### How to Use a Clinical Practice Guideline

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# Abbreviations and Acronyms

AUA = American Urological Association

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**Purpose:** Leading organizations increasingly recognize clinical practice guidelines as an important approach in promoting an evidence-based clinical practice of urology. In light of their considerable clinical, economic and medicolegal impact, guideline users should be confident that the guidelines were rigorously developed and address relevant patient questions. In this article we outline a practical approach for critically appraising a clinical practice guideline.

**Materials and Methods:** We outline a 3-step approach to the assessment of a clinical practice guideline that answers the questions of whether the recommendations are valid, what the recommendations are and whether they will help in the treatment of an individual patient.

Results: To determine the adequacy of a clinical practice guideline, urologists should carefully review the rigor of the development process and its content. Important questions that relate to the validity of a guideline are whether, for specific questions, all important management options and outcomes were considered, and whether there was an explicit and sensible process to identify, select and combine all relevant evidence. Clinical practice guidelines should formally grade the quality of the available evidence for a given clinical question and outline a formal process of how the recommendations were derived. Value judgments made in the guideline development process about the relative importance of the potential benefits and harms of a given health care intervention should be made transparent to the reader. The recommendations made should be practical and should address important clinical issues. Furthermore, their strength should be graded to reflect the underlying uncertainty about the evidence and the values applied in the guideline development process.

**Conclusions:** The systematic approach presented in this article will allow urologists to critically appraise clinical practice guidelines. Determining the validity of the recommendations, understanding the recommendations and assessing their applicability to patients are 3 fundamental steps toward an evidence-based approach to using clinical practice guidelines.

Key Words: practice guidelines as topic, evidence-based medicine

UROLOGISTS are continuously faced with the need to make or facilitate decision making for individual patients. Making treatment recommendations implicitly or explicitly involves formulating a clinical question, identifying management options and outcomes, collecting and summarizing evidence, and applying value judgments and preferences to arrive at an optimal treatment plan. In an attempt to facilitate clinical decision making and promote the delivery of consistent, high quality care to all patients, clinical practice guidelines are being developed by various local, regional and international organizations. Clinical practice guidelines seek to provide explicit recommendations for the treatment of typical index patients based on the best available research evidence, while at the same time assessing the balance between desirable and undesirable effects, the patient's presumed values and preferences, and the potential economic impact of different treatment options. As such, the Institute of Medicine defines them as "systematically developed statements to assist practitioner and patient decisions about appropriate health care for specific clinical circumstances."

Unfortunately the methodological quality of clinical practice guidelines developed by different organizations varies considerably, thereby impacting the confidence that we can place in their recommendations. <sup>1–4</sup> Therefore, it is important that urologists be familiar with the defining characteristics of clinical guidelines that deserve the label evidence-based, and that they have a conceptual framework to determine whether a guideline document is likely to be valid, to interpret the recommendations appropriately and to determine whether the recommendations are applicable to a particular patient. Thus, we introduce a systematic approach to critically evaluate a clinical practice guideline document before applying its recommendations to the care of an individual patient.

#### **CLINICAL SCENARIO**

You are a community practice urologist and are previewing your list of clinic patients for the next day which includes the brother of a close friend. Your friend asked for a second opinion for this 61-year-old patient with newly diagnosed prostate cancer. Outside records have been faxed to your office. The patient has clinical T1c disease with Gleason score 3+3=6 adenocarcinoma of the prostate in 4 of 14 cores and a prostate specific antigen of 4.5 ng/ml. The urological history is negative for any significant urinary complaints but mentions poor erectile function. The medical history is notable for mild hypertension, hyperlipidemia and adult onset diabetes which is well controlled with an oral agent.

Having recently attended a urological meeting where much emphasis was placed on the importance of evidence-based decision making consistent with clinical practice guidelines, you feel compelled to update your knowledge on the management of clinically localized prostate cancer. Therefore, you decide to retrieve the most recent clinical practice guidelines on prostate cancer to guide the treatment of this patient.

#### SEARCH OF THE MEDICAL LITERATURE

From your reading of the "Users' Guide to the Urological Literature" by Krupski et al on how to search the medical literature effectively, you recall the National Guideline Clearing House as a dedicated resource for evidence-based clinical practice guidelines.<sup>5,6</sup> Using prostate cancer as single search term you find 65 guideline documents (accessed June 1, 2008). Considering recent advances in the understanding of the natural history of prostate cancer as well as new treatment approaches including active surveillance, you decide to narrow the search by applying filters for treatment (vs diagnosis or prognosis) and the last 5 years only (2004 to 2008), which yields 27 guidelines. Among these only 1 document with the title "Guidelines for the Management of Clinically Localized Prostate Cancer: 2007 Update" strikes you as truly applicable to your patient scenario.<sup>7,8</sup> Delighted to have found a recent guideline by a leading urological association you decide to print a copy of this document and review it before your patient's clinic visit.

#### ARE THE RECOMMENDATIONS VALID?

Before using evidence provided by a clinical research study, urologists should ask whether the results of the study are likely to be valid. The same principle applies to clinical practice guidelines. Under Guideline users should be confident that these recommendations are the product of a rigorous evidence driven development process, that the recommendations address clinically relevant issues and are applicable to the patient for which guidance is being sought.

To assess the methodological quality of clinical practice guidelines several validated instruments have been developed. 11 Among them the Appraisal of Guidelines for Research and Evaluation (AGREE) collaboration instrument is one of the best known and most widely used. 12 It distinguishes 6 domains of methodological quality and transparent reporting. 1) "Scope and purpose" deals with the overall aim of the guideline, the specific clinical questions and the target patient population. 2) "Stakeholder involvement" focuses on the extent to which the guideline represents the views of its intended users. 3) "Rigor of development" relates to the process used to gather and synthesize the evidence and the methods to formulate the recommendations, and to update them. 4) "Clarity and presentation" deals with the language and format of the guideline. 5) "Applicability" pertains to the likely organizational, behavioral and cost implications of applying the guideline. 6) "Editorial independence" addresses the independence of the recommendations and acknowledgment of possible conflict of interest from the guideline development group.

A similar endeavor to establish a shared framework for guideline development, reporting and assessment

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