

Organizational Variations in Colorectal Cancer Screening Rates

PI: Elizabeth M. Yano, PhD

Objectives

Colorectal cancer (CRC) is the third most common cancer among men and women in the U.S. and ranks second among cancer death causes. Over 2,000 cases are diagnosed in VA patients each year. Recent studies have demonstrated that CRC screening is effective in the prevention and early detection of CRC. Despite the strength of this evidence, less than one-third of CRCs are found at an early stage. This project will assess geographic variations (i.e., by region, by urban vs. rural location) in CRC screening rates among VA health care facilities. We will analyze VA organizational characteristics associated with high and low CRC screening rates.

Research Plan

We will obtain CRC screening data through the Office of Quality & Performance's (OQP) External Peer Review Program (EPRP) for FY2001. The EPRP program conducts a periodic random sampling of patient charts from each VA facility. Organizational data will be obtained from the VHA Survey of Primary Care Practices (1999-00), reflecting over 200 organizational and practice features among 219 geographically distinct VA primary care practices, and other administrative data. Sample measures include environmental features (e.g., region, urban/rural location, managed care penetration), organizational characteristics (e.g., academic affiliation, complexity/size, leadership characteristics), and primary care practice structure (e.g., service line organization, staffing, practice arrangements with specialists, fiscal structure and resource changes, decision support, and managed care practices).

Methods

Simple frequencies and histograms of the variability in CRC screening in VA settings will be analyzed and presented for overall variation assessments. The outcome variables of interest will include overall screening penetration rates (any screening modality), as well as screening rates for specific modalities (FOBT, sigmoidoscopy, and colonoscopy). We will then conduct multivariate analyses to examine the organizational characteristics independently associated with CRC screening rates in VA practices. We will examine the utility of (1) simple linear regression, using different approaches to address the likely skewed distribution of CRC screening rates, (2) logistic regression, identifying appropriate cutpoints in CRC screening rates for use in dichotomizing screening performance in line with OQP and CRC-QUERI strategic goals, and (3) hierarchical linear regression, adjusting for the potential clustering of patients within practices and aiming to assess the contribution of different levels of the organization on screening performance. These structure-outcome models will be used to advance the knowledge of the factors associated with VA performance of CRC screening nationwide.

Findings, results, conclusions reached to date:

In VHA, the Office of Quality & Performance has reported a national average of 32% of patients over age 52 with 3+ visits in a given year failing to receive timely CRC screening, while VISN-level screening failure rates range from 22%-44% (CRC-QUERI Strategic Plan, 2002). To date, VA health policy makers and health care managers lack needed information about the determinants of variations in CRC screening across the VA healthcare system.