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When Medicine Refuses to Admit It Was Wrong

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Medicine has always involved uncertainty, but we do not always admit this as openly as we should. We are trained to make decisions under pressure, often with incomplete information and little time to weigh the consequences. Patients look to us for answers, families want reassurance, and our colleagues expect us to be confident in our actions. Still, history shows that some treatments we once thought essential turned out to be ineffective or even harmful.

After over forty years in medicine, much of it spent caring for critically ill patients, I have seen many treatments rise and fall in popularity. I have watched medications hailed as breakthroughs, procedures adopted as standard practice, and recommendations defended passionately, only to be questioned when new evidence appeared. This is not a failure of science; in fact, it is how science is supposed to work. The real problem comes when we are so attached to a belief that we ignore evidence that challenges it.

Consider one of the most instructive examples in cardiovascular medicine. For years, physicians recognized that patients experiencing frequent ventricular premature contractions following myocardial infarction were at increased risk of sudden cardiac death. It seemed entirely reasonable that suppressing these arrhythmias would improve survival. Antiarrhythmic medications such as encainide and flecainide did exactly what physicians wanted: they reduced abnormal electrical activity. Unfortunately, suppressing the arrhythmia did not mean saving the patient. The Cardiac Arrhythmia Suppression Trial, published in 1989, demonstrated increased mortality among patients receiving these medications compared with placebo. The treatment was correcting an abnormal measurement while worsening the outcome that mattered most. (1)

The lesson was important, but I am not sure we have truly learned it. Just because an intervention makes sense biologically does not mean it is helpful. Improving a lab result, fixing an ECG abnormality, or normalizing a vital sign does not always lead to longer life or better quality of life. Sometimes, we focus so much on what we can measure that we forget to ask whether changing it actually helps our patients.

A similar story unfolded with hormone replacement therapy. Observational studies had suggested that postmenopausal hormone therapy might protect women against cardiovascular disease. The biological rationale was attractive, and many physicians prescribed hormones with the expectation that they were providing benefits extending beyond relief of menopausal symptoms. However, the Women's Health Initiative randomized trial reported in 2002 found that the specific combination of conjugated equine estrogens and medroxyprogesterone acetate increased several important risks, including coronary events, stroke, pulmonary embolism, and breast cancer, despite benefits in other outcomes. (2) Subsequent research has provided a more nuanced understanding of hormone therapy, particularly regarding age, timing, formulation, and indication. Nevertheless, the original lesson remains relevant: observational associations should not be confused with proof that an intervention improves clinical outcomes.

Critical care medicine gives another example that I know well. At one time, tight glucose control became a key part of ICU care. The reasoning made

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sense: high blood sugar was linked to worse outcomes, and a major trial showed better survival with intensive insulin therapy in surgical ICU patients. (3) Many clinicians started aiming for near-normal glucose levels as a treatment goal.

Then the NICE-SUGAR trial was published. In over 6,000 critically ill patients, intensive glucose control led to higher 90-day mortality compared to standard care and caused much more severe hypoglycemia. (4) What seemed like a good idea did not translate into better outcomes in this large, heterogeneous population of critically ill adults. This reminded us again that the human body is much more complex than our models suggest.

These are not just rare stories from the past. In 2013, Prasad and colleagues reviewed ten years of research in a top medical journal and found 146 cases in which published evidence contradicted established medical practices. (5) This introduced many doctors to the idea of medical reversal, where a common practice is later shown to be no better than an older or simpler approach. The exact number depends on definitions and what is studied, but the main point is clear: there is more uncertainty in medicine than our guidelines and textbooks often admit.

Why, then, is changing our minds so difficult?

Part of the reason is human psychology. Doctors are not immune to confirmation bias, pride, or the discomfort of admitting mistakes. We spend years learning certain ways to treat disease, build routines around them, teach them to students, and sometimes even base our professional identity on them. When new evidence challenges these beliefs, changing our minds can feel personal, not just intellectual. Still, no matter how much experience we have, it cannot prove cause and effect by itself.

There are also institutional barriers. Once a treatment is built into clinical routines, payment systems, hospital rules, and guidelines, it can be much harder to stop using it than it was to start. Medical literature now recognizes this issue through the study of deimplementation, which means reducing or stopping interventions that do little good or cause harm. (6) More recently, researchers have stressed the need for trials that test whether cutting back or stopping certain treatments can keep or improve patient outcomes. (7)

This brings up another uncomfortable point. We usually get recognition for introducing something new, not for showing that an old practice is unnecessary. New devices, drugs, or procedures can create excitement, lead to publications, and attract commercial interest. Proving that a common treatment adds little value rarely gets the same attention. Still, stopping ineffective care can be just as important as finding new treatments.

None of this is meant as an argument against clinical guidelines, randomized trials, or evidence-based medicine. In fact, the examples here show why careful clinical research is essential. Without randomized trials, some of these practices might have continued for years. But evidence-based medicine should be a process of ongoing evaluation, not a set of conclusions that doctors must accept forever.

Guidelines are interpretations of the best available evidence at a given time. They are helpful, often necessary, and usually improve the consistency and quality of care. But they are not unchanging scientific facts. Recommendations vary in how certain they are, and a strong recommendation does not always mean the evidence behind it is strong. Good doctors need to know not just what a guideline says, but also why it says it, who was studied, and where uncertainties still exist.

We need to apply the same careful thinking to those who question established medical practices. Thinking independently does not mean every new idea deserves acceptance, and disagreeing with a professional group does not automatically make an alternative view correct. A theory backed only by stories is still just a theory backed by stories. If we require strong evidence for standard treatments, we should expect the same for new or unconventional ones.

I think this distinction is important today, when scientific disagreements can quickly turn into personal, institutional, or political arguments. When we see an unexpected result, we should respond with curiosity, careful review of the methods, and, if needed, repeat the study. We should not dismiss results just because they are inconvenient, or accept them just because they go against the mainstream. Science does not work well when who did the research matters more than how good the research is.

As Editor-in-Chief of the *Journal of Independent Medicine*, I see this as a key responsibility of scientific publishing. Journals should be a place for well-supported findings, thoughtful criticism, and real scientific debate. Peer review should judge the methods, interpretation, transparency, and relevance of a study. It should not just check if a paper says what reviewers want to hear. At the same time, editors must reject unsupported claims, overstatements, and poor methods, no matter who submits them.

Maybe the most important lesson for doctors is that humility and confidence can go together. We need to act decisively for our patients, but also be willing to rethink our choices when new evidence appears. We should teach younger doctors that uncertainty is not something to be ashamed of, and that changing your mind when better evidence comes along shows maturity, not weakness.

I often wonder how many patients in history got treatments their doctors truly thought would help, only for later generations to find out they did not. Those doctors were not always careless or uncaring. Many were doing the best they could with the knowledge they had. We should understand that, just as we should be willing to question our own beliefs for the sake of our patients today.

The real question is not if medicine will be wrong again—it will. The real question is whether we will spot our mistakes soon enough, look into them honestly, and fix them before more patients are harmed.

Patients do not need doctors who are always right. They need doctors who care enough about being right to admit when they are wrong.

Conflict of Interest

The author serves as the Editor-in-Chief of the Journal of Independent Medicine, and reports no conflicts of interest in preparing this manuscript.

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