

# **Dyspraxia or inconsistent phonological disorder? Why correct diagnosis and intervention is an economic necessity**

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# We will.....

- Demonstrate how correct assessment, differential diagnosis of developmental verbal dyspraxia (DVD or childhood apraxia of speech) and inconsistent speech disorder (ISD) can save time and money



# Assessment

The danger of assessing the wrong thing and sticking with phonological processes



# Incidence

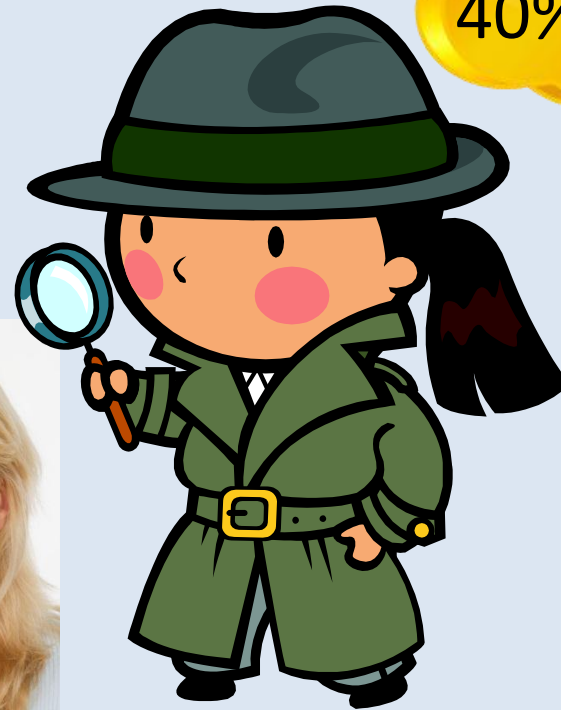
DVD/CAS	ISD
0.1-0.2% (Shriberg et al 1997)	9.4% (Broomfield & Dodd 2004)
0.03% (Law et al 2007)	5% (Stringer, & Nicholson 2011)
3.4-4.3% (Delaney & Kent 2004)	12% (Dodd, 1994)
Rare	Not So Rare

# Differential diagnosis

- SLTs should always look for inconsistent speech disorder

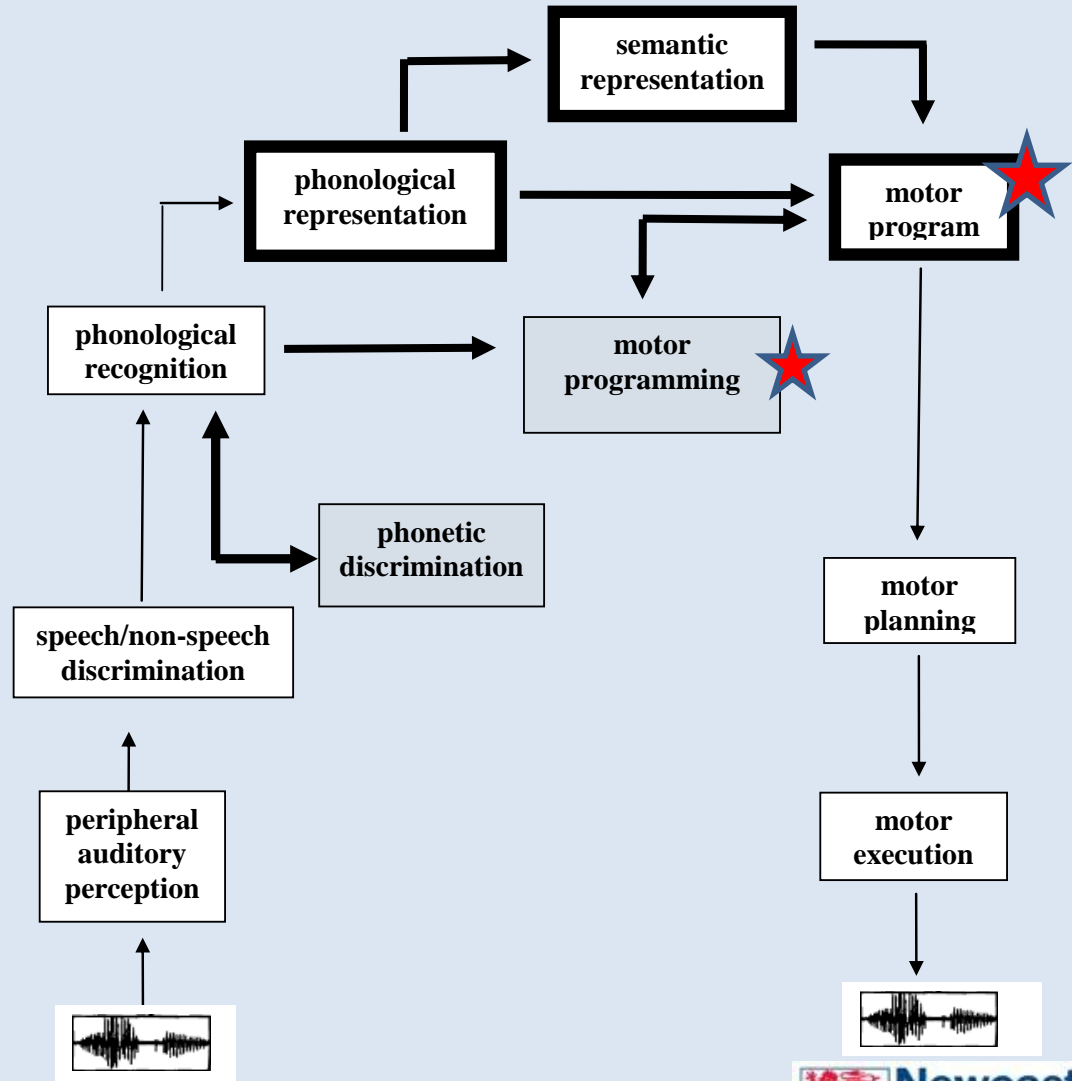
Oh no! over 40%

/kat/; /kak/; /tat/  
/fan/; /fam/; /fam/



# Inconsistent speech

- What it isn't
- What it is

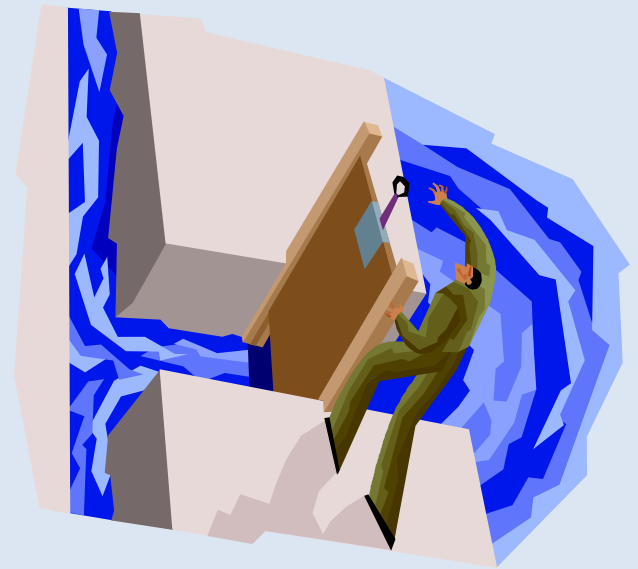


# Intervention

Assessment → diagnosis →  
hypothesis and theory →  
effective intervention →  
positive outcome

# Intervention

- Combining linguistic and psycholinguistic theories
- Core vocabulary intervention →  
consistent production →  
opens gates for phonology  
to develop



# Evidence

- 7 children with 'DVD' recruited into intervention study
- 'lifers'
- Reality: 1 DVD
  - 1 oro-motor and consistent phonological disorder
  - 5 inconsistent speech disorder

# The economics of SB

SB: Percentage consonants correct (PCC); inconsistency % over periods of intervention and consolidation



# Inconsistency qualitative data

SB data	Age 6;0	Age 6;1	Age 6;2	Age 6;3	Age 6;6
Sounds not Stimulable	ʃ, dʒ, z	ʃ		ʃ, dʒ	
Stopping	6	7	12	10	0
CR	19	22	17	11	10
Gliding	8	6	9	14	6
Devoicing	2	1	2	0	3
Voicing	2	3	1	1	0
FCD	4	3	0	0	0
Deaffrication	2	3	4	3	0
Harmony	1	1	1	1	0
Dialectic errors	2	2	2	2	2
Non-process errors	28	22	12	12	8
Vowel errors	4	2	3	0	0
Number	6	7	8	12	27



# Cost comparison SB

Phase	Duration	Contacts	Staff hours	Speech status	Cost
Pre-study	26 months	49	30.25	Assumed to be no better than pre-study levels	£1180
Study	6 months	19	19	PCC pre-study 37.41% PCC post study 78.16% inconsistency pre-study 84.00% inconsistency post study 24%	£741
Post-study	36 months	9	9	On review for language/reasoning. Speech targets: articulation for /ʃ/ & /tʃ/ Reminders for gliding. Now Intelligible	£351

Based on Band 7 @£39/hour

# Cost comparison KS

Phase	Duration	Contacts	Staff hours	Speech status	Cost
Pre-study	23 months	42	30.25	Assumed to be no better than pre-study levels	£1224
Study	6 months	19	19	PCC pre-study 45.48% PCC post study 74.48% inconsistency pre-study 76% inconsistency post study 20%	£741
Post-study	24 months	7	5	School programme and review. Now Intelligible.	£195

Based on Band 7 @£39/hour

# Points to note

- Expensive intervention with little/no improvement
- Use of evidence based assessment and intervention proves more effective and cost efficient
- Reconfiguration of services?



# Conclusion

For children with persistent speech difficulties:

- SLTs should rule out inconsistent speech before looking at phonological processes (DEAP screen) or DVD
- Developmental Verbal Dyspraxia has low prevalence compared to inconsistent speech
- Time spent on assessment (e.g. 10 minutes on DEAP screen) and accurate differential diagnosis is time well spent
- Appropriately targeted and evidence based intervention will save time and money

Obrigado!

Merci

Thank you!

Vielen  
Dank

Gracias

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