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Conflating Colorectal Cancer Screening and Diagnostic Testing – Letter

Thomas M. Atkinson, Talya Salz, and Jennifer L. Hay

Memorial Sloan Kettering Cancer Center, New York, NY, USA

We read with great interest the recent article by Becker and colleagues, “Potential biases introduced by conflating screening and diagnostic testing in colorectal cancer screening surveillance” (1). Study investigators found that in surveys that do not take into account the reason for testing, the population colorectal cancer (CRC) screening prevalence is overestimated by 23.3%. Overestimations are even higher in underserved populations and non-Hispanic White women.

From a behavioral perspective, these findings dovetail with our recent meta-analysis of the relationship between CRC risk perception and screening behavior (2), where we found a small, significant overall effect size of $z = 0.13$ (95% CI 0.10-0.16). We observed that only 22% of the 58 studies in our analysis excluded tests for symptoms; this was the only study characteristic that moderated the relationship between CRC risk perception and screening, with a significantly lower relationship observed in studies that excluded tests for symptoms ($z = 0.03$ vs. 0.17, respectively). Our findings led us to propose that, “risk perceptions may be less important in the asymptomatic screening context” (p.846) (2).

Synthesizing our work with that of Becker and colleagues, we propose several conclusions and research directions. First, perceived risk may not be a necessary component of interventions to increase CRC screening per se, and future examination of CRC perceived risk and screening behavior must isolate and measure actual screening. Self-report assessments that meet this standard are readily available (3, 4); chart-confirmed CRC screening should document test rationale. Second, future research may be able to tease apart some unexamined subtleties of how and when physicians recommend CRC diagnostic testing, as they may more readily order tests for gastrointestinal symptoms in patients over age 50 and non-CRC screening adherent. Finally, the most dramatically biased estimate of screening is in underserved populations (i.e., population screening was overestimated by greater than 50% in those uninsured or with no usual source of health care (1)). This may contribute to inconsistent behavioral intervention effects in diverse populations (5), and strongly justifies a need to examine psychosocial predictors of actual CRC screening in diverse populations.

We are encouraged by the approach taken by Becker and colleagues to quantify the degree of screening overestimation. This will have important implications for ascertainment of CRC screening rates on a national level, and improved interventions to increase behavioral adoption and maintenance of this evidence-based, efficacious method of reducing mortality and morbidity from this common cancer.

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