STAFF PERSPECTIVE

Primum Non Nocere: An Impossible Task in Medicine?

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Key Points

- Are clinicians growing overly cautious in the name of "avoiding harm"?
- Overdiagnosis is a modern medical phenomenon underlied by expanded disease definitions, uncritical adoption of population screening and fear of uncertainty and new technology.
- International coordination is needed to improve current diagnostic standards and to promote effective deprescribing.
- Sometimes, avoiding harm means avoiding action.

Keywords: Primum non nocere, overdiagnosis, deprescripting, decision-making

Primum non nocere: "first, do no harm". The ethical pillar of non-maleficence dictates that the benefits of a treatment must always outweigh the potential for harm. For healthcare professionals, every decision carries its weight.

The principle is honourable in its optimism. However, is such an ideal truly feasible? In the modern age of readily accessible diagnostic imaging and pharmacotherapy, it is essential to consider whether clinicians might be growing overly cautious in the name of "avoiding harm". A recent shadowing experience at a medical outpatient clinic offered me eye-opening insight into the increasing levels of patient anxiety, hospital expense and lengthy wait lists induced by unnecessary ordering of scans and overprescription of drugs. Although it might seem counter-intuitive, there is such a thing as *Too Much Medicine*[1].

The BMJ's *Too Much Medicine* initiative pinpoints overdiagnosis as a rapidly expanding problem of major clinical significance1. Overdiagnosis is defined as "the diagnosis of a condition that, if unrecognised, would not cause symptoms or harm a patient during his or her lifetime". The causes are many and varied, including expanded disease definitions, uncritical adoption of population screening, fear of uncertainty and new technology, increased patient expectations, and litigation. In an increasingly automated world, it's no surprise that patients and doctors alike are seeking to batten down the hatches with imaging and prescriptions. Why would one rely on flawed human instinct, when the comforting security of a scan is just one click away? Surely failing to take advantage of diagnostic technology is a direct violation of the *primum non nocere* maxim? Herein lies the cautious, almost-justified logic behind the modern epidemic of overdiagnosis.

Among other factors, overdiagnosis is increasingly recognised as a consequence of expanded disease definitions. An article published in 2015 by the BMJ entitled "Overdiagnosis of bone fragility in the quest to prevent hip fracture" found that a new definition of osteoporosis introduced in 1994, with expanded indications for pharmacotherapy, led to at least double the number of candidates for drug treatment with current fracture risk predictors[2]. Yet a continual decline in hip fracture rates, with most occurring in people without osteoporosis, belies the effectiveness of this strategy. Moreover, the label "at risk of fracture" and the side effects of drug treatment (e.g. gastrointestinal problems, osteonecrosis of the jaw) can impose significant psychological and physical burdens on patients. This illustrates how overdiagnosis, in the name of "avoiding harm", can actually prove highly detrimental to patient wellbeing.

Expanded disease definitions are not the only culprits underlying overdiagnosis. Fear of uncertainty and uncritical adoption of population screening also share part of the blame. The "absolute certainty" of advanced diagnostic tools is an illusionary temptation. Ordering a scan for every potential at-risk patient is not only impractical but highly dangerous. Precious time is often wasted on low priority rule-out scans, while patients in dire need of care are forced to wait months for a slot. I witnessed this firsthand in the cardiology clinic: a patient requiring a CT scan for a possible congenital heart defect was informed that their wait would be around 8 months. Meanwhile, those receiving care in private clinics are able to order scans within weeks. It is imperative that we weigh the urgency and necessity of scans prior to

ordering; otherwise, we risk severe overdiagnosis in the name of "doing no harm".

Combating over-diagnosis is a complex and ongoing battle, precluded by lack of awareness of the problem and confusion surrounding terminology. International coordination is needed as a preventative measure to improve clarity of terminology and current diagnostic standards for disease definitions. As a more immediate course of action, overprescription is most effectively tackled through "deprescribing": the process of withdrawal of an inappropriate medication, supervised by a health care professional, with the goal of managing polypharmacy and improving outcomes[3]. General practitioners (GPs) are optimally situated to carry out such a process, armed with a long-standing relationship with patients and access to full medical history. However, effective deprescribing is often prevented by a desire to avoid conflict with other healthcare professionals. According to the BMJ's ECSTATIC trial, many GPs reported that their decision to stop preventive cardiovascular medication was influenced by concerns over specialist disapproval[4]. In addition, lack of proper guidelines and trial evidence for deprescribing has led to significant GP hesitancy in carrying out the process. These barriers illustrate how a desire to "avoid harm" (e.g. avoiding conflict or the initiation of a "poorly supported" process) can paradoxically hinder effective patient care. Further research is needed to provide better trial evidence and more detailed guidelines for deprescribing.

Overall, *primum non nocere* is a noble ideal, well worthy of its stance as an ethical pillar. However, "perfect" implementation of this principle is an impossible goal in modern medicine, where overdiagnosis has the potential to cause more harm than good. Discerning the appropriate use of modern diagnostic tools is a critical skill for every healthcare professional to develop. Sometimes, avoiding harm means avoiding action.

Henry Marsh said it best in his biography *Do No Harm: stories of Life, Death and Brain Surgery*[5]: "The operating is the easy part, you know," he said. "By my age you realize that the difficulties are all to do with the decision-making". ◄

Declarations

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