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FOCUS ON: Incorporation of Evidence

In order to prepare providers for the changes in accreditation/certification requirements related to Mainpro+ we will be providing a series of communication pieces to help familiarize providers with the Quality Criteria requirements. The first in this series will be Quality Criterion 3, Incorporation of Evidence. Our aim will be to address common questions and concerns we have heard regarding the criterion and to provide context for its inclusion in the certification requirements.

What is Evidence-Based Medicine?

Evidence-based Medicine (EBM) is the thorough, specific, and careful use of up-to-date best evidence in making decisions about the care of individual patients. The practice of evidence-based medicine means incorporating individual clinical expertise with the best available external clinical evidence from systematic research[1]. The goal of EBM is to combine the best scientific evidence available with clinical expertise to optimize patient care decisions.

More Details

What is "Best" Evidence?

There are several recognized systems for grading and rating evidence. On average these systems recognize the following as the highest quality evidence format: systematic reviews/meta-analyses of well-designed studies (random controlled trials, cohort and case control studies). Additionally, though lower on the evidence hierarchy, single, at least moderate-sized, well-designed random controlled trials and/or well-designed consistent, controlled but not randomized trials or large well-designed cohort studies are also considered among the better sources of evidence.

More Details

Low Quality Forms of Evidence

The following are considered low quality forms of evidence for assertions in a Mainpro+ certified program

- Expert opinion alone
- Individual case reports or series
- Single-study focused programs that are not identified as such
- Unsupported assertions

Evidence-Based Medicine & CPD Programs

Translating evidence to practice is an often repeated challenge. Multiple studies have investigated this difficulty, including attempts to demonstrate that the translation of research to practice leads to improvements in healthcare[2]. The incorporation of EBM into continuing professional development and continuing medical education raises the level of content for learners. Knowledge of the level o f evidence included in an educational activity provides learners with greater confidence to decide if the content will help them with the care of their patients[3]. Furthermore, confidence in the strength of the evidence improves the likelihood of changing physician behaviour. The more certain a physician is in the evidence for a clinical decision the more likely they are to incorporate that change into their practice[4].

Quality Criterion 3: Incorporation of Evidence

Programs seeking Mainpro+ certification must meet the following requirements in regards to the incorporation of evidence into program design and delivery.

Credits per Hour	Certification Requirements for Criterion
1 credit per hour	• An outline of the evidence and how it was used to create the content must be provided and references must be included within materials • Evidence should come from systematic reviews/meta-analyses of studies (RCTs, cohort case control studies), or single, moderate-sized, well-designed RCTs or well-designed, consistent, controlled but not randomized trials or large cohort studies. • Lack of evidence for assertions or recommendations must be acknowledged • If a single study is the focus or select studies are omitted program developers must provide rationale to support this decision • Graphs and charts cannot be altered to highlight one treatment or product • Both potential harms and benefits should be discussed and an efficient way to present this to clinicians is number needed to treat (NNT) and number needed to harm (NNH). As well as absolute and relative risk reductions.
2 credits per hour (must meet 1 credit per hour requirements **AND** include the following)	• Content must reflect patient-oriented outcomes and avoid surrogate outcomes • Canadian-based evidence should be included where it exists
3 credits per hour (must meet 1 and 2 credits per hour requirements **AND** include the following)	• Program must include opportunity for participants to seek, appraise, and apply best available evidence

Glossary of Evidence-Related Terms[5][6]

Term	Definition
Case-control study	A study designed to determine the association between an exposure and outcome in which patients are sampled by outcome. Those with the outcome (cases) are compared with those without the outcome (controls) with respect to exposure to the suspected harmful agent. This type of study is most appropriately used as an economical preliminary study or to study rare diseases.
Cohort Study	In a cohort study the study participants are followed over time—from weeks to years, depending on the time frame. The goal is to understand the relationship between some attribute related to the cohort at the beginning of the study and the eventual outcome. These studies are often used to study the effects of lifestyle, environment and toxins, factors which are not amenable to study in a randomized controlled trial.
Meta-analysis	A statistical technique for quantitatively combining the findings from independent studies measuring the same outcome into a summary estimate.
Randomized controlled trial or Randomized control trial (RCT)	A study in which people are allocated at random (by chance alone) to receive one of several clinical interventions. One of these interventions is the standard of comparison or control.
Surrogate endpoint	A surrogate end point, or marker, is a laboratory measurement or physical sign that is used in therapeutic trials as a substitute for a clinically meaningful end point. A clinically meaningful end point is generally a direct measure of how a patient feels, functions, or survives. The surrogate end point is expected to predict the clinical effect of the therapy. E.g. Reduction in cholesterol as a marker for reduction in mortality.
Systematic review	A literature review focused on a research question that tries to identify, appraise, select , and synthesize all high quality research evidence relevant to a specific question.

References

[1]Sackett DL, Rosenberg WMC, Gray JAM, Haynes RB, Richardson WS. 1996. Evidence based medicine: what it is and what it isn't. BMJ 312: 71–2 [3] [Full text]

[2] Farquhar Cynthia M, Stryer Daniel, Slutsky Jean. Translating research into practice: the future ahead, International Journal for Quality in Health Care 2002 v. 14, n. 2 233-249 [Full text]

[3] Shannon, Susan. Education and Practice: Evidence-based programme design for CME, The Lancet 1752 vol. 361 May 2013.

[4]Alper BS, White DS, Ge B. *Physicians answer more clinical questions and change clinical decisions more often with synthesized evidence: a randomized trial in primary care. Ann Fam Med 2005;3(6):507-13.*

[5]Guyatt Gordon, Drummond Rennie, Meade Maureen O., Cook Deborah J.2008 *JAMA Evidence Users' Guides to the Medical Literature Essentials of Evidence-Based Clinical Practice Second Edition*. New York, NY: McGraw Hill Companies

[6]Fleming T, David D. Surrogate End Points in Clinical Trials: Are We Being Misled? Ann Intern Med. 1996 Oct 1;125(7):605-13