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Accountability and Empathy Effects on Medical Students' Clinical Judgments in a Disability Determination Context for Low Back Pain

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Abstract: Accountability has been shown to affect clinical judgments among health care providers in several ways. It may increase a provider's motivation for accuracy, leading to more deliberative judgments, or it may enhance biases that evaluators consistently demonstrate with patients with chronic pain. In this study, medical students read a vignette about a hypothetical patient referred for evaluation of severe low back pain by the Office of Vocational Rehabilitation. Accountability to the patient was either weak (consultative 1-time evaluation) or strong (ongoing primary care provision); societal accountability was either weak (evaluation information as secondary source for disability determination) or strong (evaluation information primary to disability determination). Participants then made judgments regarding validity of the patient's presentation, influence of psychosocial factors on the presentation, and patient's level of pain, distress, and disability, and completed an empathy measure. Results showed that empathy had strong associations with symptom validity and severity judgments. With empathy as a covariate, 3 crossover interactions emerged. Judgments of symptom validity were lower when the 2 forms of accountability were inconsistent (ie, one weak and the other strong) than when they were consistent (ie, both weak or both strong). Likewise, judgments of psychosocial factors and pain/distress/disability were higher under consistent accountability conditions than when accountability conditions were inconsistent. This pattern may imply conflict avoidance or self-protection as a motivation for judgments under inconsistent accountability. This study demonstrated that role demands can affect symptom judgments in complex ways, and that empathy may play both direct and moderating roles. Because physicians are the primary gatekeepers regarding disability determination in both consultative and treating roles, accountability may have significant mediating effects on such determinations.

***Perspective:** This study demonstrated that medical student judgments of pain-related symptoms were strongly associated with their levels of empathic concern. Student judgments of symptom validity and psychosocial influences on patient adjustment were differentially affected by their level of accountability to the patient and society in a disability determination process.*

***Key words:** Chronic low back pain, disability, accountability, empathy, clinical judgments.*

In a recent review article, Tait and colleagues[29] presented a 5-factor model of potential influences on health care provider clinical judgments of patients with chronic pain. The 5 factors represented patient pain presentation (eg, chronicity, severity), patient social presentation (eg, race, age, gender), patient psychological presentation (eg, depression, somatization), observer/provider features (eg, empathy, experience), and situational features (eg, compensation/litigation involvement, availability of objective medical evidence). When such factors influence medical judgments, the resulting judgments may be considered biased, in that they reflect factors that may be extraneous to appropriate pain management. The literature clearly documents such biases in the evaluation of patients with chronic pain, typically reflected in observer discounting of patient reports of pain severity and/or the attribution of symptoms to psychological rather than medical factors.[3,4,7,18,20,22,29-31]

One largely unexplored provider variable that was proposed in the latter model involved the anticipated contingencies associated with an encounter. Those

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contingencies are proposed to be a function of the entity to which the provider is most accountable and to which "decision-makers can expect to be called upon to justify their behavior" (p. 173).[26] Hadler and Ehrlich have discussed such issues in the context of primary care versus worker's compensation systems: in the former, the provider is primarily accountable for the patient's well-being; in the latter, the provider is primarily accountable to the employer for cost containment.[13] Although patient recovery is a priority in each system, the differences in provider accountability can affect clinical judgments of patient symptom validity, psychosocial involvement, and levels of pain, distress, and disability. For example, physicians who provide ongoing clinical care to patients—and who therefore are obligated to the care of the patient over time—may interpret patient pain-related symptoms less skeptically than physicians who are accountable to employers and obligated to contain medical costs. Similarly, consultants who evaluate patients on a 1-time basis[27] and whose judgments may have significant medicolegal implications (making them accountable to a review board or a judicial system) may require more evidence supporting the validity of a reported symptom than physicians without such legal obligations and who, instead, are primarily accountable to the patient to make sound clinical judgments in the course of usual care.[13]

There is limited research on the effects of accountability on medical judgments. Research generally has indicated that higher levels of accountability for a given judgment may increase a judge's motivation for accuracy, yielding a more deliberative approach that is less influenced by bias.[2,17] Research regarding physician judgments, however, is more mixed: Increased accountability for clinical judgments has been shown to increase some forms of bias (eg, by promoting conflict avoidance in medication and referral decisions)[26] but not others (eg, anchoring effects in treatment decisions for pulmonary emboli).[2] Of course, accountability is not a unitary construct that varies only by level; it also can vary by type. For example, a provider with accountability to the public or the legal system may be motivated to provide accurate, dispassionate judgments or, alternatively, to minimize the levels of severity and disability associated with a symptom constellation. By contrast, a provider with accountability to a patient may be motivated to avoid interpersonal conflict (even at the expense of accuracy).

The effects of accountability on judgment biases relevant to chronic pain have not been systematically studied, despite the multiple forms of accountability that physicians who treat such patients may face. Frequently, the treatment of chronic pain conditions involves a long-term social contract with patients; the shared accountabilities associated with the patient-provider relationship can be critical to treatment success.[10] Indeed, with the advent of electronic medical records, the prospect of direct patient access to physician notes has been proposed (eg, the OpenNotes project[8,33]), a prospect likely to enhance provider accountability to patients. In addition, physicians—both treating and consulting—often assume accountability as primary and secondary sources of information for societal contracts with patients, such as those associated with disability determination. In light of the sheer volume of cases processed through the latter system—more than 680,000 applications and more than 228,000 claimants were reviewed in the first quarter of 2013 alone[32]—the potential impact of variable accountability could be substantial.

Of course, a physician's clinical judgments are a function of more than accountability; they also are a function of competence, compassion, and empathy. Empathy—generally defined as the capacity to vicariously experience the feelings or perspectives of others—has received considerable attention in pain medicine, both as a topic of research[12,16] and as a critical attribute related to good clinical practice. Indeed, a survey of pain educators recently found that empathy was considered the single most integral feature in the practice of effective pain medicine.[19] Further, there is accumulating evidence that empathy serves a mediating role in observer judgments of pain patients, making it an important construct to consider in conjunction with accountability.[1,9,11,15,28,30]

The purpose of the present study was to investigate the effects of empathy and provider accountability, relative to both patient and legal/societal obligations, on the clinical judgments of medical students about to begin their final year of medical school. Medical students were chosen partly for convenience and partly because previous research has documented the effects of biases in attitudes and judgments regarding pain patients even at this level of clinical training.[5,14,34] In this randomized experiment, 4 vignettes were constructed to represent a hypothetical disability determination process that presented weak versus strong levels of both patient and societal accountability, embedded within relevant patient information. After reading a vignette, medical students made clinical judgments about the validity of the patient's symptoms, medical factors affecting symptom presentation, psychosocial factors affecting symptom presentation, and symptom severity. All vignettes described a high level of patient-reported pain intensity for 2 reasons: 1) face validity of the patient vignette required that the patient report pain at an intensity level that would warrant application for disability, and 2) previous research has consistently found that observer biases are augmented at higher levels (ie, >6 on a 0–10 numeric rating scale) of reported pain (see Tait et al[29] for a review). Participant empathy was also assessed, consistent with recent research on its role in pain judgments. Main effects for both patient and societal accountability were anticipated. Relative to a weak patient accountability condition, clinical judgments made under a strong patient accountability condition were expected to deemphasize psychosocial factors and accentuate medical factors, symptom validity, and severity. Judgments made under weak versus strong societal accountability conditions were expected to follow an opposite pattern. A specific hypothesis regarding the interaction of the 2 forms of accountability was not proposed. Empathy was expected to have a strong and significant association with judgments overall.