

Are Airport Bathrooms Spreading Antibiotic-Resistant Bacteria Globally?



By Alex Berezow, PhD — October 7, 2016



Abandon all hope, ye who enter here.
(Credit: Shutterstock) [1]

International travel is not always a pleasant experience. Cramped airplanes with crying babies, ridiculous and arbitrary regulations, long lines, and overpriced food contribute to the general grumpiness and anxiety that many travelers feel. Despite this, a German scientist hunting for data on antimicrobial resistance patterns decided to push his research team just a little bit further.

The conversation probably went something like this:

RESEARCHER: I'm leaving on holiday soon.

BOSS: Lovely. Where are you going?

RESEARCHER: Brazil.

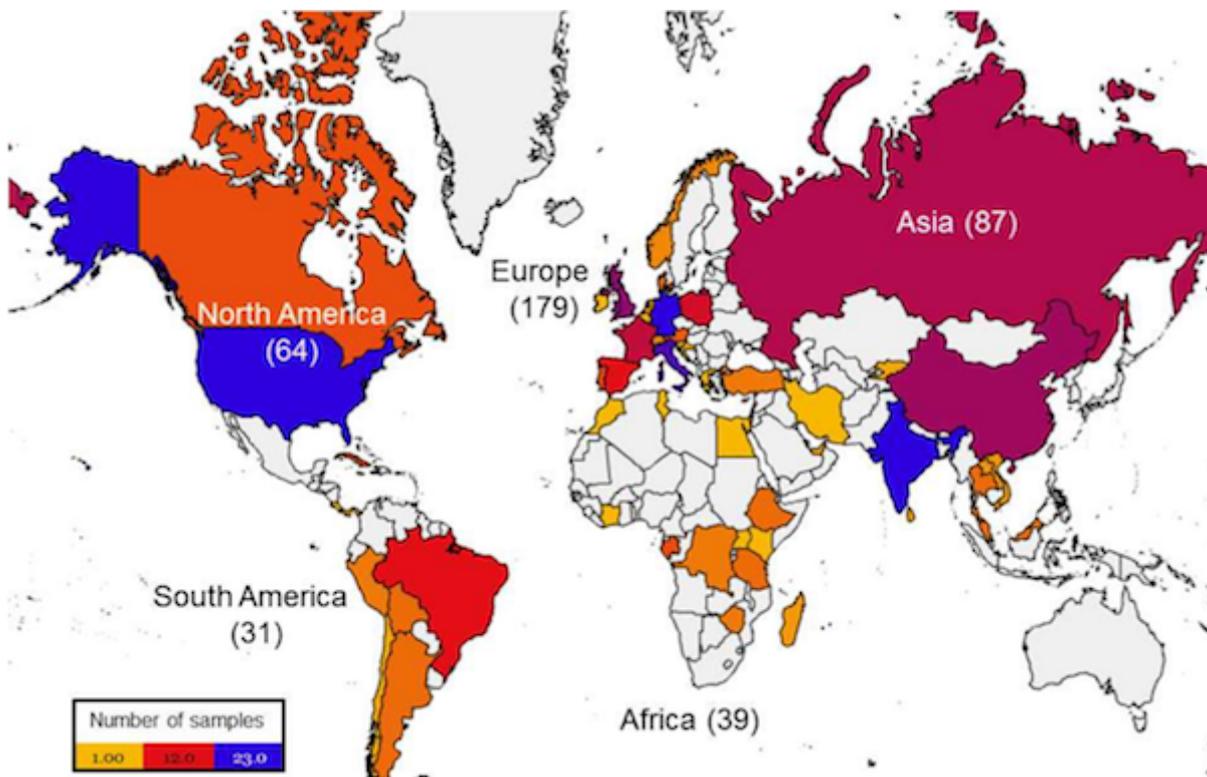
BOSS: Excellent choice. Where are you stopping?

RESEARCHER: I've got layovers in Munich and London.

BOSS: Perfect. Say, while you're out there, would you mind swabbing a few bathroom door handles for me?*

RESEARCHER: *Blank stare*

In this way (or perhaps something similar to it), the team swabbed 400 bathroom door handles from 136 airports in 59 countries. This map indicates the number of samples taken from each country:



Upon return to Germany, the samples were inoculated onto growth media, and the bacteria that grew were analyzed. They found that most airport bathroom door handles, like all door handles, have bacteria on them. That's not necessarily a bad thing; bacteria are everywhere and we have immune systems.

The more concerning finding is that 5.5% of the samples had strains of *Staphylococcus aureus*. One of the strains found in Paris, a type of MRSA, is rare. A genetic analysis suggested that it originated from India, which means the bacterium is now being spread around the world by international travelers.

While that shouldn't come as a surprise, it underscores the importance of proactive global epidemiological surveillance. There is no such thing as local outbreak anymore.

**These researchers got off easy. When I was in graduate school, my mentor considered having me bring my own feces into the lab. I chose a different project.*

Source [2]: Frieder Schaumburg, Robin Ko?ck, Fabian H. Leendertz, Karsten Becker. "Airport door handles and the global spread of antimicrobial-resistant bacteria: a cross sectional study." *Clinical Microbiology and Infection*. Published online: Sept 2016. doi: 10.1016/j.cmi.2016.09.010

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[2] [http://www.clinicalmicrobiologyandinfection.com/article/S1198-743X\(16\)30398-6/fulltext](http://www.clinicalmicrobiologyandinfection.com/article/S1198-743X(16)30398-6/fulltext)