Background:
Nosocomial infection prolongs hospital stays. Health professionals and their medical equipment like, stethoscopes have long been known to act as a vector of pathogenic bacteria. It’s represented an additional financial burden for health systems and generates dead, high cost and suffering, for health care, patients and their family. Consequently, disinfection of stethoscopes between the use in one patient and other is required.

The aim of this study was evaluated the improve stethoscopes disinfection rates

Material/methods:
Phase 1: 87 samples from stethoscopes of health workers from different areas of the Miguel Servet University Hospital (Zaragoza, Spain) were taken using swabs. Afterwards, 70% alcohol was applied to 39 stethoscopes and the others 30 stethoscopes was cleaned with commercial wipes (Menalind® HartMann Laboratories), After that, new specimens were taken again. All samples were cultured onto sheep blood agar at 35º. The system of Matrix assisted laser desorption/ionization-Time of Flight (MALDI-TOF) was used to microbiological identification. Negative cultures were stored 48 hours before to confirm the absence of growth.

Phase 2: Information, campaign, educational interventions and videotaping (https://youtu.be/MhzDbflsAdU) by team members reflecting inappropriate practices and the importance of following corrects habits. We participated in clinical sessions of services with greater involvement in the study, meeting with the supervisors of these units

Phase 3: 87 specimens were analyzed, but no control were used. All samples were cultured like phase 1.

Results:
Phase 1: 91,95% of stethoscopes before disinfection showed positive culture. The most prevalent was Staphylococcus hominis, followed by staphylococcus epidermidis. Other species were isolated like Methicillin-resistant Staphylococcus aureus (2/87) and Pseudomonas aeruginosa (1/87)

Phase 3: 59,77% showed positive culture and the prevalent bacteria were the same in the phase1. Only one Methicillin-resistant Staphylococcus aureus was isolated

Conclusions:
1. Most of stethoscopes were contaminated with bacteria
2. Education and preventive strategies as video, meeting and participation in clinical sessions, produce a positive response in the health workers
3. The stethoscope contamination rate was improved after these mentioned strategies