AUA GRADE WORKSHOP 2016

On March 5-6, 2016, the American Urological Association (AUA) Guidelines Department hosted its first annual GRADE Workshop thanks to funding generously provided by the Patient-Centered Outcomes Research Institute (PCORI). This two-day interactive workshop led by Drs. M. Hassan Murad and Philip Dahm provided attendees with both didactic course materials as well as opportunities for open learning and application of course teachings.

Following completion of this activity, participants were able to:

1. Utilize the GRADE approach to improve judgment and prevent errors
2. Perform critical appraisal of judgments based on the GRADE approach
3. Integrate communication of the GRADE approach
4. Compare clinical effectiveness research (CER) and other medical literature

The fourteen participants in the workshop as well as the two invited patient representatives (unable to attend) were provided with a comprehensive guide to GRADE as well as follow up exercises illustrating the utility of the GRADE method.

BACKGROUND

The Institute of Medicine (IOM) publication *Clinical Practice Guidelines We Can Trust* outlines the essential components of trustworthy guidelines. This document outlines the need for a complete systematic review of the existing evidence, consideration of patient preferences and discussion of quality of evidence and strength of recommendations. In addition to other developers of modern guidelines, including the Guidelines International Network (GIN) and the World Health Organization (WHO), IOM emphasizes three guiding principles of evidence-based medicine: there is a hierarchy of evidence (all evidence is not the same), decisions should be based on a body of evidence (not individual studies selected without criteria), and evidence alone is insufficient for decision making.

Grading of Recommendations Assessment, Development and Evaluation (GRADE) is a working group of clinicians, methodologists and stakeholders formed in 2000 with the aim of creating a new approach to rating quality of evidence and strength of recommendations in a methodologically rigorous and transparent manner. A number of international organizations provided input into the development of the GRADE approach, which is now considered the standard in guideline development. The GRADE working group now has 300+ contributors and has been adopted by over 90 organizations.

The standards of excellence in guideline development outlined by the IOM and valued by the AUA are reflected in the sensible and transparent approach to evidence grading embodied by GRADE. The AUA prides itself on maintaining the highest standards of quality in guideline development with a focus on transparent and methodologically rigorous systematic reviews of published
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Translating Comparative Effectiveness Research Using the GRADE Approach

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literature, data extraction and analysis, and clinical judgment. As the premier urologic association, the AUA is tasked with assimilating a wealth of information into coherent and well-defined guideline statements to enable urologists to make educated decisions in terms of patient diagnosis and treatment with the goals of reducing unnecessary variation and, ultimately, optimizing the quality of patient care. It is through continual procedural evaluations and member feedback that AUA is able to evolve and adapt to the necessarily rigorous process of guideline development. The educational opportunity funded by PCORI allowed the AUA to further explore GRADE methodology and determine the best manner for integrating GRADE principles into AUA methodology.

GRADE METHODOLOGY

Many systems view study design as a hierarchy of bias in which systematic reviews and meta-analyses remain at the top (least biased) followed by randomized controlled trials, cohort studies, case control studies and case series and reports (very likely biased). The GRADE system, however, recognizes that evidence review cannot be done in such a straight manner with many opportunities for upgrading or downgrading evidence based on additional sources of bias outside of study design. Additionally, GRADE views systematic reviews and meta-analyses as the lens through which reviews can study other sources of data.

One important aspect of GRADE is that it is outcome-centric; a body of evidence is graded as a whole as opposed to individually grading particular studies. Utilizing the GRADE approach, randomized trials are assigned a rating of certainty of “high,” while observational studies are rated “low.” However, there are a number of factors that allow a body of evidence to be upgraded or downgraded before a final rating of evidence certainty is assigned:

Decrease Confidence Rating:

- Risk of bias
- Inconsistency
- Indirectness
- Imprecision
- Reporting bias

Increase Confidence Rating

- Large effect
- Dose response gradient
- Confounding direction

GRADE utilizes four ratings for evidence quality:

1. High—further research is very unlikely to change confidence in the estimate of effect
2. Moderate—further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate
3. Low—further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate
4. Very low—any estimate of effect is very uncertain

In addition to quality of evidence, GRADE incorporates non-evidence factors, such as patient values, resource use and the balance between benefits/harms/burdens, into generation of
recommendations. GRADE utilizes the Evidence to Decision Framework (EtD), which is organized into a table and provides a comprehensive outline of the factors that bear on recommendations and their strength. GRADE Workshop attendees were given the opportunity to use the EtD framework in the analysis of a urology-specific key question for recommendation development.

GRADE INTEGRATION AND APPLICATION FOR AUA MEMBERS

The AUA is a premier urologic association, providing invaluable support to the urologic community through the promotion of the highest standards of urologic care, largely through education and research. With the ultimate goal of bettering patient care, the AUA is at the forefront in development of innovative, evidence-based quality education for urologists and urologic health professionals worldwide. Judgment of evidence in the creation of actionable recommendations is complex given the plethora of evidence rating nomenclature systems available for use. GRADE aims to reduce this unnecessary confusion through the application of its explicit and transparent approach to evidence rating and recommendation generation. Such an approach helps to prevent errors, facilitate critical appraisal and improve communication of information.

Following the completion of the in-depth GRADE Workshop, the AUA Guidelines Department is presently developing plans to further integrate the principles of GRADE into the current AUA methodology framework for developing guidelines. While much of the ambiguity in guideline development stems from the initial rating of evidence used to support guideline statements, the AUA feels strongly that the GRADE protocol and associated tools, including EtD, can eliminate much of this uncertainty while enhancing the ability of AUA guidelines to address issues of importance to patients. In the current AUA system, which utilizes evidence levels of A, B, and C to delineate quality of evidence, this determination is made based on an assessment of study design as well as internal and external validity. One important feature of GRADE that will enhance the AUA’s capacity to grade evidence is the ability to upgrade or downgrade literature based on other key factors important to the enhancement of patient care, most notably patient factors and risk/benefit ratios.

In terms of ease of use, AUA members have a strong understanding of and affinity for the tri-modal evidence rating system of A, B, or C. As such, AUA will likely maintain this nomenclature by translating the GRADE system such that A=High, B=Moderate, and C=Low/Very Low as judged by the GRADE methodology. In recent years, the AUA has increasingly partnered with the Agency for Healthcare Research and Quality (AHRQ) for the completion of systematic reviews for guideline development. Many of the Evidence-Based Practice Centers (EPC) contracted by AHRQ are already fully-ingrained with the GRADE system. As such, the ease of transition for AUA panels will be nominal. Given the plan to integrate GRADE into the AUA system on the backend, there will be no difference in panel process when using the systematic review to create guideline statements. Additionally, AUA will continue to allow panel members to create consensus-based statements when evidence is lacking in the form of Clinical Principles and Expert Opinions. As such, membership will benefit from an increasingly rigorous process while using an already familiar system.
CONCLUSION

Invited participants to the GRADE Workshop included members of current AUA Guidelines panels as well as scholars interested in the application of evidence-based medicine. Participants possessed varying degrees of knowledge of the GRADE system for grading evidence and developing guideline statements. Through the introduction of GRADE, participants gained a greater knowledge of the importance of evidence-based medicine and the degree to which appropriately developed guidelines can improve patient care. All attendants responded positively to solicited surveys of the course and expressed particular appreciation for the amount of information provided and the interactive opportunities for the application of GRADE principles. Based on the wholly positive feedback for the workshop and the direct positive impact of GRADE on the development of future AUA guidelines, it is the hope of AUA to continue this workshop annually.

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