PopSim Effectiveness and Cost Estimates

PATIENT REMINDERS

Intervention Effectiveness:

Intervention	Relative Risk	Lower Bound	Upper Bound	Population, Setting and Study Information for Data Sources	Sources
Patient reminders: Patients receive an automated call to notify them that they are overdue for CRC screening. The automated message includes the notification that they are overdue, brief information about why CRC screening is important, and information about various options for screening (e.g., FIT or colonoscopy).	1.26	1.20	1.30	**Muller et al., 2017:** ● Population: 2,386 Alaska Natives and American Indians aged 40-75, average-risk, and due for CRC screening; 59% female; 18% Medicaid enrollees ● Setting: Tribal healthcare system in Anchorage, AK ● Study period: November 2013-March 2014 ● Study type: Randomized controlled trial at the patient level comparing a text messaging intervention (up to 3 text messages one month apart) vs. usual care **Mosen et al., 2010:** ● Population: 5,905 patients aged 51-80, average-risk, and due for CRC screening; 50% female; 92% White, ● Setting: Health maintenance organization (Kaiser Permanente Northwest) in southern Washington and northern Oregon ● Study period: 2008 ● Study type: Randomized controlled trial at the patient level comparing an automated telephone intervention (up to 3 one-minute automated calls describing the health benefits of a fecal occult blood test and allowing patients to request a mailed stool kit) vs. usual care **Dougherty et al., 2018:** ● Study type: Systematic review and meta-analysis of randomized controlled trials of interventions to increase CRC screening in average-risk populations and conducted in U.S. clinical settings	Muller et al., 2017; Mosen et al., 2010; Dougherty et al., 2018

				● Number of studies: 73 total studies, of which 14 studies focused on patient reminders (included telephone-based, mail-based, and internet-based reminders) ● Effectiveness: Relative risk compared to usual care was 1.20 (95% CI: 1.02-1.41); larger associations found among telephone reminders compared to other types of patient reminders	

Intervention Implementation Cost:

Intervention components	**Cost per patient**	**Lower Bound**	**Upper Bound**	**Setting and Population Where Costs Were Collected**	**Sources**
Technical staff to manage automatic calls, maintain the electronic health records, track patients, etc.	$0.79	-	-	**Smith et al., 2012:** ● Setting: Health maintenance organization (Kaiser Permanente Northwest) in southern Washington and northern Oregon ● Population: 5,905 patients aged 51-80, average-risk, due for CRC screening, and who were randomized to automated telephone outreach (included up to 3 one-minute automated phone calls) vs. usual care in a prior randomized controlled trial (Mosen et al., 2010) ● Notes: Staff costs were estimated using the clinical trial records and time estimates from study staff. Salary costs were assigned using wage estimates from the Bureau of Labor Statistics to increase generalizability. A fringe benefit rate of 30% and overhead rate of 20% were assumed	Smith et al., 2012
Automated phone reminder to complete FIT, including the cost of developing the automated message	$0.64	-	-	**Smith et al., 2012:** ● Setting: Health maintenance organization (Kaiser Permanente Northwest) in southern Washington and northern Oregon ● Population: 5,905 patients aged 51-80, average-risk, due for CRC screening, and who were randomized to automated telephone outreach (included up to 3 one-minute automated phone calls) vs. usual care in	Smith et al., 2012

				a prior randomized controlled trial (Mosen et al., 2010) ● Notes: Cost estimate is based on pricing from the in-house vendor of phone messaging services	
Total cost per patient:	**$1.43**				

References

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