

APPENDIX

SPECIFICATION OF PRIMARY INTERRUPTED TIME SERIES REGRESSION

Our primary segmented regression can be described by the following equation:

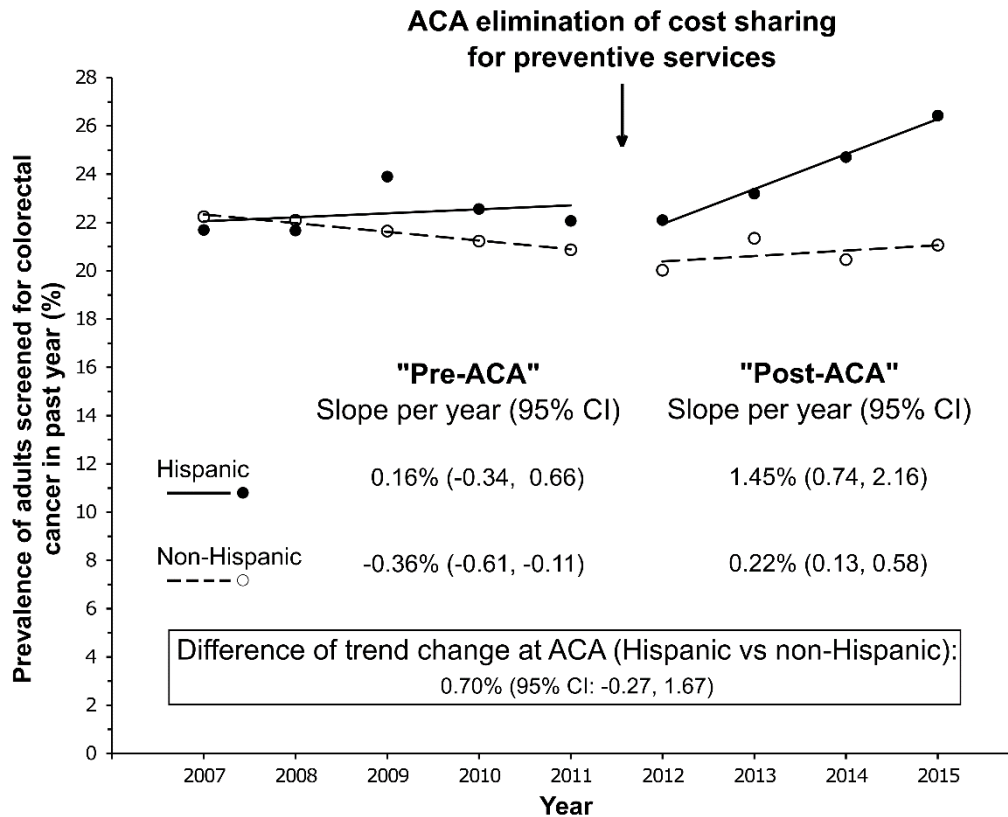
$$Y = \beta_0 + \beta_1 * time + \beta_2 * time_since_interruption + \varepsilon$$

where Y denotes annual CRC screening prevalence; *time* denotes the study year, *time* = {1,2,3,4,5,6,7,8,9}; and *time_since_interruption* denotes the number of years since the ACA interruption, *time_since_interruption* = {0,1,2,3}.

Coefficient β_0 is the constant term (intercept) and estimates the annual screening rate immediately prior to the beginning of the study period (2007). Coefficient β_1 represents the baseline linear trend in screening over time during the pre-ACA period. Coefficient β_2 represents changes in CRC screening trends post-ACA.

SENSITIVITY ANALYSIS 1 – INTERRUPTED TIME SERIES REGRESSION WITH LEVEL CHANGE

Appendix Figure 1. Segmented trend estimates of annual colorectal cancer screening rates for Hispanic versus non-Hispanic adults aged 50–64 years, 2007–2015 (including jump).



ACA, Affordable Care Act.

Appendix Table 1. Segmented Linear Regression Model for Annual Colorectal Cancer Screening Rates for Hispanic versus non-Hispanic Adults Aged 50–64 Years, 2007–2015 (Including Jump)

Parameter	Hispanic	Non-Hispanic
	Estimate (95% CI)	Estimate (95% CI)
Intercept	21.89 (20.23, 23.54)	22.69 (21.85, 23.53)
Pre-ACA trend	0.16 (-0.34, 0.66)	-0.36 (-0.61, -0.11)
Jump at ACA	-0.94 (-3.06, 1.18)	-0.15 (-1.22, 0.93)
Post-ACA trend	1.45 (0.74, 2.16)	0.22 (0.13, 0.58)
Post-ACA trend change	1.29 (0.42, 2.15)	0.58 (0.15, 1.02)

Notes: Estimates correspond to the prevalence (%) for the intercept and jump, or the change in prevalence (%) per year.

ACA, Affordable Care Act.

SENSITIVITY ANALYSIS 2 – INTERRUPTED TIME SERIES REGRESSION EXCLUDING 2011 DATA AND LEVEL CHANGE

Appendix Table 2. Segmented Linear Regression Model for Annual Colorectal Cancer Screening Rates for Hispanic Versus non-Hispanic Adults Aged 50–64 Years, 2007–2015 (Without Jump Term in Model and Without 2011 Data)

Parameter	Hispanic	Non-Hispanic
	Estimate ^a (95% CI)	Estimate ^a (95% CI)
Intercept	22.22 (20.69, 23.76)	22.76 (22.02, 23.49)
Pre-ACA trend	0.03 (–0.37, 0.42)	–0.39 (–0.58, –0.20)
Post-ACA trend change	1.23 (0.23, 2.23)	0.59 (0.12, 1.07)

^aEstimates correspond to prevalence (%) for intercept or change in prevalence (%) per year.

Difference of trend change at ACA (Hispanic vs non-Hispanic): 0.63% (–0.47%, 1.74%).

ACA, Affordable Care Act.

SENSITIVITY ANALYSIS 3 – INTERRUPTED TIME SERIES REGRESSION INCLUDING LEVEL CHANGE AND EXCLUDING 2011 DATA

Appendix Table 3. Segmented Linear Regression Model for Annual Colorectal Cancer Screening Rates for Hispanic Versus non-Hispanic Adults Aged 50–64 Years, 2007–2015 (Without 2011 Data)

Parameter	Hispanic	Non-Hispanic
	Estimate ^a (95% CI)	Estimate ^a (95% CI)
Intercept	21.25 (19.45, 23.04)	22.67 (21.57, 23.76)
Pre-ACA trend	0.48 (–0.17, 1.14)	–0.35 (–0.75, 0.05)
Jump at ACA	–2.21 (–4.91, 0.49)	–0.20 (–1.85, 1.45)
Post-ACA trend change	0.97 (0.04, 1.89)	0.57 (0.01, 1.14)

^aEstimates correspond to prevalence (%) for intercept/jump, or change in prevalence (%) per year.

Difference of trend change at ACA (Hispanic vs non-Hispanic): 0.40% (–0.69%, 1.48%).

ACA, Affordable Care Act.

SENSITIVITY ANALYSIS 4 – INTERRUPTED TIME SERIES REGRESSION USING COMPLETE CASE ANALYSIS TO EXAMINE THE IMPACT OF “DON’T KNOW” OR “REFUSED” FOR SCREENING OUTCOME VARIABLE ON TREND COMPARISONS

Appendix Table 4. Segmented Linear Regression Model for Annual Colorectal Cancer Screening Rates for Hispanic Versus non-Hispanic Adults Aged 50–64 Years, 2007–2015 (Using Complete Case Analysis to Account for Missing Data)

Parameter	Hispanic	Non-Hispanic
	Estimate^a (95% CI)	Estimate^a (95% CI)
Intercept	22.78 (20.96, 24.60)	23.84 (23.01, 24.67)
Pre-ACA trend	0.36 (–0.08, 0.81)	–0.25 (–0.45, –0.04)
Post-ACA trend	1.00 (0.23, 1.78)	0.08 (–0.27, 0.44)
Post-ACA trend change	0.64 (–0.46, 1.74)	0.33 (–0.17, 0.83)

^aEstimates correspond to the prevalence (%) for intercept or change in prevalence (%) per year.

Difference of trend change at ACA (Hispanic vs non-Hispanic): 0.35 (95% CI: –1.10, 1.80).

ACA, Affordable Care Act.