

White coats as source of infection in hospitals: a paradigm for students and physicians

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White coats act as a symbol of identification for a healthcare worker; however, there has always been some concern that white coats, such as uniforms of nurses and other hospital garments, may act as a potential source in the transmission of pathogenic bacteria in a hospital setting, as white coats are known to be heavily infected with pathogenic drug-resistant bacteria [1]. White coats are considered to be a sign of protection for our patients and, yes of course, it is also a type of uniform for medical students. When we were in clinical year last summer, we performed ward rounds in different clinical departments. We also visited ICUs, emergency units, cardiac care units, and neonatal care units. We hardly used to get our white coats washed after 3–4 days and used two white coats in a week. However, most of our colleagues and even teachers were never concerned about washing it for 1 or 2 weeks. They performed ward rounds and visited patients with those coats on. A study was conducted involving 149 medical students, and among those 149 participants who were wearing their white coats at study entry, 109 attended medical grand rounds and 40 attended surgical grand rounds. Of the 149 participants, the white coats of 23% of participants (34 white coats) were contaminated with *Staphylococcus aureus*; of which, six (18%) were MRSA. In residents and in those working in inpatient settings, *S. aureus* contamination was more prevalent [2]. Recently, another study was conducted, which also included 100 medical students, in which swabs taken from four different areas of the white coat, such as the pockets, the sides, and the collar, were analyzed, and it showed that most of the white coats had been washed within the past 2 weeks. The most dirty areas included the sides of coats, followed by the collar and pockets. *S. aureus* was the most common isolate [3]. White coats of medical students, physicians, and even all healthcare workers may be infected with microbiological organisms. As shown in this study, most of the healthcare workers acknowledged that their white coats were unclean, and two-thirds of them had not washed their coats for more than a week. Efforts

should be taken to encourage them to keep their white coats clean and to wash their hands frequently. Further studies should be conducted to assess white coats and clothing of other healthcare workers. Alternatives to white coats, such as universal use of disposable and protective gowns should be considered. There are no regulations on how often students and physicians should wash their coats, but our patients are worthy of having professionally dressed physicians with clean white coats. The following measures can be adopted to prevent contamination:

- (a) Neckties can be skipped or tucked under lab coats. Studies have found that the ties of physicians are contaminated with *S. aureus* bacteria and that up to 70% of physicians confess to never washing them.
- (b) White coats with short sleeves should be encouraged. This might help to reduce germs on cuffs.
- (c) If possible, disinfect or replace items such as identification tags, cell phones, lanyards, and pagers, if they come in contact with patients.
- (d) Hot water wash of white coats at least once a week can be done.

A survey assessed that, although hospital workers cleaned scrubs every 1–2 days, they washed lab coats every 12 days.

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Conflicts of interest

None declared.

References

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