

## The Comparison of Microbial Contamination of Work Desks in Official Building of Mashhad University of Medical Sciences with that in Central Laboratory of Imam Reza Hospital of Mashhad

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### Abstract

**Background and objectives:** Pathogens can be transferred via the hands of the personnel not only to themselves but also to their families or to the patient causing infection especially nosocomial infections. Microbial contamination of hand is caused by contact with patients and their environments or usual devices in the workplace. It seems that contamination of computer devices and handsets are more in hospital than official buildings. The aim of this study was to assess and compare the microbial contamination of computer keyboards, mouse and telephone receivers in a hospital department and an official building.

**Material and Methods:** the sterile swab samples obtained from 32 keyboards, 31 computer mouse and 30 telephone receivers in the official building of Mashhad medical university and central laboratory of Imam Reza hospital were cultured on Blood agar and MacConkey agar plates.

**Results:** Out of 64 samples from the official building, we identify 83 microbial germs. The most common ones are gram-positive *Bacilli* (n =34, 40.95%) and coagulase-negative *Staphylococci* (n = 32, 32.53%). Of 29 samples of central laboratory, there are 33 microbial germs .The most common of them are gram-positive *Bacilli* (n = 19, 57.57%) and coagulase-negative *Staphylococci* (n = 7, 21.21%). Overall, microbial contamination of the computer equipment and handsets is not statistically meaningful (P< 0.05). Some germs like diphtheroid are not existed in laboratory, but two cases of *Aspergillus* are found.

**Conclusion:** The presence of most of the germs on these devices is due to dusting or normal flora transferred via staffs' hands. Only two of them, coagulase-positive *Staphylococci* and *Aspergillus*, should be considered carefully because they may cause serious infections in staff, their families or patients.

**Key words:** contamination , workers' desk, Organisms, computer keyboard and mouse