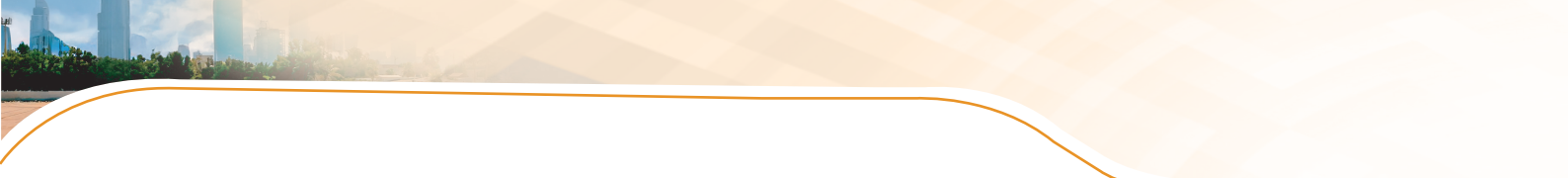


Research Agenda

Day 1

Friday, Oct 23, 2026

 Time	Activity	 Faculty
11:00 - 11:20	Introduction & Definitions	Ashraf Hantouly
11:20 - 11:50	Developing the Research Question	Abdulaziz F. Ahmed
11:50 - 12:10	Developing & Registering the Protocol	Ashraf Hantouly
12:10 - 12:45	Designing & Running the Search	Abdulaziz F. Ahmed
 12:45 - 13:30	Friday prayer & Lunch break	
13:30 - 14:00	Exporting, Uploading & Managing the Literature	Abdulaziz F. Ahmed
14:00 - 14:20	Screening & Study Selection	Ashraf Hantouly
14:20 - 14:50	Quality & Risk-of-Bias Assessment	Ashraf Hantouly
 14:50 - 15:00	Coffee Break	
15:00 - 15:15	Data Extraction	Abdulaziz F. Ahmed
15:15 - 15:40	Reporting the Systematic Review & Meta-Analysis	Abdulaziz F. Ahmed
15:40 - 16:00	Wrap-Up, Discussion & Q&A	Abdulaziz F. Ahmed & Ashraf Hantouly



From Research Question to Publication

A 5-Hour Hands-On Systematic Review & Meta-Analysis Workshop

Dubai Shoulder Course

Workshop Faculty: Ashraf Hantouly & Abdulaziz F. Ahmed

Date & Time: 23-Oct-2026 | 11:00 - 16:00

Venue: Luxor 1 meeting room, Raffles Dubai, Wafi

Format: Short interactive lectures, live demonstrations, and hands-on exercises

Target Audience: Orthopaedic surgeons, fellows, residents, and clinical researchers

Level: Beginner to intermediate

Workshop Objectives

By the end of the workshop, participants should be able to:

- Formulate a focused systematic review and meta-analysis research question.
- Develop a reproducible literature search and study-selection strategy.
- Extract and organize data for systematic review and meta-analysis.
- Perform a basic risk-of-bias assessment and interpret study quality.
- Understand and interpret forest plots, heterogeneity, and confidence intervals.
- Report systematic reviews according to established reporting guidelines.
- Develop a practical plan for taking a systematic review from research question to manuscript.

1. Introduction & Definitions [Ashraf Hantouly]

11:00–11:20 AM | 20 minutes

- Narrative reviews, scoping reviews, systematic reviews, and meta-analyses.
- Systematic review versus meta-analysis.
- When is a systematic review appropriate?
- When can—and when should—we pool studies?

2. Developing the Research Question [Abdulaziz F. Ahmed]

11:20–11:50 AM | 30 minutes

- Identifying a clinically relevant knowledge gap and assessing novelty.
- Conducting a preliminary search and identifying existing systematic reviews.
- Converting clinical uncertainty into a focused and answerable question.
- Developing the research question using the PICO framework.

Hands-on: Each group develops a structured PICO question for a shoulder-related clinical topic.

Output: Final research question and PICO framework.

3. Developing & Registering the Protocol [Ashraf Hantouly]

11:50 AM–12:10PM | 20 minutes

- Why a protocol should be developed before starting the review.
- Defining eligibility criteria, outcomes, and review methodology.
- Prespecifying the search, screening, risk-of-bias, and analysis methods.
- PRISMA-P, PROSPERO, and other options for protocol registration.

Hands-on: Complete a simplified protocol template based on the selected PICO question.

Output: Mini systematic review protocol.

4. Designing & Running the Search [Abdulaziz F. Ahmed]

12:10–12:45 PM | 35 minutes

- Translating PICO into searchable concepts using keywords, synonyms, and MeSH terms.
- Building the search using Boolean operators and controlled vocabulary.
- Selecting databases: MEDLINE/PubMed, Embase, CENTRAL, Scopus, and Web of Science.
- Supplementary searching through references, citations, trial registries, and grey literature.

Live demonstration: Build and run a PubMed search strategy from scratch.

Hands-on: Participants develop a search strategy for their clinical question.

Output: Reproducible search strategy.

Lunch Break

12:45 - 13:30 | 45 minutes

5. Exporting, Uploading & Managing the Literature [Abdulaziz F. Ahmed]

13:30 - 14:00 | 30 minutes

- Exporting database results
- Reference management using EndNote, Zotero, or Mendeley
- Uploading studies to systematic review platforms such as Covidence or Rayyan
- Deduplication, reviewer setup, and preparation of the library for screening

Live demonstration: Database → Export → Reference Management → Deduplication → Screening Platform.

Hands-on: Export, upload, deduplicate, and prepare a citation library for screening.

Output: Screening-ready citation library.

6. Screening & Study Selection [Ashraf Hantouly]

14:00 - 14:20 | 20 minutes

- Title/abstract screening followed by full-text screening.
- Applying predefined inclusion and exclusion criteria consistently.
- Independent reviewers, resolving disagreements, and adjudication.
- Recording full-text exclusion reasons and constructing the PRISMA flow diagram

Hands-on: Independently screen sample abstracts and selected full-text articles.

Output: Final set of included studies.

7. Quality & Risk-of-Bias Assessment [Ashraf Hantouly]

14:20 - 14:50 | 30 minutes

- Understanding the difference between methodological quality and risk of bias.
- Selecting the appropriate assessment tool according to study design.
- Common tools: RoB 2, ROBINS-I/ROBINS-E, Newcastle-Ottawa Scale, and JBI.
- Assessing key sources of bias and reaching consensus between reviewers.

Hands-on: Assess one included study using an appropriate risk-of-bias tool.

Output: Completed risk-of-bias assessment.

Break

14:50 - 15:00 | 10 minutes

8. Data Extraction [Abdulaziz F. Ahmed]

15:00 - 15:15 | 15 minutes

- Designing a standardized extraction sheet and defining variables before extraction.
- Extracting study, patient, intervention, comparator, and follow-up characteristics.
- Extracting continuous and dichotomous outcome data.
- Managing missing data, multiple timepoints, multiple groups, and duplicate cohorts.

Hands-on: Extract key data from a selected shoulder study into a standardized spreadsheet.

Output: Analysis-ready dataset.

9. Reporting the Systematic Review & Meta-Analysis [Ashraf Hantouly & Abdulaziz F. Ahmed]

15:15 - 15:40 | 25 minutes

- PRISMA 2020 and the essential components of transparent reporting.
- Presenting study selection, characteristics, risk of bias, and quantitative findings.
- Reporting effect estimates, confidence intervals, heterogeneity, and forest plots.
- Preparing the PRISMA flow diagram, evidence tables, figures, and supplementary material.

Manuscript structure:

Introduction: What we know → What we do not know → Why this review is needed

Methods: Eligibility → Search → Screening → Extraction → Risk of Bias → Analysis

Results: Study Selection → Characteristics → Risk of Bias → Primary and Secondary Outcomes

Discussion: Principal Findings → Existing Literature → Clinical Implications → Limitations → Conclusion

10. Wrap-Up, Discussion & Q&A

15:40 - 16:00 | 20 minutes

- Review the complete systematic review workflow.
- Common methodological pitfalls and how to avoid them.
- Practical steps for taking the project from protocol to publication.
- Open discussion and participant questions.