ORAL HEALTH IN COMPREHENSIVE CLEFT CARE

Guidelines for oral health professionals and the wider cleft care team







EXECUTIVE SUMMARY

Continuum of Care

Many providers are involved in the care of people who are born with clefts. Everyone has a role to play in reducing oral disease in people who are born with clefts. This resource has been developed to assist providers in their decision making during the oral health care continuum.

Introduction

Clefts of the lip and palate (clefts) are the most common birth defects of the face and mouth. Clefts occur when parts of the lip and/or palate and nose do not fuse together during embryonic development. Clefts can be associated with missing or extra teeth, and malformed teeth and facial structures. Even children who undergo cleft surgery are often at an increased risk for caries, periodontal disease, and other oral health and wellbeing issues as they grow and develop. These children require regular dental care to ensure adequate monitoring, education, support, and treatment to prevent oral disease and achieve the highest possible quality of life.



- All of the providers involved in the care of people born with a cleft have a role to play in maintaining a person's oral health and wellbeing.
- It is essential that agreed protocols are developed and adopted for providers to ensure good interdisciplinary communication.
- Providers should support caregivers, as caregivers may worry about their children's oral health and how their teeth may appear after eruption.
- The objectives of interdisciplinary collaboration are to **optimize cleft** patients' oral health and wellbeing including the ability to eat, speak, breathe and swallow.
- Caretakers may need support and encouragement to learn how to clean the cleft area and around the mouth. It's important for them to understand what causes oral disease and how to prevent it.

Orthopedic Dentistry Surgery Nursing ENT

Classification of Clefts

An anatomical based classification known as LAHSAL uses the lip (L), alveolus (A), hard (H) and soft (S) palate to describe the characteristics of the cleft. The first character is for the patient's right lip and the last character for the patient's left lip.

- incomplete cleft with a small letter.
- No cleft is represented with a dash.

EXAMPLES





• LAHSAL code indicates a complete cleft with a capital letter and an

1. Bilateral complete cleft lip and palate: The condition is bilateral cleft lip and palate, so there will be no dash and all letters of the LAHSAL code will be written as capitals and thus this will be represented as LAHSAL.

2. Left complete cleft lip: A complete cleft lip will be represented with the capital letter "L", as it is left, so this "L" will be written at the end. A patient with a left cleft lip will be represented as _ _ _ _ L

Oral Health	0-2	2-6	6-12	12-18
Protessionals Cleft Oral Health Guidelines (by age group in years)	 Explain to patients and their parents or g Professional fluoride application Scar management should be explained to 	guardians the causes of tooth decay & gum di o caregivers and patients	sease	
Routine Care	 Age appropriate oral hygiene - toothbrus Dietary advice - nighttime feedings, baby Fluoridated toothpaste use, fluoride support 	shing, mouth cleansing y bottles plements if required	 Age appropriate oral hygiene - toothbru Dietary advice - avoid fizzy drinks, caric Fluoridated toothpaste use Periodontal examination Radiographic monitoring 	ushing, interdental cleanin ogenic snacks
dentistry and maintain primary dentition	 Obturator/appliance cleansing 	 Discuss adverse habits - thumb sucking/ nail biting - and injury prevention 	pacifiers/clenching, bruxing and	• Discuss adverse hal
			• Fissure sealants as molars/premolars er	upt
	Identification and monitoring of white/bi	rown spot lesions		
Restorative Tips	 Silver diamine fluoride (if available) Atraumatic Restorative Treatment (ART) Stainless steel or zirconia crowns Direct bonding 	using adhesive materials such as glass-ionom	ner	
			 Partial dentures for missing teeth should be reviewed regularly for growing 	 Partial dentures for Begin considering c crowns, veneers
Orthopedic and Orthodontic Tips	 Referral to dental team if necessary Brief oral hygiene intervention (page 17) Presurgical infant orthopedics (PSIO) or palatal obturators 	 Interceptive orthodontics if required Consider space maintainers if any primary teeth are lost 	 Interceptive orthodontics/ orthopedics Assess need for alveolar bone graft (ABG), maxillary and/or palatal expanders Maxillary orthopedic protraction if required 	• Assess the need for to correct severe m
	• Care of the PSIO or obturator (page 17)			
		Care of orthodontic appliances		
Other Specialty Tips	Psychological support and counsellingInterdisciplinary team clinic appointment	ts available to patients and parents or guardia	ans	
	 Prenatal-birth: Genetic & feeding counseling O-3 months: Feeding counselling; hearing screening & ENT services if required 3-6 months: Lip repair 6-18 months: Early speech & language stimulation 6-18 months: Palate repair 	• Surgery revision if required	 Bone graft to the alveolar cleft(s) and closure of the oro-nasal fistula if required Rhinoplasty if required 	• Monitor for sleep ap
		Speech language assessment and treatm	nent if required	Patient receives jaw & velopharyngeal d



Non-Oral Health	0-2	2-6	6-12	12-18	
Professionals	Assess level of risk for oral disease (pag	e 5)			
Cleft Oral Health Guidelines (by age group in years)	 Referral to dental team if required Brief oral hygiene intervention (page 17))			
	Scar management should be explained t	o caregivers and patients			
At each appointment	 Discuss stopping adverse habits - thumb sucking/pacifiers/clenching, bruxing and nail biting - and injury prevention Any prescribed medicines should be sugar free 				
At each appointment					
the care provider should refer to these guidelines	 Lift the lip (page 10) Cleaning of the PSIO or obturator (page 17) 		• Cleaning of the orthodontic appliances (page 17)		
			• Coordinate with the dental team for ex	tractions and orthodontics a	

Risk Assessment for Non-Oral Health Professionals

Applies to all age groups

Use this quick reference guide to assess the level of risk for oral disease.

Each factor below — whether occurring on its own or in combination with other factors — increases patients' risk of caries (tooth decay), periodontis (gum disease), and other oral diseases.

- > Active or previous caries lesions
- > Low socio-economic status
- > Frequent consumption of dietary sugars
- > Reduced salivary flow or salivary pH
- > Poor oral hygiene
- > Suboptimal fluoride exposure
- Familial risk factors (educational level of parents'/sibling's oral health status)





Routine Care <i>It is essential</i> <i>to achieve</i>	 At this age, appropriate oral hygiene measures should begin and be taught to the caregivers (defined as parent or guardian) to establish a good routine of mouth cleaning and gum wiping before the eruption of primary teeth and gentle toothbrushing as the primary dentition erupts. 			
minimally invasive dentistry	 Explain to the caregiver the causes of tooth decay and gum disease, by describing the role of plaque and sugars and the effect on the oral tissues. 			
and maintain primary dentition	 At this age, nighttime feedings and baby bottles can contribute to high rates of early childhood caries. Discourage caregivers from putting honey or sweetened beverages in the bottle and ensure that the child's mouth is fully cleansed after the final nighttime feed. 			
	 Discuss adverse habits with the caregiver—thumb sucking, nail-biting and pacifiers should be actively discouraged. There may be concerns about the child clenching and bruxing their teeth, especially at night. Caregivers should be reassured that their child will usually outgrow this habit, but referral to a general practitioner for sleep analysis may be required in severe cases. 			
	 A smear of fluoridated toothpaste should be used, and children should spit out, but not rinse away, the toothpaste residue. Fluoride supplements can be considered if the local water supply is not fluoridated. 			
	 Early identification and monitoring of white/brown spot lesions are essential to prevent and manage caries. Professional fluoride application can be carried out twice per year from six months of age. 			
0-2 years only	 Scar management can be carried out when the surgical site is fully healed, and sutures have been removed. Caregivers should be encouraged to massage downwards from the columella end of the scar to the vermilion, three times per day for 8-10 minutes. 			
Ň	• Proper cleaning of the obturator and appliance should be taught to maintain a healthy mouth. See guidelines on page 17.			
Restorative Tips	• Silver diamine fluoride (if available) should be utilized to treat and manage caries.			
	 Minimally invasive techniques such as Atraumatic Restorative Treatment (ART) should be carried out using adhesive materials such as glass-ionomer. 			
	 Stainless steel or zirconia crowns should be used on teeth with extensive caries or following a pulpotomy. 			
	 Direct bonding can be used when required (strip crowns/ composite restorations/pit and fissure sealants). 			
Orthopedic and Orthodontic Tips	• The orthodontist should monitor the child's oral health and refer to the dental team if they identify any issues such as white spots or early caries.			
	 At each appointment, the orthodontic team should provide brief oral hygiene, advice and educate the caregiver about the care of presurgical infant orthopaedics (PSIO) or obturators. 			
7	 The orthodontist may be involved with providing the PSIO or palatal obturators before surgery. 			

Other Specialty Tips

- cleft care team:
- if required
- » 3-6 months: Lip repair
- » 6-18 months: Early speech & language stimulation
- » 6-18 months: Palate repair
- » Ongoing: Psychological support and counselling should be provided to the patient and their support network

NON-ORAL HEALTH PROFESSIONALS

Care and Tips:	• All members of the com
Key Points	monitoring and maintair
	» Assess the child's lev

- as shown on page 10.
- on the teeth.
- » Thumb sucking and pacifier use should be discouraged.
- » A brief oral hygiene intervention should be provided at each visit.
- » Scar management should be explained to caregivers.
- » Any prescribed medicines should be sugar free.

ILLUSTRATION

Teach mouth cleaning and gum wiping before the eruption of primary teeth and gentle toothbrushing as the primary dentition erupts



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• At this age, the child will be undergoing treatment with the comprehensive

» Prenatal-birth: Genetic & feeding counseling

» 0-3 months: Feeding counselling; hearing screening & ENT services

prehensive cleft care team can take part in ining the child's oral health.

- » Assess the child's level of risk for oral disease using the quick reference guide. Refer to risk assessment on page 5.
- » 'Lift the lip' is a quick and easy way to check the child's oral health status,
- » Referral to the dental team if any white or brown spots are noticed
- » Cleaning of the obturator and orthodontic oral appliances by following the obturator cleansing guidelines on page 17.





Routine Care It is essential to achieve minimally	 At this age, appropriate oral hygiene measures should be reinforced to the caregivers to maintain a good routine of gentle toothbrushing as the primary dentition continues to erupt. If possible, interdental cleaning should be carried out. 				
invasive dentistry	 Explain to caregivers the causes of tooth decay and gum disease, by describing the role of plaque and sugars and their effect on tooth enamel. 				
and maintain primary dentition	• At this age, nighttime feedings and baby bottles can contribute to high rates of early childhood caries. Discourage parents or guardians from putting honey or sweetened beverages in the bottle and ensure that the child's mouth is fully cleansed after the final nighttime feed.				
	 A smear of fluoridated toothpaste should be used, and children should spit out, but not rinse away, the toothpaste residue. Fluoride supplements can be considered if the local water supply is not fluoridated. Early identification and monitoring of white/brown spot lesions are essential to prevent and manage caries. Professional fluoride application should be carried out every six months. 				
	 Discuss adverse habits with the caregiver—thumb sucking, nail-biting and pacifiers should be actively discouraged. There may be concerns about the child clenching and bruxing their teeth, especially at night. Caregivers should be reassured that their child will usually outgrow this habit, but referral to a general practitioner for sleep analysis may be required in severe cases. 				
Restorative Tips	 Silver diamine fluoride (if available) should be utilized to treat and manage caries. 				
	 Minimally invasive techniques such as Atraumatic Restorative Treatment (AR should be carried out using adhesive materials such as glass-ionomer. 				
	 Stainless steel or zirconia crowns should be used on teeth with extensive caries or following a pulpotomy. 				
	 Direct bonding can be used when required (strip crowns/ composite restorations/pit and fissure sealants). 				
Orthopedic and Orthodontic Tips	 The orthodontist should monitor the child's oral health and refer to the dental team if they identify any issues such as white spots or early caries. At each appointment, the orthodontic team should provide brief and 				
	hygiene advice and educate the caregiver about the care of obturators or orthodontic appliances.				

2-6 years only	•	As the child grows the p maintainers should be u
Ň	•	As the permanent denti should be used if requir
Other Specialty Tips	Specialty • During to surgical develop speech	During this phase of gro surgical team in case an develops speech and lan speech therapist for ass
2-6 years only	•	Psychological support a their support network.

• Interdisciplinary team clinic appointments should be offered to all children and their parents or guardians annually.

NON-ORAL HEALTH PROFESSIONALS

Care and Tips:	•	All members of the com
Key Points		monitoring and maintai
		» Assess the child's lev

- as shown on page 10.
- on the teeth.
- » Thumb sucking and pacifier use should be discouraged.
- » A brief oral hygiene intervention should be provided at each visit.
- » Scar management should be explained to caregivers.
- » Cleaning of the obturator and orthodontic oral appliances by following the obturator cleansing guidelines on page 17.
- » Any prescribed medicines should be sugar free.

ILLUSTRATION

Teach caregivers 1 to support the child when brushing their teeth





- primary dentition should be maintained. Space used as appropriate if primary teeth are lost.
- ition begins to erupt, interceptive orthodontics red.
- owth, the child will require monitoring by the ny surgery revision is required. As the child nguage skills, they may need a referral to a sessment and treatment.
- and counselling should be provided to the child and

- nprehensive cleft care team can take part in ining the child's oral health.
- vel of risk for oral disease using the quick reference guide. Refer to risk assessment on page 5.
- » 'Lift the lip' is a quick and easy way to check the child's oral health status,
- » Referral to the dental team if any white or brown spots are noticed

Routine Care

It is essential to achieve minimally invasive dentistry and maintain primary dentition

- At this age, appropriate oral hygiene measures should be taught to the caregivers and child to continue a good routine of toothbrushing and introduce interdental cleaning and use of an interspace brush in the cleft area. Children should be supported in their oral hygiene routine until at least the age of 8.
- Explain to caregivers and the child the causes of tooth decay and gum disease, by describing the role of plaque and sugars and their effect on the oral tissues.
- Dietary advice should be provided to the caregiver and child with instructions to avoid fizzy drinks and reduce the consumption and frequency of cariogenic snacks.
- A pea-size of fluoridated toothpaste should be used. Children should spit out, but not rinse away, the toothpaste residue. Fluoride supplements can be considered if the local water supply is not fluoridated.
- · Early identification and monitoring of white/brown spot lesions are essential to prevent and manage caries. Professional fluoride application should be carried out every six months.
- Scar management can be carried out when the surgical site is fully healed, and sutures have been removed. Caregivers should be encouraged to massage downwards from the columella end of the scar to the vermilion, three times per day for 8-10 minutes.
- Discuss adverse habits with the caregiver—thumb sucking, nail-biting and pacifiers should be actively discouraged. There may be concerns about the child clenching and bruxing their teeth, especially at night. Caregivers should be reassured that their child will usually outgrow this habit, but referral to a general practitioner for sleep analysis may be required in severe cases.
- Fissure sealants should be placed as molars/premolars erupt to prevent caries.
- A periodontal examination should be carried out every six months to monitor for inflammation.
- Radiographic assessments should begin to monitor the eruption of the permanent dentition.
- Restorative Tips • Silver diamine fluoride (if available) should be utilized to treat and manage caries.
 - Minimally invasive techniques such as Atraumatic Restorative Treatment (ART) should be carried out using adhesive materials such as glass-ionomer.
 - Stainless steel or zirconia crowns should be used on teeth with extensive caries or following a pulpotomy.
- 6-12 years only
 - Direct bonding can be used when required (strip crowns/ composite restorations/pit and fissure sealants).
 - At this age, the child will begin to develop self-awareness and start attending school. Clinicians should provide partial dentures for missing teeth, and the fit of the denture should be reviewed regularly as the child grows.

Orthopedic and Orthodontic Tips	•	The orthodontist should team if they identify any
	•	At each appointment, the hygiene advice
6-12 years only	•	As the child grows, it is e primary teeth are lost, sp
	•	As the permanent dentition orthopedics in mixed der
	•	Maxillary orthopaedic pro
Other Specialty Tips	•	The child will continue to such as a bone graft to th fistula and rhinoplasty.
	•	Speech-language therapy
6-12 years only	•	Psychological support an their support network.
	•	Interdisciplinary team cli

they complete care.

NON-ORAL HEALTH PROFESSIONALS

Care and Tips:	•	All members of the con
Key Points		monitoring and mainta

- » Assess the child's level of risk for oral disease using the quick reference guide. Refer to risk assessment on page 5.
- on the teeth.
- » Thumb sucking and pacifier use should be discouraged.
- » A brief oral hygiene intervention should be provided at each visit.
- » Scar management should be explained to caregivers and children.
- as required.
- » Any prescribed medicines should be sugar free.

ILLUSTRATION

Children should be supported in their oral hygiene routine until at least the age of 8



- monitor the child's oral health and refer to the dental issues such as white spots or early caries.
- e orthodontic team should provide a brief oral
- essential to maintain the primary dentition. If any bace maintainers should be used where possible.
- ion begins to erupt, interceptive orthodontics/ ntition should be used.
- otraction may be considered at this age.
- grow rapidly and may require further surgery he alveolar cleft(s) and closure of the oro-nasal
- y will be ongoing if required.
- nd counselling should be provided to the patient and
- nic appointments should be offered to patients and parents or guardians annually until about ten years old, then biannually until
 - mprehensive cleft care team can take part in aining the child's oral health.
- » Referral to the dental team if any white or brown spots are noticed
- » Coordinate with the dental team for extractions and orthodontics

12-18 YEARS

ORAL HEALTH PROFESSIONALS

Routine Care	
lt is essential	
to achieve	
minimally	
invasive	
dentistrv	

- Essential to achieve minimally invasive dentistry and maintain primary dentition.
- Appropriate oral hygiene measures should be reinforced at every appointment to continue a good routine of toothbrushing, interdental cleaning and use of an interspace brush in the cleft area. Specific oral hygiene measures will be needed for patients undergoing orthodontic treatment to clean around the brackets and underneath the archwire.
- Explain to caregiver and patient the causes of tooth decay and gum disease, by describing the role of plaque and sugars and their effect on the oral tissues.
- Dietary advice should be provided to the patient with instructions to avoid fizzy drinks and reduce the consumption and frequency of cariogenic snacks.
- A bean-size of fluoridated toothpaste should be used. Patients should spit out, but not rinse away, the toothpaste residue.
- Professional fluoride application should be carried out every six months.
- Scar management can be carried out when the surgical site is fully healed, and sutures have been removed. Caregivers should be encouraged to massage downwards from the columella end of the scar to the vermilion, three times per day for 8-10 minutes.
- Fissure sealants should be placed as molars/premolars erupt to prevent caries.
- A periodontal examination should be carried out every six months to monitor for inflammation.
- Radiographic assessments should continue to monitor for caries and the periodontal condition.
- · Information on behaviour modification, including smoking cessation and the reduction of alcohol consumption, should be provided as needed.
- Injury prevention should be discussed as well as the importance of using a fitted mouthguard during sports.
- Silver diamine fluoride (if available) should be utilized to treat and **Restorative Tips** manage caries.
 - Minimally invasive techniques such as Atraumatic Restorative Treatment (ART) should be carried out using adhesive materials such as glass-ionomer.
 - Stainless steel or zirconia crowns should be used on teeth with extensive caries or following a pulpotomy.
 - Direct bonding can be used when required to improve aesthetics with a minimally invasive approach (strip crowns/composite restorations/ pit and fissure sealants).
 - Clinicians should provide partial dentures for missing teeth, the fit of the denture should be reviewed regularly.
 - Begin to consider cosmetic requirements: for example, resin-bonded bridges, crowns or veneers.

Orthopedic and **Orthodontic Tips**

- foods and sweets.

 - be required to prepare the patient for surgery.

Other Specialty

years only

Tips

12-18

(

dysfunction (VPD).

their support network.

parents or guardians at least biannually.

NON-ORAL HEALTH PROFESSIONALS

Care and Tips:	•	All members of the co
Key Points		monitoring and maint

- guide on page 5.
- » Referral to the dental team if required.
- each appointment.
- as required.
- required to correct severe malocclusion.

ILLUSTRATION

Specific oral hygiene measures will be needed for patients undergoing orthodontic treatment



Specific care instructions for orthodontic appliances should be given to the patient. The oral hygiene regime should be carried out after each meal, in addition to in the morning and at night. The patient should avoid sticky

• The orthodontist should monitor the patient's oral health and refer to the dental team if they identify any issues such as white spots or early caries.

If jaw surgery is needed to correct severe malocclusion, orthodontics will

Monitor for sleep apnea by questioning the patient if they feel unusually sleepy during the day or if they have heavy snoring. Patients should be referred to a sleep specialist if they have concerns.

Psychological support and counselling should be provided to the patient and

• If the patient receives jaw surgery to correct severe malocclusion, speech should be assessed after surgery to rule out any issues with velopharyngeal

• Interdisciplinary team clinic appointments should be offered to patients and

omprehensive cleft care team can take part in taining the patient's oral health.

» Assess patient's level of risk for oral disease using the quick reference

» A brief oral hygiene intervention should be provided at

» Scar management should be explained to patients.

» Coordinate with the dental team for extractions and orthodontics

» Coordinate with the facial surgeon and orthodontist if jaw surgery is



Routine Care It is essential to achieve minimally	 Appropriate oral hygiene measures should be reinforced at every appointment to continue a good routine of toothbrushing, interdental cleaning and use of an interspace brush in the cleft area. Specific oral hygiene instructions will be needed for patients with orthodontics, implants and bridges. Explain to the patient at every appointment the causes of tooth decay and gum disease by describing the role of plaque, inflammation and sugars and their effect on the oral tissues. 				
invasive dentistry and maintain					
primary dentition	 Dietary advice should be provided to the patient with instructions to avoid fizzy drinks and reduce the consumption and frequency of cariogenic snacks. 				
	 A bean-size of fluoridated toothpaste should be used, and patients should spit out, but not rinse away, the toothpaste residue. 				
	 Professional fluoride application should be carried out every six months. 				
	 Following surgical revisions, scar management can be carried out when the surgical site is fully healed and sutures have been removed. The patient should be encouraged to massage downwards from the columella end of the scar to the vermilion, three times per day for 8–10 minutes. 				
	 A periodontal examination should be carried out every six months to monitor for inflammation. 				
	 Radiographic assessments should continue to monitor for caries and the periodontal condition. 				
	 Information on behaviour modification, including smoking cessation and the reduction of alcohol consumption, should be provided as needed. 				
	 Injury prevention should be discussed as well as the importance of using a fitted mouthguard during sports. 				
Restorative Tips	 Silver diamine fluoride (if available) should be utilized to treat and manage caries. 				
	 Minimally invasive techniques such as Atraumatic Restorative Treatment (ART) should be carried out using adhesive materials such as glass-ionomer. 				
	 Stainless steel or zirconia crowns should be used on teeth with extensive caries. 				
	 Direct bonding can be used when required (strip crowns/ composite restorations/pit and fissure sealants). 				
	 Clinicians should provide partial dentures for missing teeth and the fit of the denture should be reviewed regularly. 				
18+ years only	• Begin to consider cosmetic requirements: for example, resin-bonded bridges, crowns or veneers.				
	Tooth whitening, if required, can be carried out.				

Orthopedic and **Orthodontic Tips**

- foods and sweets.
- be required to prepare the patient for surgery.

Other Specialty Tips

٠ their support network.

dysfunction (VPD).

• Interdisciplinary team clinic appointments should be offered to patients and parents or guardians at least biannually.

NON-ORAL HEALTH PROFESSIONALS

Care and Tips: **Key Points**

- - guide on page 5.
 - » Referral to the dental team if required.

 - required to correct severe malocclusion.

ILLUSTRATION

Specific oral hygiene instructions will be needed for patients with orthodontics, implants and bridges



2



Specific care instructions for orthodontic appliances should be given to the patient. The oral hygiene regime should be carried out after each meal, in addition to in the morning and at night. The patient should avoid sticky

• The orthodontist should monitor the patient's oral health and refer to the dental team if they identify any issues such as white spots or early caries.

If jaw surgery is needed to correct severe malocclusion, orthodontics will

Psychological support and counselling should be provided to the patient and

• If the patient receives jaw surgery to correct severe malocclusion, speech should be assessed after surgery to rule out any issues with velopharyngeal

• All members of the comprehensive cleft care team can take part in monitoring and maintaining the patient's oral health.

» Assess patient's level of risk for oral disease using the quick reference

» A brief oral hygiene intervention should be provided at each visit.

» Coordinate with the facial surgeon and orthodontist if jaw surgery is



Instructions for Cleaning of the Obturator/Appliance (OA)

Applies to age groups 0-2 and 2-6 only

Performed after each feed for the first 48 hours after the OA is fitted; then twice daily thereafter.



Brief Intervention of Oral Hygiene for Non-Oral Health Professionals

Applies to all age groups





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