

## Classic Levels of Evidence- Intervention

- Ia -- Meta-analysis of >1 randomized controlled trial
- Ib -- Well-designed randomized controlled study
- IIa -- Well-designed controlled study without randomization
- IIb -- Well-designed quasi-experimental study
- III -- Well-designed non-experimental studies, i.e., correlation and case studies
- IV -- Expert committee report, consensus conference, clinical experience of respected authorities
- Message often missed -
  - May be a hierarchy but all above are evidence

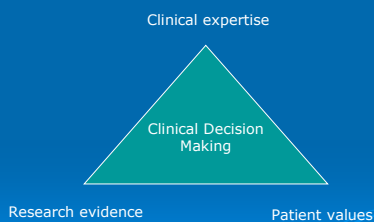
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## Expanded Definition of EBP- Sackett, Strauss, Richardson, Rosenberg, and Haynes, 2000



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## ASHA's magic triangle of EBP



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## EBP and all clinical fields

- Without evidence, funds can be cut at will
- More data kept centrally means more accountability, easier for governments to do comparisons among facilities, regions, settings.
- Can also see who has given outcomes for the least cost

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## Bad EBP Questions

- Bad questions
  - Does dysphagia intervention work?
    - As bad as "Does surgery work?" Or "Is private school good for children?"
    - What does work mean?
      - Is statistical significance enough or effect sizes or neither.
      - Is it patient satisfaction?
      - Is it quality of life?
    - Quality of therapist – Important to outcomes

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## More specific questions needed

- Does therapy X better than therapy Y?
  - Better for whom?
  - Better for which conditions?
  - Better for which time frames?
- Which can be done with less time?
- Which can be done with less resources/expense?
- What is cost/benefit ratio?

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## What is the desired outcome?

- Decreased risk of aspiration
- Decreased risk of aspiration pneumonia or other health complication secondary to dysphagia
- Decreased issues of malnutrition
- Decreased issues of dehydration
- Increased food/liquid intake
- Increased quality of life
- Maintained self image despite dysphagia
- Increased enjoyment of eating/drinking
- Ability to participate successfully in eating in social venues, or religious/family events

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## Selected systematic reviews of dysphagia management

- **Screening for Oropharyngeal Dysphagia in Stroke: Insufficient Evidence for Guidelines**  
Martino, R., Pron, G., et al.  
*Dysphagia*, 2000, 15(1): 19-30
- **Prevention of Pneumonia in Elderly Stroke Patients by Systematic Diagnosis and Treatment of Dysphagia: An Evidence-Based Comprehensive Analysis of the Literature**  
Doggett, D.L., Tappe, K.A., et al.  
*Dysphagia*, 2001, 16(4): 279-295
- **Non-Pharmacological Therapies for Dysphagia in Parkinson's Disease**  
Deane, K.H.O., Wilfong, R., et al.  
The Cochrane Database Of Systematic Reviews, 2001, Issue 3
- **Interventions to Prevent Aspiration Pneumonia in Older Adults: A Systematic Review**  
Loeb, M.B., Becker, M., Eady, A., & Walker-Dilks, C.  
*Journal of the American Geriatrics Society*, 2003, 51(7): 1018-1022

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## Selected systematic reviews -2

- **Criteria for Determining Disability in Infants and Children: Failure to Thrive**  
Perin, E.C., Cole, C.H., et al.  
AHRQ Evidence Report/Technology Assessment, 2003, Number 72
- **Treatment for swallowing difficulties (dysphagia) in chronic muscle disease (Review)**  
Hill, M., Hughes, T., Milford, C., et al.  
The Cochrane Database of Systematic Reviews, 2004, Issue 3
- **Gastrostomy Feeding Versus Oral Feeding Alone for Children with Cerebral Palsy**  
Sleigh, G., Sullivan, P.B., et al.  
The Cochrane Database of Systematic Reviews, 2004, Issue 2
- **Diagnosis and Treatment of Swallowing Disorders (Dysphagia) in Acute-Care Stroke Patients**  
AHRQ Evidence Report/Technology Assessment, 1999, Number 8

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## Research conclusions regarding dysphagia

- Inclusive, with some strong yes with Cochrane group concerned about lack of control group in many studies
- Even if given study shows dysphagia therapy works, does it work for the patient sitting in front of you?
- Even if given study shows dysphagia therapy did not work, could it work for the patient sitting in front of you?

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## EBP- Clinical Expertise

- Clinical Expertise
  - Doing it a long time does not make one automatically better
  - Discussing with one's colleagues does not make one automatically better, especially if they know no more than you

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## Clinical Expertise – Best ways to utilize

- Scientific method-
  - 1) read research and clinical literature, attend conferences
  - 2) decide if what has read might work better than what have been doing with a specific population with a specific difficulty
  - 3) Collect data on how currently doing it
  - 4) Start new procedure and decide how long going to use it before will measure again
  - 5) Determine whether what has changed to is working better than old way, the same, or are your clients or a specific client getting worse?

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## Clinical Expertise – Best ways to utilize - 2

- Conference- let's discuss what has worked and not worked
- When something works, think "How could I make it better?" or "How can I make it work in less time?"
- If conflicts with research, go with the clinical process in a real person in front of you.

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## EBP -Patient values and dysphagia

- Research shows better the mutual respect of the relationship better the outcomes
- Do you think you have gotten better? How? Does this make you happier about eating?
- Even in testing
  - How well do you think you are able to swallow?
  - Do you still enjoy eating or is it a chore?
  - Do you miss not being able to eat certain foods? How much on a scale of one to ten?
  - Rank ordered what frustrates you the most
  - How upset are you usually about not being able to eat like you use to?
  - Are there any new foods or new ways to eat your favorite foods that you have learned?

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## Patient values- Cont.

- As systematic in getting their values and expectations as evaluating their physical swallow pre and post testing
- *If can't get from patient and families what they want or what change would mean the most to their quality of life, then cannot have the best possible outcomes.*

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## Patient values – What if cannot give what they want?

- Patients and families have right to refuse treatment and to not follow your recommendations
  - Are your recommendations reasonable?
  - Have you taken patient and families' culture into consideration when deciding intervention goals or providing explanations?
  - Can you give any assistance toward their goals?

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## EBP big picture: The Final Word

- Sackett, Rosenberg, Gray, Haynes, and Richardson (1996) state
- Evidence based medicine is not "cookbook" medicine. Because it requires a bottom up approach that integrates the best external evidence with individual clinical expertise and patient's choice, it cannot result in slavish, cookbook approaches to individual clinical expertise. External clinical evidence can inform, but can never replace, individual clinical expertise, and it is this expertise that decides whether the external evidence applies to the individual patient at all, and, if so, how it should be integrated into a clinical decision" (p. 72).

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## Selected References

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- Dollaghan, C. (2007). *The Handbook for evidence based practice in communication disorders*. Baltimore: Paul Brooks Publishing Company
- Fratalli, C. (1998). Outcomes measurement: definitions, dimensions and perspectives. C. Fratalli (Ed), *Measuring Outcomes in Speech-Language Pathology* (pp. 1-27). New York: Thieme.
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- Yorkston, K.M., Spencer, K., Duffy, J., Beukelman, D., Golper, L.A., Miller, R., Strand, E., & Sullivan, M. (2001). Evidence-based medicine and practice guidelines: Application to the field of speech-language pathology. *Journal of Medical Speech-Language Pathology*, 4, 243-256.

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## Web references

- <http://www.cebm.utoronto.ca>: The Centre for Evidence-Based Medicine at the University of Toronto Health Network
- <http://www.cebm.net>: Oxford Centre for Evidence-Based Medicine
- <http://bmj.com/collections>: British Medical Journal site
- <http://www.poems.msu.edu/InfoMastery>: This site by Mark H. Ebell, MD has self-tutorials on EBP.
- <http://www.cochrane.org>: Cochrane Collaboration identifies those clinical studies that meet their EPB criterion

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## Web references- 2

- Sackett, D. L., Rosenberg, W. M. C., Gray, J. A. M., Haynes, R. B., & Richardson, W. S. (1996). Evidence-based medicine: What it is and what it isn't. Article based on an editorial from the *British Medical Journal*, 312, 71-72, accessed on 1/9/02 at [www.cebm.ir2.ox.ac.uk/ebmisisnj](http://www.cebm.ir2.ox.ac.uk/ebmisisnj)
- Evidence-based Practice Centers (EPC) Program of the Agency for Healthcare Research and Quality (USA)  
<http://www.ahrq.gov/clinic/epc/>
- American Speech-Language-Hearing Association. (2004). Evidence-Based Practice in Communication Disorders: An Introduction [Technical report]. Available at: <http://www.asha.org/members/deskref-journals/deskref/default>
- American Speech-Language-Hearing Association (2005). *Evidence-Based Practice in Communication Disorders: Position Statement*. Available at <http://www.asha.org/members/deskref-journals/deskref/default>

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