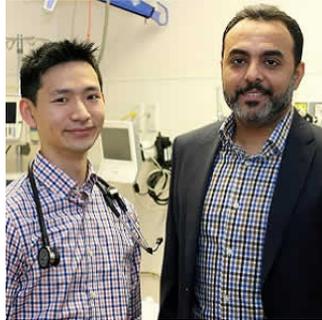

Too much oxygen increases mortality in acutely ill adults



A new systematic review published in *The Lancet* shows there is such a thing as too much oxygen for acutely ill adults. Based on the findings, supplemental oxygen, when given liberally to these patients, increases the risk of death without improving other health outcomes. Researchers estimated one additional death for every 71 patients treated with a liberal oxygen strategy.

The review team, led by McMaster University researchers, searched electronic academic databases from their inception through to October 2017 for randomised controlled trials (RCTs) done worldwide which compared liberal versus conservative oxygen therapy and death rates, as well as impacts on such aspects as disability, infections and hospital length of stay.

The 25 RCTs encompassed more than 16,000 adult patients with sepsis, stroke, trauma, emergency surgery, heart attack or cardiac arrest. Analysis of data revealed that, compared to the conservative strategy, liberal administration of oxygen resulted in increased in-hospital death by 21 percent. Additional analyses suggested that the more supplemental oxygen patients were given, the higher their risk was for death. However, the incidence of other conditions, such as infections or length of hospital stay, was similar between the two groups.

"Our findings are distinct from the pervasive view that liberal oxygen therapy for acute illnesses is at worst, harmless," said senior author Waleed Alhazzani, assistant professor of medicine at McMaster and an intensive care and general internal medicine staff member at St. Joseph's Healthcare Hamilton.

The results of the study, called Improving Oxygen Therapy in Acute-illness (IOTA), have immediate and important implications for healthcare providers, policymakers and researchers, say the authors.

"Our results provide much-needed clarification by showing, with high-quality evidence, that administering too much supplemental oxygen increases mortality among a broad range of acute illnesses," said first author Derek Chu, who is a McMaster clinical fellow.

"Currently, patients are frequently given supplemental oxygen and at excessive levels. A simple change to current practice - being more moderate and cautious with how much oxygen is administered to acutely unwell patients - could save lives."

Source: [The Lancet](#)
Image Credit: McMaster University

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