



PRESS RELEASE

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RESEARCHERS EXAMINE COVID-19–ASSOCIATED KIDNEY INJURY IN U.S. VETERANS

Study reveals high rates and geographic variation that may be driven by racial differences.

Highlights

- Acute kidney injury (AKI) is common during hospitalization with COVID-19 in the U.S. veterans, and it's associated with a higher risk of death. This risk is especially high for Black veterans.
- Nearly half of the veterans with AKI in this analysis did not fully recover their kidney function by the time of hospital discharge.

Washington, DC (November 16, 2020) — An analysis of data from across the U.S. indicates that acute kidney injury (AKI) is common among hospitalized veterans with COVID-19, and it's associated with a higher risk of death. The analysis, which appears in an upcoming issue of *CJASN*, also found that the burden of death in people with AKI is disproportionately borne by Black veterans.

COVID-19 has been linked with a higher risk of AKI, but reports of COVID-19–associated AKI in the U.S. have been limited to a few studies from regional health systems. To provide more robust data, a team led by Ziyad Al-Aly, MD (VA Saint Louis Health Care System and Washington University in Saint Louis) examined data from 5,216 U.S. veterans hospitalized with COVID-19 from March to July.

Among the major findings:

- 1,655 (32%) veterans had AKI: 58%, 13%, and 16% with stage 1, 2, and 3 AKI, respectively.
- 201 (12%) of these patients received kidney replacement therapy such as dialysis.
- 80% of patients with AKI developed it within 1 day of hospitalization, and 47% did not fully recover their kidney function by the time they were discharged.
- Older age, Black race, male gender, obesity, diabetes, hypertension, and lower kidney function were significant predictors of AKI during hospitalization with COVID-19.
- AKI was associated with higher likelihoods of needing to be put on a ventilator and of requiring a longer hospital stay.
- AKI was associated with a 6.7-times higher risk of death, and this association was stronger in Black veterans.

- Rates of AKI exhibited substantial geographic variability (ranging from 10% to 56%), and higher rates were observed in regions with hospitals that cared for more Black veterans.
- Between March and July 2020, AKI rates declined and proportions of AKI stage 3 and AKI requiring KRT decreased.

“This is the first national study of AKI in COVID-19, and it told us that AKI is very common,” said Dr. Al-Aly. “It was also striking to see that nearly half of the veterans with AKI left the hospital with unresolved AKI—meaning that they will likely need long term follow up and care, they will also likely suffer long term consequences lasting their lifetime. Their kidneys are scarred by COVID-19. Unresolved AKI and its long-term consequences are going to be part of the “long-haul COVID-19.”

Study co-authors include Benjamin Bowe, MPH, Miao Cai, PhD, Yan Xie, MPH, Andrew K. Gibson, MPH, and Geetha Maddukuri, MD.

Disclosures: The authors reported no financial disclosures.

The article, titled “Acute Kidney Injury in a National Cohort of Hospitalized US Veterans with COVID-19,” will appear online at <http://cjasn.asnjournals.org/> on November 16, 2020, doi: 10.2215/CJN.09610620.

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