

# Treatment in hospital by older doctors linked to higher death rates

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Credit: Petr Kratochvil/public domain

Patients in US hospitals treated by older physicians have higher mortality than patients cared for by younger physicians, except those physicians treating high volumes of patients, finds a study published by *The BMJ* today.

If the results are causal, they suggest that for every 77 patients treated by doctors aged 60 or over, one fewer patient would die within 30 days of admission if those patients were cared for by physicians aged less than 40.

However, the researchers stress that their findings should be regarded as exploratory.

Clinical skills and knowledge accumulated by more experienced physicians can lead to improved quality of care. It is possible, however, that physicians' skills may become outdated as scientific knowledge, technology, and clinical guidelines evolve.

Whether quality of care differs between younger and older physicians remains largely unknown, so a team led by Yusuke Tsugawa at Harvard T H Chan School of Public Health in Boston, set out to investigate whether outcomes of patients who were admitted to hospital differ between those treated by younger and older physicians.

They analysed 30 day mortality, readmissions and costs of care for a random sample of 736,537 elderly Medicare patients (aged 65 or over) managed by 18,854 hospital physicians (average age 41) at US acute care hospitals from 2011 to 2014.

Patients were assigned a physician based on scheduled work shifts and patients' characteristics were similar across physician ages.

After adjusting for patient, physician, and hospital characteristics that could have affected the results, patients' 30 day [mortality rates](#) were 10.8% for physicians aged less than 40, 11.1% for physicians aged 40-49, 11.3% for physicians aged 50-59, and 12.1% for physicians aged 60 or over.

Among physicians with a high volume of patients, however, there was no association between physician age and patient mortality, suggesting that high volumes could be "protective" of clinical skills, say the authors.

Readmissions did not vary with [physician](#) age, while costs of care were slightly higher among older physicians. And similar patterns were observed after further analyses to test the strength of the results.

The researchers say this is an observational study, so no firm conclusions can be drawn about cause and effect, and they outline some limitations could have introduced bias.

Nevertheless, they conclude that "within the same [hospital](#), patients treated by older physicians had higher [mortality](#) than patients cared for by younger physicians, except those physicians treating high volumes of patient volumes."

In a linked editorial, researchers at the University of Pennsylvania ask what are the options for ensuring that quality and safety of care is optimized for [patients](#).

They point out that patient outcomes research "is providing much needed evidence to inform clinical practice, educational innovation, organizational redesign, and healthcare policy."

The challenge, they say, "is to integrate findings across multiple studies within an overarching framework of health system responsibility, as recommended by the Institute of Medicine, which holds promise of safe care and good patient outcomes despite diversity of performance by individuals."

**More information:** Physician age and outcomes in elderly patients in hospital in the US: observational study , *BMJ* (2017).

[www.bmj.com/content/357/bmj.j1797](http://www.bmj.com/content/357/bmj.j1797)

Editorial: Physician age and patient outcomes, *BMJ* (2017).

[www.bmj.com/content/357/bmj.j2286](http://www.bmj.com/content/357/bmj.j2286)

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