

## CHOOSING WISELY<sup>®</sup>: NEXT STEPS IN IMPROVING HEALTHCARE VALUE

# Improving healthcare value: The need to explicitly address equity in high-value care

Danni Liang MD<sup>1,2</sup>   | Samantha A. House DO, MPH<sup>3</sup>  | Christopher Moriates MD<sup>4,5</sup> 

<sup>1</sup>Division of Hospital Medicine, Cincinnati Children's Hospital Medical Center, Cincinnati, Ohio, USA

<sup>2</sup>Department of Pediatrics, University of Cincinnati, Cincinnati, Ohio, USA

<sup>3</sup>Department of Pediatrics, Dartmouth Health Children's, Lebanon, New Hampshire, USA

<sup>4</sup>Department of Medicine, VA Greater Los Angeles Healthcare System and UCLA, Los Angeles, California, USA

<sup>5</sup>Costs of Care, Boston, Massachusetts, USA

### Correspondence

Danni Liang, MD, Division of Hospital Medicine, Cincinnati Children's Hospital Medical Center, Cincinnati, OH, USA.

Email: [danni.liang@cchmc.org](mailto:danni.liang@cchmc.org); Twitter: @dxl273

Over the past decade, many hospitalists have led efforts to improve healthcare value through reducing unnecessary tests, treatments, and procedures. While avoiding the harms of overuse has historically been considered a broadly beneficial endeavor, recent investigations<sup>1-4</sup> reveal important disparities in low-value care delivery, highlighting the need to consider equity implications in high-value care discussions. In particular, to consider how deimplementation efforts may influence healthcare disparities and associated outcomes.

The US Centers for Disease Control and Prevention defines health equity as “the state in which everyone has a fair and just opportunity to attain their highest level of health.” The achievement of health equity may be hindered by health care disparities, defined as the “differences in the burden of disease, injury, violence, and opportunities to achieve optimal health that are experienced by socially disadvantaged populations.”<sup>5</sup> Disparities in receipt of recommended high-value healthcare services (i.e., services considered to improve health outcomes) are well-documented. For example, racial and ethnic differences are seen in the delivery of high-value care for patients with diabetes, atrial fibrillation, cancer, and other common conditions.<sup>6-8</sup> Narrowing gaps in the receipt of high-value services is widely recognized as a primary and necessary focus of emerging equity efforts. However, less attention has been directed at the equity implications of low-value care delivery.

Some research suggests that patients with more access to healthcare have a higher likelihood of receiving unnecessary interventions.<sup>9,10</sup> However, as literature on this topic evolves, it is becoming clear that relationships between low-value care delivery and social influences of health are mixed and complex.<sup>4,9,11</sup> For example, Black and Hispanic patients, who have been demonstrated to receive less evidence-based care for some conditions than White patients, are also

more likely to receive selected low-value services compared to White patients.<sup>1</sup> Similarly, the overuse of certain low-value services has been disproportionately observed among patients who are publicly insured or uninsured.<sup>10</sup> Patterns of low-value care based on the social influences of health are not yet well-characterized and appear to vary by individual service. For low-value services that are more commonly delivered to vulnerable populations, the associated harms, including physical harms, financial harms, and unnecessary downstream healthcare utilization will also have a disparate impact; these populations are already known to have poorer health outcomes than socially advantaged groups.<sup>12</sup> As we investigate the relationship between low-value care and health equity, we must better characterize low-value care delivery across populations and consider prioritizing deimplementation efforts toward services that disproportionately impact marginalized populations.

## HOW CAN HIGH-VALUE CARE EFFORTS EXACERBATE HEALTHCARE DISPARITIES?

Embarking on deimplementation strategies without careful consideration to equity may exacerbate healthcare disparities in multiple ways. First, if a low-value service selected for focused deimplementation has a disproportionate impact on socially advantaged populations, improvement efforts may also differentially improve health care for advantaged populations, widening existing healthcare disparities. As an example, low-value imaging for low-back pain is a costly service with known cascades of care that has been a popular focus for deimplementation efforts.<sup>1</sup> However, this service has been demonstrated to be more common among White adults than Black

and Hispanic adults. A deimplementation project focused on the reduction of low-value imaging may reduce imaging rates for White adults, thereby improving their overall quality of healthcare. If Black and Hispanic adults already have a low likelihood of receiving this service, they are apt to receive less benefit from such an effort.

In contrast, Black children with bronchiolitis have been shown to receive more corticosteroids and bronchodilators compared to their White peers.<sup>3</sup> Focused deimplementation efforts on these select services may positively impact healthcare value for Black children. While patterns of delivery for the above services based on race and ethnicity have been preliminarily defined, such data for many low-value services observed routinely in clinical care are lacking; this gap challenges the ability to fully predict the implications of deimplementation efforts across populations.

Additionally, it is important to recognize the potential for unequal effects of deimplementation efforts across differing populations. For example, an initiative involving education and shared decision-making around low-value back imaging that is limited to English-speaking patients may further the differential improvement observed among White populations as compared to other races, who may be more likely to prefer a language other than English. Failure to consider the principles of equity in programmatic design could further worsen healthcare disparities.

When considering disparities between groups, it is also important to carefully examine the “optimal rate” of care delivery across populations and avoid assumptions that the care received by a socially advantaged group should serve as a goal. In one observational study,<sup>4</sup> White patients had increased hospital admission and receipt of intravenous fluids for acute gastroenteritis compared to non-White groups. This disparity may result from racial/ethnic bias and, on the surface, may seem critical to ensure that children from non-White groups receive equivalent rates of services as their White peers. However, this study also failed to identify a difference in patient revisits between groups, suggesting this pattern may indicate over-treatment in White patients. If a proposed solution to the observed disparity was to ensure that non-White patients are hospitalized with intravenous fluids as often as White patients for acute gastroenteritis, we would be increasing low-value care to non-White groups, thereby increasing the risk of hospital-associated harms, and imposing unnecessary costs without clear evidence of benefit.

Thoughtful assessment is also needed when deimplementation is focused on a particularly disadvantaged group. In 2021, the American Academy of Pediatrics retired their clinical practice guidelines for urinary tract infection (UTI) due to the inappropriate use of race as a factor in assessing diagnostic risk.<sup>13</sup> Similarly, the American Thoracic Society made recommendations to replace race and ethnicity-specific equations for pulmonary function test (PFT) interpretations and to re-evaluate how PFTs are used in clinical decision-making.<sup>14</sup> As we deimplement the use of race as a clinical decision factor in these conditions, we must also actively measure care delivered to all racial groups to ensure that socially disadvantaged groups receive diagnostic and therapeutic interventions at the appropriate rates, again seeking to establish and apply data-driven target rates for all groups.

Finally, we must ensure our efforts toward high-value care do not jeopardize access to necessary services, which may differentially impact already disadvantaged populations. For example, efforts directed at decreasing low-value prostate cancer screening could result in fewer available screening locations, particularly in already vulnerable areas, leading to more limited access for those who may benefit from this service. Conversely, efforts to decrease low-value back imaging could theoretically lead to overall improved imaging availability, with some benefits extending to disadvantaged populations. Even still, this may differentially benefit patients whose preferred language is English, who may have inequitable advantages in navigating the appointment scheduling process. Addressing the broader disparities that influence access to care is a critical area of healthcare quality improvement that will impact equity in high-value care efforts.

## STEPS TOWARD EQUITY

Progress toward high-value care has historically been viewed as broadly beneficial across populations. Still, subsequent steps toward value improvement should intentionally consider the potential impact on healthcare disparities for socially disadvantaged populations. We should develop deimplementation interventions that mitigate the mechanisms and downstream effects of bias and that meaningfully impact equitable and patient-centered outcomes.<sup>11,15</sup> We can do so by following Kilbourne et al.'s framework for health disparities research: detection, understanding, and reduction or elimination.<sup>15</sup>

### Collecting stratified data to identify disparities

The first step toward these aims is to understand the impact of low-value care on varying populations. To do so requires collecting stratified data and defining disparities for all measures. Researchers with a focus on health equity have begun to propose methodology to support this work. Parikh et al. have proposed and piloted a measure called the Health Disparity Index, a hospital-based score that documents the presence and magnitude of health disparities for individual services.<sup>16</sup> In addition, continued work toward developing benchmarks for achievable rates of low-value care delivery may aid in reducing disparities if effectively applied across populations.<sup>15-17</sup> We should further the development of these methods and leverage available data sources to improve our understanding of healthcare disparities.

### Understanding the drivers of disparities

As research evolves in differential patterns of delivery of low-value care services, seeking to understand the root causes of such disparities is critical. Provider-level biases and a number of patient-level characteristics, including access to care, community factors, and education, among others, have been proposed as potential drivers of

disparities in low-value care.<sup>15-17</sup> Literature in this area is currently limited and structural barriers are complex, with some barriers being more or less modifiable than others. Mixed-methods techniques will be needed to further understand the perspectives of both providers and patients surrounding these issues. Only with careful consideration of the context surrounding these drivers can we inform successful improvement strategies.

### Directing deimplementation toward disadvantaged populations

As data become available to guide deimplementation prioritization, consideration should be made to direct efforts toward services that are more common in disadvantaged populations.<sup>3,9,15-17</sup> In services where low-value care is more common in advantaged populations, we should be prudent to emphasize improvement in vulnerable populations, who generally experience poorer health outcomes. For these scenarios, deimplementation for all patients with specific focus on disadvantaged people can improve value while simultaneously reducing disparities (Figure 1). These improvement efforts will take multiple iterations to refine as interventions continue to be tailored and resources are appropriately allocated to address key drivers.<sup>17</sup>

### Assessing the influence of low-value care on overall health equity

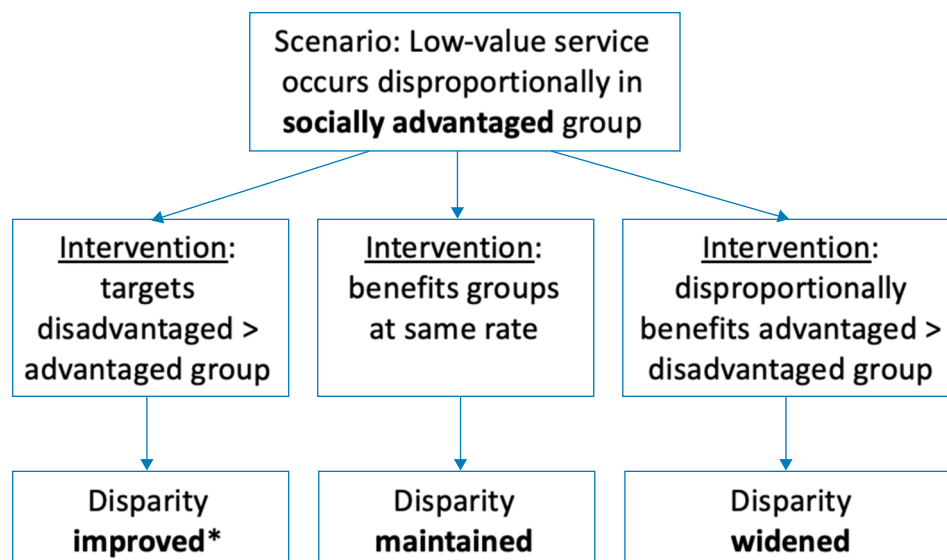
Reducing low-value care is only one component of improving healthcare value. It is important to understand low-value care

because of its potential harms and drivers of cost within our healthcare system. The ability to curb these costs can influence the healthcare system as a whole, but the degree to which addressing disparities in low-value care will influence overall health equity is currently unknown and warrants further exploration. In addition to applying an equity lens to deimplementation efforts, we must continue to aim to achieve equitable implementation of high-value services. More broadly, addressing issues such as access to care, provider-level biases, fiscal inequities, and more will be critical to ensuring that equity-focused implementation and deimplementation efforts are successful.

While this perspective mainly highlights inequities in race and ethnicity, we would like to acknowledge that these are not the only groups at risk. Those belonging to populations with a preferred language other than English, or those from varying cultures, sexual orientations, disabilities, immigration status, housing access, and other vulnerable groups may also experience differential care value than socially advantaged groups. Continued efforts should be made to elucidate and address care patterns across these populations. In addition, efforts toward high-value care may also influence costs of care; there are further opportunities to explore how these broader cost reductions may impact varying populations.

### CONCLUSION

While high-value care efforts have the well-intentioned goal of decreasing overuse to improve healthcare for all, failure to incorporate healthcare equity into the prioritization and development of deimplementation efforts may maintain or worsen existing healthcare



**FIGURE 1** Scenarios of interventions to improve healthcare value and their potential effects on healthcare disparities. (Adapted from Lion et al.).<sup>15</sup> \*The improved disparity gap results from targeting low-value services for both the advantaged and disadvantaged groups, with more of an emphasis on the disadvantaged group, who generally have poorer existing health outcomes. Focusing more on the disadvantaged group in this scenario allows for more equalization in rates of care which narrows the disparity.

disparities. We must place intentional focus on health equity as a key component of our continued high-value care pursuits to move toward a future of safely and equitably doing less.

## ACKNOWLEDGMENTS

The authors would like to thank Dr. Alan R. Schroeder for his input and review of this manuscript.

## CONFLICT OF INTEREST STATEMENT

The authors declare no conflict of interest.

## ORCID

Danni Liang  <http://orcid.org/0000-0001-7048-9620>

Samantha A. House  <http://orcid.org/0000-0002-7459-4054>

Christopher Moriates  <http://orcid.org/0000-0002-3153-2558>

## TWITTER

Danni Liang  @dxl273

## REFERENCES

- Schpero WL, Morden NE, Sequist TD, et al. For selected services, Blacks and Hispanics more likely to receive low-value care than Whites. *Health Aff.* 2017;36(6):1065-1069. doi:10.1377/hlthaff.2016.1416
- Xu WY, Jung JK. Socioeconomic differences in use of low-value cancer screenings and distributional effects in Medicare. *Health Serv Res.* 2017;52(5):1772-1793. doi:10.1111/1475-6773.12559
- Honcoop AC, Poitevien P, Kerns E, Alverson B, McCulloh RJ. Racial and ethnic disparities in bronchiolitis management in freestanding children's hospitals. *Acad Emerg Med.* 2021;28(9):1043-1050. doi:10.1111/acem.14274
- Congdon M, Schnell SA, Londoño Gentile T, et al. Impact of patient race/ethnicity on emergency department management of pediatric gastroenteritis in the setting of a clinical pathway. *Acad Emerg Med.* 2021;28(9):1035-1042. doi:10.1111/acem.14255
- What is Health Equity? Centers for Disease Control and Prevention. Published March 21, 2023. Accessed June 3, 2023. <https://www.cdc.gov/healthequity/whatis/index.html>
- Bynum JPW, Fisher ES, Song Y, Skinner J, Chandra A. Measuring racial disparities in the quality of ambulatory diabetes care. *Med Care.* 2010;48(12):1057-1063. doi:10.1097/MLR.0b013e3181f37fcf
- Patel MI, Lopez AM, Blackstock W, et al. Cancer disparities and health equity: a policy statement from the American Society of Clinical Oncology. *J Clin Oncol.* 2020;38(29):3439-3448. doi:10.1200/JCO.20.00642
- Essien UR, Holmes DN, Jackson LR, et al. Association of race/ethnicity with oral anticoagulant use in patients with atrial fibrillation. *JAMA Cardiol.* 2018;3(12):1174-1182. doi:10.1001/jamacardio.2018.3945
- Helfrich CD, Hartmann CW, Parikh TJ, Au DH. Promoting health equity through de-implementation research. *Ethn Dis.* 2019;29(Suppl 1):S93-S96. doi:10.18865/ed.29.S1.93
- Barnett ML, Linder JA, Clark CR, Sommers BD. Low-value medical services in the safety-net population. *JAMA Intern Med.* 2017;177(6):829-837. doi:10.1001/jamainternmed.2017.0401
- Gutman CK, Holmes S, Balhara KS. Low-value care in pediatric populations: there is no silver lining. *Acad Emerg Med.* 2022;29(6):804-807. doi:10.1111/acem.14470
- Chien AT, Hasnain-Wynia R. Reducing low-value care among vulnerable populations. *Health Affairs Forefront.* Accessed June 2, 2023. <https://www.healthaffairs.org/doi/10.1377/forefront.20190603.800067/full/>
- Roberts KB. Urinary tract infection: clinical practice guideline for the diagnosis and management of the initial UTI in febrile infants and children 2 to 24 months. *Pediatrics.* 2011;128(3):595-610. doi:10.1542/peds.2011-1330
- Bhakta NR, Bime C, Kaminsky DA, et al. Race and ethnicity in pulmonary function test interpretation: an official American Thoracic Society Statement. *Am J Respir Crit Care Med.* 2023;207(8):978-995. doi:10.1164/rccm.202302-0310ST
- Kilbourne AM, Switzer G, Hyman K, Crowley-Matoka M, Fine MJ. Advancing health disparities research within the health care system: a conceptual framework. *Am J Public Health.* 2006;96(12):2113-2121. doi:10.2105/AJPH.2005.077628
- Parikh K, Hall M, Kaiser SV, et al. Development of a health disparities index: proof of concept with chest radiography in asthma. *J Pediatr.* 2021;238:290-295. doi:10.1016/j.jpeds.2021.07.022
- Lion KC, Raphael JL. Partnering health disparities research with quality improvement science in pediatrics. *Pediatrics.* 2015;135(2):354-361. doi:10.1542/peds.2014-2982

**How to cite this article:** Liang D, House SA, Moriates C. Improving healthcare value: The need to explicitly address equity in high-value care. *J Hosp Med.* 2024;1-4. doi:10.1002/jhm.13280