LESS IS MORE

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How Less Health Care Can Result in Better Health

IF SOME MEDICAL CARE IS GOOD, MORE CARE IS BETter. Right? Unfortunately, this is often not the case. Across the United States, the rate of use of common medical services varies markedly, but measures of health are not better in areas where more services are provided.[1] In fact, the opposite is true—some measures of health are worse in areas where people receive more health services.[2]

How can more health care lead to worse health outcomes? Almost all tests, imaging procedures, drugs, surgery, and preventive interventions have some risk of adverse effects. In some cases, these harms have been proven to outweigh benefits—for example, treating asymptomatic women with postmenopausal hormone therapy.[3] In other cases, services become widely used with inadequate proof of benefit. For example, arthroscopic debridement of the knee for treatment of osteoarthritis was performed about 650 000 times per year in the United States in the late 1990s, despite the fact that the procedure had not been shown to be beneficial. Randomized trials subsequently demonstrated no benefit of this procedure[4]—but all patients were exposed to the pain and risk associated with surgery.

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Even if a medical service has been shown to provide a clear benefit in selected groups, using this service in different groups, especially those with less severe disease or lower risk for disease, can result in harm. For example, antidepressants have been shown in multiple randomized trials to be an effective treatment for severe depression but have little benefit in persons with less severe depression.[5] If antidepressants are widely used in persons with mild depression, the known adverse effects of these drugs will outweigh the benefits. Even if the relative benefit of a medical service is the same, overuse in a low-risk population can result in harm. For example, screening mammography is probably just as effective in reducing the risk of dying of breast cancer in younger women as in older women. But because the absolute risk of dying of breast cancer is lower in younger women than in older women, the absolute benefit is lower. But the adverse effects of mammography—false-positive findings, biopsies, anxiety, and overdiagnosis and treatment of latent cancers—is the same and may overwhelm the benefit.[6] Finally, harm can occur when tests and procedures are repeated unnecessarily. For example, repeated computed tomographic scanning to "follow" documented renal stones has no clear clinical purpose but is associated with a significant risk of radiation-induced cancers.[7]

In the United States, the debate about decreasing the overuse of medical services has focused on the expense of unneeded care. And in fact, reducing the use of medical services in high-use regions of the United States has been estimated to reduce the overall cost of care about 20%.[8] Cost cutting as a justification for reducing the use of medical services is met with suspicion by many people who equate reducing the volume of care to rationing. Rationing implies that the care being withheld is beneficial and is being withheld simply to save money. But as we have noted above, there are many areas of medicine where not testing, not imaging, and not treating actually result in better health outcomes.

"Less is More," a new series in the *Archives*, will highlight situations in which the overuse of medical care may result in harm and in which less care is likely to result in better health. For example, a series of articles in this issue of the *Archives* documents serious adverse effects of proton pump inhibitors, including increased rates of fractures, *Clostridium difficile* infection, and recurrence of diarrhea caused by *C difficile*[9-11]; previous reports have also documented an increased risk of pneumonia.[12,13] Harm will result if these commonly used medications are prescribed for conditions for which there is no benefit, such as nonulcer dyspepsia.[14]

There are many reasons why clinicians in the United States may provide more care than is needed. These include payment systems that reward procedures disproportionately compared with talking to patients, expectations of patients who equate testing and interventions with better care, the glamour of technology, the fact that it may be quicker to order a test or write a prescription than explain to a patient why they are not being treated, and of course, defensive medicine. Another reason is "technology creep." After a device is approved for use with a high-risk population in which there is a proven benefit, its use often expands to lower-risk groups in which the benefit does not outweigh the risk.[15]

Evidence suggests that providing excessive health care service is most likely to occur in situations in which there is not strong evidence to document the benefit and harms of the service.[16] The *Archives* aims to address this deficit by publishing articles that provide evidence that performing "more" of certain health care activities results in "less" health. Appropriate articles should compare strategies that provide more health care service with those that

provide less and should include a comprehensive assessment of both benefits and harms. We will also publish commentaries on these articles and clinical vignettes illustrating how more care can lead to worse outcomes. Our hope is that these vignettes will generate future studies on ways to do more by doing less.

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