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Intensive Care Unit Admission and Mortality Among Medicare Beneficiaries With Pneumonia--Reply

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Dr Zadra and colleagues proposed 2 important points for consideration. First, they raised concerns about the generalizability of our findings to the Medicare Advantage population. We agree that it is not clear if differential distance is a valid instrument for the Medicare Advantage population. Our analysis, however, was limited to Medicare fee-for-service beneficiaries, a population in which our instrument was theoretically and empirically valid.

Second, they speculate that early initiation of noninvasive ventilation may be beneficial when applied to patients hospitalized with pneumonia and suggest stratifying our analyses by a hospital's capability to provide noninvasive ventilation outside of the ICU. We agree that the mechanism underlying improved outcomes for individuals with pneumonia admitted to the ICU remains unknown. However, we are skeptical that the observed reduction in mortality can be attributed to increased use of noninvasive ventilation, as other studies have not demonstrated a consistent benefit of noninvasive ventilation for patients with pneumonia.¹⁻⁴ Further research is needed to elucidate the processes of care that explain the benefit of ICU care for pneumonia.

Assessments of the value of ICUs are vital. Future work must characterize the multifaceted ways in which ICU care may improve outcomes and must identify the patients for whom the ICU will be most beneficial. We demonstrated that ICU admission for patients with pneumonia in whom the decision to admit appeared to be discretionary was associated with reduced mortality. However, definitive conclusions about the effect of ICU admission will require more evidence, ideally from randomized designs.

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