



## Service Priorities and Programmes Electronic Presentations

**Convention ID:** 998

**Submitting author:** Dr Xin Li

**Post title:** Other(Please specify):, Queen Mary Hospital, NULL

### **Quality of Care Evaluations of Congenital Heart Surgery in Hong Kong**

*Li X(1), Au TWK(1), Bhatia I(1), Chau AKT(2)*

*(1)Department of Cardiothoracic Surgery, Queen Mary Hospital, (2)Department of Paediatric Cardiology, Queen Mary Hospital*

#### **Keywords:**

Quality evaluation

Audit

Congenital heart

Surgery

Database

Database

#### **Introduction**

Continuous quality of care assessment is important for benchmarking and creating health care improvement strategies. Being the only referral centre in Hong Kong, the congenital heart surgery (CHS) programme in Queen Mary Hospital (QMH) has the responsibility of maintaining a high quality of service by continuously evaluating and auditing its outcomes.

#### **Objectives**

(1) To collect data prospectively for all the patients undergoing surgery for paediatric and congenital heart disease (CHD) at QMH. (2) To establish an ongoing surgical database and a systematic audit for CHD and its surgical outcome. (3) To identify risk stratification tools for CHS applicable to the local population. (4) To aid in quality assessment and quality improvement initiatives of CHS in Hong Kong.

#### **Methodology**

All the data were collected at the bedside of patients undergoing CHS by the first-line medical staff in QMH since 2012. Data entry, submission, maintenance, and analysis were conducted by the department's full-time research staff. Aristotle Basic Complexity (ABC) Score and the STAT Mortality Score were used as risk stratifications for outcome analysis. The data in the European Congenital Heart Surgeons Association (ECHSA) Database was also achieved for benchmarking. The performance was assessed by calculating the observed versus the expected (O/E) mortality ratio. The discrimination of the risk stratification tools as predictors of 30-day mortality were quantified by calculating the area under the Receiver Operating Characteristic curve (C-index).

#### **Result**

All the data were collected at the bedside of patients undergoing CHS by the first-line medical staff in QMH since 2012. Data entry, submission, maintenance, and analysis

were conducted by the department's full-time research staff. Aristotle Basic Complexity (ABC) Score and the STAT Mortality Score were used as risk stratifications for outcome analysis. The data in the European Congenital Heart Surgeons Association (ECHSA) Database was also achieved for benchmarking. The performance was assessed by calculating the observed versus the expected (O/E) mortality ratio. The discrimination of the risk stratification tools as predictors of 30-day mortality were quantified by calculating the area under the Receiver Operating Characteristic curve (C-index). Conclusions: Satisfactory CHS outcomes have been achieved at QMH in the past four years. STAT Mortality Score was a better predictor of mortality than ABC score and can be applied to our local population. The information from this surgical database will aid in benchmarking our performance against international peers and guide our quality improvement efforts.