Aims Triage is a key principle in the effective management of major incidents. However, there is an increasing body of evidence demonstrating that existing paediatric methods are associated with high rates of under-triage and are not fit for purpose. The aim of this study was to derive a novel paediatric triage tool using machine learning (ML) techniques.

Methods The United Kingdom Trauma Audit Research Network (TARN) database was interrogated for all paediatric patients aged under 16 years for the ten-year period 2008-2017. Patients were categorised as Priority One if they received one or more life-saving interventions from a previously defined list.

Six ML algorithms were investigated for identifying patients as Priority One. Subsequently, the best performing model was chosen for further development using a risk score approach and clinically relevant modifications in order to derive a novel triage tool (LASSO M2).

Using patients with complete pre-hospital physiological data, a comparative analysis was performed with existing pre-hospital paediatric major incident triage tools. Subsequent external validation was performed using the UK military Joint Theatre Trauma Registry (JTTTR). Performance was evaluated using sensitivity, specificity, under-triage (1-sensitivity) and over-triage (1-sensitive positive predictive value).

Results Complete physiological data were available for 4962 patients. The LASSO M2 model demonstrated the best performance at identifying paediatric patients in need of life-saving intervention, sensitivity 88.8% (95% CI 85.5, 91.5) and was associated with the lowest rate of under-triage, 11.2% (8.5, 14.5). In contrast, the Paediatric Triage Tape and Jump-START both had poor sensitivity when identifying those requiring life-saving intervention (36.1% (31.8, 40.7) and 44.7% (40.2, 49.4)) respectively. Performance was unchanged in the external validation dataset.

Conclusion The ML derived triage tool (LASSO M2) outperforms existing methods of paediatric major incident triage at identifying patients in need of life-saving intervention in both the internal and external validation datasets. Prior to its recommendation for clinical use, further work is required to conduct a feasibility assessment and user acceptability trial in clinical conditions.

894 EPIDEMIOLOGY OF ACUTE POISONING AMONG CHILDREN IN URBAN SRI LANKA: THE EXPERIENCE OF TWO TERTIARY CARE HOSPITALS IN COLOMBO DISTRICT

1Kavinda Dayasiwe, 2V Thadhchanamoorthy, 3Michael Jansz, 4Senuri Dassanayake, 5Geetha Anand. 1Kavinda Dayasiwe, 2V Thadhchanamoorthy, 3Michael Jansz, 4Senuri Dassanayake, 5Geetha Anand. 1Kavinda Dayasiwe, 2V Thadhchanamoorthy, 3Michael Jansz, 4Senuri Dassanayake, 5Geetha Anand. 1Kavinda Dayasiwe, 2V Thadhchanamoorthy, 3Michael Jansz, 4Senuri Dassanayake, 5Geetha Anand.

Aims Acute poisoning in children is associated with increased yet largely preventable morbidity and mortality. Further, poisoning patterns and trends vary over the years in keeping along with change in socio-cultural practices and, availability and access of poisonous substances to young children. This study aimed to describe the recent patterns and trends in acute poisoning among children in two tertiary care centers in urban Sri Lanka.

Methods The current observational cross-sectional study included all children admitted to Lady Ridgeway hospital, Colombo (LRH) and North Colombo Teaching Hospital (NCTH) over a period of two years (January 2020 to December 2021). Data regarding patient demographics, poison types and outcomes were collected retrospectively by trained medical graduates using a based on structured check list by trained medical graduates. All data were recorded using the entered in SPSS 17.0 software. Findings were compared A comparison was made between the findings of the current study with similar the studies performed in rural Sri Lanka; in addition, comparison was also made with data available from and the studies performed in the same settings more than two decades ago.

Results Out of Among 200 children recruited to the study (NCTH – 116, LRH – 84), the majority were male (119 59.5%, range 9 months – 14 years. All poisonings occurred following ingestion and no cases were reported following eye instillation and skin contamination. The majority of poisoning occurred accidentally apart from whilst there’re two events of deliberate poisoning. The most common poison type was household chemicals (93, 46.5%) whilst other poison types included pharmaceutical agents (79, 39.5%), plants (16, 8%) and miscellaneous substances (12, 6%). No pesticide poisonings were observed. Common poisons included kerosene oil (37, 18.5%), paracetamol (21, 10.5%), and good luck plants that were thought to bring good fortune (13, 6.5%). The majority of children were discharged following a period of observation whilst one child was admitted to intensive care unit for further management. The observations of the current study showed notable variations in poisoning compared to previous studies performed in urban and rural Sri Lanka over time. They included reduced incidence of pesticide and oleander plant poisonings, and more frequent pharmaceutical poisonings with drugs.

Conclusion The current trends in poisoning among children living in urban Sri Lanka shows decreasing incidence of pesticide poisonings and increasing incidence of poisoning with pharmaceutical agents. Ornamental plants were the most common plants implicated in poisoning in urban regions compared to more toxic oleander plant poisonings observed in rural Sri Lanka. These changing trends in poisonings of children need careful documentation so that it allows for attention in the purview of planning preventative interventions.

893 EMERGENCIES IN EMERGING ADULTS: SHOULD 16–17 YEAR-OLDS BE CARE FOR IN THE PAEDIATRIC OR ADULT ED?

1Lucy Pickard, 2Timothy Sullivan, 3Elizabeth Paxton, 4Lauren Poklar, 5Lalanksh Asim. 1Lucy Pickard, 2Timothy Sullivan, 3Elizabeth Paxton, 4Lauren Poklar, 5Lalanksh Asim. 1Lucy Pickard, 2Timothy Sullivan, 3Elizabeth Paxton, 4Lauren Poklar, 5Lalanksh Asim. 1Lucy Pickard, 2Timothy Sullivan, 3Elizabeth Paxton, 4Lauren Poklar, 5Lalanksh Asim.

Aims The NHS ‘You’re Welcome’ standards aim to ensure that children and young people (CYP) receive healthcare suitable for the group’s specific needs. It is not specified whether adolescents should be cared for in Adult Emergency Department (AED) or Paediatric Emergency Department (PED) settings, but that ‘care is delivered in a safe, suitable and young people friendly environment.’