

Not the Last Word: *Primum Non Nocere* Is Harmful. *Primum Noce Apte* May Help

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The adage *primum non nocere* or “first, do no harm”—long associated with the Hippocratic Oath—is a misguided principle. In fact, these words are not part of the oath at all. Rather, the English physician Thomas Sydenham likely composed this Latin phrase [6].

The practice of medicine is always and everywhere a tradeoff between costs and benefits. All medical treatments—from cancer chemotherapy that can kill

normal cells, to bandages that might irritate the skin—have potentially adverse effects.

Orthopaedic surgeons know this well. Load bearing stimulates fracture remodeling, but too much load can disrupt fracture healing. Immobilization protects injured ligaments, yet it invites arthrofibrosis. Anticoagulation prevents thrombosis but promotes hemorrhage. And so on.

That ubiquity of potential harm from medical care creates a paradox. Specifically, if all treatments have potentially adverse effects (and they do), and if all potential harms are to be avoided (as *primum* demands), medical care cannot be rendered: Even the most obviously net-beneficial steps must be outlawed because of their potential to do harm. For example, the Heimlich maneuver can break a rib [3]. That alone should preclude its use.

Happily, sane people have not let the risk of a rib fracture stop them from performing the Heimlich maneuver, and thousands of lives have been saved as a result. In everyday practice, the Hippocratic/Sydenhamian standard is closer to “try to be helpful, not hurtful—especially if you can help it.” The rule against harm is only honored in the breach.

If inevitable harm is ultimately tolerated, a pithy maxim like *primum non nocere* seems, well, harmless. Yet it’s not harmless. The proscription against harm placed so prominently in the mission statement of our profession has at least three harmful effects.

First, too much concern about harm promotes defensive medicine. I have discovered, for example, that among geriatric patients with hip fracture, more than 25% had extensive preoperative testing, leading to delays to surgery, with testing almost never influencing treatment [2]. This over-testing is likely motivated by a well-intentioned desire to avoid perioperative complications, but it overlooks and undervalues the benefits that expeditious surgery can offer. (This pattern of practice is likely not motivated by a fear of malpractice litigation. An investigation of lawsuits related to hip fractures in the United Kingdom [5], for example, did not find any allegations of inadequate preoperative evaluation.)


Second, an emphasis on harm also distracts us from what really deserves attention: namely, medical error, independent of whether harm results. The main feedback mechanisms in medicine for improving care—morbidity and mortality (M&M) conferences and malpractice litigation—are triggered only by harmful events. Errors that miraculously don’t inflict damage easily pass through their net. As I have noted elsewhere [1], an orthopaedic surgeon

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Not the Last Word

who does not administer necessary postoperative deep vein thrombosis (DVT) prophylaxis may not get flagged in M&M unless and until his patient suffers a symptomatic DVT. Indeed, this poor practice could be repeated continually until harm results. And in a related point, when doctors aim to avoid harm completely—rather than simply minimize it—they'd be reluctant to invite patients to take the small risks that could lead to large improvements in medical care. Too much emphasis on harm can impede progress.

Third and foremost, a “do no harm” standard has deranged the thinking of lay people. The excessive executive responses to COVID-19, for instance, might be explained as harm aversion gone wild. The former Governor of New York, Andrew Cuomo, was no doubt overcome by harmophobia—and unburdened by cost-benefit considerations—when he closed businesses, banned funerals and hospital visits, and allowed only solitary recreational exercise. His comment, “If everything we do saves just one life, I'll be happy” [4], is the mantra of someone in thoughtless thrall to the “first, do no harm” ideology.

And yet because “first, do no harm” has such a powerful effect on thinking, it's not enough to simply remain silent when the phrase is incanted at graduation ceremonies and the like. The motto must be supplanted and replaced with a better version.

I propose for your consideration the following: “first, do harm appropriately,” or as translated by my amanuensis, University of Pennsylvania medical student and Latin scholar, Lori Jia: *primum noce apte*. And I think we need to use Latin words. It is true that, *ceteris paribus*, one should avoid using a foreign language when English will

do, but to replace the original effectively, an equally formal catchphrase is needed.

There are three principles imbedded in the three words *primum noce apte*. First, *primum noce apte* is written in the imperative. It's a call to action—to do, rather than to avoid. At times, the conservative option is indeed a surgical operation. Second, *primum noce apte* is a call to grace, reminding us that some risk of harm must be accepted if any care is to be rendered. Third, *primum noce apte* is a call to thought, for harm of the appropriate kind can be identified only with study and contemplation.

The right amount of iatrogenic harm is not zero. We need a medical mission statement that reflects this reality.

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I read Dr. Joseph Bernstein's column “Not the Last Word: *Primum Non Nocere* Is Harmful. *Primum Noce Apte* May Help” with great interest. I was immediately struck by the notion that it is prime time to replace the old dogma with a modern and better version. And it needs to be in Latin.

It takes certain personal traits to cut open human bodies. Anyone else doing this would be sent to prison, but surgeons are paid to do it. This clearly

creates some dissonance when reflecting on the often-cited phrase “first, do no harm,” which is used far too often without critical thought. In my daily practice, I often meet transplantation surgeons performing living donor organ transplantation, epitomizing this ambiguity. High-profile kidney donor transplantations from parent to child and living liver transplantations are part of modern medicine. These procedures target harm not only to the patient but also to a healthy third party, making it even more clear that the quote by Thomas Sydenham “*primum non nocere*” from the 17th century is no longer relevant considering 21st-century technology and techniques.

Dr. Bernstein thoughtfully discusses and dissects the tradeoffs between costs and benefits in our daily work. It becomes clear that the risk analysis built into practice is often tacit and not explicit. The list of unintended consequences is long. Apart from well-known examples from the field of orthopaedics and surgery, medication errors potentially affecting the outcomes of surgery must not be forgotten, as pointed out by Dr. Bernstein. Both undertreatment and overtreatment must be addressed and evaluated. When it comes to unintentional medical harm, medicolegal aspects are also important to consider when we reflect on the powerful impact on thinking that old quotes possess. Besides checklists, evidence-based medicine, and reimbursement models, critical thinking and reflection must not be overlooked. A new chapter in medical ethics is clearly also needed as we revamp yesterday's fashionable quote.

Primum noce apte frames the essence and underpins the many layers of medical harm that must be kept in mind.

Not the Last Word

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Dr. Bernstein makes excellent points that the phrase “first, do no harm” is not part of the Hippocratic Oath, and that all medical treatment risks some iatrogenic harm. It is a balancing act between the risks of not doing something for a malady and the consequences of inaction versus taking action and its potential risks. As Dr. Bernstein points out, the trend toward government-mandated medical decisions pushed for self-serving reasons by medical

manufacturers is only possible if every patient is the same. They are not.

I agree with Dr. Bernstein that essentially one may need to break some eggs to serve that medical omelet. However, I don't think the public will understand “do harm appropriately.” Nowadays, with no room for explanations and insight, a sound bite is all that's contemplated, and this sounds like a doctor will exclusively do harm in some fashion. I do not think this will engender the trust required for a return to personalized care.

Instead, I suggest “first, know the harm.” This statement would cover risks arising from not pursuing treatment, as well as risks associated with the interventions physicians perform.

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education. *Clin Orthop Relat Res.* 2016; 474:882-886.

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