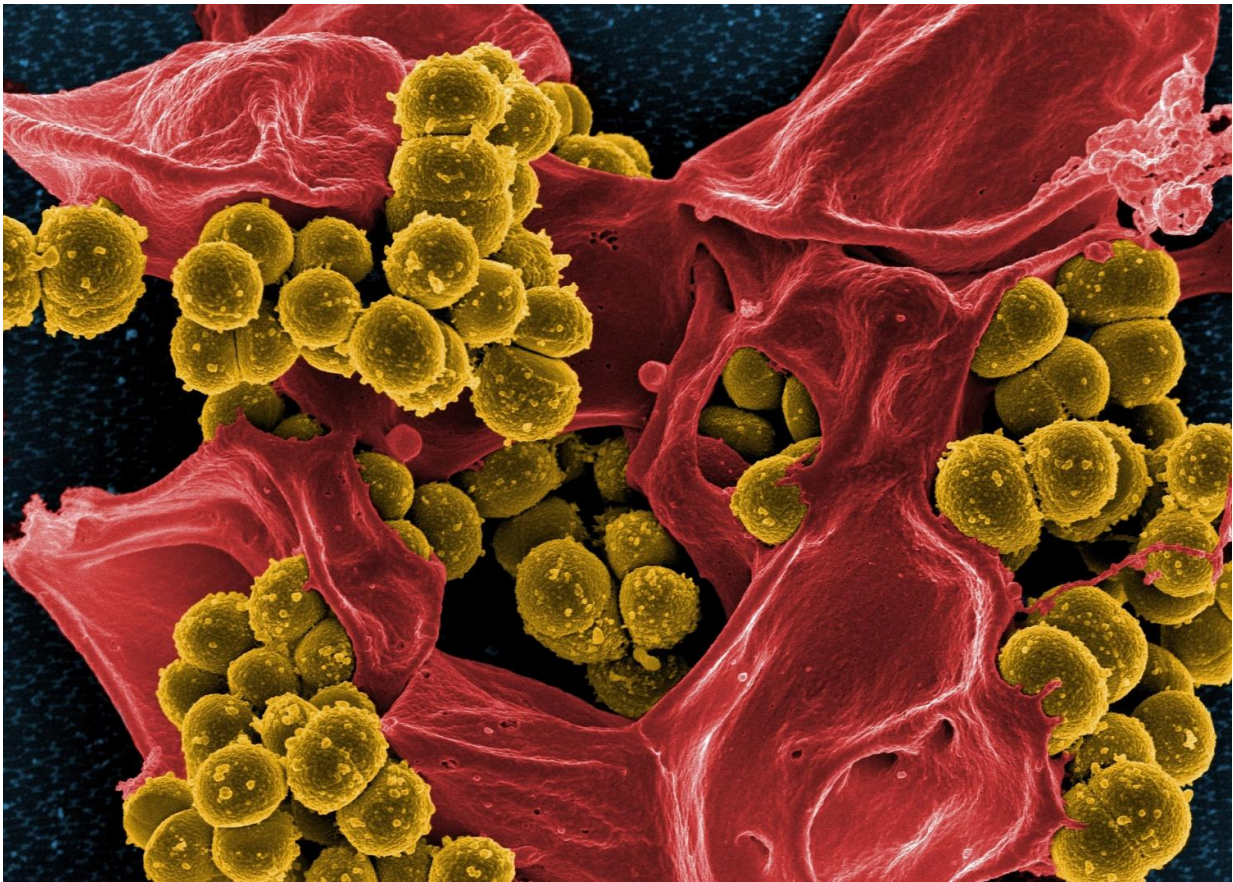


# Dissemination of pathogenic bacteria by university student's cell phones

June 21 2019

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New research has demonstrated the presence of *S. aureus* in 40% of the cell phones of students sampled at a university. *S. aureus* is a common

cause of hospital and community-based infections and is currently considered an important pathogen because of its level of antibiotic resistance. The research, conducted at the Western University of São Paulo, Brazil, is presented at ASM Microbe, the annual meeting of the American Society for Microbiology.

Of the bacteria isolated, 85% were resistant to the antibiotic penicillin and 50% had the ability to adhere to surfaces. In addition, the presence of genes related to adhesion, antimicrobial resistance and toxins were present a high level. Samples were collected from 100 cell phones of students from the Biomedicine (20), Pharmacy (20), Dentistry (20), Nutrition (20), and Nursing (20) courses. The vast majority of the bacteria isolated belonged to students of the nursing course.

Nursing students are very likely to become carriers of *S. aureus* since [clinical practice](#) in hospital settings is part of their coursework and exposure to occupational hazards is inherent to this setting, which could favor the colonization and contamination of the surface of cell devices. Cell phones used in healthcare environments allow for the transmission of bacteria that harbor genes of virulence and resistance, contributing to increasing the infection rates as well as an increase in the morbidity/mortality from these infections.

"The widespread use of cell devices in hospitals and healthcare settings has raised major concerns about [nosocomial infections](#), especially in areas requiring the highest standards of hygiene, such as the operating room," said Lizziane Kretli, Professor at the Western University of São Paulo, Brazil. Students in the health area attend practical classes and clinical stages where they have direct contact with samples, objects, and clinical environments containing pathogenic microorganisms.

Cell phones are an indispensable accessory in the professional and social life of a large part of the population. In the [medical field](#) they are

considered an integral part of the life of health professionals and have improved communication, collaboration, and information sharing.

"In this context, cell phones may thus serve as a reservoir of bacteria known to cause nosocomial infections and could play a role in their transmission to patients through the hands of health professionals," said Kretli.

**More information:** The complete results will be presented in ASM Microbe 2019 at San Francisco, California at Friday, June 21, 2019: 11 am - 12 pm and 4 pm - 5 pm in the Poster Session.

Provided by American Society for Microbiology

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