Sterra Study Summary: Disposable Desk Phone Cover

Prepared from the source packet provided to Sterra regarding barrier cover use on shared desk phones in hospital environments.

Study attribution

The corresponding author identified in the source packet is **Orangel Cadenas Cedeno, MD**, described as Surgeon Medical, Associate Professor, OPTACIB, Office for the Integral Attention of the Scientific Biomedical Investigator, Merida, Venezuela. The acknowledgement section states that **HULA-IA** and **IVSS** supported the investigation.

The study setting described in the manuscript includes the **Microbiology Institute at the University Hospital of Los Andes (HULA-IA)** and the **Hospital Management Area Type II "Dr. Tulio Carnevali Salvatierra" of the Venezuelan Institute of Social Security (IVSS)**, both located in Merida, Venezuela.

Study objective

The manuscript describes a hospital comparison designed to evaluate whether a disposable barrier cover applied to shared landline desk phones could reduce bacterial or fungal growth on those devices under hospital-use conditions. For Sterra's site and supporting evidence materials, the product is referred to here as a **Disposable Desk Phone Cover**.

Methods described in the source packet

- The paper describes an experimental comparison between covered desk phones and uncovered control phones in hospital environments.
- The covered handsets were cleaned with disinfectant before the barrier cover was placed by trained personnel using asepsis and antisepsis measures.
- Samples from the cover and handset surfaces were processed for bacterial culture; the packet also describes fungal media and incubation conditions.
- The packet reports culture conditions using TSA blood agar for bacteria and Sabouraud medium with chloramphenicol for fungi.
- Bacterial cultures were incubated at 37 C for 48 hours, and fungal cultures were incubated for 7 days at 22 C.
- Statistical significance was evaluated with chi-square testing at a 5% significance level.

Results

Measure	Reported result

Study samples analyzed	24 covered samples
Control samples analyzed	24 uncovered samples
Control samples with gram-positive growth > 100,000 CFU	80% (n = 19)
Covered samples with gram-positive growth > 100,000 CFU	25% (n = 5)
Statistical result	Chi-square test; $p < 0.05$

A total of **24 covered study samples** and **24 uncovered control samples** were processed. The clearest quantitative result in the packet is the comparison showing **80% (n = 19)** gram-positive growth over 100,000 CFU in control samples versus **25% (n = 5)** in covered study samples, with the difference reported as statistically significant at **$p < 0.05$**.

The discussion section of the packet states that the cover showed **significant efficacy of 80%** in preventing colonization by pathogenic bacteria when compared with uncovered desk phones in hospital environments and recommends **multicenter studies** to compare the efficacy obtained in this investigation.

Related contamination literature cited in the packet

- **Page K, Wilson M, Parkin IP**. Antimicrobial surfaces and their potential in reducing the role of the inanimate environment in the incidence of hospital-acquired infections.
- **Ulger F, Esen S, Dilek A, Yanik K, Gunaydin M, Leblebicioglu H**. Are mobile phones contaminated with nosocomial pathogens?
- **Sepehri G, Talebizadeh N, Mirzazadeh A, Mir-shekari TR, Sepehri E**. Bacterial contamination and resistance to commonly used antimicrobials of healthcare workers' mobile phones in teaching hospitals.
- **Arora U, Devi P, Chadha A, Malhotra S**. Cellphones: a modern stayhouse for bacterial pathogens.
- **Rafferty KM, Pancoast SJ**. Brief report: bacteriological sampling of telephones and other hospital staff hand-contact objects.

Interpretation

The strongest use of this source is to support a restrained conclusion: shared desk phones in healthcare environments can become contaminated, and a barrier approach may reduce microbial burden between routine cleanings and between users. Routine cleaning and disinfection protocols remain essential.