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REVIEWING THE FACTORS THAT ENHANCE THE COMPLIANCE TO STANDARD PRECAUTION IN PRIMARY CARE

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Abstract:
In hospital settings, standard precautions prevent the transmission of infections. A healthcare worker's failure to comply with infection control recommendations may increase his or her risk of exposure to infectious disease, particularly during pandemics. This study's objective was to analyze the level of compliance with infection prevention and control methods among healthcare professionals in various healthcare settings, particularly primary care settings. We scoured the most popular databases, Medline and Embase, for any relevant articles published up to the beginning of 2022 that were relevant to our topic. Due to occupational exposure to germs, healthcare personnel may contract an infection while administering nursing care.

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INTRODUCTION:

Health-care-associated infections (HAIs) are regarded as one of the most serious challenges healthcare providers faces when providing services to patients. These infections are widespread causes of morbidity and mortality in hospitalized patients [1]. Improving patient safety has received excessive global attention, and one of the primary objectives of the World Health Organization's World Alliance for Patient Safety [2] is to reduce HAIs. Standard precautions were defined by the Centers for Disease Control and Prevention in 2011 as "the minimum infection prevention measures that should be applied to all patient care" regardless of their suspicion or confirmation of infection status of the patients, which are used in all health care settings [3]. These precautions should be taken in any setting where health care is provided, always assuming that the blood, body fluids, secretions, and excretions of patients have infectious potential [4,5]. Therefore, nurses' knowledge and adherence to standard precautions are crucial for reducing the incidence of secondary infections [6]. However, the actual implementation of standard precautions in clinical settings deviates significantly from the recommendations and has proven to be somewhat problematic [7]. In spite of the awareness of the importance of standard precautions in preventing the transmission of infectious agents in the workplace, low compliance rates among health care personnel have been reported globally [7].

Compliance with standard precautions may be affected by environmental factors such as the availability of materials and equipment, a manager's lack of commitment, or individual factors such as knowledge [8]. In order to increase compliance with standard precautions and eliminate the factors that have a negative impact on compliance, nursing practice must undergo significant behavioral changes. These behavioral changes may involve education, motivation, and organizational modifications. Moreover, promoting compliance with standard precautions should primarily involve behavioral, environmental, and management actions, going beyond the individual focus that most institutions adopt by placing the blame on the victim [9]. It is crucial to note that the incidence of infectious blood diseases and the spread of non-blood infectious diseases, such as those transmitted through the respiratory system, have increased [7,9].

Compliance has been defined in a number of different ways [10,11]. Heynes et al. [12] provided a widely accepted definition of compliance in healthcare environments [13]. According to this definition, compliance is the degree to which a given behavior (such as following a physician's prescriptions or adopting a healthier lifestyle) is in conformity with the physician's instructions or health care advise. A range of elements, including culture, economic and social considerations, self-efficacy, and lack of knowledge or resources, can impact or control compliance. In a variety of settings (including health care settings), there are behavioral guidelines, but people do not always adhere to them. A number of conceptual models or theories have been developed in order to explain and comprehend the factors that influence an individual's compliance with certain guidelines, which may in turn contribute to the adoption of certain behaviors. The HBM is one of the most frequently used models [14,15].

DISCUSSION:

Standard precautions (SPs) are the key technique for preventing healthcare-associated infections (HAIs) in both healthcare staff and patients [16]. SPs are the latest and most comprehensive preventative guidelines for infectious risk [17]. SPs are predicated on the premise that all blood, bodily fluids, secretions, excretions (excluding sweat), nonintact skin, and mucosal membranes may contain infectious pathogens that are transmissible [18].

Guidelines for SPs include proper hand hygiene, the use of gloves and other personal protective equipment (PPE), proper cleaning and disinfection of patient care equipment and environment surfaces, proper waste disposal, proper management of used needles and other sharp objects, and proper cough etiquette [19]. These measures are essential for effective infection control because they prevent the transmission of microorganisms from one patient to another via the hands or uniforms of healthcare workers, reduce the exposure of healthcare workers to infectious agents, and decrease environmental contamination [17,18]. SPs should be used during all healthcare activities for all patients at all times to prevent HAIs among patients and healthcare staff, regardless of the known or suspected status of infectious pathogens [19].

Although global health organizations regard SPs as the most effective means of preventing HAIs, healthcare professionals' compliance with these measures remains inadequate. Particularly, compliance with SPs should be improved among nurses, who are more likely to be exposed to microorganisms associated with cross-infections since they provide direct and repetitive patient care [17]. Increasing evidence suggests that nurse compliance with SPs can contribute to the reduction of HAIs among patients

and healthcare providers, hence enhancing the efficacy and safety of care [19].

SPs are the work practices required to provide the highest level of infection control for the care of all patients, regardless of their diagnosis. It refers to all policies, processes, and activities aimed at preventing or minimizing the risk of infectious disease transmission in health care facilities. The administration of SPs is suggested for all patients, whether or not an infection is suspected or confirmed [20]. SPs consist of hand hygiene (routine hand washing, hand antisepsis, and surgical hand scrub), personal protective equipment (capes, gowns, masks, aprons, drapes, closed boots or shoes, sterile drapes), prevention of needle stick or sharp injury, waste management, instrument processing (decontamination, cleaning, and sterilization), processing linen, housekeeping, and clinical laboratory services [21]. The occupational exposure of health care workers to blood and body fluids poses a significant risk for the transmission of infectious diseases such as human immunodeficiency virus (HIV), hepatitis B virus (HBV), and hepatitis C virus (HCV) [21].

Numerous bacteria, many of which can cause serious or even fatal infections [12,19], are frequently encountered by health care professionals, notably nurses. The Centers for Disease Control and Prevention (CDC) issued the Standard Precautions, a set of guidelines to prevent exposure, in 1996; nonetheless, despite the simplicity and clarity of these guidelines, it has been noted that compliance among nurses is low. Although a high rate of occupational exposure to germs is documented among all health care personnel, nurses are among the most exposed [21]. It is therefore ethical to investigate the factors that influence nurses' adherence to SPs.

Regardless of whether a patient is symptomatic, SPs rules are intended to decrease the risk of microorganism transmission from one person to another. When a patient's infection status is confirmed or suspected, specific transmission-based measures must be followed. There are three sorts of transmission-based precautions: airborne, contact, and droplet. These involve the addition of transmission-based techniques to those of Standard Precautions, and they are employed in conjunction with SPs. Numerous infections can be treated just with SPs and do not necessitate further precautions [22].

Since their initial introduction, SPs have been implemented globally, with frequent updates provided. Although many guidelines for the control of specific microorganisms, such as Clostridium difficile and norovirus, have been developed, these guidelines have supplemented Standard Precautions [23] rather than replacing them.

Despite the widespread adoption of Standard Precautions by organizations, implementation gaps have been identified among healthcare professionals, and percutaneous injuries from needlesticks and sharps continue to occur [24]. Unsuitable infrastructure, such as lack of handwashing facilities, lack of awareness concerning transmission, insufficient personal protective equipment (PPE), risky worker behaviors, and inadequate working circumstances are cited as obstacles by healthcare professionals [25]. Therefore, interventions have been developed to encourage Standard Precautions implementation as the foundation for infection prevention and control.

The education program [26] also included classroom instruction regarding disease transmission, SPs, and PPE use. In this study, education was provided to both the intervention and control groups, which differs from the methodology described in earlier research. In addition, the intervention group received a visual representation of particle dispersion in the respiratory tract. The authors of the study did not indicate the length of the instructional session.

Two trials introduced support for infection control to an educational curriculum. In addition to a two-hour training session that included lectures and practical demonstrations of hand hygiene and decontamination of equipment and the surroundings, an infection control link nurse was assigned to the intervention group [27].

One study [28] provided an intervention that emphasized peer evaluation. Participants in the intervention group received information on peer evaluation and applicable instruments. During the intervention phase, participants evaluated their peers but did not provide feedback to individuals; instead, they provided input to the unit 11 times over the course of six weeks. The control group did not get any treatment.

In contrast to the other trials, the intervention in one [29] study was not educational. The intervention for radiology porters consists of a checklist and colored cues to promote infection control measures. The research involved four groups. Two groups independently evaluated the checklist and signals,

while one group evaluated them together, and the fourth group received no intervention. The same porters participated in each study group.

Thus, interventions differed between trials. No research established the intervention's theoretical foundations, such as whether it was based on a particular theory or paradigm for behavior change. Additionally, the period of follow-up differed. Two studies reported a followup term of one month, one a followup period of three months, two a followup period of four months, one a followup period of six months, and one a followup period of 12 months [30].

Two cluster-randomized trials evaluating the addition of infection control support to education used infection control link nurses and offered 24-hour telephone help. The control group received no treatment. In terms of audits of different suggested practices, both studies documented compliance at the institution level rather than the person level. The authors of both trials did not conduct a matched analysis as required by their respective designs. Overall, audited practices have improved, however there is considerable heterogeneity between long-term care facilities and audited practices [31.32].

Regarding compliance with other Personal Protective Equipment (goggles, masks, and gown), the results of this study indicated that 24.8% of total nurses typically wear a face mask to protect nasal and oral mucosa during procedures that may result in spraying of blood and body fluids, while 33.5% occasionally wear a face mask. This conclusion was consistent with prior research [33]. On the other hand, 6.8% of participants wore protective suits (gowns) always, 12.0% wore them frequently, and 43.6% wore them infrequently. Unfortunately, these percentages were somewhat low in comparison to other research [34], and extra attention must be paid to this issue in orientations, seminars, and educational classes. However, other studies have indicated similarly low compliance rates for personal protective equipment [33,35], which may be attributable to a lack of these types of equipment in the departments.

Nonetheless, the sample's overall compliance rate reveals significant areas for improvement, but it was higher than the compliance rates reported by nurses in Hong Kong, Brazil, and Saudi Arabia in earlier research using the same instrument [36]. Compared to other studies that published participant characteristics, our sample had a similar distribution of participants by gender, was younger and less experienced than Brazilian nurses, but older and more experienced than Hong Kong nurses. These researchers did not record the educational level of the nurses or if participants had received specific training on SPs [36]. Our group was highly educated, and the majority of nurses had attended SPs training. This may be one of the reasons why our sample's compliance rate was higher than that of earlier studies. However, more study is required to clarify the factors that influence nurse compliance with SPs across nations [36].

CONCLUSION:

SPs are the most essential infection prevention and control measures for preventing the transfer of germs to other patients or healthcare professionals. Therefore, encouraging nurses to engage in these activities as frontline workers is a fundamental aspect of infection control. Managers should assess compliance with SPs among clinical nurses with more vigilance in order to create and evaluate interventions tailored to their needs. The balance of these positively or adversely influential factors may have an effect on adopted behavior. If the reasons that tend to noncompliance outweigh those that lead to compliance, Standard Precautions are unlikely to be followed. Consequently, it is vital to identify the elements that influence compliance (both positively and negatively) and to establish strategies to eliminate those that prevent the adoption of Standard Precautions and promote those that facilitate their implementation.

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