Advice

Suppose you turn on the television just in time for the latest medical advice, delivered by a glib, attractive host reporting new research. Should you heed the advice or perhaps be a bit more skeptical? As our writer shows in the following, the answer may not be as simple as first thought.

Letter to the Editor

At least several times daily I am bombarded with medical advice beginning with the words “According to the latest medical research [published in ABC journal], all living beings should do XYZ.” Regardless of whether the words originate in print, mass media, or the Internet, my immediate question is “How can I tell if the advice is trustworthy?”

Call me a skeptic, but I have seen far too many times the “latest” advice one day conflicted by “ground breaking” advice the next. Even when the source appears credible, something is inevitably lost, or even distorted, in translation. I am savvy enough to judge the appropriateness of advice in my medical specialty, but must admit I can be readily deceived when drifting from my area of expertise.

Now please don’t get me wrong: I am not an unabashed skeptic and curmudgeon. I have simply tired of the biased, distorted, and deceptive advice that is so ubiquitous when research is commercialized. Not just a mere annoyance, putting mass appeal and media ratings above unadorned, humble reporting has real potential to do harm.

I have brought this question, and concern, to you, as the editor of a prestigious medical journal, because it is the very source which distinguishes man from animals.”1 What has changed since Osler quipped more than a century ago that “The desire to take medicine is perhaps the greatest sophistication, its spokespeople with other evidence, and its consistency. As a medical journal editor, I view media attractiveness as a double-edged sword. Yes, it is wonderful to have someone care about—and to disseminate—what you publish, but once the content is whisked away by the media all bets are off. At best the message will stay faithful to the truth, garnering well-deserved attention for the authors and journal; at worst the information will be regurgitated out of context, extrapolated far beyond justification, and morphed into advice that could be harmful if heeded.

Now one could argue that this endless deluge of medical advice is self-inflicted by a public obsessed with health, fitness, and quick fixes, not to mention a pervasive thirst for pills, potions, and supplements to replace illness with vitality. Little has changed since Osler quipped more than a century ago that “The desire to take medicine is perhaps the greatest feature which distinguishes man from animals.”1 What has changed, however, is the multitude of rostrums—natural and synthetic—that inundate the public and the ruthless efficiency with which advice about them can be delivered through media outlets.

So how can you distinguish adroit advice from biased banter? By assessing 4 key aspects of the message: the source, the spokesperson, its consistency with other evidence, and its relevance to your particular situation:

1. Source. Always seek the source of medical advice. Trustworthy advice comes from original research published in a peer-reviewed journal. Be wary of pilot studies, unpublished reports, advice from secondary sources (eg, reviews, newsletters, or the lay press), and preliminary research at medical meetings. Not all facts are created equal and some are

Editor’s Response

Medical advice is everywhere: radio, television, newspapers, magazine articles, and—perhaps more than all other sources combined—the Internet. Regardless of how mundane the original content, editors and producers work masterfully to spin an engaging story, with varying degrees of poetic license and varying degrees of relevance to the study, research, or publication on which it is purportedly based.

Here’s the typical scenario: Research published in a journal, or presented at a meeting, catches the eye of an eager journalist who envisions a story with mass appeal. The ingredients for compelling advice are then carefully assembled: an author (or investigator) from the research, one or more “experts” to put the findings in context, a patient (or family) to add a humanistic—yet biased and anecdotal—spin, and finally a charismatic spokesperson (or writer) who may have limited knowledge of the subject at hand.

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Clearly not worth the paper, airwaves, or html code on which they appear.

2. **Spokesperson.** Be certain the person delivering the advice is credible. Crafting advice means supplementing facts with values, nuance, and insight. An artful spokesperson injects just enough of each to make facts understandable; potential harms and benefits get equal billing and are dutifully compared with alternative interventions. This most often occurs with an independent medical professional, not someone who gains directly from increased product sales or enhanced media ratings.

3. **Consistency.** Look for a consistent body of evidence, not individual studies. Advice based on a single study, small studies, or “average” results of widely varying studies are intriguing but not necessarily valid. Sound advice is based on the totality of evidence, which is ideally robust, plentiful, and consistent. Some online detective work is often required to see how the advice rendered fits with preceding work, ideally in the context of a systematic literature review.

4. **Relevance.** Confirm the advice is truly relevant to your particular situation and circumstances. The most relevant advice comes from clinical research on living patients in circumstances similar to your own. Passionate advice based on laboratory or animal studies cannot be applied directly to humans, regardless of how innovative or exciting it may seem. Further, careful study is required to demonstrate safety and efficacy, using large, randomized trials with patient-based outcomes.

To illustrate the aforementioned principles, let us consider 2 contrasting examples. Your ears perk up when your favorite television doctor, the charismatic host of the “Doctor Know-It-All Show,” trumpets new research that freeze-dried horse dung (FDHD) improves memory and learning. To drive home the point, one of the researchers, who also markets the product, appears in a pristine white coat to offer expert opinion. We see firsthand how laboratory mice, the research subjects, quickly navigate a complex maze when given FDHD compared with placebo. The chemical structure of FDHD is shown with a cartoon of how it binds to nerve cells in the brain to boost function. Last, our doctor host reiterates the ground-breaking nature of the research and is kind enough to artfully spokesperson inject just enough of each to make facts understandable; potential harms and benefits get equal billing and are dutifully compared with alternative interventions. This most often occurs with an independent medical professional, not someone who gains directly from increased product sales or enhanced media ratings.

Now let’s suppose you are blessed with sound advice, from a reputable source, communicated by a trustworthy spokesperson with due regard for consistency and relevance. Outcomes are only credible if they exceed what would occur in an untreated control or comparison group. As described by Oliver Wendell Holmes: “This is the way it happens: Every grown-up person has either been ill himself or had a friend suffer from illness, from which he has recovered. Every sick person has done something or other by somebody’s advice, or of his own accord, a little before getting better. There is an irresistible tendency to associate the thing done, and the improvement which followed it, as a cause and effect. This is the great source of fallacy in medical practice.” And this
fallacy extends to the media when improvement after therapy equates with improvement because of therapy.

Given the nebulous mix of facts, fallacy, and distortion that often permeates medical advice, especially when the media is involved, the best advice may be perennial skepticism. As cautioned by the ancient Roman statesman Cicero, “Nobody can give you wiser advice than yourself.”6 Hopefully the approach outlined in this brief editorial will facilitate some healthy due diligence when the next installment of seductive medical advice comes your way.

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References