Medical Xpress

Tool can accurately predict risk of death within one year after admission to hospital

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A recently developed tool can accurately predict the risk of death for patients within 1 year after admission to hospital using routinely collected data, reports a study in *CMAJ* (*Canadian Medical Association Journal*).

"An accurate assessment of risk of death, particularly if that risk is high, could motivate and inform discussions between patients and physicians regarding goals of care," states Dr. Carl van Walraven, a researcher at the Ottawa Hospital and the University of Ottawa, Ottawa, Ontario, who developed the tool.

Researchers in Canada and the United States looked at data over an 8-year period for patients who had been admitted to hospital in Ontario (2 862 996 people) and Alberta (210 595) and to Brigham and Women's Hospital (66 683) in Boston, Massachusetts, to determine if the Hospital-patient One-year Mortality Risk (HOMR) model can accurately predict 1-year risk of death in a diverse group of patients. HOMR was developed to help predict risk of death from any cause in the year after hospitalization. It includes age, sex and living status (e.g., whether someone is living independently at home or with home care or in a nursing home), number of illnesses and severity of illness, taking into consideration the number and type of admissions to hospital. The tool was previously validated using data only from Ontario patients over a 1-year period.

The study included a large group of adults from Ontario, Alberta and

Boston who had been admitted to hospital for nonpsychiatric conditions. Patients in Alberta were younger and those in Boston had a greater number of chronic diseases. The overall risk of death within 1 year after hospital admission was 8.7%, but it varied substantially according to patient characteristics. The predicted risk of 1-year mortality based on the HOMR score accurately reflected observed risk of death.

"The HOMR score can be used with confidence to predict the risk of death within 1 year after admission using health administrative data," state the authors. Further research is required to determine whether the HOMR model can be used on the front lines to predict survival during routine care.

More information: *Canadian Medical Association Journal*, www.cmaj.ca/lookup/doi/10.1503/cmaj.150209

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