positivity was highest with the STI-order set, while individual clinician tests captured the highest HCV volumes and positivity rates, suggesting addition of HIV to an STI order set can help in case finding. Further education to support RN-led screening and evaluation of clinician screening criteria may guide implementation in other EDs.

311 | Upstream From the Emergency Department: How Summer Camps Mitigate Air Quality and Severe Weather Risks for Children

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Background and Objectives: Climate change is increasing the frequency and severity of wildfire smoke, extreme heat, and poor air quality, disproportionately affecting children due to developing lungs and higher asthma prevalence. Summer camps place children outdoors for prolonged periods during peak wildfire and ozone seasons, often in remote settings with limited access to emergency medical services. Delayed recognition of hazardous air quality and insufficient activity modification may increase respiratory exacerbations, heat-related illness, and pediatric emergency department utilization. From an emergency medicine and disaster preparedness perspective, summer camps represent a critical opportunity for upstream prevention of climate-related illness. This study evaluates how summer camps across North America assess and respond to air quality and severe weather risks.
Methods: We partnered with a national camp-specific electronic health record system to distribute a 24-question online survey to camp leadership, including directors, medical staff, and administrators, at approximately 1250 camps. The survey assessed air quality monitoring practices, activity modification triggers, use of real-time environmental data, and the presence of formal air quality protocols. Descriptive statistics were used for analysis.
Results: A total of 550 camps completed the survey. Of these, 279 (51%) were residential overnight camps, 168 (30%) were day camps, 75 (14%) operated as both, and 28 (5%) identified as other. Camps reported modifying activities due to poor air quality, extreme heat or humidity, heavy rain, thunderstorms, lightning, severe winds, snowstorms, fog, weather advisories, and elevated Air Quality Index levels. Despite these concerns, only 24% ($n = 131$) of camps reported having a formal air quality policy. Existing policies most commonly relied on weather applications and the Environmental Protection Agency Air Quality Index for decision-making.
Conclusion: Many summer camps remain underprepared for climate-related air quality threats. Standardized protocols using objective air quality measures may improve camp safety and reduce preventable pediatric respiratory emergency department visits.

312 | Building-Level Prediction of Residential Fire Exposure

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Background and Objectives: Residential fires cause nearly 3000 deaths and 10,000 injuries in the United States each year. Identifying high-risk residences may help target emergency medicine interventions (e.g., post-discharge services, home safety evaluations, resources for patients with impaired mobility) and support emergency response planning. Previous work has shown fire risk to be associated with both neighborhood characteristics and housing safety-code violations. This project used aggregated public records and building data to develop a model predicting in-year risk of residential fire exposure by home address.
Methods: Building-level models were constructed using data from Boston 2014–2025 to estimate the probability of same-year residential fire. Covariates were taken from the Boston Buildings Inventory (building type, size, structure, age, features, owner-occupancy, and census-tract information), the Boston Fire Incident Reporting dataset, and the Boston Building and Property Violation dataset. These were geospatially joined to Boston Parcel ID and year. Panel logistic regression was used to fit models to 2014-2023 data, and 2024 fire data were used to assess 2024 predictions.
Results: 77,123 residential parcels were analyzed, representing a total of 14,746 code violations and 3,589 building fires. Fires were associated with building- and census-tract variables, including building size risk increased with units to an aOR of 44.6 for >100 units; 95% CI (44.4, 44.8), public housing (aOR 3.89; 95% CI (3.63, 4.15)), previous fire (aOR 2.42; 95% CI (2.20, 2.63)), housing code violations (aOR 1.18/violation; 95% CI (1.11, 1.25)), "unsafe and dangerous" citations (aOR 1.36; 95% CI (1.09, 1.63)), and census-tract variables including percent residents with incomes <149% Federal Poverty Level (aOR 1.06/10%; 95% CI (1.02, 1.06)) and residents of color (aOR 1.17/10%; 95% CI (1.010, 1.13)). Owner-occupancy was protective (aOR 0.67; 95% CI (0.57, 0.77)). Our models predicted 2024 fire risk with an AUC of 0.78. This included the identification of high-risk buildings, where 20% of residences identified as having >15% fire risk and 50% of residences identified as having >25% fire risk experienced actual same-year fires.
Conclusion: Building-level models predicted same-year residential fires and show potential to help clinicians and policymakers identify individuals and homes at high risk of fire exposure.

313 | Influenza-Associated Outcomes for Children in the 2024-2025 Season Stratified by Current and Previous Season Vaccination Status

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Background and Objectives: Influenza is a common cause of pediatric emergency department (ED) visits. Annual influenza vaccination is recommended for children aged ≥6 months, but it remains unclear whether vaccination in the prior season provides protection in the subsequent season. We evaluated whether influenza vaccination during the 2023–2024 season protected against influenza-related outcomes during the 2024–2025 season.

Methods: We conducted a retrospective cohort study of patients aged between 6 months and 17 years as of October 1, 2023 who were continuous members of Kaiser Permanente Northern California from October 1, 2023 through April 30, 2025. Vaccination status, demographics, and medical history were obtained electronically. The primary outcome was medically attended influenza infection confirmed by polymerase chain reaction. Secondarily, we assessed influenza-associated ED visits. Patients were categorized into four groups: unvaccinated in both seasons, vaccinated only in 2023–2024, vaccinated only in 2024–2025, or vaccinated in both seasons. Groups were compared using unadjusted analyses and multivariable regression.

Results: Among 711,002 children, 56.5% were unvaccinated in both seasons, 22.6% were vaccinated in both seasons, 12.5% were vaccinated only in 2023–2024, and 8.3% were vaccinated only in 2024–2025. Medically attended influenza occurred in 4.2% of children unvaccinated in both seasons, 4.9% of those vaccinated only in 2023–2024, 2.1% of those vaccinated only in 2024–2025, and 3.0% of those vaccinated in both seasons. Compared with unvaccinated children, adjusted odds of influenza infection were lower among those vaccinated in both seasons (aOR 0.62; 95% CI 0.60–0.64) and higher among those vaccinated only in 2023–2024 (aOR 1.08; 95% CI 1.04–1.12). Influenza-associated ED visits occurred in 0.78% for the unvaccinated both seasons group, 0.71% for 2023-2024 vaccination only, 0.36% for 2024-2025 vaccination only, and 0.35% for vaccinated both seasons.

Conclusion: Vaccination during the 2024–2025 influenza season, with or without prior-season vaccination, was associated with reduced influenza infections and ED visits. Prior-season vaccination alone did not confer protection, reinforcing the importance of annual influenza vaccination.

314 | Mandatory Versus Optional Influenza Vaccination for University Students

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Background and Objectives: While most college students are not at high risk for severe influenza, the combination of close living quarters and tight classroom spaces can facilitate the rapid spread of influenza which can lead to significant morbidity and missed class time. Although some universities have implemented policies requiring influenza vaccination for all students, there have been no published clinical data about the effectiveness of these policies. Thus, we sought to determine if a mandatory influenza vaccination policy at a single university resulted in fewer positive influenza tests at the student health clinic.

Methods: We performed a retrospective quasi-experimental before–after study using data from the University of Miami comparing influenza-related outcomes for students from the 2022–2023 influenza season when influenza vaccination was mandatory to those from the 2023–2024 season when influenza vaccination was optional. We compared groups with regards to the number of influenza vaccines given by the student health clinic, the total number of influenza tests performed, and the number of positive Influenza tests. We used two-proportion z-tests to compare the percentage of the student body who received vaccines and who were diagnosed with influenza at the student health clinic.

Results: At the beginning of the 2022–2023 academic year (the mandatory vaccination season), there were 19,402 students enrolled as compared to 19,593 in the 2023–2024 season (the optional vaccination season). For the mandatory season, 8556 students (44.1% of the student body) were vaccinated by the student health clinic compared with 2187 (11.2%) during the optional season, an absolute difference of 32.9% (95% CI 32.1% to 33.8%, $p < 0.001$). During the mandatory season, 2,543 influenza tests were performed as compared to 4,148 during the optional season, a 63.1% increase. Lastly, during the mandatory year, 195 (1.0%) of 19,402 students had a positive influenza test at the student health clinic compared to 403 (2.1%) of 19,593 students during the optional year, an absolute difference of 1.1% (95% CI 0.8 to 1.3%), $p < 0.001$.

Conclusion: In this single-institution, before–after analysis, removal of a mandatory influenza vaccination policy at a university was associated with increases in influenza tests ordered and laboratory-confirmed influenza cases diagnosed at the student health clinic.

315 | Heart Rate Trajectory Phenotypes and Clinical Outcomes

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Background and Objectives: Early heart rate (HR) response to therapy for atrial fibrillation with rapid ventricular response (Afib-RVR) may provide prognostic information beyond static measurements. Identifying HR trajectory phenotypes could improve the prediction of treatment success and early adverse events, especially in heterogeneous populations presenting to the emergency department (ED).

Methods: We performed a retrospective cohort study of ED patients with Afib-RVR between 2019 and 2023. HR trajectories were classified into rapid responders (HR <110 by 2 h), gradual responders (HR <110 by 4 h), and non-responders (HR ≥110 through 4 h). Primary outcomes were 6-h rate control and composite adverse events. Multivariable logistic regression adjusted for age, baseline HR, and heart failure with reduced ejection fraction (HFrEF).

Results: Among 311 patients, 26.4% were rapid responders, 18.0% gradual responders, and 55.6% non-responders. Rate control was achieved in 80.5% of rapid responders, 82.1% of gradual responders, and 38.2% of non-responders. In adjusted models, non-response was strongly associated with failure to achieve control (adjusted odds ratio [aOR] 0.13; 95% CI, 0.06–0.27), whereas rapid and gradual responders had similar odds of