Incidence of ESKD and Mortality among Children with Congenital Heart Disease After Cardiac Surgery
SUPPLEMENTAL MATERIAL

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Supplemental Table 1. STROBE and RECORD checklists

	Item No.	STROBE items	Location in manuscript where items are reported	RECORD items	Location in manuscript where items are reported
Title and abstract					
	1	(a) Indicate the study's design with a commonly used term in the title or the abstract (b) Provide in the abstract an informative and balanced summary of what was done and what was found	Abstract	RECORD 1.1: The type of data used should be specified in the title or abstract. When possible, the name of the databases used should be included. RECORD 1.2: If applicable, the geographic region and timeframe within which the study took place should be reported in the title or abstract. RECORD 1.3: If linkage between databases was conducted for the study, this should be clearly stated in the title or abstract.	Abstract Abstract Abstract
Introduction					
Background rationale	2	Explain the scientific background and rationale for the investigation being reported	Introduction		
Objectives	3	State specific objectives, including any prespecified hypotheses	Introduction		
Methods					
Study Design	4	Present key elements of study design early in the paper	Study Design		
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment,	Population, Study Outcomes		

	Item No.	STROBE items	Location in manuscript where items are reported	RECORD items	Location in manuscript where items are reported
		exposure, follow-up, and data collection			
Participants	6	*(a) Cohort study* - Give the eligibility criteria, and the sources and methods of selection of participants. Describe methods of follow-up *Case-control study* - Give the eligibility criteria, and the sources and methods of case ascertainment and control selection. Give the rationale for the choice of cases and controls *Cross-sectional study* - Give the eligibility criteria, and the sources and methods of selection of participants *(b) Cohort study* - For matched studies, give matching criteria and number of exposed and unexposed *Case-control study* - For matched studies, give matching criteria and the number of controls per case	(a) Population, Study Outcomes (b) Statistical Analysis	RECORD 6.1: The methods of study population selection (such as codes or algorithms used to identify subjects) should be listed in detail. If this is not possible, an explanation should be provided. RECORD 6.2: Any validation studies of the codes or algorithms used to select the population should be referenced. If validation was conducted for this study and not published elsewhere, detailed methods and results should be provided. RECORD 6.3: If the study involved linkage of databases, consider use of a flow diagram or other graphical display to demonstrate the data linkage process, including the number of individuals with linked data at each stage.	Supplementary Table 4 Supplementary Table 4, References Methods, Figure 1

	Item No.	STROBE items	Location in manuscript where items are reported	RECORD items	Location in manuscript where items are reported
Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable.	Population, Study Outcomes, Supplementary Table 4, Supplementary Table 5	RECORD 7.1: A complete list of codes and algorithms used to classify exposures, outcomes, confounders, and effect modifiers should be provided. If these cannot be reported, an explanation should be provided.	Supplementary Table 5
Data sources/ measurement	8	For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group	Study Outcomes, Supplementary Table 4, Supplementary Table 5		
Bias	9	Describe any efforts to address potential sources of bias	Statistical Analysis		
Study size	10	Explain how the study size was arrived at	Population, Figure 1		
Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen, and why	Statistical Analysis		
Statistical methods	12	(a) Describe all statistical methods, including those used to control for confounding (b) Describe any methods used to	(a) Statistical Analysis		

	Item No.	STROBE items	Location in manuscript where items are reported	RECORD items	Location in manuscript where items are reported
		examine subgroups and interactions (c) Explain how missing data were addressed (d) *Cohort study* - If applicable, explain how loss to follow-up was addressed *Case-control study* - If applicable, explain how matching of cases and controls was addressed *Cross-sectional study* - If applicable, describe analytical methods taking account of sampling strategy (e) Describe any sensitivity analyses	(b) Statistical Analysis (c) Statistical Analysis (d) N/A (e) N/A		
Data access and cleaning methods		..		RECORD 12.1: Authors should describe the extent to which the investigators had access to the database population used to create the study population. RECORD 12.2: Authors should provide information on the data cleaning methods used in the study.	Study Design Population, Figure 1

	Item No.	STROBE items	Location in manuscript where items are reported	RECORD items	Location in manuscript where items are reported
Linkage		..		RECORD 12.3: State whether the study included person-level, institutional-level, or other data linkage across two or more databases. The methods of linkage and methods of linkage quality evaluation should be provided.	Study Design
Results					
Participants	13	(a) Report the numbers of individuals at each stage of the study (*e.g.*, numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analysed) (b) Give reasons for non-participation at each stage. (c) Consider use of a flow diagram	(a) Results, Figure 1 (b) Figure 1 (c) Figure 1	RECORD 13.1: Describe in detail the selection of the persons included in the study (*i.e.,* study population selection) including filtering based on data quality, data availability and linkage. The selection of included persons can be described in the text and/or by means of the study flow diagram.	Population, Figure 1
Descriptive data	14	(a) Give characteristics of study participants (*e.g.*, demographic, clinical, social) and information on exposures and potential confounders (b) Indicate the number of participants with	(a) Results, Table 1, Supplementary Table 2 (b) Statistical Analysis		

	Item No.	STROBE items	Location in manuscript where items are reported	RECORD items	Location in manuscript where items are reported
		missing data for each variable of interest (c) *Cohort study* - summarise follow-up time (*e.g.*, average and total amount)	(c) Results		
Outcome data	15	*Cohort study* - Report numbers of outcome events or summary measures over time *Case-control study* - Report numbers in each exposure category, or summary measures of exposure *Cross-sectional study* - Report numbers of outcome events or summary measures	Table 2, Supplementary Table 3		
Main results	16	(a) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (e.g., 95% confidence interval). Make clear which confounders were adjusted for and why they were included (b) Report category boundaries when continuous variables were categorized	(a) Results, Table 2, Supplementary Table 3, Figure 2, Figure 3 (b) N/A		

	Item No.	STROBE items	Location in manuscript where items are reported	RECORD items	Location in manuscript where items are reported
		(c) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period	(c) Figure 2, Table 2		
Other analyses	17	Report other analyses done—e.g., analyses of subgroups and interactions, and sensitivity analyses	Figure 3		
Discussion					
Key results	18	Summarise key results with reference to study objectives	Discussion		
Limitations	19	Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias	Discussion	RECORD 19.1: Discuss the implications of using data that were not created or collected to answer the specific research question(s). Include discussion of misclassification bias, unmeasured confounding, missing data, and changing eligibility over time, as they pertain to the study being reported.	Discussion
Interpretation	20	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence	Discussion		
Generalisability	21	Discuss the generalisability	Discussion		

	Item No.	STROBE items	Location in manuscript where items are reported	RECORD items	Location in manuscript where items are reported
		(external validity) of the study results			
Other Information					
Funding	22	Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based	Acknowledgements		
Accessibility of protocol, raw data, and programming code		..		RECORD 22.1: Authors should provide information on how to access any supplemental information such as the study protocol, raw data, or programming code.	Acknowledgements

Supplemental Table 2. Cohort build and baseline characteristic codes

Characteristic/Condition	Database	Codes
Inclusion Criteria		
Congenital heart disease	CIHI-DAD OHIP	**ICD-10:** Q250, Q211, Q210, Q218, Q206, Q207, Q208, Q209, Q226, Q228, Q238, Q240, Q241, Q242, Q243, Q244, Q245, Q246, Q255, Q257, Q229, Q239, Q249, Q213, Q201, Q202, Q203, Q205, Q251, Q220, Q221, Q222, Q223, Q212, Q252, Q253, Q254, Q234, Q231, Q260, Q261, Q262, Q263, Q264, Q265, Q266, Q267, Q268, Q269, Q233, Q230, Q200, Q214, Q219, Q224, Q225, Q204, Q232 **OHIP:** E650, E660, E660, E670, E671, G268, G269, M108, M132, M134, M137, R703, R705, R709, R712, R713, R715, R716, R717, R718, R720, R721, R722, R723, R724, R725, R726, R728, R729, R735, R736, R737, R738, R742, R743, R746, R748, R749, R750, R751, R753, R761, R754, R756, R757, R758, R759, R762, R768, R770, R771, R772, R774, R781, R790, R799, R801, R808, R814, R815, R818, R820, R826, R827, R830, R841, R857, R863, R870, R874, R876, R920, R921, R922, R923, R925, R926, R927, R928, R929, R930, Z153, Z335, Z341, Z412, Z415, Z428, Z433, Z435, Z443, Z444, Z445
Exclusion Criteria		
End-stage renal disease	CIHI-DAD OHIP CORR	As defined in outcomes table
Baseline Characteristics		
Age	RPDB	N/A
Sex	RPDB	N/A
Year of surgery	OHIP	N/A
Rural residence	RPDB	N/A
Income quintile	RPDB	N/A
Maternal age	MOMBABY RPDB	N/A
Gestational age	MOMBABY	B_GESTWKS_DEL
Birth weight	MOMBABY CIHI-DAD	WEIGHT
Multibirth	MOMBABY	B_MULTIBIRTH
Artificial insemination	OHIP	**OHIP:** G367
Risk adjustment for congenital heart surgery (RACHS) score	OHIP	
Severe congenital heart disease	CIHI-DAD	**ICD-10:** Q212, Q213, Q204, Q201, Q202, Q203, Q200, Q234
Length of stay in hospital	CIHI-DAD	LOS
Length of stay in ICU	OHIP	**OHIP:** C101, G400, G401, G402, G405, G406, G407, G557, G558, G559

Characteristic/Condition	Database	Codes
Time on ventilation	OHIP	**OHIP:** G557, G558, G559, G405, G406, G407
Dialysis	OHIP	**OHIP:** G082, G083, G085, G090, G091, G092, G093, G094, G095, G096, G295, G294, R849, R850, G323, G325, G326, G860, G862, G863, G865, G866
Acute kidney injury	OHIP	**ICD-10:** N17
Echocardiogram	CIHI-DAD OHIP	**CCI:** 3IP30 **OHIP:** G560, G561, G562, G566, G567, G568, G570, G571, G572, G574, G575, G576, G577, G578, G579, G580, G581
Coronary angiogram	CIHI-DAD OHIP	**CCI:** 3IP10, 3IS10 **OHIP:** G297, G509
MRI with contrast	OHIP	**OHIP:** X487
Serum creatinine test	OHIP	**OHIP:** L067
Cardiologist visits	OHIP IPDB	**MAINSPECIALTY:** CARDIOLOGY, PEDIATRIC CARDIOLOGY
Nephrologist visits	OHIP IPDB	**MAINSPECIALTY:** NEPHROLOGY, PEDIATRIC NEPHROLOGY
GP visits	OHIP IPDB	**MAINSPECIALTY:** GP/FP
Pediatrician visits	OHIP IPDB	**MAINSPECIALTY:** Starting with 'PED' or 'PAED'
Hypertension	CIHI-DAD OHIP	As defined in outcomes table
Chronic kidney disease	CIHI-DAD OHIP	As defined in outcomes table
Diabetes	CIHI-DAD OHIP	**ICD-10:** E10, E11, E13, E14 **OHIP DXCODE:** 250 **OHIP FEECODE:** Q040, K029, K030
Pneumonia	CIHI-DAD	**ICD-10:** J12, J13, J14, J15, J16, J17, J18, P23
Turner Syndrome (gonadal dysgenesis)	CIHI-DAD	**ICD-10:** Q96
Down Syndrome	CIHI-DAD	**ICD-10:** Q90
Any chromosomal anomaly	CIHI-DAD	**ICD-10:** Q9
Non-cardiac malformation	CIHI-DAD	**ICD-10:** Q0, Q1, Q3, Q4, Q5, Q6, Q7, Q8
Malformation of the urinary system	CIHI-DAD	**ICD-10:** Q60, Q61, Q62, Q63, Q64

Supplemental Table 3. Outcome codes

Outcome	Dates	Codes used in study	Codes used in validation	Reference Standard	Operating Characteristics (%)			Reference[a]
					Sn	Sp	PPV	
Death	2002 to 2015	RPDB: Vital status	RPDB: Vital status	Ontario Registar General Death Certificates	98.6			Internal ICES data
End-stage renal disease	2002 to 2015	CCI: 1PC85, 1PZ21	CCI: 1PC85	Three major transplant centres in Ontario, Canada provided information on their kidney transplant activity from January 1, 2008 to December 31, 2011.	98		98	Lam et al.[b]
	2002 to 2015	OHIP FEECODE: S435, S434, R849, G323, G325, G326, G860, G862, G865, G863, G866, G330, G331, G332, G333, G861, G082, G083, G085, G090, G091, G092, G093, G094, G095, G096, G294, G295, G864, H540, H740	OHIP FEECODE: S435, S434	Three major transplant centres in Ontario, Canada provided information on their kidney transplant activity from January 1, 2008 to December 31, 2011.	98		96	Lam et al.
		CORR: Treatment_Code: 171 and Transplanted_Organ_Type_Code[1-3]: 10, 11, 12, 18, 19 Treatment_Code not in ("171", "181", "")	CORR: Treatment_Code: 171 and Transplanted_Organ_Type_Code[1-3]: 10, 11, 12, 18, 19	Three major transplant centres in Ontario, Canada provided information on their kidney transplant activity from January 1, 2008 to December 31, 2011.	96		98	Lam et al.
Hypertension	1991 to 2002		ICD-9: 401, 402, 403, 404, 405	Algorithm of 2 physician billing claims or 1	72	95	87	Tu et al.[c]

Outcome	Dates	Codes used in study	Codes used in validation	Reference Standard	Operating Characteristics (%)			Reference[a]
					Sn	Sp	PPV	
	2002 to 2015	ICD-10: I10, I11, I12, I13, I15	ICD-10: I10, I11, I12, I13, I15	hospital discharge with a diagnosis of hypertension in a 2-year period.				
	2002 to 2015	OHIP DXCODE: 401, 402, 403	OHIP DXCODE: 401, 402, 403, 404, 405					
Chronic kidney disease	2002 to 2015	ICD-10: N18, N19, R80	ICD-10: E102, E112, E132, E142, I12, I13, N08, N18, N19	The final CKD algorithm consisted of 11 codes, with the presence of any of these 11 codes classified as chronic kidney disease positive	32.7[d]	96.9	65.4	Fleet et al.[e]
	2002 to 2015	OHIP DXCODE: 585	OHIP DXCODE: 403, 585					

[a]These validation studies were performed in the adult population. Validations in the pediatric population were not available.

[b] Lam, Ngan N., et al. "Validation of kidney transplantation using administrative data." *Canadian journal of kidney health and disease* 2.1 (2015): 20.

[c] Tu K, Campbell NR, Chen Z, Cauch-Dudek K, McAlister FA. Accuracy of administrative databases in identifying patients with hypertension. Open Medicine 2007 April;1(1):18-26.

[d] These summary statistics are based on eGFR<45. Statistics based on eGFR<60 or eGFR<30 are also in the manuscript

[e] Fleet, Jamie L., et al. "Detecting chronic kidney disease in population-based administrative databases using an algorithm of hospital encounter and physician claim codes." *BMC nephrology* 14.1 (2013): 81.

Supplemental Table 4. ICD-10 CHD Diagnosis and Surgical Billing Codes

Variable	Code	N=3600
Post-2002 diagnosis (ICD-10) (first 3 digits presented to allow more broad categorization)	Q21- Congenital malformations of cardiac septa	1705 (47%)
	Q25- Congenital malformations of great arteries	601 (17%)
	Q20- Congenital malformations of cardiac chambers and connections	585 (16%)
	Q23- Congenital malformations of aortic and mitral valves	194 (5%)
	Q22- Congenital malformations of pulmonary and tricuspid valves	156 (4%)
	Q26- Congenital malformations of great veins	128 (4%)
	Q24- Other congenital malformations of heart	68 (2%)
	P07- Disorders related to short gestation and low birth weight, not elsewhere classified	25 (1%)
	I50- Heart failure	10 (0%)
Post-2002 diagnosis (ICD-10)	Q210- Ventricular septal defect	575 (16%)
	Q213- Tetralogy of Fallot	449 (12%)
	Q212- Atrioventricular septal defect	426 (12%)
	Q251- Coarctation of aorta	377 (10%)
	Q211- Atrial septal defect	237 (7%)
	Q2031- Complete transposition of great vessels	221 (6%)
	Q234- Hypoplastic left heart syndrome	140 (4%)
	Q254- Other congenital malformations of aorta	118 (3%)
	Q201- Double outlet right ventricle	113 (3%)
	Q262- Total anomalous pulmonary venous connection	105 (3%)
	Q2038- Other transposition of great vessels NEC	91 (3%)
	Q244- Congenital subaortic stenosis	57 (2%)
	Q255- Atresia of pulmonary artery	53 (1%)
Surgery billing code (allowing multiple codes during the index hospitalization)	R715- HEART PERI.-CLOSURE-ATRIAL SEPTAL DEFECT	1191 (33%)
	R718- HEART PERI.-CLOSURE-VENTRICULAR SEPTAL DEFECT	1109 (31%)
	R754- HEART PERI.-LIGATION OF PATENT DUCTUS-CHILD/INFANT	729 (20%)
	R757- HEART PERI RESECTION COARCTATION-INFANT	429 (12%)
	R759- HEART PERI.-CONGENITAL HEART SHUNT PROC.	374 (10%)
	R725- HEART PERI.-PULMONARY VALVOTOMY & INFUNDIBULAR RESECTION	346 (10%)
	R721- HEART PERI-REPAIR-ARTERIAL-TRANSPOSITION.	326 (9%)
	R720- HEART PERI.-TOTAL REPAIR TETRALOGY OF FALLOT	322 (9%)
	R921- HEART PERI.-REPAIR COMPLETE A/V CANAL	295 (8%)
	R830- ARTERIES-EXC. &/REPAIR-AORTIC ARCH RECONSTRUCTION-INNOMINATE	219 (6%)

Variable	Code	N=3600
	R762- HEART PERI.-CREATION ASD THORACOTOMY	191 (5%)
	R737- HEART PERI.-AORTIC INFUNDIBULAR RESECTION-VENTRICULOMYOTOMY	168 (5%)
	R722- HEART PERI.-REPAIR TOTAL ANOMALOUS PULMONARY VENOUS DRAINAGE	156 (4%)
Surgery billing code (restricting to first code during the index hospitalization)	R715- HEART PERI.-CLOSURE-ATRIAL SEPTAL DEFECT	1109 (31%)
	R718- HEART PERI.-CLOSURE-VENTRICULAR SEPTAL DEFECT	553 (15%)
	R757- HEART PERI RESECTION COARCTATION-INFANT	312 (9%)
	R720- HEART PERI.-TOTAL REPAIR TETRALOGY OF FALLOT	230 (6%)
	R759- HEART PERI.-CONGENITAL HEART SHUNT PROC.	216 (6%)
	R754- HEART PERI.-LIGATION OF PATENT DUCTUS-CHILD/INFANT	215 (6%)
	R921- HEART PERI.-REPAIR COMPLETE A/V CANAL	162 (4%)
	R721- HEART PERI-REPAIR-ARTERIAL-TRANSPOSITION.	117 (3%)
	R768- HEART PERI.-PULMONARY ARTERY BANDING	95 (3%)
	R722- HEART PERI.-REPAIR TOTAL ANOMALOUS PULMONARY VENOUS DRAINAGE	94 (3%)
	R737- HEART PERI.-AORTIC INFUNDIBULAR RESECTION-VENTRICULOMYOTOMY	85 (2%)
	R717- HEART PERI.-CLOSURE-ANOMALOUS PULMONARY VENOUS DRAINAGE	51 (1%)
	R771- HEART PERI-REPAIR-VASCULAR RING.	45 (1%)
Surgery diagnosis code (restricting to first code during the index hospitalization)	746- Other congenital anomalies of heart	2930 (81%)
	999- WITHOUT DIAGNOSIS	384 (11%)
	429- All other forms of heart disease	242 (7%)
	401- Essential, benign hypertension	20 (1%)

Supplemental Table 5. Healthcare Utilization among the Cardiac Surgery (CS) and Matched Controls

Healthcare Utilization Outcome	Status	N	n	%	Incidence rate per 10000 person-years	Hazard ratio (95% CI)	P Value
Hospitalization	No CS	36000	4055	11.26%	208	1.0 (reference)	<0.0001
	CS	3600	1816	50.44%	1731	7.74 (7.27, 8.23)	
Pediatrician visit	No CS	36000	23461	65.17%	2654	1.0 (reference)	<0.0001
	CS	3600	3492	97.00%	185281	10.67 (10.16, 11.21)	
Primary care physician visit	No CS	36000	34758	96.55%	40465	1.0 (reference)	<0.0001
	CS	3600	3500	97.22%	385590	4.26 (4.09, 4.44)	
Cardiologist visit	No CS	36000	2082	5.78%	100	1.0 (reference)	<0.0001
	CS	3600	3327	92.42%	28474	161.47 (140.23, 185.92)	
Nephrologist visit	No CS	36000	645	1.79%	30	1.0 (reference)	<0.0001
	CS	3600	316	8.78%	167	5.50 (4.79, 6.31)	

Supplemental Table 6. Long Term Death and ESKD by Type of Congenital Heart Disease

Outcome	Type of Cardiac Defect	N	No. of events	Cumulative Incidence	Total person-years of follow-up	Incidence rate per 10000 person-years
Death	Tetralogy of Fallot	449	8	1.78%	2706	29.56
	Atrioventricular septal defect	426	17	3.99%	2304	73.79
	Coarctation of aorta	377	10	2.65%	2244	44.56
	Hypoplastic left heart syndrome	140	36	25.71%	637	565.53
	Total anomalous pulmonary venous connection	105	6	5.71%	507	118.42
	Atresia of pulmonary artery	53	9	16.98%	326	276.25
ESKD	Tetralogy of Fallot	449	6	1.34%	2698	22.24
	Atrioventricular septal defect	426	6	1.41%	2288	26.23
	Hypoplastic left heart syndrome	140	13	9.29%	602	216.05

Diagnoses not listed above had less than 6 events and cannot be presented in accordance with ICES privacy policy

Supplemental Table 7. Long Term Outcomes Stratified by Chromosomal Anomaly Status amongst cohort of children undergoing surgical repair for congenital heart disease

Outcome	Chromosomal Anomaly Status	N	No. of events	%	Total person-years of follow-up	Incidence rate per 10000 person-years
Death	No anomaly	3130	120	3.83%	17685	67.85
	Anomaly	470	20	4.26%	2594	77.10

Supplemental Table 8. Cumulative incidences of the outcomes in Cardiac Surgery (CS) Group by Neonatal Status

Outcome	Status	Status	N	No. of events	%	Total person-years of follow-up	Incidence rate per 10,000 person-years	Hazard ratio (95% CI)	Interaction P Value
Death	Not neonate	No CS	28590	27	0.09%	168985	1.60	1.00 (referent)	0.47
		CS	2859	110	3.85%	15916	69.11	43.8 (28.4, 67.7)	
	Neonate	No CS	5000	6	0.12%	31634	1.90	1.00 (referent)	
		CS	500	18	3.60%	2943	61.16	30.0 (11.9, 75.6)	

Supplemental Table 9. Long Term Outcomes following Surgical Repair of Congenital Heart Disease (S-CHD)

Outcome	Status	N	No. of events	%	Incidence rate per 10,000 person-years	Unadjusted Hazard Ratio (95% CI)	Preterm Adjusted Hazard Ratio (95% CI)
Death	No CHD	36000	35	0.10%	1.62	1.0 (reference)	1.0 (reference)
	CHD	3600	140	3.89%	69.04	42.3(28.2-61.4)	40.4 (27.6-59.3)
ESRD	No CHD	36000	6	0.02%	0.28	1.0 (reference)	1.0 (reference)
	CHD	3600	52	1.44%	25.80	86.5 (37.5-201.6)	90.6 (37.2-220.9)

Supplemental Table 10. Characteristics of Children with Congenital Heart Disease by Whether They Did or Did Not Receive Surgery

Variable	Statistic	Congenital Heart Disease with Surgery		Congenital Heart Disease Diagnosis without Surgery		Standardized Difference
		3078		3078		
Demographics						
Age (years)	Mean (SD)	0.61	1.12	0.56	1.13	4%
	Median (IQR)	0.32	(0.09-0.53)	0.23	(0.08-0.42)	
Sex	Female	1347	44%	1347	44%	0%
Rural		287	9%	287	9%	0%
Income quintile	1 (lowest)	673	22%	673	22%	0%
	2	622	20%	622	20%	0%
	3	646	21%	646	21%	0%
	4	656	21%	656	21%	0%
	5 (highest)	481	16%	481	16%	0%
Gestational age (weeks)	Mean (SD)	38.01	2.38	33.08	5.93	109%
	Median (IQR)	38	(37-40)	34	(27-38)	
	Preterm (<37 weeks)	543	18%	1804	59%	93%
	Very preterm (<32 weeks)	79	3%	1281	42%	107%
	Extremely preterm (<28 weeks)	24	1%	845	28%	83%
Birth weight (grams)	Mean (SD)	3072	703	2162	1191	93%
	Median (IQR)	3147	(2680-3539)	2150	(980-3210)	
	Low birth weight (<2500 grams)	569	19%	1739	57%	85%
	Very low birth weight (<1500 grams)	85	3%	1233	40%	102%
Multibirth	Yes	159	5%	504	16%	37%

Supplemental Table 11. Long Term Outcomes in Children with Congenital Heart Disease by Whether They Did or Did Not Receive Surgery

Outcome	Status	N	No. of events	%	Total person-years of follow-up	Incidence rate per 10000 person-years	Unadjusted Hazard Ratio (95% CI)
Death	CHD diagnosis without surgery	3078	102	3%	17432	58.5	1.0 (referent)
	CHD with surgery	3078	130	4%	17480	74.4	1.3 (1.0-1.7)
ESRD	CHD diagnosis without surgery	3078	10	0.3%	17387	5.8	1.0 (referent)
	CHD with surgery	3078	51	2%	17352	29.4	5.1 (2.6-10.1)

Supplemental Figure 1. Hazard ratios for death and ESKD stratified by RACHS-1 category. ESKD collapsed into only two RACHS-1 categories due to a low number of events. Error bars represent the 95% confidence interval.