Utility Evaluations for the Patient Characteristics Survey

Cameron Flores & Leslie Placencia

October 2021

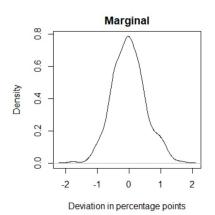
pMSE

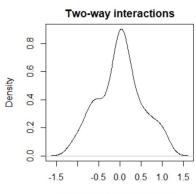
pMSE of m Synthetic Data Sets using Logistic Regression		
m	pMSE	
m=1	0.006459464	
m=2	0.006065811	
m=3	0.00649827	
m=4	0.007124899	
m=5	0.005567177	
Overall	0.006343124	

pMSE

pMSE of m Synthetic Data Sets using Multi-Layer Perceptron AI		
m	pMSE	
m=1	0.04537986	
m=2	0.04484598	
m=3	0.04271045	
m=4	0.0443121	
m=5	0.04324433	
Overall	0.04409854	

Distributions of Relative Frequencies



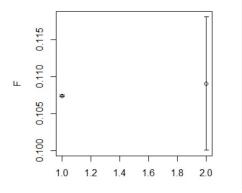


Deviation in percentage points

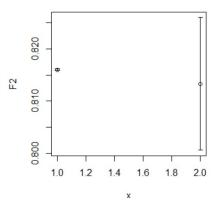
Flores, Placencia Synthesis Models October 2021 4 /

Cl's for Population Proportion

Proportion of people with an alcohol-related disorder



Proportion of people who use cannabis



Interval Overlap Utility		
Variable	Interval Overlap Value	
alcohol-related disorder	0.506734	
drug-related disorder	0.5069527	
cannabis use	0.5059634	
cash assistance	0.5062462	
region (Central NY)	0.5064357	

Regression Coefficients

Confidential		
Variable	Coefficient	CI
age	3.37224696	[2.18205709,
		5.1971431]
gender	-0.68504559	[-0.91120005, -
		0.4614502]
race2	-0.02013342	[-0.77250124,
		0.6731797]
Synthetic		
Variable	Coefficient	CI
age	2.850201	[1.670207,
		4.030194]
gender	-0.20647201	[-0.44809353,
		0.03514951]
race2	0.1218977	[-0.5567310,
		0.8005265]

Regression Coefficients

Interval Overlap Utility		
Variable	Interval Overlap Value	
age	-0.6661861	
gender	-0.02866883	
race2	0.8784609	