

2nd National PRECI Conference 1-3 May 2024 | Surfers Paradise, QLD Continuous Saliva Packing Resulting in Feeding Tube Dependence: In-Home Behaviour-Analytic Treatment

Nikolas F. Roglić, BA & Tessa Taylor, PhD, BCBA-D





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UNIVERSITY OF CANTERBURY Te Whare Wananga o Waitaha

#### Introduction



- One of the most challenging feeding problems to treat is packing: holding food or liquid in the mouth instead of swallowing. Saliva pooling is most extreme form, a seemingly biological reflexive behaviour.
- Less outwardly apparent than overt aggression or self-injury, but one of the most severe lifethreatening problem behaviours, with significant consequences--dehydration, rapid weight loss, adaptive behaviour regression, & hospitalisation, requiring feeding tube placement.
- Original aetiology may be medical or a triggering event, but once resolved, persists for behavioural reasons (avoiding swallowing associated with discomfort or high effort).
- Successful treatment involves graduated exposure with reinforcement to associate swallowing with pleasant experiences & increased success.
- No prior studies on case presentations requiring combined approaches for saliva packing as an undifferentiated automatically-maintained behaviour (the most difficult type to treat) outside of meals without anxiety or saliva expulsion, plus a feeding problem.





# Method



- Éloi 9yo, ASD (L3), ID, 100% NG tube dependence, significant adaptive behaviour regression (no longer talking or using his hands or participating in activities, back in nappies, out of school, sleep problems). 10-wks prior during trip overseas, diarrhoea, stopped swallowing (protruding cheeks), hospitalisations & extensive work-up (MRI, endoscopy, blood, faecal/urine, echo, CT; speech, ENT, GI, dental, endocrine, behaviour). 5 teeth pulled, prescribed fibre/laxatives.
- Refused to spit out, didn't 'play' with saliva, no "anxiety," packed all waking hours and contexts.
- Intensive 7-week behaviour-analytic paediatric feeding programme. Single-case experimental designs (multiple-baseline, changing criterion). For 10 days, did not respond to typically highly effective specialised feeding interventions & a multitude of treatment probes.
- Saliva packing, as an automatically-maintained undifferentiated behaviour persisting in all waking contexts despite high engagement in activities, warranted an additional/combined feeding & outside of meal approach: structured schedule, all desires put contingent on saliva swallowing, & self-monitoring targeting independence (swallowing saliva without prompting).







## Results

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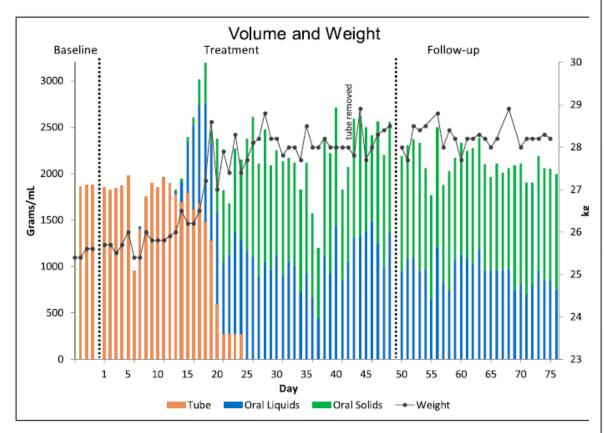


Figure 3. Volume and weight per day.





Figure 4. Sample photographs of meals consumed.

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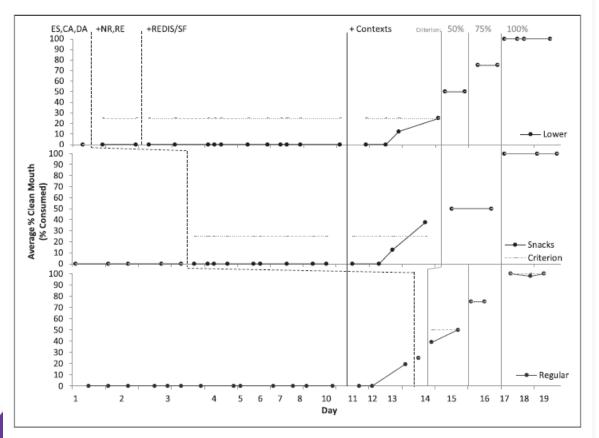


Figure 1. Percentage of swallowing in meal sessions for solids.

Note. ES, Escape; CA, Contingent Access; DA, Differential Attention; NR, Nonremoval; RE, Representation; REDIS/SF, Redistribution/Swallow Facilitation (Lower Texture only).



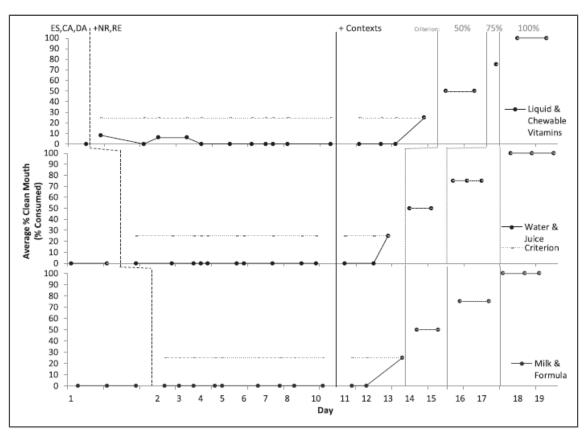


Figure 2. Percentage of swallowing in meal sessions for medications and liquids. Note. ES, Escape; CA, Contingent Access; DA, Differential Attention; NR, Nonremoval; RE, Representation.



### Conclusion



- Met 100% of his 21 goals, gained weight (24.5 to >28kg), eliminated tube dependence (in 23 days). Variety = 94 across all food groups, drinks, & supplements. Caregivers were trained, reported high social validity (all ratings 7/7), gains generalised & maintained in 1-month follow-up. Did not yet reach independence (would not eat/drink or swallow saliva without treatments) due to time/funding constraints.
- First case in Australia of in-home solely behaviour-analytic intervention to eliminate tube dependence, without hunger provocation, weight loss, or limited nutritional variety.
- Saliva packing may not receive the attention it warrants compared to aggression, self-injury, or other inappropriate mealtime behaviours (e.g., throwing, thrashing, spitting). Éloi's entire broader life & adaptive behaviour were significantly disrupted (e.g., no longer speaking, in diapers, not using his hands, not going to school, sleep). Determining severity of paediatric feeding problems, adequate multidisciplinary & medical work-up prior to intervention, & adequate outcomes & procedures requires highly specialised training, expertise, & competency. Children should be referred as early as possible to receive expert empirically-supported treatments at the individualised intensity warranted for case severity.







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Tessa Taylor<sup>1,2</sup> and Nikolas F. Roglić<sup>2</sup>



Free overview with fillable checklist. references & links to resources

DrTaylor@PaediatricFeedingIntl.com

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