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MONKEY SEE MONKEY DO: RESILIENT DOGMAS IN SURGERY

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Abstract

This is a reflection on my own experience over the course of almost five decades since I started medical education. Despite the giant leaps in medical practice, and medical eduction, it is unlikely that dogmas are dying out anytime soon. It is incumbent upon us to challenge the status quo, and exploit our own critical thinking in evaluating existing literature to refuse the prevailing and resilient dogma.

Keywords: Dogma, medical practice, medical education

Five decades went by, and my journey of trying to overcome as many dogmas in surgery as possible has not come to an end. Suffice it to say, I have witnessed enormous changes in the way we understand the pathophysiology of disease, and in effect, the evolution of better means of management. Even with the lack of supporting evidence, dogmas still dominate our medical practice[1] despite the unravelling of new evidence to the contrary. In 2019 alone, Eric Topol generated a list of 15 newly published scholarly articles that challenged the prevailing dogmas.[2]

Oxford dictionary defines dogma as," a principle or set of principles laid down by an authority as incontrovertibly true."

Dogma in medical practice and medical education goes as far back in history as medicine itself. Medical practice and medical education go hand in hand. No new practitioners can

be born without learning from those who preceded them. The pillar of medical education then and for a long time was the “apprenticeship model” that was deeply rooted in ancient Mesopotamian culture. Medical care was delivered by the “asû” the healer, and the “āšipu” the priest. Both acquired their skills through an “apprenticeship model” with no formal schooling. [3]

Formal schooling in medical education can be traced back to the 4th Century AD when the Mesopotamian schools of Edessa and Jundi Shapur were established. They are considered the prototypes of modern medical schools. Campuses were built to encompass hospitals and classrooms. The physicians would instruct their trainees in the classrooms and then attend to the admitted patients for hands-on experience.[4] Despite this leap in medical education and patient care, the limitation of knowledge during that period provided a fertile land for entrenchment and propagation of dogma that continued throughout dark ages.

Renaissance in Europe was a period of awakening and innovation when artists, physicians, and entrepreneurs joined forces in making medical knowledge available and accessible to those seeking medical education. A point in case is the drawings of Leonardo da Vinci, and the incredibly accurate illustrations of Vesalius that challenged the accepted norms and revolutionized our understanding of human anatomy. It is considered by many historians as a true “re-birth” of medicine.[5]

In the US, medical education has come long ways since the Flexner report of 1910. It was the first major blow to dogma in medicine through mandating rigorous scientific experimentation in biological sciences and its translation into clinical practice.[6] While promising, it failed to close the gap between pragmatism and dogmatism.

Dogma in surgery is born out of lack of solid scientific evidence, which makes the practicing surgeons default to what they have learned from their mentors as expert opinions. With practice, surgeons develop their own personal biases and dogmas, which they transfer to their learners, and the saga continues. The knowledge and skill gained from mentors get propagated and probably glorified from one generation to the next when there is no challenge to the “status quo”. Surgeons in particular are reluctant to change

when their practice seems to be doing alright," this is how I have always done it." Such a stance, to some degree, still exists today. Sometimes evidence is even overlooked or misinterpreted.[7] Hence the difficulty or failure in eliminating or purging the obvious.

In recent years, clinical practice and medical education took new and drastic steps premised to improve science and make sure it is carried to the next generation in objective and measurable way, and by extrapolation, addressing dogmas in both fields.

In clinical practice, national and international professional leaders meet on regular bases to collaborate and reach a consensus, create and updated "Practice Guidelines" after reviewing the best available data. Practice guidlines are meant to standardize practice among physicians. With so much data coming out almost on daily basis, physicians find themselves unable to catch up with the volume, let alone the ability to subject the contents to critical evaluation. Thus, they have no choice but to rely on published guidelines that are rife with personal experience, expert opinion, and deeply entrenched and inherited dogma.[8] Guidelines rely on the available data, and its interpretation by the panelists. At best, they can be used as a yard stick against which individual practices can be measured. Practice guidelines may service a good resource for medicolegal purposes, but very little beyond. Guidelines have no means to discover new science, they simply list what is in existence, and how it is interpreted by "experts", leaving behind large gaps of unanswered questions- an environment in which dogma thrives.

In medical education, a new educational strategy- competency-based medical education, has been in effect since the early 2000s driven by the ACGME's outcome project. The focus has shifted from time-based education to a focus on the ability of the learners to demonstrate key elements of solid medical practice.[9] Such a shift entails a fairly complex process that has its own challenges from the ability to secure adequate resources, trained staff, administrative support, developing solid evaluation strategies, and the alike. This model while is extremely appealing in theory, it focuses on achieving certain metrics that meet only minimal standards and would not encourage a high level of critical thinking- a fertile land for acquiring dogmas at a higher level.

I am nor oblivious to the fact that dogma is unlikely to die out anytime soon when we are limited in what we know, and we do not have an answer to every question we encounter.

However, I bring up dogma as a stark reminder for all of us to challenge the status quo, evaluate the existing literature, and exploit our own critical thinking to refute prevailing and resilient dogmas to the best we can.

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