

Impact of fecal immunochemical test-based screening programs on proximal and distal colorectal cancer surgery rates: A natural multiple-baseline experiment.

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BACKGROUND: Colorectal cancer (CRC) screening programs based on the fecal immunochemical test (FIT) were found to reduce overall CRC surgery rates, but to the authors' knowledge data by subsite are lacking. The objective of the current study was to assess the impact of FIT-based screening on proximal and distal CRC surgical resection rates.

METHODS: The Veneto region in Italy can be subdivided into 3 areas with staggered introduction of FIT-based screening programs: early (2002-2004), intermediate (2005-2007), and late (2008-2009) areas. Time series of proximal and distal CRC surgery were investigated in the 3 populations between 2001 and 2012 by Joinpoint regression analysis and segmented Poisson regression models.

RESULTS: The impact of screening was similar in the study populations. Rates of distal CRC surgical resection were stable before screening, increased at the time of screening implementation (rate ratio [RR], 1.25; 95% confidence interval [95% CI], 1.14-1.37), and thereafter declined by 10% annually (RR, 0.90; 95% CI, 0.88-0.92). Rates of proximal CRC surgical resection increased by 4% annually before screening (RR, 1.04; 95% CI, 1.03-1.05) but, after a peak at the time of screening initiation, the trend was reversed. The percentage represented by proximal CRC surgery rose from 28% in 2001 to 41% in 2012.

CONCLUSIONS: In this natural multiple-baseline experiment, consistent findings across each time series demonstrated that FIT-based screening programs have an impact both on proximal and distal CRC surgery rates. However, underlying preexisting epidemiological trends are leading to a rapidly increasing percentage of proximal CRC. Cancer 2015. © 2015 American Cancer Society.

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