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The effectiveness of two sanitation methods on casino cheques

What this research is about

Past research has shown that casino cheques (also known as casino chips) can be contaminated with harmful bacteria, such as *E. coli*, and fungi. However, there are currently no policies that specify their cleaning procedures. There are also no strategies for how to best clean them. This is a public health risk as bacteria could quickly transfer to people and risk their health. Hence, the purpose of this study was to explore the effectiveness of two sanitation procedures on casino cheques. This study sought to measure bacterial growth after control (no sanitation), aerosol disinfectant sanitation, and dishwasher sanitation.

What you need to know

This research examined bacterial growth on casino cheques in three different conditions: control (no sanitation), aerosol disinfectant sanitation, and dishwasher sanitation. The researchers randomly placed 19 casino cheques into the three conditions. The results revealed that the two sanitization methods increased contamination, rather than decreasing it. Even though there were no differences in fungi levels, bacteria levels were higher following a cleaning. Further research is needed to understand why and how the increase in bacterial contamination occurs. More research is also needed to find out how to reduce bacterial contamination on casino cheques.

What the researchers did

The researcher examined 19 casino cheques. Thirteen cheques came from four casinos in the Gulf Coast and Las Vegas, Nevada. Six cheques came directly from the manufacturer. The researcher randomly split them into the three different conditions, and added 313 other chips into each tray to resemble a standard casino chip tray.

The first condition was the control condition, where the cheques in the tray did not receive any sanitation. The second condition used an aerosol disinfectant. Once the tray had been sprayed, the casino cheques and chips were allowed to dry for three minutes. The third condition used a dishwasher to sanitize the tray of casino cheques and chips. The casino cheques were then transported to a lab for further testing.

In the lab, two microbiologists swabbed each cheque for bacteria using six-inch sterile cotton tipped applicators. The cheques were swabbed on the front, back, and side. They placed the Petrie dishes for the swabbed cheques into an incubator for 48 hours and then into a refrigerated cooling area. The protocol for culturing bacteria followed standard procedure. Finally, the researcher analyzed the bacteria cultured from the cheques.

What the researchers found

The results revealed that there were differences in bacteria levels between the conditions. In particular, cleaning the cheques actually resulted in more contamination. Thus, both methods (e.g., using aerosol disinfectant or a dishwasher) increased bacterial contamination. However, doing nothing (e.g., control) also increased contamination as compared to the results of previous research. This showed that there was bacterial growth on the cheques over time without any cleaning. There were no differences in the amounts of fungi between the three conditions.

How you can use this research

This research could be used by policy makers, health advocacy groups, and researchers. Policy makers could develop recommendations and guidelines for which strategies to use regarding cleaning casino items and places. Health advocacy groups could raise awareness of how to prevent the spread of infectious diseases in gambling places. Future research studies could examine the reasons for bacteria growth following sanitization methods.

About the researchers

Edward G. Mc Keown has had an extensive career in hotels, restaurants, and casinos. He has expertise in all areas of Hospitality with a specialty in workplace contamination and food safety. For more information about this study, please contact Edward G. Mc Keown at edward@doctormckeown.com

Citation

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About Gambling Research Exchange (GREO)

Gambling Research Exchange (GREO) has partnered with the Knowledge Mobilization Unit at York University to produce Research Snapshots. GREO is an independent knowledge translation and exchange organization that aims to eliminate harm from gambling. Our goal is to support evidence-informed decision making in safer gambling policies, standards, and practices. The work we do is intended for researchers, policy makers, gambling regulators and operators, and treatment and prevention service providers.

Learn more about GREO by visiting greo.ca or emailing info@greo.ca.