Clearly, a more realistic evaluation of the total effect of guidelines on individuals and across populations will require the development of new methods. Until this is done, the true impact of clinical guidelines cannot be known.

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Counterpoint: Rationing on the Fly: The Opportunity Cost of Clinical Guidelines

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Adoption of new guidelines must be balanced by the reduction of other care during visits since such care delivery is a zero sum game bounded by time. The resulting deletion of care is done ad hoc in the midst of busy visits. This results in a problem—rationing— the solution for which is not obvious, but at least now we have labeled the problem.

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These are the basic tenets of the Commentary by Ganiats and Kempster.[1] However, it is unclear that these tenets are valid or adequate to define the problem or guide the evolution of practice.

Several considerations are relevant. First, the care we provide patients is driven by the number of problems they have, not by the number of guidelines available. Second, the number of problems we address during a single visit (or during any other interval of time) often is determined by the patient's capacity to engage in the care required, including at the behavioral level. Third, our selection of problems to tackle is a complex process involving clinician-guided patient prioritizing and decision making, again bounded by the capacity of the patient as well as the clinician.

Ganiats and Kempster's dilemma of the increasing number of guidelines applicable to the patient with multiple problems is inherently an issue related to the complexity of such patients rather than to the guidelines that might inform their care. It remains for clinicians to determine whether new guidelines are applicable or whether continuing previous "expert opinion" care or no care is preferable. New guidelines might make relevant evidence more accessible to clinicians. However, as Katerndahl[2] notes, the complexity of such patients requires primary care clinicians to have the ability to provide high-value care integrated across problems rather than simply adding to the checklist another guideline for a "complicated" patient. The number of problems, not the number of guidelines, is the issue.

Ganiats and Kempster's tenets might be applicable particularly if clinicians and patients implement new guidelines for problems that were not under care. To the degree that problems were being addressed clinically, guidelines might improve care and save time. Guideline-driven improvements to care, while possibly requiring increased time initially, is likely to save time in the long term to the degree that worsening morbidity is prevented. Similarly, initiating care for problems previously not under care will take time early but might save time later. Consequently, the potential detrimental impact derived from Ganiats and Kempster's concern regarding compensatory time-driven abandonment of other care arises primarily as a trade-off between time consumed now to improve health with time savings later. The key variable is the time horizon for summing the trade-off

of early expenditures and later savings of time or other resources.

Time-constrained primary care clinicians might limit other care to implement new guidelines. Such abandoned care is framed as rationing. But is this really rationing? My sense is that patients generally can engage in actively managing 1 to 3 new problems, including new prevention initiatives. This, rather than the number of guidelines and the time required for them, often is the limiting constraint on the number of problems newly addressed. By "actively managing" I mean the patient effort expended for diagnostic assessment, learning about conditions, learning new behaviors, adapting to new treatments, and integrating those into their lives. We commonly sequentially address problems with new patients to not overwhelm them and so that we as clinicians can understand any resulting adverse effects and benefits.

I do agree with Ganiats and Kempster that we care for patients in a world constrained by time and other resources and that many visits start with the prioritization and selection of problems to be addressed. Indeed, skill in this process is likely a core attribute of primary care clinicians. Ganiats and Kempster's concern is that the implementation of a new guideline requires ad hoc deletion of other care, with the implication that the ad hoc nature of the decision might result in harm. However, while a practice might implement a new guideline, it still is a patient-by-patient decision to activate the guideline. Both the adoption of a new guideline and any abandoning other care to offset this is done concurrently as the clinician and patient seek to maximize value.

It is not a trade-off of preordained implementation of new guidelines at the expense of ad hoc abandonment of other care. New guidelines, if adequate, enrich the process of selecting problems to be addressed, patient by patient, by making available information on, for example, the potential value of addressing the target problem and the effort required to do so. New guidelines often are developed in response to great variation in care and uncertainties as to the elements of effective care. Their guidance improves the reliability of care to provide value and decrease potential harms. They also may improve both clinician and patient confidence and motivation to engage in such care. Consequently, the clinician and patient might decide to initiate care of a previously unaddressed problem. Sometimes this is at the expense of other care, but with a goal of maximizing value.

Ganiats and Kempster postulate that pursuing care in response to new guidelines results in expending additional time and consequent rationing of care at the patient or population level. However, we have little data to support that this occurs. To the degree that guideline-driven care has a higher value than non-guideline-driven care, new guidelines might increase the overall value of the care provided. The availability of additional guidelines might save time by improving care decisions, organizing team effort, and reducing low-value care. As Ganiats and Kempster note, care that has become routine may be delegated to others, leaving clinicians time to manage new problems. technologies also may eventually provide time-conserving support. The extent to which improved value or time-constrained rationing of care occurs because of new guidelines does merit research attention.

The angst among clinicians related to the expansion in the number of guidelines is real, well founded, and acute. Some of the angst comes from recognizing the limitations of clinicians' ability to master information. But much of the angst comes not from the new guidelines but from the external pressures to adopt an expanded menu of guideline-driven care, short-circuiting the process by which clinicians engage patients in targeting care to problems most meaningful to them.

A recent patient comment conveys this: "By the time we went through the quality checklist, we didn't have time for the problems I came in for." Such pressure come from payers and is communicated through practice systems designed to maximize practice revenue by attaining quality thresholds. Such pressures are well meaning, arising from belief that a top-down setting of care priorities, rather than clinicians and patients determining care priorities, will maximize health. Panzer et al[3] recently proposed 7 strategies to deal with the explosion in quality mandates that has occurred in the past 4 years.

Ganiats and Kempster, however, are concerned that possible solutions are not evident. As they note, expanded evaluation of guidelines and research on the prioritization process both are needed but unlikely to yield early solutions. More

immediately we need to balance the control of setting clinical priorities between the clinician–patient dyad and systems setting quality measurement mandates. This might include a requirement that mandates come with an impact statement of the health improvements that are expected and the underlying rationale, as well as the specific patients for whom these expectations are evidence based. For instance, do they apply to both middle-income patients who have been receiving care and those just obtaining insurance and care? Improvements should be described at the patient level (ie, in keeping with Patient-Oriented Evidence that Matters) rather than at the level of disease or process of care. Providing such information is a reasonable expectation given the possible effect, including unintended consequences.

The limits of patients' capacity to adopt care recommendations should also be considered when setting quality measurement mandates. For instance, during the first 12 months a patient is enrolled with a physician, should only the physician-designated top few priority conditions contribute to the practice's quality metrics? Practices and payers also should limit the number of new guidelines mandated during any period of time.

Ganiats and Kempster are not suggesting we abandon guidelines. Ultimately, guidelines have great potential to improve the value of care and the health of patients and populations. Key to realizing such benefit is controlling how they are introduced to practices and the influence implementation has on either improving or distorting the decisions clinicians and patients make.

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Re: Counterpoint: Rationing on the Fly: The Opportunity Cost of Clinical Guidelines

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We are happy to see that Dr. Larry Culpepper agrees with our basic premises. Importantly, we appreciate his correct clarification that "the care we provide patients is driven by the number of problems they have, not by the number of guidelines available." However, he misrepresents some of our key tenets. We believe the adoption of a new guideline *may* increase care (not that it necessarily will); when the workload is increased, barring other interventions, something must be taken away.

We are happy that medicine is complex enough that we do not know a priori all the problems that will be addressed in a given day, even though this means we cannot plan a learned response to the day's challenges. This means that real-world practice has excitement and challenges that force to us to make decisions on the fly. Thus we disagree with Culpepper when he suggests the decision on what care to provide "is done concurrently as the clinician and patient seek to maximize value." In addition, when these decisions are made, whether ad hoc or through thoughtful deliberation, we call it rationing. He does not. That is just semantics.

A major premise of our Commentary is that without more work "the true impact of clinical guidelines cannot be known." We agree with some of Culpepper's proposed solutions, though many have a long-term horizon, but the basic problem persists. In the end, we hoped to spur debate and discussion and are pleased that this has started.

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