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Standard Precautions Are The Work Practices Required To Achieve A Basic Level Of Infection Prevention And Control

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Abstract

Healthcare-associated infections cost the Ministry of health millions annually. Each infection costs additional money and resources. They also make patients unsafe and uncomfortable. Healthcare professionals (HCPs) are returning to handwashing as healthcare-associated infections (HCAIs) become more widespread, illnesses more serious, and treatments more complicated. However, healthcare personnel' hand hygiene compliance has continually been low. Two weeks of prospective observational data were collected on employees' basic hand hygiene routines. Two weeks were spent collecting prospective observation data. 217 times, various groups of employees appeared at different times. All nurses, ANPs, and domestic workers were bare below the elbow, but just 37% of consultants were. Consultants rubbed their hands 37% before and 33% after. ANPs did best, utilizing alcohol hand rub before and after patient contacts 70% of the time. Healthcare providers must be ready to teach patients how to wash their hands, a simple yet useful habit. This study demonstrates the standard was partially met.

Subject Areas Different departments in general governmental hospitals and state public institutions in KSA

Keywords Infection Control, Alcohol Hand Rub, Hand Hygiene.

Introduction

1. Background

It is possible for organisms to be transferred from one human to another either directly through the individual's hands or indirectly through an ambient source (such as clinical equipment, toys, or sinks). There is a consensus among all parties that the hands are the primary vector through which cross-infections are transmitted, and that maintaining proper hand hygiene is the single most critical component in the prevention and control of infections. At this point in time, cleanliness of the hands is considered to be one of the most essential components of infection control efforts. It was estimated that infectious diseases were responsible for 7% of all deaths in England in 2010, 4% of all possible years of life lost (up to the age of 75), and were also the leading reason of admission for 8% of all hospital bed days. Furthermore, infectious diseases are responsible for a significant amount of the sick leave

that employees take from their jobs [1]. As a result of receiving treatment inside the Ministry of health, it is estimated that 300,000 patients in England develop a healthcare-associated infection each year, which corresponds to a prevalence rate of 8.2% [2]. Methicillin-resistant Staphylococcus aureus (MRSA) bloodstream infections and Clostridium difficile infections were recognized as the underlying cause of or a contributory role in roughly 9000 deaths that occurred in hospitals and primary care settings in England in the year 2007. It is estimated that healthcare-associated infections cost the Ministry of health roughly one billion pounds per year. Every one of these infections results in a rise in expenses, an increase in the amount of resources that are used by the Ministry of health an increase in the amount of discomfort that patients experience, and a deterioration in the level of patient safety. As a result of the growing burden of healthcare-associated infections (HCAIs), the increasing severity of illness and the complexity of treatment, and the addition of multi-drug resistant (MDR) pathogen infections, healthcare practitioners (HCPs) are reverting back to the fundamentals of infection prevention by taking simple measures such as practicing proper hand hygiene. However, investigations that have been conducted on the compliance of healthcare personnel with regard to hand cleanliness have frequently demonstrated a lack of compliance with hand hygiene. Human healthcare workers (HCWs) frequently get their hands colonized with pathogens such as methicillin-resistant Staphylococcus aureus (MRSA), vancomycin-resistant Enterococcus (VRE), methicillin-resistant Gram-negative bacteria (GNBs), Candida species, and Clostridium difficile, which are capable of surviving for up to 150 hours. When it comes to lowering the incidence of healthcare-associated infections (HAIs) and the propagation of antimicrobial resistance, the single most important, straightforward, and cost-effective method is to practice proper hand hygiene.

2. Method & Sample

Over the course of two weeks, beginning on June 4th and ending on June 17th, 2024, prospective observational data were gathered. In accordance with the local guideline, a standard was established, and the following aspects were monitored differently for each level of personnel. If they were bare below the elbow, if they wore wrist watches or rings with stones or grooves, and if they utilized an alcohol-based hand massage before and after each patient encounter, then they were considered to be vulnerable to infection. On a total of 217 instances, employees belonging to a variety of categories were observed with varying degrees of frequency.

3. Results

Over a period of two weeks, individuals from various staff groups were observed on 217 distinct occasions. Consultants were observed a total of 27 times during the ward round. Registrars were seen 35 times, SHOs 31 times, advanced nurse practitioners (ANPs) 44 times, nurses 61 times, allied professions 30 times, and domestic staff 33 times. Only 37% of the consultants adhered to the bare below elbow protocol, whereas nursing staff, Advanced Nurse Practitioners, and domestic personnel attained a 100% compliance rate (Table 1). This is evidently due to their clothing code. Regarding the use of alcohol hand rubs, 37% of consultants employed hand rubs prior to procedures, while 33% utilized them both before and after. The ANPs demonstrated superior performance, with 70% utilizing alcohol hand rub before and after each patient interaction.
(**Figure 1**).

4. Discussion

Hand hygiene is now considered a crucial component of infection control measures. In 2023, in the Kingdom of Saudi Arabia, infectious diseases constituted 7% of total mortality, 4% of potential years of life lost (until age 75), and were the principal reason for 8% of all hospital bed occupancy, significantly contributing to work-related illness absenteeism. Within the majority of healthcare facilities,

Table 1. Showing the findings indifferent employees about the infection control strategies.

Employee group Below	Bare Elbow	Jewllery/Wrist watches	Hand Rub (Before)	Hand Rub (After)	Total Number
Consultants	10	9	10	9	27
Registrars	28	6	15	16	35
SHOs	19	6	15	12	31
ANPs	44	0	31	31	44
Nurses	61	4	37	37	61
Allied Health Professionals	21	12	10	8	30
Domestics/House Keepers	33	9	12	8	33

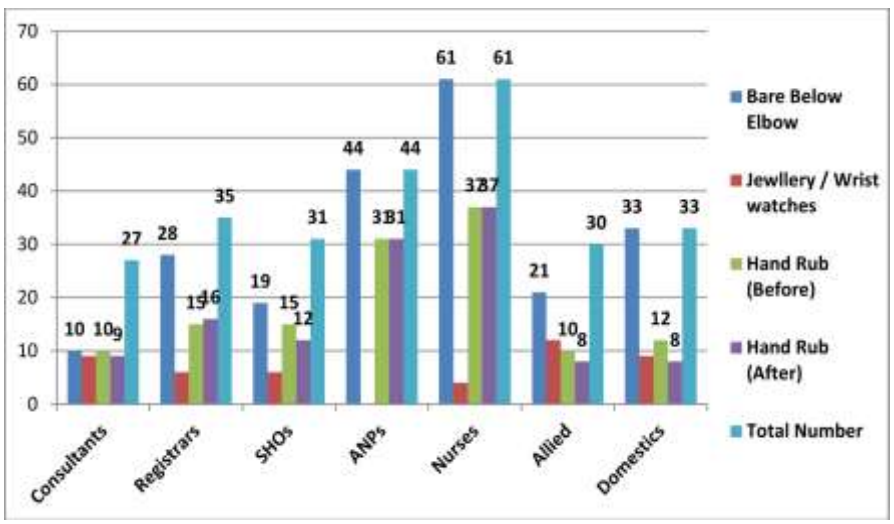

Figure 1. Showing performance of different level of employees in infection control stra-tegies.

Table 2. Factors influencing infection control strategies.

Staff factor	Clinical factor	Environmental/Institutional factor
Physician status	Working in ITU	Believes that wearing gown and gloves take away the needs of hand hygiene
Male sex	Weekdays Vs Weekends working	
		Inappropriate location of the hand hygiene equipment

Lack of Role model	Understaffing	Belief of low risk of infection from Inappropriate hand hygiene
Forgetfulness	Patient overcrowding	Lack of guidelines/Protocol
Not thinking about	Insufficient time	Lack of institutional priority
Lack of knowledge	Patient needs take priority	Lack of administrative sanction of the noncomplainers/rewarding compliers

Compliance with prescribed hand-washing protocols remains unacceptably low, seldom surpassing 40 percent in instances where hand hygiene is warranted [3] [4]. Hand hygiene embodies attitudes, behaviors, and beliefs. Several observed and self-reported factors influencing hand hygiene behaviors are included in Table 2 [2]. [5]-[10]. In our research, these factors became increasingly apparent. Basic hand hygiene practices were monitored among various staff levels during a two-week period. Only 37% of the consultants were observed to be bare below the elbow, whereas nursing staff, Advanced Nurse Practitioners, and domestic personnel attained a 100% compliance rate. Regarding the use of alcohol hand rubs, 37% of consultants employed hand rubs prior to procedures, while 33% utilized them both before and after. The ANPs attained optimal performance, with 70% utilizing alcohol hand massage before to and following each patient interaction.

5. Conclusion

One reason microorganisms have persisted in nature is likely their simplicity: a basic genomic structure with genetic encoding of essential survival mechanisms. To combat these microorganisms, humans must adhere to fundamental and straightforward infection prevention practices. This investigation demonstrates that the standard was partially fulfilled. Healthcare practitioners must prepare to integrate the fundamental and effective practice of hand hygiene into their everyday patient care routines.

Conflicts of Interest

The authors assert the absence of any conflicts of interest pertaining to the publishing of this paper.

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