Improving Colorectal Cancer Screening Rates in an Urban Community Health Center

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Abstract

Colorectal cancer (CRC) is a leading cause of cancer-related death. Although screening has been shown to significantly reduce mortality associated with the disease, CRC screening rates remain low, especially among many minority groups. The purpose of this study was to determine whether an organized screening protocol with interventions tailored for the clinic could increase CRC screening rates among the targeted population served by a Federally Qualified Health Center (FQHC) that serves a mostly minority population in Phoenix, AZ. The study population included any patient aged 50 – 75 years presenting to the clinic over the course of the trial period.

Prior to initiating the study, approval to access records and data was obtained from the Wesley Health Center and the University of Arizona. The study was conducted in one Federally Qualified Health Center (FQHC) that serves a predominately uninsured patient population. Participants were patients aged 50 – 75 years who visited the clinic for routine primary care. A team of doctors and support staff at the Wesley Health Center developed a systematized CRC screening protocol with interventions tailored for the clinic. Following the implementation of the screening regimen, screening rates among the targeted population were examined over a one-year period and compared to a recent one-year period previous to protocol implementation. The primary outcome was the change in CRC screening rates in the intervention group compared to screening rates prior to implementation of the protocol. Results of the study showed CRC screening rates of 45.6% over the trial period, as compared to 13.7% prior to screening interventions, a statistically significant difference (p < 0.001).

Methods

A multidisciplinary team of clinical providers and support staff at the Wesley Health Center was organized to develop a CRC screening protocol. Previous studies have shown improved results by increasing screening service delivery by providers, increasing community access to screening and increasing community demand for screening. The team evaluated interventional strategies along these focus areas and developed a screening regimen tailored for the clinic. A complete detail of the screening interventions can be found in Figure 2.

The trial period was set for August 1, 2013 – July 31, 2014. Following implementation of the screening protocol, screening rates among the targeted population were examined over a one-year period and compared to a recent one-year period previous to protocol implementation. The completion period was established as January 1, 2014 – December 31, 2015. Data collection and analysis were conducted in 2015. An electronic chart review was completed to determine the number of unduplicated patients between the ages of 50 and 75 who visited the clinic for any reason over the study period along with the number of CRC screening tests performed. On a square-distribution was used to compare CRC screening rates over the trial period to CRC screening rates prior to interventions.

Results

Our chart review showed that 1,332 unduplicated patients between the ages of 50 and 75 utilized the services provided by the clinic during the dates of January 1, 2013 and December 31, 2012. Of these patients, 183 were screened for CRC by FOBT or colonoscopy for a screening rate of 13.7%. A review of the intervention period revealed that 1,268 unduplicated patients between the ages of 50 and 75 utilized the services of the clinic between the dates of August 1, 2013 and July 31, 2014. Of these patients, 556 were screened for CRC by FOBT or colonoscopy for a screening rate of 45.6%.

Discussion and Conclusions

The results of our study show that a set of interventions for improved CRC screening rates can produce significant improvements in screening compliance among patients. The screening rate change from 13.7% to 45.6% was statistically significant and indicates that patients were five times more likely to be screened with the interventions than without these measures. Findings from our project provide support to a growing set of studies examining strategies for improved CRC screening among underserved populations. The interventions implemented in our program were chosen based on financial and labor feasibility. Although resource-limited health centers may have difficulty implementing a full spectrum of CRC screening efforts directed at patients presenting to the clinic for routine or acute care, there may be more feasible interventions to combine in the implementation of interventions to enhance care. Given these limitations, we are concerned for cost and labor-effective strategies that could be universally applied across many clinics.

The study demonstrates that the implementation of an CRC screening protocol has produced significant improvements in screening among the target population served by the Wesley Health Center. Continued efforts are needed to reduce disparities locally and nationally to achieve the Healthy People 2020 cancer screening targets. CRC screening rates are lower in many group of health care providers and patient subpopulations. In our support towards closing the gaps in CRC screening efforts, efforts directed at patients presenting to the clinic for routine or acute care can be more feasible. A combination of strategies, that occur within the framework of routine care, are more likely to achieve sustainable results.

Based on our study design, we are unable to isolate the impact of individual interventions on screening rates. As opposed to randomizing individual interventions to the patient population, all of the strategies were employed and available to the entire target population over the trial period. This format makes it difficult to discern which strategies may be most beneficial in combination with implementing in similar care settings. Given these limitations, we are interested for cost and labor-effective strategies that could be universally applied across many clinics.

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