POSTER 89
Monitoring of hygiene practices in institutional kitchens

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Resumo

Introduction: Institutional kitchens can accumulate high amounts of microorganisms given the high affluence of people in vulnerable situations, such as sick people, the elderly and children. Different hygiene practices may affect food safety and microorganism contamination levels at hospitals, child care centers, schools, and retirement homes. **Objectives:** Our main purpose was to explore whether differences in hygiene and handling practices makes a distinction within different sectors of institutional kitchens. We selected 5 articles from PubMed analyzing the employee's hygiene during the meal preparation process, the sanitation of the utensils and the food contact surfaces. **Methods:** Three main analyses were performed in industrial kitchens: 1) Escherichia coli (indicator of fecal contamination), Staphylococcus aureus (indicator of food handler personal hygiene), Enterobacteriaceae and B. cereus (both indicators of good hygiene practices during food production) were searched by growth on specific agar culture media in different samples (hand contact surfaces, food contact surfaces and kitchen utensils); 2)For the data collection instrument, a checklist was made to evaluate food handler's hands and uniforms, environmental conditions, cleaning methods, temperature control, and types of surfaces; 3)A statistical analysis was made to compare samples from used versus cleaned surfaces. **Results:** The kitchens that followed more strict hygiene protocols and that provided better training concerning hygiene measures were proven to be cleaner by showing lower bacterial counts. The total aerobic bacterial count in samples taken before food hygiene training showed 21%-29% of positive smears, while the ones taken after improving cleaning protocols had 3%-6% of grown colonies. Enterobacteriaceae had 33%-35% of positive smears, but only 0.7% of overgrown samples; B. cereus 0.3% and E. coli 0.2% of overgrown, with the E. coli being more present in the sinks and not the food. Notably, $^1/_3$ of the cutting boards still presented a substantial amount of the bacteria Enterobacteriaceae even after being cleaned. **Conclusions:** These data highlight the need for improvement in the hygiene protocols in institutional kitchens. Despite the low number of kitchens analyzed, these results emphasize that working surfaces and utensils should be cleaned more frequently and thoroughly to ensure basic sanitary measures and food safety.

Keywords: kitchen hygiene; hygiene training; microbiological food quality; food safety.

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