Evidence

Evidence, broadly construed, is anything presented in support of an assertion. This support may be strong or weak.

Classification

see Evidence level

Systematic reviews of randomized controlled trials (RCTs) are generally considered the highest level of evidence for the relative effectiveness of interventions

see also Experimental evidence.

Direct evidence

The strongest type of evidence is that which provides direct proof of the truth of an assertion.

Indirect evidence

At the other extreme is evidence that is merely consistent with an assertion but does not rule out other, contradictory assertions, as in circumstantial evidence.

Clinicians' trust level of evidence 1 recommendations, issued on preponderantly solid randomized clinical trials (RCTs), to guide best practice decision-making. However, sometimes physicians following one CPG find themselves in a situation in which they do not follow another, issued on the same strong evidence base. The aim of Volovici et al. is to reflect on the consistency of recommendations in different guidelines (between-guideline consistency). They also consider within-guideline consistency (or durability), defined as the number of recommendations carried over from one edition to another in consecutive editions of the same CPG. For illustration purposes, they use two examples: hypertension guidelines and traumatic brain injury (TBI) guidelines. They conclude that just like research, CPGs also need to have between-guideline and within-guideline consistency (akin to the reproducibility of studies). Clinicians and researchers should take into account the lower consistency of guidelines that are not based on at least one strong RCT [1)].

see Evidence based medicine.

Evidence in Neurosurgery

Neurological surgery practice is based on the science of balancing probabilities. A variety of clinical

guidance documents have influenced how we collectively practice our art since the early 20th century. The quality of the science within these guidelines varies widely, as does their utility in positively shaping our practice. The guidelines development process in neurological surgery has evolved significantly over the last 30 yr. Historically based on expert opinion, as a specialty, we have increasingly relied on objective medical evidence to guide our clinical practice. We assessed the changing practice guidelines development process and the impact of scientifically robust guidelines on patient care. The evolution of the guidelines development process in neurological surgery was chronicled. Several subspecialty guidelines were extracted and reviewed in detail. Their impact on practice patterns was evaluated. The importance of evidence-based research and practice guidelines development was discussed. Evidence-based practice guidelines serve to chronicle multiple acceptable treatment options and help us move towards more standardized care for specific disease processes. They help refute false “standards of care.” Guidelines-based care supported by solid medical evidence has the potential to streamline patient care and improve patient outcomes. The guidelines development process identifies areas, issues, and strategies for which little medical evidence exists, as well as topics that need focused scientific investigation and future study. The production of evidence-based practice recommendations is a vital part of furthering our specialty. Guidelines development advances our science, augments the resident education process, and protects our practice from undue external influence [2].

1)
Volovici V, Steyerberg EW. Lost in translation between evidence and recommendations: Expert opinion is needed to define “level I”. World Neurosurg. 2021 Mar 25:S1878-8750(21)00465-4. doi: 10.1016/j.wneu.2021.03.095. Epub ahead of print. PMID: 33775869.
2)
Shank CD, Lepard JR, Walters BC, Hadley MN. Towards Evidence-Based Guidelines in Neurological Surgery. Neurosurgery. 2019 Nov 1;85(5):613-621. doi: 10.1093/neuros/nyy414. PubMed PMID: 30239922.