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**INTRODUCTION**

OMFS department handles various trauma cases as well as cases such as dentofacial deformities, dental pathologies, post-trauma defects, tumours, and complicated exodontia. These cases are mostly treated under general anaesthesia (elective category). Cases requiring operative procedure within 6 months. If not done, it will not become an emergency but will affect the quality of life and patient's functions.<sup>1</sup>  
**Waiting time** is defined as time elapsed from the time surgeon placing the patient on surgery list and completion of the surgery

**1. SELECTION OF OPPORTUNITIES FOR IMPROVEMENT**

**1.1 PROBLEM IDENTIFICATION & PRIORITISATION**

Problem	S	M	A	R	T	Score
Poor pass over of oncall cases	12	12	12	12	10	58
Long waiting time for elective cases under general anaesthesia	18	16	18	18	18	88
Long waiting time for surgical removal of impacted teeth under local anaesthesia	13	12	10	10	10	55
Difficult traceability of number of cases seen in clinic/ emergency/ward	13	12	12	12	10	59

Members vote: 6 people

**1.2 REASON FOR SELECTION**

- S** 30% cases are initially seen but not completed, 33% patient cases had to be done under local anaesthesia instead, waiting for treatment is found to cause anxiety, distress and uncertainty among patients<sup>2</sup>
- M** Progression of the disease causing 15% requiring additional last minute medical assessment, increased recovery period and stay at hospital and potentially increase in post operative infection incidence<sup>2</sup>
- A** Data can be obtained from :
  - Waiting list board and log book is available in the department
  - OT list
- R** The procedure aligns with the organisation's values and goals and is closely tied to it's core business
- T** Remedial measures could be implemented to reduce waiting time
- Study and remedial measures can be implemented within reasonable period of time

**1.3 LITERATURE REVIEW**

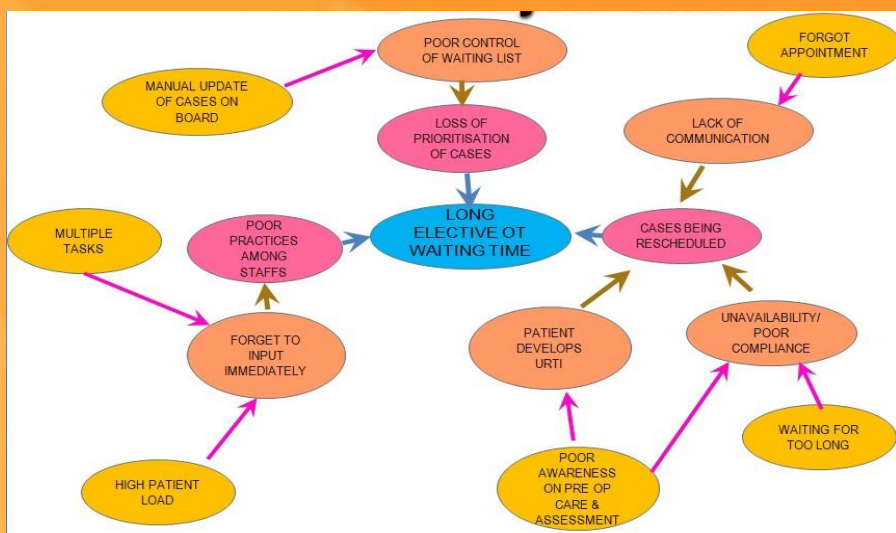
Delays in surgery will have real impacts on patient health outcomes, hospital finances, and resources, as well as training and research programs. A thoughtful and concerted effort is necessary to mitigate these effects  
 - Fu SJ, George EL, Maggio PM, Hawn M, Nazerali R. The Consequences of Delaying Elective Surgery: Surgical Perspective. Ann Surg. 2020;272(2):e79-80.

**1.4 PROBLEM STATEMENT**

A survey conducted from January to June 2022 showed that only 40% of patients completed elective surgery within 6 months. Multiple factors include weakness of work process (lack of proper tracking & time monitoring), overburdened officers, manual update of boards, poor communication and poor compliance of patient to appointment dates and health optimization contributes to the current problem. This study aims to improve the percentage of elective cases completion in OMFS Department within 6 months

**2. KEY MEASURES FOR IMPROVEMENT**

**2.1 PROBLEM ANALYSIS CHART**



**2.2 OBJECTIVES**

**General**

**Specific**

To increase the percentage of patients completing their elective surgery within 6 months.

To verify the percentage of patients completing their elective surgery within 6 months

To identify factors contributing to the increase in waiting time

To implement effective prevention strategies to increase the number of patients completing the operation

To evaluate the intervention strategies implemented

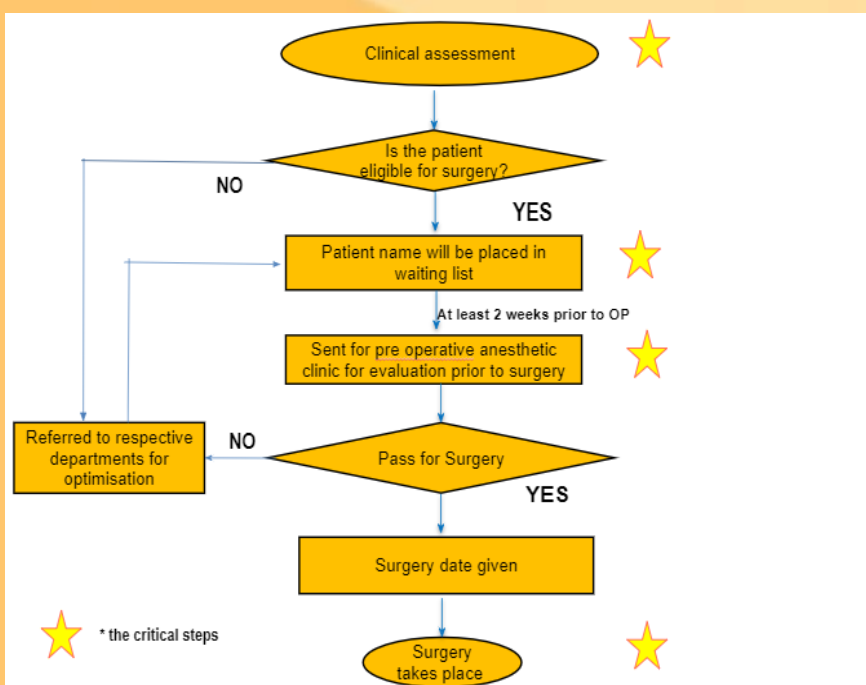
**2.3 INDICATOR & STANDARD**

Indicator: Percentage of patients completing elective surgery under GA within 6 months

Formula =  $\frac{\text{Number of patients completed elective surgery under GA in 6 months}}{\text{Number of patients scheduled for elective surgery under GA in 6 months}} \times 100$

Standard : >90% Departmental Consensus

**2.4 PROCESS OF CARE**



**3. PROCESS OF GATHERING INFORMATION**

**3.1 METHODOLOGY**

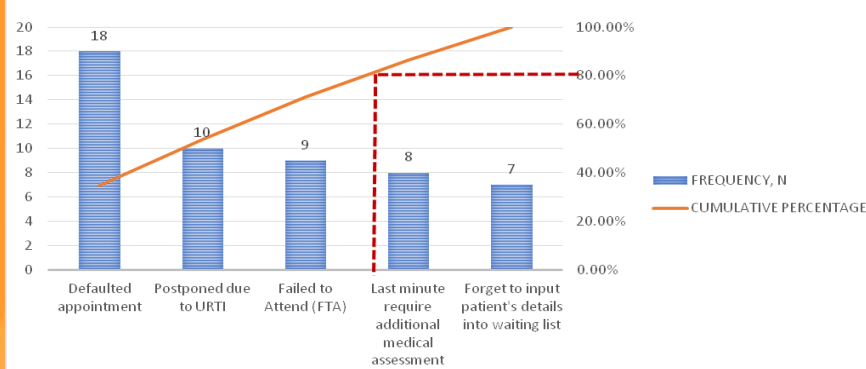
STUDY DESIGN	Retrospective study
SAMPLING TECHNIQUE	Universal sampling Sample size: Patients placed in elective OT waiting list for 6 months Site: OMFS Clinic, Hospital Sungai Buloh
INCLUSION CRITERIA	i. Patients fit for elective surgery under general anaesthesia
DURATION OF STUDY	i. 6 months : Jan- June 2022 (Verification study) ii. 2 months : July – August 2022 (Remedial measures) iii. 6 months: Post data analysis Cycle 1 (September 2022- February 2023) iv. 2 months: March – April 2022 (Remedial measures) v. 6 months: Post data analysis Cycle 2 (May 2023- October 2023)

**4. ANALYSIS AND INTERPRETATION**

Verification study done from January to June 2022 found out that only 40% of the patients completed their elective surgery within 6 months

The contributing factors were studied using a Pareto Analysis and shown in graph below

**CAUSES OF LONG ELECTIVE OT WAITING TIME**



**5. STRATEGIES OF CHANGE**

**CYCLE 1**

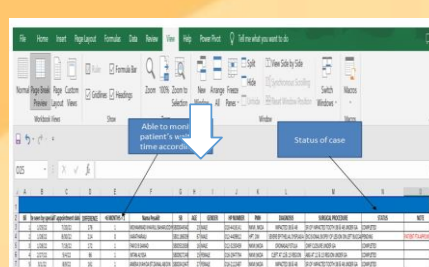
**1) PRIORITISATION OF ELECTIVE SURGERY CASES**



**2) APPOINTMENT OF OT MANAGER EVERY 6 MONTHS**

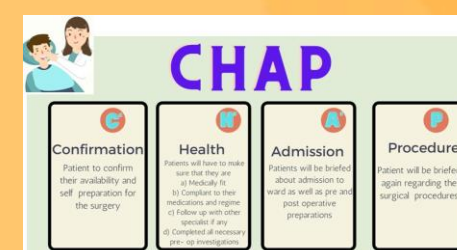
- Dental officer is in control of the elective OT board
- With the guidance of specialist – to make sure fair inclusiveness of elective cases in OT slots

**3) DIGITISATION OF OT LIST WAITING LIST – Using Microsoft Excel**



**CYCLE 2**

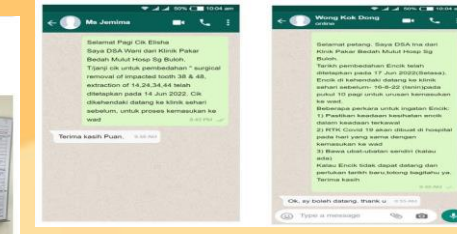
**4) DENTAL OFFICERS INFORM PATIENT ABOUT OT APPOINTMENT FLOW**



**5) CME FOR NEW DENTAL OFFICERS Held every quarterly after department meetings**



**6) WHATSAPP REMINDER TO PATIENTS 3 days prior to appointment by dental officers**



**7) PATIENT EDUCATION BROCHURE Distributed in waiting area**



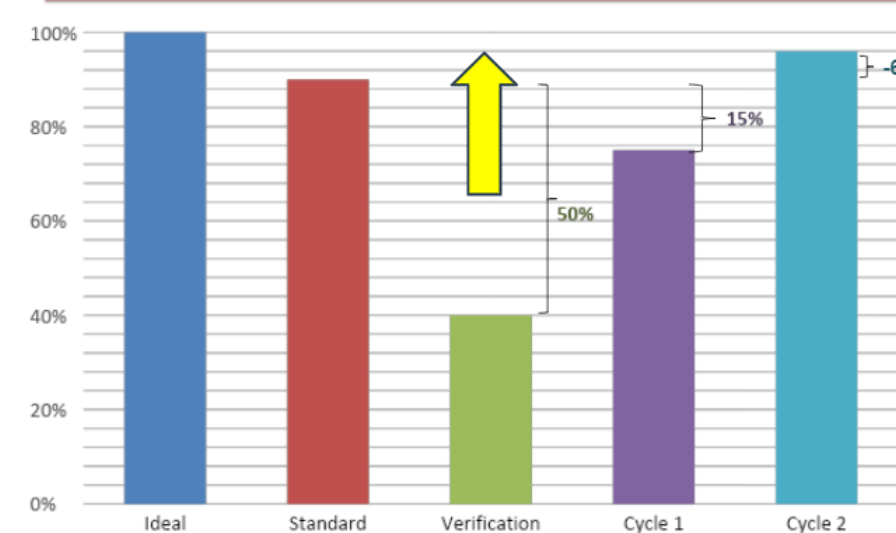
**6.0 EFFECT OF CHANGE**

**6.1 MODEL OF GOOD CARE**

No	Items	Criteria	Standard	Pre intervention	Cycle 1	Cycle 2
1	Clinical assessment	(A)Patient must be briefed about the surgery	100%	100%	100%	100%
		(B)Give advice on pre-op care to avoid cancellation by Anesthesia team due to upper respiratory tract infection (URTI)	100%	50%	60%	100%
2	Waiting list	(A)Patient's name and date assessed by specialist must be documented in case note and log book (digitalised)	100%	60%	90%	100%
		(B)Dental officer in charge to inform OT date to patient via call or message	100%	30%	75%	100%
3	Pre anaesthetic assessment	Patient will be given appointment at least 2 weeks prior to surgery date	100%	30%	50%	100%
4	Surgery done	Patient to complete operation within 6 months	90%	40%	75%	96%

**6.2 ABNA**

**Achievable Benefit Not Achieved (ABNA) GRAPH**



**7. CONCLUSION**

No	Objective	Conclusion
1	To determine the prevalence of increased waiting time for elective surgery	Pre remedial data showed only 40% of patients completing their elective surgery within 6 months
2	To identify factors contributing to the increase in waiting time	Multiple contributing factors were identified including poor practices among staffs, poor control of operation board, patients being unfit for surgery.
3	To implement effective prevention strategies to increase the number of patients completing the operation	Strategies formulated were prioritizing the general operation list by incorporating more slots for elective cases, Whatsapp messages to alert patients on appointments and optimising their health to avoid last-minute cancellations
4	To evaluate the intervention strategies implemented.	Post remedial, percentage of patients completing their elective surgery increased from 40% to 96%

**8. IMPACT OF STUDY**

- Reduced OT time wastage by optimisation of slot given
- Able to provide better care to patients within shorter period of time
- Reduced rate of default cases : 9%
- Reduced rate of last minute cancellation < 5%

**9. LESSON LEARNT**

- This project established the best possible practice of evaluating waiting time prior to surgery and methods to reduce waiting time
- Methods used to overcome the problem were within means and doable with close monitoring and periodic follow up
- The results achieved reflects the effect of meticulous planning, cooperation of staffs and execution of steps in daily clinical practices

**10. THE NEXT STEP**

- Continue regular audits at clinic level & share the experience to all OMFS clinics in Gombak who may face the similar issues.
- Currently in the progress of creating database for elective surgery cases via Microsoft Access for efficient traceability and monitoring of cases – if successful, it can be replicated by other teams

**ACKNOWLEDGEMENT**

Special thanks to our Head of Department, Dr Syed Iqbal Bin Syed Husman, OMFS department officers and staffs who have contributed to the development of this project