Medical Xpress

New study shows red blood cell distribution width predicts prognoses in elderly, hospitalized patients

May 24 2022

Higher red cell distribution width (RDW) is associated with increased rates of in-hospital mortality and hospital re-admission among older (>60) patients, new research led by investigators at Sutter Health's San Francisco Coordinating Center (SFCC) in San Francisco, CA has shown.

Results of a retrospective analysis were published this month in the *Journal of the American Geriatrics Society*.

"Greater variability of red blood cell size is significantly associated with worse prognosis in hospitalized elderly patients, indicating higher mortality, greater risk of early re-admission and longer hospital stay days. Risk stratification strategies for hospitalized elderly should include RDW value," says Steve Cummings, M.D., lead author of the study, director of the SFCC and a principal investigator at Sutter's California Pacific Medical Center (CPMC).

Dr. Cummings and colleagues at CPMC retrospectively studied 94,617 patients aged >60 who were hospitalized between January 2013 to December 2017 at Sutter Health. A total of 167,292 admissions were included. The RDW was measured during hospital admission and categorized with 1% intervals. The primary outcome was the rate of in-hospital mortality; secondary outcomes included 30-day re-admission rate and length of hospital stay.

Results showed the overall in-hospital mortality rate was 6.3%. As the RDW value increased, the rate of in-hospital mortality increased from 2.7% for the lowest RDW category to 12.2% in the highest category (p-trend