).

Protocols are always changing in the healthcare system as a means to protect staff from getting sick. Evidence-based practice regarding protective measures involving personal protective equipment, staffing, and screening has proven to reduce the numbers of healthcare providers from contracting the virus in the workplace.

Works Cited:

Primary Article:

Liu, M., Cheng, S., Xu, K., Yang, Y., Zhu, Q., Zhang, H., . . . Xiao, H. (2020). Use of personal protective equipment against coronavirus disease 2019 by healthcare professionals in Wuhan, China: cross sectional study. *BMJ.* https://doi.org/10.1136/bmj.m2195

Secondary Article:

Jameson, A. P., Biersack, M. P., Sebastian, T. M., & Jacques, L. R. (2020). SARS-CoV-2 screening of asymptomatic healthcare workers. *Infection Control & Hospital Epidemiology, 41*(*10*), 1229-1231. https://doi.org/10.1017/ice.2020.361

Tertiary Article:

Burnett, G. W., Katz, D., Park, C. H., Hyman, J. B., Dickstein, E., Levin, M. A., . . . Hamburger, J. (2020). Managing COVID-19 from the epicenter: adaptations and suggestions based on experience. *Journal of Anesthesia*. https://doi.org/10.1007/s00540-020-02860-1