

# Utilization Review in Workers' Compensation

## Review of Current Status and Recommendations for Future Improvement

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Utilization review (UR) is a process that assesses aspects of a treating provider's care plans and then provides recommendations to payors/insurance carriers, third party administrators, etc, concerning the appropriateness of the proposed care. UR has become an integral part of medical practice and has influenced medical care within the workers' compensation (WC) system and is mandated in several states and jurisdictions. This guidance statement from the American College of Occupational and Environmental Medicine (ACOEM) reviews structural elements of UR programs and proposes a possible template for operational standards. UR has a unique role in protecting patients and educating providers on evidence-based guidelines, new research, and best practices.

Utilization review (UR) has evolved into an important component of the health care system, affecting health care providers and patients and impacting medical practice with significant implications for health care choices, outcomes, cost of care, and stakeholder satisfaction. Rising medical costs, the desire to optimize patient outcomes, and the increasingly available options for new and complex medical treatments, necessitate a process for payors to determine effective, medically necessary, and evidence-based treatment. As a result, UR has become an integral part of medical

practice today. UR has influenced medical care within the workers' compensation (WC) system and is mandated in several states and jurisdictions. These mandates will likely expand, placing additional challenges on requesting providers and on insurance carriers. Although various jurisdictions implement UR regulations differently, some basic principles can be applied to all or most jurisdictions.

In 2017, the American College of Occupational and Environmental Medicine (ACOEM) developed a statement reviewing standards for all UR programs irrespective of jurisdiction.<sup>1</sup> This current paper reviews structural elements of UR programs and proposes a possible template for operational standards. The standards state that UR should emphasize patient welfare and proven clinical outcomes derived from the use of transparent evidence-based decision making resulting in UR determinations that are factual, consistent with evidence-based medicine, and understandable to all parties including patients, providers, insurers, and other stakeholders. The UR process should incorporate oversight mechanisms, including quality assurance (QA) and continuous quality improvement (CQI) efforts, to ensure sound evidence-based treatment determinations within a timely, efficient and effective process. Furthermore, the perspectives of multiple stakeholders should be incorporated into a framework of the standards.

In developing standards, patient outcomes (emphasizing functional recovery, quality of life, and potential benefit vs harm) and cost-effectiveness are considered most relevant.<sup>2</sup> The following recommendations represent ACOEM's public position concerning the design, implementation, operation, and oversight of UR systems for use by all stakeholders, comprised of requesting providers, patients and/or their representatives, attorneys, peer UR reviewers, employers, insurers, third-party administrators (TPAs), utilization review agents or organizations (URAs, UROs), regulators, policy makers, and researchers/academics.

### GOALS AND OBJECTIVES OF UR SYSTEMS

The purpose of UR is to review the safety and efficacy of treatment requests for

consultations, durable medical equipment (DME), rehabilitation, complementary and alternative medicine, behavioral health care, diagnostics, procedures, surgery, medication requests, etc, for prospective, concurrent and retrospective reviews (see Appendix A. Glossary). As discussed in ACOEM's earlier position paper, "UR is intended to be a collaborative process in which proposals to perform medical service for reimbursement are compared with high-quality, evidence-based guidelines for the purpose of assuring that patients receive the appropriate care necessary while avoiding ineffective, potentially harmful, and low-value care."<sup>1</sup> UR looks solely at the medical necessity of a request and not at the issues surrounding compensability or causation. In addition, financial analysis is not typically part of the peer UR reviewer decision-making process, although these decisions may be used by the insurance carrier or bill review department to approve the costs of proposed procedures or DME. Insurance carriers may sometimes deny treatment based on administrative rules including compensability disputes.

At its heart, UR is a process that assesses aspects of a treating provider's care plans and then provides recommendations to payors/insurance carriers, TPAs or UROs/URAs concerning the appropriateness of the proposed care. UR recommendations may be used to authorize payment and for QA review. An inherent conflict exists between expediency, regulatory requirements, and the time needed for thoughtful review. Another major factor for consideration is the global transition from the historic practice of medicine based upon experience to a more rigid evidence-based approach.

Historically, UR has been practiced in many states for many years as a means to combat fraud, waste and inappropriate care. This often leads to improved health care, decreased impairment, and earlier return to work for the injured worker.<sup>3</sup> Practice gaps continue in health care despite well documented evidence-based guidelines, an observation supported by examples such as worsening trends in the management of back pain with increased use of imaging, opioids, and specialty referrals for non-specific back pain while guideline supported interventions

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This guidance paper was developed by ACOEM Utilization Review Task Force under the auspices of the Council on OEM Practice. It was reviewed by the Committee on Policy, Procedures, and Public Positions, and approved by the ACOEM Board of Directors on February 8, 2020. ACOEM requires all substantive contributors to its documents to disclose any potential competing interests, which are carefully considered. ACOEM emphasizes that the judgments expressed herein represent the best available evidence at the time of publication and shall be considered the position of ACOEM and not the individual opinions of contributing authors. The authors declare no conflicts of interest.

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DOI: 10.1097/JOM.0000000000001893

like physical medicine and non-steroidal anti-inflammatory medication use has remained stable or declined.<sup>4</sup> Evidence continues to mount that frequently used treatments including opioids and lumbar fusion for degenerative disease often result in inferior patient outcomes or harms,<sup>5,6</sup> and are thus frequently evaluated by UR. Recognition of potential harm from unsupported low back imaging has resulted in a call for action to decrease unsupported low back imaging.<sup>7</sup> Value-based health care decisions consistent with evidence-based guidelines result in decreased costs to the carrier, the employer and the WC system<sup>3,8</sup> while helping to protect the worker from iatrogenic harm.<sup>9</sup> An example of this is the recent integration of state pharmacy formularies with UR to reduce inappropriate prescribing, including opioid use.<sup>10–12</sup>

Recent research has acknowledged that it may take several years for physicians to adopt new evidence-based medical treatment plans and abandon ineffective historic treatments. One example of this type of persistent behavior is the continued high rates of treatment of degenerative meniscal tears with arthroscopy despite the lack of evidence of efficacy in the majority of cases.<sup>13–15</sup> New technology and innovations, while much-needed in health care, oftentimes do not meet the rigorous clinical standards for efficacy to truly improve patient outcomes or to establish benefits exceeding harm. For example, intradiscal electrotherapy (IDET) to treat “discogenic pain” continued long after evidence including a sham randomized controlled trial and subsequent guideline recommendations concluded the lack of efficacy.<sup>16,17</sup> UR has a unique role in protecting patients and educating providers on evidence-based guidelines, new research, and best practices.

## QUALIFICATIONS

The UR determination corresponds to the qualifications of the peer UR reviewer. At every level of review (eg, 1st, 2nd, 3rd, independent medical review [IMR], independent review organization [IRO]), the reviewer must have an appropriate level of expertise (eg, education, training, licensure, certification, experience, scope of practice, jurisdictional requirements, etc) to understand and opine on the clinical issues involved and applicable guidelines. Peer UR reviewers should demonstrate understanding and competence regarding the clinical circumstances but also the regulatory and administrative requirements of the jurisdictional UR system. Consideration should be given to the specialty and scope of practice of the requesting provider and utilize a similarly qualified reviewer. The reviewer must have a detailed understanding of the treatment or

procedure requested. Active practice (eg, defined number of hours performing patient care) should be considered for a second level reviewer, especially for an appeal peer UR reviewer. Independent organizations that seek to improve health care quality through accreditation and oversight such as Utilization Review Accreditation Commission (URAC) (<https://www.urac.org/>) or the National Committee for Quality Assurance (NCQA) (<https://www.ncqa.org/>) have recommendations pertaining to guidelines and reviewer qualifications.

The proposed operational standards for analysis of UR review request include:

1. A medical record summary – This summary must be sufficiently thorough, accurate, and include documentation of all the pertinent clinical, diagnostic, therapeutic, and other important facts of the case including any red flags, potential exceptions to guidelines, or rationale for care requests. This summary must also include pertinent negatives identified in the medical record.
2. Application of evidence-based medicine – The application of evidence-based medicine must be documented, including the specific criteria utilized and how it relates to the individual clinical facts of the case. This should result in a clear determination with sound reasoning and obvious and defensible rationale.
3. Requesting provider and peer UR reviewer discussion – The requesting provider and the peer UR reviewer should directly discuss the facts of the case and the criteria applied when denial or only partial certification of care is being considered. The UR system must provide reasonable opportunity for the requesting provider to discuss his/her findings and treatment plan with the peer UR reviewer. The peer UR reviewer and the requesting provider share responsibility for making the peer-to-peer contact occur (see section on UR Decisions and Stakeholder Responsibilities).
4. Flexibility for unusual circumstances – Occasionally cases require complex decision making that justify treatment that is not supported by evidence-based medicine or specific guideline criteria. These scenarios may include uncommon cases or treatments, cases with complications or an unusual clinical course, previous documented response to the requested treatment or current updates in evidence-based literature and research not reflected in applicable guidelines. Peer UR reviewers may, at times, recommend modified certification based upon specific circumstances, including prior positive response to care, comorbidities,

guideline limitations, etc. When this occurs, the UR reviewer must thoroughly explain their rationale for certifying some, but not all of the requested care, or for certifying a treatment outside of the guidelines/criteria. This explanation for exception must be well documented in the case file.

5. Compliance with jurisdictional requirements – Jurisdictional requirements for peer UR reviewers vary between states and must be followed. These criteria may include whether a same school, same or similar specialty, board certification, state license, or active practice is required.
6. Timeliness of review and decision – Turnaround times (TAT) are critical and must be met. This varies based on the jurisdiction and decision delays or improper processing of the determination may be subject to state fines, potential denial of the request (Texas), or approval of the request (California). TAT for UR should be clearly stated and understood by all participants. This facilitates timely decisions and execution of care plans. Of high significance is that there is an injured worker at the ultimate receiving end of any decision to approve or deny a treatment, and therefore excessive administrative delays should be avoided.
7. Appeals – Physician appeal reviews must be performed by an independent (eg, absence of financial interest; material personal, professional or business relationship; prior involvement with the case), board certified physician within the same or similar specialty, and with adherence to jurisdictional requirements. Non-physician (non-MD/non-DO) appeal reviews, where board certification is not a requirement (eg, chiropractic, acupuncture, psychology, etc), should be conducted by practitioners who are independent (including not reporting to the peer UR reviewer who rendered the non-certification decision under review), are not financially associated with the requesting treater, have the appropriate level of training, licensure, expertise, and who adhere to jurisdictional requirements.

## CREDENTIALS

Credentialing of the peer UR reviewer should include primary source verification of education and training, active board certification, licensure, disciplinary actions, malpractice history, and adequate liability insurance coverage to include omissions and errors. Validation of active practice is important when jurisdictionally required. Re-credentialing at regular 2 to 3 years intervals is commonly

required. Policies and processes should be in place for removal of peer UR reviewers that are unable to meet credentialing or QA standards, including TAT. Payments to peer UR reviewers must not be based on targets for specific determinations or denial (non-certification or partial certification) rates that are not supported by medical facts and applicable evidence-based guidelines.

### PEER REVIEWER ORIENTATION AND TRAINING

UR agents must provide effective and efficient orientation, training, oversight, and monitoring to ensure appropriate peer UR reviewer performance. UR organizations operating in jurisdictions that mandate specific UR regulations and guidelines are responsible for providing clarity in the regulations promulgated and assurance that adequate training is available to reviewers for the policies and guidelines mandated. Training should include jurisdictional requirements for UR and instruction in navigation of the electronic health record (EHR) system including any portals used for access to medical records and transmission of UR reports back to the UR organization or agent. The orientation should also cover the importance of electronic data security, confidentiality of injured worker information, conflicts of interest, proper use of technology including portals, documentation and tracking of phone calls, conduct of peer-to-peer conversations, and access to guidelines and medical documents. Reviewers must also be instructed on electronic security, avoidance of conflicts of interest, Health Insurance Portability and Accountability Act of 1996 (HIPAA) confidentiality of patient information,<sup>18</sup> and avoidance of any appearance of bias.

All complaints should be investigated, resolved, and tracked. Recurrent complaints should receive more in-depth analysis and, if necessary, corrective action. Policies must be in place to address the process and outcomes of complaint investigations. The UR review process should be improved based on information gleaned from complaints from any party, including requesting provider, patient or their attorney, claims adjuster, UR nurse or nurse case manager, peer UR reviewer, state or accrediting body.

### UR DECISIONS AND STAKEHOLDER RESPONSIBILITIES

Accountability is the foundation for appropriate utilization management. UR participants and their roles should be clearly identified at every step. To improve transparency, the peer UR reviewer for each determination should be identified by name, school, specialty, board certification, and licensure. Appropriate determinations

must be based on accurate information, correct assessment of the medical information, and application of evidence-based guidelines. No UR preauthorization treatment requests should be denied or partially certified/modified without satisfying a list of requirements:

1. Only a physician or appropriate equivalent peer depending upon the nature of the request and jurisdictional requirements (such as a chiropractor, dentist, psychologist, acupuncturist, physical therapist, occupational therapist, etc) should recommend denial or modification (partial certification) of a UR request (2nd and 3rd level review). In the majority of states, nurses, nurse practitioners, pharmacists, physical/occupational therapists, or other health professionals performing first-level review cannot deny UR requests or pharmacy requests. (One exception is Massachusetts' state regulations which require school to school matching for second- or third-level peer UR review.)
2. First-level nurse UR reviewers must understand jurisdictional requirements. These professionals must have access to a secure portal and tools for an efficient process to prevent unnecessary delays in UR response causing delays in injured worker care. Proper documentation, security and confidentiality are important. If approval cannot be made by the nurse based upon review of medical documentation versus evidence-based criteria or required guidelines, then the review must be forwarded to the peer UR reviewer without delay. Rapid response is important to allow time for the peer-to-peer conversation and return of the determination within jurisdictional time frames. The nurse should try to obtain any medically necessary reports or procedural results that are important for making the determination. The UR nurse should initiate requested reconsiderations or appeals and forward any complaints to the appropriate department for review and resolution.
3. The UR system must provide reasonable opportunity for the requesting provider to discuss his/her findings and treatment plan with the peer UR reviewer. This exchange of information should occur before recommending a denial or partial certification. The purposes of this dialogue are to: (1) obtain any missing information; (2) discuss the rationale for the request; (3) explore the expected outcomes versus risks; (4) evaluate congruence with applicable guidelines; and (5) investigate rationales for exceptions

to the guidelines. An agent may be helpful in setting up the provider interaction and in obtaining missing medically necessary documents prior to the peer-to-peer conversation but relying exclusively on this involvement does not satisfy the requirement for peer-to-peer contact. The WC system should make all reasonable efforts to encourage and incentivize both reviewing and requesting physicians to successfully accomplish and conduct a collegial, high-quality, fact-based peer-to-peer interaction and educational discussion. This interaction is typically conducted via one or more confidential telephone conversations. However, if both the reviewing and requesting physician agree, the information may be transmitted via other secure electronic means or fax where permitted by regulations and in full compliance with all applicable laws including HIPAA<sup>18</sup> and information technology (IT) security compliance statutes.

- a. Both the requesting provider and the peer UR reviewer have responsibilities to complete and improve the peer-to-peer process. A successful UR interaction is most effective when all appropriate documents supporting the request are available. This is ultimately the requesting provider's primary responsibility. The peer UR reviewer may also greatly enhance the likelihood of successful communication by attempting to contact the treating provider during the provider's regular office hours or when the requesting provider has indicated their availability. The peer UR reviewer should also leave clear phone contact information including hours of contact for the treating physician to call as well. When both physicians understand the time constraints, maintain flexibility, availability, and the willingness to participate in the UR process, the best outcome for the injured worker can be achieved. The treating physician is in direct contact with the injured worker and is responsible for the medical care of his or her patient. The peer UR reviewer is responsible for thorough review of the clinical medical records, and documented application of specific evidence-based medical guidelines, with a clear explanation of the recommendation including guideline criteria that were not met for partial certification or denial. Likewise, clinical determinations that are approved should also be supported



- by evidence-based guidelines and rationale for feedback to all necessary stakeholders (ie, the provider, injured worker, insurance carrier, URA or URO, attorney, state regulator) and for future quality assurance review. The peer UR reviewer has no direct contact with the injured worker and no patient–physician relationship is established. This concept was recently litigated in California where the state medical board opined that UR is the practice of medicine. Tort action was initiated and lower courts awarded damages based upon peer UR recommendation to deny care, with subsequent reversal of the decision by the California Supreme Court based upon WC being the exclusive remedy for employees with work injuries, thereby preempting tort claims (such as malpractice associated with utilization review).<sup>19</sup>
- b. While monetary costs may be used to determine when UR triggers (referral to UR review), medical UR determinations must be based on review of clinical efficacy and assessment of benefit versus risk or the requested medical service or treatment. Outcome measurements should be tracked for improvement of both clinical quality and functioning of the UR system itself, thus serving all stakeholders (see section on Outcomes and Metrics).
  - c. Implementation of a UR system must protect patient confidentiality while operating transparently to foster acceptance of the process, allow identification of bottlenecks and maximize opportunities for continuous quality improvement.
  - d. Any conflict of interest or the appearance of such, must be avoided at every stage in the UR process. Incentives based upon denials/modification (partial certification must be avoided/precluded). URO/URA and peer UR review policies and procedures must mandate that if the peer UR reviewer identifies a potential conflict of interest upon receiving a case, then the peer UR reviewer must notify the sender and not accept the case. UROs/URAs should try to identify and avoid potential conflicts of interest prior to assigning a peer UR review case. Examples of conflicts of interest include a peer UR reviewer that works in the same practice as the requesting physician, a peer UR reviewer that receives referrals from the requesting physician or a history of a significant past legal dispute between the peer UR reviewer and the requesting provider.
  - e. The cooperation and collaboration by both requesting providers and peer UR reviewers should be tracked and appropriate interventions implemented as needed and where permitted by applicable jurisdictions or networks. Examples of interventions include retraining, review of policies and procedures with increased monitoring of compliance and removal from review or provider networks if indicated, etc.
  - f. Criteria to subject treatment requests to UR should be carefully determined to maximize system benefits and outcomes, minimize treating provider burdens, and avoid unnecessary care delays and excessive administrative costs. The criteria development should consider factors such as emergency care, timing of care and compliance with evidence-based guidelines, risk versus benefit, expected or demonstrated outcomes, duration of treatment and the need for skilled versus self-care, high versus low value care requests, and experimental treatment requests. Some suggested options include:
    - i. Recommendation for approval without UR review: Examples include emergency care consistent with guidelines, acute and time limited treatment trial involving conservative care consistent with guidelines.
    - ii. Recommendation for UR review: Requests for experimental treatment, lack of evidence-based support, care exceeding treatment guidelines with limited efficacy, invasive treatment including surgery, hospitalizations, treatments with evidence of suboptimal outcomes or potential risk exceeding benefits.
4. All decisions should follow a medically logical approach, document the rationale for the decision, be supported by clinical information with consideration of applicable guidelines or evidence-based literature where applicable. Denial or modification (partial certification) must be based on objective review of submitted documentation, peer-to-peer discussion when possible, risk versus benefit, applicable guidelines, and/or an identified hierarchy of evidence-based medicine (strength of evidence). Reviewers should identify if there is adequate rationale to apply exceptions to the guidelines' recommendations.
  5. Denials or modification (partial certification) should specify the guideline and criteria that were not met to permit the provider to appeal/rebut the denial and to educate the requesting provider regarding expectations and evidence, including appropriate application of evidence-based medical guidelines.
  6. Clinical situations not covered by guidelines should be evaluated by thorough assessment of objective evidence from submitted documentation, including the claimant's prior response to the treatment requested, consideration of other pertinent clinical knowledge and guidelines, and review of related evidence-based medical literature. Another possible consideration is the consistency of the treatment request with other medical treatment specialists evaluating the claimant.
  7. All determination notifications must be clear, timely, and meet jurisdictional requirements. Systems should strive to avoid delays or gaps in supported care. All parties should remain cognizant that there is an injured worker at the heart of the process. Unnecessary delays in rendering an appropriate determination are potentially detrimental to that worker's treatment, delaying recovery and return to work, and ultimately increasing WC system costs.
  8. The appeal (also IRO or IMR) and jurisdictional options and process should be specified in writing when providing decisions with a denial or modification (partial certification). The peer UR reviewer should understand the appeal process and educate the requesting provider as needed. The appeal, IRO or IMR process outcomes should follow quality standards for reviewer qualification and decision rationale and documentation. Any deficiencies present in the original request and UR recommendation must be meticulously evaluated during the formal IMR/IRO review.
  9. Physicians who understand clinical circumstances in WC cases, as well as, the application of guidelines and jurisdictional variations in regulations should be involved in: the routine quality assessment of the UR process; peer review determinations; appeals; and orientation, training and retraining of peer UR reviewers when issues are identified.
  10. Claim representatives must understand jurisdictional rules and be accessible to

injured workers and claims managers. Adjusters must prioritize UR procedural, medication or treatment requests to prevent unnecessary delays in care.

11. Attorneys should understand and follow the jurisdictional UR processes and appeals. They should facilitate allowed information flow between parties to encourage early injured worker recovery and return to work.

### **GUIDELINES AND EVIDENCE-BASED MEDICINE**

Guidelines are important in utilization management in setting standards of medical care, consistency in decision making, and clarity of rationale for decisions. Guidelines must be based on high-quality, evidence-based medical research (Table 1) that is nationally accepted and applicable to the condition and requested intervention. The guidelines must be clearly acknowledged and available to all stakeholders for transparency, ease of use, and application. Guidelines may outline appropriate medical treatment plans and decisions (eg, pharmacologic, rehabilitation, interventions, surgery, experimental treatment), the duration of medical care (eg, physical or occupational therapy, chiropractic care, etc), and length of hospitalization. Guidelines may also reference functional improvement or lack thereof. The evidenced-based medical hierarchy of evidence should be specified for use by the system and/or jurisdiction. Guidelines must be based on a complete review of evidenced-based medical sources with ranking of the sources and a clear and precise interpretation of how guidelines should be correctly and appropriately applied (eg, AGREE II,<sup>20,21</sup> GRADE,<sup>22</sup> etc).

Evidence-based medicine can decrease excessive, unnecessary, and potentially harmful medical care.<sup>9</sup> Studies have shown that evidence-based medicine guidelines can raise the quality of care. Evidence-based medicine uses scientific studies to help

guide effective clinical decision-making and ensure the consistent use of proven medical evaluation and treatment. It can also reduce medical interventions or treatments that can make injured workers worse. Adherence to the ACOEM Practice Guidelines<sup>8,23</sup> or Official Disability Guidelines (ODG by MCG)<sup>24</sup> have demonstrated a significant difference in claims outcomes resulting from adherent care. (See section on Research Findings Regarding UR.)

Many jurisdictions have adopted the use of evidence-based medicine guidelines in their WC systems. WC claims that follow evidence-based medicine guidelines have shorter durations and lower medical costs. Research supports improved outcomes and cost savings when medical providers follow recommendations based on peer-reviewed evidence in WC treatment guidelines.<sup>3,8</sup>

It is important to acknowledge that situations arise in clinical medicine by which strict application of evidence-based medical guidelines may not result in the optimal clinical outcome for the patient. Understanding the nuances of the particular case is vital. Thus, there needs to be an understanding by stakeholders that there will undoubtedly be exceptions to UR system guidelines. The exceptions must be carefully explained and supported by the clinical facts of the case, for example, comorbidities, severity of injury, delays in care or past functional response to treatment that is well documented.

Orientation and training courses on the content and proper application of guidelines should be made available to providers and peer UR reviewers. An example of training outreach is available from the California Department of Industrial Relations Physician Education module on the use of the Medical Treatment Utilization Schedule.<sup>25</sup> Many states have made their guidelines available on the internet for easy access at no or low cost. If the state has selected a specific state guideline for WC

utilization management, then that state guideline takes precedence over any other guidelines and must be referenced and applied first in any UR review. However, these guidelines often vary in the detail, adaptability, and medical appropriateness of the medical decision making provided. The states, UROs/URAs, and carriers should strive for the use of the best guidelines permitted so that appropriate determinations are supported.

Treating provider and peer UR reviewer use of guidelines will depend on their ease of use and access, as well as, their clarity. When the requesting provider understands and properly applies the guideline during medical decision making with an injured worker, there is less need for peer UR reviews and appeals, since the guideline would correctly support the medical decisions and allow for first level (nursing or automated) approval of requests. If there are repeated denials for the same diagnostic test or treatment, then an educational discussion with careful review of the requesting provider and peer UR reviewer interpretation of the guideline should be undertaken along with a plan for additional training and clarification of the process and guidelines. Medical treatment guidelines should be current with at least annual review or update.

The structure (including use of UR) and implementation of formularies<sup>26</sup> is challenging, and still under development in several jurisdictions (International Association of Industrial Accident Boards and Commissions [IAIABC] 2016<sup>27</sup> and 2019<sup>28</sup> reports regarding status of state WC formularies). From a clinical point of view, urgently needed pharmaceuticals need not be denied or unreasonably delayed, just as with other aspects of medical treatment; but with medications there is often no way for a caregiver to provide necessary medications prior to receiving authorization. For that reason, structure and implementation of such systems require care to provide rapid

**TABLE 1.** Quality of Evidence

Evidence Level	Types of Studies or Evidence
Higher grade of evidence	Systematic reviews: structured reviews including meta-analysis with summary of studies looking at study design, quality, bias, confounding, outcomes resulting in a higher level of evidence recommendation on the effectiveness of health care interventions. Randomized controlled trials: studies in which patients are randomly assigned to treatment and control groups. High-quality, prospective randomized controlled trials with low risk of bias are preferred. Prospective cohort studies: forward observations of groups of patients over time and comparison of characteristics and treatments. High-quality studies with low risk of bias are preferred. Retrospective cohort studies: similar studies looking back at previously collected data. High-quality studies with low risk of bias are preferred.
Lower grade of evidence	Case-control studies: matching people with a health problem to other people with similar characteristics, but without the health problem, are regarded as less accurate. Case reports (multiple) with no match or control group Individual case reports Expert opinion including other treatment guidelines, textbook, conference proceedings

provision of urgently needed medications via some combination of rapid-response UR, and/or a list of pre-approved (eg, exempt) medications that can be dispensed when consistent with guidelines prior to retrospective UR or without UR at all.

## OVERSIGHT

Active oversight and intervention by all parties is required to improve outcomes, system efficiency, quality, and stakeholder satisfaction. Appropriate systems should be implemented to provide oversight for jurisdictional elements such as TAT, reviewer qualifications and licensure, IRO or IMR decisions, and complaints, up-to-date peer UR review contracts and liability coverage. A comprehensive oversight plan contains multiple components and processes to ensure compliance, reasonableness, and system continuous quality improvement. State audit programs, URAC or NCQA provide external oversight of internal processes to assure compliance. Vendor management processes and oversight are critical to ongoing success. Electronic algorithms for automatic approval of initial UR requests should be based on evidence-based medicine and reviewed regularly for correctness, outcomes, and necessary updates. Complex or prolonged cases, higher risk, or experimental procedures must have direct oversight and review.

It is essential that the system of UR in WC integrates QA elements into its structure and is applicable to the treating physician, the reviewing entity and its agents, and the UR system itself. For effective QA and CQI, there must be the collection of appropriate metrics, a rational and fair procedure to assess quality, a feedback mechanism to both educate the participants as to their successes and to any needs for improvement, and a system flexible enough to efficiently implement changes where needed (see Outcomes and Metrics).

Oversight should demonstrate the monitoring and evaluation of quality of UR, as well as, the quality of care, service concerns, complaints and grievances, patient rights, adverse/critical events, safety issues, and UR processes consistent with jurisdictional and contractual network requirements. This is accomplished through the systematic and consistent application of utilization management processes based on current, relevant medical review criteria, and expert clinical opinion when needed. UR agents should track timeliness of the completion of a peer view, TAT, reviewer qualifications and training, inter-rater reliability of determinations, complaint review and management, and percent of times a peer UR reviewer is successful in contacting requesting providers. Final oversight of these measures should be conducted by a

medical director (MD, DO). The qualifications of the medical director include a strong background and broad understanding of work-related disorders, clinical medicine, evidence-based medicine, and utilization management. It is important that the medical director be actively involved, have the ability to analyze quality data and implement corrective action plans and policies to drive positive change in the UR system. Objectivity and good communication skills are vitally important for this physician when working with and educating diverse stakeholders and colleagues.

A multidisciplinary team should be created to review the entire UR process. Each UR agent should have an internal QA process that addresses clinical quality measures and includes reasonably sized random quality review of UR decisions by a physician and/or other qualified health care professional peer who is appropriate for the QA setting (eg, chiropractor, psychologist, etc). Peer UR reviewers should be independent and without conflict of interest, or in the situation of an appeal, they should not have been involved in the case's initial UR process. If services are vended, then there should be a QA review and oversight of these services. Results of this URA/URO QA process should be evaluated on a periodic basis (system wide, by reviewer and requesting physician) and result in appropriate interventions where indicated based on QA deficiencies. Results of the UR agent QA process must be communicated to the reviewing physician with attention to improving his/her performance (eg, corrective action plan). More frequent monitoring of cases should be implemented when appropriate.

Quality assessments should include review of the clinical information provided, decision appropriateness, guideline provided, proper selection of the reviewer based on scope of practice, board certification, and jurisdiction requirements. Quality review of appeals should include review of the clinical records and initial determination that denied the request with a comparison of the appeal determination and appropriateness of the rationale for any uphold or overturn to appeal decision.

Jurisdictions should have clear guidelines and ease of access, offer frequently asked questions (FAQs) to improve consistency or system participants, implement mechanisms to monitor provider quality of care concerns from patients and UR agents and implement interventions where indicated, systems to monitor complaints regarding UR agents and peer UR reviewers and implement interventions, monitor quality of IRO or IMR decisions and implement interventions.

UROs/URAs, networks and jurisdictions must implement systems to address

complaints in a timely manner. Any complaints, including reported concerns from the treating or requesting provider, should be discussed with the peer UR reviewer and allow the peer UR reviewer to explain the basis for any decision or extenuating circumstances involving the clinical facts or discussion with the requesting provider, including courtesy and professionalism. There must be a process for feedback to the treating or requesting provider with documentation and tracking of complaint resolution. A similar process should apply to tracking and resolution of any complaints regarding courtesy and professionalism of treating or requesting providers. It is often important to allow the appeal process to proceed simultaneously with investigation of the complaint so that the jurisdiction TAT is respected. Timeliness is required by the overarching system structure; this is intended to give feedback to the reviewer as to how well they did in independent audits. Accuracy (eg, avoidance of errors, reports without inconsistencies), correct understanding of the case, application of clinical information with references to applicable guidelines, good decision making, percent of cases with good faith peer-to-peer contact attempts, and successful peer-to-peer calls, are all measurements that should be collected.

## INFORMATION MANAGEMENT, SECURITY, AND CONFIDENTIALITY

Professionals shall conduct UR consistent with the jurisdictional regulatory, licensing, credentialing, and insurance laws and rules as well as national standards. Credentialing by independent organizations like URAC or NCQA is desirable to promote compliance with high level QA standards. UR professionals should ensure that workspaces are secure and private (eg, policies and procedures with effective training, restricted access to worksite, secure computers and information technology system, strong computer passwords, locked access to sensitive information, confidential conversations, liability coverage, and rapid responses to data breaches, etc).

Backup systems are necessary and should involve a set of policies, tools, and procedures to enable the recovery or continuation of vital technology infrastructure and systems following a disaster. Disaster recovery planning is an integral part of any UR service. A good plan will cover all potential scenarios. Disaster recovery requires the determination of the recovery time objective in order to designate the maximum amount of time the business can be without IT systems post-disaster. The ability to meet a given recovery time objective requires at least one duplicate of



the IT infrastructure in a secondary location to allow for replication between the production and disaster recovery site.

The purpose of the HIPAA Privacy Rule is to allow the safe transfer of medical information from one health insurance company to the next, and from one health care provider to another.<sup>29</sup> The HIPAA Privacy Rule was finalized in 1999, and it requires safeguarding of patient information against unauthorized access and disclosure. In 2003, the HIPAA Security Rule was published and subsequently the HIPAA Enforcement Rule and Breach Notification Rule,<sup>30</sup> all in an effort to keep up with technology and meet the demand of patient privacy. In the WC arena this means obtaining and securing medical information within the HIPAA rules. Individuals have an interest in privacy, but in the context of WC, that privacy right recognizes an employer's legitimate business interest. HIPAA's Privacy Rule allows WC insurers, TPAs, and some employers to obtain the necessary medical information to manage their WC claims.

WC carriers and administrators typically send authorization release forms to injured employees upon the receipt and initiation of a WC claim to ensure compliance with HIPAA and state laws. Covered entities are required to reasonably limit the amount of protected health information disclosed. Disclosure of medical information can vary from state to state, and in some instances, you do not need a medical release/authorization whereas in others you do. The Privacy Rule for Workers' Compensation is designed to provide the minimal necessary information needed to manage a claim and should comply with privacy standards.

UR professionals must be aware of the various jurisdictional rules. In California, the Confidentiality of Medical Information Act (CMIA) protects confidentiality of medical information limiting where the release of medical information is permissible.<sup>31</sup> In Illinois, state privacy laws in WC require a consent to release information and the self-insured employer, carrier or claims administrator has the right to the medical records in order to pay benefits. In Kentucky, if an employee files a WC claim, the employee is required to sign a waiver and consent related to the injury being claimed so medical records can be obtained.

Sharing of sensitive genetic information is covered by The Genetic Information Nondiscrimination Act of 2008 (GINA).<sup>32</sup> GINA states an employer may never use genetic information to decide employability or any aspect of employment. It also prohibits employers from intentionally obtaining such information. A UR reviewer must be aware that information covered by GINA must be handled properly.

## OUTCOMES AND METRICS

The UR process requires continuous or periodic assessment to determine if program goals are being achieved. Desirable goals for UR systems include contributing to patient recovery and return to work, promoting reasonable and necessary care delivered in a timely manner, avoiding ineffective or unnecessary and potentially harmful treatments, promoting high versus low value care (ie, cost-effective care), and maintaining stakeholder satisfaction.

This assessment of system efficacy, impact, or harm requires development of meaningful and measurable outcomes metrics. Organizations need to dedicate adequate resources and involve appropriate personnel including senior management to achieve success in this activity. Determination of the specific metrics for various entities to measure will vary depending upon the goals, roles, and responsibilities of each stakeholder. In order to achieve system-wide quality improvement and collaboration, these metrics should be reasonable and reflective of key program goals and quality components, easily measured, transparent and reported in an understandable format. Stakeholder quality performance needs to be measured and tracked on a continuous or sufficiently frequent periodic basis (eg, quarterly) to ensure maintenance of quality and offer opportunity for timely quality improvement. Results need to be carefully analyzed to determine if meaningful quality metrics are being achieved. If not, adopted metrics should be subject to root cause analysis, and used to provide useful feedback to system participants as part of the process of developing action plans to address quality deficiencies (including education, policy, procedural change, and monitoring to prevent recurrence). The analytic process evaluating metrics should determine if there is a need to periodically revise quality targets to further improve performance and outcomes, to assess if there is a need to adopt new metrics or if some measures no longer require tracking due to the effectiveness of designed and implemented system policies and procedures.

Redundancy, duplication, and excessive paperwork can be a significant barrier to efficient UR. An effort should be made to facilitate efficient review of the relevant clinical information wherever possible and reduce the burden on requesting providers to repeatedly submit the same documentation. Software is available that can scan documents and tease out redundancies. These are not widely used, but improved efficiency could result in systematic cost savings.

“Outcomes based networks” or “Preferred provider status” may allow exemption from or reduction of UR

requirements for certain practitioners who comply with network policies and procedures, use evidence-based practice (eg, adherence to appropriate use criteria or clinical decision pathways, evidence-based guidelines, etc), and have demonstrated better outcomes. In return, preferred providers can reduce administrative burdens and potential delays of care, improve efficiency, and satisfaction.

As noted, quality improvement requires assessment of outcomes metrics, comparison to evidence-based medicine and best practice, and implementation of strategies to improve outcomes. A comprehensive list of outcomes metrics that each stakeholder should track is beyond the scope of this paper. Each stakeholder needs to perform an analysis to determine which outcomes metrics best meet their unique circumstances, goals and responsibilities. However, recognizing some of the key goals for the UR process listed above, some suggestions for system participants to consider are worth mentioning.

## Utilization Review Agents

URAs are entities that conduct UR for medical necessity and appropriateness of health care services on a prospective, concurrent, or retrospective basis. URAs perform UR for number of stakeholders including payers, employers, TPAs, etc. URAs are responsible for assuring timely decisions to facilitate delivery of high quality, cost-effective care. URAs need to effectively communicate and collaborate with health care providers to improve the UR process and knowledge of evidence-based medicine including clarification of guidelines or evidence-based criteria used. URAs must adhere to regulatory requirements and performance standards for UR. Continuous quality improvement with implementation and updates of operational process, policies, and programs are necessary on an ongoing basis. Examples of relevant metrics include:

1. System wide rates of timeliness.
2. Determination outcomes including approvals, partial or modified approvals, denials.
3. Rates of appeals and appeal overturns, including appeal through the URA (ie, third level review), or jurisdictionally designated external entities conducting reviews after appeal denial by the URA (IMR or IRO).
4. Successful peer-to-peer contact rate (with identification of root causes of lack of contact).
5. Regulatory compliance.
6. Results of reviewer QA audits including first, second, and third level reviewers and any sub-vendors; description of

audited components and who performs quality audits; interrater reliability; interventions for reviewers who do not meet quality metrics.

7. Complaints (including the source and focus of the complaint) and resolution of identified issues.
8. Maintenance of confidentiality including any breaches and resolution.
9. Satisfaction (including that of patients and of treating providers).

### Peer Review Organizations

PROs are independent entities that perform UR review for URAs using qualified physicians and other appropriate health care providers. PROs need to ensure that reviewers effectively communicate and collaborate with health care providers to improve the UR process (including enhancing successful peer-to-peer conversations) and provider knowledge of evidence-based medicine and guidelines or review criteria. PROs must adhere to regulatory requirements and performance standards for UR in addition to adopting continuous quality improvement procedures. Examples of relevant metrics include:

1. Credentialing report with status of peer UR reviewer panel (training, licensure, board certification, specialty, disciplinary actions), periodic training and description of training, retraining/termination.
2. Timeliness of decisions to URA.
3. Determination outcomes including approvals, partial or modified approvals, denials.
4. Rates of appeals and overturns.
5. Successful peer-to-peer contact rate (with identification of root causes of lack of contact).
6. Regulatory compliance.
7. Results of reviewer QA audits including any sub-vendors; description of audited components and who performs quality audits; interrater reliability; interventions for reviewers who do not meet quality metrics.
8. Complaints (including the source and focus of the complaint) and resolution of identified issues.
9. Maintenance of confidentiality including any breaches and resolution.

### Provider Networks

Provider networks are health care delivery systems including contracted physicians and other health care providers for the purpose of delivering necessary medical and health care services. Provider networks should monitor provider qualifications, as well as, performance and patient outcomes. Examples of relevant metrics include:

1. Credentialing report with status of contracted providers (training, licensure, board certification, specialty, disciplinary actions including termination).
2. Provider quality measures including patient outcomes and return to function including work.
3. Patient safety issues.
4. Complaints (including complaints from patients, hospitals and healthcare settings, insurers, URAs), and resolution of identified issues.
5. Provider collaboration and adherence to network policies and procedures including behaviors suggestive of potential regulatory requirements for all stakeholders involved in the UR process. Examples of relevant metrics include:

### Jurisdictions

Jurisdictions include the federal system, states, and other regulatory UR entities (eg, Longshore Act). Jurisdictions define regulatory requirements for all stakeholders involved in the UR process. Examples of relevant metrics include:

1. Any specified regulatory guideline criteria.
2. Results of appeals conducted by IMR or IRO including submission rates, timeliness, rates of overturns by service request.
3. Complaints (against URAs, payers, PROs, treating providers, and resolution of identified issues).
4. Disciplinary actions.

### INFORMATION MANAGEMENT, SECURITY, AND CONFIDENTIALITY

System protections for security and confidentiality are critical:

1. UR agents must demonstrate and monitor mechanisms for electronic transfer of information (requesting provider submissions and notification, referrals to peer UR reviewers, and receipt of determinations, maintenance of records, communications with jurisdictions, etc).
2. Jurisdictions must demonstrate and monitor mechanisms for electronic transfer of information (eg, fax, secure email or text, secure portals, etc), oversight and interventions with UR agents, or IRO/IMR review entities.

### RESEARCH FINDINGS REGARDING UR

UR programs have been designed and implemented to achieve several specified goals including the promotion of cost-effective and high-quality care and improvement of patient safety. However, it is important to understand the current

status of UR decisions in WC and what is known with respect to the ability of UR to achieve quality outcomes and cost control goals in order to justify these programs. Since UR involves a determination that applies medical facts versus evidence-based guides, the quality of guidelines is critically important and knowledge of the effect of adherence to treatment guides on outcomes should be evident. In addition, observations regarding any known or potential adverse impacts of UR merit discussion. Furthermore, there is a need to understand potential alternatives to the current UR system and research needs to better identify UR benefits versus harms and improvement opportunities in a variety of WC systems.

A recent ACOEM position paper discussed a number of challenges facing the United States health care system including rising costs of health care and disability, less optimal outcomes and cost-efficacy in comparison to several other countries, over-reliance on fee for service, lack of care coordination, and failure to focus on longer term outcomes including functional improvement.<sup>2</sup> Another study suggested that estimates of unnecessary medical spending for low-value care could range from 6% to as high as 29%.<sup>33</sup> There are several categories of low value care such as use of ineffective or unproven tests or treatments on patients or use of effective tests or treatments on an inappropriately selected patient.<sup>34</sup> Some examples of low value care include imaging for non-specific low back pain,<sup>35</sup> opioids for chronic non-cancer pain,<sup>5</sup> lumbar fusion for degenerative disease without instability,<sup>6</sup> meniscectomy for degenerative meniscal tears.<sup>13,14</sup> WC systems are similarly affected by these systematic problems and often have inferior outcomes in comparison to group health settings. Treatment guidelines and UR have been implemented in WC to address these cost and quality concerns. Several organizations have made recommendations to improve high value care and reduce low value care. The American College of Physicians has a high value care initiative to improve health, avoid harms, and eliminate wasteful practices.<sup>36</sup> Academy Health and the American Board of Internal Medicine Foundation convened numerous stakeholders to discuss how researchers and stakeholders can partner to reduce unnecessary care.<sup>37</sup>

While guidelines vary in methodology, quality, applicability, and acceptance, there is some evidence that adherence to guidelines can improve outcomes. A retrospective analysis of low back claims (14,787 low back episodes in 8300 employees) from a large employer evaluated treatment patterns and congruence of care in comparison to a synthesis of recommendations for



diagnosis and treatment of low back pain. The researchers found that adherence to guideline recommendations regarding imaging, medications, and surgery was associated with lower resource utilization and total costs for low back care. The one area where guideline incongruence demonstrated lower cost was with early referral for physical therapy or chiropractic care, suggesting the benefit of early referral for rehabilitation care.<sup>38</sup> Controllable absenteeism decreased significantly as the result of adoption of evidence-based guidelines and other health and safety measures.<sup>39</sup>

Another study evaluated the impact of guideline compliance involving 45,951 indemnity claims from four insurers. The researchers developed a compliance score (low vs high) and assessed levels of complexity based upon diagnosis and treatments provided.<sup>3</sup> Official Disability Guidelines Treatment in Workers' Comp (ODG) from Work Loss Data Institute (now owned and published by MCG Health and available electronically at [www.mcg.com/odg](http://www.mcg.com/odg)) was selected as reference.<sup>24</sup> Cases with low compliance were associated with 13.2% increase in claim duration and 37.9% increased medical cost. The difference in duration and cost between low and high compliance care became more pronounced as medical complexity increased.<sup>3</sup> A recent analysis involving acute, work-related low back pain claims from Utah (excluding major trauma, fracture or history of spinal fusion) assessed ACOEM guideline compliance using an occupational medicine expert rating score. The researchers found a significant trend of increasing medical and total claim cost with decreasing compliance with the ACOEM Guidelines.<sup>8</sup> Other studies have similarly observed improved outcomes including return to work for patients with low back pain when MRI utilization and opioid prescribing was consistent with guideline recommendations.<sup>40–42</sup>

In contrast, some studies have reported mixed results. An analysis of 101,457 low back and 46,742 shoulder claims from a large WC insurer looked at guideline concordance using recommendations from the ACOEM Occupational Medicine Practice Guidelines<sup>23</sup> (now owned and published by the Reed Group and available electronically through MDGuidelines<sup>®</sup> at <https://www.mdguidelines.com/>) and ODG,<sup>24</sup> observed a lack of consistent findings of guideline concordance and return to work across multiple recommendations. However, excessive physical therapy, bracing, and injections were generally associated with slower return to work. The authors suggested that unmeasured factors including injury characteristics, pain, and patient preferences could account for some of these findings where guideline concordance did not correlate as well with outcomes.<sup>43</sup>

Observations regarding payment authorization for requested services in WC demonstrate that the majority of care is approved, often without formal UR. In California, there is currently a well-defined UR system using evidence-based treatment guidelines, the Medical Treatment Utilization Schedule or MTUS, and an IMR process to resolve medical necessity disputes. An analysis from 2014 to 2015 found that almost 85% of requests for authorization were paid without UR. Of the 15.3% submitted for UR, 59.8% were approved by non-physician review. Physician review resulted in 29.9% approvals and 70.1% modification or denials. Overall, only 1.1% of requests were modified and 3.2% were denied.<sup>44</sup> Studies of IMR results suggest that most UR denials and modifications appear to be valid. Recent findings from the IMR process in the first part of 2018 note that 90.1% of denials were upheld on medical dispute review. Uphold rates varied by request, ranging from 77.8% for psych services to 89.6% for injections, 90.8% for surgery, 90.9% for opioids, 92.5% to 92.8% for chiropractic and physical therapy, and 93% for acupuncture.<sup>45</sup>

UR processes have had to adapt recently to the inclusion of formulary rule-making in some states. California implemented a formulary rule effective January 2018 including a list of “exempt” medications that do not require prospective review if supported by the MTUS, “non-exempt” and “not listed” drugs. Initial analysis of results observed 77.6% UR approvals, 7.8% modifications, and 14.6% denials of formulary requests.<sup>11</sup> The Texas Department of Insurance Workers' Compensation Research and Evaluation Group<sup>12</sup> also found an impact of adopting a formulary rule and evidence-based closed formulary using ODG<sup>24</sup> recommendations. In Texas, drugs are classified as “N-drugs” (not recommended) or “Y-drugs” (recommended). The number of N-drugs decreased over 80% and N-drug costs fell over 70% after adoption of these changes. Prescriptions and other drug costs also fell between 5% and 25%. Another analysis of the impact of the Texas closed formulary concluded lower pharmacy costs due to the reduction of non-preferred drugs, and decreased spending on non-preferred drugs did not lead to increased expenditures on other types of care including preferred drugs or spending on non-pharmacy medical care.<sup>10</sup>

There are some observations that UR can improve quality and control cost. The most robust evidence comes from Washington, a state where most employers purchase insurance from a designated public agency. Other system advantages include an office of the medical director responsible

for system quality, evidence-based guidelines developed with community-based expert input to address frequent treatments associated with high cost and poor outcomes, and ability to conduct outcomes studies (including lumbar fusion, opioids, imaging for low back pain, etc).<sup>46</sup> From 1993 through 1998, 100,005 UR reviews were conducted. The overall denial rate for guideline-based reviews was 7.3%. The highest denial rates were for low value care requests including thoracic outlet surgery (19.1%) and lumbar fusion (17.7%) suggesting that evidence-based guidelines could help improve UR efficacy to identify potentially inappropriate care.<sup>9</sup> Opioid prescribing guidelines were developed and implemented in 2007 with upper limit recommendations to not exceed 120 morphine equivalent dose (MED) and dissemination of many prescriber tools. This resulted in decline in chronic opioid therapy (6.3% to 4.7% of incident users), 27% reduction of MED for schedule II opioids, 35% decline in workers on MED more than or equal to 120, and 50% fewer opioid overdose deaths in WC.<sup>47,48</sup>

Carefully run UR with high quality evidence-based guidelines can result in cost savings by reducing low value care. A subsequent analysis of outcomes of UR for various treatment requests noted a return on investment for discography \$6.39, inpatient cases \$3.52, imaging \$2.29, outpatient physical medicine \$1.89, outpatient cases \$1.83, and spinal injections \$1.51.<sup>49</sup> Updated analysis of the downstream impact of UR found that reduction of unsupported imaging for low back pain was associated with reductions in injections, surgeries, mean medical costs, and disability duration.<sup>50</sup>

There is some evidence from other jurisdictions that UR and evidence-based guidelines can result in cost savings. California adopted the ACOEM Practice Guidelines in 2004 along with other WC reforms. An analysis of early results noted reductions in most interventions including physical therapy, chiropractic, evaluation and management, radiology, and injections.<sup>51</sup> Texas WC reforms have included adoption of ODG guidelines including a closed formulary, with cost savings noted above. However, results of medical cost control in other states that have UR options vary.<sup>52</sup>

There is a paucity of information regarding the evidence of potential harm associated with UR, though some information is available regarding patient and treating provider satisfaction and impressions. A group health study found lower patient satisfaction in settings where there were preauthorization requirements for patient access to specialists.<sup>53</sup> A physician survey conducted regarding impressions of prior authorization on patients noted that: 92%

perceive care delays, 92% opine a negative impact on patient clinical outcomes, and 78% believe that patients sometimes abandon care. In addition, 84% of physicians report high or extremely high burden on physicians and office staff due to preauthorization.<sup>54</sup> There is a need for information regarding potential patient harm resulting from delays of care, modification (partial certification) or denials including clinical outcome (including functional improvement and return to work), satisfaction, perceived injustice, and litigation. Potential adverse UR impact on treating providers could include validation of rates of care delays, abandonment of care, and clinical outcomes. In addition, there is need to identify whether strict adherence to evidence-based guideline affects patient satisfaction with clinicians or insurers. Further areas of interest include the effect of administrative burdens on care delivery and financial viability of the practice of medicine.

## CONCLUSION

The rationale for use of UR in WC is noted for several reasons. Despite the existence of a number of evidence-based guidelines on a variety of subjects, practice gaps continue as evident by overuse of low value and potentially harmful treatments.<sup>4-7,13-15,33-35</sup> There is also evidence that guideline concordant care is more likely to be associated with improved outcomes.<sup>3,38-42</sup> UR is an important and complex element that is one means to improve outcomes and control costs.<sup>9,10,46-51</sup>

However, UR systems have deficiencies and potential harms that need to be addressed. Currently, UR is often seen as a transactional cost, that is, the cost of a UR review versus potential cost savings that results from denial or modification (partial certification) of care requests. Future evolution of UR as a component of care management should include longer term and comparative efficacy outcomes, including functional outcomes from treatment,<sup>2</sup> improved patient safety, and longer-term overall treatment costs instead of short-term transactional costs. More research is needed to assess the efficacy of UR including patient outcomes, patient safety, system costs versus potential harms including delays of care and inferior patient outcomes due to unsupported UR denials, and the adverse impact on patient and provider satisfaction.

UR system efficiencies need to improve, and several recommendations should be considered. There is an overall system benefit from decreasing unnecessary UR (eg, guideline consistent conservative care for acute injuries). There is a need to reduce the burden on treating providers and their patients, enhance provider understanding of how to navigate UR

systems, assist the ease of requesting care, maximize the frequency and ease of peer-to-peer conversations where needed, and advance the speed of obtaining UR determination results and processing appeals when requested.

UR system quality similarly needs to improve. Evidence-based guidelines should be applicable, high quality, current, and transparent. There are needs for better education of treating providers and peer UR reviewer training. Peer UR reviewer credentialing, oversight, quality assurance using qualified physicians should be enhanced, and timely intervention assured for peer UR reviewers who do not meet quality standards. As part of this initiative, ACOEM has developed The Eight Ethical Values and Principles of Utilization Review (see Appendix B).<sup>55</sup> System quality improvement needs should apply to jurisdictional appeal systems including IMR (California) and IRO (Texas). Jurisdictions should consider the need to develop and implement mechanisms to receive, evaluate and address complaints regarding URAs (eg, complaints, quality deficiencies), peer UR reviewers (eg, complaints, quality deficiencies), treating providers (eg, complaints, quality of care concerns, excessive rates of IMR requests with upheld decisions).

The nature of WC as state-based systems has inherent challenges due to significant variability of policies and procedures across jurisdictions. Adoption of more consistent procedures and high-quality evidence-based guidelines applicable to WC could potentially improve system performance, provider and patient understanding, overall care and outcomes.

Given the administrative and cost burdens associated with UR, alternatives should be explored. Some states (California, Massachusetts) have implemented regulations to reduce the burden of UR involving certain initial treatment options consistent with guidelines. In New York, treating providers can provide initial care for select conditions within the parameters of the NY Medical Treatment Guidelines (Neck, Back, Shoulder, Carpal Tunnel Syndrome, Knee, Non-acute Pain), but need to request approval for care outside of guides (see New York State Workers' Compensation Board. Medical Treatment Guidelines and Variance Requests). Some outcomes-based networks may exempt specific treating providers from some UR requirements based upon their demonstrated quality outcomes. Another option for insurers to consider is to analyze their UR, bill review, and claim costs data to determine whether some lower risk, lower cost treatment requests may be better handled from an auto-approval standpoint. Decision support systems are available to assist with these

decisions. Some evidence-based guidelines have implemented tools to assist with these decisions as well, including the MDGuidelines<sup>®</sup> Diagnosis and Related Treatment (DART) tool to access diagnostic and treatment recommendations from the ACOEM Practice Guidelines,<sup>23</sup> or the ODG Treatment Analyzer on Outcomes (TAO), also known as the ODG UR Advisor.<sup>24</sup>

Consideration of costs as a primary rationale for medical appropriateness of care is usually not permitted in most jurisdictions, as well as URAC and NCQA standards. This is determined by the laws and regulations of the jurisdiction, or policies from accrediting organizations. However, there are some situations for which the only significant difference between treatment options is indeed cost (eg, requesting two 5 mg tablets vs one 10 mg tablet of the same medication with a large difference in costs; requesting a combination pill containing two over-the-counter [OTC] medications at a significantly increased cost vs taking two less expensive OTC pills). Such decisions can be made at other levels from the treating physician to the pharmacy benefits manager or insurer but permitting UR to address costs when there is no significant clinical difference in options may be a useful addition to the UR process.

The future provides many other opportunities for enhancing the value of UR to the injured worker and health care system. The integration of artificial intelligence, EHRs and information systems will provide improved workflow and processes, better access to secure medical records, faster and more consistent decisions and automated decisions, with improved development and application of evidenced-based medical guidelines. These integrated systems offer the potential for improved tracking, reducing turn-around times and delays in treatment decisions, and ultimately more cost-effective and better outcomes for the injured worker. The EHR and information systems can track outcomes and collate and aggregate data from multiple carriers, billing systems, pharmacy benefit managers to improve evidence-based medicine guidelines by analyzing real world outcomes associated with specific treatment interventions in real world settings.

Artificial intelligence and evidence-based medicine will interact to ease the burden of the UR pre-authorization process and improve cost-effectiveness of UR decision-making. Outcome tracking holds the promise of limiting UR compliance to providers with poor outcomes, or treatment requests requiring closer scrutiny, outside of guidelines or experimental. Improved information systems and EHR can improve the timely access and review of the appropriate medical record elements needed for

timely and cost-effective decision making. Information systems can improve access to guidelines and formularies for all parties with improved training programs for proper use and application. The current difficulty in accessing, interpretation and variability of the jurisdictional regulations will be resolved with recognition of the need for improved consistent jurisdictional processes that avoid duplication, add clarity, and ease of access for all stakeholders. This of course requires that all stakeholders work together ethically and in partnership to make meaningful changes. These changes hold the promise of improving the quality and cost-effectiveness of health care decisions, outcomes, and satisfaction of all stakeholders.

### ACKNOWLEDGMENTS

This document was developed by the ACOEM Utilization Review Task Force under the auspices of the Council on OEM Practice. Members of the Task Force include Melissa Bean, DO, MBA, MPH, FACOEM (Co-Chair), Robert Blink, MD, MPH, FACOEM (Co-Chair), Rajiv Das, MD, MPH, MS, Michael Erdil, MD, FACOEM, Lisa Galloway, MD, FACOEM, Lee Glass, MD, JD, Stephen Levit, MD, David McKinney, MD, MPH, FACOEM, Chang Na, MD, FACOEM, Lee Okurowski, MD, MPH, Charles Prezgia, MD, MPH, FACOEM, Jill Rosenthal, MD, MPH, MA, FACOEM, Adam Seidner, MD, MPH, and Tanisha Taylor, MD, MPH, FACOEM. The Task Force appreciates the assistance of Ronald F. Teichman, MD, MPH, FACP, FACOEM who served as an Editor for this document.

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## APPENDIX A

### GLOSSARY OF TERMS

**American College of Occupational and Environmental Medicine Occupational Medicine Practice Guidelines (ACOEM Practice Guidelines):** A nationally recognized, evidence-based treatment guideline. ACOEM Practice Guidelines are the regulatory guidelines in several jurisdictions. ACOEM Practice Guidelines define best practices for key areas of occupational medical care and disability management. They are intended to improve the efficiency and accuracy of the diagnostic process as well as identify the effectiveness and risks of individual treatments in resolving an illness or injury—helping workers return to normal activities as quickly and safely as possible (<http://acoem.org/Practice-Resources/Practice-Guidelines-Center>). ACOEM Practice Guidelines are available electronically through MDGuidelines<sup>®</sup> published by Reed Group. Available at: <https://www.mdguidelines.com/>.

**Appeal UR review:** See Utilization review Appeal UR and Reconsideration UR review.

**Concurrent UR review:** See Utilization review.

**Confidentiality Medical Information Act (CMIA):** The Confidentiality of Medical Information Act (CMIA) is a California state law that adds to the federal protection of personal medical information and records under the Health Information Portability and Accountability Act (HIPAA). Available at: <https://irb.ucsd.edu/CMIA.pdf>.

**Continuous Quality Improvement (CQI):** The systematic process of identifying, describing, and analyzing strengths and problems and then testing, implementing, learning from, and revising solutions (definition from the US Department of Health and Human Services).

**Evidence-based medicine (EBM):** The explicit and judicious use of currently available, highest quality medical evidence from research studies and literature reviews, to guide clinical decision making about the medical care of individual patients. This is the basis for credible clinical guidelines and peer UR review decisions.

**Expedited UR review:** See Utilization review.

**Formulary (Drug formulary):** Lists of prescription drugs, generic or brand names, developed by health plans, pharmacy benefits management companies or states to identify and/or direct prescribing of value added and cost-effective drug choices. State defined WC formulary drug lists are commonly developed in conjunction with formulary rules or regulations and are consistent with statutory evidence-based treatment guidelines.

**Genetic Information Nondiscrimination Act of 2008 (GINA):** A federal law that protects individuals from genetic discrimination in health insurance and employment. Available at: <https://www.eeoc.gov/laws/statutes/gina.cfm>.

**Health Insurance Portability and Accountability Act of 1996 (HIPAA):** Legislation that established national standards for the protection of personal health information including standards for data privacy (<https://searchcio.techtarget.com/definition/data-privacy-information-privacy>) and security provisions for safeguarding medical information. Available at: <https://www.hhs.gov/sites/default/files/privacysummary.pdf>.

**Independent Medical Review (IMR):** A review performed by an independent entity to provide an objective, unbiased determination regarding medical necessity for requested care that has been denied after peer UR performed for the insurer, TPA, URA, etc. In some states and jurisdictional WC systems, there may be a specified IMR appeal option and process that is mandated by law, as in California, after a request for care is denied by the payor.

**Independent Review Organization (IRO):** An organization that performs independent external peer UR review for an insurer, TPA, URA, etc, using qualified physicians and other appropriate health care providers. In some states and jurisdictional WC systems, there may be a specified IRO appeal option and process that is mandated by law, as in Texas, after a request for care is denied by the payor.

**Medical Treatment Utilization Schedule (MTUS):** A set of regulations found in title 8, California Code of Regulations section 9792.20 through 9792.27.23 that contain medical treatment guidelines and rules for determining what is reasonable and necessary medical care. The MTUS is based on the principles of evidence-based medicine. That means treatment decisions are guided by recommendations supported by the best-available evidence. See: <https://www.dir.ca.gov/dwc/MTUS/MTUS.html>

**National Committee for Quality Assurance (NCQA):** A national, independent, non-profit organization that evaluates and accredits health care plans based on quality measurements, in addition to being involved in other activities to assess and improve quality and care outcomes and protect consumers. See: <https://www.ncqa.org/>.

**Official Disability Guidelines (ODG) Treatment in Workers' Compensation (ODG by MCG):** A nationally recognized, evidence-based treatment guideline. ODG is the regulatory guideline in several jurisdictions. ODG by MCG “provides independent, evidence-based medical

treatment guidelines and return-to-work guidelines for conditions commonly associated with the workplace.” ODG is electronically available and published by ODG/MCG Health. Available at: <https://www.mcg.com/odg/>.

#### **Outcomes Based Network (OBN):**

A network of providers who provide consistent high-quality care focused on outcomes versus traditional discount and access-based networks.

**Peer Review:** A review performed by a qualified health care provider for UR or non-UR decisions. Peer review is also performed outside of the regulatory UR system to comment on appropriateness of requested services, but may also consider causation, cost, alternative treatment options, or other considerations.

**Peer UR Review:** See utilization review.

**Peer Reviewer (UR Reviewer):** The appropriate health care practitioner (clinical peer) who reviews a case (second or third level UR review) to offer recommendations regarding medical necessity or appropriateness of requested services. Reviewer qualifications are determined by the nature of the request and jurisdictional requirements.

**Peer Review Organizations (PROs):** Independent entities that perform Peer UR review or Peer review for insurers, TPAs, URAs using qualified physicians and other appropriate health care providers.

**Prospective UR Review:** See Utilization review.

**Quality Assurance (QA):** Monitoring and evaluation of the quality and integrity of program processes and decisions rendered regarding care requests.

**Reconsideration UR Review:** In some jurisdictions, a reconsideration UR review can be performed when care has been denied per second level UR review in the absence of a successful peer to peer conversation. In other states, like Texas, a reconsideration is an appeal UR review.

**Requesting (Treating or Ordering) Provider:** The physician or other health care provider who specifically prescribes the health care service being reviewed.

**Retrospective UR review:** See utilization review.

**Third-party Administrator (TPA):** An organization that performs a number of services for the insurer or employer who underwrites the risk. Administrative services may include claims processing, customer service, management of provider networks, UR, etc.

**Turnaround Time (TAT):** Time-frame in which UR decision must be completed and documentation submitted.

**Utilization Review (UR):** Determination of medical necessity or

appropriateness of requested treatment or services following regulatory guidelines. UR decisions are based upon medical necessity, not cost or compensability.

**Types of UR Reviews:** UR can be performed at different times during the course of treatment.

- Prospective UR review. UR review before treatment starts. Sometimes called precertification or preauthorization.
- Concurrent UR review. UR review performed regarding continuation of care a patient is already receiving.
- Retrospective UR review. UR review performed after care has been delivered
- Appeal UR review. A third level peer UR review following a denial of the request at the initial peer UR review second level and/or reconsideration. Usually performed by a board-certified provider in active practice in the same or similar specialty as the treating doctor.
- Reconsideration UR review: In some jurisdictions, a reconsideration UR review can be performed when care has been denied per second level UR review in the absence of a successful peer to peer conversation. In other states, like Texas, a reconsideration is an appeal UR review.
- Expedited UR review, Urgent care UR review. UR review requested by a treating provider for urgent care (per the treating provider). Examples include care or treatment requests where there may be jeopardy to the life or health of the patient, risk of significant pain or failure to regain maximal function in the absence of the requested care or treatment. Expedited or Urgent care UR reviews are completed within 72 hours.

**Types of UR Reviewers:** UR can be performed by the following types of reviewers:

- First level UR review. UR review performed by appropriate licensed or certified health professionals to determine if care requests meet clinical review criteria to merit certification. First level review can approve but cannot deny or modify care.
- Second level UR review. UR review performed by a clinical peer for requests that do not meet First level clinical UR review criteria.
- Third level UR review or Appeal UR review. UR review performed after treatment has been denied by Second level UR review. See also Appeal UR review and Reconsideration UR review.

**Utilization Review Agent (URA) or Utilization Review Organization (URO):** An organization that administers

and performs UR for an insurer, employer, TPA. URAs may be required to be certified and registered to conduct UR in specific jurisdictions.

**Utilization Review Accreditation Commission (URAC)/American Accreditation Commission:** A national, independent, non-profit organization that evaluates and accredits health care plans based on quality measurements, in addition to being involved in other activities to assess and improve quality and care outcomes and protect consumers. See: <https://www.ura-c.org/>

## APPENDIX B

### The Eight Ethical Values and Principles of Utilization Review

This document was approved by the ACOEM Board of Directors on April 27, 2019.

Occupational and environmental health professionals have an obligation to:

#### 1. Promote Clinically Correct, Patient-Centric Decisions

Acknowledge that effective and medically necessary care decisions that place patient welfare and clinical outcomes in the forefront are a key priority.

#### 2. Support Evidenced-Based Medical Guidelines and Formularies

Recognize that high-quality, evidence-based guidelines and formularies can help assure that patients receive appropriate care while avoiding ineffective and/or potentially harmful care.

#### 3. Require Qualified Peer Reviewers and Administrative Oversight

Ensure that utilization review (UR) peer reviewers for all denials, modified decisions, and appeal reviews have adequate education, training, specialty board certification, scope of practice, licensure, and experience and meet any regulatory requirements. Avoid conflicts of interest and behave honestly and ethically when requesting authorization or rendering UR peer-review decisions.

#### 4. Strive for Timely Reviews and Reduction of Administrative Burdens

Develop and implement policies and procedures to facilitate timely submission of requests for communicating authorization among all parties and rendering of UR peer-review decisions. Avoid unnecessary delays of care for patients and administrative burdens for practices.

#### 5. Enhance Professional Interaction between the Provider and Peer Reviewer

Strive for peer-to-peer conversation when additional information is necessary. Conversations must be collegial and professional with a focus on determining if care is consistent with guidelines while

recognizing circumstances with exceptions to guidelines and emphasizing treatment based upon functional outcomes.

#### **6. Improve Basic Understanding of the UR Process When Performing Peer Review**

Communicate and collaborate effectively with health care providers when performing UR peer review to improve provider knowledge of the UR system and regulatory requirements, as well as evidence-based medicine and guidelines or review criteria.

#### **7. Maintain Secure, Confidential Information Systems**

Protect confidential patient medical information throughout the entire UR system. Adhere to all applicable laws, regulatory requirements, and ethical standards relevant to communications, transmission, handling, or storage of medical records or protected health information.

#### **8. Implement Total Quality Improvement**

Commit to ongoing total quality improvement throughout the entire

UR system with engagement of all stakeholders and active medical director (MD or DO) oversight. Quality improvement requires assessment of relevant outcomes metrics, comparison to evidence-based medicine and best practice, quality assurance reviews, root cause analysis for quality deficiencies, functional assessment, and implementation of strategies to improve outcomes with monitoring of efficacy of interventions to correct deficiencies.