## Framework For Evidence-based Critical Appraisal & Decision-making

Healthcare Information & Decision Equation: <u>Information → Decision → Action → Outcome</u>
Is it true → Is it useful → Is it usable?

**Delfini on Evidence-based Practice and the 5 Hallmarks:** "Evidence-based medicine is the use of the scientific method and application of valid and useful science to inform health care provision, practice, evaluation and decisions. The use of science is required to help reduce medical uncertainty, increase predictability and inform about the probability of benefit or harm to whom."

| nam to whom.                                |  |  |  |
|---|--|--|--|
| The 5 "A"s of Evidence-based Practice       |  |  |  |
| ASK   | Create highly specific and focused key questions to frame the work. Consider PICO: patient/population, |  |  |
|   | intervention, comparator, outcomes.  |  |  |
| ACQUIRE                                     | Apply time-saving filters. Type of clinical qu   | lestion drives appropriateness of study type.              |  |
| APPRAISE                                    | EVIDENCE REVIEW  |  |  |
|   | □ Population   |  |  |
|   | ☐ Selection Bias   |  |  |
|   | ☐ Generation sequence  |  |  |
|   | Concealment of allocatio   | n  |  |
|   | Baseline characteristics   |  |  |
|   | Performance Bias   |  |  |
|   | Successful execution   |  |  |
|   | Comparator   |  |  |
|   | □ Blinding   |  |  |
|   | ☐ Similar treatments & care  | e experience both arms                                     |  |
|   | Data Collection Bias   |  |  |
|   | Measurement methods  |  |  |
|   | How much, when, why, h   | ow missing data managed                                    |  |
|   | Assessment Bias  |  |  |
|   | Blinding   |  |  |
|   | Analysis   |  |  |
|   | Other issues that could explain or   | distort results  |  |
|   | Efficacy and Safety Results  |  |  |
|   |  | ptom relief, QOL, functioning                              |  |
|   | Size of benefits   |  |  |
|   | ☐ Confidence intervals   |  |  |
| Synthesis/Strength or Level of the Evidence |  |  |  |
| APPLY TRIANGULATING DECISIONS               |  |  |  |
|   | 1. Evidence  | 4. Other Decision Considerations                           |  |
|   | 2. Patient Perspective   | Accreditation issues                                       |  |
|   | ☐ Benefits   | Community standards  |  |
|   | ☐ Harms  | Cost   |  |
|   | Risks  | Ethical considerations                                     |  |
|   | ☐ Costs☐ Uncertainties   | ☐ Liability and risk management issues                     |  |
|   | ☐ Uncertainties☐ Alternatives  | <ul><li>Marketing</li><li>Media or press issues</li></ul>  |  |
|   | Applicability  | Medical community impacts                                  |  |
|   | ☐ Satisfaction,  | Medical community impacts     Medical-legal                |  |
|   | ☐ Clinical considerations (eg  | □ Public relations   |  |
|   | tolerability, ease of use,   | Purchasing issues  |  |
|   | dependency or abuse potential)   | Regulatory   |  |
|   | ☐ Unmet needs  | Research realities (eg, no evidence will be able to answer |  |
|   | ☐ Special populations  | clinical questions, etc.)                                  |  |
|   | 3. Clinician Perspective   | Utilization and capacity issues                            |  |
|   | Satisfaction, acceptability, etc.  | Overall impact on the health care organization             |  |
|   | Satisfaction, acceptability, etc.  | Other  |  |
| AGAIN                                       | Update and improve   |  |  |
|   | - Passes and m.p. 016  |  |  |