Patient Distribution Tool for Mass Casualty Incidents in a Large Metropolitan Setting

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Introduction: During a mass casualty incident (MCI), activating resources for response and equitable patient distribution is paramount. The Regional Hospital Coordination Center (RHCC) of a large US city lacked an objective tool readily available to manage patient distribution to area hospitals during an MCI. In a hospital-rich community, spreading the patient distribution throughout the region decreases the impact to one hospital. A tool was needed to equitably distribute patients across the healthcare system without added burden or demand to the hospitals nearest the MCI.
Method: This tool was developed using Excel and regional hospital capability information including trauma or burn center status, pediatric designation, etc. These capabilities and geographic distances from the MCI were the driving factors of the tool development.

The city has several high-visibility, large event locations. These locations were added into the tool and can be selected as MCI origin points. From here, the tool organizes hospitals by distance from the designated point. Since the formulas were programmed into the tool, it can be easily and quickly adapted to any MCI in the area and reflect relevant resources and limitations.
Results: Equitable patient distribution to area hospitals during an MCI is a best practice. Advance preparation is key to ensuring quick response and effective utilization of resources. Having a custom tool pre-programmed with relevant, regional hospital capabilities expedited this process and streamlined patient distribution efforts and, ultimately, improved emergency care coordination and patient outcomes.
Conclusion: During a Mass Casualty Incident, distributing patients equitably across the healthcare system without added burden to the hospitals nearest the event is critical. Having a custom tool pre-programmed with regional hospital capabilities expedites and streamlines patient distribution efforts, ultimately improving emergency care coordination and patient outcomes.

Prehosp. Disaster Med. 2023;38(Suppl. S1):s40
doi:10.1017/S1049023X23001413

Temporal Trends of Ambulance Times for Suspected Stroke/Transient Ischemic Attack (TIA) Before and During the COVID-19 Pandemic in Ireland: A Retrospective Cohort Study

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Introduction: International reports suggest there have been prehospital delays for time-sensitive emergencies like stroke and TIA during the COVID-19 pandemic. The aim was to investigate the impact of the COVID-19 pandemic on ambulance times and emergency call volume for adults with suspected stroke and TIA in Ireland.
Method: We conducted a retrospective cohort study of patients ≥ 18 years with suspected stroke/TIA, based on data from the National Ambulance Service. We included all cases assigned code 28 (suspected stroke/TIA) by the emergency call-taker, from 2018-2021. We compared ambulance times and emergency call volume by week, the four COVID-19 waves (defined by the Health Protection Surveillance Centre) and annually. The COVID-19 period was from March 1, 2020 - December 19, 2021 and the pre-COVID-19 period January 1, 2018 - February 29, 2020. Continuous variables were compared with t-tests and categorical variables with Pearson's $\chi 2$ tests.
Results: 40,012 cases were included: 20,281 in the pre-COVID-19 period and 19,731 in the COVID-19 period. Mean patient age significantly decreased between the two periods, from 71 years (±16.5) to 69.8 years (±17.1); $p<0.001$. Mean ambulance response time increased between the two periods from 17 minutes 31 seconds to 18 minutes 59 seconds ($p<0.001$). The number of cases with symptom onset to emergency call time of >4 hours significantly increased from 5,581 to 6,060 during the COVID-19 period ($p<0.001$). Mean calls/day increased from 25.1/day to 30.1/day during the COVID-19 period.
Conclusion: Early findings from the study suggest an increase in call volume for stroke/TIA between the COVID-19 and pre-COVID-19 periods. An increase in response times during the same periods was also found. We concluded that longer symptom-to-call times indicate a change in healthcare-seeking behavior. Sustaining high levels of compliance with stroke code protocols is crucial during healthcare crises. Future research will involve further analysis including controlling for confounders.

Prehosp. Disaster Med. 2023;38(Suppl. S1):s40
doi:10.1017/S1049023X23001425

Ukraine War: How Humanitarian Medicine can Reduce Morbidity and Mortality in the Prehospital Space

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Introduction: The 2022 Russian invasion of Ukraine exacts a heavy death toll throughout Ukraine. Morbidity and mortality