The United States spends nearly 18% of its gross national product on health care—the highest percentage of any first-world country. Experts estimate that 10% to 20% of health spending includes the delivery of low-value health services. Controlling health care costs involves 4 approaches: efficiently organizing care, reducing administrative costs, lowering the price of services, and reducing low-value services. Recent work has demonstrated that accounting for the cascading downstream effect of low-value care (LVC) can substantially increase the cost estimates of LVC. Generally, LVC is defined as services that offer no net benefit to patients in specific clinical scenarios yet may cause harm because of adverse effects or complications. The appeal of reducing LVC is that it offers an opportunity to safely reduce spending while simultaneously reducing patient harm. Nevertheless, reducing LVC has been a major challenge due to a variety of factors including perverse financial incentives to deliver more services, the practice of defensive medicine, training, habit, and culture. Leading approaches to date have included the Choosing Wisely awareness/public education campaign, behavioral nudges (eg, making the LVC service more difficult to order), and payment reform via accountable care organizations. While these approaches have shown promise, they have not yet been able to consistently and successfully turn the tide on reducing LVC.

Based on more than 15 years of experience working with practitioners to reduce LVC, we outline a novel, 10-step approach to reducing LVC utilization that draws on lessons from past successful efforts. This approach ultimately focuses on changing human behavior through an iterative process of sharing information, building trust, soliciting feedback, and empowering clinicians to lead change on their own terms. Published examples of successful projects include reducing spinal injections for back pain in a Medi-Cal population, reducing the overall use of fiberoptic laryngoscopy by otolaryngologists, improving antibiotic selection by pediatricians for otitis media, and reducing the ratio of nuclear cardiology studies to stress echocardiograms in the evaluation of coronary artery disease. Currently, we are sharing this approach with 6 health systems in Virginia to reduce LVC through the Smarter Care Virginia project.
The 10 steps are summarized in Figure 1. The approach grew out of several observations. First, cost reduction is not a significant motivator for changing clinician behavior. Efforts by payers and purchasers to motivate practitioners to reduce spending and cut costs need to be consistent with ensuring the delivery of appropriate, high-quality care. What does work as a motivator is adding overuse reduction to underuse reduction as a quality measure. Redefining quality as reducing underuse, overuse, and misuse brings overuse reduction into the realm of quality, rather than primarily cost. An example of overuse from our experience (H.B.) would be the use of esophageal biopsy for 100% of patients receiving endoscopy for esophageal reflux. Our experience is that practitioners are eager to talk about improving quality but distrustful of discussing cost reduction in the absence of a quality context. A recent randomized controlled trial found that physicians are far more likely to be motivated to reduce LVC when the problem is framed in terms of patient harm rather than costs to society.

The result is a focus on appropriateness of care that is anchored in honest, respectful conversations around doing more of what improves outcomes (high-value care) and less of what does not (LVC). As LVC is identified, the most successful discussions around reducing these services occur in the context of explicit organizational core values that resonate with the practitioner’s best instincts, including delivering high-quality care, avoiding harm to patients, and using resources wisely. The anchor of this approach has been sharing variation in care through nonjudgmentally delivered peer comparison data.

Why variation analysis? Overwhelmingly, clinicians believe that they are doing what is best for their patients and are practicing similarly to other high-quality physicians. Variation analysis creates a comparison of what practitioners are either doing (volume of services) or accomplishing (outcomes). Countering clinicians’ own assumptions about their practice patterns with their own utilization data can be a powerful tool in engaging them. This is particularly important for LVC because many clinicians may not believe they overuse services until they see their own data for themselves. Focusing on LVC first identifies a low-value

**TAKEAWAY POINTS**

- The frequency of low-value care can be reduced by a respectful, data-driven process anchored in nonjudgmental communication and explicit core values.
- Managing the stages of practitioner behavior change is difficult but achievable.
- Careful attention to the creation and rollout of practitioner reports of utilization is critical to the success of the project.
- Mutually respectful collaboration among medical directors and quality improvement staff is essential to project success.

**FIGURE 1. The 10 Steps of a Successful Program to Reduce Low-Value Care**

1. Secure Senior Management and Board Buy-In and Resources
2. Form an Interdisciplinary Team Anchored in the Project’s Core Values
3. Recruit a Respected Clinical Champion for Each Project
4. Create Accurate Dramatic Reports That Deliver a Clear Respectful Message
5. Conduct a Nonjudgmental Conversation That Identifies the Sources of Unwarranted Variation
6. Create a Quality Improvement Plan to Address and Reduce the Unwarranted Variation
7. Offer Clinicians an Ongoing Respectful Feedback Program That Encourages Improvement
8. Remember and Use the Table Metaphor*
9. Use Tracking Tools to Monitor and Report Interim Measures of Success
10. Praise Success

*Imagine a table with the practitioner(s) on one side of the table and a problem on the other side. If, during the course of a visit, the medical director or quality improvement staff member feels the practitioner is treating the medical director as if they are on the side of the table with the problem rather than with the practitioner, one can assume that, feeling defensive, the practitioner will not share important and honest thoughts, feelings, or insights. The result is a superficial, meaningless conversation. The goal then becomes getting the medical director on the same side of the table as the practitioner, focusing together on solving the problem.
The power of practitioners recognizing that their respected peers vary work. The graph focuses on the percentage of patients receiving back surgery for a complaint of back pain among orthopedic surgeons and neurosurgeons. Using the comparative data metric, the focus moves from questioning the decision to operate on each individual patient to, instead, understanding the reasons that of 100 patients seen, a given number undergo surgery. Focusing on the variation spotlights attention on how patients are treated in total rather than focusing on the merits of surgery in each individual patient. Such a conversation might begin with showing the data and saying, "I’m confused. It looks like some people operate on 90% of patients while others operate on 10%. How can that be?" Rather than create a punitive conversation on individual behavior, the focus shifts to the indications for surgery and why differences exist: a less threatening conversation focusing on clarifying what is right. The power of practitioners recognizing that their respected peers evaluate or treat patients differently is predictable and significant. Given the importance of peer comparison and the need to express these comparisons nonjudgmentally, we review 10 sequential steps to creating a successful approach to reduce LVC.

Step 1: Secure buy-in from senior management and the organization’s board of directors, and clarify the organizational reasons to commit to reducing LVC.

Reducing LVC in an era of fee-for-service reimbursement, where more services lead to more payment, generally results in decreased revenues for clinicians and health systems. Although payment reform to better align incentives between payers and clinicians would help galvanize efforts to reduce LVC, the majority of American medicine continues to practice in a fee-for-service environment. Therefore, the reasons that an organization should take on the risk of reducing LVC must be clear to leadership. Reasons to reduce LVC in a fee-for-service environment include patient safety concerns for potentially harmful services (eg, reducing low-value screening colonoscopies to expand access to high-value colonoscopy screening). Because many health systems use relative value unit utilization to incentivize financial productivity, it is highly likely that practitioners will complain about the LVC reduction approach to the chief medical officer, chief financial officer, or chief executive officer. If a lack of support exists at the top of the organization, the approach will inevitably be undercut and fail. To ensure clarity, LVC reduction leaders are advised to normalize the process by engaging the board, the C suite, and health system leaders in conversations about why the approach is in the organization’s best interest. The approach should be discussed at medical staff, department, and division meetings. Sample variation charts should be shared, and practitioners should be informed that all will be included in report generation and sharing. At the conclusion of step 1, practitioners should understand why the project is being initiated, that it has the support of the organization’s leaders, and that the approach is focused on appropriateness of care rather than saving money.

Step 2: Form an interdisciplinary team anchored in the project’s core values and a clear focus on appropriateness of care.

All too frequently, organizations either have not articulated core values or are not guided by them. As medical director of a 3500-member panel of practitioners, one author (H.B.) has had the opportunity to visit many practitioners. He has always opened meetings by saying, "It is important to me that you understand that our core values are honesty, respect, and integrity. If you do not feel you are being treated that way, call my boss." Practitioners appreciate that core values are clearly articulated and that they have recourse if they feel they were treated unfairly. It did not take long to learn what practitioners viewed as disrespectful or dishonest.

The team should include both primary care physicians (PCPs) and specialists, and we encourage nurse practitioner, physician assistant, quality improvement (QI) staff, practice manager, nursing, and patient representation. Members should include both administrators and active practitioners.

Step 3: Recruit and train clinical champions for each project.

Whenever possible, it is desirable to incorporate a respected local clinician who is knowledgeable about the measure specific to their specialty. PCPs and specialists respond to feedback and accept information from a well-regarded clinician more positively than from an administrative medical director. The champion attends practice group meetings to hear concerns and share recommendations about choosing evaluation protocols or treatment recommendations. Discussions are anchored in evidence and local best practices. Sharing blinded group variation data and asking those present to consider which groups are higher or lower utilizers of the selected lower-value services is particularly helpful.

Then, unblinding the groups or individuals, with their permission, to show where the most highly regarded practitioners fall on the variation curves, proves most compelling. Almost invariably, there is no correlation between perceived group quality and their position on the variation chart. Often, the most highly regarded groups perform low-value services well below the community mean.

To lead actual feedback sessions with smaller groups or individuals, it is preferable to select medical directors who are specially trained in sharing actual practitioner-specific data. The combination of a facilitator trained to offer practitioner-specific information, working collaboratively with a seasoned respected specialist or generalist, offers a team focused on sharing expert data-driven suggestions in the spirit of doing the right thing.

Step 4: Create accurate, simple, dramatic reports delivering a clear, respectful message.

Successful practitioner reports have 4 key attributes. First, there should be an unmistakably specific behavior being measured. Examples are the use of preoperative testing and electrocardiograms before cataract surgery in asymptomatic patients, the percentage of patients receiving endoscopy procedures for gastroesophageal reflux disease before adequate treatment is administered, or the percentage of patients seen by a neurosurgeon or orthopedist for back pain undergoing fusion for spinal stenosis. For each measure, there is not an absolute contraindication. Rather, the issue is the percentage of patients seen by a practitioner receiving a procedure judged to be of low value compared with peers. Our experience is that peer comparison data are the most influential in changing provider behavior, especially if the variation curve participants are identified. Because there often is as much variation within a practice as there is among between practices, variation is best shared at the individual physician level. When data are shared at the practice level, individuals will predictably hold their partners responsible for the lower-value care.

Second, provide the variation data for discussion rather than judgment. Figure 3 is an example drawn from our current Smarter Care Virginia project, reporting on low-risk patients undergoing cataract surgery who had preoperative blood work. The purpose of sharing data is to encourage practitioners to examine their indications and compare them with best available practice. These discussions are best conducted nonjudgmentally.

Third, the report should include a summary of the indications and contraindications for the behavior in question, to anchor subsequent discussion on community-developed recommendations. For example, although routine antibiotic prescriptions for upper respiratory infections are generally of low value, they are indicated in circumstances in which the patient is immunosuppressed. These indications and contraindications should be vetted by the local community of practitioners, facilitated by the content champion.

Finally, the report should include the name and number of a person to contact for practitioner’s questions. Because clinicians who are higher utilizers of low-value services will likely be surprised by, and disagree with, their placement on the variation curve, we strongly recommend having knowledgeable persons available to discuss how they determine which physician is responsible for ordering the low-value service, and to review International Classification of Diseases, Tenth Revision diagnostic codes for inclusion in the numerator and denominator. Inquiries should be encouraged because clinicians will initially question data accuracy. It is critical to ensure and share clear attribution rules and to remove from the variation curve clinicians whose practices are different from peers (eg, transplant physicians will appropriately prescribe more antibiotics for their
immunosuppressed patients than nontransplant physicians). Because all physicians believe their patients are sicker, we developed 2 somewhat more objective ways of determining which physicians’ practices are different from peers: (1) having the panel vote on those whose practices are different but disallowing voting for oneself, and (2) determining which specialists see more than 25% of referrals from same specialty physicians.

**Step 5: Conduct a nonjudgmental conversation that identifies the sources of unnecessary variation.**

Once the variation curve is created, one can review the practices and/or practitioners with whom to have conversations about LVC utilization. There are a few important caveats to initiating the conversation process. Initially select those with higher utilization and with whom the administrative team has a reasonable relationship. Practitioners will be watching for how the process treats its clinicians. Next, all judgmental terms should be deleted from the quality improvement team's vocabulary. The greatest offender is the word “outlier.” Outlier unmistakably implies a negative judgment about the practitioner’s behavior. Also, avoid the term “inappropriate.” When these words are used by the medical director, the visited practitioners will feel obligated to defend themselves, abruptly stopping meaningful discussion. Rather, the medical director should begin by soliciting what the practitioner thinks about the variation observed in the graph, then carefully listening to the answer. The emphasis of the conversation is to focus on defining appropriateness together, not on judging the prior overuse of a low-value service.

Medical directors often ask how much information to bring to the first meeting. We recommend bringing only blinded and unblinded variation charts. Bringing an overabundance of data suggests 2 things: First, the team has already judged the practitioner as an outlier who warrants education, and second, unsolicited information brought by the medical director is much less likely to be found useful than information requested by the practitioner.

We also recommend that a member of the QI staff attend the meeting as an observer. The observer’s role is to note when the practitioner’s demeanor changes abruptly and to record what the medical director said or did immediately preceding the behavior change. It is difficult for a medical director to focus on the visit while simultaneously observing their own behavior. Asking the visited practitioner for permission for the observer to attend is required.

**Step 6: Collaboratively construct a way to address and reduce the unnecessary variation.**

As practitioners become aware of variation that exists in the practice, group, or system and that the variation is determined to be unwarranted, they can be encouraged to focus attention on organizational solutions to the variation. Participants can be recruited to develop electronic health record prompts, improve system reporting, or create a team of generalists and specialists to develop clear guidelines to which everyone will be held accountable. Treating practitioners as interested, intelligent collaborators helps decrease defensiveness and reduce the likelihood of responses such as “Don’t tell me how to practice” or “This is cookbook medicine.” Such responses provide evidence that the practitioner feels judged.

**Step 7: Offer clinicians ongoing feedback through a respectful process of sharing data and facilitating improvement.**

Sharing data at the first visit is the beginning of a process and assuming that the practitioner will move directly from denial to bargaining is rare. In 1969, Kubler-Ross described the stages of death, but she was actually describing the stages of change. Medical administrators and QI staff should anticipate anger after denial is confronted. It is especially important to respond to anger nondefensively. Managing emotion provides the basis for delivering additional data while acknowledging the practitioner’s value. The goal of sharing information is to demonstrate to the practitioner that although the behavior at hand can be addressed in various ways, identifying and reducing unwarranted variation in LVC improves quality.

When approached nonjudgmentally, many practitioners become advocates of the project. Because medical directors have limited time, subsequent meetings can be conducted by QI staff who can be responsible for following up with requested data and serve as an important partner in the process.

**Step 8: Remember the table metaphor.**

LVC projects will invariably be faced with predictable barriers. One practical way to orient to these barriers is to use the following metaphor as a guide. Imagine a table with the practitioner(s) on one side of the table and a problem on the other side. If, during the course of a visit, the medical director or QI staff member feels the practitioner is treating the medical director as if they are on the side of the table with the problem rather than with the practitioner, one can assume that, feeling defensive, the practitioner will not share important and honest thoughts, feelings, or insights. The result is a superficial, meaningless conversation. The goal then becomes getting the medical director on the same side of the table as the practitioner, focusing together on solving the problem.

Creating a partnership is best accomplished by addressing the unstated emotion in the meeting, usually anger. Remembering the stages of change, anger generally follows the confrontation of denial. So, anger is an expected piece of the acceptance process. Knowing that, the QI team and medical director can anticipate emotion and focus on the skills needed to successfully manage it. The team member can begin the process by directly naming the emotion. A typical sequence follows:

- **Team member:** You seem angry.
- **Practitioner:** I am angry!
- **Team member:** Why are you angry?
- **Practitioner:** You are wasting my time with inaccurate data.
- **Team member:** What data do you think are inaccurate and how can we make it better?
Although seemingly simple, medical directors and QI staff are often reluctant to confront emotion, preventing the dyad from agreeing on the problem. When the medical director/QI staff addresses the practitioner’s emotion, they start the process of moving the medical director to the practitioner’s side of the table, beginning to address the problem. What usually happens when emotion is left unaddressed is fostering emotion interfering with meaningful work.19

Step 9: Use tracking tools to monitor and report results, especially reaching or approaching targets, percent improvement, dollars saved, and return on investment.

Once the practitioners are engaged in the process, continued engagement requires regular feedback. Because accurate, well-presented peer comparison data are the most powerful motivators of change, predictable clear reports that include progress toward targets for the individual and the group are critical. In addition, tracking the patient harm avoided by narrowing the variation, dollars saved, and/or return on investment may be of value depending on the culture of the system and where the saved dollars go. These data are best delivered promptly. If a dashboard is available with up-to-the-moment data, all the better.

Step 10: Praise success.

Although punishing those left behind in the process is not recommended, as it implies judgment, praising success is appropriate, especially if the community of practitioners endorses the reduction in LVC. Our experience is that praise delivered publicly by system practitioners for their excellence in reducing LVC were placed in patient waiting rooms and earned the respect of peers. Stories about practices’ successes should be reported in system newsletters and shared at department meetings. Based on motivational theory, financial incentives are not required and may, in fact, complicate the message to practitioners.20 Rather, our experience is that practitioners respond to requests to do the right thing for their patients in the absence of perverse incentives. We need to move from doing more to doing what is needed while avoiding what is not.

Conclusions

By removing perverse incentives, focusing attention on doing what is right, and moving overuse reduction into the quality paradigm, addressing LVC in an organization becomes an important QI activity. Once LVC is viewed as part of quality, clinicians and organizations can focus on doing on what is needed and less of what is not. Viewing overuse as a cost measure confuses the messages and focuses on where the savings, if any, go. Our experience is that given a chance to focus on doing what is right, practitioners are eager to excel and actively participate in the process.21

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