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Editorial Open Access

Pay-for-Performance Based on Adhering to Clinical Practice Guidelines: Justified or Not?

Srinivas Chiravuri, Li Ma, Ngoc Vo and Xiulu Ruan*

Department of Anesthesiology, LSU Health New Orleans School of Medicine, USA

***Corresponding author:** Xiulu Ruan, Department of Anesthesiology, LSU Health New Orleans School of Medicine, USA, Tel: 478-4900; E-mail: xiuluruan@yahoo.com

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Editorial

Clinical guidelines were initially written as physician education tools for application within individual idealized patient encounters. Though based on large studies, applying guidelines to populations was not originally intended. However, this notion has been naively adopted in the rush to generalize, measure, and regulate quality [1]. Since given the new definition by the Institute of Medicine (IOM) in 1990, clinical guidelines have increasingly become a familiar part of clinical practice. As currently defined by IOM, clinical guidelines are "systematically developed statements to assist practitioner and patient decisions about appropriate health care for specific clinical circumstances." [2]. Guidelines are widely considered evidence based, unbiased, and valid. High quality guidelines have the potential to promote the use of effective clinical services, minimize undesirable practice variation, and reduce the use of unnecessary services [3].

Unfortunately, current use of the term "guidelines" has strayed away from the original intent of the IOM. Most so called "guidelines" publications are actually expert consensus reports [4]. There have been many concerns expressed, including limitations in the scientific evidence on which the guidelines relied, a lack of transparency of the guideline development groups' methodologies, and conflict of interest among guideline development group members and funders, as well as questions regarding how to reconcile conflicting guidelines [5]. Very often, we see bias in the development of guide-lines, involving the reviewed research, misrepresentation of the data, or failure to assess the quality of the evidence supporting the recommendations. Inadequate or weak evidence may lead to conclusions based on value judgments, organizational preferences, or opinion. Specialty and subspecialty societies can use guidelines to enlarge their area of expertise in a competitive medical field. Federal guideline agencies usually focus on cost saving approaches, while committees influenced by industry are more likely to shape recommendations to accord with industry needs [6].

Also, the validity of systematic reviews and meta-analyses may also be negatively affected by bias. For example, several practice guidelines on long-term opioid therapy for chronic pain were published between 2008 and 2011. Although each guideline was based on analysis of essentially the same body of published research, the guideline conclusions differed significantly [6]. It reached the point that any group of individuals could designate itself a guideline group to come up with guidelines on some disease/condition; and different guideline groups could review the same disease/condition and reach different conclusions [7].

Faced with such an exponential proliferation of practice guidelines and the widespread concern expressed by physicians, consumer groups, and other stakeholders about the quality of the processes supporting development of practice guidelines, US Congress mandated IOM to develop a set of standards for developing rigorous, trustworthy clinical practice guidelines [5]. In 2011, IOM published the report, "Clinical Practice Guidelines We Can Trust", in which it proposed 8 standards/recommendations, deemed essential to developing sound practice guidelines. These include transparency establishment; management of conflict of interest; guideline development group composition; guideline-systematic review intersection; establishing evidence foundations for and rating strength of recommendations; articulation of recommendations; external review; and guideline updating [5].

So, does it make sense for guidelines to be used as gauges to measure against clinicians' performance? The only scenario in which it does is that when the clinical practice guideline is evidence-based, thus unbiased and valid, and when they are also applicable, to the individual patient the clinician is treating. But, this is a rare exception than the general rule, we believe.

First of all, adhering to flawed guidelines may result in harm to patients. Flawed practice guidelines that are not based on scientific evidence, or based on weak, slanted, or wrong evidence, can result in suboptimal, ineffective, or harmful services to patients. Flawed clinical guidelines can also harm practitioners professionally by providing inaccurate scientific information and clinical advice, thereby compromising the quality of care.

Secondly, even if the guideline is of high quality and thus valid (rarely), the frequently advertised benefit of guidelines of more consistent practice patterns and reduced variation, may come at the expense of reducing individualized care for patients with special needs. Because the specific elements of care are based on single-disease clinical practice guidelines, pay-for performance may create incentives for ignoring the complexity of multiple comorbid chronic diseases and dissuade clinicians from caring for individuals with multiple comorbid diseases. Quality-of-care standards based on these guidelines also may lead to unfair and inaccurate judgments of physicians' care for this population [8]. For example, treatment guidelines for patients with osteoarthritis or rheumatoid arthritis recommend NSAIDs as the 1st line agent, however, when patients also have history of a bleeding ulcer, history of chronic kidney insufficiency, chronic hepatitis, or on anticoagulation, adhering to clinical practice guidelines with NSAIDs may lead to serious complications and adverse events. Another example is when an elderly woman with severe spinal pain, joint pain, and extremity pain due to severe osteoporosis, multiple compression fractures, advanced diabetes with diabetic neuropathy, advanced osteoarthritis, and with histories of chronic renal and hepatic insufficiency, where steroid injection therapy has not been beneficial or not recommended due to osteoporosis/fractures, NSAIDs usage is not

recommended due to multiple organ risks. In this setting, low dose opioid usage under monitored setting can prove to be very beneficial for pain control and improving quality of life. Yet, none of the current pain practice guidelines recommend such use in patients without nonmalignant pain. These examples show why performance indicators based on single-disease guidelines cannot accurately reflect the quality of care with multiple chronic diseases.

Thirdly, chronic pain patients due to degenerative lumbar disc disease, lumbar radiculopathy, osteoarthritis, and rheumatoid arthritis are recommended to receive physical therapy as the non-pharmacological therapy by various guidelines, however, not uncommon, we see patient noncompliance either due to lack of transportation, out of pocket cost, non-coverage by insurance company, unwilling to go through physical therapy, or in some cases, patients have received physical therapy, but are unable to tolerate physical therapy due to poorly controlled pain or worsening pain. The recommended regimen may present the patient with unsustainable treatment burden, making independent self-management and adherence difficult.

So, payment to physicians in pay-for-performance programs, based on their meeting quality of-care standards created for single diseases, according to a calculated rate of adherence to the standard within an eligible population is unwarranted. It can create financial incentives for physicians to focus on certain diseases and younger or healthier Medicare patients. These initiatives perpetuate the single-disease approach to care and fail to reward physicians for addressing the complex issues that confront patients with several chronic diseases. Standards that define quality of patient care, regardless of a patient's health status and preferences, by placing emphasis on attaining high rates of adherence to practice guidelines rather than the more difficult task of weighing burden, risks, and benefits of complex therapies in shared decision making could ultimately undermine quality of care [9].

In summary, in light of the pervasiveness of clinical practice guidelines being flawed and biased, as well as considering the unbiased guidelines still having intrinsic limitations, especially when dealing with elderly patients with multiple co-morbidities, and in view of other uncontrollable variables, such as patients' preference, financial status, social support, insurance coverage status, etc., pay-for-performance based on adhering to clinical guidelines is unjustified.

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