

Less is not always more: embracing (appropriate) medical intensity

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As healthcare costs continue to rise globally, policy makers and researchers have focused on inefficiencies in health-care delivery. In the USA, the combination of high costs and disappointing outcomes associated with a fragmented delivery system has generated the idea that substantial reductions in spending are possible without sacrificing patient care. Indeed, we know that high spending often fails to produce optimal outcomes and therefore, reductions in spending should be achievable with no detrimental effects on quality.

The evidence that less can sometimes be more is all around us. Front-line providers know all too well the human and financial costs of aggressive treatment of terminally ill patients who might otherwise prefer a palliative approach. Redundant testing due to inadequate care coordination and lack of information sharing is another example. Preventable adverse events exemplify how poor-quality care can drive up costs and harm patients at the same time. From these instances, a new mantra has emerged among many health policy leaders: less is better. Intensity is bad.

What is clinical intensity? It is often described as the tendency to do more: perform more procedures, admit more patients, consult more specialists and prescribe more medications.¹ Why does level of intensity appear to vary widely across institutions? Some have suggested that variation in clinical intensity is due to differences in the underlying patient population, although others have argued that patient factors matter very little. Detailed work by researchers at Dartmouth has suggested that both medical intensity and its variation among providers are fundamentally inefficient and are driven by differences in medical culture.²⁻⁴ The nature and value of medical intensity are controversial and ripe for additional research.

In this context, an elegant new study by Bhatia *et al*⁵ offers several important insights. The first is that providing less medical care (i.e. having lower intensity) has its own costs. The authors examined rates of admission from emergency departments (EDs) for patients presenting with heart failure (HF). They found that the low-intensity EDs, those with low baseline rates of admissions for patients with HF, had higher rates of repeat ED visits and hospitalisations. Even more worrisome, low admission rate EDs had a trend toward greater mortality relative to institutions with higher admission rates for this condition. Patients discharged from EDs with low rates of admission were less likely to see a cardiology specialist or to have cardiac testing after discharge. Taken together, these findings suggest that there are real clinical costs to being less aggressive. Many patients might have done better had they gone to an ED with a higher level of clinical intensity.

A second insight from the Bhatia study is that intensity does seem to be related to clinical culture. While the authors found that low admission rate hospitals tended to be smaller, non-teaching, rural hospitals (with presumably healthier patients), these characteristics did not fully explain the differences in hospitalisations after presentation. Indeed, the authors found that when patients presented to a different hospital after being discharged from the original ED, their likelihood of admission on the second visit was predicted by the overall admission rate for the second hospital. This suggests that variations in admission rates are driven by differences in practice patterns rather than the degree of the patient's illness.

Clinicians who have worked at multiple institutions will not be surprised. Indeed, we are all familiar with the phenomenon of 'medical culture.' What is common practice at one hospital (e.g. discharging



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a patient with low-risk chest pain after a single set of cardiac enzymes) may be viewed as substandard or even reckless at another. It seems that this phenomenon of medical culture at least partly explains some of the variation in medical intensity among providers and institutions.

The study by Bhatia *et al* adds to a growing body of literature that challenges the 'less is more' philosophy in health policy. Their study is consistent with the other literature showing that aggressive, high-intensity care is associated with better outcomes for some conditions.^{6–8} The policy implication of this phenomenon is clear: even in health care, sometimes, 'you get what you pay for'. But how does one reconcile the findings of the Bhatia study and others like it with the Dartmouth work suggesting that higher spending does not produce better outcomes? Is medical intensity bad or is it good? Clearly, the answer depends on the specific clinical scenario. Patients and their conditions are too heterogeneous for a single approach. The optimal level of intensity of care needs to be tailored to the patient's needs and wishes and supported by high-quality evidence whenever possible. Optimal care for patients with serious illness frequently requires complex care in expensive settings.^{9–10} This level of intensity, applied to seriously ill patients, can lead to better outcomes. Applying the same level of intensity to a different patient population is likely to lead to waste and potentially worse clinical outcomes.

The recognition of waste and inefficiency has motivated policymakers in a number of countries to begin a shift away from a fee-for-service model, which often encourages volume over value. As this shift continues, we need to remember the corollary: that less is also not always better. This emerging body of work has important implications for policymakers; indiscriminate cuts in spending are unhelpful. A more nuanced approach to intensity and spending is necessary. While providing less medical care is guaranteed to reduce costs in the short run, it is likely to lead to poor outcomes for at least some conditions. Sophisticated approaches to measuring patient outcomes will be critical to ensuring that as payment models evolve, we reduce wasteful spending by eliminating use of services on patients who will not benefit—not by skimping on interventions that can save lives and improve health. This is the right kind of medical intensity.

Bhatia *et al* provide one more critically important insight; no one has quite gotten this right. While it is true that some patients at the high admission hospitals were likely admitted unnecessarily (i.e. they would have done fine at home), it is just as true—and quite problematic—that the low admission hospitals failed to admit patients who probably would have done better in the hospital. On average, the patients at the high admission hospitals seem to fare better, but

patient care has to be about more than averages. New approaches to identifying, in real time, which patients should be admitted and which can go home safely are imperative. Just as importantly, we need to determine which services will foster a path to safe recovery at home for appropriately selected individuals. Right now, these decisions are based on local culture and custom. When medicine was a cottage industry, driven more by whims and opinions of eminent intellectuals, this kind of practice made sense. But as we shift towards being a scientific discipline, driven by evidence and data, this variation can no longer stand. Simplistic notions, such as doing more is better or doing less is better, have no role, either clinically or in the policy world. Figuring out who is likely to benefit from intensive therapy and who will do fine without is critically important—and not just for the bottom line. Indeed, patients' lives depend on it.

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