

# Compliance with hand hygiene: an expected heritage of the COVID-19 pandemic

*Adesão à higiene de mãos: uma herança esperada da pandemia da COVID-19*

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Among the prevention and control measures of healthcare-associated infections (HAIs), hand hygiene (HH) is considered the most effective, the easiest to execute, and the least costly<sup>(1-2)</sup>.

Important milestones in history have placed HH in the spotlight as an infection prevention and control measure. Records indicate that Hippocrates (460 BCE), who is considered the father of medicine, already recommended this practice before performing surgery. In the 19<sup>th</sup> century, emphasis goes to Ignaz Philip Semmelweis, who after his obstinate search for causes of puerperal deaths in a maternity ward in Vienna, in 1847, instituted mandatory “hand washing” with chloric acid before attending to births, reducing death rates from 12.24% to 1.89%. Florence Nightingale, a pioneer nurse in the 19<sup>th</sup> century, emphasized HH as a measure that led to a great reduction of deaths among soldiers in the Crimean War (1854). Nightingale was a fierce advocate for hygiene principles as pillars of patient care: principles that composed the foundations of the institutionalization of nursing as a profession, when in 1860 she created the Nightingale Training School for Nurses at Saint Thomas Hospital, in London<sup>(3)</sup>.

Today, in light of evidence-based practices, HH is classified by the Centers for Disease Control and Prevention as category IA (strongly recommended) for HAI prevention and control, i.e., supported by randomized clinical trials<sup>(4)</sup>.

Healthcare-associated infections are those that patients can acquire as a result of receiving health care. They are considered adverse events that challenge researchers around the world, generate tangible and intangible consequences, and negatively impact patient treatment. These negative results include prolonged readmissions, worsened prognosis, increased mortality, reduced quality of life, and increased costs<sup>(5)</sup>.

Despite the evidence associating HH with reduced endemic rates of HAIs, studies have shown that compliance to this measure among healthcare workers worldwide is still low<sup>(6)</sup>. Some initiatives to increase this rate have been developed. For example, the World Health Organization (WHO) created a campaign disseminating the “Five Moments” essential to HH<sup>(7)</sup>. In Brazil, emphasis goes to the National Health Surveillance Agency, which reinforced these five moments and applied them to specific situations, aimed at the care of patients with central and peripheral venous catheters, endotracheal tube, urinary catheter, and surgery wounds. Furthermore, when considering specificities, WHO innovated and, in parallel to the Brazilian proposal, presented the Five Moments of HH in maternity wards and dentistry, outpatient, and home care services.

This effort has been embraced by workers who operate in HAI prevention and control services. Routinely, they develop educational and multimodal campaigns to encourage HH and

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studies that seek innovative strategies to promote compliance. However, the results have been disheartening. The increase in compliance during the campaigns is almost always statistically irrelevant when compared to compliance before the campaign, and the rates fall over time. This scenario has maintained itself over the decades and has become an object of investigation, being associated with the Hawthorne effect<sup>(8)</sup>.

However, the fight against the COVID-19 pandemic has presented a possibility of change. The World Health Organization declared the pandemic on March 11, 2020, and protection measures quickly began to be published. Hand washing was highlighted as a measure in all emergency plans<sup>(1-2)</sup>. Amid all the fake news and empirical data, HH, consecrated as the standard precautionary measure against transmission (whether contact, droplet, or airborne)<sup>(4)</sup> gained the spotlight in news reports, workplace conversations, public spaces, and among neighbors and families. The importance of compliance to HH extended from HAI prevention and control to the prevention and control of an unprecedented community-wide infection.

Over the course of a year of pandemic, the recommendation remains at the top of the list of national and international organizations<sup>(1-2)</sup> and has been reinforced by all forms of media. Abiding by health norms, the dissemination of the measure, coupled with the necessary resources to carry it out, has become part of establishments ranging from large supermarket chains to neighborhood bars.

Within the scope of healthcare facilities, the pandemic has awoken dormant conversations among all professional categories, such as the role of HH in preventing cross-contamination, which used to be restricted to the relentless efforts of HAI control service workers.

Our expectation is that the pandemic will be a game changer in terms of recognizing the value of HH practice as a primary prevention measure. In addition, as a counterweight to the devastating human loss, we hope that it will leave us a good heritage of HH compliance by healthcare workers, becoming naturally associated with any form of care; a legacy in the post-COVID-19 pandemic era.

Henceforth, we hope that Florence Nightingale's recommendation, that: "Every nurse ought to be careful to wash her hands very frequently..."<sup>(9)</sup> be a daily practice of all healthcare workers. This way, they can contribute to saving thousands of lives in the future and, who knows, eliminate HAI from the unwanted ranking it occupies, as one of the five leading causes of death in the world.

Another expected legacy of the great dissemination of information about the importance of HH in fighting the pandemic is that it becomes a habit, correctly taught, since childhood, as a path to individual and collective health. This concept has been adopted by researchers who have prioritized children when teaching HH technique, who then become

multipliers and can adopt the measure as a routine and natural part of life<sup>(1,10)</sup>.

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