

PopSim Effectiveness and Cost Estimates by Intervention

PATIENT NAVIGATION

Intervention Effectiveness:

Intervention	Relative Risk	Lower Bound	Upper Bound	Population, Setting and Study Information for Data Sources	Sources
<p>Patient navigation: A trained patient navigator calls eligible patients to help “navigate” them towards getting screened for CRC with the goal of overcoming any barriers to screening, and to support diagnostic testing and treatment initiation. Patients receive individualized assistance such that the navigator's actions are dependent on what each patient needs. Navigation may include explaining why CRC screening is important, describing where and how to get screened, helping to arrange transportation to a screening center, ordering a FIT to the patient's house, and answering questions about CRC screening.</p>	1.65	1.60	1.76	<p>Dietrich et al., 2006:</p> <ul style="list-style-type: none"> ● <u>Population:</u> 1,413 female patients aged 50-69 who were due for cancer screening (CRC screening, mammography and/or Papanicolaou testing); nearly 63% Spanish-speaking; 78% Medicaid enrollees ● <u>Setting:</u> 11 community and migrant health centers in New York City, NY ● <u>Study period:</u> November 2001-April 2004 ● <u>Study type:</u> Randomized controlled trial at the patient level comparing a telephone support intervention (average of 4 calls) vs. usual care <p>Lasser et al., 2011:</p> <ul style="list-style-type: none"> ● <u>Population:</u> 465 primary care patients aged 52-74 who were due for CRC screening; 61% female; 20% Portuguese-speaking, 14% Spanish-speaking, 18% Haitian Creole-speaking; 20% Medicaid enrollees; 47% White, 27% Black ● <u>Setting:</u> 4 community health centers and 2 public hospital-based clinics in Massachusetts ● <u>Study period:</u> September 2008-March 2009 ● <u>Study type:</u> Randomized controlled trial at the patient level comparing a patient navigation intervention (6 hours of navigation in 6 months) vs. usual care <p>Dougherty et al., 2018:</p> <ul style="list-style-type: none"> ● <u>Study type:</u> 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 	<p>Dietrich et al., 2006; Lasser et al., 2011; Dougherty et al., 2018</p>

				<ul style="list-style-type: none"> ● <u>Number of studies</u>: 73 total studies, of which 8 studies included patient navigation and had a low risk of bias ● <u>Effectiveness</u>: Relative risk compared to usual care was 1.62 (95% CI: 1.32-1.98) 	
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Intervention Implementation Cost:

Intervention components	Cost per patient	Lower Bound	Upper Bound	Setting and Population Where Costs Were Collected	Sources
<p>Navigator staff to make the navigation calls; cost includes 45-90 minutes of navigation per patient provided by health educators or community health workers</p>	\$35.41	\$13.50	\$108.03	<p>Lairson et al., 2014:</p> <ul style="list-style-type: none"> ● <u>Setting</u>: 10 primary care practices within a large health network in Delaware ● <u>Population</u>: 945 primary care patients aged 50-79, average-risk, due for CRC screening, and who were randomized to a mailed standard intervention (included a mailed stool kit) vs. a tailored navigation intervention (included the standard intervention plus a nurse navigator call) vs. usual care ● <u>Notes</u>: We used the per-person cost for the intervention call from this study for our cost estimate. This included a structured navigation call conducted by a nurse navigator to confirm receipt of the mailing, address any questions, reassess patients' screening preferences, and encourage participation <p>United States Department of Labor Bureau of Labor Statistics:</p> <ul style="list-style-type: none"> ● <u>Setting</u>: Oregon ● <u>Population</u>: N/A ● <u>Notes</u>: We obtained mean hourly wages for health educators and community health workers in Oregon from the Bureau of Labor Statistics. To obtain the lower and upper bound cost estimates, the wage estimates were multiplied by the number of navigation hours per patient based on additional navigation studies: 	<p>Lairson et al., 2014; Dietrich et al., 2006; Lasser et al., 2011; United States Department of Labor Bureau of Labor Statistics</p>

				<ul style="list-style-type: none"> ○ Dietrich et al., 2006: 4 calls per patient; initial calls were an average of 17 minutes (range: 6 to 48 minutes); subsequent calls were an average of 14 minutes (range: 1 to 62 minutes) ○ Lasser et al., 2011: 6 hours of navigation per patient 	
Technical staff to develop and maintain system, keep track of who is up-to-date on screening and who needs a phone reminder	\$0.79	-	-	<p>Smith et al., 2012:</p> <ul style="list-style-type: none"> ● <u>Setting:</u> Health maintenance organization (Kaiser Permanente Northwest) in southern Washington and northern Oregon ● <u>Population:</u> 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) ● <u>Notes:</u> 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
Navigator training , which can be conducted virtually or in-person;; average cost includes in-person training and travel while lower bound includes virtual training. *Cost is per navigator trained, not per patient. We assume that one navigator is required per 500 patients.	\$1,123.45	\$500	\$1,500	<p>Patient Navigator Training Programs:</p> <ul style="list-style-type: none"> ● <u>Setting:</u> N/A ● <u>Population:</u> N/A ● <u>Notes:</u> Patient navigator trainings are available across the country and are offered in-person or virtually. Our average cost assumes in-person training with some travel and lodging required. The lower bound estimate assumes a virtual training, while the upper bound assumes higher travel and lodging expenses. We derived these estimates from the following examples of training programs: <ul style="list-style-type: none"> ○ Patient Navigator Training Collaborative: Options include 3-day in-person training (\$750) or 8-week online course (\$500). 	Patient Navigator Training Collaborative; Harold P. Freeman Patient Navigation Institute

				○ Harold P. Freeman Patient Navigation Institute: Provides a 2-day in-person training (\$995)	
Total cost per patient:		\$1,159.65			

References

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