A Navigation-Centered Colonoscopy Screening Program for the Medically Underserved Population of South Carolina.

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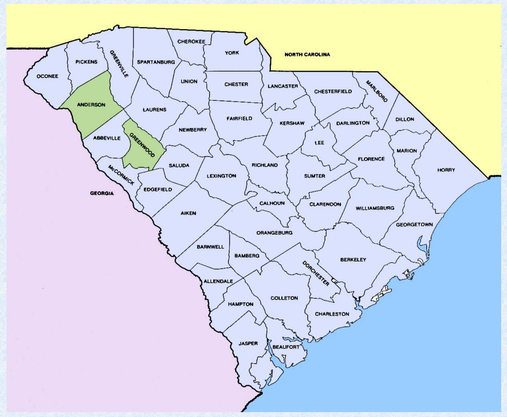
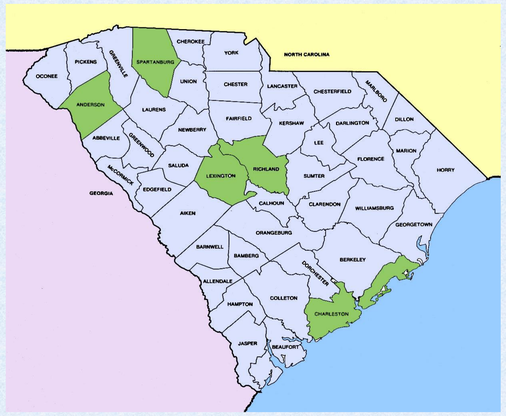
Background

Screening rates for colorectal cancer (CRC) remain low nationally, especially in uninsured and medically underserved populations, leading to high CRC incidence and mortality. The SCCCPN implemented an open access colonoscopy screening program targeting this population in 2008. The program directs individuals to colonoscopy services provided by participating board-certified gastroenterologists who waive their professional fees. Outside sources of funding cover the costs of the procedure, preparation solutions, the endoscopy facility fees, and pathology fees. During the period of 2008-2010 (Phase I), participants were recruited directly from qualifying free medical clinics (FMCs) and federally qualified healthcare centers (FQHCs) to participating endoscopy centers for screening colonoscopy. From 2011-2014 Phase II), participants were recruited from FMCs, and were referred to SCCCPN patient navigators for assessment. This study measures the impact of navigation services on screening rates, adenoma detection rates (ADR) and African American male enrollment. Our results suggest that rigorous patient navigation strategies may improve participant recruitment (male, African American), adherence to program guidelines, and screening rates.

2008-2010 Phase 1 (sites A&B)



2011-2014 Phase 2 (all sites)

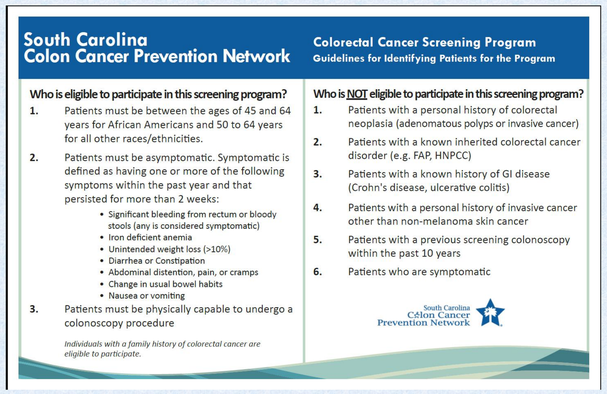


Population

- Two cohorts of participants, Phase 1 (2008-2010) and Phase 2 (2011-2014), were referred from FMCs and FQHCs and received an open-access colonoscopy.
- Participants were selected based on: Age (50-64 yrs or 45-64 yrs for African-Americans) and recruitment location.

Goals/Objectives

- Increase screening rates and decrease the morbidity for CRC statewide.
- Demonstrate effective outreach to the uninsured and medically underserved populations of SC, and lower their risk of CRC.
- Design and implement a vigorous, patient navigation-based CRC screening program.
- Collect preliminary information on the impact of patient navigation services on recruitment of African American males for CRC screening, and screening outcomes.



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Colorectal Cancer Screening Program
Guidelines for Identifying Patients for the Program

Who is eligible to participate in this screening program?

1. Patients must be between the ages of 45 and 64 years for African Americans and 50 to 64 years for all other races/ethnicities.
2. Patients must be asymptomatic. Symptomatic is defined as having one or more of the following symptoms within the past year and that persisted for more than 2 weeks:
   - Significant bleeding from rectum or bloody stools (any is considered symptomatic)
   - Iron deficient anemia
   - Unintended weight loss (>10%)
   - Diarrhea or Constipation
   - Abdominal distention, pain, or cramps
   - Change in usual bowel habits
   - Nausea or vomiting
3. Patients must be physically capable to undergo a colonoscopy procedure

Individuals with a family history of colorectal cancer are eligible to participate.

Who is NOT eligible to participate in this screening program?

1. Patients with a personal history of colorectal neoplasia (adenomatous polyps or invasive cancer)
2. Patients with a known inherited colorectal cancer disorder (e.g. FAP, HNPCC)
3. Patients with a known history of GI disease (Crohn's disease, ulcerative colitis)
4. Patients with a personal history of invasive cancer other than non-melanoma skin cancer
5. Patients with a previous screening colonoscopy within the past 10 years
6. Patients who are symptomatic

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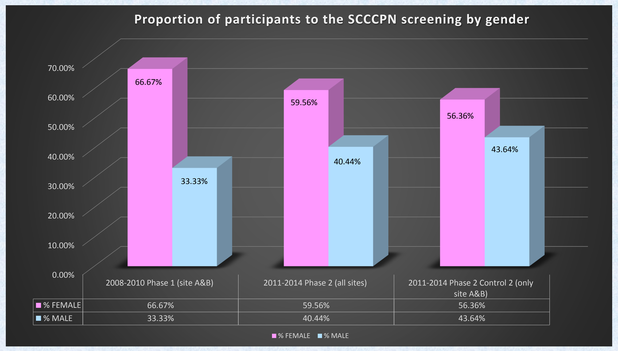
Methods

This study measures the impact of navigation services in an open-access screening program by comparing patient outcomes based on location, gender, ethnicity, program eligibility, in two phases of the program (2008-2010 and 2011-2014). All colonoscopies were performed by board-certified gastroenterologists; specimens collected during the procedure as a result of polypectomy were reviewed by certified pathologists.

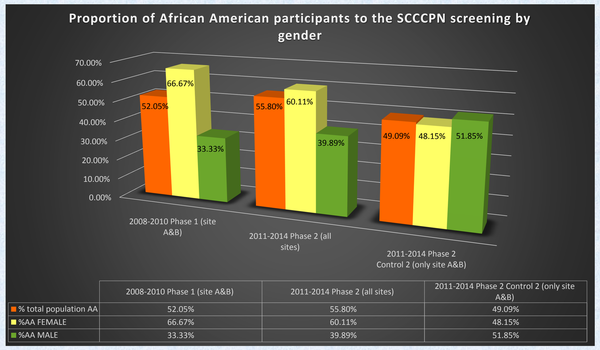
In the first phase (2008-2010), patients were referred directly from the qualifying medical clinic to the endoscopy center, and received no patient navigation services. In the second phase (2010-2014), patients were assigned patient navigators by qualifying medical clinics, and were interviewed to assure program eligibility. During this phase, all patients were provided with in-person individual education and reminder calls by their navigators. The quality of endoscopic procedures were evaluated via monitoring of cecal intubation and adenoma detection rates for both phases independently.

Results

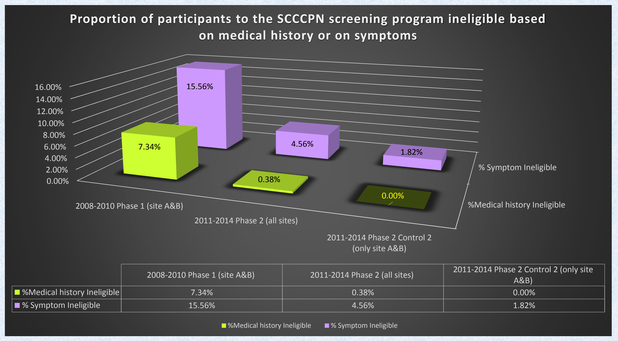
First phase screening (2008-2010) occurred without navigation. Of the 219 participants who received a colonoscopy, 66.7% (n=146) were female, 33.3% (n=73) were male. Overall 52.1% (n=114) were African American, of which 33.3% (n=38) were male. Second phase screening (2011-2014) included patient navigation. Of the 319 participants who were screened, 59.6% (n=190) were female, and 40.4% (n=129) were male. Overall, 55.8% (n=178) were African American, of which 39.9% (n=71) were male.



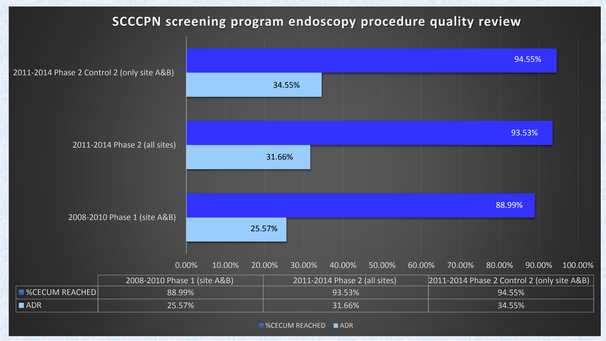
	2008-2010 Phase 1 (site A&B)	2011-2014 Phase 2 (all sites)	2011-2014 Phase 2 Control 2 (only site A&B)
% FEMALE	66.67%	59.56%	56.36%
% MALE	33.33%	40.44%	43.64%



	2008-2010 Phase 1 (site A&B)	2011-2014 Phase 2 (all sites)	2011-2014 Phase 2 Control 2 (only site A&B)
% total population AA	52.05%	55.80%	49.09%
%AA FEMALE	66.67%	60.11%	48.15%
%AA MALE	33.33%	39.89%	51.85%



	2008-2010 Phase 1 (site A&B)	2011-2014 Phase 2 (all sites)	2011-2014 Phase 2 Control 2 (only site A&B)
%Medical history Ineligible	7.34%	0.38%	0.00%
% Symptom Ineligible	15.56%	4.56%	1.82%



	2008-2010 Phase 1 (site A&B)	2011-2014 Phase 2 (all sites)	2011-2014 Phase 2 Control 2 (only site A&B)
%CECUM REACHED	88.99%	93.53%	94.55%
ADR	25.57%	31.66%	34.55%

Conclusions. These preliminary results indicate that:

- Patient navigation positively impacts participant readiness and compliance to CRC screening.
- Patient navigation may result in increased ADRs among the screened patients.
- Patient navigation ensures that patients meet appropriate eligibility requirements for screening programs.
- Patient navigation positively influences screening rates in males, particularly in the African American population. Further studies should determine if the SCCCPN promoted an increased awareness of CRC which impacted enrollment in this population.

NOTES:

- Results of the SCCCPN study suggest the need to increase the number of appropriately trained navigators, and standardize patient navigation training to standardize CRC patient navigation nationwide.
- These results are preliminary, and will be extended and/or verified during the ongoing expansion of the program to more clinics and gastroenterologists.

References

1. Ward E, Jemal A, Cokkinides V *et al.* Cancer disparities by race/ethnicity and socioeconomic status. *CA Cancer J. Clin.* 54(2), 78–93 (2004).
2. Freeman HP, Muth BJ, Kerner JF. Expanding access to cancer screening and clinical follow-up among the medically underserved. *Cancer Pract.* 3(1), 19–30 (1995).
3. Oluwole SF, Ali AO, Adu A *et al.* Impact of a cancer screening program on breast cancer stage at diagnosis in a medically underserved urban community. *J. Am. Coll. Surg.* 196(2), 180–188 (2003).
4. Paskett ED, Harrop JP, Wells KJ. Patient navigation: an update on the state of the science. *CA Cancer J. Clin.* 61(4), 237–249 (2011).
5. Ma GX, Shive S, Tan Y *et al.* Community-based colorectal cancer intervention in underserved Korean Americans. *Cancer Epidemiol.* 33(5), 381–386 (2009).
6. Katz ML, Fisher JL, Fleming K, Paskett ED. Patient activation increases colorectal cancer screening rates: a randomized trial among low-income minority patients. *Cancer Epidemiol. Biomarkers Prev.* 21(1), 45–52 (2012).
7. Natale-Pereira A, Enard KR, Nevarez L, Jones LA. The role of patient navigators in eliminating health disparities. *Cancer* 117(15 Suppl.), 3543–3552 (2011).