RACHS Group A – Pooled DM			
Outcomes	**Controls**	**IDM**	**Sig**
ICU LOS (days)	3.6±3.0	3.9±5.4	**0.17**
Hosp LOS (days)	9.9±7.9	12.1±17.9	**0.50**
EVIDENCE OF IRI			
PRISM Score*	7.6±4.8	7.6±4.3	**1.00**
Lowest MV O_2 sat* (%)	48.9±12.3	49.1±12.7	**0.91**
Highest lactate* (mmol/L)	3.0±1.7	2.9±1.2	**0.91**
Highest glucose* (mmol/L)	12.0±4.1	12.2±3.3	**0.23**
Highest urea (mmol/L)	8.1±4.1	9.0±4.3	**0.19**
Highest creatinine (µmol/L)	46.7±16.0	44.9±13.2	**0.68**
Days intubated	3.1±3.2	2.7±2.8	**0.53**
RACHS Group B – Pooled DM			
Outcomes	**Controls**	**IDM**	**Sig**
ICU LOS (days)	5.6±3.6	5.2±2.6	**0.97**
Hosp LOS (days)	24.6±18.5	24.0±16.5	**0.97**
EVIDENCE OF IRI			
PRISM Score*	11.3±4.6	13.2±6.2	**0.30**
Lowest MV O_2 sat* (%)	41.4±13.8	43.4±9.1	**0.66**
Highest lactate* (mmol/L)	6.2±3.3	5.9±1.8	**0.87**
Highest glucose* (mmol/L)	15.6±3.1	14.8±2.4	**0.44**
Highest urea (mmol/L)	14.2±8.5	14.2±10.0	**0.76**
Highest creatinine (µmol/L)	64.3±29.6	95.5±117.9	**0.65**
Days intubated	8.2±6.1	9.3±4.8	**0.19**

Table. Surgical outcomes for IDM vs Controls by RACHS Group. RACHS: risk adjustment for congenital heart surgery; DM: diabetes mellitus; IDM: infants of mothers with DM; ICU: intensive care unit; LOS: length of stay; Hosp: hospital; IRI: ischemia-reperfusion injury; PRISM: **P**ediatric **RIS**k of **M**ortality; MV: mixed venous. *First 24 to 48 hours

Women and Childrens Health Research Institute (WCHRI)

P051
THE FEASIBILITY OF A VIRTUAL PHYSICAL ACTIVITY COUNSELLING INTERVENTION IN CHILDREN WITH CONGENITAL HEART DISEASE

B Fukakusa, M Kuan, E Bennett, C Voss, K Harris

Vancouver, British Columbia

BACKGROUND: While long-term survival has improved significantly in recent years, we are now recognizing the high prevalence of cardiovascular (CV) risk factors in children with repaired congenital heart disease (CHD). Low levels of physical activity (PA) are one of the important modifiable CV risk factors. Evidence-based interventions for this high-risk group are needed, as it is not known how to best help children with CHD to be more active. In this study, we aimed to assess the feasibility and acceptability of a PA counselling intervention in children with CHD.

METHODS AND RESULTS: We designed a 12-week PA intervention based on behaviour change theory which could be remotely delivered to children across British Columbia and the Yukon. We recruited children with moderate-to-complex CHD aged 9-12 years from BC Children's Hospital. At baseline, we measured moderate-to-vigorous PA using accelerometers and participants' readiness to change their PA using questionnaires to determine their intervention eligibility. Participants who were not meeting PA guidelines and expressed readiness to change qualified for the intervention. The intervention consisted of 6 sessions with a PA counsellor via Zoom where participants learned strategies to increase their PA through workbook activities. We measured PA again at the intervention midpoint and post-intervention. Intervention feasibility (study recruitment and retention) and acceptability (intervention attendance and engagement) were assessed. We recruited 21 participants who completed baseline measures (48% male, 11.2 [IQR 10.4-12.1] years), although recruitment success has been lower than anticipated (53%). Of these participants, 6 were already meeting PA guidelines, 2 were not willing to change their PA, and 3 had incomplete baseline PA data. Ten participants qualified for the intervention, where 20% were male (10.8 [IQR 9.6-11.8] years) with a baseline median moderate-to-vigorous PA of 34.1 min/day (IQR 24.4-39.2). Four participants are currently participating in the PA intervention and 6 participants have completed it. Study retention has been excellent (100%), session attendance was 100% thus far, and workbook activities completed between sessions have been well received (23 completed, 7 partially completed, 3 incomplete). Median moderate-to-vigorous PA increased by 4.5 min/day (p=0.813, 95% CI -5.25 to 43.04) from pre- to post-intervention.

CONCLUSION: This PA counselling intervention is feasible and acceptable to families and children with CHD. Study retention rates and activity completion rates confirm that the intervention is engaging and well received by children with CHD. Preliminary objective PA data suggests that the intervention may have facilitated increased PA for participants.

Canadian Institutes of Health Research - Masters Award

P052
THE IMPACT OF THE COVID-19 PANDEMIC RESTRICTIONS ON THE PROVISION OF ACHD CARE ACROSS CANADA

R Mao, L Beauchesne, A Marelli, C Silversides, A Dore, J Ganame, M Keir, R Alonso-Gonzalez, I Vonder Muhll, J Grewal, A Williams, P Dehghani, S Siu, A Johri, E Bedard, J Therrien, C Kells, D Hayami, R Ducas

Winnipeg, Manitoba

BACKGROUND: Patients with adult congenital heart disease (ACHD) are at increased risk for poor outcomes when compared to the age matched non-ACHD population and require specialist care to optimize outcomes including well-being and survival. The COVID-19 pandemic significantly impacted healthcare provision across Canada with reduction on in person evaluations. The effect of the COVID-19 restrictions on ACHD care including clinic evaluation, diagnostic and procedures in Canada has not been well characterized.

METHODS AND RESULTS: All Canadian Adult Congenital Heart Network affiliated ACHD centers were contacted and asked to collect data on outpatient clinic and procedural volumes for the

2019 and 2020 calendar years. A survey was sent to each site detailing questions on clinic and procedural volumes and wait times pre and post pandemic restrictions. Descriptive statistics were used with student t test to compare groups. Pre-pandemic (2019) there were 19326 ACHD clinic visits across Canada with 296 (1.5%) being virtual. During the first year of the pandemic (2020) there were a similar number of total clinic visits 20532, however 11412 (56%) visits were virtual p< 0.0001. Total procedural volumes for ACHD care are presented in figure 1. Pre-pandemic mean estimated clinic waiting times (in months) for non-urgent consults were: 5.4 + 2.57 vs. pandemic wait time 6.5 + 4.22, p=0.65, for elective ACHD cardiac surgery 6.0 + 3.46 vs.7.3 + 4.59, p=0.47, for ACHD electrophysiology procedures 6.3 + 3.33 vs 6.7 + 3.27 p=0.72, for ACHD percutaneous intervention 4.6 + 3.89 vs 4.4 + 2.33 p=0.74.

CONCLUSION: During the pandemic, despite social distancing restrictions, the use of virtual clinics visits have helped to maintain continuity in ACHD clinical care. The procedural volumes and wait times for consultation, percutaneous and surgical interventions were not delayed.

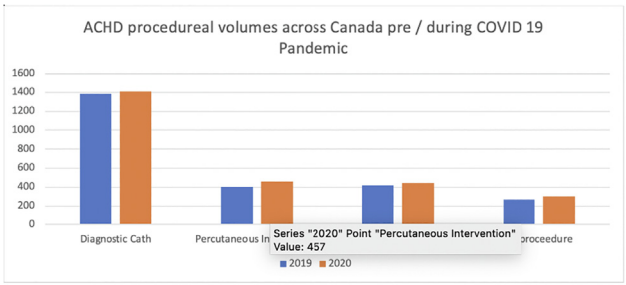

Figure 1: Absolute numbers across Canada for specialized ACHD diagnostic cardiac catheterization, ACHD percutaneous intervention, ACHD surgery and procedures, prior to (2019) and during (2020) the COVID-19 pandemic. No statistical difference between groups. *ACHD = Adult congenital heart disease, Cath = catheterization, EP = electrophysiology*

Canadian Cardiovascular Society (CCS) Abstracts — CSI

P053
ANGIOGRAPHIC PREDICTORS OF CTO PCI SUCCESS: HOW TO GUIDE DECISION MAKING BEYOND THE J-CTO SCORE

K Haddad, A Matteau, B Potter, S Mansour

Montréal, Québec

BACKGROUND: Chronic total occlusion (CTO) recanalization remains one of the most challenging procedures in interventional cardiology, and the inability to cross the lesion with a guidewire is the most common cause of CTO percutaneous coronary intervention (PCI) failure. While the current standard lesion evaluation is mostly based on anatomical complexity scores, a global comprehensive approach could help guiding the clinical decision and allow predicting CTO-PCI success. In this study, we aimed to evaluate angiographic predictors of procedural success.

METHODS AND RESULTS: This single-centre prospective observational study was conducted in an academic tertiary care medical center and patients were recruited between January 2014 and March 2020. CTO was defined as 99-100% occlusions with Thrombolysis in Myocardial Infarction (TIMI) 0 flow with at least 3-month duration. The primary inclusion criteria were the presence of refractory ischemic symptoms despite optimal medical therapy and non-invasive imaging demonstrating reversible ischemia. A total of 255 patients were consecutively enrolled in this registry. Average age was 65±10 and 75% were males. Hypertension and diabetes were present in 73% and 27% of patients respectively. The left ventricular ejection fraction (LVEF) was above 50% in 73% of patients. The mean SYNTAX and J-CTO scores were 19.3±8.6 and 2.26±1.11 respectively. The overall CTO-PCI success rate was 86.4%. Univariate analysis showed that a high J-CTO score >1 predicted decreased CTO PCI success in 83.5% vs 94.1%, p=0.038. In addition, patients with procedural success had a lower percentage of history with bypass graft (73.8% vs. 88.8%, p = 0.004), significant left main stenosis (61.9% vs. 88.9%; p=0.003), reference vessel diameter < 3mm (82.7% vs. 96.9%, P=0.003). Finally, a lower median Syntax score was a predictor of procedural success (17 IQR 12-24 vs. 20.5 IQR 15-29.5, p=0.036).

CONCLUSION: Beyond the J-CTO score, several angiographic parameters related to the CTO lesion complexity and the coronary atherosclerotic burden predict the risk of CTO PCI failure. This hypothesis-generating analysis needs to be validated in future large-scale studies as it could improve patient selection and refine decision making for such a complex coronary intervention.

P054
LINKS BETWEEN CORONARY MICROVASCULAR DYSFUNCTION AND EVIDENCE OF HEART FAILURE WITH PRESERVED EJECTIVE FRACTION

J Park, S Miner, V Gurtu, F Valle, S Mak

Toronto, Ontario

BACKGROUND: It has been hypothesized that coronary microvascular dysfunction (CMD) may be associated with the development of myocardial abnormalities associated with heart failure with preserved ejective fraction (HFpEF). Making a diagnosis of HFpEF is aided by exercise right heart catheterization (RHC) based on an abnormal pulmonary artery wedge pressure (PAWP) response during exercise. An