


Evidence-based SLT

what has changed in 10 years?



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Radboudumc



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Dysarthria and dysphagia in adults:


- stroke
- intensive care
- head-neckoncology
- neuromuscular diseases
- neurodegenerative diseases: Parkinson's disease (PD)

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 twitterer, blogger, webmaster
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 Nijmegen, Netherlands


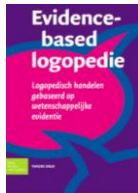
Parkinson Centre Nijmegen


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Evidence-based SLT: 10 years!



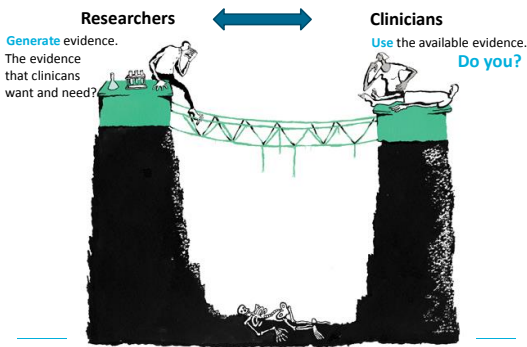
book presentation:
11 May 2004

2004 2011: 2nd edition

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EBP



Researchers Generate evidence. The evidence that clinicians want and need?


Clinicians Use the available evidence. Do you?

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What are you regarding evidence?

- Follower:** applying evidence collected by others.
- User:** collecting evidence by searching literature.
- Expert:** generating evidence by doing research.


[Smeijsters, 2009, Thema 1-09]




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Let others do the work for you...


Evidence-based guidelines: guiding every day practice



1 study = no study
 systematic reviews:
 summary & meta-analysis




RCTs: digging for data to find the true effect of treatment



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Take-home message


“What does this mean for the hardworking speech-language therapists who have little time to keep up with the published evidence?”



Apply evidence-based guidelines!

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Evidence-Based Practice



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Can you fix it?!



What is wrong?
Can you fix it?
How long does it take?
What are the costs?
Does it last?
Are you the best person?

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Can you fix it?!



What is wrong?
Can you fix it?
How long does it take?
What are the costs?
Does it last?
Are you the best person?

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Do you have the answers?

Do you treat patients in the best possible way?
How long does it take and does this result last?

- A. I think that I am overall a good therapist, I don't get complaints.
- B. I am a good therapist and I can explain why, based on my experience.
- C. I am a good therapist and I can explain why, because my treatments are based on good evidence.

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My answers:

A: a patient with an uncommon dysphagia.
I don't know how to treat this, but I am going to try by using all my knowledge and experience. [And I'll try to publish it so we can all learn from it.]

B: a patient with persisting dysphagia based on a Wallenbergs syndrome.
Evidence is currently lacking, but I have had good results with my treatment and have a hypothesis why my approach works. [And I am studying this and will publish it to better understand.]

C: a patient with Parkinson's disease and dysphagia asking: "can electrical stimulation work for me?"
Answer: no, because there is good evidence that this is not helpful in PD. [Heijnen et al. *Dysphagia* 2012,27,336-45; Baljens et al. *Laryngoscope* 2013, 2013,123, E38-44.]

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Lack of evidence means: do not apply?

If it is dangerous, expensive, contra-intuitive, long-term effect?

If it is logical, cheap, intuitive, easy to apply, easy to evaluate?

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Always: evaluate carefully!

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In 10 years time:

1. Awareness
2. SLT students learn it too
3. Practice-based evidence
4. Increase of evidence
5. PubMed = Google
6. More open access
7. Social media
8. Apps
9. Guideline development ...
10. International cooperation

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1. Awareness

evidence-based practice

evidence-based treatments

evidence-based courses

evidence-based handbooks

evidence-based guidelines

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Evidence-based .. WHAT?

~~evidence-based research~~

~~evidence-based literature~~

?

Evidence
= Research results (if done properly)
literature

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2. SLT students learn using evidence

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And that is being investigated too:

1. **Competed in evidence-based practice (EBP): validation of a measurement tool that measures EBP self-efficacy and task value in speech-language therapists**
 Speck B, Vermege-de Waard M, Lucas C, van Die N. *Int J Lang Commun Disord.* 2013;48(4):453-7. doi: 10.1111/1460-0984.12015. Epub 2013 Apr 13. PMID: 23589109 (PubMed) - indexed by MEDLINE
[Related citation](#)
2. **Teaching evidence-based practice (EBP) to speech-language therapy students: are students competent and confident EBP users?**
 Speck B, Vermege-de Waard M, Lucas C, van Die N. *Int J Lang Commun Disord.* 2013;48(4):454-5. doi: 10.1111/1460-0984.12020. Epub 2013 Apr 13. PMID: 23589109 (PubMed) - indexed by MEDLINE
[Related citation](#)
3. **Development and validation of an assessment instrument for teaching evidence-based practice to students in allied health care: the Dutch Modified Farnes.**
 Speck B, de Vroef GD, van Die N, Lucas C. *J Allied Health.* 2012 Summer;41(2):77-82. PMID: 22736102 (PubMed) - indexed by MEDLINE
[Related citation](#)



Bea Speck
 Clinical expert/practitioner | SLT
 Universiteit van Tilburg | TU

CONCLUSIONS & IMPLICATIONS: Despite a significant increase in EBP knowledge and skills over the years as assessed by the DMF, the integrated EBP curriculum did not raise levels of EBP self-efficacy and task value. This lack of feeling competent might have an impact on students' willingness actually to use EBP in curricula; therefore, there should be a focus on how to raise EBP self-efficacy in SLT students. This goes even beyond the educational department because a professional culture in which professionals are competent and confident EBP users would have a positive effect on EBP self-efficacy in students.

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3. Practice based evidence (PBE)

Research in professional education:

- Emphasis on knowledge and experience of professionals and patients combined to gain improvement.

Psychiatry:

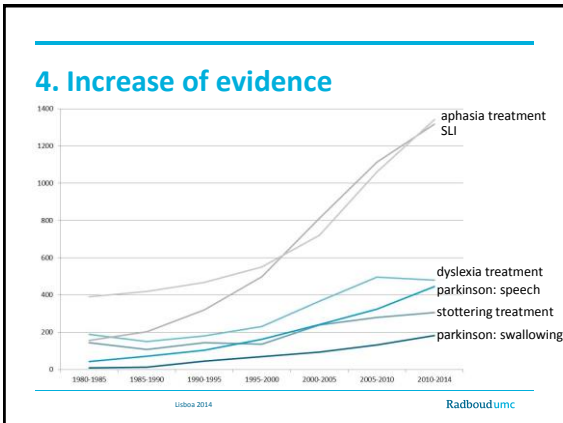
- Emphasis on experience, context and professional autonomy of the therapist.

Measurement and psychotherapy

Evidence-based practice and practice-based evidence⁸

FRANK R. MARGISON, MICHAEL BARKHAM, CHRIS EVANS, GRAEME MCGRATH, JOHN HELLOR CLARK, KERRY AUDIN and JANICE CONNELL

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5. PubMed = Google

PubMed search results for "parkinson's disease dysphagia". Results 1 to 20 of 457.

1. **Treatment effects for dysphagia in Parkinson's disease: A systematic review.**
 van Hooen MR, Bajens LW, Voskuilen S, Oosterloo M, Kremer B. *Parkinsonism Relat Disord.* 2014 Apr 6; pii: S1360-8020(14)00138-0. doi: 10.1016/j.parkre.2014.03.02. Epub ahead of print. Review. PMID: 24794297 (PubMed) - as supplied by publisher
[Related citation](#)
2. **Sequential Voluntary Cough and Aspiration or Aspiration Risk in Parkinson's Disease.**
 Haglund RW, Olson MS, Troche MS. *Lung* 2014 May 3 [Epub ahead of print]. PMID: 24792231 (PubMed) - as supplied by publisher
[Related citation](#)

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AND OR? Automatic!

Search details

```

("parkinson disease"[MeSH Terms] OR ("parkinson"[All Fields] AND "disease"[All Fields]) OR "parkinson disease"[All Fields]) OR

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Search See more...

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Or just use google.pt

Google search results for "parkinson's disease dysphagia electrical stimulation".

Neuromuscular electrical stimulation versus traditional ...
[www.ncbi.nlm.nih.gov/pubmed/22081122](#) - Vertaal deze pagina
 door EJ Heijnen - 2012 - Geceleerd door 14. Verwante artikelen
 13 nov. 2011 - Neuromuscular electrical stimulation versus traditional therapy in patients with Parkinson's disease and oropharyngeal dysphagia: effects on ...

The effect of surface electrical stimulation on swallowing in ...
[www.ncbi.nlm.nih.gov/pubmed/22237722](#) - Vertaal deze pagina
 door LW Hoopman - 2012 - Geceleerd door 11. Verwante artikelen
 12 jan. 2012 - Surface electrical stimulation has been applied on a large scale to treat ... oropharyngeal dysphagia in the presence of Parkinson's disease ...

Neuromuscular Electrical Stimulation Versus ... - Springer
[link.springer.com /10.1007/978-90-455-011-9371_1](#) - Vertaal deze pagina
 door EJ Heijnen - 2012 - Geceleerd door 14. Verwante artikelen
 1 sep. 2012 - Neuromuscular Electrical Stimulation Versus Traditional Therapy in Patients with Parkinson's Disease and Oropharyngeal Dysphagia: Effects ...

NOTE: most scientific papers are in English!

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6. More open access

Research results should be available for everyone

- for free

Financing of papers:

- currently: via subscription and libraries
- future: by the authors and research funds



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International Journal of Speech-Language Pathology

IJSLP

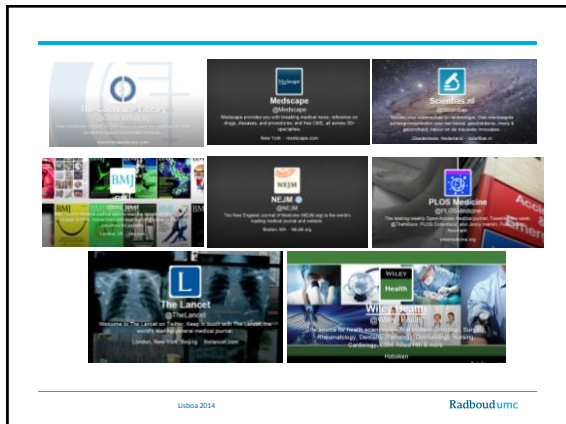
IJLCD

How do I know?

LinkedIn group

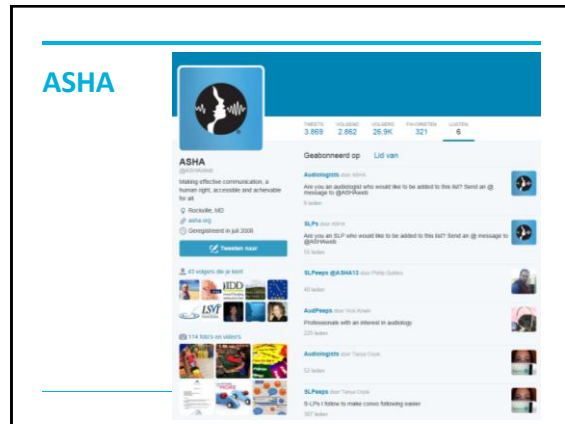
'Evidence-based logopedie' (in English)

7. Social media



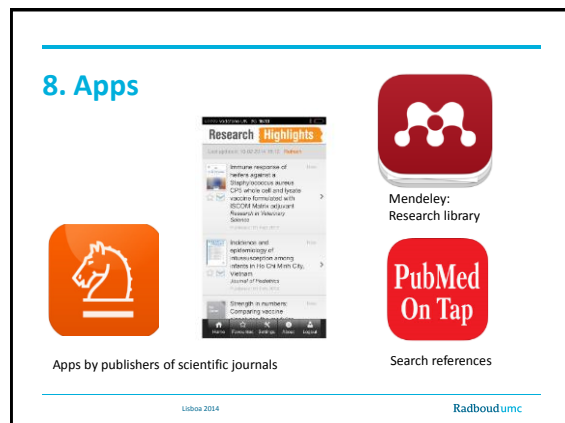
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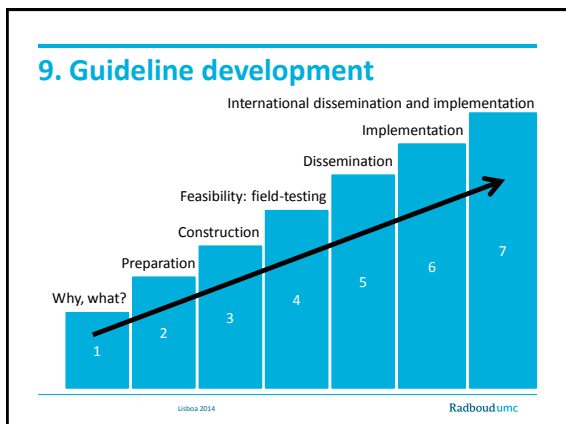
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When a clinical question is an issue

- "What is the preferred voice treatment for patients with unilateral vocal fold paralysis; and when is surgery indicated?"
- Takes much time for individual clinician
- If (level 1) evidence is limited: who are the experts?

Group work: guideline!

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How do I know?




Guideline: "Speech-language therapy for Parkinson's disease"

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Construction: from question to recommendation

```

    graph TD
      A[Clinical question] --> B[Scientific evidence conclusion: level 1-4]
      B --> C[Taking into consideration: availability, costs enz.]
      C --> D[Recommendation]
  
```

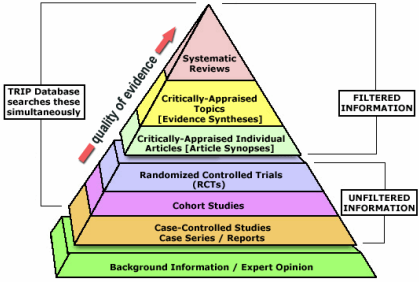
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Scientific evidence

level	
Ia	Systematic review (meta-analysis) of minimal two independent Ib studies
Ib	Well controlled RCT
II	Well designed controlled study (no randomisation)
III	Non-experimental studies, case studies
IV	Expert opinion

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Scientific evidence



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Field-testing by intended users

It the guideline feasible? In our health care system etc.

Otherwise you risk

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More SLT guidelines?



All multidisciplinary

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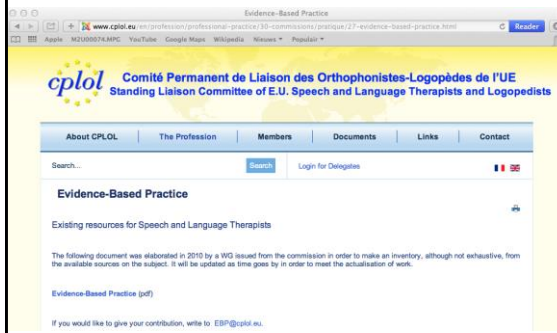
Just published: stuttering



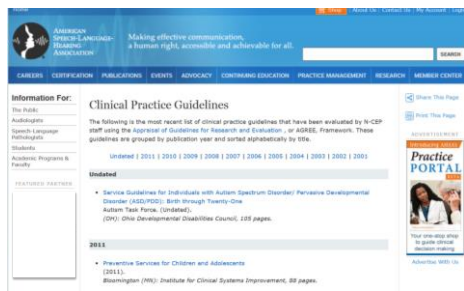
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10. International cooperation



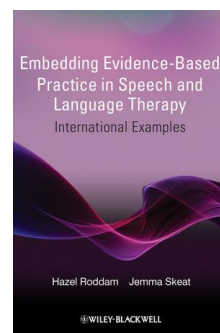
ASHA



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Other books: with international examples

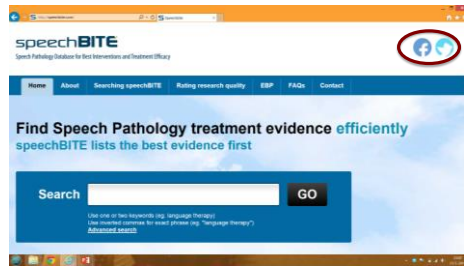


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www.speechbite.com

a database of intervention studies across the scope of speech pathology practice



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Take-home message

“What does this mean for the hardworking speech-language therapists who have little time to keep up with the published evidence?”



1. Be a good clinician and keep improving yourself
2. **Work evidence-based by:**
 - being critical and asking for evidence
 - demanding guidelines
 - applying guidelines

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