

Unfortunately our web seminar suffered from two audio errors affecting the following slides. Below, please find a reconstruction of what was discussed in the narration during those slides. Please refer to this handout when viewing slide 34, and slides 101-106. We apologize for this inconvenience.

#### Slide 34 narration

The systematic review rigorously evaluates all available research in a specific area of inquiry, filters out those with poor design quality and other flaws, and boils those studies down to extract knowledge. It uses a-priori or predetermined criteria for which studies will be acceptable for inclusion, blinding of judges rating studies, and other controls for validity. It then summarizes “what is known” about a specific construct.

#### Slide 101 narration

Is the treatment replicable in my setting? If a research study concludes there is a positive treatment effect for a specific method, but the setting in which that study was performed is very much unlike our own setting, then we cannot expect the treatment to work in our setting. Sometimes the available resources, limitations in staffing or technology, the types of patients we see in our setting, or other factors, are too dissimilar to those in the research to enable us to replicate their results in our clinic.

#### Slide 102 narration

The 3<sup>rd</sup> limb of evidence based practice is “patient values and expectations”. The patient must agree to and invest in a treatment if it is expected to work. Just like taking a pill, if the patient does not comply with a treatment it will not succeed. Some noncompliance is caused by a dislike for the intervention itself, others by misunderstanding. Compliance is an important issue. If a treatment method will not be used by the patient then we cannot expect it to produce a benefit. Low et al. investigated the effects of patient compliance on outcomes in dysphagia management. 21% of their patients were noncompliant with dysphagia recommendations. Those patients were significantly more likely to be hospitalized with chest infections than those that participated and complied with treatment. Likewise, though about half of these patients died with aspiration pneumonia as a potential contributor, mortality from these causes was almost twice as likely in deliberately noncompliant patients.

#### Slide 103 narration

Other tidbits for research consumers reading articles. 1. Post hoc analyses are analyses of data performed after the data are analyzed. Sometimes they are fine so long as the investigators are not making big leaps with the post hoc analysis results. Post hoc analyses involve after-the-fact data analysis, so whatever data are being analyzed was not generated while searching for the hypothesized

outcome. That is, the research was not designed to answer that particular question, it was designed to address a stated hypothesis. Post hoc results can be useful toward spawning future research. If the study you are reading focuses on the post-hoc analysis as the “big” result, the research consumer should be cautious about those claims.

Slide 105 narration

2. Reading the discussion section. Things to look for. A. the authors should acknowledge any flaws in their design here. There are no flawless studies. The authors should then discuss how they will incorporate (or recommend to others) changes to mitigate these flaws in future research. B. are the authors working very hard to convince you of the result? Research results are self evident and they should not require arm-twisting to convince the research consumer of their importance. But we need to be familiar with the supporting research to judge this aspect of the discussion section.

Slide 106 narration

C. Does the summary of findings match the results? Sometimes you will see that what was displayed in the results is not what is discussed in the discussion, or the findings are reinterpreted. D. Do the findings contradict prior research or reinforce and expand on prior research? Or are the findings overly supportive of a long line of the author’s own prior research and none from other independent investigators? E. Does the result refute what is conventional wisdom or knowledge about the subject of interest? F. All studies should have a critique of the methods, good and bad. G. Is the clinical importance of the result stretched too far? H. Are there suggestions for future research? It is rare that a published study is the final word on a scientific question.