Table S1. Candidate predictors of exercise, fruit and vegetable consumption, BMI and diabetes from the literature compared to the predictors available in the BRFSS and synthetic microdata.

Predictors		Selected Predictors Identified from Literature Review				Predictors Available in the BRFSS and Synthetic Microdata
		Exercise [1–15]	**Fruit and vegetable consumption [16–22]**	**BMI [23–35]**	**Diabetes [36–45]**	
Demographic and psychosocial	Sex	X	X	X	X	X
	Age	X	X	X	X	X
	Race/ethnicity	X	X	X	X	X
	Income	X	X	X	X	X
	Education	X	X	X	X	X
	Employment	X	X	X		X
	Smoking	X	X	X	X	X
	Alcohol	X		X	X	X
	Exercise		X	X	X	X
	Diet			X	X	X
	BMI	X	X		X	X
Social support		X	X			
Self-efficacy		X	X			
Marital status		X	X			
Motivation		X	X			
Family history diabetes					X	
Sleep		X		X		
Mental health		X		X		
Hypertension					X	
Hypocholesteremia					X	
Food Access			X	X		
Screen time (computer or TV)		X		X	X	
Green space		X		X		
Breastfeeding			X	X		

Table S2. Comparison of multivariable regressions coefficients predicting exercise, fruit and vegetable consumption, BMI and diabetes constructed from BRFSS data for Bristol County, MA (2005-2010) and New Bedford, MA (2005-2010).

Table S2. (a) Multivariable logistic regression for any exercise in past 30 days.

	Bristol County Model			New Bedford Model		
Covariate	Beta	Standard Error	p-value	Beta	Standard Error	p-value
Intercept	0.60	0.047	<.0001	0.62	0.067	<.0001
		Sex				
Male	0.086	0.021	<.0001	0.11	0.040	0.0062
		Age				
18-29	0.40	0.070	<.0001	0.34	0.12	0.0035
30-39	0.18	0.053	0.0005	0.29	0.096	0.0026
40-49	0.072	0.047	0.12	0.083	0.086	0.34
50-59	-0.040	0.043	0.35	-0.035	0.079	0.66
60-69	-0.077	0.045	0.087	-0.032	0.086	0.71

70-79	-0.12	0.053	0.020	-0.23	0.10	0.024
Race/ethnicity						
Black, non-Hispanic	-0.021	0.096	0.83	0.051	0.12	0.68
Hispanic	-0.35	0.072	<.0001	-0.40	0.10	<.0001
Other (includes Asian)	0.24	0.083	0.0033	0.26	0.12	0.023
Income						
< $25,000	-0.20	0.032	<.0001	-0.23	0.060	<.0001
$25,000-34,999	-0.014	0.040	0.72	-0.0035	0.073	0.96
Education						
< High school	-0.26	0.036	<.0001	-0.24	0.062	0.0001
High school	-0.077	0.030	0.0075	-0.041	0.053	0.44
Smoking						
Current	-0.30	0.032	<.0001	-0.27	0.058	<.0001
Former	0.096	0.030	0.0015	0.081	0.059	0.17
Alcohol						
At least 1 drink in past 30 days	0.25	0.021	<.0001	0.22	0.040	<.0001

Bristol PROC LOGISTIC: exercise = sex + age + race + income + education + smoking + alcohol

New Bedford PROC LOGISTIC: exercise = sex + age + race + income + education + smoking +alcohol

Reference: female, age 80-99, White Non-Hispanic, 35k and over, above high school education, never smoked, no alcoholic drinks in past 30 days

Table S2. (b) Multivariable logistic regression of daily fruit and vegetable consumption:

	Bristol County Model			**New Bedford Model**		
Covariate	Beta	Standard Error	p-value	Beta	Standard Error	p-value
Intercept	-1.5	0.079	<.0001	-1.5	0.12	<.0001
Sex						
Male	-0.29	0.033	<.0001	-0.16	0.065	0.016
Age						
18-29	-0.14	0.10	0.17	-0.22	0.18	0.23
30-39	-0.35	0.083	<.0001	-0.18	0.15	0.24
40-49	-0.13	0.073	0.069	-0.049	0.14	0.72
50-59	0.052	0.065	0.43	0.040	0.13	0.75
60-69	0.062	0.071	0.38	-0.12	0.15	0.43
70-79	0.16	0.083	0.057	0.041	0.16	0.80
Race/ethnicity						
Black, non-Hispanic	0.21	0.14	0.15	0.40	0.19	0.031
Hispanic	0.20	0.12	0.10	-0.04	0.18	0.84
Other (includes Asian)	-0.19	0.14	0.17	-0.26	0.20	0.20
Income						
< $25,000	0.051	0.055	0.36	0.14	0.010	0.16
$25,000-34,999	-0.17	0.067	0.012	-0.11	0.13	0.37
Education						
< High school	-0.18	0.067	0.0062	-0.11	0.11	0.32

High school	0.000039	0.050	0.99	-0.090	0.092	0.33
Smoking						
Current	-0.30	0.058	<.0001	-0.28	0.11	0.0076
Former	0.078	0.049	0.11	0.031	0.096	0.75
Exercise						
Any exercise in past 30 days	0.33	0.039	<.0001	0.28	0.071	<.0001

Bristol PROC LOGISTIC: fruit and vegetable consumption = sex + age + race + income + education + smoking + exercise

New Bedford PROC LOGISTIC: fruit and vegetable consumption= sex + smoking + exercise

Reference: female, age 80-99, White Non-Hispanic, 35k and over, above high school education, never smoked, no exercise in past 30 days

Table S2. (c) Multivariable Linear Regression Model of BMI:

	Bristol County Model			**New Bedford Model**		
Covariate	Beta	Standard Error	p-value	Beta	Standard Error	p-value
Intercept	7.8	0.011	<.0001	7.9	0.022	<.0001
Sex						
Male	0.036	0.0048	<.0001	0.0095	0.0096	0.33
Age						
18-29	0.047	0.012	<.0001	0.045	0.023	0.049
30-39	0.093	0.011	<.0001	0.092	0.022	<.0001
40-49	0.094	0.011	<.0001	0.086	0.021	<.0001
50-59	0.11	0.010	<.0001	0.12	0.020	<.0001
60-69	0.11	0.010	<.0001	0.10	0.021	<.0001
70-79	0.079	0.011	<.0001	0.065	0.022	0.0026
Income						
< $25,000	0.021	0.0061	0.0005	0.017	0.011	0.13
$25,000-34,999	0.010	0.0076	0.20	0.0049	0.015	0.74
Education						
< High school	0.034	0.0074	<.0001	0.023	0.013	0.095
High school	0.022	0.0055	<.0001	0.017	0.011	0.11
Smoking						
Current	-0.051	0.0062	<.0001	-0.059	0.012	<.0001
Former	0.0076	0.0055	0.17	0.010	0.011	0.37
Alcohol						
At least 1 drink in past 30 days	-0.030	0.0050	<.0001	-0.032	0.0098	0.0012
Exercise						
Any exercise in past 30 days	-0.043	0.0053	<.0001	-0.048	0.010	<.0001
Fruit and vegetable consumption						
5 or more servings of fruit daily	-0.020	0.0055	0.0007	-0.019	0.011	0.079

Bristol PROC GLM: Log(BMI) = sex + age + income + education + smoking + alcohol + exercise + fruit and vegetable consumption

New Bedford PROC GLM: Log(BMI)=age + education + employment + smoking + alcohol + exercise + fruit and vegetable consumption

Reference: female, age 80-99, 35k and over, above high school education, unemployed, never smoked, no alcoholic drinks in past 30 days, no exercise in past 30 days, 0-5 servings of fruits/vegetables dail

Table S2. (d) Multivariable logistic regression for diabetes.

	Bristol County Model			New Bedford Model		
Covariate	Beta	Standard Error	p-value	Beta	Standard Error	p-value
Intercept	-2.4	0.11	<.0001	-2.4	0.19	<.0001
		Sex				
Male	0.21	0.031	<.0001	0.14	0.057	0.017
		Age				
18-29	-1.65	0.22	<.0001	-1.4	0.30	<.0001
30-39	-0.93	0.12	<.0001	-0.99	0.20	<.0001
40-49	-0.29	0.087	0.0007	-0.25	0.15	0.08
50-59	0.44	0.068	<.0001	0.53	0.11	<.0001
60-69	0.72	0.067	<.0001	0.47	0.12	<.0001
70-79	0.99	0.074	<.0001	0.85	0.13	<.0001
		Race/ethnicity				
Black, non-Hispanic	0.071	0.14	0.62	0.17	0.18	0.36
Hispanic	0.19	0.11	0.074	0.22	0.15	0.14
Other (includes Asian)	-0.11	0.12	0.37	-0.30	0.17	0.09
		Income				
< $25,000	0.27	0.044	<.0001	0.30	0.081	0.0002
$25,000-34,999	-0.068	0.058	0.24	-0.11	0.11	0.33
		Smoking				
Current	-0.057	0.051	<.0001	-0.15	0.091	0.09
Former	0.17	0.042	<.0001	0.30	0.078	0.0001
		Alcohol				
At least 1 drink in past 30 days	-0.36	0.032	<.0001	-0.40	0.060	<.0001
		Exercise				
Any exercise in past 30 days	-0.083	0.031	0.0069	-0.0011	0.056	0.98
		BMI category				
Obese (BMI >=30)	0.91	0.090	<.0001	0.89	0.17	<.0001
Overweight (30>BMI >= 25)	0.054	0.091	0.55	-0.053	0.18	0.76
Normal Weight (18.5<= BMI <25)	-0.53	0.097	<.0001	-0.46	0.18	0.013

Bristol PROC LOGISTIC: diabetes = sex + age + race + income + smoking + alcohol + exercise + BMI category

New Bedford PROC LOGISTIC: diabetes= sex + age + income + smoking + BMI category

Reference: female, age 80-99, White Non-Hispanic, 35k and over, never smoked, no alcoholic drinks in past 30 days, no exercise in past 30 days, underweight (BMI <18.5)

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