

Good medicine left on the shelf?

November 30 2015



Various pills. Credit: Wikipedia

A controversial new paper by James Cook University scientist claims many useful new treatments are being left on the shelf by medical researchers.

JCU's Dr David Kault, a [medical doctor](#) and mathematician, has examined the way [clinical trials](#) of [medical](#) treatments are judged.

"Traditional assessment of a clinical trial is based on whether we can blame chance for a favourable outcome," said Dr Kault. "But there is little consideration of background and context, which sometimes leads to ignoring common sense."

Dr Kault said a well-known parody on the subject published in the

British Medical Journal pointed out that, under current conditions and rules, it was not clear that parachutes were strictly necessary for people to safely jump out of aircraft - as some people using parachutes were injured and some people survived falls from aircraft without parachutes.

He said followers of the currently-used Evidence Based Medicine approach argue that allowing consideration of common sense in assessing treatments introduces subjectivity and there were some instances of apparent common sense being seriously misleading.

But Dr Kault believes effective drugs and treatments are being discarded unnecessarily by this approach. "There are rigid decisions made, with little consideration of the background - whether in the given context, chance was a reasonable explanation," he said.

Dr Kault said his new method produced a probability that a treatment worked, rather than a straight yes or no answer. "It shows a compromise approach is possible which should lead to better decisions. It shows that sometimes it's possible to calculate an objective probability that a treatment works."

He said his method suggests researchers have been dismissing treatments which have a small degree of effectiveness.

"It appears up to 20% of all older treatments reassessed may have been mistakenly labelled as ineffective. These mistakes usually occurred in the case of treatments with only very modest degrees of effectiveness, which should have remained available to patients if they were low cost."

More information: David Kault et al. From P-Values to Objective Probabilities in Assessing Medical Treatments, *PLOS ONE* (2015). [DOI: 10.1371/journal.pone.0142132](https://doi.org/10.1371/journal.pone.0142132)

Provided by James Cook University

Citation: Good medicine left on the shelf? (2015, November 30) retrieved 25 April 2024 from <https://medicalxpress.com/news/2015-11-good-medicine-left-shelf.html>

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