Reducing Low Value Care:

Research Questions Identified by Researchers, Patients, Physicians, and Stakeholders

Laura Esmail, PhD, MSc

Daniel Wolfson, MHSA

Lisa Simpson, MB, BCh, MPH, FAAP

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Acknowledgements

Introduction

The problem of overuse, unnecessary care, or "low value" care is increasingly a focus of the national health policy conversation. Estimates suggest that as much as one-third of health care spending in the United States is of low value (1). Many factors contribute to the problem, including increased patient demand, information asymmetry, perverse financial incentives for providers, and a culture of "more is better than less"(2). The complexity and multifaceted nature of the problem warrant a wide range of solutions. In fact, health systems, policymakers, and health services researchers have been developing and testing a variety of interventions that address the problem at various levels and from different perspectives.

To complicate the problem further, there is no common definition of low value care, which embodies a host of factors, including the patient population, potential benefits and harms, existing alternatives, and financial and other costs (such as opportunity, time, effort, and physical harm) (3). Finally, poor or limited evidence makes it difficult to identify low value care. For purposes of this report, the terms unnecessary care and low value care are interchangeable.

Several organizations have launched initiatives to address one or more aspects of low value care. For example, since 2012, the ABIM Foundation has been coordinating the Choosing Wisely campaign, which promotes patient-physician conversations about unnecessary medical tests and procedures. The campaign now includes more than 70 specialty societies whose reach exceeds 1 million clinicians. While these and other initiatives show promise, the pace of change is slow, necessitating a better understanding of what is—and is not—succeeding.

Stakeholders and Researchers Working Together to Reduce Low Value Care

To focus attention on the emerging and needed evidence base, AcademyHealth partnered with the ABIM Foundation, the Veterans Affairs Health Services Research and Development Branch (HSR&D), Kaiser Permanente, and the Hartford Foundation to convene a meeting in May 2015. Sixty-six participants representing patients, researchers, health systems, purchasers, policymakers, and practitioners gathered to discuss the current evidence base and prioritize future research needs. Specifically, the goals of the meeting were to:

1. Determine what is known and what needs to be learned about ways to reduce unnecessary care

2. Identify critical research questions associated with different types of interventions as well as ways to incorporate various stakeholder perspectives into the development of interventions

3. Explore the barriers to research into needed interventions and how partnerships among stakeholders can address such barriers

4. Develop ongoing partnerships and dialogue among funders, payers, health plans, government agencies, providers, patients/consumers, and researchers committed to reducing unnecessary care

Two commissioned papers provided background for the meeting: a systematic review of interventions aimed at reducing the use of low value health services and a paper articulating the role of the patient in reducing low value care (3,4). By focusing on the two papers' findings and engaging an expert group, the meeting built on lessons learned from earlier initiatives and looked to capitalize on opportunities for synergy among stakeholders to overcome barriers to low value care research and implementation.

The Current Evidence Base

A systematic review conducted by Carrie Colla, Ph.D., and colleagues summarized what is known about the effectiveness of interventions aimed at reducing the use of low value health services (3). Clinical decision support, performance feedback, and provider education, coupled with other interventions, demonstrate a sufficient and promising evidence base. Overall, multicomponent interventions directed at patients and providers appear to be more effective than single-component interventions. Pay-for-performance and risk-sharing contracts show some evidence of their potential effectiveness but require additional study. At the same time, Colla and colleagues' review pointed to several gaps in the literature, such as the identification of outcomes important to patients; an examination of chronic longitudinal care; development of broad indicators of overuse; classification of effective versus low value care in high-cost settings (i.e., inpatient, emergency department, and intensive care); and the role of payer-provider-patient collaborations.

The systematic review also emphasized that advances in reducing low value care will require supportive systems, including (1) actionable definitions of low value care; (2) effective patient education campaigns; (3) evidence of effective implementation approaches; (4) aligned incentives; and (5) access to data sufficiently rich to permit valid measurement (i.e., a shift from a focus on claims data to a look at the individual provider).

The Patient's Role in Reducing Low Value Care

Understanding the perspectives of various stakeholders with respect to low value care is essential to developing and testing new interventions. From the patient and consumer side, Amy Berman and Shannon Brownlee's paper discussed the untapped role of the patient in reducing low value care (4). For patients, high-value care means taking into account patient values, goals, and life circum-

stances. Yet, patients and the public have been noticeably absent from most discussions of how to define value and related research efforts. Brownlee and Berman identified five categories or permutations of low value services: (1) the use of an effective treatment, test, or technology on an inappropriate patient; (2) the use of an ineffective or low value treatment, test, or technology on any patient; (3) the use of an unproven treatment, test, or technology; (4) the use of an effective but unwanted treatment (preference-sensitive care); and (5) unnecessary discretionary hospitalization.

Some of the major barriers to achieving value-based care include the public perception that more is better; the insufficient evidence base for many treatments; the role of marketing in driving many clinical decisions; the lack of a strong relationship between prices and outcomes; the absence of a patient role in the research enterprise; and the lack of opportunities for public deliberation around value. Berman and Brownlee's recommendations call for (1) fostering public deliberation on value to encourage transparency and the development of measures that matter; (2) engaging patients and the public in deliberations and decisions on appropriate payment amounts (with government and private payers); and (3) increasing communication and shared decision making at the point of care. They write, "There is no greater value than care and outcomes concordant with a patient's goals and values and yet the perspectives of patients, their families and the public are often absent from the national conversation about value in health care policy and practice"(4). The engagement of patients and the public should occur at all levels—research, policy, and payer—of decision making and discussion about value in health care.

The Need for Research to Test Interventions That Reduce Low Value Care

Using the framework presented in the systematic review (3), meeting participants engaged in a tabletop exercise to identify priority interventions to be developed and evaluated. They discussed measurement, data, and contextual issues related to those interventions, along with overall barriers to and facilitators of the interventions. Each table included a patient/consumer representative to ensure that the role of patients and/or consumers was discussed.

Demand-Side Mechanisms

Demand-side interventions are those that seek to reduce patient and consumer demand for low value services. Throughout the discussions, demand-side strategies focused on information-based approaches (i.e., patient/consumer education) and incentive-based approaches.

1. Information Interventions

Information interventions may be directed to patients and/or the broader public. For example, initiatives have aimed to generate dialogue about and explain value in health care (5), though little is known about the initiatives' impact or effectiveness. Over the last 20 years, several interventions have focused on improving patient-physician communication and facilitating shared decision making, which involves patient education and patients' active engagement in decisions about their care. While existing evidence suggests that some patient education initiatives hold promise, the current evidence base addresses only a narrow range of interventions as reflected in a mere handful of published studies (3). Given the potential impact of patient demand on the use of low value care services (1), information interventions represent an area ripe for research.

What are the most effective mechanisms for integrating patient values into care planning decisions?

The discussion participants addressed the need for research to investigate the most effective mechanisms for integrating patient values into care planning decisions. In particular, the "patient-redesigned personal care plan" would identify and incorporate patient values to shape care in complicated illness. As a practical matter, patients have a tendency both to overestimate the benefits of treatment and to underestimate adverse effects (4), and the lack of information and discussion about the benefit/harm trade-off undermines appropriate care planning decisions. The use of a framework or system to structure and integrate discussions of trade-offs and ensure patient engagement in care planning may yield treatment decisions that accord with patient goals, improve the patient experience, and reduce unwanted service utilization.

2. Patient Incentives and Disincentives

Patient incentives and disincentives can reduce the delivery of low value care by making patients more price-sensitive and, as a result, encouraging them to consider the value of the care or service that they may receive. Interventions related to incentives/disincentives include forms of patient cost sharing such as value-based insurance design (1). Overall, the evidence suggests that patient cost sharing can be effective in reducing low value care, with effect sizes ranging from 6 percent (combined colonoscopy, flexible sigmoidoscopy, and double contrast barium enemas) to 67 percent (medical tests) depending on the service studied (3). As Colla (3) reports, "Greater patient cost sharing decreases patient-driven utilization, including office visits, number of prescriptions, and use of outpatient and inpatient services, but whether cost sharing has the potential to differentially affect low value care while maintaining use of high-value services is incompletely understood." Value-based insurance design (VBID) uses differential cost sharing to communicate the relative value of services. Evidence suggests that VBID can reduce service utilization (3), although the effects on patient outcomes and costs are less clear (6)Recent studies, such as the EMPOWER study (Oregon), showed that the offer of waivers for copayments for medicines and visits related to diabetes control led to a greater reduction

in HbA1C values and mean LDL cholesterol compared to a control group (3,7). Additional research is warranted to understand more fully how benefit design can target low value care and encourage appropriate use of high-value care while granting the flexibility needed to ensure preference-sensitive care decisions.

What interventions are effective in reducing low value care in a high-deductible health plan environment?

Research designed to identify interventions that reduce low value care in a high-deductible health plan environment would help identify "levers"—mechanisms that work to reduce inappropriate care in a variety of contexts—and reduce health care disparities. Such research would require a large sample, with randomization at the level of the plan recipient as well as consideration of the provider payment model. The selected interventions could target primary care clinicians who provide high levels of low value care and deliver education directed to both providers and patients.

B. Supply-Side Mechanisms

1. Incentives and Pay for Performance

Pay for performance is a financial incentive that ties provider payment to the achievement of specified goals. It aims to reduce inappropriate care or increase the provision of high value care (3). The limited evidence on the success of pay-for-performance initiatives shows mixed results. Of two studies reviewed by Dr. Colla and colleagues, one showed no effect on test ordering, whereas the other study found a 47 percent reduction in testing (3). As payment reform continues to evolve and expand in both the public and private sectors, more evaluation is needed to determine what models might work in which settings to reduce low value care.

What combination of provider payment models and insurance systems has the greatest impact on encouraging high value/effective care?

Payment reform was a popular topic among discussion participants and the focus of two groups' discussions. One group talked about what combination of provider payment models and insurance systems has the greatest impact on encouraging high value/effective care. Participants discussed a comparative study across three natural market segments: public insurance, exchanges, and employer self-insured. The three segments respond to different provider and patient incentives. Increasingly, Medicare Advantage and Medicaid are evolving into managed care models (with full or partial capitation), making it important to learn how these public sector payment models operate. The exchanges involve narrower networks and more disruptive innovations in payment. Consumers are highly price-sensitive in these contexts and may be willing to

make trade-offs. The employer market is large and predominantly a fee-for-service market that offers incentives, and many employers want to self-fund.

The group also discussed some highly innovative interventions. In looking to capitated or fee-for-service systems, participants proposed investment in a geographic region or provider group to encourage high value/effective care. If the provider group saves money, it could reinvest its funds, sustain the innovation cycle, and deliver high value care. While designing and implementing such an investment model would pose a considerable challenge, the approach—yet to be tried in the health care sector—is nonetheless promising.

What is the best payment reform to encourage appropriate use of low value diagnostic tests for patients with chronic conditions?

Participants discussed what type of payment reform would most likely encourage the appropriate use of low value diagnostic tests for patients with chronic conditions. Such reform could lead to fewer false positives, fewer downstream interventions, and decreased overuse of services and therefore lower costs. However, unintended outcomes could include missed diagnoses. A study of payment reform would compare shared savings versus a fee-for-service approach, and cluster randomize at the practice/clinic level within markets across a single payer. Participants pointed to the importance of measuring and accounting for contextual issues and variation within a practice. They also noted that a potential barrier to payment reform could be payers' unwillingness to adopt a new payment mechanism. Other interventions that could be tested concurrently include patient decision aids and feedback on patient self-reported health status and patients' care experiences.

What is the impact of risk-sharing contracts on reducing inappropriate care?

Colla and colleagues (3) highlighted the need for more research on how risk-bearing contracts may produce unintended consequences. "Regardless of the form financial risk sharing takes, it has been shown to reduce utilization, and in some cases to reduce low value care. However, further research is necessary to determine whether reductions in utilization are due to reductions in inappropriate or appropriate care" (3). Discussion participants did not directly address risk-sharing contracts.

2. Clinician Information

Interventions that use information directed to providers have been the subject of considerable research and include (1) clinical decision support, (2) clinician education, and (3) clinician feedback.

Studies of clinical information interventions are often multicomponent, and the interventions appear to be highly effective. Dr. Colla's review found that "interventions that combine clinical education with either decision support or feedback are most common and frequently effective at reducing overuse" (1). Furthermore, the authors found that multicomponent interventions targeting "both the patient and provider roles in overuse have the greatest potential to reduce low value care."

What factors should determine the design of paired interventions that include both provider-facing and patient-facing components?

Discussion participants emphasized that the design of paired interventions needs to embody certain considerations. For example, pairing clinician-facing and patient-facing interventions is important, but the interventions must not be symmetric. Clinician interventions are more important when consensus exists. On the other hand, patient interventions are appropriate when communication/patient expectations/preferences are more important (i.e., in the "grey zone"). Another consideration raised by participants is the question of how to match the level of an intervention's intrusiveness to the level of practice variation while remaining mindful of likely consequences. A further issue relates to autonomy and where, along the continuum of intrusiveness, an intervention should be targeted, particularly when providing clinicians with data and feedback. For example, should a clinician information intervention be coupled with financial consequences (e.g., making the physician pay for an unnecessary MRI)?

3. Clinical Decision Support

What are the most effective collaborative decision-making models for reducing low value care?

Clinical decision support includes a range of interventions such as integration of information within electronic health records, administrative restrictions on test orders, third-party support, and general promotion of clinical pathways or guidelines through decision support tools such as apps/decision trees (i.e., point-of-care decision support, administrative decision support, and staff-level decision support). Clinical decision support is the most widely studied and demonstrates enormous variation in results, but the evidence suggests that the intervention can offer an effective method of reducing low value care (3). Several groups discussed the use of clinical decision support mechanisms to reduce low value care.

How can we increase both patient and provider comfort with uncertainty?

A group of discussion participants focused on the use of clinical decision support strategies to increase provider comfort with uncertainty. The strategy of greatest interest was referral boards or protocols that make providers "hold" certain care decisions until discussion with their peers (otherwise known as "third-party consultation or oversight") (3). By delaying the patient care decision, the intervention encourages the clinician to shift the decision-making process from the fast-paced, intuitive environment to a slower, more thoughtful and deliberate moment (9). Participants would like to see a study match specialty practices and compare them to usual care. Providers would self-identify issues that require a group discussion. Payers would be involved in the study and require previous authorization if the patient care decision is diverted to peer discussion. Study outcomes would largely focus on the provider: the proportion of decisions made by the care team, models of positive behavior, and physician satisfaction/distress. In addition, the study would measure patient satisfaction and the number of low value care decisions. Contextual issues would include culture and infrastructure. The discussion participants recognized that the intervention could potentially reinforce biases or culture in an unwanted direction and therefore needs to be evaluated.

4. Clinician Education

What are the best approaches to educating clinicians to change the culture of overuse/low value care?

Clinician education about low value care mainly involves teaching clinicians to recognize and reduce low value care (3). Its effectiveness varies with the intensity of the clinician education program. "Passive educational interventions, those with a narrow scope, or those with only one educational tactic are often less successful at reducing low value care" (3).

What are patient preferences for the timing and content of provider initiatives for end-of-life care, and how can we train providers to implement these initiatives effectively?

Participants discussed an intervention that would improve care management of the costliest 5 percent of patients who are at the end of life (last 12 months) and continuously high cost over three to five years. First, participants discussed the need for an observational study to understand patient preferences for the timing and content of provider initiatives (including consumer segmentation to determine the appropriate target group). Subsequently, they proposed a four-arm, multisite cluster randomized controlled trial at several levels of systems and providers. The intervention would involve different types and levels of provider training and would look at the time spent by providers on end-of-life care planning and management. Expected outcomes would include an understanding of patient end-of-life preferences and goals, the preferred site of death, preferences for hospice care, financial outcomes, and outcomes that matter to the patient. Several contextual issues need to be taken into account for the observational study, including the health information technology infrastructure, provider and patient financial incentives, practice culture, specialists

who may be involved in the patients' care, and regional variations in spending patterns. Potential barriers include a lack of data on outcomes, particularly longer-term outcomes.

5. Clinician Feedback

Clinician feedback generally involves the provision of information to physicians on their use of unnecessary care, along with suggestions for change, information on achievable benchmarks, and tools for improvement (3). Clinician feedback is often coupled with some form of clinician education (3). Overall, studies show that clinician feedback is an effective intervention, with results ranging from an 8 percent reduction in avoidable laboratory tests to a 78 percent reduction in carotid endarterectomy (CEA) surgery (3). Multicomponent interventions that involve performance feedback have also demonstrated success (3).

What are the best combinations of interventions that effectively present clinician feedback alongside another intervention?

As a type of nonfinancial incentive, clinician feedback works in the context of professionalism, which can be an effective incentive to encourage clinicians to improve their performance. For example, some unified practices with salaried providers in the Kaiser Permanente health system found that benchmarking—providing clinicians with feedback on their performance against that of their peers in the same practice—was sufficient to motivate improvement in clinicians' performance (10).

A group of participants discussed the benefits of feedback and provider champions/leaders. They proposed a study that would randomize control and experimental groups at the site level across five regions and a range of specialties. Outcomes would look at a reduction in practice variation and an increase in evidence-based care, a reduction in costs and utilization, an increase in access to care, a change in culture and attitudes, and a potential increase in professional group cohesion. Other interventions could be tested concurrently, including patient education, the training of facilitators, and communication training for physicians. The study would need to account for several contextual issues, such as provider financial incentives, provider contracts, practice characteristics, and practice culture. The discussion participants identified several barriers to the proposed study, including the challenge of characterizing medical groups by degree of risk-bearing, sample selection, the need for trained (and respected) facilitators to lead group discussions, and variation in the conditions targeted for study (e.g., diabetes, congestive heart failure).

How can unnecessary routine chronic disease care be reduced?

Participants discussed a provider feedback intervention that would develop profiles on a range of value measures coupled with patient-facing reports. The participants' research question focused on how to reduce unnecessary routine care for chronic disease. The participants discussed the design of a randomized controlled trial in public sector group practices. The study would investigate the proportion of inappropriate care, the changes in how low value providers practice, and the quality of the patient-physician relationship. Some potentially unintended outcomes might include patients' decision to leave a practice or a decrease in appropriate care. Among the several contextual issues in need of consideration are financial incentives, the provider contract, and the degree of managed care penetration. Barriers to conduct of the study relate to access to clinical data, data beyond the group level, and global measures of value incorporated into the electronic health record.

C. Cross-Cutting Issues
1. Measurement

Direct measures of low value care need to be developed and incorporated into electronic health records. The measures will help characterize the potential extent of low value care; identify such care at the practice, provider, and individual levels; and guide policy interventions that reduce low value care (11). The development of the needed measures poses a challenge because the value of care is inherently tied to the clinical context in which care is delivered as well as to the patient's values and goals.

What are the most promising indicators for measuring value accurately and reliably across diverse settings?

While administrative data are useful in benchmarking care—providing high-level snapshots that characterize low value service use—they do not provide the detailed clinical data needed to assess whether an individual care decision was a high value decision. As Colla describes, "[R]esearchers have developed algorithms to identify low value service use in health services datasets, such as claims or electronic health records. Some have aggregated clusters of overuse measures and begun to explore patterns and correlates of overuse" (1). Participants, however, highlighted the importance of understanding practice variation and how such variation may be used to identify and investigate potential overuse.

How can we best incorporate the patient perspective into measures of low value care?

Participants across several groups emphasized the need to develop patient-reported outcome (PRO) measures that focus on outcomes that matter to patients and accurately reflect patient values and goals. To that end, the patient's voice needs to be integrated into all stages of the research process, but especially early in the process as topics are considered and concepts are defined (12).

2. Data Infrastructure and Rapid Learning Systems

The development and improvement of outcome measures goes hand in hand with the improvement of the data infrastructure needed to create a learning health system that permits the real-time collection and analysis of and access to data. To date, most systems do not facilitate sophisticated and real-time data capture and analysis.

What are the best practices in using electronic health records to target low value care?

While electronic health records offer an excellent data source for identifying and targeting reductions in low value services, they are not without limitations. One promising area is natural language processing that converts audio recordings of patient-physician interactions into data, which might be more reliable than some parts of the electronic health record in that the recordings do not rely on recall.

How can we improve electronic data infrastructure to facilitate real-time feedback on value to providers, patients, and health systems?

A group of participants discussed a vision for a transparent data set or registry that could answer clinician and patient questions about comparative effectiveness at the point of care. The group proposed a multicomponent intervention comprised of patient education information coupled with a shared decision-making approach that integrates a real-time and personalized comparative effectiveness research (CER) data set. The proposed study would evaluate whether clinicians and patients use the database and, if so, the extent to which care plans are matched to patients' desired and achievable outcomes and the extent to which the intervention lowered costs. Such an approach would need to overcome several obstacles. First, are the available data of sufficient specificity and granularity to guide care decisions adequately for individual patients? Even if so, can clinicians and patients make sense of the data as part of a clinical encounter? A more fundamental challenge is sufficient a priori identification and articulation of patient goals such that outcomes associated with those goals may be incorporated into the data set. In addition, patient goals are dynamic such that a data set would need to measure goals and track them over time.

3. Identifying, Understanding, and Scaling Up Best Practices and Positive Outliers

Once interventions are identified as effective in reducing or eliminating low value care in a specific setting, the next challenge is to scale up and spread or adapt the interventions. To do so, it is critical to understand the context for success and to identify the factors contributing to that success, thus guiding the needed changes across an organization, health system, or regions.

What factors are most important to the successful scale-up of an effective intervention to reduce low value care?

One challenge to the scale-up of any effective intervention is the organizational will to introduce and champion change. Leaders and clinical champions play an important role in influencing an organization's culture and encouraging the achievement of positive outcomes. Evidence across a variety of business sectors suggests that a grassroots, peer-driven approach to developing a culture of quality (e.g., provider-driven quality improvement initiatives) is highly effective. It is equally important to obtain buy-in from on-site practitioners. It is essential to engage practitioners as early as possible. Their involvement in the design of implementation strategies may help encourage their ownership of the process. Finally, aligning quality measurement and payment and reporting structures spreads the use of effective strategies.

Conclusions

Despite a growing focus on low value care, much remains to be learned about which interventions are effective in reducing such care across a variety of settings, conditions, and patient populations. The evidence to date suggests that the most promising interventions are multicomponent and target both patient and the provider (3). Future efforts will need to integrate the patient perspective into the design, implementation, and evaluation of interventions that aim to reduce low value care. A robust measurement and data infrastructure will be critical for continuous learning, dissemination, and adaptation.

Suggested Citation

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