We would like to thank you and Dr. Lederman for your thoughtful and thorough assessment which will continue to improve our content and usability of the Shoulder Chapter. Below please find comments from Dr. Norwood (ODG Editor-in-Chief) and myself in response to Dr. Lederman's review of the ODG Shoulder Chapter. For ease of referencing, Dr. Lederman’s original comments are included below and indented followed my comments from Dr. Norwood and/or me, which are further indented.

Per Dr. Norwood:
“I have taken the liberty to begin specifically addressing Dr. Lederman’s comments. His input is timely, as I was in the processes of updates. Many of the summaries and comments provided were found to be useful, with appropriate recommendations, and will be handled with the highest priority. I am also looking forward to your further comments and contributions to our review and update processes.”

Dr. Lederman letter of September 10, 2017:Dear Jacqueline:
There is my evaluation of the shoulder ODG for your project. Of course, a far more detailed evaluation regarding the guidelines could be done as well. I hope this is helpful.

Stated goal: From Jacqueline Kurth “The goal is for each of you to review a Chapter, in your case Chapter 19 Shoulder, and answer the questions will the guidelines: 1) improve medical treatment for injured workers, and 2) adequately cover the body parts and conditions”.

ODG Training Guideline Video Reviewed

Eichler: Although Dr. Lederman references the above to answer the two referenced questions, the ODG team remains aware of the three qualifiers in mind as we review comments; 1) improve medical treatment for injured workers, 2) make treatment and claims processing more efficient and cost effective, and 3) the guidelines adequately cover the body parts or conditions.

Shoulder
Chapter lead: Stephen Norwood MD
Non-specialist/non-shoulder reviewer - No identified credentials
Not in member directory of ASES, AANA or AOSSM
No identified shoulder specialists on editorial board

Dr. Norwood: I am an orthopaedic colleague (FAAOS) with years of experience as a university sports medicine team physician, worker’s comp specialist, AAOS Board of Councilors, Texas Orthopaedic Association President, Texas Medical Association workers' comp committee, to name a few. Hence, my diversified experience in orthopaedics and workers compensation affords an understanding of the unique but particular needs of Workers Compensation Guidelines Users, especially for orthopaedic surgeons. I would be more than happy to provide my CV upon request.

I have been privileged to be Chapter lead for both knee and shoulder sections of ODG for several years now, and must continually ensure that the evidence summaries are kept relevant. I have also been Medical Editor-In-Chief for the past few years.

ODG is committed to publishing a powerful evidence-based tool which facilitates medical provider and stakeholder communications, with the express goal of improving outcomes for injured workers, expediting the delivery of optimal care, and decreasing associated transactional processes and costs.

Unfortunately, from a national perspective, many injured workers do not have the benefit of seeing a specialist, often encountering multiple providers with many levels of training. The ODG Editorial
Team does not author the evidence or the literature, nor do we conduct the studies. I agree that authoring on that level would require Sub-specialist granular level of expertise. We (in conjunction with extensive clinical and editorial teams at our parent companies, MCG Health & the Hearst Health Network) impartially review, rank, and transparently present the evidence in a user-friendly format. Information on our methodologies is available on our website at http://www.odg-twc.com/ under the “Treatment Index” section.

There have been shoulder sub-specialists contributing to ODG for years, some of whom choose not to be listed on the Editorial Advisory Board for reasons including but not limited to shielding against conflicts of interest which may arise when identities are revealed to outside parties. This further protects against entities who might attempt to contact or solicit Editors, which is forbidden. This also further allows for candid objectivity without fear of backlash or attack.

ODGwelcomes input and feedback from stakeholders as outlined on the “Quick Links: User Guide & Suggest ODG Updates” which can also be accessed from http://www.odg-twc.com ODG will work to provide a more comprehensive list of our team members upon request. ODG and MCG welcome your involvement and participation in our editorial review processes and/or the feedback of other qualified medical professionals on the Arizona team.

Although this is a departure from the traditional means of submitting literature for review, we believe it is important to respectfully make such allowances for you to communicate directly with me as the Chapter Lead as part of this Regulatory Review process. Please feel free to forward me PubMed numbers or abstracts for inclusion in the review and update processes.

Despite your identified concerns, I respectfully assert that ODG meets the Arizona mandate to “improve medical treatment for injured workers”. This has been independently documented by numerous nationally recognized sources including but not limited to The Texas Department of Insurance, The Tennessee Bureau of Workers Compensation, WCRI (Workers Compensation Research Institute), NCCI (National Council on Compensation Insurance), Johns Hopkins and others. Ms. Kurth has these studies and I would be happy to have them forwarded to you and your team. Furthermore, I again respectfully assert that ODG meets the Arizona requirement to “adequately cover the body parts and conditions” with the tens of thousands of CPT, ICD and NDC code related diagnoses, treatments, procedures, and medications covered representing both evidence based studies and statistically significant qualifiers assuring coverage for workers compensation.

Specific to Shoulder Surgery, the following procedures are among those addressed:

<table>
<thead>
<tr>
<th>Surgery</th>
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<td>See more specific procedure. The following are choices: Arthroplasty (shoulder); Arthroscopic debridement (for shoulder arthritis); Bankart repairs; Bicep tenodesis; Clavicle fracture surgery; Diagnostic arthroscopy; Dorsal scapular nerve entrapment; Graft, rotator cuff; Manipulation under anesthesia (MUA); Nerve entrapment (shoulder); Osteochondral autologous transplantation (OATS); Porcine small intestinal submucosa (SIS); Regional anesthetia (for shoulder surgeries); Reverse shoulder arthroplasty; Surgery for rotator cuff repair; Surgery for impingement syndrome; Surgery for AC joint separation; Surgery for biceps tenodesis; Surgery for ruptured biceps tendon; Surgery for shoulder dislocation; Surgery for shoulder neuropathies; Surgery for adhesive capsulitis; Surgery for Thoracic Outlet Syndrome; Surgery for SLAP lesions; Surgery for pectoralis tendon repair; Thermal capsulorrhaphy; Scapula fracture surgery; Superior capsule reconstruction (Mihata procedure).</td>
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**Rotator Cuff Tears: Useful with comments**

Surgical treatment Accurate and useful

**Dr. Norwood:** I participated extensively in the last update November 2016 and would be pleased to review it again.

Do not address acute SMALL full thickness tears
Dr. Norwood: If you have particular studies in mind, please send me PubMed numbers or abstracts of such. There is little high quality evidence differentiating treatment of new vs. pre-existing small tears. However, from a real world clinical perspective small acute or chronic tears often do fairly well without early surgery or sometimes with none at all. Maybe 3 months is too long in some cases. Factors to justify shortening might include absence of progress with PT, high sustained pain levels, mechanical catching as examples. Hence, this is an excellent example of how guidelines “fit” for most straightforward cases but specifically encourages and sets the groundwork for documentation of case specific factors that would empower authorization of the requested procedure while safeguarding the injured worked from potential premature, unnecessary, or inappropriate procedures as “first line” care by a medical provider who is not a highly qualified subspecialist. As a Specialist, I am confident you will agree that injured workers should be afforded protections against unnecessary procedures suggested by less skilled, yet well intending practitioners. This does not suggest fostering inappropriate denials, but simply allows a pause to evaluate and produce true substantiation of need, including response to conservative care and citation of possible confounding factors. Your additional thoughts and input on language to further clarify such exceptions would be appreciated for further review against the evidence by the ODG Advisory Board.

Atraumatic tears-good
Traumatic medium to large tears-Size not defined-appropriate
Do not address radiographic criteria for chronic tears
Not surprisingly, larger tears are more difficult to successfully repair. The re-tear rate based on rotator cuff tear size is: 10% for ≤2 cm²; 16% for 2–4 cm²; 31% for 4–6 cm²; 50% for 6–8 cm²; & 57% for >8 cm² (Murrell, 2012)

Dr. Norwood: We will further review and may consider adding something about radiographic differentiators including muscle atrophy on MRI, as an example. Let us know if you have other suggestions and studies. This Murrell study of 2012 is cited in the guidelines under Rotator Cuff Tear. It is important not to overly and narrowly set “Authorization” criteria in a Guidelines, overly limiting the Physician’s ability get approval by citing case specific needs. Cases with chronic tears or other complex conditions may fall into a category requiring greater consideration and be addressed on a case by case basis. From a practical perspective, we have found that most Medical Providers, Hospitals and Surgical Facilities will not schedule and allow procedures without an authorization “in hand”.

Many outdated studies not updated

Dr. Norwood: This is a matter of style, preserving some of the better older studies from previous updates to provide some historical background. In some scenarios, the physiology and treatments do not significantly change much and/or new high quality studies are not initiated or published. During major updates the old references are re-edited, eliminating less pertinent duplicative information and adding further clarity.

Based upon Medical Provider feedback, “Risk versus Benefit” sections have been added. These provide a summary from a different perspective. The “Recent research” section is usually where the more current and useful information can be found and the blue indications box is intended to represent the latest summarized recommendations.

Rehab-preop
3-6 months-poor definition

Dr. Norwood: Options discussed above.

PT and RTW guidelines not clearly stratified by diagnosis and therefor inaccurate.
PT visit numbers seem to be based on opinion and not EBM
RTW based on historical case review and not biology-(ie RTC healing and risk for re-injury)
For instance: (from ODG)
PT: (No references:)
Medical treatment: 10 visits over 8 weeks Medical treatment, partial tear: 20 visits over 10 weeks Post-surgical treatment: 24 visits over 14 weeks

Dr. Norwood: I agree that there may appear to be a lack of “basis” and easy cross-references for
PT and RTW. These frequencies and durations are provided as recommended for substantiation of medical necessity and confirmation of patient response to care at reasonably indicated points in time. As you know, there are few, if any, high quality unbiased evidence based studies specific to frequency and durations for physical therapy.

**Eichler:** This safeguards the patient against suboptimal or excessive unnecessary therapy that might not be benefitting the patient. This also results in re-evaluation & documentation of next steps and goals, which I hope you will agree is reasonable. It is again important to note that in many regions of the country, including Arizona, many injured workers do not have access to top notch care by specialists and outcome oriented therapy programs. Without the resulting pause for review, patient outcomes could be negatively impacted. ODG numbers are not simply made up or determined by consensus, but reflect huge significant data sets from highly-recognized reliable sources. In addition to the Treatment Guidelines citations and studies, this data can be accessed directly using ODG’s UR Advisor query tool. Such data linking ICD and CPT Codes with associated frequencies of the pairings for several million claims provide significant insights for Providers and Payers apart from the actual Evidence Based Literature. The depth of the data cleary demonstrates that ODG addresses the statically significant diagnoses, conditions, and treatments associated with workers’ compensation injuries and claims across the country. In addition to newly published literature, this data helps our teams to identify conditions and treatments to research for inclusion in the Guidelines. Hence, ODG clearly meets the Arizona intent of “adequately cover the body parts and conditions”. Members of our team would be happy to demonstrate this and other tools for you.

The American Physical Therapy Association has an initiative to collect data from their members in an attempt to publish studies to support the treatments and services they provide. Members will apparently be charged a fee to participate and subsequently access the data. It will be interesting to see if the results are published and meet unbiased evidence based standards.

**Return-To-Work "Best Practice" Guidelines**

Medical treatment, modified work: 0 days Medical treatment, manual work: 7 days Medical treatment, manual overhead work: 28 days Medical treatment, heavy manual work: 56 days Arthroscopic surgical repair/acromioplasty, clerical/modified work: 28 days Arthroscopic surgical repair/acromioplasty, manual work, non-dominant arm: 56 days Arthroscopic surgical repair/acromioplasty, manual work, dominant arm: 70 days Open surgery, clerical/modified work: 42-56 days Open surgery, manual work, non-dominant arm: 70-90 days Open surgery, manual work, dominant arm: 106-180 days Open surgery, heavy manual work if cause of disability: indefinite

_Highlight reflects 70 days for RTW after RCR-This would-be malpractice and under no circumstance acceptable as this is reviewed by non-surgeon personnel it represents misinformation. ESL_

**Eichler:** Return-To-Work "Best Practice" Guidelines are not adopted, mandated or under consideration in Arizona. These are data analytics tools used industry wide for predictive modeling, reserve setting, benchmarking and numerous other business functions necessary to successfully operate an insurance company. Insurance is a business of calculated risk. Risk is evaluated and premiums are, in part, set based upon predictive modeling of projected risk and costs with application of advanced business modeling.

**Surgery for AC joint: Not useful**

Separation: Not useful
No treatment section.
Only states Grade III. Doesn’t address grade 4 and 5 where surgical treatment is indicated. Section obviously not updated for years.
Distal clavicle resection/ACJ arthritis-section hard to find. Not referenced

**Guidelines inadequate**

**Dr. Norwood:** This shoulder summary is at the top of our priority list for review and update. If you are willing to provide input, I would be happy to include you in the review process in accordance with our methodologies and conflict of interest policies. I can further send you the early draft along with our other shoulder subspecialists to get additional appropriate feedback. Once modifications are completed for a major update like this, it is finally scrubbed again by staff before publishing.
**Biceps Tenodesis: Useful**

Reasonable review. No discussion of tenotomy. The cumulative evidence supports labral debridement or biceps tenotomy over labral repair when an associated rotator cuff injury is present. (Erickson, 2014)

Practice trends indicate that the proportion of SLAP repairs has decreased over time, with an increase in biceps tenodesis and tenotomy. Increased patient age correlates with the likelihood of treatment with biceps tenodesis or tenotomy versus SLAP repair. For patients with isolated SLAP lesions, the proportion of SLAP repairs decreased from 69.3% to 44.8%, while biceps tenodesis increased from 1.9% to 18.8%, and biceps tenotomy increased from 0.4% to 1.7%. For patients undergoing concomitant rotator cuff repair, SLAP repair decreased from 60.2% to 15.3%, while biceps tenodesis or tenotomy increased from 6.0% to 28.0%. There was a significant difference in the mean age of patients undergoing SLAP repair (37.1 years) versus biceps tenodesis (47.2 years) versus biceps tenotomy (55.7 years). (Patterson, 2014)

**Dr. Norwood:** Tenotomy is also discussed with indications under the cross-referenced Surgery for SLAP lesions.

**Biceps Tenotomy:**

- Preferred for revision SLAP surgery and with associated large rotator cuff repair in older patients.

A systematic review of SLAP repair over age 40 demonstrated significantly higher failure rates with decreased patient satisfaction and increased complications in the older cohort. Worse results were also noted in workers’ compensation patients and those with associated rotator cuff tears. Since the literature demonstrates more reliable results with biceps tenotomy or tenodesis, these procedures should be favored over repair. Tenotomy is specifically recommended for revision SLAP surgery and with associated rotator cuff tears. (Erickson, 2015)

**Dr. Norwood:** Improved visibility has been proposed by adding these entries which currently do not exist. As we move to a new delivery platform in 2018, additional display functions and presentation styles are slated. I would be interested in your opinions on the need or benefit of additional discussion and references, since tenotomy or tenodesis it is somewhat dependent on preference of surgeon and patient.

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<td>Surgery for biceps tenotomy</td>
<td>See Surgery for SLAP lesions and Surgery for biceps tenodesis for discussion and indications.</td>
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**Surgery for impingement syndrome: Useful**

**Complete biceps rupture: Not useful. (in fact, the worst section I’ve read in the ODG)**

This section is incomplete and inaccurate. It includes some comments on Distal biceps rupture (an elbow injury with clear surgical indication). The Long head biceps rupture indications is incomplete. Inaccurate and misleading. The discussion combines comments for elbow, partial tears and SLAP tears—all not “complete ruptures”. This section should be completely rewritten—obviously and clearly not edited by a shoulder surgeon.

**Dr. Norwood:** This feedback is helpful. An update is scheduled as a priority to include surgery for ruptured proximal biceps tendon (shoulder) on the top of the list along with AC surgery.

**Surgery for Shoulder dislocation: Not useful**

Combines information on both glenohumeral dislocation (shoulder dislocation) and AC joint dislocation (not a shoulder dislocation).


**Dr. Norwood:** This is in the queue as part of the shoulder update. From a practical perspective, failed surgery deviates from the norm and further treatment, which is no longer first line of care, should involve review of the case specific scenario in an attempt to facilitate the best possible outcome for the injured worker.
Surgery for SLAP tears: Useful
In general, this is up to date and recommendations are appropriate. It overemphasizes tenotomy as opposed to tenodesis and misrepresents the study (Erickson 2015).

Dr. Norwood: This was a more recently updated topic. Your further perspectives on the Erickson study would be helpful. The reason for emphasizing systematic reviews and meta-analyses is that ODG considers this form of evidence to be at the top of the pyramid, followed by RCTs, cohort studies, and so on. We will review.

Shoulder Arthroplasty (TSA): Useful
The basic elements are there. Again, a bit of a confused section with discussion of Glenohumeral joint Arthritis (Shoulder arthritis) combined with ACJ arthritis—not relevant to section.

Dr. Norwood: Language in this section will be reviewed with a goal of providing better clarity. One problem is that distal clavicle resection is referred to as an “arthroplasty” in some editions of AMA guides to impairment, for instance.

Reversed Shoulder Arthroplasty (RSA): Sort of Useful
RSA will likely be used more in the WC patients than anatomic TSA because the primary indication is the long-term effect of failed Rotator cuff surgery. This section is correct but very limited and should be expanded significantly. The economic effect of this surgery is dramatic and this section doesn't do it justice. The guidelines presented are basic and for that reason useful but much room for improvement.

Dr. Norwood: This section is concise and the ODG team will consider expanding the discussion. Dr. Lederman is welcome to submit evidence for review and inclusion.

Summary:
In summary, there is a lot of useful information in the ODG. The shoulder section is not really up to date with a great deal of outdated/not updated information and some illogical organization of diagnosis and surgical procedures.

The most potentially useful sections are for surgical indications for:

- Rotator Cuff Repair
- TSA and Reversed TSA
- SLAP tears
- Biceps Tenodesis
- Impingement Syndrome

Physical therapy visit recommendations are arbitrary and not Evidence based.

Return to work days are very generalized and not clearly diagnosis or job specific.

End/ESL
Evan Lederman, MD
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602-277-6211

We hope the insights we have provided are of value to you and your team. We look forward to further discussions with you and your team upon your review of this e-mail, as well as potential further discussions with Dr. Lederman.

Thank you again for your efforts to improve the Arizona Workers Compensation system and your open candid communication with our team.

Thanks & Regards,

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