In the Spotlight: Quality Improvement and Outcomes Committee

Under the leadership of Erle Austin, our CHSS President, the CHSS Committee on Quality Improvement and Outcomes was officially constituted at the 2011 Annual Meeting of CHSS.

The CHSS Committee on Quality Improvement and Outcomes has the following duties:

- To create and facilitate multi-institutional initiatives to assess and improve the quality of care delivered to patients with congenital and pediatric heart disease
- To establish and maintain a CHSS-based resource for the evaluation of programmatic quality for programs caring for patients with congenital and pediatric congenital heart disease
- To oversee the linkage of the CHSS to other databases in order to achieve the above objectives and simultaneously further the research mission of the CHSS.

Our new CHSS Committee on Quality Improvement and Outcomes has engaged in multiple activities since its creation. This article will describe five of these initiatives:


The abstract from this manuscript states:

“This article presents 21 “Quality Measures for Congenital and Pediatric Cardiac Surgery” that were developed and approved by the Society of Thoracic Surgeons (STS) and endorsed by the Congenital Heart Surgeons’ Society (CHSS). These Quality Measures are organized according to Donabedian’s Triad of Structure, Process, and Outcome. It is hoped that these quality measures can aid in congenital and pediatric cardiac surgical quality assessment and quality improvement initiatives.”

Second, the CHSS Committee on Quality Improvement and Outcomes is collaborating with the CHSS Research Committee, the CHSS Data Center, and Emile Bacha to develop methodology to operationalize Emile’s Technical Performance Score as a CHSS multi-institutional initiative.

Third, the CHSS Committee on Quality Improvement and Outcomes is collaborating with The National Association of Children’s Hospitals and Related Institutions (NACHRI) to explore the possibility of creating a Congenital Heart Surgery Quality Improvement Collaborative. Two exploratory webinars were held with CHSS and NACHRI on November 28, 2011 and December 15, 2011.

Work in Progress: Pulmonary Conduit

Some pulmonary conduit risk factors, such as patient characteristics, are static (e.g., gender). However, the magnitude of many risk factors changes with time (e.g., RV systolic pressure). Most cardiac surgical studies have been analyzed using methods that treat all risk factors as constants, thereby providing only a first approximation of risk factors which change over time. Newer statistical techniques are now available which can incorporate multiple measurements of risk factors into the analysis, as first used in the Data Center’s 2010 manuscript which examined the risk of subsequent procedures and mortality in patients after repair of Interrupted Aortic Arch (Jegatheeswaran A, et al, 2010).

One of the major goals identified during the previous Work Weekend was to use this method to quantify the influence of catheter-based procedures and non-conduit-related cardiac surgery on conduit durability.

To date we have successfully created a preliminary model which quantifies the influence of the type and timing of diagnostic and interventional cardiac catheterizations on durability of the first conduit (i.e., time to surgical replacement of the first conduit). We have also incorporated time-independent covariates such as type and caliber of conduit inserted, duration of cryopreservation (when applicable), patient weight at birth and at conduit insertion, age at conduit insertion, and patient blood type (with donor blood type and ABO compatibility, when applicable). We continue to add more administrative and procedural variables to the model on a daily basis.

AAOCA Surgical Checklist

We realize that the priorities for clinical reporting and research data collection differ in the real world. We observed that some data we consider important for future analysis were missing from the OR notes. In order to bridge this gap, we have created a surgical checklist for operating surgeons. You can fill out these forms at the time of or soon after cardiac procedures for patients enrolled in the AAOCA study. Once the patient is consented and the form filled out, you can send this checklist to us which will help us clarify the data better.

Most surgeons would have heard of the book ‘The Checklist Manifesto’ by Dr. Atul Gawande. The AAOCA surgical checklist is our attempt to emulate the clinical success in our research environment!
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Fourth, the CHSS Committee on Quality Improvement and Outcomes is collaborating with the STS to prepare a CMS Grant with the following goal:

- To develop a Pediatric Cardiac Care Learning Collaborative (PCCLC) and compare quality improvement achieved at centers who participate in the PCCL and the STS Congenital Heart Surgery Database (STS-CHSD) to comparable centers (control centers) who only participate in STS-CHSD.

Fifth, the CHSS Committee on Quality Improvement and Outcomes is collaborating with the CHSS Research Committee and STS to operationalize the following funded Grant from Children’s Heart Foundation (CHF): Linking the Congenital Heart Surgery Database of the Society of Thoracic Surgeons (STS) with the CHSS Database.

Spring 2012 Work Weekend Dates:
April 13-15, 2012

We are happy to announce the Spring 2012 Work Weekend dates. Please mark your calendars for the dates of 13-15 April 2012. We will circulate the agenda in separate email as soon as we have more details finalized.

We had a great social program along with the busy research days during the last work weekend in November 2011. Dr. Bill DeCampli has kindly shared pictures he took of the events. We hope this photo will entice you to come visit the Data Center!

Pulmonary Conduit (Continued from Pg. 1)

We will also examine other end-points such as echocardiographic measures of conduit failure (i.e., stenosis, regurgitation or pseudoaneurysm). We look forward to making further refinements with input from the Pulmonary Conduit Working Group. An email invitation to participate will be forthcoming in late February or March.

Launch of Unbalanced Atrioventricular Septal Defect Cohort

We are glad to announce the launch of the newest CHSS inception cohort of Unbalanced Atrioventricular Septal Defect. The study has been approved to recruit patients at The Hospital for Sick Children. We invite your participation in the cohort.

We have spoken with research coordinators in two conference calls on 18th and 24th January regarding the initiation of the cohort at their institutions.

We have uploaded the study documents to our website that you can download to initiate the IRB/REB approval process at your institutions. For further information or to participate in the cohort, please contact us at chss.dc@sickkids.ca.

Secure Electronic Data Transfer

Your CHSS Data Center continuously strives to make participation in your research cohorts easier for all the members, research team members and patients. Towards that goal, we will roll out a secure electronic data transfer plan starting in February. This service is provided by The Hospital for Sick Children Research Information Technology Department. The data transferred will be hosted on the Hospital server and will be completely secure. This process has also been approved by the Research Ethics Board at The Hospital for Sick Children, Toronto.

While this service is intended to supplement and not a replacement of physical data transfer, we invite all participating centers who have capacity to send us their data electronically to use this facility. This will enhance the efficiency of the data transfer in terms of increased speed and will cut printing and mailing costs. If you are interested in using this service for your CHSS participation, please contact us at chss.dc@sickkids.ca.