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Medical accidents: no such thing?

More precise terminology would help doctors to reduce harm

The use of the word "accident" in the title of the excellent new book *Medical Accidents*[1] stands in stark contrast to its abandonment in other disciplines, such as the study of traffic safety[2] . Fifteen years ago Doege argued in an editorial in the *New England Journal of Medicine* that it was time "for medicine to dispose of the idea of 'accident' and 'accidental injury'." [3] Others have also reasoned persuasively that the conceptual ambiguities encompassed in the word accident disqualify it from technical use, notwithstanding its near universal general use. [4] Yet its use in medical settings continues to mislead.

"Accident" conveys a sense that the losses incurred are due to fate and are therefore devoid of rational explanation or predictability. Yet the motivation to study subjects like traffic safety is to discover factors that influence the likelihood of occurrence of, and resulting harm from, "crashes," the preferred term. There are very few traffic related deaths for which the word crash is inappropriate (the minuscule fraction of deaths from drowning and fires not initiated by crashes). Some crashes are purposeful acts, including suicide[5,6] and homicide, for which the term accident would be inappropriate even in popular use.

The word crash indicates in a simple factual way what is observed, while accident seems to suggest in addition a general explanation of why it occurred without any evidence to support such an explanation. The word cause is also avoided[2] because it conveys the notion of a single cause in the deterministic sense in which the term is used in the physical sciences or engineering.

Suppose on a dark rainy morning a young man argues with his wife about the purchase of a sofa, leaves the house late for work in a rage, drives his poorly maintained car too fast on a badly designed poorly lit curve, skids, and is killed in a crash with a truck driven by an older driver. It is of little value to say that the death was "caused" by the car driver's youth or maleness, the truck driver's old age, the car's bald tires, the high cost of sofas, emotional stress, the non-use of a safety belt, inadequate enforcement of speed limits by the police, rain, or any other of the many factors which, if different on this particular occasion, would have prevented the death. What is important is to know what factors affect risk, and by how much, and to use such knowledge to reduce future risks.

In air transport, the word crash has achieved general public acceptance, especially as airport security procedures remind air travellers that crashes may indeed not fit the popular notion of accident. In many regards, air crashes differ fundamentally from car crashes, and may be more analogous to the medical case. In the medical and air transport cases the main decision makers are highly trained professionals, and rarely is there any egregious violation of elementary safety procedures, as commonly occurs when car drivers are drunk, violate speed limits, or jump red lights. Uunfortunately, it is too easy a step from identifying factors associated with losses in transport or medicine to adopting a narrow focus on assigning blame. Perhaps this is what gives "accident" its most potent appeal -- the sense that it exonerates participants from responsibility.

Adverse outcomes for medical procedures have an even wider range of potential explanatory variables than apply to the transportation crashes described above. A patient may die even though every aspect of the procedure was performed flawlessly in the light of present knowledge; death during a lengthy procedure may even be unrelated to the procedure or

the condition it addressed. In such casess detailed investigation would lead to no recommendations for change. At the other end of this wide spectrum is the possibility of professional malfeasance (see the paper by Graham Neale on p 1483[7]), and even purposeful harmful acts are not impossible. Unlike the airline pilot, medical professionals do not share the fate of those in their care. Even if the patient dies because the hospital burns down in the middle of the operation, this should still not be called an accident, because buildings catch fire for reasons.

As the issues in the medical case are more complex than in the transport case, the reasons for replacing the word accident by a more objective and crisp word are all the more compelling. While some might argue that this is a pedantic quibble to be dismissed by "What's in a name?", I think that the benefits of a more precise terminology would be substantial. The central issue is that “accident” conveys a sense that bad outcomes are to be explained in terms of fate and luck rather than a set of understandable, and possibly changeable, antecedents. The opportunities to reduce harm will increase if we keep uppermost in our thinking that "The fault. . . is not in our stars, but in ourselves."

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