

BACTERIA ON AIRPLANES

Cause Map

Study Finds Bacteria Can Live on

With many bodies packed into a tight space and seemingly stale air, airplanes tend to bring out the inner germaphobe in many of us. And the latest research, especially if you just read the headlines, isn't going to help. Researchers at the University of Auburn found that Methicillin-resistant *Staphylococcus aureus* (commonly known as MRSA) and E. Coli can live for days on airplane surfaces.

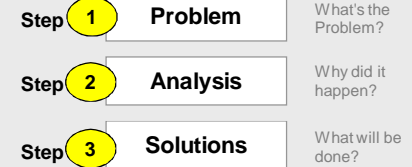
"The take-home message is be careful about your hand hygiene and don't travel while contagious or immune compromised."

-Kiril Vaglenov, a post-doctoral fellow at Auburn, who led the research.

Cause Mapping is a Root Cause Analysis method that captures basic cause-and-effect relationships supported with evidence.

CAUSE MAPPING

Problem Solving • Incident Investigation • Root Cause Analysis

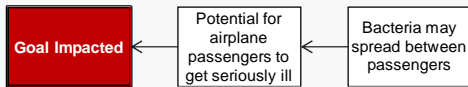


1 Problem

What	Problem(s)	Concern about bacteria on airplanes
When	Date	Study published April 28, 2014
	Different, unusual, unique	New research
Where	Facility, site	Airplanes
	Unit, area, equipment	Surfaces throughout airplanes - seat backs, tray tables, push button to flush toilets, etc.
	Task being performed	Air travel
Impact to the Goals	Safety	Potential for airplane passengers to get seriously ill

2 Analysis

Basic Level Cause Map - Start with simple Why questions.

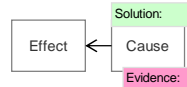


Basic Cause-and-Effect

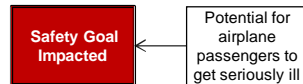
Researchers performed an experiment to see how long two types of dangerous bacteria can live on airplane surfaces in conditions similar to the environment on a plane. They found that the bacteria lived between 8 and 2 days. This data is interesting, especially since an estimated 1-2% of people in the US may be carriers of these dangerous bacteria.

More Detailed Cause-and-Effect

The Cause Map can be expanded by asking "why" questions. When two causes are required to produce an effect, they are listed vertically with "and" between them.



More Detailed Cause Map



For a free copy of our Root Cause Analysis Template in Microsoft Excel, used to create this page, visit our web site.

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3 Solutions

No.	Action Item	Cause
1	Passengers wash hands thoroughly prior to eating or touching faces.	Potential for exposure to dangerous bacteria
2	Passengers clean the surfaces around their seats when entering the airplane.	All surfaces may not be cleaned between flights
3	Airlines thoroughly clean all surfaces between flights.	All surfaces may not be cleaned between flights