

# Excessive hospital occupancy levels result in avoidable mortality

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Once a hospital reaches a certain occupancy level, the quality of care it provides deteriorates, increasing the risk of mortality of critically ill patients. What is worrying is that this safety 'tipping point' is reached at occupancy levels that are below 100%. The findings are reported by a team of researchers led by Ludwig Kuntz, Professor of Health Management at the University of Cologne. Their paper (Stress on the Ward: Evidence of Safety Tipping Points in Hospitals) is to appear shortly in the international journal *Management Science*.

For the purposes of their study, the academics looked at occupancy levels and death rates in 83 German hospitals; they discovered that [mortality](#) began to increase at an occupancy level of 92.5%, which they thus define as the [safety](#) tipping point. For patients, this means that as soon as occupancy levels exceed this tipping point, there is a greater probability of their dying in [hospital](#). Of the patient collective they investigated, 17.4% had been in a department in which the occupancy level exceeded the safety tipping point on at least one day while they were there. The researchers claim that one in seven deaths among these patients could have been avoided if they had not been exposed to such high occupancy levels.

The paper's authors attribute the effect to the fact that the number of personnel hospitals assign to their wards is only sufficient to cope with average levels of occupancy. If the occupancy tipping point is consistently exceeded, the result is a persistent safety problem and failure to appropriately adjust the number of personnel may lead to a

significantly increased threat to the survival of hospitalised patients.

It is of even greater concern if the safety tipping point is only occasionally exceeded and this potentially dangerous situation is never recognised. There is then the risk that a hospital could be perceived as safe although, in fact, it isn't. In their publication, the team provides advice on strategies that can be used to ensure that the safety tipping point is not exceeded.

Provided by University of Cologne

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