Editorial

Clinical Practice Guidelines and Diagnostic Uncertainty in the Management of Early Rheumatoid Arthritis


Clinical practice guidelines (CPG) are "systematically developed statements to assist practitioner and patient decisions about healthcare for specific clinical circumstances," and are intended to improve the quality of care for individuals with a specific diagnosis by encouraging physicians to adopt more evidence-based practice[1]. Over the past decade, several sets of CPG for the management of rheumatoid arthritis (RA) have been developed and disseminated[2-4].

Many studies have demonstrated substantial gaps between disseminated CPG and clinical practice, including some in RA[5,6]. However, requisite to drawing meaningful conclusions about physician adherence to CPG is a more detailed understanding of the circumstances leading to perceived suboptimal healthcare practices. In an effort to explore reasons for potential nonadherence to CPG in RA, in this issue of *The Journal*, Benhamou and colleagues examined physician prescribing patterns for early RA[7] prior to publication of 2 sets of CPG addressing prescription of first-line disease-modifying antirheumatic drugs (DMARD)[2,3]. Utilizing ESPOIR (French acronym for "Study and Followup of Undifferentiated Early Arthritis"), a French multicenter observational cohort study that included 813 patients with early RA between 2002 and 2005, the authors found a 58% physician adherence rate with the French Society of Rheumatologists' STPR (French acronym for "Therapeutic strategies in RA") working group guidelines, and a 54% adherence with the European League Against Rheumatism (EULAR) RA guidelines. The main predictors of guideline adherence included increased disease activity and disease severity, while the main predictor of guideline nonadherence was physician uncertainty about the diagnosis of RA. In a followup survey exploring the reasons for rheumatologists' nonadherence to guidelines, diagnostic uncertainty was confirmed as the primary physician explanation of guideline nonadherence.

The findings of this study serve to highlight the difficulties inherent in applying CPG to a disease process like RA, where diagnostic uncertainty is common. By utilizing a "real-world" population of patients with early RA to establish a baseline measurement of physician adherence to established CPG, this study brings to light the issues that emerge when potentially complex medical decision-making is examined using CPG, which are not meant to be used as a tool to measure performance or quality of care. The central finding of this study, that adherence to guidelines is influenced by diagnostic uncertainty, raises 2 important questions about CPG utilization in the management of patients with early RA, and other rheumatic diseases where diagnostic uncertainty is common: (1) Is there value in measuring differences between clinical guideline adherence and clinical practice?, and (2) How does diagnostic uncertainty affect physician adoption of CPG?

It is crucial to understand the reason for discrepancies between clinical guidelines and daily practice. One factor is the very method by which guidelines are developed. As in the case of the STPR and EULAR early RA guidelines, rigorously developed guidelines rest on a base of scientific evidence, which largely derives from randomized controlled trials. But because experts often have different interpretations of the evidence, capturing expert opinion is still required to arrive at a consensus. The CPG that are produced, then, are a product of both evidence-based recommendations (when available) and expert opinion. And although this methodology represents the current gold standard for clinical guideline development, there remain inherent difficulties in applying treatment recommendations gleaned from patient populations who participated in clinical trials to the measurement of the same treatment recommendations in a "real-world" population. This is a particular challenge in a disease where diagnostic uncertainty is commonplace. Patients who enter clinical trials meet strict criteria for study entry, and in general there is little to no uncertainty in these populations about the underlying diagnosis. In contrast, in the observational cohort (ESPOIR)

See The gap between practice and guidelines in choice of first-line DMARD in early RA, *page 934.*

used in this study, only 57% of subjects had "definite RA," while 42.7% had "probable RA." In addition, the authors found that DMARD use as measured by the STPR guidelines was substantially higher in the group with "definite RA" versus "probable RA" (66% vs 47%), and similar differences in conformity were seen for the EULAR guidelines. These findings highlight the intrinsic challenges of applying guidelines to real-world settings, where recommendations may not fit specific complex clinical circumstances.

In this study the authors also surveyed the rheumatologists of all patients whose treatment differed from STPR guidelines, in order to determine why the guidelines were not followed, and to assess their awareness of the STPR and EULAR guidelines. The authors found that the primary factor influencing physician treatment decision-making was diagnostic uncertainty, and the primary reason for disagreement with STPR guidelines was also diagnostic uncertainty. In a 1999 review by Cabana, *et al* in *Journal of the American Medical Association,* "Why Don't Physicians Follow Clinical Practice Guidelines?", the authors compiled published studies identifying at least one barrier to physician adherence to CPG[8]. After a review of 76 articles, the authors succinctly classified the barriers to physician adherence into 7 categories, which included lack of physician: (1) familiarity, (2) awareness, (3) agreement with guidelines in general or with the specific guidelines presented, (4) self-efficacy, (5) outcome expectancy, (6) motivation/inertia of previous practice, and (7) the presence of external factors, including patient preferences and lack of time and resources to institute the guidelines. The authors suggest that recognition of these barriers is needed to design interventions to improve physician CPG adherence. In the study by Cabana, *et al*, the authors did not identify diagnostic uncertainty as a major barrier to CPG adherence, most likely because one of the implicit assumptions of CPG is that the individual CPG pertains to a specific diagnosis. As demonstrated in this study by Benhamou, *et al*, in early RA and other rheumatic diseases where clinical judgment is central, and biomarkers or other clinical assessments that definitively establish diagnoses are rare, physician uptake of CPG is likely to be affected by diagnostic uncertainty.

Clinical practice guidelines are an important tool for improving healthcare delivery and patient outcomes, and some literature suggests that they may have at least a modest effect on practice patterns and outcomes over time[9]. Guidelines can provide needed structure for clinical decision-making, but at the same time, guidelines leave room for individual physician interpretation, particularly in situations of diagnostic uncertainty. In order to know the appropriate or expected level of adherence to treatment guidelines in early RA, further studies are needed to better define the outcomes for the patient populations for whom the underlying diagnosis is less certain. Understanding the reasons for discrepancies between guidelines and real-world clinical practice is a critical step both in designing future clinical trials that address unanswered questions (in this case, what to do when there is substantial diagnostic uncertainty in early RA), and in increasing the applicability and impact of CPG themselves.

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