

Stopping the Flood: Reducing Harmful Cascades of Care

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The term *cascades of care* refers to a succession of medical services that are often fueled by the desire to avoid even the smallest risk of a serious condition.¹ They can follow from incidental or marginal findings on screening and diagnostic tests, some of which are themselves of low value. Regardless of their origins, they can be difficult to stop once the floodgates are opened, often leading to harms for patients, clinicians, and the health care system at large.

In certain cases, further evaluation of unexpected findings can serve a useful purpose, such as uncovering a dangerous yet treatable cancer.² More often, these pursuits are ultimately futile and costly. For example, consider an unwarranted preoperative electrocardiogram prior to a low-risk procedure like cataract surgery, where an inconclusive result may prompt additional referrals, diagnostic testing, and catheterization that rarely confirms significant cardiovascular disease.³ The process can be emotionally and physically exhausting for patients without offering them any real benefits.

Cascades of care are extremely common. In a recent survey of US internists, more than 99% of respondents reported that they had experienced cascades from incidental findings. One-third experienced cascades with no clinically important or intervenable outcome on at least a monthly basis. Notably, more than half of respondents said cascades led to physical, psychological, and financial harm to patients and wasted time, frustration, and anxiety for physicians.^{2,4}

There are 2 ways to reduce cascades: (1) decrease the use of unnecessary services that often initiate cascades (ie, close the floodgates) and (2) mitigate cascades once they begin (ie, slow the flow through the floodgates). Both are critical to preventing these floods from causing catastrophic damage.

Closing the Floodgates

So far, most efforts to address low-value care, including the ABIM Foundation's Choosing Wisely campaign and the US Preventive Services Task Force (USPSTF) rating system, have focused on identifying, measuring, and educating patients and clinicians on low-value

ABSTRACT

Cascades of care are common and can lead to significant harms for patients, clinicians, and the health care system at large. In this commentary, we argue that there are 2 ways to reduce cascades: decrease the use of unnecessary services that often initiate cascades (ie, close the floodgates) and mitigate cascades once they begin (ie, slow the flow through the floodgates). So far, most efforts to address cascades have focused on identifying, measuring, and educating clinicians on low-value services, with only modest success. We explore potential solutions for both closing the floodgates and slowing a cascade once the floodgates have been opened, including information to assist patients and clinicians in making better decisions, relationships that enable shared decision-making, and policy changes. Ultimately, reducing cascades while maintaining our commitment to high-quality care requires equipping patients and clinicians with the information, tools, and support needed to embrace uncertainty.

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services.⁵⁻⁷ However, these initiatives have had only modest success in reducing the use of low-value care.⁸ One reason for this might be the lack of policies that incentivize clinicians or patients to put recommendations into practice. Of note, Section 4105 of the Patient Protection and Affordable Care Act authorizes Medicare plans to remove coverage for preventive care services that are deemed harmful or unnecessary by the USPSTF (ie, D rating).⁹ By pushing implementation of this provision, the new administration has an opportunity to meaningfully address the prevalence of low-value care.

Closing the floodgates makes sense when it is possible to identify a specific service as low value. However, this can be difficult in many cases, given the poor consensus around how to incorporate clinical nuance, patient preferences, and cost-benefit trade-offs into this designation.¹⁰ Moreover, cascades are often triggered by initial tests that are clinically appropriate.⁴ Given these factors, it is also important to mitigate cascades once they begin.

Slowing the Flow Through the Floodgates

Slowing the flow may be more challenging; it is easier to avoid discovering an “incidentaloma” than to unsee it. Clinicians order that second or third test because they fear missing something important, fear being sued, feel an obligation to follow practice and community norms, or believe they are responding to patient preferences.^{2,11} To slow a cascade once the floodgates have been opened, we need (1) information to assist patients and clinicians in making better decisions, (2) relationships that enable shared decision-making, and (3) policy changes.

Information to help patients and clinicians make better decisions.

Physicians often feel frustrated but compelled to pursue additional testing for incidental findings when results are unfamiliar and are not accompanied by information to contextualize their clinical importance.¹¹ Yet, cascades may occur even when such information is provided. For example, a multicenter study showed that including data on the prevalence of age- and sex-specific abnormalities in healthy adults on spine imaging reports (thereby “normalizing” these abnormalities) did not decrease subsequent spine-related utilization.¹²

This speaks to the importance of providing the right information at the right time. In the spine imaging study, the information included in reports was based on population-level estimates, making it challenging to generalize to individual patients, and did not include recommendations for follow-up. For information to be useful to clinicians, it should be clear, specific, and provided at the point of care. The information should also be guided by high-quality evidence rather than just expert opinion, which tends to be more conservative and promote cascades. To this end, there is a need for more research on when a laboratory “abnormality” does or does not require further testing and on best practices for evaluation of various incidentalomas.

TAKEAWAY POINTS

Reducing cascades of care while maintaining our commitment to high-quality care requires equipping patients and clinicians with the information, tools, and support to embrace uncertainty.

- ▶ Addressing harmful cascades requires strategies to decrease the use of unnecessary, low-value services that often initiate cascades and also stop cascades once they begin.
- ▶ Decreasing the use of low-value care is challenging, but there is an opportunity to implement policies that incentivize patients and clinicians to put recommendations around avoiding low-value services into practice.
- ▶ To mitigate cascades once they begin, we need information to assist patients and clinicians in making better decisions, relationships that enable shared decision-making, and accompanying policy changes.

In the wake of the 21st Century Cures Act, patients increasingly have access to their test results, and any deviation from “normal” can provoke anxiety. Ideally, test results would be presented alongside interpretative comments in language that is easily understood. Another solution might be allowing patients to review imaging results with radiologists directly. In general, the public should be better sensitized to the idea that medical tests and procedures carry harms and that attempts to prevent devastating but rare outcomes can have risks of their own.

Trusting patient-clinician relationships. Using reliable, point-of-care information, we can leverage trusting patient-clinician relationships to engage patients in shared decision-making to minimize the harms of cascades. When faced with a dilemma (eg, after an incidental finding is found, should testing be pursued to rule out a rare but life-threatening diagnosis?), clinicians need to understand and factor in what is important to patients. In an open conversation, clinicians can explain the clinical implications of findings and potential harms and benefits of further testing; similarly, patients can share their concerns and reasons for and against further testing. These conversations should start early—when deciding to order a test in the first place—and may reassure clinicians who pursue cascades due to fears of litigation.

Clinicians need training and resources to navigate these conversations. Although most clinicians report having conversations about cascades with patients, they are often limited to specific use cases (eg, pulmonary nodules incidentally found on chest radiography).² Education on overuse should be baked into the medical curriculum such that clinicians feel comfortable talking to patients about uncertainty. Decision aids and scripts can be integrated into the electronic health record to help guide these conversations.

Policy changes. It is important to consider the legal and policy context in which these conversations are happening. For instance, the shift to value-based payment may incentivize clinicians to reduce unnecessary medical tests and treatments, although evidence remains mixed.¹³ Alongside efforts to reduce the number of low-value tests ordered, future models should invest in point-of-care solutions to stem low-value cascades once they are triggered.

Medical malpractice reform is another solution that is appealing in theory, although reforms to date have had limited impact on

low-value care utilization. A fear of malpractice lawsuits can propel cascades¹⁴—in one study, the possibility of a lawsuit increased the intensity of care that patients received, although this extra testing and treatment did not improve outcomes.¹⁵ One promising approach is the creation of “safe harbor” laws that protect clinicians from liability if they adhere to clinical practice guidelines based on rigorous evidence.¹⁶ There is also evidence that specific communication behaviors, such as educating patients on the purpose of tests and procedures, soliciting patients’ opinions, and checking understanding, are associated with fewer malpractice claims.¹⁷ Thus, safe harbor laws that encourage clinicians to follow guidelines and explain the context and implications of incidental findings may mitigate cascades motivated by legal concerns.

Conclusions

Ultimately, reducing cascades while maintaining our commitment to high-quality care requires becoming more comfortable with uncertainty.¹⁸ Although the increasing attention to low-value care is an important step forward, to really stop the flood, we need strategies that provide patients and clinicians with the information, tools, and support to embrace the uncertainty inherent in medicine. ■

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