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## Invited Commentary

### Invited commentary on “Delving deeper into disparity: The impact of health literacy on the surgical care of breast cancer patients”



In this insightful review, Portelli Tremont and colleagues demonstrate the important role of health literacy in determining care for breast cancer patients faced with surgery.<sup>1</sup> Limited health literacy, which affects over a third of surgical populations, is common and has been found by many studies to impact patient outcomes.<sup>2</sup> Although it has been more extensively studied in nonsurgical populations, an increasing body of evidence suggests that health literacy is also an important mediator of surgical outcomes and experiences.<sup>3–5</sup> In their study, the authors highlight the complexity of breast cancer patients' interactions with the health care system and show that limited health literacy may be especially challenging for this surgical population. Through a comprehensive review of existing literature, Portelli Tremont and colleagues show that breast cancer patients with limited health literacy have less disease-specific knowledge, lower adherence with screening recommendations, inaccurate cancer risk perception, and are less likely to participate in multidisciplinary care and shared decision making. These data highlight opportunities to deliver more health-literate care in order to improve gaps in the management of breast cancer and even broader surgical populations.

The authors aptly identify the need for more research addressing health literacy and outcomes in breast cancer patients, as well as the need for more tailored interventions to enhance health literacy in the healthcare setting. The authors suggest that incorporating health literacy screening into clinical encounters may be one way to improve our understanding of health literacy's impact on patient outcomes and experiences. There are, in fact, several validated instruments that can be easily integrated into patient care to measure health literacy,<sup>2</sup> as well as other key sociodemographic factors and determinants of health that are often overlooked and unmeasured in surgical research.<sup>6</sup> While important for research, measuring health literacy is not enough, however, and truly health-literate care will only come from comprehensive development and universal adoption of health-literate interventions in surgical practices.

It is important to also consider that an individual's health literacy is heavily influenced by factors at the patient, provider, organizational and community level.<sup>7</sup> For example, patient-level experiences and beliefs may impact risk factors for readmission, including health literacy.<sup>8</sup> Understanding these factors and relationships is important as interventions to address health literacy can come from any or all of these levels. At the provider level, the authors highlight the need for provider education on the signs and impact of low health literacy, as well as increased provider

focus on communication and patient understanding. By employing communication tools such as patient-centered interviewing, slow speech, understandable words, and time for reflective silence, providers can more effectively communicate with their patients.<sup>9</sup> At the organizational level, redesigning patient education materials to the recommended 6th–8th grade reading level, providing pictorial depictions of disease processes and imaging, clear medication and facility labeling, and patient engagement technologies are important first steps. At the community level, partnership with community organizations, leaders and health educators is vital to identify opportunities for intervention. Applying these best-practices in health literacy at every point of surgical care, particularly in surgery clinics, can facilitate health-literate care for all patients, especially breast cancer patients.

While this paper is limited by the relatively small body of research in health literacy and breast cancer outcomes, the authors expertly highlight existing work that supports the development of health-literate interventions. However, as we learn more about multi-level factors that impact health outcomes, it is clear that health literacy interacts with other key determinants of health at every socioecological level. These determinants of health are tightly interconnected and represent new challenges and opportunities as we attempt to better understand mechanisms of disparities in surgical care. In all these efforts, health literacy represents a promising avenue to address disparities in breast cancer care.

## References

- Portelli Tremont JN, Downs-Canner S, Maduekwe U. Delving deeper into disparity: The impact of health literacy on the surgical care of breast cancer patients [published online ahead of print, 2020 May 12]. *Am J Surg*. 2020. <https://doi.org/10.1016/j.amjsurg.2020.05.009>.
- Chang ME, Baker SJ, Dos Santos Marques IC, Liwo AN, et al. Health literacy in surgery. *Health Literacy Res Pract*. 2020;4(1):e46–e65.
- Scarpato KR, Kappa SF, Goggins KM, et al. The impact of health literacy on surgical outcomes following radical cystectomy. *J Health Commun*. 2016;21(sup2):99–104.
- Wright JP, Edwards GC, Goggins K, et al. Association of health literacy with post-operative outcomes in patients undergoing major abdominal surgery. *JAMA Surg*. 2018;153(2):137–142.
- Dos Santos Marques IC, Herbey II, Theiss LM, et al. Understanding the surgical experience for african-Americans and caucasians with enhanced recovery. *J Surg Res*. 2020;250:12–22.
- Stadel KM, Hantouli MN, Brewer EG, et al. Beyond demographics: missing socio-demographics in surgical research. *Am J Surg*. 2020;219(6):926–931.
- Paasche-Orlow MK, Wolf MS. The causal pathways linking health literacy to health outcomes. *Am J Health Behav*. 2007;31(Suppl 1):S19–26.
- Lumpkin ST, Mihos P, Baldwin X, Adams U, Carey T, Sitzenberg K. Surgical patient values frame and modify the impact of risk factors for non-routine postdischarge care: a mixed-methods study [published online ahead of print 2020, May 16].

*Am J Surg.* 2020. <https://doi.org/10.1016/j.amjsurg.2020.05.016>.

9. Rowland-Morin PA, Carroll JG. Verbal communication skills and patient satisfaction. A study of doctor-patient interviews. *Eval Health Prof.* 1990;13(2):168–185.

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