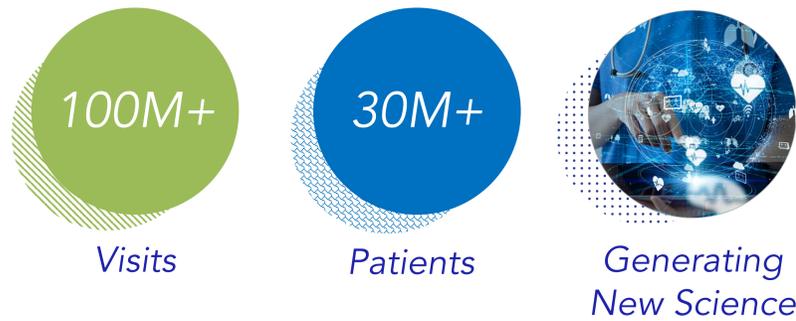


# Use of CEDR Big Data for Elucidating COVID-19's Impact on Emergency Care

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## What is CEDR?

- The American College of Emergency Physicians' (ACEP) Clinical Emergency Data Registry (CEDR) is the first Emergency Medicine specialty-wide registry.



## Collecting CEDR Data

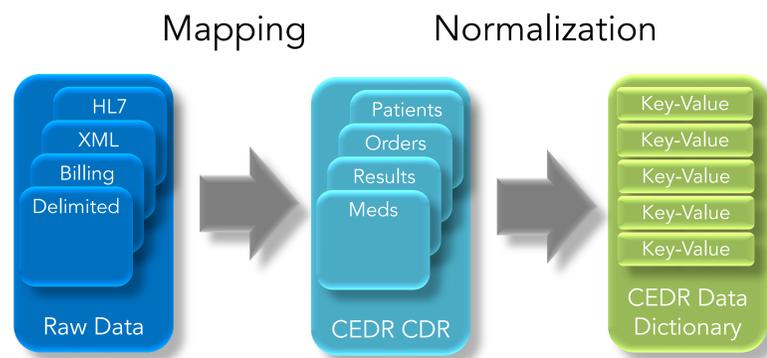


Figure 1. CEDR Collection, Mapping & Normalization Architecture

- Data are collected on a site-by-site basis with site-specific timelines. This can result in a short data lag.
- All data are normalized before being pushed into the Clinical Data Repository to be queried.

\* Janke, AT, Jain, S, Hwang, U, et al. Emergency department visits for emergent conditions among older adults during the COVID-19 pandemic. *J Am Geriatr Soc.* 2021; 19. <https://doi.org/10.1111/jgs.17227>

† Venkatesh, AK, Janke, AT, Li, S, et al. Emergency Department Utilization for Emergency Conditions During COVID-19, *Ann Emerg Med.* 2021;1-8. <https://doi.org/10.1016/j.annemergmed.2021.01.011>

‡ American College of Emergency Physicians. (2022). Covid-19 Data Visualization. ACEP - COVID-19. Retrieved April 20, 2022, from <https://www.acep.org/corona/covid-19-data-visualization/>  
§ National Syndromic Surveillance Program. (2022). ACEP COVID-19 and ED Utilization Syndromic Data. [Data file]. Irving, TX: American College of Emergency Physicians Clinical Affairs Division.



## COVID-19's Impact on EM Visits

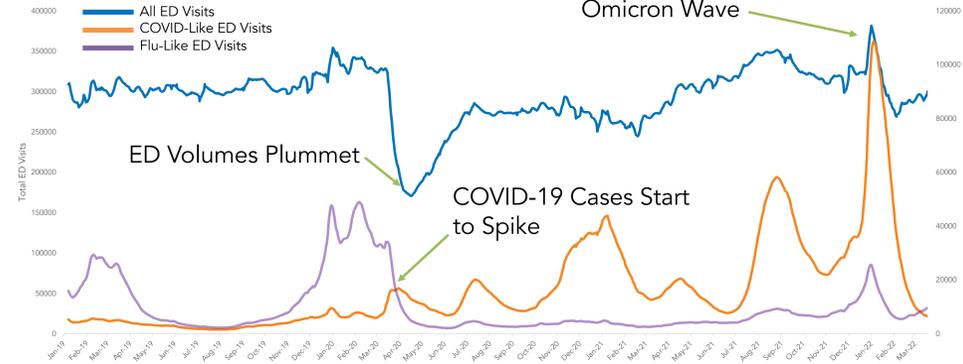


Figure 2. US Emergency department visits from January 2019-March 2022.<sup>‡§</sup>

## Querying CEDR for COVID-19 and Emergency Conditions

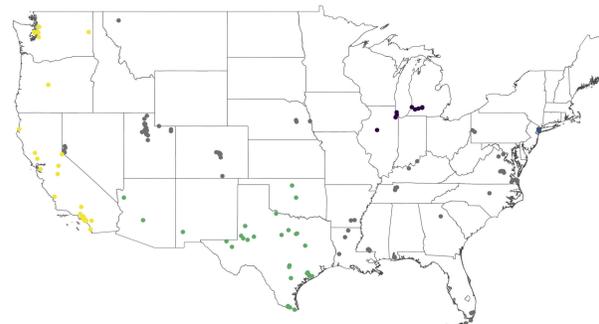
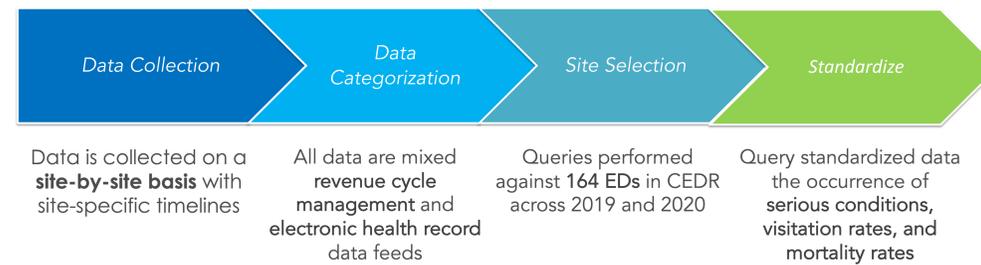
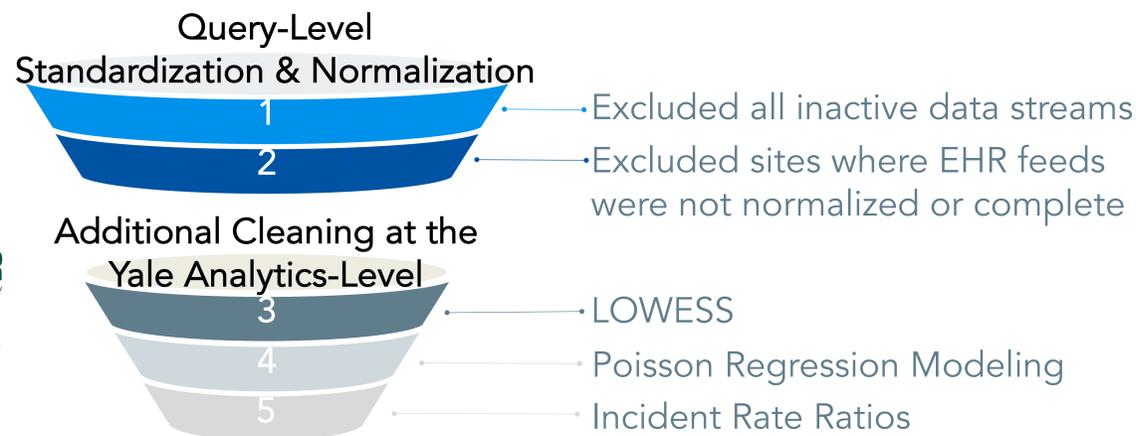


Figure 3. Map of 164 ED sites selected for both studies.<sup>†</sup>



## Use Case: ED Visit Surveillance During the COVID-19 Pandemic



## Retrospective Findings

### Nationwide

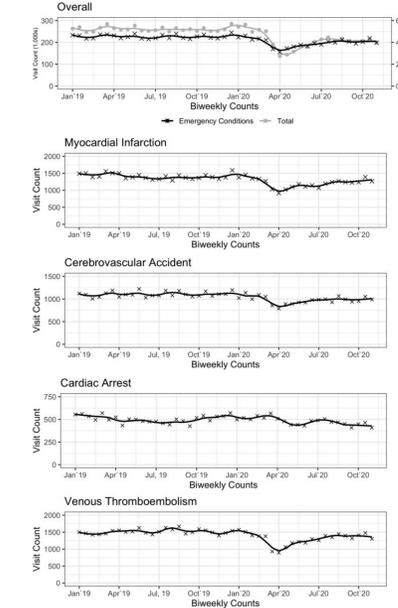


Figure 4. Total and select emergency condition biweekly ED visit counts.<sup>†</sup>

The decline in ED visits for these time-sensitive conditions suggests COVID-19 may continue to impede patients from seeking essential care.<sup>†</sup>

### In Older Adults (40+)

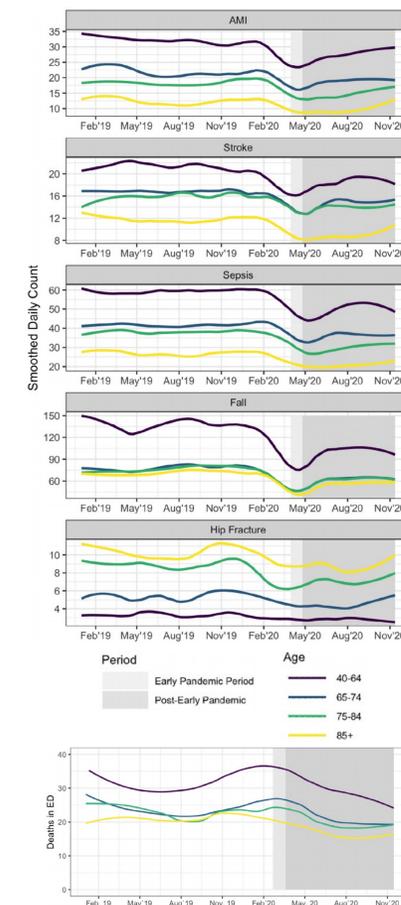


Figure 5. ED visit counts for select conditions by age category.<sup>‡</sup>

The decline in ED visits for emergent conditions in older adults might explain excess mortality seen nationwide during the COVID-19 pandemic.<sup>\*</sup>

Figure 6. Emergency department (ED) deaths in ED, counts, and incident rate ratios by age. Smoothed daily counts for deaths in ED are reported by age category.<sup>\*</sup>