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Current Protocols for Paediatric Videofluoroscopic Swallow Studies – An ANZ Survey of Practice

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BACKGROUND:

Whilst the Videofluoroscopic Swallow Study (VFSS) is a commonly used instrumental assessment for evaluating oropharyngeal dysphagia and aspiration in children, there is currently no standardised protocol for paediatric VFSS.

This leads to variability across practices, reporting, and potentially leading to increased radiation dose.

AIMS: To understand current practice variation in conducting paediatric VFSS across Australia and New Zealand (ANZ) in order to inform future training

Acquisition Rates & Dose Reduction:

Acquisition rates used were 15 frames per second (fps) (79%), 30 fps (31%) & 7.5 fps (31%)

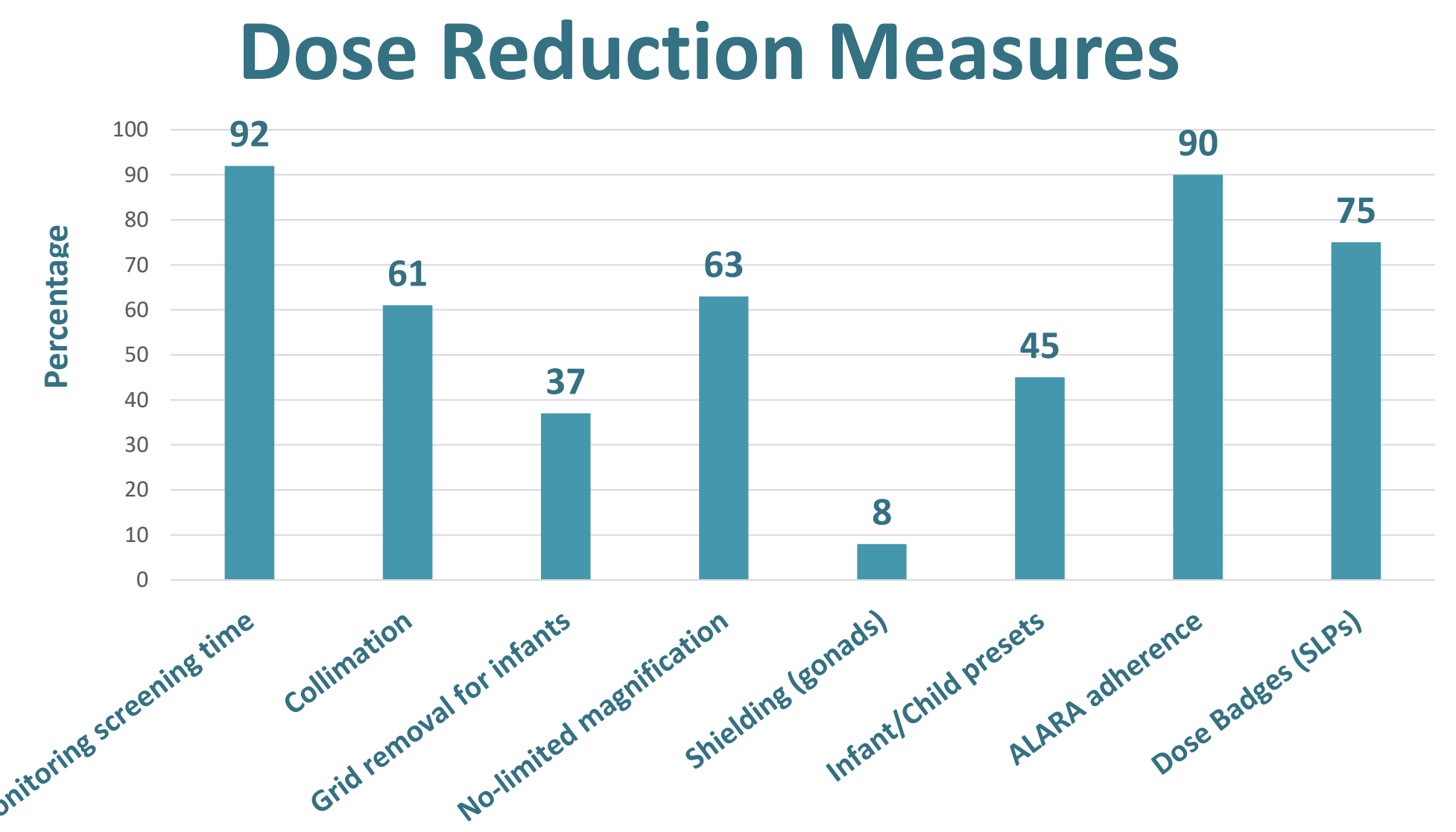


Figure 3

METHODS:

- We conducted an online survey of ANZ speech pathologists/therapists who conduct paediatric VFSS using the Qualtrics platform, from 29/07/2024–30/09/2024
- Participants were asked 71 questions about their demographics and current VFSS practices including:
- Pre-VFSS assessment; field of view and dose reduction measures; contrasts, textures, fluids and utensils; trials of posture and positions; manoeuvres for interventions or compensation; assessment tools; parent feedback; competency training and reports
- Data was analysed using descriptive statistics

Standardised Rating Scales:

- Whist 78% used a standard VFSS analysis tool to rate studies,
- The most frequently used tools were the Penetration-Aspiration Scale (98%), NZIMES (28%) & Bolus Residue Scale (24%)
- There was minimal use of quantitative measures

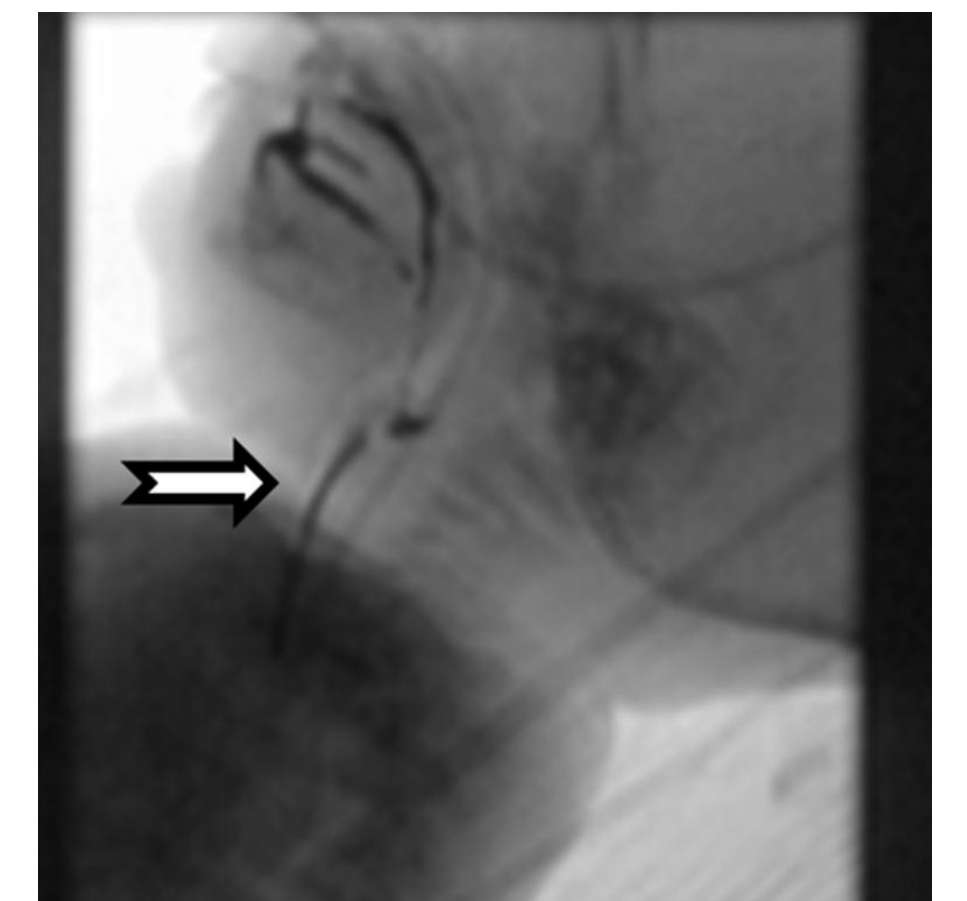


Figure 4. Silent Aspiration in Infant during VFSS

RESULTS:

- 52/71 valid responses
- 90% Australian
- 100% female
- Pre-VFSS clinical feeding evaluations were required by 88% and had a standard referral form;
- Only 46% had a specific protocol in use
- 51% include an oesophageal sweep



Figure 1. Videofluoroscopy Suite

Strategies & Interventions: Top 4 per age group



INFANT

- Thickened fluids 100%
- Alter flow rate/type of teat 98%
- Pacing 92%
- Sidelying 100%



TODDLER

- Thickened fluids 98%
- Alter cup flow rate 98%
- Pacing 94%
- Upright positioning 94%



CHILD

- Thickened fluids 98%
- Alter cup flow rate 98%
- Pacing 94%
- Upright positioning 94%

Contrasts:

- Most respondents used both barium sulphate and water-soluble contrasts (70%)
- Water soluble contrast was used most commonly with breastmilk (67%) or formula (62%), thin fluids (67%) or slightly thick fluids (45%)
- Barium was used most frequently with thicker fluids, purees (77%), lumpy-mashed (84%) & chewable textures (84%)

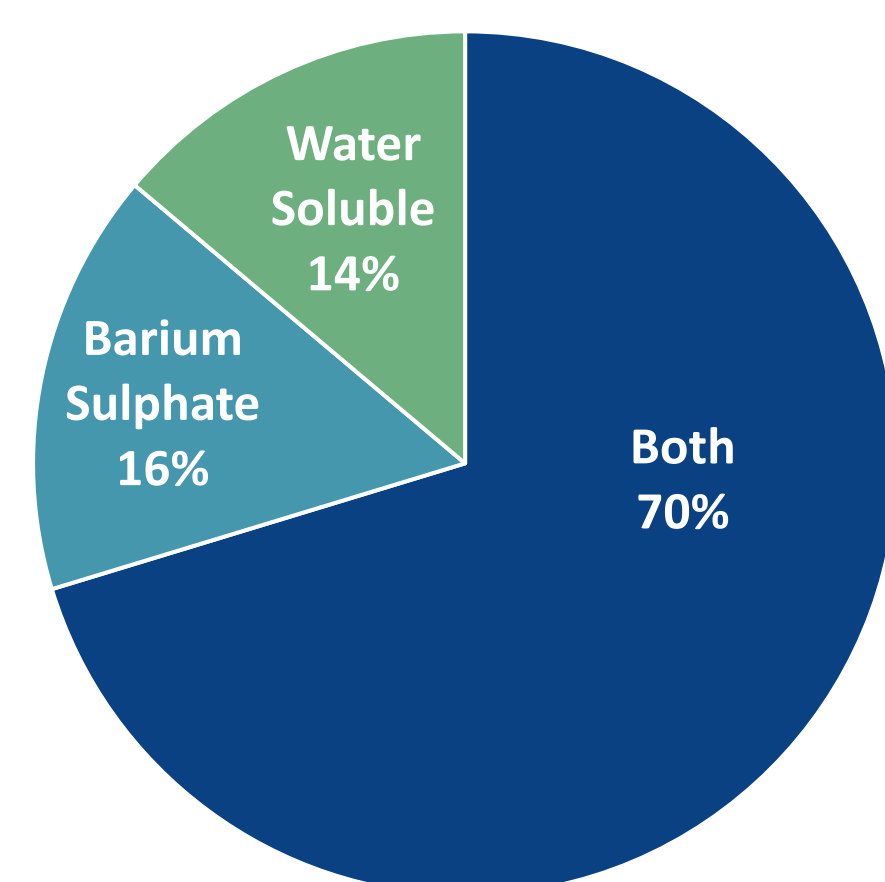


Figure 2. Contrast Media used in VFSS

CONCLUSIONS:

- There is marked practice variation for paediatric VFSS
- Limited use of standardized rating scales and minimal use of quantitative measures lead to increased subjectivity of VFSS procedures and interpretation
- Similar interventions across age groups include thickening fluids, flow rates of teats/bottles/cups, pacing and positioning
- Further research is required to determine best practice protocols in children
- Increased training opportunities will support research translation to practice

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