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Six years' experience of managing congenital and pediatrics database: The impact on clinical practice

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Background/Introduction: Quality improvement is a core value of healthcare provision in Pediatric and Congenital Cardiothoracic surgery. In order to improve quality of care, information on key indicators needs to be systematically collected and analyzed. To promote quality assurance of the Pediatric and Congenital Cardiothoracic surgeryprogram at The Aga Khan University and hospital,a database is developed to acquire, maintain and analyze reliable variable information.This database helps health professionals, to measure and improve care by equating their work to international standards. This is the only Pediatric and Congenital Cardiothoracic surgery database in Pakistan.

Objective: To assess the impact of database development and maintenance on clinical practice and quality of care.

Methods: Information of patients were obtained through pre-operative evaluation form, anesthesia information sheet, perfusion information, sheetsurgery information form and the post-operative flowcharts, status of the patient at discharge and 30-days post-surgery follow-up information. Information was collected through structured questionnaire by trained data abstractor and entered into Microsoft Access, after error checks and the validated data was analyzed on SPSS(Statistical package of social sciences) software.

Results: From July 2006–June 2012, a total of1017 heart surgeries were performed. The most common open heart surgeries were VSD 27%, TOF24% were,and 13%were ASD. In closed heart 51% were Modified BT shunts,17% were PDA. The overall 30-day mortality in open heart was 7.04%, and in closed heart it was 7.5%. Post-surgery morbidity was 29% in open-heart, 21% was in closed heart surgery. Re-admissions after 30 day of Discharge were 8.4% mainly for respiratory infection. Followed with 16% lost to follow-ups 79.6% patients were alive, 0.6% were died at 30 day patients follow up.

Impact in clinical practice: With the development of database, post-surgery mortality and morbidity rates could easily be generated. It helped in development and enforcement of protocols to reduce the mortality and morbidity rates. It also helped in controlling preventable post-surgery complications. As a result, we modified our practice in an effort to address these issues and reduce the complication rates after the surgery.

Conclusion: Updated and stringently maintained database helped to identify deficiencies, strength and trends of the Pediatric and Congenital Cardiothoracic surgery program.

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