Letter to the Editor

Letter to the Editor: What Does a Shoulder MRI Cost the Consumer?

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To the Editor,

We read the recently published study by Westermann and colleagues [2] with great interest. In their paper, the authors found that the cost for a MRI shoulder exam was highly variable in the state of Iowa. The authors conclude that improved price transparency may better guide individuals and their referring providers to imaging centers that provide the best value for their healthcare dollar.

(RE; Westermann RW, Schick C, Graves CM, Duchman KR, Weinstein SL. What Does a Shoulder MRI Cost the Consumer? *Clin Orthop Relat Res*. 2017;475:580–584).

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The authors did not consider quality in the scope of their study. It is important to note that understanding quality, and not merely cost, is of paramount importance in helping patients and payers identify value.

Key elements of a high-value MRI include the image quality, as well as the accuracy and comprehensiveness of the radiologist's report. From a technical standpoint, details such as in-plane and through-plane resolution, tissue contrast, and artifact reduction pulse sequences (for patients who have had surgery) all affect the diagnostic performance of MRI. Similarly, fellowship-trained musculoskeletal radiologists with an understanding of these technical details, regional anatomy, and current surgical practices provide more-accurate assessment and

may obviate the need for diagnostic arthroscopy.

An inaccurate diagnosis may lead to a cascade of unnecessary medical interventions, delay in correct treatment, and increased patient morbidity. Inaccurate diagnoses may also result in increased direct and indirect costs to the patient, as well as to the payer, despite up-front savings of a lower-cost MRI.

If all MRI services were otherwise identical except for price, then certainly obtaining a scan at the lowest price point results in the highest value. However, as in other areas of medicine where additional factors need to be considered, low cost does not always equal high value.

In a clinical study recently completed at Hospital for Special Surgery, a subject underwent a lumbar MRI exam at 10 different regional MRI centers over a 3-week period. Compared to reference exams performed immediately before and after the 10 MRI exams, the study identified meaningful variability in reported diagnostic findings from center to center with an average of 12.5 errors in interpretation and 43.6% false negatives (findings that were not reported) in the MRI reports [1]. Equally alarming is that the variability

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identified could meaningfully impact the patient's treatment trajectory, and relatedly, the ultimate outcome and total cost of care.

At Hospital for Special Surgery, we frequently repeat outside MRI exams of the shoulder due to both poor technical quality and errors of interpretation. Recognizing that imaging is not merely a commodity based

on price can be a meaningful step forward in identifying value for patients and payors in selecting their imaging centers and ultimately, how it impacts the total cost of care.

References

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