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# ANALYSIS

## Intolerance of error and culture of blame drive medical excess

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### Abstract

**Jerome R Hoffman** and **Hemal K Kanzaria** argue that efforts to reduce overdiagnosis and overtreatment should focus on changing professional and public attitudes towards medical error and uncertainty

There are many reasons why physicians engage in overtesting and overtreatment. Much emphasis has been placed on perverse financial incentives that reinforce such behavior, as well as on commercial marketing efforts designed to create demand for more testing, diagnosis, and treatment.<sup>1-5</sup> Physicians themselves mostly cite fear of legal (malpractice) claims as the primary driver of excess,<sup>6,7</sup> but less attention has been paid to other drivers, whether at the individual or medical societal level. We believe that intolerance of both uncertainty and error—among physicians, in the larger medical culture, and in general Western culture—may be the most important reason that physicians engage in medical excess. Both need to be confronted if we are to tackle the problem of “too much medicine.”<sup>8,9</sup>

### Denial of medical fallibility

“To err is human,” and a modicum of error in a decision making process as complex as acute medicine is unavoidable. The best protection against harm from error is searching for and identifying errors and “near misses” so that we can create systems to catch or mitigate them.<sup>10</sup> The medical culture of shame and blame, which can lead practitioners to deny and hide errors, is therefore counterproductive. Nevertheless, this culture has been a fundamental part of Western medical training for generations. It has also fed the pretension that modern medicine is based on perfected science, which in turn implies that any error, and indeed any adverse outcome, represents unacceptable failure. This pretension has also been sold to the public.

The widespread belief in the boundless capacity of medical science is one of a series of myths, both in modern Western medical culture and in society at large, that underpin our demand for perfect results and our lack of tolerance for inevitable morbidity and mortality. Physicians are taught from early in training to take personal responsibility for any “mistake” that occurs, while “mistake” has mostly been redefined as “the

outcome was less than ideal”; a bad outcome is thus typically assumed to reflect a bad process. Furthermore, we are programmed through repeated socialization to feel guilty and ashamed when our patients are harmed. Our resultant drive to be perfect, and the related “quixotic quest for certainty”<sup>11</sup>—neither of which is remotely attainable—dovetail with other largely unquestioned but certainly questionable societal shibboleths such as “more is better,” “information is power,” “technology can solve all our problems,” and, ultimately, “death is optional.”

### Role of defensive medicine

Physicians routinely assert that defensive medicine—defined as deviation from sound medical practice because of fear of liability—is the leading cause of medical excess.<sup>6,7</sup> In a well done survey of a random stratified sample of physicians practicing in six high risk specialties, over 90% of 824 US physicians acknowledged engaging in defensive medicine.<sup>7</sup> This primarily involved ordering unnecessary diagnostic tests and procedures (59%), prescribing more drugs than indicated (33%), and referring patients more often than necessary (52%).<sup>7</sup> In another recent survey study of US emergency physicians, 97% of respondents admitted ordering advanced imaging studies that they thought were medically unnecessary, asserting that fear of litigation and fear of missing a low probability diagnosis were the primary contributors.<sup>6</sup>

Reform of malpractice law may therefore be necessary if we wish to reduce overdiagnosis and overtreatment. Medicolegal systems punish perceived sins of omission far more frequently than any other type of “error,”<sup>12</sup> which incentivizes “doing more” as a strategy for lowering legal risk. There is substantial evidence, however, that malpractice reform would be far from sufficient to drive this change. Studies assessing reforms enacted in the US to reduce the risk of litigation show that they have had a limited effect on defensive medicine and costs.<sup>13-18</sup> One of the most widely cited investigations in support of reform found a 5-9% reduction in medical expenditures.<sup>19</sup> However, this study has limited generalizability because it was restricted

to elderly inpatients with serious cardiac illness in the late 1980s; subsequent research with greater external validity has found contrary results.<sup>17 18</sup> Furthermore, physicians' fear of malpractice may not decrease even when tort reforms make the risk of a lawsuit objectively low.<sup>14</sup> Additionally, defensive medicine and medical excess clearly existed long before the threat of malpractice was nearly as powerful as it is today, and it also exists in many countries where such threat remains small, including in countries such as New Zealand that have a no fault system.<sup>20</sup>

This does not mean that there is no need to change the malpractice system in the US and others countries with a similar approach. These legal systems promote a culture of blame, regardless of how much they contribute to overuse.<sup>21</sup> The projected career risk of facing a malpractice claim is far from trivial—it is 99% for US physicians in the highest risk specialties and 75% for those in lowest risk specialties<sup>22</sup>—and physicians' behavior is influenced by the desire to avoid the hardship and emotional toll that occurs when a lawsuit is served. The financial burden associated with defensive medicine is also substantial. The most rigorous study estimated that the entire US medical liability system costs \$55.6bn (£34bn; €43bn) annually, with defensive medicine contributing to over 82% (\$45bn) of this amount, compared with only 18% for direct costs of indemnity payments, legal expenses, and lost clinician work time.<sup>23</sup>

Despite all this, the US malpractice system, among others, fails to achieve either of its main goals—it neither accurately compensates patients who are injured as a result of negligence nor routinely restricts the practice of physicians who provide negligent care.<sup>21 23-26</sup>

## Action to change attitudes

Because the beliefs that drive medical excess are almost foundational in modern Western society, it will not be easy to change physician behavior. Certainly, however, we must try to change both the incentives that currently reward overtesting and overtreatment and the disincentives of public shaming and potential lawsuits whenever a diagnosis is “missed” or a possible treatment withheld. But given the evidence that malpractice reform by itself is unlikely to stop overdiagnosis, we must also examine other ways to overcome physician drivers of medical excess. Fortunately, several such efforts are already under way.<sup>27</sup>

The National Institute for Health and Clinical Excellence in the UK spearheaded the initial efforts, forming a “do not do” list consisting of over 950 services that should be discontinued completely or not used routinely.<sup>28 29</sup> The American Board of Internal Medicine more recently initiated the Choosing Wisely campaign, and over 60 specialty societies have each identified a list of the top five low value tests, treatments, or services common in their discipline.<sup>30</sup> A group from the Australian government department of health similarly identified 156 potentially unsafe, ineffective, or inappropriate services listed on the country's Medicare Benefits Schedule.<sup>31</sup> Though these initiatives do not specifically deal with intolerance of uncertainty, they are a commendable first step towards reducing overuse stemming from cultural demands for perfection in medical practice. Further attempts to integrate such efforts into performance measures for physicians might increase their effectiveness.<sup>32</sup> The outreach efforts of medical journals, including *JAMA Internal Medicine's* Less is More section and *The BMJ's* Too Much Medicine campaign ([www.bmj.com/too-much-medicine](http://www.bmj.com/too-much-medicine)), as well as the recently initiated preventing overdiagnosis conferences ([www.preventingoverdiagnosis.net](http://www.preventingoverdiagnosis.net)), will also help.

Another approach to help change physician behavior has been to involve patients in the medical decision making process. Though the primary goal of shared decision making is to incorporate a patient's values and preferences into healthcare decisions, this requires the patient to understand the uncertainty attached to each benefit-harm profile.<sup>33</sup> Several studies have shown that decision aids and shared decision making programs can lower healthcare costs and usage while maintaining high quality care—for example, reducing the choice of discretionary surgery and aggressive work-ups for patients with chest pain.<sup>34-36</sup>

But we need to go beyond these ideas and start to change the culture of medicine, and even the wider culture. This will require us to be more open about the inevitability of failure, and even of error, and encouraging both the profession and the public to acknowledge and start to define an “acceptable miss” rate. Physicians have long enjoyed enormous respect from the public—and despite our protestations to the contrary, have enjoyed being seen as almost god-like, up until the moment when we wonder why we are blamed for not in fact being able to perform miracles. Although we must truly be willing to give up pretensions to omnipotence, we should continue to welcome the moral authority that our society continues to bestow on us and use it to educate each other and the public—that putting a man on the moon is far easier than preventing the human body from failing; that “information” outside of an appropriate clinical context, or information we do not understand, is more likely to cause harm than benefit; that “catching disease early” does not always translate into better patient oriented outcomes; and, finally, that more is certainly not always better.

Contributors and sources: JRH teaches students, residents, and fellows both clinical medicine and health services research. He has published extensively and spoken widely on the topic of overdiagnosis and overtesting. HKK is a practicing emergency physician and conducts research promoting patient and physician engagement in efforts to reduce overutilization. Both authors contributed substantially to the development of this article, drawing from their reading of the literature and their experience within the US healthcare system. JRH is guarantor.

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### Key messages

- A zero tolerance for error and uncertainty drives the culture of overdiagnosis and overtreatment
- Although often touted as the key to reducing medical excess, malpractice reform will not be sufficient to resolve this problem
- Addressing the widespread intolerance of uncertainty will require a cultural change, both within the medical profession and by the public

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