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CORR Insights®: What Clinimetric Evidence Exists for Using Hip-specific Patient-reported Outcome Measures in Pediatric Hip Impingement?

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Where Are We Now?

The use of patient-reported outcome measures to evaluate orthopaedic intervention is

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gaining popularity among orthopaedic surgeons. This upswing in acceptance is due to the discordance between traditional outcomes, such as joint ROM or alignment of bone and those reported by patients. The newer metrics can expand our understanding of what treatment success really means, and expand our understanding of how interventions work, since their answers come from a key vantage point: That of the patient. Broadly, there are two groups: Generic and specific patient-based measures. The former quantify a patient’s perception of his or her general health state, and as such, often are less sensitive to changes related to a specific orthopaedic disorder. Specific measures are either joint/disease-

specific or region-specific. They are commonly used in orthopaedics because of their ability to detect focused types of change or departures from normality. The consequences of hip impingement can be measured at the hip level and (perhaps more meaningfully) globally, including activities of daily living, of leisure, or at the work place. As for the latter, the impact of hip impingement will differ between children and adults because of the differing nature and frequency of activities in each group. Outcome measures developed for adults therefore are not automatically applicable to children and adolescents; careful consideration should be given to which measures can be used in evaluating children with hip impingement.

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Where Do We Need To Go?

d’Entremont and colleagues bring to light several key messages about patient-reported outcome measures for children with hip impingement.

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In their systematic review, the authors identified six different patient-reported outcome measures that had been used in 13 published studies on hip impingement in patients younger than 18 years. No measure was specifically designed or validated for children with impingement of the hip – there was a paucity of patient-based outcome measures specifically developed for children’s hips, and measures originally developed for adults were used to evaluate outcomes in children. The study by d’Entremont and colleagues calls for at least two key issues to be resolved: (1) The best patient-based outcome measures should be identified and (2) their measurement properties – reliability, validity, and responsiveness – established for pediatric patients with impingement of the hip.

How Do We Get There?

It seems intuitive to include both hip-specific and generic measures to the assessment of patients with

femoroacetabular impingement because of the condition’s potential consequences and the goals that interventions seek to achieve. Studies still are needed to test whether this is the case for children (and for adolescents as a separate group) or whether the impact of impingement on general health for this age group is less evident compared to adults with impingement. Children usually accept help from parents/caregivers in performing functional activities, with less perceived limitations as compared to adults. There is continuous change throughout growth – age, developmental level, and maturity are reflected in skill level, nature and frequency of activities performed. While adult measures are not sensitive to the differences typically found in childhood, they may well be sensitive for adolescents.

Similar to hip-specific measures, research should identify the measurement properties of existing measures instead of developing new ones, particularly because hip impingement becomes much more common in the

adolescent than it is in the young child. There may be too many joint-specific measures, complicating comparisons of results across different studies. Measures that have been developed for young adults, such as the Hip Outcome Score or the Nonarthritic Hip Score, may be appropriate for adolescents with impingement of the hip. Clearly, these measures demonstrate a lack of content validity for this population, but feedback from young impingement patients about irrelevant or missing items would allow for additional content analysis with refinement of item structure, leading to modifications of existing measures. Once content issues have been resolved, the measurement properties of the tool can be examined in this specific group of patients. In doing so, it will be important to make a distinction between children, adolescents and adults. A direct comparison of measures may offer insight into when and how a transition from paediatric to adult measures is appropriate for patients with impingement of the hip.