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Original research article

Knowledge regarding hand hygiene among MBBS IInd phase students

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Abstract

Hospital-acquired illnesses, often known as HAIs, are an issue that affects people all over the world. If practised correctly, hand hygiene has the potential to drastically cut the risk of infections being passed from one patient to another in medical facilities. Everyone who works in the healthcare industry, including medical students and residents, is at risk of contracting or spreading HAIs. There is a wide range of understanding about hand hygiene practises among medical students. Teaching proper hand hygiene to all of the medical students can be a time-consuming undertaking.

Keywords: Hand hygiene, hospital acquired infections, MBBS students, video-based learning

Introduction

According to estimates provided by the WHO, around 1.4 million patients in industrialised as well as developing nations could be afflicted by health care-associated illnesses at any given moment [1]. There is evidence from the scientific community that supports the observation that appropriate implementation of hand hygiene practises has the potential to dramatically minimise the risk of infections being passed from one patient to another in healthcare settings [2, 3, 4]. Washing one's hands reduces the amount of potentially infectious agents that are carried on one's hands by a significant amount. There is as little as a forty percent compliance rate among health care personnel when it comes to proper hand hygiene [6, 7, 8, 9, 10]. Continuous attempts are being made in order to find strategies that are both successful and sustainable so that the situation can be improved. It has been observed that the majority of medical students do not adhere to proper hygiene practises [11]. According to the findings of other writers, if students are taught early on in their medical education about the significance of developing right hygiene behaviours, it will be easier for them to comprehend the significance of practising proper hand cleanliness [12]. The medical college that was selected for the research project is a tertiary care centre, which means that medical students spend a lot of time in direct contact with patients, both as part of their education in medicine and also in their roles as carers. It is imperative that they receive training in fundamental hospital infection control skills as soon as feasible in the course of their education in order to avoid nosocomial infections from occurring among patients and among the students themselves. It is possible that teaching excellent hand hygiene skills to all of the employees who are involved in the care of the patient would be a difficult undertaking. This research investigates whether or not the use of video demonstrations as educational aids is beneficial. It is hoped that, if this approach of learning through videos is proved to be effective, it can be utilised as a simple, rapid, and less resource-intensive method to teach a large group of people the skills necessary for proper hand hygiene.

Materials and Methods

The study was conducted in Anna Medical College, Mauritius.

Before beginning this investigation, we first sought and received clearance from the Institutional Ethics Committee. Students in phase 2 of the MBBS programme who volunteered to take part in the study followed the protocol for a descriptive cross-sectional study design. They were provided with a comprehensive explanation of the processes involved in the study, as well as an assurance that the data obtained would be kept confidential. Consent after informed deliberation was gained in written form. The pre-test and post-test both made use of a structured paper-based questionnaire that contained a total of 20 questions with multiple-choice answers. In the event that the participants were unable to comprehend the materials, explanations were provided. Following the administration of the pre-test, movies were screened that discussed the significance of practising proper hand hygiene, its processes, and the WHO's five moments of hand hygiene. After that, the post-test was given to the students. The information that was gathered was entered into a table in Microsoft Excel, and the findings were analysed by doing percentage calculations.

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Results

Table 1: The summary

Question Correct option	Correct answer in Pre Test	%	Correct answer in Post Test	%	P value
The correct way of washing (Theory)	120	86	135	96	0.0035
Standard precautions need to be followed only if the patient has no infectious disease	106	76	139	99	0.0000
Is hand hygiene the most effective way to keep away transmission	93	68	111	76	0.132
Wearing of gloves eliminates the need of hand hygiene	98	71	138	99	0.0000
Practical	94	68	110	76	0.1360

Discussion

The overall frequency of healthcare-associated infections in hospitals in underdeveloped nations like India ranges from 5.7% to 19.1%, with a pooled prevalence of 10.1% [13]. In the wake of the growing burden of health care-associated infections, the increasing severity of illness, and the increasing complexity of treatment, which is superimposed by multi-drug resistant pathogenic infections, health care practitioners are reversing back to the fundamentals of infection prevention by simple measures such as proper hand hygiene [14]. Hand hygiene is a broad phrase that can refer to either the act of washing one's hands, using an antiseptic hand wash or antiseptic hand rub, or performing surgical hand antisepsis [15]. It has been discovered that medical students' levels of understanding of the infection control practises used in hospitals are highly diverse. It is crucial to understand how medical students think about infection control in order to increase compliance, and the first step in this process is to evaluate the strengths and shortcomings of their education. Understanding how medical students think about infection control is important. Due to the large number of studies that have been conducted on professional healthcare workers and the relatively small number of studies that have engaged undergraduate medical students, additional research is required in order to evaluate the knowledge levels of medical students [13, 16]. In this particular survey, between 70 and 80 percent of the students responded correctly to the majority of the questions. Only around a third of the participants were aware of the appropriate length of time for both washing and rubbing their hands. A little less than half of the students were unaware of the fact that it is recommended to wash one's hands between different procedures performed on the same patient and that proper hand hygiene is required prior to carrying out a surgical treatment. After attending the learning session, there was a discernible rise in the overall level of knowledge regarding all of the constituents. It is possible that pupils will develop improper hand hygiene practises if there is no curriculum in place that covers the concepts and skills related to hand hygiene [12]. Several authors have emphasised how important it is to make teaching about proper hand hygiene a high priority in the classroom [17]. The old MBBS curriculum that was established by the Medical Council of India did not include an explicit listing of hand hygiene as an important ability. However, the ability Based Medical Education that is being introduced from the academic year 2019-20 has included such a listing. 18. Everyone who works in healthcare, including doctors, nurses, and other medical professionals, as well as students, has a responsibility to understand proper hand hygiene. It has been attempted to increase the medical students' knowledge of hand hygiene through the use of a variety of methods, such as including it in the required curriculum, making it a routine practise for teaching faculty to serve as motivating role models, including it in the examination checklist of OSCE stations, providing regular feedback and reminders to students who make mistakes in their hand hygiene practises, and distributing YouTube links to clips on the application of hand hygiene by: 19 According to one study, the combination of these tactics boosted the level of awareness from 56% to 78.4%, and also increased the level of compliance from a meagre 17% to 47% [19]. Multiple studies have indicated that the hand hygiene practises of teachers and other adults in authority over children are the single most important factor in influencing pupils' behavioural patterns [19, 20, 21]. In this investigation, a video-based teaching and learning method was utilised with the assumption that, if successful, it would be simple to implement many times, and they can also be distributed to students so that they can watch the movies on their own personal computers or mobile devices (such as cell phones) for the purposes of reinforcement and reference. Studies have indicated that higher year medical students had greater understanding and practise of hand hygiene. One possible explanation for this finding is because individuals at advanced years of medical school are more exposed to clinical practises, including extensive exposures to patients, clinical practises, and senior clinical personnel in hospital wards [22].

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Conclusion

Students in the second year of the MBBS programme at this institution are aware of the need of practising proper hand hygiene; yet, they still have a lot to learn about the correct method and the circumstances in which it should be used. One single video-based learning session was found to boost participants' knowledge, at least immediately after the session; this session could be easily employed for the purposes of training and reinforcing previously acquired skills.

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