Program Overview

The Barrow Cleft and Craniofacial Center Infant Program is the only program of its kind in the state of Arizona. Program intervention begins with a pre-natal consultation during which expectant families are provided resources for feeding and care of an infant with cleft lip and/or palate. This includes a consultation with a speech-language pathologist, craniofacial orthodontist, psychologist, and team coordinator. After the baby arrives, feeding therapy and pre-surgical molding to improve lip and nasal anatomy begins. Families of infants who are diagnosed after birth are welcome to the program as well. Feeding and pre-surgical appointments are coordinated for family convenience. We are sensitive to the emotional needs of parents and caregivers and set aside a half day per week for our program. This dedicated time provides an opportunity to meet other families who have children with similar diagnoses or conditions.

The program was designed to provide coordinated services for early pre-surgical and feeding needs of infants with cleft lip and palate and their families.

Providers

Lori Takeuchi, MPA, Program Coordinator
Patricia Glick, DMD, Craniofacial Orthodontist
Hemali Kothari, DMD, Craniofacial Orthodontist
Carolynn Garrison, PhD, Clinical Psychologist
Kelly Cordero, PhD, Speech-Language Pathologist
Jessica Williams, MS, Speech-Language Pathologist

www.barrownuro.org/craniofacial
Naso-labial Molding

Naso-labial molding (NLM) is a type of pre-surgical infant orthopedics (PSIO) performed by a craniofacial orthodontist during the first 3-4 months of infancy. The procedure consists of molding the soft tissues of the lip and nose using lip tape and custom nasal stents.

The goal of NLM is to move the right and the left sides of the lip closer together to achieve an optimal result from lip repair surgery. Additionally, the purpose of the nasal stent is to improve the shape of the nasal cartilages and make the right and left nostrils more similar in size.

NLM is often used in infants with unilateral cleft lip and palate. The molding begins within the first 2-3 weeks of birth and at this time, the lip tape is initiated. A few weeks later, the custom nasal stent is introduced. The infant is closely monitored by the craniofacial orthodontist and is seen every 1-2 weeks during this process.

The benefits of NLM include markedly improved nasal shape and symmetry. Furthermore, a number of studies have attributed improved surgical outcomes during the primary lip repair to PSIO procedures.


Naso-alveolar Molding

Naso-alveolar molding (NAM) is another type of pre-surgical infant orthopedics (PSIO) performed by a craniofacial orthodontist during the first 6 months of infancy. The procedure consists of a custom molding plate which is placed inside the infant’s mouth and a custom nasal stent which is attached to the molding plate.

NAM is typically initiated within the first 2-4 weeks of birth in order to take advantage of the plasticity of the infant’s cartilage. The first step in the NAM process is fabrication of the molding plate which is done by taking a mold of the infant’s palate. The molding plate is secured in the mouth with tape and elastics. It is adjusted every 7-14 days to reduce the size of the cleft gap and obtain close approximation of the gum line.

The nasal stents are added to the molding plate when the gap between the gum segments is reduced to approximately 5mm. The goal of the nasal stent is to improve the projection of the nose and elongate the tissue band between the nostrils (columella). The benefits of NAM have been extensively studied and it has been shown to have measurable benefits in facial appearance and primary surgical repair.

Feeding

Infants with cleft lip and/or palate are at risk for feeding difficulties, failure to thrive, and poor weight gain. One center found 31% of infants born with cleft lip and/or palate fell in the failure to thrive category (5th percentile or lower). When infants were followed by a team for feeding, the failure to thrive rate decreased to 5% after 6 months.

The team speech-language pathologist will educate families on these options and assist them in selecting a bottle that is right for their child. When a feeding is going well with a cleft-adapted bottle, it should take under 30 minutes to complete and be safe for the infant. After the initial evaluation, the team speech-language pathologist will continue to assess the infants’ feeding, volume intake, and weight gain. All appointments for feeding are coordinated with the infant’s appointments for naso-alveolar or nasal-labial molding. The infant’s feeding evaluation will be sent directly to his or her plastic surgeon and other relevant medical providers for coordination of care.

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