

Improving CarE for Community-Acquired Pneumonia (ICE-CAP) Prognostic Study Study Information Sheet

The ICE-CAP prognostic tool uses data routinely collected upon arrival to the emergency department (e.g., patient age, vital signs) to estimate risk for severe pneumonia outcomes (e.g., need for intensive care, respiratory failure). The tool was developed and validated in a multi-center study, and we are now examining how it might help with clinical decision making, including patient disposition.

The original model was developed among a cohort of >2,200 children of all ages hospitalized with pneumonia at children's hospitals in three U.S. cities. The model accurately discriminated between children with and without severe outcomes (i.e., need for intensive care and respiratory failure or shock). Full details can be found here:
<https://pubmed.ncbi.nlm.nih.gov/27688362/>

We subsequently validated this model in a new cohort of children 6 months to 18 years of age with pneumonia presenting for emergency care at two children's hospitals. Model performance was unchanged from the original cohort and the model was well calibrated to the ED setting.

The current study aims to test the effectiveness of an EHR-based prognostic decision support tool as compared to usual care alone in a randomized clinical trial being conducted at Vanderbilt University Medical Center and the University of Pittsburgh Medical Center (ClinicalTrials.gov Identifier: NCT03760419).

Questions?

If you have further questions about the ICE-CAP study or this prognostic model, please contact Derek Williams, MD, MPH (Principal Investigator) at derek.williams@vumc.org.