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Conclusion: At two community EDs, three distinct subgroups of EP ordering practices exist based on advanced imaging use, propensity to admit a patient, and whether a visit was shared with a midlevel or resident. This data validates prior work showing that resource utilization and admission rates are related, while demonstrating that more nuanced patterns of EP ordering practices exist based on whether a visit is shared with a midlevel or resident provider. Further investigation is needed to understand the impact of EP characteristics and behavior on throughput and quality of care.

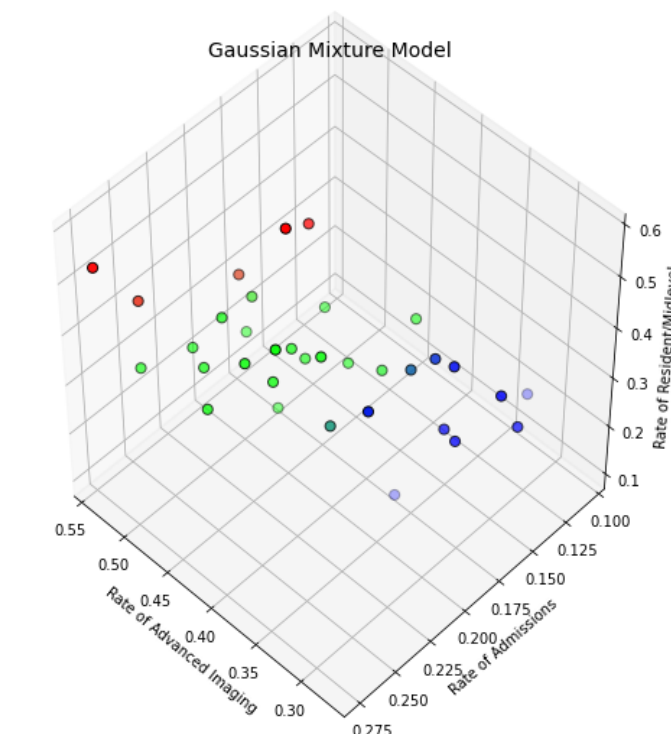


Figure 1. Gaussian mixture model

22 Variation of Emergency Medicine Resident Productivity During the COVID-19 Pandemic

Arjun Dhanik; Bryan Stenson; Daniel L. Shaw; David T. Chiu; Jake Hoyne; Joshua Kolikof; Leon D. Sanchez; Nathan McDonald; Peter S. Antkowiak

Objectives: The purpose of this study is to determine Emergency Medicine (EM) resident productivity (as measured by patients per hour) over the course of the COVID-19 pandemic compared to the prior training environment.

Background: The coronavirus disease 2019 (COVID-19) pandemic disrupted medical education throughout the United States. As a result, many EM residents began residency with atypical clinical experiences. In addition, Emergency Department (ED) patient volumes decreased during the early months of the pandemic.

Methods: This is a retrospective observational cohort

study conducted at an urban, academic medical center with an established EM residency program. Data was collected from electronic medical records between July 1, 2017 and October 31, 2021. EM residents completing full, consecutive years of residency were included in the sample. Classes prior to 2020 were defined as a control group. Due to the structure of the residency, only shifts at the academic medical center during first and second year of residency (PGY1 and PGY2) were included. Productivity was defined as total primary patient encounters divided by aggregate scheduled shift hours. To allow comparison of the most recent data, analysis was performed on the first four months (July-October) of each academic year. The data was analyzed using descriptive statistics, including standard deviation and t-tests.

Results: A total of 63 residents were included in this analysis of the first four months of each training year from 2017-2021. Prior to COVID-19, PGY1 residents evaluated 0.75 ± 0.23 patients per hour and PGY2 residents evaluated 1.46 ± 0.11 patients per hour ($p < 0.001$). Compared with the pre-COVID control group, PGY1 residents evaluated 0.64 ± 0.22 patients per hour in 2020 ($p = 0.15$) and 0.82 ± 0.21 patients per hour in 2021 ($p = 0.34$); PGY2 residents evaluated 1.44 ± 0.17 patients per hour ($p = 0.65$) in 2020 and 1.75 ± 0.17 patients per hour in 2021 ($p < 0.001$).

Conclusion: This analysis suggests that EM resident productivity at the medical center did not decrease significantly compared to prior years during the COVID-19 pandemic. While there was a trend towards fewer patients per hour in 2020, this did not reach statistical significance. These results may have applications to medical education and ED operations. The study is limited by single center, retrospective, and observational design.

23 Point-of-Care Ultrasound Interpretation of Cardiac Standstill in Children

Angela Chen; Kevin Hu

Objectives: This study seeks to determine the level of inter-observer agreement among Pediatric Emergency Medicine (PEM) physicians when interpreting POCUS for cardiac standstill in pediatric patients during cardiac arrest as well as highlight factors that may contribute to lack of agreement.

Background: Use of point-of-care ultrasound (POCUS) to diagnose cardiac standstill and guide continuation of cardiac resuscitation has gained widespread use in adult patients and is becoming more prevalent in pediatric patients. Previous studies have demonstrated moderate inter-observer agreement among physicians using POCUS to diagnose cardiac standstill during cardiac arrests in adult patients. There is limited data regarding POCUS interpretation of