

Supplemental Table 1. Characteristics According to Age Group among Respondents Aged 40-54 years, NHIS 2000-2015

	40-54 years (n=53,175)			40-44 years (n=18,296)			45-49 years (n=17,718)			50-54 years (n=17,161)		
	Total	2000	2015	Total	2000	2015	Total	2000	2015	Total	2000	2015
	%	%	%	%	%	%	%	%	%	%	%	%
Male	49.2	49.4	49.5	49.6	50.1	48.7	49.2	49.8	50.0	48.9	48.8	49.3
Race/Ethnicity												
Hispanic	12.4	9.0	16.3	14.8	10.8	19.1	12.7	8.9	17.6	10.3	7.5	12.9
NH White	70.9	76.2	64.4	67.6	74.3	59.2	70.7	75.5	64.0	73.3	78.7	67.9
NH Black	11.5	10.7	11.9	11.9	10.9	13.0	11.2	11.1	11.5	11.7	9.8	12.1
NH Other	5.3	4.1	7.4	5.8	4.0	8.7	5.5	4.5	6.9	4.8	4.0	7.1
Education												
<HS	12.0	12.7	11.8	12.4	12.2	12.0	11.8	12.0	12.3	11.9	13.6	11.2
HS Graduate	27.3	29.5	23.2	26.1	31.6	20.1	27.8	29.0	24.1	27.6	28.5	24.1
Some College	29.7	28.8	30.2	29.2	28.1	29.4	29.7	29.9	28.0	29.8	28.3	32.2
College Graduate	31.1	29.1	34.8	32.3	28.2	38.5	30.7	29.2	35.6	30.6	29.6	32.5
Insurance												
Private	73.1	78.2	71.5	72.0	76.9	69.3	73.6	77.5	73.3	73.4	80.5	71.1
Medicare	3.2	2.4	3.7	2.2	1.8	2.5	2.8	2.3	2.8	4.4	3.1	5.3
Other ^a	2.9	2.6	3.8	2.4	2.1	2.1	2.8	2.8	4.0	3.4	2.7	4.7
Medicaid/State	5.6	3.4	9.6	6.2	3.5	11.5	5.4	3.3	9.1	5.3	3.3	9.1
Uninsured	15.2	13.4	11.3	17.2	15.7	14.7	15.5	14.1	10.9	13.5	10.5	9.9
BMI Category^b												
Underweight	1.1	1.2	0.9	1.1	1.5	0.8	0.9	1.2	0.8	1.1	0.9	1.1
Normal	31.5	35.2	28.6	33.2	39.2	31.0	32.0	35.6	28.2	29.7	31.7	27.3
Overweight	36.9	38.3	35.5	36.6	36.3	35.4	36.8	38.8	35.3	37.4	39.6	35.7
Obese	30.6	25.4	35.1	29.1	23.1	32.8	30.3	24.5	35.7	31.8	27.9	36.0
Smoking Status												
Current smoker	22.9	26.4	18.1	23.0	28.9	17.6	22.9	25.9	16.0	22.8	24.5	20.3
Former smoker	21.0	24.3	18.9	17.6	19.4	16.6	20.2	24.2	18.1	24.4	28.9	21.3
Never smoker	56.1	49.4	63.0	59.5	51.8	65.8	56.9	49.9	65.9	52.7	46.6	58.5
Alcohol Consumption^c												
Current light ^c	47.2	47.5	49.5	48.9	48.0	52.0	48.0	49.0	50.6	45.2	45.2	47.0
Current moderate	21.5	18.8	21.5	21.3	20.5	21.1	20.9	17.3	20.1	22.3	18.6	23.2
Former	14.3	14.8	13.3	12.5	14.2	11.2	14.1	15.3	12.9	15.8	15.1	14.4
Lifetime abstainer	17.0	18.9	15.7	17.3	17.4	15.8	17.1	18.4	16.5	16.7	21.2	15.5
Family History^d	5.9	5.9	6.1	4.7	5.6	4.6	6.2	5.7	6.5	6.8	6.4	7.1

Abbreviations: National Health Interview Survey (NHIS), Non-Hispanic (NH), High School (HS), Body Mass Index (BMI)

a. Includes military and other government

- b. BMI categorized according to World Health Organization classifications. Underweight BMI $<18.5 \text{ kg/m}^2$, normal $18.5\text{-}24.9 \text{ kg/m}^2$, overweight $25\text{-}29.9 \text{ kg/m}^2$, obese $\geq 30.0 \text{ kg/m}^2$
- c. In an average year: current light ≤ 3 drinks per week, moderate or heavy 3+ drinks per week
- d. Data were only collected in 2000,2005,2010, and 2015 surveys. Includes first-degree family history

Supplemental Table 2. Unadjusted Rate of Sigmoidoscopy in the Past Year According to Survey Year and Age, NHIS 2000-2015

Survey Year	40-44 years			45-49 years			50-54 years		
	%	95%CI		%	95%CI		%	95%CI	
2000	0.5	0.3	0.9	1.0	0.7	1.4	2.9	2.2	3.8
2003	0.7	0.4	1.1	0.7	0.4	1.2	1.3	0.9	1.8
2005	a			a			0.9	0.5	1.4
2008	a			a			0.7	0.4	1.3
2010	a			a			a	a	a
2013	a			0.7	0.4	1.2	1.3	0.8	2.1
2015	a			0.3	0.1	0.4	a	a	a

Abbreviations: National Health Interview Survey (NHIS), Confidence Interval (CI)

a. Unstable estimates

Supplemental Table 3. Association between Sociodemographic, Insurance, and Risk Factors for Colonoscopy in the Past Year, NHIS 2000-2015^a

	40-44 years			45-49 years			50-54 years		
	aRR	95%CI		aRR	95%CI		aRR	95%CI	
Sex									
Male	1.00			1.00			1.00		
Female	1.18	0.91	1.53	1.07	0.88	1.30	1.15	1.03	1.30
Race/Ethnicity									
NH White	1.00			1.00			1.00		
Hispanic	0.62	0.43	0.91	0.91	0.67	1.24	0.85	0.69	1.05
NH Black	1.12	0.82	1.51	1.30	1.01	1.68	1.15	0.99	1.33
NH Other	0.65	0.38	1.10	0.72	0.45	1.15	0.72	0.54	0.96
Education									
College	1.00			1.00			1.00		
<High School	0.98	0.59	1.62	0.87	0.60	1.26	0.62	0.49	0.79
High School	1.00	0.74	1.35	0.93	0.72	1.20	0.76	0.65	0.90
Some College	1.01	0.76	1.33	0.97	0.77	1.22	0.84	0.73	0.97
Insurance									
Private	1.00			1.00			1.00		
Medicare	1.09	0.60	1.97	1.49	1.02	2.17	1.29	1.04	1.60
Other ^b	0.98	0.54	1.77	1.06	0.67	1.67	1.21	0.93	1.56
Medicaid/State Plan	1.03	0.67	1.60	1.16	0.85	1.59	1.03	0.82	1.28
Uninsured	0.35	0.18	0.67	0.28	0.19	0.40	0.26	0.19	0.34
BMI Category									
Normal	1.00			1.00			1.00		
Underweight	1.12	0.33	3.83	1.57	0.79	3.13	1.87	1.25	2.80
Overweight	1.16	0.85	1.59	1.20	0.96	1.51	1.00	0.87	1.14
Obese	1.29	0.95	1.75	1.05	0.82	1.34	1.21	1.05	1.38
Alcohol Consumption									
Lifetime abstainer	1.00			1.00			1.00		
Current Light	1.17	0.83	1.65	1.22	0.94	1.58	1.34	1.13	1.58
Current Moderate/Heavy	0.98	0.64	1.52	0.98	0.71	1.36	1.29	1.06	1.57
Former	1.33	0.87	2.03	1.45	1.05	2.00	1.34	1.11	1.61
Smoking Status									
Never	1.00			1.00			1.00		
Former	0.86	0.66	1.13	0.99	0.77	1.27	0.83	0.71	0.97
Current	1.02	0.76	1.36	1.26	0.99	1.59	1.11	0.98	1.25
Family History of CRC^c									
No	1.00			1.00			1.00		
Yes	3.90	2.63	5.78	3.17	2.18	4.62	1.36	1.04	1.77

Abbreviations: National Health Interview Survey (NHIS), Adjusted Rate Ratios (aRR), Body Mass Index (BMI), High School (HS), Colorectal Cancer (CRC)

- a. Models were simultaneously adjusted for sex, race/ethnicity, insurance, BMI category, alcohol consumption, and smoking status.
- b. Includes military and other government
- c. Data on family history was only collected in 2000,2005,2010, and 2015 surveys. These models only contain data from 2000,2005,2010, and 2015 and adjust for sex, race/ethnicity, insurance, BMI category, alcohol consumption, and smoking status.

Supplemental Table 4. Delay-Adjusted Colorectal Cancer Incidence Rates by Age and Year among Adults 40-54 years, SEER18 2000-2015^a

Year	40-44 years			45-49 years			50-54 years		
	IR	95%CI		IR	95%CI		IR	95%CI	
2000	14.2	13.3	15.2	27.1	25.7	28.4	51.1	49.1	53.1
2001	13.8	12.9	14.7	28	26.7	29.4	51.6	49.7	53.6
2002	14.4	13.5	15.4	27.1	25.7	28.4	54.6	52.6	56.6
2003	14.1	13.2	15	27.1	25.8	28.4	53.7	51.8	55.8
2004	14.2	13.3	15.2	28.7	27.4	30.1	55.2	53.3	57.3
2005	15	14	16	27.6	26.2	28.9	54.4	52.5	56.5
2006	16.5	15.5	17.5	28	26.7	29.3	54	52.1	55.9
2007	16.5	15.5	17.5	29.7	28.4	31.1	56.7	54.7	58.6
2008	16.4	15.4	17.4	28.2	26.9	29.6	56	54.1	57.9
2009	16.7	15.7	17.7	30.1	28.8	31.5	58.2	56.3	60.2
2010	16.8	15.8	17.9	30.6	29.3	32	56.6	54.8	58.6
2011	16.7	15.7	17.7	30.4	29	31.8	54.9	53.1	56.8
2012	16.1	15.1	17.2	29.8	28.4	31.2	57.9	56	59.8
2013	16.7	15.7	17.8	30.3	28.9	31.7	56.7	54.9	58.7
2014	18.3	17.2	19.4	31.3	29.9	32.8	59.7	57.8	61.7
2015	17.7	16.6	18.8	32.3	30.8	33.8	60.5	58.6	62.5
2000-2015 APC (p-value)	1.7	(<0.001)		1.1	(<0.001)		0.9	(<0.001)	
2014-2015 vs 2000-2001 IRR	1.28	1.20	1.37	1.15	1.10	1.21	1.17	1.13	1.21

Abbreviations: Surveillance Epidemiology and End Results (SEER), Incidence Rates (IR), Confidence Interval (CI), Annual Percent Change (APC), Incidence Rate Ratios (IRR)

- a. Incidence rates include all stages including unstaged. Bold font indicates statistical significance (p<0.05)

Supplemental Table 5. Delay-Adjusted Colorectal Cancer Incidence Rates by Age, Year, and Stage among Adults 40-54 years, SEER18 2000-2015^a

Localized Stage									
Year	40-44 years			45-49 years			50-54 years		
	IR	95%CI		IR	95%CI		IR	95%CI	
2000	4.7	4.2	5.2	10.2	9.3	11	20.7	19.4	22
2001	4.7	4.2	5.3	9.7	8.9	10.6	20.8	19.5	22
2002	4.8	4.3	5.4	9.4	8.7	10.2	22.2	20.9	23.5
2003	4.5	4	5.1	9.4	8.6	10.2	22.1	20.8	23.4
2004	4.4	3.9	4.9	10	9.2	10.8	23.1	21.8	24.4
2005	5.3	4.8	5.9	9.3	8.6	10.1	23.6	22.3	24.9
2006	5.7	5.2	6.4	10.1	9.3	10.9	23.2	22	24.5
2007	5.5	5	6.1	10	9.2	10.8	24.9	23.6	26.2
2008	5.4	4.9	6.1	9.9	9.1	10.7	24.9	23.6	26.2
2009	5.6	5	6.2	10.8	10	11.7	25.7	24.5	27
2010	6.1	5.5	6.8	10	9.2	10.8	24.7	23.4	25.9
2011	5.3	4.7	5.9	10	9.2	10.8	24.1	22.9	25.4
2012	5.6	5	6.3	9.8	9	10.6	24.9	23.6	26.1
2013	4.9	4.3	5.5	10.2	9.4	11.1	23.6	22.4	24.9
2014	5.6	5	6.2	10.2	9.4	11	26.9	25.6	28.2
2015	5.4	4.8	6	10.3	9.5	11.2	27.4	26.1	28.8
2000-2015 APC (p-value)	1.2	(<0.001)		0.4	0	0.8	1.5	1.0	2.0
2014-2015 vs 2000-2001 IRR	1.17	1.04	1.31	1.03	0.95	1.12	1.31	1.24	1.38
Regional Stage									
Year	40-44 years			45-49 years			50-54 years		
	IR	95%CI		IR	95%CI		IR	95%CI	
2000	5.5	4.9	6.1	10.4	9.6	11.3	18.6	17.4	19.8
2001	5.4	4.9	6	10.7	9.9	11.6	18.7	17.5	19.9
2002	5.7	5.1	6.3	9.9	9.1	10.7	19.4	18.2	20.6
2003	5.7	5.2	6.4	10.2	9.4	11	18.5	17.3	19.7
2004	6.1	5.5	6.7	10.8	10	11.7	19.1	17.9	20.3
2005	5.6	5.1	6.3	10.4	9.6	11.2	18	16.8	19.1
2006	6	5.4	6.6	10.5	9.8	11.4	17.7	16.6	18.9
2007	6.4	5.8	7.1	11.5	10.7	12.3	18.6	17.5	19.8
2008	5.9	5.3	6.6	10.6	9.8	11.5	18.7	17.6	19.8
2009	6.3	5.7	7	10.6	9.8	11.4	19.4	18.3	20.5
2010	6.2	5.6	6.9	11.6	10.8	12.5	18.4	17.4	19.5
2011	6.6	5.9	7.3	11.7	10.9	12.6	17.4	16.4	18.5
2012	6.2	5.5	6.8	11.4	10.6	12.3	19.3	18.2	20.4
2013	6.6	5.9	7.2	10.8	10	11.7	18.8	17.8	19.9

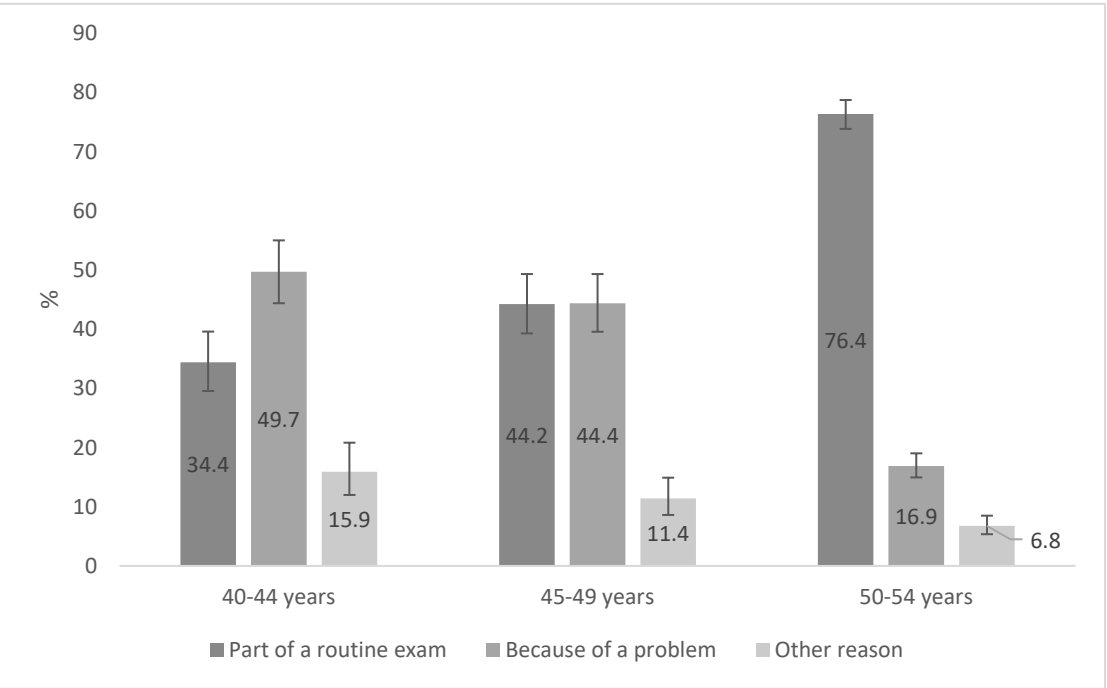
2014	7.5	6.8	8.2	12.1	11.2	13	18.9	17.9	20.1
2015	7	6.4	7.8	12.4	11.5	13.4	18.6	17.5	19.7
2000-2015 APC (p-value)	1.7	(<0.001)		1.1	0.6	1.6	0.0	-0.3	0.4
2014-2015 vs 2000-2001 IRR	1.33	1.20	1.47	1.16	1.07	1.25	1.01	0.95	1.07
Distant Stage									
	40-44 years			45-49 years			50-54 years		
Year	IR	95%CI		IR	95%CI		IR	95%CI	
2000	3.3	2.9	3.8	5.4	4.9	6.1	9.4	8.6	10.3
2001	3.1	2.7	3.6	6.3	5.7	7	10.1	9.2	11
2002	3.1	2.7	3.6	6.7	6	7.3	11	10.1	12
2003	3.2	2.8	3.7	6.4	5.8	7.1	10.9	10	11.8
2004	3.1	2.7	3.5	6.7	6.1	7.4	10.9	10	11.8
2005	3.5	3	3.9	7.1	6.5	7.8	11.1	10.2	12
2006	4.1	3.7	4.7	6.3	5.7	6.9	10.9	10	11.8
2007	3.9	3.5	4.5	7.1	6.5	7.8	11.2	10.4	12.1
2008	4.4	3.9	4.9	6.9	6.3	7.6	10.4	9.6	11.3
2009	4.2	3.7	4.8	7.5	6.9	8.3	10.7	9.9	11.6
2010	3.9	3.4	4.5	8.2	7.5	9	11.2	10.3	12
2011	4.1	3.6	4.7	7.7	7	8.4	11.4	10.6	12.3
2012	3.9	3.4	4.5	7.6	6.9	8.3	11.7	10.9	12.6
2013	4.6	4.1	5.2	8.2	7.5	8.9	11.8	11	12.7
2014	4.7	4.1	5.3	8.2	7.5	9	11.5	10.6	12.3
2015	4.8	4.2	5.4	8.3	7.6	9	11.8	11	12.7
2000-2015 APC	2.9	(<0.001)		2.3	(<0.001)		1.0	(<0.001)	
2014-2015 vs 2000-2001 IRR	1.46	1.28	1.66	1.40	1.27	1.55	1.19	1.10	1.30
Unstaged									
	40-44 years			45-49 years			50-54 years		
Year	IR	95%CI		IR	95%CI		IR	95%CI	
2000	0.7	0.5	1.0	1.0	1.0	1.3	2.1	0.2	1.7
2001	0.4	0.3	1.0	1.1	1.0	1.4	2.0	0.2	1.6
2002	0.7	0.5	1.0	1.1	1.0	1.3	1.9	0.2	1.6
2003	0.5	0.4	1.0	1.1	1.0	1.4	2.2	0.2	1.8
2004	0.7	0.5	1.0	1.2	1.0	1.5	2.2	0.2	1.8
2005	0.6	0.4	1.0	0.7	1.0	1.0	1.8	0.2	1.5
2006	0.6	0.4	1.0	1.1	1.0	1.4	2.2	0.2	1.8
2007	0.6	0.4	1.0	1.1	1.0	1.4	1.9	0.2	1.6
2008	0.6	0.5	1.0	0.8	1.0	1.1	2.0	0.2	1.7
2009	0.6	0.4	1.0	1.2	1.0	1.5	2.4	0.2	2.0
2010	0.6	0.4	1.0	0.8	1.0	1.1	2.4	0.2	2.0

2011	0.7	0.5	1.0	1.1	1.0	1.4	1.9	0.2	1.6
2012	0.4	0.2	1.0	1.0	1.0	1.2	2.0	0.2	1.7
2013	0.7	0.5	1.0	1.0	1.0	1.3	2.5	0.2	2.1
2014	0.6	0.4	1.0	0.8	1.0	1.1	2.5	0.2	2.1
2015	0.4	0.3	1.0	1.2	1.0	1.5	2.7	0.2	2.3
2000-2015 APC	-1.5	(0.20)		-0.9	(0.40)		1.6	(0.10)	
2014-2015	0.85	0.59	1.21	0.88	0.68	1.14	1.15	0.96	1.37

Abbreviations: Surveillance Epidemiology and End Results (SEER), Incidence Rates (IR), Confidence Interval (CI), Annual Percent Change (APC), Incidence Rate Ratios (IRR)

- a. Among all stages. Bold font indicates statistical significance ($p < 0.05$). Stage is based on 2000 SEER Summary stage.

Supplemental Figure 1. Reason for Testing Among those with a recent Colonoscopy by Age, NHIS 2000-2015^a



a. Includes respondents receiving a colonoscopy in the past year, excludes 1 respondent with missing reason for testing data.