Feeding with an Orthodontic Airway Plate (OAP): Infant Feeding Protocol

*All infants with OAP must undergo feeding and developmental evaluations**

PHASE 1 : Pre-OAP

NICU

Feeding evaluation, attention to:

- Secretion management: suction needs, changes with oral stimulation, pacifier, body position
- Oral anatomy: tongue position
- TBAO: frequency, position, state dependency

Nutrition: NG in place for all infants

Oral stimulation and intake:

- HFNC >2lpm: limited pacifier dips
- HFNC ≦2lpm: cautious oral trials
- Orofacial massage
- Anticipatory guidance to parents on feeding progression with OAP

Communication: NICU + Craniofacial

PHASE 1a: Initial OAP Placement

NICU

Neurobehavioral support during placement

Secretions:

- Expected to increase significantly
- Assess secretion handling
- Custom preemie binky to suction for infants with copious secretions

Oral stimulation:

- Pacifier can dislodge OAP leading to oral sores
- Pacifier and oral intake held for 24-48 hours after initial OAP, need approval from Orthodontics + Craniofacial to re-intro
- Requires preemie pacifier, cut to accommodate the OAP wires

Communication: orders updated

PHASE 2: OAP Adjustment

~3-14 Days after initial OAP delivery (NICU/acute care floors)

Oral stimulation:

- No Pacifier/bottle x 30 min after OAP daily placement
- Once secretion management stable with pacifier: add tastes/drops/syringe of milk

Bottle feeding readiness when:

- Room Air or up to 2L HFNC
- Total CO2 down-trending or <30 mEq/L
- Improving secretion handling
- Stable state regulation
- Tolerance of pre-feeding activities

First oral feedings:

- Custom preemie binky trainer (if helpful/indicated – not required)
- Dr. Brown's specialty bottle with cleft valve and Ultra Preemie nipple 5-15mL to start
- Sidelying or upright – a feeding wedge can be helpful
- Start cautiously and allow infant to explore and re-learn swallowing

Oral feeding progress:

- Feeding therapy visits 3-5x/week for incremental bottle progression as tolerated
- Infants change quickly and need close eyes on feeding and swallowing
- NG tube for transition home and tube weaning done outpatient

Special attention to changes with OAP modifications and growth:

- secretion management, need for suctioning, swallow sounds/observations, stridor, stertor, gagging, coughing, pacifier use, state regulation, activity, tongue position, oral feeding skills and endurance, reflux symptoms
- Oral feeding paused for 24 hrs after pharyngeal spur adjustments

Communication: orders updated, RN, NICU, Craniofacial, family after each session

**Developmental team guides positioning recommendations.*

TBAO = Tongue-based Airway Obstruction

PHASE 3: OAP Maintenance

Outpatient through OAP graduation

Outpatient Craniofacial Clinic Care:

- Initially, clinic visits every 2 weeks for OAP assessments with orthodontist +/- RN, feeding therapist, pediatrician, dietitian, ENT

Bottle feeding progression and tube weaning:

- Incremental increase flow rate, volume, frequency, time limit, ect
- Responsive feeding strategy approach guided by the infant to encourage positive oral experiences and decrease aversion and aspiration risk
- Instrumental swallow exam as needed (VFSS/FEES), ideally with OAP in and out
- POAL criteria: taking ~80-90% PO, adequate growth, respiratory status stable
- Able to wean during OAP tx, though more common after graduation

Ongoing evaluation during progression, modifications and growth:

- Secretion management, swallow sounds/observations, stridor, stertor, gagging, coughing, need for suctioning related to position, pacifier use, state regulation, activity, oral feeding
- s/sx of aspiration, growth, respiratory health
- MIDWAY point of OAP treatment: Planned admission for pharyngeal spur adjustment and sleep study, ~2-3 months into OAP treatment

Introduce oral feeding without OAP in place:

- Challenges re-learning how to swallow without OAP
- Consideration for feeding plate (eg, pharyngeal spur removed after graduation)

Puree introduction when developmentally appropriate:

- Ensure infant is not dislodging or rubbing face / wires of OAP

- Confirm enrollment in birth to three, collaborate with community therapist
- GRADUATION: Sleep study without OAP, full OAP treatment course is 3-6 months
- Prior to Palate surgery must wean from NG tube or transition to G tube

OAP Feeding Considerations

Pain and Aversion:

- High risk for oral sores on gums, gum/lip vestibule, posterior maxillary arch
- Infants averse to fingers in their mouth

Therapist Continuity:

- Craniofacial SLP to see each infant (with primary therapist) at one timepoint in each phase and available for consultation
- Therapist needs experience with Robin sequence without OAP prior
- Bedside feeding plans with visuals extremely helpful for carry over

Swallow Considerations:

- Instrumental swallow exam at discretion therapist throughout all phases
- Thickening at bedside NOT indicated, to be informed by VFSS if needed
- FEES has not been done but is possible, though undergo multiple endoscopies

Remember:

- OAP is an airway treatment NOT a feeding treatment!
- HIGHLY INDIVIDUALIZED FEEDING
- Comorbidities are impactful (eg, NOWS)

What if there's not enough oral space?

The OAP leaves little room for pacifier, bottle or finger in the beginning

Pacifiers:

- Preemie Jolly Pop, MAM, Medela, wee thumbie
- Flat and small nipple, ideally with a flexible exterior
- Preemie binky trainer or suction

Bottle:

- Nipple may not always fit – don't strive for perfection
- Allow infant to explore bottle nipple and gently progress it intra orally
- Position: Side-lying

Avoid any force that causes the tongue to retract against the pharyngeal spur leading to discomfort/retraction

Authored by Lucy Moreman MS, CCC-SLP with extensive review from the entire OAP team