Cancer Care Disparities: Research Regarding Timeliness and Potential Coordination

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A conceptual framework that recognizes 3 generations of studies in healthcare disparities has been proposed: (1) descriptive studies of disparities in healthcare, (2) analytic studies of mechanisms for these disparities, and (3) interventional studies to reduce disparities.[1] Interventional studies regarding disparities still are relatively rare. The study by Gold et al[2] in this issue of the *Journal* fits mostly within the first generation of disparities research, with some insight into what mechanisms do not explain these disparities. Gold et al found that among women age ≥65 years with early-stage breast cancer, those of nonwhite race or Hispanic ethnicity were more likely to have radiation therapy delayed longer than 8 weeks after surgery.

Because of US demographic changes, elderly persons and minorities will be increasingly affected by cancer in the future. By 2030, the projected cancer incidence will increase 67% among older adults (vs an 11% increase for younger adults). The projected incidence will increase 99% among minorities (vs a 31% increase for whites).[3] Of course, healthcare disparities among minority groups are important regardless of the population burden; in fact, disparities often are considered to occur because of factors unique to minority status within a society. Yet the impact of persistent disparities, specifically in cancer care, will only become magnified over time.

The study by Gold et al did not directly compare treatment for older women with treatment for women younger than age 65 years. Cancer health services research studies commonly include only older women because of the widespread use of linked Surveillance, Epidemiology and End Results (SEER) and Medicare data. In this particular study, the older cohort was nested in the Breast Cancer Treatment Effectiveness in Older Women Study. Neither the SEER-Medicare data nor the data used by Gold et al allow us to directly understand the comparative vulnerability of an older population to undertreatment.

This study defined minority status broadly: "nonwhite race or Hispanic ethnicity." That category could include African Americans, Hispanics, Asians, Pacific Islanders, and many other subsets and groups. Defining minority status in this way results in limited understanding of the second-generation causes of these disparities among different population groups with unique cultural identities and challenges, including differences in the perceived benefits of treatment, fatalism, and social norms. Third-generation interventions would likely benefit from tailoring to more narrowly defined racial/ethnic groups.

The minority population studied here was significantly more likely (29%) than white patients (12%) to receive delayed radiation therapy. Timeliness measures, which are increasingly common measures of healthcare quality, are distinct from dichotomous measures, which determine receipt of a recommended service (yes/no). These 2 types of quality measures can provide complementary information, although a dichotomous measure of the receipt of radiation therapy (yes or no) was not provided in these results. The emergence of timeliness measures may be related to the increased adoption of Lean techniques into quality improvement activities.[4] These techniques commonly apply system principles to workflow in order to remove obstacles that may be associated with delay; timeliness measures fit this paradigm well.

Timeliness measures are especially important when linked to clinical benefit. Gold et al make a case for the benefit of timely radiation therapy. A systematic review found that delayed radiation therapy was associated with higher rates of local recurrence, although there was little evidence about the impact of delay on the probability of metastases or survival.[5] Patient anxiety associated with long waiting times provides another justification for timely care. Timeliness measures may gain increasing prominence if US healthcare reform proposals characterized by opponents as risking delays in patient care are passed into law.

The delays in radiation therapy among minority women with breast cancer occurred despite full insurance (patient level) and receiving care in an integrated healthcare delivery system (organization level). At the patient level, comorbidity and breast cancer type or size were not related to delays in therapy. Many patient-level explanations could not be explored in this study, including cultural perceptions, patient knowledge, preferences, communication, language concor-

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dance, education, and income. An explicit theoretical model may have aided in outlining next steps toward a deeper understanding of patient and organizational behavior.

The breast cancer population for this study was drawn from 5 integrated delivery systems nationwide. The Cancer Research Network has provided national leadership in making substantial contributions to clinical and outcomes research, and has openly discussed participating organizations' concerns about the confidentiality of quality-of-care data.[6] The rates of radiation therapy delay in these integrated delivery systems are similar to those in Medicare fee-for-service,[7] suggesting that the level of coordination within the integrated delivery systems was not exceptional. Yet in the current study, Gold et al[2] did not measure the construct of care coordination itself, nor many other potential organizational explanations for healthcare disparities including organizational structure (radiation oncologist availability, transportation facilitation), processes (referral procedures, service coordination), and culture.[8]

Observational studies in health services research are limited without additional context regarding the organizations delivering the cancer care, which would enable the findings to be better interpreted. Because of relatively few explanations for the healthcare disparities tested, at either the organizational or the patient level, this study makes its largest contribution to first-generation healthcare disparities research.

The authors recommend consideration of care coordination efforts such as patient navigation programs for traditionally underserved patients. In this instance, the nature of the quality measure (timely referral and initiation of care across clinical services) leads to the conclusion that coordination will improve timeliness, although the effect of increased coordination remains unproven on the basis of these findings. Prior reviews of patient navigation programs to reduce cancer disparities have concluded that there is some evidence regarding their efficacy for cancer screening and diagnostic follow-up, but less evidence regarding their efficacy in reducing delays in initiation of cancer treatment.[9] A recent evaluation of patient navigation in a community radiation oncology center found no statistically significant differences in favor of patient navigation.[10] Two reviews concluded that more rigorous research is needed: either carefully designed randomized controlled trials[11] or at least study designs including control groups and adequate sample sizes.[9] Third-generation research is being supported by the National Cancer Institute's Patient Navigation Research Program at 9 sites nationwide that are testing the efficacy and cost-effectiveness of patient navigation interventions to reduce cancer health disparities.

Other interventions may be important parts of a multifaceted strategy to reduce healthcare disparities. For example, implementation of clinical reminder systems and patient Web-based portals may alert providers to potential care disparities and increase patient self-efficacy, respectively. In addition, a strong argument has been made for incorporating disparity reduction into pay-for-performance initiatives.[12] However, the first obstacle to overcome in the case of cancer treatment may be the relatively low general use of financial incentives to promote guideline-adherent cancer care. Only 15% of physicians in Los Angeles County reported such incentives for breast cancer care.[13]

To reward performance, data systems will need to be designed to measure it in a timely manner. Real-time collection and delivery of valid data are persistent challenges. Disparities in this study were observed among a cohort of women diagnosed with breast cancer from 1990 through 1994. Likewise, SEER-Medicare publications are typically delayed several years from the time of original care delivery. Although we are appropriately applying pressure to healthcare providers to deliver timely clinical care, all healthcare organizations, researchers, and other information stewards should challenge themselves to provide increasingly timely data, until delays in care can be addressed among patients as they happen.

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