

**Supplementary Table C.** Sensitivity analysis that classified all subjects missing outcome data as not meeting criteria for any of the outcome measures (i.e. did not participate in any form of CRC screening) in the 2009 Medical Expenditures Panel Survey.

**C1. Prevalence of colorectal cancer screening in the overall sample and by each mental health diagnosis**

CRC Screening	Total Sample (N = 7060)	Depression N = 863 (12.81 %)			Any MH N = 1517 (22.69 %)			Anxiety N = 751 (11.19 %)		
		Yes n (%)	No n (%)	P-Value	Yes n (%)	No n (%)	P-value	Yes n (%)	No n (%)	P-Value
Up-to-date Colonoscopy	3762 (56.57 %)	513 (62.72 %)	3249 (55.67 %)	0.0028	882 (61.22 %)	2880 (55.21 %)	0.0011	433 (59.34 %)	3329 (56.23 %)	0.20
Up-to-date CRC Screening	4130 (61.14 %)	552 (66.63 %)	3578 (60.34 %)	0.0047	949 (64.88 %)	3181 (60.04 %)	0.0064	469 (63.27 %)	3661 (60.87 %)	0.33
CRC Screening Ever	4607 (67.65 %)	619 (74.59 %)	3988 (66.63 %)	0.0001	1073 (73.08 %)	3534 (66.06 %)	<0.0001	540 (72.75 %)	4067 (67.01 %)	0.02

*CRC = colorectal cancer, MH = mental health*

Note:

- a. All percentages reported in this table are weighted to the 2009 United States civilian and non-institutionalized population
- b. P-values reported in this table are for the Rao-Scott Chi Square tests for differences in characteristics by mental health diagnosis

**C2. Unadjusted associations between independent variables and CRC Screening (N = 7060)**

Variable	Up-to-Date Colonoscopy		Up-to-Date CRC Screening		CRC Ever	
	OR (95 % CI)	P-Value	OR (95 % CI)	P-Value	OR (95 % CI)	P-Value
<b>Depression</b>		<b>0.0027</b>		<b>0.0046</b>		<b>0.0001</b>
<b>Yes</b>	<b>1.34 (1.11, 1.62)</b>		<b>1.31 (1.09, 1.58)</b>		<b>1.47 (1.21, 1.79)</b>	
<b>No</b>	<b>REF</b>		<b>REF</b>		<b>REF</b>	
Any MH Disorder		0.0012		0.0065		<0.0001
Yes	1.29 (1.10, 1.49)		1.23 (1.06, 1.43)		1.39 (1.20, 1.63)	
No	REF		REF		REF	
Anxiety		0.21		0.33		0.02
Yes	1.14 (0.93, 1.39)		1.11 (0.90, 1.36)		1.31 (1.05, 1.65)	
No	REF		REF		REF	
Gender		0.85		0.70		0.04
Male	0.99 (0.88, 1.11)		0.98 (0.87, 1.10)		0.88 (0.78, 1.00)	
Female	REF		REF		REF	
Marital Status		<0.0001		0.05		0.0018
Married	2.12 (1.69, 2.67)		1.86 (1.47, 2.36)		1.56 (1.22, 2.00)	
Widowed/Divorced/Separated	1.77 (1.40, 2.25)		1.60 (1.24, 2.06)		1.50 (1.16, 1.92)	
Never Married	REF		REF		REF	
Education		<0.0001		<0.0001		<0.0001
< HS	0.40 (0.33, 0.47)		0.39 (0.33, 0.47)		0.40 (0.34, 0.49)	
HS Diploma/GED	0.61 (0.54, 0.69)		0.61 (0.54, 0.70)		0.61 (0.53, 0.70)	
> HS	REF		REF		REF	
Race		<0.0001		<0.0001		<0.0001
Hispanic	0.49 (0.41, 0.60)		0.52 (0.43, 0.63)		0.53 (0.45, 0.64)	
Black, non-Hispanic	0.87 (0.74, 1.02)		0.91 (0.78, 1.07)		0.86 (0.74, 1.01)	
Other	0.52 (0.42, 0.63)		0.51 (0.41, 0.62)		0.52 (0.42, 0.65)	
White, non-Hispanic	REF		REF		REF	
Born in US		<0.0001		<0.0001		<0.0001
No	0.54 (0.47, 0.64)		0.59 (0.51, 0.68)		0.57 (0.49, 0.66)	
Yes	REF		REF		REF	
Language Spoken at Home		<0.0001		<0.0001		<0.0001
Non-English	0.47 (0.39, 0.56)		0.47 (0.39, 0.56)		0.49 (0.41, 0.59)	
English						

	REF		REF		REF	
US Census Region		0.03		0.34		0.71
Northeast	1.36 (1.10, 1.69)		1.09 (0.89, 1.34)		1.07 (0.86, 1.33)	
Midwest	1.07 (0.88, 1.31)		0.95 (0.78, 1.15)		0.97 (0.79, 1.18)	
South	1.12 (0.94, 1.33)		0.94 (0.80, 1.11)		0.97 (0.79, 1.18)	
West	REF		REF		REF	
Income Level		<0.0001		<0.0001		<0.0001
Poor/Near Poor/Low Income	0.47 (0.41, 0.55)		0.46 (0.39, 0.54)		0.50 (0.42, 0.58)	
Middle Income	0.65 (0.55, 0.77)		0.63 (0.54, 0.74)		0.66 (0.56, 0.78)	
High Income	REF		REF		REF	
Age (in years)		<0.0001		<0.0001		<0.0001
50 – 64	0.50 (0.44, 0.55)		0.47 (0.41, 0.54)		0.41 (0.36, 0.47)	
≥ 65	REF		REF		REF	
Health Insurance		<0.0001		<0.0001		<0.0001
Public Only	0.80 (0.70, 0.92)		0.81 (0.71, 0.92)		0.86 (0.75, 0.98)	
Uninsured	0.23 (0.19, 0.29)		0.24 (0.20, 0.29)		0.26 (0.22, 0.31)	
Private	REF		REF		REF	
Usual Care Provider		<0.0001		<0.0001		<0.0001
No	0.34 (0.28, 0.43)		0.32 (0.26, 0.39)		0.33 (0.27, 0.40)	
Yes	REF		REF		REF	
Diabetes		0.05		0.0031		0.0006
Yes	1.16 (1.00, 1.35)		1.25 (1.08, 1.44)		1.34 (1.13, 1.58)	
No	REF		REF		REF	
Co-morbid conditions		<0.0001		<0.0001		<0.0001
Yes	1.69 (1.44, 1.99)		1.71 (1.47, 2.00)		1.89 (1.63, 2.19)	
No	REF		REF		REF	
Number of co-morbid conditions		<0.0001		<0.0001		<0.0001
None	1.36 (1.16, 1.60)		1.40 (1.19, 1.65)		1.50 (1.28, 1.75)	
1	1.79 (1.49, 2.15)		1.81 (1.51, 2.16)		1.99 (1.67, 2.37)	
2	2.24 (1.83, 2.74)		2.21 (1.81, 2.70)		2.43 (1.98, 2.98)	
3	1.95 (1.45, 2.64)		2.09 (1.56, 2.81)		2.43 (1.83, 3.24)	
4	1.93 (1.47, 2.53)		1.88 (1.43, 2.47)		2.32 (1.77, 3.05)	
≥ 5	REF		REF		REF	
BMI	1.00 (0.99, 1.01)	0.46	1.00 (0.99, 1.01)	0.60	1.01 (1.00, 1.02)	0.21

# Office Based Provider Visits	1.04 (1.03, 1.05)	<0.0001	1.04 (1.03, 1.06)	<0.0001	1.05 (1.04, 1.07)	<0.0001
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*CRC = colorectal cancer, GED = General Equivalency Diploma, HS=high school*

Notes:

- a. All models take into account the 2009 MEPS multi-stage complex survey design
- b. All models are weighted to reflect the 2009 US civilian, non-institutionalized population
- c. All models are based off the same 7,060 study subjects

**C3. Adjusted Logistic Regression Results for CRC Screening Participation and Depression (N =7060)**

Predictors	Outcomes					
	Up-to-date Colonoscopy		Up-to-date CRC Screening		CRC Screening Ever	
	OR (95 % CI)	P-Value	OR (95 % CI)	P-Value	OR (95 % CI)	P-Value
<b>Depression</b>		<b>0.0048</b>		<b>0.01</b>		<b>0.0017</b>
<b>Yes</b>	<b>1.35 (1.10, 1.67)</b>		<b>1.31 (1.06, 1.61)</b>		<b>1.40 (1.14, 1.73)</b>	
<b>No</b>	<b>REF</b>		<b>REF</b>		<b>REF</b>	
Gender		0.53		0.60		0.37
Male	1.04 (0.92, 1.18)		1.03 (0.91, 1.17)		0.94 (0.82, 1.08)	
Female	REF		REF		REF	
Marital Status		<0.0001		0.0004		0.03
Married	1.91 (1.50, 2.43)		1.60 (1.26, 2.03)		1.27 (1.00, 1.62)	
Widowed/Divorced/Separated	1.85 (1.43, 2.39)		1.62 (1.25, 2.10)		1.42 (1.10, 1.84)	
Never Married	REF		REF		REF	
Education		<0.0001		<0.0001		<0.0001
< HS	0.50 (0.41, 0.62)		0.49 (0.40, 0.61)		0.48 (0.38, 0.60)	
HS Diploma/GED	0.66 (0.58, 0.75)		0.67 (0.59, 0.76)		0.66 (0.57, 0.76)	
> HS	REF		REF		REF	
Race		<0.0001		<0.0001		<0.0001
Hispanic	0.81 (0.66, 1.00)		0.86 (0.70, 1.05)		0.88 (0.73, 1.08)	
Black, non-Hispanic	1.24 (1.05, 1.47)		1.35 (1.14, 1.59)		1.21 (1.02, 1.43)	
Other	0.62 (0.49, 0.78)		0.59 (0.46, 0.76)		0.63 (0.49, 0.80)	
White, non-Hispanic	REF		REF		REF	
US Census Region		0.17		0.35		0.64
Northeast	1.20 (0.97, 1.50)		0.91 (0.73, 1.14)		0.90 (0.70, 1.14)	
Midwest	0.97 (0.80, 1.19)		0.84 (0.69, 1.03)		0.88 (0.71, 1.08)	
South	1.07 (0.90, 1.28)		0.87 (0.73, 1.04)		0.91 (0.75, 1.09)	
West	REF		REF		REF	
Income Level		<0.0001		<0.0001		<0.0001
Poor/Near Poor/Low Income	0.64 (0.53, 0.76)		0.60 (0.50, 0.72)		0.62 (0.51, 0.76)	
Middle Income	0.77 (0.65, 0.92)		0.73 (0.61, 0.86)		0.75 (0.62, 0.90)	
High Income	REF		REF		REF	
Age (in years)		<0.0001		<0.0001		<0.0001
50 – 64						

≥ 65	0.50 (0.53, 0.58) REF		0.46 (0.39, 0.54) REF		0.40 (0.34, 0.47) REF	
Health Insurance		<0.0001		<0.0001		<0.0001
Public Only	0.76 (0.63, 0.92)		0.75 (0.62, 0.91)		0.71 (0.58, 0.88)	
Uninsured	0.46 (0.36, 0.58)		0.48 (0.39, 0.60)		0.51 (0.42, 0.63)	
Private	REF		REF		REF	
Usual Care Provider		<0.0001		<0.0001		<0.0001
No	0.52 (0.41, 0.65)		0.47 (0.39, 0.59)		0.51 (0.42, 0.63)	
Yes	REF		REF		REF	
Diabetes		0.31		0.03		0.03
Yes	1.09 (0.92, 1.30)		1.20 (1.02, 1.41)		1.23 (1.02, 1.49)	
No	REF		REF		REF	
Co-morbid conditions		0.0003		0.0002		<0.0001
Yes	1.38 (1.16, 1.65)		1.39 (1.17, 1.65)		1.48 (1.25, 1.74)	
No	REF		REF		REF	
BMI	1.00 (0.99, 1.01)	0.81	1.00 (0.99, 1.01)	0.85	1.00 (0.99, 1.02)	0.66
# Office Based Provider Visits	1.03 (1.02, 1.04)	<0.0001	1.03 (1.02, 1.04)	<0.0001	1.03 (1.02, 1.05)	<0.0001
<b>Model C-Statistic</b>	0.70		0.71		0.71	

*CRC = colorectal cancer, GED = General Equivalency Diploma, HS=high school*

Notes:

- a. All models take into account the 2009 MEPS multi-stage complex survey design
- b. All models are weighted to reflect the 2009 US civilian, non-institutionalized population
- c. All models are based off the same 7,060 study subjects

**C4. Adjusted Logistic Regression Results for CRC Screening Participation and Any Mental Health Disorder (N =7060)**

Predictors	Outcomes					
	Up-to-date Colonoscopy		Up-to-date CRC Screening		CRC Screening Ever	
	OR (95 % CI)	P-Value	OR (95 % CI)	P-Value	OR (95 % CI)	P-Value
<b>Any Mental Health Disorder</b>		<b>0.0032</b>		<b>0.03</b>		<b>0.0012</b>
<b>Yes</b>	<b>1.26 (1.08, 1.47)</b>		<b>1.18 (1.01, 1.38)</b>		<b>1.31 (1.11, 1.54)</b>	
<b>No</b>	<b>REF</b>		<b>REF</b>		<b>REF</b>	
Gender		0.50		0.61		0.39
Male	1.04 (0.92, 1.18)		1.03 (0.91, 1.17)		0.94 (0.83, 1.08)	
Female	REF		REF		REF	
Marital Status		<0.0001		0.0003		0.02
Married	1.93 (1.52, 2.45)		1.61 (1.27, 2.04)		1.29 (1.02, 1.64)	
Widowed/Divorced/Separated	1.87 (1.44, 2.41)		1.63 (1.26, 2.11)		1.44 (1.11, 1.86)	
Never Married	REF		REF		REF	
Education		<0.0001		<0.0001		<0.0001
< HS	0.50 (0.41, 0.62)		0.49 (0.40, 0.61)		0.48 (0.38, 0.60)	
HS Diploma/GED	0.66 (0.58, 0.74)		0.67 (0.59, 0.76)		0.65 (0.57, 0.75)	
> HS	REF		REF		REF	
Race		<0.0001		<0.0001		<0.0001
Hispanic	0.81 (0.66, 1.00)		0.86 (0.70, 1.06)		0.89 (0.73, 1.08)	
Black, non-Hispanic	1.24 (1.05, 1.47)		1.34 (1.14, 1.59)		1.21 (1.03, 1.43)	
Other	0.63 (0.50, 0.79)		0.60 (0.47, 0.76)		0.63 (0.49, 0.81)	
White, non-Hispanic	REF		REF		REF	
US Census Region		0.17		0.35		0.64
Northeast	1.20 (0.97, 1.50)		0.91 (0.73, 1.14)		0.89 (0.70, 1.14)	
Midwest	0.98 (0.80, 1.19)		0.84 (0.69, 1.03)		0.88 (0.71, 1.08)	
South	1.08 (0.90, 1.28)		0.87 (0.73, 1.04)		0.91 (0.76, 1.09)	
West	REF		REF		REF	
Income Level		<0.0001		<0.0001		<0.0001
Poor/Near Poor/Low Income	0.64 (0.54, 0.76)		0.60 (0.50, 0.72)		0.62 (0.51, 0.76)	
Middle Income	0.77 (0.63, 0.92)		0.73 (0.62, 0.86)		0.75 (0.62, 0.91)	
High Income	REF		REF		REF	
Age (in years)		<0.0001		<0.0001		<0.0001

50 – 64 ≥ 65	0.50 (0.43, 0.58) REF		0.47 (0.40, 0.55) REF		0.40 (0.34, 0.47) REF	
Health Insurance Public Only Uninsured Private	0.76 (0.63, 0.92) 0.46 (0.36, 0.58) REF	<0.0001	0.76 (0.63, 0.91) 0.48 (0.39, 0.60) REF	<0.0001	0.71 (0.58, 0.87) 0.52 (0.43, 0.63) REF	<0.0001
Usual Care Provider No Yes	0.52 (0.42, 0.65) REF	<0.0001	0.48 (0.39, 0.59) REF	<0.0001	0.52 (0.42, 0.63) REF	<0.0001
Diabetes Yes No	1.10 (0.93, 1.30) REF	0.29	1.20 (1.02, 1.41) REF	0.03	1.24 (1.26, 1.75) REF	0.02
Co-morbid conditions Yes No	1.39 (1.17, 1.66) REF	0.0002	1.40 (1.18, 1.66) REF	0.0001	1.48 (1.26, 1.75) REF	<0.0001
BMI	1.00 (0.99, 1.01)	0.74	1.00 (0.99, 1.01)	0.91	1.00 (0.99, 1.02)	0.61
# Office Based Provider Visits	1.03 (1.02, 1.04)	<0.0001	1.03 (1.02, 1.04)	<0.0001	1.03 (1.02, 1.04)	<0.0001
<b>Model C-Statistic</b>	0.70		0.71		0.71	

*CRC = colorectal cancer, GED = General Equivalency Diploma, HS=high school*

Notes:

- a. All models take into account the 2009 MEPS multi-stage complex survey design
- b. All models are weighted to reflect the 2009 US civilian, non-institutionalized population
- c. All models are based off the same 7,060 study subjects



**C5. Adjusted Logistic Regression Results for CRC Screening Participation and Anxiety (N =7060)**

Predictors	Outcomes					
	Up-to-date Colonoscopy		Up-to-date CRC Screening		CRC Screening Ever	
	OR (95 % CI)	P-Value	OR (95 % CI)	P-Value	OR (95 % CI)	P-Value
<b>Anxiety</b>		<b>0.41</b>		<b>0.65</b>		<b>0.09</b>
<b>Yes</b>	<b>1.09 (0.89, 1.34)</b>		<b>1.05 (0.85, 1.30)</b>		<b>1.23 (0.97, 1.57)</b>	
<b>No</b>	<b>REF</b>		<b>REF</b>		<b>REF</b>	
Gender		0.67		0.74		0.31
Male	1.03 (0.91, 1.16)		1.02 (0.90, 1.16)		0.93 (0.82, 1.07)	
Female	REF		REF		REF	
Marital Status		<0.0001		0.0004		0.02
Married	1.90 (1.49, 2.41)		1.59 (1.26, 2.02)		1.27 (1.00, 1.61)	
Widowed/Divorced/Separated	1.87 (1.45, 2.42)		1.64 (1.26, 2.12)		1.44 (1.11, 1.86)	
Never Married	REF		REF		REF	
Education		<0.0001		<0.0001		<0.0001
< HS	0.51 (0.41, 0.62)		0.50 (0.40, 0.61)		0.48 (0.38, 60)	
HS Diploma/GED	0.66 (0.58, 0.74)		0.67 (0.59, 0.76)		0.65 (0.57, 0.75)	
> HS	REF		REF		REF	
Race		<0.0001		<0.0001		<0.0001
Hispanic	0.80 (0.65, 0.99)		0.85 (0.69, 1.05)		0.88 (0.72, 1.07)	
Black, non-Hispanic	1.21 (1.02, 1.44)		1.32 (1.11, 1.56)		1.19 (1.00, 1.40)	
Other	0.62 (0.49, 0.77)		0.59 (0.46, 0.75)		0.63 (0.49, 0.81)	
White, non-Hispanic	REF		REF		REF	
US Census Region		0.18		0.34		0.62
Northeast	1.20 (0.96, 1.49)		0.91 (0.73, 1.13)		0.89 (0.70, 1.13)	
Midwest	0.97 (0.80, 1.19)		0.84 (0.69, 1.03)		0.87 (0.71, 1.08)	
South	1.07 (0.90, 1.27)		0.87 (0.73, 1.04)		0.90 (0.75, 1.09)	
West	REF		REF		REF	
Income Level		<0.0001		<0.0001		<0.0001
Poor/Near Poor/Low Income	0.65 (0.54, 0.77)		0.60 (0.50, 0.73)		0.63 (0.51, 0.76)	
Middle Income	0.77 (0.65, 0.92)		0.73 (0.62, 0.86)		0.75 (0.62, 0.91)	
High Income	REF		REF		REF	
Age (in years)		<0.0001		<0.0001		<0.0001
50 – 64	0.51 (0.41, 0.64)		0.47 (0.40, 0.56)		0.40 (0.34, 0.48)	

≥ 65	REF		REF		REF	
Health Insurance		<0.0001		<0.0001		<0.0001
Public Only	0.77 (0.64, 0.93)		0.76 (0.63, 0.92)		0.72 (0.59, 0.89)	
Uninsured	0.46 (0.6, 0.58)		0.48 (0.39, 0.60)		0.52 (0.43, 0.63)	
Private	REF		REF		REF	
Usual Care Provider		<0.0001		<0.0001		<0.0001
No	0.51 (0.41, 0.64)		0.47 (0.38, 0.58)		0.51 (0.42, 0.62)	
Yes	REF		REF		REF	
Diabetes		0.26		0.02		0.02
Yes	1.10 (0.93, 1.31)		1.21 (1.02, 1.42)		1.25 (1.04, 1.51)	
No	REF		REF		REF	
Co-morbid conditions		0.0001		0.0001		<0.0001
Yes	1.41 (1.18, 1.68)		1.41 (1.19, 1.68)		1.50 (1.27, 1.77)	
No	REF		REF		REF	
BMI	1.00 (0.99, 1.01)	0.69	1.00 (0.99, 1.01)	0.94	1.00 (0.99, 1.02)	0.56
# Office Based Provider Visits	1.03 (1.02, 1.04)	<0.0001	1.03 (1.02, 1.04)	<0.0001	1.03 (1.02, 1.05)	<0.0001
<b>Model C-Statistic</b>	0.70		0.71		0.71	

*CRC = colorectal cancer, GED = General Equivalency Diploma, HS=high school*

Notes:

- a. All models take into account the 2009 MEPS multi-stage complex survey design
- b. All models are weighted to reflect the 2009 US civilian, non-institutionalized population
- c. All models are based off the same 7,060 study subjects