

Nursing workloads multiply likelihood of death among black patients over white patients

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Older black patients are three times more likely than older white patients to suffer poorer outcomes after surgery, including death, when cared for by nurses with higher workloads, reports research from the University of Pennsylvania School of Nursing. The large-scale study showed higher nurse workloads negatively affected older surgical patients generally and that the rate was more significant in older black individuals. When the patient-to-nurse ratio increased above 5:1, the odds of patient death increased by 3 percent per additional patient among whites and by 10 percent per additional patient among blacks.

Lead author J. Margo Brooks Carthon, PhD, RN, and Penn Nursing colleagues studied more than 548,000 patients ages 65 and older undergoing general, orthopedic, or vascular surgery in 599 hospitals in California, Florida, New Jersey, and Pennsylvania. These hospitals are among the largest in the country and account for more than one-fifth of the nation's hospitalizations.

"Hospitalized [surgical patients](#) sometimes experience periods of instability in vital functions, and the quality of nursing care they receive has a significant effect on their recovery and well-being," said Dr. Carthon. "This is particularly relevant to older black patients because of associated complex medical conditions that may compromise their health status postoperatively."

In the study, 94 percent of patients were white and 6 percent were black. Data were comprised from nearly 30,000 [hospital staff](#) nurses working directly in patient care. The study assessed mortality and failure to rescue, which was defined as death after the development of a complication in the hospital after surgery.

The correlation between [nurse staffing](#) and [patient](#)

[outcomes](#) in the U.S. and around the world has been long established, largely by the pioneering work of study co-author Linda H. Aiken, PhD, RN, who directs the Penn Nursing Center for [Health Outcomes](#) and Policy Research. And, while [racial disparities](#) are widely documented in the health sciences literature, how the quality of nursing care may affect minority patient outcomes is a new area of research.

In this study, the data suggest that the probability of death for black patients is equal to that of white patients when the patient-to-nurse ratio is low to average (considered up to 5:1). The finding that the odds of death for older black patients were greater in hospitals where nurses had heavier [workloads](#) has particular implications for the delivery of care and signals an important focus of future research and intervention, Dr. Carthon wrote.

"These results suggest that improving the quality of postsurgical outcomes of older patients, particularly older black patients, means putting more nurses on the floor," said Dr. Carthon. "Better staffed hospitals are better prepared to meet the more complex needs of older patients, particularly minorities with higher rates of co-existing conditions."

Provided by University of Pennsylvania School of Nursing

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