

IMPACT ON OUTCOME OF SEVEN MONTHS IMPLEMENTATION GLOBAL SURGERY AT HOSPITAL MERSING, HOSPITAL KLUSTER JOHOR TIMUR IN 2022

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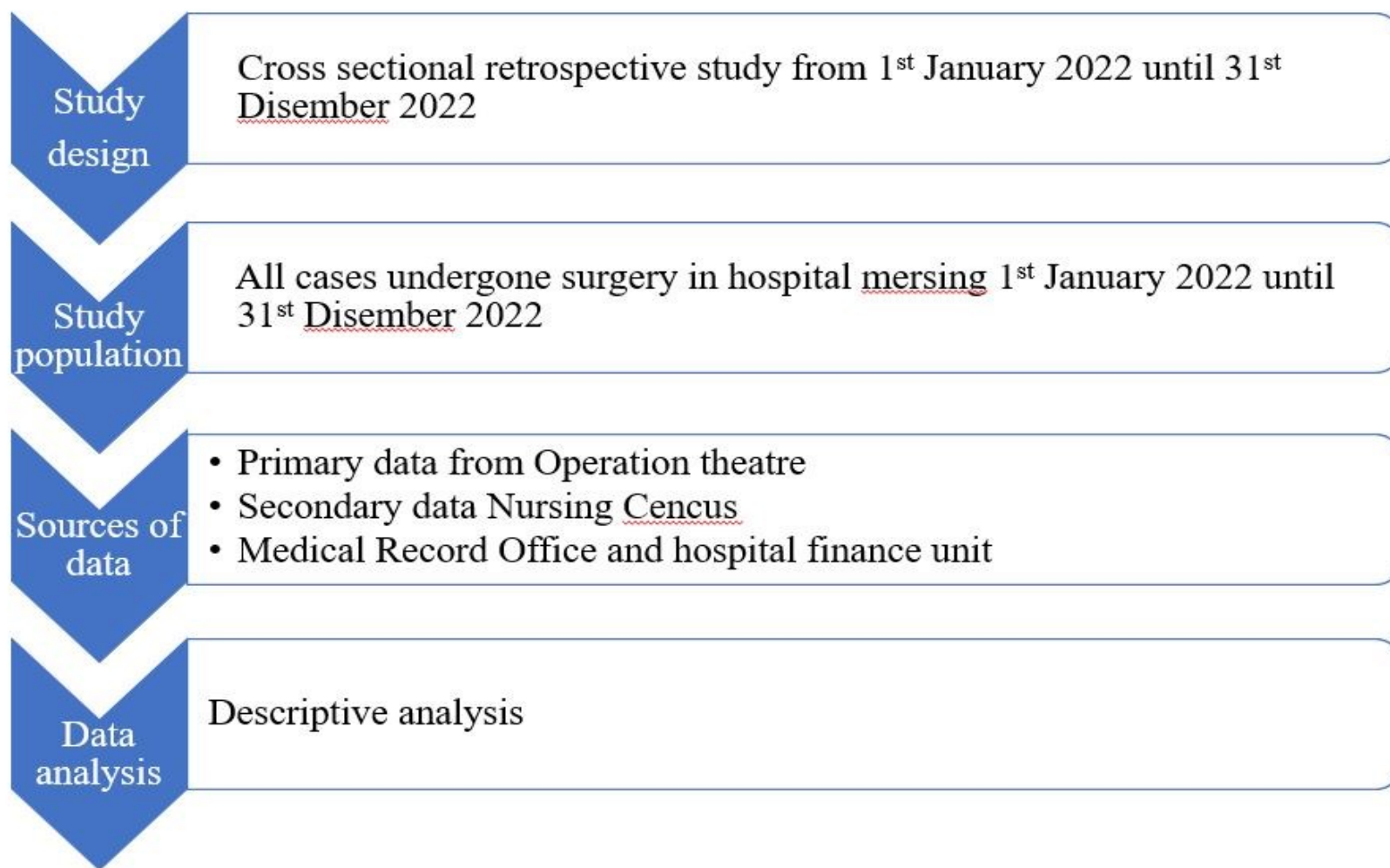
1 INTRODUCTION

- Hospital Mersing is a non specialist hospital at the East Coast of Johor and part of Hospital Kluster Johor Timur with Hospital Sultan Ismail Johor Bahru (HSIJB) and Hospital Kota Tinggi with 70 beds, covering for about 89,000 population.
- Distance from specialist hospital and travel time are 120 km or two hours away. Interfacility transfer (IFT) around 1000 cases per year, about 3 to 4 cases daily with one simple case will used 7-8 hours per trip. Surgical base cases referral are about 30% from the total IFT cases.
- Global surgery initiated in Hospital Mersing in May 2022 with the help form Hospital Sultan Ismail Johor Bahru (HSIJB) and Hospital Sultanah Aminah Johor Bahru (Anesthetist team), with mainly surgical and orthopedic department running the Operation Theatre (OT).

2 OBJECTIVES

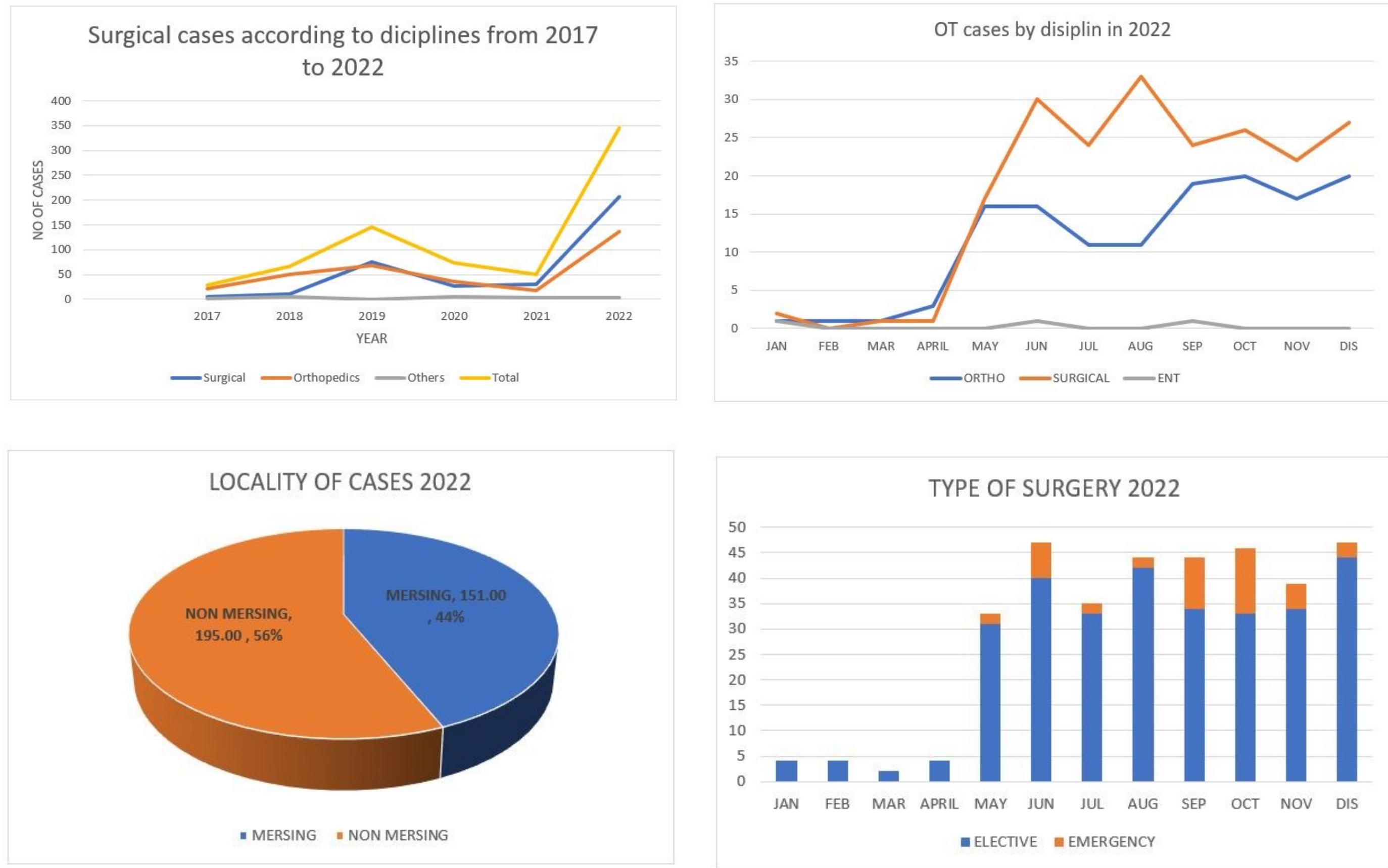
- To analyse the output of Global Surgery Initiative in Hospital Mersing, Hospital Kluster Johor Timur
- To analyse the outcome of Global Surgery Initiative in Hospital Mersing, Hospital Kluster Johor Timur
- To determine the impact of Global Surgery Hospital Mersing, Hospital Kluster Johor Timur

3 METHODOLOGY



4 RESULTS

Output



8 CONCLUSIONS

The Global Surgery initiative in Hospital Mersing, Hospital Kluster Johor Timur has great potential of success in long term. For time being, the program is running with minimal manpower and inadequate asset, however despite these hassle we still able to get good input, outcome and impact but certainly with adequate manpower and assets combined with already very good team cooperation from lead kluster hospital, Hospital Sultan Ismail Johor Bahru, this program will boost further and benefitted both patients and the hospital itself. This study will be further continue for a couple of years to see better results of this initiative.

Outcome

Table 1: Type of Procedures done

TYPE OF PROCEDURE - ORTHOPEDIC	BIL.	TYPE OF PROCEDURE - SURGICAL	BIL.
ROI FEMUR	7	HERNIAPLASTY	55
PLATING RADULNA	22	TABOCLAY PROCEDURE	4
EXCISION BHOPI	13	EUA	39
PLATING PEAKR	13	WD	2
SSG & Z SUTURING	2	CHECUCISION	17
ANTHEROTOMY + WOG	1	AMILARY CLEARANCE	1
WD	7	MAC	4
I&D	3	PAKALUMBICAL HERNIA REPAIR	5
ROI REPLATING RAD	1	CHECUCISION	3
ROI TIBIA	4	APPENDECTOMY	4
RAYS AMPUTATION	2		
PLATING TIBIA	2	CLOSURE ILEOSTOMY	2
WE	1	WIDE LOCAL EXCISION BREAST + MICHONDCTAL TOMY	1
TBW & CERCLAGE WIRE	2	MASTECTOMY	4
PLATING FIB	1	SAUCEKIZATION	2
TARSAL TUNNEL RELEASE + PLANTAR RELEASE	3	I&D	6
Z SUTURING + SSG	1	REVERSAL OF DOUBLE BARREL	1
ANTEROLATERAL LOCKING PLATE	2	WLE BREAST	2
I&D	2	REVERSAL ILEOSTOMY	1
ROI PATELLA	1	EUA & I&D	2
WD + RAYS AMPUTATION	1	REVERSAL STOMA	1
WD + SHORTEING METATARSAL	1	WE	1
WD + TENDON REPAIR	1	EUA + SUTURING	2
AMPUTATION & REPAIRSHOING	1	ME	1
REVISION MEDIAL MALLEOLUS SCREW FIXATION	1	HEMATOMA EVACUATION	1
EXCISION GRANULOMA	1	TOTAL	186
REMOVAL OF SCREW	1		
SAUCEKIZATION	2		
LOCKING PLATE	3		
TKR	1		
TBW	2		
PLATING HUMERUS	1		
ROI HUMERUS	1		
ROI ELBOW	1		
TENDON LENGTHENING	1		
ORIF & PLATING CLAVICLE	1		
ROI SYNDROMOTIC SCREW MALLEOLUS	1		
ROI RADULNA	2		
TOTAL	114		

RESULT

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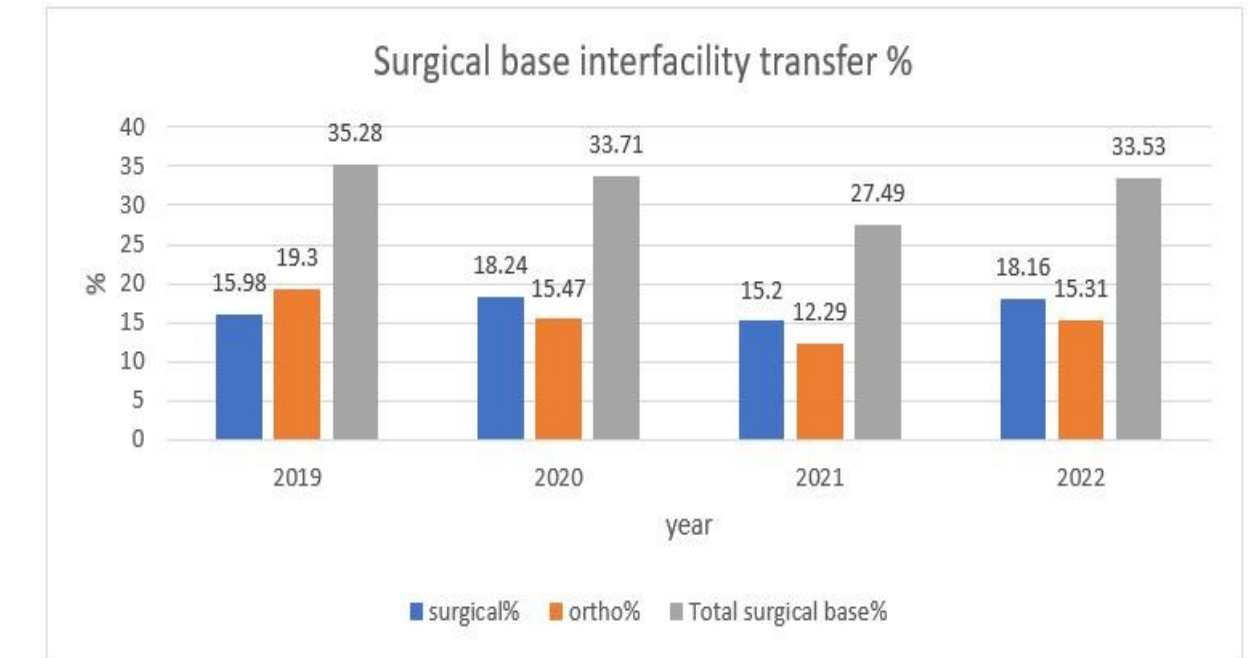
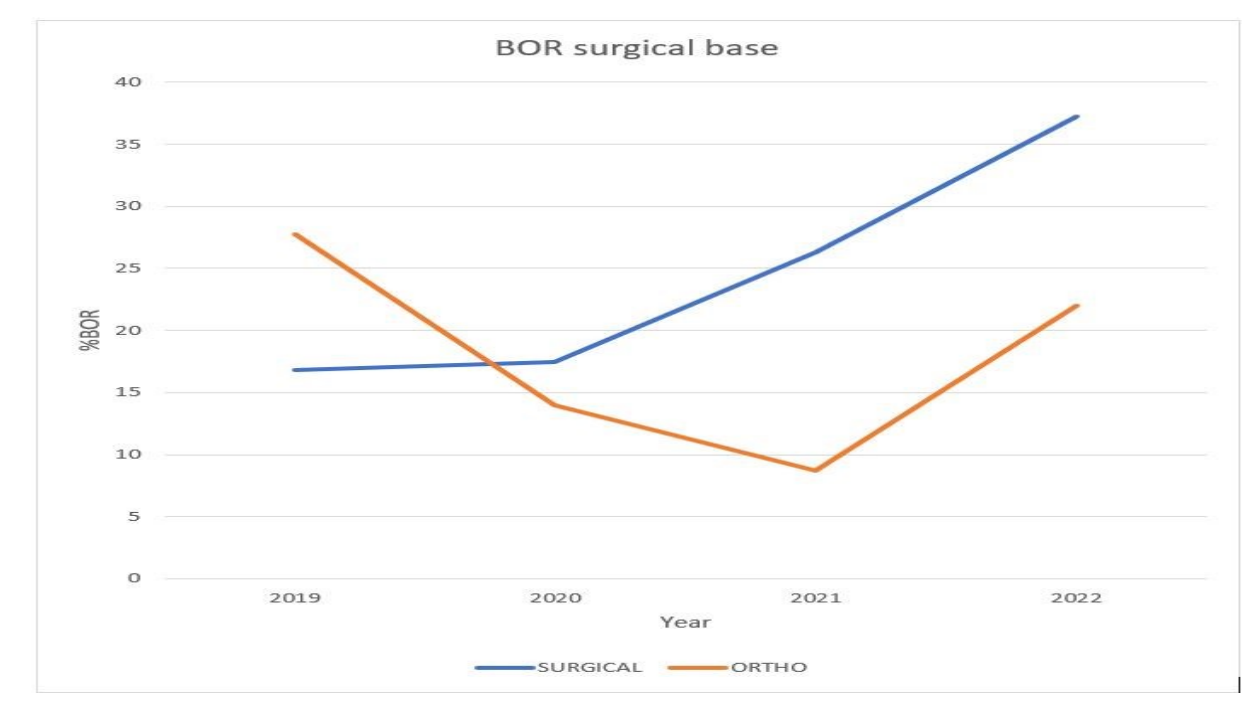


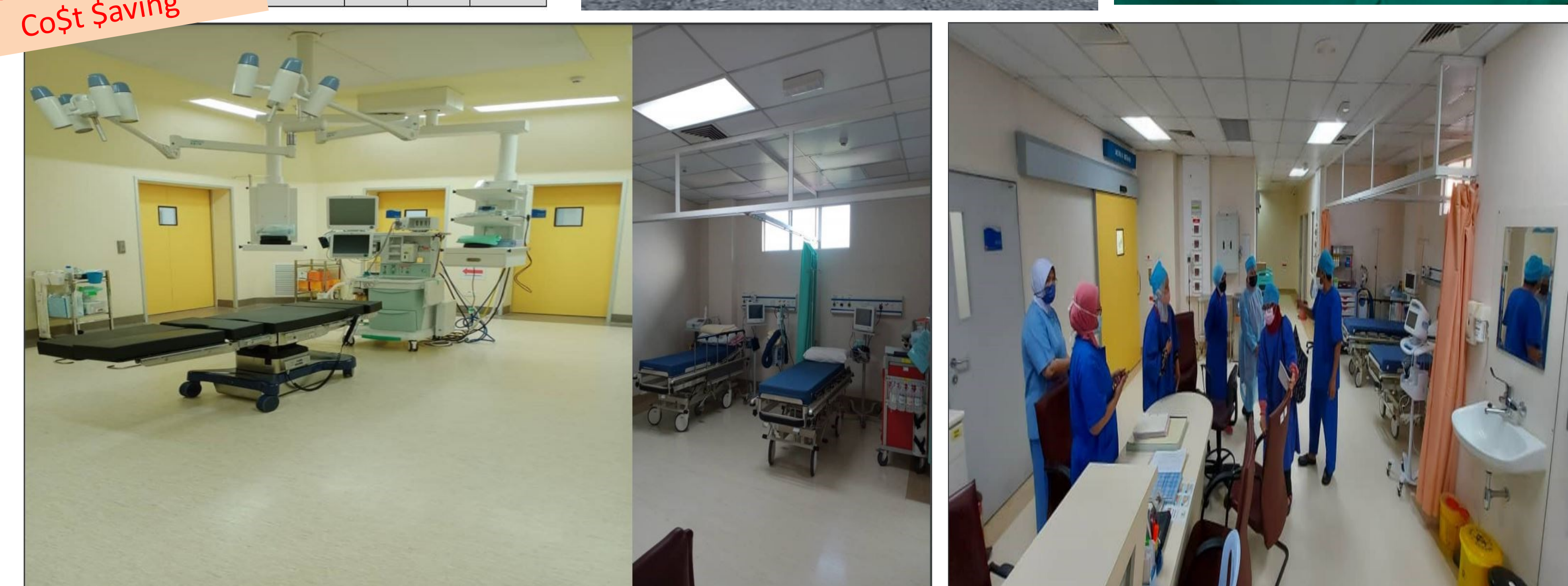
Table 2: Hospital expenditure for Medical Officer attachment program at Hospital Sultan Ismail Johor Bahru in preparation for surgical procedures in Hospital Mersing

YEAR	NO OF MO	DISCIPLINE	COST (RM)	TOTAL COST
2019	1	ANESTH	2,868.00	2,868.00
2020	1	SURGICAL	6,124.80	6,124.80
2021	1	ANESTH	2,034.62	
	1	ANESTH	2,672.12	
	1	SURGICAL	2079.62	25,566.55
	1	SURGICAL	18780.19	
2022	1	ANESTH	2179.12	2179.12
TOTAL	7		36,738.47	36,738.47

Impact

Table 3: Out of Pocket Expenditure for patient and relative for surgery at HSIJB.

ITEM	COST (RM)	1 DAY DISCHARGE STEP UP PATIENT	2 DAY 1 NIGHT	3 DAY 2 NIGHT	2 DAY RETURN TRIP
TAXI - 1WAY	166.75	166.75			
TAXI - RETURN TRIP	333.50		333.50	333.50	667.00
FOOD/DAY	20.00-50.00	20.00	50.00	70.00	20.00
ACCOMODATION/DAY	60.00-120.00		60.00-120.00	120.00-240.00	
TOTAL COST		186.75	443.50	523.50	687.00
		353.50	503.50	643.50	



- For the duration of seven months of this initiatives no significant reduction of interfacility transfer (IFT) thus no financial impact was seen for IFT but **reduction in hospital expenditure for medical officer attachment training** in lead hospital can be seen.
- The impact in patients and relatives **out of pocket expensed** were huge. There is huge amount of savings when the surgery can be done near to their home compare to specialist hospital in Johor Bahru.
- Bed occupying rate (BOR)** surgical disciplines seemed in increasing trend in both surgical and orthopedics department even though the hospital BOR not yet affected. This resulted in more bed allocated for surgical discipline to support of Global Surgery in our hospital.
- Both Mersing and imported (non Mersing) cases were done here thus helping out the lead hospital with longer waiting time.
- Can do **in-house surgical related training for medical officer and paramedic** too. In 2023, there are **four resident specialists** placed in Hospital Mersing mainly for supporting the Global Surgery.
- Positive feedback** was gained for the first circumcision program in collaboration of Global Surgery with HSIJB, which has been done for 20 kids in the early years of 2023

DISCUSSIONS

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- The Global surgery initiative of Hospital Mersing has shown significantly increased in number of surgical cases with significant numbers of procedures that can be done in our hospital. This can be supported by the increase of BOR (Bed occupying rate) for surgical discipline. With this surgical procedures showing good performance here in Mersing, we will definitely provide adequate beds necessary for this purpose.
- Financial savings for both hospital expenditure (medical officer training) and out of pocket expenses borne by patient and relatives are amongst the positive impact seen at this moment.
- The biggest impact are four resident specialist placed at Hospital Mersing in support of our Global Surgery and help to improve the skill, knowledge and overall competencies of the staff. There are already few medical officer took MedEx exam to pursue their study. Hopefully Hospital Mersing will contribute in producing specialist in future.

The Operation Theatre team currently operate with minimal manpower of one team, minimal instruments and loan instruments. Its really challenging if we need to expand the services due to manpower shortage.