as having low privacy risks. Once it was deemed to be non-personal information, the synthetic dataset was sent to the Austrian team for pooling and analysis. The analysis was performed on the pooled source ATHIS data and the synthetic CCHS data. The outcome variable was CVH, calculated through a modified CANHEART index in both countries. The utility of the pooled dataset was evaluated by comparing the regression model with the model constructed from federated analysis using DataSHIELD. A significant time elapsed to set-up the necessary servers in multiple locations with the requisite security protocols for the federated analysis. For assessing Privacy Risks of Synthetic Data, the largest membership disclosure F1 score across different attack datasets was 0.001, indicating low privacy risk. A comparison of the marginal distributions between males and females showed consistent results in the federated and pooled analyses of synthetic data. In the multivariate analysis of the main effects, the parameter estimates of the federated and pooled analysis were directionally the same as for the univariate analysis. In the multivariate analyses considering the country interactions to determine whether country moderates the relationship between the other variables and CVH, the impact of several factors differed between countries (Table 1).

CONCLUSION: The result of this secondary analysis of population-based datasets revealed that synthetic data generation methods can be safely and reproducibly used to pool datasets across countries for international studies. There were significant country-level differences in the role of sex, and gender in CVH which demonstrates the importance of pooling datasets from different jurisdictions.

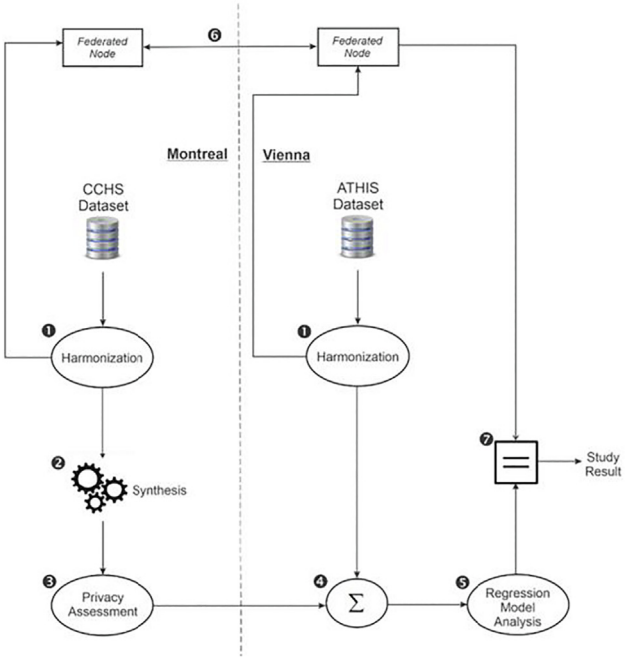

Table 1: Multivariate Main Effects Models for Predicting CVH in Federated and Pooled Analyses

CANHEART score**	Federated Analysis	Pooled Analysis	Federated Analysis with Country Interaction		Pooled Analysis with Country Interaction	
	Main Effect Regression Coefficient (95% CI)***	Main Effect Regression Coefficient (95% CI)	Main Effect Regression Coefficient (95% CI)	Country Interaction Coefficient (95% CI)	Main Effect Regression Coefficient (95% CI)	Country Interaction Coefficient (95% CI)
Sex (*ref:* male)	0.25 (0.23, 0.26)*	0.23 (0.21, 0.25)*	0.226 (0.211, 0.24)*	0.157 (0.122, 0.191)*	0.2 (0.186, 0.216)*	0.18 (0.147, 0.216)*
Education	0.04 (0.04, 0.05)*	0.05 (0.04, 0.06)*	0.036 (0.03, 0.042)*	0.08 (0.063, 0.101)*	0.041 (0.039, 0.051)*	0.073 (0.054, 0.093)*
Marital status (*ref:* Single)						
Divorced/widowed	-0.12 (-0.14, -0.09)*	-0.13 (-0.16, -0.11)*	-0.112 (-0.138, -0.087)*	-0.039 (-0.103, 0.02)	-0.125 (-0.152, -0.099)*	-0.026 (-0.091, 0.038)
Married	-0.15 (-0.17, -0.13)*	-0.14 (-0.16, -0.12)*	-0.169 (-0.19, -0.147)*	0.057 (0.008, 0.107)*	-0.144 (-0.162, -0.119)*	0.029 (-0.02, 0.079)
Household Size	0.05 (0.04, 0.06)*	0.07 (0.05, 0.08)*	0.051 (0.042, 0.059)*	-0.011 (-0.02, 0.007)	0.07 (0.063, 0.08)*	-0.032 (-0.051, -0.013)*
House Income (*reverse coded*)	-0.08 (-0.09, -0.07)*	-0.03 (-0.04, -0.02)*	-0.13 (-0.145, -0.12)*	0.12 (0.1, 0.147)*	-0.026 (-0.042, -0.017)*	0.021 (-0.0008, 0.044)
Immigrant (*ref: No*)	0.13 (0.12, 0.15)*	0.11 (0.09, 0.13)*	0.163 (0.143, 0.183)*	-0.297 (-0.365, -0.15)*	0.12 (0.101, 0.142)*	-0.165 (-0.224, -0.107)*
Age	-0.13 (-0.14, -0.13)*	-0.14 (-0.14, -0.13)*	-0.126 (-0.132, -0.12)*	-0.06 (-0.077, -0.048)*	-0.127 (-0.133, -0.122)*	-0.06 (-0.075, -0.046)*
Country (*ref:*CA)	-0.01 (-0.03, 0.002)	-0.03 (-0.05, -0.02)*	-0.222 (-0.335, -0.117)*	-	-0.177 (-0.295, -0.051)*	-
R^2	0. 63	0.153	0.168		0.157	

Pooled Analysis: Synthetic CCHS + Real ATHIS
Federated Analysis: Real CCHS + Real ATHIS
* p<0.05
**CANHEART index: A measure of CVH in the population, consisting of 4 cardiometabolic risk factors (i.g, smoking, obesity, diabetes and hypertension), 0 (worst) to 4 (ideal)
*** Regression Coefficient: The degree of change in the CANHEART index for every 1-unit of change in the predictor variables
**** Country Interaction Coefficient: **The coefficient of interaction of each variable with country (i.e, Education*Country)**
Number of participants in CCHS: **63,522; 55.3% females**
Number of participants in ATHIS: **15,771, 55.7% females**

P034
EFFECT OF TAFAMIDIS ON GLOBAL LONGITUDINAL STRAIN USING A CORRECTION METHOD IN TRANSTHYRETIN CARDIAC AMYLOIDOSIS

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BACKGROUND: Various pharmacological options have been developed for TTR cardiac amyloidosis (TTR-CA), targeting different phases of the disease process. Tafamidis is a stabilizer of the TTR molecule that reduces CV mortality and CV-related hospitalization in patients with either wild-type or hereditary TTR CM. Echocardiography is an important tool in the diagnosis and follow-up of patients with TTR-CA, however, no echocardiographic markers of response to treatment with Tafamidis have been identified to date. Global Longitudinal Strain (GLS) is a measure that has clinical value in the diagnosis of TTR-CA. As atrial fibrillation is common in patients with TTR-CM, the GLS with the square root of the RR-interval (GLS/$\sqrt{}$(RR)) may offer an alternate method to assess GLS is this population. In this study, we aimed to evaluate the role of GLS/$\sqrt{}$(RR) to assess treatment response with Tafamidis.

METHODS AND RESULTS: We conducted a single-center, retrospective case-control study of 48 patients with TTR-CM matched for age and sex. Twenty-four patients were treated with Tafamidis and 24 did not receive treatment. Patients underwent a baseline echocardiogram and at one-year post-initiation of Tafamidis. Clinical and laboratory characteristics are shown in Table 1. Two-dimensional speckle tracking echocardiography was analyzed offline using a vendor-neutral software (Epsilon Imaging). GLS was calculated as the average of strain from 3 long-axis views and then indexed to the square-root of the RR interval (GLS/$\sqrt{}$(RR)). 14 patients had atrial fibrillation. Over 12 months, GLS/$\sqrt{}$(RR) deteriorated less in the Tafamidis group by a median of 3.4% (IQR -3.8 − 10.4) compared with 13.3% (IQR 5.6 − 18.7) in the untreated group (p=0.002). Similarly, non-indexed GLS deteriorated less in the Tafamidis group by a median of 3.2% (IQR -3.5 − 8.4) compared with 11.6% (IQR 7.6 − 21.5) in the untreated group ($P < 0.001$). There was also a significant difference in the reduction in LVEF 3.2% (IQR -2 − 7) in the Tafamidis group versus 9.5% (IQR 6 − 20.3) in the untreated group ($P < 0.001$).

CONCLUSION: In our study, patients treated with Tafamidis had a lower deterioration in ventricular function at 12 months follow-up compared with an untreated group. Although all measures of cardiac function demonstrated a difference in our cohort, indexing GLS to $\sqrt{(RR)}$ may allow assessment in myocardial function in more patients especially in the context of variable RR interval when LVEF measurements can be time consuming and less reliable.

Variable	Without Tafamidis (n=24)	With Tafamidis (n=24)	p-value
Age:	65.67±11.28	72.71±9.64	0.04
Sex:			0.09
Male	15 (62.5%)	21 (87.5%)	
Female	9 (37.5%)	3 (12.5%)	
Comorbidities:			0.96
Smoking	6 (25.0%)	6 (25.0%)	
Alcohol	9 (37.5%)	10 (41.7%)	
Dyslipicemia	10 (41.7%)	14 (58.3%)	
Diabetes	5 (20.8%)	5 (20.8%)	
Hypertension	11 (45.8%)	15 (62.5%)	
Dialysis	1 (4.2%)	0 (0.0%)	
Implanted Device:			0.08
Pacemaker	3 (12.5%)	2 (8.3%)	
ICD	5 (20.8%)	0 (0.0%)	
CRT-D	1 (4.2%)	1 (4.2%)	
None	15 (62.5%)	21 (87.5%)	
Treatmerts:			0.54
Diuretics	10 (41.7%)	15 (62.5%)	
Beta Blocker	9 (37.5%)	11 (45.8%)	
ACE Inhibitor	5 (20.8%)	8 (33.3%)	
ARB	3 (12.5%)	7 (29.2%)	
Digoxin	1 (4.2%)	0 (0.0%)	
MCRA	7 (29.2%)	8 (33.3%)	
Diflunisal	2 (8.3%)	4 (16.7%)	
Other medications	13 (54.2%)	7 (29.2%)	
NYHA Class:			0.07
Asymptomatic	4 (16.7%)	1 (4.2%)	
Class 1	3 (12.5%)	6 (25.0%)	
Class 2	7 (29.2%)	14 (58.3%)	
Class 3	7 (29.2%)	3 (12.5%)	
Class 4	2 (8.3%)	0 (0.0%)	
unknown	1 (4.2%)	0 (0.0%)	
BNP:			
Presenting BNP (pg/mL)	239.31±295.95	195.25±281.20	0.59
BNP Peak (pg/mL)	430.76±593.39	283.00±563.85	0.67
hATTR variants:			0.00011
No variant/wildtype	5 (20.8%)	19 (79.2%)	
Val142Ie	9 (37.5%)	4 (16.7%)	
Thr80Ala	4 (16.7%)	0 (0.0%)	
Val50Met	4 (16.7%)	0 (0.0%)	
Ala120Ser	1 (4.2%)	0 (0.0%)	
Val50Leu	0 (0.0%)	1 (4.2%)	
unknown	1 (4.2%)	0 (0.0%)	

TABLE 1: Descriptive characteristics of 24 patients treated without Tafamidis and 24 patients treated with Tafamidis. P-values were determined by using the Wilcoxon rank-sum test and Fisher's exact test.

P035
EVALUATION OF THE REAL-WORLD PLACE OF THE ICOSAPENT ETHYL (IPE) FOR THE TREATMENT OF PATIENTS WITH HYPERTRIGLYCERIDEMIA REQUIRING INVASIVE CORONARY ANGIOGRAM

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BACKGROUND: Although the REDUCE-IT trial recently demonstrated the benefits of Icosapent ethyl (IPE) on reducing ischemic events in a broad population of primary and secondary prevention patients with hypertriglyceridemia, its generalizability to patients referred for a coronary angiogram is not known yet. This study aims to determine the proportion of patients referred for a coronary angiogram that would be eligible for IPE treatment.

METHODS AND RESULTS: In this prospective study, all patients referred to the catheterization laboratory in a tertiary academic center between January 1st, 2022 and February 15th, 2022 were enrolled. Patients meeting the inclusion criteria of the REDUCE-IT trial were included. A total of 350 patients were screened and included in our study. The average age was 68±11 and 64% were males. Hypertension and diabetes were present in 76% and 40% of patients, respectively. A total of 253 patients (72.3%) had dyslipidemia. The mean left ventricular ejection fraction (LVEF) was 52±14%. A lipid profile was available in 73% of cases in the 6 months preceding the procedure. A total of 38 patients (16.2%) referred to the catheterization laboratory currently on statin therapy would be eligible for IPE, according to REDUCE-IT criteria. No difference was found between patients with acute coronary syndrome and chronic coronary syndrome in terms of elibility for IPE treatment (13.5% vs 21.8%, p=0.132). No eligible patient was yet started on IPE.

CONCLUSION: These analyses would support IPE usage as an adjunct to secondary prevention therapies in eligible patients referred for a coronary angiogram. Findings of this study need to be confirmed in larger scale cohorts.

P036
HOMOZYGOUS FAMILIAL HYPERCHOLESTEROLEMIA IN CANADA

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BACKGROUND: Homozygous familial hypercholesterolemia (HoFH) is life-threatening orphan disease characterized by high levels of low-density lipoprotein cholesterol (LDL-C). Untreated patients often present with extensive xanthomas and marked premature atherosclerotic cardiovascular disease (ASCVD) before the age of 20. Prior to the advent of statins and extracorporeal LDL filtration techniques, survival beyond 30 years of age was unusual. Treatment with lipid-lowering therapy is highly efficacious and has dramatically increased life expectancy, reducing the risk of ASCVD to background population rates. Canada is known to have several founder effect regions for HoFH, including Québec. Clinical outcomes in HoFH patients, especially ASCVD events such as myocardial infarctions or stroke are difficult to capture, in part because of the rarity of the disorder and the lack of registry focusing on this disease.

METHODS AND RESULTS: The objective of our project is to obtain a comprehensive registry of HoFH in Canada, estimate the cost to society caused by HoFH burden of disease in Canada, and implement changes to advocate access to specialized care for these patients. A standardized