Are We All Quacks?

Doctors allow one to die
The Charlatans kill
Jean de la Bruère

FEW TERMS in medicine are as insulting as *quack* or *charlatan*. They imply a sinister, evil, uninformed practice encountered, so, we hope, only in the Dark Ages of medicine.[1] But how sure can we be that quackery belongs to the past? What is a quack anyway?

There is no single quality to characterize the term. Dictionaries are also not very helpful: "unskilled practiser of medicine,"[2] "ignorant or dishonest practitioner."[3] W. T. Jarvis[4] of the US National Council Against Health Fraud defines a quack as someone who "promotes therapies known to be false" and who "profits from doing this."

Intriguingly, this definition might put many physicians close to the ranks of quacks. In medicine, we have to deal the best we can with uncertainty to reassure patients. About 15% of our clinical practice is still scientifically unproved.[5,6] Clinical medicine seems to consist of a few things we know, some things we think we know (but probably do not), and many things we do not know at all.[7] Despite this uncertainty, we all promote and sanction unproved procedures by using them. Furthermore, earning a living, profiting, and exploiting can be difficult to differentiate. Often this may be a question of degree and, therefore, the discriminating power of the above 2 factors is limited. But maybe there are other, more subtle features that characterize a quack.

A monistic philosophy is typical for quacks. Usually a singular, at times fanatic emphasis relates to both the cause and the cure of disease. Dogmas of quackery attain the status of a religion. It is impossible to disprove a religion, and the greater the ignorance, the greater the dogmatism. During the late 19th century, for instance, the dogma of "autointoxication" stated that all diseases were caused by self-poisoning through toxic degradation products of the digestive process. The cure for all disease, therefore, was colonic irrigation in various guises.[8] Prior to this, the reason for all disease was believed to be an imbalance of the 4 body humors, and the cure for all disease consisted in bloodletting.

Quacks tend to focus on the mechanism by which their quackery is claimed to work, almost as if this emphasis could compensate for the lack of evidence that it works at all. Naive and apparently plausible theories are put forward while the clinical evidence is, at best, anecdotal. Quacks often take advantage of the disillusionment patients may have with medicine. This commonly takes the form of attacking others for being ineffective, harmful, or greedy.[9]

Quacks shy away from experiments that could be published and repeated. The void is usually filled with testimonials from past successes and embroidered by fancy theories. Quacks thrive on the rejection of science, but as soon as a shred of real evidence apparently speaks in favor of their notions, they exploit this particular aspect of research with quasi-scientific arguments.

Unprofessionalism may take all possible guises—anything from not knowing the essential facts (eg, about the adverse effects or limitations of their treatments) to aggressive advertising or not keeping proper records. The most incorrigible vice, according to Albert Camus, is ignorance that fancies knowing everything.

Quacks are keen to point out their unrecognized genius. Edison, Alexander Graham Bell, Nikola Tesla, or John Logie Baird were all ridiculed until their unique genius was eventually discovered. Without revolutionary ideas, mankind would still not have invented the wheel. The odds, however, favor the assumption that anyone proposing a revolutionary doctrine is a quack and not a genius. If it sounds too good to be true, it probably is.

Quacks can also be highly inventive, even to the point of creating a disease that does not exist. An example is the diagnosis of precancer states through iridology. The fact that iridology has been repeatedly shown to be invalid (eg, Knipschild[10]) does not deter charlatans. Strangely, the patient may feel happy, "cured" of a disease that she or he did not even know she or he had. Coronary thrombosis may be a case of a disease that only existed "on and off." It used to be synonymous with acute infarction in the 1950s. Later, it was laughed out of favor, and now its predominance is reestablished.[11]

Insincerity is sometimes suggested as a further characteristic of quacks. We like to think that quacks have no true interest in the health and welfare of their patients.[12] Yet, sincere practitioners can also be quacks. Sincerity, while making a quack socially more acceptable, will only make him or her more dangerous.[4]

Some of the aforementioned characteristics could, in one way or

another, apply to us—more likely, of course, to the colleague down the road. The quack is always someone else. The modern physician has become so confident in his or her guesswork that a danger exists of confusing personal opinion with evidence, or personal ignorance with genuine scientific uncertainty.[6] Opinions in medicine shift as new evidence emerges. For instance, prolonged bed rest after myocardial infarction has given way to early ambulation. Nitroglycerin used to be contraindicated in acute myocardial infarction, and is now routinely given.[11] In other areas, genuine uncertainty persists.[5,6] Take acupuncture, for instance: it is used in most pain clinics nowadays, but the evidence that it is effective in reducing pain is far from conclusive.[13] Often we may have nothing else to rely on than plausibility, experience, or simple medical common sense. Yet in other areas, evidence may be in disagreement with clinical practice. For instance, antibiotics are still often prescribed for bronchitis[14] or the common cold[15] with minimal benefit and considerable risks. This might be a case in which a plausible mechanism compensates for the lack of clinical evidence. Similarly, laser therapy is still used for musculoskeletal problems like tennis elbow, but has been repeatedly shown to be ineffective.[16] Vitamins are commonly given to prevent or treat respiratory tract infections; if anything, this increases the rate of infections.[17]

Are physicians who disregard solid evidence in this way automatically quacks? The reader is invited and encouraged to introspect and analyze this question. If nothing else, such reflection will provide some protection from becoming a quack. After all, self-criticism is probably the ultimate discriminator between quacks and ethical medical practitioners.

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