**APPENDICES**

**Appendix 1.**

**Protocol for resuscitation, definitions and data extraction.**

Resuscitation, delivered as routine care, was guided by ACLS protocols and institutional policies. PoCUS was performed during designated pauses, such as pulse and rhythm checks and necessary resuscitative procedures (e.g. intubation), so as to minimize cardiopulmonary resuscitation (CPR) interruption. Pauses were minimized as per ACLS recommendations, however, actual delays in CPR were not recorded.

Images were acquired using the standard PoCUS technique, using curvilinear or phased array ultrasound probes. Ultrasound views included sub-xiphoid, parasternal long axis, or apical four chambers. Image requirements were based on adequate echocardiographic windows and image quality, as determined by the physician performing the bedside ultrasound. For patients that were difficult to image, a combination of views was used to obtain adequate information. Sonographic images were obtained by competent personnel with experience in PoCUS; findings were communicated to the team leader.

Cardiac activity on PoCUS was defined as sustained coordinated contractility of the left ventricle, with visible valve movement.

Return of Spontaneous Circulation (ROSC) is defined as presence of a palpable major pulse, resulting in cessation of CPR for at least one cycle.

Survival to Hospital Admission (SHA) is defined as survival resulting in transfer to a ward or intensive care setting post resuscitation, but not resulting in survival to hospital discharge.

Survival to Hospital Discharge (SHD) is defined as survival to the point of leaving the hospital alive.

**Data collection and presentation**

The data for this study were obtained through a structured chart review in line with the REporting of studies Conducted using Observational Routinely-collected health Data (RECORD) statement guidelines.14 The ED cardiac arrest database was used to identify all cardiac arrest patients. In addition, full patient charts (ambulance charts, emergency department charts, cardiac arrest records, electronic records, inpatient charts and PoCUS records) for patients with a presentation of cardiac arrest were analyzed. Subject data, with Protected Health Information (PHI) removed, were stored in a local database. The local site kept secured records to enable the identification of the patient source if data review was required.

A team of data abstractors were trained utilizing a practice chart analysis prior to official data abstraction. Bias was minimized by the creation of a standardized data abstraction form prior to the chart review. Questionable chart details were reviewed with an adjudication committee prior to continuing with data collection. Key cases were subsequently reviewed and clarified by consensus by senior clinical members of the investigating team. Data on diagnostic performance are reported in this manuscript. We plan to report the impact of PoCUS findings on the length of resuscitation, frequency of interventions and clinical outcomes separately.