

# Editorial Commentary: Assessing Outcomes in Terms of Fulfillment of Patient Expectations Is Complementary to Traditional Measures Including Satisfaction



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**Abstract:** The topic of patients' expectations is receiving increasing attention as a patient-centered variable in preoperative orthopaedic assessment. Formally querying patients about expectations is necessary because surgeons may not be aware of these expectations, which often derive from multiple sources outside encounters with surgeons. Validated patient-derived surveys now exist for diverse orthopaedic surgeries to preoperatively measure expectations for improvement in symptoms and physical and psychological well-being. Assessing results of surgery in terms of fulfillment of these expectations is a patient-centered outcome that complements traditional measurements of satisfaction and pre- to postoperative change in symptoms and function. Validated follow-up surveys also now exist that ask patients for each item they expected before surgery, how much improvement have they actually received after surgery. The amount of improvement expected versus the amount of improvement received constitutes a measure of fulfilled expectations. The advantages of fulfillment of expectations as an outcome are that it prospectively includes both pre- and postoperative patients' perspectives and, because it is composed of multiple items, it can identify which symptoms and functions have improved to expected levels and which have not, thus providing the rationale for why patients rate outcomes the way they do. Therefore, measured in this way, postoperative fulfillment of expectations is a unique and novel patient-centered assessment for the comprehensive evaluation of orthopaedic surgical outcomes.

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The topic of patients' expectations is receiving increasing attention as a patient-centered variable in preoperative assessment.<sup>1-3</sup> It is particularly salient for elective orthopaedic surgery, where patients' perspectives strongly impact the decision to undergo surgery.<sup>4</sup> Knowledge of expectations can lead to better patient education, shared decision-making, and a means to ensure patients and surgeons have similar goals.<sup>5</sup> Formally querying patients about expectations is necessary because surgeons may not be aware of these expectations, which often derive from multiple sources outside encounters with surgeons.<sup>6</sup>

Several groups of researchers have addressed measuring expectations, including our group, which has dedicated effort to the assembly of expectations

surveys for diverse orthopaedic procedures.<sup>5,7-13</sup> A major strength of these surveys is that each was developed during a multiphase process, including an initial phase of open-ended questions soliciting patients' perspectives. As such, the surveys include some expectations that are seemingly remote from the physical condition, such as expectations for psychological improvement, and would not be included in a clinician-derived survey. In completing the surveys, patients indicate which items they expect, and then how much improvement they expect for each item. The surveys were validated with comparisons to existing questionnaires and showed they are related to but not equivalent to these comparators, and thus measure distinct dimensions. The surveys have been widely disseminated, shown to be applicable in diverse clinical settings, and are relevant in diverse populations after language translation and retesting.<sup>14-16</sup> In addition, each survey is specific to the joint and condition in question. For example, unlike the Hip Arthroplasty Survey,<sup>7</sup> the Hip Preservation Survey<sup>13</sup> addresses expectations to participate in rigorous activities, to delay more complex surgery, and to resume a previously

Hospital for Special Surgery and Weill Cornell Medical College  
The author reports no conflicts of interest in the authorship and publication of this article. Full ICMJE author disclosure forms are available for this article online, as [supplementary material](#).

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0749-8063/211763/\$36.00  
<https://doi.org/10.1016/j.arthro.2021.12.023>

active lifestyle. The Hip Preservation Survey was developed with 366 patients with diverse diagnoses, but mostly femoral acetabular impingement.<sup>13,17</sup>

In their article "Preoperative Expectations Do Not Correlate With Postoperative iHOT-33 Scores and Patient Satisfaction Following Hip Arthroscopy for the Treatment of Femoroacetabular Impingement Syndrome," Factor, Vidra, Shalom, Clyman, Roth, Amar, and Rath<sup>18</sup> examined preoperative scores from the Hip Preservation Survey and pre- and postoperative 33-item International Hip Outcome Tool (iHOT-33) scores and satisfaction. The authors are to be commended for acknowledging expectations as an important patient-centered variable and for their special efforts in measuring expectations. Among 69 patients, the authors found high expectations before surgery but no associations between expectations and group mean pre- and postoperative iHOT-33 scores or postoperative satisfaction. More analyses with respect to expectations, such as number of expectations, and clinical characteristics, such as labral involvement, duration of symptoms, and sports-related hip demands, would have defined the sample more comprehensively. Additional analyses of interest would have been comparison to within-patient changes in iHOT-33 scores (as opposed to group mean scores) and more targeted queries about satisfaction.

Satisfaction is a popular patient-reported outcome after orthopaedic surgery.<sup>3,19</sup> It offers several advantages, such as assessing surgical results collectively using relatively straightforward questions. However, if considered discerningly, the concept of "satisfaction" is heterogeneous, with its meaning dependent on an individual's perspective. For example, "satisfied with surgery" for some patients can mean the outcome was "excellent," whereas for other patients it may mean the outcome was "satisfactory."<sup>20</sup>

As an adjunct to traditional measures of satisfaction, we developed a follow-up to the Expectations Survey to define another outcome, specifically fulfillment of expectations. Designed to be administered postoperatively, the follow-up survey addresses each item patients expected before surgery and asks them to now (postoperatively) rate how much improvement they actually received. The amount of improvement expected versus the amount of improvement received constitutes a measure of fulfilled expectations. Unlike the preoperative survey that yields a score, the fulfillment outcome is a proportion that can range from 0 (no expectations fulfilled) to >1 (expectations surpassed).<sup>21,22</sup> Fulfillment of expectations has been most extensively studied in follow-up to the Lumbar and Cervical Spine Surgery Expectations Surveys, where it has been shown to be associated with change in pre- to postoperative patient-reported disability and several global ratings of outcome.<sup>23</sup> The advantages of

fulfillment of expectations as an outcome are that it prospectively includes both pre- and postoperative patients' perspectives and, because it is composed of multiple items, it can identify which symptoms and functions have improved to expected levels and which have not, thus providing the rationale for why patients rate outcomes the way they do. Measured in this way, postoperative fulfillment of expectations is a unique and novel patient-centered outcome of orthopaedic surgery.

The value of measuring preoperative expectations is in its ability to facilitate discussions between patients and surgeons and, when associated with specific demographic and clinical characteristics, can help target educational interventions. In the sample assembled by Factor et al, it would have been interesting to see whether fulfillment of expectations, as opposed to preoperative expectations in isolation, were associated with within-patient changes in iHOT-33 scores and satisfaction.

Finally, when measuring expectations, there are several other concepts that deserve attention. First, it is necessary to foster realistic expectations so that patients work toward achievable goals. Expectations that are unrealistically too high or too low can both be counterproductive. For example, patients with unrealistically high expectations can become quickly discouraged with the recuperation process and either abandon rehabilitation or prematurely engage in activities that cause injury. Patients with unrealistically low expectations can lack motivation to participate in rehabilitation and to make permanent lifestyle changes necessary to safeguard their future condition. In both cases, not having realistic expectations can impede achieving maximum benefit from surgery and can result in rating outcomes poorly. But what are realistic expectations? How should realistic expectations be determined? Most likely they are patient-specific and should be defined with surgeon input. Several studies have begun to explore this topic by comparing expectations within the patient-surgeon dyad.<sup>24-26</sup>

Another important topic related to expectations is uncovering other patients' perspectives that impact the drive for surgery and the assessment of outcome. During interviews with patients, when asked about expectations, it is not uncommon for patients to start responding with "well, what I really want is...." As researchers and clinicians interested in expectations, it is incumbent upon us to emphasize "not what you want, but what you expect." Patients quickly understand the difference when this juxtaposition is presented to them. The concept of "want" may be related to the concept of "hope." As experienced clinicians know, hope is a powerful motivator that can contribute to remarkable outcomes. How to emphasize and foster realistic expectations while not simultaneously dashing

hope is a challenge worthy of further exploration and discussion.

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