

# Training Manual



2020



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# Chapter 1

## Introduction

### Introduction

Welcome to the Bridge2Aid Training Programme. This Manual has been provided to; help you get the most out of the Programme; be well prepared for your Clinical Sessions; use as a reference when you're back in your clinic.

If you are successful your District will receive a set of dental instruments, a pressure cooker for sterilization and Oral Health educational material that you can use in your clinic.

The Theory Training will be conducted by a local Supervising Dental Professional (SDP). The Clinical Training will be done by local Trainers, along with international volunteers.

There are many different ways to learn and to teach. On our Programme we encourage you to ask as many questions as you can and our Trainers are here to help you. If you are struggling to understand us please let us know and we will do our best to be sure that any difficulties with language or differences in learning style are solved quickly

### Course Outline

Day	Participants	Time	Theory Training Sessions	Chapter
<b>Day 1</b>	Training Team (TT)	Time tbc for each programme	Orientation and travel to site for Training Team	
	HCW/SDP	8:30am	Introduction Oral Health Care in the Host Country	Chapter 1
	HCW/SDP	9:00am	Pre Course Exam	
	HCW/SDP	10:00am	Oral Anatomy	Chapter 2
	HCW/SDP	12:00pm	Lunch	
	HCW/SDP	12:45pm	Oral Health and Disease	Chapter 3
	HCW/SDP	1:45pm	Prevention of Oral Disease	Chapter 4
	HCW/SDP	2:45pm	Infection Control, Sterilization and Sharps Safety	Chapter 5
<b>Day 2</b>	HCW/SDP	8:00am	Initial Welcome and Assessment of the Patient	Chapter 6
	HCW/SDP	8:30am	Tooth Extraction	Chapter 7
	HCW/SDP/TT	9:30am-4:30pm	Clinical and Experiential* Training	
<b>Day 3</b>	HCW/SDP	8:00am	Local Anaesthetic	Chapter 8
	HCW/SDP	8:45	Complications of Tooth Extraction	Chapter 9
	HCW/SDP/TT	9:30am-4:30pm	Clinical and Experiential* Training	
<b>Day 4</b>	HCW/SDP	8:00am	Treatment Limitations for HCWs	Chapter 10
	HCW/SDP	8:15am	Other Pathology	Chapter 10
	HCW/SDP	9:15am	Antibiotic Stewardship	Chapter 10
	HCW/SDP/TT	9:30am-4:30pm		
<b>Day 5</b>	HCW/SDP/TT	9:30am-4:30pm	Clinical and Experiential* Training	
<b>Day 6</b>	HCW/SDP/TT	9:30am-4:30pm	Clinical and Experiential* Training	
<b>Day 7</b>	HCW/SDP/TT	9:30am-4:30pm	Post Course Exam – time to be confirmed by SCL Clinical and Experiential* Training	
	Day 8	9:30am-4:30pm	Clinical and Experiential* Training	
	Day 9	8:30am-12:30pm	Clinical Session: The timing of this session will vary on different Programmes	
	*Experiential Training includes seminars; demonstrations; group discussions; etc.			

## What to expect on the Course?

### **Have you had any previous Dental Training?**

It will be helpful for your Trainers to know if you have any experience in dentistry. Most people will not have any.

#### **a. Pre-Course Examination**

On the First Day of the Course you will take a Pre-Course Examination, this is just to find out what your baseline knowledge is, so don't worry, we don't expect you to pass at this stage.

#### **b. Theory Training**

Day 1 is Theory Training only, and from 8:00am – 9:30 on Days 2, 3 and 4. All the information you need for the Theory Training is in this Manual

#### **c. Clinical Training**

You will be receiving 1:1 training in undertaking treatment from Dentists and Dental Therapists, with additional training in Oral Health and Infection Control from other dental professionals, such as Dental Hygienists and Dental Nurses. The Clinical Training follows the outline in your **Learning Objectives Document** and will be signed off every day by your Trainer.

#### **d. Clinical Assessment**

On Day 3 and Day 7 the SCL/SDP will carry out a clinical competency assessment (see Appendix)  
The Oral Health Team will carry out Assessments on Infection Control, Sterilization and Oral Health Education and Promotion. (see Appendix)

#### **e. Post-Course Examination**

On Day 7 you will take a Post-Course written exam. All the questions will have been covered in your Theory and Clinical Teaching.

#### **f. Final Assessment**

The Final Assessment is your Assessment totals plus the Post-Course Exam. (see Appendix)

### Introduction to Oral Health in the Host Country

Your Supervising Dental Professional (SDP) will provide you with an overview of Oral Health in your Country including;

- Prevalence of Disease
- Oral Health Services – nationally and locally
- Who can you refer to?
- What record keeping and reporting is required?

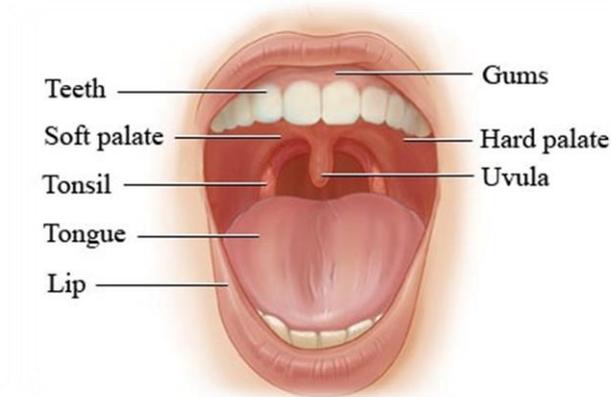
#### **Acronyms**

<b>ASCL</b>	Assistant Site Clinical Lead
<b>HCW</b>	Health Care Worker
<b>PDC/PDT</b>	Programme Delivery Coordinator/Team (UK)
<b>SA</b>	Site Administrator
<b>SCL</b>	Site Clinical Lead
<b>SDP</b>	Supervising Dental Professional

## Chapter 2

### Oral Anatomy

#### The Oral Cavity



The Oral Cavity

The teeth are surrounded by lips, cheeks and the tongue which direct the food to the teeth so it can be chewed. The lips and tongue are very sensitive and can feel food remnants on the tooth surfaces. The cheeks are less sensitive

There are 2 main salivary glands on each side: **The Parotid Gland** opens into the mouth

opposite the upper first molars

**The Submandibular Gland** opens in the floor of the mouth, on either side of the midline, just behind the lower incisors

Ask your Trainer to show you the opening of the salivary glands on a patient. Where the glands open is the most likely place to find the calculus on the teeth when a patient has poor oral hygiene. **Saliva** is useful because it dilutes acids harmful to the teeth and helps the digestion and swallowing of food

#### The Teeth

**Anatomy of a tooth:** The tooth consists of a crown and a root. The crown is the visible part of the tooth in the mouth. The root is the invisible part which anchors the tooth into the jaw.

**Enamel:** The crown is covered by the hardest tissue in the body, enamel. Its main function is to protect the dentine underneath from wearing away. Enamel has no nerves, but if the enamel is worn by abrasion, attrition or erosion the tooth can become very sensitive.

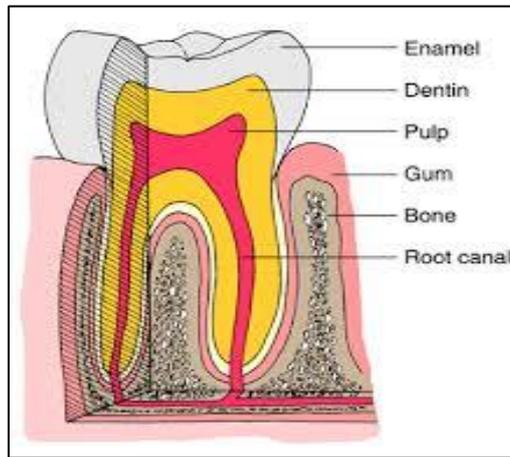
**Dentine:** is the main substance of the tooth, it is not as hard as enamel. Dentine is found in the crown covered by enamel and in the root covered by cementum. The dentine, when it is exposed, is very sensitive.

**Cementum:** is the thin outer layer of the root. Its function is to help fix the tooth in the jaw bone. The tooth has in its centre a cavity called the **root canal**.

**Pulp:** The root canal contains soft tissue, the pulp. The pulp consists of nerves, which when triggered cause pain, and fine blood vessels which feed the dentine. When the pulp is damaged, by trauma, dental caries, abrasion, attrition, or erosion etc., the pulp has an inflammatory response, pulpitis. If this continues the pulp can die, which in turn can lead to a dental abscess. (see Ch. 10)

#### The Gums

The inside of the mouth is covered with soft tissue called mucosa. Where the mucosa covers the neck of the teeth and the bone around the teeth, it is called the gum or gingivae



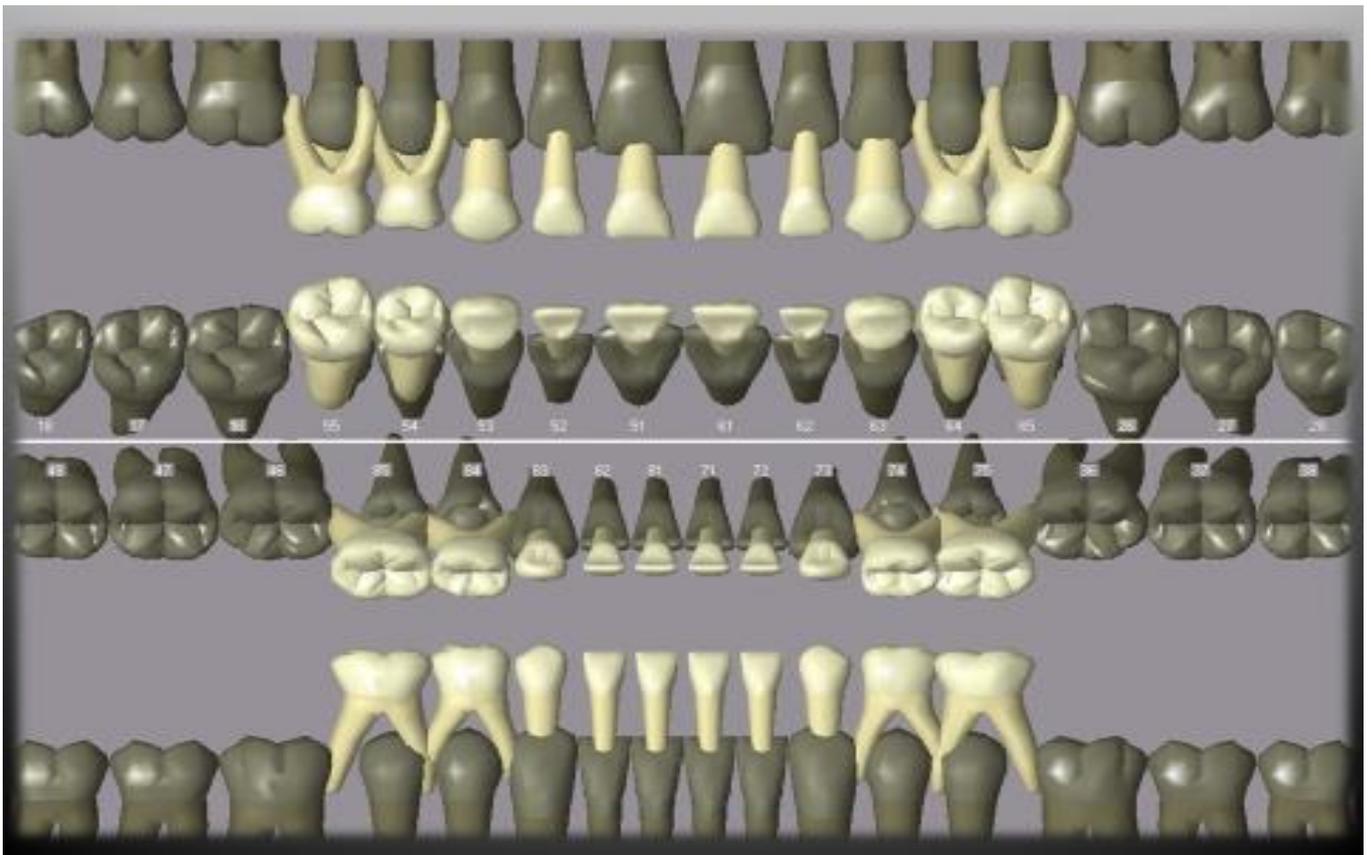
Cross Section of a Tooth

### Bones of the Face

The two main bones in the face are the maxilla which is part of the skull and the mandible which is an independent bone connected to the cranium by the two temporo-mandibular joints (TMJs), you can identify them on the skull in the Training Box.

### The Developing Dentition

When a baby is born the primary teeth are already present in the jaw, but are usually un-erupted. The permanent dentition will have already started to develop. The incisors, canines and premolars develop *under* the primary teeth, and the molars develop *behind* the primary dentition.

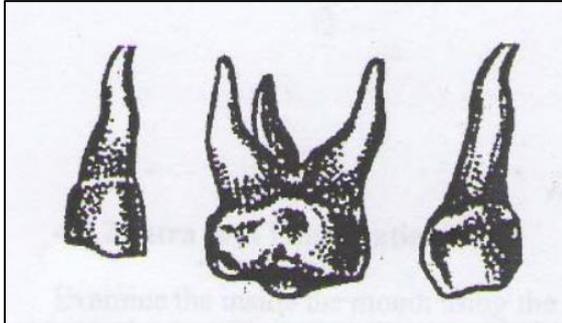


The Developing Dentition

### The Primary Teeth (Baby/Deciduous)

Usually a baby is born without any erupted teeth. There are 20 primary teeth, ten in the upper jaw and ten in the lower jaw. The primary teeth differ from the permanent teeth because they are **smaller**, often **whiter** and the molars have **diverging roots**.

The permanent teeth erupt behind the primary teeth. The primary teeth usually fall out (exfoliate) before the permanent teeth erupt, but sometimes both sets of teeth may be present. Your patient may ask you remove the 'extra' tooth/teeth, so knowing the difference between them is important.



Primary Teeth



Both Primary and Permanent Teeth present.  
Permanent Teeth are **darker** and **behind** the Primary Teeth

**The Incisors:** They are smaller than the permanent ones that replace them, but the 4 primary incisors in each jaw are almost the same shape.

**The Canines:** There are 2 canine teeth in each jaw and are similar to the permanent ones that replace them.

**The Molars:** There are no primary premolar teeth, instead, they are called molars. There are 4 in each jaw. They are replaced by the permanent premolars. Later on the permanent molars erupt behind them further back in the mouth as the jaws grow in size to allow this. Like the permanent molars, the primary molars in the upper jaw have 3 roots and in the lower jaw 2 roots

### The Permanent Teeth (Adult)

A fully grown up person has 32 teeth. 16 in the upper jaw and 16 in the lower jaw. The first of these enter the mouth or erupt at 6 years of age, the last one after the age of 16, however there can be a big difference in the times when they erupt. There are 16 teeth in each jaw; 4 incisors, 2 canines, 4 premolars, 6 molars

### Sizes and Shapes of Teeth (Tooth Morphology)

- The Incisors:** uppers are bigger than lowers; chisel shape, with wide, sharp edge used for biting; has one root
- The Canines:** upper and lower are similar in size pointed and stronger than the incisors used for tearing food; has one root
- The Premolars:** bigger, more cylindrical crowns used for chewing and grinding  
upper first premolars, two roots  
upper second premolars, one or two roots  
lower premolars - one root
- The Molars:** broad surface used for chewing and grinding  
upper first and second molars, three roots  
lower first and second molars - two roots



Tooth Morphology

**Third Molars:** Both upper and lower third molars are very varied; they may be smaller than the first or second molars; have one conical root; be very large with 3 upper or 2 lower roots; or even be quite unusual in shape, size and number of roots

## FDI Tooth Notation – Permanent & Primary Teeth

Quadrants are numbered 1-8		
Permanent Teeth	Primary Teeth	Location
Quadrant 1	Quadrant 5	Upper Right
Quadrant 2	Quadrant 6	Upper Left
Quadrant 3	Quadrant 7	Lower Left
Quadrant 4	Quadrant 8	Lower Right

Quadrant Numbers

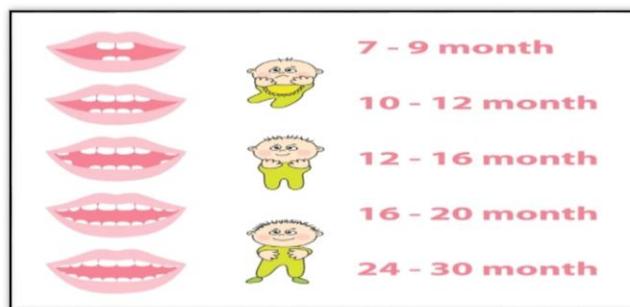
Teeth are numbered 1-8			
Permanent Teeth		Primary Teeth	
First Incisor	1	First Incisor	1
Second Incisor	2	Second Incisor	2
Canine	3	Canine	3
First Premolar	4	First Molar	4
Second Premolar	5	Second Molar	5
First Molar	6		
Second Molar	7		
Third Molar	8		

Teeth Numbers

**Tooth Chart:** This chart will be available on the clinic to help you identify teeth; (see Appendix)

### Eruption Dates of Primary Teeth

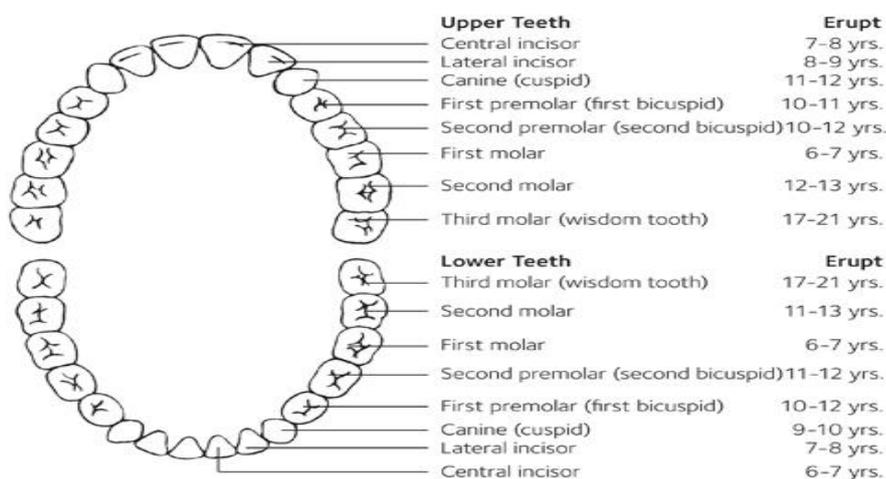
Primary Teeth erupt at different dates but usually during the period from age 6 months to two and half years. As with the permanent dentition, there can be a marked variation between people



Primary Teeth Eruption Dates

### Eruption Dates of Adult Teeth

There is great variation in eruption dates of adult permanent teeth throughout the world. These dates are given **as a guide only**. Incisors 6 to 8 years, canines 9-12 years, premolars 10-12 years, **first molars 6 years, second molars 12 years and third molars 18 -25 years**



Reference Chart for Eruption Dates

## Chapter 3

### Oral Health and Diseases

The World Health Organisation recommends that oral health services be a part of general health services. You will have the opportunity to deliver Oral Health Education to patients during the Programme and then in your own clinic

#### **Importance of a Healthy Mouth?**

- To be able to chew and eat properly
- For smiling and appearance
- To prevent pain caused by infection or tooth decay
- To avoid gum disease; bleeding gums, bad breath and loose teeth
- To reduce the need for teeth to be extracted
- To help prevent oral cancer
- To maintain overall good health

The two most common oral diseases are Gum Disease (Periodontal Disease) and Tooth Decay (Dental Caries)

#### **Gum Disease**

##### **1. Gingivitis**

**Gingivitis is inflammation of the gums** caused by leaving bacterial plaque on the teeth and around the gum edges due to poor tooth cleaning. It can be recognised by bleeding gums although sometimes the patient may not notice it. Encourage them to check this by brushing into the gum edges and look to see if they bleed. Gingivitis is **REVERSIBLE** by using a more thorough cleaning technique.

Plaque is difficult to see as it is the same colour as the teeth. The treatment of gingivitis is simply to remove the bacterial plaque thoroughly by using a good cleaning technique. This is discussed more fully in Chapter 4.

If the plaque is not removed it hardens and becomes **calculus**. The patient cannot remove the calculus, but they can still brush over it and remove the plaque from the surface. It is the **plaque** that causes the inflammation. If gingivitis is untreated it can progress to **periodontitis**.



Gingivitis, with plaque and swollen, red gums



Calculus, lingual surface of lower teeth

##### **2. Periodontitis**

Persistent gingivitis can lead to periodontitis. **Periodontitis** is inflammation of the tissues that support the teeth and once the bone around the teeth is damaged that damage is **IRREVERSIBLE**, the bone will not

grow back. When the bone around the teeth is destroyed the teeth become loose. It is known as the SILENT disease because it is not painful, and the patient may not notice it until the late stages when teeth move position or become loose, or there is significant bleeding. However, **even at this stage** improving their tooth cleaning can halt the progression of the disease. The gap between the tooth and the gum is called a periodontal pocket and this is where plaque bacteria live and this is why we teach our patients how to clean thoroughly in and around the gum edges, not just their teeth. Often patients think they are brushing too hard and that is what's causing their gums to bleed, but it is **gingivitis and periodontitis** that is the reason for their **bleeding gums** not the toothbrush! Next to poor oral hygiene, **SMOKING** is the biggest risk factor for gum disease, making it much worse.

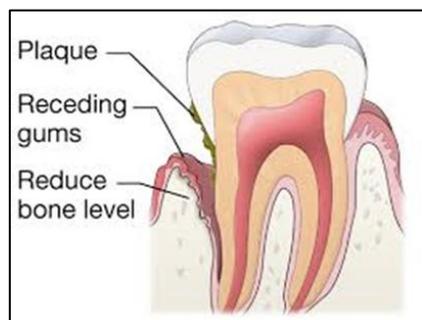
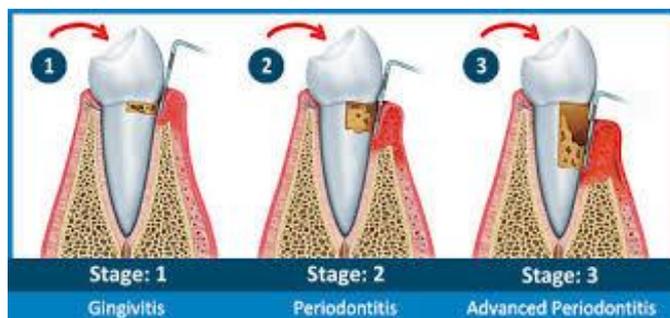


Diagram of Periodontitis



Stages of Periodontal Disease

### **Necrotising Periodontal Disease**

Occasionally when patients have very poor oral hygiene, are immunocompromised, or suffer from malnutrition, they may develop an acute anaerobic infection. The patient will experience pain, swelling and bleeding from their gums, find it difficult to eat and may feel unwell. Clinically the gums are red, swollen and there may be ulceration of the gums, leading to flattening of the papilla between the teeth. The tissues may have a greyish surface that sloughs off, and a characteristically unpleasant smell. It can occur in adults or children. It is treated with Metronidazole. If left untreated it can spread and become Noma (usually in children).



Necrotising periodontal disease

### **Noma**

Noma is a necrotising disease that destroys the mouth and face. It is NOT contagious and is not caused by witchcraft or a curse. It is caused by the combination of bacteria in a compromised patient.

**Patients at Risk:** children just after weaning; immunocompromised children aged 2-6 years;

**Contributory factors:** malnutrition; extreme poverty; poor living conditions; poor oral hygiene; underlying diseases e.g. malaria; HIV; measles;

**Symptoms:** red, swollen gums that bleed when touched; closed mouth; excess saliva; putrid smell; very painful lesions in the mouth; patient *may or may not* have fever;

**Treatment:** if caught early it can be treated with IV or oral antibiotics according to treatment guidelines in your country, in conjunction with treatment of underlying problem such as malnutrition; malaria etc.

### **Periodontal Abscess**

Occasionally the bacterial plaque and food debris trapped in the pocket caused by periodontitis can progress to a periodontal abscess causing a swelling in the gum.

### **Periodontal Status**

Guide to describing periodontal status:

**Poor:** generalised periodontal disease

**Fair:** generalised gingivitis, periodontitis on a few teeth

**Good:** no gingivitis, or mild gingivitis

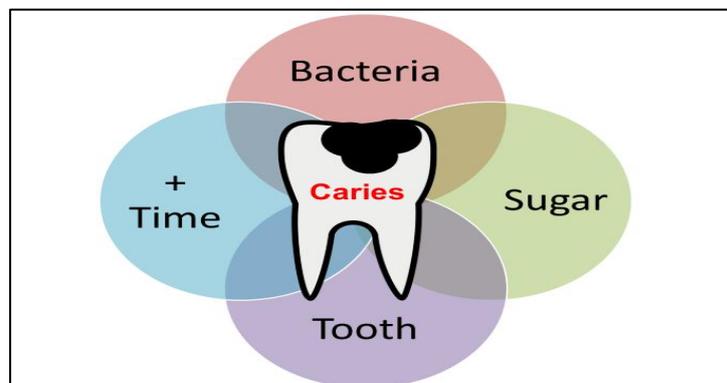
### 3. Tooth Decay – Dental Caries

Tooth decay is caused by eating too much sugar, too often throughout the day and not cleaning the plaque and bacteria off the teeth thoroughly. For decay to start you need **four** things – Tooth; Sugar; Plaque; Time;



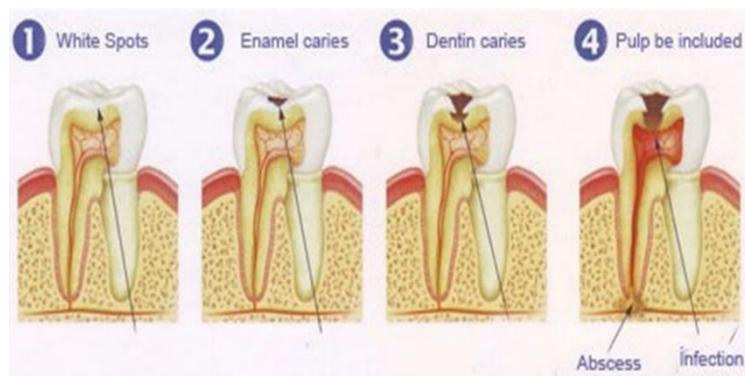
#### Progression of Dental Caries

If plaque and bacteria stay on the tooth for sufficient time, the bacteria use sugars to multiply and produce acid, causing a lesion in the enamel, which progresses into the dentine and eventually causes a cavity (hole).



**Toothache** occurs when decay reaches the dentine of the tooth. The tooth usually hurts on eating and drinking. More severe pain occurs when dental caries enters the pulp of the tooth. The tooth may now hurt all the time, including at night. The pulp, the soft tissue inside the tooth responds to the dental caries by becoming inflamed causing **pulpitis**

**Pulpitis** causes swelling which puts pressure on the nerve and blood vessels, and may result in death of the pulp. This process can happen within days of the decay reaching the pulp, or can take years. The dead tissue acts like a foreign body and eventually causes a periapical abscess (see Ch. 10)



### 4. Tooth Wear - abrasion, attrition and erosion

**Abrasion:** tooth wear caused mechanically, but *not* by the other teeth; e.g. a toothbrush used too roughly and incorrectly

**Attrition:** tooth wear caused by tooth-to-tooth contact, e.g. grinding teeth at night

**Erosion:** loss of enamel (or dentine) caused by acid, often associated with soda drinks

This can be difficult to treat. Try to find out the cause, and remove it where possible. E.g. use toothbrush more gently; stop eating or drinking acidic food and drinks; stop habit such as grinding teeth if possible.



Loss of enamel due to erosion

**Treatment:** Rubbing fluoride toothpaste over the sensitive surface just before bed helps make the tooth stronger and less sensitive. This can be used even in high fluoride areas.

## 5. Dental Fluorosis

Dental fluorosis is a condition affecting tooth enamel and is caused by an increased intake of fluoride, over an extended period of time, while teeth are developing under the gums

- Fluorosis can be brown marks or white marks
- Greatest risk is from birth to 8 years, particularly between 16-30 months, because this is when the teeth are developing
- Fluoride intake *after* the age of 8 years cannot cause fluorosis
- Fluorosis in primary teeth is less likely.

Even patients with fluorosis will benefit from using the correct amount of fluoride toothpaste because the surface of their teeth are often rough pitted and collect plaque, making them vulnerable to decay.



Fluorosis

## 6. Oral Cancer

The incidence of Oral Cancer is rising in Sub-Saharan Africa.

The main cause of oral cancer is smoking. Patients who smoke *and* drink alcohol make their risk 30 times higher than non-smokers and non-drinkers. If you see any patients with ulcers that have not healed after 3 weeks; red or white patches that don't rub off; they may be cancerous, so refer to your nearest dental professional.



Oral Cancer

## Chapter 4

### Prevention of Oral Diseases

In order to prevent or halt the progress of gum disease, dental caries, tooth wear and oral cancer give your patients good oral health advice. This advice will also help prevent systemic diseases, especially non-communicable diseases (NCDs) as they share the same risk factors.

#### **Oral Health Advice**

- a. Brush your teeth twice a day for 2 minutes with fluoride toothpaste; use a smear (small amount) of toothpaste for babies and small children; pea size amount for older children and adults. If they don't have a toothbrush they can use a natural mswaki
- b. Brush last thing at night after you've eaten and one other time during the day
- c. Reduce amount and frequency of sugar
- d. Avoid sugary snacks between meals
- e. Eat healthy food and drinks
- f. Do not smoke or chew tobacco
- g. Drink water rather than sugary drinks
- h. Exercise regularly
- i. If possible get your mouth checked regularly and visit a Dentist or HCW if you have a problem

#### **Advice to parents of babies and small children**

- a. Breast feeding provides the best nutrition for babies
- b. Avoid giving babies a bottle with soda
- c. Do not add sugar to baby's foods or drink
- d. Brush as soon as teeth erupt with smear (small amount) of fluoride toothpaste twice daily
- e. Help children under the age of 8 to clean their teeth

#### **Demonstrations:**

It is a lot easier to understand disclosing and tooth brushing when it has been demonstrated to you. This will be done during your Theory Training by the SDP, or by the OH Team on the Clinic

1. **Disclosing:** chew a disclosing tablet thoroughly and swish it all around the teeth, spit out, and then view your mouth with a hand mirror. Dental plaque stains pink or blue (depending on the tablets). Brush thoroughly until all the stain is removed, checking in the mirror
2. **Tooth Brushing:**
  - a. Start in the lower jaw, on the inside of the teeth
  - b. Angle your toothbrush at 45 degrees to the gum line, then brush backwards and forwards using very short strokes or small circular motions if you wish.
  - c. Move your brush towards the front on the mouth slowly, being sure to brush every tooth, turning the tooth brush through 90 degrees for behind the front teeth to get to all the 'corners'
  - d. When you have finished the inside of the lower teeth, brush the outside, the cheek side, of the teeth in the same way
  - e. Move to the upper jaw, starting at the back, in the palate, rotating your brush for the front teeth, and finishing up cleaning the cheek side of the teeth

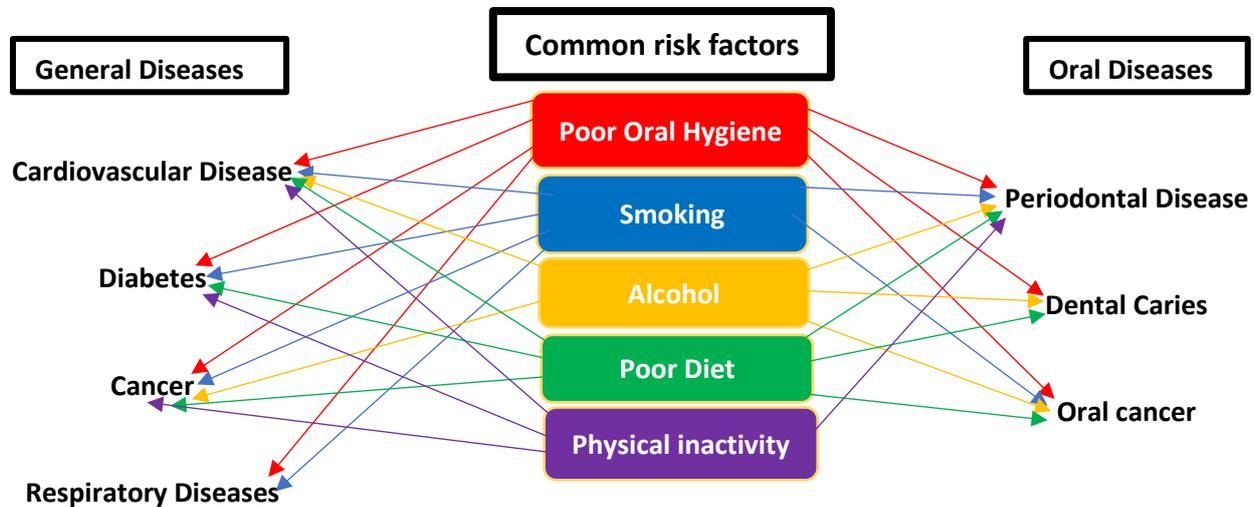
The whole process should take you at least 2 minutes to do a thorough job. When you are back in your clinics you can use the models (if provided) in your kits to demonstrate tooth brushing to your patients. Encourage them to bring in their own toothbrush so you can help them improve their technique.

#### **Oral Health and General Health: Healthy Mouth = Healthy YOU**

The main risk factors for **Oral Diseases** are the same as the risk factors for the 4 main **Non-Communicable Disease (NCDs): Cardiovascular Disease; Cancer; Diabetes; Respiratory Disease**

## Risk Factors for Oral Diseases and NCDs

1. **Poor diet high in sugar and low in nutrition:** tooth decay; gum disease; oral cancer; diabetes; heart disease/stroke; cancer;
2. **Smoking:** oral cancer, gum disease; staining, bad breath; lung disease; heart disease /stroke; cancer
3. **Excessive alcohol:** gum disease; oral cancer; heart disease; cancer;
4. **Lack of exercise:** periodontal disease; heart disease/stroke
5. **Poor oral hygiene:** tooth decay and gum disease; heart disease/stroke; diabetes;



Follow the coloured arrow to see **what risk factors relate to each** general disease **and** each oral disease. We know the obvious links that poor oral hygiene has on causing dental diseases but poor oral hygiene may have an impact on general diseases of the body. Poor oral hygiene and bacterial plaque and associated INFLAMMATION resulting from this may have an effect on other diseases of the body. Evidence shows robust evidence of the link between periodontitis and cardiovascular disease and diabetes; and further research shows a link to other general diseases; respiratory disease, cancer, chronic kidney disease and dementia.

## Oral Health Promotion

Below are some suggestions of how you could deliver oral health messages in your communities. Almost all dental diseases are preventable, so your oral health education programmes are vital. You will get a chance to work on this with our Oral Health Team during the Programme

- a. Give personalised OH messages and education to the patients in your clinic, face to face. Use teaching aids, tooth brushing instruction etc.
- b. Give OH messages to patients while you're waiting for local anaesthetic to work
- c. Go out on visits to your patients' own homes
- d. Group talks; mother and baby clinics
- e. School talks - support the local school by doing OH talk aimed at pupils
- f. Oral Health Trainers e.g. use the older students; OH School Champions
- g. Train teachers to deliver OH messages regularly to their students, and support OH in the school
- h. Ensure other clinic staff are trained so they can give advice
- i. Any national programmes they can support e.g. Oral Health Week; World Oral Health Day
- j. Learning by doing, participation, group brushing
- k. Take the opportunity to educate patients who are attending for other medical problems, especially NCDs as this will give double benefit to general and oral health
- l. Can you help your patients find fluoride toothpaste in local pharmacies?
- m. Let patients know that if they cannot afford a modern toothbrush they can *make* a mswaki
- n. Discuss the environmental issues around modern and natural toothbrushes

## Chapter 5

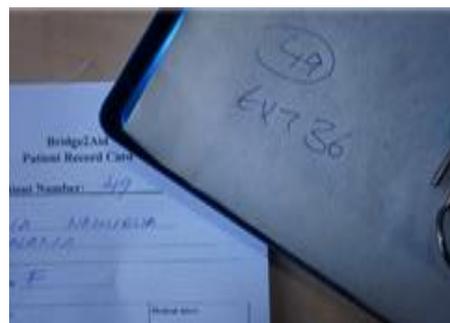
1. Infection Control
2. Decontamination/Sterilization
3. Sharps Safety

### 1. Infection control

Infection control; means preventing the spread of infections and diseases from one person to another *and* from patients to the wider community. No matter what problem you are treating, be sure that your work place, your instruments, and you are always clean.

#### **This can be achieved by;**

- a. Hand washing at the beginning and end of each session
- b. Use of hand gel between patients
- c. Put on new gloves for each patient
- d. Personal Protective Equipment (PPE)  
**Gloves** to prevent contamination from patient/patient, HCW/patient, patient/HCW. When you are wearing gloves don't touch anything except the patient and their instruments to prevent contamination  
**Mask** to prevent the transmission of infection via coughing or sneezing  
**Glasses** to prevent splatter of blood or saliva splashing in your eyes
- e. All instruments are used for one patient only, and sterilized before being used for the next patient
- f. Instruments: keep dirty and clean instruments separate and put them in the labelled 'dirty' or 'clean' zone as appropriate, to prevent cross contamination between patients
- g. Write the patient number on the record card and tray liner to prevent cross contamination between patients *and* to ensure you are treating the correct patient. In the example picture the patient is number 49 and tooth 36 is to be extracted. (you will only need to do this during the Programme, on your own clinic you will be able to do one patient's treatment completely).
- h. Place used needle and syringe in the sharps bin *immediately* after use to reduce the risk of needlestick injury, to prevent it being used more than once, and to prevent it being used on a different patient. If more local anaesthetic is needed a new syringe must be used.
- i. On your treatment table keep dirty and clean instruments separate to prevent cross contamination from one patient to another. Use a pair of clean tweezers in the gauze container in case you need more instruments or gauze. If you use the tweezers, with dirty gloves, the tweezers are contaminated and need to be placed on the dirty tray
- j. Tray liners do help to prevent contamination of the trays during extractions. When the procedure has been completed the clinician gathers up all the contaminated material in the tray liner and puts it immediately in the clinical waste. The instruments are placed back on the tray and the tray placed on the floor, to be collected by the OH Team



### 2. Sterilization

We sterilize instruments to ensure that all micro-organisms (germs) have been destroyed, and cannot be transmitted to another patient

### Personal Protective Equipment (PPE)

- a. Thick rubber gloves must be worn during the scrubbing and the cleaning process to reduce the risk of injury
- b. Mask and glasses must be worn to prevent splatter

### Zones

The Sterilization area is set up in zones

**Dirty Zone** – area for dirty instruments only (no sharps, or teeth/roots – these should have been removed by the clinician; if this has not happened please ask the clinician to be sure this is done at the station)

- a. Dirty instruments are placed in a bowl of clean soapy water and hand scrubbed with a wire brush to remove visible blood and debris. Place instruments so that all sharp ends face away from you, to reduce the risk of injury
- b. Instruments are then placed in a different bowl with clean water and inspected for signs of blood and debris. It's important to open up the forceps and check all the hinges
- c. If there are no visible signs of blood or debris they are then placed in a metal basket ready to be placed in the pressure cooker. If visible blood or debris remains they must be returned to the previous bowl and re-scrubbed



### Sterilising Zone

- a. Only instruments that have been through the dirty area are placed here
- b. Instruments are loaded into metal baskets with the sharp ends all facing one way to reduce the risk of needlestick injury
- c. Baskets are placed in the pressure cooker

### Clean Zone

- a. **Only** instruments that have completed the sterilising process can be placed here, to be cooled



### Sterilization Procedure

- a. Place water in the bottom of the pressure cooker to the marker line and add **a drop** of the oil supplied (too much oil makes all the instruments slippery)
- b. Don't overload, or all the instruments may not be sterilized properly
- c. Close the lid and lock fully into place
- d. Place the valve
- e. Check that the nipple on the lid of the pressure cooker is down
- f. Place the pressure cooker carefully on the burner
- g. Once the correct temperature is reached the nipple will pop up, it is important that sterilizing timing **begins now** and not before
- h. Set timer carefully for 20 minutes for altitudes up to 600m (2000ft), add one extra minute for every 300m over 600m, there is an altitude reading in the compass app on most phones, or ask the SA
- i. When the timer goes off remove the cooker from the heat, using protective heavy duty gloves

- j. There is a lot of pressure in the cooker that has to be released before the lid is opened. **THIS IS AN IMPORTANT SAFETY ISSUE.** To do this release the valve on the pressure cooker carefully. This is done by using the Cheatle forceps to pull the ring on the top of valve towards you, allowing the steam to escape away from you. Once this is done the pressure will drop, do not open the lid until there is no more steam escaping.
- k. Only then can you open the lid
- l. Remove the basket from the cooker using the Cheatle forceps provided
- m. Place the sterilized instruments in the clean zone and allow them to cool before using or storing safely

**Storage of Instruments** - sterilized instruments should be kept;

- a. Separate from any instruments in use
- b. In a clean dry and dust free area
- c. Covered until required for re-use

**Maintenance of surgical Instruments**

- a. Your forceps are surgical instruments. Do not use them for purposes other than oral surgery
- b. Do not use them if the joint has become loose. A loose joint can stress the material beyond its designed load capacity and lead to failure
- c. If an instrument is stiff to open lubricate the joint with light oil before sterilization

### **3. Sharps Safety**

#### **Prevention of Sharps Injuries**

- a. Dispose of all needles and syringes into the sharps container IMMEDIATELY after use. NEVER re-sheath the needle; NEVER reuse the needle; NEVER put the syringe back on your table. The syringe should only ever be in the patient's mouth or in the bin.
- b. When using an elevator, always wrap gauze around the finger or thumb that you are most likely to injury if you were to slip using the elevator
- c. Always wrap gauze on your thumbs when relocating a dislocated jaw

#### **Sharps Injury Management**

If you have a needlestick, elevator, bite or splash-back injury ask your patient to stay in the chair, and report the incident **IMMEDIATELY** to the SDP, they will help you to implement your Local Sharp's Policy

Be sure you are familiar with how to deal with a Sharps injury to yourself or your patient.

*(Training Team should report any sharps injury to the SCL and follow the B2A Blood Borne Virus Policy)*

## Chapter 6

### Initial Welcome and Assessment of Patient

At the beginning of each day you will go through the **Learning Objectives Document** with your Trainer so you know what the focus is for the day.

**Wash your hands** at the beginning and end of each session, and use alcohol rub between patients

#### **1. Greeting Patients**

Call your patient by number, and cross the number off the list on the wall at the entrance to the clinic. Sometimes the numbers are not consecutive as the SA will triage patients. If you have any questions on this process as it is vital to the smooth running of the clinic. Check with your Trainer, the Site Clinical Lead (SCL) or Site Administrator (SA) if Introduce yourself and your Trainer to the patient. We treat all patients with respect, and make every effort to maintain confidentiality

Your Trainer will fill out the paperwork initially, but later in the Programme you will complete the patient records to gain experience. You need to fill in all the appropriate records including:

- Patient's name and age
- Relevant medical history (MH)
- Patient's current complaint
- Periodontal status
- Diagnosis
- Treatment plan
- Local anaesthetic given
- Treatment undertaken
- Any complications or important details

#### **2. History**

##### **a. Presenting Complaint**

Let the patient tell you in his/her own words:

**What** is the problem?

**Where** is the problem? Get the patient to point to the problem.

**How long** has the patient had the problem?

Was anything connected with the start of the problem, e.g. an accident? eating?

Has the problem got worse, remained the same or improved?

Does anything make the problem worse e.g. eating or drinking something hot or cold?

##### **b. Past Dental History**

Has this problem occurred before and if so was it treated or not? If it was treated, were there any complications; bleeding, broken roots, infected socket or failure of anaesthesia. It helps to know if your patient has had previous dental experience when you are explaining the treatment to them

##### **c. Medical History**

Check the patient's medical history, it is common for patients not to take prescribed medication, so please double check. There will be a laminated card on your station in the clinic (see Appendix)

The following chart also has information about **why** we need a good medical history

<b>Medical History - and its relevance for treatment</b>	
<b>QUESTION</b>	<b>If the answer is 'YES'</b>
Are you taking any medicines, pills, creams etc.? If so what are they?	Find out what the medication is, and proceed accordingly The patient may have been prescribed medication but not be taking it, may not be able to afford it. Have they taken it today? When did they last take it? If the patient's condition is unstable consider referral to hospital
Do you suffer from HIV or AIDS?	As with all patients good infection control measures are essential Patient maybe more susceptible to infections, <i>consider</i> antibiotics
Do you suffer from any heart disease, high or low blood pressure?	Check the patient's BP before continuing, if it is high, refer to the SDP, who may postpone treatment until the high BP has been treated Consider Referral
Do you bleed for a long time after a tooth has been removed or if you cut your finger	Check for haemostasis before the patient leaves the clinic. If necessary place a suture Consider referral if the patient has a history of bleeding disorder
Do you have any allergies including antibiotics or local anaesthetic? (a local anaesthetic allergy is very rare)	Ask more questions about the severity of the reaction Do you have adrenaline available on the clinic? Consider referral
Have you every suffered from hepatitis?	As with all patients good infection control measures are essential
Do you ever suffer from fainting or seizures (fits)?	Fainting: Ask the patient when they last ate or drank Fainting and Seizures (Fits): Be prepared to deal with the situation if the patient faints or has a seizure, get support from colleagues e.g. nurses
Have you ever suffered from TB or chronic cough?	Check: Has patient started treatment? Ideally the patient should have 3 weeks of antibiotics before any dental treatment is undertaken, at the discretion of the HCW or SDP. Patient may be more susceptible to infection so consider antibiotics
Do you ever get breathless/chest pains	Consider: asthma; heart problems; TB etc. Discuss with your Trainer and local medical staff
Have you ever had surgery in the past?	Did they have any ill effects, did they recover ok?
Do you have diabetes? (this may well be described as 'having sugar')	Check blood sugar on clinic; treat accordingly - give soda/water, consider antibiotics Check when patient last ate and how long they have travelled Consider referral
Have you ever received dental treatment?	What was the experience like? Did they have any problems
Are you anaemic?	Do a blood test to check severity; if severe postpone treatment until anaemia has been treated After treatment check for haemostasis and if necessary suture If problem is severe involve local medical staff and consider referral
Are you pregnant?	Which trimester? Consider postponing treatment during the 1 <sup>st</sup> or 3 <sup>rd</sup> trimester, but remember treatment may be in the patient's and the baby's best interest to get the patient out of pain and treat any infection Discuss with the local medical staff
How long have you walked/cycled to get here today? When did you last eat?	Patients who have walked/cycled a long way or have not eaten today may be dehydrated/have low blood sugar; consider giving soda

### 3. Present the Patient to your Trainer

Be prepared to present the following minimum information to your Trainer:

- a. **What** is the patient's problem? e.g. pain; swelling; loose tooth/teeth; bleeding etc.
- b. **Where** is the problem? Which quadrant? (Q1; Q2; Q3; Q4; Q5; Q6; Q7; Q8)
- c. **How long** has the patient had the problem?
- d. If the patient has *more than one* problem **which is causing the most pain?**
- e. Does the patient have **any medical problems?**

### 4. Exam:

Your assessment of the patient begins as soon as you meet them. By the time you do your clinical examination you will already be aware of the patient's gender, age, general medical condition, psychological state, level of anxiety, trauma, etc. Your oral examination can be done from in front or behind the patient.

#### Set Up:

Set up a tray for your patient with a mirror and probe and put on PPE:

- |            |  |
|------------|--|
| Essential: | All clinicians must wear masks and gloves  |
| Desirable: | Where <i>possible</i> please wear white coats or scrubs or apron, closed toed shoes; protective glasses; |

Your patient will want you to focus on their complaint, so explain to the patient that you will be looking at the whole mouth *first* and then focusing on the problem

**Extra Oral Examination** – do a visual exam first

- a. **General Appearance;** is the patient responsive, feverish, lethargic, pale, sweating, any visible trauma?
- b. **Symmetry;** is there any swelling, is it hot, tender, fluctuant, firm, fixed?
- c. **Temporomandibular Joints;** palpate the TMJs, check for pain, dislocation, mobility, **Mouth opening;** is it painful? Does the jaw move straight up and down or to one side? Consider dislocated or fractured jaw; pericoronitis; abscess; cellulitis;
- d. **Lymph nodes;** if there are palpable lymph nodes the most common cause is infection, but consider benign tumours, or spreading malignancy from a primary tumour
- e. **Check head and neck;** for any injuries or infections such as extra-oral sinuses;
- f. **Check patient's eyes;** do they open equally? are they red? are the mucus membranes pale?;
- g. **Swallowing;** can the patient swallow **without** difficulty?

#### Intra Oral Examination

- a. **Soft Tissues;** use your fingers to retract the patient's lips, look at the soft tissues, lips; cheeks; tongue; floor of the mouth. Get the patient to move their tongue to either side of the mouth, and then place tip of the tongue on the palate behind the front teeth; are there any sores, wounds, swellings, blisters?

Examine the inside the mouth using

the mouth mirror. Good light is needed;

on the clinic you will be provided with a light, but sometimes in your own clinic it may be necessary to position the patient near a window for better light. Now examine the teeth and the periodontal tissues



- b. **Teeth and Periodontal Tissues** – using a mirror; start at Quadrant 1, the patient’s upper right hand side
  - i. **Teeth:** Check the teeth; look at each tooth one by one. Do they look intact? Are there any holes visible? Are they broken; Are any of the teeth loose? Are any of the teeth sore? Are any of the teeth a different colour from the rest? Are there any roots present?
  - ii. **Periodontal Tissues:** Check the gingiva: Does it look swollen? Does the gum easily bleed when touched? Is it very painful when touched? Is there a bad smell?
- c. **Periodontal Status:** poor; fair; good (see Ch.3)
- d. **Percussion:** To confirm which tooth is causing the problem it is helpful to ‘percuss’ the tooth. Use the handle of your mirror (or probe) to tap gently on the crown of the tooth so that the pressure goes straight down the long-axis of the tooth (please ask your Trainer to demonstrate as this is a very important technique). While you are percussing the teeth watch the patient’s reaction, especially their eyes to see which tooth is the most painful. This tooth (teeth) are recorded on your records as being TTP, tender to percussion.

When examining children you *may* need to go straight to the presenting problem rather than spending too much time examining the rest of the mouth. Children may become upset if the process takes too long.

## 5. Diagnosis and Treatment Planning

- a. **Diagnosis;** the most common cause of your patient’s problem will be dental caries, (tooth decay). Other common diagnoses are gingivitis, periodontitis; periapical abscess; periodontal abscess; retained roots. These and other oral diseases are discussed further in Chapters 3 and .

It takes time to become good at diagnosis, so please be sure to ask your Trainer a lot of questions to help improve your skills. You may come across other pathology that will need to be referred, so be sure you know who to refer to in your area.

You will be able to observe your Trainer make the diagnosis, based on the history and examination. As you gain experience you will be able to make the diagnosis, with the help of your Trainer, and by the end of the course you will be able to make simple diagnoses, and know when to refer the patient to a more experienced clinician.

- b. **Treatment;**

**Fillings etc.** some teeth can be saved by having a filling. If a tooth is not painful, or only intermittently painful and the patient improves their oral hygiene, they may be able to arrest the progress of dental caries. Some teeth can be saved by having more advanced dental treatment such as root fillings, crowns. Lost teeth may be replaced by a denture etc. It is important to know if a tooth can be saved, and what dental treatment is available in your area so a patient can be referred appropriately.

If the tooth cannot be saved, due to the extent of the disease, severity of the pain, or the patient is unable to access any other treatment (e.g. due to the unavailability of care, travel or financial constraints) then the tooth can be extracted

## 6. Explain Treatment to Patient

**Options;** before treatment, be sure the patient understands their diagnosis and what their treatment choices are

**Consent:** be sure the patient has given their consent freely before starting treatment

## Chapter 7

### Tooth Extraction

#### Reasons for tooth extractions

Many people think that when a tooth hurts, the only cure is to have it extracted. For many people this is true, but as Dental Services improve patients may be able to access other dental treatments.

#### **Why are teeth extracted?**

- a. Dental caries
- b. Periodontal diseases
- c. Periapical and periodontal abscess
- d. Pericoronitis
- e. Accident/Trauma
- f. Traditions/Customs

In some tribes, teeth are extracted either as a tribal symbol or just for cosmetics. In such cases extractions are done by traditional healers, *not in hospitals by Dental Professionals*.

- g. Clearance for space

A tooth which is not painful or diseased may, at times, be extracted. The main reason for this is to give space for other teeth. The aim is to remove one or more teeth so that other teeth are in good alignment. This should only be done a qualified Dental Professional.

These are the main reasons but not the only ones.

#### Contra-indication for tooth extraction

The following conditions necessitate special precautions or the referral of the patient to another member of the health team for any treatment other than first-aid.

- Severe anaemia
- Blood coagulation (clotting problems)
- Patients using drugs such as anticoagulants

#### Extraction Process

Before extracting a tooth you will have administered local anaesthetic. This is covered in Chapter 8.

##### **1. Prepare for the Extraction**

- a. Choose the appropriate instruments for the extraction: forceps, elevator, gauze, bite pack as required and place on the tray.
- b. Put the chair in the appropriate position, away from the wall for Quadrant 4 so you have room to stand behind the patient.
- c. Call the patient back from where they are waiting for the local anaesthetic to take effect.
- d. Confirm the patient's number and that the tooth to be extracted *and* the patient's number is written on the patient's tray. Don't rush, ask your Trainer to double check.  
**Until you complete the course this is the responsibility of your Trainer.**
- e. Put on PPE

##### **2. Checking for Anaesthesia**

- a. First **ask** if patient feels numb, remembering this will be a new sensation /experience for most patients
- b. Infiltration: If the patient reports feeling numb after infiltration, you can check for anaesthesia. Inferior Dental Block: be sure to actually **touch** the lip to check it is numb all the way to the midline. If it is numb you can check for anaesthesia

Using a probe push very firmly down the periodontal ligament, between the tooth and the bone, once buccally and once palatally or lingually. If the tooth was TTP originally, check that it is no longer TTP by tapping on the top of the tooth. You want the pressure to be **down the long axis** of the tooth

- c. Be aware of the need for good anaesthesia for your patient's comfort, acceptance of future treatment and operator's reputation

### 3. Forceps

Teeth are extracted using dental forceps. Dental forceps consist of a pair of handles, a hinge and a pair of beaks. Notice the difference in the way the beaks are pointed in forceps for upper and lower teeth

#### Upper Forceps

There are 3 upper forceps available on the Programme.

**Upper premolar forceps** are used for extracting incisors, canines *and* premolars.

**Upper right molar forceps** are used for extracting upper right molars

**Upper left molar forceps** are used for extracting upper left molars.

The pointed beak on upper molar forceps grips the outer (buccal) side of the crown between the two outside roots. On upper right molar forceps the pointed beak is to the patient's right (cheek) side, and on upper left molar forceps it is on the patient's left.



Upper Premolar Forceps



Upper Right Molar Forceps



Upper Left Molar Forceps

#### Lower Forceps

There are 2 types of lower forceps available.

**Lower premolar forceps** are used for all incisors, canines and premolars

**Lower molar forceps** are used for all molars, both right and left



Lower Premolar Forceps



Lower Molar Forceps

### 4. Positioning, stance, supporting alveolar bone and keeping soft tissues out of the way

Stand with one foot in front of the other for strength and balance, you will be using a lot of pressure



Right handed operator



Left handed operator

**Q1 and Q2** both right and left handed operators stand in front of patient - index finger and thumb on either side of tooth to be extracted



Right handed operator



Left handed operator

**Q3 Right handed** operator stands in front of patient, index finger and middle finger on either side of the tooth to be extracted and thumb supporting the jaw

**Left handed** operator, stands behind patient, index finger and thumb on either side of the tooth to be extracted 3 fingers supporting the jaw



Right handed operator



Left handed operator

**Q4 Right handed** operator stands behind patient, index finger and thumb on either side of the tooth to be extracted, 3 fingers supporting the jaw.

**Left handed** operator stands in front of patient, index finger and middle finger on either side of the tooth to be extracted and thumb supporting the jaw

NB: be careful not to put your fingers in the patient's eyes or cause soft tissue damage with the forceps by pinching the lower lip, especially because the patient won't feel it if they have had an IDB. Place your fingers carefully to protect the tissues from trauma.

## 5. Extraction

Teeth are usually firmly held in their sockets. To dislodge them without breaking off their crowns you must grip the tooth firmly, and slide the forceps as deeply as possible along the root of the tooth avoiding damage to the margin of the gum. If you do not hold the forceps properly you may slip and injure the patient's mouth. Place the finger and thumb of the supporting hand on the gum on either side of the tooth to be extracted while loosening it.

Upper incisors and canines have a conical root form so a gentle rotating movement combined with considerable force upwards will loosen them. Make the extraction movements slowly. Continue the movements until the tooth can easily be removed

- a. Explain to the patient that they will feel a lot of pressure, but if they feel pain to raise their hand
- b. If more than one tooth is to be extracted, prioritize the most severe problem
- c. Usually, to aid visibility, take lowers out before uppers and posteriors before anteriors. Your Trainer will give you advice if they recommend a different approach
- d. Mouth props are available if the patient is having difficulty keeping their mouth open

## 6. Elevation

- a. Hold the elevator in the palm of your hand. The index finger should lie along the long axis of the elevator, resting near the end of the blade, as shown below. This way, if the instrument slips it will not travel far and cause unnecessary damage to the patient  
Wrap gauze around the finger or thumb you are most likely to “hit” if you slip with the Couplands. This can be different for each tooth, depending on which tooth you are extracting, and how broken down it is. The gauze will help protect you from a sharps injury.



Good elevator technique

Poor elevator technique is the most common cause of sharps injury so please be careful and stick to these Guidelines. If you do have a sharps injury please notify your SDP immediately. You only need to use gauze when using the elevator, *not* with forceps, where it will get in your way and will not help.

- b. Place the Couplands in the space between the tooth and the bone, at a 45 degree angle, with the concave surface of the Couplands *towards* the tooth being extracted
- c. Use apical pressure and rotation to loosen tooth
- d. Place elevator on the tooth to be extracted – not on the adjacent tooth
- e. Support the alveolar bone as described previously
- f. When extracting upper premolar and molar roots be especially careful that your elevator is between the root and the bone. If you are actually pushing up *on the root*, not between the root and the bone, you may push it into the sinus. If the roots do not come out easily it is better to leave them.

If you do feel the root moving upwards stop immediately and refer the patient, because if the root passes into the sinus this may become infected and specialized treatment will be needed to remove it. If there is any doubt, do not use the elevator on difficult upper premolar and molar roots

## 7. Forceps

- a. Holding forceps – your grip changes from placement to extraction, your Trainer will demonstrate this technique.
- b. When placing forceps be careful not to damage the gums especially lingually or palatally.
- c. Position forceps as far down the tooth (apically) as possible.
- d. Maintain constant apical pressure through the long axis when moving the tooth. It is the pressure, more than the movement that loosens the tooth. So, make the extraction movements *slow*. **More pressure, less movement!**
- e. **Movement:**  
Upper premolars and molars, move buccally and palatally, more buccally  
Lower premolars and molars, buccally and lingually, molars figure of 8 (or small circles)  
Upper and lower incisors and canines, gently rotate  
**Deliver** teeth buccally to avoid excessive palatal and lingual pressure, buccal bone is weaker

## 8. Complete Extraction

- a. If the tooth has **not** been removed by either you or the Trainer after **15 minutes** refer to the SCL so you can continue your training. The SCL may offer advice, take over the treatment or transfer the patient to finish the extraction.
- b. After the tooth is extracted check roots and socket. Show patient the tooth if they would like to see it.
- c. Compress the socket. Check for excessive bleeding and place pack correctly, asking patient to bite down on the pack. If you have done multiple extractions, and you feel it's appropriate, please place a suture to help haemostasis, as many patients will have a long walk home.
- d. Put disposable items from dirty tray and the extracted teeth into clinical waste.
- e. Place the tray on the floor in designated area for collection by the OH Team.
- f. Remove gloves and place in clinical waste.
- g. When treatment is finished complete the Record Card, Day Sheet and Record of Extraction.

### Post-Operative Instructions

From your first day on clinic you will give Post-Operative Instructions to the patients who have had a tooth extracted. Use the laminated card on the clip board. (see Appendix) The instructions need to be clear and understandable. Remember most of your patients will never have had LA, or had teeth removed before.

Post-Operative Instructions	
1	Bite on the pack for 30 minutes, then throw the pack in the box/bin provided
2	Be careful not to bite your lip or tongue, as it is numb
3	Keep your tongue and fingers away from the socket, leave it alone for the rest of today
4	Do not spit, rinse or wash your mouth out today. Beginning tomorrow you should wash your mouth with clean salty water 4 times a day for several days
5	Avoid hot food or drinks/exercise/smoking/alcohol for the next 24 hours
6	Try not to eat over the socket while it is healing, try to eat on the opposite side
7	Keep the rest of your mouth clean with daily tooth brushing
8	If you continue to bleed or have increased pain or swelling please return to the clinic as soon as possible

### **Oral Hygiene Instructions**

During the Programme you will spend time learning about, and delivering Oral Health messages to the patients. But from the first day you give OH Advice to every patient using the information which is on the clipboard on the clinic. (see Appendix) If there are tooth brushes and toothpaste available on the clinic give them to the patient when you have completed the OH advice.

### **Completion of Treatment**

When treatment is complete please take the number sticker from the patient's arm and dispose of it to prevent it being handed to another patient.

Direct the patient to the waiting area, and ask them to wait for 30 minutes. Ask them to dispose of the gauze pack in the box provided before they leave. If there is any concern about bleeding after 30 minutes, ask the patient to come back to the chair to be reassessed

### **Recordkeeping**

Before calling the next patient please be sure you have completed the

- a. Patient Record card (see Appendix)
- b. Day Sheet (see Appendix)
- c. Record of Extraction (see Appendix and back page of the HCW Learning Objectives Document)

## Chapter 8

### Local Anaesthesia

In dentistry we use two types of local anaesthetic techniques:

**Infiltration Anaesthesia** is where the anaesthetic is placed near to the apex of the root of the tooth to be anaesthetised. It works well in the upper jaw where the bone is thinner and more porous. The local anaesthetic soaks in like a sponge. It is used for all upper teeth and for the lower incisors and canines. It is necessary to also give a buccal and palatal injection for upper teeth, and buccal and lingual for lowers.

**Block Anaesthesia:** the anaesthetic drug is placed near to the nerve at a point along its course to block the transmission of impulses along pain nerve fibres. Injections should be done slowly as this improves the effectiveness of the local anaesthetic *and* is more comfortable for the patient

#### 1. Drawing up local anaesthetic

During the Programme the Oral Health team will demonstrate good infection control when drawing up local anaesthetic.

- a. Always draw up local anaesthetic in a 'Clean' area
- b. Wash your hands and put on gloves, if required
- c. Check the contents label on the bottle, make sure the solution is clear and check the expiry date
- d. Remove the metal tab carefully and wipe the top of the bottle with hand gel
- e. Attach the needle to the syringe tightly, without touching the 'hub' (where the syringe and the needle meet) as it needs to remain sterile
- f. Hold the bottle upside down, insert the needle making sure the bevel is in the solution, and slowly withdraw a little more than 2.5mls, then inject the extra solution and any air back into the bottle
- g. Remove the bottle from the needle, draw back the small amount of solution that's still in the needle, tap along the length of syringe gently to remove air bubbles, and gently expel the air from the end of the needle. This ensures that you have a full 2.5mls of anaesthetic
- h. Carefully replace the sheath over the needle, being sure not to touch the needle, or catch it on the sides of the sheath as this may damage the needle and result in an unnecessarily painful injection.
- i. Place in a clean kidney bowl for distribution onto the clinic
- j. Write the date the bottle was opened on its label. Once opened the bottle should be used within 28 days

#### 2. Dose

There will be syringes of 2.5mls of Lidocaine with adrenaline available on the clinic. We use Lidocaine with adrenaline *unless* the patient has a history of high blood pressure or heart palpitations. For these patients ask the OH Team for Lidocaine *without* adrenaline. These syringes should be marked with a coloured dot using a permanent marking pen.

**Maximum Dose** of Anaesthetic: 1) Adults 8-10mls  
2) Children 4-5mls

If your patient requires more anaesthetic please discuss with either SCL or your Local Medical Staff before using any more

### 3. Technique for giving local anaesthetic:

Check that the needle has been tightened onto the syringe

- a. **Buccal infiltration:** retract soft tissues with mirror, holding the tissues taut makes it is easier to insert the needle. For the front teeth the needle can be parallel with the tooth, for the back teeth go in at approximately a 45 degree angle, aim to inject with bevel facing the tooth, close to the apex of the tooth. Use a little more than 2mls of local anaesthetic
- b. **Palatal infiltration:** deposit the remaining local anaesthetic, <0.5mls approximately 1cm from the gingival margin, in deeper tissue if possible. Rotate the needle slightly as it is inserted, with the bevel towards the palate, this helpful to pierce the tissues, prevent splash back and makes it more comfortable for the patient
- c. **Inferior Dental Block (IDB):** palpate the external oblique ridge with the thumb and rest your thumb in the triangle formed by the external and internal oblique ridges (your Trainer will demonstrate all the local anaesthetic techniques). Keep your thumb in situ, approach with the syringe from the pre-molars on the opposite side, insert needle to bone, retract slightly, move syringe across the midline until parallel to the occlusal plane, insert the needle approximately 1 cm and aspirate. Deposit a little less than 2mls, keep injecting as you retract your needle to anaesthetize the lingual nerve as well (2mls in total)
- d. **Long buccal:** retract soft tissues with mirror, infiltrate remaining 0.5mls into the soft tissues slightly distal to the tooth to be extracted, with the bevel facing the bone.  
**Sharps Safety:** ALL syringes, including partially used ones, complete with needles, should be placed immediately after use into the sharps bin. NEVER re-sheath needles. NEVER put a syringe back on the tray  
If you have a **sharps injury** please notify SDP immediately  
Explain to patient what LA feels like, give cautionary advice such as not to bite the lip

### 4. Next steps and record keeping

- a. When local anaesthetic is completed remove your gloves and place in clinical waste
- b. Write up Patient Record Card, as per example. (see Appendix) These cards will be left at the health centre

***In your own clinic you will see one patient at a time, which is best clinical practice. However on our busy DTP clinics it is often necessary to numb more than one patient at a time.***

***In your own clinic you do not need to do c-f, go straight to number 5 below***

- c. Write patient's number on tray liner
- d. Write tooth to be extracted on tray liner (e.g. EXT 16 or EXT 45) to avoid confusion with patient number
- e. Put tray under the table on the black box (these store instruments, stoves, sharps bins etc.)
- f. Get patient to wait (on 'anaesthetic' bench - when available)

### 5. Checking for Anaesthesia: (see Ch.7)

### 6. Failure of Anaesthesia

If the anaesthesia does not work, give another injection and make sure that the position of the needle is correct. If you have given 2 injections and the patient is not numb your Trainer will take over. If there is infection present it can be more difficult to obtain anaesthesia as a result of localised swelling. When giving an infiltration, if possible, inject into the buccal sulcus on either side of the swelling.

Remember: Dispose of needle and syringe in the sharps container IMMEDIATELY!

## Chapter 9

### Complications of Extractions

#### 1. Complications of Dental Extractions

##### Bleeding

If there is a lot of bleeding immediately after the extraction, place a pad of damp gauze over the socket and ask the patient to bite on it for 30 minutes. The pressure normally stops the bleeding. If the patient returns with further bleeding, try the above method again, if it fails place sutures across the socket. If there is severe bleeding the patient may be in shock, check the patient's blood pressure and if necessary admit or refer to hospital

##### Suturing

The technique for suturing in the mouth is the same as skin but access is more difficult. Hold the needle two thirds along from the tip as shown in the picture. The needle holders can be rotated depending on access. Insert the needle close to the gingival margin rotating it away from the bone. This is done by rotating the wrist. Your trainer will demonstrate this on the clinic, and during the programme you will have the opportunity to place sutures in the mouth

The best suture for a bleeding molar socket is a mattress suture as seen below.



Holding a curved needle



Horizontal mattress sutures

##### Broken roots

Occasionally roots will be broken during extraction. If only the bottom third is left it might be better to leave it alone as normal healing will usually take place. If a large piece of root is present an attempt may be made to remove it with an elevator. If you leave the broken root in they do not usually cause a problem, but review the patient in a week, and if it is causing severe pain or infection refer the patient to the hospital.

##### Sinus

There is a close relationship between the sinus and the apex of roots of the upper premolars and molars. Do not spend a long time trying to remove roots. If they do not come easily leave them alone. If you continue you risk pushing the root into the sinus, causing an oroantral communication (OAC).

Symptoms include: air bubbles in the extraction socket, liquid from the mouth passing through the nose on drinking, air coming down into the mouth from the nose when breathing. Refer the patient to the hospital, and advise them not to blow their nose and avoid smoking. Give them analgesics (e.g. paracetamol, ibuprofen) as they will probably be in some pain. Discuss prescribing antibiotics with your SDP.

## Dry Socket



This is an acutely painful condition which is first noticed **a few days after** the extraction. There is no blood clot in the socket which often contains food debris

Dry socket following extraction of 26

## **Management of Dry Socket**

- a. Reassure the patient the right tooth has been taken out as it may feel like the pain from the dry socket is coming from the teeth either side. Whilst this may be more severe than the original toothache this will usually resolve on its own with time
- b. Prescribe analgesics
- c. If there is a lot of debris in the socket, and you decide to clean it out, first administer local anaesthetic as it can be very painful. Irrigate the socket with saline, hydrogen peroxide or bottled water, and if necessary debride the socket and encourage bleeding to form a new clot
- d. If there is systemic involvement such as fever, severe swelling or trismus, prescribe Metronidazole 400mgs t.d.s for 5 days (warn re alcohol)
- e. Advise the patient to rinse **gently** with warm salt water mouthwash
- f. Reinforce post-operative instructions for extractions

## Fainting

Sometimes a patient will faint while receiving an injection. The patient may be nervous; might not have slept well; might not have eaten etc. If they feel faint stop giving the injection.

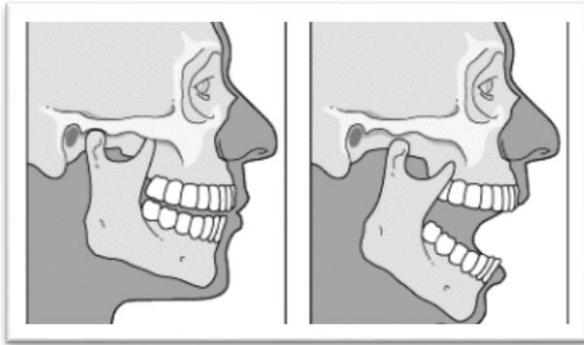
### **Management of a collapsed patient**

- a. Lie the patient on the floor, support their head and raise their legs. There is a piece of material (e.g. kanga) in the Administration Box that can be used for a screen, pillow, or to put over the patient's legs to help maintain the patient's dignity.
- b. Give glucose or soda. Bridge2Aid supply sodas, which can be poured into a cup.
- c. Inform the SCL who will discuss the patient management with you and the SDP.
- d. Recovery is usually quick and the original treatment may then be completed. Ask the patient to wait for one hour at your clinic after treatment is finished to be sure they have recovered completely before they leave.
- e. If the patient doesn't recover quickly the SCL will consult with the Local Medical Staff who will continue caring for the patient whilst you return to training.

## Mandibular Dislocation

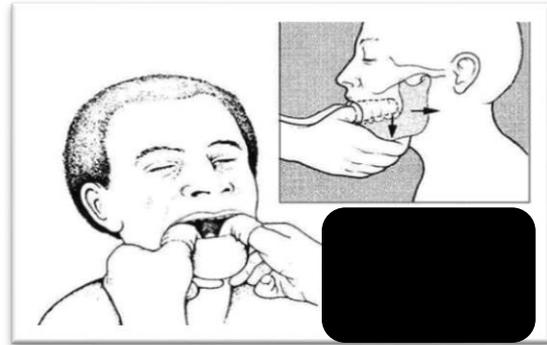
In a normal situation the mandible is positioned against the skull just in front of the ear

When the mouth is opened the joint rotates first, and then slides forward. If the joint slides too far forward it is called a mandibular dislocation.



Normal position

Dislocation



Technique to reduce dislocation

### Symptoms and signs

The patient is unable to close his mouth and may feel pain in the area of the joint. If only one side of the jaw is dislocated the jaw deviates to one side

### Treatment

1. This procedure will be demonstrated to you on the clinic during your training.
2. Place the patient on a low chair. The head should be supported against a back-rest or wall. Now wrap gauze around your thumbs and place on the mandible, press downwards and backwards with a slow sustained pressure, to slide it back into the right position.
3. If available, place a 5 or 10 mL syringe between the posterior upper and lower molars or gums on one of the affected sides. Have the patient gently bite down on the syringe while rolling it back and forth between the teeth until the dislocation on that side is reduced. The opposite side tends to reduce spontaneously. If this does not occur, place the syringe on the opposite side and try the same technique. This requires good cooperation from the patient so may not work in a young child
4. Advise the patient not to open their mouth wide or yawn. They should eat a soft diet.
5. Apply a 'head and chin' bandage; see below. Ask your Trainer for a demonstration if needed.

### Maxillo Facial Trauma

Trauma may damage the teeth, the soft tissues, or the underlying bone. Clean any wounds, and suture if necessary. If appropriate undertake simple extractions of damaged teeth. If you suspect a fractured jaw do not attempt any extractions, refer the patient to the Hospital immediately

### Broken Jaw

#### Common Causes

- Road Traffic Collision (RTC)
- Physical violence
- Falls
- Sports injuries
- Incorrect tooth extraction technique



Fractured mandible

### Symptoms and Signs

- a. Pain
- b. Swelling or bruising to the face, around the eyes or in the floor of the mouth
- c. Bleeding and lacerations between two teeth, into the eye, or from the nose
- d. The teeth may be pushed out of position, not meeting normally
- e. Unable to open or close the mouth fully
- f. Numbness to chin, lips, teeth, tongue

Examine the patient; can you see a fracture? Palpate the facial bones to feel for any bony steps; check for crepitus (a crackling feeling), and mobility at the suspected fracture site

## Treatment

Refer the patient to the hospital

The patient may be unconscious so be sure the patient can get to the hospital safely:

- a. Ensure the airway is clear. Lie the patient on their side or in a position that the tongue and the jaw fall forward
- b. Check for bleeding, both extra oral and intraoral. Control the bleeding. If the gums are bleeding, use a gauze compress, if the bleeding is more severe temporary sutures may be needed while the patient is being transported to hospital.
- c. Give analgesic, which may have to be administered IM etc.



If it is necessary to immobilize the bone, then gently close the patient's jaw, as far as possible, and support with a 'head and chin' bandage. NB don't restrict the airway.

'head and chin' bandage

## Chapter 10

1. Know Your Limitations
2. Other Pathology
3. Antibiotic Stewardship

### Know Your Limitations

#### When to Refer:

All clinicians need to work to their abilities; it is important to know when treatment is beyond your knowledge and ability. These are situations where it is important to refer the patient into the hospital for specialist care

- a. Refer all failed extractions
- b. Refer other dental disease for treatment where this is available e.g. fillings, scaling, dentures etc.
- c. Refer all wisdom teeth - unless they are FULLY erupted
- d. Refer all impacted teeth e.g. canines and premolars
- e. Refer all facial fractures
- f. Refer all severe abscesses & cellulitis, they need urgent referral to SDP; Do NOT attempt to incise an abscess until you have discussed the case with your SDP
- g. Refer all tumours
- h. Refer patients with complicated medical histories
- i. Refer all speckled leukoplakia or erythroplakia that will not rub off
- j. Refer any unexplained paraesthesia
- k. Refer any possible osteomyelitis.

### Other Pathology

#### 1. The Development of a Periapical Abscess

It begins as a localized, circumscribed area of inflammation filled with pus in the soft tissues around the apex of the root

- a. **Signs of acute infection:** When the infection develops, the patient might suddenly have throbbing localized pain, caused by the pressure of the pus. There is usually swelling, redness and tenderness of the surrounding tissues and the surface appears smooth and shiny. The involved tooth is often sore on biting and may be slightly mobile. You can check your diagnosis by percussing (tapping) the tooth and checking for mobility. It may feel to the patient that this tooth is above the level of the others. The patient might have a fever
- b. **Swelling:** if the abscess is small and well localized removing the tooth will resolve the problem, and antibiotic therapy is unnecessary
- c. **Cellulitis:** if the patient is developing a cellulitis you need to give antibiotics as well as removing the tooth. If you are unable to remove the tooth discuss with the SDP who *may* ask you to incise the abscess
- d. **Severe swelling:** The first choice of treatment is always to remove the source of the infection – the tooth. However, if the infection is severe, the patient is unwell, has a fever and trismus (unable to open their mouth) you may not be able to access the tooth to remove it. This can easily progress to a Ludwig's Angina in the lower jaw or brain abscess in the upper jaw. So in this case call your SDP/Supervisor to discuss the management of this patient, poor management can result in death. The usual treatment would be to give IV antibiotics first (see Page 37 for antibiotic prescribing) and extract the tooth *as soon as* the

swelling is reduced enough for you to access the tooth. In some circumstances your Supervisor may recommend that you refer the patient to another Clinic or Hospital for specialist care.



Severe swelling, could progress to the brain  
Treatment was extraction of 64 and IV antibiotics



Upper First Deciduous Molar (64)  
removed under Local Anaesthetic

**Chronic infection** – if the patient has a longstanding abscess they may have a history of a number of episodes of swelling over a period of time, often years. The infection may spread through the soft tissues to form an extraoral draining sinus (EOS). You can remove the tooth, which will remove the cause of the infection, but this patient needs to be referred to be sure that the sinus is healing and that the patient has not developed osteomyelitis



Extra-oral draining sinus resulting from a periapical abscess

### **Osteomyelitis**

This is a serious consequence of periapical abscess. The bone, including the marrow becomes inflamed and infected causing necrosis. The diagnosis of this is very important for the patient's wellbeing, and needs to be made by an experienced clinician with the help of a radiograph. Normal management of this potentially life threatening condition is a combination of IV and oral antibiotics initially treated in hospital so you should refer to the SDP



Bony sequestrum



Sequestrum removed

## 2. Retained Roots



Retained roots

Sometimes the crown of the tooth is completely destroyed by caries leaving just the roots. These are known as retained roots, and are often brown rather than tooth coloured. Sometimes they don't cause any symptoms, but they can cause infection, abscesses and lead to extra oral sinuses

## 3. Pericoronitis

This means inflammation of the gum around an erupting tooth, usually the third molars (wisdom teeth), especially the lower ones. It may only last a short time during the eruption of these teeth, but it may persist if there is not enough room for the tooth to erupt completely, it can be extremely painful.

- If the patient is a young adult (up to age 25), the third molar may still erupt, so treatment would be to scale around the tooth, and to wash out under the gum with saline or bottled water. Advise the patient to keep his mouth clean by using warm salt water mouth rinses four times a day, after meals.
- If the problem is longstanding the tooth is unlikely to erupt, especially if the patient is over 25. In this case the patient should be referred for extraction.

In either case, if the patient has a fever and/or trismus (cannot open the mouth) then prescribe Metronidazole 400mgs t.d.s. and Paracetamol 1000mgs t.d.s.



Diagram of Pericoronitis



Pericoronitis Clinically around tooth 48

## 4. Eruption Cyst



Eruption Cysts around the developing 11 and 21

Blue/purple coloured swelling on the soft tissue covering erupting tooth  
Common in children  
Will resolve once tooth erupts  
No treatment required

# Antibiotic Stewardship

## Overview

This information is based on 'Antibiotic Stewardship in Africa' a joint programme by the Infection Control African Network and British Society for Antimicrobial Chemotherapy.

There is a worldwide health crisis caused by the growing problem of Antimicrobial Resistance (AMR).

Antibiotic resistance occurs naturally, bacteria are always evolving. They divide every 20 minutes, and it can take as little as 8hrs 20mins for an antibiotic resistant bacteria to overwhelm the antibiotic/host.

As clinicians it is essential that we minimize our misuse of antibiotics.

## **There are 3 main areas of antibiotic misuse worldwide**

- 1. Antibiotics *not* used when needed:** e.g. when an oral infection is spreading into the throat or eye
- 2. Antibiotics used when not needed *or* not effective:** e.g. viral infections; most types of diarrhea; pressure from the patient;
- 3. Antibiotics used incorrectly:** e.g. wrong antibiotic; wrong dose; wrong duration - too long/too short

Ask yourself these questions;

*Q. Does this patient have a bacterial infection that requires treatment and what should the treatment be? Is it always antibiotics? E.g. remove the tooth rather than give antibiotics*

*Q. Has this antibiotic been prescribed by the appropriate clinician? If you are not confident about when, what and how long to prescribe antibiotics contact your SDP or another appropriate clinician and ask their advice. The time it takes you might save a life*

*Q. Has a blood culture been done to determine if an antibiotic is indicated? And if so which one? This is very important if your patient appears to be deteriorating rather than improving, after you have given them antibiotics*

As front line clinicians it is important to keep up with our own education, and support our staff, e.g. you could read the latest guidelines for prescribing antibiotics and share them with your colleagues.

You may find that patients don't always take your advice. The nurses and other HCWs involved with your patients may be able to help with this. They often spend more time with the patient and families and may have a better understanding of their fears; beliefs; financial concerns etc. This information can help us with to communicate better and help us educate our patients.

Listen carefully to your patient and then help them to understand;

- the cause of their disease and the treatment you propose
- the importance of lab tests in managing many diseases; fevers; diarrhea and vomiting; upper respiratory tract infections; sexually transmitted disease; oral infections etc.
- that prescribing antibiotics too many times and inappropriately make them *useless*, so we must have good evidence e.g. lab tests
- that antibiotics do not work against viral infections; colds; cough; flu; infantile diarrhea etc.

## **Use of antibiotics in dentistry**

- The use of antibiotics is recommended for oral infections when there is:-

**Systemic involvement;** fever; general malaise; severe swelling involving throat or eye etc.

**OR**

**Inadequate anaesthesia:** even **after** a maximum dose of LA used **and** a successful IDB if needed

- If a swelling is life threatening prescribe **IV antibiotics** and remove the tooth *as soon as* you gain access
- As long as there are no contraindications the normal antibiotic regime for oral infections is:

**Amoxicillin 500mg t.d.s. for 5 days AND Metronidazole 400mg t.d.s. for 5 days**

Be sure to check **EVERY TIME** that the patient is *not* allergic to antibiotics *before* you prescribe them.

Be sure that the patient can afford the antibiotics, if not speak to the SCL. (During the Training Programme the SCL will fund antibiotics for any patient who is unable to pay).

**Top Tip:** Take this opportunity while you are on the Programme to discuss individual cases; unique challenges; current best practice etc. with your Trainer, SDP and HCW colleagues, brainstorming ways to give our patients the best possible care.

### **Antibiotics in Clinical practice in sub-Saharan Africa:**

1. Ensure that you explain to your patients what antibiotics are as many may be unfamiliar with them and/or using them for the first time.
2. Ensure that you stress the dosage, duration and time of day they should be taken.
3. Ensure that you tell your patient what antibiotics they are taking whilst remembering that they may be illiterate.
4. Encourage patients to finish the whole course of treatment prescribed even if their symptoms are subsiding.
5. Tell your patients not to share their antibiotics with friends or family as they may harm or at worst even kill them.

## **SECTION 2 –Trainer Role on DTP**

The aim of our Programme is to train HCWs to provide Oral Urgent Care in a rural setting, we are not training them to be dentists. The course outline is on Page 5 and course content is laid out in Chapters 1- 10.

**Theory Training:** The Theory Training is done by the local SDP. The HCWs will have undertaken a Pre-Course exam and done a full day of Theory Training prior to beginning the Clinical & Experiential part of their training that you will be providing. They will continue to receive Theory Training for the following 3 days from 8:00 – 9:30am, prior to the start of the clinic.

**Training:** During the training you will be a role model for the HCWs, so please try to model the techniques and infection control procedures laid out in the Manual. The HCWs progress quickly and you will go from being a teacher, explaining and demonstrating everything, to a coach who offers verbal advice and suggestions, and then to a mentor, answering the HCWs questions, and confirming their diagnosis and treatment plans. Each HCW will learn in a different way, and at a different rate, so be flexible and aware of each individual's needs. Discuss any concerns at the daily debrief, the CLs or other team members may have some valuable suggestions to help with their training.

You will have a sheet of magic white board and a marker pen at your station which you can use to draw pictures, write aide memoirs etc. (see page 43)

### **Assessment:**

#### **a. Written Exams:**

**Pre Course Exam:** Day 1 - to establish baseline knowledge

**Post Course Exam:** Day 7

#### **b. Continual Assessment:**

**Learning Objectives document:** The HCW will bring this document to the clinic. At the beginning of each day go through the Learning Objectives with the HCW, and at the end of the day sign off all the objectives that have been met, make brief notes for any that have not. Each morning check the previous day's records to see what is still outstanding.

**Record of Extractions:** On the back page of the Learning Objectives Document there is a Record of Extraction form. This needs to be completed after every extraction, starting with the first tooth you extract. The SCL will go through filling this form out with you at Orientation.

#### **c. Formal Assessments:**

i. **Clinical Assessment:** Formal assessment of clinical practice is done by the SCL/SDP on Day 3 and Day 7, using an established competency system based on how much the trainer has to intervene for the HCW to be successful.

ii. **Assessment of Infection Control, Sterilization and Oral Health Education:** Formal assessment by the OH Team is carried out throughout the Programme

d. **Final Assessment:** All the assessments are collated, and a decision is made as to whether a HCW has achieved the required standard. This decision follows discussions with the whole team.

### **Sutures:**

By the end of the Programme we would like each HCW to have had the opportunity to place sutures. As the need for suturing could occur at any time please inform the SCL if an opportunity arises. We may demonstrate suturing (simple interrupted or horizontal mattress) to more than one HCW at a time. They are used to suturing in other areas of the body, so once a HCW has seen one being placed they can do the next one themselves. If you are not happy to suture don't worry, the SCL will arrange an alternative solution.

### **Pathology:**

Similarly, if you see any unusual pathology, please let the SCL know ASAP, so they can help you manage the patient's needs as effectively as possible, in consultation with the SDP.

### **Resources:**

Please familiarize yourself with the resources in the B2A Training Box. They are there to help with teaching. We have models; laminates; manuals; skull; flip charts; seminar folder; suture pads; toothbrushes etc.

### **Break down the training to small achievable goal:**

Every patient is a learning opportunity for the HCW. Set simple goals, be encouraging when they achieve them. Encourage, encourage, encourage – even when you need to correct. Ask open questions to ensure the HCW has a chance to demonstrate their knowledge and understanding.

## **Daily Learning Objectives and Teaching Tips**

**Day 1** Theory Training and Pre-Course Exam

### **Day 2** **LEARNING OBJECTIVES**

1. Take medical history of patient
2. Take clinical history of patient
3. Observe and then carry out an intra oral clinical examination
4. Begin to identify teeth types, incisors, canines, premolars & molars both in maxilla & mandible
5. Observe diagnostic skills
6. Explain the treatment to the patient
7. Obtain patient's consent
8. Observe the administration of local anaesthetic
9. Explain the effects of local anaesthetic to the patient
10. Observe the forceps to be used for extraction
11. Observe the process of extraction
12. Demonstrate correct stance and hand position for extractions
13. Give post extraction instructions to patient
14. Give Oral Health Education with advice from trainer
15. Observe appropriate infection control procedures
16. Observe sharps safety

### **TEACHING TIPS**

#### **Medical History, Post Op Instructions & Oral Health Education**

Use the laminated sheets on your clip board, if unsure check with local language speaker

#### **Oral examination**

Start exam using fingers – gently! Progress to using mirror, which needs to be held correctly both for retraction and vision. The HCWs may find this a difficult skill, so try to be *specific* about what you are demonstrating. Once they're competent at this then progress to using a probe, again held correctly. The probe is mainly used to test for anaesthesia, remove debris, count teeth, and to confirm the presence of caries. Watch that your HCW is not causing pain or damage by rough handling of the probe



#### **Identifying teeth**

Early in the training it's helpful to get the HCW to count the teeth out loud starting URQ; use teaching aids and tooth models; use FDI notation

#### **Teaching trainee to support alveolar bone**

Allow trainee to get their hands inside the mouth before you take the tooth out

### **Day 3 LEARNING OBJECTIVES**

17. Discuss the importance of healthy teeth
18. Describe how to clean and organise the clinical area
19. Demonstrate a good understanding of cross infection control and discuss importance
20. Demonstrate and discuss the risk and need for awareness of Sharps Safety
21. Record clinical findings on the patient's card
22. Recognise signs and symptoms of dental caries
23. Administer infiltration and block anaesthesia with practical and verbal assistance from trainer
24. Check for anaesthesia using a probe, pressing firmly down on the periodontal ligament
25. Describe the complications of tooth extraction
26. Discuss importance of post-extraction care

### **TEACHING TIPS**

#### **LOCAL ANAESTHETIC**

Use skull to demonstrate, make sure the injection is into soft tissue, especially for the long buccal

#### **Check for Anaesthesia**

Make sure the HCW is not punching holes in the mucosa!

#### **Infection Control**

Use tweezers for consumables, set example of good practice from the beginning. Good use of PPE.

#### **Prevention of Sharps Injuries**

The syringe is only ever in the patient's mouth or the bin! It's as simple as that!!

#### **Identification of Teeth**

This is difficult to learn (how long did it take you at Dental School?). Use the skulls/ models/teeth available in the Teaching Supplies Box and. Extracted teeth are helpful for; confirming the number of roots; letting your HCW decide if they've all been extracted; identifying caries

### **Day 4 LEARNING OBJECTIVES**

27. Recognise the signs and symptoms of periodontal disease
28. Identify which teeth need to be extracted and explain decision
29. Identify forceps required for extraction
30. Extract a fully erupted permanent tooth with practical and/or verbal assistance from trainer
31. Use correct positioning and stance for extractions in the different quadrants
32. Observe the use of elevators to extract a retained root
33. Control Bleeding by using gauze pack (and possibly adrenaline, available on clinic)
34. Demonstrate good understanding and discuss the anatomy of the oral cavity, deciduous teeth and permanent teeth

### **TEACHING TIPS**

#### **Diagnosis**

Get trainee to ask patient which tooth is painful. Teach TTP. Get the patient to point to the *exact* tooth if they can.

#### **Forceps identification**

This is a difficult skill for beginners, so try using the skull and models to practise on. Get them to pick their own forceps as early as possible. Try putting forceps on your tray with uppers vertically and lowers horizontally to help visual learners. You can even put just one set of instruments out on the table rather than the full set as this is less overwhelming to the trainee.

#### **Holding forceps**

Get trainee to practice picking up cotton products from table to acquire dexterity with forceps.

#### **Stance & pressure recognition**

Demonstrate pushing over your trainee and the need for balance – ask SCL for a demonstration

Get trainee to hold patients head whilst you take out upper tooth so they can feel pressure.

Use the nurses whilst holding heads and ask for feedback on the pressure being delivered by trainee. Bring in Swahili speaker to help with explanation if the HCW is still not pushing *continually*.

**Top Tip:** If you find your HCW is struggling to remember what to do, or regularly forgets to get consent, or use a mirror to retract etc., you can use a customized version of this chart to help them keep on track.

Step	V	P	V	P	V	P	V	P
1. Greeting	✓		✓		✓		✓	
2. Glove/Hand hygiene	✓		✓		✓		✓	
3. Diagnosis	✓	?	✓		✓		✓	
4. Consent	✓	?	✓		✓		✓	
5. I.P.A.	✓		✓		✓		✓	
6. ASPIRIN/IBUPROFEN	✓		✓		NA		✓	
7. Check Anaesthetics	✓		✓		✓		✓	
8. Elevator	✓		✓		✓		✓	
9. Forceps	✓		✓		✓		✓	
10. Complete socket	NA		✓		✓		✓	
11. P.O.I.G.	✓		✓		✓		✓	
12. O.H.C.	✓		✓		✓		✓	
13. T.L.C.	✓		☹		☺		☺	

### Day 5 LEARNING OBJECTIVES

35. Administer anaesthetic with no physical or verbal assistance
36. Be able to consistently diagnose and identify which tooth is causing the problem, and record on patient's notes
37. Remove broken or retained roots with physical and/or verbal assistance
38. Recognise a tooth indicated for extraction due to periodontal disease
39. Extract deciduous and permanent teeth with verbal assistance only, if appropriate
40. Demonstrate good and safe technique when using elevators
41. Recognise and describe the management of a dental abscess
42. Discuss treatment limitations for HCWs and when to refer

### TEACHING TIPS

**Trainee limitations:** (see Ch.10)

#### **Use of Elevators:**

Use gauze with elevators to guard against needlestick injury and to dry the area. The most common cause of a needlestick injury is incorrect use of Couplands elevator

#### **Retained Roots:**

Ask 3 Questions

1. Can I see it? If not make sure you can by removing debris and drying
2. Can I feel it? Do I know the part of the tooth the elevator is touching? Do I have a good elevation point?
3. Can I move it? Only try to move it once you have visual access

### Day 6 LEARNING OBJECTIVES

43. Discuss how to manage complications of tooth extraction
44. Extract teeth with verbal assistance only, where appropriate
45. Recognise and discuss the management of: dislocated jaw; pericoronitis; fractured jaw
46. Discuss the use of antibiotics (see Ch.10)
47. Discuss management of dry socket (see Ch.10)

### TEACHING TIPS

Shift from demonstration to asking open ended questions and being more of a coach, allowing the HCW to make safe mistakes e.g. standing in front of the patient instead of behind for a lower extraction. After each patient review what has gone well and what could have been done better and plan for next patient.

### **Day 7 LEARNING OBJECTIVES**

48. Control bleeding by suturing, or if not possible demonstrate suturing technique on suture pad
49. Safely manage and treat several patients with no physical or verbal assistance
50. Demonstrate or explain how to deal with a collapsed patient (see Ch.9)
51. Discuss how medical problems relate to dental extractions (see Ch.6)

### **TEACHING TIPS**

Hopefully by now every HCW will have seen a suture placed, but if not demonstrate on the suture pad in the training box – or get a friend to do it

If the opportunity arises let the HCW place a suture

The following Learning Objectives (52 – 58) need to be signed off **by the OH Team**

### **LEARNING OBJECTIVES**

52. Describe the aetiology of periodontal disease and dental caries, including the role of sugar and plaque
53. Discuss the prevention of periodontal disease and caries
54. Discuss the role of the HCW in promoting oral health in their health facility, and to the wider community
55. Discuss the use and value of a natural mswaki as an alternative to a toothbrush
56. Deliver an oral health presentation
57. Demonstrate an understanding of the clinical environment, how to set up the clinic and equipment
58. Demonstrate a thorough knowledge of:
  - a. Cross infection control
  - b. Sterilization
  - c. Care and storage of instruments

### **Day 8 and 9 LEARNING OBJECTIVES**

59. Safely manage several patients independently
60. Refer patients when appropriate

## Section 3 – Oral Health Team Role on DTP

Thank you for being part of the DTP team. The Oral Health Team is essential to our Programme.

Our OH Teams are made up of DCPs: (nurses; hygienists; therapists; dental technicians; practice managers). We occasionally take volunteers without a dental background; these volunteers' tasks involve team support and sterilization.

Because our Oral Health Team is so diverse we know that some of you will have experience of teaching OHE and some won't. Some of you will **want** to do a lot on the education side, and some will not. This varies with each team, so please talk with your fellow OH Team members and the SCL when deciding who has the skills and willingness to undertake the Training. Please be proactive as an OH Team in getting on with the Teaching and Assessing, the SCL may be busy, so don't wait for an invitation, take the initiative.

### **Main responsibilities on site**

- Teaching and Assessing the HCWs in Infection Control, including Sterilisation
- Teaching and Assessing the HCWs in Oral Health Education and Promotion
- Sterilization of instruments on the clinic - ensuring the smooth running of the clinic
- Patient Support – holding heads and babies!
- Dentist and HCW Support
- Extra eyes and ears on the clinic
- Daily Entertainment and TLC for everyone!

## Part 1

### Setting Up and Maintaining the Clinic

*One Person remains in the Sterilization Area At All Times*



There are 2 OH Team document in the Training Folder that the SCL has.

1. **Quick Reference Box Contents**
2. **OH Team Training Log**

Be sure to get them from the SCL and put up on the wall of the Decontamination Room

## Sterilisation Zones

Decide on your work flow, and set up your 3 zones – Dirty, Sterilization and Clean. You will usually have a returning volunteer on the OH team who will be able to help set up your area, but if you don't some of the things to consider are;

How can you make the best use of the space available to you; will the gas stoves work in front of a window or is it too draughty; consider where you want the dirty instruments to be dropped off; do you have a place to set out spare equipment etc.

Remember; all the team will be keeping their personal belongings in the decontamination room for safekeeping, so there must always be a member of the OH Team present. If necessary you may have to ask visitors, or even other team members to stay out for safety reasons.

**The Sterilization Procedure** is described fully in [Ch.5; pages 18 and 19](#)

## Dirty Zone

1. Table to be covered with paper/cardboard (or whatever available to protect surface)
2. Bucket of clean water (IP staff will organise this)
3. Jug for scooping water out of the water bucket
4. Boxes of gloves for OH team
5. Washing up liquid
6. Disinfectant spray bottle
7. Heavy duty rubber gloves and visor/glasses and mask for scrubbing dirty instruments
8. Two scrubbing brushes, long handled plastic brush and smaller wire brush
9. Two (or three if available) silver bowls – one for scrubbing with washing up liquid in and one with clean water for rinsing
10. Dirty instrument box
11. There are instrument baskets in the pressure cookers, you will need these in the dirty zone to load the dirty instruments in preparation for sterilization
12. Clinical waste bin (empty box lined with black bin bag)
13. Centre feed roll

## Sterilisation zone

1. Table to be covered with paper/cardboard (whatever is available to protect the surface) also, if available, extra cardboard for resting hot pressure cookers on
2. Two gas stoves
3. Matches
4. Three pressure cookers
5. Vaseline (for lubricating pressure cooker seals)
6. Thick pair of heavy duty gloves for handling hot pressure cookers
7. Long handled Cheatle forceps for releasing steam and lifting baskets of hot instruments out of pressure cooker
8. Safety goggles for releasing pressure from pressure cookers
9. Timers
10. Kidney bowls to place instruments in for cooling after sterilisation
11. Turnover of instruments is never ending - keep checking or you'll run out!



## Clean zone

1. Clean instrument box
2. Disinfectant spray to spray trays
3. Tray liners

The pressure cookers must not be left unattended when on, the SA will keep an eye on the zone at lunchtimes in order for everyone to be able to get some food.

### Supplies and preparation area

Set up this area with

1. Boxes of syringes (wrappers to be kept for use as torch covers)
2. Anaesthetic with adrenaline, prepare syringes ready in advance (see 'Drawing up local anaesthetic' Ch.8)
3. Adrenaline free anaesthetic; keep completely separate; only draw up when needed, and be sure to label
4. Throat pack cut into pieces for use as bite packs; Scissors; Gauze squares to restock the stations; As the day goes on the clinic usually gets busier, so take every opportunity to prepare 2, 3, & 4, and in any spare time continue to monitor these items, and check other stock
5. Assortment of different size gloves; hand disinfectant (gel)
6. There is a backup kit of special instruments (Cryers; Warwick James etc.) for use by SCL and SDP only, **if anyone else asks for them please don't hand them out without checking with the SCL.** (the HCWs will not have access to these instrument so we do not want to demonstrate their use, they will only be used by the Trainer if the SCL or SDP are busy; this decision can only be made by the SCL).

### Daily tasks

Replenish work stations with bite packs, gauze and loaded syringes as needed

Assist in treatment room when required

Check stock levels and advise SCL and SA if any stock is running low

Carry out sterilisation and OHE training with the HCWs (liaising with SCL right from the beginning of the programme)

Keep an eye on all team members and let SCL know if anyone appears unwell, upset or struggling in any way

Remind all volunteers to drink water regularly

Make tea or coffee – only if time allows!

### Pack down

#### Partial pack down

Communicate well with SCL and ensure you know what time you will be leaving site

Try to have as many instruments sterilised by the time you leave. If you run out of time, clean and scrub the instruments and place in the Dirty Box to sterilise the next day. (This can be helpful as it means you can train a HCW as soon as you start the clinical session the following day).

Discard dirty water – ask the SA the best place to throw it away

SA will take away dirty rubbish/clinical waste

Tidy sterilisation area and storage area and cover with blue cloth

Ensure stoves are turned off properly

Depending on the set up at your clinic the instruments may all have to put in one room to be locked up, or be able to stay out on the tables. If the tables are staying out, help the Trainers to pack all instruments into a plastic container then cover all the contents of the table with the cloth provided

#### Full Pack down

You cannot travel with hot stoves so turn off and allow time to cool down

On the final pack down please liaise with SCL to make sure there is time to process instruments. If it is unavoidable, and there are dirty instruments left, clean them, and leave in the dirty box to be sterilised by the IP Team (NB: **this may not be possible**, please check with SCL on your trip).

Use the packing list located in the OH team site folder to repack the boxes ready for leaving. Make a note of any damaged or lost items and give to SA. Help dentists to pack workstations up if possible.

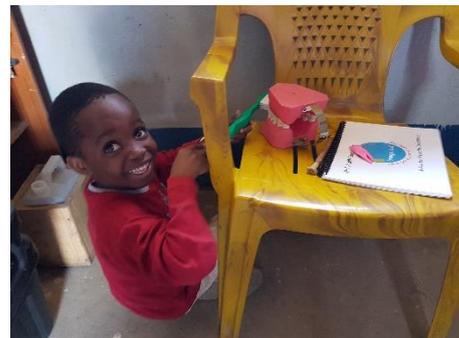


## Part 2

# Teaching and Assessment Role

### 1. Teaching Role

Talk to the SCL on your first day on site to arrange the HCWs Teaching. 'What' to teach is in Chapters 3, 4 and 5. The HCWs will have been through these chapters with their SDP, some may already have a good understanding, while others may not. Use your own skills, personality and techniques when presenting the material, just remember you may have to tailor it to the understanding of your HCW. There is a Flipchart in the Training Box on Site which doubles up as a resource for training the HCWs and for the HCWs to use to educate their patients. Once your HCW has done their OH Training they are ready to do and more in depth OHE at their stations, and also to the waiting patients. (They should use most, but not necessarily all of the flipchart in their talks, it should be tailored to their audience). Coordinate these talks with the SCL.



***If possible get the HCWs to do an OH talk every morning and afternoon, this will mean using some of your HCWs more than once (be proactive!)***

Divide the teaching between the members of your Team. There is a chart in the CL Training Folder to help organise this. Usually Infection Control and Sterilization are taught together, and so are Oral Health Education and Oral Health Promotion, but all 4 sections can be taught at once. Later in the Programme you will assess the HCWs' knowledge. Your SCL will be able to answer any questions you have, and there is often a returning OH Team member who knows the process well.

### 2. Assessment Role

Once you have completed the Teaching you will begin Assessment of the HCWs. The paperwork can be found as follows;

- OH Team Training Log:** is in the CL Training Folder, please put up on the wall of the decontamination room to help organise HCW training and assessments
- Assessment Forms for OHE and Sterilization:** copies for each HCW are in the CL Training Folder. Once you have filled this out please also complete the;
- Final Assessment Form:** copies for each HCW are in the CL Training Folder
- Also:** Complete Page 12 in the HCWs Learning Objectives booklet by Day 7, the HCWs have this document at their stations

***There are copies of all 3 forms in the Appendix. Ask the SCL if you have any questions about the paperwork***

### Assessment Process

#### a. Infection Control

##### **Training:**

This is similar to how you would teach a new dental nurse in your practice. (see Ch.5)

##### **Assessment:**

Assessment is ongoing; watch the HCWs while they are working at their tables and check their knowledge during the Sterilization Assessment. *Fill in the assessment form.*

#### b. Sterilization of Instruments:

##### **Training:**

Show the HCW the sterilization process as explained in Ch.5. Get the HCW to give a full demonstration of what you just taught them in preparation for their assessment which is usually done the following day. Discuss the set up in their own clinics, and explain to HCW the importance of teaching their nurses back on their clinic how to sterilize and clean the instruments if they are not currently sterilizing.

**Assessment:**

At a later date watch the HCW sterilize instruments, following the process you taught. Do step in if there are any safety issues, to ensure that instruments are properly sterilized. Be sure to give them feedback, ask them how they thought it went, could they do anything better next time etc. If there are safety issues repeat the relevant training and re-assess at a later date. *Fill in the assessment form.*

**c. Oral Health Education****Training:**

Please co-ordinate timing with the SCL. Training can be done 1:1 or in groups. You will find tooth models, toothbrush, natural mswaki and a flip chart in the training box at site to help you deliver this part of the training. The HCWs should have had the opportunity to use disclosing tablets during their theory training, but please check, and if not make sure you go through it with them. Being able to clean their *own* teeth well will help them to teach their patients, so find a quiet corner; (see Ch.5)

**Assessment:**

Using the knowledge gained in the Teaching Session the HCW will carry out a presentation to the waiting crowds. Ensure that;

- i. they review their talk with you BEFORE they go out, remind them that there are prompts on the reverse of the flipchart pictures to help them cover ALL the key OH messages
- ii. they speak loudly and clearly
- iii. they position themselves so everyone can see
- iv. ask the HCW to engage with the group, and encourage active participation for greater understanding
- v. encourage them to use their own style, initiative and knowledge of the culture
- vi. ensure an IP Team member is present to translate to ensure the message is correct
- vii. be on standby to step in and help out where necessary to ensure a good tooth brushing demonstration; clarify any questions etc.

On completion of the presentation please discuss with the HCW what they think went well, what you think went well and are there any changes they would they make to improve it for next time? *Fill in the assessment form*

**d. Oral Health Promotion****Training:**

You will need to discuss with the HCWs how they can fully utilise their knowledge to support good OH in their communities. This may vary depending on each HCWs unique community (see Ch.5)

**Assessment:**

Do Assessment of OHE and OHP together, by asking the HCW relevant questions on OHP and giving feedback. *Fill in the assessment form.*

**1:1 OHE - Other Opportunities:** If there is time on the clinic it is often helpful if you *or* the HCW is able to offer more extensive 1:1 OHE to a patients or families who have very poor OH. It is useful to remember;

- use all the available props - flip chart, models, toothbrush
- do 1:1 tooth brushing and 1:1 diet advice whenever time allows on the clinic

Make sure all the HCWs are giving as much OHE to patients, where time permits, and are utilising the visual aids. Check that the correct information is being given.

**Building Relationships**

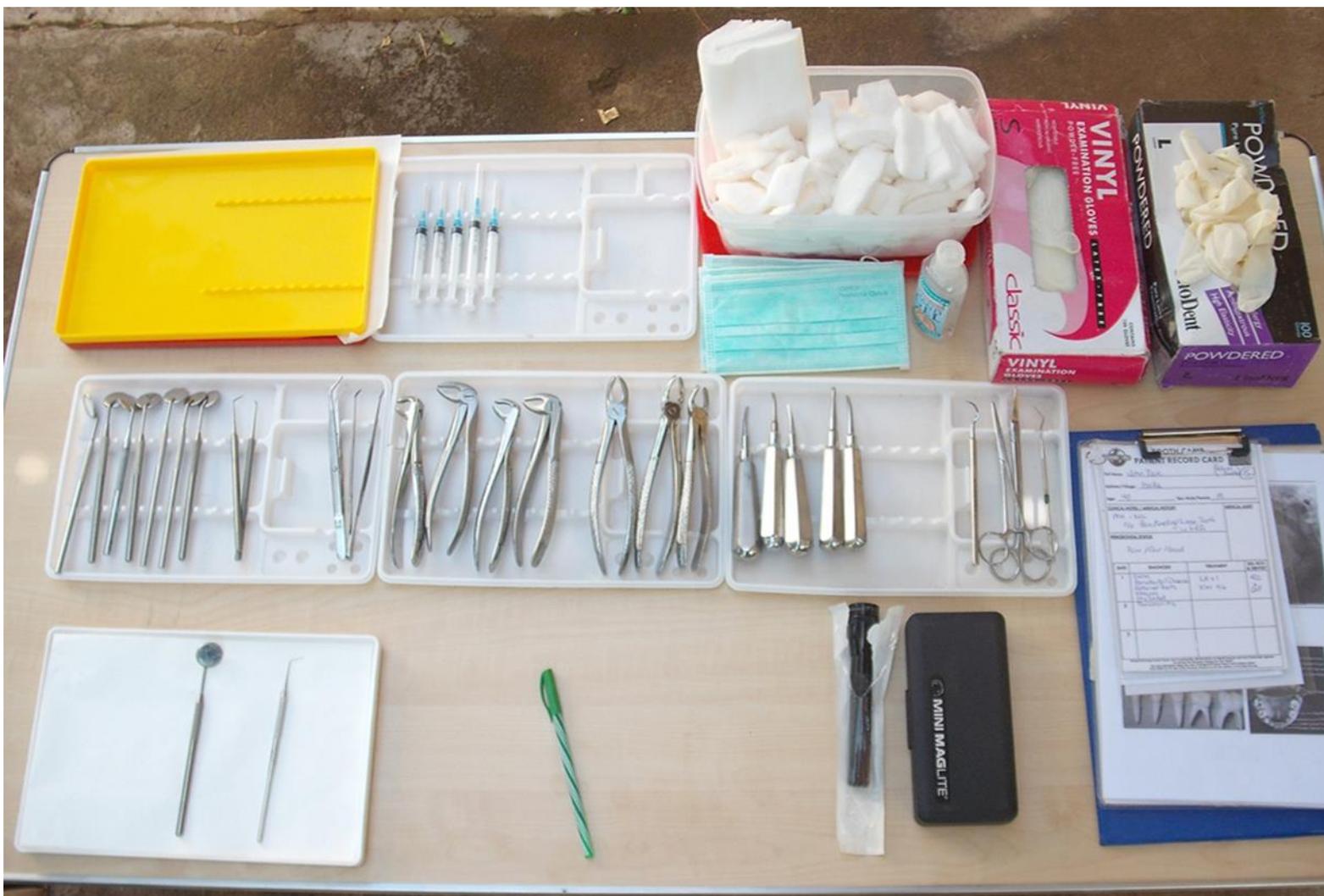
Do take the time, when possible, to interact with the waiting patients, try out your local language skills, and don't forget to blow Bubbles!!



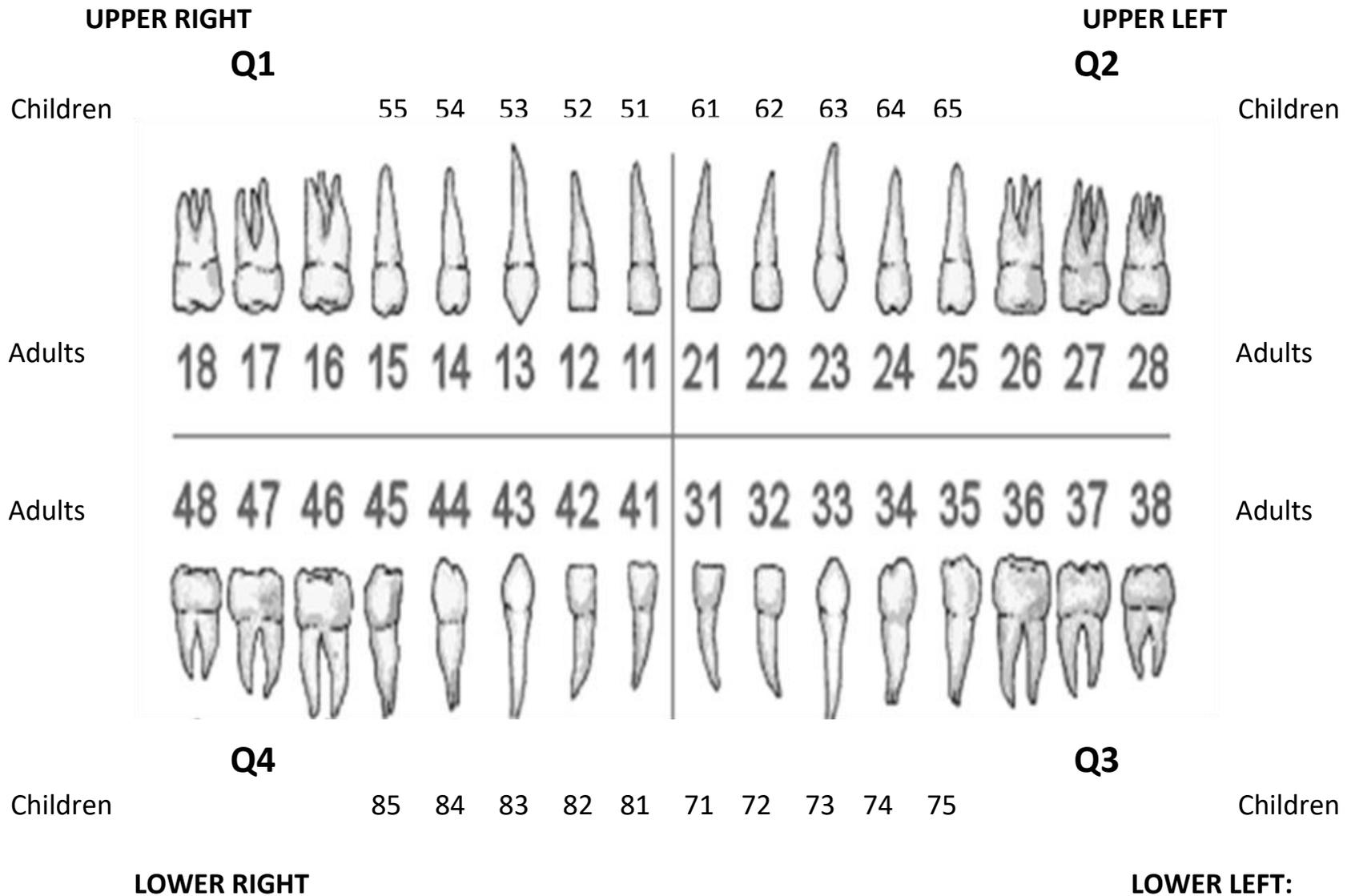
## APPENDIX

<b>DTP Paperwork:</b>	Table Layout Tooth Chart Record of Extractions Oral Health Advice Medical History Post-Operative Instructions Example of Record Card List of Seminars; Contents of HCW's Kits; Training Box Contents Contents of Central Site Boxes Quick Reference List of Box Contents Day Sheet OH Team Training Log Photo of Table Set-up
<b>Assessment Forms:</b>	HCW Clinical Assessment HCW OHE and Sterilization Assessment Final Assessment

## Table Layout



# TOOTH CHART



**Record of Extractions Performed by Health Care Worker Instructions** - For each extraction, record two numbers:

1. A **score in the white column**, indicates the HCWs' competence in the procedure:

Score	Descriptor
1	Currently <b>UNABLE</b> to meet the outcome. Has caused <b>harm</b> or <b>does not seek essential guidance</b>
2	Currently <b>UNABLE</b> to meet the outcome. Requires <b>major</b> corrective physical intervention from the trainer
3	<b>ABLE</b> to meet the outcome. Requires <b>minor</b> corrective <i>physical</i> intervention from the trainer
4	<b>ABLE</b> to meet the outcome. Requires <b>minor</b> corrective <i>verbal</i> intervention from the trainer
5	<b>ABLE</b> to meet the outcome <b>independently</b> . Confirmatory advice only from the trainer
6	<b>ABLE</b> to meet the outcome <b>independently</b> . Exceeds expectations at this level

2. A **grade in the shaded column**, indicates the difficulty of the procedure:

Grade	Difficulty
A	A tooth with some degree of mobility, or an easily retrievable fragment
B	A routine extraction
C	A difficult extraction
R	Referred to SDP/SCL

3. For recording additional extractions when main sheet is full

Tooth	Score	Grade	Tooth	Score	Grade	Tooth	Score	Grade
e.g. 16	5	B						



## ORAL HEALTH ADVICE

- a. Brush your teeth twice a day for 2 minutes with fluoride toothpaste; use a smear (small amount) of toothpaste for babies and small children; pea size amount for older children and adults. If they don't have a toothbrush they can use a natural Mswaki
- b. Brush last thing at night after you've eaten and one other time during the day
- c. Reduce amount and frequency of sugar
- d. Avoid sugary snacks between meals
- e. Eat healthy food and drinks
- f. Do not smoke or chew tobacco
- g. Drink water rather than sugary drinks
- h. Exercise regularly
- i. If possible get your mouth checked regularly and visit a Dental Professional or HCW if you have a problem

### **Advice to parents of babies and small children**

- a. Breast feeding provides the best nutrition for babies
- b. Avoid giving babies a bottle with soda
- c. Do not add sugar to baby's foods or drink
- d. Brush as soon as teeth erupt with smear (small amount) of fluoride toothpaste twice daily
- e. Help children under the age of 8 to clean their teeth

**Demonstrate Tooth Brushing** to your patient using a model and tooth brush

### **Tooth Brushing:**

- a. Start in the lower jaw, on the inside of the teeth. Angle your toothbrush at 45 degrees to the gum line, then brush backwards and forwards using very short strokes or small circular motions.
- b. Move your brush towards the front on the mouth slowly, being sure to brush every tooth, turning the tooth brush through 90 degrees for behind the front teeth to get to all the 'corners'.
- c. When you have finished the inside of the lower teeth, brush the outside, the cheek side, of the teeth in the same way.
- d. Move to the upper jaw, starting at the back, in the palate, rotating your brush for the front teeth, and finishing up cleaning the cheek side of the teeth.

The whole process should take you at least 2 minutes to do a thorough job.

When you are back in your clinics you can use models, when available, to demonstrate tooth brushing to your patients. Encourage them to bring in their own toothbrush so you can help them improve their technique.

**Poor Oral Hygiene:** if the patient's oral hygiene is poor and disclosing tablets are available demonstrate disclosing. Get the patient to chew a disclosing tablet thoroughly and swish it all around the teeth, spit out, and then view your mouth with a hand mirror. Dental plaque stains pink or blue (depending on the tablets). Brush thoroughly until all the stain is removed, checking in the mirror.

## Medical History and Post-Operative Instructions

<b>Medical History</b>	
1	Are you taking any medicines, pills, creams etc.? If so what are they?
2	Do you suffer from HIV or AIDS?
3	Do you suffer from any heart disease, high or low blood pressure?
4	Do you bleed for a long time after a tooth has been removed or if you cut your finger
5	Do you have any allergies including antibiotics or local anaesthetic?
6	Have you every suffered from Hepatitis?
7	Do you ever suffer from fainting or fits?
8	Have you ever suffered from TB or chronic cough?
9	Do you ever get breathless/chest pains
10	Have you ever had surgery in the past?
11	Do you have diabetes? (this may well be described as 'having sugar')
12	Have you ever received dental treatment?
13	Are you anaemic?
14	Are you pregnant?
15	How long have you walked/cycled to get here today? When did you last eat?

<b>Post-Operative Instructions</b>	
1	Bite on the pack for 30 minutes, then throw the pack in the box/bin provided
2	Be careful not to bite your lip or tongue, as it is numb
3	Keep your tongue and fingers away from the socket, leave it alone for the rest of today
4	Do not spit, rinse or wash your mouth out today. Beginning tomorrow you should wash your mouth with clean salty water 4 times a day for several days
5	Avoid hot food or drinks/exercise/smoking/alcohol for the next 24 hours
6	Try not to eat over the socket while it is healing, try to eat on the opposite side
7	Keep the rest of your mouth clean with daily toothbrushing
8	If you continue to bleed or have increased pain or swelling please return to the clinic as soon as possible

## Example of Record Card

 <h3 style="margin: 0;">B2A Record Card</h3>			
Full Name _____			Patient No. _____
Address/Village _____			
Age _____ 40 _____		Sex: Male / Female _____ F _____	
Clinical Notes  c/o pain in Q3 for 6 months or swelling; loose tooth; bleeding gums etc.			Medical History  Nil or e.g. High BP (record BP here)
Periodontal Status <input type="checkbox"/> Poor <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Good			
Date	Diagnosis	Treatment	Signature Trainer/HCW
	Caries; Periodontal disease; Retained roots; Abscess; Dry socket; Pericoronitis etc.	LA x1 EXT 36	

## **List of Seminars**

Cross Infection Control  
Deciduous teeth  
Extraction complications  
Extraction Technique (1) – stance, positioning, pressure  
Extraction Technique (2) – identification of forceps, positioning of forceps, elevators  
HIV oral manifestations  
Local Anaesthetic  
Medical and Clinical History  
Oral Anatomy  
Oral Pathology & Special Problems  
Periodontal Disease and Caries  
Referrals

## **Contents of HCWs Kits**

Dental mirrors x 3  
Probes x 2  
Perio probe x 1  
Tweezers x 2  
Suture Holder  
Suture Scissors  
Upper premolar forceps x 1  
Upper right molar forceps x 1  
Upper left molar forceps x 1  
Lower Premolar forceps x 1  
Lower Molar forceps x 1  
Coupland Elevators x 2  
Pressure Cooker with basket and trivet  
Cheatle forceps  
OHE Flipchart  
Tooth model

## **Training Box Contents**

Seminar Folder  
Skull  
Large Teeth Model and Large Toothbrush  
A3 OH Flipcharts for Teaching  
Sunnymede Trust Oral Health Manual and additional laminates for teaching  
Laminated teaching prompts:

- a. Oral Manifestations of HIV teaching laminates.
- b. Perio teaching laminates
- c. Deciduous and Permanent teeth laminate (OPG)

Flip chart paper and/or White Board Roll and Marker Pens  
Suture pads and sutures for demonstration



	Pressure cookers	Steri 1
	Pressure cooker weights	Steri 2
	Pressure cooker seals	Steri 2
	Pressure cooker spares - nipples, weight	Steri 2
<b>S</b>	Stationary box	Admin box
	Scissors	Steri 2 & Admin box
	Stickers	Admin box
	Sugar	Admin Box
	Surgical box	Central 2
	Scalpels/handles	Central 2
	Scalpel blades	Central 2
	Scrubbing brushes	Steri 2
	Sutures	Central 2
	Syringes	Central 2
	Stainless steel bowls	Steri 2
<b>T</b>	Talcum powder	Steri 2
	Tea bags	Admin box
	Tray liners	Central 2
	Thick heat protection gloves	Steri 2
	Timers	Steri 2
	Towel roll	Central 2
	Throat pack; to cut and use as bite packs	Central 1
	Toilet roll	Admin box
<b>V</b>	Vaseline for pressure cooker seals	Steri 2
<b>W</b>	Washing up liquid	Steri 2
	WD 40 lubricant	Admin box
	White board markers	Admin box



**OH TEAM TRAINING LOG**

**LOCATION:**

**DATE OF DTP:-**

TRAINEES NAME	ORAL HEALTH EDUCATION TRAINING				STERILISATION TRAINING			
	Date of OHE Training	Name of Trainer	Talk given to waiting patients ✓ Tick when done	Witnessed by (Name of OH Team Member)	Date of Sterilisation Training	Name of Trainer	Date of Sterilisation Exam	Witnessed By (Name of OH Team Member)
1.								
2.								
3.								
4.								
5.								
6.								
7.								

Date:

**HCW Clinical Assessment**

**Name of Health Care Worker**

**Day 3 Assessor**

**Day 7 Assessor**

To be completed by the SCL and/or SDP on Days 3 & 7. The scoring is based on a **final** benchmark of the *HCWs having the skills needed to safely and competently remove teeth*. Give a score, and if relevant a comment, for each component, then enter an average score in the column. To pass the HCW needs to score at least 5 for each section.

Score	Descriptor
0	Not assessed as this procedure has not yet been taught
1	Currently <b>UNABLE</b> to meet the outcome. Has caused harm or does not seek essential guidance
2	Currently <b>UNABLE</b> to meet the outcome. Requires <b>Major</b> corrective physical/verbal intervention from the trainer
3	<b>ABLE</b> to meet the outcome. Requires <b>Minor</b> corrective <i>physical</i> intervention from trainer
4	<b>ABLE</b> to meet the outcome. Requires <b>Minor</b> corrective <i>verbal</i> intervention from trainer
5	<b>ABLE</b> to meet the outcome <b>independently</b> . Confirmatory advice only from trainer.
6	<b>ABLE</b> to meet the outcome <b>independently</b> . Exceeds expectations at this level

Objective	Comments	Score	Average Score Day 3	Comments	Score	Average Score Day 7
<b>COMMUNICATION - The HCW is able to:</b>						
Take a pain history						
Take a medical history						
Explain the treatment to the patient						
Give postoperative instructions						
<b>EXAMINATION - The HCW is able to:</b>						
Carry out an oral examination						
Make a pain diagnosis						
Decide on appropriate treatment required						
<b>ANAESTHESIA – The HCW is able to:</b>						
Retract cheek with mirror						

Place needle correctly					
Inject appropriate amount into soft tissues slowly					
Use thumb to locate external oblique ridge (for IDB ONLY)					
Aspirate (for IDB ONLY)					
<b>EXTRACTION – The HCW is able to:</b>					
Check for anaesthesia					
Select correct forceps					
Adopt correct position and stance					
Use elevator correctly					
Apply forceps correctly					
Use appropriate pressure and movement					
Check for haemostasis					
<b>INFECTION CONTROL – The HCW is able to:</b>					
Use PPE appropriately					
Demonstrate good cross infection control when handling instruments etc.					
Dispose of sharps correctly					
<b>LIMITATIONS – The HCW is able to :</b>					
Demonstrate awareness of his/her own limitations					
Know when to cease treatment and refer					

## HCW OHE and Sterilisation Assessment

NOTE: To be completed by a member of the Oral Health Team, supported by the Clinical Lead or SDP as needed.

NB: When the HCW is delivering the OH messages, please ask a Tanzanian speaking team member to translate

The scoring is based on a final benchmark of the *HCWs having the skills needed to safely and competently carry out these processes*. Using the scoring system below please enter an overall score against each objective for the named HCW on the days that they are assessed. If they score a low mark please use the second column to reassess them after further training. Make a comment only about the individual components of the objective. In order to pass the HCW needs to score at least a 5 for each section by the final day.

Name of HCW ..... Date of DTP .....

Assessment carried out by: (Name) ..... Clinical Lead / SDP (Name) .....

Score	Descriptor
0	Not assessed as this procedure has not yet been taught
1	Currently <b>UNABLE</b> to meet the outcome. Has caused harm or does not seek essential guidance
2	Currently <b>UNABLE</b> to meet the outcome. Requires <b>Major</b> corrective physical intervention from the trainer
3	<b>ABLE</b> to meet the outcome. Requires <b>Minor</b> corrective <i>physical</i> intervention from trainer
4	<b>ABLE</b> to meet the outcome. Requires <b>Minor</b> corrective <i>verbal</i> intervention from trainer
5	<b>ABLE</b> to meet the outcome <b>independently</b> . Confirmatory advice only from trainer.
6	<b>ABLE</b> to meet the outcome <b>independently</b> . Exceeds expectations at this level

Objective	Comments	Score	Average	Comments	Score for re-exam if needed	Average
<b>Oral Health Education and Promotion</b>						
Able to explain the causes of periodontal disease						
Able to explain the causes of dental caries						
Able to explain the main ways to prevent periodontal disease and dental caries						
Able to present an OHE message to a large group effectively						
Able to present an OHE message on a 1:1 basis with a patient effectively						
Able to discuss and identify opportunities for Oral Health education and promotion within their health facility and locality						
Understands the use and availability of a natural Mswaki as an alternative to a manufactured toothbrush						
<b>Cross Infection Control and Sterilisation procedures</b>			<b>Average</b>			<b>Average</b>
Understands the importance of good cross infection control in the clinical environment						
Able to demonstrate the sterilisation process						
Demonstrates an understanding of the storage and maintenance of instruments						

## HCW Final Assessment

The scoring is based on a final benchmark of the *Health Care Workers having the skills needed to safely and competently remove teeth*. Using scoring system below please enter a score against each objective for the named HCW

<b>HEALTH CARE WORKER NAME:</b>		<b>DATE:</b>
<b>DTP Code:</b>		
COMPONENT	MARK/COMMENT	
<b>Written exam – pre course</b>		
<b>Written exam – post course</b>		
CLINICAL ASSESSMENT		
Objective	Comments	Final Score
<b>COMMUNICATION:</b> Ability to take pain history, medical history, explain treatment to patient and give post op instructions.		
<b>EXAMINATION:</b> Ability to carry out an examination, make a pain diagnosis and decide on appropriate treatment		
<b>ANAESTHESIA:</b> Ability to administer safe local anaesthetic technique		
<b>EXTRACTION:</b> Ability to check for anaesthesia, select correct forceps, use forceps and elevators appropriately, safely remove a tooth and roots and check for haemostasis		
<b>INFECTION CONTROL:</b> Ability to demonstrate good cross infection control and safe disposal of sharps		
<b>LIMITATIONS:</b> Demonstrates awareness of own limitations and knowledge of when to refer the patient		
<b>ORAL HEALTH EDUCATION</b> Understands the role of an Oral Health Educator, and demonstrates the ability to deliver appropriate OHE messages effectively in differing circumstances		
<b>STERILISATION PROCESS</b> Demonstrates thorough knowledge of Sterilisation process, care & storage of instruments		

**Following 9 days of training on the Dental Training Programme the above named clinical officer:**

1. Has been passed as competent in the management of emergency oral health and will be allocated a dental Kit that has been provided to the District by B2A to enable them to carry out the procedure in which they are trained.
  
2. Has not passed the training programme as per reasons stated below and will not be allocated a dental kit by the District.
  
3. Requires further training before they are eligible to receive a dental kit

Action required / reasons for not passing

Signature SCL.....Date \_\_/\_\_/\_\_

Signature SDP.....Date \_\_/\_\_/\_\_

**Scoring System for Clinical Assessment**

In order to pass the Health Care Worker needs to score at least a 5 for each section.

Score	Descriptor
1	Currently <b>UNABLE</b> to meet the outcome. Has caused harm or does not seek essential guidance
2	Currently <b>UNABLE</b> to meet the outcome. Requires <b>Major</b> corrective physical intervention from the trainer
3	<b>ABLE</b> to meet the outcome. Requires <b>Minor</b> corrective <i>physical</i> intervention from trainer
4	<b>ABLE</b> to meet the outcome. Requires <b>Minor</b> corrective <i>verbal</i> intervention from trainer
5	<b>ABLE</b> to meet the outcome <b>independently</b> . Confirmatory advice only from trainer
6	<b>ABLE</b> to meet the outcome <b>independently</b> . Exceeds expectations at this level, this is for trainee who is exceptional rather than competent