



**PAEDIATRIC DENTISTRY**  
**Residency Training Programme**  
**leading to the degree of**  
**Master of Dental Surgery (MDS)**  
**APPENDIXES**

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# 1. RESIDENT AND SELF ASSESSMENT FORM



DIVISION OF GRADUATE DENTAL STUDIES

PAEDIATRIC DENTISTRY MDS RESIDENCY TRAINING PROGRAMME

CONTINUAL ASSESSMENT  
(ACADEMIC YEAR 2018/2019)

	Year 3			Year 2			Year 1		
<b>PERSONAL QUALITIES</b>									
<b>1 Responsibility/commitment</b>									
<b>2 Emotional maturity</b>									
<ul style="list-style-type: none"> <li>• Handling of difficult situations / problems</li> <li>• Acceptance of opinions/criticisms</li> <li>• Reaction under pressure</li> </ul>									
<b>3 Interpersonal relationship</b>									
<ul style="list-style-type: none"> <li>• Courtesy / punctuality</li> <li>• Communication / interaction with colleague, staff and patients</li> <li>• Teamwork</li> </ul>									
<b>4 Integrity</b>									
<b>CLINICAL PERFORMANCE</b>									
<b>1 Laboratory Component</b>									
• Laboratory skill	NA	NA	NA	NA	NA	NA	NA	NA	NA
• Contents	NA	NA	NA	NA	NA	NA	NA	NA	NA
• Presentation	NA	NA	NA	NA	NA	NA	NA	NA	NA
Average	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>2 Clinical Component</b>									
• Diagnostic skill									
• Clinical skill									
• Communication skill									
• Overall quality patient care									
• Depth of knowledge and application									
Average									
<b>ACADEMIC/DIDACTIC PERFORMANCE</b>									
<b>3 Didactic Component</b>									
• Contents / knowledge									
• Analytic skill									
• Participation									
• Presentation									
Average									
<b>RESEARCH</b>									
<b>4 Research</b>									
Average									
Grand Total									
Grand Average									
Remarks: PTO – for feedback/remarks									
Grading Scale:									
4	Outstanding performance								
3	Significantly better than a pass								
2	Pass								
1	Fail								

## 2. PAEDIATRIC DENTISTRY/ ORTHODONTIC COMPETENCIES

Technique competencies must be completed prior to patient clinics; Clinical competencies are expected **to be completed by Term 2 of Year 1**. Please hand in completed sheet to program director.

### i. Technique

- Please collect the 6 ivorine teeth from Nurse Shida UG Clinic NUCOHS Level 8

- Please mount teeth in green stone

- 2 Class II cavities
  - ✓ #74d GIC
  - ✓ #85m Amalgam
- 1 Class III cavity (#63 distal)
- 1 Stainless steel crown preparation (#64)
- Rubber dam placement
- 1 Band and Loop space maintainer
- 1 Nance space maintainer
- Covered in Orthodontic Prep. Course
  - ✓ 1 Lower lingual holding arch
  - ✓ 1 Transpalatal Arch Appliance
  - ✓ 1 Quad Helix
  - ✓ 1 Rapid Palatal Expander

-		-
P/ Redo	P/ Redo	Staff Sig.
P/ Redo	P/ Redo	Staff Sig.
P/ Redo	P/ Redo	Staff Sig.
P/ Redo	P/ Redo	Staff Sig.
P/ Redo	P/ Redo	Staff Sig.
P/ Redo	P/ Redo	Staff Sig.

### ii. Clinical

- Examination, diagnosis & treatment planning
- Topical anesthetic application
- Local anesthetic delivery
- Rubber dam placement
- 1 Class II cavity
- 1 Stainless steel crown
- Indirect pulp cap
- 1 pulpotomy or pulpectomy procedure
- GA Consultation

P/ Redo	P/ Redo	Staff Sig.
P/ Redo	P/ Redo	Staff Sig.
P/ Redo	P/ Redo	Staff Sig.
P/ Redo	P/ Redo	Staff Sig.
P/ Redo	P/ Redo	Staff Sig.
P/ Redo	P/ Redo	Staff Sig.
P/ Redo	P/ Redo	Staff Sig.
P/ Redo	P/ Redo	Staff Sig.

### iii. Viva Voce (30 minutes)

Comments:

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### 3. LIST OF INSTRUMENTS FOR TECHNIQUE WORK

#### 1. Paediatric Dentistry (Staff: DSA Ling XT)

On loan from to be returned to Nurse DSA Ling end of July:

- Slow speed handpiece
- High speed handpiece
- Hand Instruments: Explorer, Condenser, Plastic, Amalgam Carver
- Bur Kit

#### 2. Orthodontics (Staff: Nurse Sylvia and Lab Technician: TBD)

On loan from to be returned to Nurse Sylvia end of July:

- Adams Pliers
- Spring Former or Bird Beak
- Wire Cutter
- Straight hand piece (draw only when needed)

On loan from Lab Technician to be returned when technique work completed:

- Rubber Bowl
- Plaster Spatula
- Lecron Carver
- Wax Knife
- Dappen Dish

All other instruments that are needed for clinical procedures in Orthodontic Preparatory Course will be obtained from the Nursing station at NUCOHS Level 6 on the day of the scheduled session.

#### 3. Endodontics

Instruments required for technique work can be obtained from nursing station at TBC on the day of the scheduled session.

## 4. ENDODONTIC TECHNIQUE

### Learning objectives:

The **focus** of these sessions is to introduce endodontic techniques of

- (1) MTA placement (for apexification procedures)
- (2) Warm fill gutta percha (using Beefill system).

All in depth literature reviews and seminars on this topic will be covered in due course during the Paediatric Dentistry Residency program.

### Course outline:

1. MTA technique for apexification (without microscope)
2. Warm fill methods (Beefill)

### Preparatory materials required

#### **To be prepared by students prior to course**

##### **1. MTA technique course:**

- 2 closed apex single rooted extracted teeth (either incisors or premolars) needed:
  - 1 mounted in sawdust block (to put a bit of beading wax at apex prior to mounting – make sure it does not get into root canal)
  - 1 not mounted
- To prepare access cavity in both teeth prior to session.
- Saw off apex of tooth to have about 1mm open apex to simulate an immature tooth

##### **2. Warm fill technique course:**

- 2 closed apex single rooted extracted teeth (either incisors or premolars) needed:
  - Both mounted in sawdust block
- Prepare access cavity in both teeth

### Suggested Pre-reading Materials

1. Mineral trioxide aggregate: a comprehensive literature review
  - Part I: chemical, physical, and antibacterial properties. J Endod. 2010 Jan;36(1):16-27.
  - Part II: leakage and biocompatibility investigations. J Endod. 2010 Feb;36(2):190-202
  - Part III: Clinical applications, drawbacks, and mechanism of action. J Endod. 2010 Mar;36(3):400-13
  - Parirokh M, Torabinejad M.
2. Peng L, Ye L, Tan H, Zhou X. Outcome of Root Canal Obturation by Warm Gutta-Percha versus Cold Lateral Condensation: A Meta-analysis J Endod. 2007 Feb;33(2):106-9.
3. Please read up in Endodontic textbooks and watch some Youtube videos on the following prior to the session:
  - MTA placement techniques &
  - Beefill system and warm fill gutta percha techniques

## 5. PATIENT CONSENT FORM: DOCUMENTATION OF CARE FOR MDS EXAMINATION PRESENTATION

**Faculty of Dentistry, National University of Singapore**

**Master of Dental Surgery (Paediatric Dentistry)**

**Candidate and Patient Declaration**

A signed declaration must be submitted for each case presentation.

*The Faculty of Dentistry, National University of Singapore handles all candidate and patient information in accordance with the Personal Data Protection Act 2012.*

**To be signed by the candidate:**

*I confirm that I have personally carried out the treatment for this patient.*

Candidate Name: .....

Candidate Signature: .....

**To be signed by the patient, parent or guardian:**

*I understand that a documentation of the treatment performed by Dr .....(Candidate) will be used for his / her Master of Dental Surgery (Paediatric Dentistry) Examination. I understand that my son's\* / daughter's\* case history may be uploaded to a secure webpage for scrutiny by examiners but that this information will never be in the public domain. In the unlikely event that the Faculty needs to contact me regarding any particulars of my son's\* / daughter's\* case, I agree to the Faculty contacting me directly and confidentially at the address below:*

Parent/ Legal Guardian Name: .....

Parent/ Legal Guardian Signature: .....

Postal Address: .....

.....

.....

Email Address: .....

**Patient contact details will be held securely by the Faculty until the examination has been completed and the candidate has received their result, after which the details will be confidentially destroyed.**



## 6. CASE HISTORY TEMPLATE

### **CASE PRESENTATION**

Title page – Case Category

Case Review Summary

- Medical and dental history
- Clinical assessment findings
- Radiographic assessment findings
- Case diagnosis summary including baseline behaviour rating and treatment rationale
- Treatment objectives and treatment plan
- Treatment rendered including behaviour techniques used
- Preventive programme and recalls
- Future treatment needs

Radiographic and /or photographic presentation

## 7.1 CLINICAL FORMS: Medical History

## MEDICAL HISTORY

## 医药简历

Name: (Dr/Mr/Mrs/Ms/Mdm) \_\_\_\_\_ NRIC No: \_\_\_\_\_  
姓名: \_\_\_\_\_ 登记号码: \_\_\_\_\_

Address: \_\_\_\_\_ Postal Code: \_\_\_\_\_  
地址: \_\_\_\_\_ 邮区: \_\_\_\_\_

Race: \_\_\_\_\_ Nationality: \_\_\_\_\_ Date of Birth: \_\_\_\_\_ Sex: \_\_\_\_\_  
种族: \_\_\_\_\_ 国籍: \_\_\_\_\_ 出生日期: \_\_\_\_\_ 性别: \_\_\_\_\_

Occupation: \_\_\_\_\_ Telephone: (Hp) (O) (H)  
职业: \_\_\_\_\_ 电话号码: \_\_\_\_\_ (手机) \_\_\_\_\_ (公司) \_\_\_\_\_ (住宅)

Marital Status: \_\_\_\_\_ No. of Children: \_\_\_\_\_  
已婚/未婚: \_\_\_\_\_ 子女人数: \_\_\_\_\_

Name of Medical Practitioner: \_\_\_\_\_  
医生姓名: \_\_\_\_\_

Name of Last Dentist: \_\_\_\_\_  
牙医姓名: \_\_\_\_\_

Answer the following to the best of your knowledge. (Circle the correct answer) Your answers are for our records only and are strictly confidential. 请尽您所能回答下列问题。(把对的答案圈起来)您所提供的答案将方便我们纪录, 并绝对保密。

- |  |                   |  |                   |
|--|-------------------|--|-------------------|
| 1) Are you in good health?<br>你的健康情况良好吗?   | Yes / No<br>是 / 否 | 7) Are you allergic to any medicines?<br>你对任何药物敏感吗?<br>If yes, state medication/s<br>若是, 请说明药名   | Yes / No<br>是 / 否 |
| 2) When was your last medical examination?<br>你前一次的健康检查是在什么时候?   | _____             | 8) Do you suffer from any other allergies?<br>你患有敏感症吗?<br>If yes, state allergy<br>若是, 请说明   | Yes / No<br>是 / 否 |
| 3) Are you being treated by a doctor at the present time?<br>你目前正在接受医生的治疗吗?<br>If yes, what is the condition being treated?<br>若是, 病况是 | Yes / No<br>是 / 否 | 9) Have you experienced any problems from previous dental treatment? (eg. local anaesthetic reaction, bleeding etc.)<br>你以往接受牙科治疗时, 有出现过任何问题吗?<br>(例如: 麻醉剂敏感, 流血不止等)<br>If yes, state problem<br>若是, 请说明 | Yes / No<br>是 / 否 |
| 4) Have you ever been seriously ill?<br>你曾经患上任何严重疾病吗?<br>If yes, what is the illness?<br>若是, 病况是                                       | Yes / No<br>是 / 否 | 10) Is there any history of infectious disease (yourself or family members)? (eg. TB, VD, AIDS etc)<br>你或你家人得过传染病吗?<br>(例如: 肺结核, 性病, 爱之病等)   | Yes / No<br>是 / 否 |
| 5) Have you ever been hospitalized or had any operations?<br>你曾经住过院或动过手术吗?<br>If yes, what for?<br>若是, 病况是                             | Yes / No<br>是 / 否 | 11) Are you suffering from any heart condition?<br>你患有任何心脏病况吗?<br>If yes, state condition<br>若是, 病况是   | Yes / No<br>是 / 否 |
| 6) Are you taking any medicine now?<br>你目前有服用任何药物吗?<br>If yes, state medication/s<br>若是, 请说明药名   | Yes / No<br>是 / 否 | 12) Have you ever had - rheumatic fever?<br>你曾患有 - 风湿性心瓣膜病?  | Yes / No<br>是 / 否 |
|  |                   | heart attack?<br>心脏病?  | Yes / No<br>是 / 否 |
|  |                   | stroke?<br>中风?   | Yes / No<br>是 / 否 |

P. T. O.

## 7.2 CLINICAL FORMS: Full Charting (4 page)

**FACULTY OF DENTISTRY  
GENERAL DENTAL CHART**

OPERATOR : \_\_\_\_\_

--	--	--	--	--	--	--	--	--	--

Patient's Name : \_\_\_\_\_  
 Address : \_\_\_\_\_  
 D.O.B. : \_\_\_\_\_ Tel : (H) \_\_\_\_\_ (O) \_\_\_\_\_  
 Age : \_\_\_\_\_ Sex :  Male  Female  
 Occupation : \_\_\_\_\_ Date registered : \_\_\_\_\_

- Additional Records**
- Complete Dentures
  - Endodontics
  - Fixed Prosthodontics
  - Oral Surgery
  - Orthodontics
  - TMD Questionnaire

\* Pedit patients only

* Parent's/Guardian's Name: _____
Parent's/Guardian's Occupation: _____

Referral from : \_\_\_\_\_

**HISTORY**

Medical History: \_\_\_\_\_

Update : \_\_\_\_\_

Allergy : \_\_\_\_\_

Complaints : \_\_\_\_\_

Dental History : \_\_\_\_\_

Social History/  
Others : \_\_\_\_\_

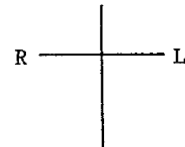
**CLINICAL EXAMINATION**

Attitude:  Co-operative  Apprehensive  Indifferent  Demanding

**EXTRA ORAL EXAMINATION**

- Lymph nodes
  - Submental
    - Non-Palpable  Palpable (Specify \_\_\_\_\_)
  - Submandibular
    - Non-Palpable  Palpable (Specify \_\_\_\_\_)
  - Cervical
    - Non-Palpable  Palpable (Specify \_\_\_\_\_)

- Lips  Competent  Incompetent
- Facial symmetry  Normal  Asymmetry
- TMJ examination
  - Normal (R/L)  Crepitation (R/L)  Click (R/L)  Pain (R/L)



- Range of Motion
  - Max opening : \_\_\_\_\_ mm Max Lat. excursion R: \_\_\_\_\_ mm
  - Max protrusion : \_\_\_\_\_ mm Max Lat. excursion L: \_\_\_\_\_ mm

Deviation on opening:  
 Present  Absent

**INTRA-ORAL EXAMINATION**

- Oral Hygiene  Good  Fair  Poor

## 7.3 CLINICAL FORMS: Consent Form (Now on CPSS: Electronic)

75 Lower Kent Ridge Road Singapore 119074  
Tel: 6779 5555 Fax: 6779 5878



### CONSENT FOR OPERATION / PROCEDURE BY PATIENT'S PARENT / GUARDIAN / NEXT OF KIN

#### Part I – To be Filled by Patient's Parent / Guardian / Next of Kin

Patient's Name: \_\_\_\_\_ Birth Certificate / NRIC / Passport No.\* \_\_\_\_\_

1. I, \_\_\_\_\_ (Name of Parent / Guardian / Next of Kin\*), (NRIC / Passport No. \_\_\_\_\_),  
(NRIC of Parent / Guardian / Next of Kin\*)

hereby consent to the above-named patient undergoing the operation / procedure of \_\_\_\_\_  
(State nature of operation / procedure)

\_\_\_\_\_ the nature, effect and purpose, as well as benefits of the above proposed operation / procedure and risks involved have been explained to me by Dr/Mr \_\_\_\_\_  
(Name of medical practitioner)

I confirm that the potential risks of not carrying out the procedure, and alternative modalities have been discussed with me.

2. I also consent to:

- (a) The administration of sedation, general, local or other forms of anaesthesia for this operation / procedure. The potential risks involved are illustrated overleaf.
- (b) The use of drugs and medicines as may be deemed advisable or necessary for the said operation / procedure.
- (c) Such further or alternative operative measures or procedures as may be found to be necessary during the course of the operation / procedure.
- (d) The transfusion of blood, blood components and other blood derived products as may be deemed necessary.
- (e) The taking of photographs / videographs for education / academic / research purposes, where the above-named patient's identity will not be revealed, if used.

3. I acknowledge that no assurance has been given to me that the operation / procedure will be performed by any particular medical practitioner. (to delete if not applicable)

4. **Note: This clause is only applicable if tissue is to be removed.** Please tick here if it is not applicable  Not applicable

I understand that in the course of the operation / procedure, tissues (which includes skin, bones, organs, blood and other body fluids) may be removed as part of the surgical procedure, and the remainder which otherwise be discarded, may prove valuable for medical research, education and study purposes.

I **\*agree / \*do not agree** to allow the remainder of any tissue removed not required for the above-named patient's medical management, to be used for medical research, education and study purposes. I understand that only excess tissue that remains after all the necessary medical tests are completed will be used, and no extra tissue will be taken for these purposes.

5. I acknowledge that the following have been explained to me:

- (a) The potential risks involved with the administration of anaesthesia and sedation as illustrated overleaf, but not limited to the list.
- (b) The potential risks involved with blood transfusion as illustrated overleaf, but not limited to the list.
- (c) No guarantee has been made to me about the outcome of the blood transfusion.
- (d) The alternatives to the use of community blood supply which include pre-donation of the above-named patient's blood (autologous blood donation).
- (e) The consequences of refusing to accept transfusion of blood or blood components, that include seriously jeopardizing the above-named patient's health or resulting in death.

\_\_\_\_\_  
(Signature of parent / guardian / next of kin\*)

\_\_\_\_\_  
(Date)

#### PART II – To be Filled by Medical Practitioner

I, \_\_\_\_\_ (Name of medical practitioner) confirm that I have explained to the patient's

parent / guardian / next of kin\* the nature, effect and purpose, as well as benefits of the proposed operation / procedure and risks involved.

\_\_\_\_\_  
(Signature of medical practitioner)

\_\_\_\_\_  
(Proceduralist's discipline)

\_\_\_\_\_  
(Date)

## 7.4 CLINICAL FORMS: Time out Check List



### TIME-OUT CHECKLIST

Date/ Time: \_\_\_\_\_

Clinic/ Centre: \_\_\_\_\_

Please paste patient's sticker here


Please tick "Yes" or "No" for each item below

Items	Yes	No*	Remarks
<b>1. CORRECT PATIENT</b> Patient's identity is checked and confirmed by either: *Asking patient for name & NRIC No. *Checking patient's wrist tag			
<b>2. CORRECT PROCEDURE</b> Procedure to be performed is checked and confirmed correct as stated in Consent Form			
<b>3. CORRECT SITE/SIDE</b> Site/ side of patient where procedure will be performed is checked and confirmed correct as stated in Consent Form			
Type of Procedure: _____  Procedure to be performed by: _____ (Name/ DCR No.)  Time-out called by: _____ (Name/ Designation / Signature of staff)			

\*Note: if answer is "NO" for any item listed, the procedure **MUST NOT** proceed.

## 7.5 CLINICAL FORMS: Acute Trauma Assessment Checklist

# Assessment of Acute Traumatic Injuries

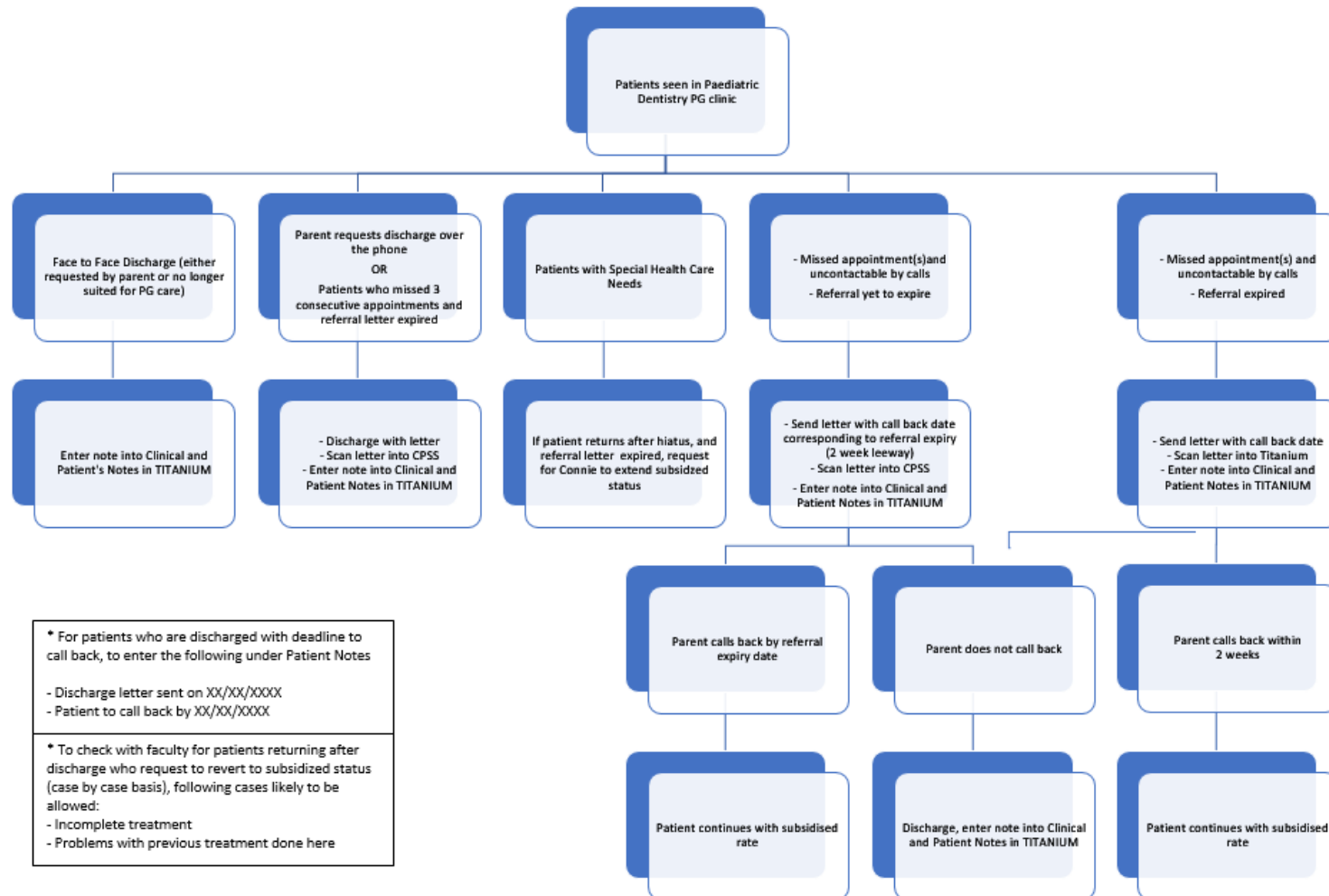
<b>ASSESSMENT OF ACUTE TRAUMATIC INJURIES</b>		<b>PATIENT NAME:</b> _____ <b>DATE OF BIRTH:</b> _____	
<b>DATE:</b> _____ <b>TIME:</b> _____		<b>REFERRED BY:</b> _____	
MEDICAL HISTORY:			
ALLERGIES:		DATE OF LAST TETANUS INNOCULATION:	
DATE & TIME OF INJURY:		TIME LAPSED SINCE INJURY:	
WHERE INJURY OCCURRED:			
HOW INJURY OCCURRED:			
<b>HISTORY</b>	Check if present and describe:		<b>MANAGEMENT PRIOR TO EXAM</b> By Whom: _____ Describe: _____
	<input type="checkbox"/> Non-dental Injuries		
	<input type="checkbox"/> Loss of consciousness		
	<input type="checkbox"/> Altered orientation/mental status		
	<input type="checkbox"/> Hemorrhage from nose/ears		
	<input type="checkbox"/> Headache/nausea/vomiting		
	<input type="checkbox"/> Neck pain		
	<input type="checkbox"/> Spontaneous dental pain		
	<input type="checkbox"/> Pain on mastication		
	<input type="checkbox"/> Reaction to thermal changes		
	<input type="checkbox"/> Previous dental trauma		
	<input type="checkbox"/> Non-nutritive oral habits		
<input type="checkbox"/> Other complaints			
<b>EXTRAORAL EXAM</b>	Check if present and describe:		<b>OTHER FINDINGS/COMMENTS:</b>
	<input type="checkbox"/> Cranial nerve deficit		
	<input type="checkbox"/> Facial fractures		
	<input type="checkbox"/> Lacerations		
	<input type="checkbox"/> Contusions		
	<input type="checkbox"/> Swelling		
	<input type="checkbox"/> Abrasions		
	<input type="checkbox"/> Hemorrhage/drainage		
	<input type="checkbox"/> Foreign bodies		
	<input type="checkbox"/> TMJ deviation/asymmetry		
<b>INTRA-ORAL EXAMINATION</b>	Check if injured and describe		<b>DIAGRAM OF INJURIES</b>  
	<input type="checkbox"/> Lips		
	<input type="checkbox"/> Frenae		
	<input type="checkbox"/> Buccal Mucosa		
	<input type="checkbox"/> Gingivae		
	<input type="checkbox"/> Palate		
	<input type="checkbox"/> Tongue		
	<input type="checkbox"/> Floor of mouth		
	<b>Occlusion</b>		
	Molar classification R ___ L ___		
	Canine classification R ___ L ___		
	Overbite (%) _____		
	Overjet (mm) _____		
	Crossbite Y N		
	Midline Deviation Y N		
Interferences Y N			

		TOOTH NUMBER			
<b>DENTAL INJURIES</b>	AVULSION	Extra-oral Time			
		Storage Medium			
	INFRACTION				
	CROWN FRACTURE				
	PULP EXPOSURE	Size			
		Appearance			
	COLOR				
	MOBILITY (mm)				
	PERCUSSION				
	LUXATION	Direction			
	Extent				
PULP TESTING	Electric				
	Thermal				
CARIES/PREVIOUS RESTORATIONS					
<b>RADIOGRAPHS</b>	PULP SIZE				
	ROOT DEVELOPMENT				
	ROOT FRACTURE				
	PERIODONTAL LIGAMENT SPACE				
	PERIAPICAL PATHOLOGY				
	ALVEOLAR FRACTURE				
	FOREIGN BODY				
	DEVELOPMENTAL ANOMALY				
	OTHER				
	<b>TREATMENT</b>	Check if performed and describe	<b>SUMMARY</b>		
Soft tissue management					
Medication					
Pulp therapy					
Root conditioning					
Repositioning					
Stabilization					
Restoration					
Extraction					
Prescription					
Referral					
Other					
<b>INSTRUCTIONS AND DISPOSITION</b>		Check if discussed			
	Diet				
	Hygiene				
	Pain				
	Swelling				
	Infection				
	Prescription				
	Complications:				
	Damage to developing teeth				
	Abnormal position/ankylosis				
	Tooth Loss				
	Pulp damage to injured teeth				
	Other:				
Follow-up:					
Other					

This sample form, developed by the American Academy of Pediatric Dentistry, is provided as a practice tool for pediatric dentists and other dentists treating children. It was developed by experts in pediatric dentistry, and offered to facilitate excellence in practice. However, this form does not establish or evidence a standard of care. In issuing this form, the American Academy of Pediatric Dentistry is not engaged in rendering legal or other professional advice. If such services are required, competent legal or other professional counsel should be sought.

## 8. PATIENT DISCHARGE WORKFLOW

Criteria and workflow for discharge from Paediatric Dentistry Post Graduate clinic





## 9. MULTI-DISCIPLINARY CLINIC

### **Purpose**

For the comprehensive management of paediatric patients requiring complex dental treatment. This clinic aims to provide residents from various disciplines the opportunity to work as a team.

### **Conditions seen**

Dental related conditions such as Hypodontia, Amelogenesis imperfecta, Dentinogenesis imperfecta and cleidocranial dysplasia etc.

**Participants:** Paediatric Dentistry, Prosthodontics, Orthodontics, Oral Surgery

### **Learning objectives:**

- Being part of a team in the management of complex cross-disciplinary cases
- Communication with other disciplines
- Treatment planning and scheduling
- Presentation of cases and generation of dental reports

**Clinical session:** Every first Wednesday of the month (2-5pm)

At the clinical session, the resident is required to obtain the following records for a new patient:

- Clinical examination
- Extra-oral photos
- Intra-oral photos
- Radiographs (If required)
- Models (If required)

There will be faculty and residents from the other disciplines present for ad-hoc consultations. If a particular discipline is unavailable on that particular session, the resident is to follow up with a consult using records before the comprehensive meeting session.

Patients may be followed up at the clinical session either 1) after treatment completion or 2) at 1 year interval if following up on growth. These patient may or may not be presented at the comprehensive meeting session.

**Comprehensive meeting session:** Every first Wednesday of the month (530 to 630pm)

At the comprehensive meeting session, residents will present cases seen during the clinical session including consults and treatment plans. If other disciplines are involved in the case management, the corresponding discipline resident is encouraged to attend and present their part.

Treatment should be completed at the various discipline clinics, not at the multi-disciplinary clinic session.

### **Patient report**

A patient report will be generated by the resident with all the discipline domains at by the end of the comprehensive meeting and given to the patient and sent back to the referring clinic.

# 10.1 TREATMENT UNDER GENERAL ANESTHESIA (GA): GA FAQ

NUHS PAEDIATRIC DENTISTRY GA

## PATIENT INFORMATION FOR PARENTS/ GUARDIANS OF CHILDREN UNDERGOING DENTAL TREATMENT UNDER GENERAL ANAESTHESIA (GA)

### 1. What is general anaesthesia (GA)?

GA is a medical procedure where your child is given medicine, usually in a gas form to put him or her into a "deep sleep" so that dental treatment can be done. He or she will not remember the surgery, feel pain or move around.

### 2. Who may benefit from dental treatment under GA?

Your child may benefit from general anaesthesia if he/she:

- Is young, anxious or unable to cooperate for dental treatment
- Needs a lot of dental treatment (many fillings and teeth removal)
- Has special health care needs

### 3. What are the advantages of GA?

Your child will not be traumatized by the dental treatment as he/she will sleep through the procedure and have no memory of the process. In addition, all treatment is done in a single appointment.

### 4. What are the risks of GA?

<b>Common, temporary side effects</b>
<ul style="list-style-type: none"> <li>• Headache, giddiness, drowsiness</li> <li>• Nausea, vomiting</li> <li>• Sore throat</li> <li>• Emergence delirium: a restless and irritable recovery process during which your child may roll about, cry or seem inconsolable</li> </ul>
<b>Extremely rare and serious complications</b>
<ul style="list-style-type: none"> <li>• Severe allergic reaction</li> <li>• Very high fever (malignant hyperthermia)</li> <li>• Aspiration resulting in lung complications</li> </ul>

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NUHS PAEDIATRIC DENTISTRY GA

If there were teeth removed, some bleeding from the mouth is expected. Please follow the following instructions to ensure optimal healing

- Apply pressure with gauze for 15-20 minutes if the extraction site is bleeding/oozing
- Avoid excessive spitting or rinsing for 24 hours
- Avoid carbonated beverages and the use of straws for 24 hours as this may cause increase in bleeding
- Soft, lukewarm diet, is advised for the next 24-48 hours

Do not plan activities for the child after treatment. Allow the child to rest. Your child's temperature may be elevated to 38°C for the first 24 hours after treatment. Children's strength paracetamol every 6 hours and drinking lots of fluids will help ease this condition.

Seek advice if:

- The temperature remains elevated beyond 24 hours or goes above 38°C
- There is any difficulty breathing
- There are any other matter that causes you concern

### 8. When can my child go home?

Your child will be monitored for about 4 hours and be allowed to go home on the same day of the surgery. He/she should be accompanied by a parent or legal guardian on the way home.

Your child will be given Medical Certificate for 2-3 days.

### 9. What should I do if my child is unwell before the surgery?

The risks of complications during and after the surgery are higher if your child is unwell. As such, should your child fall sick within 14 days of the surgery date, please call us at [6772 4921](tel:67724921) or [6772 4949](tel:67724949) as we may need to re-schedule the surgery.

### 10. What should I do to prepare my child for the surgery?

It is important to follow the hospital's fasting instructions before the surgery. The general rule is that your child should not take any food or drinks 6 hours before

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NUHS PAEDIATRIC DENTISTRY GA

You may speak to your child's doctor or the anaesthesiologist about these concerns.

### 5. What will happen on the day of the surgery?

Either you or a legal guardian of your child must attend the appointment with the child, and is expected to be present when the treatment is completed.

After registration, your child will be given a bed to rest. The anaesthetist and dentist will review your child as well as answer any further questions you may have.

Anaesthesia is induced either by placing the intravenous plug in the back of your child's hand and injecting the anaesthetic medicine or by breathing anaesthetic gas through a mask held over your child's mouth and nose. The anaesthetist will offer the most appropriate method based on the circumstances.

You may accompany the child into the operating theatre (OT) to comfort and help distract the child until he or she is asleep. Once he or she is asleep, you will need to leave the OT.

### 6. What and Who will be involved in the surgery?

Your child will be monitored from the start to the end of the dental surgery by an anaesthesiologist. The dental treatment will be carried out or supervised by a paediatric dentist.

### 7. What should I expect after the surgery (dental treatment)?

Once the dental treatment is completed, your child will be woken up and taken to the recovery room. You will be able to accompany your child during the recovery period.

It is common for children to be groggy or cry immediately after the surgery. They may also feel dizzy, nauseous and/or discomfort from the numbing medicine that was given during the dental treatment. This numbness may last up to 2 hours after general anaesthesia.

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NUHS PAEDIATRIC DENTISTRY GA

surgery unless directed by your doctor. Sips of water to wet the mouth for comfort is allowed 2 hours before the scheduled procedure.

To reduce the chance of your child falling sick near the date of the dental procedure, it is advisable to avoid rigorous activities (e.g. swimming) the week before the surgery.

You can prepare your child by:

- Arriving on time for your appointment
- Explaining that the surgery will help them get better
- Providing basic information about what will happen when he/she is in hospital (e.g. how long they will stay in hospital).
- Bringing comfort items (e.g. blanket, soft toy, Ipad)

### 11. How can I pay for the dental treatment under general anaesthesia?

You can pay by cash, NETS, cheque, credit card or your child's Child Development Account (Baby Bonus). Medisave cannot be used for payment.

### 12. Should you have further enquiries, please contact us at 6772 4921 or 6772 4949, or email us at \_\_\_\_\_.

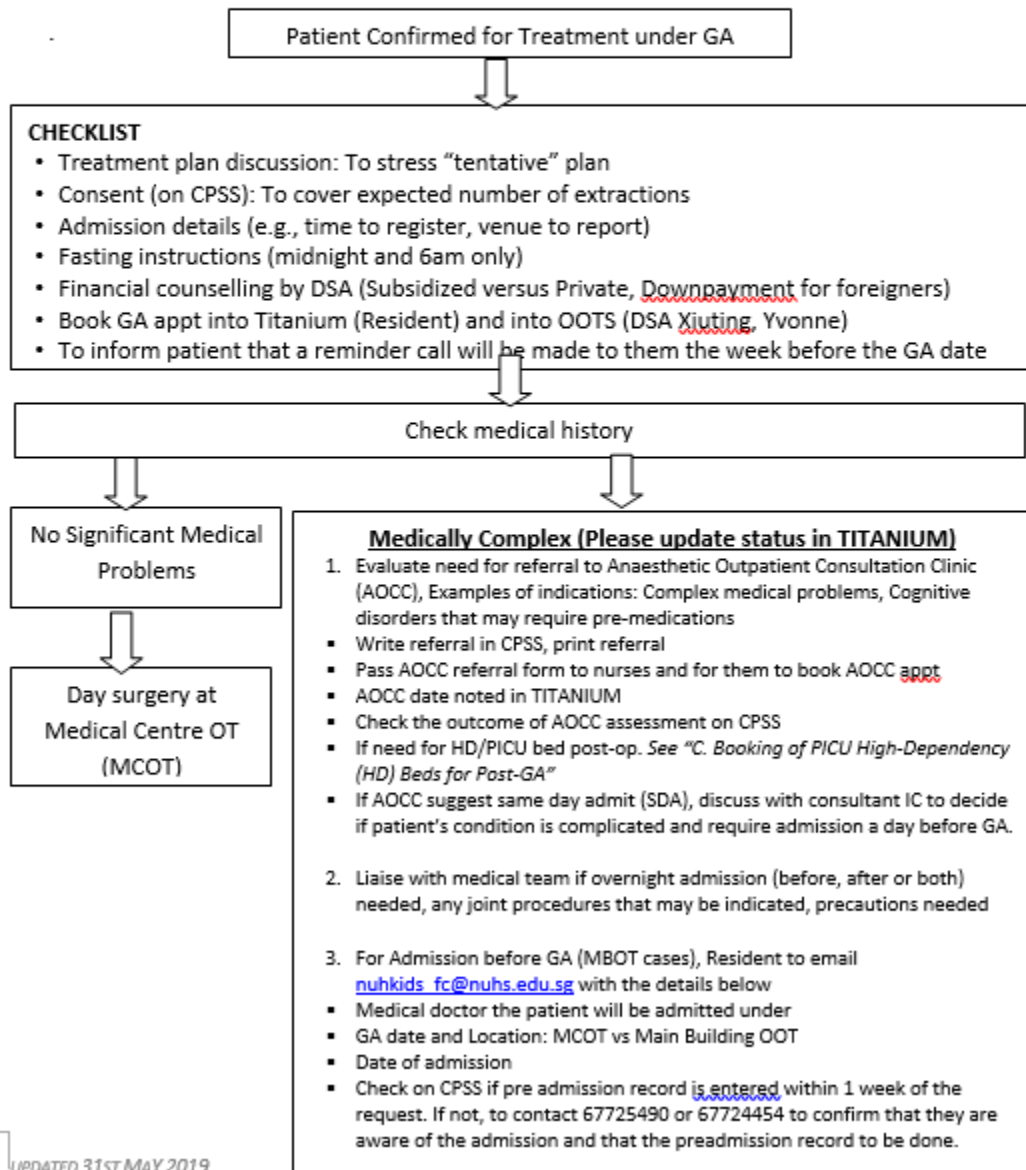
Page 4 of 4

## 10.2 TREATMENT UNDER GA: GA Audit and AOCC

### A. GA Audit (JCI Requirement): Twice/Term

- 1) Discuss post-operative infections or complications, if any (e.g., bleeding, unexpected admission)
- 2) Discuss pre-operative cases
  - Treatment plan
  - Preparations required (e.g., additional investigations, joint cases with medical team)
  - Checklist to ensure complex cases will run smoothly

### B. Medical Complex Patient for GA



UPDATED 31ST MAY 2019

## 10.3 TREATMENT UNDER GA: PICU Bed Booking

*Applicable if:*

- *Advised by AOCC (check in CPSS 2 C-Doc section after AOCC appointment for outcome)*
- *Advised by medical team*

1. Call **PICU at 67725459** and ask to speak to PICU consultant-on-duty:
  - Identify yourself as the surgical team.
  - Explain why the case would need a high-dependency bed (eg severe cardiac function, neurological disorders, advised by the anaesthetist).
2. Cases which are listed in the OOTS will be automatically scanned, and cases booked for HD or PICU in advance will be flagged up to the PICU staff.
3. Please ensure that the name of the primary surgeon/consultant is listed in the OOTS system so that PICU can contact the surgical team should there be a cancellation.

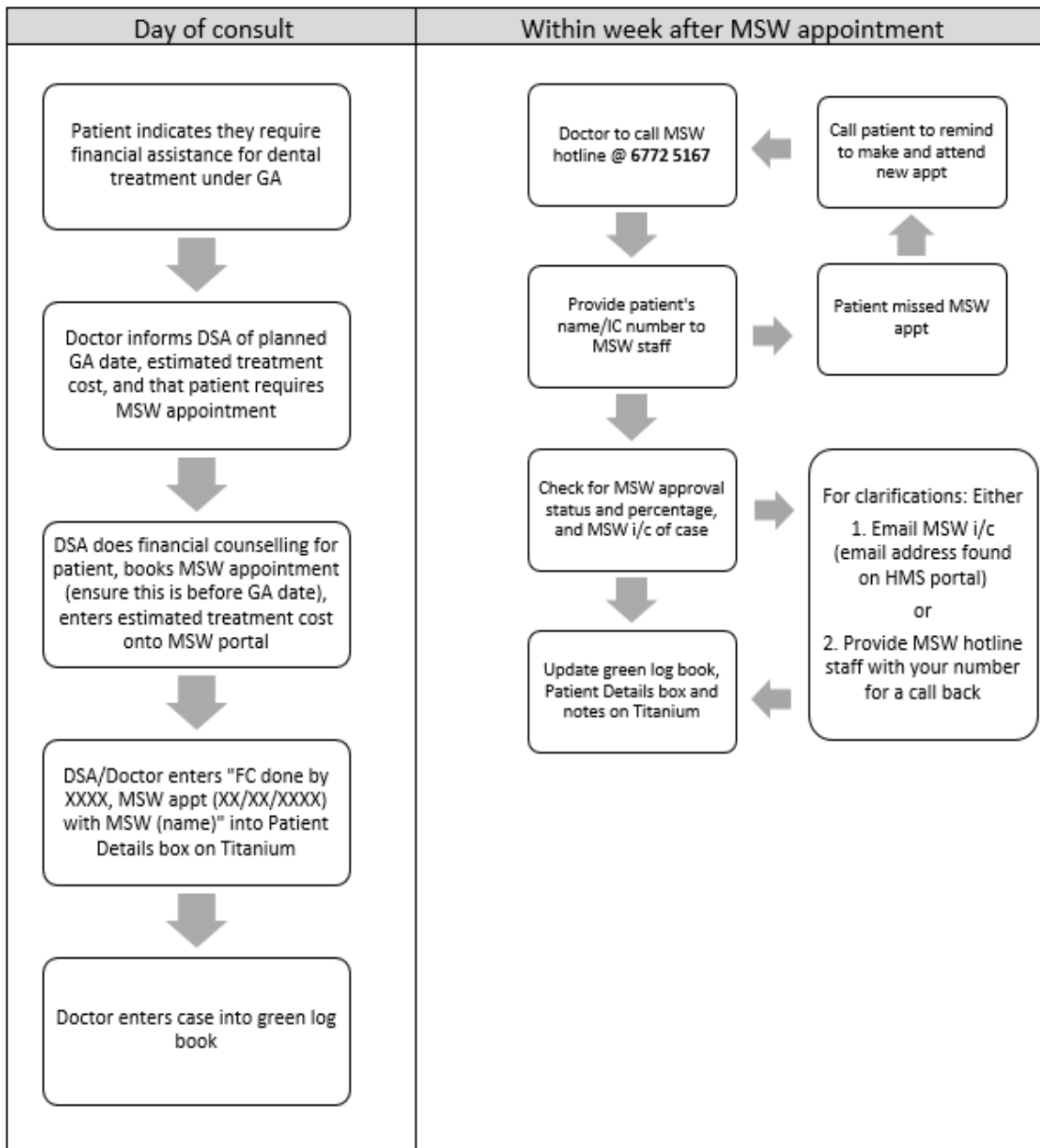
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**Please note the following:**

- The Paeds HD/PICU beds are not guaranteed as emergency admissions will get priority over elective cases so be prepared for dental cases to be cancelled should there be insufficient PICU/HD beds available.
- For cases which you think HD/PICU bed may be necessary, you can indicate it on the AOCC referral form to enquire on this.
- Please do prepare the parents/guardian for patients who need HD//PICU beds post-operatively that there may be a chance of cancellation of the dental operation should there be insufficient beds.

## 10.4 TREATMENT UNDER GA: Application For Financial Aid (Medical Social Worker)

### MSW workflow



## 10.5 TREATMENT UNDER GA: Pre-admission Checklist

### GA PRE-ADMISSION CHARTING FORM

Patient details sticker

Date: ..... Height = ..... Weight = .....

MBOT   
Inpatient

MCOT   
Day surgery

AOCC? Yes

No

Medical history/allergy:

.....  
 .....  
 .....

Medications:

.....  
 .....  
 .....

Paediatrician(s)/Hospital(s):

.....  
 .....

Treatment plan: EUA

Rest 

--

FS 

--

Ext 

--

Others .....

Estimated operating time: .....

Pre-operative radiographs: OPT  BWs  Others .....

Need for special equipment in theatre?

.....  
 .....

Work-up required: Yes

No

Correspondence .....

Pre-operative investigations .....

#### Checklist:

Consent   
 Updated contact details   
 Fasting information

Cost information   
 Regular medications   
 Admission details

## 10.6 TREATMENT UNDER GA: Intra-Operative Charting

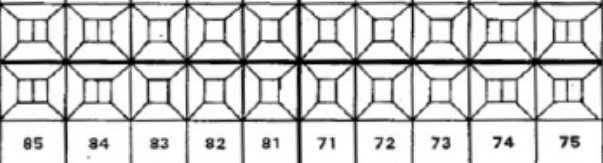
### GA INTRA-OPERATIVE CHARTING FORM

Date: .....

Anaesthetist:	Assistant:
Surgeon:	Scrub nurse:

Patient details sticker

**Intra-oral charting:**

18	17	16	15	14	13	12	11	21	22	23	24	25	26	27	28		
				55	54	53	52	51	61	62	63	64	65				
																	
				85	84	83	82	81	71	72	73	74	75				
48	47	46	45	44	43	42	41	31	32	33	34	35	36	37	38		

<p><b>Quadrant 1: UR</b></p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<p><b>Quadrant 2: UL</b></p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
<p><b>Quadrant 3: LR</b></p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<p><b>Quadrant 4: LL</b></p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>

**Other surgical notes:**

Intubation method: Nasal  Oral  LMA  Others  \_\_\_\_\_

Premedication given: Yes  (Medication & dosage) \_\_\_\_\_ No

LA used: Yes  (Type & amount) \_\_\_\_\_ (ml) No

Surgical: Yes  No  Sutures placed: Yes  (Type & No.) \_\_\_\_\_ No

Throat pack out:  Swab count:

Initial haemostasis achieved:  Tooth count:

## 10.7 TREATMENT UNDER GA: Post-Operative

### GA POST-OPERATIVE RESIDENT RESPONSIBILITIES

Resident who was the operator for the GA cases will responsible for the following

- Charge form to be given to front desk at NUH Dental Center 1
- Post-GA ward round check that afternoon
- Post GA phone call to patient in the evening or latest by the following morning
- Appointing patient for 2 week post GA review

### GA POST-OPERATIVE CHECKLIST

Post-operative instructions given to nursing staff and caregiver(s):

- Pain relief
- Bleeding
- Oral hygiene instructions
- Emergency contact number(s)

Medical certificate

Discharge medication prescribed if any

Follow-up care\*

- Where? .....
- When? .....

Discharge summary printed and filed

OTRS operation notes printed and filed



## 10.8 TREATMENT UNDER GA: Resident Responsibilities on GA Rotation

- **2 - 4 WEEKS PRE-SURGERY:** Residents are expected to present the treatment plan for the PG GA cases scheduled for their month of rotation; 2 weeks prior.
- Residents are expected to attend and to discuss their GA patient cases that they will or have treated during GA audit meetings.
- If there are last minute cancellations (days before GA date), resident on GA rotation (or ask the resident that originally saw the patient) to call the patient's parents to arrange i. either another GA date (if not already done by Xiuting or Yvonne) or ii. make another outpatient appointment for re-evaluation. If patient's parent no longer wants to have treatment at NUCOHS, please document in Titanium and discharge patient accordingly.
- **IMMEDIATE PRE-SURGERY:** For PG GA patients (*For private patients, please check with your Paed Dent IC*): Clerk patients the morning prior to surgery (if inpatient, the night before) which includes
  - Consent form signed (no abbreviations, full description of procedures to be done) and current (within 3 months of GA)
  - Any changes in medical history (e.g., heart condition) and dental history e.g., new onset tooth pain/ swelling
  - Check NPO status
  - Only if requested by patient, discuss tentative treatment plan briefly
- **POST SURGERY:** For PG GA patients (*For private patients, please check with your Paed Dent IC*):
  - Enter treatment notes into OTRS, to be verified by faculty /Paed Dent IC and print a set of hardcopy to be given to patient
  - Complete discharge (EHIDS) summary on CPSS, and print 1 set for patient
  - Order discharge medication if needed, to be verified by faculty/Paed Dent IC
  - Write medical leave if needed
  - Post op instructions to parents
  - Complete charge forms and hand them to the front counter at NUCOHS L6, charges to be under supervising Paed. Dentist
  - Post GA review in recovery room in PM to check on pain status, hemostasis and whether patient ok to go home from dental standpoint; document your post op review in CPSS
  - Post GA phone call to patient in the evening or latest by the following AM to check on pain status and hemostasis
  - Appoint patient for 2-3-week post GA review
  - Enter clinical notes and update charting of treatment performed under GA in Titanium on day of surgery.

## 11.1 TREATMENT UNDER INHALATIONAL SEDATION (IHS): OVERVIEW

### **Purpose**

For the comprehensive management of anxious paediatric patients requiring dental treatment under inhalation sedation. This clinic aims to equip the residents with the necessary skills to perform dental treatment under inhalation sedation.

### **Learning objectives:**

- To be familiar with the indications and contraindications for management of patients under inhalation sedation
- To be familiar with the set-up of inhalation sedation equipment
- To be proficient with the various methods of administering inhalation sedation
- To be familiar with monitoring requirements during and discharge criteria after inhalational sedation
- To be cognizant of the risks involved in working in an inhalation sedation clinic environment

**Scheduled clinical sessions:** 2 operatories every other Tuesday of the month.

### **Consultation/ Scheduling visit**

Refer to Appendixes 11.2 and 11.3. These information sheets serves as a guide for residents to ensure that the assessment for inhalation sedation is performed. A template of Appendix 11.3 can be found in Titanium (Notes section), do add the template to your clinical notes for patients who are being referred for sedation treatment.

If the patient is suitable and approved by supervising faculty for inhalation sedation treatment, please obtain the necessary consent from the parent/caregiver (to be done in CPSS2). Consent may be obtained prior to the visit or on the day of the inhalational sedation visit. Consent is valid for 3 months.

Each inhalation sedation appointment typically lasts about 1-1.5 hour.

Please provide a copy of the Patient Information Leaflet (Appendix 11.4) to the parent/caregiver and ensure that they are aware of the following:

- Punctuality is appreciated.
- Patient/parent to inform the resident operator if the child develops flu/ cough/ runny nose/ rhinitis/ fever before the scheduled treatment. For the safety of the child, the inhalational sedation visit may need to be rescheduled. Resident operator to update the change in appointment on Titanium and to inform the supervising staff of the change.
- The cost of inhalation sedation treatment and that the cost is in addition to the cost of the dental treatment.
- Parent/caregiver may bring the disposable nasal hood home to familiarize the child to the hood. Do remind the parent/caregiver to bring it back for the inhalation sedation visit. The charge of each disposable nasal hood is \$10 (0529 Special Materials Cost).

### **Inhalation Sedation Visit**

You are responsible for confirming/ reminding your patient of their scheduled appointment.

On the day of the inhalation sedation visit, arrive early so that you have time to set up the inhalation sedation equipment and oxygen saturation/ heart rate monitor in the operatory. The

key to unwind the gas cylinder cap must be obtained and signed out from the Dental Centre 1 Administrative Office.

Additionally, you are required to prepare and complete the following forms:

- Clinic Preparation Checklist (Appendix 11.5) - A guide to ensure the gas machine is functioning and that the gas supply is adequate for the session.
- Treatment Sheet (Appendix 11.6) - For monitoring purposes. There is a template on Titanium, please add the pre-created template on Titanium to your treatment notes.
- Post-Procedure Checklist (Appendix 11.7) - A guide to ensure that the gas equipment is properly turned off and stored accordingly. Add the pre-created template on Titanium to your treatment notes.

Please enter and complete the patient's treatment notes in Titanium on the same day as the treatment.

At the end of session, do ensure all infection control procedures are strictly adhered to.

- Use 70% alcohol wipes to disinfect the inhalation sedation machine.
- The rubber tubes are to be disinfected and packed in the large autoclave pouch and then passed to the paediatric dental nurses for sterilisation.
- All other instruments and materials to be disinfected and sent for sterilization/storage accordingly.

Should there be any out-of-the-ordinary requests/circumstances/ queries (e.g., direct referrals from HPB), please obtain approval from the attending faculty supervising the Inhalational Sedation session.

### **Clinic Policy Documents**

The following documents can be obtained from the NUH intranet: Go to "*Guides & Policies*" → "*Clinical Policies & Procedures*" → Click on "*Do a direct search at the NUH e-DCS site*" → Type "*Inhalation sedation*" in Search box.

- Nitrous Oxide Inhalation Sedation (Anxiolysis) For Adult And Paediatric Patients In Outpatient Dental Services: NUH-HAP-DEN-002
- Nitrous Oxide Inhalation Sedation (Anxiolysis) For Adult And Paediatric Patients In Outpatient Dental Services: NUH-SOP-MCP-DEN-012
- Risk Assessment - Clinical Processes / Inhalation Sedation: NUH-RA-DEN-022

## 11.2 TREATMENT UNDER INHALATIONAL SEDATION (IHS): REFERRAL TO IHS CLINIC

### AT CONSULTATION VISIT:

BEFORE REFERRING INTO IHS WAITLIST, RESIDENT TO CHECK THE FOLLOWING:

- Get radiographs and diagnosis done at consultation visit
- Suitable for inhalation sedation? (ASA 1 or 2, can breathe through nose, allow placement of mask on face – Refer to Appendix 8.3)
- Patient ready to be treated at next visit (no outstanding work-up needed)



Yes, suitable for  
inhalation sedation

- Take consent with parent/caregiver on CPSS2
- Give patient a sample of disposable nasal hood for patient to take home and familiarize with it (Patient to bring this nasal hood to IHS appt as this hood will be used for the patient)
- Provide parent/caregiver with information leaflet (Refer to Appendix 8.4)
- Schedule an appointment for patient in the Titanium labelled “PG Inhalation Sedation” (every first and third Tuesday of the month)
- Fill up “Pre-Inhalation Sedation Flowsheet” (Refer to Appendix 8.3) and pass the form to Dr Tang or the chief resident to file

### NOTES TO REFERRING CLINICIAN:

- Only postgraduates and consultants are allowed to refer cases into the PG inhalation sedation clinic.
- Once treatment under inhalation sedation is completed or contraindicated (eg undisclosed medical conditions, uncooperative behaviour), the patient will be referred back to the referring clinician for further follow-up care.
- Duration of inhalation sedation appointment for each patient can range from 1 to 1.5 hours depending on treatment required.
- Starting costs for just the inhalation sedation and disposable nasal hood (excluding any dental procedural treatment and GST) are as follows:
  - Subsidised SG citizen \$85
  - Subsidised PR \$122.50
  - Private SG and PR \$160
  - Non-resident \$205

## 11.3 TREATMENT UNDER INHALATIONAL SEDATION (IHS): PRE-IHS FLOWSHEET

**Operator:**

**Assistant:**

**PRE-INHALATION SEDATION (DENTAL) FLOWSHEET**

Date: \_\_\_\_\_



PRE-SEDATION ASSESSMENT	
1) Medical history/Medications: Recent ENT or eye surgery?	_____
2) Previous sedation/GA history:	_____
3) Drug Allergy:	<input type="checkbox"/> No <input type="checkbox"/> Yes, specify: _____
4) Any snoring/sleep apnoea/blocked nose?	_____
5) ASA Classification:	_____
6) Pre-procedure fasting (where applicable) (date/time):	_____
7) Any pre-operative investigations required:	_____
8) Consent done	<input type="checkbox"/>
9) Information leaflet to parent/caregiver/patient	<input type="checkbox"/>

Mallampati Score:	
<p>(a) Class 1    Class 2    Class 3    Class 4</p>	<p><b>Class 1: Complete visualisation of the soft palate</b>  <b>Class 2: Complete visualisation of the uvula</b>  <b>Class 3: Visualisation of only the base of the uvula</b>  <b>Class 4: Soft palate is not visible at all</b></p>

DENTAL DIAGNOSIS AND SEQUENTIAL TREATMENT PLAN	
Estimated number of visits needed:	
Diagnosis:	
Visit	Treatment
1	
2	
3	
4	

## 11.4 TREATMENT UNDER INHALATIONAL SEDATION (IHS): Patient Information Leaflet

### PATIENT INFORMATION LEAFLET Nitrous Oxide (Laughing Gas) Sedation

#### Information for patients, parents/ guardians and caregivers of children

It is very common for people of all ages to be a little nervous about having dental treatment. Nitrous Oxide – more commonly known as “laughing gas”- can help you relax and make the treatment process more comfortable.

#### What is Nitrous Oxide sedation?

Nitrous Oxide (laughing gas) is mixed with oxygen and breathed in through a rubber mask that is placed over your nose. This is so that the dentist can carry out dental treatment in your mouth. During this time, you will still be aware of the surroundings and the dental treatment, but will feel more relaxed. Your dentist can control the amount of sedation you receive and the gas usually wears off quickly.

#### Is Nitrous Oxide safe?

Dental treatment under Nitrous Oxide sedation is a safe technique for reducing anxiety. During your consultation visit, your dentist will ask you to complete a medical history form and will discuss any concerns you may have before treatment. Your dentist will assess your suitability for Nitrous Oxide sedation. He/She will also discuss in more details the risks, the benefits and the alternatives to the Nitrous Oxide sedation.

#### What can I expect when having Nitrous Oxide sedation?

Nitrous Oxide may make you feel sleepy and relaxed. You will still be aware of what is happening around you but will feel more relaxed. Some people may have a warm feeling, or tingling in their hands and feet. You will still be able to understand instructions, cooperate with treatment and keep your mouth open.

#### Who may benefit from nitrous oxide sedation?

Patients who are anxious and fearful of dental treatment, needle-phobic or have a sensitive gag reflex may benefit from Nitrous Oxide sedation. You must be able to understand instructions and cooperate for the rubber mask to be put over your nose. Nitrous oxide may also be helpful for some patients with special health care needs who have difficulty coping with dental treatment. However, the suitability for Nitrous Oxide sedation needs to be considered on a case-by-case basis.

#### Does the tooth still need an injection for treatment?

If the dental procedure requires numbing of the teeth or gums, local anaesthesia will still be used. However, Nitrous Oxide has pain-relieving properties which will make the numbing process more comfortable and acceptable to you.

**Are there any risks with inhalation sedation?**

Some people may feel light-headed. On rare occasions, some people may feel dizzy or sick. You should let your dentist know about any unpleasant sensations or symptoms so that they can lower the amount of nitrous oxide being given. Nitrous Oxide sedation may not be as effective if you cannot breathe through your nose, for example if you have a cold or if you have a habit of breathing through your mouth.

**What will I need to do before the appointment?**

1. You will be asked to sign a consent form for Nitrous Oxide sedation and the dental treatment before the start of treatment.
2. Do not eat a heavy meal immediately before the appointment. However, you can have a light meal or snack about two hours before the appointment.
3. Should you become ill or get a cough/cold which prevents you from breathing through your nose, please contact us to postpone the appointment.
4. You should take your regular medications (if any) at the usual times unless your dentist or doctor has told you not to.
5. You **must** be accompanied by a responsible adult at your appointment. This person must meet our staff before your treatment and is responsible for taking you home afterwards. The child undergoing treatment must be accompanied by a parent or guardian. Ideally, avoid bringing other children to the appointment as they can cause distraction to an already nervous child.
6. Wear loose, comfortable clothes for the appointment.
7. You must remove nail polish and false nails before the appointment.

**What special instructions should I follow after the sedation appointment?**

Our staff will not discharge you until you are alert and ready to go. Our staff will discuss specific post-treatment instructions with you and the person accompanying you home. You are usually advised to stay at home and rest for the day.

In the immediate 24 hours after your appointment, avoid the following activities:

- drive any vehicle or operate any machinery
- make any important decisions or sign any legal documents
- be responsible for the care of anyone else (adult or child)
- do any sporting activities (eg swimming, cycling, jogging)

If you have any problems or worries after your appointment, please contact us at 67724921 or 67724939.

## 11.5 TREATMENT UNDER INHALATIONAL SEDATION (IHS): Clinic Preparation

Date: \_\_\_\_\_

Initial: \_\_\_\_\_

### CLINIC PREPARATION FOR INHALATION SEDATION (See Section A below)

No	Safety Checklist (See below table)	√	Remarks
1	Gas level check		
2	Bleed check		
3	Flowmeter and controls check		
4	Reservoir bag and circuit check		
5	Crash trolley check- equipment and medicine stock		

#### (A) CLINIC PREPARATION TESTS (to be done before start of inhalation sedation clinic)

Start with ALL cylinders off (valves tightly screwed; pressure gauges showing 0 psi).

##### 1. GAS level check (full cylinders first):

- Turn valve of O<sub>2</sub> cylinder anticlockwise about half-turn (see O<sub>2</sub> pressure gauge rise)\*.
- Turn valve of N<sub>2</sub>O cylinder anticlockwise about half-turn (see N<sub>2</sub>O pressure gauge rise)\*.

\*To report for replacement of cylinder(s) if pressure gauge rises to less than 1000psi for O<sub>2</sub> and 0psi for N<sub>2</sub>O.

##### 2. BLEED check:

- Turn on flow control with mixer control set at 70% O<sub>2</sub>.
- Turn off both cylinders (nitrous oxide first).
- Check that both flow meters fall to ZERO.

##### 3. FLOWMETER and CONTROLS check:

- Turn both cylinder valves back on.
- Set mixer control at 100% O<sub>2</sub>.
- Set flowmeter at 6 litres/minute O<sub>2</sub>.
- Set mixer at 50% O<sub>2</sub> (50%N<sub>2</sub>O) - check calibration (equal flows +/- 0.25 litres/minute).
- Turn off O<sub>2</sub> cylinder valve and check that flowmeter drops to ZERO (automatic cut-out).

##### 4. RESERVOIR BAG & CIRCUIT checks:

- Turn O<sub>2</sub> cylinder valve on.
- Turn off flow control.
- Set mixer at 100% O<sub>2</sub>.
- Occlude common gas outlet.
- Press O<sub>2</sub> flush - reservoir bag inflates (check for leaks by feeling bag lightly around).
- Examine all flexible pipe work for visible damage/gas leakage.
- Ensure scavenging is properly connected to vacuum suction and scavenging dial is turned on (needle should indicate the green portion for adequate scavenging).

Clinic preparation checks should be performed at the beginning of the session for the day. It is essential that there is always one full cylinder for each of the gases at the machine at the beginning of each treatment procedure. Any empty cylinders should be replaced immediately at the end of the treatment.

NUHS UDC Dental Inhalation Sedation Forms v1.0 (updated 20.05.16)



## 11.6 TREATMENT UNDER INHALATIONAL SEDATION (IHS): Documentation During Treatment (now in TITANIUM under notes)

Page 1 of 2

**Operator:**  
**Assistant:**  
**Date:**

Patient sticky label

### INHALATION SEDATION (DENTAL) FLOWSHEET

INTRA-SEDATION MONITORING								
	Time	% N <sub>2</sub> O	%O <sub>2</sub>	Flow rate (L/min)	SpO <sub>2</sub>	HR	RR	Modified Ramsay scale
Start								
Mid								
End								
100% O <sub>2</sub> given at end of treatment (3-5 minutes) <input type="checkbox"/>								

RECOVERY & SEDATION DISCHARGE
<p><b>Discharge criteria:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Awake and responsive</li> <li><input type="checkbox"/> Can breathe deeply and cough</li> <li><input type="checkbox"/> Able to stand and walk unassisted</li> <li><input type="checkbox"/> No vomiting</li> </ul> <p><b>Discharge instructions:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> This patient has recovered fully from this sedation episode</li> <li><input type="checkbox"/> This patient is fit for discharge from hospital</li> <li><input type="checkbox"/> Accompanying person: _____</li> <li><input type="checkbox"/> Other instructions: _____</li> </ul> <p>Time of discharge: _____</p> <p>Plan for next visit if any: _____</p> <p>Verified by: Name _____ DCR no _____</p>

MODIFIED RAMSAY SCALE
<p><b>Awake States</b></p> <ol style="list-style-type: none"> <li>1. Patient anxious, agitated or restless</li> <li>2. Patient cooperative, oriented, tranquil</li> <li>3. Patient asleep, brisk response to loud auditory stimulus</li> </ol>
<p><b>Sleep States</b></p> <ol style="list-style-type: none"> <li>4. Patient asleep, sluggish response to loud auditory stimulus</li> <li>5. Patient has no response to loud auditory stimulus but does respond to painful stimulus</li> <li>6. Patient does not respond to painful stimulus</li> </ol>

**Adverse Events During Procedural Sedation (If Any)** No adverse events

	<b>Oxygen desaturation</b> (requiring airway intervention) Lower SpO <sub>2</sub> : _____%
	<b>Central apnoea</b> (cessation of respiratory effort and requiring airway intervention)
	<b>Partial obstructive apnoea</b> (stridor, snoring or retraction AND required airway intervention(s))
	<b>Complete obstructive apnoea</b> (ventillatory effort with no air exchange AND requiring airway intervention(s))
	<b>Laryngospasm</b> (partial or complete upper airway obstruction with desaturation not relieved by airway repositioning, suction or oral airway)
	<b>Clinically Apparent Pulmonary Aspiration</b> (suspicion or confirmation of oropharyngeal or gastric contents in the trachea AND 1 or more of the following respiratory signs and symptoms in any of the 3 categories: i. Physical signs: cough, crackles, decreased breath sounds, wheezing, tachypnea or respiratory distress ii. Oxygen requirement: desaturation requiring oxygen iii. CXR: focal infiltrated, consolidation or atelectasis
	<b>Retching/vomiting</b> No. of times: ____ (requiring additional treatment and delay in discharge)
	<b>Bradycardia</b> (HR <2SD for age AND intervention required)
	<b>Paradoxical response to sedation</b> (unanticipated restless or agitation in response to sedation drugs during sedation AND results in administration of other sedative medication, delay in completion of procedure or discontinuation of procedure)
	<b>Unpleasant recovery reactions</b> (abnormal patient behavior during recovery phase requiring treatment or delay in patient discharge. Tick either criteria: Inconsolable crying <input type="checkbox"/> Delirium (state of severe confusion, altered mental state) <input type="checkbox"/> Agitation (restless, continuous activity) <input type="checkbox"/> Nightmares <input type="checkbox"/> Hallucinations (responds to sensory phenomena not physically present) <input type="checkbox"/> Dysphoria (mood of restlessness, depression and anxiety) <input type="checkbox"/>
	<b>Others, please state:</b>

<b>Intervention</b> (can tick more than 1): Vigorous tactile stimulations <input type="checkbox"/> Airway repositioning <input type="checkbox"/> Suctioning <input type="checkbox"/> Oxygen <input type="checkbox"/> Oral airway <input type="checkbox"/> Bagged and mask-assisted ventilation <input type="checkbox"/> Intubation <input type="checkbox"/> Administration of medication <input type="checkbox"/> , please state: _____ Chest compression <input type="checkbox"/> IV fluids <input type="checkbox"/> Physical restraints <input type="checkbox"/> Delayed discharge <input type="checkbox"/>
---

## 11.7 TREATMENT UNDER INHALATIONAL SEDATION (IHS): Post Procedure Check List

### POST-PROCEDURE – DENTAL NURSE CHECK LIST

Tick	Checklist Items	Remarks (if any)
	<p><b>Turn off the nitrous oxide machine:</b></p> <ul style="list-style-type: none"> <li>▪ <u>First turn off (clockwise) the N<sub>2</sub>O valve.</u></li> <li>▪ Turn off the O<sub>2</sub> valve and flush out (from reservoir bag).</li> <li>▪ Detach all tubings from the Matrix Quantiflex Monitored Dial Mixer (MDM) machine and the dental chair suction.</li> </ul>	
	<p><b>Check if any cylinder is empty</b> – ensure that ‘in use’ and ‘full’ cylinder labels are in place accordingly. Notify store manager if cylinder(s) empty.</p>	
	<p><b>Switch off scavenging.</b></p>	
	<p><b>Switch off pulse oximeter/heart rate monitoring machine.</b></p>	
	<p><b>Return pulse oximeter to its original location.</b></p>	
	<p><b>Swab Matrix Quantiflex MDM machine and dental chair unit.</b></p>	
	<p><b>Return Matrix Quantiflex MDM machine to storage place.</b></p>	
	<p><b>Autoclave nasal hood (outer nose piece and inner liner if autoclavable or discharge inner liner if single-use), breathing circuit tubings, instruments etc.</b></p>	

## **12. DENTAL TRAUMA CLINIC (HPB) STANDARD OPERATING PROCEDURE**

Dental Trauma Clinic within the School Dental Service (SDS), HPB is a specialist-led clinic which focuses on diagnosis, acute treatment, long term management and prevention of dental-alveolar trauma in children.

### Primary aim:

To improve the care for young patients who have suffered traumatic injuries to the teeth through:

- i. Provision of supervised immediate emergency management by dental specialists or senior grade staff.
- ii. Close monitoring and follow up to render appropriate short, medium and long term management of dental trauma following emergency treatment.
- iii. Provision of advice on prognosis and information of long term dental treatment commitments required for patients with dental trauma.
- iv. Inter-disciplinary approach to long term monitoring of healing outcomes, which is essential for timely intervention and provision of patient care in the medium and long term.

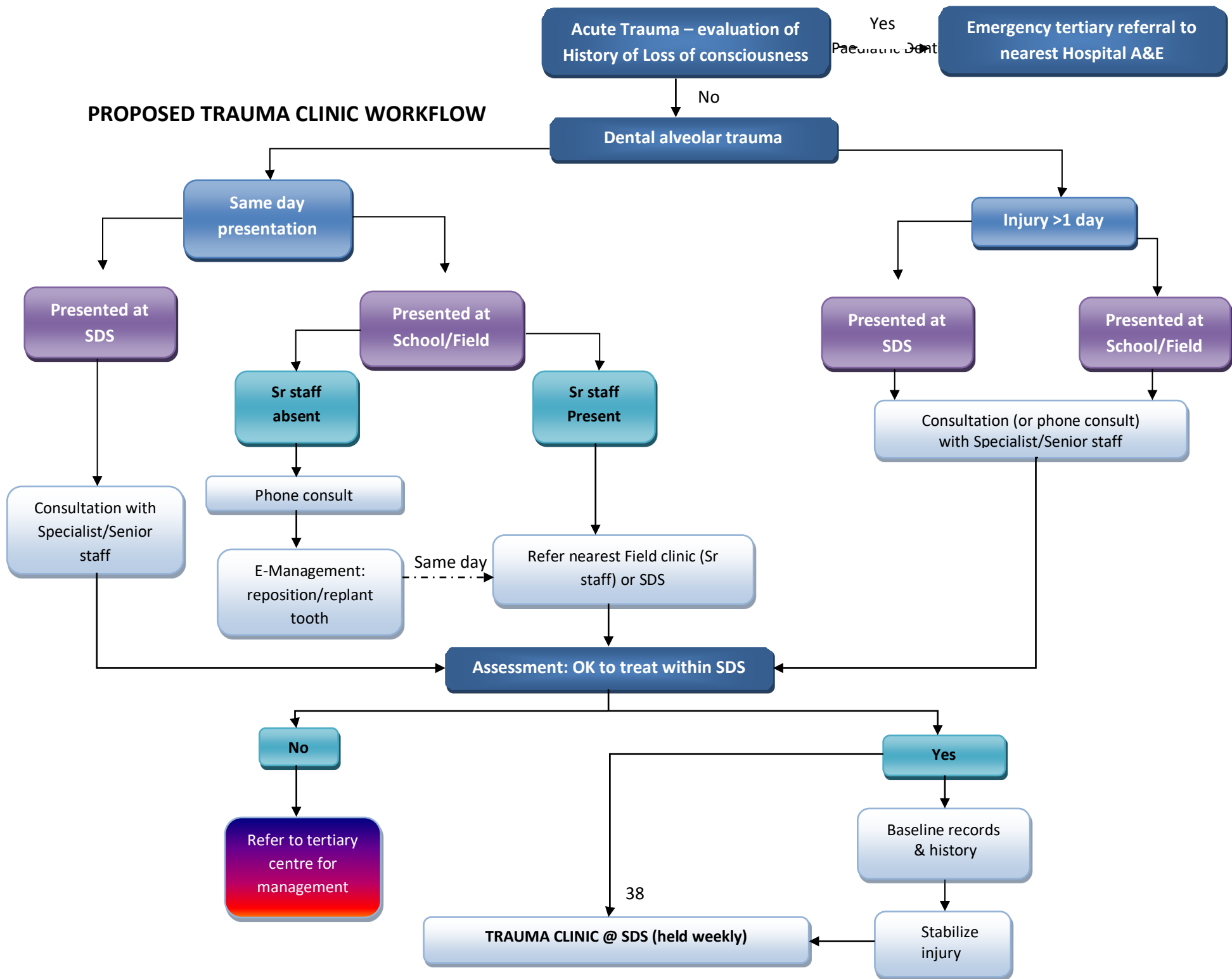
### Secondary aims:

- i. Provision of structured training in trauma management for dental officers, postgraduate residents, and specialist registrars working within the SDS.
- ii. Streamlining and standardization of treatment pathways and protocols.
- iii. Serve as a database of trauma cases, to be used for local epidemiological studies in dental traumatology, identification of potential areas for clinical research and development of educational materials to raise public awareness on trauma prevention, and acute trauma management.

### Trauma clinic details:

- Location: School Dental Service (SDS), Level 4, HPB.
  - Target population: All children in Singapore who have suffered dental-alveolar trauma
- i. New cases  
All new cases of dental trauma referred to SDS will be logged into the HPB New Trauma Cases Logbook. Following acute management, all new cases will be referred into Trauma clinic for Examination and Diagnosis, and treatment planning.
  - ii. Staffing and clinic format:  
The clinic will be run in a consultant-led clinic format, with a Paediatric Dentistry specialist overall in charge of decision making and overseeing the running of the clinic.  
During their posting, postgraduate residents will be rotated into the clinic to help review the healing progress of injuries and render the appropriate treatment as necessary for the patient during the session.  
All cases will be discussed weekly with the specialist or registrar in-charge of the clinic in a case discussion/learning session prior to commencement of the clinic.  
Cases will be scheduled by appointment basis, in accordance to the review protocols/guidelines recommended by the International Association of Dental Traumatology (IADT).  
Joint interdisciplinary clinics which involve an orthodontist will also be held at appropriate intervals to enable orthodontic input into the management of the cases undergoing treatment.  
Appropriate referrals to tertiary centres will be carried out for patients requiring more advance management.

- iii. Logistics and Scheduling related matters:
- a) Time allocation for case bookings:
- Frequency: Once a week; preferably to be held on a day when an in-house Orthodontist is present for consultations, i.e. Thursdays.
  - Timing for each trauma clinic slot: Typically each case will be 30 minutes per review, unless more treatment is required e.g. splinting, endodontic, surgical treatment etc. Duration of treatment time will then be scheduled according to the treatment need of the individual case.
  - All cases will be logged/ written into the Trauma Clinic Diary, and duration of treatment will be determined by the supervisor/clinician in-charge of the case for the day. Booking of future appointments will be done by the Reception staff as advised by the clinician on-duty.
- b) Rotation schedule:
- For July 2016 onwards: One postgraduate resident will be rotated into trauma clinic per week at a 1 in 4 weeks rotation system. This will be shared responsibility between Year 1 and Year 2 residents (rotations into Trauma Clinic are based on their given individual timetables).
  - Year 3 residents will review their own trauma exam cases during their own personal treatment sessions on Fridays at HPB. Following graduation from the MDS program, cases requiring more long term follow up will be referred back to Trauma clinic for reviews.  
(\*Postgraduates on Trauma Clinic rotations will NOT be allowed to book orthodontic patients during that timeslot. All Orthodontic patients can only be booked and seen during their own personal treatment sessions).
- iv. Postgraduate cases management responsibilities
- The postgraduate resident on rotation is required to prepare a summary of cases scheduled for the week ahead of time (preferably **at least ONE week** in advance). This will be presented to the covering faculty member prior to the trauma clinic; to discuss and confirm the treatment plan for the upcoming session.
  - Postgraduate residents can choose to take on certain cases for continued care under themselves (i.e. for presentation as exam cases). This should be identified and logged into the HPB New Trauma Cases Logbook as soon as the case is taken on.
  - These cases should ideally be identified and taken on early in the management of the case, e.g. at acute treatment phase, or during the review/ treatment visit immediately after stabilization of acute injury.
  - Postgraduate residents can choose to bring their cases into Trauma clinic for treatment or under their own personal treatment slots. If they choose to bring it into Trauma clinic, the resident is required to ensure that adequate time is allocated for the treatment, and that other patients in the trauma clinic are still seen to at their scheduled appointment times.
  - Postgraduate personal log of trauma cases: Each postgrad is to log the cases they saw under Trauma clinic. Logbook is to be submitted for auditing/discussions at the end of each term. Format and content of the logbook will be determined.



## 13. KK WOMEN'S AND CHILDREN'S HOSPITAL ROTATION

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**Facilitator:** Dr Chay Pui Ling

### Clinical session

- Every Tuesday (Time: 830am-1230pm; 130pm – 6.00pm) during term of rotation
- Dental Emergency Call (6-8 calls/ month, minimum of 20/ term) on Tuesdays, Saturdays and Sundays

### Terms

- Term 4 (Incoming Year 3): April - June
- Term 1 (Year 3): July – September
- Term 2 (Year 3): September 2017 –December
- Term 3 (Year 3): January – March

### Pre-requisites

1. Residents must have completed all clinical competencies as stipulated in the Paediatric Dentistry Residency Training Programme manual.
2. Resident must have completed General Anaesthesia (GA) rotation in NDC and be competent in the dental management of patients under GA
3. Undergone OMS rotation in NDC and be familiar with delivering of urgent dental treatment for children and adolescents in an emergency room setting.
4. Residents are required to attend the 1 day KKCH clinical orientation (and complete the necessary E modules) held in January/July.
5. Residents to be BCLS certified

### Learning Objectives

1. Medically Complex Patients
  - To gain exposure and understanding of developmental and medical conditions that impact delivery of care and treatment planning
  - To be proficient in the diagnosis and treatment planning of children with medical conditions, i.e. medically complex patients
  - To gain experience in coordinating dental care and multidisciplinary care of patients with medical co-morbidities
2. Cleft Lip/Palate and Craniofacial Disorders
  - To be cognizant of the dental manifestations and be proficient in the dental management of cleft lip/palate and craniofacial disorders
  - Gain exposure to multi-disciplinary management of cleft lip/palate and craniofacial disorders.
3. To be proficient in provision of acute emergency dental care, thorough on-call responsibilities.
  - Diagnosing and managing acute dental traumatic injuries and acute dental infections.
  - To gain exposure in emergency dental treatment under sedation/ general anaesthesia

### Target

1. Target Case Load for Medical Complex Cases: 20 cases
2. Target Case Load for Cleft Lip/Palate and Craniofacial Cases: 20 cases
3. Target Number of Emergency Dental Calls: 20 calls

**Reading Material:** KKH Dental Service DO Handbook

## 14. PAEDIATRIC DENTISTRY CHIEF RESIDENT RESPONSIBILITIES

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**When:** 3<sup>rd</sup> Year of Paediatric Dentistry Residency

**Length:** One Term

### 1. Objectives

- Provide leadership development opportunities for the residents
- Provide experience of academic, institutional responsibilities

### 2. Responsibilities

#### a. Administrative

- Journal club: Schedule residents to present at Journal Club, ensure that the articles chosen be circulated to Faculty IC for approval 3 weeks before date of journal club.
- Point of contact for dissemination of information from Nurse In charge/ Faculty Members
- Ensure all residents have opened/blocked out clinical sessions appropriately (e.g., term break, visiting professors, rotations, research time) on electronic patient scheduling system.
- Assist junior residents on clinical patient management matters

#### b. Clinical

- Infant Oral Health Clinic: Liaise with Dr Sim
- General Anesthesia Clinic
  - i. Collate general anesthesia audit of resident GA cases (Liaise with Dr Sim)
  - ii. When there is concurrent GA cases on Tuesday mornings (e.g., cases in Main OT and MCOT), to ensure that there is always a resident in each OT.
- *Ped Patient Tracking Log Book* (e.g., with Medical Social Worker/ OMS faculty, AOCC referral and response, communications with physician): To review on a weekly basis.
  - i. Ensure that all residents enter patients' details and follow up on the issues listed in the Log Book
  - ii. In the event that an issue needs to be resolved and the managing resident is uncontactable, chief resident to step in and resolve issue with consultation from faculty member.
- *Mixed Dentition/ Multi-Disciplinary Clinic Patient Log Book*: To review on a monthly basis to ensure that all patients in the waiting list were called and appointments made. If patient no longer want an appointment, to note in log book as well as patient's titanium record.

#### c. Education

- Teach in undergraduate program
-



**15. TEMPLATE: Clinical Returns (Paediatric Dentistry)**

Resident Name				
Date Submitted	Year		Term	
Types of cases operated	Institution			Grand Total
	NUHS	NDC	HPB	
<b>1. Restorative Dentistry</b>				
Class II restorations				0
Class IV restorations including strip crowns				0
Stainless steel crowns (Primary teeth)				0
Stainless steel crowns (Permanent teeth)				0
<b>Subtotal</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>2. Endodontics</b>				
Primary teeth pulpotomy				0
Primary teeth pulpectomy				0
Permanent teeth apexification				0
Permanent teeth apexogenesis (include revascularisation)				0
<b>Subtotal</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>3. Permanent Teeth Trauma Management</b>				
Splinting and repositioning of teeth				0
Management of ankylosed teeth				0
Ongoing trauma patients				0
Completed trauma patients (now on regular follow-up)				0
<b>Subtotal</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>4. Interventional Orthodontics</b>				
Band and loop space maintainer				0
Lower lingual holding arch				0
Nance appliance				0
Other removal appliances				0
Ongoing orthodontics cases				0
Completed orthodontics cases				0
<b>Subtotal</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

## 16. Application for Variable/ Conference Leave

Faculty of Dentistry  
Division of Graduate Dental Studies



### Application for Variable / Conference Leave\* (Residents)

PART I – TO BE COMPLETED BY RESIDENT		
<b>A. Particulars</b>		
Name:	Programme (*pls delete accordingly): *Endodontics / Oral & Maxillofacial Surgery / Orthodontics / Paediatric Dentistry / Periodontology / Prosthodontics	Year of Study:
Address during period of leave:		Contact No.:
<b>B. Purpose of Application</b>		
<input type="checkbox"/> Conference Leave (IMPT NOTE: All applications for conference leave must be submitted with the completed <u>Indication of Research Conference Presentation Form</u> available on DENNET or from Dean's Office.)		
<input type="checkbox"/> Variable Leave		
_____		_____
Signature of Resident		Date
<b>C. Proposed Period of Leave</b>		
Conference Leave: From: _____ to _____		Total number of days: _____
Variable Leave: From: _____ to _____		Total number of days: _____
Dates	Classes/Duties Missed (at NUS, NUH & NDC)	Duties covered by:
PART II – TO BE COMPLETED BY ASSOCIATE PROGRAMME DIRECTOR OF RESIDENCY PROGRAMME		
Application is supported <input type="checkbox"/> Yes <input type="checkbox"/> No		
Reasons/Comments (if application is not supported):		
_____		_____
Signature of MDS Residency Associate Programme Director		Date
PART III – TO BE COMPLETED BY PROGRAMME DIRECTOR OF RESIDENCY PROGRAMME		
Application is approved <input type="checkbox"/> Yes <input type="checkbox"/> No		
Reasons/Comments (if application is not approved):		
_____		_____
Signature of MDS Residency Programme Director		Date
PART IV – FOR OFFICAL USE (DGDS OFFICE)		
Total number of days taken for the academic year : _____ days (inclusive of leave applied for above.)		

\*delete as appropriate.

Revised August 2014

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## 17. Off Site Incident Reporting Framework

Off Site Injury May 17<sup>th</sup> 2018 Version 1 Final

### STANDARD OPERATING PROCEDURE OFF SITE INCIDENT REPORTING FRAMEWORK

