

Patient participation in hand hygiene among health professionals

Participação do paciente na higienização das mãos entre profissionais de saúde
Participación del paciente en la higienización de las manos entre profesionales de salud

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ABSTRACT

Objective: To investigate the perception and attitude of health professionals (HPs) about the patient participation in hand hygiene (HH). **Method:** A cross-sectional study with 150 HPs from a university hospital in Brazil. A descriptive analysis was conducted. **Results:** Simple hand hygiene was the preferred method of HPs, rather than hand rubbing with alcohol-based solutions. A total of 83.3% of the HPs supported the patient participation in reminding them about HH, but 48% reported that they would feel uncomfortable; 45.3%, comfortable; and 20.7% were familiar with the "Patients for Patient Safety" program. **Conclusion:** HPs showed limited knowledge about HH, opposing recommendations on the topic. The contradiction between the HPs acceptance and attitude when questioned by the patient regarding HH was revealed, reflecting a lack of knowledge about the WHO program and the need to implement educational practices in health.

Descriptors: Health Professionals; Hand Hygiene; Patient Participation; Patient Safety; Hospital Infection.

RESUMO

Objetivo: Investigar a percepção e atitude dos profissionais de saúde (PS) sobre a participação do paciente na higienização das mãos (HM). **Método:** Estudo transversal, realizado com 150 PS de um hospital universitário do Brasil. Realizou-se uma análise descritiva. **Resultados:** A higiene simples das mãos foi o método preferido dos PS, em detrimento da fricção com preparação alcoólica. Dos PS, 83,3% apoiavam à participação do paciente em lembrá-los sobre a HM, mas 48% relataram que se sentiriam desconfortáveis; 45,3%, confortáveis; e 20,7% conheciam o programa "Paciente Pela Segurança do Paciente". **Conclusão:** PS mostraram conhecimento limitado sobre a HM, contrapondo as recomendações sobre o tema. Revelou-se a contradição entre a aceitação e atitude dos PS em serem questionados pelo paciente a respeito da HM, refletindo desconhecimento do programa da OMS e a necessidade de implementação de práticas educativas em saúde.

Descritores: Pessoal da Saúde; Higiene das Mãos; Participação do Paciente; Segurança do Paciente; Infecção Hospitalar.

RESUMEN

Objetivo: Investigar la percepción y actitud de profesionales de salud (PS) sobre la participación del paciente en la higienización de manos (HM). **Método:** Estudio transversal, realizado con 150 PS de un hospital universitario de Brasil. Se realizó un análisis descriptivo. **Resultados:** La higiene simple de manos fue el método preferido de los PS, en detrimento de la fricción con preparación alcohólica. De los PS, 83,3% apoyaban a la participación del paciente en recordarlos sobre la HM, pero 48% relataron que se sentirían incómodos; 45,3%, confortables; y 20,7% conocían el programa "Pacientes en Defensa de su Seguridad". **Conclusión:** Los PS mostraron conocimiento limitado sobre HM, contraponiendo las recomendaciones sobre el tema. Además, revelaron contradicción entre su aceptación y actitud a respecto de que sean cuestionados por el paciente sobre la HM, reflejando desconocimiento del programa de la OMS y la necesidad de implementación de prácticas educativas en salud.

Descriptores: Personal de la Salud; Higiene de las Manos; Participación del Paciente; Seguridad del Paciente; Infección Hospitalera.

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INTRODUCTION

Hand hygiene (HH) has been considered, for more than 150 years, the most important measure to reduce the cross-transmission of microorganisms in health services. This practice is recognized above all as a simple, effective and cost-effective way to reduce healthcare-associated infections (HAIs) by international agencies such as the World Health Organization (WHO) and Centers for Disease Control and Prevention (CDC) and Brazilian national agencies such as *Agência Nacional de Vigilância Sanitária* – National Agency of Sanitary Surveillance (ANVISA)⁽¹⁻³⁾.

However, despite all the evidence about the relevance of HH to the breakdown of the microorganism transmission chain and its effectiveness in the prevention of HAIs, compliance with this practice by health professionals is reported as unsatisfactory throughout the world, with an estimate of lower rates to 50%⁽⁴⁻⁷⁾.

The factors pointed to explain the low adherence to HH among HPs are associated with forgetfulness, beliefs and inadequate knowledge; dryness and skin lesions; excess of activity or insufficient time; physical structure-related problems such as sinks which are far or inaccessible to the professional; lack or low quality of inputs such as soap, paper towel and alcohol-based solutions, among others⁽⁶⁻⁸⁾.

Thus, several initiatives have been developed by international and national bodies, societies and associations of infection control professionals, in order to increase HH adherence among HPs, such as WHO's First Global Patient Safety Challenge of Clean Care is Safer Care, which aims to reduce the occurrence of HAIs through actions related to the improvement of HH⁽¹⁻⁵⁾.

In this perspective, the "Patients for Patient Safety" program, which proposes to ensure the patient participation in all healthcare levels, is highlighted, with an emphasis on improving HH adherence, reminding health professionals to perform it before their care^(2,9).

Regarding HH, informing and educating patients to participate in their own care is a relatively recent strategy proposed by WHO. Positive results have been demonstrated in international studies on increasing HH adherence in health services^(2,10-11).

However, this program is still little publicized, and the reports about it are more focused on the North American experience. In Brazil, despite the growing interest in its implementation and in WHO recommendations for its implementation, there are no studies that report how patient involvement has developed as a strategy to improve HH among health professionals. Therefore, the objective of this study was to *investigate the perception and attitude of health professionals regarding patient participation in hand hygiene in the perspective of the patients for patient safety program*.

METHOD

Ethical aspects

This study is part of the project *Impacto da estratégia multimodal na adesão à higiene de mãos entre a equipe multiprofissional* (Impact of the multimodal strategy on the adherence to hand hygiene among the multiprofessional team) submitted

and approved by the Research Ethics Committee of the Federal University of Minas Gerais (COEP/UFMG).

Study design, location and period

This present research consisted of a cross-sectional approach, conducted in a public university hospital in Belo Horizonte, Minas Gerais, Brazil, from August to October 2015.

Population and inclusion and exclusion criteria

One hundred and fifty health professionals were interviewed individually at their workplace. The participants were selected according to the inclusion criteria: being a medical professional or being in the nursing team; working in medical-surgical clinic units; and provide direct patient care. Exclusion criteria were as following: health absent professionals in the sector, due to leave, vacations or medical leave during the period of data collection.

Instrument of data collection

The study used a structured questionnaire, based on the model developed by WHO⁽²⁾. This was adapted to local reality and previously tested in the pilot study. The instrument of data collection was divided into five parts: *I – sociodemographic characteristics; II – perception of health professionals in relation to HAIs and HH; III – perception of health professionals regarding compliance with hand hygiene; knowledge of health professionals regarding the structure of the unit and materials for HH; IV – perception and attitudes of health professionals regarding the patient participation in hand hygiene*.

Statistical and result analyses

The collected data were analyzed in the Statistical Package for Social Sciences program (SPSS), version 21, through descriptive statistics to summarize the obtained data set.

RESULTS

Regarding the sociodemographic characteristics of the 150 health professionals interviewed, 55.3% were nursing technicians; 26% were nurses; and 18.7%, doctors; with a predominance of females (74.7%). The mean age was 35 (22-64 years). The mean time of professional training was 9 years and the professional performance of the interviewees in the institution was 4.6 years.

Regarding the perception of health professionals about HAIs, all participants reported being aware and concerned about the risk of patients acquiring them, and 90.7% considered that HAIs represent a *highly relevant* issue. Most health professionals (90%) considered the HH to be *highly effective* in reducing care-related infections, and 94.7% believed that this practice was very important when performed before and after contact with patients to prevent infection. Regarding the professionals' preference of HH type, hand washing with soap and water (78%) was preferred, rather than the hand rubbing with alcohol-based solutions (22%).

The reasons reported by professionals for hand hygiene with soap and water were, for 43.6%, related to efficacy;

24.8%, to practicality; 19.7%, due to habit/custom; and 12% did not express the reason for their preference. Regarding the use of alcohol-based solutions, 69.7% attributed their choice to practicality; 12.1% due to effectiveness; 3%, habit/custom; and 15.2% did not inform the reason for the choice. Training on HH was reported by 52.7% of the HPs, admitted in the institution, in the last year.

In face of the perception of the health professionals regarding hand hygiene compliance, they stated performing HH with soap and water in 57.6% of the moments *before and after the contact with patients*; and hand rubbing with alcohol-based solutions, in 39.3%, which is restricted to the moment *before having contact with patient*.

Regarding the structural aspects of the units and the products that contribute to HH compliance, a large part of health professionals considered the availability of water, soap and paper towel, trash bins without manual contact, sinks in the units and alcohol-based solutions to be very important. Most of the interviewees considered that the institution had all the products and materials for HH.

As to the incentive to the practice of HH, 57.3% of the professionals recognized the incentive of their direct superior as important; 81.3%, the institution's incentive; and 32%, the attitudes of colleagues.

Regarding national regulations and guidelines for HH, 37.3% reported knowledge of the Resolução Diretoria Colegiada (Resolution Collegiate Board of Directors) (RDC) 42, 2010, of the National Sanitary Surveillance Agency, which stipulates the obligation to provide alcohol-based solution for antiseptic hand rubbing with the goal of establishing and promoting HH in the country's health services, in accordance with WHO guidelines in the World Alliance for Patient Safety. And 56.7% stated that they knew the "Five Moments for Hand Hygiene," an information that guides the specific situations in which HH is necessary, closely linked to the activities of health professionals and their involvement with the care/services close to the patient. On this topic, 8.1% correctly described these moments for HH.

According to the perception and attitudes of health professionals regarding patient participation in hand hygiene, the majority of the interviewees (83.3%) considered that the patients could help improving HH, by reminding health professionals about this practice (52.2%), aiming to promote greater patient protection/safety (25.6%), since it is a patient's right (11.2%) and in order to avoid/prevent infection (8%). On the other hand, 16.7% of the interviewees did not view this participation as positive, claiming it to be unnecessary (60%), not the patient's function (24.0%), and embarrassing, the patient reminding the professional about HH (16.0%).

The majority of professionals (93.3%) considered the patient participation to be important, in reminding the professionals about HH; whereas, 19.3% of the interviewees were previously questioned by patients or relatives.

When questioned about their feelings about being reminded by patients about HH, 48% of the total of 150 participants reported that they would feel uncomfortable; 45.3%, comfortable; and 6.7%, very comfortable.

When questioned about strategies that would make it easier for patients to identify HPs willing to be questioned about HH, 53% of the professionals considered it *important* to display posters in patient units, written statements/booklets as well as verbal guidance, and 41.3% considered the use of badges with phrases that would encourage the patients to such questioning as *unimportant*.

Regarding the WHO "Patients for Patient Safety" program, 20.7% of the participants reported knowing about it, and 45.2% of them indicated that its foundation would be patient involvement in care.

DISCUSSION

Regarding the perception of interviewed health professionals about HAIs, the majority of them were aware of the risk of patients acquiring infections through the care service. Also, they considered that this was a high risk. A similar result was found by Kim et al. (2015).

The health professionals of this study reported preference for simple HH, instead of hand rubbing with alcohol-based solutions, because they considered HH to be more effective. Possibly, the health professionals in this study do not recognize the indications and effectiveness of the types of HH, which may have influenced the greater adoption of simple HH in relation to hand rubbing with alcohol-based solutions, in addition to the situations in which they must be performed.

This inference can be influenced by the data that only 52.7% of health professionals reported having received training on HH in the institution, directly reflecting the low recognition of alcohol's effectiveness for hand rubbing, consequently, the preference for simple hand hygiene was justified by practicality, which is not consistent with WHO recommendations⁽¹⁻³⁾.

The encouragement of the use of alcohol-based products has been considered a strategy to increase health professionals' adherence to HH and to reduce the rate of HAIs, by reducing the time spent with this practice and due to the rapid and effective reduction of microbial load. In the findings of this study, the lack of the HPs' proficiency in HH, as well as a lack of knowledge of the effectiveness of HH products and types is clearly evident^(1-3,9,12).

HPs preference for simple hand hygiene is still a major challenge in several countries, as pointed out by Bathke et al. (2013), in establishing that, among the opportunities for HH, performed by monitored health professionals, in 90.5% of the situations, used soap and water; 6% alcohol-based solution; 2.4%, water, liquid soap followed by alcohol-based solution; and 1.2%, water and degermant solution⁽⁶⁾.

In this study, it was identified that, although HH is one of the most studied themes under different aspects, its comprehension and adoption in clinical practice still serve as the cornerstone for providing safe healthcare, which is evidenced worldwide by the low rates of their compliance among health professionals⁽¹⁻³⁻⁶⁾.

In this study, most interviewees reported that all products and materials that contribute to HH were available at the institution. This finding differs from other studies that have shown lack of inputs such as water, soap, alcohol-based solutions and paper towel, and the absence of these products was

mentioned as one of the factors for the low adhesion to HH by HPS^(2,6,13-14).

The change of the system, according to the WHO proposal, established in the "A Guide to the Implementation of the WHO Multimodal Hand Hygiene Improvement Strategy" in health services aims to ensure the availability of the materials necessary for the practice of hand hygiene by health professionals, including continuous and safe access to water and materials such as liquid soap, paper towels and, in particular, the availability of alcohol-based solutions, whether in liquid form, gel or foam⁽²⁾.

Most of the health professionals followed in this study, which was directly involved in patient care, were unaware of the Resolution of the Collegiate Board 42, legislation in force in Brazil since 2010, which may justify the reduced use of alcohol-based solutions in the health service, as well as the knowledge of its indications and effectiveness⁽¹⁵⁾.

In addition, the observed inadequacies regarding the preference for the use of soap and water as well as the predominance of the adoption of HH restricted to *before and after the contact with the patient* can be explained by the lack of knowledge of the "Five Moments for Hand Hygiene."

This finding is alarming, as it brings to light the limitation of perception of the HPS to the necessity of HH in the moments related to the handling of invasive devices during patient care, when moving from a contaminated body site to another, after contact with bodily fluids or excretions, mucous membrane, non-intact skin or wound dressings; after removal of gloves and, especially, after contact with inanimate objects and surfaces immediately next to the patient, understanding that environment and equipment can be considered as potential reservoirs of microorganisms^(1-3,16).

In clinical practice, the application of the "Five Moments for Hand Hygiene" actually remains as a challenge, in which the HPS recognize HH as a fundamental measure for prevention/reduction of HAIs, of the dissemination of bacterial resistance. However, HPS are not yet able to recognize the situations that require HH adoption and, consequently, do not adopt it effectively⁽¹⁷⁻¹⁸⁾.

Although Pan et al. (2013) have shown that 83.1% of the 880 health professionals evaluated showed good knowledge of the five moments for HH, this is not compatible with the reality of other countries and healthcare institutions⁽¹⁷⁻¹⁹⁾.

In the study by Souza et al. (2015), performed in a Brazilian Intensive Care Unit, the data that in 81.6% of cases HH was not performed "before aseptic procedure"⁽¹⁷⁾, is also alarming. However, according to self-reported rates of intensive care nurses in Turkey, 65%-93% performed HH before and 96-100% after procedures with patients⁽²⁰⁾.

The support for patient participation in reminding professionals about HH is in line with the findings of Pan et al. (2013) and Longtin et al. (2009), in which 62.8% and 73% of the health professionals surveyed agreed with patient participation in HH, respectively⁽¹⁹⁻²⁰⁾.

Among the reasons considered by the interviewees to support the patient participation in HH, most answered that this attitude would increase the compliance of HH among health

professionals due to forgetfulness. However, among those who disapproved of the patient's involvement in HH, claims mainly revolved around the premise that this strategy was unnecessary, since such attitude is not the patients' function and that the HPS know their obligation. This data contrasts with Kim et al. (2015), as the reason given by the health professionals when disagreeing with the patient participation referred to their concern with the negative effects this intervention may have on their relationship with the patients⁽¹¹⁾.

On the other hand, studies that investigated how patients feel about questioning HPS about HH stated that they did not feel comfortable asking the HPS, as there are the possibilities of retaliation, interference and detriment to the treatment given by the professionals^(11,21-22).

Although most healthcare professionals in the study supported patient participation and considered it important to remind patients about this practice, an expressive number of HPS that were still supportive reported that they would feel uncomfortable being questioned by patients if they performed any type of HH. This finding was corroborated by the results of the study by Kim et al. (2015)⁽¹¹⁾.

Strategies for using badges stating "Ask me if I sanitized my hands" were considered to be of little relevance to respondents, stating that they would not like to use them, consistent with the statements of Longtin et al. (2009), in which 37% would not consent to use badges to invite patients to ask about hand hygiene⁽²⁰⁾.

The use of "Ask Me if I Sanitized My Hands" badges is considered an important tool to educate and encourage patients to remind professionals about HH. However, in this study, it was observed that, in fact, the interviewees (physicians, nurses and nursing technicians) were not open to questioning, since the majority did not want to use them. As HPS reported approving patient participation in reminding them on how to sanitize their hands, not wanting to wear the badges is clearly a contradiction between accepting patient participation in this process, but not committing to adopting attitudes that lead them to such behavior.

Limitation of study and contribution to health

As limitations of the research, the fact that it was conducted in a single institution with a method of convenience sampling, as well as the shortage of specific scientific literature involving the patient participation in adherence to HH at the time of the research. Although these limitations have been present, the contribution to the practice of nursing and health professionals from the results obtained points to relevant reflections, in which it is evident that the professionals of health, although they often verbally assume the relevance of patient participation in their treatment and in encouraging good practices, do not always incorporate postures and positive attitudes that in fact influence and encourage patients to such involvement and co-responsibility for their treatment. The results of our study also indicate that training and continuing education in this aspect of patient involvement in improving care practices should be planned and guaranteed.

CONCLUSION

In this study, there was a contradiction between the acceptance and the attitude of HPs to be questioned by the patient about HH, reflecting their lack of knowledge of the WHO program and the need to implement educational practices in health. These results point to the need for a great investment in HH policies in Brazilian hospitals, institutions which have a scenario that is similar to the one found in the present study, which possibly can also extended to the reality of other developing countries. Actions aimed at training strategies that can clarify and strengthen HPs regarding indications, recommendations and situations/moments in which HH should be performed, as well as the choice of type of HH to be adopted and products to be used, should be prioritized and planned as permanent action in healthcare institutions.

The barriers to HPs knowledge, perceptions and attitudes express a distancing from national and international guidelines for HH, reinforced in several other WHO-supported documents in campaigns proposed since the World Alliance for Patient Safety. Another point to highlight is the importance of disseminating knowledge about *the five moments for HH*, which should be a tireless aim of those responsible for training, qualifying and monitoring of the quality of care in institutions.

All of this may also explain the controversy, which consists of: on one hand, the professionals present a predominant feeling of discomfort before being questioned by the patient; on the other hand, their acceptance regarding the patient participation in incentivizing and reminding the HPs about HH is high, being, therefore, due to the obligation to implement strategies that stimulate this action.

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