POSTER 90

Spread of relevant bacteria and antimicrobial resistance through mobile phones

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Doi: https://doi.org/10.51126/revsalus.v4iSup.357

Resumo

Introduction: Microorganisms are a risk factor for public health. As we know, mobile phones are used for various functions, contacting several body parts. What many people don't know is that the dissemination of microbiota in these devices is something very recurrent. **Objectives:** This review is intended to demonstrate that phones represent a threat to public health. Therefore, it is our goal to warn readers that the disinfection of these devices is of utmost importance. **Methods:** We conducted our search through Pubmed database. Seven articles were selected that fit our topical area and that presented detailed yet easy-to-understand information. Data on viruses, bacteriophages, protists, and fungi were excluded. The articles used techniques such as bacterial agar culture, PCR, DNA extraction, and swabbing on samples collected from hospitals, high schools, the community, and a university. **Results:** In a 2017 study of high school students' smartphones, 74% of the devices had coagulase-negative staphylococci [1], and similarly to the 2021 studies of health professionals, Micrococcus luteus and Staphylococcus aureus were found in abundance [2, 3]. In one 2021 study, pathogenic bacteria were detected on half of the devices. Other studies have identified Escherichia coli (2% to 13%) and Enterobacter aerogenes (5%) demonstrating fecal contamination. Also found in multiple reports were pathogenic bacteria such as Salmonella enterica in 3% to 9% of samples, Listeria monocytogenes in 2% to 20%, and Pseudomonas aeruginosa in 4% to 33%. One hospital survey reported bacteria showing resistance to different antibiotic families in all screened devices [4]. **Conclusions:** Our research evidence that mobile phones act as a "Trojan Horse" [5] because severe microorganisms are "hidden" in platforms that we don't often think to disinfect. It is important to highlight that is normal to find some bacterial species that are present in our skin microbiota. However, bacteria such as Pseudomonas aeruginosa can cause severe and hard-to-treat human infections (resistant to several antibiotic families), while Listeria monocytogenes can be fatal to immunocompromised adults. Mobile phones can also contribute to the global spread of antimicrobial resistance. Taking all data in consideration, their disinfection should be faced as important as hand disinfection.

Keywords: mobile phones; microorganisms; contamination

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