

**School:** Medical Management  
**Course:** Evidence Based Medicine in Workers' Comp  
**Faculty:** Dr. James Talmage, Assistant Medical Director, Tennessee Bureau of Workers' Compensation

### **Summary**

The course "Evidence Based Medicine in Workers' Comp," taught by Dr. James Talmage, explores the evolution and application of evidence-based medicine (EBM) in the context of workers' compensation. EBM represents a shift from traditional medical practices, which were often based on anecdotal experience and apprenticeships, to a more scientific approach. This shift began in earnest in the 1980s when the concept of EBM was popularized by Dr. David Sackett, who defined it as the "conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients."

In the past, medical practices were largely influenced by individual doctors' training and personal experiences. This led to inconsistent diagnoses and treatments, with different specialists providing varying assessments for similar symptoms. The introduction of EBM aimed to standardize medical practices by utilizing the best available scientific evidence. However, even today, not all medical interventions are supported by high-quality evidence, and some practices persist based on lower-quality, hypothesis-generating studies.

The course explains the hierarchy of scientific evidence, particularly in addressing causation and treatment efficacy. For questions about causation—whether a job contributed to a worker's disease or injury—the prospective cohort study is considered the gold standard. This study type provides the most reliable evidence by following groups over time to assess the impact of exposures on outcomes. For treatment efficacy, randomized controlled trials (RCTs) are the highest level of evidence. RCTs involve randomly assigning participants to different treatment groups to minimize bias and confounding factors, allowing for a more accurate assessment of a treatment's effectiveness. When multiple RCTs are conducted on the same topic, they can be combined into a meta-analysis to provide a more comprehensive understanding of the treatment's impact.

The course also delves into the role of Utilization Review (UR) in workers' compensation. In this context, treatment requests are reviewed to ensure they align with evidence-based guidelines, such as the Official Disability Guidelines (ODG) and the American College of Occupational and Environmental Medicine (ACOEM) guidelines. These guidelines are tools used to standardize care, providing criteria for approving or

denying treatment requests based on the best available evidence. While ODG covers a wide range of diagnoses and treatments, ACOEM focuses specifically on occupational and environmental medicine. State-specific guidelines also exist, blending scientific recommendations with regional medical practices.

Dr. Talmage emphasizes that EBM is not meant to be a rigid "cookbook" for treatment. Instead, it serves as a framework to guide clinical decision-making, considering both scientific evidence and the individual circumstances of each worker. The course highlights the importance of applying guidelines thoughtfully, recognizing the variability in injuries and patient responses.

Utilization Review aims to expedite the approval of effective treatments, thereby reducing recovery times and promoting optimal outcomes for injured workers. However, the course acknowledges that delays or denials in care can lead to distrust and suboptimal recovery if workers perceive the system as valuing cost over their well-being.

In summary, "Evidence Based Medicine in Workers' Comp" underscores the need for a balanced approach that incorporates the best scientific evidence while accommodating the unique needs of each injured worker. By adopting evidence-based practices, the workers' compensation system can enhance patient outcomes, reduce unnecessary interventions, and provide timely, appropriate care.

### **Learning Objectives**

1. Understand the historical development of evidence-based medicine (EBM) and its application in workers' compensation.
2. Recognize the different types of scientific evidence and their roles in determining causation and treatment efficacy.
3. Explore the process of Utilization Review in workers' compensation and the guidelines used to approve or deny treatment requests.
4. Analyze the advantages and limitations of using evidence-based guidelines, including ODG, ACOEM, and state-specific guidelines.
5. Learn how evidence-based medicine aims to improve patient outcomes by ensuring appropriate, scientifically supported treatment for injured workers.

### **Primary Takeaways**

1. Evidence-based medicine (EBM) is a relatively recent trend in healthcare that emphasizes using the best scientific evidence to guide treatment decisions, particularly in workers' compensation.

2. Scientific evidence is organized in a hierarchy, with prospective cohort studies providing the best evidence for causation questions and randomized controlled trials offering the highest level of evidence for treatment efficacy.
3. Utilization Review (UR) is a process in workers' compensation where treatment requests are reviewed against evidence-based guidelines to determine their necessity and appropriateness.
4. Commonly used guidelines in workers' compensation, such as the Official Disability Guidelines (ODG) and ACOEM guidelines, aim to provide standardized recommendations but may vary in content, approach, and ease of use.
5. The goal of EBM in workers' compensation is not to dictate a "one-size-fits-all" approach but to ensure that injured workers receive the most effective, timely, and scientifically supported treatments, minimizing unnecessary delays and promoting optimal recovery.

## **Course Outline**

- 1) Introduction to Evidence-Based Medicine (EBM)
  - a) Historical background and philosophy of medicine
  - b) Shift from anecdotal practice to evidence-based practice
  - c) Definition of EBM by David Sackett
- 2) The Role of Scientific Evidence in Medicine
  - a) Evolution of medical practice from tradition to evidence
  - b) Challenges in current medical practices (e.g., differing diagnoses by specialists)
  - c) Levels of scientific evidence:
    - i) Prospective cohort studies for causation questions
    - ii) Randomized controlled trials (RCTs) for treatment efficacy
  - d) Meta-analysis and systematic reviews
- 3) Utilization Review in Workers' Compensation
  - a) Role of Utilization Review in approving or denying treatment
  - b) Differences between health insurance and workers' compensation pre-authorization
  - c) Involvement of insurance adjusters, UR departments, and courts in decision-making
- 4) Guidelines in Workers' Compensation
  - a) Overview of key guidelines:
    - i) Official Disability Guidelines (ODG)
      - Broad coverage, owned by an insurance company subsidiary

- ii) ACOEM Guidelines
    - Content created by ACOEM, marketed by the Reed Group
  - iii) State-specific guidelines
    - Blend of evidence-based recommendations and state medical traditions
  - iv) Advantages and limitations of each guideline type
- 5) Evidence Hierarchies and Decision-Making
- a) The evidence pyramid for causation and treatment questions
  - b) Systematic reviews and meta-analyses in synthesizing evidence
  - c) Use of Clinical Practice Guidelines in making treatment recommendations
  - d) The importance of assessing guideline validity
- 6) Challenges and Considerations in EBM
- a) Variability in guideline recommendations and updates
  - b) Potential conflicts of interest in guideline authorship
  - c) The role of the adjuster in implementing guidelines
- 7) Impact of EBM on Workers' Compensation
- a) EBM's role in improving treatment outcomes
  - b) Balancing scientific evidence with individual patient circumstances
  - c) The importance of timely treatment to promote recovery
- 8) Conclusion
- a) Summary of EBM's goals in workers' compensation
  - b) Emphasis on protecting workers from unscientific treatment
  - c) Final thoughts on the importance of evidence-based practice for optimal worker outcomes

NOTE: Artificial Intelligence was used in the creation of this document.