

Evidence-based medicine theory can be applied to frequent flying, says professor

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Come fly with me! Professor Leslie Citrome gets ready to test his Evidence-Based Flying theory. Credit: (c) Professor Leslie Citrome

When New York-based Professor Leslie Citrome sets off for his latest conference or speaking engagement, he isn't just armed with a stack of medical journals and his passport. He makes sure he packs a calculator and notebook as well!

The psychiatry expert, who has nearly 200 published papers to his name, is on a mission to test his new theory of evidence-based flying (EBF), which he hopes will help him to achieve minimum delays and maximum upgrades.

"I was on a flight from Los Angeles to Brisbane when it occurred to me that the evidence-based medicine theories that I use every day as an author and clinician could be applied to other areas of my life" he explains in a paper published online today (1 April) by *IJCP*, the [International Journal of Clinical Practice](#).

"Evidence-based medicine encourages clinicians to incorporate the best available research evidence regarding efficacy and safety, together with individualised patient assessment and patient preferences, into their medical decision making" says Professor Citrome from the New York University School of Medicine and Nathan S Kline Institute for Psychiatric Research.

"Academics on the medical conference circuit already have their own extensive travel experience, albeit anecdotal. What has been missing in flyer decision-making to date is robust research evidence.

"Cut-throat competition between the airlines means that published rates of departure delays can now make my theory of EBF a reality."

Armed with the latest statistics on flight delays, Professor Citrome has already carried out initial calculations on the number needed to fly (NNF) - the number of flights he needs to take with each of the big six airlines before experiencing one delay. This is based on the medical equivalent of the number needed to treat (NNT), used by clinicians to see how many patients they could normally expect to treat before experiencing one outcome of interest.

Professor Citrome's initial analysis showed that departure delays ranged from 20 to 30 per cent, with the NNF ranging from 10 to 31 flights when comparisons were carried out against the top performing airline.

"I should point out that these figures were merely used to demonstrate

the theory I have developed and the data used in the calculations were taken from an advertisement in USA Today" stresses Professor Citrome. "Further research is needed to validate and refine the statistics, but they provided a useful starting point."

But it doesn't end there. Professor Citrome suggests that other factors could be taken into account to determine number needed to upgrade (NNU) from coach to first class.

"NNU can be highly variable, depending on baseline factors such as the city one is flying from, time of day, day of the week, class of ticket purchased and individual traveller characteristics like frequent flyer loyalty club status level" he points out.

By working out the NNF and the NNU, Professor Citrome argues that it would be possible to come up with comparative values on the likelihood of being upgraded or delayed (LUD) on each airline.

Other factors that could be included in the equation include type of food served (free or not), pillow and blanket policy, cost considerations, charges for extra baggage and availability of flights.

"Using these baseline characteristics, in the same way as we would use factors in evidence-based medicine, could help us make the final estimates more precise" he argues.

Professor Citrome, who has frequent flyer platinum status on one airline and silver on another, looks forward to greater transparency by the airlines.

"The posting of delay and upgrade rates in publicly accessible airline registries will further enhance the amount of data available to help us make wise flying decisions" he says.

More information: Evidence-based flying: a new paradigm for frequent flyers. Citrome L. IJCP. Published online early 1 April 2010 ahead of print. [DOI: 10.1111/j.1742-1241.2010.02409.x](https://doi.org/10.1111/j.1742-1241.2010.02409.x)

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