



GENERAL SURGICAL SERVICES
MINISTRY OF HEALTH MALAYSIA

GENERAL SURGERY

INPATIENT, OUTPATIENT,
ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



2021

GENERAL SURGERY

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CENSUS REPORT 2016-2019



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CONTRIBUTORS

Dato' Dr Fitzgerald Henry

Senior Consultant General Surgeon and Head
Department of General Surgery
Hospital Selayang,
Selangor

Dr Hanif bin Hussein

Senior Consultant Vascular Surgeon and Head
Department of General Surgery
Hospital Kuala Lumpur,
Wilayah Persekutuan Kuala Lumpur

Dr Clement Edward a/I Thaumanavar

Consultant General Surgeon and Head
Department of General Surgery
Hospital Tengku Fauziah,
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Dato' Dr Cheong Yew Teik

Consultant Breast and Endocrine Surgeon and Head
Department of General Surgery
Hospital Pulau Pinang,
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Dr Nagarajan a/I T. Vellasamy

Consultant General Surgeon and Head
Department of General Surgery
Hospital Seberang Jaya,
Pulau Pinang

Dr Nil Amri bin Mohamed Khalid

Consultant Colorectal Surgeon and Head
Department of General Surgery
Hospital Sultanah Bahiyah,
Alor Setar, Kedah

Dr Rashide bin Yaacob

Consultant General Surgeon and Head
Hospital Sultan Abdul Halim,
Sungai Petani, Kedah

Dr Umasangar a/I M. Ramasamy

Consultant General Surgeon and Head
Department of General Surgery
Hospital Taiping,
Perak

Dr Ramesh a/I Thangaratnam

Consultant General Surgeon and Head
Department of General Surgery
Hospital Serdang,
Selangor

Dr Lewellyn Rajakumar a/I Kovil George

Consultant General Surgeon and Head
Department of General Surgery
Hospital Teluk Intan,
Perak

Dr Yan Yang Wai

Senior Consultant General Surgeon and Head
Hospital Raja Permaisuri Bainun
Ipoh, Perak

Dr Nik Azim bin Nik Abdullah

Senior Consultant Hepatobiliary Surgeon and Head
Department of General Surgery
Hospital Umum Sarawak,
Kuching, Sarawak

Dr Chieng Tiong How

Consultant Colorectal Surgeon and Head
Department of General Surgery
Hospital Sibu,
Sarawak

Datin Rohamini @ Rumani binti Sibin

Consultant General Surgeon and Head
Department of General Surgery
Hospital Queen Elizabeth 2,
Kota Kinabalu, Sabah

Dr Siti Zubaidah binti Sharif

Consultant Breast and Endocrine Surgeon and Head
Department of General Surgery
Hospital Queen Elizabeth 2,
Kota Kinabalu, Sabah

Dato' Dr Ahmad Shanwani bin Mohamed Sidek

Consultant Colorectal Surgeon and Head
Department of General Surgery
Hospital Raja Perempuan Zainab II,
Kota Bharu, Kelantan

Dr David Ong Li Wei

Consultant Colorectal Surgeon and Head
Department of General Surgery
Hospital Tengku Ampuan Afzan,
Kuantan, Pahang

Dr Abd Hamid bin Daud

Consultant General Surgeon and Head
Department of General Surgery
Hospital Kemaman,
Terengganu

Dr Nor Hisham bin Muda

Consultant Breast and Endocrine Surgeon and Head
Department of General Surgery
Hospital Sultanah Nur Zahirah,
Kuala Terengganu, Terengganu

Dr Khairudzi bin Salekan

Consultant General Surgeon and Head
Department of General Surgery
Hospital Sultanah Nora Ismail,
Batu Pahat, Johor

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CONTRIBUTORS

Dr Ros'Aini binti Paijan

Consultant General Surgeon and Head
Department of General Surgery
Hospital Pakar Sultanah Fatimah,
Muar, Johor

Dr Ainani binti Muhamad Husin

Consultant General Surgeon and Head
Department of General Surgery
Hospital Tanah Merah,
Kelantan

Dr Mohd Asri bin Che Jusoh

Consultant General Surgeon and Head
Department of General Surgery
Hospital Sultan Ismail Petra
Kuala Krai, Kelantan

Dr Tuan Nur'Azmah binti Tuan Mat

Consultant General Surgeon and Head
Department of General Surgery
Hospital Sultanah Aminah,
Johor Bahru, Johor

Dr Anita binti Baghawi

Consultant Breast and Endocrine Surgeon and Head
Department of General Surgery
Hospital Putrajaya,
Wilayah Persekutuan Putrajaya

Dr. Lo Gin Yong

General Surgeon and Head
Department of General Surgery
Hospital Kulim,
Kedah

Dr Ahmad Khairil Irham bin Harun

General Surgeon and Head
Department of General Surgery
Hospital Langkawi,
Kedah

Dr Tan Wing Nung

General Surgeon and Head
Department of General Surgery
Hospital Seri Manjung,
Perak

Dr Azuddin bin Mohd Khairy

Trauma Surgeon and Head
Department of General Surgery
Hospital Tengku Ampuan Rahimah,
Klang, Selangor

Dr Mohamed Akbar bin Mohamed Bahari

General Surgeon and Head
Department of General Surgery
Hospital Ampang,
Selangor

Dr Jasiah binti Zakaria

Consultant Colorectal Surgeon
Hospital Tuanku Ja'afar,
Seremban, Negeri Sembilan

Dato' Dr Muhammad Safian bin Naim

Consultant General Surgeon and Head
Department of General Surgery
Hospital Melaka,
Melaka

Dr Mathew Thomas

Consultant General Surgeon and Head
Department of General Surgery
Hospital Sultan Ismail,
Johor Bahru, Johor

Dr Andre Das

Consultant General Surgeon and Head
Department of General Surgery
Hospital Kajang,
Selangor

Dr Lee Yuk Loong

General Surgeon and Head
Department of General Surgery
Hospital Shah Alam,
Selangor

Dr Yap Lee Ming

General Surgeon and Head
Department of General Surgery
Hospital Sungai Buloh,
Selangor

Dr Atiki Falparado bin Ahmad

General Surgeon
National Cancer Institute,
Wilayah Persekutuan Putrajaya

Dr Saravanan a/I Ramasamy

General Surgeon and Head
Department of General Surgery
Hospital Enche' Besar Hajjah Khalsom,
Kluang, Johor

Dr Norly binti Salleh

General Surgeon and Head
Department of General Surgery
Hospital Segamat,
Johor

Dr Zaidah binti Ali

General Surgeon and Head
Department of General Surgery
Hospital Tuanku Ampuan Najihah,
Kuala Pilah, Negeri Sembilan

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CONTRIBUTORS

Dr Syahrir Sukarno bin Mohd Fadzil

General Surgeon and Head
Department of General Surgery
Hospital Labuan,
Sarawak

Dr Khasnizal bin Abd. Karim

General Surgeon and Head
Department of General Surgery
Hospital Tawau,
Sabah

Dr Patrick Chang Siong Junk

General Surgeon and Head
Department of General Surgery
Hospital Sarikei,
Sarawak

Dr Dayang Azzyati binti Awang Dahlan

General Surgeon and Head
Department of General Surgery
Hospital Miri,
Sarawak

Dr Rashidah binti Mohamad Khalid

General Surgeon and Head
Department of General Surgery
Hospital Port Dickson,
Negeri Sembilan

Dr Ahmad Burhan bin Idris

Medical Officer
Hospital Tengku Fauziah,
Kangar, Perlis

Dr Mohariz bin Musa

Medical Officer
Hospital Tengku Fauziah,
Kangar, Perlis

Dr Kumaresan Subramanian

Medical Officer
Hospital Sultanah Bahiyah,
Alor Setar, Kedah

Dr Por Jin Sik

Medical Officer
Hospital Sultan Abdul Halim,
Sungai Petani, Kedah

Dr Tan Kah Hooi

Medical Officer
Hospital Kulim,
Kedah

Dr Burkhairi bin Azmi

Medical Officer
Hospital Langkawi,
Kedah

Dr Lai Chun Ket

General Surgeon and Head
Department of General Surgery
Hospital Duchess of Kent,
Sandakan, Sabah

Dr Nithya. Devi a/p Kandasami

General Surgeon and Head
Department of General Surgery
Hospital Keningau,
Sabah

Dr Doon Yoke Kiet

General Surgeon and Head
Department of General Surgery
Hospital Lahad Datu,
Sabah

Dr Mohd Faizal bin Azizan

General Surgeon and Head
Department of General Surgery
Hospital Kuala Lipis,
Pahang

Dr Azmi bin Hassan

General Surgeon and Head
Department of General Surgery
Hospital Sultan Haji Ahmad Shah
Temerloh, Pahang

Dr Sara Liyana binti Mohd Hisyam

Medical Officer
Hospital Pulau Pinang,
Pulau Pinang

Dr Rosita binti Zakaria

Medical Officer
Hospital Seberang Jaya,
Pulau Pinang

Dr Mahuzah binti Ismail

Medical Officer
Hospital Seberang Jaya,
Pulau Pinang

Dr Zuhriahmi bin Ramli

Medical Officer
Hospital Raja Permaisuri Bainun
Ipoh, Perak

Dr Calvin Dinash Joackim

Medical Officer
Hospital Taiping,
Perak

Dr Adrian Li-Siang Satish

Medical Officer
Hospital Teluk Intan,
Perak

Dr Maslinda Yuhainis binti Firus Khan

Medical Officer
Hospital Seri Manjung,
Perak

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CONTRIBUTORS

Dr Ahmad bin Humaizy

Medical Officer
Hospital Selayang,
Selangor

Dr Rosmalinda binti Kamaruddin

Medical Officer
Hospital Ampang,
Selangor

Dr Imran bin Abdul Jamil

Medical Officer
Hospital Sungai Buloh,
Selangor

Dr How Chu Kean

Medical Officer
Hospital Serdang,
Selangor

Dr Len En Yean

Medical Officer
Hospital Serdang,
Selangor

Dr Farabi bin Abdul Manaf

Medical Officer
Hospital Kajang,
Selangor

Dr Josiah Williams

Medical Officer
Hospital Shah Alam,
Selangor

Dr Musaddiq bin Mohd Nizar

Medical Officer
Hospital Shah Alam,
Selangor

Dr Lim Shin Tom

Medical Officer
Hospital Banting,
Selangor

Dr Khairul Adli bin Salim

Medical Officer
Hospital Kuala Lumpur,
Wilayah Persekutuan Kuala Lumpur

Dr Vikram Singh Sandhu

Medical Officer
Hospital Kuala Lumpur,
Wilayah Persekutuan Kuala Lumpur

Dr Annisaa binti Abu Samah @ Abdul Malek

Medical Officer
Hospital Putrajaya,
Wilayah Persekutuan Putrajaya

Dr Muhammad Ikram Harzany bin Che Yaziz

Medical Officer
Hospital Putrajaya,
Wilayah Persekutuan Putrajaya

Dr Ramizah binti Mohd Shariff

Medical Officer
National Cancer Institute,
Wilayah Persekutuan Putrajaya

Dr Felicia Kong Chiew Yen

Medical Officer
Hospital Tuanku Ja'afar,
Seremban, Negeri Sembilan

Dr Nuramira binti Izhar

Medical Officer
Hospital Tuanku Ampuan Najihah,
Kuala Pilah, Negeri Sembilan

Dr Navin Raj Balachandran

Medical Officer
Hospital Port Dickson,
Negeri Sembilan

Dr Narmatha Kamalanathan

Medical Officer
Hospital Melaka,
Melaka

Dr Nadia binti Ismail

Medical Officer
Hospital Melaka,
Melaka

Dr Mohamad Azril Rizal bin Ghazali

Medical Officer
Hospital Sultanah Aminah,
Johor Bahru, Johor

Dr Mogaraj Sellapan

Medical Officer
Hospital Sultan Ismail,
Johor Bahru, Johor

Dr Lim Shiao Ping

Medical Officer
Hospital Pakar Sultanah Fatimah,
Muar, Johor

Dr Hirdayu binti Abu Bakar

Medical Officer
Hospital Sultanah Nora Ismail,
Batu Pahat, Johor

Dr Sharmaine Marie

Medical Officer
Hospital Enche' Besar Hajjah Khalsom,
Kluang, Johor

GENERAL SURGERY

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CONTRIBUTORS

Dr Muhammad Haziq bin Nasir

Medical Officer
Hospital Segamat,
Johor

Dr Salehah binti Tahkin

Medical Officer
Hospital Raja Perempuan Zainab II,
Kota Bharu, Kelantan

Dr Wan Nur Syahirah binti Wan Rahimi

Medical Officer
Hospital Raja Perempuan Zainab II,
Kota Bharu, Kelantan

Dr Muhammad Nazreen bin Zakaria

Medical Officer
Hospital Sultan Ismail Petra
Kuala Krai, Kelantan

Dr Hapsah binti Aripin

Medical Officer
Hospital Tanah Merah,
Kelantan

Dr Khairul Anwar bin Abdul Rahman

Medical Officer
Hospital Sultanah Nur Zahirah,
Kuala Terengganu, Terengganu

Dr Suad Fakhriah

Medical Officer
Hospital Kemaman,
Terengganu

Dr Vickneswaran Ghanapathy

Medical Officer
Hospital Tengku Ampuan Afzan,
Kuantan, Pahang

Dr Ahmad Fazwan bin Junaidi

Medical Officer
Hospital Sultan Haji Ahmad Shah
Temerloh, Pahang

Dr Kesavan Chandrasekar

Medical Officer
Hospital Kuala Lipis,
Pahang

Dr Marianne Lee Li Chii

Medical Officer
Hospital Queen Elizabeth
Kota Kinabalu, Sabah

Dr Ng Jun Jeat

Medical Officer
Hospital Queen Elizabeth
Kota Kinabalu, Sabah

Dr Chiew Tien Chuen

Medical Officer
Hospital Tawau,
Sabah

Dr Nigel Loke

Medical Officer
Hospital Duchess of Kent,
Sandakan, Sabah

Dr Ahmad Fakhzan bin Alias

Medical Officer
Hospital Keningau,
Sabah

Dr Mohamed Nabil bin Mohamed Nazri

Medical Officer
Hospital Lahad Datu,
Sabah

Dr Edward Chong

Medical Officer
Hospital Miri,
Sarawak

Dr Yogeneswaran Pachiaffen

Medical Officer
Hospital Sarikei,
Sarawak

Dr Jonah Seenii a/I John Devasagayam

Medical Officer
Hospital Labuan,
Sarawak

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1 Abbreviations and Acronyms



APR	Abdomino-Perineal Resection
AR	Anterior Resection
BCF	Brachio-cephalic Fistula
BMS	Big, Medium, Small
ERCP	Endoscopic Retrograde Cholangiogram
EMR	Electronic Medical Records
GA	General Anaesthesia
HDok	Hospital Duchess of Kent
HEBHK	Hospital Enche' Hajjah Besar Kalsom
HoSHAS	Hospital Sultan Haji Ahmad Shah
Hosp.	Hospital
HPB	Hepatopancreaticobiliary
HPSF	Hospital Pakar Sultanah Fatimah
HQE	Hospital Queen Elizabeth
HRPB	Hospital Raja Permaisuri Bainun
HRPZ II	Hospital Raja Perempuan Zainab II
HSA	Hospital Sultanah Aminah
HTAH	Hospital Sultan Abdul Halim
HSB	Hospital Sultanah Bahiyah
HSI	Hospital Sultan Ismail
HSIP	Hospital Sultan Ismail Petra
HSNI	Hospital Sultanah Nora Ismail
HSNZ	Hospital Sultanah Nur Zahirah,
HTAA	Hospital Tengku Ampuan Afzan
HTAR	Hospital Tengku Ampuan Rahimah
HTF	Hospital Tuanku Fauziah
HTJ	Hospital Tuanku Ja'afar
LA	Local Anaesthesia
LAR	Low Anterior Resection
MoH	Ministry of Health
OGDS	Oesophagogastroduodenoscopy
OT	Operating Theatre
PDU	Perforated Duodenal Ulcer
PGU	Perforated Gastric Ulcer
POMR	Post-Operative Mortality Rate
RCF	Radio-Cephalic Fistula
SOPC	Surgical Outpatient Clinic
ULAR	Ultra Low Anterior Resection

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2.a Director General Foreword

General Surgery Services as a major service provided by Ministry of Health has evolved and progressed over the last few years. One of the recent national agenda is to ensure the accessibility of the essential surgical services to the rural areas and hence the implementation of Global Surgery Framework and Ecosystem has been rolled out since 2018.

In 2015, The Lancet Commission on Global Surgery recommended the development of National Surgical, Obstetric, and Anaesthesia Plans (NSOAPs) to address existing gaps using a systems-based approach. The five key messages, six surgical indicators and roadmap to improve access by 2030 in the report have become the primary guidance for surgical fraternities worldwide to translate into action and impactful outcomes.

To understand the evolving needs and to enhance the surgical service delivery, data collection and analysis is crucial. It also helps us to understand the complexity of the disease burden in Ministry of Health hospitals in the country.

The general surgery fraternity under the leadership of the Head of General Surgery Services, Dato' Seri Dr Haji Mohamed Yusof bin Haji Abdul Wahab, have made great effort in collecting, compiling and analyzing surgical output data and hence the publication of this report namely **General Surgery: Inpatient, Outpatient, Endoscopy and Surgery (IOES) Census Report 2016-2019**.

This report is a very useful reference for policy makers and implementers to plan workforce requirement and placement, fair distribution of allocation for procurement of assets and consumables and a tool to strategize the equitable service delivery planning based on the workload across the country.

Finally, I would like to take this opportunity to congratulate the technical committees who contributed to the development of this report.

**TAN SRI DATO' SERI DR NOOR
HISHAM BIN ABDULLAH**

Director General of Health
Ministry of Health, Malaysia



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2.b

Deputy Director General Foreword

Ministry of Health hospitals serve as the main secondary and tertiary healthcare providers for the country. There are total of 146 hospitals and institutions in the country whereby in 2022, 54 specialist hospitals provide general surgery service with at least two general surgeons posted in each hospitals. The subspecialty care like hepatobiliary, colorectal surgery, breast and endocrine surgery, upper gastro-intestinal surgery, vascular surgery and thoracic surgery are also being provided under the umbrella of general surgery service at the state and major specialist hospitals.

With the implementation of Global Surgery Framework and Ecosystem, the essential surgical services are also provided at the non-specialist hospitals in the rural or suburban areas.

It is important to measure the workload of the surgical services for the identification of the needs and to ensure the quality of care provided. Therefore, data on the disease burden and workload from each of the hospitals were collected and analyzed by a group of hardworking medical officers and specialists from the general surgery fraternity. These data were compiled for 4 years started since 2016 until 2019 and published as **General Surgery: Inpatient, Outpatient, Endoscopy and Surgery (IOES) Census Report 2016-2019**.

Medical Program will continue to encourage and support the publication of the same kind of report not only for the surgical services but also other services as well. This report is very useful for the Medical Program and other stakeholders to understand the overall view of the surgical workload in order to plan for the enhancement of the surgical services in the country.

Last but not least, congratulations to Dato' Seri Dr Haji Mohamed Yusof bin Haji Abdul Wahab, the Head of General Surgery Service and all the technical committees for developing this report.



DATO' DR ASMAYANI BINTI KHALIB

Deputy Director General of Health
Ministry of Health, Malaysia

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3 Executive Summary

This report describes output data of surgical units between year 2016 to 2019 from specialist hospitals under the MOH Malaysia. These surgical units were categorised into 3 groups, Big (B) with surgical beds > 80, Medium (M) with surgical beds 50 – 80, and Small (S) < 50 based (BMS). This is to facilitate comparison of output between surgical units of similar size.

Data was collected manually using an Excel Sheet template by a medical officer in the respective surgical unit and submitted to a coordinator. Outlier data was validated for accuracy'.

Report is divided into two sections. Section A describes gross workload for the surgical unit based on the 4 main domains of surgical services which is Inpatient, Outpatient, Endoscopy and Surgery. Section B is on number of different types of operative procedures done. The list of procedures selected is not comprehensive to describe all the procedures done in the specialist hospitals. Common surgical procedures done by specialists were selected and grouped based on surgical subspecialties. Data from the various surgical units were tabulated in their respective BMS grouping. The data is presented using bar charts and table. For comparison of output between the surgical units, mean figure was used.

The sum of new admissions to the ward and new cases seen in the outpatient clinic is described in a section called new case workload (Section 6.3.3). This data may be used as a surrogate measure of surgeons' workload and hence assist in decision for surgeon placement and distribution.

Endoscopy services is both provided by the gastroenterologist and surgeons. In this report, data is only reflective of endoscopy done by surgeons and hence would not be reflective

on the actual burden of endoscopy workload in Ministry of Health hospitals. Issues of access for ERCP services will need to be addressed, especially in East Malaysia.

The casemix of surgical procedures are those that are done by General Surgery and its Sub-specialty which includes Breast & Endocrine, Upper GIT, Colorectal, Hepato-pancreatobiliary, Vascular, Thoracic and Trauma Surgery. These numbers which form the denominator are essential for the calculation of POMR rate. Emergency surgery contributes to about 60% of total inpatient surgeries. Daycare elective GA cases contributes only to about 10% of the total elective surgeries done under general anaesthesia.

The IOES report is aimed to promote transparency and accessibility to surgical data with the hope of improving the access to essential surgical services throughout the country. This initiative is hoped to set a chain reaction amongst other clinical services to also embark into maintaining clinical data. The integration of data across specialities can help consolidate patient care by fostering a better understanding of the healthcare requirements and driving care where its needed.



DATO' SERI DR HAJI MOHAMED YUSOF BIN HAJI ABDUL WAHAB

Senior Consultant General Surgeon
Head of General Surgery Service
Ministry of Health



4 Introduction / Background

Data will last longer than systems themselves.

Healthcare should be driven where and when it is need. Policy drawn to strengthen healthcare systems should be based on data which can describe and demonstrate inequity in access to healthcare. The world today is overflowing with data; and thus, the ability to utilize it, understand it, process it, extract value from it and finally successfully communicate it is an important skill set for all leaders to possess. Data can be converted into information, and this information only has value if it is able to inspire those in position to make a difference, to develop insights that can improve service delivery. In order to strengthen surgical services, it is crucial to instil a work culture of maintaining real time health data that can be utilised to improve infrastructure, workforce, service delivery and finance. The sustainability of this data driven culture is dependent on end users understanding the long-term benefits and goals.

In December 2016 during the surgeons' annual meet, a resolution was made to collect data which can be used to describe the burden of surgical services. Data set to be collected was decided and data collection template was designed using an excel sheet. A medical officer(MO) was appointed in all specialist surgical unit who was tasked with data collection. Outlier data was re-examined and validated. The report has thus far highlighted several variation and challenges faced in the provision of surgical services. We were able to identify the capabilities and vulnerabilities in the system. There are numerous obstacles leading to gaps in service, common challenges being lack of experience, maldistribution of specialists and lack of resources. Information gathered and measured were reflective of workload in the respective regions.

This report is divided into 2 sections:

- **Section A** : Inpatient admissions, Outpatient Census, Total Endoscopy, Total Surgery
- **Section B** : Surgical Procedures (Refer to Appendix 1)

Hospital categorization

Although the hospitals included in this report are all Specialist Hospitals, they differ greatly in terms of bed numbers, facilities and resources. Therefore, these hospitals are classified into :

- | | |
|------------------------------------|-------------------------|
| a. Big Category Hospital | : > 80 surgical beds |
| b. Medium Category Hospital | : 50 – 80 surgical beds |
| c. Small Category Hospital | : < 50 surgical beds |

Categorization of the participating Specialist Hospitals into the Big Medium Small (BMS) category allows for a more objective comparison on performance and outcome.

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



Data Presentation

Data collected is presented in Graphs and Tables in Descending order (Highest to Lowest)

Graphs and Tables are presented as below :

- a. **Total - total number for all hospitals**
- b. **By BMS Category**
- c. **By BMS Hospital Category**
- d. **Types of Procedures**
- e. **Modality of Approach**

For Graphs representing **BMS Hospital Category** , the hospitals are colour coded to denote their BMS category :



Where the data recorded is zero, the hospitals will not be included into the graphs or table unless relevant.



5 Methodology

Parameters Selection

This report aims to reflect the workload of the surgeons and thus, data collected mainly focuses on surgeon's related procedures.

In section A, total numbers for Admission, Outpatient encounters, Endoscopy and Surgery was selected to reflect the burden of General Surgeons. Each of these parameters are subsequently used in management and distribution of resources and manpower.

Section B collates the total number of selected surgeon-specific procedures which would be used as denominator to calculate Post-Operative Mortality Rate (POMR) in the effort to monitor outcome.

Data Source

The IOES report collates various quantitative Surgical data from Malaysia's MoH Specialist Hospitals. Data was collected from 53 Specialist Hospitals. Non-specialist and District Hospitals are not included in this report as the aim of this report is to reflect specialist workload only.

Data from other surgical specialities (Urology, Neurosurgery, Pediatric Surgery, Cardiothoracic Surgery, Plastic Surgery) are not included.

As not all hospitals have an electronic medical record (EMR) system, a large proportion of our data are collected manually via census kept by the ward sister and OT (Operating Theatre) book census. The heterogeneity of data source is leads to some discrepancies of data which had to be verified several times before endorsement by the each Hospital's Surgical Head of Department (HoD)

Data Collection

Each of the 53 Specialist MoH Hospitals have a appointed Data Coordinator, which consists of Medical Officers. They oversee collecting each hospital's department set of data.

A template designed and used for data collection (Appendix 2) is distributed via the central committee to all the data coordinator to facilitate this process. The completed template is then reviewed and verified by each HoD before it is e-mailed back to the central committee.

The central committee which consists of the Chief editor and 2 Associate Editors, are in charge of collating and tabulating these data. Any discrepancies noted during initial analysis of data will be sent back to the respective Data Coordinator for verification and correction.

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
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Data Coordinator for each Hospitals



Data collected by each Data coordinator are sent for review and verification

Surgical Head of Department (HoD)



Once data are verified by the HoD, it is emailed to the Central Committee



Central Committee's Associate Editors



Data with discrepancies during initial review will be sent back to respective HoD for verification

Collation and Tabulation Data



IOES Report

Figure 5.1.1 Process of Data Collection

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



6 Section A : Inpatient, Outpatient, Endoscopy and Surgery (IOES)

6.1 Total IOES

a. Total

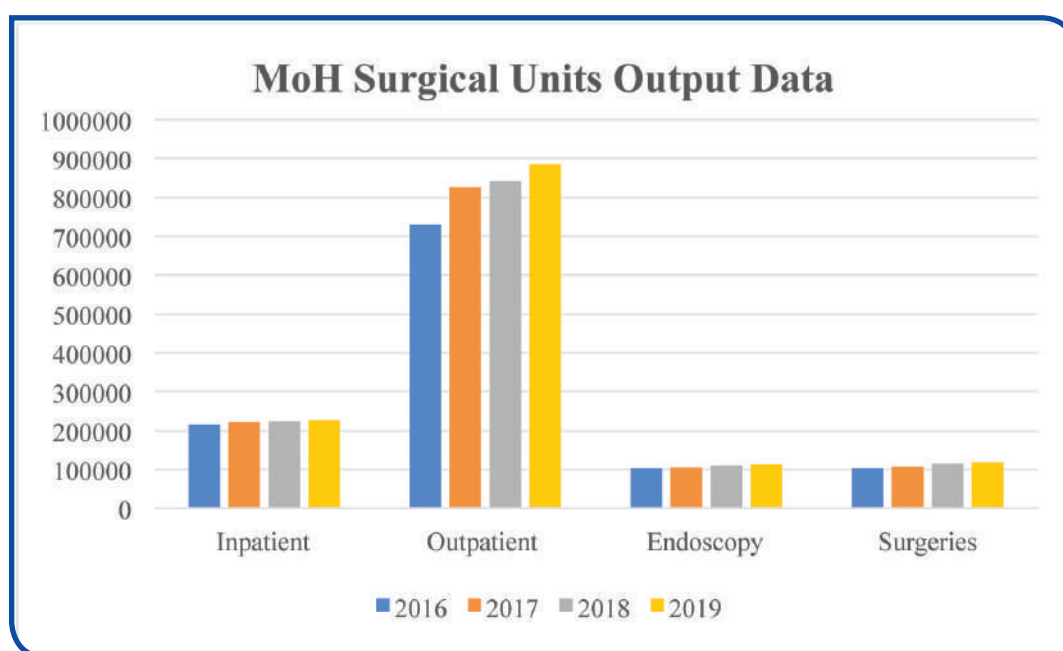


Figure 6.1.1 KKM Surgical Units Output Data

TOTAL NUMBER OF INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY

	2016	2017	2018	2019
Inpatient	215037	220312	222604	225924
Outpatient	730461	825645	842089	886134
Endoscopy	104159	104560	108201	113444
Surgeries	104315	106554	114100	117619
TOTAL	1153972	1257071	1286994	1343121

Table 6.1.1 : Total Number of Inpatient , Outpatient , Endoscopy and Surgery

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



6.2 INPATIENT

6.2.1 Admissions

a. Total

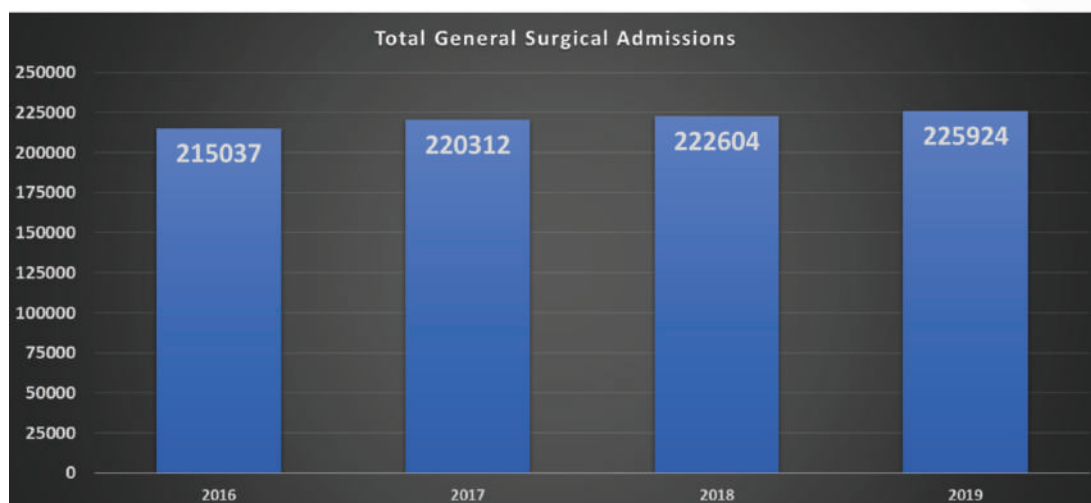


Figure 6.2.1 : Total Number of General Surgical Admissions

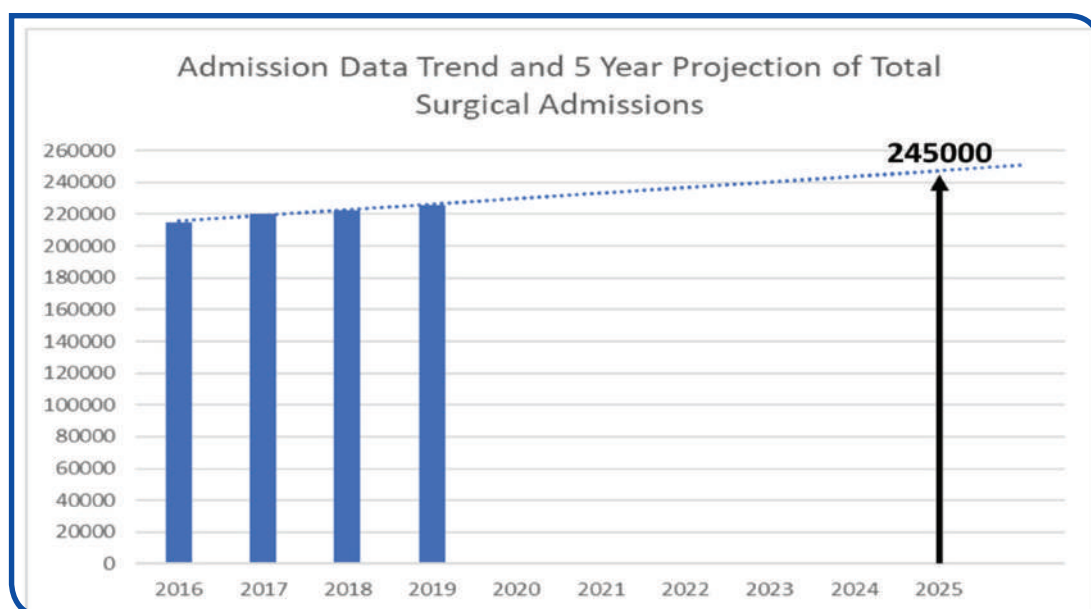


Figure 6.2.2 : 5 years Projection of Total Surgical Admissions

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



b. By BMS Category

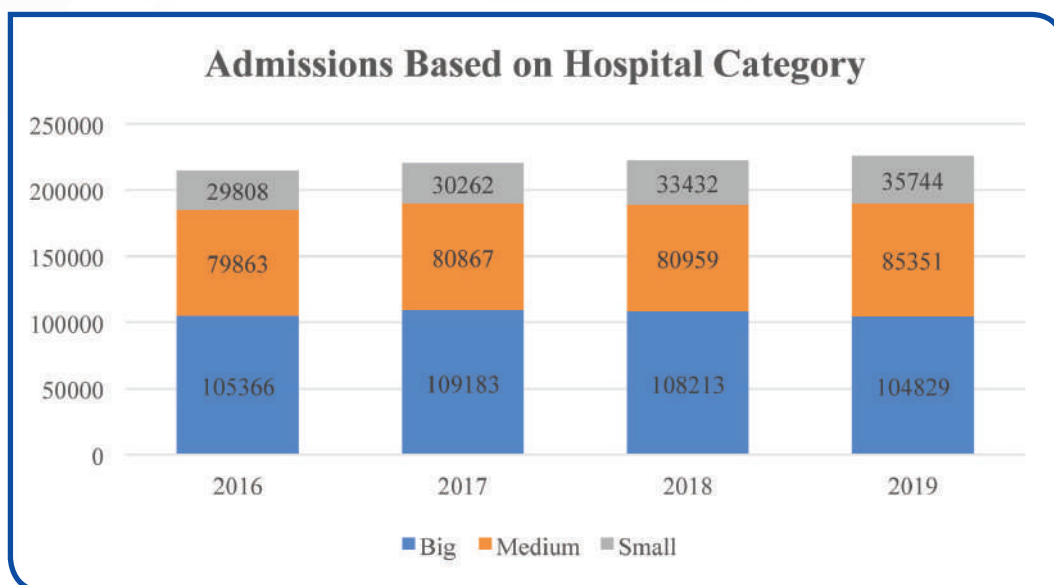


Figure 6.2.3 : Total Number of Admissions based on Hospital Category

INPATIENT ADMISSIONS

HOSPITAL CATEGORY	2016		2017		2018		2019	
Big	105366	49%	109183	50%	108213	49%	104829	46%
Medium	79863	37%	80867	37%	80959	36%	85351	38%
Small	29808	14%	30262	14%	33432	15%	35744	16%
TOTAL	215037	100%	220312	100%	222604	100%	225924	100%

Table 6.2.1 : Total Number of Admissions based on Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



c. By Hospital Category

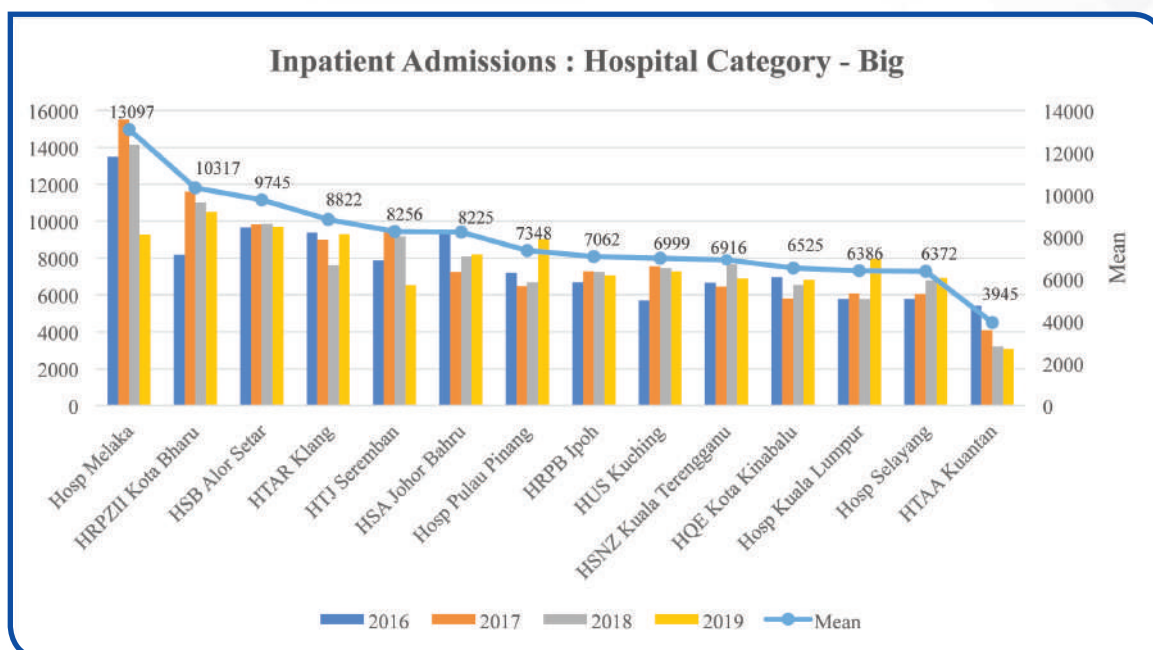


Figure 6.2.4 : Inpatient Admissions for Big Category Hospitals

INPATIENT ADMISSIONS : BIG HOSPITALS

NO	HOSPITALS	2016	2017	2018	2019	MEAN
1	Hosp Melaka	13481	15496	14147	9265	13097
2	HRPZII Kota Bharu	8173	11594	11000	10502	10317
3	HSB Alor Setar	21503	9819	9846	9669	9745
4	HTAR Klang	9647	9007	7596	9295	8822
5	HTJ Seremban	9388	9451	9176	6527	8256
6	HSA Johor Bahru	7871	7264	8088	8197	8225
7	Hosp Pulau Pinang	9350	6490	6674	9036	7348
8	HRPB Ipoh	7193	7277	7236	7036	7062
9	HUS Kuching	6697	7552	7465	7294	6999
10	HSNZ Kuala Terengganu	5685	6445	7672	6900	6916
11	HQE Kota Kinabalu	6648	5790	6545	6802	6525
12	Hosp Kuala Lumpur	5768	6053	5767	7957	6386
13	Hosp Selayang	5757	6040	6775	6915	6372
14	HTAA Kuantan	5406	4078	3202	3094	3945
TOTAL		105366	109183	108213	104829	106898

Table 6.2.2: Inpatient Admissions for Big Category Hospitals

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019

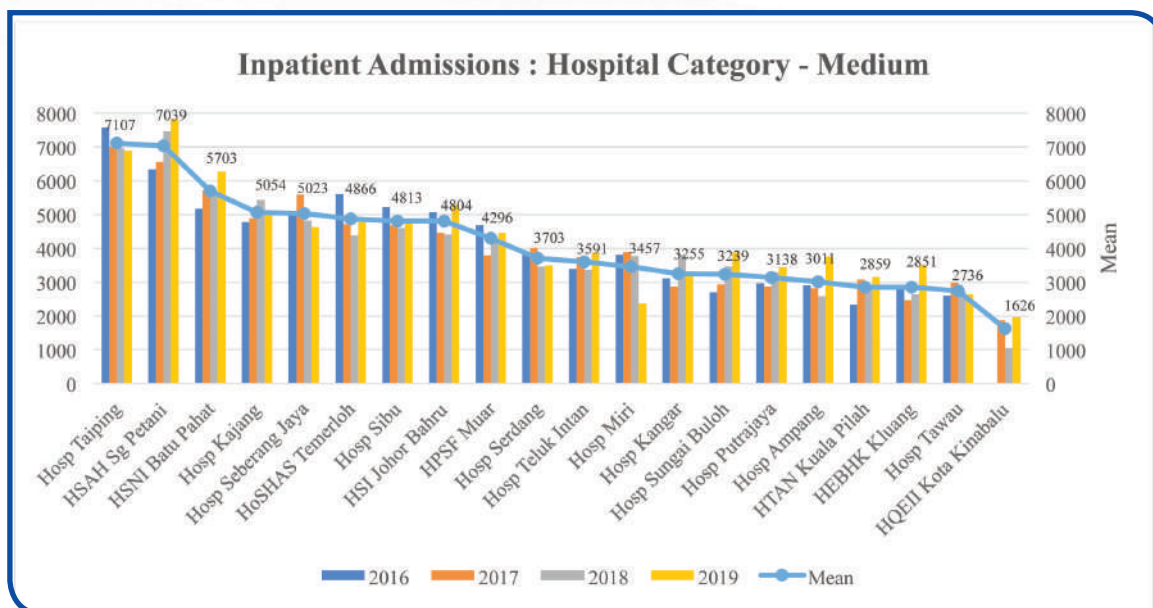


Figure 6.2.5 : Inpatient Admissions for Medium Category Hospitals

INPATIENT ADMISSIONS : MEDIUM HOSPITALS

NO	HOSPITALS	2016	2017	2018	2019	MEAN
1	Hospital Taiping	7574	7004	6954	6894	7107
2	HSAH Sungai Petani	6326	6549	7452	7827	7039
3	HSNI Batu Pahat	5171	5715	5663	6262	5703
4	Hosp Kajang	4776	4884	5430	5126	5054
5	Hospital Seberang Jaya	5057	5577	4824	4632	5023
6	HoSHAS Temerloh	5596	4713	4377	4779	4866
7	Hospital Sibu	5213	4685	4592	4762	4813
8	HSI Johor Bahru	5058	4459	4413	5286	4804
9	HPSF Muar	4686	3796	4241	4460	4296
10	Hospital Serdang	3861	4009	3449	3491	3703
11	Hospital Teluk Intan	3389	3742	3359	3873	3591
12	Hospital Miri	3806	3877	3767	2379	3457
13	Hospital Kangar	3098	2867	3799	3255	3255
14	Hospital Sungai Buloh	2691	2932	3460	3873	3239
15	Hospital Putrajaya	2955	2865	3286	3444	3138
16	Hospital Ampang	2894	2812	2584	3752	3011
17	HTAN Kuala Pilah	2333	3069	2883	3150	2859
18	HEBHK Kluang	2783	2474	2649	3496	2851
19	Hospital Tawau	2596	2978	2725	2645	2736
20	Hospital Queen Elizabeth 2	0	1860	1052	1965	1626
TOTAL		79863	80867	80959	85351	82166

Table 6.2.3: Inpatient Admissions for Medium Category Hospitals

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019

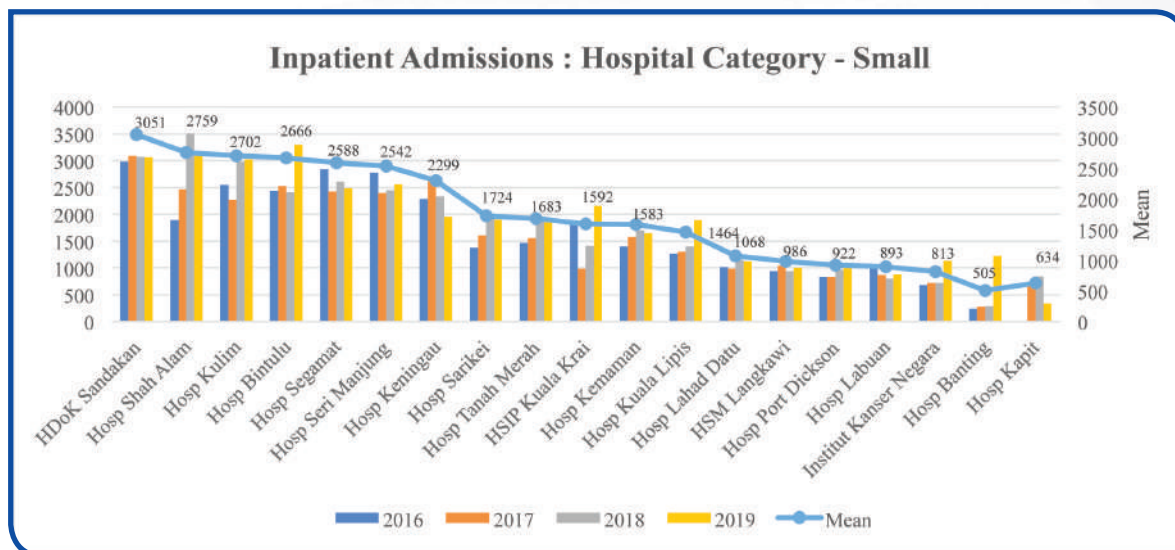


Figure 6.2.6: Inpatient Admissions for Small Category Hospitals

INPATIENT ADMISSIONS : SMALL HOSPITALS

NO	HOSPITALS	2016	2017	2018	2019	MEAN
1	HDoK Sandakan	2979	3094	3072	3058	3051
2	Hosp Shah Alam	1895	2470	3505	3167	2759
3	Hosp Kulim	2545	2260	2984	3017	2702
4	Hosp Bintulu	2431	2528	2417	3289	2666
5	Hosp Segamat	2836	2423	2606	2486	2588
6	Hosp Seri Manjung	2774	2394	2442	2557	2542
7	Hosp Keningau	2287	2614	2339	1955	2299
8	Hosp Sarikei	1377	1609	2009	1899	1724
9	Hosp Tanah Merah	1467	1553	1859	1851	1683
10	HSIP Kuala Krai	1824	983	1408	2152	1592
11	Hosp Kemaman	1400	1580	1703	1647	1583
12	Hosp Kuala Lipis	1268	1303	1393	1892	1464
13	Hosp Lahad Datu	1017	985	1141	1127	1068
14	HSM Langkawi	946	1044	946	1006	986
15	Hosp Port Dickson	830	834	965	1058	922
16	Hosp Labuan	1018	869	801	885	893
17	Institut Kanser Negara	680	721	720	1131	813
18	Hosp Banting	234	275	285	1226	505
	TOTAL	29808	30262	33432	35744	32470

Table 6.2.4 : Inpatient Admissions for Small Category Hospitals

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



d. By BMS Hospital Category

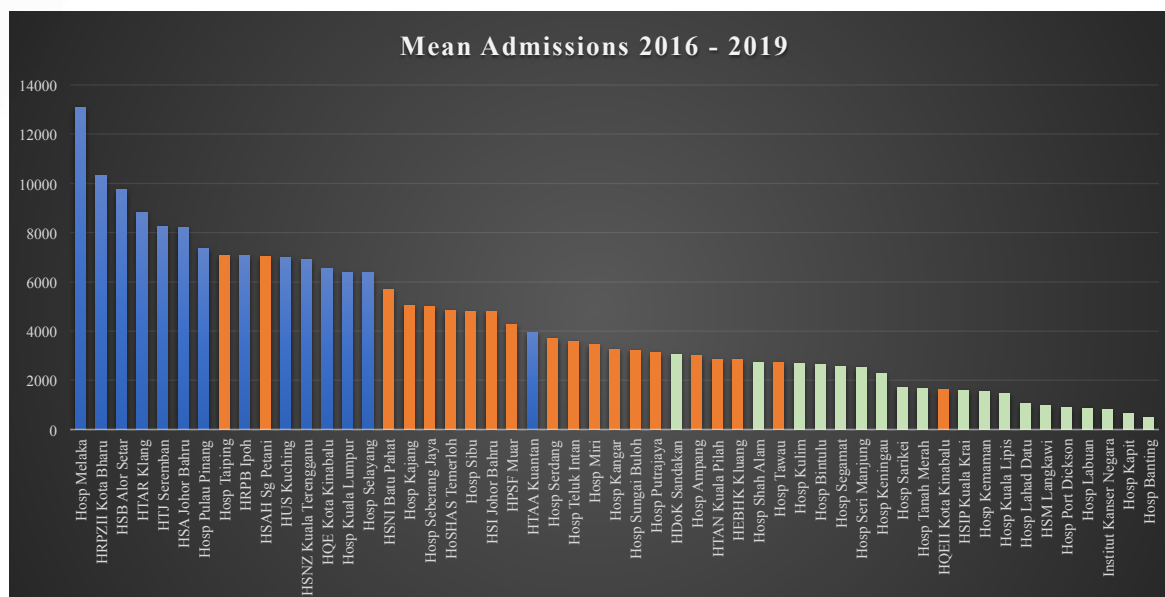


Figure 6.2.7: Mean Inpatient Admissions by BMS Hospital Category

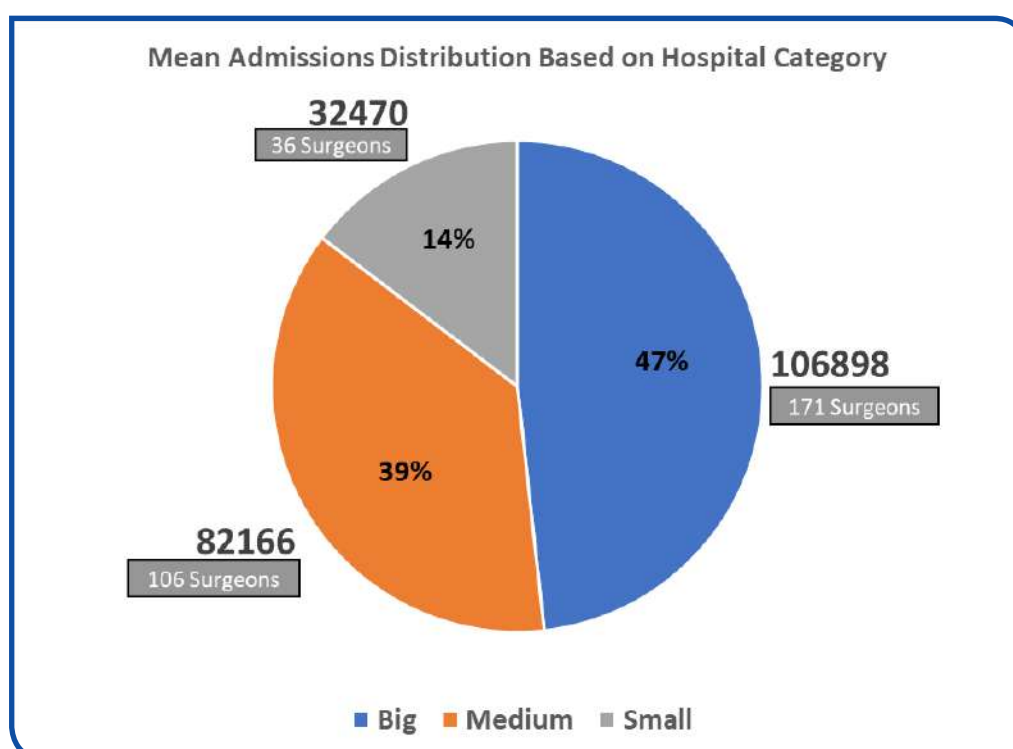


Figure 6.2.8: Mean Inpatient Admissions by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



6.3 OUTPATIENT

a. Total

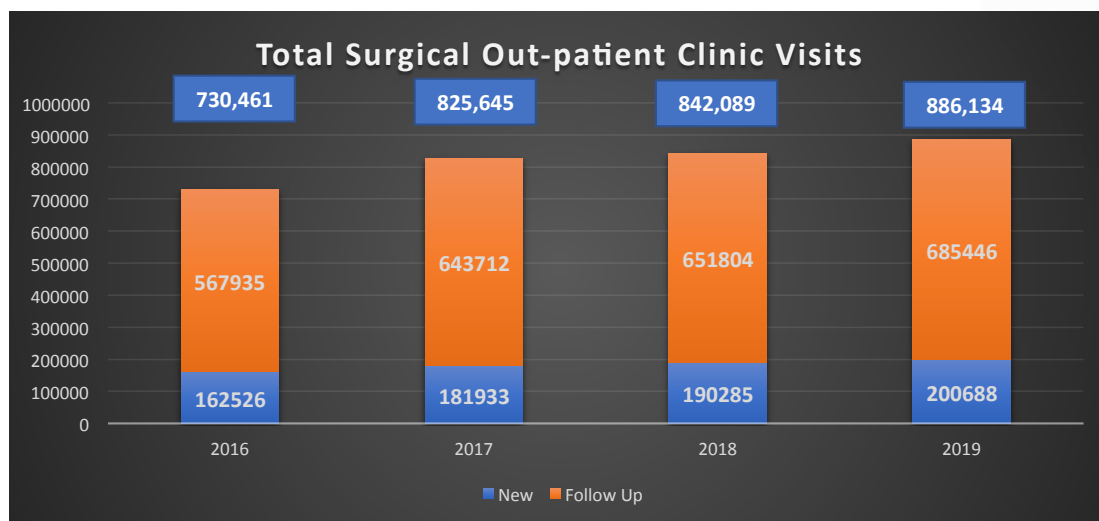


Figure 6.3.1 : Total Number of SOPC Visits

SOPC	2016		2017		2018		2019	
New Cases	162526	22%	181933	22%	190285	23%	200688	23%
Follow Up	567935	78%	643712	78%	651804	77%	685446	77%
Total	730461	100%	825645	100%	842089	100%	886134	100%

Table 6.3.1 : Total Number of SOPC Visits

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



b. By BMS Category

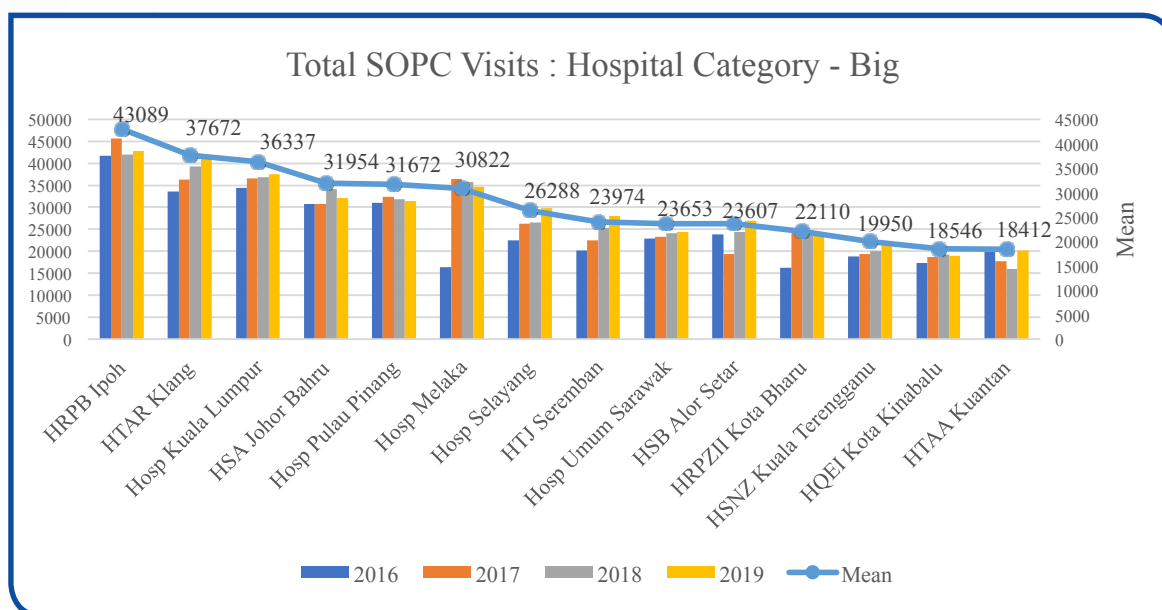


Figure 6.3.2 : Total SOPC Visits – Big Category Hospitals

TOTAL SOPC VISITS : BIG HOSPITALS

NO	HOSPITALS	2016	2017	2018	2019	MEAN
1	HRPB Ipoh	41704	45710	42060	42880	43089
2	HTAR Klang	33590	36368	39303	41425	37672
3	Hosp Kuala Lumpur	34377	36551	36875	37544	36337
4	HSA Johor Bahru	30755	30755	34158	32147	31954
5	Hosp Pulau Pinang	30977	32413	31879	31417	31672
6	Hosp Melaka	16323	36442	35818	34706	30822
7	Hosp Selayang	22471	26331	26596	29752	26288
8	HTJ Seremban	20176	22448	25297	27975	23974
9	Hosp Umum Sarawak	22842	23317	24125	24328	23653
10	HSB Alor Setar	23826	19387	24329	26884	23607
11	HRPZII Kota Bharu	16226	24274	23685	24255	22110
12	HSNZ Kuala Terengganu	18826	19334	19991	21649	19950
13	HQE Kota Kinabalu	17299	18722	19201	18961	18546
14	HTAA Kuantan	19850	17689	15969	20141	18412
TOTAL		349242	389741	399286	414064	388083

Table 6.3.2 : Total SOPC Visits - Big Category Hospitals

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019

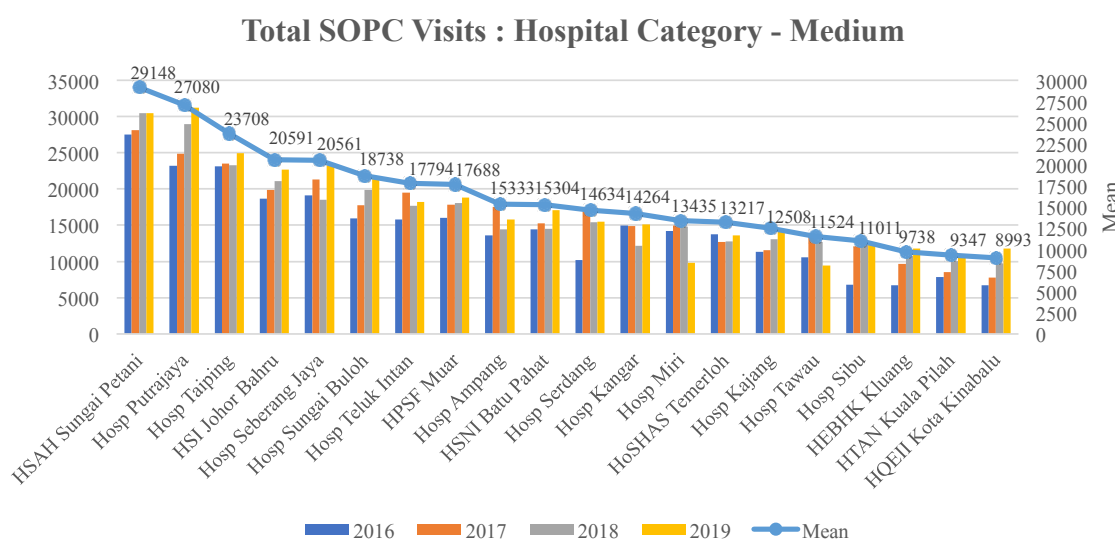


Figure 6.3-3 : Total SOPC Visits – Medium Category Hospitals

TOTAL SOPC VISITS : MEDIUM HOSPITALS

NO	HOSPITALS	2016	2017	2018	2019	MEAN
1	HSAH Sungai Petani	27535	28123	30489	30444	29148
2	Hosp Putrajaya	23202	24903	28972	31243	27080
3	Hosp Taiping	23107	23511	23268	24946	23708
4	HSI Johor Bahru	18662	19908	21121	22671	20591
5	Hosp Seberang Jaya	19113	21280	18536	23315	20561
6	Hosp Sungai Buloh	15964	17723	19842	21422	18738
7	Hosp Teluk Intan	15807	19476	17711	18183	17794
8	HPSF Muar	16020	17862	18038	18832	17688
9	Hosp Ampang	13579	17526	14424	15802	15333
10	HSNI Batu Pahat	14394	15230	14502	17088	15304
11	Hosp Serdang	10182	17432	15448	15473	14634
12	Hosp Kangar	14931	14884	12141	15099	14264
13	Hosp Miri	14183	14944	14811	9803	13435
14	HoSHAS Temerloh	13788	12688	12787	13606	13217
15	Hosp Kajang	11308	11536	13058	14131	12508
16	Hosp Tawau	10565	13426	12683	9420	11524
17	Hosp Sibu	6801	12113	12842	12286	11011
18	HEBHK Kluang	6745	9647	10785	11775	9738
19	HTAN Kuala Pilah	7842	8520	10015	11009	9347
20	HQEII Kota Kinabalu	6682	7794	9736	11758	8993
TOTAL		349242	384429	393878	414064	385403

Table 6.3.3 : Total SOPC Visits – Medium Category Hospitals

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019

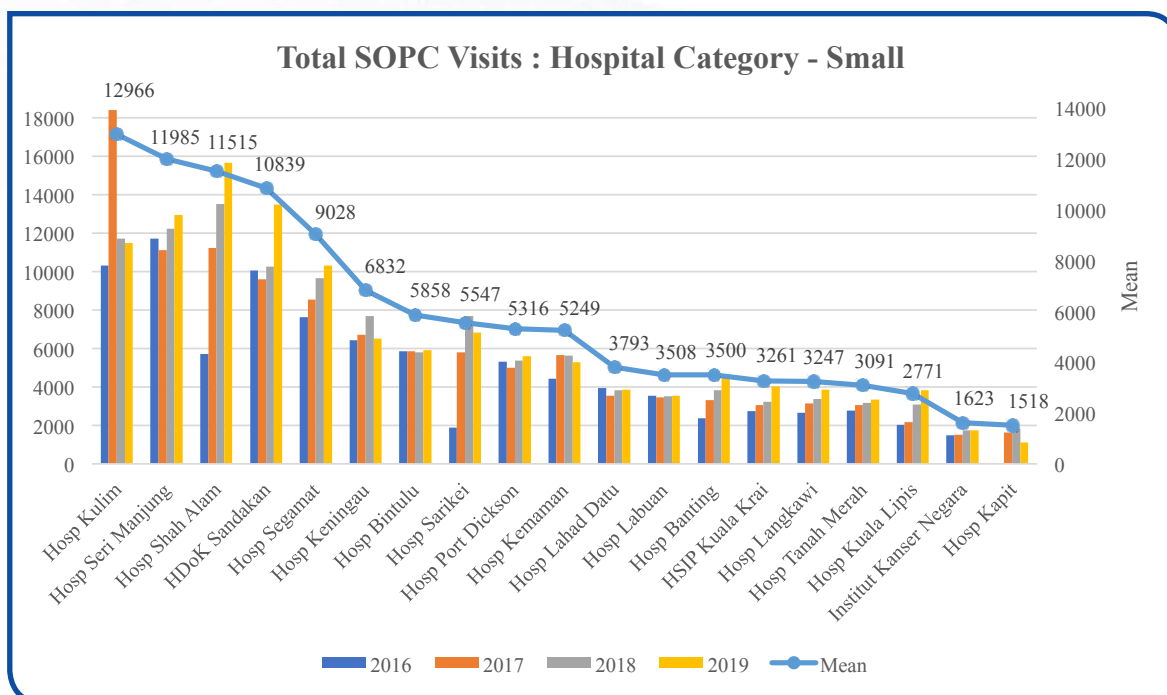


Figure 6.3.4 : Total SOPC Visits –Small Category Hospitals

TOTAL SOPC VISITS : SMALL HOSPITALS

NO	HOSPITALS	2016	2017	2018	2019	MEAN
1	Hosp Kulim	10301	18396	11697	11471	12966
2	Hosp Seri Manjung	11694	11095	12208	12943	11985
3	Hosp Shah Alam	5702	11221	13503	15633	11515
4	HDoK Sandakan	10059	9590	10235	13473	10839
5	Hosp Segamat	7620	8522	9654	10317	9028
6	Hosp Keningau	6430	6716	7671	6510	6832
7	Hosp Bintulu	5845	5859	5806	5922	5858
8	Hosp Sarikei	1871	5809	7693	6816	5547
9	Hosp Port Dickson	5309	5008	5356	5591	5316
10	Hosp Kemaman	4437	5657	5619	5284	5249
11	Hosp Lahad Datu	3945	3547	3822	3857	3793
12	Hosp Labuan	3547	3445	3503	3537	3508
13	Hosp Banting	2361	3301	3823	4513	3500
14	HSIP Kuala Krai	2743	3042	3225	4032	3261
15	Hosp Langkawi	2656	3128	3362	3842	3247
16	Hosp Tanah Merah	2780	3060	3181	3342	3091
17	Hosp Kuala Lipis	2014	2165	3076	3827	2771
18	Institut Kanser Negara	1495	1514	1741	1743	1623
19	Hosp Kapit	0	1615	1827	1111	1518
TOTAL		90809	112690	117002	123764	111446

Table 6.3.4 : Total SOPC Visits –Small Category Hospitals

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



c. By BMS Hospital Category

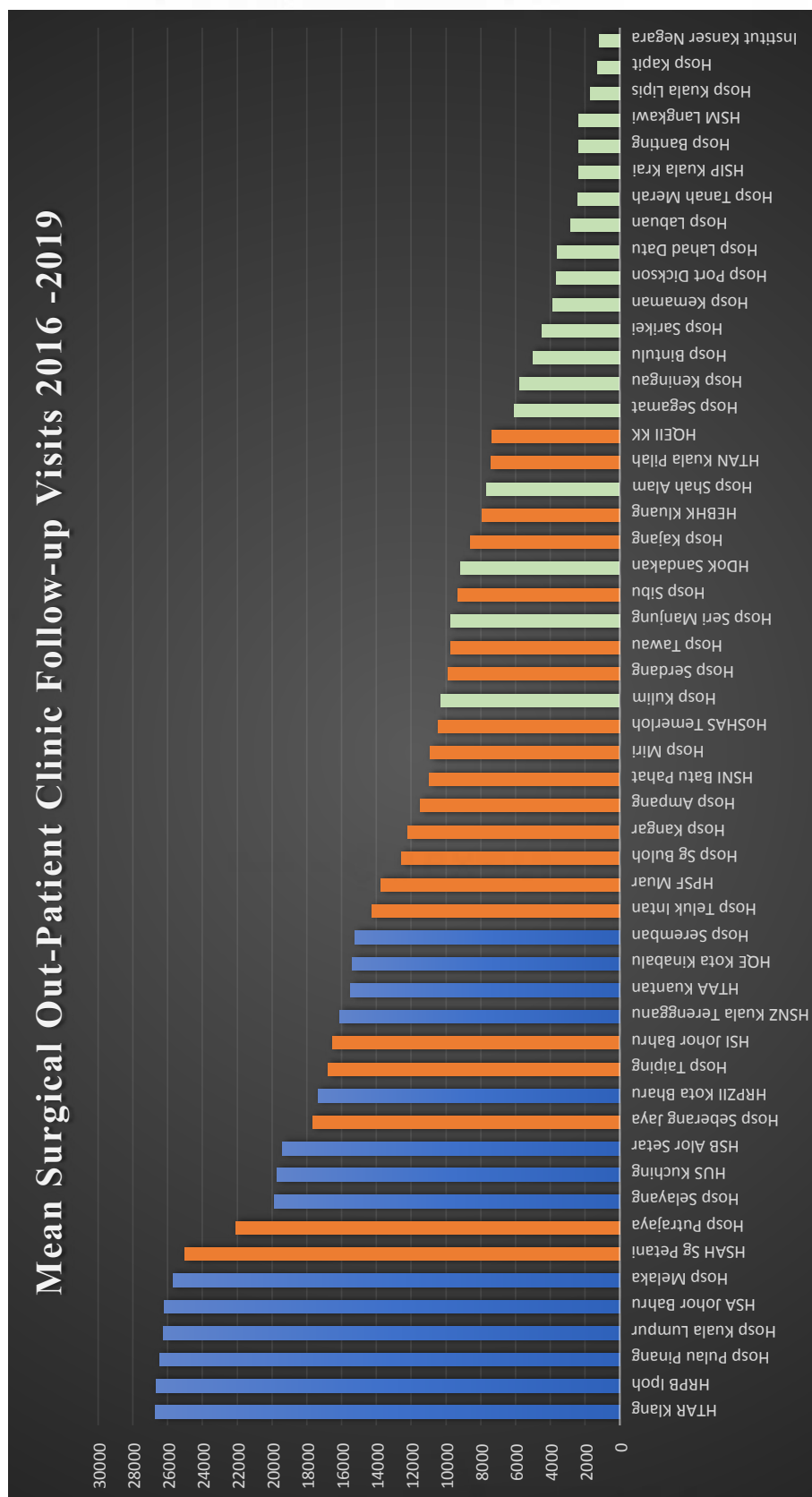


Figure 6.3.5 : Mean Total Surgical Outpatient Clinic Visits by BMS Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



6.3.1 SOPC New case Visits

a. By BMS Category

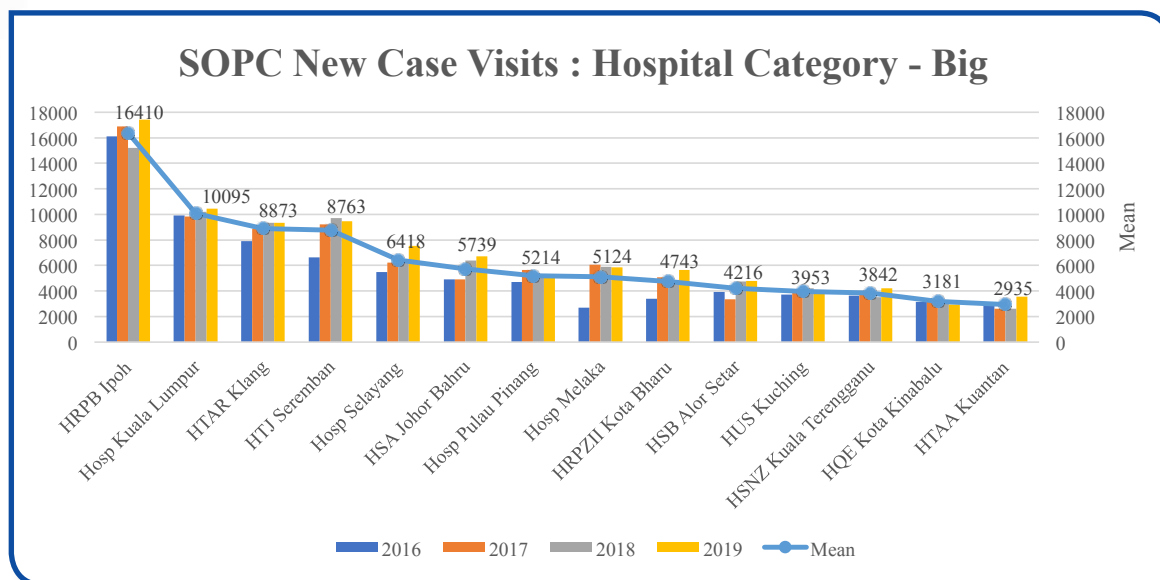


Figure 6.3.6 : SOPC New Case Visits – Big Category Hospitals

SOPC NEW CASE VISITS : BIG HOSPITALS

NO	HOSPITALS	2016	2017	2018	2019	MEAN
1	HRPB Ipoh	16114	16883	15202	17442	16410
2	Hosp Kuala Lumpur	9909	9826	10204	10440	10095
3	HTAR Klang	7898	8892	9357	9345	8873
4	HTJ Seremban	6640	9239	9722	9449	8763
5	Hosp Selayang	5493	6231	6414	7532	6418
6	HSA Johor Bahru	4915	4915	6398	6729	5739
7	Hosp Pulau Pinang	4689	5642	5191	5333	5214
8	Hosp Melaka	2699	6047	5910	5841	5124
9	HRPZII Kota Bharu	3382	5075	4860	5655	4743
10	HSB Alor Setar	3921	3369	4767	4805	4216
11	HUS Kuching	3734	3832	4235	4010	3953
12	HSNZ Kuala Terengganu	3631	4009	3517	4210	3842
13	HQE Kota Kinabalu	3160	3360	3279	2924	3181
14	HTAA Kuantan	2943	2619	2632	3544	2935
	TOTAL	79128	89939	91688	97259	89504

Table 6.3.5 : SOPC New Case Visits – Big Category Hospitals

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019

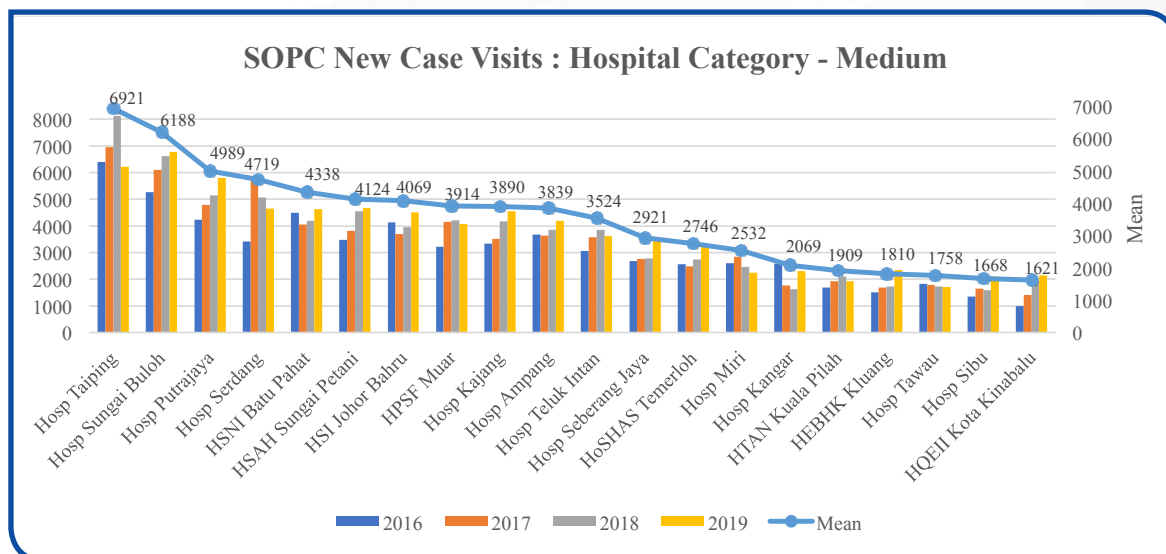


Figure 6.3.7 : SOPC New Case Visits – Medium Category Hospitals

SOPC NEW CASE VISITS: MEDIUM HOSPITALS

NO	HOSPITALS	2016	2017	2018	2019	MEAN
1	Hosp Taiping	6401	6954	8124	6206	6921
2	Hosp Sungai Buloh	5264	6103	6621	6764	6188
3	Hosp Putrajaya	4222	4786	5140	5808	4989
4	Hosp Serdang	3415	5751	5066	4642	4719
5	HSNI Batu Pahat	4480	4055	4189	4629	4338
6	HSAH Sungai Petani	3474	3820	4541	4659	4124
7	HSI Johor Bahru	4129	3693	3952	4503	4069
8	HPSF Muar	3225	4157	4212	4063	3914
9	Hosp Kajang	3330	3514	4171	4546	3890
10	Hosp Ampang	3681	3630	3848	4196	3839
11	Hosp Teluk Intan	3059	3575	3847	3615	3524
12	Hosp Seberang Jaya	2682	2751	2769	3483	2921
13	HoSHAS Temerloh	2557	2472	2739	3215	2746
14	Hosp Miri	2595	2829	2468	2235	2532
15	Hosp Kangar	2589	1763	1623	2301	2069
16	HTAN Kuala Pilah	1692	1921	2095	1926	1909
17	HEBHK Kluang	1506	1680	1721	2334	1810
18	Hosp Tawau	1830	1781	1719	1702	1758
19	Hosp Sibu	1349	1639	1585	2099	1668
20	HQEI Kota Kinabalu	990	1405	1947	2143	1621
TOTAL		62470	68279	72377	75069	69549

Table 6.3.6 : SOPC New Case Visits – Medium Category Hospitals

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019

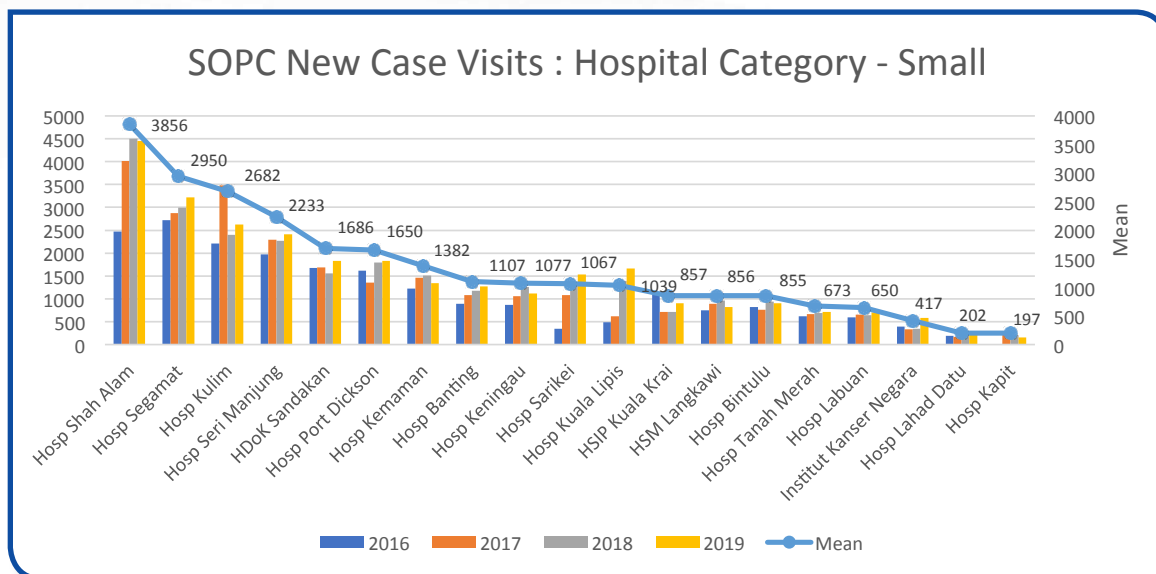


Figure 6.3.8 : SOPC New Case Visits – Small Category Hospitals

SOPC NEW CASE VISITS: SMALL HOSPITALS

NO	HOSPITALS	2016	2017	2018	2019	MEAN
1	Hosp Shah Alam	2465	4009	4498	4452	3856
2	Hosp Segamat	2716	2870	2991	3223	2950
3	Hosp Kulim	2215	3485	2396	2630	2682
4	Hosp Seri Manjung	1968	2290	2265	2407	2233
5	HDoK Sandakan	1675	1686	1552	1832	1686
6	Hosp Port Dickson	1620	1358	1796	1824	1650
7	Hosp Kemaman	1219	1458	1506	1344	1382
8	Hosp Banting	892	1087	1177	1273	1107
9	Hosp Keningau	865	1063	1256	1122	1077
10	Hosp Sarikei	348	1087	1299	1535	1067
11	Hosp Kuala Lipis	487	617	1388	1664	1039
12	HSIP Kuala Krai	1088	712	718	908	857
13	HSM Langkawi	753	886	960	823	856
14	Hosp Bintulu	822	761	935	902	855
15	Hosp Tanah Merah	613	668	694	718	673
16	Hosp Labuan	600	657	647	697	650
17	Institut Kanser Negara	395	335	351	587	417
18	Hosp Lahad Datu	187	166	197	259	202
19	Hosp Kapit	0	230	202	160	197
TOTAL		25425	26828	28360	25434	69549

Table 6.3.7 : SOPC New Case Visits – Small Category Hospitals

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



b. BMS Hospital Category

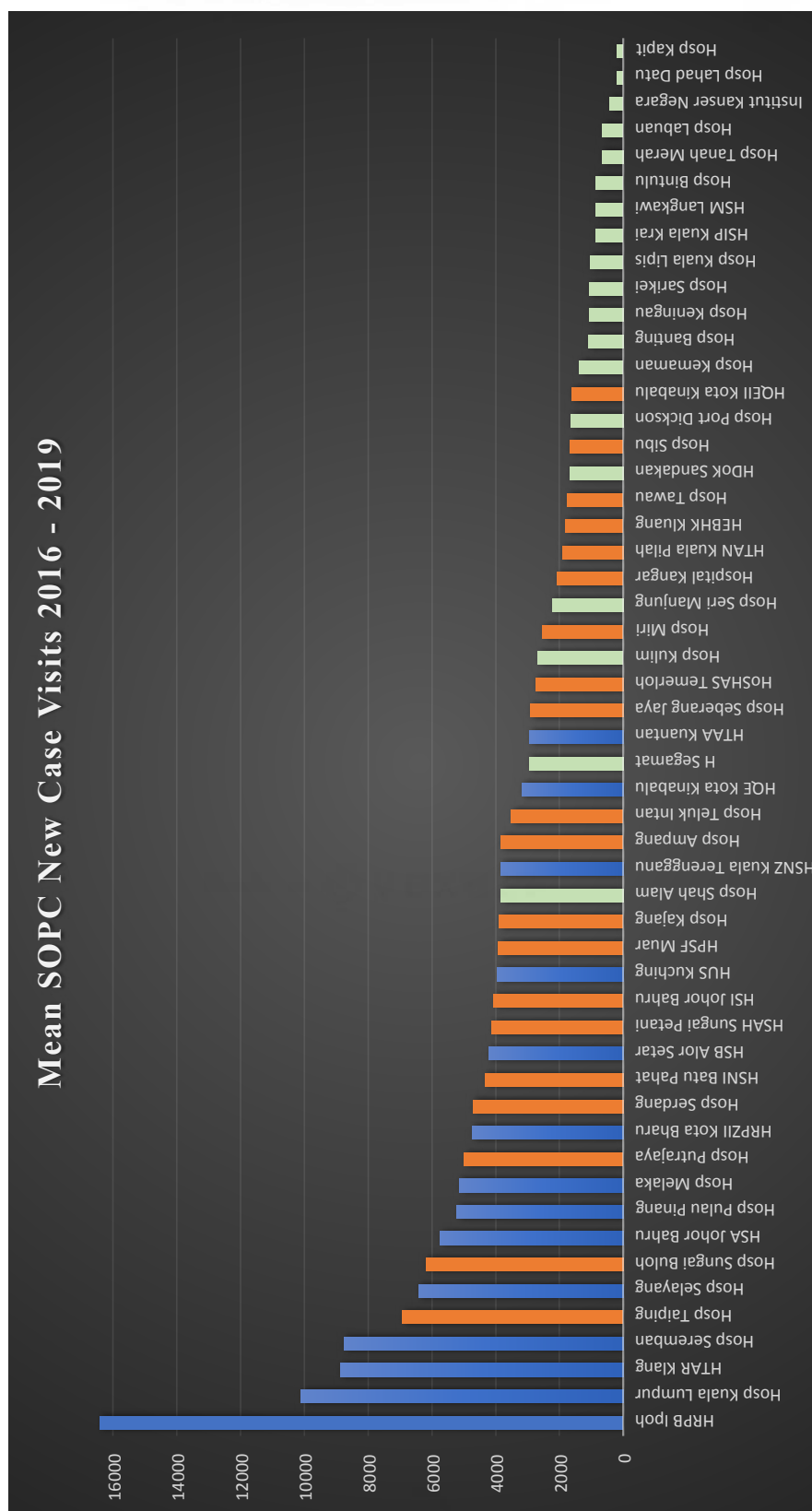


Figure 6.3.9 : Mean SOPC New Case Visits by BMS Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



6.3.2 SOPC Follow up Visits

a. By BMS Category

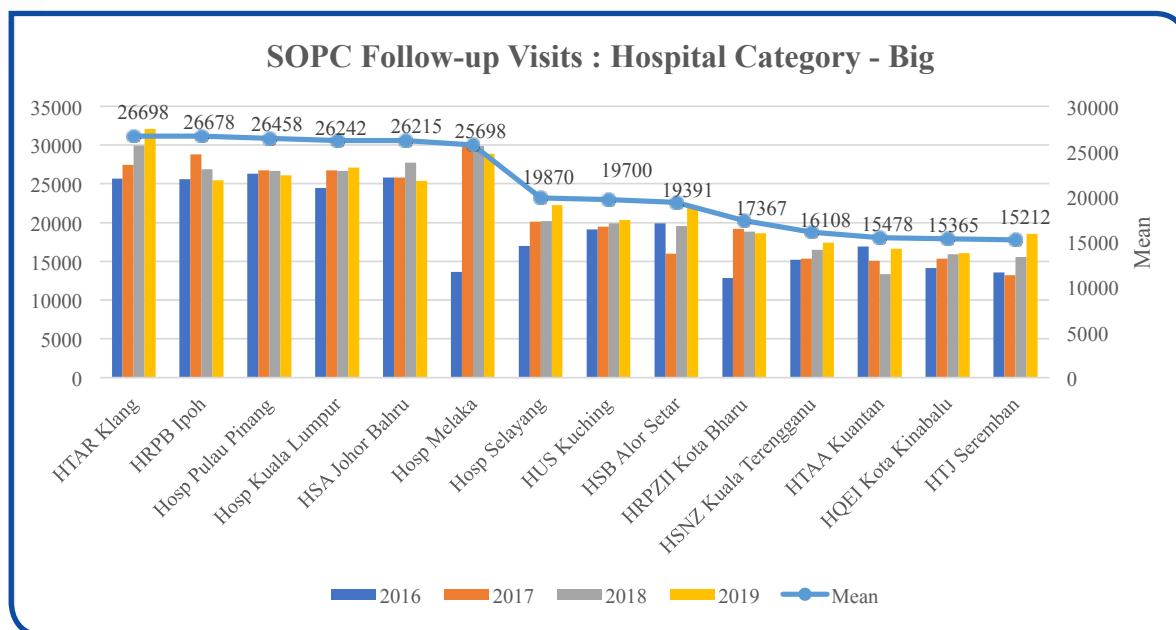


Figure 6.3.10 : SOPC Follow up Visits – Big Category Hospitals

SOPC FOLLOW-UP VISITS : BIG HOSPITALS

NO	HOSPITALS	2016	2017	2018	2019	MEAN
1	HTAR Klang	25692	27476	29946	32080	26698
2	HRPB Ipoh	25590	28827	26858	25438	26678
3	Hosp Pulau Pinang	26288	26771	26688	26084	26458
4	Hosp Kuala Lumpur	24468	26725	26671	27104	26242
5	HSA Johor Bahru	25840	25840	27760	25418	26215
6	Hosp Melaka	13624	30395	29908	28865	25698
7	Hosp Selayang	16978	20100	20182	22220	19870
8	HUS Kuching	19108	19485	19890	20318	19700
9	HSB Alor Setar	19905	16018	19562	22079	19391
10	HRPZII Kota Bharu	12844	19199	18825	18600	17367
11	HSNZ Kuala Terengganu	15195	15325	16474	17439	16108
12	HTAA Kuantan	16907	15070	13337	16597	15478
13	HQEI Kota Kinabalu	14139	15362	15922	16037	15365
14	HTJ Seremban	13536	13209	15575	18526	15212
	TOTAL	270114	299802	307598	316805	296479

Table 6.3.8 : SOPC Follow up Visits – Big Category Hospitals

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019

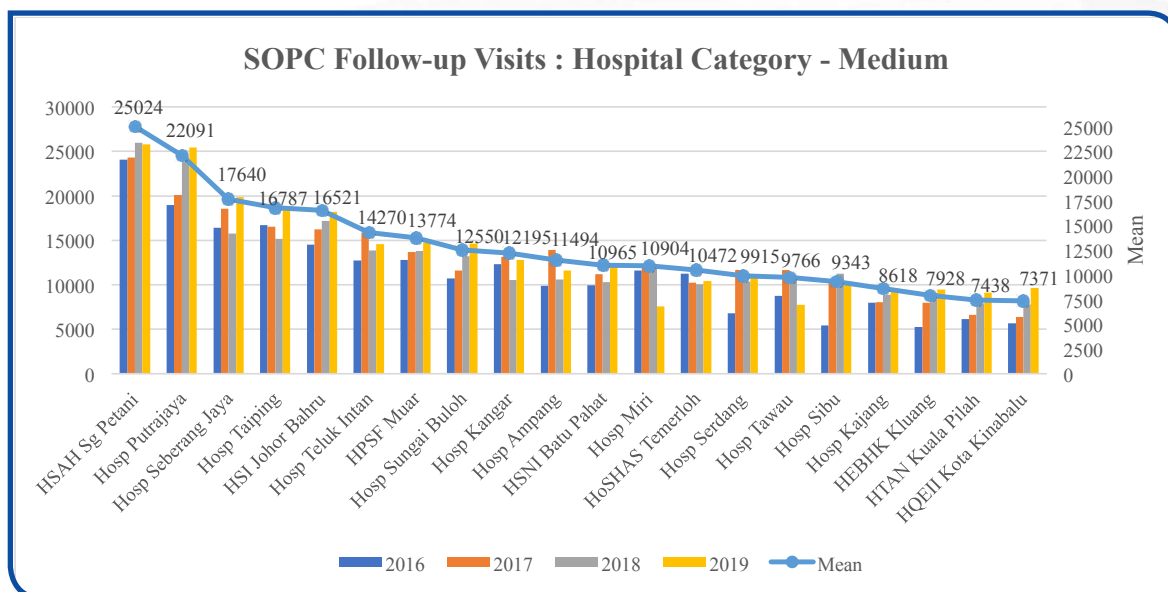


Figure 6.3.11 : SOPC Follow up Visits – Medium Category Hospitals

SOPC FOLLOW-UP VISITS: MEDIUM HOSPITALS

NO	HOSPITALS	2016	2017	2018	2019	MEAN
1	HSAH Sg Petani	24061	24303	25948	25785	25024
2	Hosp Putrajaya	18980	20117	23832	25435	22091
3	Hosp Seberang Jaya	16431	18529	15767	19832	17640
4	Hosp Taiping	16706	16557	15144	18740	16787
5	HSI Johor Bahru	14533	16215	17169	18168	16521
6	Hosp Teluk Intan	12748	15901	13864	14568	14270
7	HPSF Muar	12795	13705	13826	14769	13774
8	Hosp Sungai Buloh	10700	11620	13221	14658	12550
9	Hosp Kangar	12342	13121	10518	12798	12195
10	Hosp Ampang	9898	13896	10576	11606	11494
11	HSNI Batu Pahat	9914	11175	10313	12459	10965
12	Hosp Miri	11588	12115	12343	7568	10904
13	HoSHAS Temerloh	11231	10216	10048	10391	10472
14	Hosp Serdang	6767	11681	10382	10831	9915
15	Hosp Tawau	8735	11645	10964	7718	9766
16	Hosp Sibul	5452	10474	11257	10187	9343
17	Hosp Kajang	7978	8022	8887	9585	8618
18	HEBHK Kluang	5239	7967	9064	9441	7928
19	HTAN Kuala Pilah	6150	6599	7920	9083	7438
20	HQEII Kota Kinabalu	5692	6389	7789	9615	7371
TOTAL		260247	258832	273237	255064	69549

Table 6.3.9 : SOPC Follow up Visits – Medium Category Hospitals

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



SOPC Follow-up Visits : Hospital Category - Small

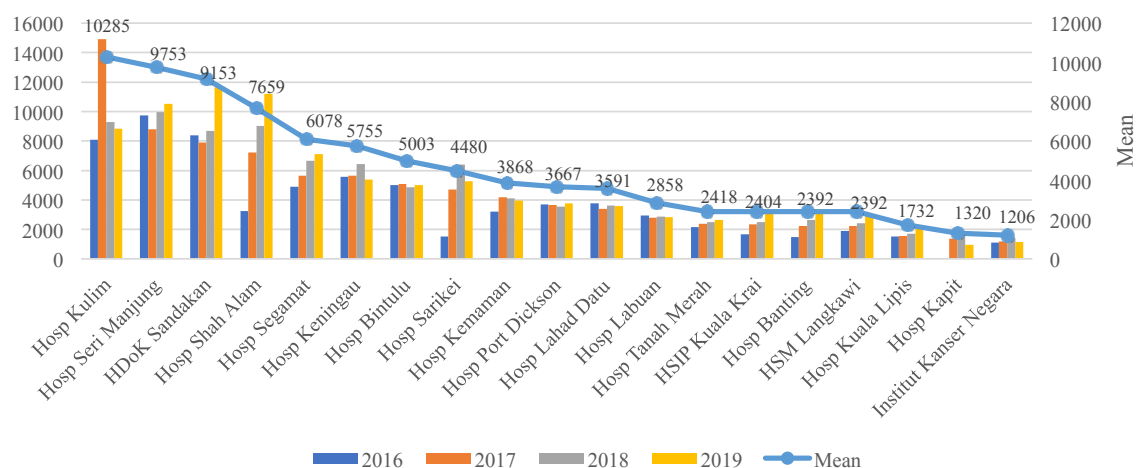


Figure 6.3.12 : SOPC Follow up Visits – Small Category Hospitals

SOPC FOLLOW-UP VISITS: SMALL HOSPITALS

NO	HOSPITALS	2016	2017	2018	2019	MEAN
1	Hosp Kulim	8086	14911	9301	8841	10285
2	Hosp Seri Manjung	9726	8805	9943	10536	9753
3	HDoK Sandakan	8384	7904	8683	11641	9153
4	Hosp Shah Alam	3237	7212	9005	11181	7659
5	Hosp Segamat	4904	5652	6663	7094	6078
6	Hosp Keningau	5565	5653	6415	5388	5755
7	Hosp Bintulu	5023	5098	4871	5020	5003
8	Hosp Sarikei	1523	4722	6394	5281	4480
9	Hosp Kemaman	3218	4199	4113	3940	3868
10	Hosp Port Dickson	3689	3650	3560	3767	3667
11	Hosp Lahad Datu	3758	3381	3625	3598	3591
12	Hosp Labuan	2947	2788	2856	2840	2858
13	Hosp Tanah Merah	2167	2392	2487	2624	2418
14	HSIP Kuala Krai	1655	2330	2507	3124	2404
15	Hosp Banting	1469	2214	2646	3240	2392
16	HSM Langkawi	1903	2242	2402	3019	2392
17	Hosp Kuala Lipis	1527	1548	1688	2163	1732
18	Institut Kanse Negara	1100	1179	1390	1156	1206
19	Hosp Kapit	0	1385	1625	951	1320
	TOTAL	69881	87265	90174	95404	86011

Table 6.3.10 : SOPC Follow up Visits – Small Category Hospitals

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



b. BMS Hospital Category

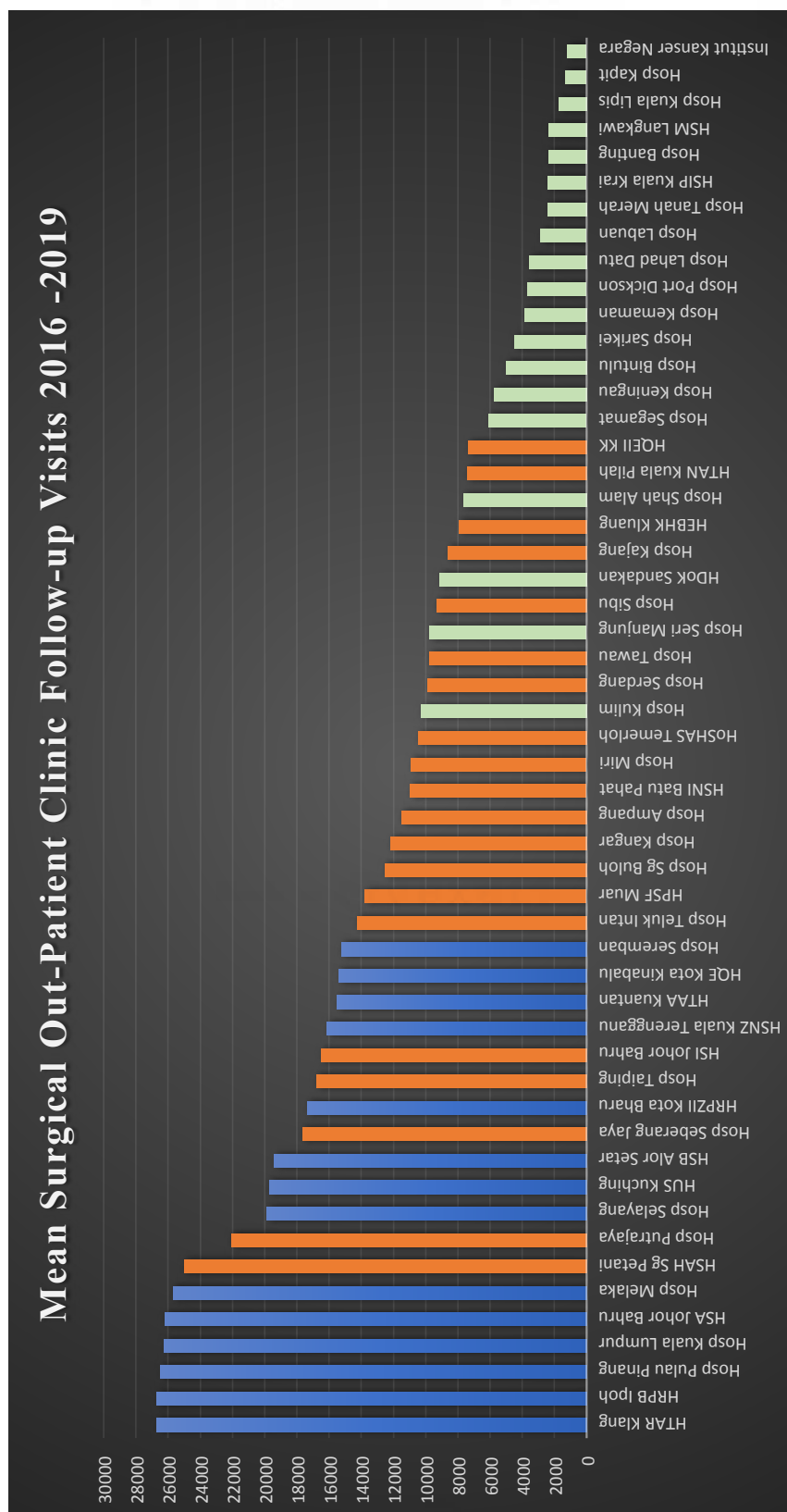


Figure 6.3.13 : Mean SOPC Follow up Visits by BMS Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



6.3.3 New Case Workload (Inpatient admissions + New Cases in SOPC)

In a specialist driven care system, workload estimation for the specialist is important for human resource planning and distribution. Among the scope of specialist work is to see all new cases, both inpatient and outpatient.

New Case Workload can be used as a surrogate measure of specialist workload in different centers.

a. By BMS Category

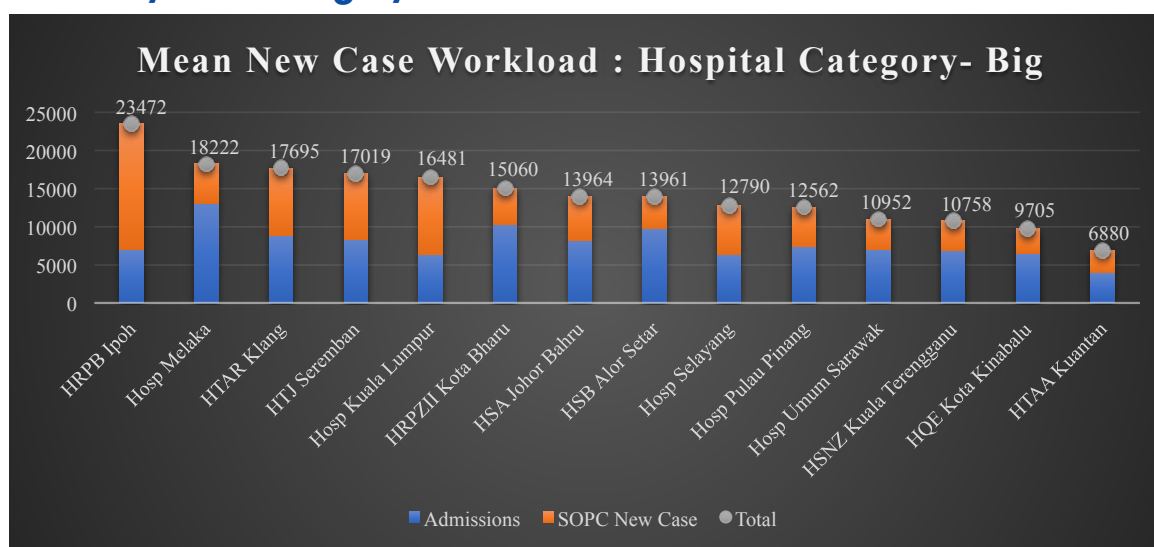


Figure 6.3.14 : Mean New Case Workload - Big Category Hospitals

MEAN NEW CASE WORKLOAD - BIG HOSPITALS

NO	HOSPITALS	ADMISSION MEAN	MEAN SOPC NEW CASES	TOTAL
1	HRPB Ipoh	7062	16410	23472
2	Hosp Melaka	13097	5124	18222
3	HTAR Klang	8822	8873	17695
4	HTJ Seremban	8256	8763	17019
5	Hosp Kuala Lumpur	6386	10095	16481
6	HRPZII Kota Bharu	10317	4743	15060
7	HSA Johor Bahru	8225	5739	13964
8	HSB Alor Setar	9745	4216	13961
9	Hosp Selayang	6372	6418	12790
10	Hosp Pulau Pinang	7348	5214	12562
11	Hosp Umum Sarawak	6999	3953	10952
12	HSNZ Kuala Terengganu	6916	3842	10758
13	HQE Kota Kinabalu	6525	3181	9705
14	HTAA Kuantan	3945	2935	6880

Table 6.3.11 : Mean New Case Workload - Big Category Hospitals

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019

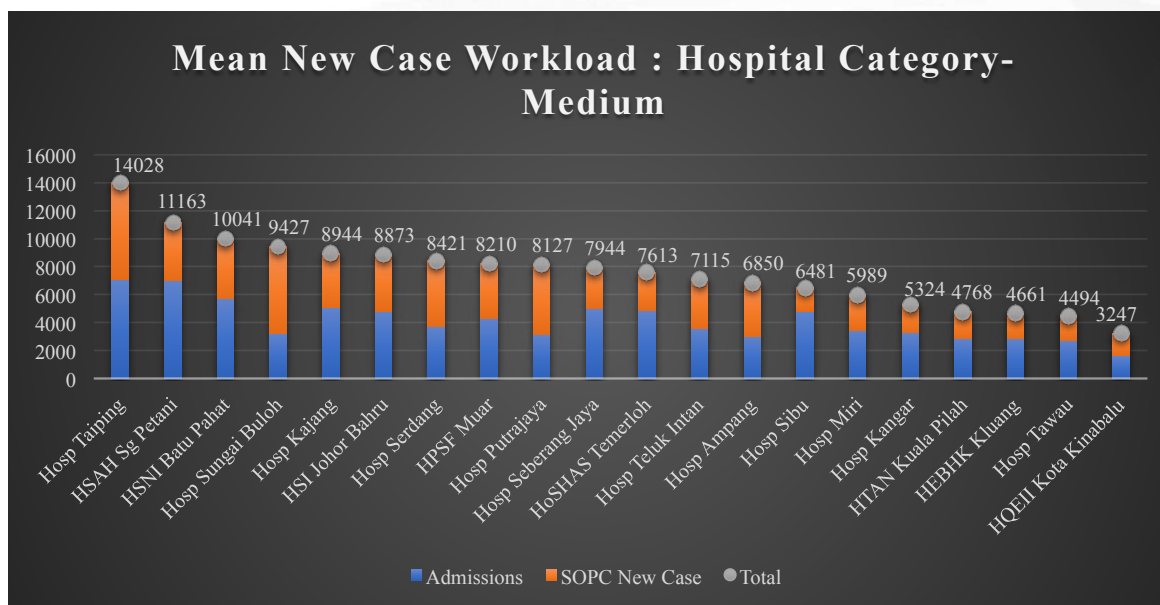


Figure 6.3.15 : Mean New Case Workload - Medium Category Hospitals

MEAN NEW CASE WORKLOAD - MEDIUM HOSPITALS

NO	HOSPITALS	ADMISSION MEAN	MEAN SOPC NEW CASES	TOTAL
1	Hosp Taiping	7107	6921	14028
2	HSAH Sg Petani	7039	4124	11163
3	HSNI Batu Pahat	5703	4338	10041
4	Hosp Sungai Buloh	3239	6188	9427
5	Hosp Kajang	5054	3890	8944
6	HSI Johor Bahru	4804	4069	8873
7	Hosp Serdang	3703	4719	8421
8	HPSF Muar	4296	3914	8210
9	Hosp Putrajaya	3138	4989	8127
10	Hosp Seberang Jaya	5023	2921	7944
11	HoSHAS Temerloh	4866	2747	7613
12	Hosp Teluk Intan	3591	3524	7115
13	Hosp Ampang	3011	3839	6850
14	Hosp Sibu	4813	1668	6481
15	Hosp Miri	3457	2532	5989
16	Hosp Kangar	3255	2069	5324
17	HTAN Kuala Pilah	2859	1909	4768
18	HEBHK Kluang	2851	1810	4661
19	Hosp Tawau	2736	1758	4494
20	HQEII Kota Kinabalu	1626	1621	3247

Table 6.3.12 : Mean New Case Workload - Medium Category Hospitals

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019

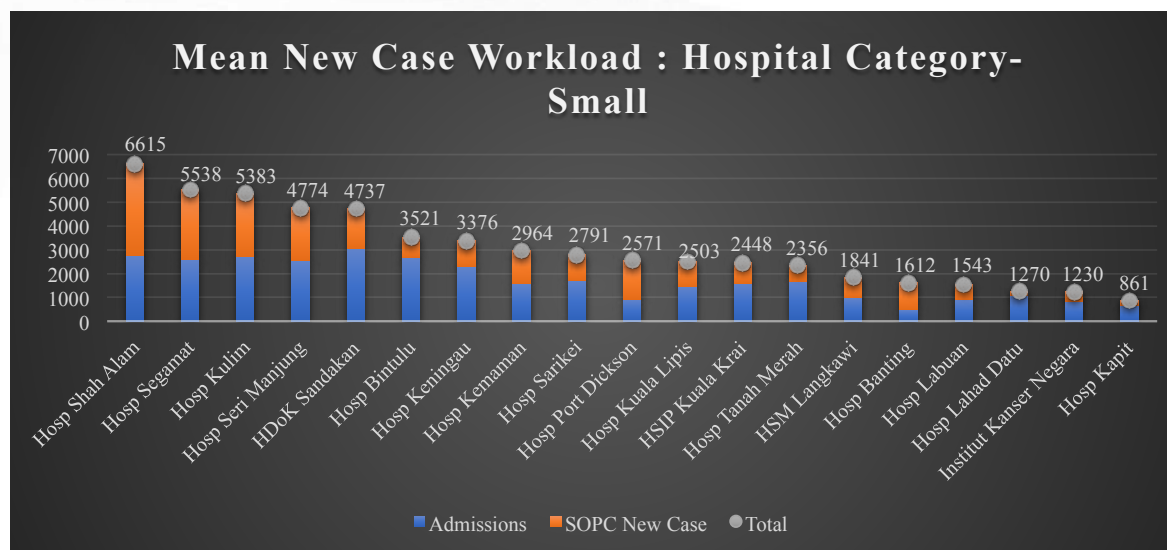


Figure 6.3.16 : Mean New Case Workload - Small Category Hospitals

MEAN NEW CASE WORKLOAD - SMALL HOSPITALS

NO	HOSPITALS	ADMISSION MEAN	MEAN SOPC NEW CASES	TOTAL
1	Hosp Shah Alam	2759	3856	6615
2	Hosp Segamat	2588	2950	5538
3	Hosp Kulim	2702	2682	5383
4	Hosp Seri Manjung	2542	2233	4774
5	HDoK Sandakan	3051	1686	4737
6	Hosp Bintulu	2666	855	3521
7	Hosp Keningau	2299	1077	3376
8	Hosp Kemaman	1583	1382	2964
9	Hosp Sarikei	1724	1067	2791
10	Hosp Port Dickson	922	1650	2571
11	Hosp Kuala Lipis	1464	1039	2503
12	HSIP Kuala Krai	1592	857	2448
13	Hosp Tanah Merah	1683	673	2356
14	HSM Langkawi	985	856	1841
15	Hosp Banting	505	1107	1612
16	Hosp Labuan	893	650	1543
17	Hosp Lahad Datu	1068	202	1270
18	Institut Kanser Negara	813	417	1230
19	Hosp Kapit	664	197	861

Table 6.3.13 : Mean New Case Workload - Small Category Hospitals

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



b. By BMS Hospital Category

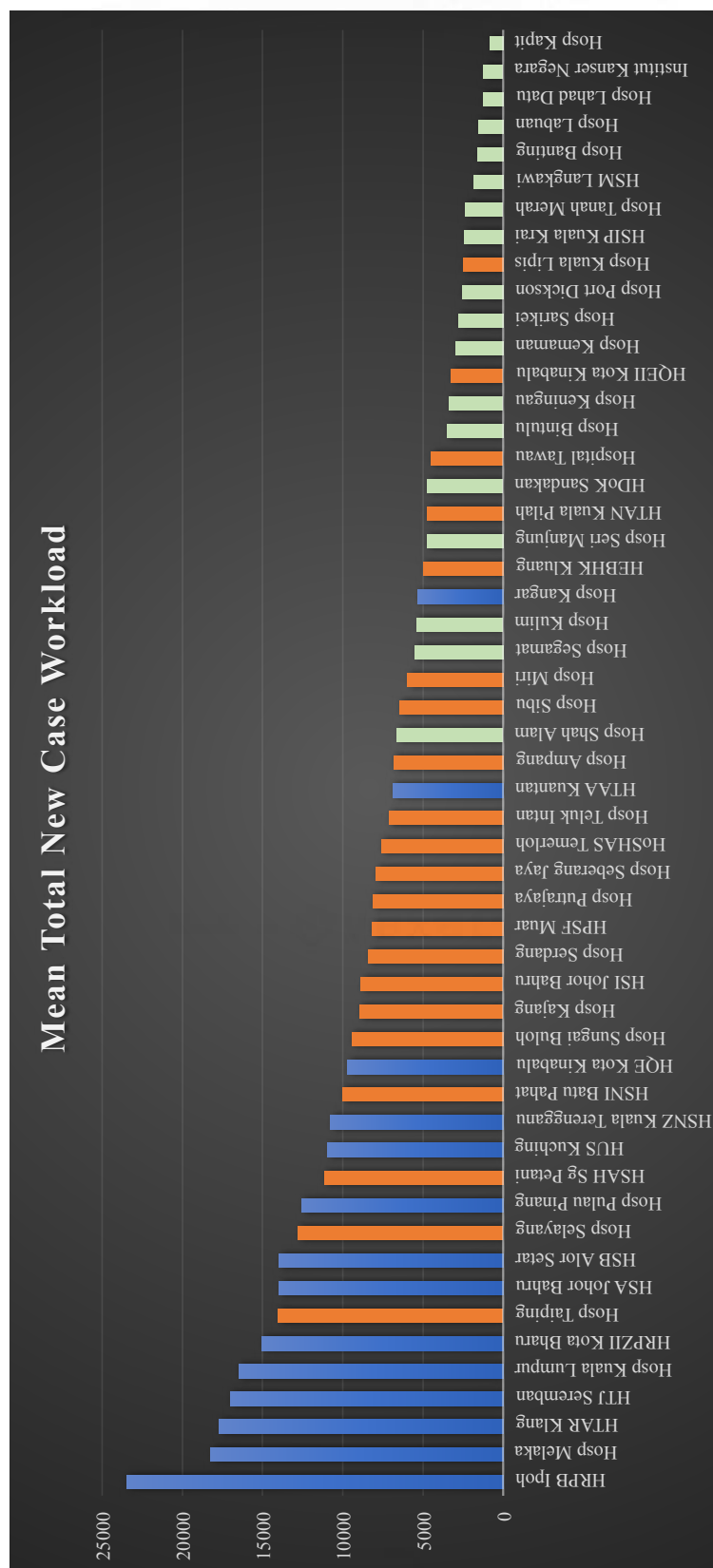


Figure 6.3 .17 : Mean New Case Workload by BMS Category Hospitals

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



6.4 ENDOSCOPY

Endoscopic Procedures / interventions done by Surgical Units: -

1. Oesphago-gastro-duodenoscopy (OGDS)
2. Colonoscopy
3. Sigmoidoscopy
4. Endoscopic Retrograde Cholangio-pancreatography (ERCP)
5. Cystoscopy

a. Total

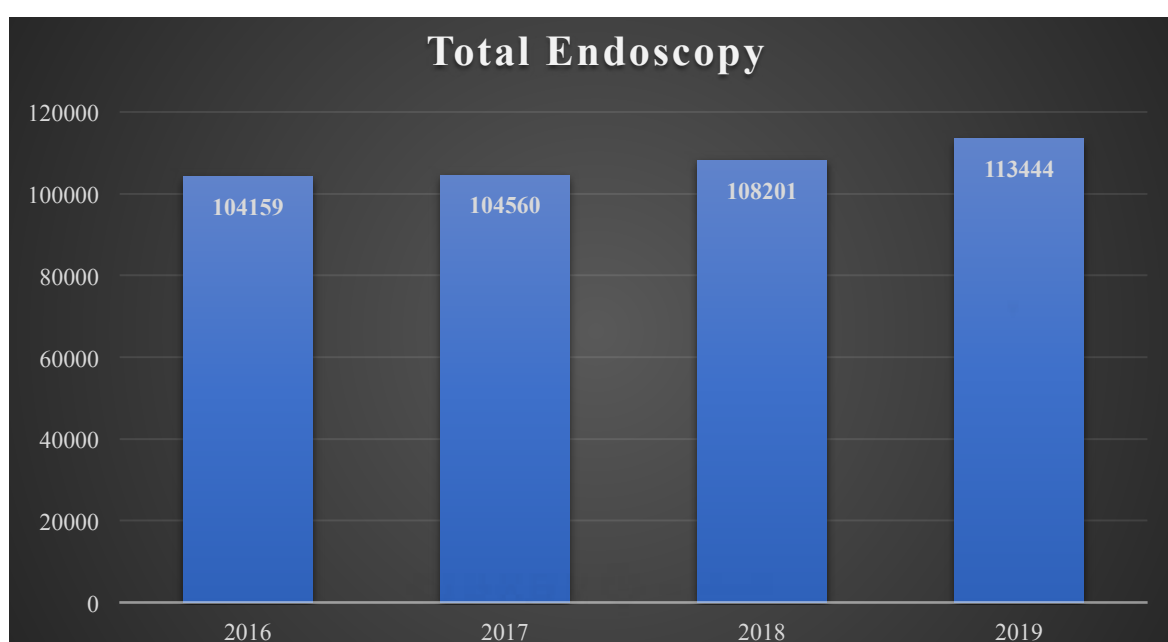


Figure 6.4.1 : Total Number of Endoscopy

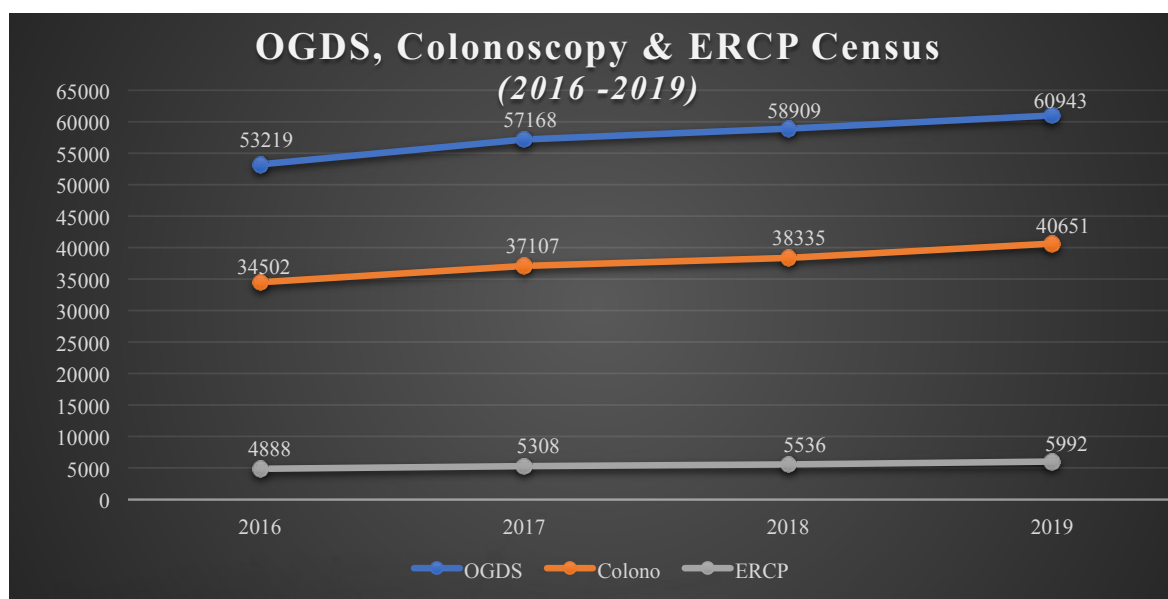


Figure 6.4.2 : Total Number of OGDS , Colonoscopy and ERCP

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



b. By BMS Category

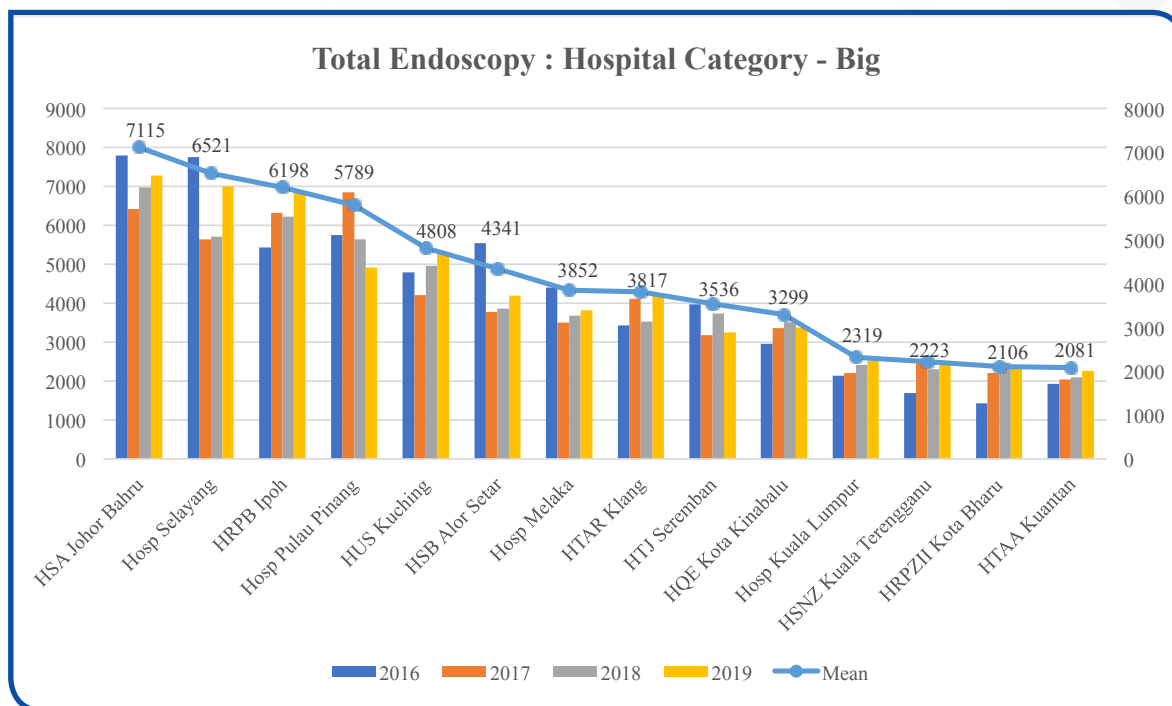


Figure 6.4.3 : Total Endoscopy – Big Category Hospital

TOTAL ENDOSCOPY : BIG HOSPITALS

NO	HOSPITALS	2016	2017	2018	2019	MEAN
1	HSA Johor Bahru	7797	6420	6970	7271	7115
2	Hosp Selayang	7752	5632	5705	6996	6521
3	HRPB Ipoh	5431	6312	6219	6830	6198
4	Hosp Pulau Pinang	5753	6840	5643	4918	5789
5	HUS Kuching	4789	4200	4952	5292	4808
6	HSB Alor Setar	5541	3772	3857	4195	4341
7	Hosp Melaka	4407	3505	3683	3811	3852
8	HTAR Klang	3432	4106	3531	4200	3817
9	HTJ Seremban	3973	3182	3740	3249	3536
10	HQEI Kota Kinabalu	2959	3363	3506	3369	3299
11	Hosp Kuala Lumpur	2138	2202	2410	2527	2319
12	HSNZ Kuala Terengganu	1692	2478	2307	2416	2223
13	HRPZII Kota Bharu	1424	2209	2468	2321	2106
14	HTAA Kuantan	1923	2045	2092	2264	2081
	TOTAL	59011	56266	57083	59659	58005

Table 6.4.1 : Total Endoscopy – Big Category Hospital

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



Total Endoscopy : Hospital Category - Medium

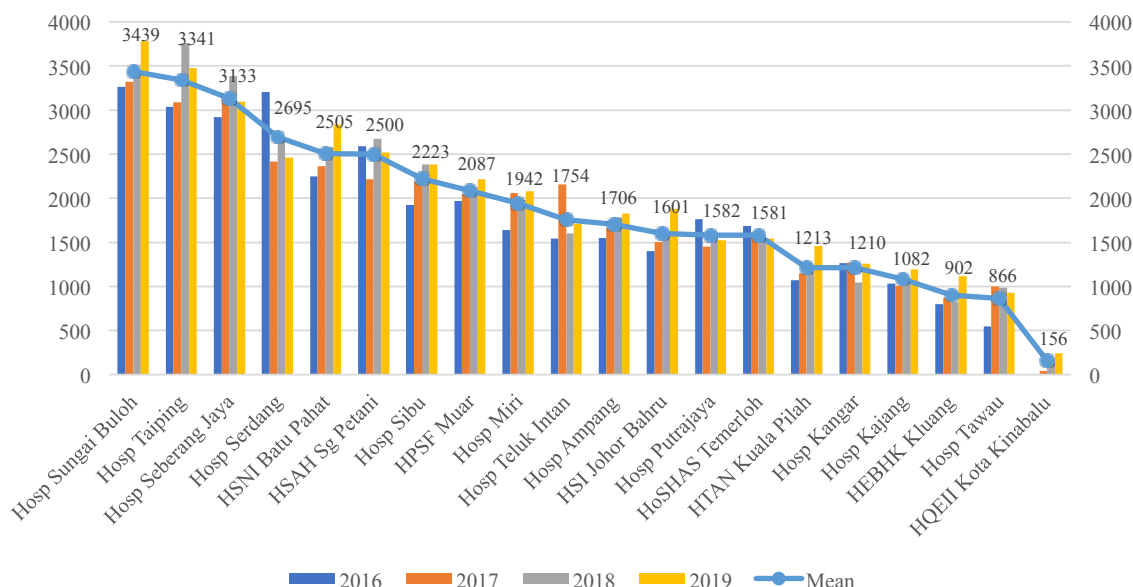


Figure 6.4.4 : Total Endoscopy – Medium Category Hospital

TOTAL ENDOSCOPY : MEDIUM HOSPITALS

NO	HOSPITALS	2016	2017	2018	2019	MEAN
1	Hosp Sungai Buloh	3262	3319	3393	3782	3439
2	Hosp Taiping	3038	3087	3761	3477	3341
3	Hosp Seberang Jaya	2923	3127	3386	3094	3133
4	Hosp Serdang	3207	2418	2694	2460	2695
5	HSNI Batu Pahat	2247	2366	2575	2833	2505
6	HSAH Sg Petani	2591	2217	2675	2518	2500
7	Hosp Sibu	1926	2192	2386	2386	2223
8	HPSF Muar	1968	2044	2122	2212	2087
9	Hosp Miri	1640	2060	1984	2082	1942
10	Hosp Teluk Intan	1544	2158	1600	1712	1754
11	Hosp Ampang	1547	1664	1784	1829	1706
12	HSI Johor Bahru	1402	1501	1621	1879	1601
13	Hosp Putrajaya	1760	1449	1594	1526	1582
14	HoSHAS Temerloh	1687	1549	1546	1543	1581
15	HTAN Kuala Pilah	1071	1150	1172	1458	1213
16	Hosp Kangar	1262	1273	1047	1259	1210
17	Hosp Kajang	1032	1006	1096	1195	1082
18	HEBHK Kluang	796	871	824	1115	902
19	Hosp Tawau	547	1002	988	925	866
20	HQEII Kota Kinabalu	0	39	185	244	156
TOTAL		35450	36492	38433	39529	37515

Table 6.4.2 : Total Endoscopy – Medium Category Hospital

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019

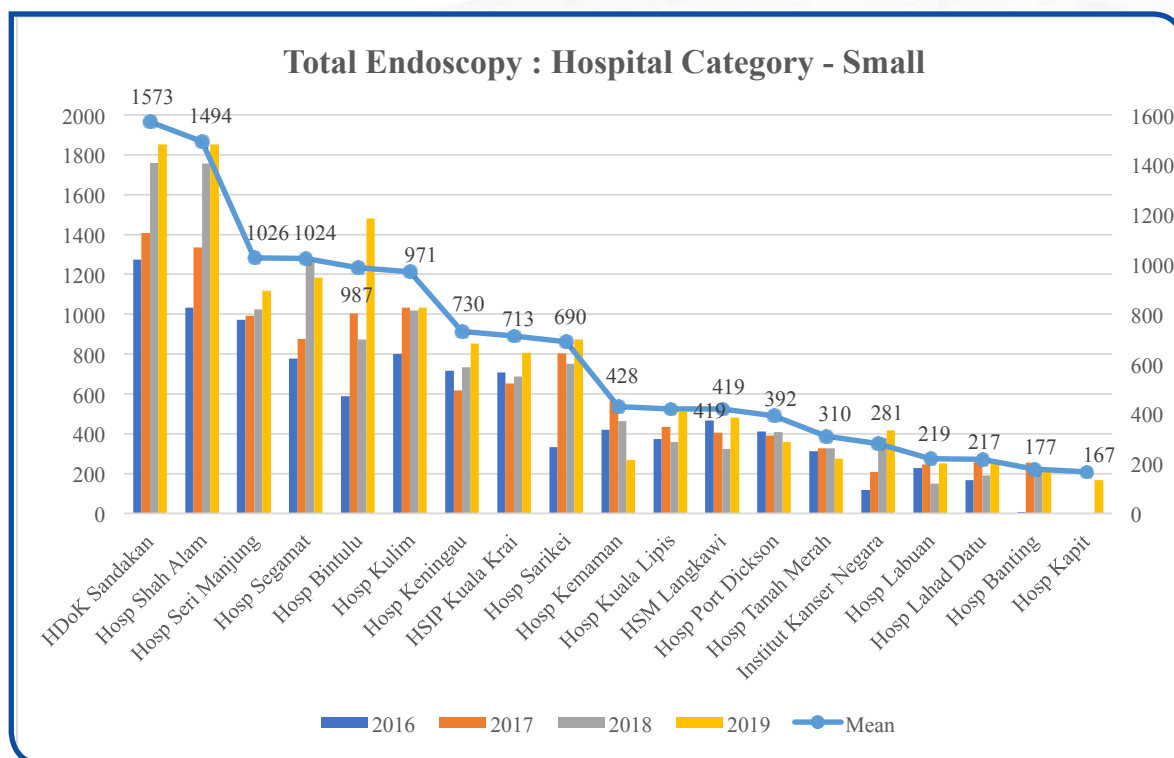


Figure 6.4.5: Total Endoscopy – Small Category Hospital

TOTAL ENDOSCOPY : SMALL HOSPITALS

NO	HOSPITALS	2016	2017	2018	2019	MEAN
1	HDoK Sandakan	1273	1407	1760	1851	1573
2	Hosp Shah Alam	1032	1336	1755	1853	1494
3	Hosp Seri Manjung	971	993	1024	1117	1026
4	Hosp Segamat	776	877	1260	1183	1024
5	Hosp Bintulu	589	1004	873	1481	987
6	Hosp Kulim	799	1032	1018	1034	971
7	Hosp Keningau	717	616	734	852	730
8	HSIP Kuala Krai	707	651	687	807	713
9	Hosp Sarikei	332	803	752	873	690
10	Hosp Kemaman	420	561	463	269	428
11	Hosp Kuala Lipis	373	434	359	510	419
12	HSM Langkawi	465	404	325	481	419
13	Hosp Port Dickson	410	392	408	358	392
14	Hosp Tanah Merah	312	328	327	274	310
15	Institut Kanser Negara	119	207	379	417	281
16	Hosp Labuan	228	246	149	251	219
17	Hosp Lahad Datu	167	257	189	255	217
18	Hosp Banting	8	254	223	223	177
19	Hosp Kapit	0	0	0	167	167
TOTAL		35450	36492	38433	39529	37515

Table 6.4.3 : Total Endoscopy – Small Category Hospital

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



c. By BMS Hospital Category

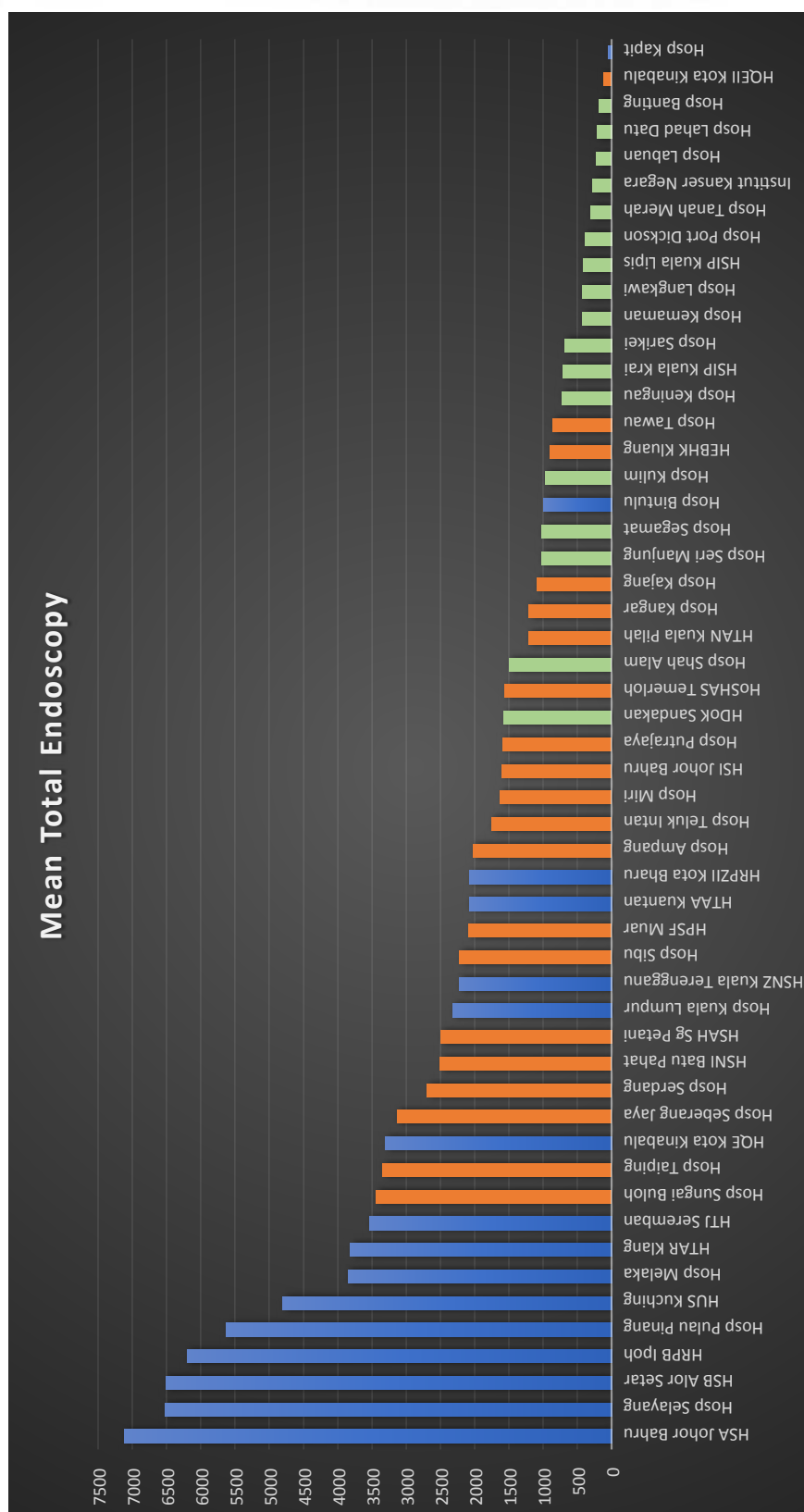


Figure 6.4.6 : Mean Total Endoscopy by BMS Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



6.4.1 OGDS

a. By BMS Category

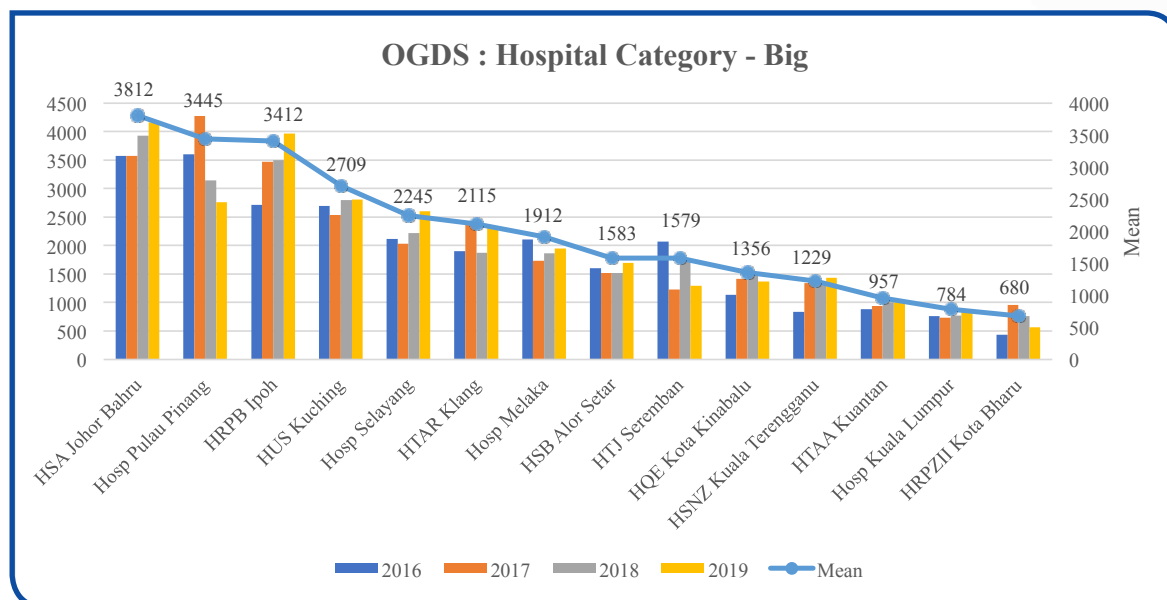


Figure 6.4.7 : Total Number of OGDS – Big Category Hospital

OGDS : BIG HOSPITALS

NO	HOSPITALS	2016	2017	2018	2019	MEAN
1	HSA Johor Bahru	3579	3579	3931	4159	3812
2	Hosp Pulau Pinang	3600	4273	3146	2762	3445
3	HRPB Ipoh	2712	3469	3501	3967	3412
4	HUS Kuching	2696	2542	2795	2804	2709
5	Hosp Selayang	2115	2035	2222	2607	2245
6	HTAR Klang	1902	2370	1878	2310	2115
7	Hosp Melaka	2109	1731	1863	1946	1912
8	HSB Alor Setar	1605	1514	1519	1693	1583
9	HTJ Seremban	2069	1231	1726	1290	1579
10	HQE Kota Kinabalu	1139	1420	1496	1367	1356
11	HSNZ Kuala Terengganu	837	1338	1309	1431	1229
12	HTAA Kuantan	879	938	1001	1009	957
13	Hosp Kuala Lumpur	762	732	768	873	784
14	HRPZII Kota Bharu	438	955	766	561	680
	TOTAL	28127	27921	28779	27817	58005

Table 6.4.4 : Total Number of OGDS – Big Category Hospital

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019

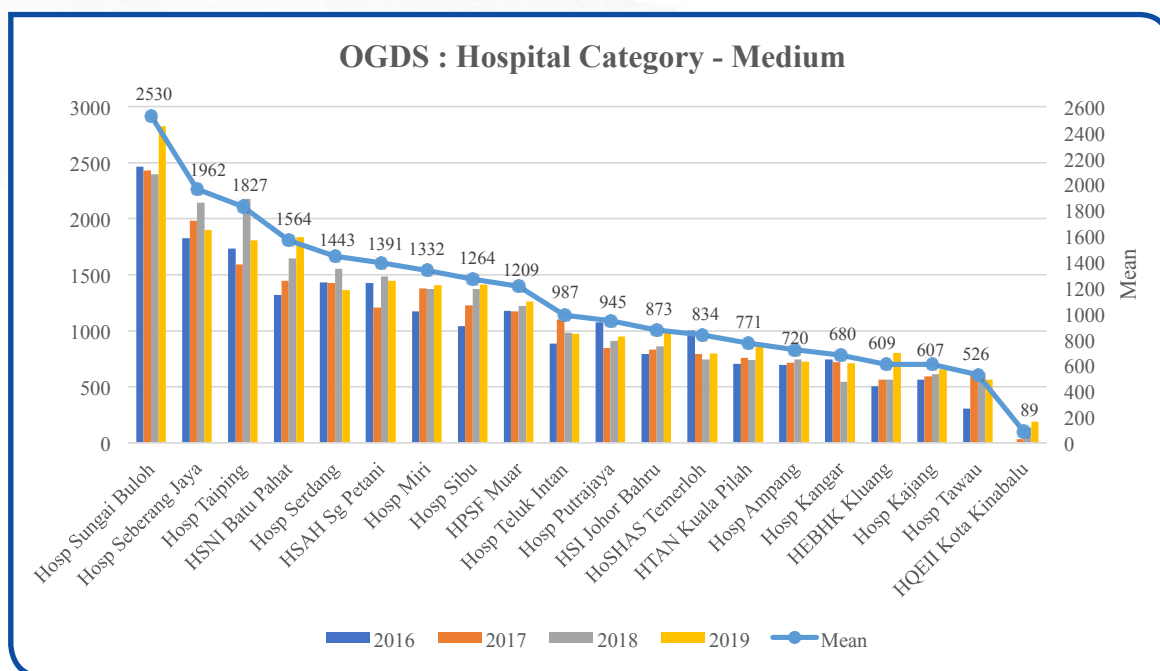


Figure 6.4.8 : Total Number of OGDS – Medium Category Hospital

OGDS : MEDIUM HOSPITALS

NO	HOSPITALS	2016	2017	2018	2019	MEAN
1	Hosp Sungai Buloh	2466	2430	2397	2826	2530
2	Hosp Seberang Jaya	1826	1982	2142	1897	1962
3	Hosp Taiping	1734	1590	2177	1808	1827
4	HSNI Batu Pahat	1321	1448	1648	1838	1564
5	Hosp Serdang	1433	1425	1553	1361	1443
6	HSAH Sg Petani	1428	1208	1483	1444	1391
7	Hosp Miri	1171	1376	1375	1407	1332
8	Hosp Sibul	1042	1229	1373	1412	1264
9	HPSF Muar	1178	1174	1222	1263	1209
10	Hosp Teluk Intan	887	1100	984	975	987
11	Hosp Putrajaya	1075	845	909	949	945
12	HSI Johor Bahru	794	832	860	1004	873
13	HoSHAS Temerloh	1002	793	746	796	834
14	HTAN Kuala Pilah	707	757	737	883	771
15	Hosp Ampang	694	715	745	725	720
16	Hosp Kangar	743	721	544	710	680
17	HEBHK Kluang	507	564	562	802	609
18	Hosp Kajang	564	591	615	656	607
19	Hosp Tawau	305	608	625	566	526
20	HQEI Kota Kinabalu	0	32	136	187	89
TOTAL		20877	21420	22833	23509	22160

Table 6.4.5 : Total Number of OGDS – Medium Category Hospital

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019

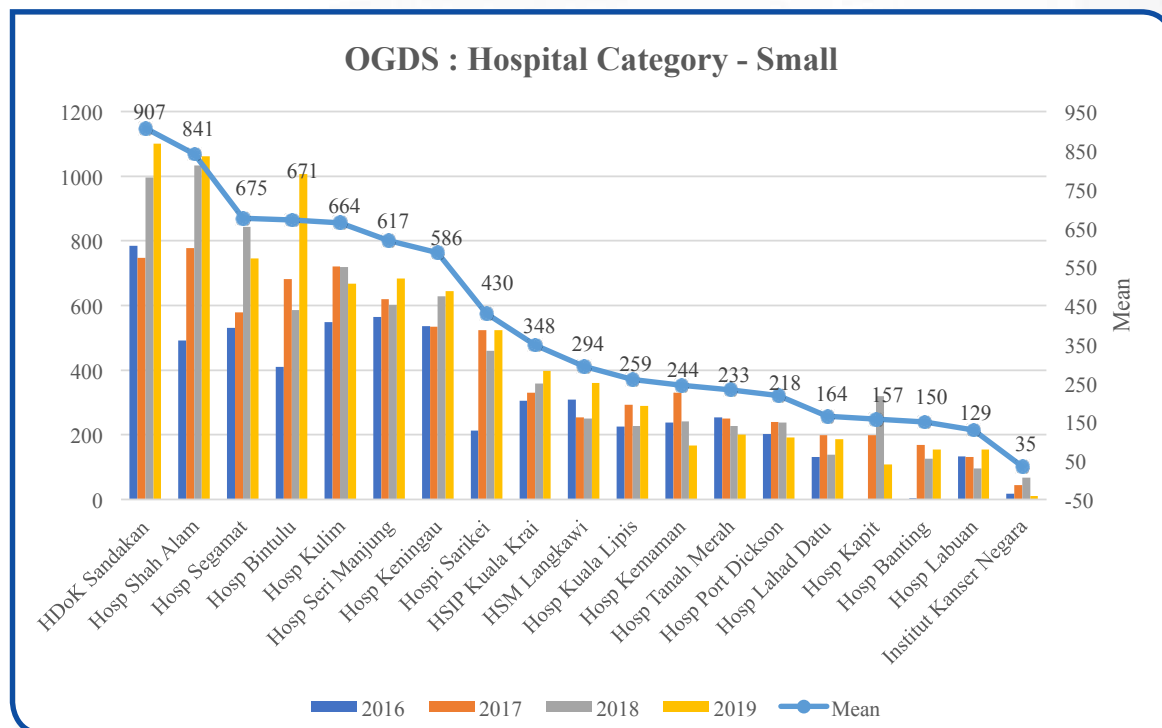


Figure 6.4.9 : Total Number of OGDS – Small Category Hospital

TOTAL ENDOSCOPY : SMALL HOSPITALS

NO	HOSPITALS	2016	2017	2018	2019	MEAN
1	HDoK Sandakan	785	748	996	1100	907
2	Hosp Shah Alam	492	777	1033	1061	841
3	Hosp Segamat	531	578	843	746	675
4	Hosp Bintulu	410	681	585	1007	671
5	Hosp Kulim	548	720	719	667	664
6	Hosp Seri Manjung	565	619	601	684	617
7	Hosp Keningau	536	534	629	645	586
8	Hosp Sarikei	213	523	459	524	430
9	HSIP Kuala Krai	305	330	358	398	348
10	HSM Langkawi	309	253	251	361	294
11	Hosp Kuala Lipis	226	293	227	290	259
12	Hosp Kemaman	238	330	241	166	244
13	Hosp Tanah Merah	254	251	227	201	233
14	Hosp Port Dickson	203	240	238	192	218
15	Hosp Lahad Datu	131	199	139	187	164
16	Hosp Kapit	0	199	319	108	157
17	Hosp Banting	4	169	126	154	150
18	Hosp Labuan	133	132	96	154	129
19	Institut Kanser Negara	17	45	68	10	35
TOTAL		5900	7621	8155	8655	7619

Table 6.4.6 : Total Number of OGDS – Small Category Hospital

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



b. By BMS Hospital Category

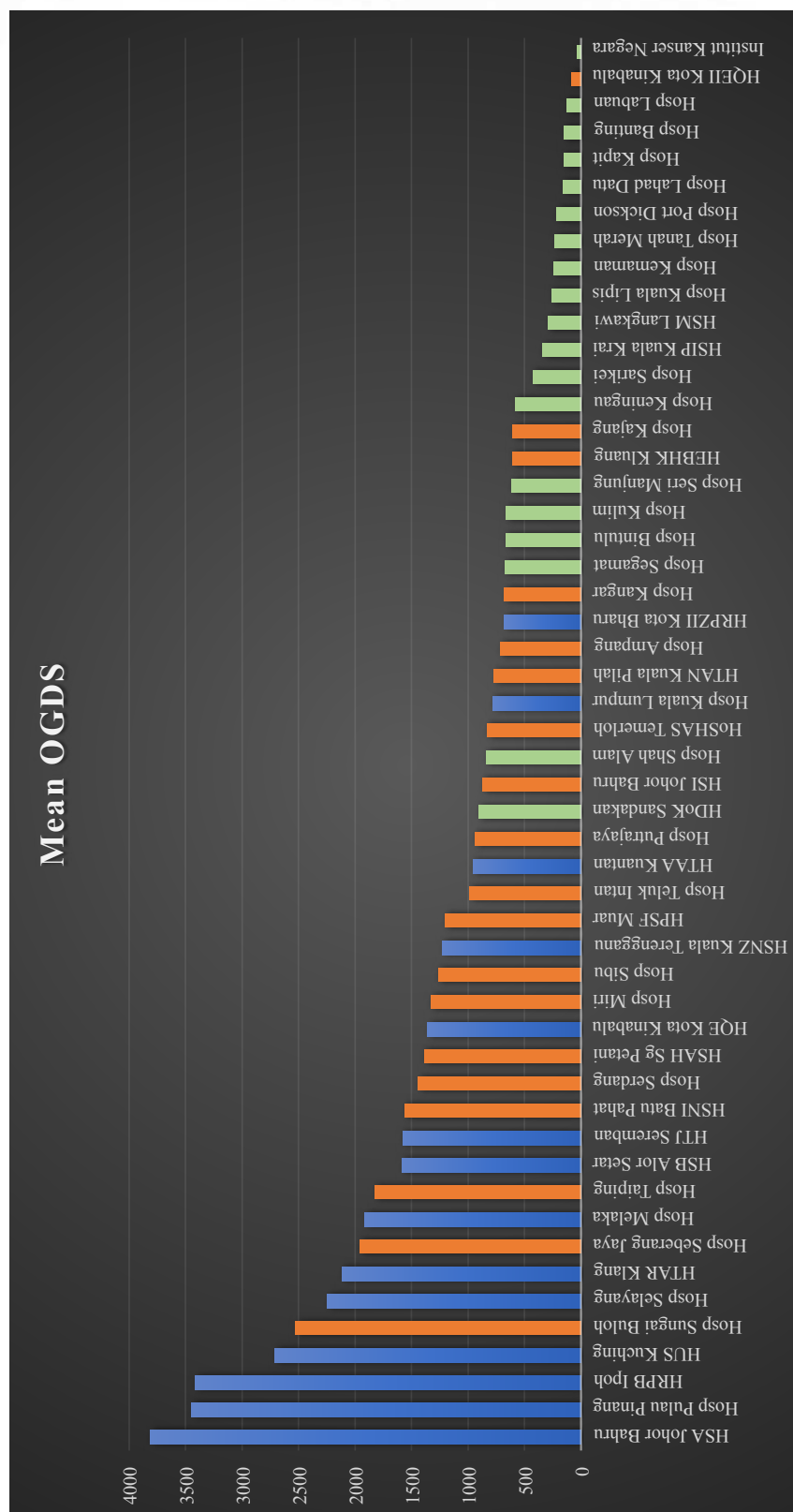


Figure 6.4.10 :Mean Number of OGDS by BMS Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



6.4.2 Colonoscopy

a. By BMS Category

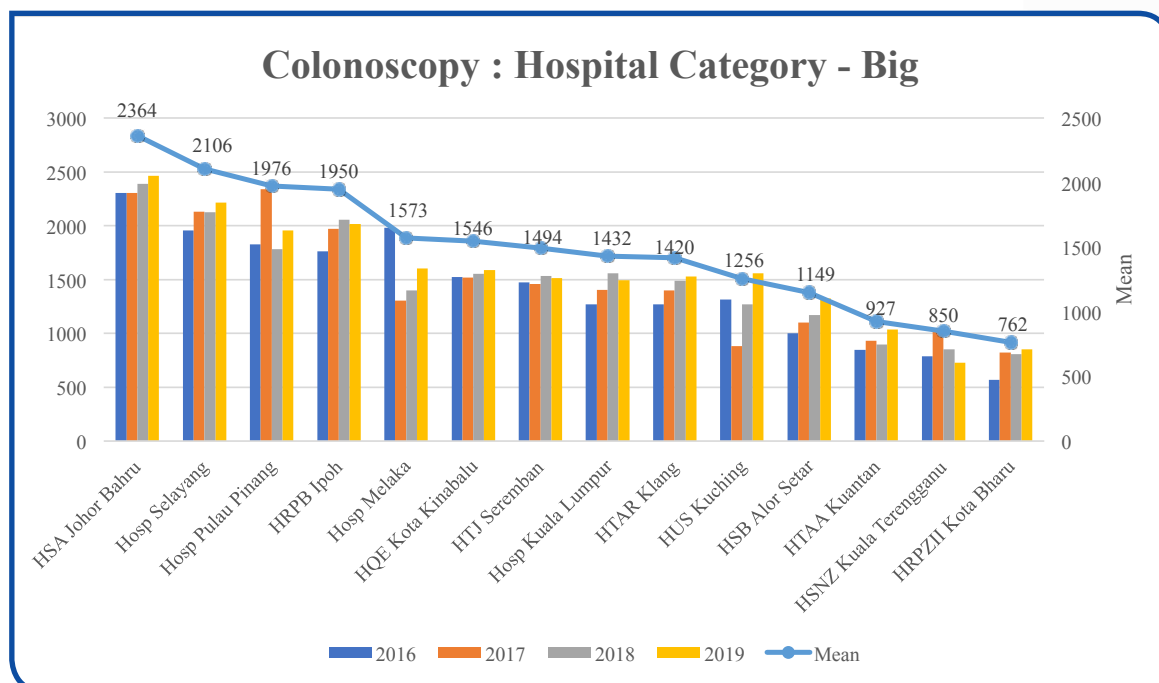


Figure 6.4.11 : Total Number of Colonoscopy – Big Category Hospitals

COLONOSCOPY : BIG HOSPITALS

NO	HOSPITALS	2016	2017	2018	2019	MEAN
1	HSA Johor Bahru	2302	2302	2388	2462	2364
2	Hosp Selayang	1957	2130	2124	2213	2106
3	Hosp Pulau Pinang	1824	2339	1782	1958	1976
4	HRPB Ipoh	1763	1969	2055	2014	1950
5	Hosp Melaka	1983	1304	1401	1605	1573
6	HQE Kota Kinabalu	1523	1516	1555	1589	1546
7	HTJ Seremban	1472	1459	1531	1513	1494
8	Hosp Kuala Lumpur	1269	1406	1557	1494	1432
9	HTAR Klang	1270	1399	1486	1526	1420
10	HUS Kuching	1314	883	1268	1559	1256
11	HSB Alor Setar	999	1100	1170	1326	1149
12	HTAA Kuantan	847	930	898	1034	927
13	HSNZ Kuala Terengganu	787	1029	853	729	850
14	HRPZII Kota Bharu	567	822	809	851	762
	TOTAL	19877	20588	20877	21873	20804

Table 6.4.7 : Total Number of Colonoscopy – Big Category Hospitals

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



Colonoscopy : Hospital Category - Medium

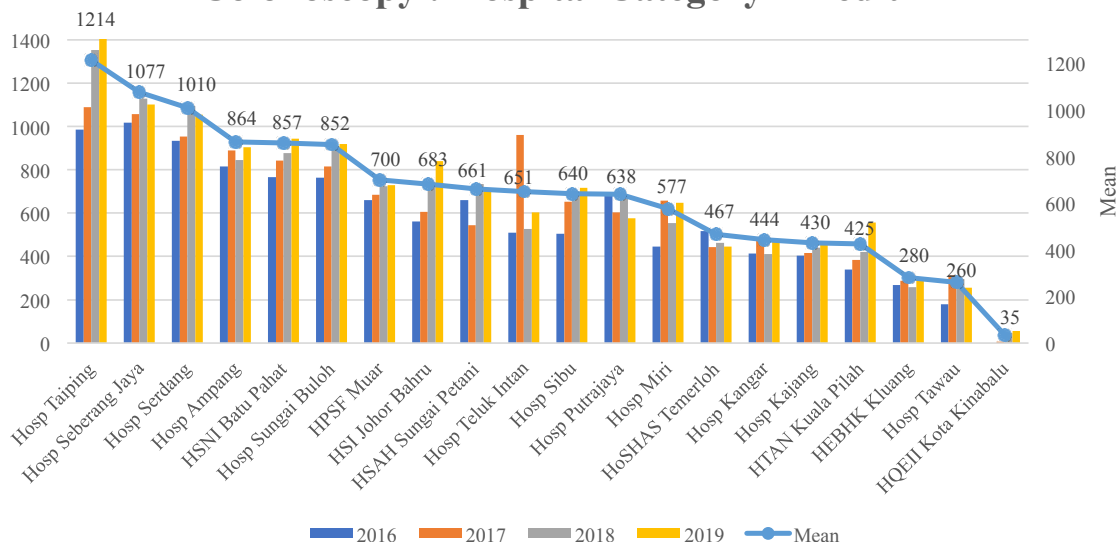


Figure 6.4.12 : Total Number of Colonoscopy – Medium Category Hospitals

COLONOSCOPY : MEDIUM HOSPITALS

NO	HOSPITALS	2016	2017	2018	2019	MEAN
1	Hosp Taiping	986	1090	1352	1427	1214
2	Hosp Seberang Jaya	1017	1058	1129	1102	1077
3	Hosp Serdang	935	953	1095	1055	1010
4	Hosp Ampang	816	890	844	904	864
5	HSNI Batu Pahat	765	843	877	943	857
6	Hosp Sungai Buloh	764	815	910	920	852
7	HPSF Muar	660	685	725	730	700
8	HSI Johor Bahru	562	606	721	841	683
9	HSAH Sungai Petani	660	543	733	707	661
10	Hosp Teluk Intan	510	960	528	604	651
11	Hosp Sibu	504	652	686	717	640
12	Hosp Putrajaya	685	604	685	577	638
13	Hosp Miri	445	658	555	648	577
14	HoSHAS Temerloh	518	442	462	445	467
15	Hosp Kangar	414	480	410	472	444
16	Hosp Kajang	404	415	441	460	430
17	HTAN Kuala Pilah	340	383	420	556	425
18	HEBHK Kluang	269	288	257	306	280
19	Hosp Tawau	179	313	294	255	260
20	HQEI Kota Kinabalu	0	6	45	55	35
TOTAL		11433	12684	13169	13724	12761

Table 6.4.8 : Total Number of Colonoscopy – Medium Category Hospitals

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



Colonoscopy : Hospital Category - Small

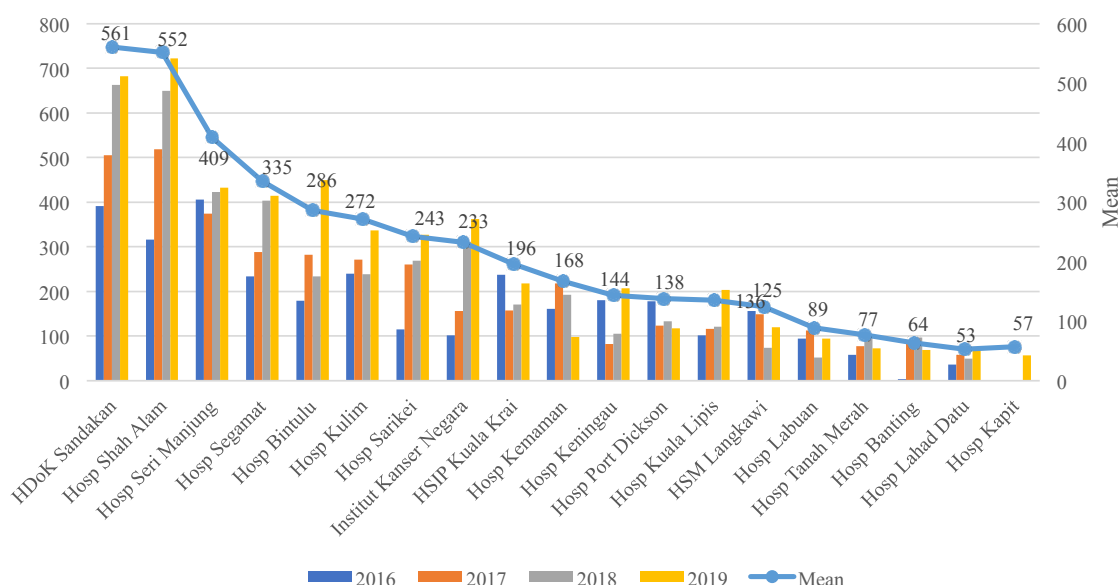


Figure 6.4.13 : Total Number of Colonoscopy – Small Category Hospitals

COLONOSCOPY : SMALL HOSPITALS

NO	HOSPITALS	2016	2017	2018	2019	MEAN
1	HDok Sandakan	391	505	663	683	561
2	Hosp Shah Alam	316	519	650	722	552
3	Hosp Seri Manjung	406	374	423	433	409
4	Hosp Segamat	234	288	404	415	335
5	Hosp Bintulu	179	282	234	450	286
6	Hosp Kulim	240	272	239	337	272
7	Hosp Sarikei	115	260	269	327	243
8	Institut Kanser Negara	102	156	311	362	233
9	HSIP Kuala Krai	238	157	171	218	196
10	Hosp Kemaman	161	218	193	98	168
11	Hosp Keningau	181	82	105	207	144
12	Hosp Port Dickson	178	124	133	117	138
13	Hosp Kuala Lipis	102	116	121	203	136
14	HSM Langkawi	156	149	74	120	125
15	Hosp Labuan	95	113	52	95	89
16	Hosp Tanah Merah	58	77	100	73	77
17	Hosp Banting	4	85	97	69	64
18	Hosp Lahad Datu	36	58	50	68	53
19	Hosp Kapit	0	0	0	57	57
	TOTAL	3192	3835	4289	5054	4135

Table 6.4.9 : Total Number of Colonoscopy – Small Category Hospitals

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



b. By BMS Hospital Category

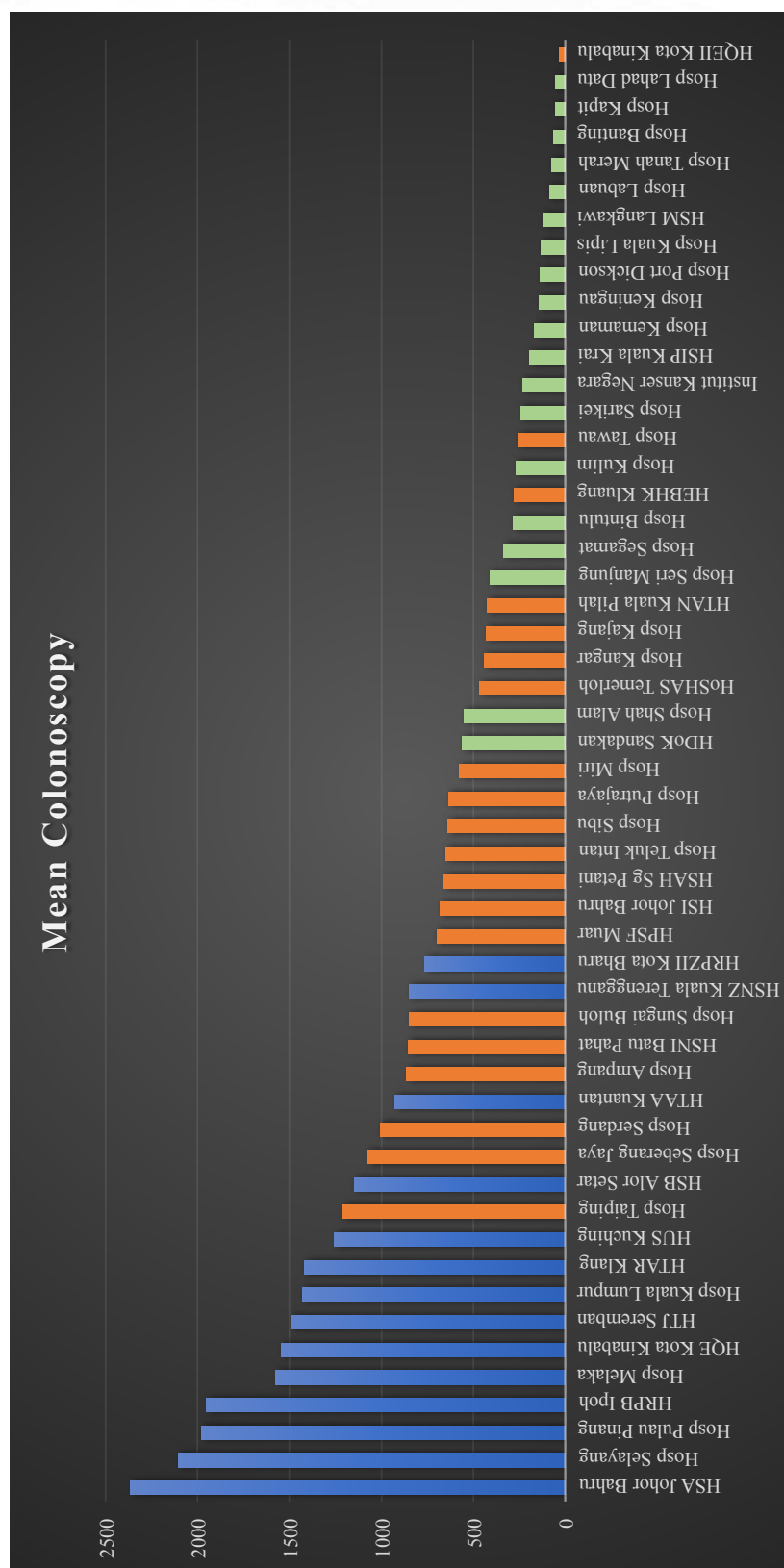


Figure 6.4.14 : Mean Number of Colonoscopy by BMS Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



6.4.3 ERCP

a. By BMS Category

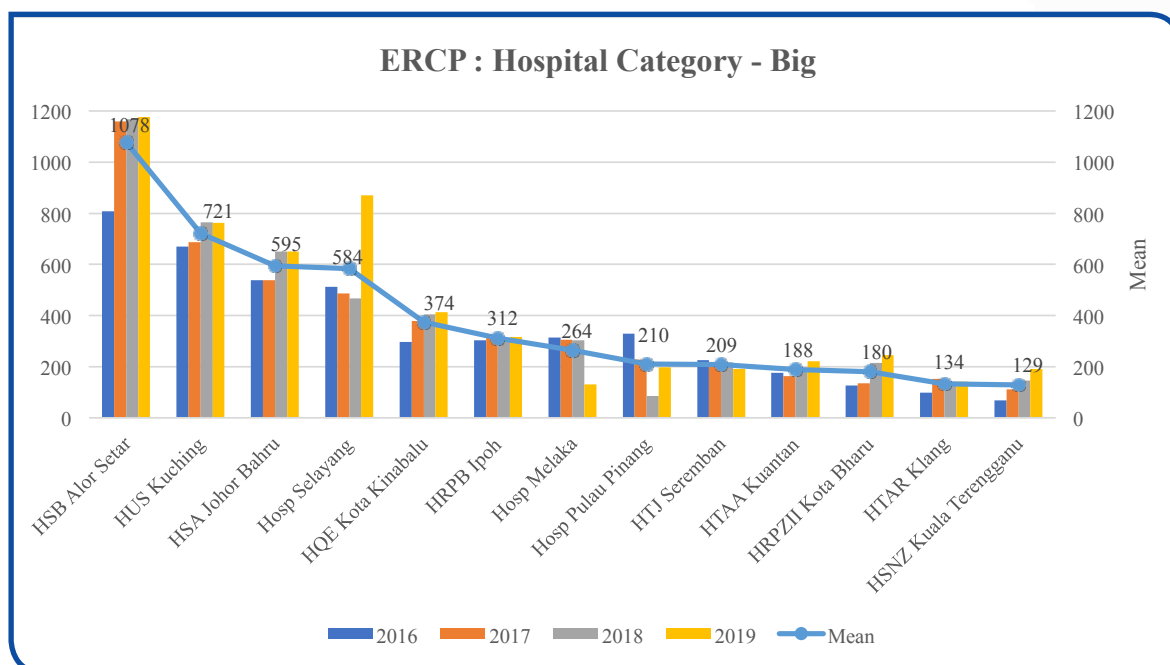


Figure 6.4.15 : Total Number of ERCP – Big Category Hospitals

ERCP : BIG HOSPITALS

NO	HOSPITALS	2016	2017	2018	2019	MEAN
1	HSB Alor Setar	808	1158	1168	1176	1078
2	HUS Kuching	670	688	765	762	721
3	HSA Johor Bahru	539	539	651	650	595
4	Hosp Selayang	512	487	467	870	584
5	HQE Kota Kinabalu	297	379	405	413	374
6	HRPB Ipoh	304	315	311	316	312
7	Hosp Melaka	315	305	304	131	264
8	Hosp Pulau Pinang	329	228	85	198	210
9	HTJ Seremban	226	200	216	192	209
10	HTAA Kuantan	175	163	193	221	188
11	HRPZII Kota Bharu	127	134	215	244	180
12	HTAR Klang	99	152	142	142	134
13	HSNZ Kuala Terengganu	68	111	145	191	129
	TOTAL	4469	4859	5067	5506	4975

Table 6.4.10 : Total Number of ERCP – Big Category Hospitals

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019

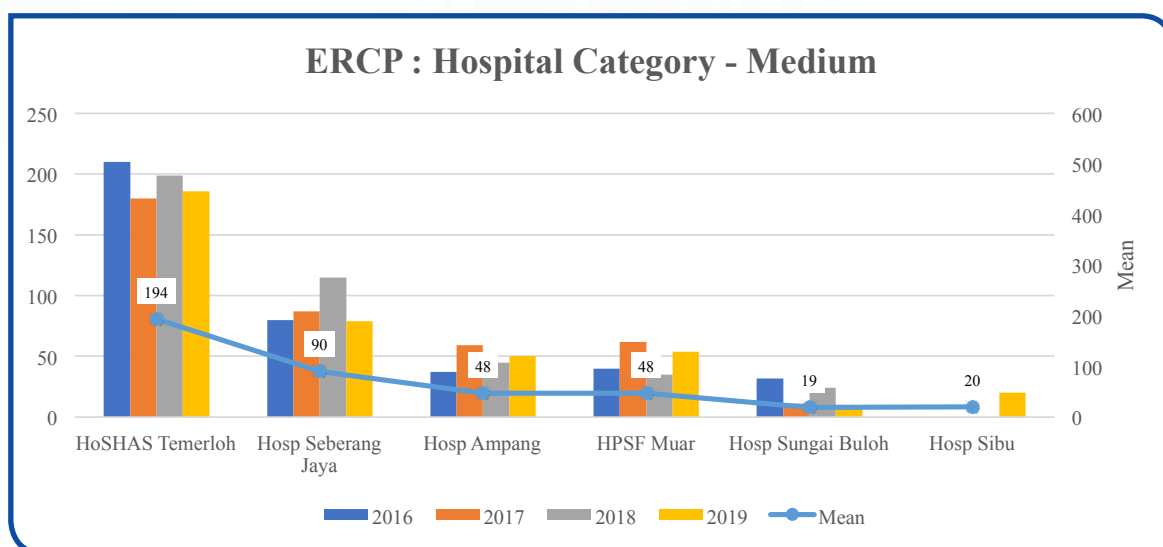


Figure 6.4.16 : Total Number of ERCP – Medium Category Hospitals

ERCP : MEDIUM HOSPITALS

NO	HOSPITALS	2016	2017	2018	2019	MEAN
1	HoSHAS Temerloh	210	180	199	186	194
2	Hosp Seberang Jaya	80	87	115	79	90
3	Hosp Ampang	37	59	45	50	48
4	HPSF Muar	40	62	35	54	48
5	Hosp Sungai Buloh	32	11	24	9	19
6	Hosp Sibu	0	0	0	20	20
TOTAL		399	399	418	398	419

Table 6.4.11 : Total Number of ERCP – Medium Category Hospitals

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



ERCP : Hospital Category - Small

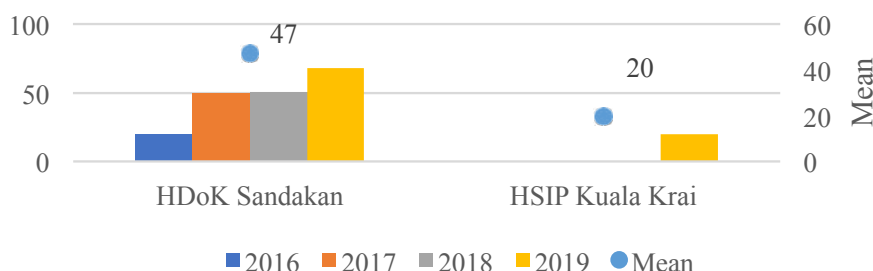


Figure 6.4 17 : Total Number of ERCP – Small Category Hospitals

ERCP : SMALL HOSPITALS

NO	HOSPITALS	2016	2017	2018	2019	MEAN
1	HDoK Sandakan	20	50	51	68	47
2	HSIP Kuala Krai	0	0	0	20	20
	TOTAL	20	50	51	88	67

Table 6.4.12 : Total Number of ERCP – Small Category Hospitals

b. By BMS Hospital Category

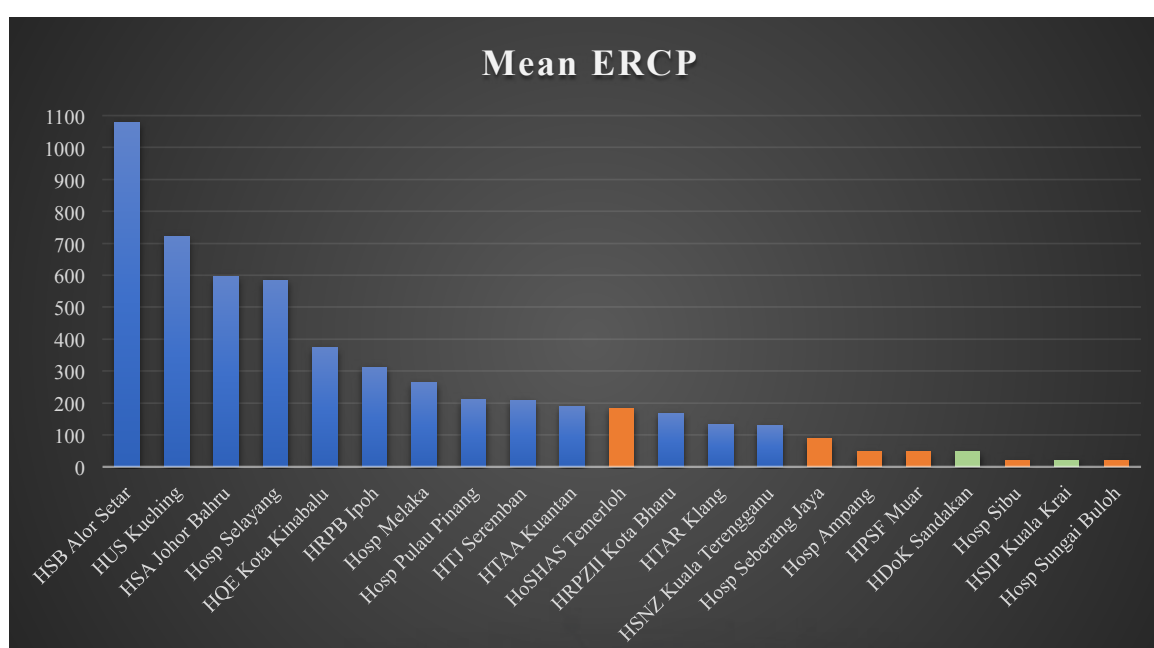


Figure 6.4.18 : Mean Number of ERCP by BMS Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



6.5 SURGERY

a. Total

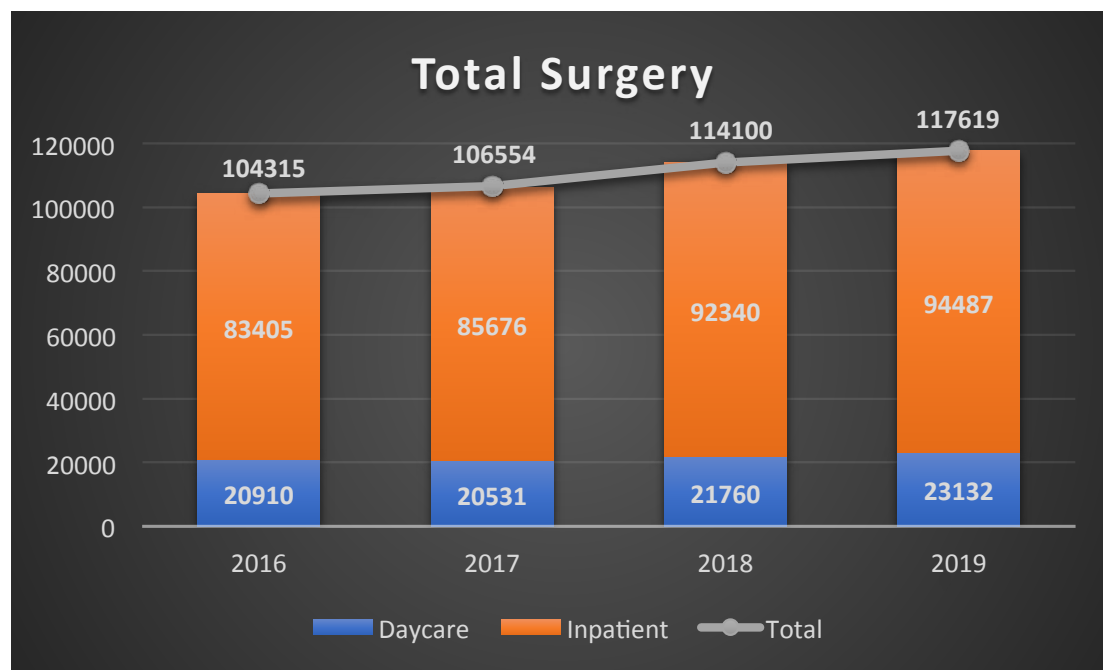


Figure 6.5.1 : Total Number of Surgery

TOTAL NUMBER OF SURGERY

SURGERY	2016		2017		2018		2019	
Daycare	20910	20%	20531	19%	21760	19%	23132	20%
Inpatient	83405	80%	86023	81%	92340	81%	94487	80%
TOTAL	104315	100%	106554	100%	114100	100%	117619	100%

Table 6.5.1 : Total Number of Surgery

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



b. By BMS Category

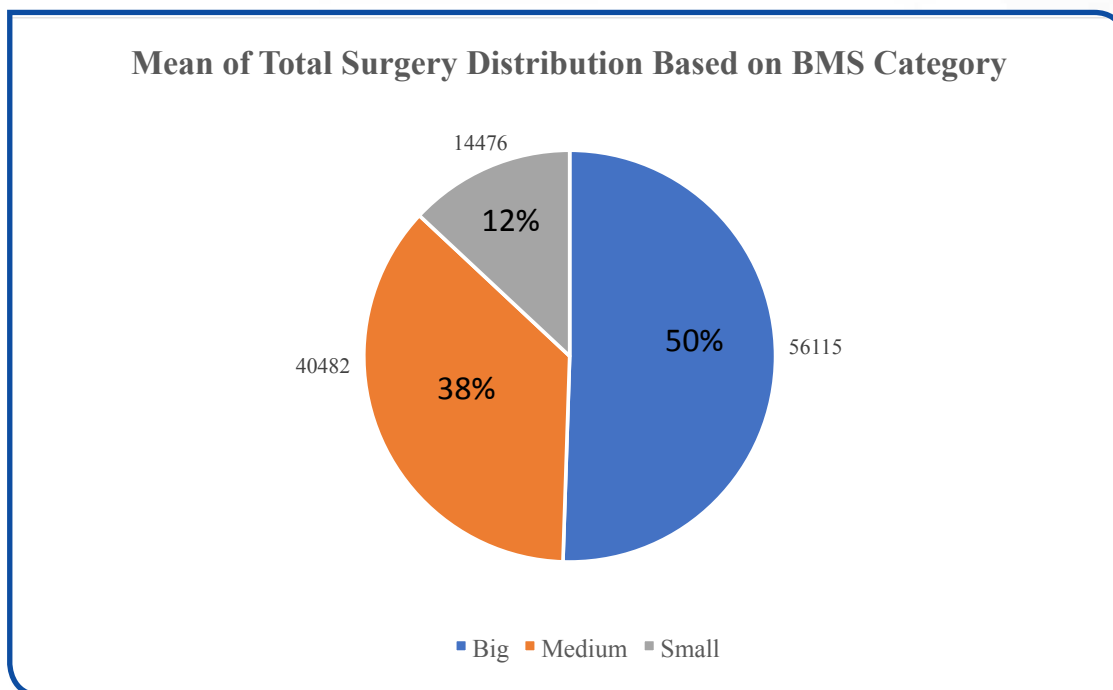


Figure 6.5.2 : Mean Total Number of Surgery by BMS Category

c. By BMS Hospital Category

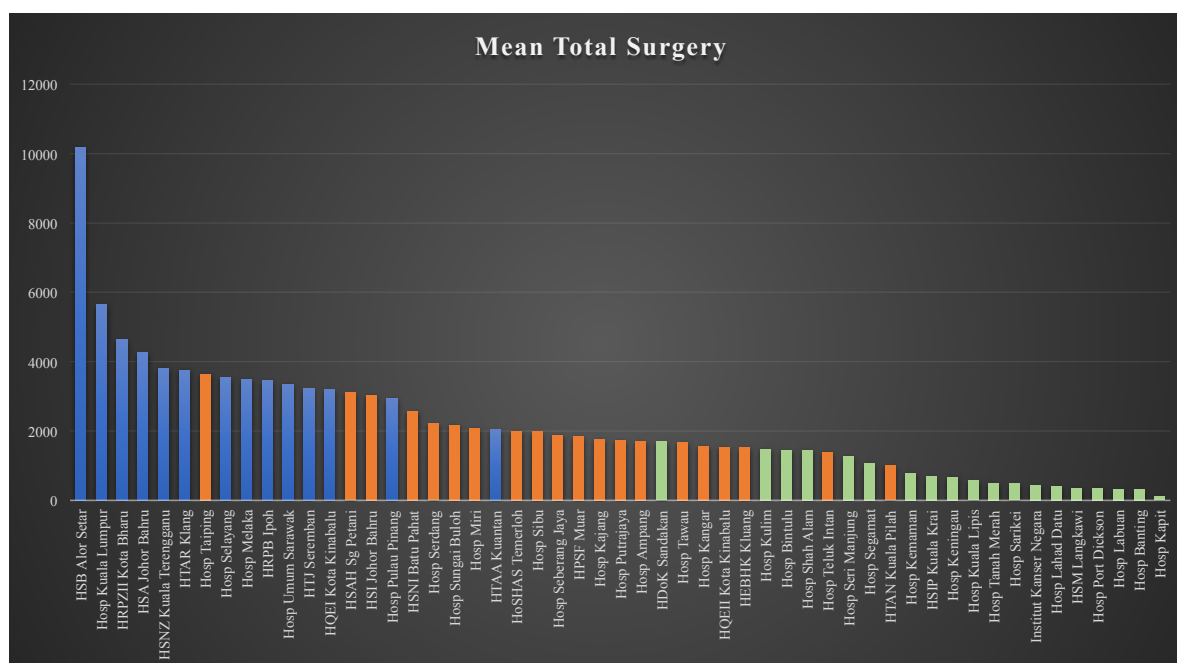


Figure 6.5.3: Mean Total Number of Surgery by BMS Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



6.5.1 Daycare Surgery

a. Total

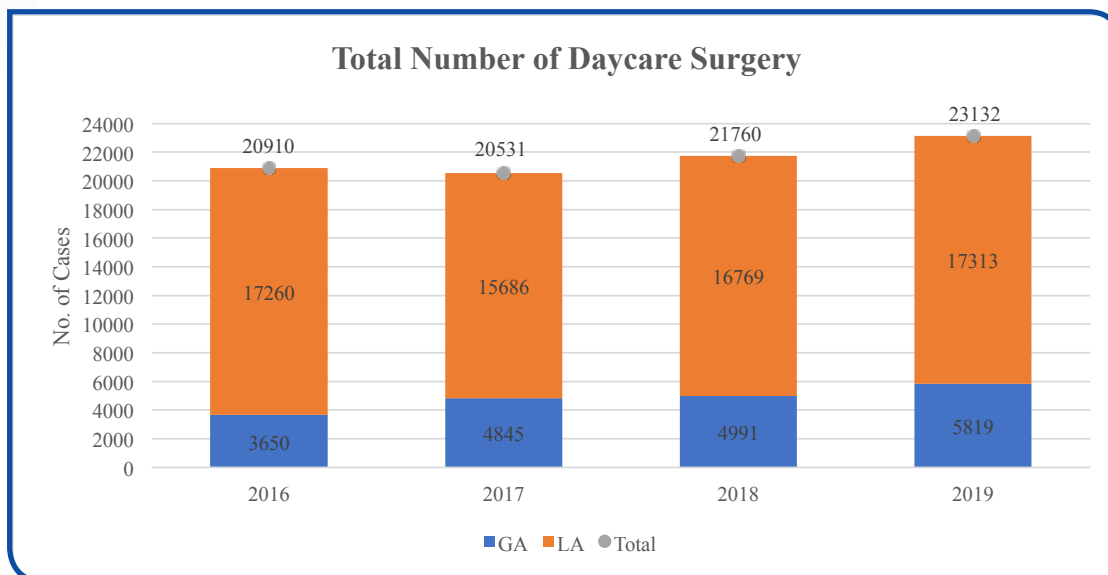


Figure 6.5.4 : Total Number of Daycare Surgery

DAYCARE	2016		2017		2018		2019	
General Anaesthesia	3650	25%	4845	24%	4991	23%	5819	25%
Local Anaesthesia	17260	75%	15686	76%	16769	77%	17313	75%
Total	20910	100%	20531	100%	21760	100%	23132	100%

Table 6.5.2 : Total Number of Daycare Surgery

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



b. By BMS Category

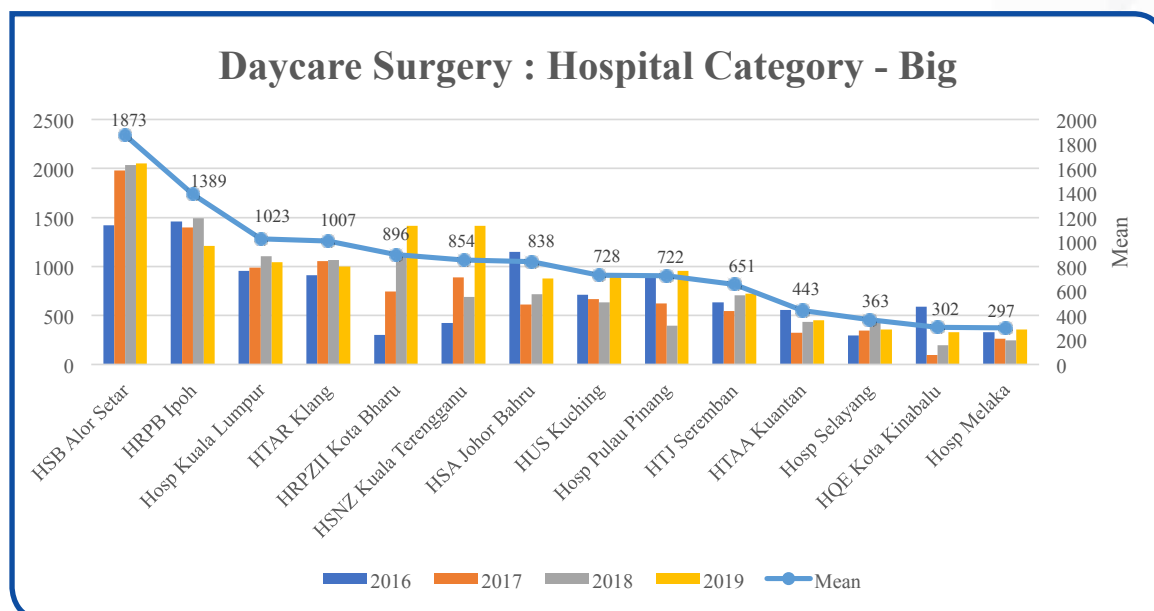


Figure 6.5.5 : Total Number of Daycare Surgery – Big Category Hospital

TOTAL DAYCARE SURGERY : BIG HOSPITALS

NO	HOSPITALS	2016	2017	2018	2019	MEAN
1	HSB Alor Setar	1422	1981	2035	2052	1873
2	HRPB Ipoh	1457	1398	1492	1209	1389
3	Hosp Kuala Lumpur	956	988	1107	1042	1023
4	HTAR Klang	911	1057	1064	997	1007
5	HRPZII Kota Bharu	299	742	1128	1415	896
6	HSNZ Kuala Terengganu	425	888	690	1413	854
7	HSA Johor Bahru	1149	611	715	876	838
8	HUS Kuching	713	666	634	899	728
9	Hosp Pulau Pinang	917	623	394	955	722
10	HTJ Seremban	632	544	707	721	651
11	HTAA Kuantan	557	325	435	453	443
12	Hosp Selayang	297	347	452	356	363
13	HQE Kota Kinabalu	587	96	194	331	302
14	Hosp Melaka	328	260	244	357	297
	TOTAL	10650	10526	11291	13076	11386

Table 6.5.3 : Total Number of Daycare Surgery – Big Category Hospital

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019

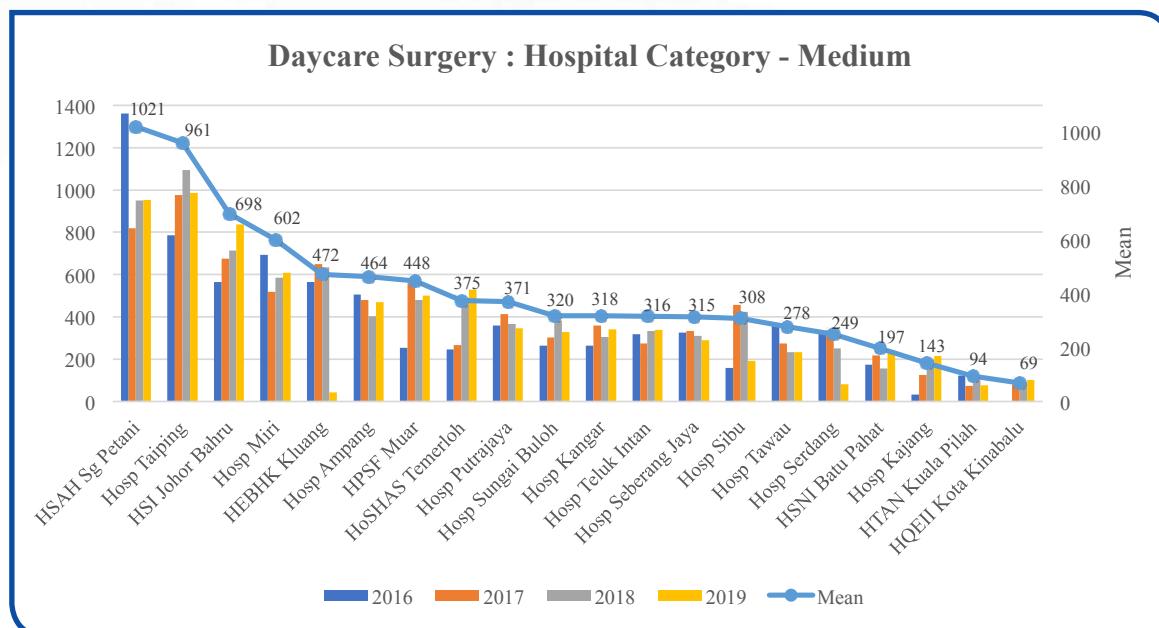


Figure 6.5.6 : Total Number of Daycare Surgery – Medium Category Hospital

TOTAL DAYCARE SURGERY: MEDIUM HOSPITALS

NO	HOSPITALS	2016	2017	2018	2019	MEAN
1	HSAH Sg Petani	1361	819	951	953	1021
2	Hosp Taiping	786	976	1095	985	961
3	HSI Johor Bahru	565	675	715	836	698
4	Hosp Miri	694	518	586	608	602
5	HEBHK Kluang	564	649	633	43	472
6	Hosp Ampang	505	480	403	469	464
7	HPSF Muar	253	559	481	500	448
8	HoSHAS Temerloh	246	266	460	528	375
9	Hosp Putrajaya	358	412	366	347	371
10	Hosp Sungai Buloh	265	303	383	327	320
11	Hosp Kangar	265	360	304	341	318
12	Hosp Teluk Intan	317	273	333	339	316
13	Hosp Seberang Jaya	325	334	311	290	315
14	Hosp Sibu	158	458	424	193	308
15	Hosp Tawau	368	274	234	234	278
16	Hosp Serdang	329	335	251	82	249
17	HSNI Batu Pahat	173	217	157	241	197
18	Hosp Kajang	33	124	198	215	143
19	HTAN Kuala Pilah	122	75	103	76	94
20	HQEII Kota Kinabalu	0	80	92	103	69
TOTAL		7687	8187	8480	7710	8016

Table 6.5.4 : Total Number of Daycare Surgery – Medium Category Hospital

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



Daycare Surgery : Hospital Category - Small

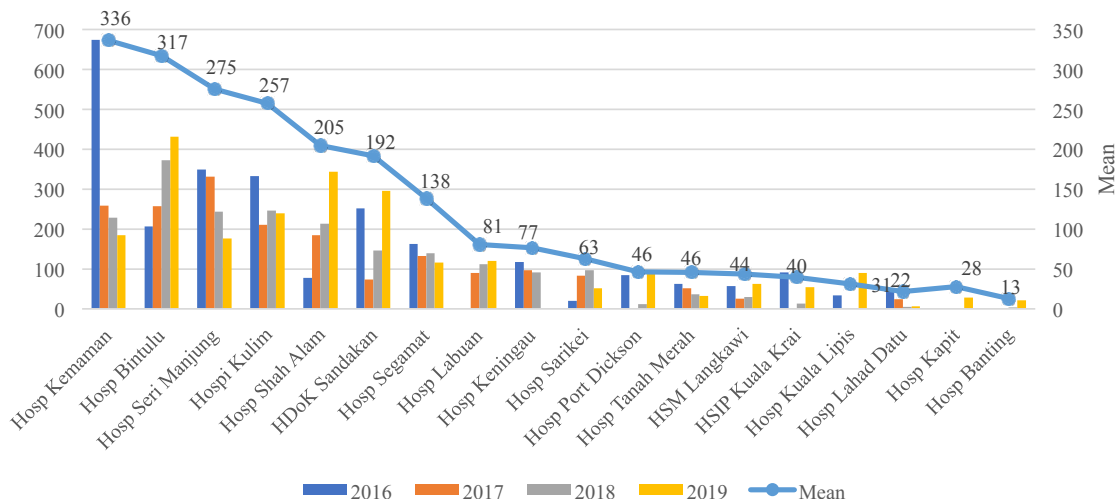


Figure 6.5.7 : Total Number of Daycare Surgery – Small Category Hospital

TOTAL DAYCARE SURGERY : SMALL HOSPITALS

NO	HOSPITALS	2016	2017	2018	2019	MEAN
1	Hosp Kemaman	674	258	228	185	336
2	Hosp Bintulu	207	257	373	431	317
3	Hosp Seri Manjung	349	331	243	177	275
4	Hosp Kulim	333	210	246	240	257
5	Hosp Shah Alam	77	185	214	344	205
6	HDoK Sandakan	252	73	146	296	192
7	Hosp Segamat	163	133	140	116	138
8	Hosp Labuan	0	90	112	120	81
9	Hosp Keningau	118	97	91	0	77
10	Hosp Sarikei	20	83	97	52	63
11	Hosp Port Dickson	85	0	12	88	46
12	Hosp Tanah Merah	63	51	37	33	46
13	HSM Langkawi	57	26	29	63	44
14	HSIP Kuala Krai	91	0	13	54	40
15	Hosp Kuala Lipis	34	0	0	90	31
16	Hosp Lahad Datu	50	24	5	7	22
17	Hosp Kapit	0	0	0	28	28
18	Hosp Banting	0	0	3	22	13
	TOTAL	2573	1818	1989	2346	2209

Table 6.5.5 : Total Number of Daycare Surgery – Small Category Hospital

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



c. By BMS Hospital Category

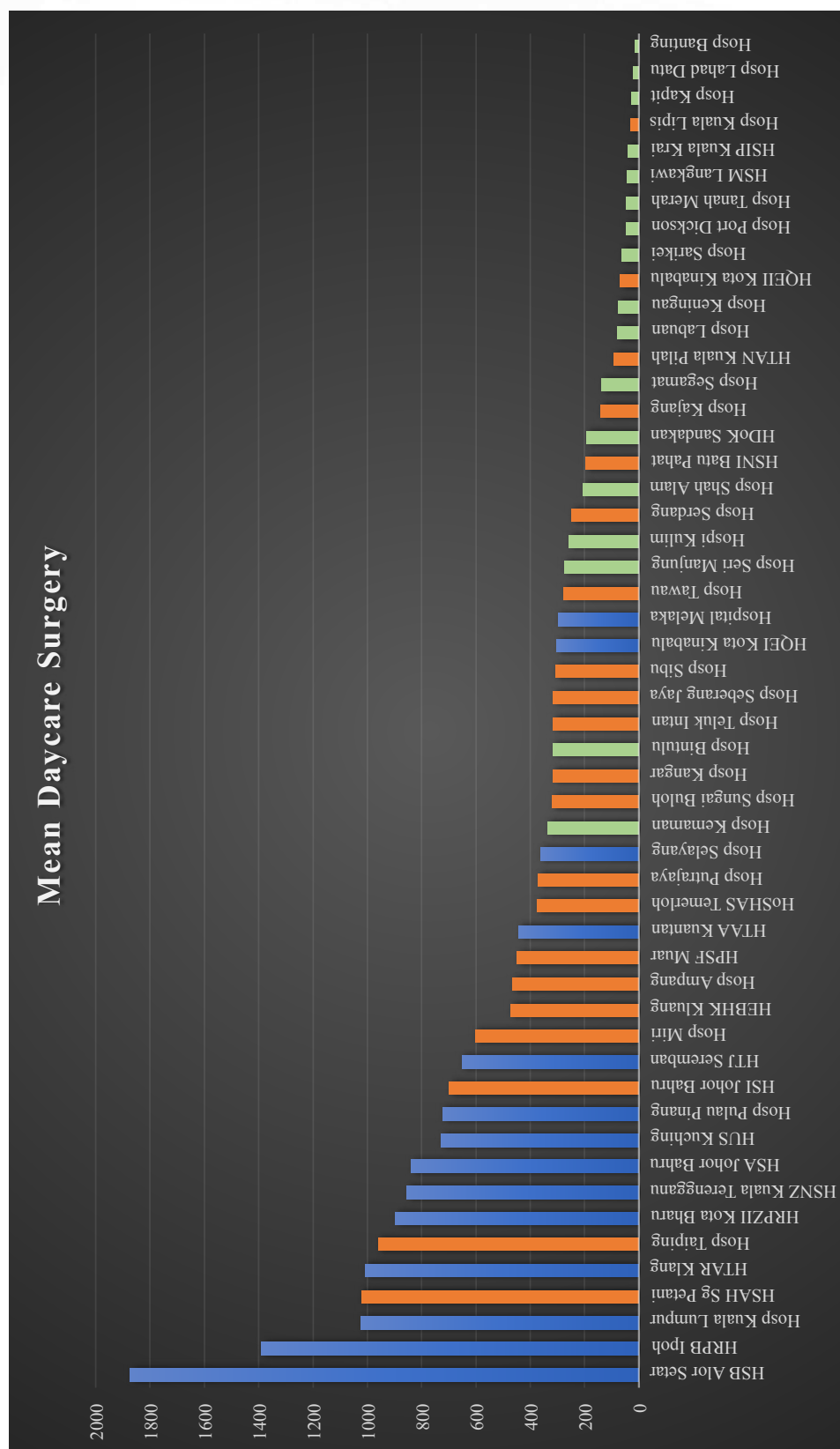


Figure 6.5.8 : Mean Number of Daycare Surgery by BMS Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



6.5.1.1 Daycare Surgery - General Anaesthesia (GA)

a. By BMS Category

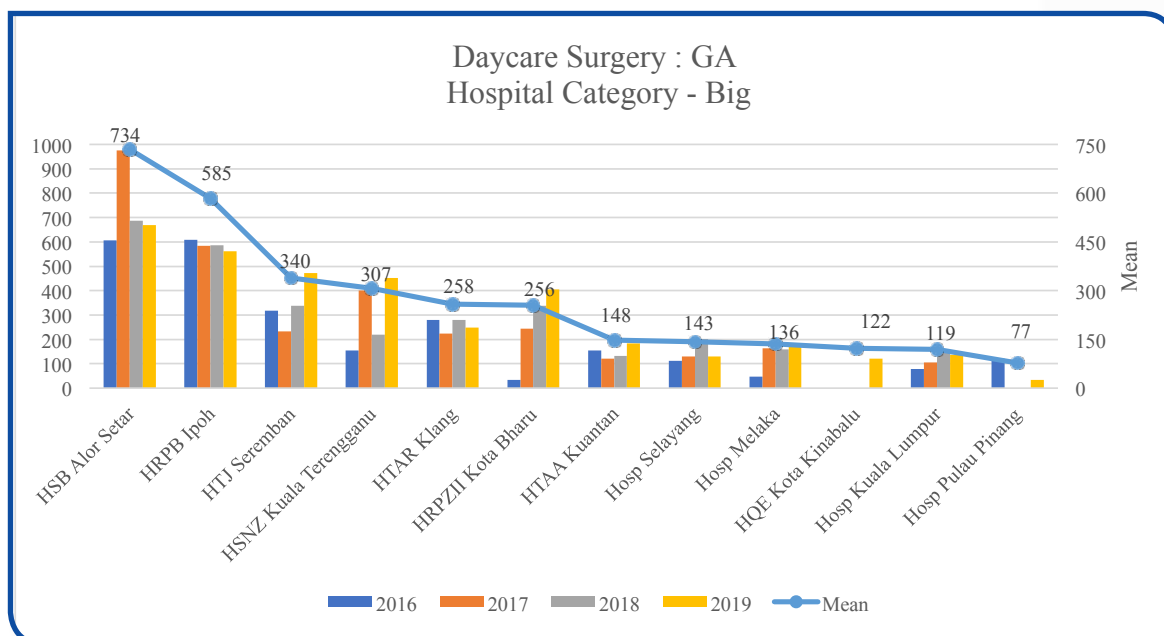


Figure 6.5.9 : Daycare Surgery under GA – Big Category Hospitals

DAYCARE SURGERY - GA : BIG HOSPITALS

NO	HOSPITALS	2016	2017	2018	2019	MEAN
1	HSB Alor Setar	606	975	686	670	734
2	HRPB Ipoh	608	583	586	561	585
3	HTJ Seremban	317	232	337	472	340
4	HSNZ Kuala Terengganu	154	400	220	452	307
5	HTAR Klang	280	223	279	249	258
6	HRPZII Kota Bharu	34	245	338	405	256
7	HTAA Kuantan	155	120	132	183	148
8	Hosp Selayang	112	130	201	129	143
9	Hosp Melaka	48	164	160	170	136
10	HQE Kota Kinabalu	0	0	0	122	122
11	Hosp Kuala Lumpur	79	106	155	136	119
12	Hosp Pulau Pinang	120	0	0	33	77
13	HSB Alor Setar	606	975	686	670	734
14	HRPB Ipoh	608	583	586	561	585
	TOTAL	2513	3178	3094	3582	3222

Table 6.5.6 : Daycare Surgery under GA – Big Category Hospitals

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019

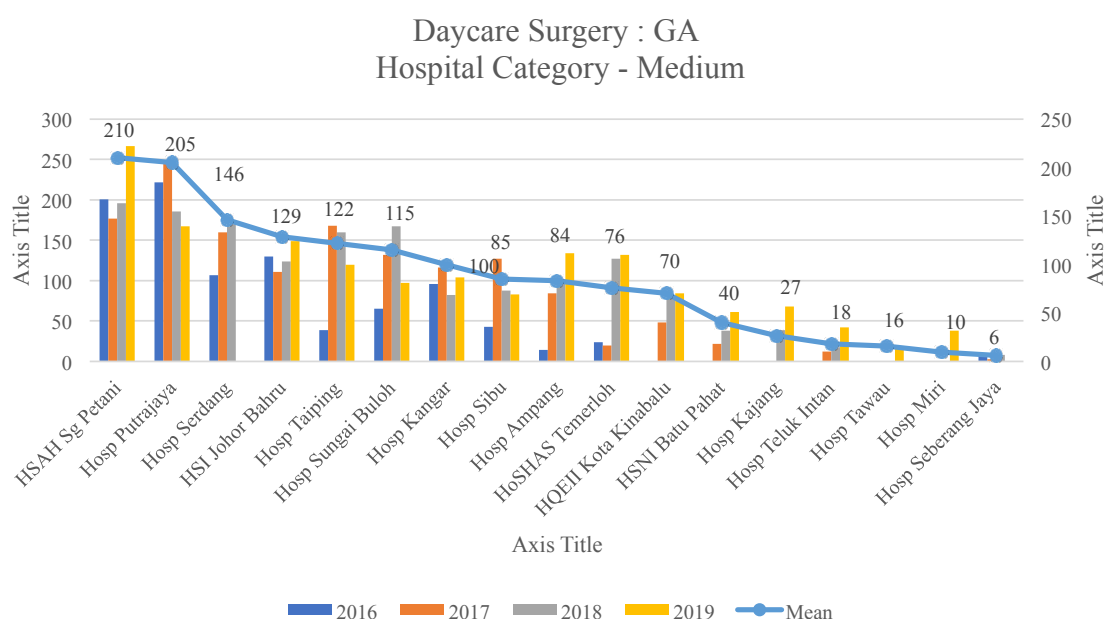


Figure 6.5.10 : Daycare Surgery under GA – Medium Category Hospitals

DAYCARE SURGERY – GA : MEDIUM HOSPITALS

NO	HOSPITALS	2016	2017	2018	2019	MEAN
1	HSAH Sg Petani	201	177	196	267	210
2	Hosp Putrajaya	222	245	186	167	205
3	Hosp Serdang	107	160	170	0	146
4	HSI Johor Bahru	130	111	124	149	129
5	Hosp Taiping	39	168	160	120	122
6	Hosp Sungai Buloh	65	132	167	97	115
7	Hosp Kangar	96	116	82	104	100
8	Hosp Sibu	43	127	88	83	85
9	Hosp Ampang	14	84	102	134	84
10	HoSHAS Temerloh	24	20	127	132	76
11	HQEII Kota Kinabalu	0	48	78	84	70
12	HSNI Batu Pahat	0	22	38	61	40
13	Hosp Kajang	0	0	39	68	27
14	Hosp Teluk Intan	0	12	18	42	18
15	Hosp Tawau	0	0	0	16	16
16	Hosp Miri	0	0	0	38	10
17	Hosp Seberang Jaya	6	3	8	0	6
	TOTAL	947	1425	1583	1562	1457

Table 6.5.7 : Daycare Surgery under GA – Medium Category Hospitals

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019

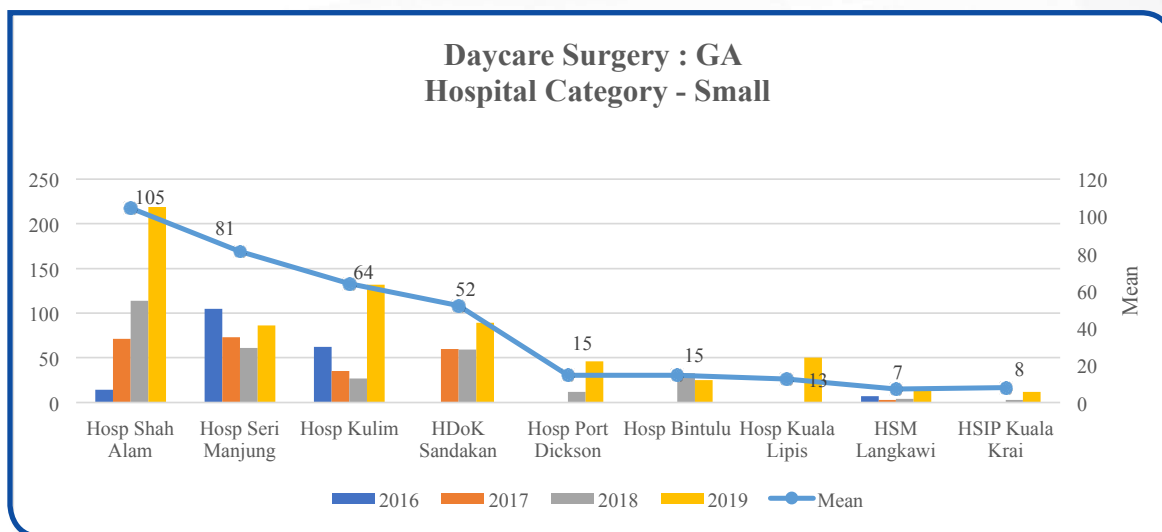


Figure 6.5.11: Daycare Surgery under GA – Small Category Hospitals

DAYCARE SURGERY – GA : SMALL HOSPITAL

NO	HOSPITALS	2016	2017	2018	2019	MEAN
1	Hosp Shah Alam	14	71	114	219	105
2	Hosp Seri Manjung	105	73	61	86	81
3	Hosp Kulim	62	35	27	132	64
4	HDoK Sandakan	0	60	59	89	52
5	Hosp Port Dickson	0	0	12	46	15
6	Hosp Bintulu	0	0	33	25	15
7	Hosp Kuala Lipis	0	0	0	50	13
8	HSM Langkawi	7	3	4	15	7
9	HSIP Kuala Krai	0	0	3	12	8
TOTAL		188	242	313	674	359

Table 6.5.8 : Daycare Surgery under GA – Small Category Hospitals

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



b. By BMS Hospital Category

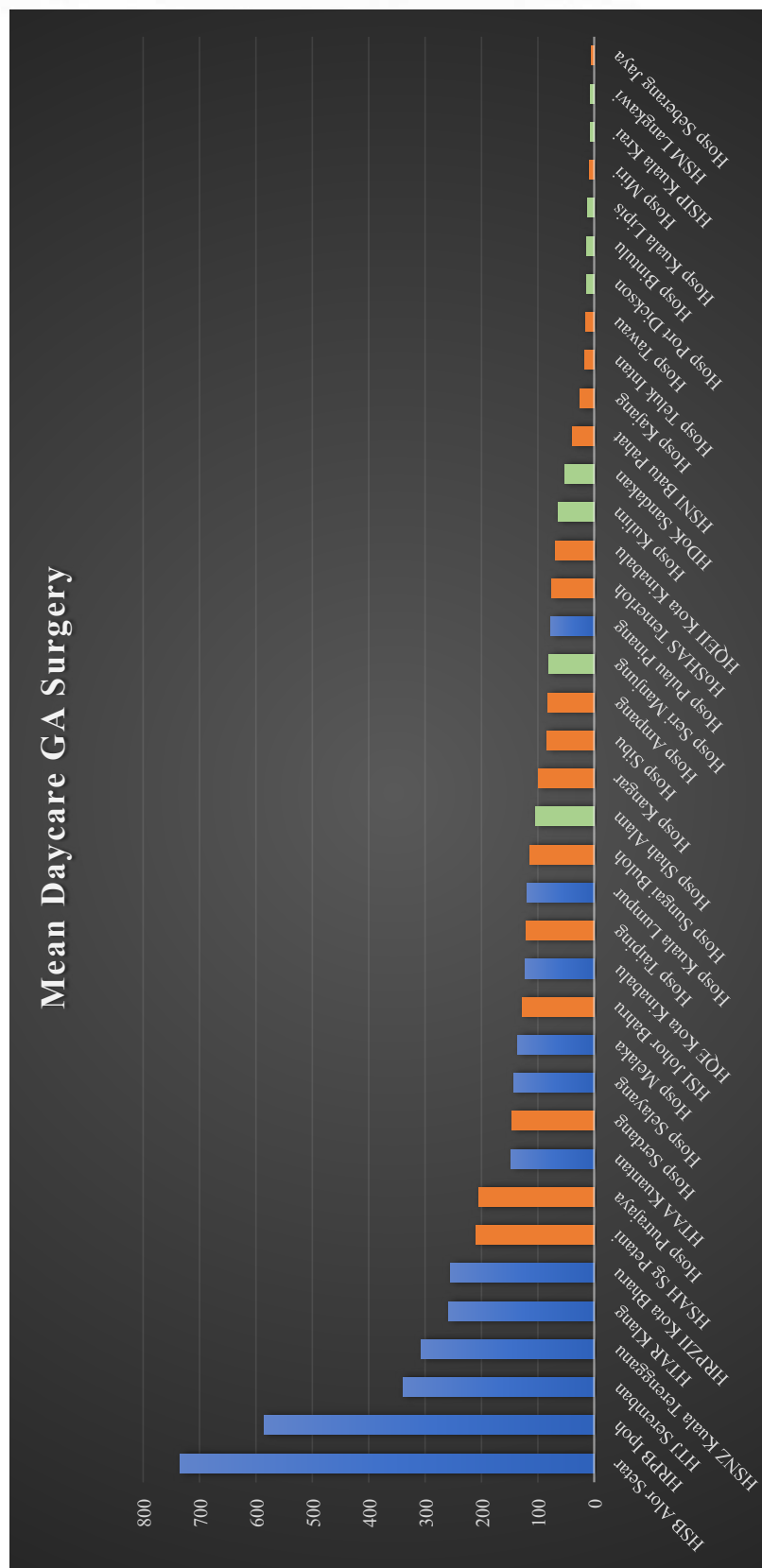


Figure 6.5.12 : Mean Number of Daycare Surgery under GA by BMS Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



6.5.1.2 Daycare Surgery - Local Anaesthesia (LA)

a. By BMS Category

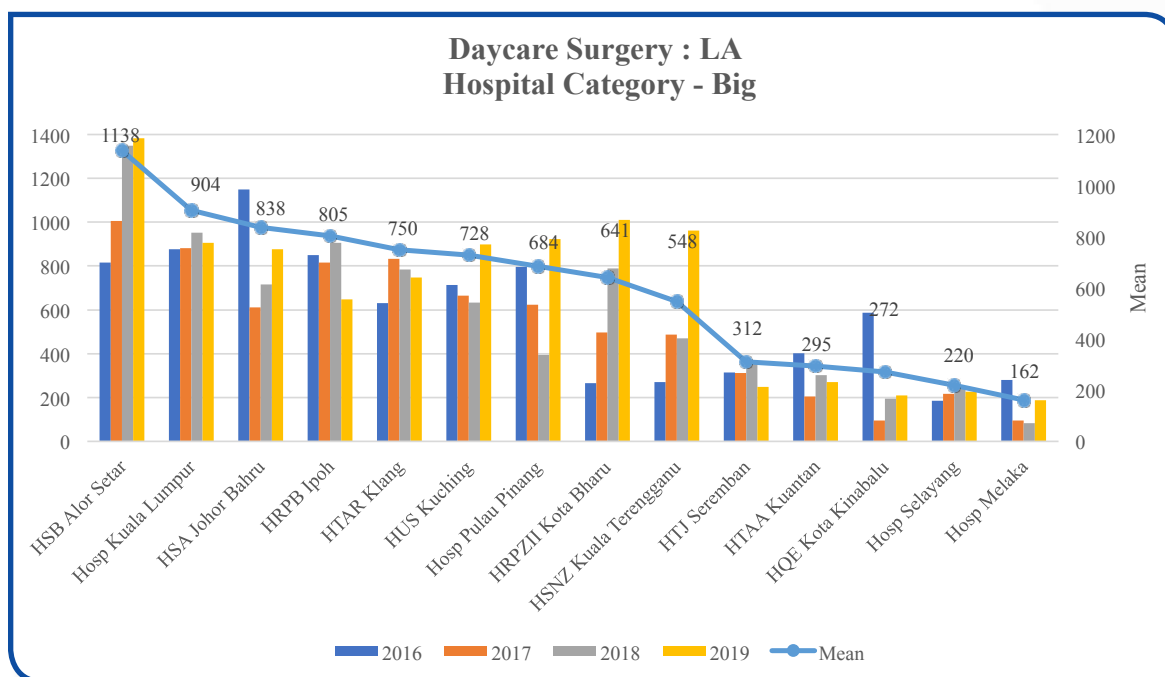


Figure 6.5.13 : Daycare Surgery under LA – Big category Hospitals

DAYCARE SURGERY - LA : BIG HOSPITALS

NO	HOSPITALS	2016	2017	2018	2019	MEAN
1	HSB Alor Setar	816	1006	1349	1382	1138
2	Hosp Kuala Lumpur	877	882	952	906	904
3	HSA Johor Bahru	1149	611	715	876	838
4	HRPB Ipoh	849	815	906	648	805
5	HTAR Klang	631	834	785	748	750
6	HUS Kuching	713	666	634	899	728
7	Hosp Pulau Pinang	797	623	394	922	684
8	HRPZII Kota Bharu	265	497	790	1010	641
9	HSNZ Kuala Terengganu	271	488	470	961	548
10	HTJ Seremban	315	312	370	249	312
11	HTAA Kuantan	402	205	303	270	295
12	HQE Kota Kinabalu	587	96	194	209	272
13	Hosp Selayang	185	217	251	227	220
14	Hosp Melaka	280	96	84	187	162
TOTAL		8137	7348	8197	9494	8294

Table 6.5.9 : Daycare Surgery under LA : Big Category Hospitals

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019

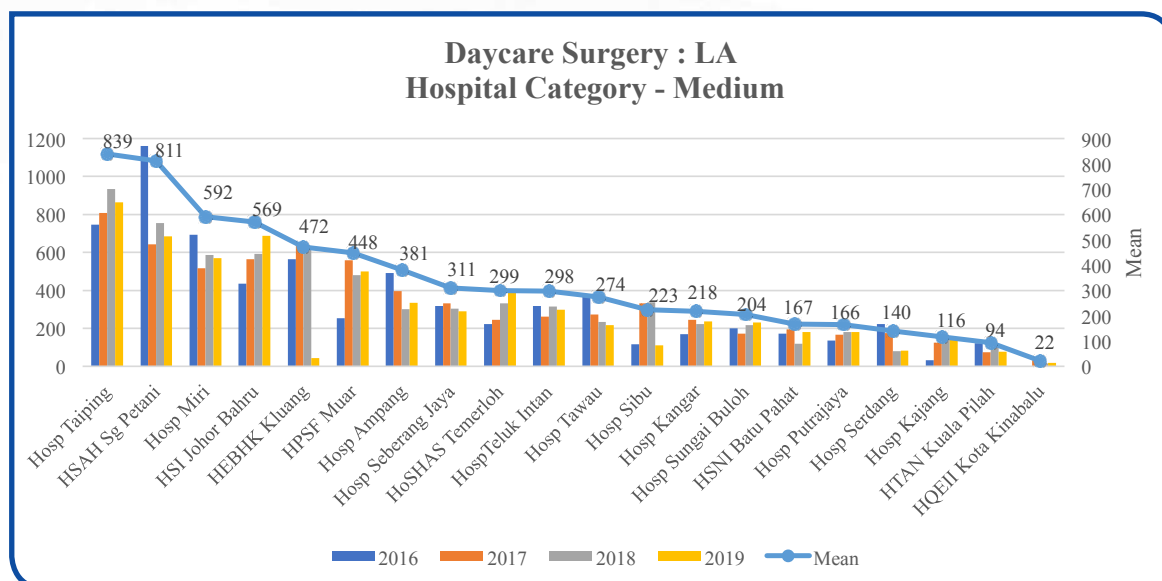


Figure 6.5.14 : Daycare Surgery under LA – Medium Category Hospitals

DAYCARE SURGERY – LA : MEDIUM HOSPITALS

NO	HOSPITALS	2016	2017	2018	2019	MEAN
1	Hosp Taiping	747	808	935	865	839
2	HSAH Sg Petani	1160	642	755	686	811
3	Hosp Miri	694	518	586	570	592
4	HSI Johor Bahru	435	564	591	687	569
5	HEBHK Kluang	564	649	633	43	472
6	HPSF Muar	253	559	481	500	448
7	Hosp Ampang	491	396	301	335	381
8	Hosp Seberang Jaya	319	331	303	290	311
9	HoSHAS Temerloh	222	246	333	396	299
10	HospTeluk Intan	317	261	315	297	298
11	Hosp Tawau	368	274	234	218	274
12	Hosp Sibu	115	331	336	110	223
13	Hosp Kangar	169	244	222	237	218
14	Hosp Sungai Buloh	200	171	216	230	204
15	HSNI Batu Pahat	173	195	119	180	167
16	Hosp Putrajaya	136	167	180	180	166
17	Hosp Serdang	222	175	81	82	140
18	Hosp Kajang	33	124	159	147	116
19	HTAN Kuala Pilah	122	75	103	76	94
20	HQEII Kota Kinabalu	0	32	14	19	22
TOTAL		6740	6762	6897	6148	6643

Table 6.5.10 : Daycare Surgery under LA – Medium Category Hospitals

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019

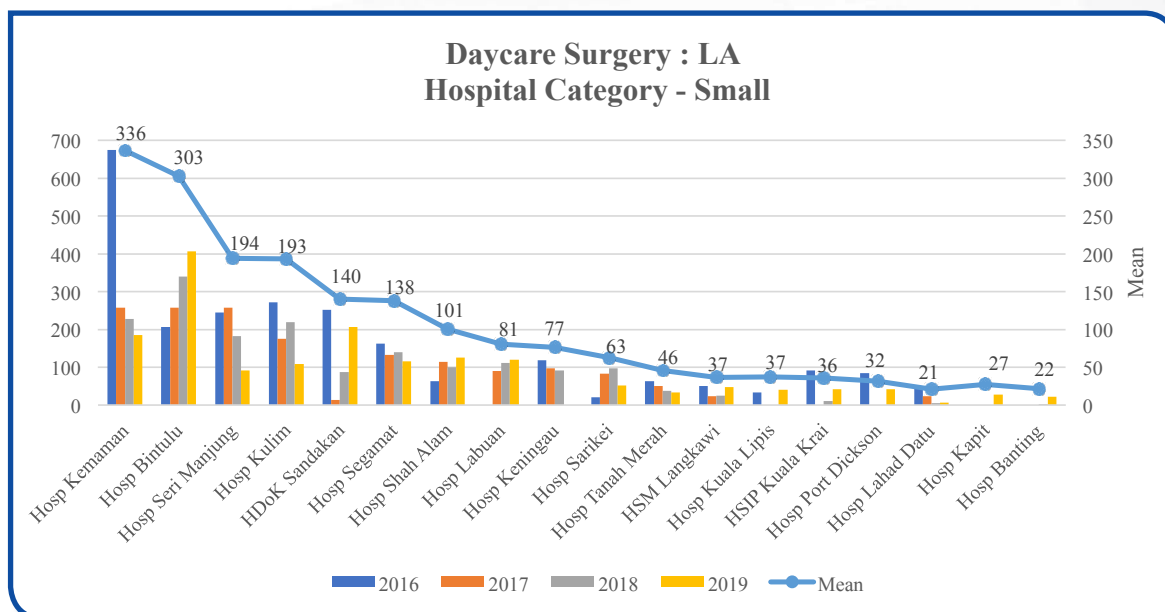


Figure 6.5.15 : Daycare Surgery under LA – Small Category Hospitals

DAYCARE SURGERY UNDER LA : SMALL HOSPITALS

NO	HOSPITALS	2016	2017	2018	2019	MEAN
1	Hosp Kemaman	674	258	228	185	336
2	Hosp Bintulu	207	257	340	406	303
3	Hosp Seri Manjung	244	258	182	91	194
4	Hosp Kulim	271	175	219	108	193
5	HDoK Sandakan	252	13	87	207	140
6	Hosp Segamat	163	133	140	116	138
7	Hosp Shah Alam	63	114	100	125	101
8	Hosp Labuan	0	90	112	120	81
9	Hosp Keningau	118	97	91	0	77
10	Hosp Sarikei	20	83	97	52	63
11	Hosp Tanah Merah	63	51	37	33	46
12	HSM Langkawi	50	23	25	48	37
13	Hosp Kuala Lipis	34	0	0	40	37
14	HSIP Kuala Krai	91	0	10	42	36
15	Hosp Port Dickson	85	0	0	42	32
16	Hosp Lahad Datu	48	24	5	7	21
17	Hosp Kapit	0	0	0	27	27
18	Hosp Banting	0	0	2	22	22
TOTAL		2383	1576	1675	1671	1881

Table 6.5.11 : Daycare Surgery under LA – Small Category Hospitals

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



b. By BMS Hospital Category

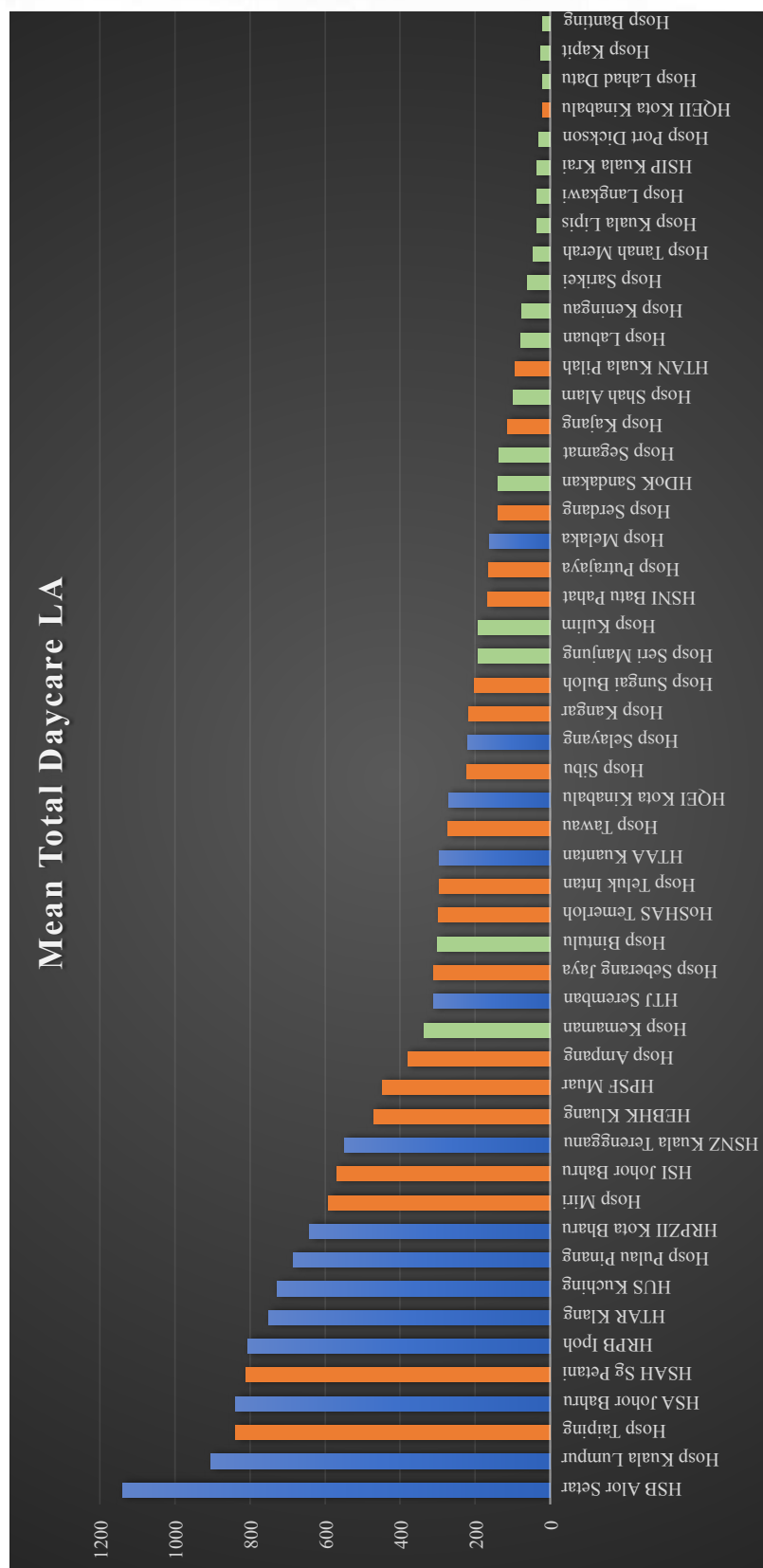


Figure 6.5.16 : Mean Total Daycare Surgery under LA by BMS Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



6.5.2 Inpatient Surgery

a. Total

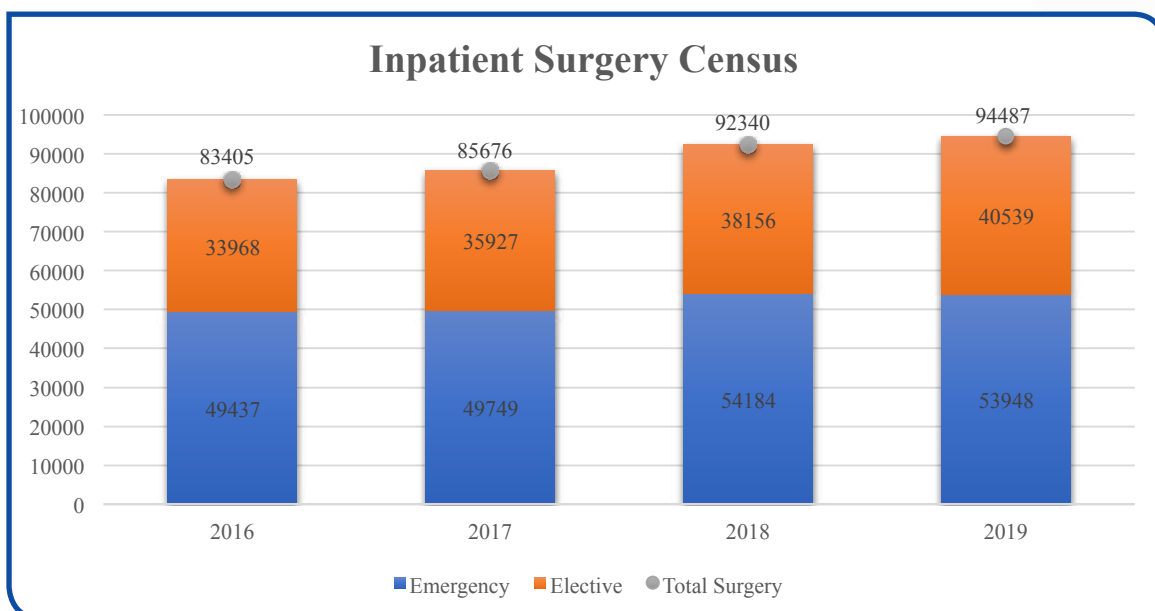


Figure 6.5.17 : Total Number of Inpatient Surgery

	2016		2017		2018		2019	
Emergency	49437	59.3%	49749	58%	54184	59%	53948	57.1%
Elective	33968	40.7%	35927	42%	38156	41%	40539	42.9%
Total Surgery	83405	100%	85676	100%	92340	100%	94487	100%

Table 6.5.12 : Total Number of Inpatient Surgery

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



b. By BMS Category

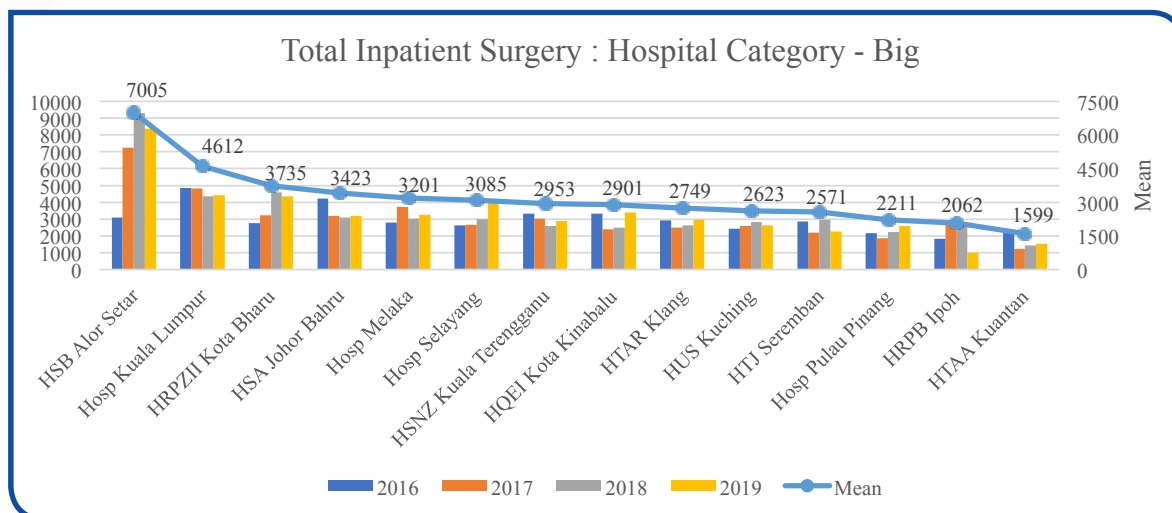


Figure 6.5.18 : Total Inpatient Surgery – Big Category Hospitals

TOTAL INPATIENT SURGERY : BIG HOSPITALS

NO	HOSPITALS	2016	2017	2018	2019	MEAN
1	HSB Alor Setar	3106	7241	9317	8356	7005
2	Hosp Kuala Lumpur	4843	4827	4360	4419	4612
3	HRPZII Kota Bharu	2765	3236	4575	4364	3735
4	HSA Johor Bahru	4222	3196	3084	3191	3423
5	Hosp Melaka	2805	3715	3031	3251	3201
6	Hosp Selayang	2626	2653	2985	4076	3085
7	HSNZ Kuala Terengganu	3328	3014	2591	2878	2953
8	HQEI Kota Kinabalu	3332	2378	2508	3385	2901
9	HTAR Klang	2917	2495	2633	2951	2749
10	HUS Kuching	2434	2598	2829	2630	2623
11	HTJ Seremban	2865	2195	2962	2260	2571
12	Hosp Pulau Pinang	2170	1858	2223	2592	2211
13	HRPB Ipoh	1833	2716	2698	1001	2062
14	HTAA Kuantan	2184	1240	1439	1534	1599
	TOTAL	41430	43362	47235	46888	44729

Table 6.5.13 : Total Inpatient Surgery – Big Category Hospitals

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019

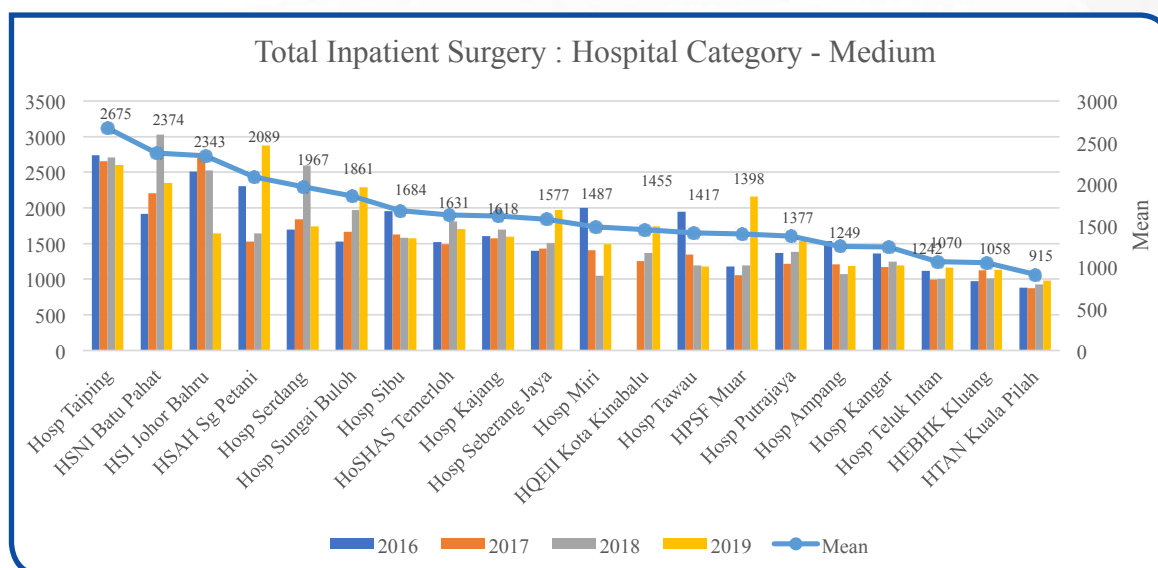


Figure 6.5.19 : Total Inpatient Surgery – Medium Category Hospitals

TOTAL INPATIENT SURGERY: MEDIUM HOSPITALS

NO	HOSPITALS	2016	2017	2018	2019	MEAN
1	Hosp Taiping	2735	2656	2708	2600	2675
2	HSNI Batu Pahat	1919	2202	3025	2351	2374
3	HSI Johor Bahru	2508	2697	2523	1642	2343
4	HSAH Sg Petani	2302	1531	1646	2876	2089
5	Hosp Serdang	1693	1839	2591	1743	1967
6	Hosp Sungai Buloh	1526	1664	1966	2287	1861
7	Hosp Sibu	1954	1628	1578	1576	1684
8	HoSHAS Temerloh	1521	1487	1811	1704	1631
9	Hosp Kajang	1608	1572	1696	1594	1618
10	Hosp Seberang Jaya	1402	1428	1509	1967	1577
11	Hosp Miri	2000	1405	1052	1490	1487
12	HQEI Kota Kinabalu	0	1253	1370	1742	1455
13	Hosp Tawau	1945	1344	1196	1181	1417
14	HPSF Muar	1177	1058	1196	2161	1398
15	Hosp Putrajaya	1370	1216	1384	1536	1377
16	Hosp Ampang	1535	1205	1069	1185	1249
17	Hosp Kangar	1359	1167	1250	1190	1242
18	Hosp Teluk Intan	1114	997	1004	1165	1070
19	HEBHK Kluang	971	1122	1011	1129	1058
20	HTAN Kuala Pilah	879	875	929	977	915
TOTAL		31518	30346	32514	34096	32483

Table 6.5.14: Total Inpatient Surgery – Medium Category Hospitals

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019

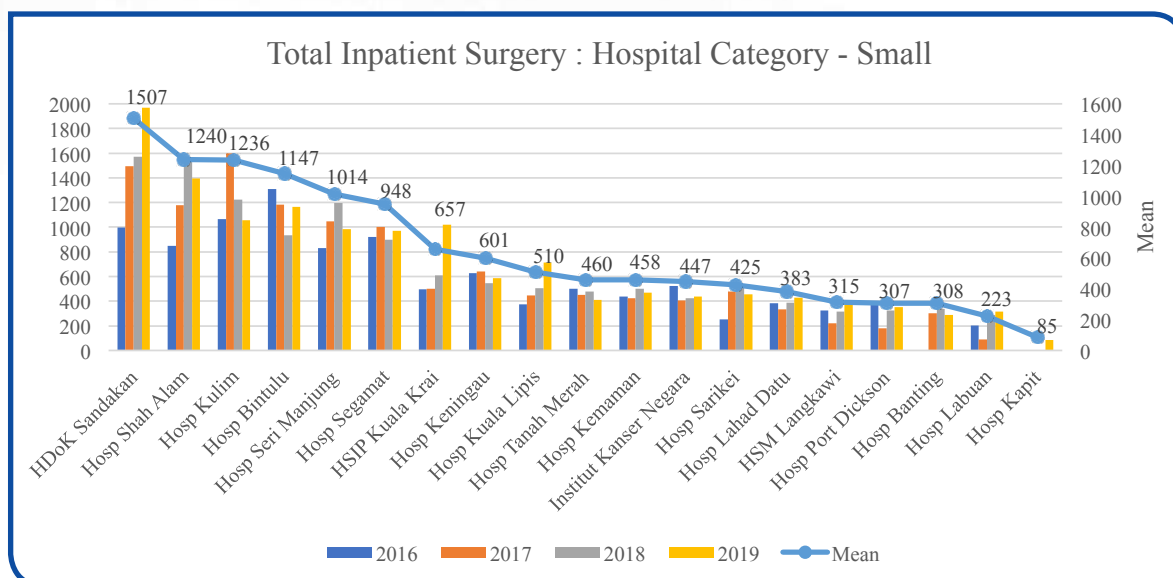


Figure 6.5.20 : Total Inpatient Surgery – Small Category Hospitals

TOTAL INPATIENT SURGERY: SMALL HOSPITALS

NO	HOSPITALS	2016	2017	2018	2019	MEAN
1	HDoK Sandakan	995	1492	1572	1968	1507
2	Hosp Shah Alam	847	1179	1541	1394	1240
3	Hosp Kulim	1064	1597	1225	1057	1236
4	Hosp Bintulu	1308	1182	933	1166	1147
5	Hosp Seri Manjung	828	1049	1194	984	1014
6	Hosp Segamat	919	1004	899	971	948
7	HSIP Kuala Krai	496	501	610	1020	657
8	Hosp Keningau	629	642	544	587	601
9	Hosp Kuala Lipis	374	445	506	714	510
10	Hosp Tanah Merah	499	452	476	412	460
11	Hosp Kemaman	439	422	502	469	458
12	Institut Kanser Negara	523	405	424	437	447
13	Hosp Sarikei	252	478	517	454	425
14	Hosp Lahad Datu	384	333	386	428	383
15	HSM Langkawi	323	220	314	403	315
16	Hosp Port Dickson	374	178	323	353	307
17	Hosp Banting	0	300	339	286	308
18	Hosp Labuan	203	89	286	315	223
19	Hosp Kapit	0	0	0	85	85
TOTAL		10457	11968	12591	13503	12270

Table 6.5.15: Total Inpatient Surgery – Small Category Hospitals

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



b. By BMS Hospital Category

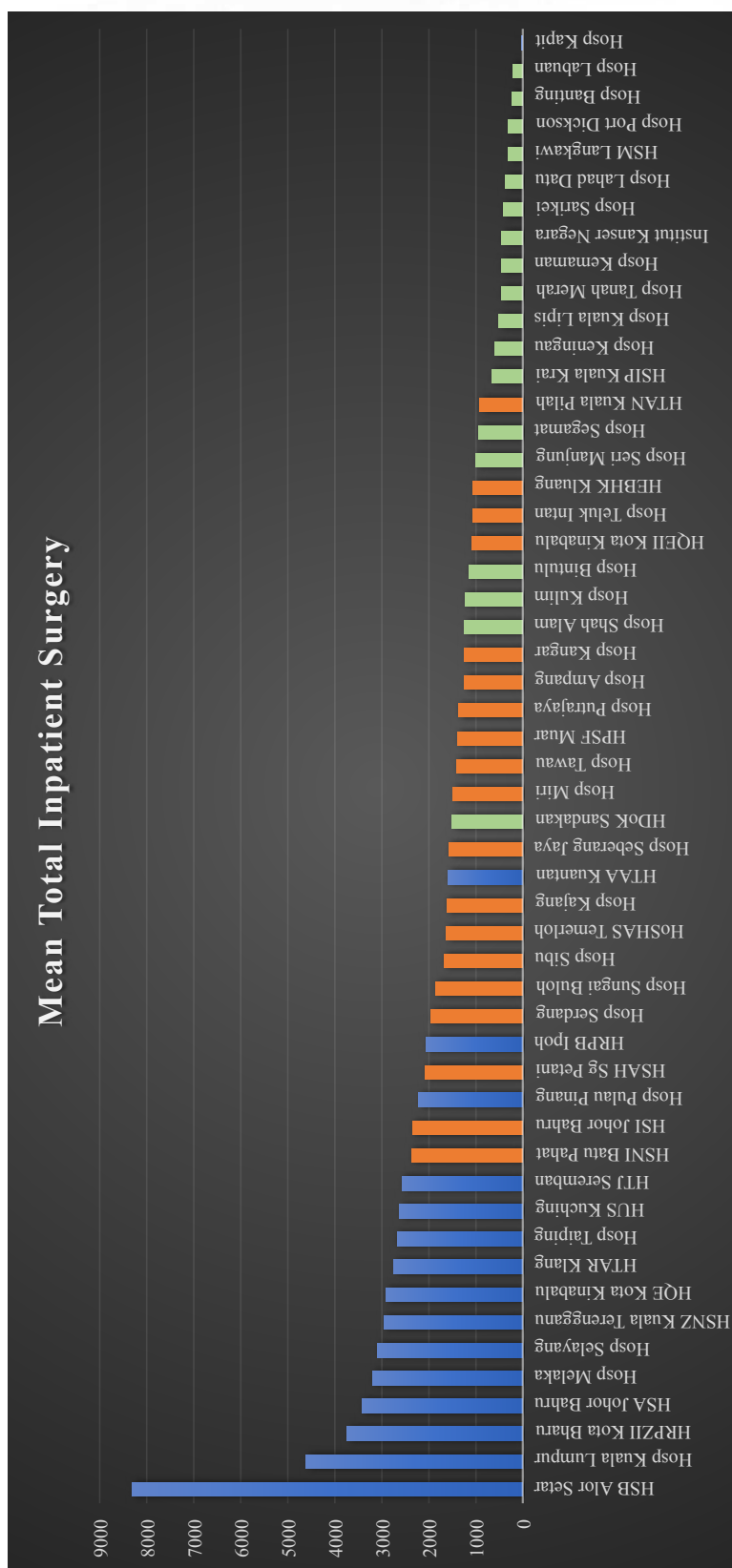


Figure 6.5.21 : Mean Number of Total Inpatient Surgery by BMS Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



6.5.2.1 Emergency Surgery

a. By BMS Category

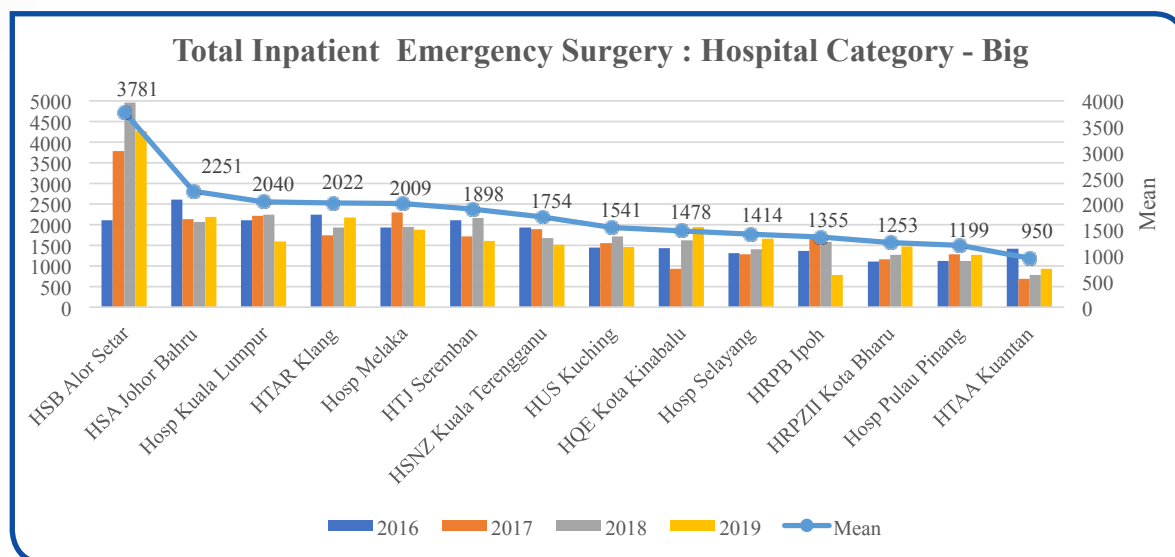


Figure 6.5.22 : Total Number of Emergency Surgery – Big Category Hospitals

INPATIENT EMERGENCY SURGERY : BIG HOSPITALS

NO	HOSPITALS	2016	2017	2018	2019	MEAN
1	HSB Alor Setar	2100	3787	4966	4272	3781
2	HSA Johor Bahru	2605	2139	2068	2193	2251
3	Hosp Kuala Lumpur	2108	2221	2246	1586	2040
4	HTAR Klang	2242	1743	1926	2175	2022
5	Hosp Melaka	1928	2289	1940	1877	2009
6	HTJ Seremban	2105	1714	2163	1609	1898
7	HSNZ Kuala Terengganu	1931	1894	1673	1516	1754
8	HUS Kuching	1443	1547	1710	1463	1541
9	HQE Kota Kinabalu	1431	927	1615	1940	1478
10	Hosp Selayang	1311	1287	1397	1663	1414
11	HRPB Ipoh	1367	1698	1578	778	1355
12	HRPZII Kota Bharu	1110	1161	1273	1469	1253
13	Hosp Pulau Pinang	1121	1287	1118	1268	1199
14	HTAA Kuantan	1411	680	783	926	950
	TOTAL	24213	24374	26456	24735	24944

Table 6.5.16 : Total Number of Emergency Surgery – Big Category Hospitals

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019

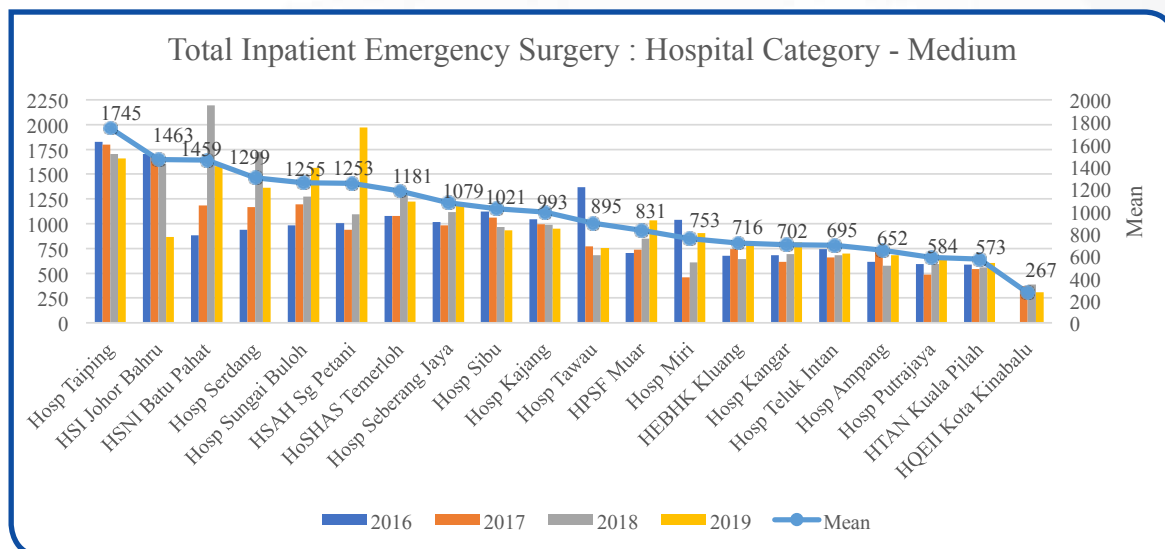


Figure 6.5.23 : Total Number of Emergency Surgery – Medium Category Hospitals

INPATIENT EMERGENCY SURGERY: MEDIUM HOSPITALS

NO	HOSPITALS	2016	2017	2018	2019	MEAN
1	Hosp Taiping	1827	1796	1702	1656	1745
2	HSI Johor Bahru	1704	1680	1600	866	1463
3	HSNI Batu Pahat	881	1184	2193	1578	1459
4	Hosp Serdang	941	1165	1727	1364	1299
5	Hosp Sungai Buloh	985	1195	1274	1565	1255
6	HSAH Sg Petani	1007	939	1093	1971	1253
7	HoSHAS Temerloh	1078	1080	1341	1226	1181
8	Hosp Seberang Jaya	1018	985	1120	1194	1079
9	Hosp Sibu	1123	1063	964	933	1021
10	Hosp Kajang	1044	993	988	948	993
11	Hosp Tawau	1366	772	684	756	895
12	HPSF Muar	704	738	849	1031	831
13	Hosp Miri	1037	458	608	908	753
14	HEBHK Kluang	675	743	643	804	716
15	Hosp Kangar	684	615	696	813	702
16	Hosp Teluk Intan	741	658	683	698	695
17	Hosp Ampang	615	740	574	680	652
18	Hosp Putrajaya	593	488	595	661	584
19	HTAN Kuala Pilah	586	541	560	606	573
20	HQEII Kota Kinabalu	0	369	389	309	267
TOTAL		18609	18202	20283	20567	19415

Table 6.5.17 : Total Number of Emergency Surgery – Medium Category Hospitals

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019

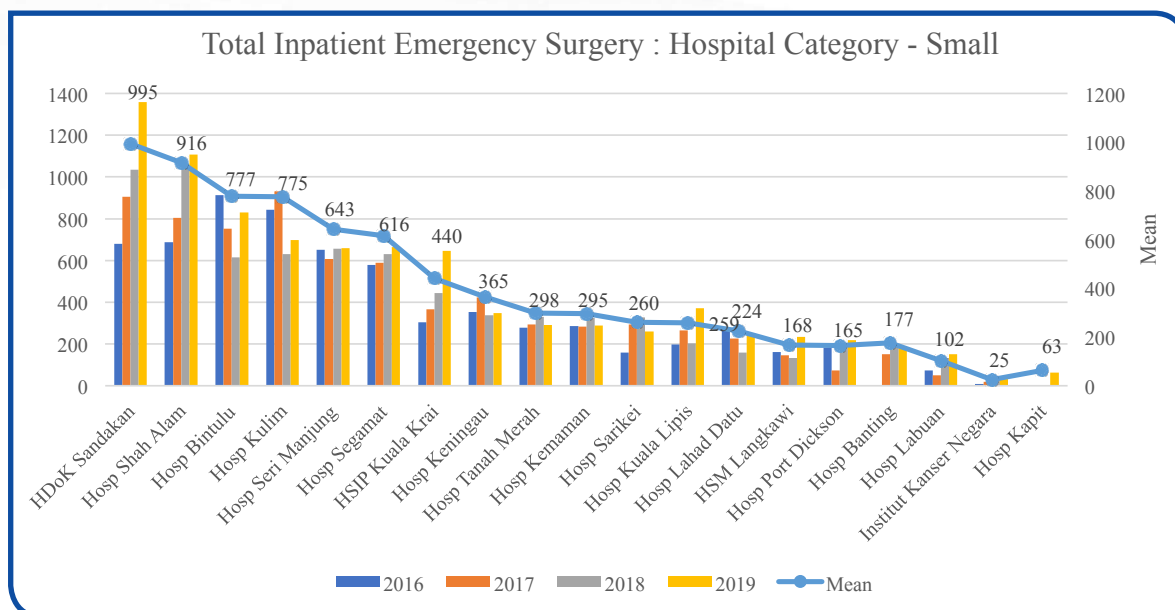


Figure 6.5.24 : Total Number of Emergency Surgery – Small Category Hospitals

INPATIENT EMERGENCY SURGERY: SMALL HOSPITALS

NO	HOSPITALS	2016	2017	2018	2019	MEAN
1	HDoK Sandakan	679	905	1035	1359	995
2	Hosp Shah Alam	688	804	1064	1106	916
3	Hosp Bintulu	914	751	615	829	777
4	Hosp Kulim	842	931	631	697	775
5	Hosp Seri Manjung	650	606	657	659	643
6	Hosp Segamat	579	589	631	665	616
7	HSIP Kuala Krai	304	365	445	646	440
8	Hosp Keningau	353	422	337	347	365
9	Hosp Tanah Merah	277	294	329	290	298
10	Hosp Kemaman	286	282	324	288	295
11	Hosp Sarikei	158	294	326	260	260
12	Hosp Kuala Lipis	197	264	204	371	259
13	Hosp Lahad Datu	262	226	159	250	224
14	HSM Langkawi	162	146	132	233	168
15	Hosp Port Dickson	181	72	188	218	165
16	Hosp Banting	0	151	198	182	177
17	Hosp Labuan	74	51	132	152	102
18	Institut Kanser Negara	9	20	38	31	25
19	Hosp Kapit	0	0	0	63	63
TOTAL		6615	7173	7445	8646	7561

Table 6.5.18: Total Number of Emergency Surgery – Small Category Hospitals

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



b. By BMS Hospital Category

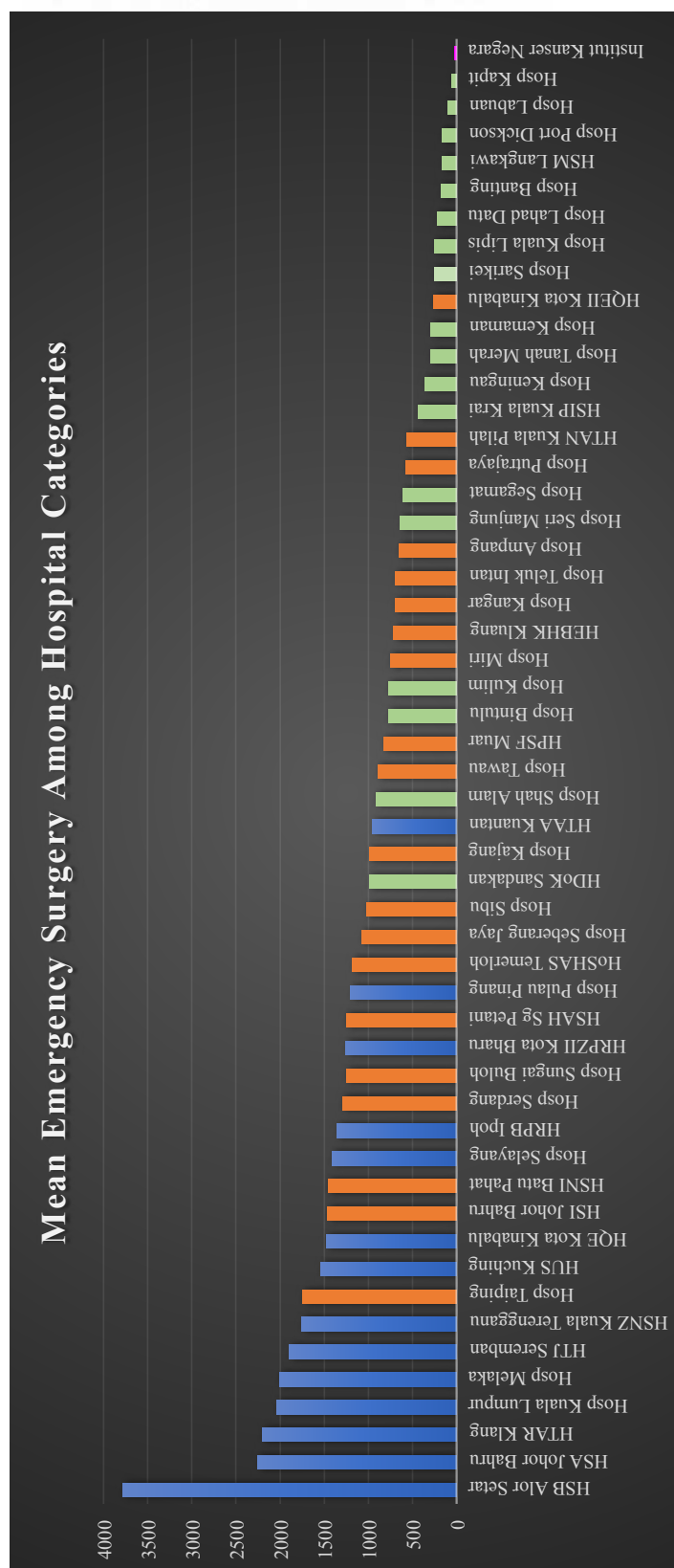


Figure 6.5.25: Mean Total Emergency Surgery by BMS Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



6.5.2.2 Elective Surgery

a. By BMS Category

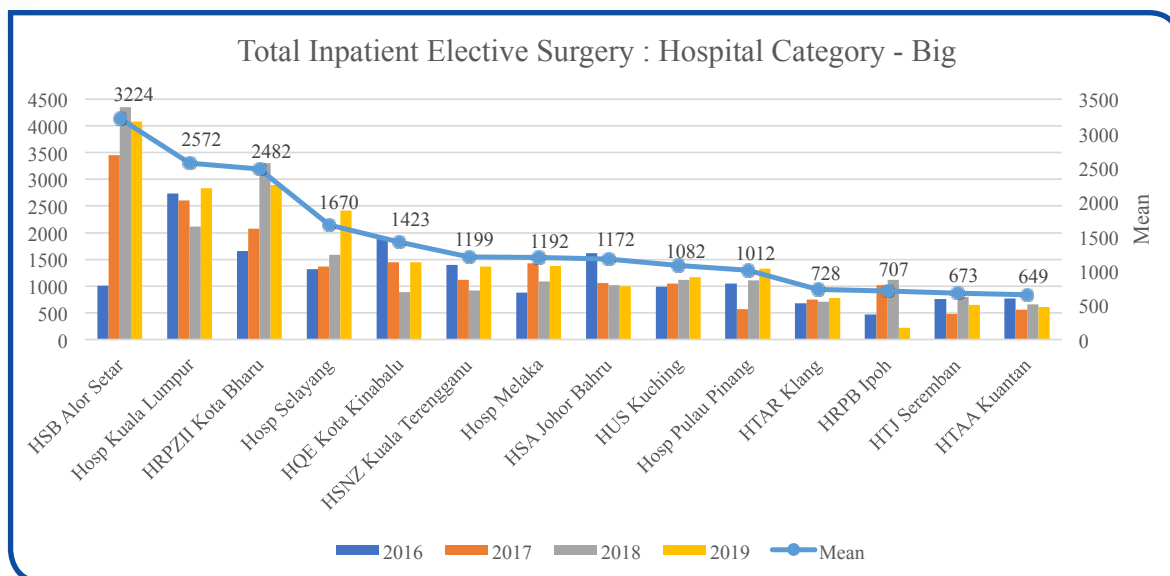


Figure 6.5.26 : Total Number of Elective Surgery – Big Category Hospitals

INPATIENT ELECTIVE SURGERY : BIG HOSPITALS

NO	HOSPITALS	2016	2017	2018	2019	MEAN
1	HSB Alor Setar	1006	3454	4351	4084	3224
2	Hosp Kuala Lumpur	2735	2606	2114	2833	2572
3	HRPZII Kota Bharu	1655	2075	3302	2895	2482
4	Hosp Selayang	1315	1366	1588	2413	1670
5	HQE Kota Kinabalu	1901	1451	893	1445	1423
6	HSNZ Kuala Terengganu	1397	1120	918	1362	1199
7	Hosp Melaka	877	1426	1091	1374	1192
8	HSA Johor Bahru	1617	1057	1016	998	1172
9	HUS Kuching	991	1051	1119	1167	1082
10	Hosp Pulau Pinang	1049	571	1105	1324	1012
11	HTAR Klang	675	752	707	776	728
12	HRPB Ipoh	466	1018	1120	223	707
13	HTJ Seremban	760	481	799	651	673
14	HTAA Kuantan	773	560	656	608	649
TOTAL		17217	18988	20779	22153	19784

Table 6.5.19 : Total Number of Elective Surgery – Big Category Hospitals

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019

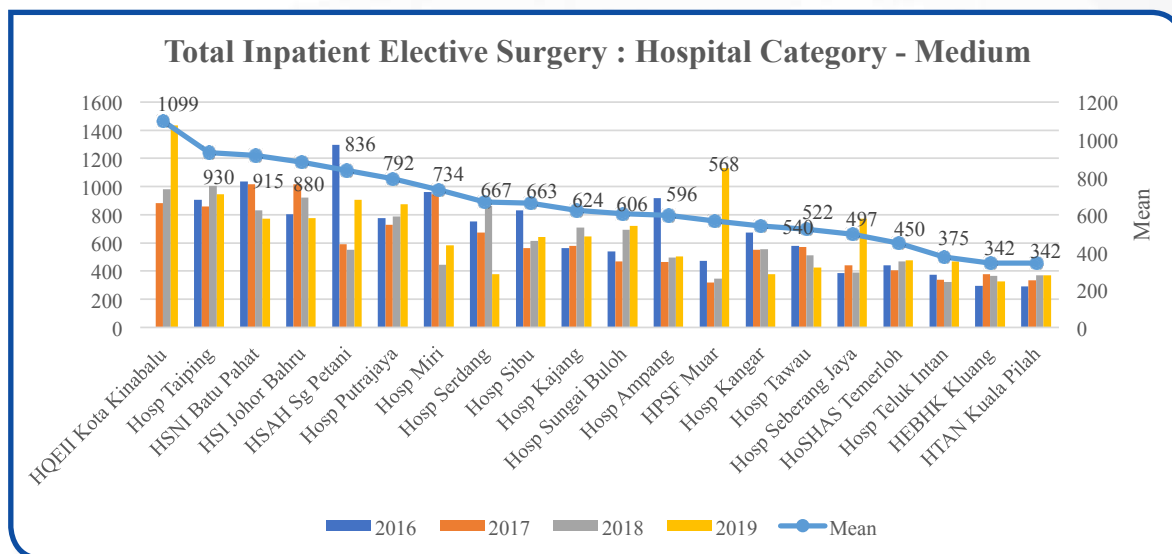


Figure 6.5.27: Total Number of Elective Surgery – Medium Category Hospitals

INPATIENT ELECTIVE SURGERY: MEDIUM HOSPITALS

NO	HOSPITALS	2016	2017	2018	2019	MEAN
1	HQEII Kota Kinabalu	0	884	981	1433	1099
2	Hosp Taiping	908	860	1006	944	930
3	HSNI Batu Pahat	1038	1018	832	773	915
4	HSI Johor Bahru	804	1017	923	776	880
5	HSAH Sg Petani	1295	592	553	905	836
6	Hosp Putrajaya	777	728	789	875	792
7	Hosp Miri	963	947	444	582	734
8	Hosp Serdang	752	674	864	379	667
9	Hosp Sibu	831	565	614	643	663
10	Hosp Kajang	564	579	708	646	624
11	Hosp Sungai Buloh	541	469	692	722	606
12	Hosp Ampang	920	465	495	505	596
13	HPSF Muar	473	320	347	1130	568
14	Hosp Kangar	675	552	554	377	540
15	Hosp Tawau	579	572	512	425	522
16	Hosp Seberang Jaya	384	443	389	773	497
17	HoSHAS Temerloh	443	407	470	478	450
18	Hosp Teluk Intan	373	339	321	467	375
19	HEBHK Kluang	296	379	368	325	342
20	HTAN Kuala Pilah	293	334	369	371	342
TOTAL		12909	12144	12231	13529	12978

Table 6.5.20 : Total Number of Elective Surgery – Medium Category Hospitals

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019

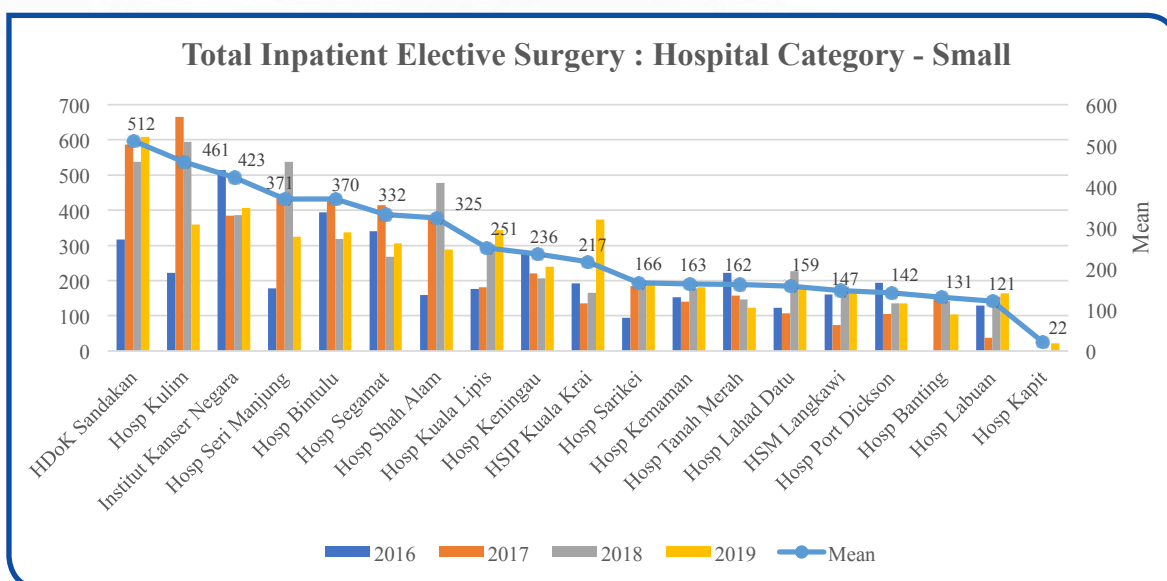


Figure 6.5.28 : Total Number of Elective Surgery – Small Category Hospitals

INPATIENT ELECTIVE SURGERY: SMALL HOSPITALS

NO	HOSPITALS	2016	2017	2018	2019	MEAN
1	HDoK Sandakan	316	587	537	609	512
2	Hosp Kulim	222	666	594	360	461
3	Institut Kanser Negara	514	385	386	406	423
4	Hosp Seri Manjung	178	443	537	325	371
5	Hosp Bintulu	394	431	318	337	370
6	Hosp Segamat	340	415	268	306	332
7	Hosp Shah Alam	159	375	477	288	325
8	Hosp Kuala Lipis	177	181	302	343	251
9	Hosp Keningau	276	220	207	240	236
10	HSIP Kuala Krai	192	136	165	374	217
11	Hosp Sarikei	94	184	191	194	166
12	Hosp Kemaman	153	140	178	181	163
13	Hosp Tanah Merah	222	158	147	122	162
14	Hosp Lahad Datu	122	107	227	178	159
15	HSM Langkawi	161	74	182	170	147
16	Hosp Port Dickson	193	106	135	135	142
17	Hosp Banting	0	149	141	104	131
18	Hosp Labuan	129	38	154	163	121
19	Hosp Kapit	0	0	0	22	22
TOTAL		3842	4795	5146	4857	4709

Table 6.5.21 : Total Number of Elective Surgery – Small Category Hospitals

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



b. By BMS Hospital Category

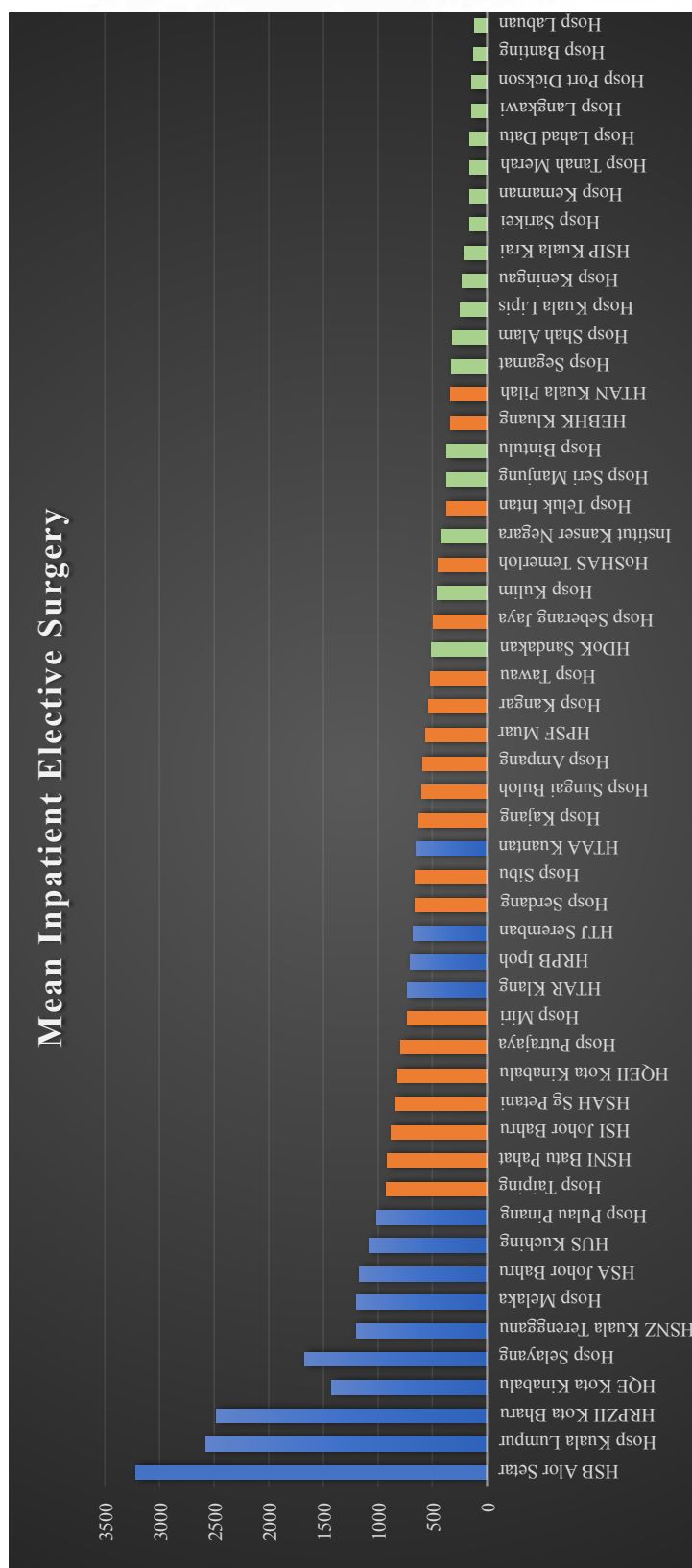


Figure 6.5.29 : Mean Number of Inpatient Elective Surgery by BMS Hospital Category



7 Section B : Surgical Procedures

Procedures selected for data collection are those that were done by surgeons as collected per OT Log (See Appendix).

These data are categorized according to organ system or pathology as below

- | | |
|---------------------------|------------------------|
| 1. Trauma | 8. Colorectal |
| 2. Endocrine | 9. Spleen |
| 3. Breast | 10. Appendix |
| 4. Thoracic | 11. Vascular |
| 5. Bariatric | 12. Hernia and Scrotal |
| 6. Upper gastrointestinal | 13. Paediatric |
| 7. Hepatobiliary | |

A few common procedures done by Medical Officers are also captured

7.1 Case-mix of Surgery in Training Hospitals

Hospitals involved in master's training are as below:

1. Hospital Sultanah Bahiyah Alor Setar
2. Hospital Pulau Pinang
3. Hospital Raja Permaisuri Bainun Ipoh
4. Hospital Kuala Lumpur
5. Hospital Tengku Ampuan Rahimah Klang
6. Hospital Ampang
7. Hospital Serdang
8. Hospital Selayang
9. Hospital Melaka
10. Hospital Tuanku Jaafar Seremban
11. Hospital Sultanah Aminah Johor Bahru
12. Hospital Sultanah Nur Zahirah Kuala Terengganu
13. Hospital Raja Perempuan Zainab II Kota Bharu
14. Hospital Umum Sarawak
15. Hospital Queen Elizabeth Kota Kinabalu (1 & 2 combined)

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



a. By Descending order of Total OT Log Procedures

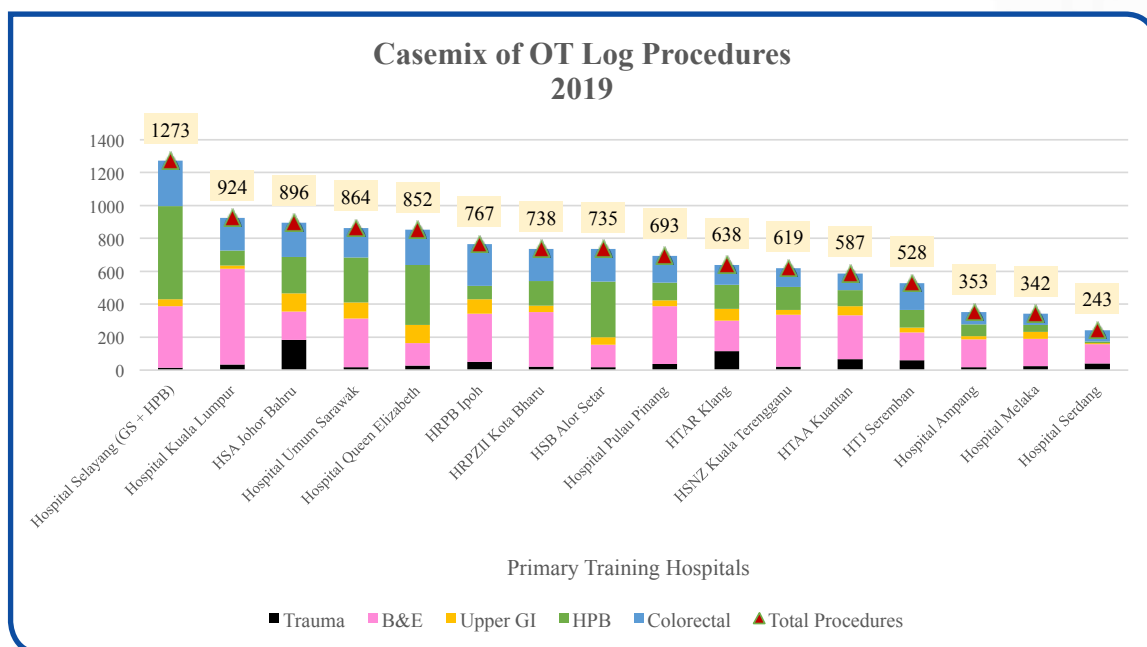


Figure 7.1.1: Casemix of OT Log Procedures for Primary Training Hospitals (Absolute number)

b. By percentage of Total OT Log Procedure

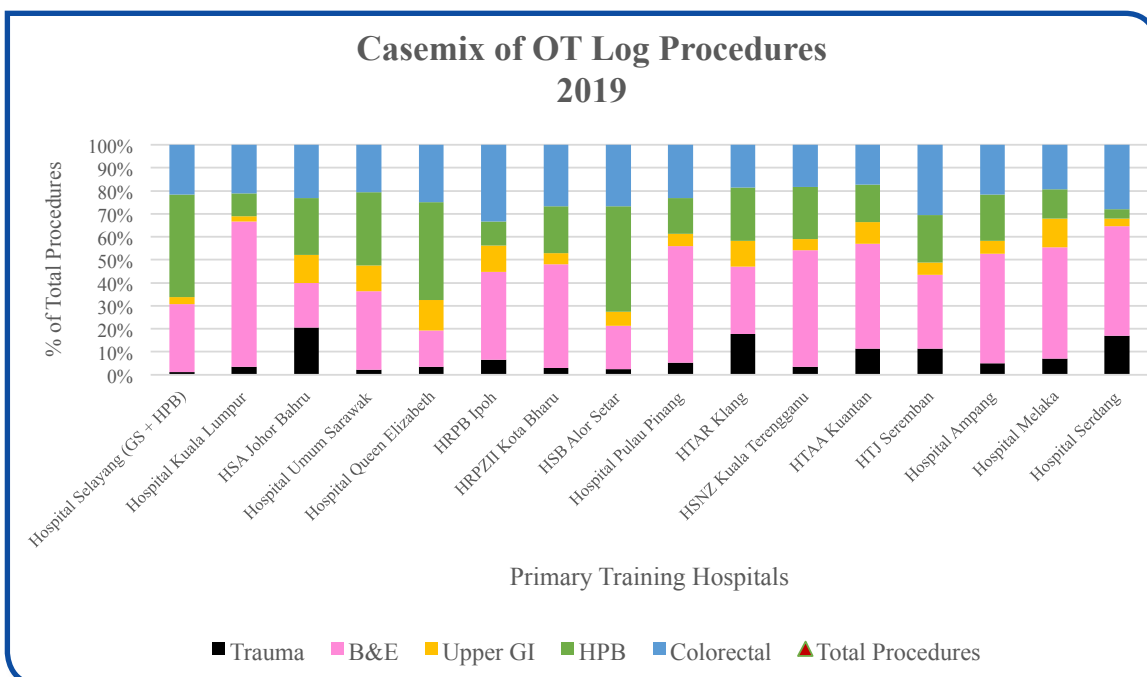


Figure 7.1.2: Casemix of OT Log Procedures for Primary Training Hospitals (Percentage)

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



CASEMIX OF OT LOG PROCEDURES FOR PRIMARY TRAINING CENTERS

NO	HOSPITALS	TRAUMA	%	B&E	%	UGI	%	HPB	%	COLORECTAL	%	TOTAL PROCEDURES
1	Hospital Selayang	15	1%	375	29%	41	3%	567	45%	275	22%	1273
2	Hospital Kuala Lumpur	33	4%	583	63%	21	2%	91	10%	196	21%	924
3	HSA Johor Bahru	184	21%	173	19%	111	12%	220	25%	208	23%	896
4	Hospital Umum Sarawak	19	2%	296	34%	95	11%	276	32%	178	21%	864
5	HQEI Kota Kinabalu	29	3%	135	16%	112	13%	364	43%	212	25%	852
6	HRPZII Kota Bharu	22	3%	332	45%	37	5%	149	20%	198	27%	738
7	HSB Alor Setar	19	3%	137	19%	45	6%	337	46%	197	27%	735
8	Hospital Pulau Pinang	37	5%	350	51%	38	5%	108	16%	160	23%	693
9	HTAR Klang	114	18%	186	29%	71	11%	148	23%	119	19%	638
10	HSNZ Kuala Terengganu	21	3%	315	51%	29	5%	140	23%	114	18%	619
11	HTAA Kuantan	67	11%	267	45%	55	9%	97	17%	101	17%	587
12	HTJ Seremban	60	11%	170	32%	28	5%	108	20%	162	31%	528
13	HRPB Ipoh	50	7%	294	38%	87	11%	80	10%	256	33%	767
14	Hospital Ampang	18	5%	168	48%	20	6%	71	20%	76	22%	353
15	Hospital Melaka	24	7%	166	49%	42	12%	44	13%	66	19%	342
16	Hospital Serdang	41	17%	116	48%	8	3%	10	4%	68	28%	243
	OVERALL	753	7%	4063	37%	840	8%	2810	25%	2586	23%	11052

Table 7.1.1 Casemix of OT Log Procedures for Primary Training Hospitals

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



7.2 Total OT Log Procedures

a. Total

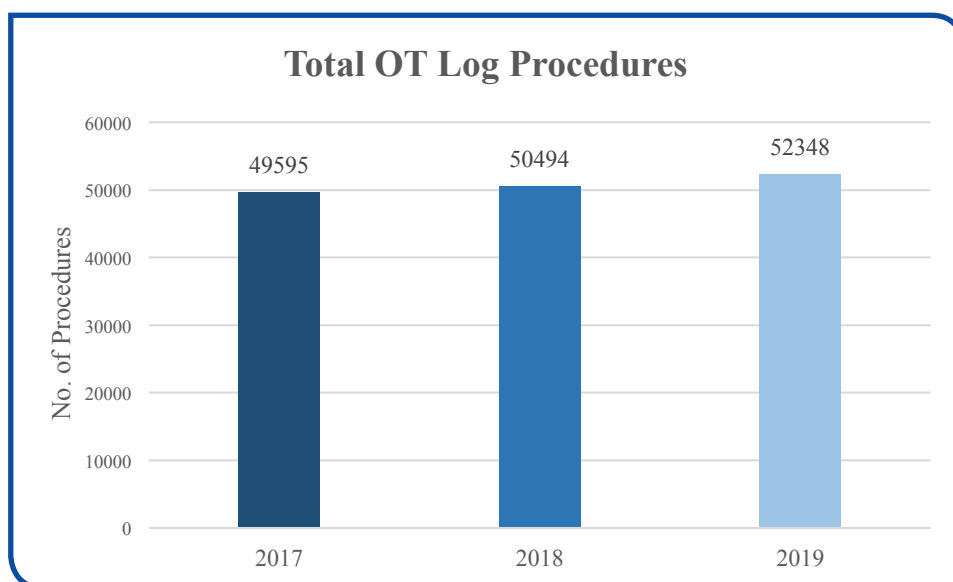


Figure 7.2.1 : Total OT Log Procedures

b. By BMS Category

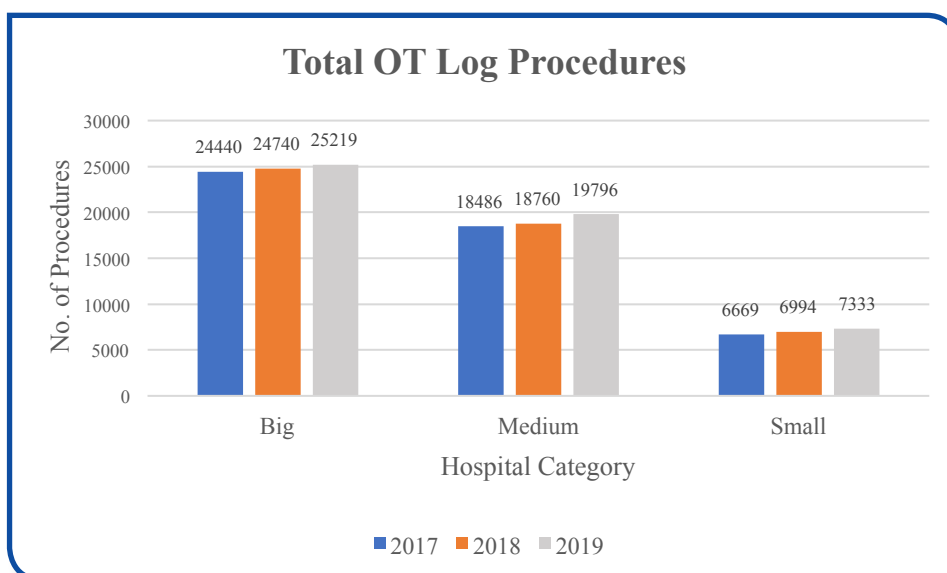


Figure 7.2.2 : Total OT Log Procedures by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



c. By BMS Hospital Category

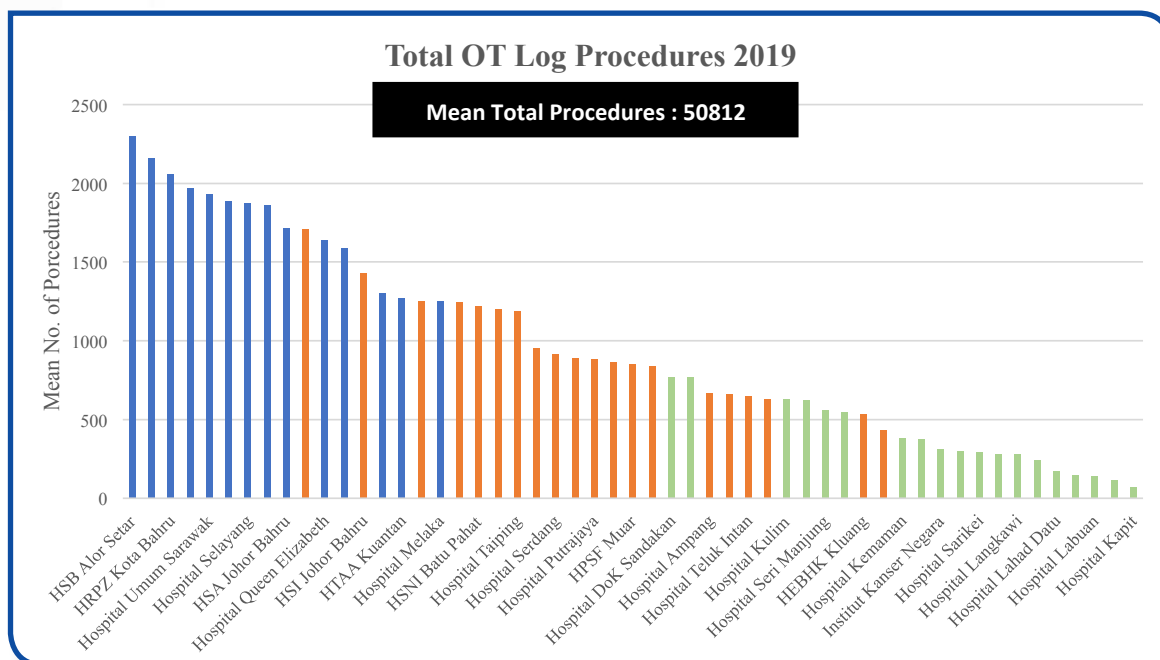


Figure 7.2.3 : Total OT Log Procedures by BMS Hospital Category

d. BMS Hospital Category Casemix

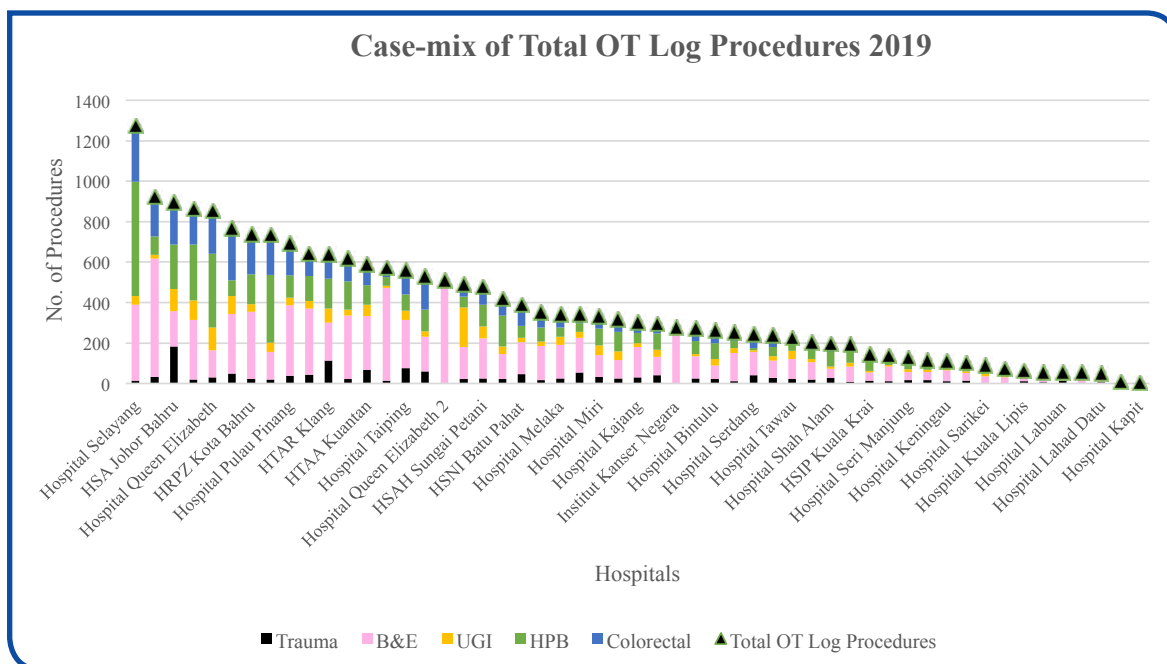


Figure 7.2.4 : Casemix of Total OT Log Procedures by Hospital (Absolute Number)

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019

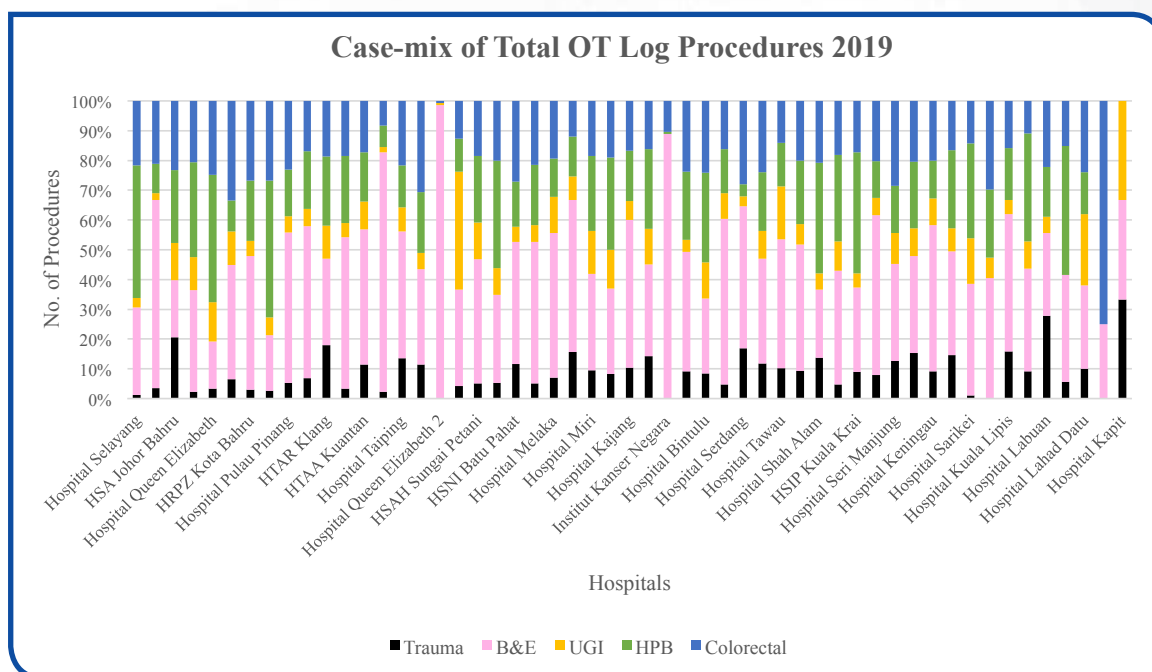


Figure 7.2.5: Casemix of Total OT Log Procedures by Hospital (Percentage)

OVERALL TOTAL OT LOG

HOSPITAL CATEGORY	2017	2018	2019
Big	24440	24740	25219
Medium	18486	18760	19796
Small	6669	6994	7333
TOTAL	49595	50494	52348

Table 7.2.1 : Total Number of OT Log Procedures by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



TOTAL OT LOG PROCEDURES

NO	HOSPITALS	2017	2018	2019	MEAN NO. OF PROCEDURES
1	HSB Alor Setar	2316	2434	2148	2299
2	Hospital Kuala Lumpur	2037	1964	2470	2157
3	HRPZ Kota Bharu	2082	1960	2124	2055
4	HSNZ Kuala Terengganu	1952	1962	1988	1967
5	Hospital Umum Sarawak	1856	2063	1875	1931
6	Hospital Pulau Pinang	1814	1873	1964	1884
7	Hospital Selayang	1644	1839	2147	1877
8	HRPB Ipoh	1997	1828	1759	1861
9	HSA Johor Bahru	1695	1807	1646	1716
10	HSAH Sungai Petani	1545	1777	1798	1707
11	Hospital Queen Elizabeth	1585	1549	1785	1640
12	HTAR Klang	1534	1582	1650	1589
13	HSI Johor Bahru	1522	1210	1557	1430
14	HTJ Seremban	1308	1349	1242	1300
15	HTAA Kuantan	1185	1334	1299	1273
16	HoSHAS Temerloh	1138	1406	1211	1252
17	Hospital Melaka	1435	1196	1122	1251
18	Hospital Sungai Buloh	1202	1254	1280	1245
19	HSNI Batu Pahat	1102	1237	1319	1219
20	Hospital Sibul	1242	1191	1177	1203
21	Hospital Taiping	1043	1161	1353	1186
22	Hospital Seberang Jaya	946	930	978	951
23	Hospital Serdang	1052	915	777	915
24	Hospital Queen Elizabeth 2	806	824	1036	889
25	Hospital Putrajaya	856	848	945	883
26	Hospital Miri	828	845	926	866
27	HPSF Muar	789	795	977	854
28	Hospital Kajang	808	846	856	837
29	Hospital DoK Sandakan	760	786	768	771
30	Hospital Shah Alam	594	856	849	766
31	Hospital Ampang	572	649	782	668
32	HTF Kangar	659	613	715	662
33	Hospital Teluk Intan	644	666	631	647
34	Hospital Tawau	701	633	561	632
35	Hospital Kulim	772	551	559	627
36	Hospital Bintulu	655	531	674	620
37	Hospital Seri Manjung	597	546	532	558
38	Hospital Segamat	588	536	514	546
39	HEBHK Kluang	528	516	564	536
40	Hospital Kuala Pilah	503	444	353	433
41	Hospital Kemaman	330	408	415	384
42	HSIP Kuala Krai	238	384	501	374
43	Institut Kanser Negara	291	270	383	315
44	Hospital Tanah Merah	323	304	262	296
45	Hospital Sarikei	256	333	288	292
46	Hospital Keningau	278	264	299	280
47	Hospital Langkawi	262	266	308	279
48	Hospital Kuala Lipis	227	252	250	243
49	Hospital Lahad Datu	135	169	205	170
50	Hospital Port Dickson	78	171	195	148
51	Hospital Labuan	121	147	160	143
52	Hospital Banting	112	119	115	115
53	Hospital Kapit	52	101	56	70
TOTAL		49595	50494	52348	50812

Table 7.2.2 : Total Number of OT Log Procedures by Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



CASEMIX OF TOTAL OT LOG BY MAIN DISCIPLINES FOR 2019

NO	HOSPITALS	TRAUMA	B&E	UGI	HPB	COLORECTAL	TOTAL
1	Hospital Selayang	15	375	41	567	275	1273
2	Hospital Kuala Lumpur	33	583	21	91	196	924
3	HSA Johor Bahru	184	173	111	220	208	896
4	Hospital Umum Sarawak	19	296	95	276	178	864
5	Hospital Queen Elizabeth	29	135	112	364	212	852
6	HRPB Ipoh	50	294	87	80	256	767
7	HRPZ Kota Bahru	22	332	37	149	198	738
8	HSB Alor Setar	19	137	45	337	197	735
9	Hospital Pulau Pinang	37	350	38	108	160	693
10	HSI Johor Bahru	44	327	37	124	108	640
11	HTAR Klang	114	186	71	148	119	638
12	HSNZ Kuala Terengganu	21	315	29	140	114	619
13	HTAA Kuantan	67	267	55	97	101	587
14	Hospital Putrajaya	13	460	10	42	47	572
15	Hospital Taiping	76	238	46	79	121	560
16	HTJ Seremban	60	170	28	108	162	528
17	Hospital Queen Elizabeth 2	0	504	3	0	4	511
18	Hospital Sungai Buloh	21	159	195	55	62	492
19	HSAH Sungai Petani	24	200	59	107	88	478
20	Hospital Sibul	22	124	38	151	84	419
21	HSNI Batu Pahat	45	160	20	59	106	390
22	Hospital Ampang	18	168	20	71	76	353
23	Hospital Melaka	24	166	42	44	66	342
24	HoSHAS Temerloh	53	174	27	45	41	340
25	Hospital Miri	32	108	48	84	62	334
26	Hospital Seberang Jaya	26	91	41	98	60	316
27	Hospital Kajang	31	149	19	51	50	300
28	Hospital DoK Sandakan	42	91	35	79	48	295
29	Institut Kanser Negara	0	248	0	2	29	279
30	HPSF Muar	25	110	11	63	65	274
31	Hospital Bintulu	22	66	32	79	63	262
32	Hospital Teluk Intan	12	140	22	37	41	252
33	Hospital Serdang	41	116	8	10	68	243
34	HTF Kangar	28	84	22	47	57	238
35	Hospital Tawau	23	98	40	33	32	226
36	HEBHK Kluang	19	87	14	44	41	205
37	Hospital Shah Alam	27	45	11	73	41	197
38	Hospital Segamat	9	74	19	56	35	193
39	HSIP Kuala Krai	13	41	7	59	25	145
40	Hospital Kulim	11	74	8	17	28	138
41	Hospital Seri Manjung	16	41	13	20	36	126
42	Hospital Kuala Pilah	18	38	11	26	24	117
43	Hospital Keningau	10	54	10	14	22	110
44	Hospital Langkawi	15	36	8	27	17	103
45	Hospital Sarikei	1	34	14	29	13	91
46	Hospital Kemaman	0	30	5	17	22	74
47	Hospital Kuala Lipis	10	29	3	11	10	63
48	Hospital Tanah Merah	5	19	5	20	6	55
49	Hospital Labuan	15	15	3	9	12	54
50	Hospital Port Dickson	3	19	0	23	8	53
51	Hospital Lahad Datu	5	14	12	7	12	50
52	Hospital Banting	0	2	0	0	6	8
53	Hospital Kapit	1	1	1	0	0	3

Table 7.2.3: Casemix of Total OT Log Procedures by Hospitals

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



7.3 Trauma

- List of procedures selected for trauma workload measurement are:

- i. Trauma craniotomy
- ii. Trauma laparotomy (blunt)
- iii. Trauma laparotomy (penetrating)
- iv. Trauma thoracotomy

- Procedures where data was not captured are vascular trauma /soft tissue injuries /neck penetrating injuries

a. Total

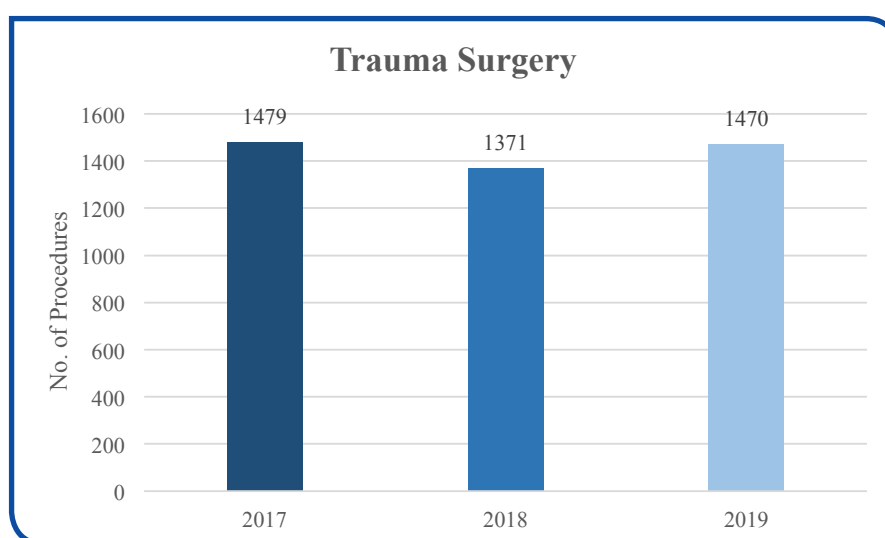


Figure 7.3.1 : Total Number of Trauma Surgery

b. By BMS Category

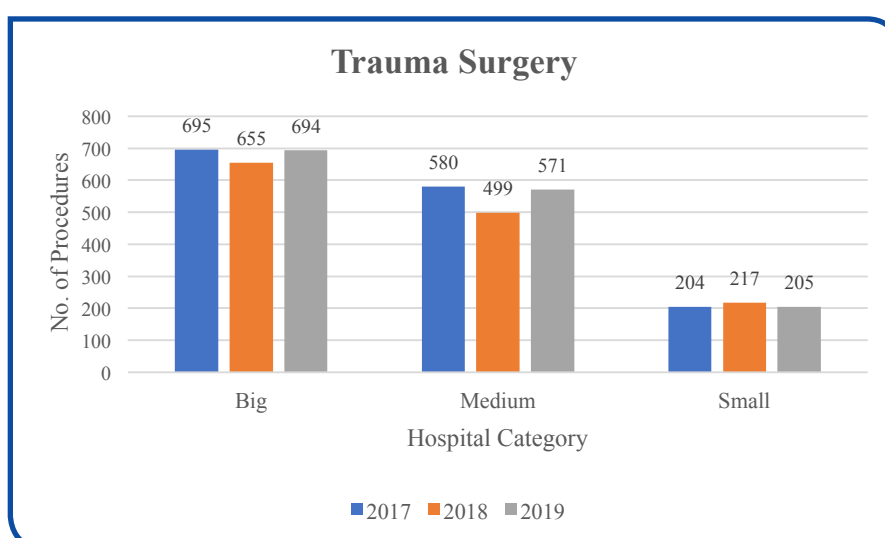


Figure 7.3.2 : Trauma Surgery by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



c. By BMS Hospital Category

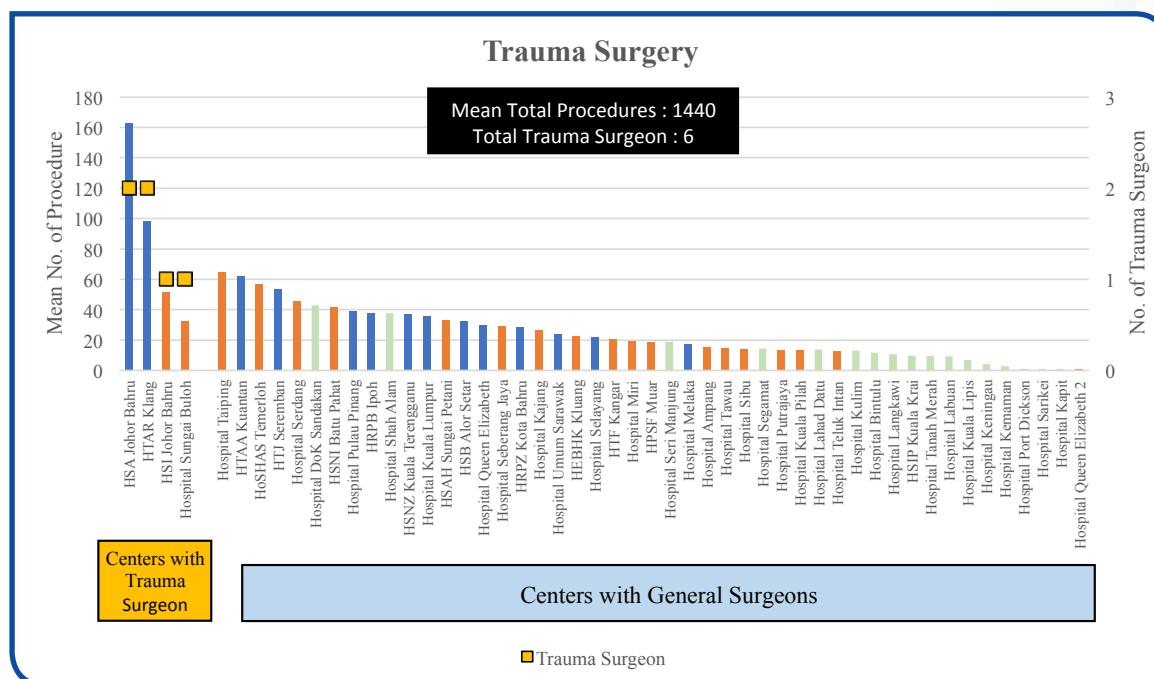


Figure 7.3.3 : Trauma Surgery by BMS Hospital Category

d. Types of Trauma Procedures

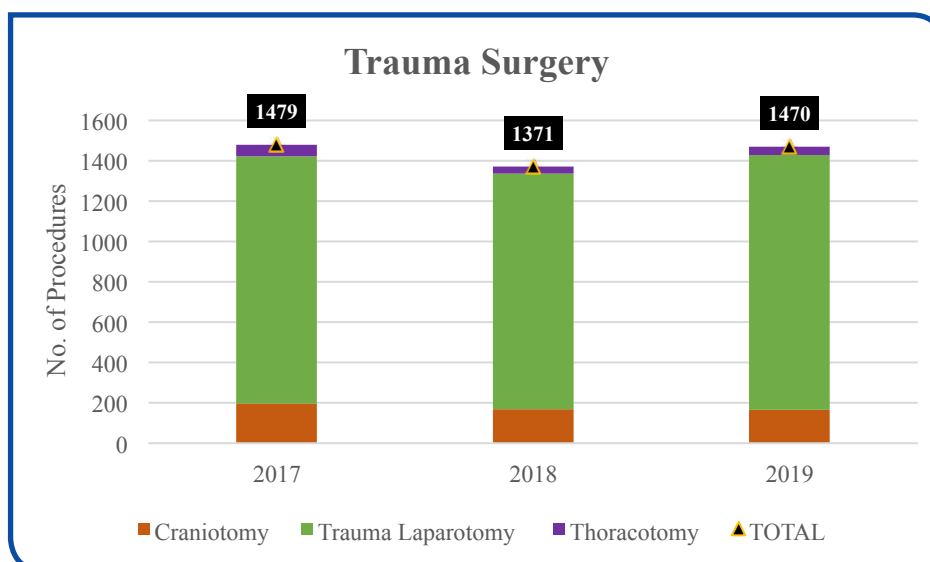


Figure 7.3.4: Types of Trauma Surgery

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



TRAUMA SURGERY

HOSPITAL CATEGORY	2017	2018	2019
Big	695	655	694
Medium	580	499	571
Small	204	217	205
TOTAL	1479	1371	1470

Table 7.3.1: Trauma Surgery by BMS Category

PROCEDURE TYPE	2017	(%)	2018	(%)	2019	(%)
Craniotomy	198	13.4	169	12.3	165	11.2
Trauma Laparotomy	1225	82.8	1168	85.2	1263	85.9
Thoracotomy	56	3.8	34	2.5	42	2.9
TOTAL	1479	100	1371	100	1470	100

Table 7.3.2: Types of Trauma Surgery

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



TRAUMA SURGERY

NO	HOSPITALS	2017	2018	2019	MEAN NO. OF PROCEDURES	NO. OF TRAUMA SURGEON
1	HSA Johor Bahru	172	132	184	163	2
2	HTAR Klang	67	114	114	98	2
3	Hospital Taiping	74	44	76	65	
4	HTAA Kuantan	63	57	67	62	
5	HoSHAS Temerloh	57	61	53	57	
6	HTJ Seremban	55	45	60	53	
7	HSI Johor Bahru	59	52	44	52	1
8	Hospital Serdang	35	62	41	46	
9	Hospital DoK Sandakan	43	44	42	43	
10	HSNI Batu Pahat	39	41	45	42	
11	Hospital Pulau Pinang	40	41	37	39	
12	HRPB Ipoh	27	36	50	38	
13	Hospital Shah Alam	36	50	27	38	
14	HSNZ Kuala Terengganu	49	42	21	37	
15	Hospital Kuala Lumpur	49	26	33	36	
16	HSAH Sungai Petani	46	29	24	33	
17	HSB Alor Setar	33	46	19	33	
18	Hospital Sungai Buloh	37	39	21	32	1
19	Hospital Queen Elizabeth	31	29	29	30	
20	Hospital Seberang Jaya	36	25	26	29	
21	HRPZ Kota Bahru	45	18	22	28	
22	Hospital Kajang	24	24	31	26	
23	Hospital Umum Sarawak	26	26	19	24	
24	HEBHK Kluang	31	19	19	23	
25	Hospital Selayang	25	27	15	22	
26	HTF Kangar	26	9	28	21	
27	Hospital Miri	10	17	32	20	
28	HPSF Muar	20	12	25	19	
29	Hospital Seri Manjung	18	23	16	19	
30	Hospital Melaka	13	16	24	18	
31	Hospital Ampang	16	13	18	16	
32	Hospital Tawau	12	9	23	15	
33	Hospital Sibul	14	7	22	14	
34	Hospital Segamat	14	20	9	14	
35	Hospital Putrajaya	11	17	13	14	
36	Hospital Kuala Pilah	14	9	18	14	
37	Hospital Lahad Datu	20	16	5	14	
38	Hospital Teluk Intan	18	9	12	13	
39	Hospital Kulim	13	15	11	13	
40	Hospital Bintulu	7	6	22	12	
41	Hospital Langkawi	10	7	15	11	
42	HSIP Kuala Krai	10	6	13	10	
43	Hospital Tanah Merah	16	8	5	10	
44	Hospital Labuan	3	10	15	9	
45	Hospital Kuala Lipis	3	8	10	7	
46	Hospital Keningau	2	0	10	4	
47	Hospital Kemaman	5	3	0	3	
48	Hospital Port Dickson	0	0	3	1	
49	Hospital Sarikei	1	1	1	1	
50	Hospital Kapit	2	0	1	1	
51	Hospital Queen Elizabeth 2	1	1	0	1	
52	Hospital Banting	1	0	0	0	
53	Institut Kanser Negara	0	0	0	0	
TOTAL		1479	1371	1470	1440	6

Table 7.3.3 : Trauma Surgery by Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



7.3.1 Trauma Craniotomy

Data Tabulated are craniotomy done by **General Surgeon (GS)** → Includes craniectomy
Craniotomy by **Neurosurgeon (NS)** : Data was not collected/captured in this report

TRAUMA CRANIOTOMY SERVICES

CRANIOTOMY PERFORMED BY NEUROSURGEON (NS)		CRANIOTOMY SERVICES NOT PROVIDED
Craniotomy performed by Neurosurgeon (NS)	Craniotomy performed by General Surgeon (GS)	Cases referred to Neurosurgical Centers
1. HSB Alor Setar 2. Hospital Pulau Pinang 3. HRPB Ipoh 4. Hospital Kuala Lumpur 5. HTJ Seremban 6. HSA Johor Bahru 7. HSNZ Kuala Terengganu 8. HTAA Kuantan 9. Hospital Umum Sarawak 10. Hospital Queen Elizabeth 1 11. Hospital Sungai Buloh 12. Hospital Miri	1. HTF Kangar 2. HTAR Klang 3. Hospital Melaka 4. HSAH Sg Petani 5. Hospital Taiping 6. HSI Johor Bahru 7. HoSHAS Temerloh 8. Hospital Tawau 9. Hospital Langkawi 10. Hospital Shah Alam 11. Hospital Labuan 12. HDoK Sandakan 13. Hospital Keningau 14. Hospital Lahad Datu 15. Hospital Bintulu	1. HRPZ II Kota Bahru 2. Hospital Seberang Jaya 3. Hospital Teluk Intan 4. Hospital Selayang 5. Hospital Ampang 6. Hospital Serdang 7. Hospital Kajang 8. Hospital Putrajaya 9. HTAN Kuala Pilah 10. HPSF Muar 11. HSNI Batu Pahat 12. HEBHK Kluang 13. Hospital Kuala Lipis 14. Hospital Sibul 15. HQEII Kota Kinabalu 16. Hospital Kulim 17. Hospital Seri Manjung 18. Hospital Banting 19. Institut Kanser Negara 20. Hospital Port Dickson 21. Hospital Segamat 22. Hospital Kemaman 23. HSIP Kuala Krai 24. Hospital Tanah Merah 25. Hospital Sarikei 26. Hospital Kapit

Table 7.3.4 : Craniotomy Services provided by General Surgeons

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



a. Total

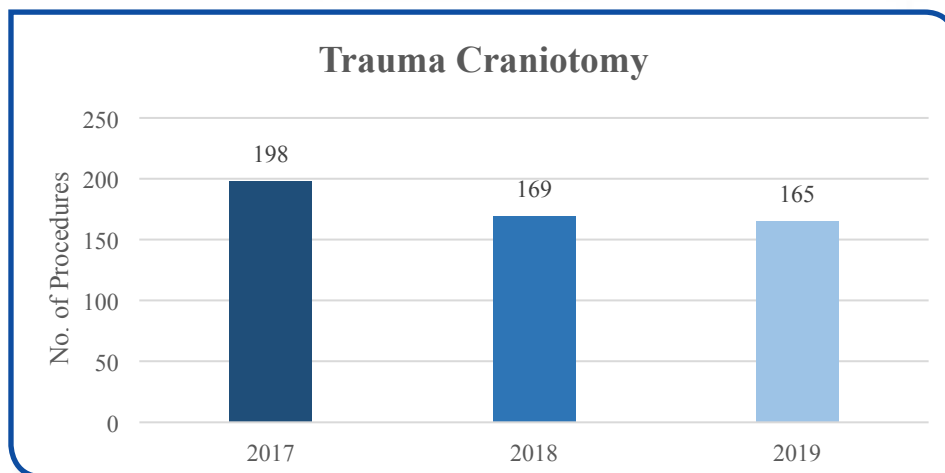


Figure 7.3.5 : Total Number of Craniotomy

b. By MS Category

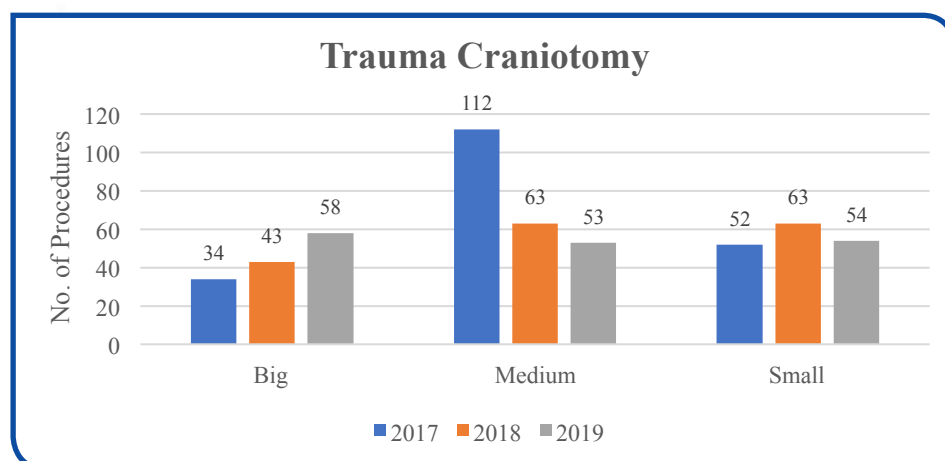


Figure 7.3.6: Trauma Craniotomy by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



c. By BMS Hospital Category

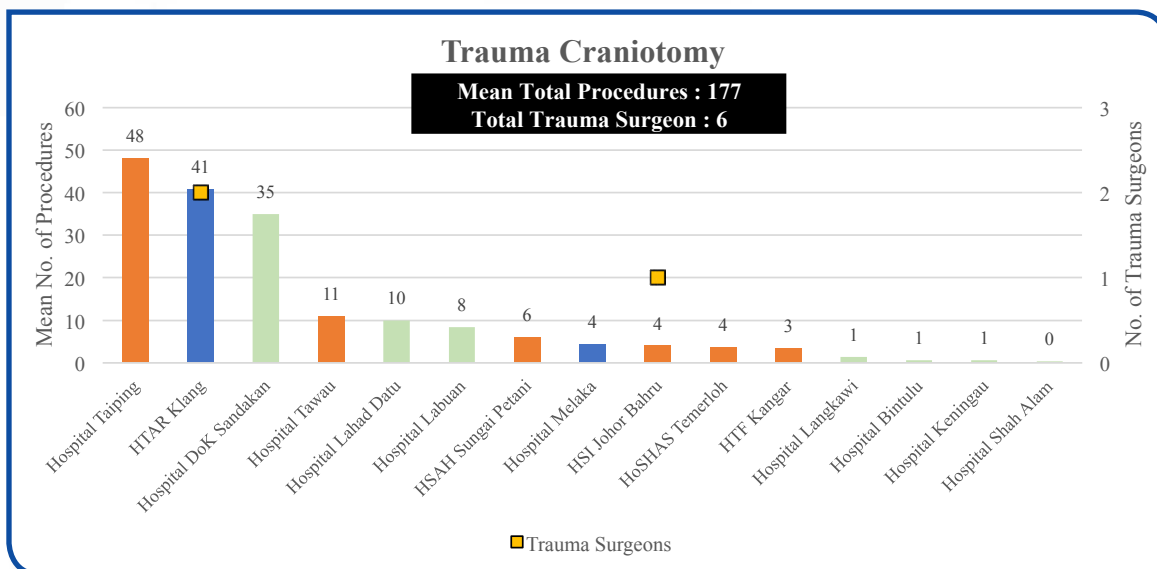


Figure 7.3.7 : Trauma Craniotomy by BMS Hospital Category

TRAUMA CRANIOTOMY

HOSPITAL CATEGORY	2017	2018	2019
Big	34	43	58
Medium	112	63	53
Small	52	63	54
Total	198	169	165

Table 7.3.5 : Total Number of Trauma Craniotomy by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



TRAUMA CRANIOTOMY

NO	HOSPITALS	2017	2018	2019	MEAN NO. OF PROCEDURES	NO. OF TRAUMA SURGEON
1	Hospital Taiping	70	44	30	48	
2	HTAR Klang	31	35	56	41	2
3	Hospital DoK Sandakan	28	41	36	35	
4	Hospital Tawau	8	8	17	11	
5	Hospital Lahad Datu	16	11	3	10	
6	Hospital Labuan	2	10	13	8	
7	HSAH Sungai Petani	9	6	3	6	
8	Hospital Melaka	3	8	2	4	
9	HSI Johor Bahru	12	0	0	4	1
10	HoSHAS Temerloh	4	5	2	4	
11	HTF Kangar	9	0	1	3	
12	Hospital Langkawi	4	0	0	1	
13	Hospital Bintulu	0	0	2	1	
14	Hospital Keningau	2	0	0	1	
15	Hospital Shah Alam	0	1	0	0	
	TOTAL	198	169	165	177	3

Table 7.3.6: Trauma Craniotomy by Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



7.3.2 Trauma Laparotomy

Trauma Laparotomy for Intra-Abdominal Injury (IAI) consists of :

- Blunt IAI
- Penetrating IAI

a. Total

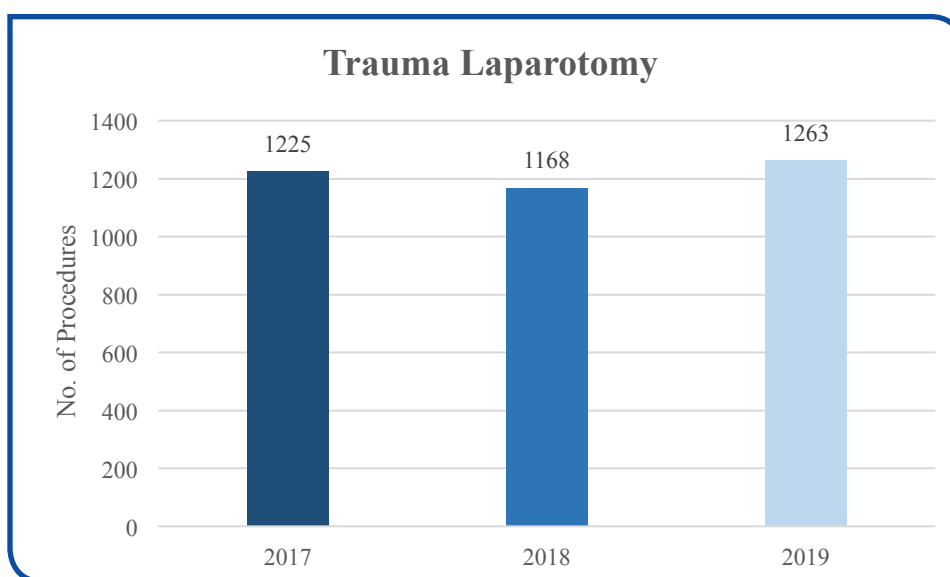


Figure 7.3.8 : Total Number of Trauma Laparotomy

b. By BMS Category

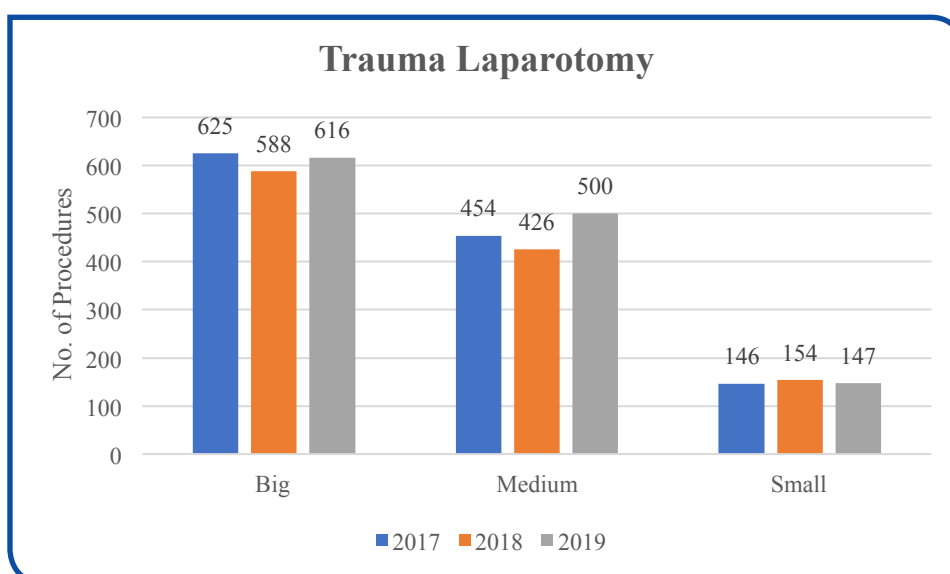


Figure 7.3.9 : Trauma Laparotomy by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



c. By BMS Hospital Category

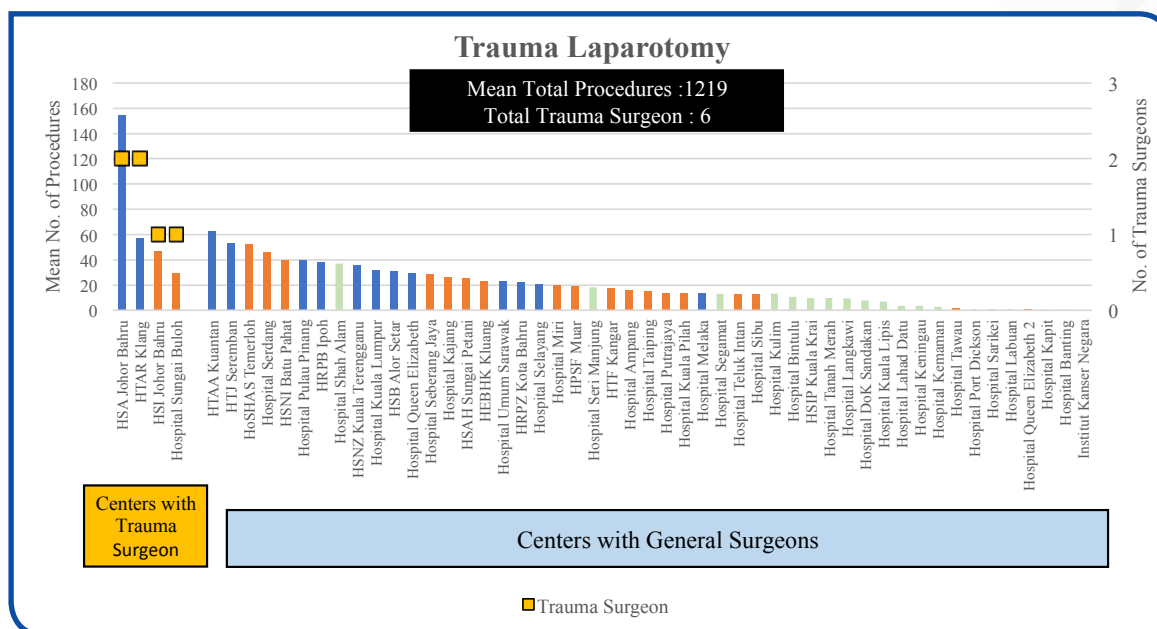


Figure 7.3.10: Trauma Laparotomy by Hospital Category

d. Types of Intra-Abdominal Injury (IAI)

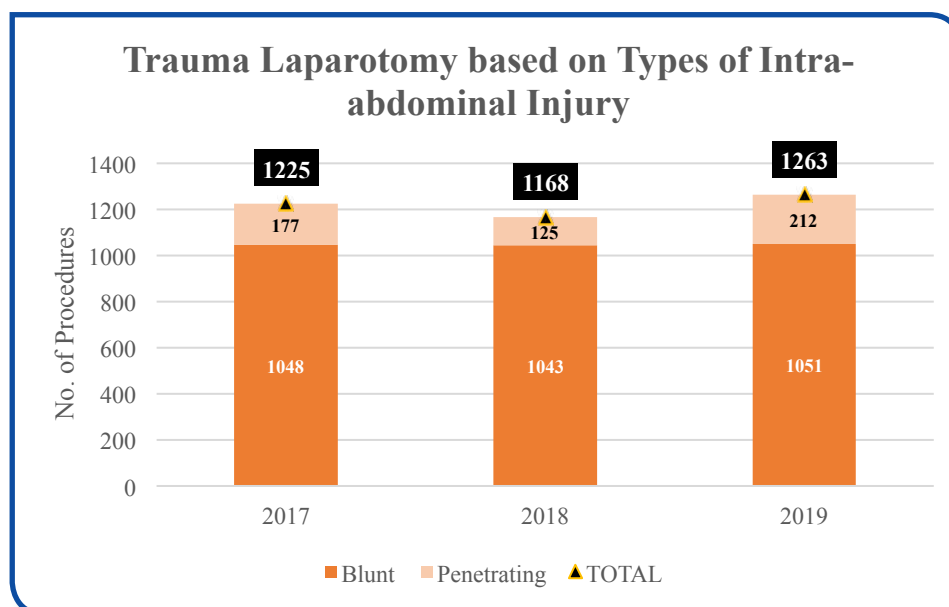


Figure 7.3.11 ; Trauma Laparotomy based on Types of IAI

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



TRAUMA LAPAROTOMY

HOSPITAL CATEGORY	2017	2018	2019
Big	625	588	616
Medium	454	426	500
Small	146	154	147
Total	1225	1168	1263

Table 7.3.7 : Trauma Laparotomy by BMS Category

TRAUMA LAPAROTOMY BY TYPES OF IAI

	BLUNT	%	PENETRATING	%	TOTAL
2017	1048	86%	177	14%	1225
2018	1043	89%	125	11%	1168
2019	1051	83%	212	17%	1263

Table 7.3.8: Trauma Laparotomy by Types of IAI

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



TRAUMA LAPAROTOMY

NO	HOSPITALS	2017	2018	2019	MEAN NO. OF PROCEDURES	NO. OF TRAUMA SURGEON
1	HSA Johor Bahru	160	126	178	155	2
2	HTAA Kuantan	63	57	67	62	
3	HTAR Klang	36	77	58	57	2
4	HTJ Seremban	55	45	60	53	
5	HoSHAS Temerloh	53	56	48	52	
6	HSI Johor Bahru	46	50	44	47	1
7	Hospital Serdang	35	62	41	46	
8	HSNI Batu Pahat	36	41	43	40	
9	Hospital Pulau Pinang	40	41	37	39	
10	HRPB Ipoh	27	36	50	38	
11	Hospital Shah Alam	36	49	26	37	
12	HSNZ Kuala Terengganu	48	38	21	36	
13	Hospital Kuala Lumpur	43	26	25	31	
14	HSB Alor Setar	30	44	18	31	
15	Hospital Queen Elizabeth	31	29	27	29	
16	Hospital Sungai Buloh	33	33	21	29	1
17	Hospital Seberang Jaya	35	25	26	29	
18	Hospital Kajang	24	23	31	26	
19	HSAH Sungai Petani	36	23	17	25	
20	HEBHK Kluang	31	19	19	23	
21	Hospital Umum Sarawak	25	24	19	23	
22	HRPZ Kota Bahru	32	12	22	22	
23	Hospital Selayang	25	25	12	21	
24	Hospital Miri	10	17	32	20	
25	HPSF Muar	19	12	25	19	
26	Hospital Seri Manjung	17	23	15	18	
27	HTF Kangar	17	9	27	18	
28	Hospital Ampang	16	13	18	16	
29	Hospital Taiping	4	0	42	15	
30	Hospital Putrajaya	11	17	13	14	
31	Hospital Kuala Pilah	14	9	18	14	
32	Hospital Melaka	10	8	22	13	
33	Hospital Segamat	12	20	8	13	
34	Hospital Teluk Intan	18	9	12	13	
35	Hospital Sibul	13	7	19	13	
36	Hospital Kulim	13	15	11	13	
37	Hospital Bintulu	6	6	20	11	
38	HSIP Kuala Krai	10	6	13	10	
39	Hospital Tanah Merah	16	8	5	10	
40	Hospital Langkawi	6	7	15	9	
41	Hospital DoK Sandakan	15	3	5	8	
42	Hospital Kuala Lipis	3	8	10	7	
43	Hospital Lahad Datu	4	5	2	4	
44	Hospital Keningau	0	0	10	3	
45	Hospital Kemaman	5	3	0	3	
46	Hospital Tawau	2	0	4	2	
47	Hospital Port Dickson	0	0	3	1	
48	Hospital Sarikei	1	1	1	1	
49	Hospital Labuan	1	0	2	1	
50	Hospital Queen Elizabeth 2	1	1	0	1	
51	Hospital Kapit	0	0	1	0	
52	Hospital Banting	1	0	0	0	
53	Institut Kanser Negara	0	0	0	0	
TOTAL		1225	1168	1263	1219	6

Table 7.3.9 : Trauma Laparotomy by Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



7.3.3 Trauma Thoracotomy

a. Total

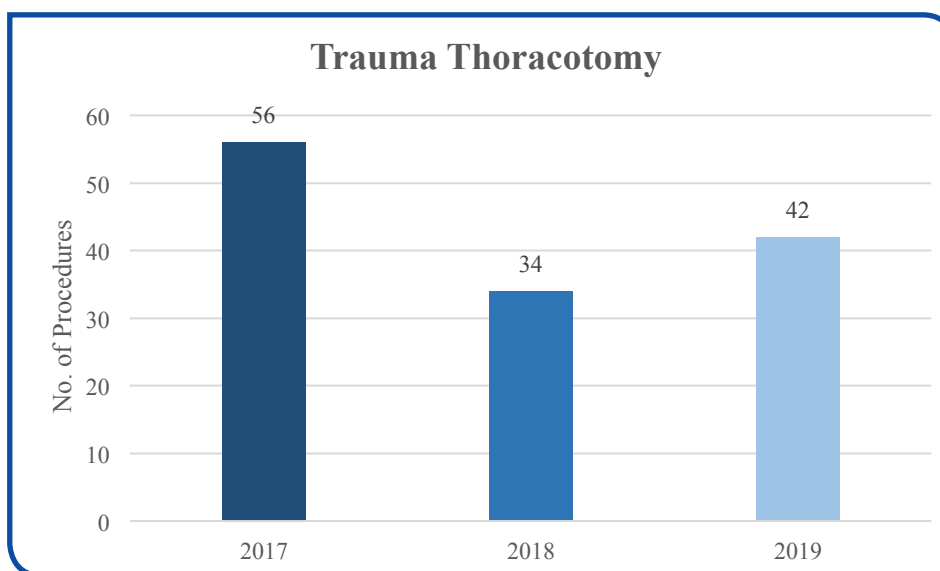


Figure 7.3.12 : Total Number of Trauma Thoracotomy

b. By BMS Category

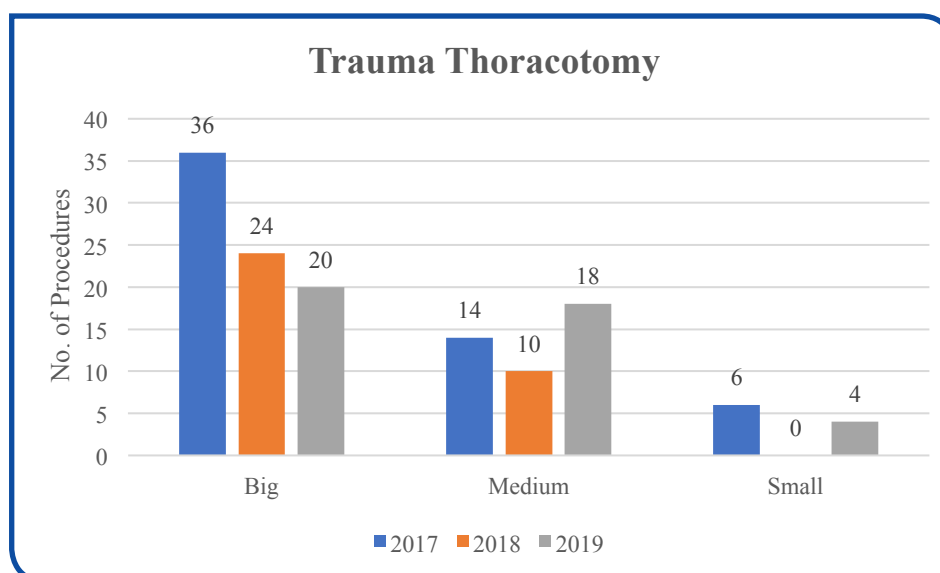


Figure 7.3.13: Trauma Thoracotomy by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



c. By BMS Hospital Category

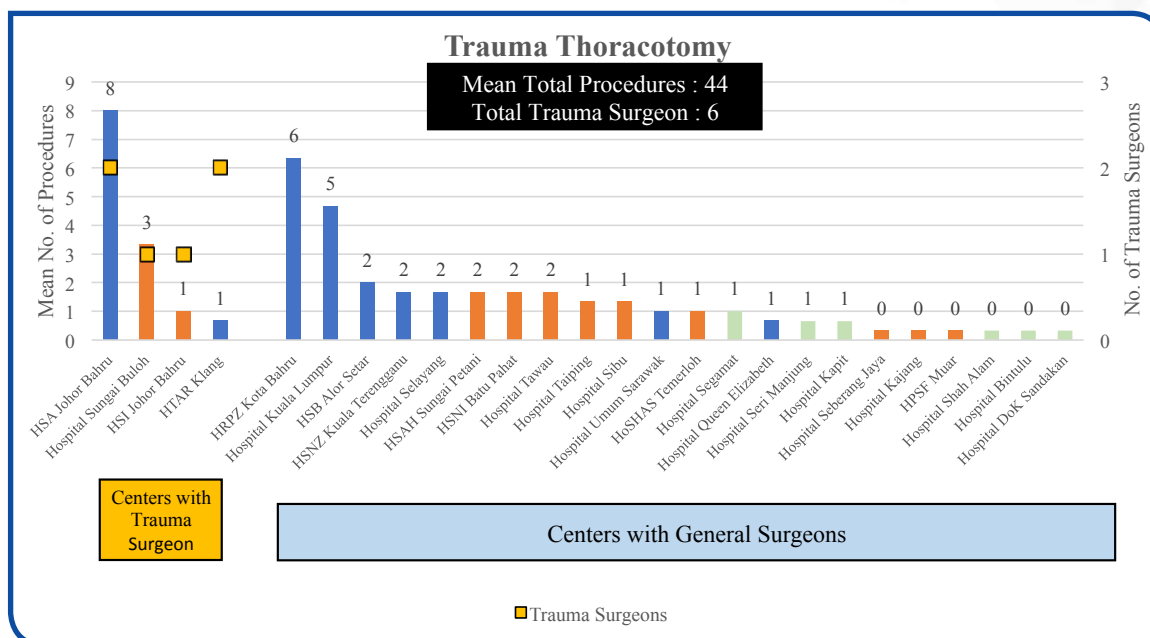


Figure 7.3.14: Trauma Thoracotomy by BMS hospital Category

d. Trauma Thoracotomy by Types of Thoracic Injury

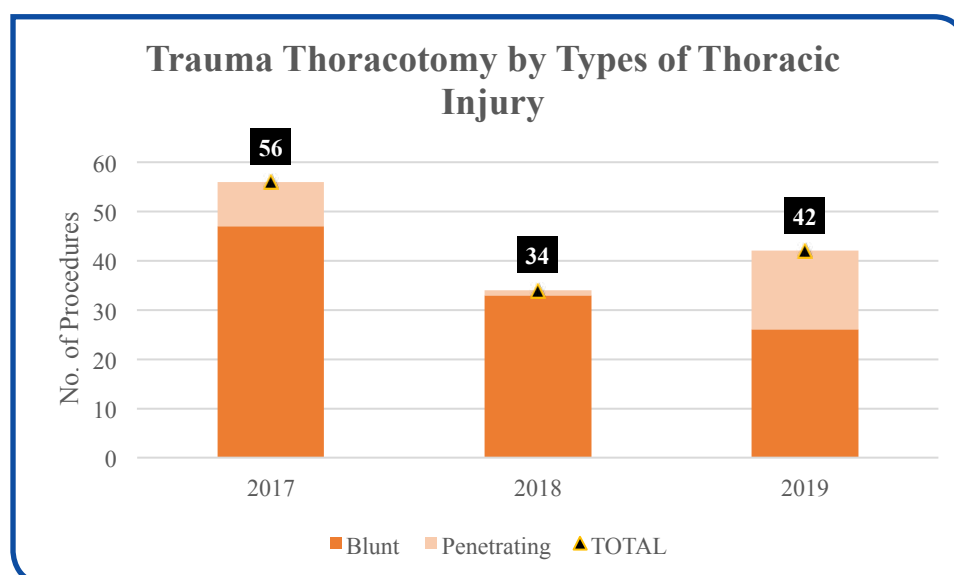


Figure 7.3.15 : Trauma Thoracotomy by Types of Thoracic Injury

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



TRAUMA THORACOTOMY

HOSPITAL CATEGORY	2017	2018	2019
Big	36	24	20
Medium	14	10	18
Small	6	0	4
TOTAL	56	34	42

Table 7.3 10 : Trauma Thoracotomy by BMS Category

TRAUMA THORACOTOMY BY TYPES OF INJURY

	BLUNT	%	PENETRATING	%	Total
2017	47	84%	9	16%	56
2018	33	97%	1	3%	34
2019	26	62%	16	38%	42

Table 7.3.11: Trauma Thoracotomy by Types of Thoracic Injury

TRAUMA LAPAROTOMY

NO	HOSPITALS	2017	2018	2019	MEAN NO. OF PROCEDURES	NO. OF TRAUMA SURGEON
1	HSA Johor Bahru	12	6	6	8	2
2	HRPZ Kota Bahru	13	6	0	6	
3	Hospital Kuala Lumpur	6	0	8	5	
4	Hospital Sungai Buloh	4	6	0	3	1
5	HSB Alor Setar	3	2	1	2	
6	HSNZ Kuala Terengganu	1	4	0	2	
7	Hospital Selayang	0	2	3	2	
8	HSAH Sungai Petani	1	0	4	2	
9	HSNI Batu Pahat	3	0	2	2	
10	Hospital Tawau	2	1	2	2	
11	Hospital Taiping	0	0	4	1	
12	Hospital Sibul	1	0	3	1	
13	Hospital Umum Sarawak	1	2	0	1	
14	HSI Johor Bahru	1	2	0	1	1
15	HoSHAS Temerloh	0	0	3	1	
16	Hospital Segamat	2	0	1	1	
17	HTAR Klang	0	2	0	1	2
18	Hospital Queen Elizabeth	0	0	2	1	
19	Hospital Seri Manjung	1	0	1	1	
20	Hospital Kapit	2	0	0	1	
21	Hospital Seberang Jaya	1	0	0	0	
22	Hospital Kajang	0	1	0	0	
23	HPSF Muar	1	0	0	0	
24	Hospital Shah Alam	0	0	1	0	
25	Hospital Bintulu	1	0	0	0	
26	Hospital DoK Sandakan	0	0	1	0	
	TOTAL	56	34	42	44	6

Table 7.3.12: Trauma Thoracotomy by Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



7.4 Endocrine

- List of procedures selected for Endocrine workload measurement are:

- i. Hemithyroidectomy
- ii. Total Thyroidectomy
- iii. Total Thyroidectomy with neck dissection
- iv. Total Parathyroidectomy
- v. Focus parathyroidectomy
- vi. Adrenalectomy

a. Total

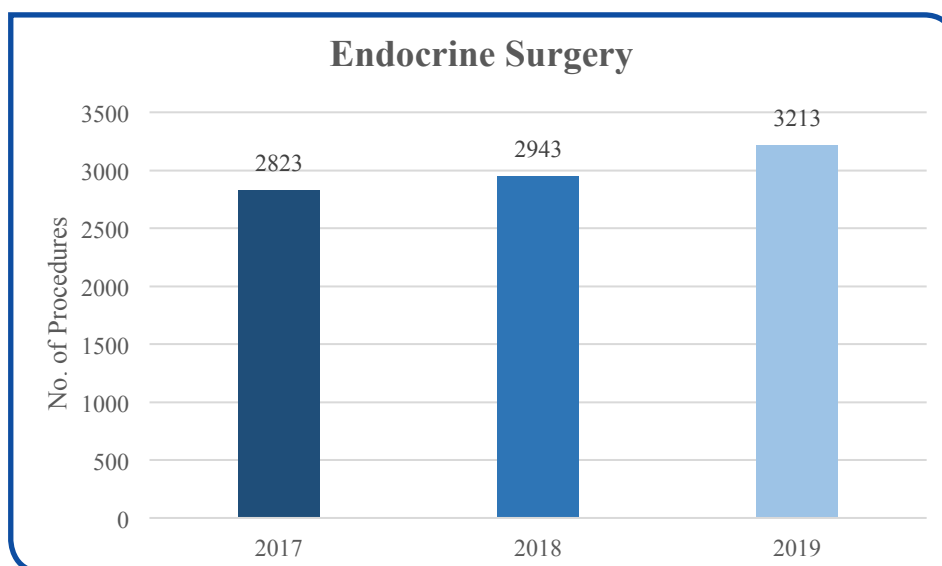


Figure 7.4.1: Total Number of Endocrine Surgery

b. By BMS Category

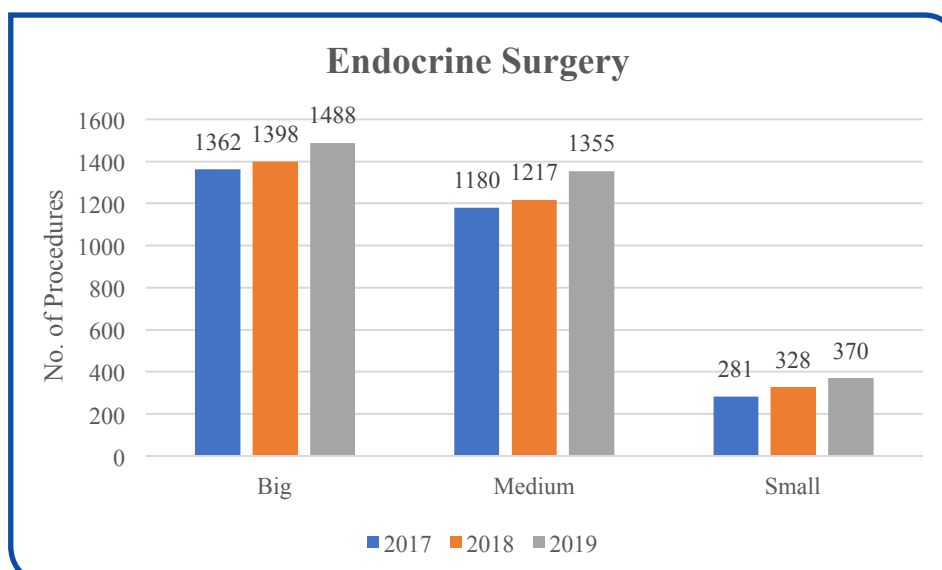


Figure 7.4.2: Endocrine Surgery by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



c. By BMS Hospital Category

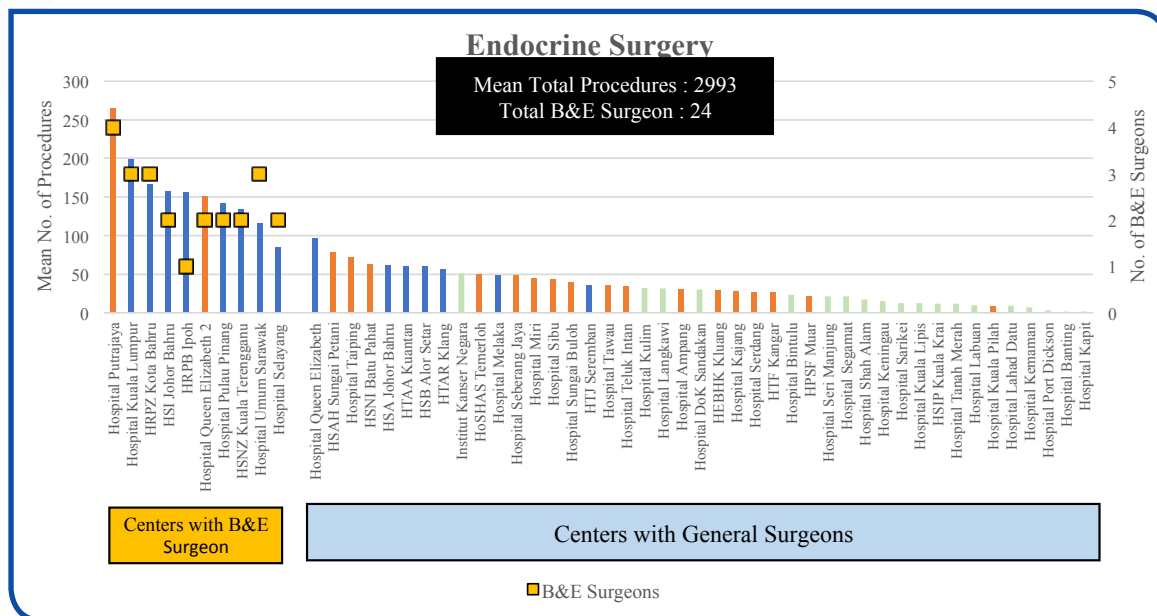


Figure 7.4.3: Endocrine Surgery by BMS Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



d. Types of Endocrine Surgery

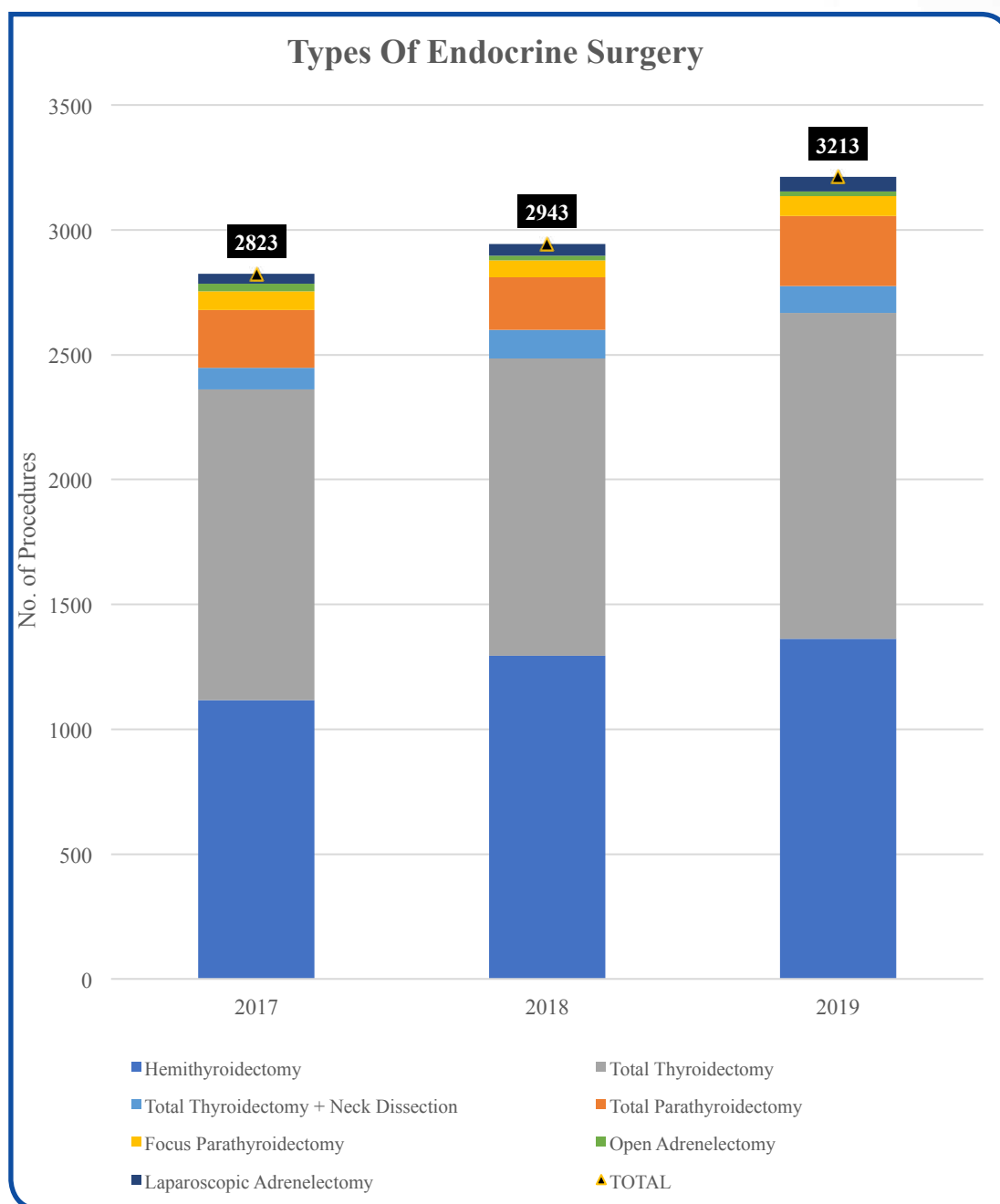


Figure 7.4.4: Types of Endocrine Surgery

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



ENDOCRINE SURGERY

HOSPITAL CATEGORY	2017	2018	2019
Big	1362	1398	1488
Medium	1180	1217	1355
Small	281	328	370
TOTAL	2823	2943	3213

Table 7.4.1: Endocrine Surgery by BMS Category

TYPE OF ENDOCRINE SURGERY

PROCEDURE TYPE	2017	(%)	2018	(%)	2019	(%)
Hemithyroidectomy	1117	39.6	1294	44.0	1363	42.4
Total Thyroidectomy	1244	44.1	1191	40.5	1304	40.6
Total Thyroidectomy + Neck Dissection	86	3.0	115	3.9	109	3.4
Total Parathyroidectomy	233	8.3	209	7.1	279	8.7
Focus Parathyroidectomy	75	2.7	69	2.3	80	2.5
Open Adrenalectomy	30	1.1	19	0.6	19	0.6
Laparoscopic Adrenalectomy	38	1.3	46	1.6	59	1.8
TOTAL	2823	100.0	2943	100.0	3213	100.0

Table 7.4.2: Types of Endocrine Surgery

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



ENDOCRINE SURGERY

NO	HOSPITALS	2017	2018	2019	MEAN NO. OF PROCEDURES	B&E SURGEONS
1	Hospital Putrajaya	258	242	294	265	4
2	Hospital Kuala Lumpur	204	153	239	199	3
3	HRPZ Kota Bahru	181	155	163	166	3
4	HSI Johor Bahru	173	145	154	157	2
5	HRPB Ipoh	167	182	119	156	1
6	Hospital Queen Elizabeth 2	146	131	174	150	2
7	Hospital Pulau Pinang	129	146	152	142	2
8	HSNZ Kuala Terengganu	111	148	143	134	2
9	Hospital Umum Sarawak	108	114	124	115	3
10	Hospital Queen Elizabeth	84	83	122	96	
11	Hospital Selayang	63	76	114	84	2
12	HSAH Sungai Petani	69	77	88	78	
13	Hospital Taiping	51	81	83	72	
14	HSNI Batu Pahat	62	67	58	62	
15	HSA Johor Bahru	51	58	76	62	
16	HTAA Kuantan	50	63	69	61	
17	HSB Alor Setar	67	71	41	60	
18	HTAR Klang	61	67	42	57	
19	Institut Kanser Negara	30	48	75	51	
20	HoSHAS Temerloh	49	49	51	50	
21	Hospital Melaka	57	47	41	48	
22	Hospital Seberang Jaya	44	37	63	48	
23	Hospital Miri	41	44	50	45	
24	Hospital Sibul	28	37	64	43	
25	Hospital Sungai Buloh	36	44	39	40	
26	HTJ Seremban	29	35	43	36	
27	Hospital Tawau	39	38	30	36	
28	Hospital Teluk Intan	27	27	50	35	
29	Hospital Kulim	28	33	36	32	
30	Hospital Langkawi	34	35	26	32	
31	Hospital Ampang	29	30	32	30	
32	Hospital DoK Sandakan	26	28	36	30	
33	HEBHK Kluang	28	32	29	30	
34	Hospital Kajang	25	28	29	27	
35	Hospital Serdang	34	38	8	27	
36	HTF Kangar	20	38	20	26	
37	Hospital Bintulu	28	17	26	24	
38	HPSF Muar	15	22	28	22	
39	Hospital Seri Manjung	20	27	18	22	
40	Hospital Segamat	14	27	24	22	
41	Hospital Shah Alam	13	23	16	17	
42	Hospital Keningau	11	18	17	15	
43	Hospital Sarikei	16	7	15	13	
44	Hospital Kuala Lipis	12	13	12	12	
45	HSIP Kuala Krai	5	8	23	12	
46	Hospital Tanah Merah	15	9	12	12	
47	Hospital Labuan	6	12	11	10	
48	Hospital Kuala Pilah	6	10	11	9	
49	Hospital Lahad Datu	10	10	7	9	
50	Hospital Kemaman	5	5	11	7	
51	Hospital Port Dickson	3	5	2	3	
52	Hospital Banting	3	1	2	2	
53	Hospital Kapit	2	2	1	2	
TOTAL		2823	2943	3213	2993	24

Table 7.4.3 : Endocrine Surgery by Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



7.4.1 Hemithyroidectomy

a. Total

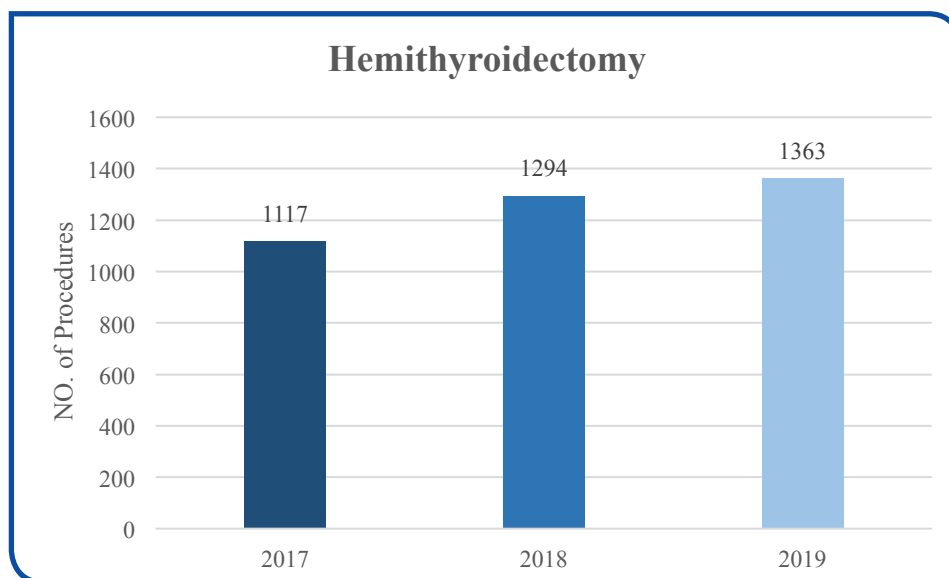


Figure 7.4.5 : Total Number of Hemithyroidectomy

b. By BMS Category

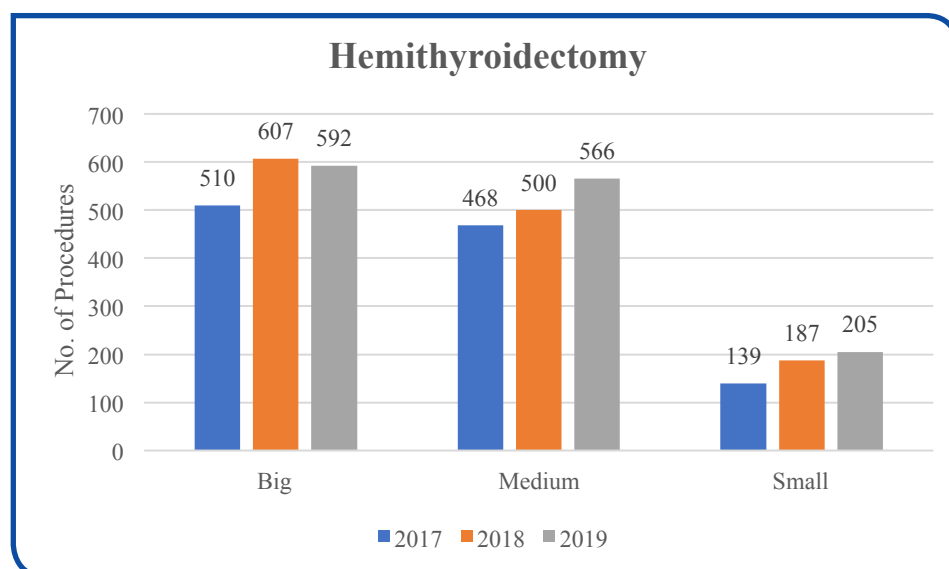


Figure 7.4.6 : Hemithyroidectomy. By BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



c. By BMS Hospital Category

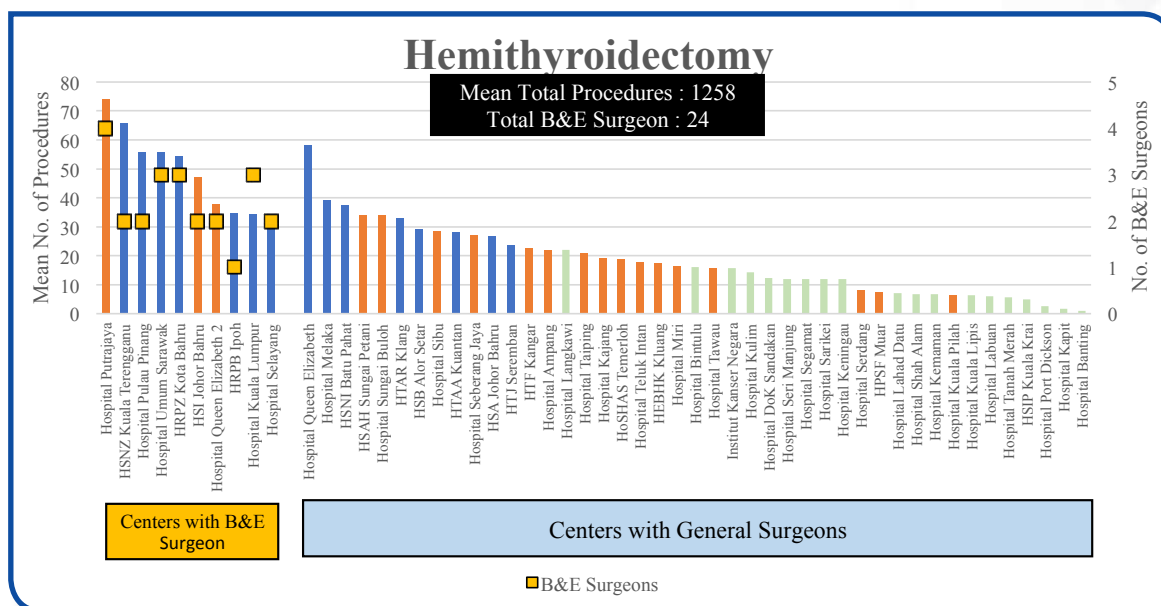


Figure 7.4.7: Hemithyroidectomy By BMS Hospital Category

HEMITHYROIDECTOMY

HOSPITAL CATEGORY	2017	2018	2019
Big	510	607	592
Medium	468	500	566
Small	139	187	205
TOTAL	1117	1294	1363

Table 7.4.4: Hemithyroidectomy By BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



HEMITHYROIDECTOMY

NO	HOSPITALS	2017	2018	2019	MEAN NO. OF PROCEDURES	B&E SURGEONS
1	Hospital Putrajaya	64	61	97	74	4
2	HSNZ Kuala Terengganu	56	77	64	66	2
3	Hospital Queen Elizabeth	57	56	62	58	
4	Hospital Pulau Pinang	48	53	66	56	2
5	Hospital Umum Sarawak	48	63	56	56	3
6	HRPZ Kota Bharu	55	48	60	54	3
7	HSI Johor Bahru	44	36	61	47	2
8	Hospital Melaka	47	35	36	39	
9	Hospital Queen Elizabeth 2	37	38	38	38	2
10	HSNI Batu Pahat	38	44	30	37	
11	HRPB Ipoh	28	49	27	35	1
12	Hospital Kuala Lumpur	29	25	49	34	3
13	HSAH Sungai Petani	37	22	43	34	
14	Hospital Sungai Buloh	35	43	24	34	
15	HTAR Klang	33	44	22	33	
16	Hospital Selayang	18	33	42	31	2
17	HSB Alor Setar	25	47	16	29	
18	Hospital Sibu	18	30	37	28	
19	HTAA Kuantan	25	32	27	28	
20	Hospital Seberang Jaya	22	19	40	27	
21	HSA Johor Bahru	24	27	29	27	
22	HTJ Seremban	17	18	36	24	
23	HTF Kangar	20	34	14	23	
24	Hospital Ampang	18	23	25	22	
25	Hospital Langkawi	24	27	15	22	
26	Hospital Taiping	13	25	25	21	
27	Hospital Kajang	15	23	19	19	
28	HoSHAS Temerloh	20	19	17	19	
29	Hospital Teluk Intan	14	14	25	18	
30	HEBHK Kluang	19	13	20	17	
31	Hospital Miri	21	13	15	16	
32	Hospital Bintulu	21	11	16	16	
33	Hospital Tawau	18	17	12	16	
34	Institut Kanser Negara	3	9	35	16	
35	Hospital Kulim	13	20	10	14	
36	Hospital DoK Sandakan	7	11	19	12	
37	Hospital Seri Manjung	11	17	8	12	
38	Hospital Segamat	3	17	16	12	
39	Hospital Sarikei	15	6	15	12	
40	Hospital Keningau	7	15	14	12	
41	Hospital Serdang	9	10	5	8	
42	HPSF Muar	3	8	11	7	
43	Hospital Lahad Datu	8	8	5	7	
44	Hospital Shah Alam	0	11	9	7	
45	Hospital Kemaman	5	5	10	7	
46	Hospital Kuala Pilah	3	8	8	6	
47	Hospital Kuala Lipis	4	9	6	6	
48	Hospital Labuan	4	5	9	6	
49	Hospital Tanah Merah	7	4	6	6	
50	HSIP Kuala Krai	3	5	7	5	
51	Hospital Port Dickson	2	4	2	3	
52	Hospital Kapiti	2	2	1	2	
53	Hospital Banting	0	1	2	1	
TOTAL		1117	1294	1363	1258	24

Table 7.4.5: Hemithyroidectomy By Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



7.4.2 Total Thyroidectomy

a. Total

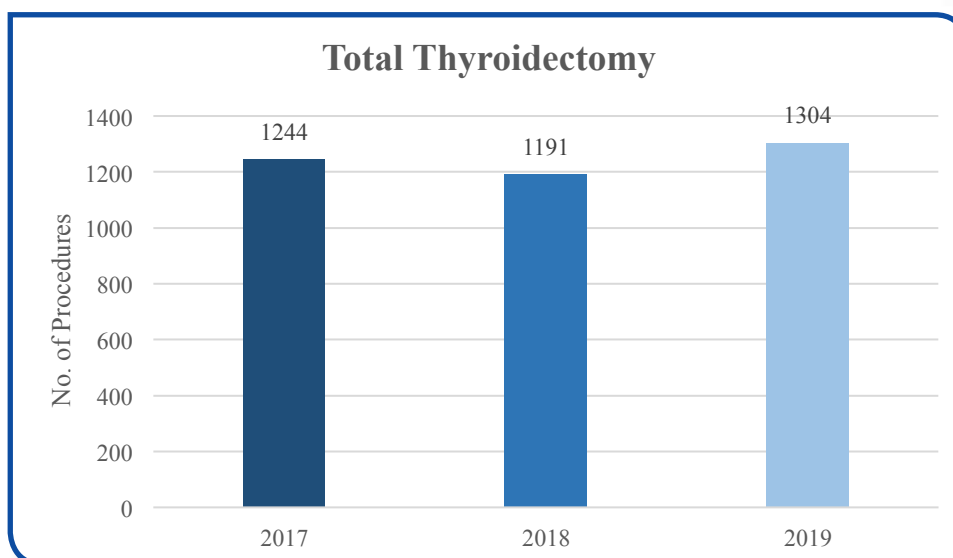


Figure 7.4.8 Total Number of Total Thyroidectomy

b. By BMS Category

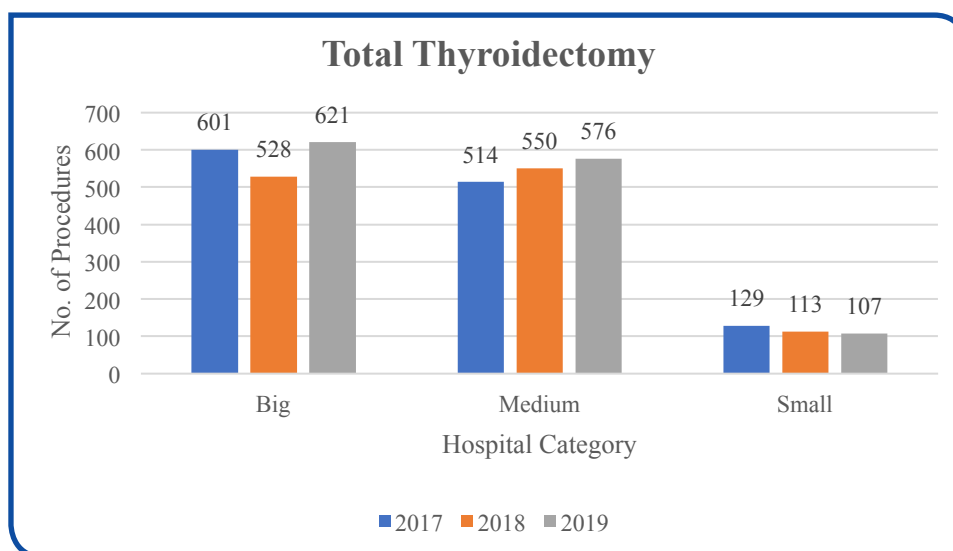


Figure 7.4.9 : Total Thyroidectomy by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



c. By BMS Hospital Category

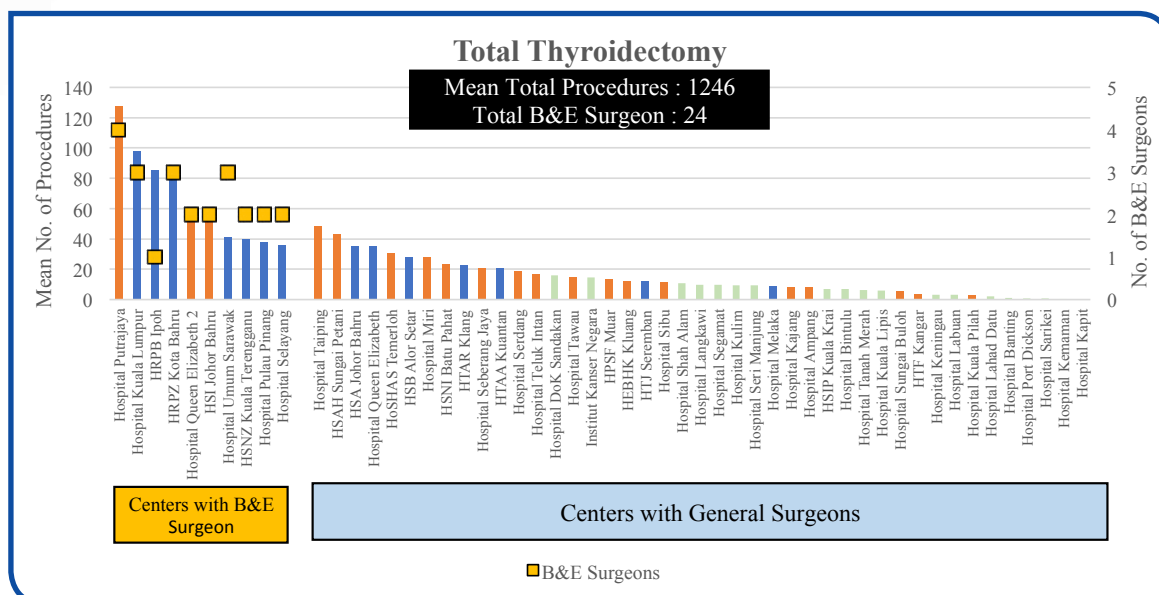


Figure 7.4.10 : Total Thyroidectomy by BMS Hospital Category

TOTAL THYROIDECTOMY

HOSPITAL CATEGORY	2017	2018	2019
Big	601	528	621
Medium	514	550	576
Small	129	113	107
TOTAL	1244	1191	1304

Table 7.4.6 : Total Thyroidectomy by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



TOTAL THYROIDECTOMY

NO	HOSPITALS	2017	2018	2019	MEAN NO. OF PROCEDURES	B&E SURGEONS
1	Hospital Putrajaya	131	125	126	127	4
2	Hospital Kuala Lumpur	121	70	103	98	3
3	HRPB Ipoh	89	96	71	85	1
4	HRPZ Kota Bharu	91	69	86	82	3
5	Hospital Queen Elizabeth 2	40	49	78	56	2
6	HSI Johor Bahru	70	49	38	52	2
7	Hospital Taiping	36	55	55	49	
8	HSAH Sungai Petani	32	55	43	43	
9	Hospital Umum Sarawak	41	31	52	41	3
10	HSNZ Kuala Terengganu	37	39	44	40	2
11	Hospital Pulau Pinang	33	41	40	38	2
12	Hospital Selayang	31	33	44	36	2
13	HSA Johor Bahru	27	31	47	35	
14	Hospital Queen Elizabeth	22	26	57	35	
15	HoSHAS Temerloh	29	30	34	31	
16	HSB Alor Setar	42	19	24	28	
17	Hospital Miri	20	31	33	28	
18	HSNI Batu Pahat	24	23	24	24	
19	HTAR Klang	26	23	19	23	
20	Hospital Seberang Jaya	22	18	23	21	
21	HTAA Kuantan	19	21	22	21	
22	Hospital Serdang	25	28	3	19	
23	Hospital Teluk Intan	13	13	25	17	
24	Hospital DoK Sandakan	19	16	13	16	
25	Hospital Tawau	16	15	13	15	
26	Institut Kanser Negara	14	19	11	15	
27	HPSF Muar	12	14	14	13	
28	HEBHK Kluang	9	19	9	12	
29	HTJ Seremban	12	17	7	12	
30	Hospital Sibul	10	7	17	11	
31	Hospital Shah Alam	13	12	7	11	
32	Hospital Langkawi	10	8	11	10	
33	Hospital Segamat	11	10	8	10	
34	Hospital Kulim	15	7	6	9	
35	Hospital Seri Manjung	9	10	9	9	
36	Hospital Melaka	10	12	5	9	
37	Hospital Kajang	10	5	10	8	
38	Hospital Ampang	11	7	7	8	
39	HSIP Kuala Krai	2	3	16	7	
40	Hospital Bintulu	7	6	8	7	
41	Hospital Tanah Merah	8	5	6	6	
42	Hospital Kuala Lipis	8	4	6	6	
43	Hospital Sungai Buloh	1	1	15	6	
44	HTF Kangar	0	4	6	3	
45	Hospital Keningau	4	3	2	3	
46	Hospital Labuan	2	6	1	3	
47	Hospital Kuala Pilah	3	2	3	3	
48	Hospital Lahad Datu	2	2	2	2	
49	Hospital Banting	3	0	0	1	
50	Hospital Port Dickson	1	1	0	1	
51	Hospital Sarikei	1	1	0	1	
52	Hospital Kemaman	0	0	1	0	
53	Hospital Kapit	0	0	0	0	
	TOTAL	1244	1191	1304	1246	24

Table 7.4.7 : Total Thyroidectomy by Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



7.4.3 Total Thyroidectomy with Neck Dissection

a. Total

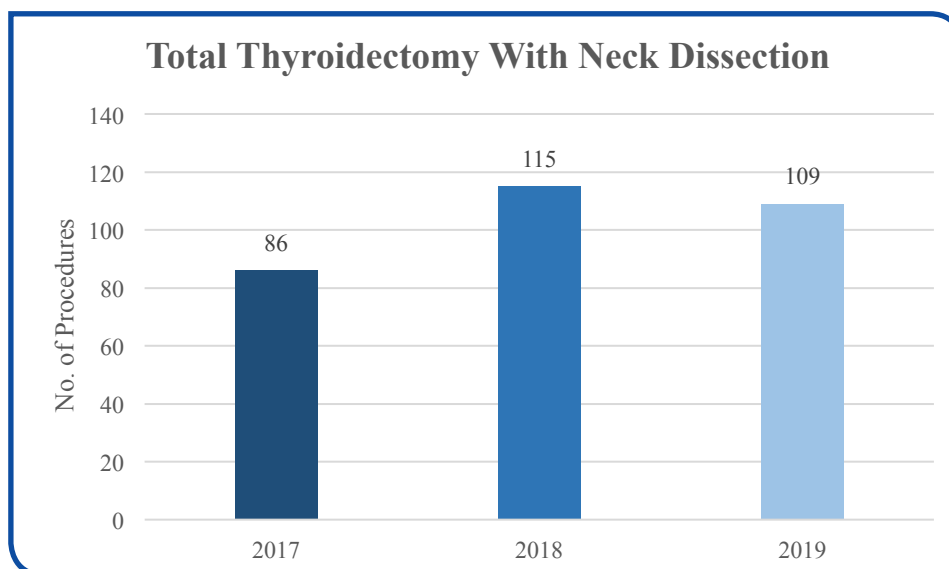


Figure 7.4.11: Total Number of Total Thyroidectomy with Neck Dissection

b. By BMS Category

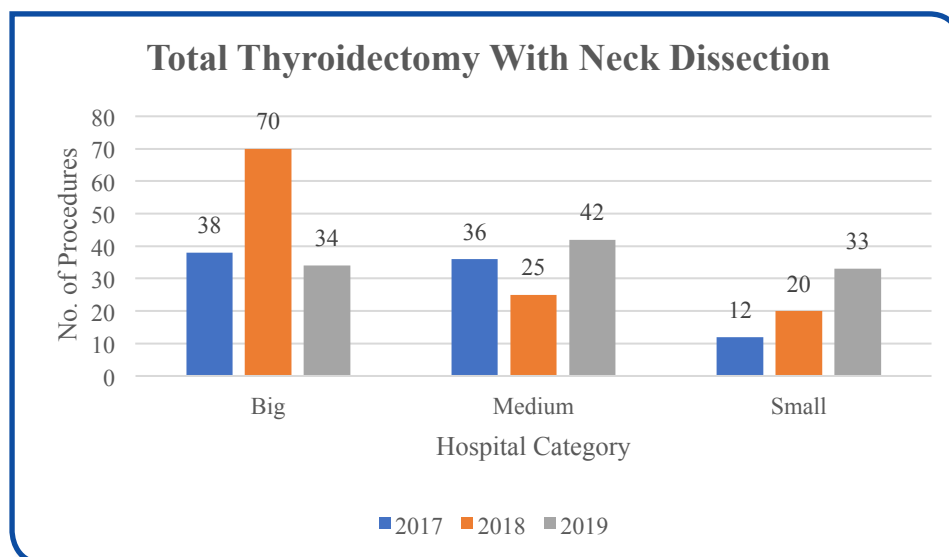


Figure 7.4.12 : Total Thyroidectomy with Neck Dissection by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



c. By BMS Hospital Category

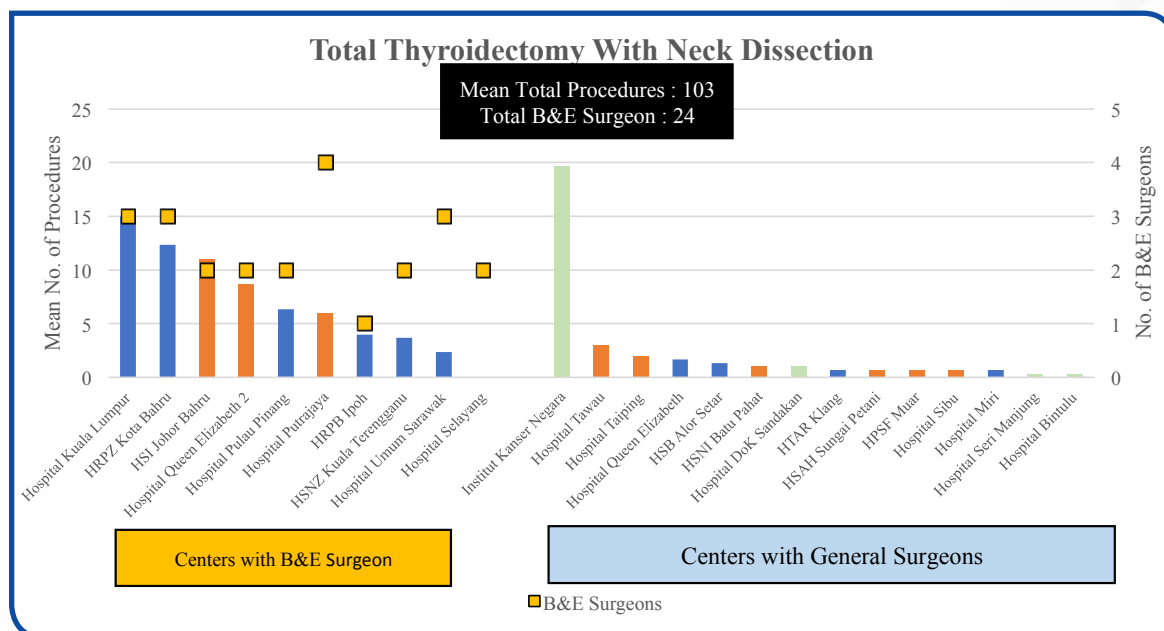


Figure 7.4.13 : Total Thyroidectomy with Neck Dissection by BMS Hospital Category

TOTAL THYROIDECTOMY WITH NECK DISSECTION

HOSPITAL CATEGORY	2017	2018	2019
Big	38	70	34
Medium	36	25	42
Small	12	20	33
TOTAL	86	115	109

Table 7.4.8: Total Thyroidectomy with Neck Dissection by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



TOTAL THYROIDECTOMY WITH NECK DISSECTION

NO	HOSPITALS	2017	2018	2019	MEAN NO. OF PROCEDURES	B&E SURGEONS
1	Institut Kanser Negara	12	19	28	20	
2	Hospital Kuala Lumpur	12	23	10	15	3
3	HRPZ Kota Bahru	7	21	9	12	3
4	HSI Johor Bahru	9	14	10	11	2
5	Hospital Queen Elizabeth 2	15	6	5	9	2
6	Hospital Pulau Pinang	3	9	7	6	2
7	Hospital Putrajaya	7	1	10	6	4
8	HRPB Ipoh	5	5	2	4	1
9	HSNZ Kuala Terengganu	5	5	1	4	2
10	Hospital Tawau	3	3	3	3	
11	Hospital Umum Sarawak	2	3	2	2	3
12	Hospital Taiping	2	1	3	2	
13	Hospital Queen Elizabeth	2	1	2	2	
14	HSB Alor Setar	0	3	1	1	
15	HSNI Batu Pahat	0	0	3	1	
16	Hospital DoK Sandakan	0	1	2	1	
17	HTAR Klang	2	0	0	1	
18	HSAH Sungai Petani	0	0	2	1	
19	HPSF Muar	0	0	2	1	
20	Hospital Sibul	0	0	2	1	
21	Hospital Miri	0	0	2	1	
22	Hospital Seri Manjung	0	0	1	0	
23	Hospital Bintulu	0	0	1	0	
24	Hospital Selayang	0	0	0	0	2
TOTAL		1117	1294	1363	1258	24

Table 7.4.9: Total Thyroidectomy with Neck Dissection by Hospital Category

7.4.4 Total Parathyroidectomy

a. Total

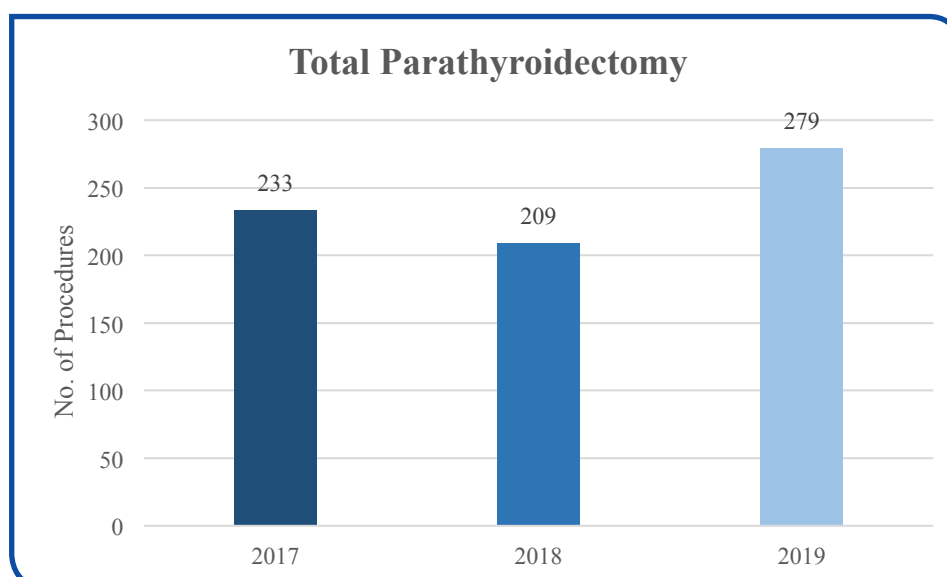


Figure 7.4.14 : Total Number of Total Parathyroidectomy

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



b. By BMS Category

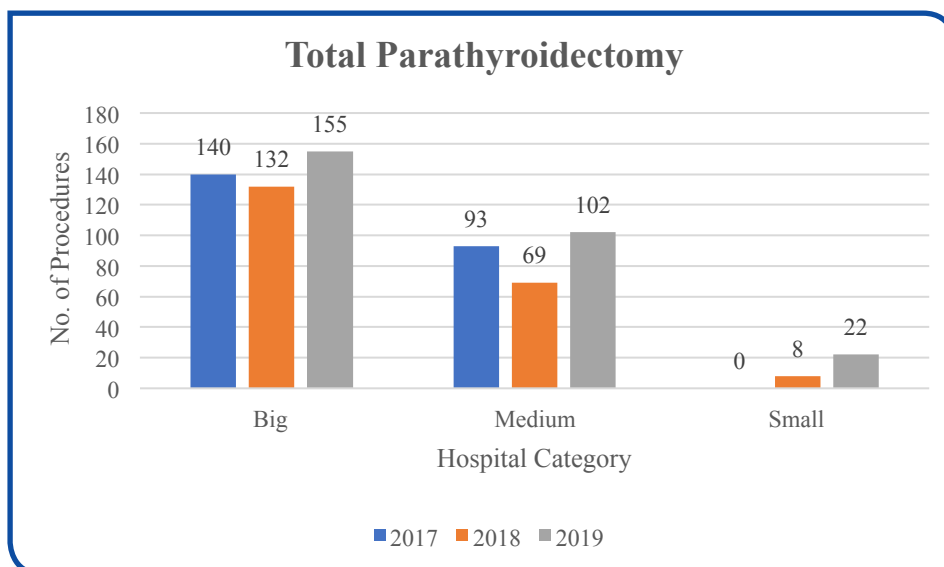


Figure 7.4.15 : Total Parathyroidectomy by BMS Category

c. By BMS Hospital Category

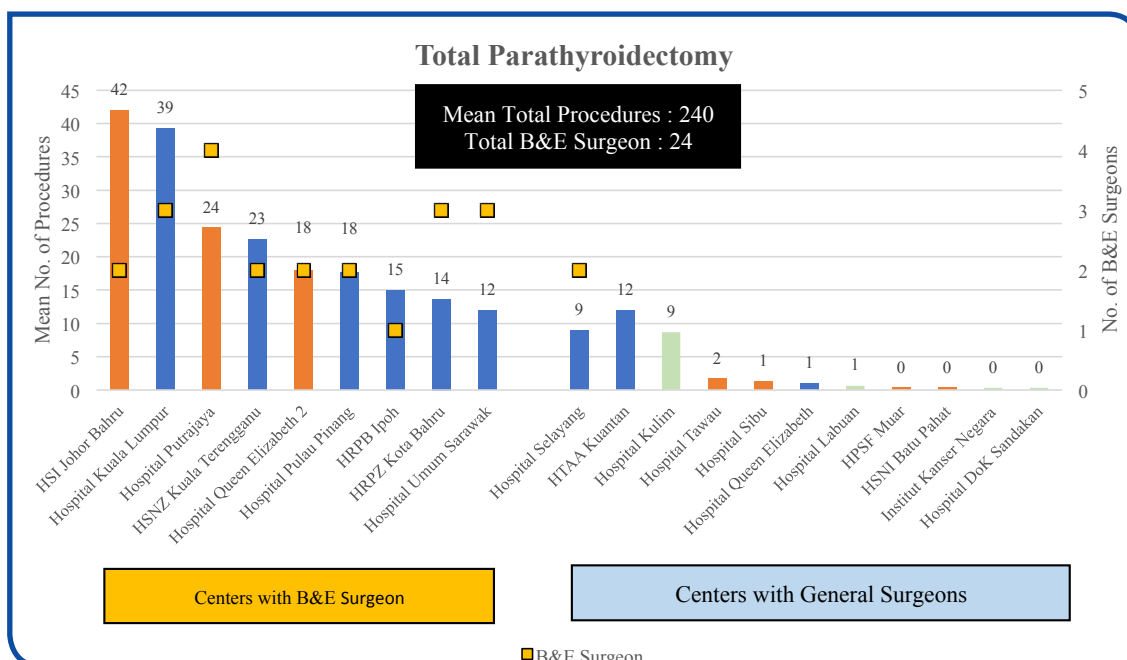


Figure 7.4.16: Total Parathyroidectomy by BMS Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



TOTAL PARATHYROIDECTOMY

HOSPITAL CATEGORY	2017	2018	2019
Big	140	132	155
Medium	93	69	102
Small	0	8	22
TOTAL	233	209	279

Table 7.4.10 : Total Parathyroidectomy by BMS Category

TOTAL PARATHYROIDECTOMY

NO	HOSPITALS	2017	2018	2019	MEAN NO. OF PROCEDURES	B&E SURGEONS
1	HSI Johor Bahru	45	41	40	42	2
2	Hospital Kuala Lumpur	35	24	59	39	3
3	Hospital Putrajaya	22	18	33	24	4
4	HSNZ Kuala Terengganu	13	24	31	23	2
5	Hospital Queen Elizabeth 2	25	8	21	18	2
6	Hospital Pulau Pinang	19	21	13	18	2
7	HRPB Ipoh	13	21	11	15	1
8	HRPZ Kota Bahru	25	11	5	14	3
9	HTAA Kuantan	6	10	20	12	
10	Hospital Umum Sarawak	16	14	6	12	3
11	Hospital Selayang	10	7	10	9	2
12	Hospital Kulim	0	6	20	9	
13	Hospital Tawau	1	2	2	2	
14	Hospital Sibul	0	0	4	1	
15	Hospital Queen Elizabeth	3	0	0	1	
16	Hospital Labuan	0	1	1	1	
17	HPSF Muar	0	0	1	0	
18	HSNI Batu Pahat	0	0	1	0	
19	Institut Kanser Negara	0	1	0	0	
20	Hospital DoK Sandakan	0	0	1	0	
	TOTAL	233	209	279	240	24

Table 7.4.11 : Total Parathyroidectomy by Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



7.4.5 Focus Parathyroidectomy

a. Total

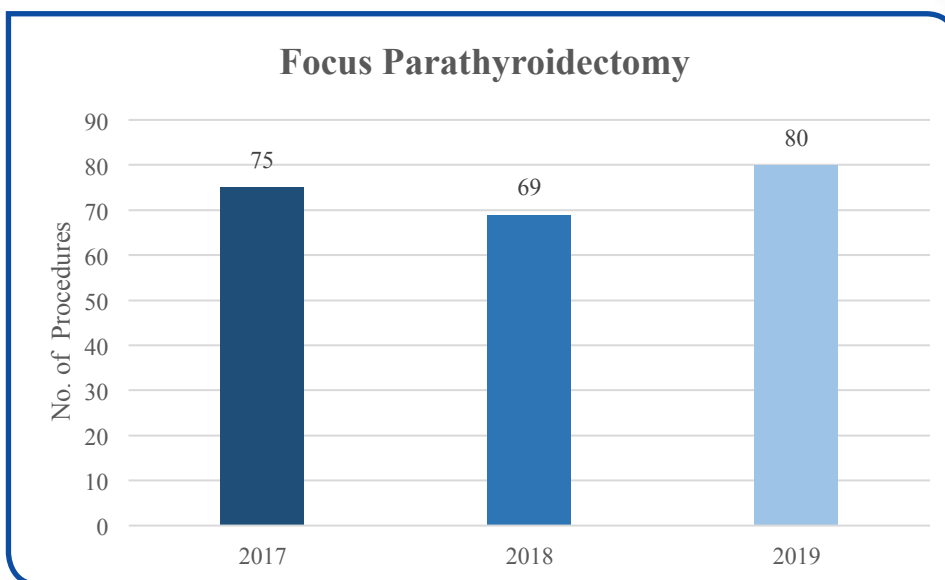


Figure 7.4.17 : Total Number of Focus Parathyroidectomy

b. By BMS Category

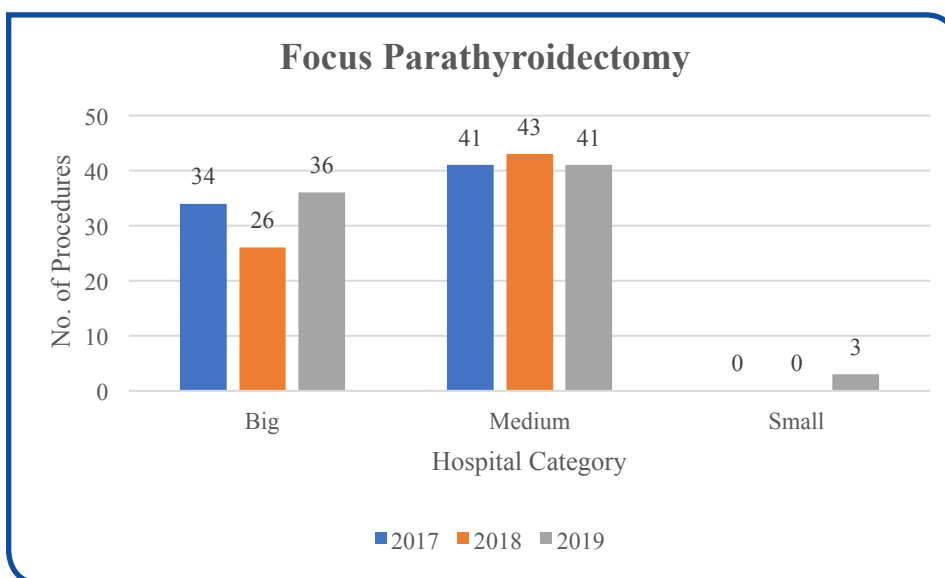


Figure 7.4.18: Focus Parathyroidectomy by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



c. By BMS Hospital Category

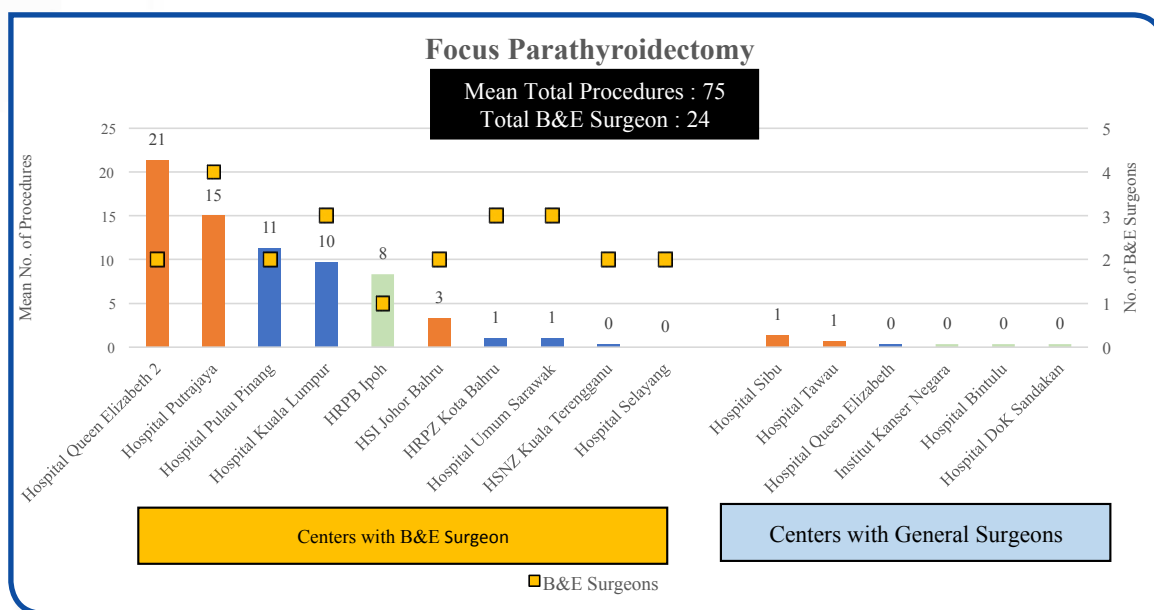


Figure 7.4.19: Focus Parathyroidectomy by BMS Hospital Category

FOCUS PARATHYROIDECTOMY

HOSPITAL CATEGORY	2017	2018	2019
Big	34	26	36
Medium	41	43	41
Small	0	0	3
TOTAL	75	69	80

Table 7.4.12: Focus Parathyroidectomy by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



FOCUS PARATHYROIDECTOMY

NO	HOSPITALS	2017	2018	2019	MEAN NO. OF PROCEDURES	B&E SURGEONS
1	Hospital Queen Elizabeth 2	22	21	21	21	2
2	Hospital Putrajaya	13	16	16	15	4
3	Hospital Pulau Pinang	11	10	13	11	2
4	Hospital Kuala Lumpur	6	11	12	10	3
5	HRPB Ipoh	16	5	4	8	1
6	HSI Johor Bahru	5	5	0	3	2
7	Hospital Sibul	0	0	4	1	
8	HRPZ Kota Bahru	1	0	2	1	3
9	Hospital Umum Sarawak	0	0	3	1	3
10	Hospital Tawau	1	1	0	1	
11	HSNZ Kuala Terengganu	0	0	1	0	2
12	Hospital Queen Elizabeth	0	0	1	0	
13	Institut Kanser Negara	0	0	1	0	
14	Hospital Bintulu	0	0	1	0	
15	Hospital DoK Sandakan	0	0	1	0	
16	Hospital Selayang	0	0	0	0	2
	TOTAL	75	69	80	75	24

Table 7.4.13: Focus Parathyroidectomy by Hospital Category

7.4.6 Adrenelectomy

a. Total

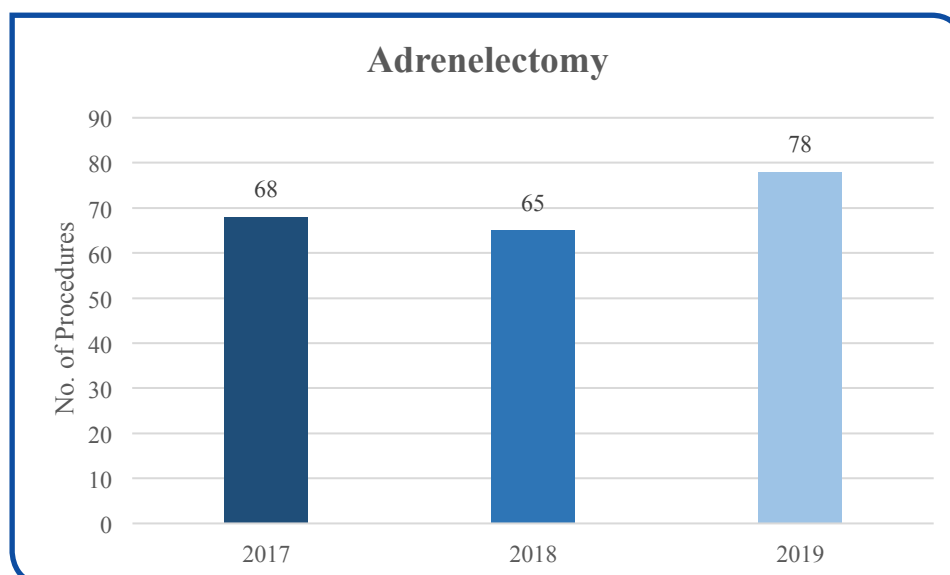


Figure 7.4.20 : Total Number of Adrenelectomy

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



b. By BMS Category

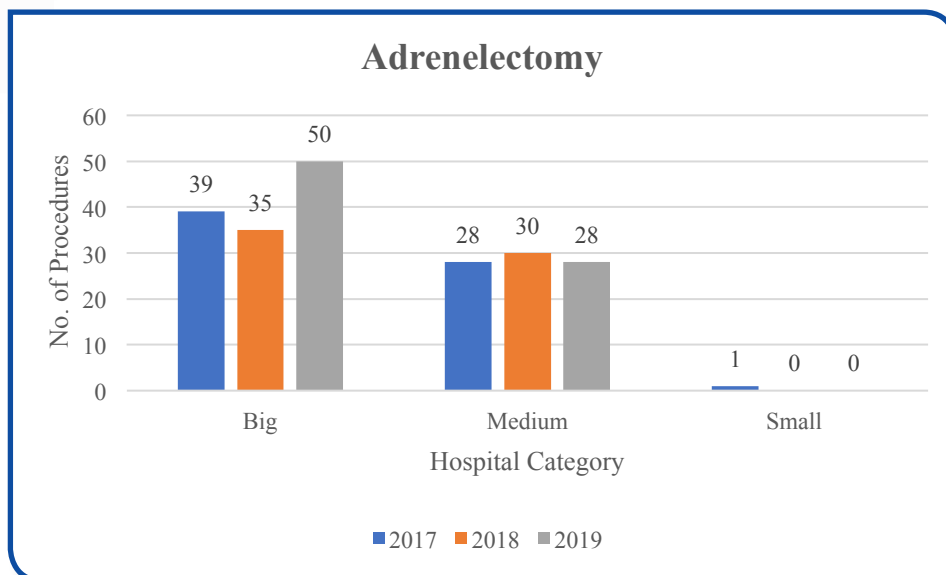


Figure 7.4.21 : Adrenelectomy by BMS Category

c. By BMS Hospital Category

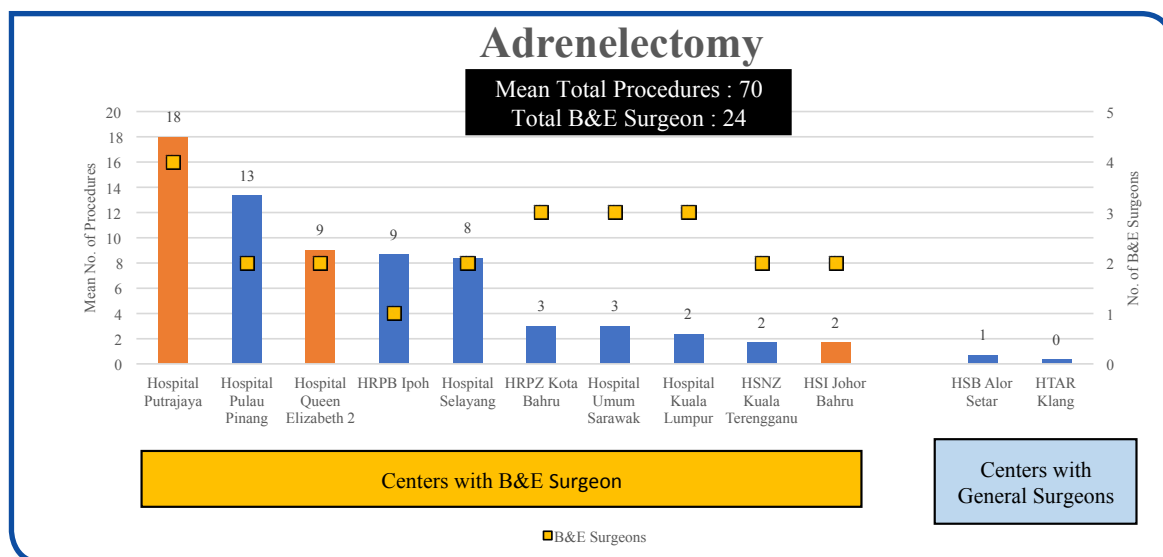


Figure 7.4.22: Adrenelectomy by BMS Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



ADRENELECTOMY

HOSPITAL CATEGORY	2017	2018	2019
Big	39	35	50
Medium	28	30	28
Small	1	0	0
TOTAL	68	65	78

Table 7.4.14: Adrenelectomy by BMS Category

ADRENELECTOMY

NO	HOSPITALS	2017	2018	2019	MEAN NO. OF PROCEDURES	B&E SURGEONS
1	Hospital Putrajaya	21	21	12	18	4
2	Hospital Pulau Pinang	15	12	13	13	2
3	Hospital Queen Elizabeth 2	7	9	11	9	2
4	HRPB Ipoh	16	6	4	9	1
5	Hospital Selayang	4	3	18	8	2
6	HRPZ Kota Bahru	2	6	1	3	3
7	Hospital Umum Sarawak	1	3	5	3	3
8	Hospital Kuala Lumpur	1	0	6	2	3
9	HSNZ Kuala Terengganu	0	3	2	2	2
10	HSI Johor Bahru	0	0	5	2	2
11	HSB Alor Setar	0	2	0	1	
12	HTAR Klang	0	0	1	0	
	TOTAL	68	65	78	70	24

Table 7.4.15: Adrenelectomy by Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



7.5 Breast

Breast cancer constitute 32.1% of all cancer among females in Malaysia (National Cancer Registry Report 2007 -2011). Although the workload pertaining to breast related disease consist of both benign and malignant cases, workload for Breast and Endocrine (B&E) Sub-specialist are best measured in terms of breast cancer related procedures.

In this section, data on Breast Mammogram and breast surgery will be tabulated.

List of procedures selected for Breast surgery measurement are:

- i. Hookwire Wide Local Excision (HWLE)
- ii. Simple Mastectomy / Radical Mastectomy
- iii. Axillary clearance
- iv. Unilateral Mastectomy and axillary clearance
- v. Bilateral Mastectomy and axillary clearance
- vi. Wide local excision (WLE)
- vii. Wide local excision and axillary clearance (WLE + AC)
- viii. Wide local excision without axillary clearance + Latissimus Dorsi flap
- ix. Wide local excision with axillary clearance + Latissimus Dorsi flap
- x. Mastectomy and axillary clearance with Breast reconstruction (TRAM / Implant) with or without contralateral mastopexy

The histopathology for which the procedure was done was not captured / not within the scope of this report.

a. Total

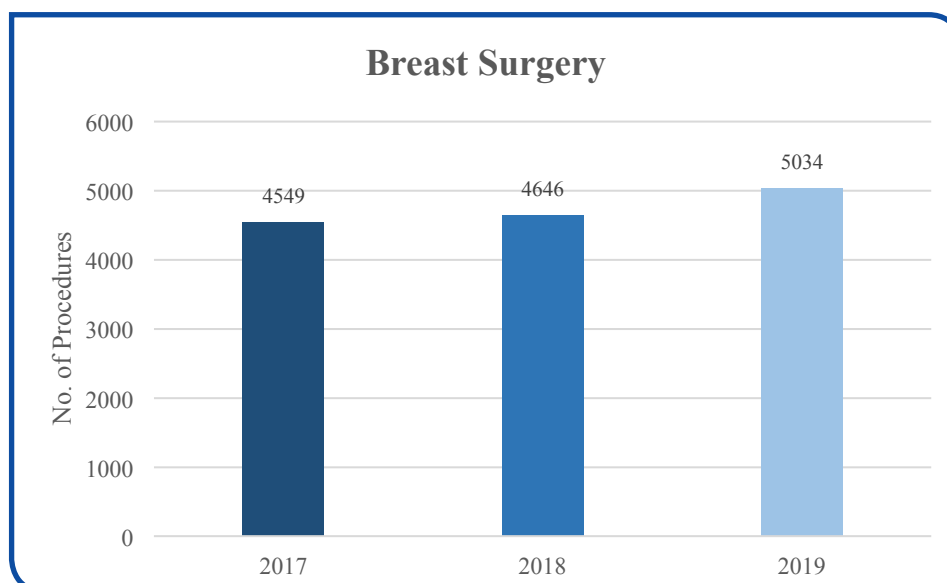


Figure 7.5.1 : Total Number of Breast Surgery

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



b. By BMS Category

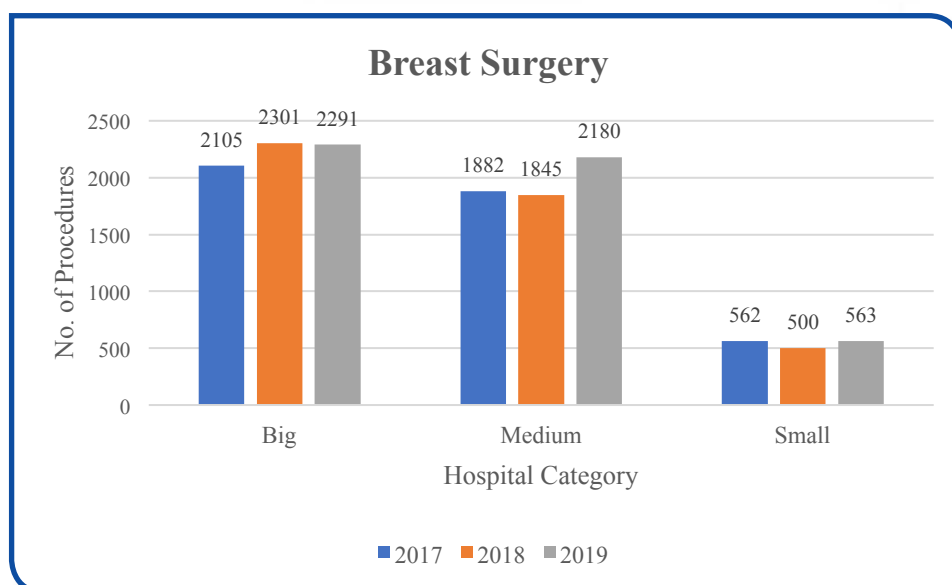


Figure 7.5.2 : Breast Surgery by BMS Category

c. By BMS Hospital Category

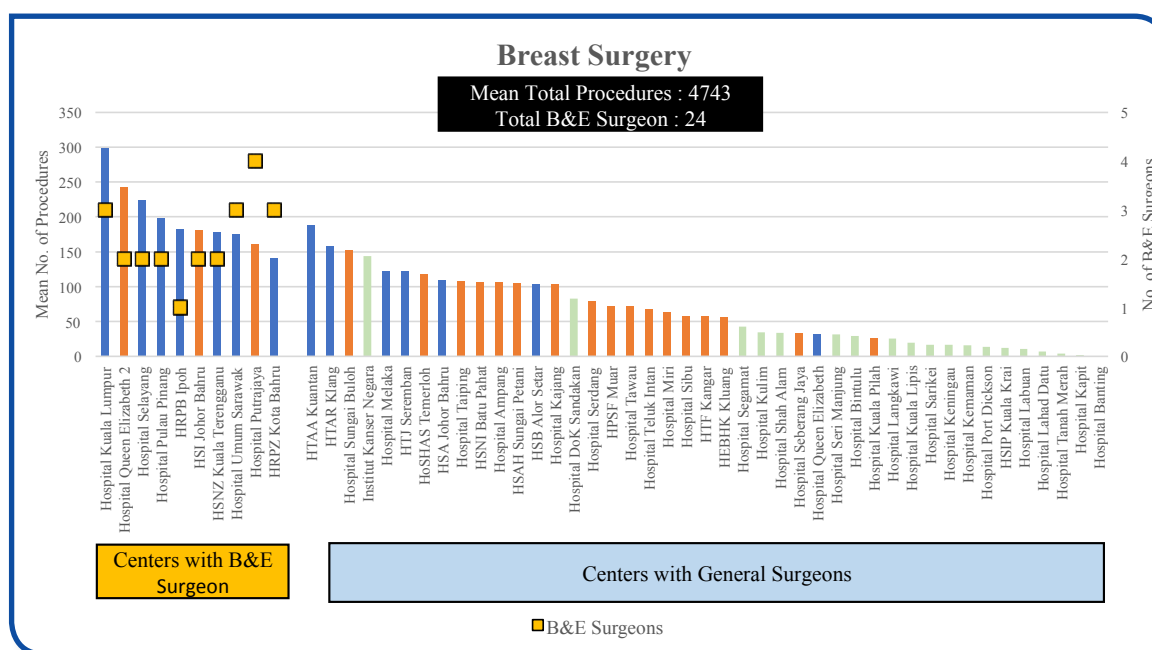


Figure 7.5.3: Breast Surgery by BMS Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



d. Types of Breast Surgery

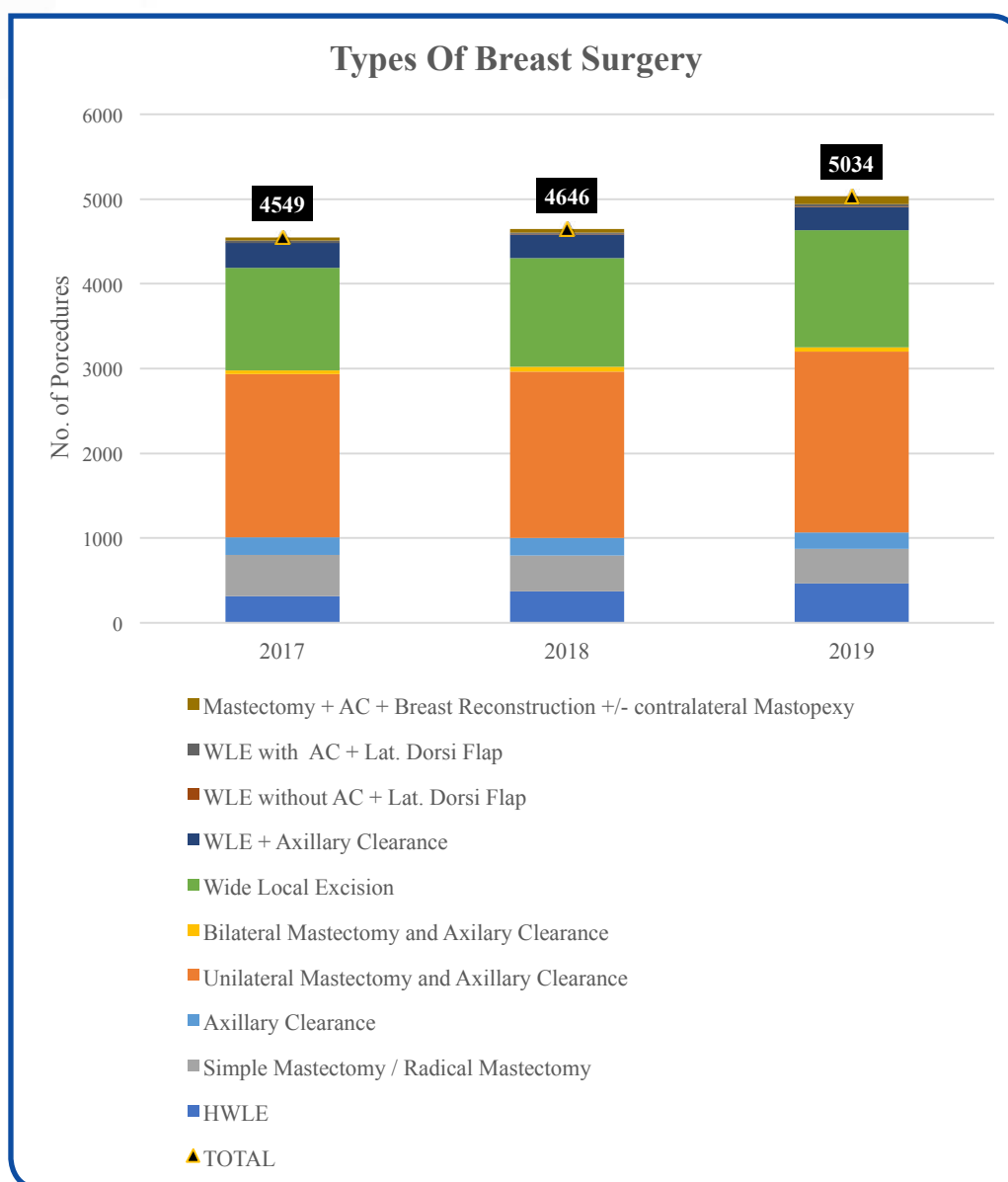


Figure 7.5.4 : Types of Breast Surgery

BREAST SURGERY

HOSPITAL CATEGORY	2017	2018	2019
Big	2105	2301	2291
Medium	1882	1845	2180
Small	562	500	563
TOTAL	4549	4646	5034

Table 7.5.1: Total Number of Breast Surgery

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



BREAST SURGERY

PROCEDURE TYPE	2017	(%)	2018	(%)	2019	(%)
Unilateral Mastectomy and Axillary Clearance	1931	42.4	1961	42.2	2138	42.5
Wide Local Excision	1209	26.6	1277	27.5	1381	27.4
Simple Mastectomy / Radical Mastectomy	486	10.7	427	9.2	407	8.1
HWLE	317	7.0	368	7.9	464	9.2
WLE + Axillary Clearance	294	6.5	280	6.0	274	5.4
Axillary Clearance	203	4.5	205	4.4	192	3.8
Mastectomy + AC + Breast Reconstruction +/- contralateral Mastopexy	42	0.9	41	0.9	91	1.8
Bilateral Mastectomy and Axillary Clearance	39	0.9	63	1.4	49	1.0
WLE with AC + Lat. Dorsi Flap	22	0.5	17	0.4	30	0.6
WLE without AC + Lat. Dorsi Flap	6	0.1	7	0.2	8	0.2
TOTAL	4549	100.0	4646	100.0	5034	100.0

Table 7.5.2: Types of Breast Surger

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



BREAST SURGERY

NO	HOSPITALS	2017	2018	2019	MEAN NO. OF PROCEDURES	B&E SURGEONS
1	Hospital Kuala Lumpur	269	285	344	299	3
2	Hospital Queen Elizabeth 2	184	216	330	243	2
3	Hospital Selayang	177	236	261	225	2
4	Hospital Pulau Pinang	149	248	198	198	2
5	HTAA Kuantan	179	187	198	188	
6	HRPB Ipoh	183	191	175	183	1
7	HSI Johor Bahru	237	132	173	181	2
8	HSNZ Kuala Terengganu	181	182	172	178	2
9	Hospital Umum Sarawak	175	177	172	175	3
10	Hospital Putrajaya	161	155	166	161	4
11	HTAR Klang	167	162	144	158	
12	Hospital Sungai Buloh	192	146	120	153	
13	Institut Kanser Negara	146	112	173	144	
14	HRPZ Kota Bharu	127	126	169	141	3
15	Hospital Melaka	115	126	125	122	
16	HTJ Seremban	85	153	127	122	
17	HoSHAS Temerloh	80	149	123	117	
18	HSA Johor Bahru	119	110	97	109	
19	Hospital Taiping	76	92	155	108	
20	HSNI Batu Pahat	127	92	102	107	
21	Hospital Ampang	87	95	136	106	
22	HSAN Sungai Petani	90	112	112	105	
23	HSB Alor Setar	111	104	96	104	
24	Hospital Kajang	73	117	120	103	
25	Hospital DoK Sandakan	101	93	55	83	
26	Hospital Serdang	65	65	108	79	
27	HPSF Muar	67	67	82	72	
28	Hospital Tawau	75	72	68	72	
29	Hospital Teluk Intan	47	67	90	68	
30	Hospital Miri	89	44	58	64	
31	Hospital Sibul	52	61	60	58	
32	HTF Kangar	62	46	64	57	
33	HEBHK Kluang	60	50	58	56	
34	Hospital Segamat	41	37	50	43	
35	Hospital Kulim	36	29	38	34	
36	Hospital Shah Alam	36	37	29	34	
37	Hospital Seberang Jaya	36	37	28	34	
38	Hospital Queen Elizabeth	68	14	13	32	
39	Hospital Seri Manjung	47	25	23	32	
40	Hospital Bintulu	28	20	40	29	
41	Hospital Kuala Pilah	22	30	27	26	
42	Hospital Langkawi	30	37	10	26	
43	Hospital Kuala Lipis	28	13	17	19	
44	Hospital Sarikei	12	18	19	16	
45	Hospital Keningau	7	5	37	16	
46	Hospital Kemaman	8	21	19	16	
47	Hospital Port Dickson	10	14	17	14	
48	HSIP Kuala Krai	7	11	18	12	
49	Hospital Labuan	14	15	4	11	
50	Hospital Lahad Datu	5	9	7	7	
51	Hospital Tanah Merah	3	2	7	4	
52	Hospital Kapit	3	2	0	2	
53	Hospital Banting	0	0	0	0	
TOTAL		4549	4646	5034	4743	24

Table 7.5.3: Breast Surgery by Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



7.5.1 Breast Imaging

Data for Breast Mammogram investigation is a good reflection for workload related to breast diseases.

The data tabulated is obtained from radiology services (Dr Shantini)

NO	HOSPITAL	MMG	U/S	U/S GUIDED BIOPSY	STEREOTACTIC BIOPSY	HOOKWIRE		BIRADS 3	BIRADS 4	BIRADS 5
						UNDER STEREO	UNDER U/S			
1	Hospital Kuala Lumpur	3485	4511	740	71	25	53	425	527	97
2	HTAR Klang	2936	4023	665	60	15	40	578	521	93
3	Hospital Putrajaya	2165	2784	301	20	6	37	191	128	61
4	Hospital Melaka	2100	4184	119	16	4	11	141	63	68
5	Hospital Selayang	2019	2520	311	64	13	24	318	181	33
6	Hospital Sarawak	2008	2320	257	32	6	14	101	66	43
7	HRPB Ipoh	1966	2559	115	72	10	18	179	123	55
8	Hospital Pulau Pinang	1936	560	45	50	2	3	218	154	57
9	HRPZ II Kota Bharu	1716	1719	117	10	2	10	92	100	12
10	HTJ Seremban	1575	2440	333	65	11	20	136	29	78
11	HSA Johor Bahru	1566	1522	12	22	26		44	27	167
12	Hospital Sungai Buloh	1489	2597	11	9	0	0	59	64	41
13	HSAH Sg Petani	1488	1862	32	0	3		55	41	146
14	HSNZ Kuala Terengganu	1450	2875	39	3	1	33	69	110	33
15	Hospital Seberang Jaya	1196	902	105	5	3	1	210	69	33
16	HTAA Kuantan	1105	1057	66	10	1	3	105	43	27
17	Hospital QE II	1084	3009	95	0	6	8	91	100	28
18	Hospital Taiping	1077	1316	101	18	1	11	109	67	43
19	Hospital Wanita & Kanak-Kanak, Sabah	873	817	0	22	0	0	149	44	11
20	HSF Muar	806	647	86	34	2	2	112	56	39
21	Hospital Kajang	793	583	50	2	4	20	86	69	33
22	HSNI Batu Pahat	787	1930	0	0	0	0	24	34	13
23	Hospital Temerloh	693	1128	141	12	3	12	116	81	38
24	Hospital Shah Alam	656	1202	249	9	0	0	80	52	33
25	Hospital Sibu	554	793	72	3	4	9	60	47	15
26	Hospital Miri	553	553	0	0	0	0	81	79	14
27	Hospital Segamat	510	448	44	12	0	0	46	41	23
28	HTAN Negeri Sembilan	467	891	94	5	0	3	64	52	NIL
29	Hospital Kuala Krai	422	109	3	0	0	0	7	12	7
30	HEBHK Kluang	364	658	34	8	6	23	25	24	192
31	HSB Alor Setar	1896	2030	116	17	5	3	137	134	42
32	HTF Perlis	417	644	62	0	0	10	45	23	23

Table 7.5.4 : Radiological Imaging for Breast Diseases

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



7.5.2 Total Parathyroidectomy

List of procedures selected for Breast Mastectomy and Reconstruction measurement are:

- i. Simple / radical mastectomy
- ii. Unilateral mastectomy
- iii. Bilateral mastectomy
- iv. Mastectomy with breast reconstruction +/- mastopexy

a. Total

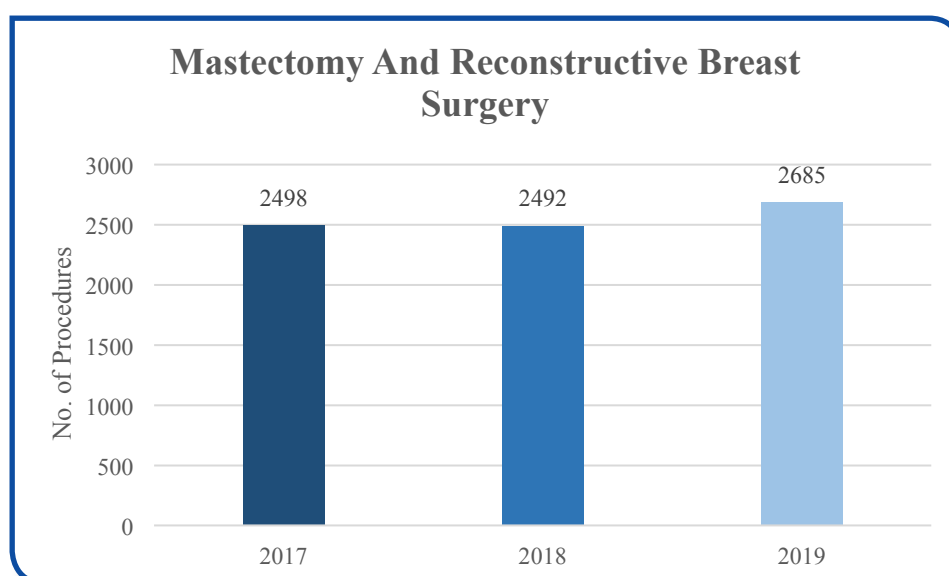


Figure 7.5.5: Total Number of Mastectomy and Reconstructive Breast Surgery

b. By BMS Category

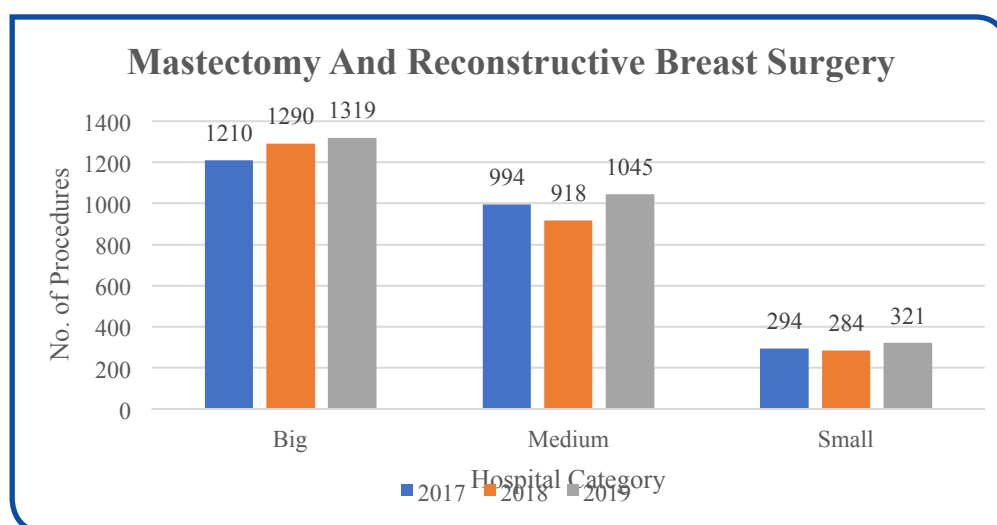


Figure 7.5.6 : Mastectomy and Reconstructive Breast Surgery by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



c. By BMS Hospital Category

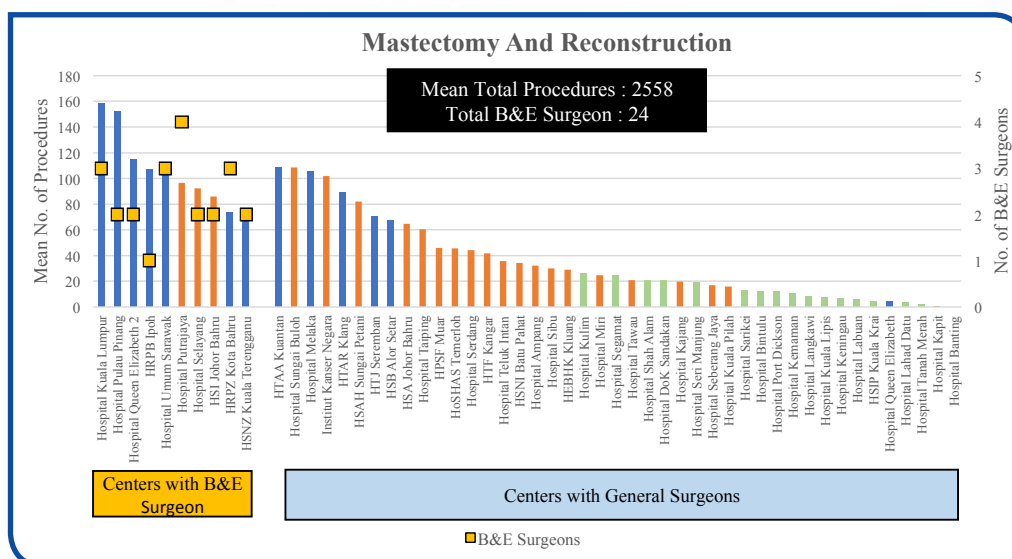


Figure 7.5.7 : Mastectomy and Reconstructive Breast Surgery by BMS Hospital Category

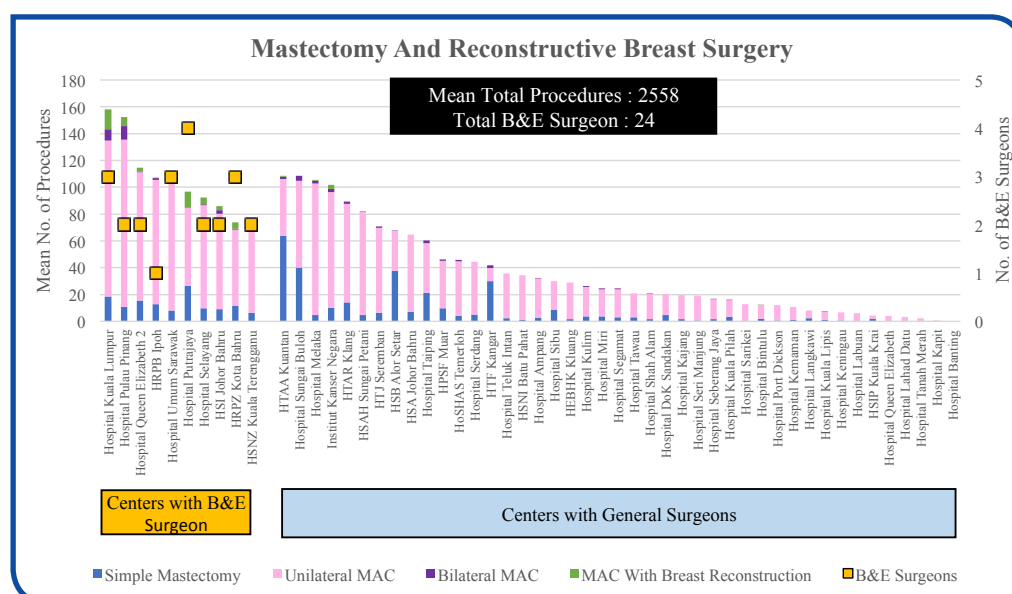


Figure 7.5.8 : Types of Mastectomy and Reconstructive Breast Surgery by BMS Hospital Category

MASTECTOMY AND RECONSTRUCTION

HOSPITAL CATEGORY	2017	2018	2019
Big	1210	1290	1319
Medium	994	918	1045
Small	294	284	321
TOTAL	2498	2492	2685

Table 7.5.5 : Mastectomy and Reconstructive Breast Surgery by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



TYPES OF MASTECTOMY AND RECONSTRUCTION

NO	HOSPITAL	MEAN NO OF PROCEDURES				TOTAL PROCEDURES (a+b+c+d)	NO. OF B&E SURGEONS
		SIMPLE MASTECTOMY (a)	UNILATERAL MAC (b)	BILATERAL MAC (c)	MAC WITH BREAST RECONSTRUCTION (d)		
1	Hospital Kuala Lumpur	19	116	9	15	158	3
2	Hospital Pulau Pinang	11	125	10	7	152	2
3	Hospital Queen Elizabeth 2	15	96	0	3	115	2
4	HTAA Kuantan	64	42	2	1	109	
5	Hospital Sungai Buloh	40	65	4	0	109	
6	HRPB Ipoh	13	93	1	0	107	1
7	Hospital Umum Sarawak	8	95	2	2	107	3
8	Hospital Melaka	5	98	2	1	105	
9	Institut Kanser Negara	10	86	2	3	102	
10	Hospital Putrajaya	27	58	0	11	97	4
11	Hospital Selayang	10	77	1	5	92	2
12	HTAR Klang	14	74	2	0	89	
13	HSI Johor Bahru	9	71	3	3	86	2
14	HSAH Sungai Petani	5	77	0	0	82	
15	HRPZ Kota Bharu	11	57	1	5	74	3
16	HSNZ Kuala Terengganu	6	63	0	2	72	2
17	HTJ Seremban	6	63	1	0	71	
18	HSB Alor Setar	38	30	0	0	68	
19	HSA Johor Bahru	7	58	0	0	65	
20	Hospital Taiping	21	37	2	0	60	
21	HPSF Muar	10	35	1	0	46	
22	HoSHAS Temerloh	4	41	1	0	46	
23	Hospital Serdang	5	39	0	0	44	
24	HTF Kangar	30	10	2	0	42	
25	Hospital Teluk Intan	2	33	0	0	36	
26	HSNI Batu Pahat	1	33	0	0	34	
27	Hospital Ampang	3	29	0	0	32	
28	Hospital Sibul	9	21	0	0	30	
29	HEBHK Kluang	2	27	0	0	29	
30	Hospital Kulim	4	22	1	0	26	
31	Hospital Miri	4	20	1	0	25	
32	Hospital Segamat	3	21	1	0	25	
33	Hospital Tawau	3	18	0	0	21	
34	Hospital Shah Alam	2	19	0	0	21	
35	Hospital DoK Sandakan	5	16	0	0	20	
36	Hospital Kajang	2	18	0	0	20	
37	Hospital Seri Manjung	1	19	0	0	19	
38	Hospital Seberang Jaya	2	15	0	0	17	
39	Hospital Kuala Pilah	3	12	0	0	16	
40	Hospital Sarikei	0	13	0	0	13	
41	Hospital Bintulu	2	10	0	0	12	
42	Hospital Port Dickson	1	11	0	0	12	
43	Hospital Kemaman	1	10	0	0	11	
44	Hospital Langkawi	2	6	0	0	8	
45	Hospital Kuala Lipis	1	6	0	0	7	
46	Hospital Keningau	1	6	0	0	7	
47	Hospital Labuan	0	6	0	0	6	
48	HSIP Kuala Krai	2	2	0	0	4	
49	Hospital Queen Elizabeth	0	4	0	0	4	
50	Hospital Lahad Datu	0	3	0	0	3	
51	Hospital Tanah Merah	0	2	0	0	2	
52	Hospital Kapit	0	0	0	0	1	
53	Hospital Banting	0	0	0	0	0	
TOTAL		440	2010	50	58	2558	24

Table 7.5.6 : Types of Mastectomy and Reconstructive Breast Surgery by Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



7.5.3 Wide Local Excisions

List of procedures selected for Wide Local Excision measurement are:

- Hookwire Wide Local Excision (HWLE)
- Wide Local Excision (WLE)
- Wide Local Excision with Axillary Clearance (WLE + AC)
- Wide Local Excision with AC + Latissimus Dorsi Flap
- Wide Local Excision without AC + Latissimus Dorsi Flap

a. Total

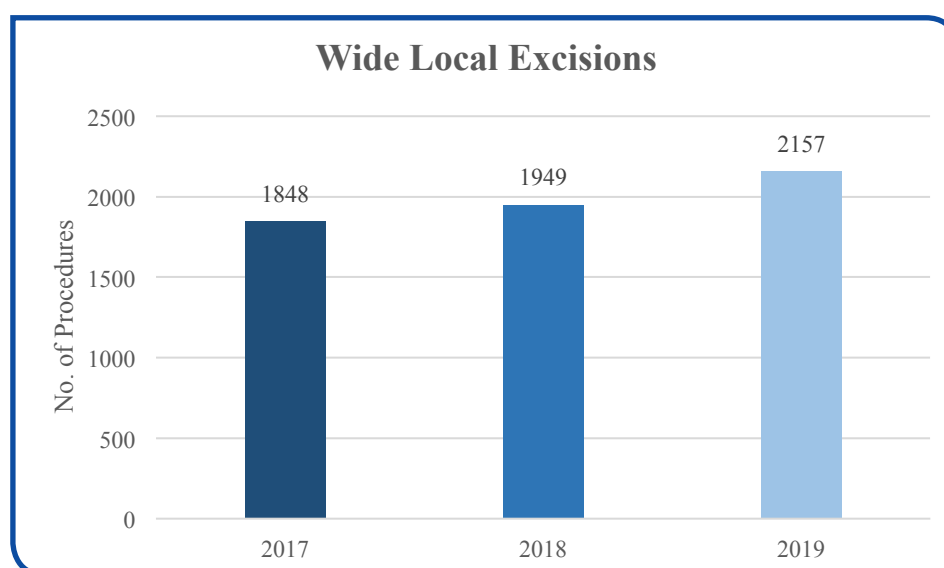


Figure 7.5.9 : Total Number of Wide Local Excisions

b. By BMS Category

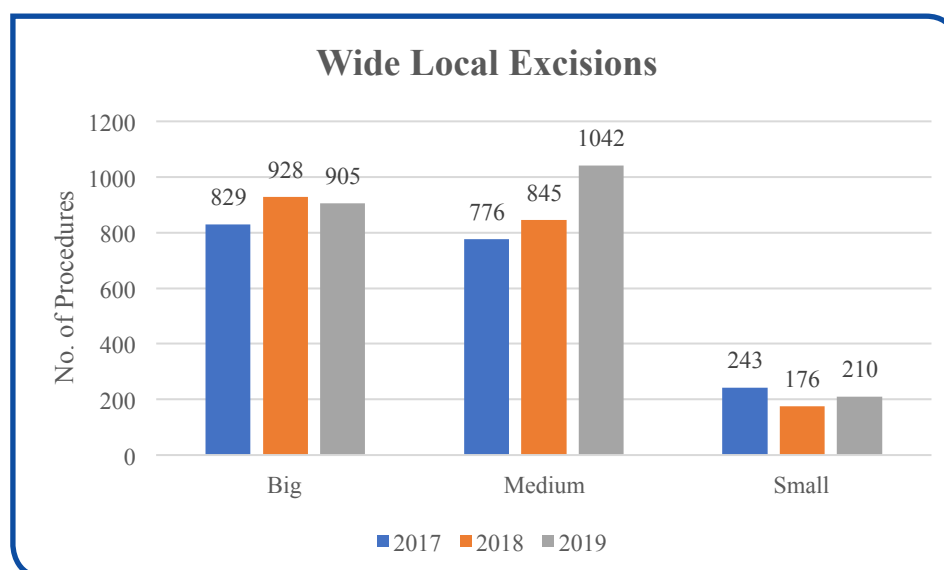


Figure 7.5.10 : Wide Local Excisions by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



c. By BMS Hospital Category

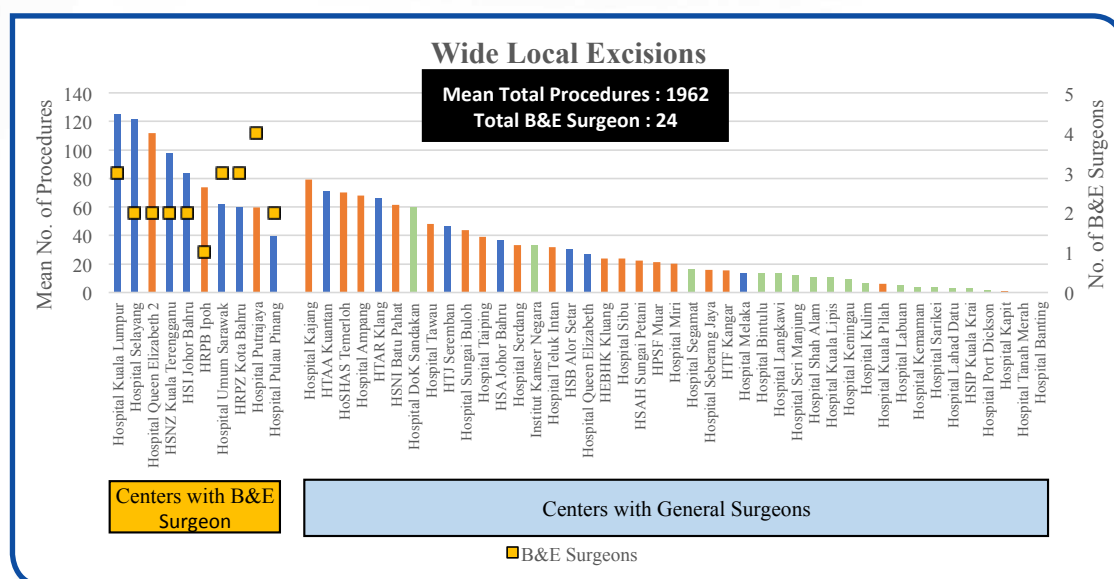


Figure 7.5.11 : Wide Local Excisions by BMS Category

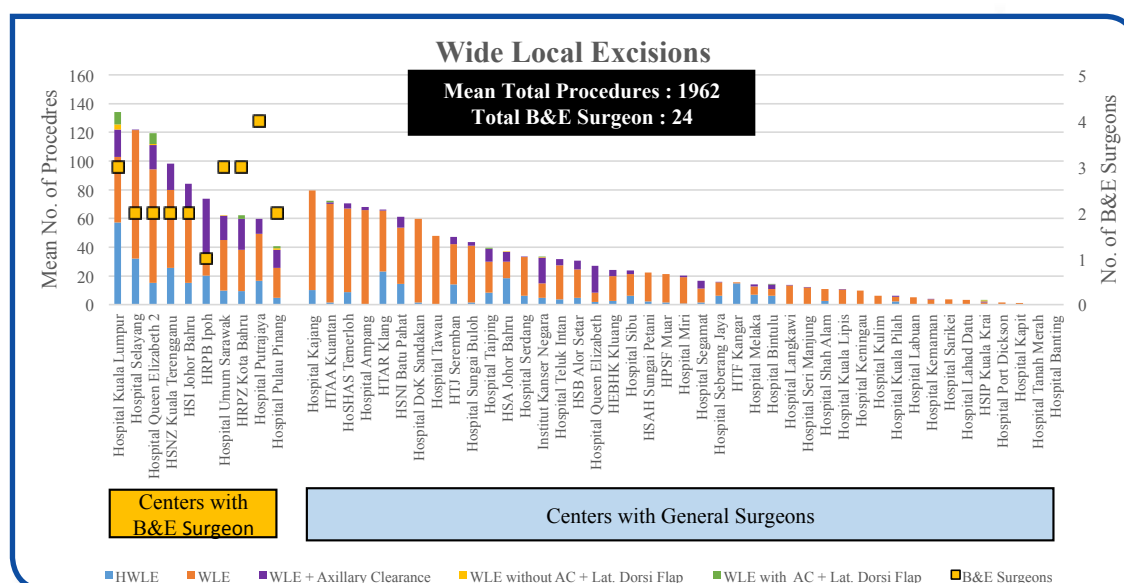


Figure 7.5.12 : Types of Wide Local Excisions by Hospital Category

WIDE LOCAL EXCISIONS

HOSPITAL CATEGORY	2017	2018	2019
Big	829	928	905
Medium	776	845	1042
Small	243	176	210
TOTAL	1848	1949	2157

Table 7.5.7 : Total Number of Wide Local Excisions by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



WIDE LOCAL EXCISIONS

NO	HOSPITAL	MEAN NO OF PROCEDURES					TOTAL PROCEDURES (a+b+c+d+e)	NO. OF B&E SURGEONS
		HWLE (a)	WLE (b)	WLE + AXILLARY CLEARANCE (c)	WLE WITHOUT AC + LAT. DORSI FLAP (d)	WLE WITH AC + LAT. DORSI FLAP (e)		
1	Hospital Kuala Lumpur	57	45	19	3	9	125	3
2	Hospital Selayang	32	90	0	0	0	122	2
3	Hospital Queen Elizabeth 2	15	79	17	1	8	112	2
4	HSNZ Kuala Terengganu	26	54	18	0	0	98	2
5	HSI Johor Bahru	15	51	18	0	0	84	2
6	Hospital Kajang	10	69	0	0	0	79	
7	HRPB Ipoh	20	12	42	0	0	74	1
8	HTAA Kuantan	2	68	1	0	1	71	
9	HoSHAS Temerloh	9	58	3	0	0	70	
10	Hospital Ampang	0	66	2	0	0	68	
11	HTAR Klang	23	42	1	0	0	66	
12	Hospital Umum Sarawak	10	35	17	0	0	62	3
13	HSNI Batu Pahat	14	39	8	0	0	61	
14	HRPZ Kota Bharu	9	29	22	0	3	60	3
15	Hospital Putrajaya	17	33	10	0	0	60	4
16	Hospital DoK Sandakan	2	58	0	0	0	60	
17	Hospital Tawau	0	48	0	0	0	48	
18	HTJ Seremban	14	28	5	0	0	47	
19	Hospital Sungai Buloh	2	39	3	0	0	44	
20	Hospital Pulau Pinang	5	21	12	1	1	39	2
21	Hospital Taiping	8	22	9	0	1	39	
22	HSA Johor Bahru	18	12	7	0	0	37	
23	Hospital Serdang	6	27	0	0	0	33	
24	Institut Kanser Negara	5	10	18	0	0	33	3
25	Hospital Teluk Intan	4	24	4	0	0	32	2
26	HSB Alor Setar	5	20	6	0	0	31	2
27	Hospital Queen Elizabeth	2	6	19	0	0	27	2
28	HEBHK Kluang	3	17	4	0	0	24	2
29	Hospital Sibul	6	15	2	0	0	24	
30	HSAH Sungai Petani	2	20	0	0	0	22	1
31	HPSF Muar	2	20	0	0	0	21	
32	Hospital Miri	1	18	1	0	0	20	
33	Hospital Segamat	2	10	5	0	0	17	
34	Hospital Seberang Jaya	6	9	0	0	0	16	
35	HTF Kangar	15	1	0	0	0	16	
36	Hospital Melaka	7	6	1	0	0	14	
37	Hospital Bintulu	6	5	3	0	0	14	
38	Hospital Langkawi	0	13	0	0	0	14	
39	Hospital Seri Manjung	0	12	0	0	0	12	
40	Hospital Shah Alam	3	8	0	0	0	11	
41	Hospital Kuala Lipis	0	10	0	0	0	11	
42	Hospital Keningau	0	10	0	0	0	10	
43	Hospital Kulim	0	6	0	0	0	6	
44	Hospital Kuala Pilah	2	3	1	0	0	6	
45	Hospital Labuan	0	5	0	0	0	5	
46	Hospital Kemaman	0	4	0	0	0	4	
47	Hospital Sarikei	0	4	0	0	0	4	
48	Hospital Lahad Datu	0	3	0	0	0	3	
49	HSIP Kuala Krai	0	2	1	1	0	3	
50	Hospital Port Dickson	0	2	0	0	0	2	
51	Hospital Kapit	0	1	0	0	0	1	
52	Hospital Tanah Merah	0	0	0	0	0	0	
53	Hospital Banting	0	0	0	0	0	0	
TOTAL		383	1289	283	7	23	1962	24

Table 7.5.8 : Types of Mastectomy and Reconstructive Breast Surgery by Hospitals

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



7.5.4 Axillary Clearance

a. Total

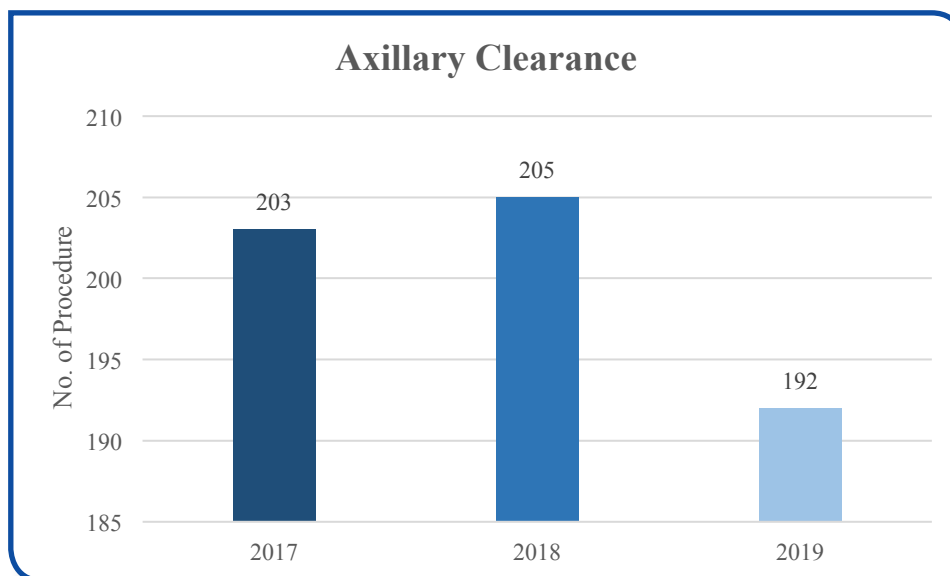


Figure 7.5.13 : Total Number of Axillary Clearance

b. By BMS Category

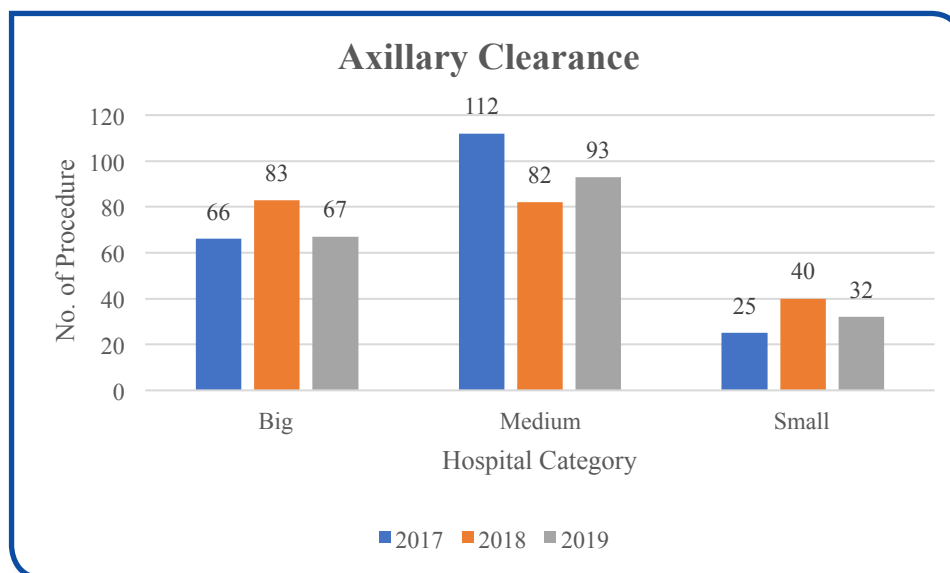


Figure 7.5.14 : Axillary Clearance by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



c. By BMS Hospital Category

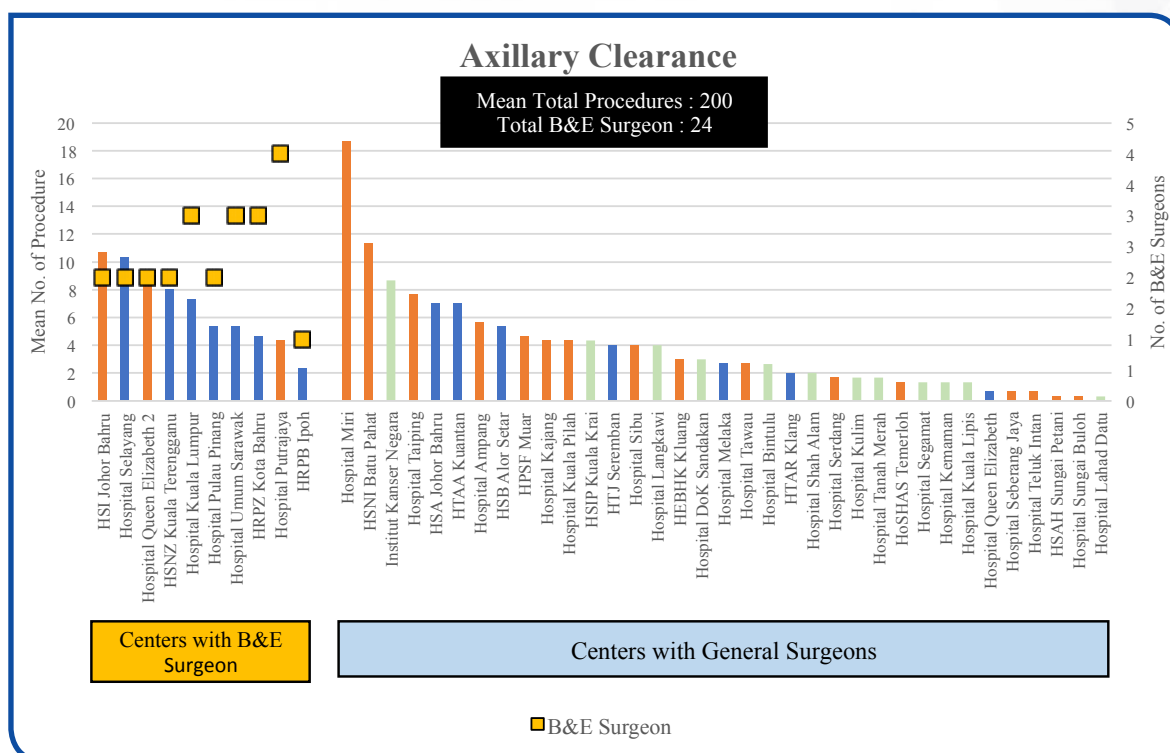


Figure 7.5.15 : Axillary Clearance by BMS Hospital Category

AXILLARY CLEARANCE

HOSPITAL CATEGORY	2017	2018	2019
Big	66	83	67
Medium	112	82	93
Small	25	40	32
TOTAL	203	205	192

Table 7.5.9 : Total Number of Axillary Clearance by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



AXILLARY CLEARANCE

NO	HOSPITALS	2017	2018	2019	MEAN NO. OF PROCEDURES	B&E SURGEONS
1	Hospital Miri	35	15	6	19	
2	HSNI Batu Pahat	8	14	12	11	
3	HSI Johor Bahru	17	8	7	11	2
4	Hospital Selayang	8	15	8	10	2
5	Hospital Queen Elizabeth 2	11	6	11	9	2
6	Institut Kanser Negara	6	8	12	9	
7	HSNZ Kuala Terengganu	9	9	6	8	2
8	Hospital Taiping	11	3	9	8	
9	Hospital Kuala Lumpur	5	8	9	7	3
10	HSA Johor Bahru	12	4	5	7	
11	HTAA Kuantan	6	10	5	7	
12	Hospital Ampang	0	11	6	6	
13	HSB Alor Setar	3	5	8	5	
14	Hospital Pulau Pinang	5	6	5	5	2
15	Hospital Umum Sarawak	2	7	7	5	3
16	HRPZ Kota Bahru	5	5	4	5	3
17	HPSF Muar	5	6	3	5	
18	Hospital Kajang	5	0	8	4	
19	Hospital Putrajaya	2	2	9	4	4
20	Hospital Kuala Pilah	7	5	1	4	
21	HSIP Kuala Krai	1	9	3	4	
22	HTJ Seremban	1	10	1	4	
23	Hospital Sibu	3	4	5	4	
24	Hospital Langkawi	5	7	0	4	
25	HEBHK Kluang	3	1	5	3	
26	Hospital DoK Sandakan	6	2	1	3	
27	Hospital Melaka	3	1	4	3	
28	Hospital Tawau	1	5	2	3	
29	Hospital Bintulu	3	1	4	3	
30	HRPB Ipoh	2	0	5	2	1
31	HTAR Klang	3	3	0	2	
32	Hospital Shah Alam	1	4	1	2	
33	Hospital Serdang	0	0	5	2	
34	Hospital Kulim	2	1	2	2	
35	Hospital Tanah Merah	1	1	3	2	
36	HoSHAS Temerloh	0	1	3	1	
37	Hospital Segamat	0	2	2	1	
38	Hospital Kemaman	0	1	3	1	
39	Hospital Kuala Lipis	0	3	1	1	
40	Hospital Queen Elizabeth	2	0	0	1	
41	Hospital Seberang Jaya	2	0	0	1	
42	Hospital Teluk Intan	1	0	1	1	
43	HSAH Sungai Petani	1	0	0	0	
44	Hospital Sungai Buloh	0	1	0	0	
45	Hospital Lahad Datu	0	1	0	0	
TOTAL		203	205	192	200	24

Table 7.5.10 : Total Number of Axillary Clearance by Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



7.6 Thoracic

List of procedures selected for Thoracic workload measurement are:

- Video Assisted Thoracoscopic Surgery (VATS)
- Non-trauma Thoracotomy

a. Total

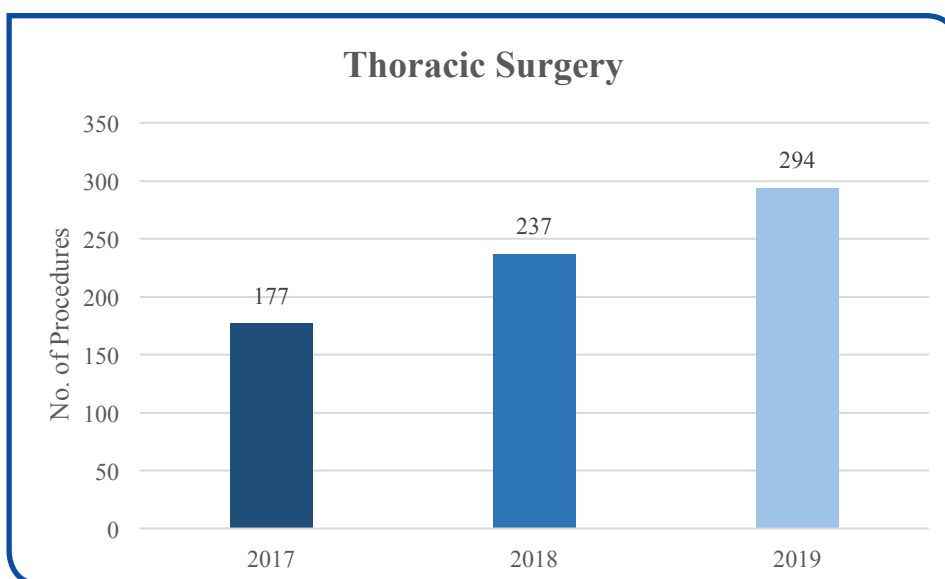


Figure 7.6.1 : Total Number of Thoracic Surgery

b. By BMS Category

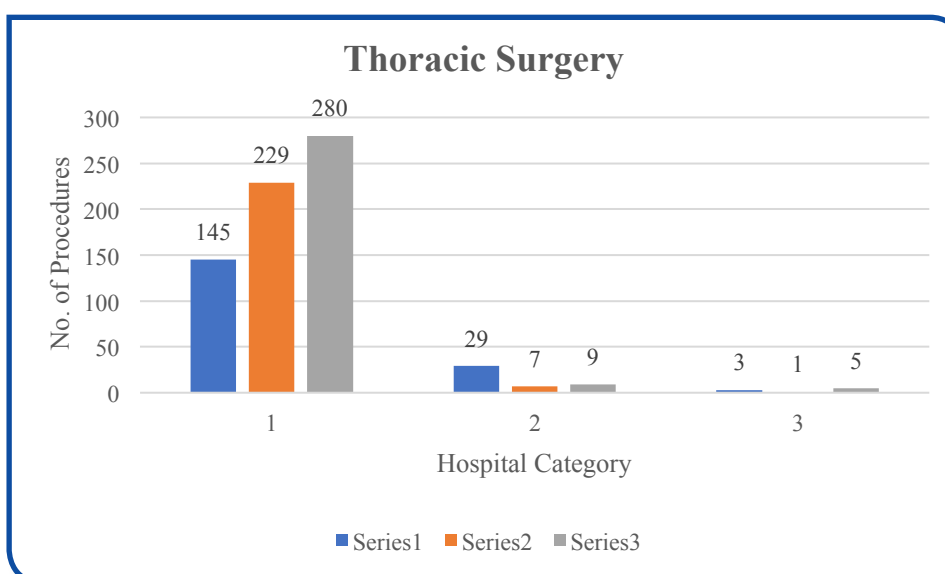


Figure 7.6.2: Thoracic Surgery by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



c. By BMS Hospital Category

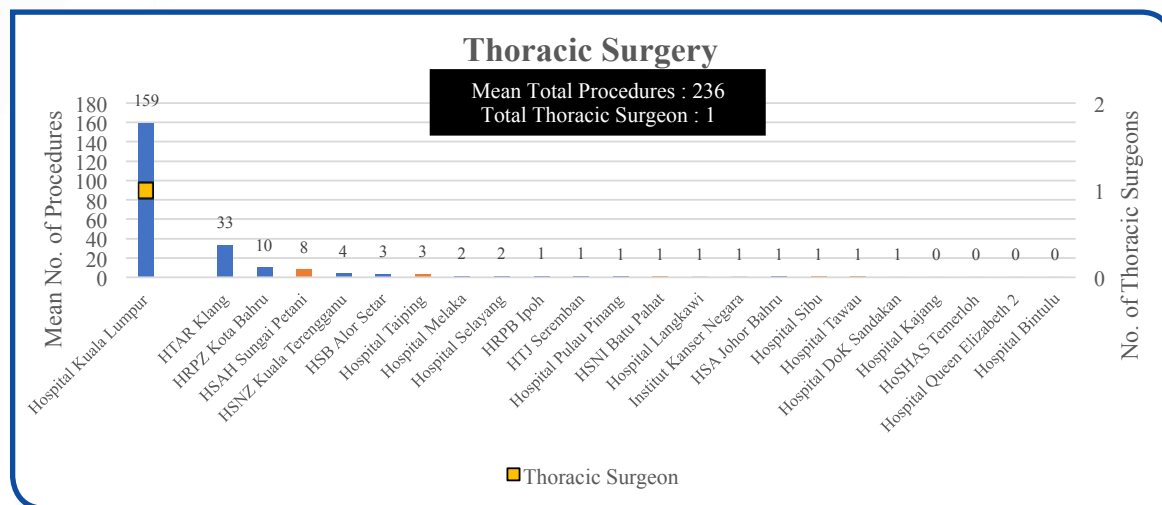


Figure 7.6.3 : Thoracic Surgery by BMS Hospital Category

d. Types of Thoracic Surgery

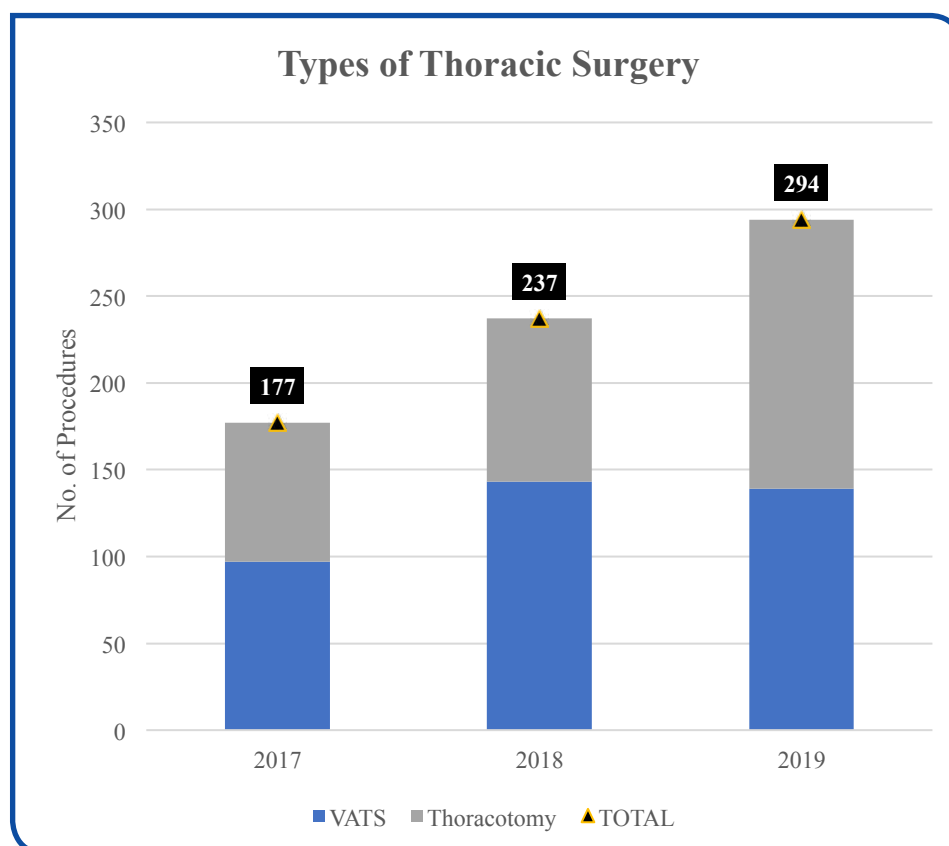


Figure 7.6- : Types of Thoracic Surgery

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



THORACIC SURGERY

HOSPITAL CATEGORY	2017	2018	2019
Big	145	229	280
Medium	29	7	9
Small	3	1	5
TOTAL	177	237	294

Table 7.6.1 : Thoracic Surgery by BMS Category

THORACIC SURGERY

PROCEDURE TYPE	2017	(%)	2018	(%)	2019	(%)
VATS	97	55%	143	60%	139	47%
Thoracotomy	80	45%	94	40%	155	53%
TOTAL	177	100%	237	100%	294	100%

Table 7.6.2 : Types of Thoracic Surgery

THORACIC SURGERY

NO	HOSPITALS	2017	2018	2019	MEAN NUMBER	THORACIC SURGEON
1	Hospital Kuala Lumpur	84	161	233	159	1
2	HTAR Klang	31	45	24	33	
3	HRPZ Kota Bahru	13	9	9	10	
4	HSAH Sungai Petani	21	1	3	8	
5	HSNZ Kuala Terengganu	8	3	1	4	
6	HSB Alor Setar	5	2	3	3	
7	Hospital Taiping	4	2	4	3	
8	Hospital Melaka	0	5	0	2	
9	Hospital Selayang	2	3	0	2	
10	HRPB Ipoh	0	0	4	1	
11	HTJ Seremban	2	1	1	1	
12	Hospital Pulau Pinang	0	0	3	1	
13	HSNI Batu Pahat	3	0	0	1	
14	Hospital Langkawi	2	0	1	1	
15	Institut Kanser Negara	1	1	1	1	
16	HSA Johor Bahru	0	0	2	1	
17	Hospital Sibul	0	2	0	1	
18	Hospital Tawau	0	0	2	1	
19	Hospital DoK Sandakan	0	0	2	1	
20	Hospital Kajang	1	0	0	0	
21	HoSHAS Temerloh	0	1	0	0	
22	Hospital Queen Elizabeth 2	0	1	0	0	
23	Hospital Bintulu	0	0	1	0	
	TOTAL	177	237	294	236	1

Table 7.6.3: Thoracic Surgery by Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



7.6.1 Video Assisted Thoracoscopic Surgery (VATS)

a. Total

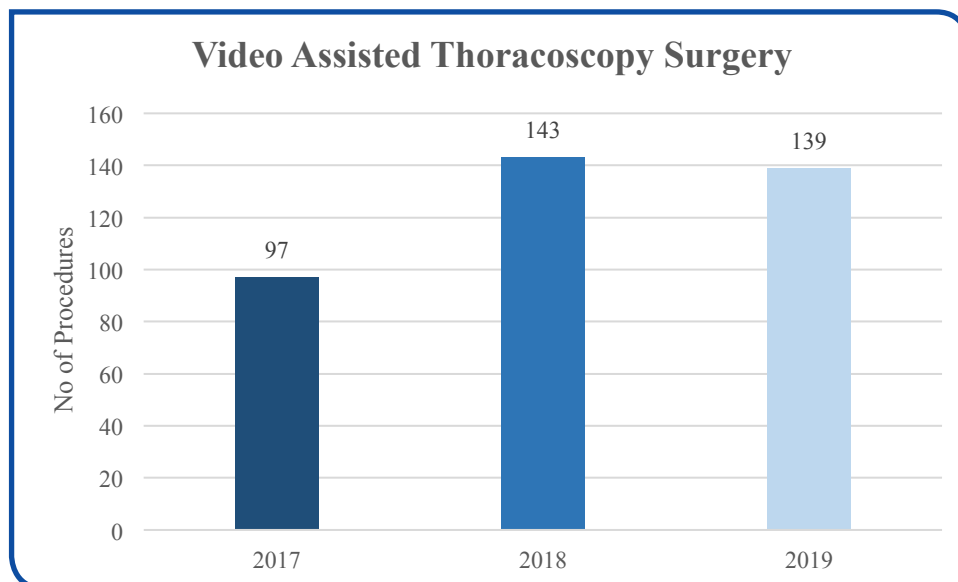


Figure 7.6.4 : Total Number of VATS

b. By BMS Category

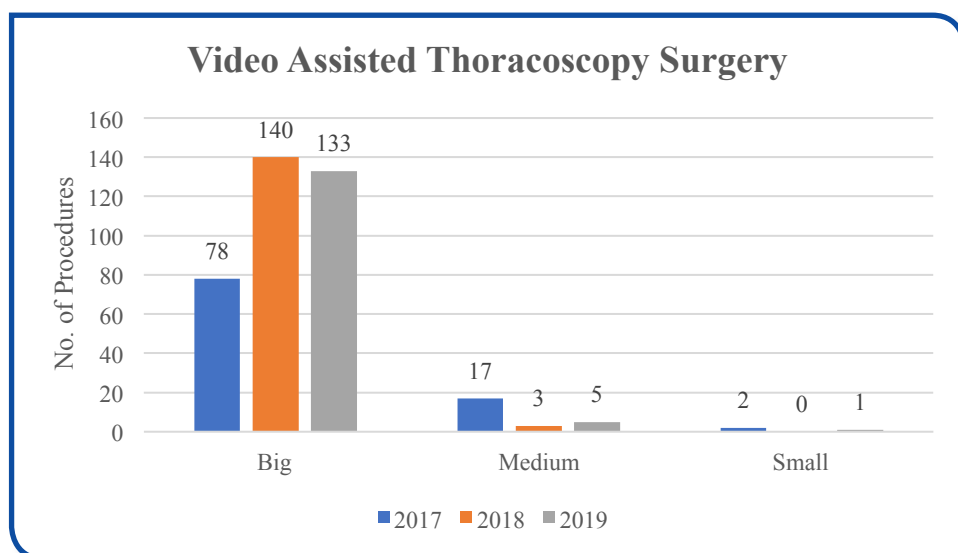


Figure 7.6.5 : VATS by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



c. By BMS Hospital Category

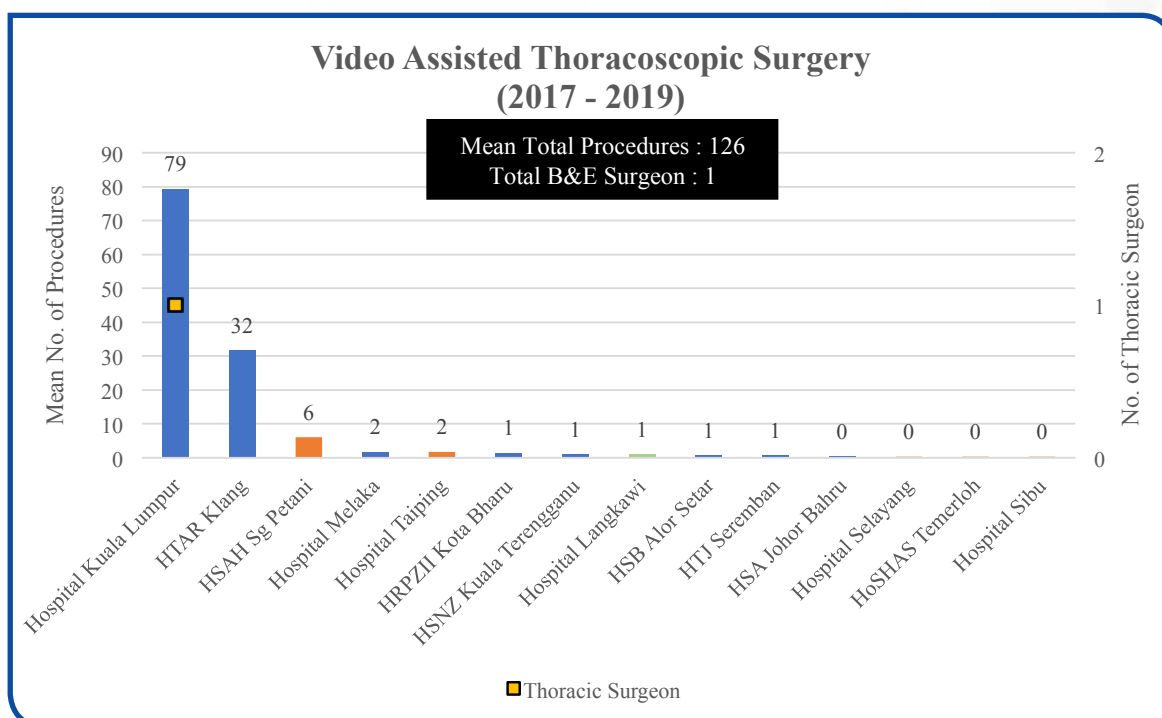


Figure 7.6.6 : VATS by BMS Hospital Category

VATS

HOSPITAL CATEGORY	2017	2018	2019
Big	78	140	133
Medium	17	3	5
Small	2	0	1
TOTAL	97	143	139

Table 7.6.4 : VATS by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



VATS

NO	HOSPITALS	2017	2018	2019	MEAN NUMBER	THORACIC SURGEON
1	Hospital Kuala Lumpur	44	87	107	79	1
2	HTAR Klang	29	43	23	32	
3	HSAH Sungai Petani	16	0	2	6	
4	Hospital Melaka	0	5	0	2	
5	Hospital Taiping	1	1	3	2	
6	HRPZ Kota Bahru	0	3	1	1	
7	HSNZ Kuala Terengganu	1	1	1	1	
8	Hospital Langkawi	2	0	1	1	
9	HSB Alor Setar	2	0	0	1	
10	HTJ Seremban	2	0	0	1	
11	HSA Johor Bahru	0	0	1	0	
12	Hospital Selayang	0	1	0	0	
13	HoSHAS Temerloh	0	1	0	0	
14	Hospital Sibul	0	1	0	0	
	TOTAL	97	143	139	126	1

Table 7.6.5 : VATS by Hospital Category

7.6.2 Non-Trauma Thoracotomy

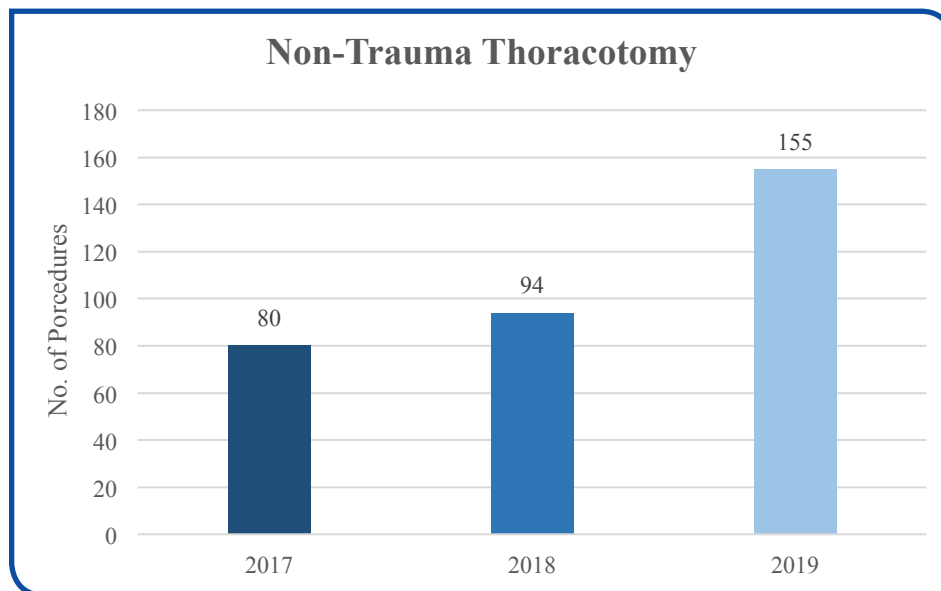


Figure 7.6.7 : Total Number of Non-Trauma Thoracotomy

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



c. By BMS Hospital Category

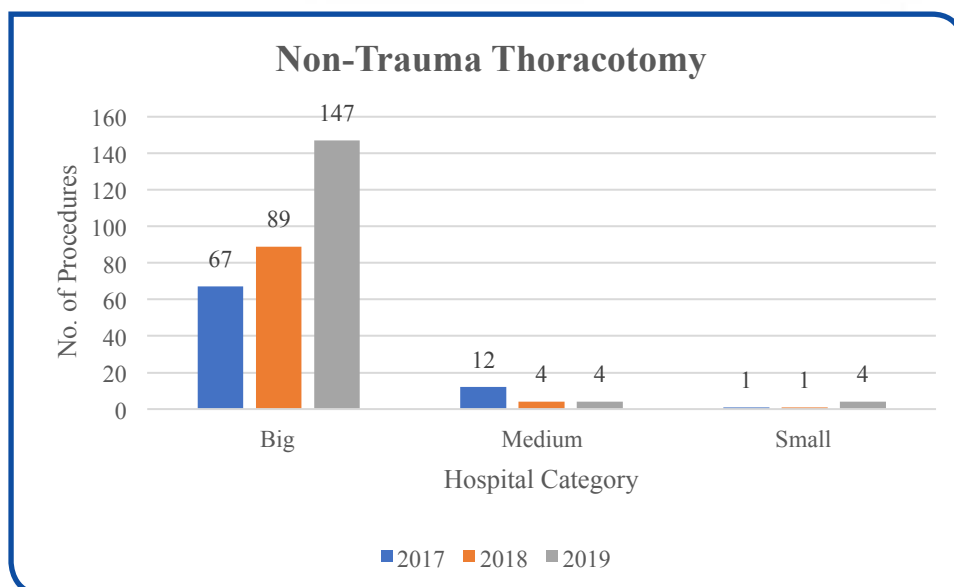


Figure 7.6.8 : Non-Trauma Thoracotomy by BMS Category

b. By BMS Category

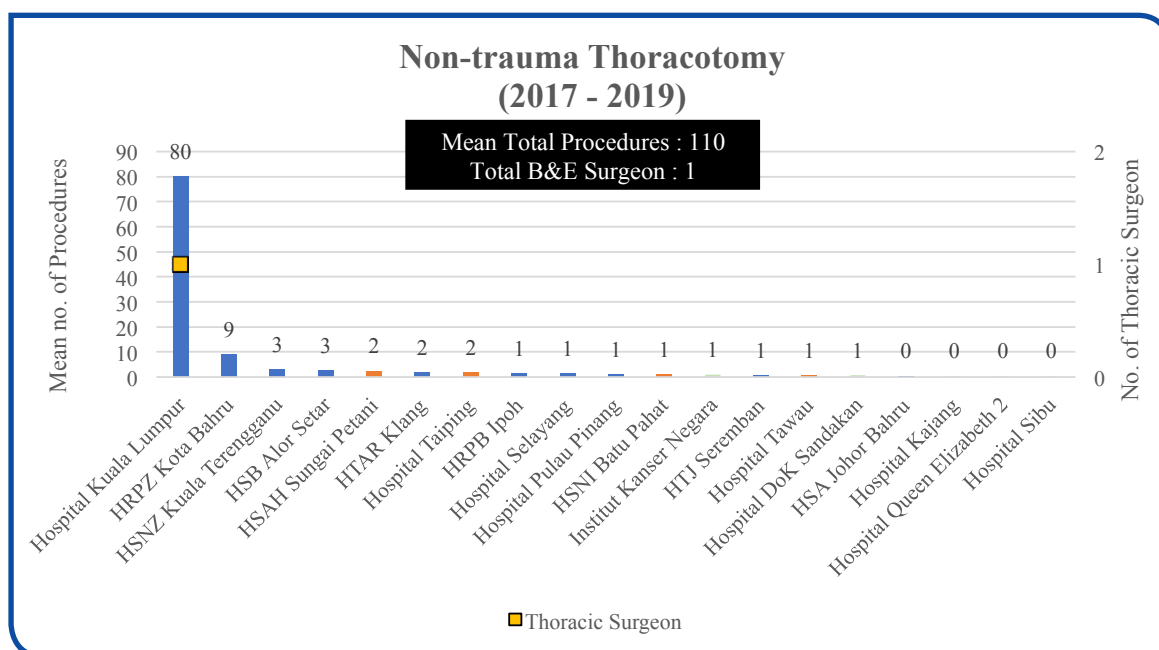


Figure 7.6.9 : Non-Trauma Thoracotomy by BMS Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



NON-TRAUMA THORACOTOMY

HOSPITAL CATEGORY	2017	2018	2019
Big	67	89	147
Medium	12	4	4
Small	1	1	4
TOTAL	80	94	155

Table 7.6.6 : Non-Trauma Thoracotomy by BMS Category

NON-TRAUMA THORACOTOMY

NO	HOSPITALS	2017	2018	2019	MEAN NUMBER	THORACIC SURGEON
1	Hospital Kuala Lumpur	40	74	126	80	1
2	HRPZ Kota Bharu	13	6	8	9	
3	HSNZ Kuala Terengganu	7	2	0	3	
4	HSB Alor Setar	3	2	3	3	
5	HSAH Sungai Petani	5	1	1	2	
6	HTAR Klang	2	2	1	2	
7	Hospital Taiping	3	1	1	2	
8	HRPB Ipoh	0	0	4	1	
9	Hospital Selayang	2	2	0	1	
10	Hospital Pulau Pinang	0	0	3	1	
11	HSNI Batu Pahat	3	0	0	1	
12	Institut Kanser Negara	1	1	1	1	
13	HTJ Seremban	0	1	1	1	
14	Hospital Tawau	0	0	2	1	
15	Hospital DoK Sandakan	0	0	2	1	
16	HSA Johor Bahru	0	0	1	0	
17	Hospital Kajang	1	0	0	0	
18	Hospital Queen Elizabeth 2	0	1	0	0	
19	Hospital Sibul	0	1	0	0	
	TOTAL	80	94	155	110	1

Table 7.6.7 : Non-Trauma Thoracotomy by Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



7.7 Upper Gastrointestinal

List of procedures selected for Upper Gastrointestinal (UGI) workload measurement are:

- i. Oesophagecardiomytomy (Heller's Procedure)
- ii. Oesophaogastrectomy
- iii. Transhiatal Oesophagectomy
- iv. Ivor Lewis/ McKeown Oesophagectomy
- v. Laparoscopic / Thoracoscopic assisted Oesophagectomy
- vi. Fundoplication
- vii. Underunning of bleeding ulcer
- viii. PGU / PDU Simple Omentum Patch Closure (Open)
- ix. PGU / PDU Simple Omentum Patch Closure (Laparoscopic)
- x. PGU / PDU Partial Gastrectomy
- xi. Gastrectomy

a. Total

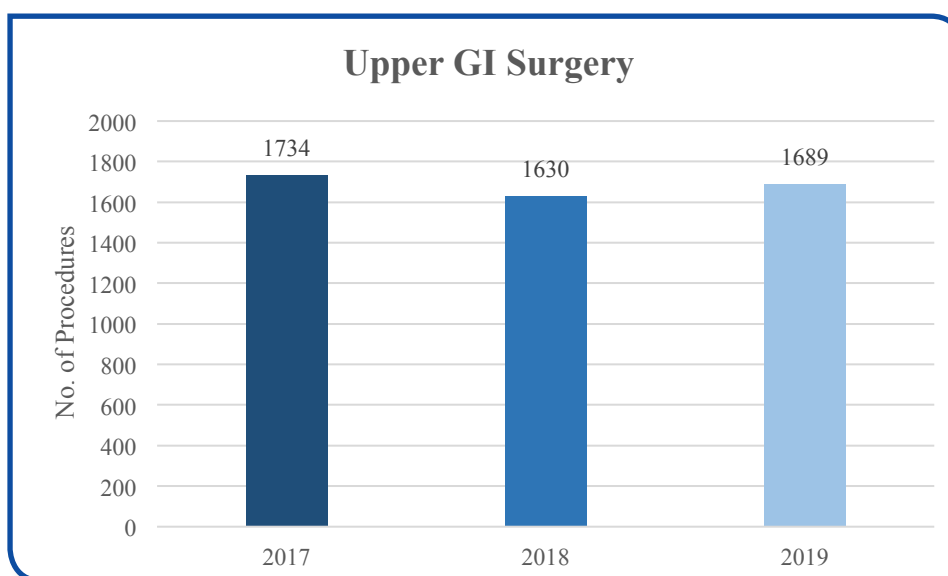


Figure 7.7.1 : Total Number of Upper GI Surgery

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



b. By BMS Category

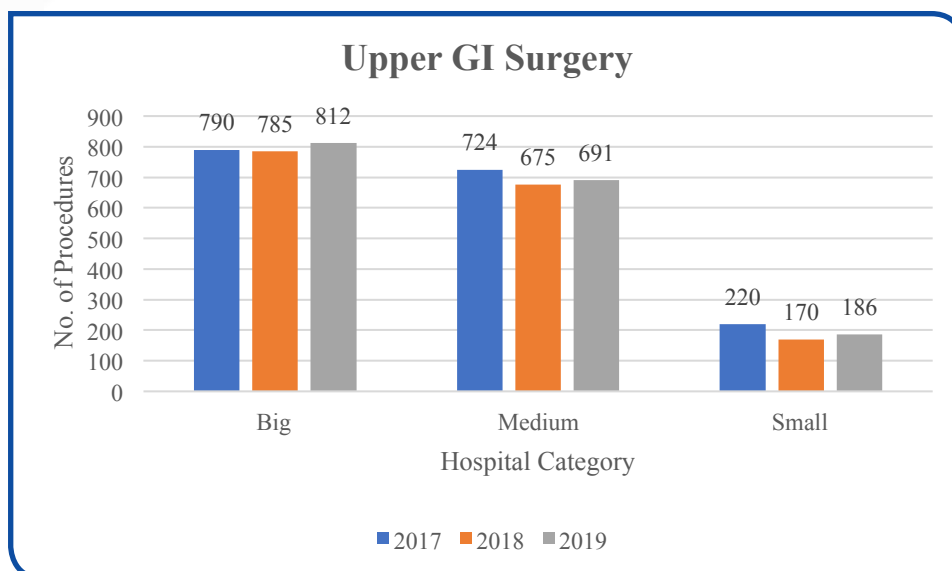


Figure 7.7.2 : Upper GI Surgery by BMS Category

c. By BMS Hospital Category

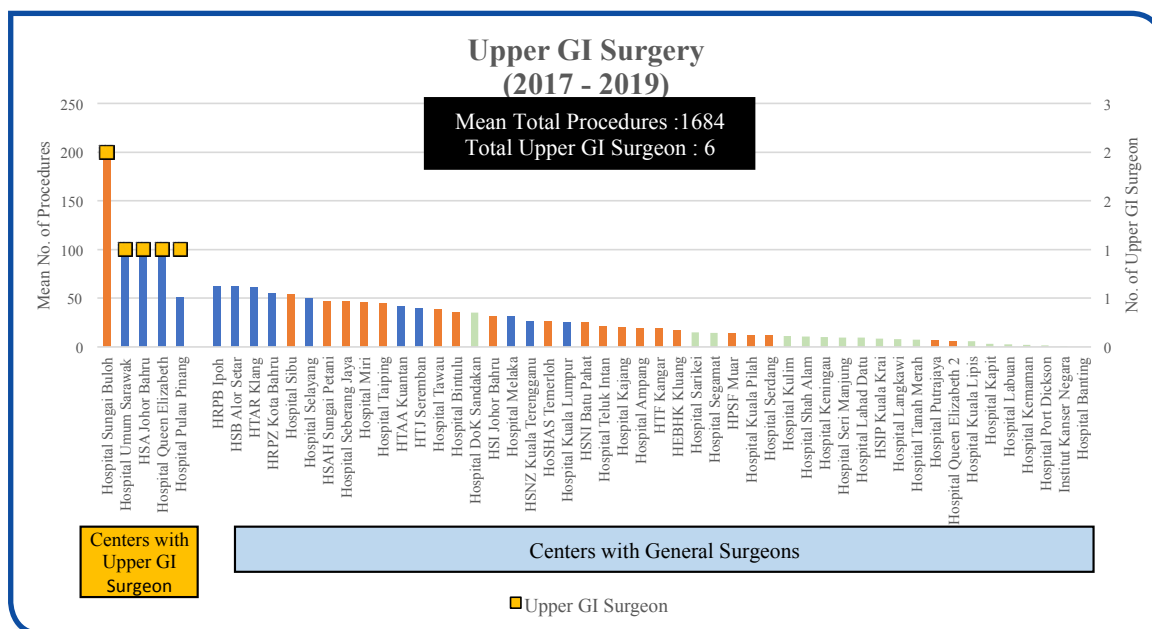


Figure 7.7.3 : Upper GI Surgery by BMS Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



d. Types of Upper GI Procedures

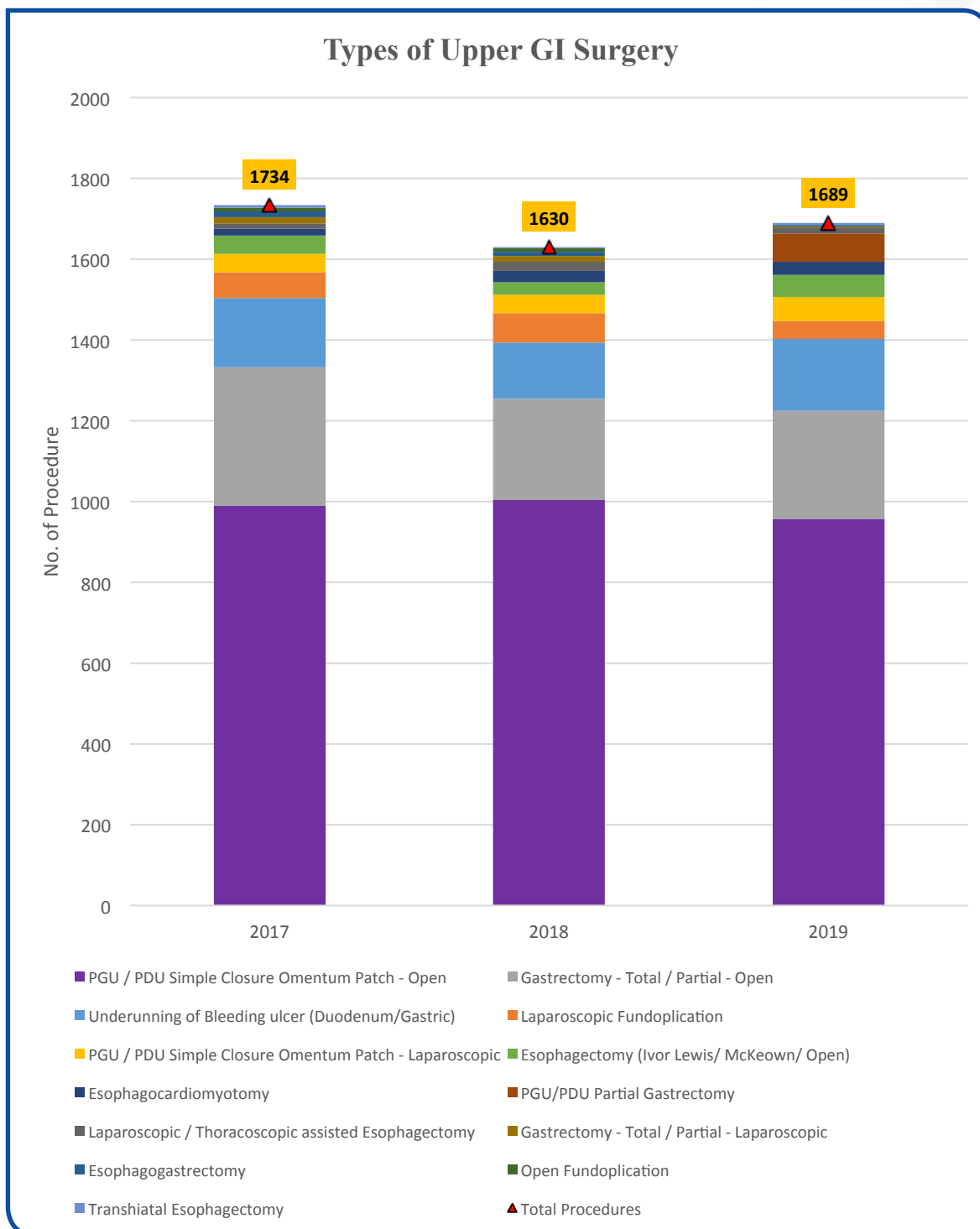


Figure 7.7.4 :Types of Upper GI Surgery

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



UPPER GI SURGERY

HOSPITAL CATEGORY	2017	2018	2019
Big	790	785	812
Medium	724	675	691
Small	220	170	186
TOTAL	1734	1630	1689

Table 7.7.1 : Upper GI Surgery by BMS Category

UPPER GASTROINTESTINAL SURGERY

PROCEDURE TYPE	2017	(%)	2018	(%)	2019	(%)
PGU / PDU Simple Closure Omentum Patch - Open	990	57%	1004	62%	957	57%
Gastrectomy - Total / Partial - Open	343	20%	250	15%	268	16%
Underrunning of Bleeding ulcer (Duodenum/Gastric)	171	10%	140	9%	177	10%
Laparoscopic Fundoplication	63	4%	72	4%	45	3%
PGU / PDU Simple Closure Omentum Patch - Laparoscopic	46	3%	46	3%	60	4%
Esophagectomy (Ivor Lewis/ McKeown/ Open)	46	3%	31	2%	54	3%
Esophagocardiomyotomy	16	1%	28	2%	32	2%
PGU/PDU Partial Gastrectomy	0	0%	1	0%	70	4%
Laparoscopic / Thoracoscopic assisted Esophagectomy	13	1%	21	1%	13	1%
Gastrectomy - Total / Partial - Laparoscopic	16	1%	15	1%	4	0%
Esophagogastrectomy	14	1%	10	1%	5	0%
Open Fundoplication	9	1%	9	1%	0	0%
Transhiatal Esophagectomy	0%	3	0%	4	0%	53%
TOTAL	1734	100%	1630	100%	1689	100%

Table 7.7.2 : Types of Upper GI Surgery

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



UPPER GASTROINTESTINAL SURGERY

NO	HOSPITALS	2017	2018	2019	MEAN NO. OF PROCEDURES	NO. OF UGI SURGEON
1	Hospital Sungai Buloh	193	191	195	193	2
2	Hospital Umum Sarawak	88	129	95	104	1
3	HSA Johor Bahru	72	101	111	95	1
4	Hospital Queen Elizabeth	86	80	112	93	1
5	HRPB Ipoh	66	34	87	62	
6	HSB Alor Setar	85	56	45	62	
7	HTAR Klang	52	60	71	61	
8	HRPZ Kota Bharu	58	70	37	55	
9	Hospital Sibul	62	61	38	54	
10	Hospital Pulau Pinang	83	33	38	51	1
11	Hospital Selayang	43	64	41	49	
12	HSAH Sungai Petani	37	44	59	47	
13	Hospital Seberang Jaya	45	54	41	47	
14	Hospital Miri	61	29	48	46	
15	Hospital Taiping	47	41	46	45	
16	HTAA Kuantan	32	37	55	41	
17	HTJ Seremban	42	49	28	40	
18	Hospital Tawau	37	40	40	39	
19	Hospital Bintulu	41	33	32	35	
20	Hospital DoK Sandakan	48	23	35	35	
21	HSI Johor Bahru	37	21	37	32	
22	Hospital Melaka	25	26	42	31	
23	HSNZ Kuala Terengganu	25	25	29	26	
24	HoSHAS Temerloh	24	28	27	26	
25	Hospital Kuala Lumpur	33	21	21	25	
26	HSNI Batu Pahat	32	22	20	25	
27	Hospital Teluk Intan	18	22	22	21	
28	Hospital Kajang	18	22	19	20	
29	Hospital Ampang	16	21	20	19	
30	HTF Kangar	19	15	22	19	
31	HEBHK Kluang	19	17	14	17	
32	Hospital Sarikei	12	19	14	15	
33	Hospital Segamat	16	9	19	15	
34	HPSF Muar	14	16	11	14	
35	Hospital Kuala Pilah	13	11	11	12	
36	Hospital Serdang	18	8	8	11	
37	Hospital Kulim	19	7	8	11	
38	Hospital Shah Alam	13	8	11	11	
39	Hospital Keningau	12	8	10	10	
40	Hospital Seri Manjung	11	4	13	9	
41	Hospital Lahad Datu	4	12	12	9	
42	HSIP Kuala Krai	10	9	7	9	
43	Hospital Langkawi	8	8	8	8	
44	Hospital Tanah Merah	10	8	5	8	
45	Hospital Putrajaya	4	7	10	7	
46	Hospital Queen Elizabeth 2	10	5	3	6	
47	Hospital Kuala Lipis	10	5	3	6	
48	Hospital Kapit	2	7	1	3	
49	Hospital Labuan	2	3	3	3	
50	Hospital Kemaman	0	2	5	2	
51	Hospital Port Dickson	1	4	0	2	
52	Institut Kanser Negara	1	1	0	1	
53	Hospital Banting	0	0	0	0	
TOTAL		1734	1630	1689	1684	6

Table 7.7.3 : Upper GI Surgery by Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



7.7.1 Heller's Cardiomyotomy

a. Total

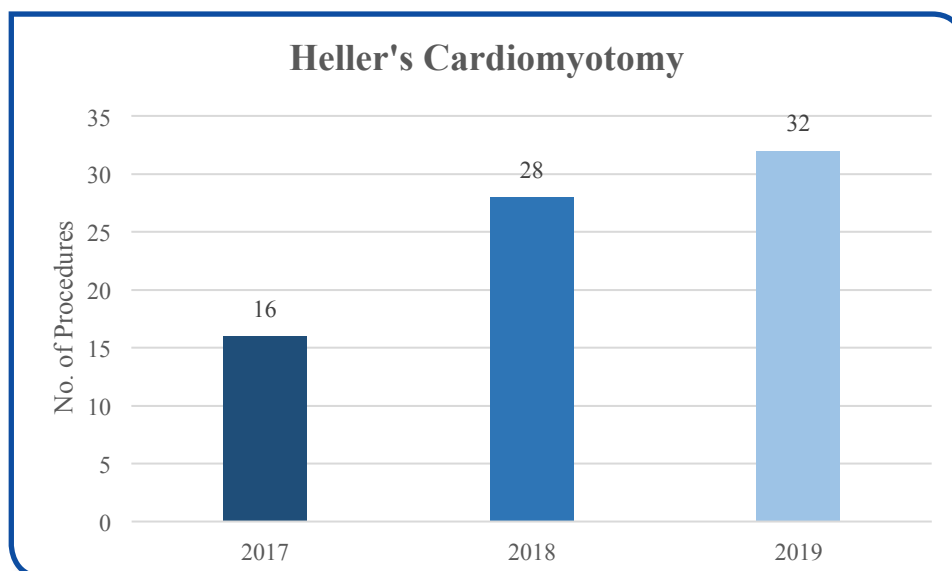


Figure 7.7.5 : Total Number of Heller's Cardiomyotomy

b. By BMS Category

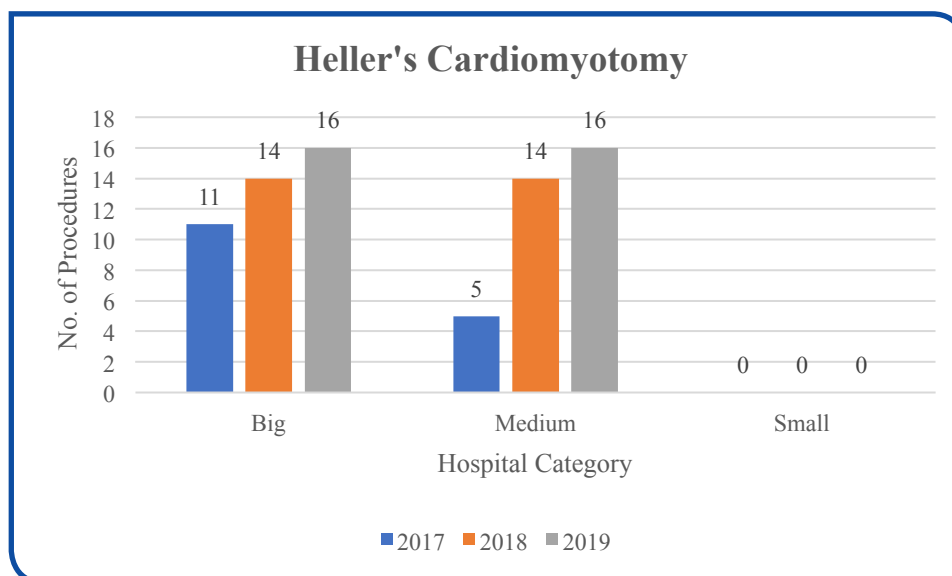


Figure 7.7.6 : Heller's Cardiomyotomy by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



c. By BMS Hospital Category

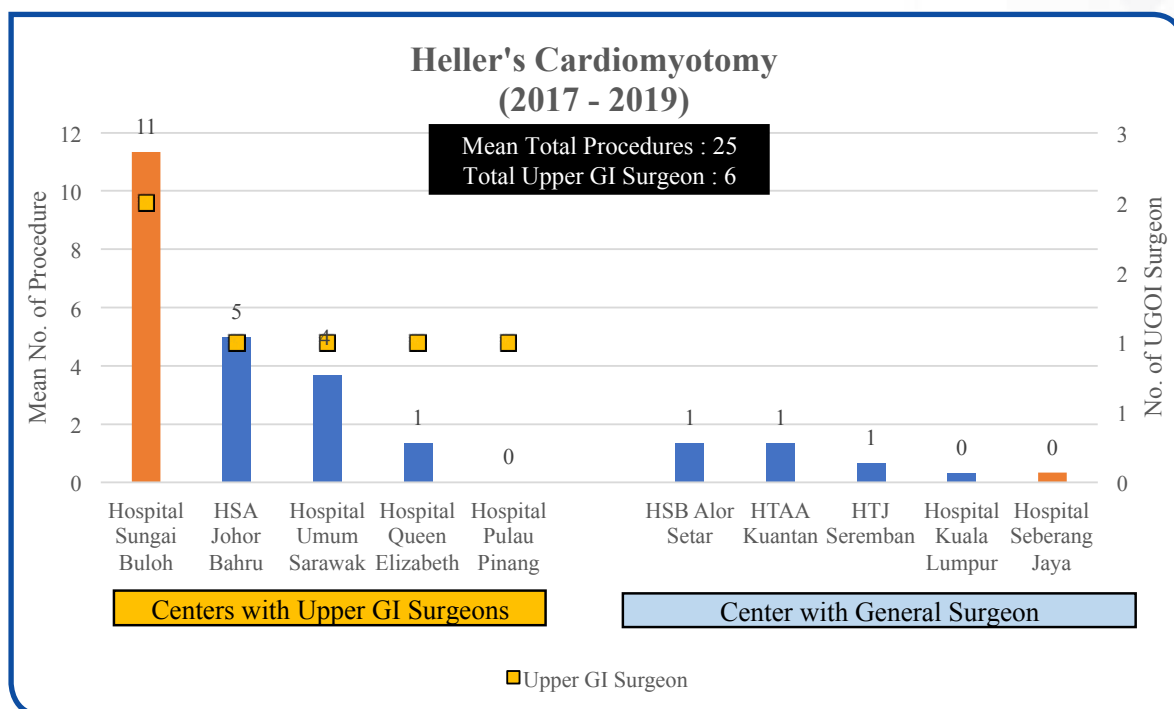


Figure 7.7.7: Heller's Cardiomyotomy by BMS Hospital Category

HELLER'S CARDIOMYTOMY

HOSPITAL CATEGORY	2017	2018	2019
Big	11	13	16
Medium	6	14	16
Small	0	0	0
TOTAL	17	27	32

Table 7.7.4 : Heller's Cardiomyotomy by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



NON-TRAUMA THORACOTOMY

NO	HOSPITALS	2017	2018	2019	UGI SURGEON
1	Hospital Sungai Buloh	5	14	15	11
2	HSA Johor Bahru	0	6	9	5
3	Hospital Umum Sarawak	3	4	4	4
4	HSB Alor Setar	4	0	0	1
5	HTAA Kuantan	2	1	1	1
6	Hospital Queen Elizabeth	0	2	2	1
7	HTJ Seremban	2	0	0	1
8	Hospital Kuala Lumpur	0	1	0	0
9	Hospital Seberang Jaya	0	0	1	0
10	Hospital Pulau Pinang	0	0	0	0
11	Hospital Sungai Buloh	5	14	15	11
12	HSA Johor Bahru	0	6	9	5
TOTAL		17	27	32	6

Table 7.7.5 : Heller's Cardiomyotomy by Hospital Category

7.7.2 Esophagectomy

List of procedures selected for Esophagectomy workload measurement are:

- Esophagogastrectomy
- Transhiatal Esophagectomy
- Ivor Lewis/ McKeown Esophagectomy
- Laparoscopic / Thoracoscopic assisted Esophagectomy

a. Total

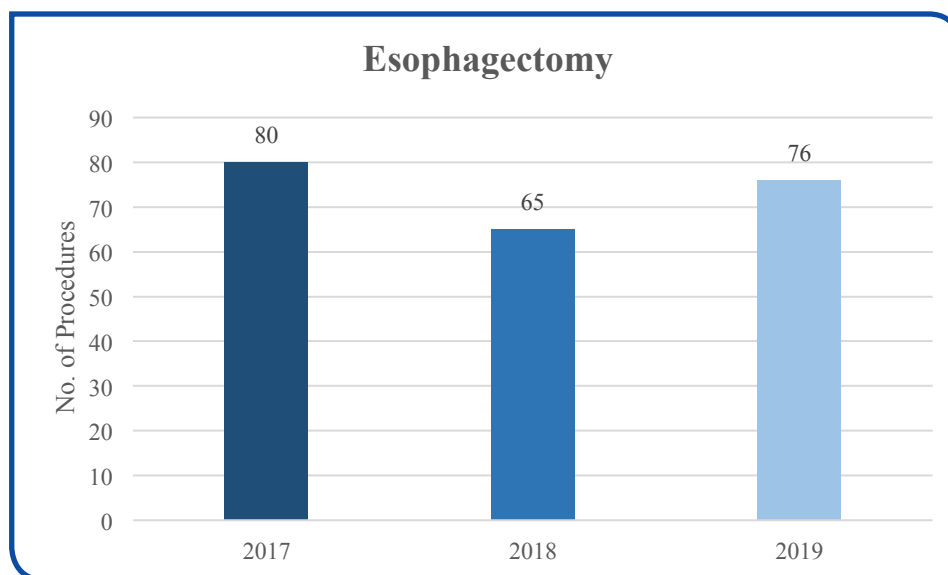


Figure 7.7.8 : Total Number of Esophagectomy

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



b. By BMS Category

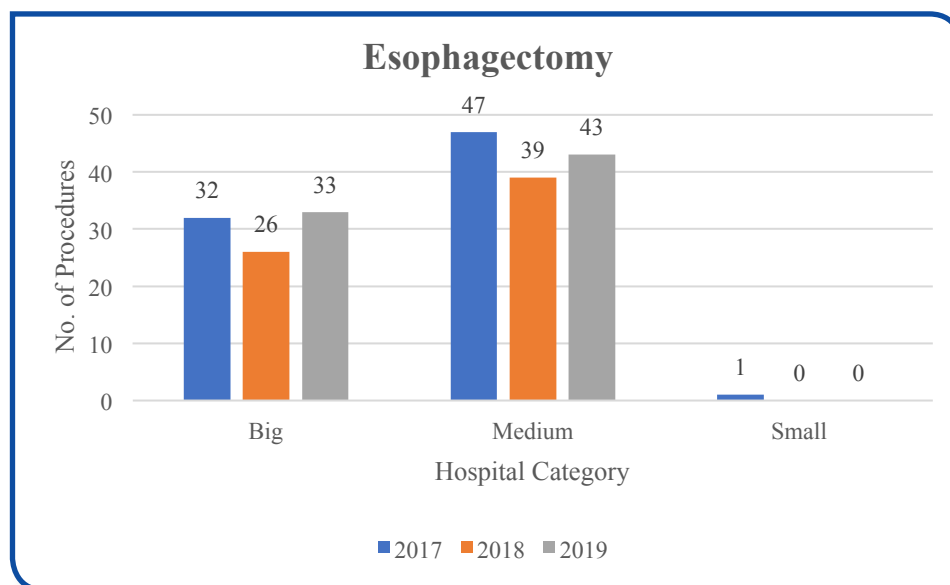


Figure 7.7.9 : Total Number of Esophagectomy by BMS Category

c. By BMS Hospital Category

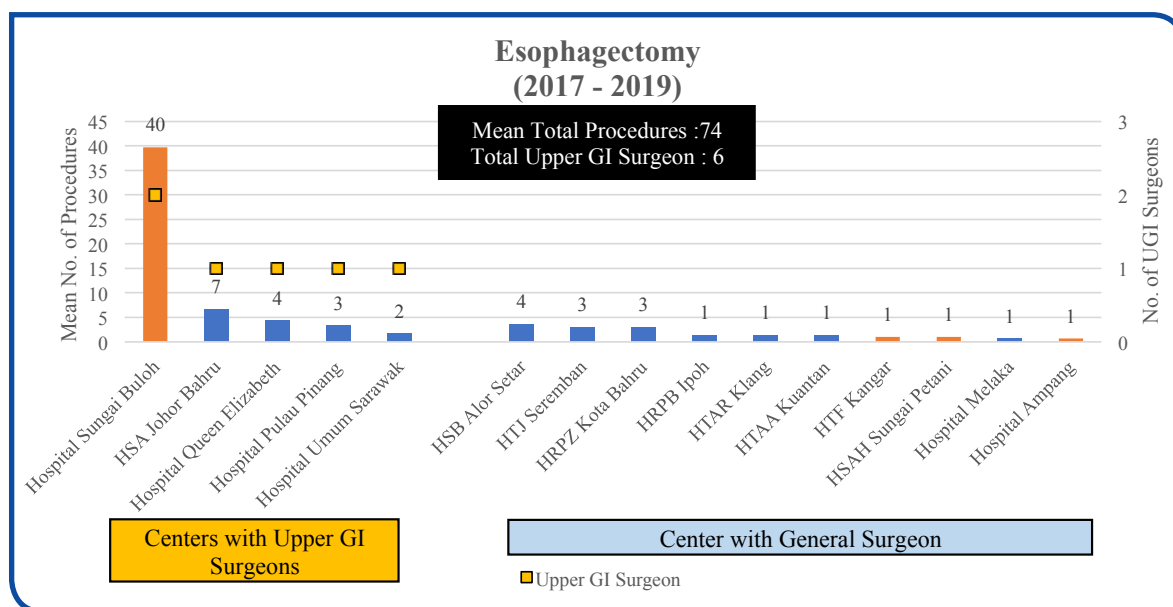


Figure 7.7.10 : Esophagectomy by BMS Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019

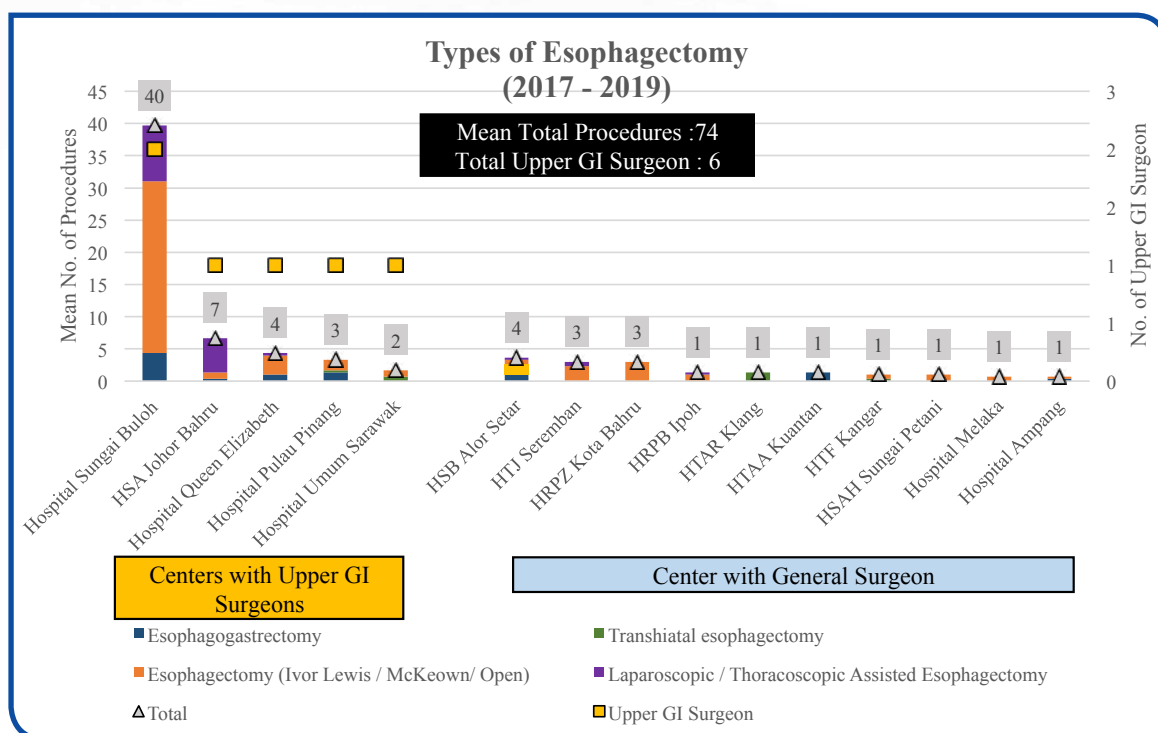


Figure 7.7.11 : Types of Esophagectomy by BMS Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



d. Types of Esophagectomy

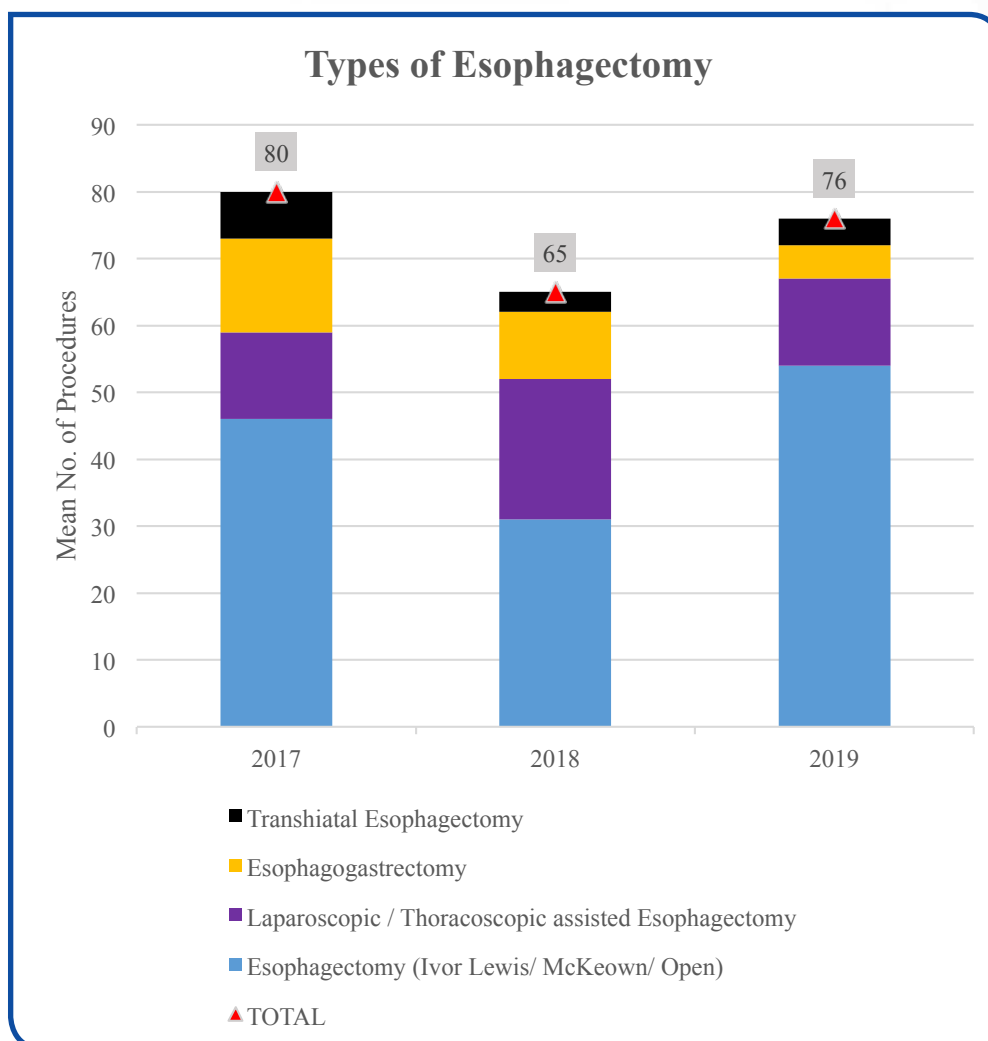


Figure 7.7.12 : Types of Esophagectomy

ESOPHAGECTOMY

HOSPITAL CATEGORY	2017	2018	2019
Big	32	26	33
Medium	47	39	43
Small	1	0	0
TOTAL	80	65	76

Table 7.7.6 : Esophagectomy by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



ESOPHAGECTOMY

NO	HOSPITALS	MEAN NO OF PROCEDURES				TOTAL PROCEDURES (a+b+c+d)	NO. OF UGI SURGEON
		ESOPHAGO-GASTRECTOMY (a)	TRANSHIATAL ESOPHAGECTOMY (b)	IVOR LEWIS / MCKEOWN (c)	ESOPHAGECTOMY - LAPAROSCOPIC / THORACOSCOPIC ASSISTED (d)		
1	Hospital Sungai Buloh	4	0	27	9	40	2
2	HSA Johor Bahru	0	0	1	5	7	1
3	Hospital Queen Elizabeth	1	0	3	0	4	1
4	HSB Alor Setar	1	2	1	0	4	
5	Hospital Pulau Pinang	1	0	2	0	3	1
6	HTJ Seremban	0	0	2	1	3	
7	HRPZ Kota Bahru	0	0	3	0	3	
8	Hospital Umum Sarawak	0	1	1	0	2	1
9	HRPB Ipoh	0	0	1	0	1	
10	HTAR Klang	0	1	0	0	1	
11	HTAA Kuantan	1	0	0	0	1	
12	HTF Kangar	0	0	1	0	1	
13	HSAH Sungai Petani	0	0	1	0	1	
14	Hospital Melaka	0	0	1	0	1	
15	Hospital Ampang	0	0	0	0	1	
TOTAL		9	5	46	14	74	6

Table 7.7.7 : Types of Esophagectomy by Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



7.7.2.1 Esophagogastrectomy

a. By BMS Hospital Category

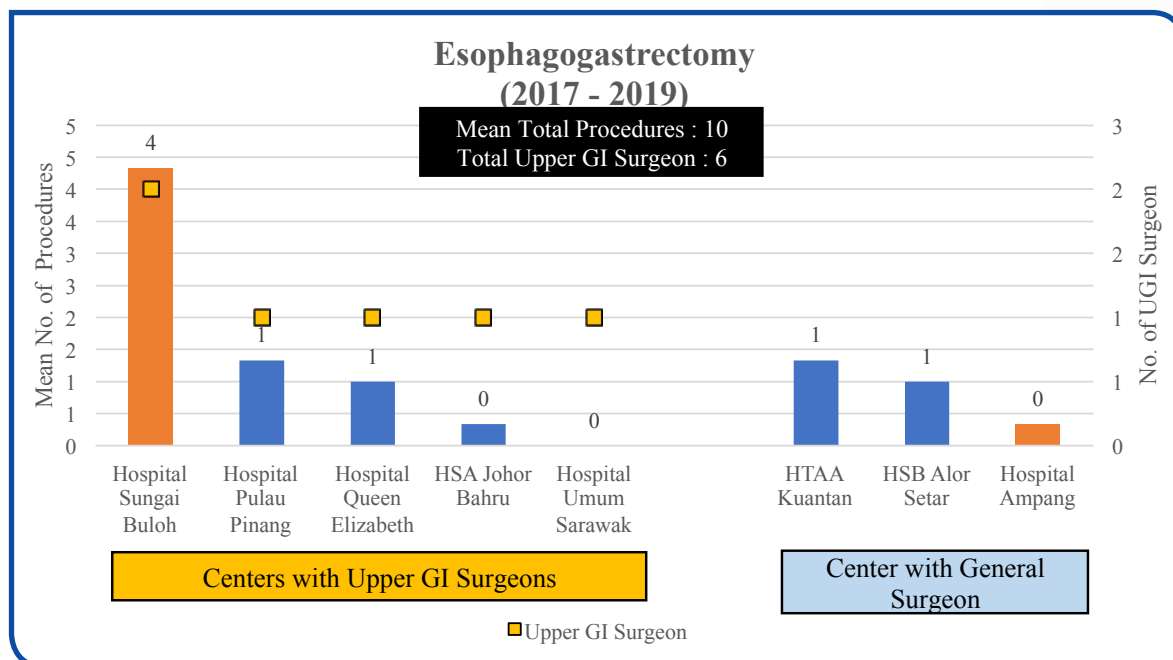


Figure 7.7.13 : Esophagogastrectomy by BMS Hospital Category

ESOPHAGOGASTRECTOMY

NO	HOSPITALS	2017	2018	2019	MEAN NO. OF PROCEDURES	NO. OF UGI SURGEON
1	Hospital Sungai Buloh	6	7	0	4	2
2	Hospital Pulau Pinang	4	0	0	1	1
3	HTAA Kuantan	1	1	2	1	
4	HSB Alor Setar	3	0	0	1	
5	Hospital Queen Elizabeth	0	1	2	1	1
6	HSA Johor Bahru	0	1	0	0	1
7	Hospital Ampang	0	0	1	0	
8	Hospital Umum Sarawak	0	0	0	0	1
	TOTAL	14	10	5	10	6

Table 7.7.8 : Esophagogastrectomy by BMS Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



7.7.2.2 Trans-Hiatal Esophagectomy

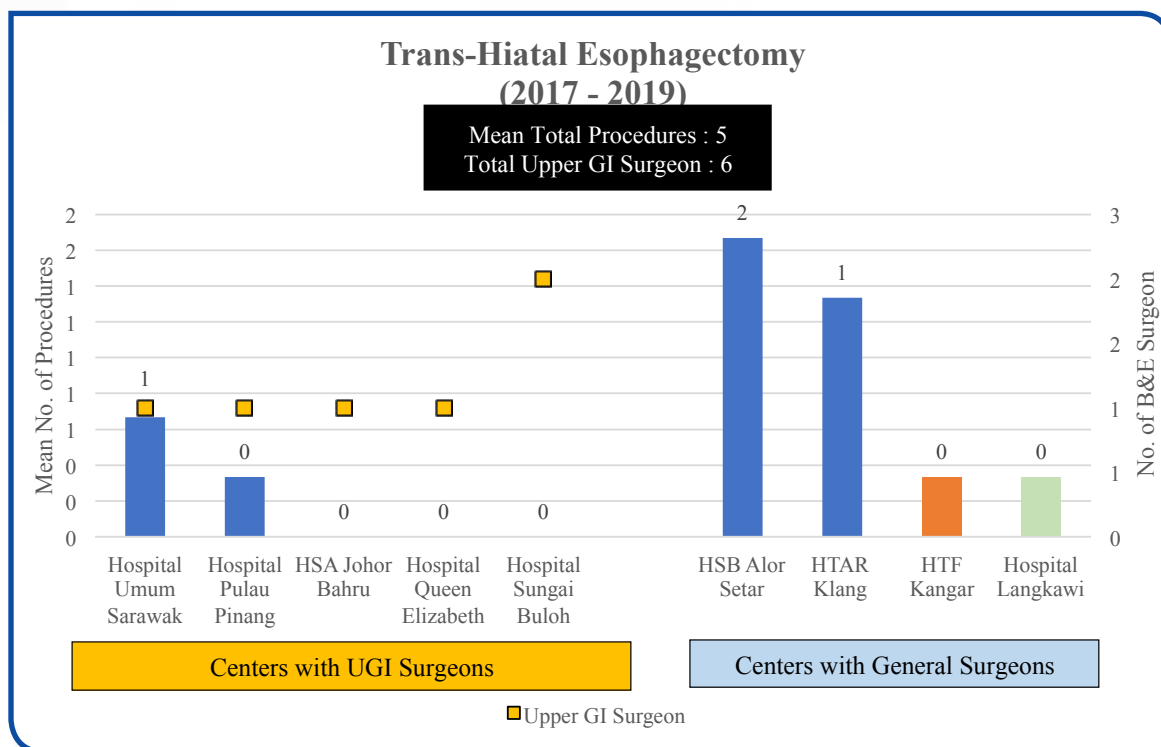


Figure 7.7.14 : Trans-hiatal Esophagectomy by BMS Hospital Category

TRANSHIATAL ESOPHAGECTOMY

NO	HOSPITALS	2017	2018	2019	MEAN NO. OF PROCEDURES	NO. OF UGI SURGEON
1	HSB Alor Setar	5	0	0	2	
2	HTAR Klang	0	3	1	1	
3	Hospital Umum Sarawak	0	0	2	1	1
4	Hospital Kangar	0	0	1	0	
5	Hospital Pulau Pinang	1	0	0	0	1
6	Hospital Langkawi	1	0	0	0	
7	HSA Johor Bahru	0	0	0	0	1
8	HQEI Kota Kinabalu	0	0	0	0	1
9	Hospital Sungai Buloh	0	0	0	0	2
	TOTAL	7	3	4	5	6

Table 7.7.9 : Trans-hiatal Esophagectomy by Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



7.7.2.3 Ivor Lewis /McKeown Esophagectomy

a. By BMS Hospital Category

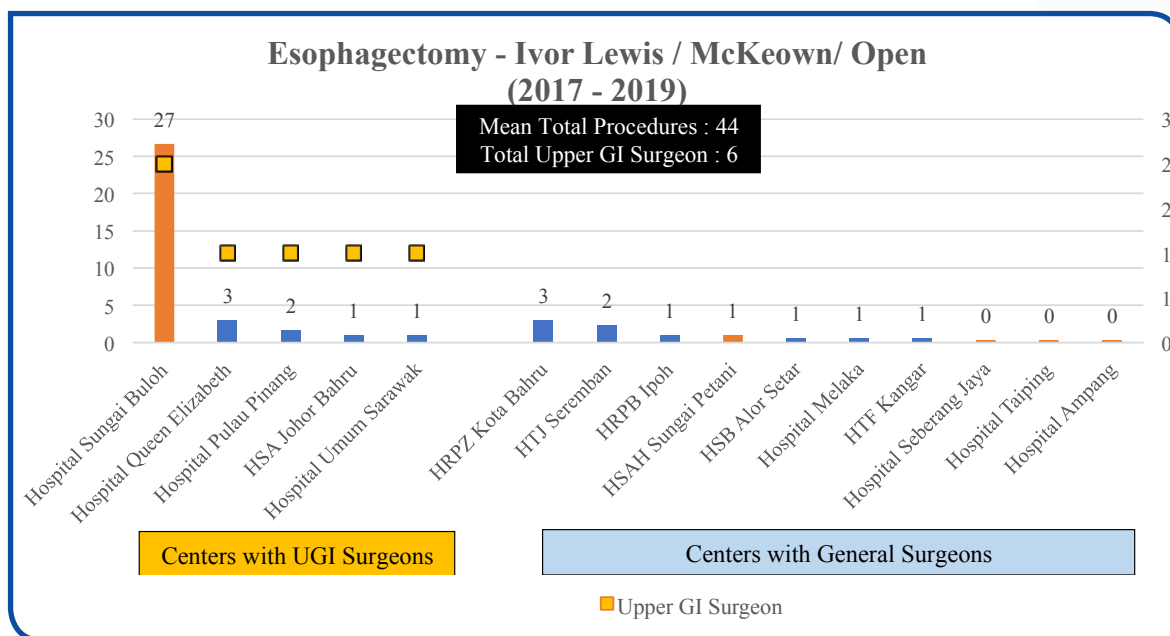


Figure 7.7.15 : Ivor Lewis / McKeown Esophagectomy by BMS Hospital Category

IVOR LEWIS / MCKEOWN ESOPHAGECTOMY

NO	HOSPITALS	2017	2018	2019	MEAN NO. OF PROCEDURES	NO. OF UGI SURGEON
1	Hospital Sungai Buloh	28	18	34	27	2
2	Hospital Queen Elizabeth	0	4	5	3	1
3	HRPZ Kota Bahru	4	4	1	3	
4	HTJ Seremban	4	1	2	2	
5	Hospital Pulau Pinang	5	0	0	2	1
6	HSA Johor Bahru	0	2	1	1	
7	Hospital Umum Sarawak	1	1	1	1	1
8	HRPB Ipoh	0	0	3	1	
9	HSAH Sungai Petani	0	0	3	1	
10	HSB Alor Setar	2	0	0	1	
11	Hospital Melaka	0	0	2	1	
12	HTF Kangar	1	1	0	1	
13	Hospital Seberang Jaya	0	0	1	0	
14	Hospital Taiping	1	0	0	0	
15	Hospital Ampang	0	0	1	0	
	TOTAL	46	31	54	44	6

Table 7.7.10 : Ivor Lewis / McKeown Esophagectomy by Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



7.7.2.4 Laparoscopic / Thoracoscopic Assisted Esophagectomy

a. By BMS Hospital Category

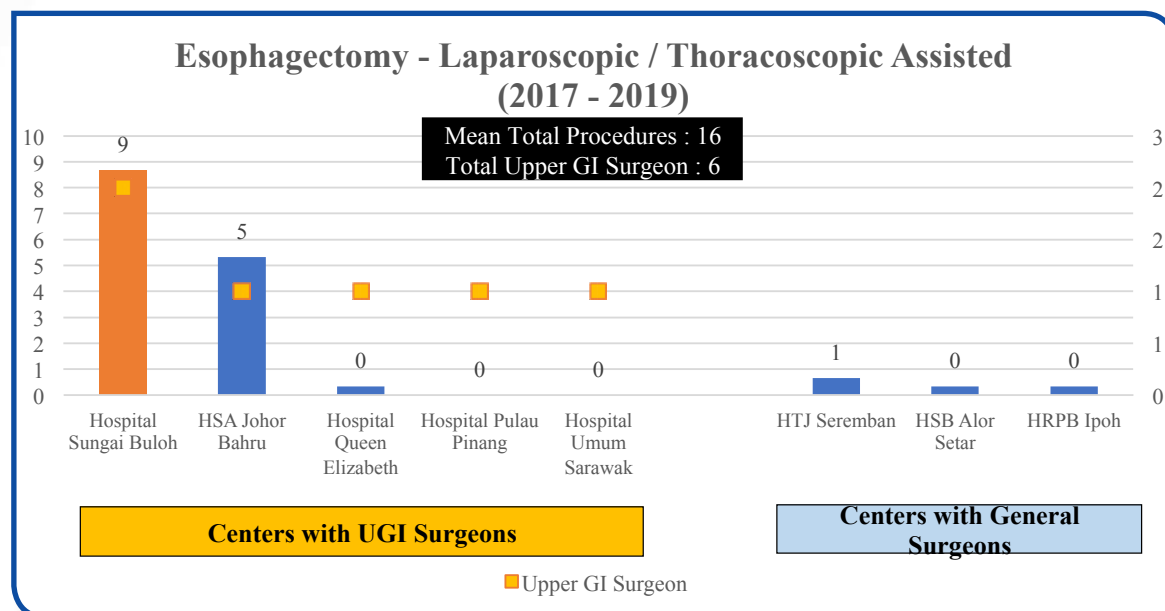


Figure 7.7.16 : Laparoscopic /Thoracoscopic Assisted Esophagectomy by BMS Hospital Category

LAPAROSCOPIC / THORACOSCOPIC ASSISTED ESOPHAGECTOMY

NO	HOSPITALS	2017	2018	2019	MEAN NO. OF PROCEDURES	NO. OF UGI SURGEON
1	Hospital Sungai Buloh	11	13	2	9	2
2	HSA Johor Bahru	0	7	9	5	1
3	HTJ Seremban	1	1	0	1	
4	Hospital Queen Elizabeth	0	0	1	0	1
5	HSB Alor Setar	1	0	0	0	
6	HRPB Ipoh	0	0	1	0	
7	Hospital Pulau Pinang	0	0	0	0	1
8	Hospital Umum Sarawak	0	0	0	0	1
	TOTAL	13	21	13	16	6

Table 7.7.11 : Laparoscopic /Thoracoscopic Assisted Esophagectomy by Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



7.7.3 Fundoplication

a. Total

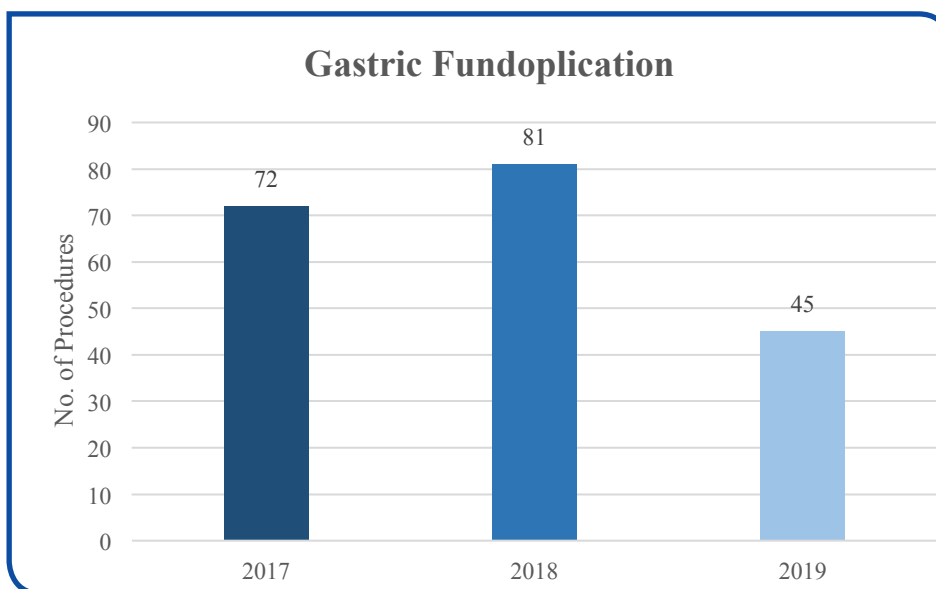


Figure 7.7.17 : Total Number of Gastric Fundoplication

b. By BMS Category

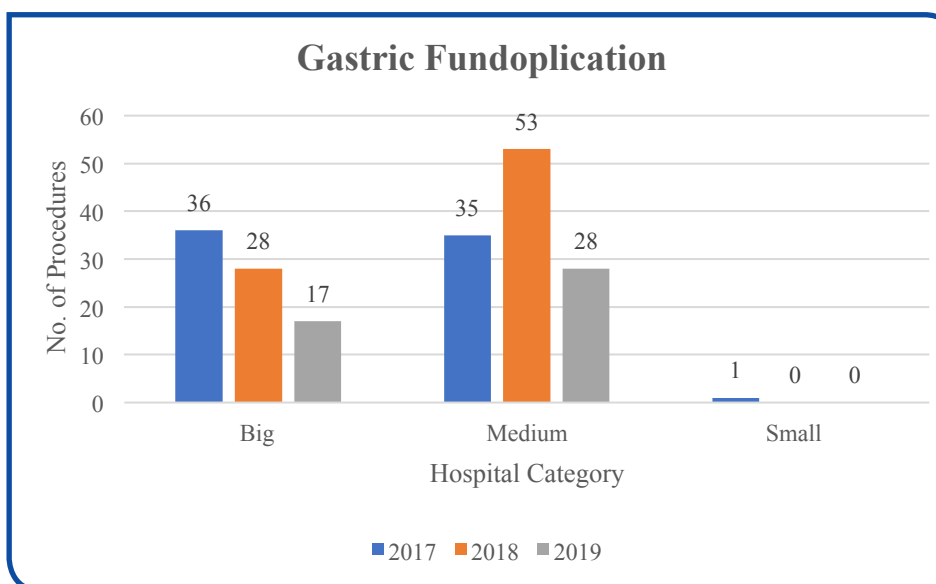


Figure 7.7.18 : Gastric Fundoplication by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



c. By BMS Hospital Category

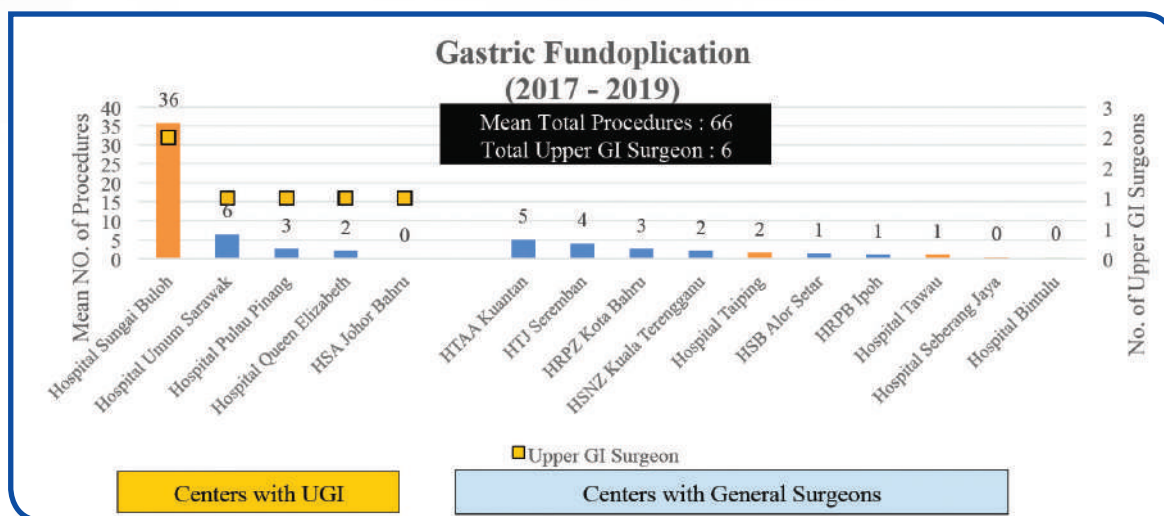


Figure 7.7.19 : Gastric Fundoplication by BMS Hospital Category

GASTRIC FUNDOPLICATION

HOSPITAL CATEGORY	2017	2018	2019
Big	36	28	17
Medium	35	53	28
Small	1	0	0
TOTAL	72	81	45

Table 7.7.12 Gastric Fundoplication by BMS Category

GASTRIC FUNDOPLICATION

NO	HOSPITALS	2017	2018	2019	MEAN NO. OF PROCEDURES	UPPER UGI SURGEON
1	Hospital Sungai Buloh	29	51	27	36	2
2	Hospital Umum Sarawak	11	5	3	6	1
3	HTAA Kuantan	2	4	9	5	
4	HTJ Seremban	3	9	0	4	
5	Hospital Pulau Pinang	8	0	0	3	1
6	HRPZ Kota Bahru	5	3	0	3	
7	Hospital Queen Elizabeth	0	4	2	2	1
8	HSNZ Kuala Terengganu	3	3	0	2	
9	Hospital Taiping	4	1	0	2	
10	HSB Alor Setar	4	0	0	1	
11	HRPB Ipoh	0	0	3	1	
12	Hospital Tawau	2	1	0	1	
13	Hospital Seberang Jaya	0	0	1	0	
14	Hospital Bintulu	1	0	0	0	
15	HSA Johor Bahru	0	0	0	0	1
	TOTAL	72	81	45	66	6

Table 7.7.13 Gastric Fundoplication by Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



7.7.4 Underrunning of Bleeding Peptic Ulcer (Gastric & Duodenal)

a. Total

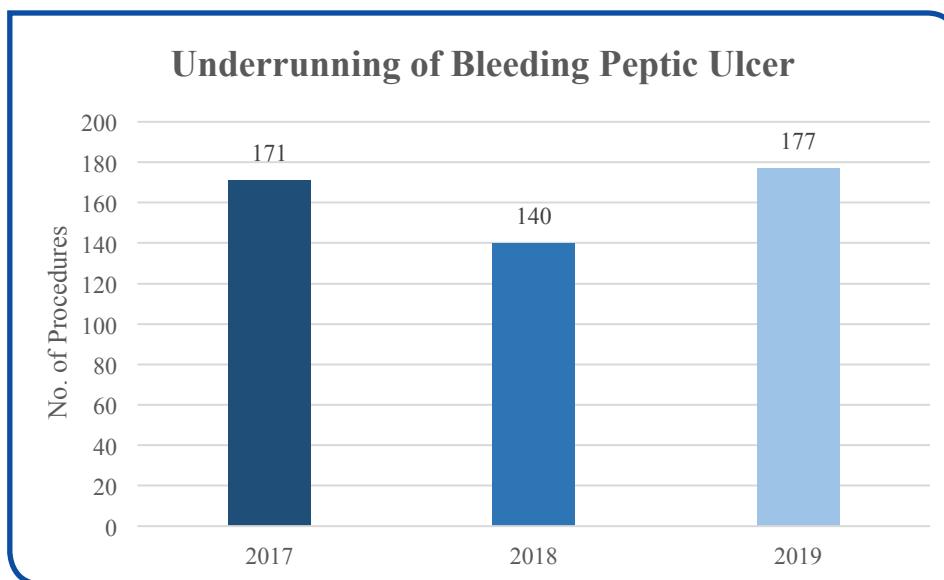


Figure 7.7-20 : Total Number of Underrunning of Bleeding Peptic Ulcer

b. By BMS Category

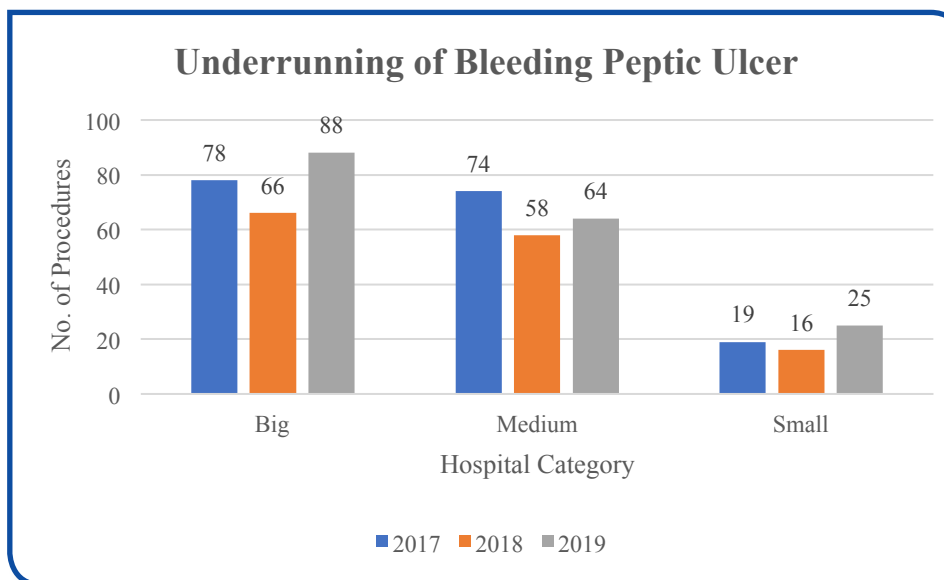


Figure 7.7.21 : Underrunning of Bleeding Peptic Ulcer by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



c. By BMS Hospital Category

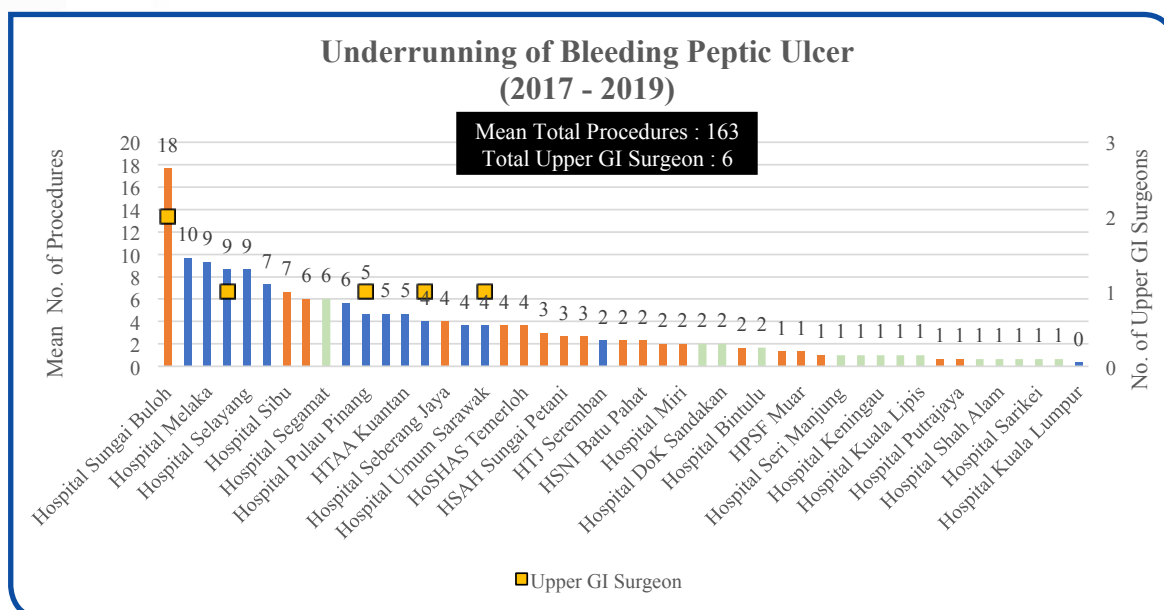


Figure 7.7.22 : Underrunning of Bleeding Peptic Ulcer by BMS Hospital Category

UNDERRUNNING OF BLEEDING PEPTIC ULCER

HOSPITAL CATEGORY	2017	2018	2019
Big	78	66	88
Medium	74	58	64
Small	19	16	25
TOTAL	171	140	177

Table 7.7.14 : Underrunning of Bleeding Peptic Ulcer by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



UNDERRUNNING OF BLEEDING PEPTIC ULCER

NO	HOSPITALS	2017	2018	2019	MEAN NO. OF PROCEDURES	UGI SURGEON
1	Hospital Sungai Buloh	21	18	14	18	2
2	HSB Alor Setar	12	8	9	10	
3	Hospital Melaka	7	2	19	9	
4	HSA Johor Bahru	7	8	11	9	1
5	Hospital Selayang	8	11	7	9	
6	HRPB Ipoh	5	6	11	7	
7	Hospital Sibul	10	4	6	7	
8	Hospital Taiping	3	6	9	6	
9	Hospital Segamat	4	5	9	6	
10	HTAR Klang	5	6	6	6	
11	Hospital Pulau Pinang	7	4	3	5	1
12	HRPZ Kota Bharu	4	3	7	5	
13	HTAA Kuantan	4	4	6	5	
14	Hospital Queen Elizabeth	6	3	3	4	1
15	Hospital Seberang Jaya	6	2	4	4	
16	HSNZ Kuala Terengganu	5	5	1	4	
17	Hospital Umum Sarawak	2	5	4	4	1
18	HSI Johor Bahru	9	2	0	4	
19	HoSHAS Temerloh	1	6	4	4	
20	Hospital Teluk Intan	2	2	5	3	
21	HSAH Sungai Petani	0	5	3	3	
22	Hospital Tawau	1	3	4	3	
23	HTJ Seremban	6	1	0	2	
24	Hospital Kajang	3	2	2	2	
25	HSNI Batu Pahat	2	3	2	2	
26	Hospital Kuala Pilah	2	2	2	2	
27	Hospital Miri	5	0	1	2	
28	Hospital Kulim	4	1	1	2	
29	Hospital DoK Sandakan	1	1	4	2	
30	HEBHK Kluang	3	0	2	2	
31	Hospital Bintulu	2	3	0	2	
32	HTF Kangar	1	0	3	1	
33	HPSF Muar	1	2	1	1	
34	Hospital Serdang	2	0	1	1	
35	Hospital Seri Manjung	1	1	1	1	
36	Hospital Tanah Merah	3	0	0	1	
37	Hospital Keningau	1	0	2	1	
38	Hospital Lahad Datu	0	1	2	1	
39	Hospital Kuala Lipis	2	1	0	1	
40	Hospital Ampang	1	1	0	1	
41	Hospital Putrajaya	1	0	1	1	
42	Hospital Langkawi	0	0	2	1	
43	Hospital Shah Alam	0	0	2	1	
44	HSIP Kuala Krai	0	2	0	1	
45	Hospital Sarikei	1	0	1	1	
46	Hospital Labuan	0	1	1	1	
47	Hospital Kuala Lumpur	0	0	1	0	
48	Hospital Queen Elizabeth 2	0	0	0	0	
49	Institut Kanser Negara	0	0	0	0	
50	Hospital Port Dickson	0	0	0	0	
51	Hospital Kemaman	0	0	0	0	
52	Hospital Kapit	0	0	0	0	
53	Hospital Banting	0	0	0	0	
TOTAL		171	140	177	163	6

Table 7.7.15 : Underrunning of Bleeding Peptic Ulcer by Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



7.7.5 PGU and PDU Surgery

List of procedures selected for Perforated Gastric Ulcer (PGU) and Perforated Duodenal Ulcer (PDU) workload measurement are:

- PGU / PDU Simple Omentum Repair - Open
- PGU / PDU Simple Omentum Repair - Laparoscopic
- Partial Gastrectomy

a. Total

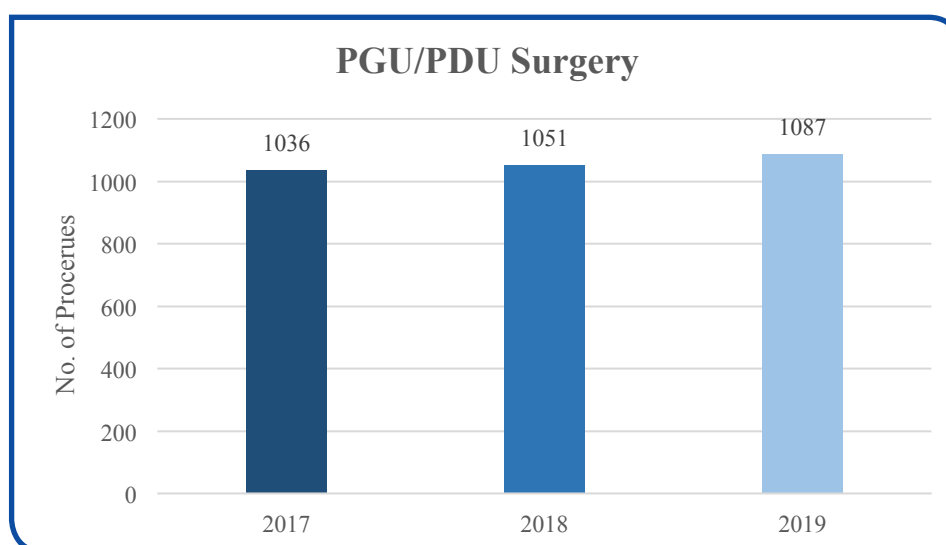


Figure 7.7.23 : Total Number of PGU / PDU Surgery

b. By BMS Category

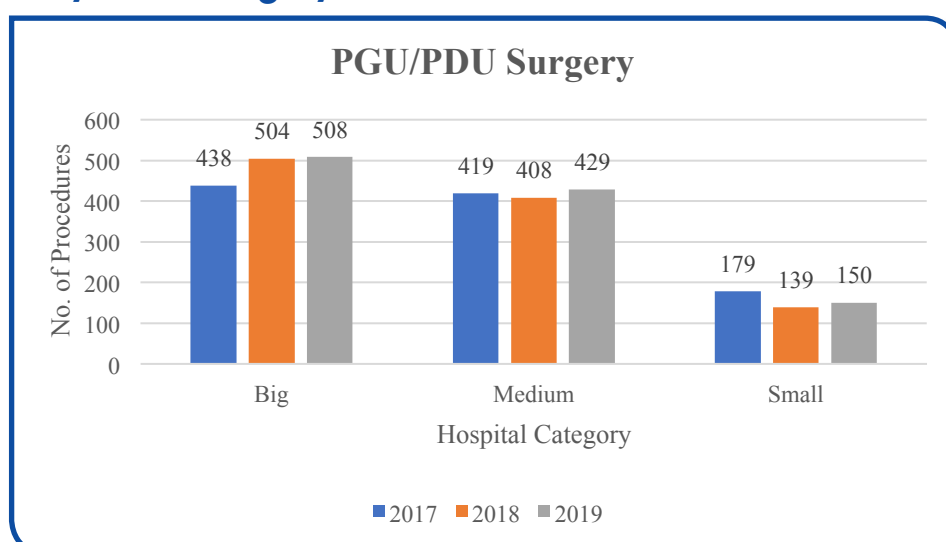


Figure 7.7.24 : PGU / PDU Surgery by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



c. By BMS Hospital Category

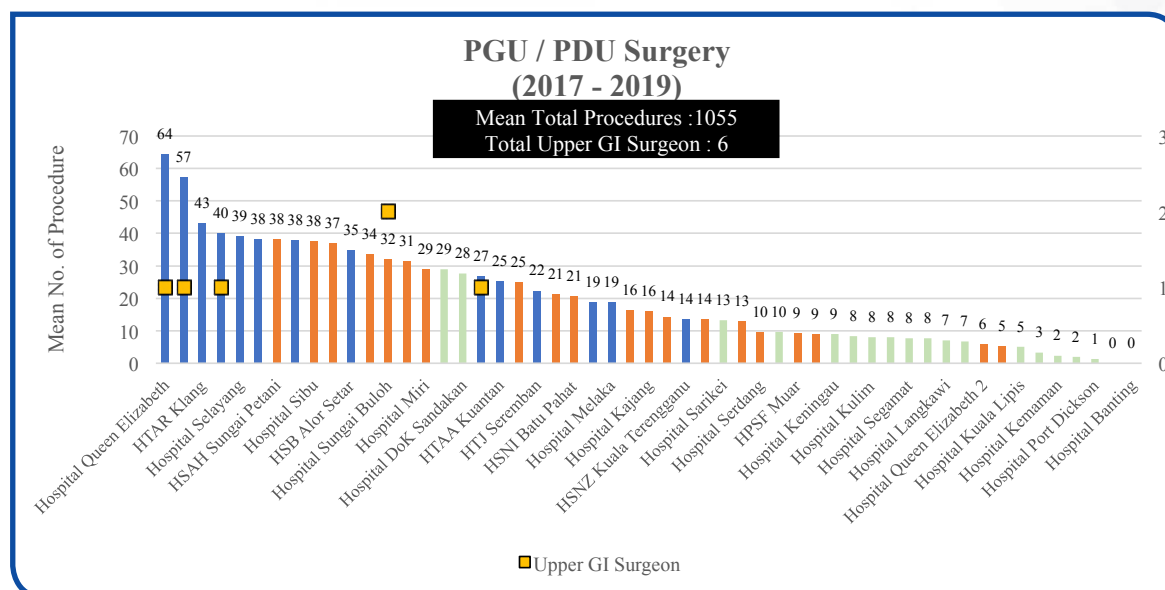


Figure 7.7-25 : PGU / PDU Surgery By BMS Hospital Category

PGU / PDU SURGERY

HOSPITAL CATEGORY	2017	2018	2019
Big	438	504	508
Medium	419	408	429
Small	179	139	150
TOTAL	1036	1051	1087

Table 7.7.16 :: PGU / PDU Surgery By BMS Category

PGU / PDU SURGERY

PROCEDURE TYPE	2017	(%)	2018	(%)	2019	(%)
PGU / PDU Simple Closure Omentum Patch - Open	990	96%	1004	96%	957	88%
PGU / PDU Simple Closure Omentum Patch - Laparoscopic	46	4%	46	4%	60	6%
Thoracotomy	0	0%	1	0%	70	6%
TOTAL	1036	100%	1051	100%	1087	100%

Table 7.7.17 : Types of PGU / PDU Surgery

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



PGU / PDU SURGERY

NO	HOSPITALS	MEAN NO OF PROCEDURES			TOTAL MEAN PROCEDURES (a+b+c+d)	NO. OF UGI SURGEON
		PGU / PDU SIMPLE CLOSURE OMENTUM PATCH - OPEN (a)	PGU / PDU SIMPLE CLOSURE OMENTUM PATCH - LAPAROSCOPIC (b)	PGU / PDU-PARTIAL GASTRECTOMY (c)		
1	Hospital Queen Elizabeth	52	10	2	64	1
2	Hospital Umum Sarawak	55	1	1	57	1
3	HTAR Klang	40	1	2	43	
4	HSA Johor Bahru	40	0	0	40	1
5	Hospital Selayang	36	1	1	39	
6	HRPZ Kota Bharu	36	0	2	38	
7	HSAH Sungai Petani	38	0	0	38	
8	HRPB Ipoh	34	2	2	38	
9	Hospital Sibul	37	1	0	38	
10	Hospital Seberang Jaya	33	4	0	37	
11	HSB Alor Setar	29	5	1	35	
12	Hospital Tawau	32	1	0	34	
13	Hospital Sungai Buloh	31	0	1	32	2
14	Hospital Taiping	29	1	2	31	
15	Hospital Miri	28	0	1	29	
16	Hospital Bintulu	24	5	0	29	
17	Hospital DoK Sandakan	24	1	2	28	
18	Hospital Pulau Pinang	26	1	0	27	1
19	HTAA Kuantan	23	0	2	25	
20	HSI Johor Bahru	23	2	0	25	
21	HTJ Seremban	17	5	0	22	
22	HoSHAS Temerloh	21	0	0	21	
23	HSNI Batu Pahat	21	0	0	21	
24	Hospital Kuala Lumpur	17	1	1	19	
25	Hospital Melaka	19	0	0	19	
26	Hospital Teluk Intan	16	0	0	16	
27	Hospital Kajang	14	2	0	16	
28	HTF Kangar	14	0	0	14	
29	HSNZ Kuala Terengganu	13	0	0	14	
30	HEBHK Kluang	13	1	0	14	
31	Hospital Sarikei	13	0	0	13	
32	Hospital Ampang	12	1	0	13	
33	Hospital Serdang	7	3	0	10	
34	Hospital Shah Alam	9	0	1	10	
35	HPSF Muar	9	0	0	9	
36	Hospital Kuala Pilah	9	0	0	9	
37	Hospital Keningau	9	0	0	9	
38	Hospital Seri Manjung	8	0	0	8	
39	Hospital Kulim	8	0	0	8	
40	Hospital Lahad Datu	8	0	0	8	
41	Hospital Segamat	8	0	0	8	
42	HSIP Kuala Krai	8	0	0	8	
43	Hospital Langkawi	7	0	0	7	
44	Hospital Tanah Merah	7	0	0	7	
45	Hospital Queen Elizabeth 2	6	0	0	6	
46	Hospital Putrajaya	5	0	0	5	
47	Hospital Kuala Lipis	5	0	0	5	
48	Hospital Kapit	3	0	0	3	
49	Hospital Kemaman	2	0	0	2	
50	Hospital Labuan	2	0	0	2	
51	Hospital Port Dickson	1	0	0	1	
52	Institut Kanser Negara	0	0	0	0	
53	Hospital Banting	0	0	0	0	
TOTAL		980	51	24	1055	6

Table 7.7.18 : PGU / PDU Surgery By Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



7.7.5.1 PGU and PDU Simple Omentum Patch Closure - Open

a. By BMS Hospital Category

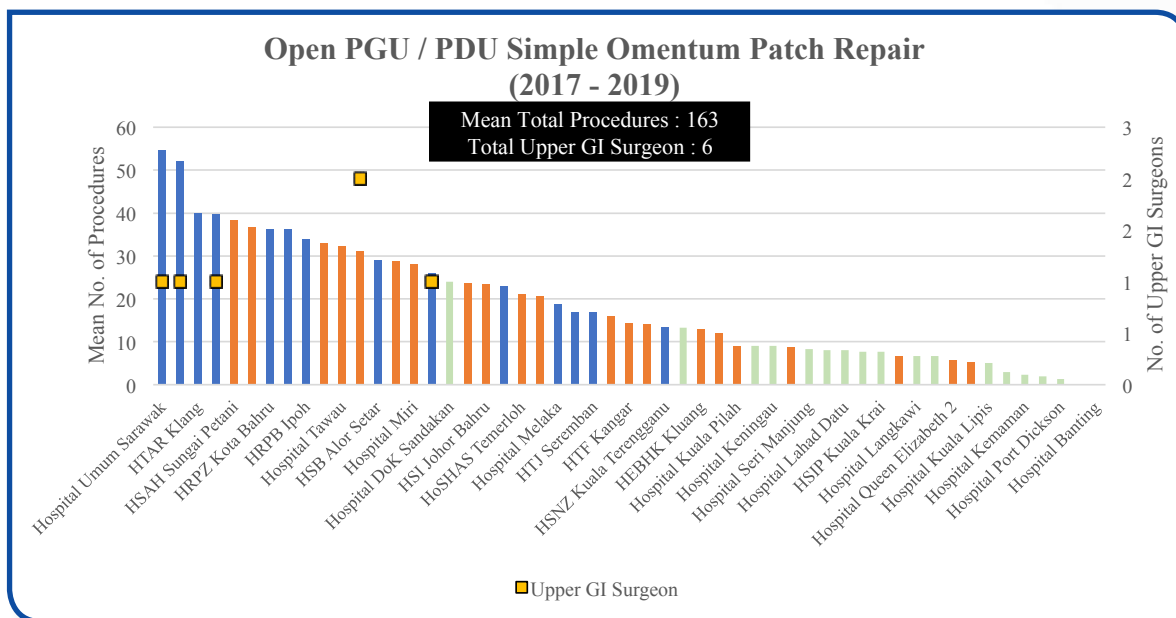


Figure 7.7.26 : Open PGU /PDU Simple Omentum Patch Closure by BMS Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



PGU / PDU SIMPLE OMENTUM PATCH CLOSURE - OPEN

NO	HOSPITALS	2017	2018	2019	MEAN NO. OF PROCEDURES	UGI SURGEON
1	Hospital Umum Sarawak	46	70	48	55	1
2	Hospital Queen Elizabeth	51	49	56	52	
3	HTAR Klang	35	41	44	40	
4	HSA Johor Bahru	49	42	28	40	1
5	HSAH Sungai Petani	30	37	48	38	
6	Hospital Sibul	38	43	29	37	
7	HRPZ Kota Bahru	36	52	21	36	
8	Hospital Selayang	34	45	30	36	
9	HRPB Ipoh	35	28	49	34	
10	Hospital Seberang Jaya	35	40	24	33	
11	Hospital Tawau	31	32	34	32	
12	Hospital Sungai Buloh	37	22	34	31	2
13	HSB Alor Setar	32	39	16	29	
14	Hospital Taiping	31	29	26	29	
15	Hospital Miri	33	21	30	28	
16	Hospital Pulau Pinang	25	22	31	26	1
17	Hospital DoK Sandakan	39	14	19	24	
18	Hospital Bintulu	26	26	19	24	
19	HSI Johor Bahru	21	18	31	23	
20	HTAA Kuantan	19	25	25	23	
21	HoSHAS Temerloh	20	21	22	21	
22	HSNI Batu Pahat	28	17	17	21	
23	Hospital Melaka	15	21	20	19	
24	Hospital Kuala Lumpur	20	16	15	17	
25	HTJ Seremban	10	20	21	17	
26	Hospital Teluk Intan	11	20	17	16	
27	HTF Kangar	14	14	15	14	
28	Hospital Kajang	14	13	15	14	
29	HSNZ Kuala Terengganu	8	8	24	13	
30	Hospital Sarikei	10	18	12	13	
31	HEBHK Kluang	15	17	7	13	
32	Hospital Ampang	13	11	12	12	
33	Hospital Kuala Pilah	10	8	9	9	
34	Hospital Shah Alam	12	8	7	9	
35	Hospital Keningau	11	8	8	9	
36	HPSF Muar	6	11	9	9	
37	Hospital Seri Manjung	10	3	12	8	
38	Hospital Kulim	13	4	7	8	
39	Hospital Lahad Datu	4	10	10	8	
40	Hospital Segamat	9	4	10	8	
41	HSIP Kuala Krai	9	7	7	8	
42	Hospital Serdang	8	6	6	7	
43	Hospital Langkawi	7	8	5	7	
44	Hospital Tanah Merah	7	8	5	7	
45	Hospital Queen Elizabeth 2	9	5	3	6	
46	Hospital Putrajaya	1	6	9	5	
47	Hospital Kuala Lipis	8	4	3	5	
48	Hospital Kapit	2	6	1	3	
49	Hospital Kemaman	0	2	5	2	
50	Hospital Labuan	2	2	2	2	
51	Hospital Port Dickson	1	3	0	1	
52	Institut Kanser Negara	0	0	0	0	
53	Hospital Banting	0	0	0	0	
	TOTAL	990	1004	957	980	6

Table 7.7.19 : Open PGU /PDU Simple Omentum Patch Repair by Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



7.7.5.2 PGU and PDU Simple Omentum Patch Closure - Laparoscopic

a. By BMS Hospital Category

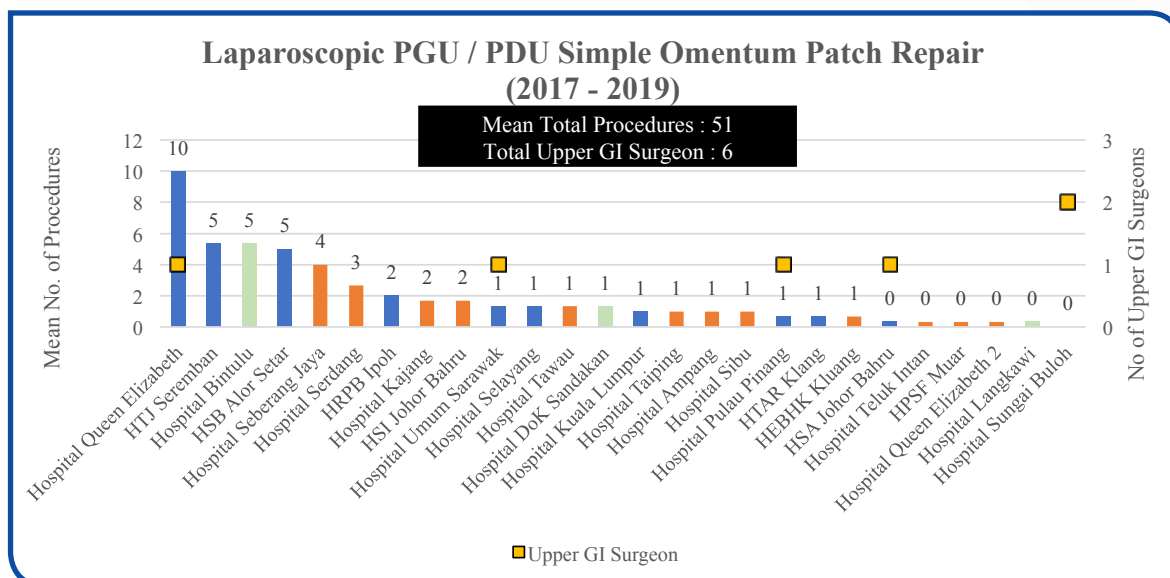


Figure 7.7.27 : Laparoscopic PGU / PDU Simple Omentum Patch Closure by BMS Hospital Category

PGU / PDU SIMPLE OMENTUM CLOSURE - LAPAROSCOPIC

NO	HOSPITALS	2017	2018	2019	MEAN NO. OF PROCEDURES	UGI SURGEON
1	Hospital Queen Elizabeth	8	12	10	10	1
2	HTJ Seremban	8	6	2	5	
3	Hospital Bintulu	9	3	4	5	
4	HSB Alor Setar	0	0	15	5	
5	Hospital Seberang Jaya	0	7	5	4	
6	Hospital Serdang	7	1	0	3	
7	HRPB Ipoh	3	0	3	2	
8	Hospital Kajang	1	3	1	2	
9	HSI Johor Bahru	0	0	5	2	
10	Hospital Umum Sarawak	2	2	0	1	1
11	Hospital Selayang	0	4	0	1	
12	Hospital Tawau	0	3	1	1	
13	Hospital DoK Sandakan	0	0	4	1	
14	Hospital Kuala Lumpur	0	1	2	1	
15	Hospital Taiping	2	1	0	1	
16	Hospital Ampang	1	2	0	1	
17	Hospital Sibul	0	0	3	1	
18	Hospital Pulau Pinang	2	0	0	1	1
19	HTAR Klang	0	0	2	1	
20	HEBHK Kluang	0	0	2	1	
21	HSA Johor Bahru	0	1	0	0	1
22	Hospital Teluk Intan	1	0	0	0	
23	HPSF Muar	1	0	0	0	
24	Hospital Queen Elizabeth 2	1	0	0	0	
25	Hospital Langkawi	0	0	1	0	
26	Hospital Sungai Buloh	0	0	0	0	2
TOTAL		46	46	60	51	6

Table 7.7.20 : Laparoscopic PGU / PDU Simple Omentum Patch Closure by Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



7.7.5.3 PGU and PDU Partial Gastrectomy

a. By BMS Hospital Category

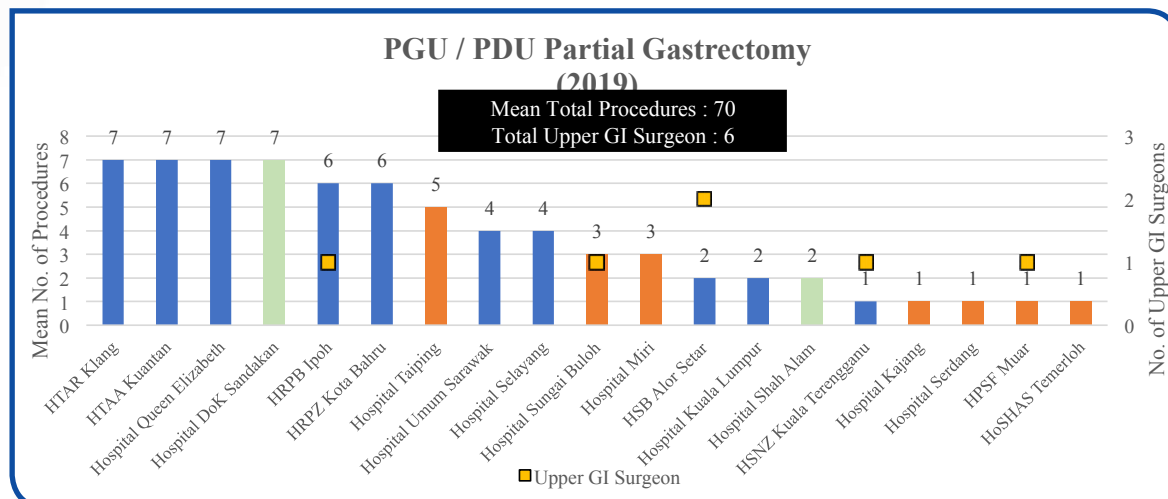


Figure 7.7.28 : PGU / PDU Partial Gastrectomy by BMS Hospital Category

PGU / PDU - PARTIAL GASTRECTOMY

NO	HOSPITALS	2019	UGI SURGEON
1	HTAR Klang	7	
2	HTAA Kuantan	7	
3	Hospital Queen Elizabeth	7	
4	Hospital DoK Sandakan	7	
5	HRPB Ipoh	6	1
6	HRPZ Kota Bahru	6	
7	Hospital Taiping	5	
8	Hospital Umum Sarawak	4	
9	Hospital Selayang	4	
10	Hospital Sungai Buloh	3	1
11	Hospital Miri	3	
12	HSB Alor Setar	2	2
13	Hospital Kuala Lumpur	2	
14	Hospital Shah Alam	2	
15	HSNZ Kuala Terengganu	1	1
16	Hospital Kajang	1	
17	Hospital Serdang	1	
18	HPSF Muar	1	1
19	HoSHAS Temerloh	1	
20	Hospital Kapit	0	
	TOTAL	70	6

Table 7.7.21 : PGU / PDU Partial Gastrectomy by Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



7.7.6 PGU and PDU Surgery

a. Total

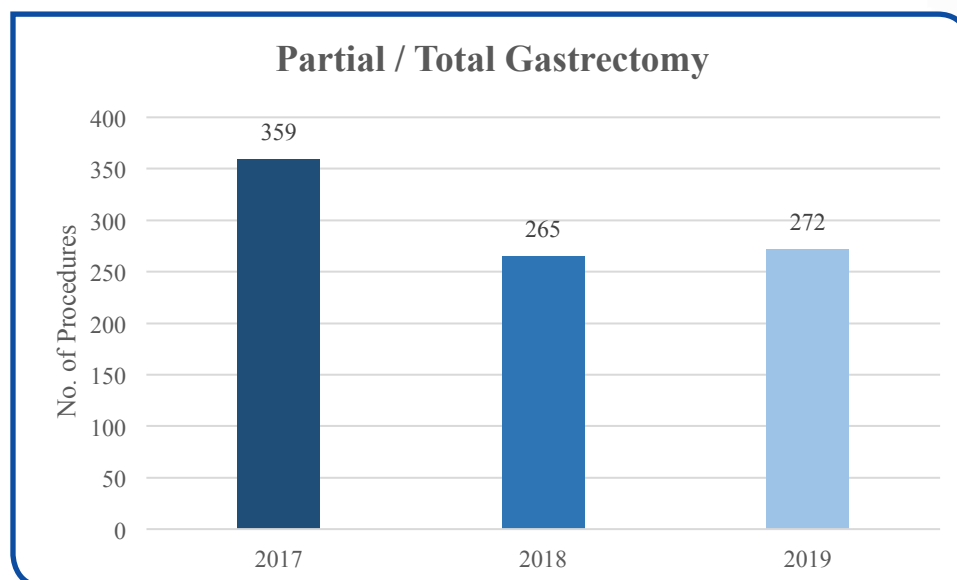


Figure 7.7.29 : Total Number of Partial / Total Gastrectomy

b. By BMS Category

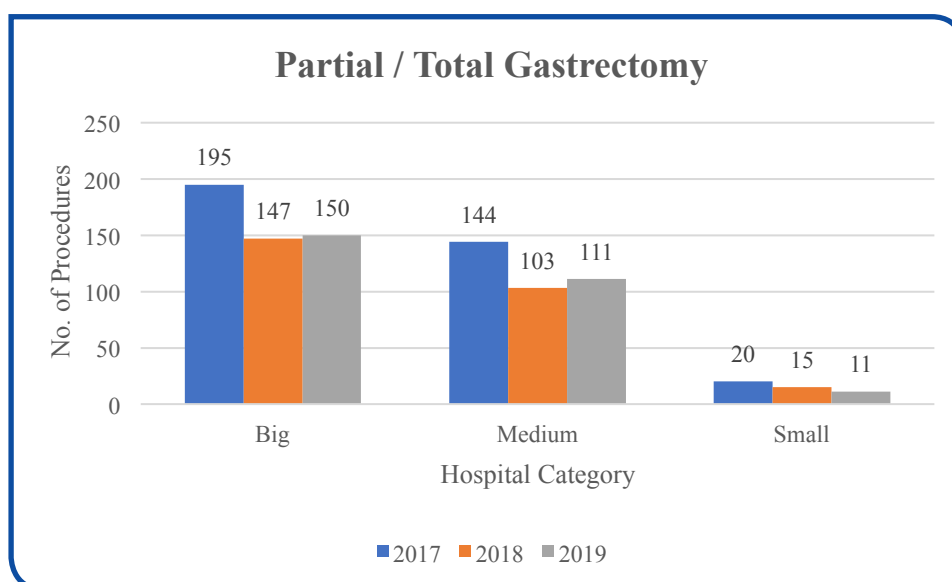


Figure 7.7.30 : Partial / Total Gastrectomy by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



c. By BMS Hospital Category

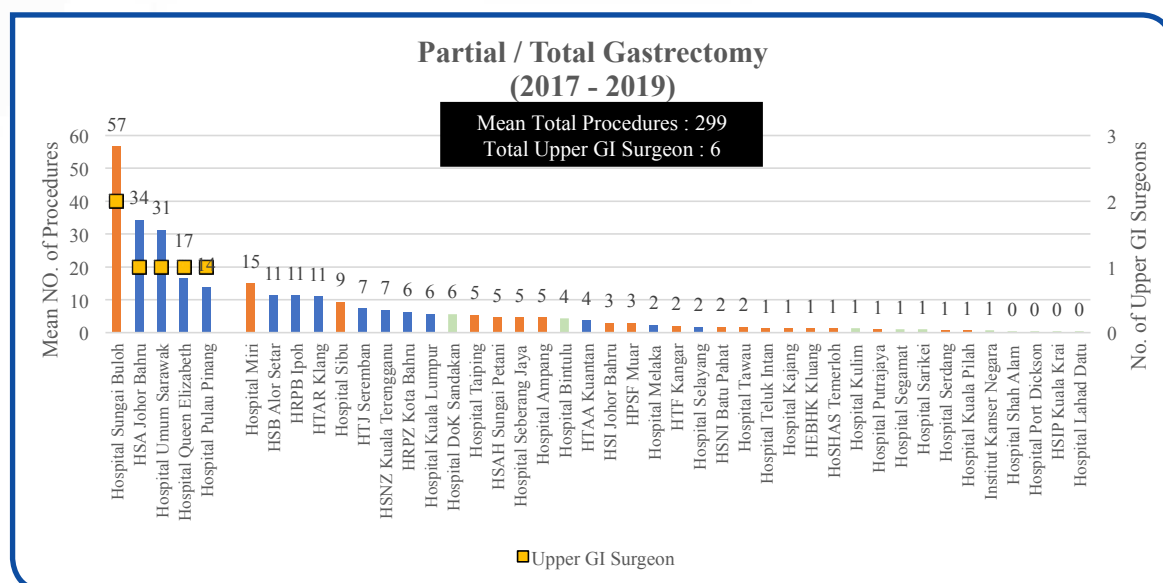


Figure 7.7.31: Partial / Total Gastrectomy by BMS Hospital Category

TOTAL / PARTIAL GASTRECTOMY

HOSPITAL CATEGORY	2017	2018	2019
Big	195	147	150
Medium	144	103	111
Small	20	15	11
TOTAL	359	265	272

Table 7.7.22 : Partial / Total Gastrectomy by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



TOTAL / PARTIAL GASTRECTOMY

NO	HOSPITALS	2017	2018	2019	MEAN NO. OF PROCEDURES	UGI SURGEON
1	Hospital Sungai Buloh	56	48	66	57	2
2	HSA Johor Bahru	16	34	53	34	1
3	Hospital Umum Sarawak	23	42	29	31	1
4	Hospital Queen Elizabeth	21	5	24	17	1
5	Hospital Miri	23	8	14	15	
6	Hospital Pulau Pinang	31	7	4	14	1
7	HSB Alor Setar	22	9	3	11	
8	HRPB Ipoh	23	0	11	11	
9	HTAR Klang	12	10	11	11	
10	Hospital Sibul	14	14	0	9	
11	HTJ Seremban	8	11	3	7	
12	HSNZ Kuala Terengganu	9	9	3	7	
13	HRPZ Kota Bharu	9	8	2	6	
14	Hospital Kuala Lumpur	13	3	1	6	
15	Hospital DoK Sandakan	8	8	1	6	
16	Hospital Taiping	6	4	6	5	
17	HSAH Sungai Petani	7	2	5	5	
18	Hospital Seberang Jaya	4	5	5	5	
19	Hospital Ampang	1	7	6	5	
20	Hospital Bintulu	3	1	9	4	
21	HTAA Kuantan	4	2	5	4	
22	HSI Johor Bahru	7	1	1	3	
23	HPSF Muar	6	3	0	3	
24	Hospital Melaka	3	3	1	2	
25	HTF Kangar	3	0	3	2	
26	Hospital Selayang	1	4	0	2	
27	HSNI Batu Pahat	2	2	1	2	
28	Hospital Tawau	3	1	1	2	
29	Hospital Teluk Intan	4	0	0	1	
30	Hospital Kajang	0	4	0	1	
31	HEBHK Kluang	1	0	3	1	
32	HoSHAS Temerloh	3	1	0	1	
33	Hospital Kulim	2	2	0	1	
34	Hospital Putrajaya	2	1	0	1	
35	Hospital Segamat	3	0	0	1	
36	Hospital Sarikei	1	1	1	1	
37	Hospital Serdang	1	1	0	1	
38	Hospital Kuala Pilah	1	1	0	1	
39	Institut Kanser Negara	1	1	0	1	
40	Hospital Shah Alam	1	0	0	0	
41	Hospital Port Dickson	0	1	0	0	
42	HSIP Kuala Krai	1	0	0	0	
43	Hospital Lahad Datu	0	1	0	0	
44	Hospital Queen Elizabeth 2	0	0	0	0	
45	Hospital Langkawi	0	0	0	0	
46	Hospital Seri Manjung	0	0	0	0	
47	Hospital Kemaman	0	0	0	0	
48	Hospital Tanah Merah	0	0	0	0	
49	Hospital Kapit	0	0	0	0	
50	Hospital Keningau	0	0	0	0	
51	Hospital Labuan	0	0	0	0	
52	Hospital Kuala Lipis	0	0	0	0	
53	Hospital Banting	0	0	0	0	
TOTAL		359	265	272	299	6

Table 7.7.23 : Partial / Total Gastrectomy by Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



7.8 Bariatric Surgery

List of procedures selected for Bariatric Surgery workload measurement are:

- Sleeve Gastrectomy
- Other Bariatric Procedures

a. Total

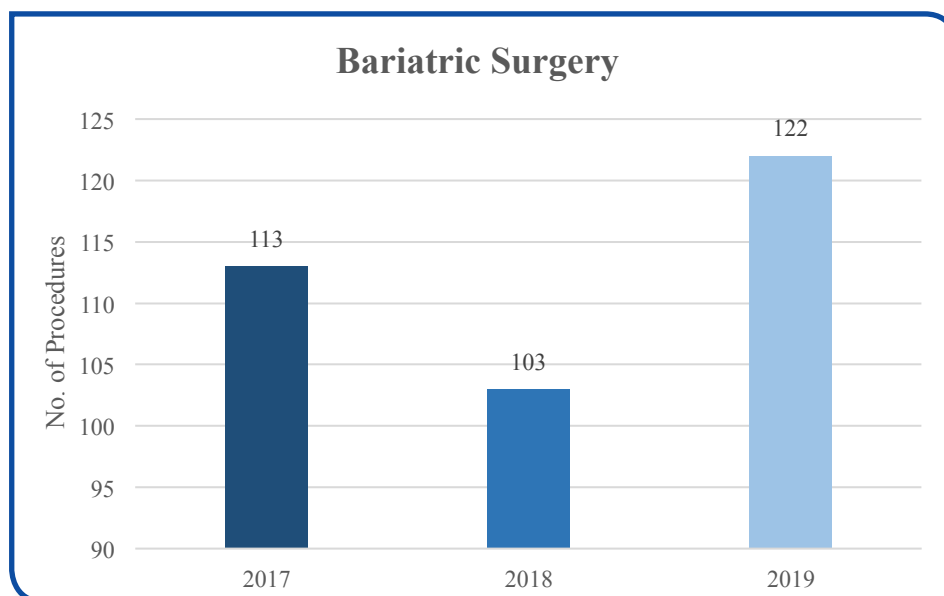


Figure 7.8.1: Total Number of Bariatric Surgery

b. By BMS Category

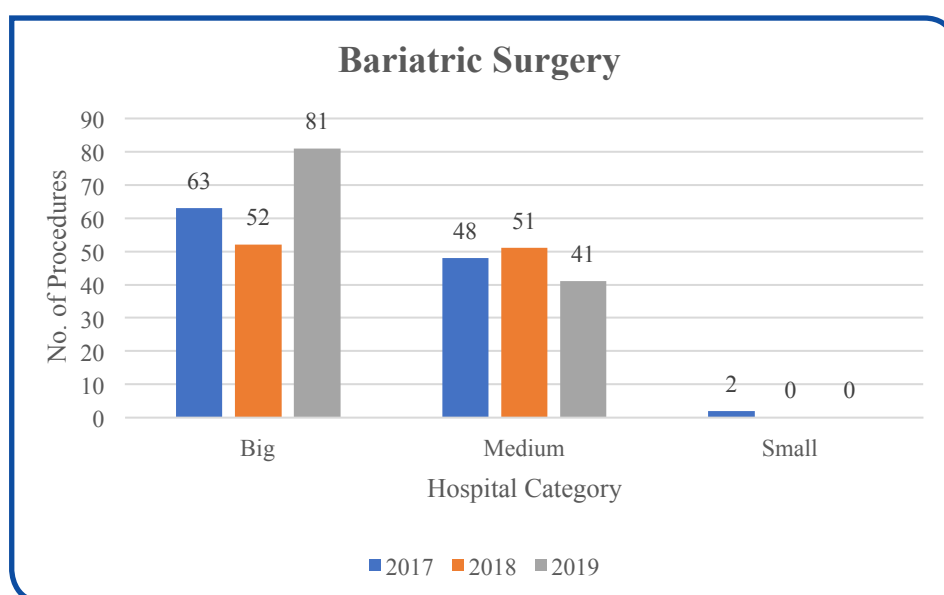


Figure 7.8.2 : Bariatric Surgery by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



c. By BMS Hospital Category

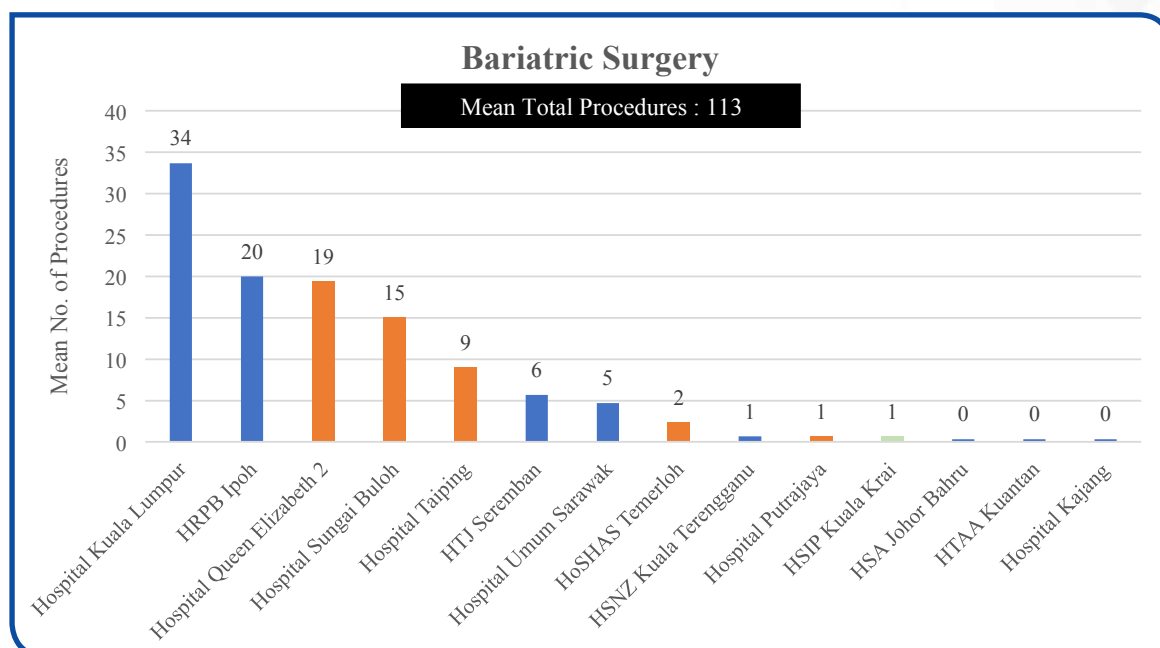


Figure 7.8.3 : Bariatric Surgery. By BMS Hospital Category

d. Types of Bariatric Surgery

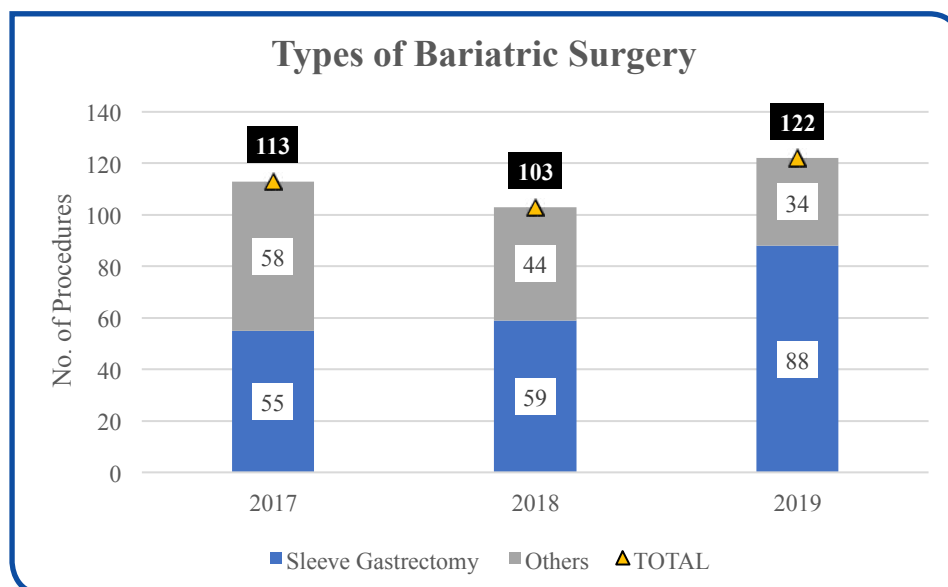


Figure 7.8.4 : Types of Bariatric Surgery

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



BARIATRIC PROCEDURES

HOSPITAL CATEGORY	2017	2018	2019
Big	63	52	81
Medium	48	51	41
Small	2	0	0
TOTAL	113	103	122

Table 7.8.1 : Bariatric Surgery by BMS Category

BARIATRIC PROCEDURES

PROCEDURE TYPE	2017	(%)	2018	(%)	2019	(%)
Table 7.8-2 : Types of Bariatric Surgery	55	49%	59	57%	88	72%
Others	58	51%	44	43%	122	28%
TOTAL	113	100%	103	100%	122	100%

Table 7.8.2 : Types of Bariatric Surgery

BARIATRIC PROCEDURES

NO	HOSPITALS	2017	2018	2019	MEAN NO. OF PROCEDURES
1	Hospital Kuala Lumpur	26	18	57	34
2	HRPB Ipoh	20	19	21	20
3	Hospital Queen Elizabeth 2	7	18	33	19
4	Hospital Sungai Buloh	16	21	8	15
5	Hospital Taiping	17	10	0	9
6	HTJ Seremban	8	9	0	6
7	Hospital Umum Sarawak	7	6	1	5
8	HoSHAS Temerloh	6	1	0	2
9	HSNZ Kuala Terengganu	1	0	1	1
10	Hospital Putrajaya	1	1	0	1
11	HSIP Kuala Krai	2	0	0	1
12	HSA Johor Bahru	0	0	1	0
13	HTAA Kuantan	1	0	0	0
14	Hospital Kajang	1	0	0	0
	TOTAL	113	103	122	113

Table 7.8.3 : Bariatric Surgery by Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



7.8.1 Sleeve Gastrectomy

a. By BMS Hospital Category

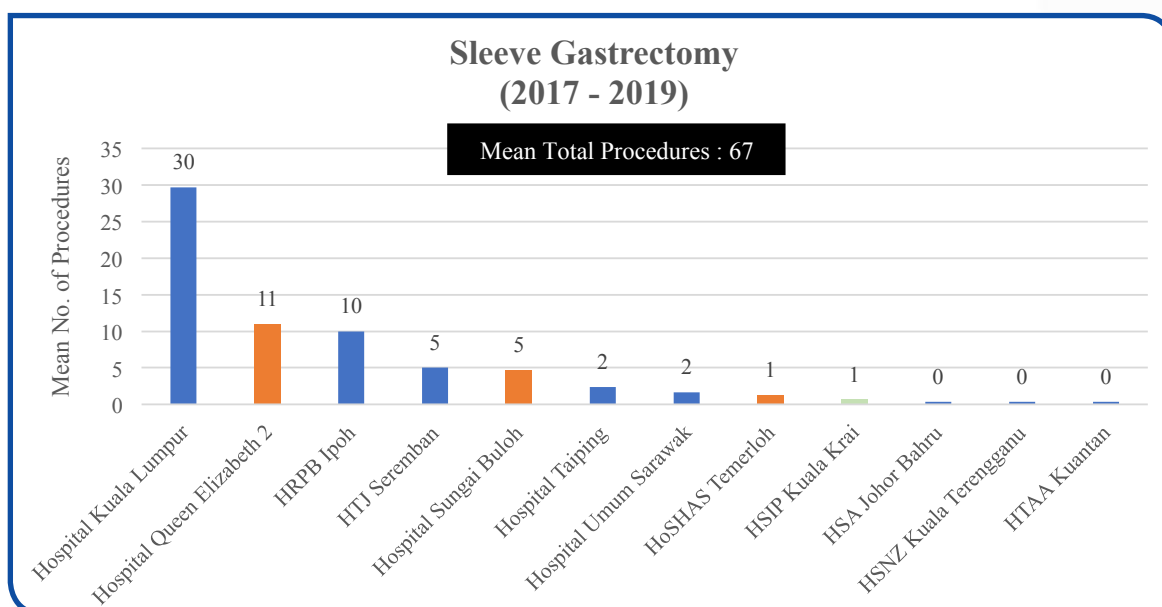


Figure 7.8.5 : Sleeve Gastrectomy by BMS Hospital Category

SLEEVE GASTRECTOMY

NO	HOSPITALS	2017	2018	2019
1	Hospital Kuala Lumpur	20	15	54
2	Hospital Queen Elizabeth 2	6	14	13
3	HRPB Ipoh	9	8	13
4	HTJ Seremban	6	9	0
5	Hospital Sungai Buloh	5	3	6
6	Hospital Taiping	1	6	0
7	Hospital Umum Sarawak	2	3	0
8	HoSHAS Temerloh	3	1	0
9	HSIP Kuala Krai	2	0	0
10	HSA Johor Bahru	0	0	1
11	HSNZ Kuala Terengganu	0	0	1
12	HTAA Kuantan	1	0	0
	TOTAL	55	59	88

Table 7.8.4 : Sleeve Gastrectomy by Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



7.8.2 Other Bariatric Procedures

a. By BMS Hospital Category

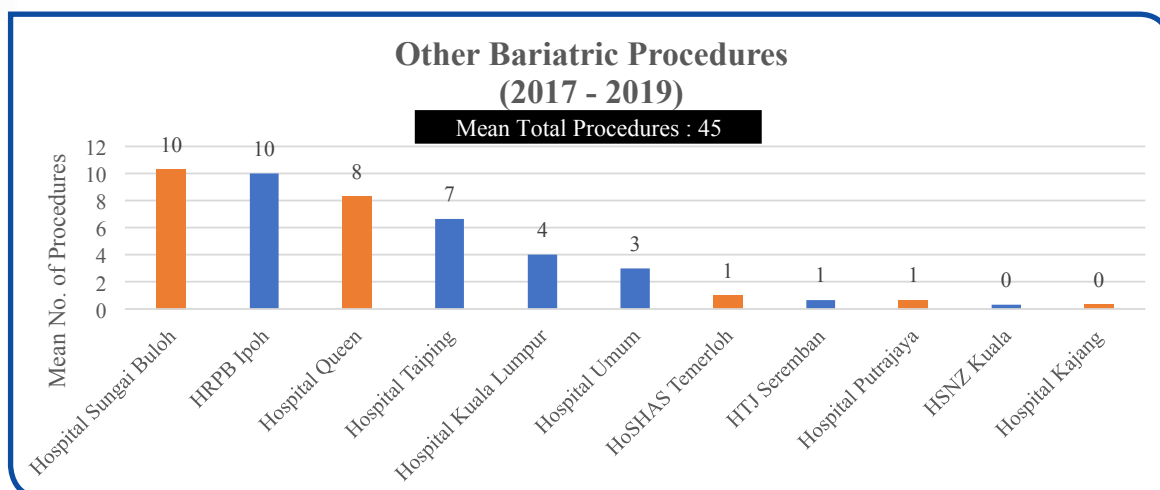


Figure 7.8.6 : Total Number of Other Bariatric Procedures by BMS Hospital Category

OTHER BARIATRIC PROCEDURES

NO	HOSPITALS	2017	2018	2019	MEAN NO. OF PROCEDURES
1	Hospital Sungai Buloh	11	18	2	10
2	HRPB Ipoh	11	11	8	10
3	Hospital Queen Elizabeth 2	1	4	20	8
4	Hospital Taiping	16	4	0	7
5	Hospital Kuala Lumpur	6	3	3	4
6	Hospital Umum Sarawak	5	3	1	3
7	HoSHAS Temerloh	3	0	0	1
8	HTJ Seremban	2	0	0	1
9	Hospital Putrajaya	1	1	0	1
10	HSNZ Kuala Terengganu	1	0	0	0
11	Hospital Kajang	1	0	0	0
TOTAL		58	44	32	45

Table 7.8.5 : Other Bariatric Procedures by Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



7.9 Hepatopancreaticobiliary (HPB)

List of procedures selected for Hepatopancreaticobiliary workload measurement are:

- Cholecystectomy
- Cholecystectomy and common bile duct (CBD) exploration
- Hepatectomy
- Whipple's Procedure

a. Total

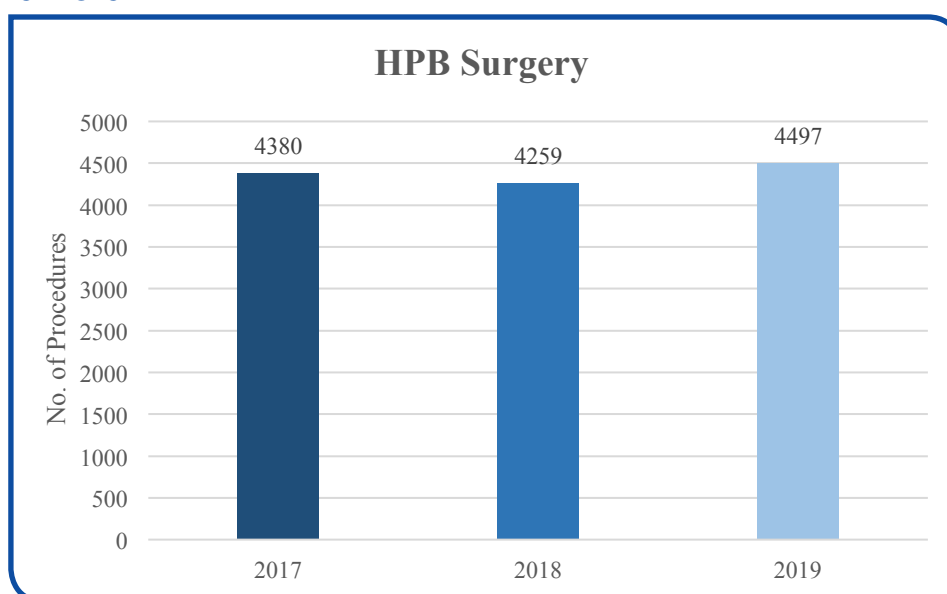


Figure 7.9.1 : Total Number of HPB Surgery

b. By BMS Category

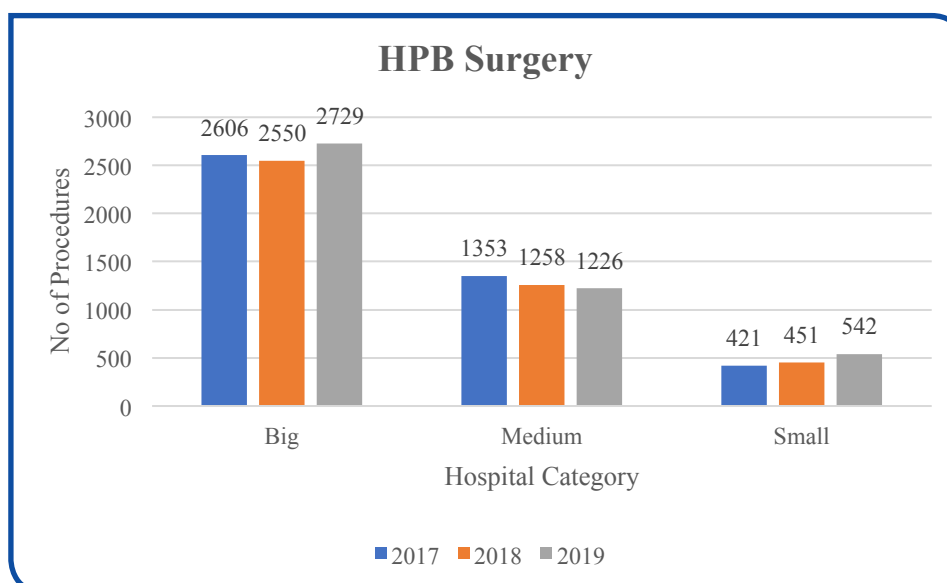


Figure 7.9.2 : HPB Surgery by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



c. By BMS Hospital Category

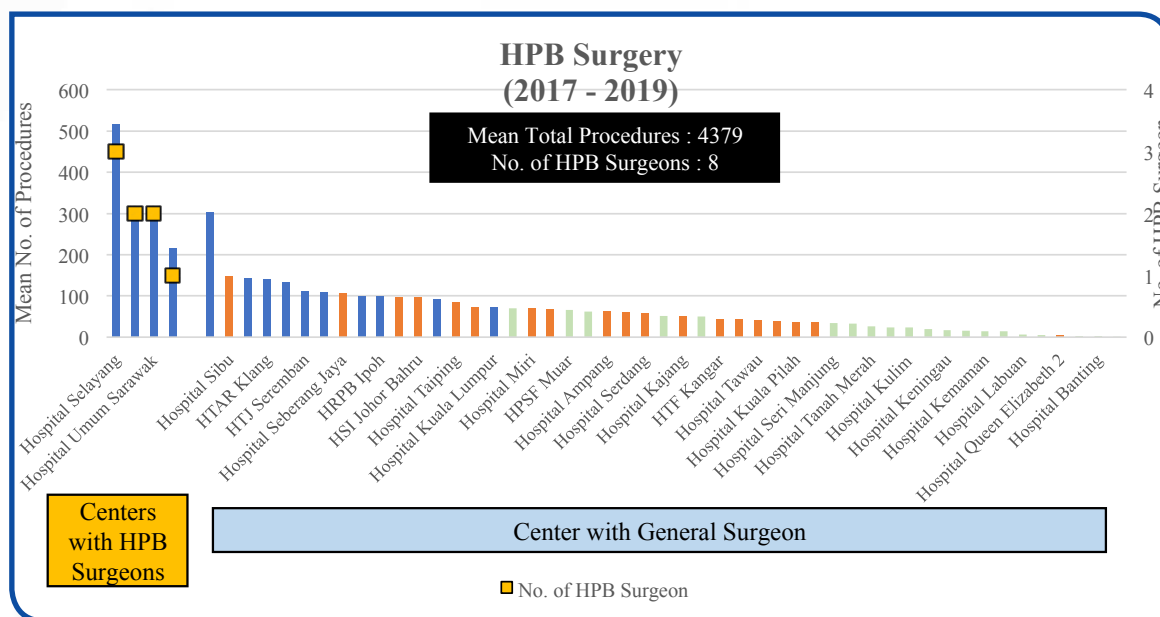


Figure 7.9.3 : HPB Surgery by BMS Hospital Category

d. Types of HPB Surgery

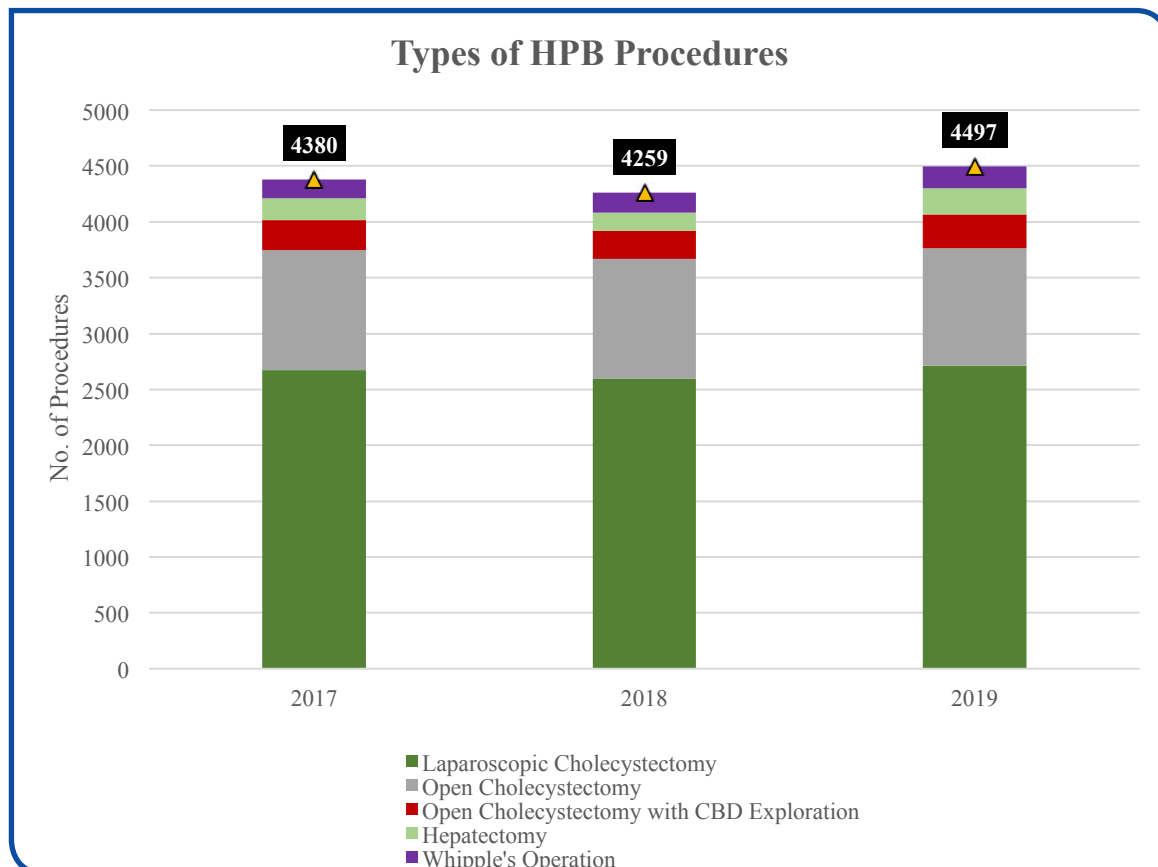


Figure 7.9.4 : Types of HPB Surgery

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



HEPATOPANCREATICOBILIARY

HOSPITAL CATEGORY	2017	2018	2019
Big	2606	2550	2729
Medium	1353	1258	1226
Small	421	451	542
TOTAL	4380	4259	4497

Table 7.9.1 : Total Number of HPB Surgery by BMS Category

HEPATOPANCREATICOBILIARY

PROCEDURE TYPE	2017	(%)	2018	(%)	2019	(%)
Laparoscopic Cholecystectomy	2675	61.1	2594	60.9	2710	60.3
Open Cholecystectomy	1072	24.5	1076	25.3	1056	23.5
Open Cholecystectomy with CBD Exploration	266	6.1	251	5.9	301	6.7
Hepatectomy	198	4.5	164	3.9	236	5.2
Hepatectomy	169	3.9	174	4.1	194	4.3
TOTAL	4380	100.0	4259	100.0	4497	100.0

Table 7.9.2 : Types of HPB Surgery

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



HEPATOPANCREATICOBILIARY

NO	HOSPITALS	2017	2018	2019	MEAN NO. OF PROCEDURES	HPB SURGEON
1	Hospital Selayang	483	498	567	516	3
2	HSB Alor Setar	350	249	337	312	2
3	Hospital Queen Elizabeth	288	254	364	302	
4	Hospital Umum Sarawak	285	302	276	288	2
5	HSA Johor Bahru	194	229	220	214	
6	Hospital Sibul	156	136	151	148	1
7	HRPZ Kota Bahru	147	129	149	142	
8	HTAR Klang	152	120	148	140	
9	HSNZ Kuala Terengganu	121	135	140	132	
10	HTJ Seremban	109	120	108	112	
11	Hospital Melaka	139	146	44	110	
12	Hospital Seberang Jaya	114	104	98	105	
13	Hospital Pulau Pinang	98	93	108	100	
14	HRPB Ipoh	101	114	80	98	
15	HSAH Sungai Petani	85	97	107	96	
16	HSI Johor Bahru	92	72	124	96	
17	HTAA Kuantan	82	93	97	91	
18	Hospital Taiping	70	103	79	84	
19	HSNI Batu Pahat	81	77	59	72	
20	Hospital Kuala Lumpur	57	68	91	72	
21	Hospital DoK Sandakan	53	77	79	70	
22	Hospital Miri	64	60	84	69	
23	Hospital Sungai Buloh	78	71	55	68	
24	HPSF Muar	76	61	63	67	
25	Hospital Bintulu	65	43	79	62	
26	Hospital Ampang	60	55	71	62	
27	HoSHAS Temerloh	75	61	45	60	
28	Hospital Serdang	86	80	10	59	
29	Hospital Shah Alam	30	51	73	51	
30	Hospital Kajang	57	44	51	51	
31	Hospital Segamat	46	47	56	50	
32	HTF Kangar	53	32	47	44	
33	Hospital Putrajaya	45	45	42	44	
34	Hospital Tawau	51	38	33	41	
35	Hospital Teluk Intan	33	44	37	38	
36	Hospital Kuala Pilah	36	46	26	36	
37	HEBHK Kluang	31	31	44	35	
38	Hospital Seri Manjung	53	29	20	34	
39	HSIP Kuala Krai	11	27	59	32	
40	Hospital Tanah Merah	21	37	20	26	
41	Hospital Langkawi	22	23	27	24	
42	Hospital Kulim	35	18	17	23	
43	Hospital Sarikei	8	23	29	20	
44	Hospital Keningau	20	18	14	17	
45	Hospital Kuala Lipis	21	14	11	15	
46	Hospital Kemaman	15	12	17	15	
47	Hospital Port Dickson	11	9	23	14	
48	Hospital Labuan	4	5	9	6	
49	Hospital Lahad Datu	4	5	7	5	
50	Hospital Queen Elizabeth 2	10	1	0	4	
51	Hospital Kapit	0	7	0	2	
52	Hospital Banting	2	5	0	2	
53	Institut Kanser Negara	0	1	2	1	
TOTAL		4380	4259	4497	4379	8

Table 7.9.3 : HPB Surgery by Hospitals

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



7.9.1 Cholecystectomy (Open and Laparoscopic)

a. Total

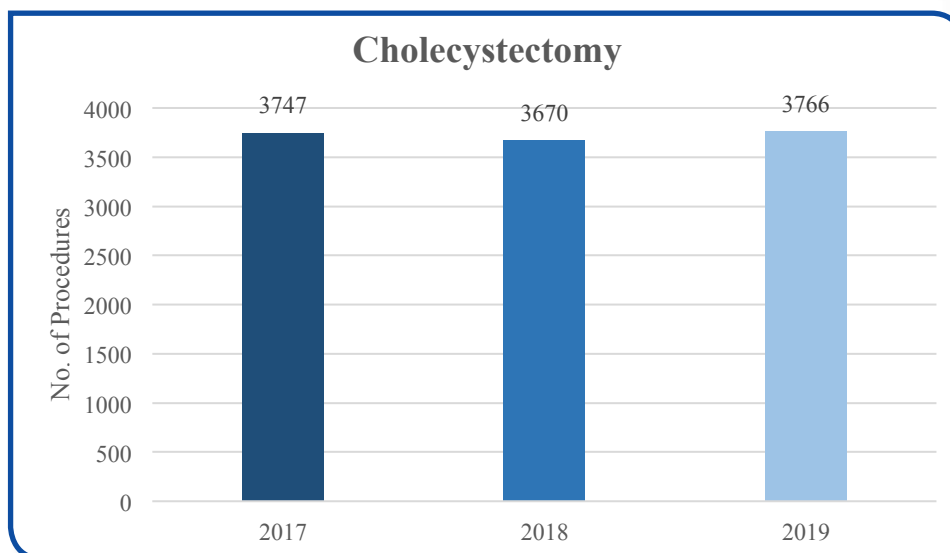


Figure 7.9.5 : Total number of Cholecystectomy

b. By BMS Hospital Category

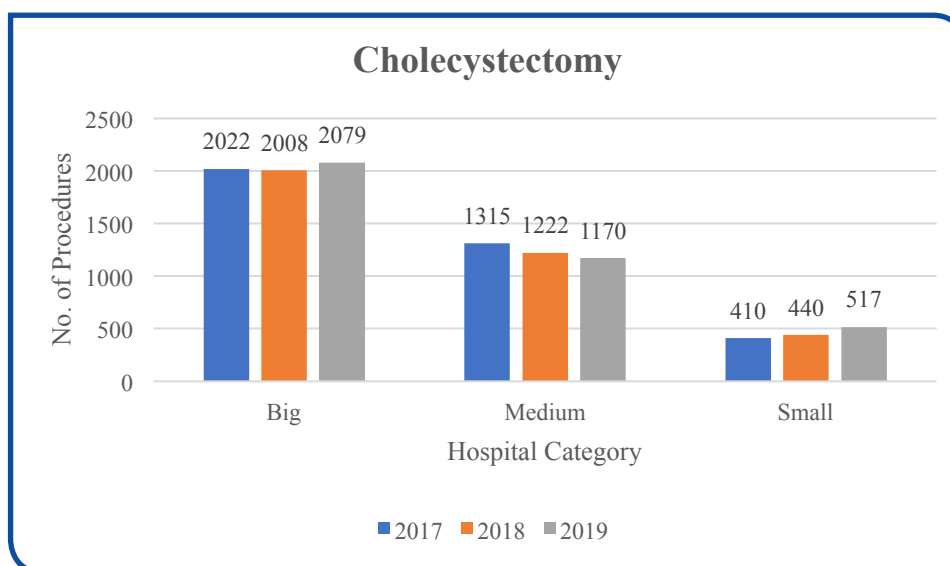


Figure 7.9.6 : Cholecystectomy by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



c. By BMS Hospital Category

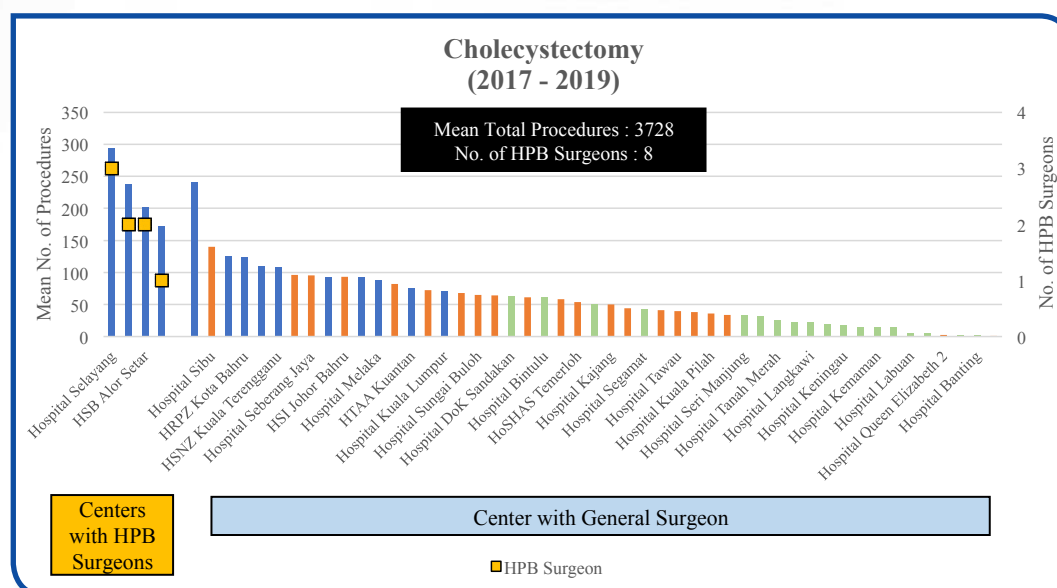


Figure 7.9.7 : Cholecystectomy by BMS Hospital Category

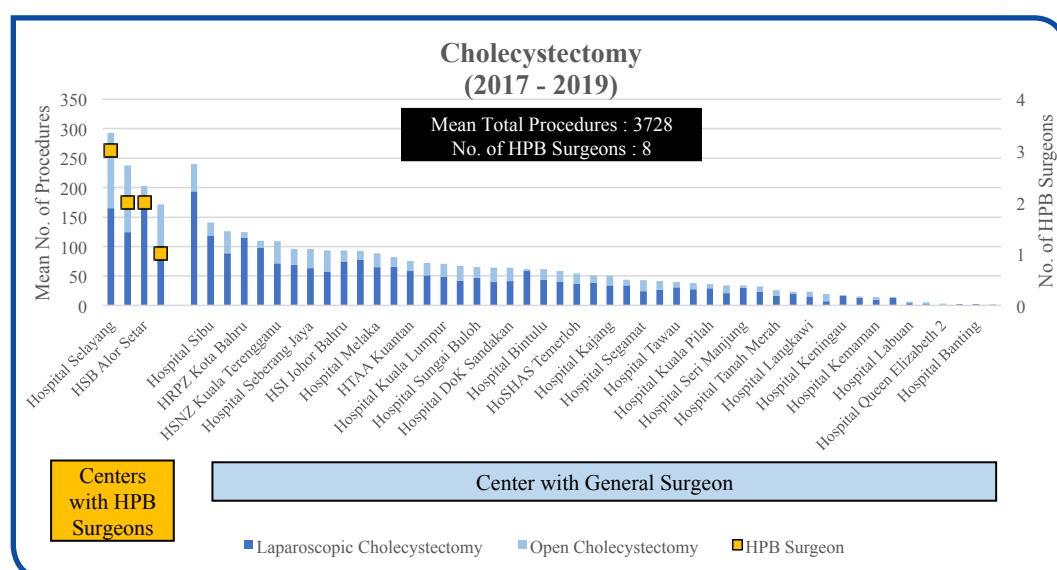


Figure 7.9.8 : Types of Cholecystectomy by Hospital Category

CHOLECYSTECTOMY

HOSPITAL CATEGORY	2017	2018	2019
Big	2022	2008	2079
Medium	1315	1222	1170
Small	410	440	517
TOTAL	3747	3670	3766

Table 7.9.4 : Cholecystectomy by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



CHOLECYSTECTOMY

NO	HOSPITALS	LAPAROSCOPIC CHOLECYSTECTOMY	OPEN CHOLECYSTECTOMY	TOTAL	NO. OF HPB SURGEONS
1	Hospital Selayang	165	128	293	3
2	Hospital Queen Elizabeth	194	46	240	
3	Hospital Umum Sarawak	124	113	237	2
4	HSB Alor Setar	166	37	203	2
5	HSA Johor Bahru	101	71	172	1
6	Hospital Sibul	118	23	140	
7	HTAR Klang	88	38	126	
8	HRPZ Kota Bharu	115	10	125	
9	HTJ Seremban	97	13	110	
10	HSNZ Kuala Terengganu	71	38	109	
11	HSAH Sungai Petani	69	27	96	
12	Hospital Seberang Jaya	63	32	96	
13	Hospital Pulau Pinang	58	36	93	
14	HSI Johor Bahru	75	18	93	
15	HRPB Ipoh	77	16	93	
16	Hospital Melaka	65	23	88	
17	Hospital Taiping	66	17	82	
18	HTAA Kuantan	58	18	76	
19	HSNI Batu Pahat	51	22	72	
20	Hospital Kuala Lumpur	49	22	71	
21	Hospital Miri	42	26	68	
22	Hospital Sungai Buloh	47	18	65	
23	HPSF Muar	40	24	64	
24	Hospital DoK Sandakan	41	22	64	
25	Hospital Ampang	58	3	61	
26	Hospital Bintulu	44	18	61	
27	Hospital Serdang	41	17	58	
28	HoSHAS Temerloh	37	17	54	
29	Hospital Shah Alam	39	12	51	
30	Hospital Kajang	34	16	50	
31	Hospital Putrajaya	34	10	44	
32	Hospital Segamat	24	19	43	
33	HTF Kangar	26	15	41	
34	Hospital Tawau	31	9	40	
35	Hospital Teluk Intan	28	10	38	
36	Hospital Kuala Pilah	29	7	36	
37	HEBHK Kluang	21	13	34	
38	Hospital Seri Manjung	30	4	34	
39	HSIP Kuala Krai	23	9	32	
40	Hospital Tanah Merah	16	10	26	
41	Hospital Kulim	20	3	23	
42	Hospital Langkawi	15	8	23	
43	Hospital Sarikei	7	12	19	
44	Hospital Keningau	16	1	17	
45	Hospital Kuala Lipis	13	2	15	
46	Hospital Kemaman	9	5	15	
47	Hospital Port Dickson	12	2	14	
48	Hospital Labuan	4	2	6	
49	Hospital Lahad Datu	2	3	5	
50	Hospital Queen Elizabeth 2	2	1	3	
51	Hospital Kapit	2	0	2	
52	Hospital Banting	2	0	2	
53	Institut Kanser Negara	1	0	1	
TOTAL		2660	1068	3728	8

Table 7.9.5 : Cholecystectomy by Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



7.9.2 Cholecystectomy with Common Bile Duct (CBD) Exploration

a. Total

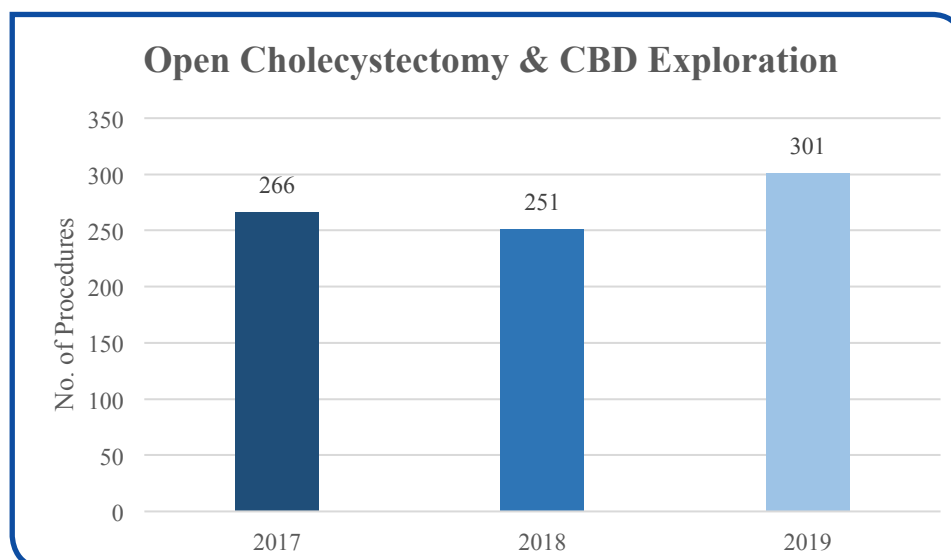


Table 7.9.6 : Total Number of Open Cholecystectomy and CBD Exploration

b. By BMS Category

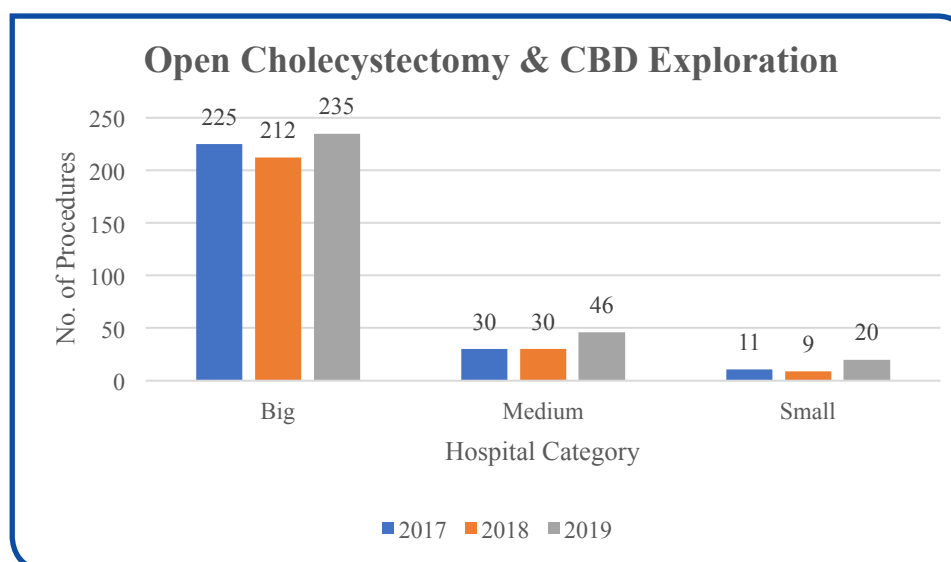


Figure 7.9.9 : Open Cholecystectomy and CBD Exploration by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



c. By BMS Hospital Category

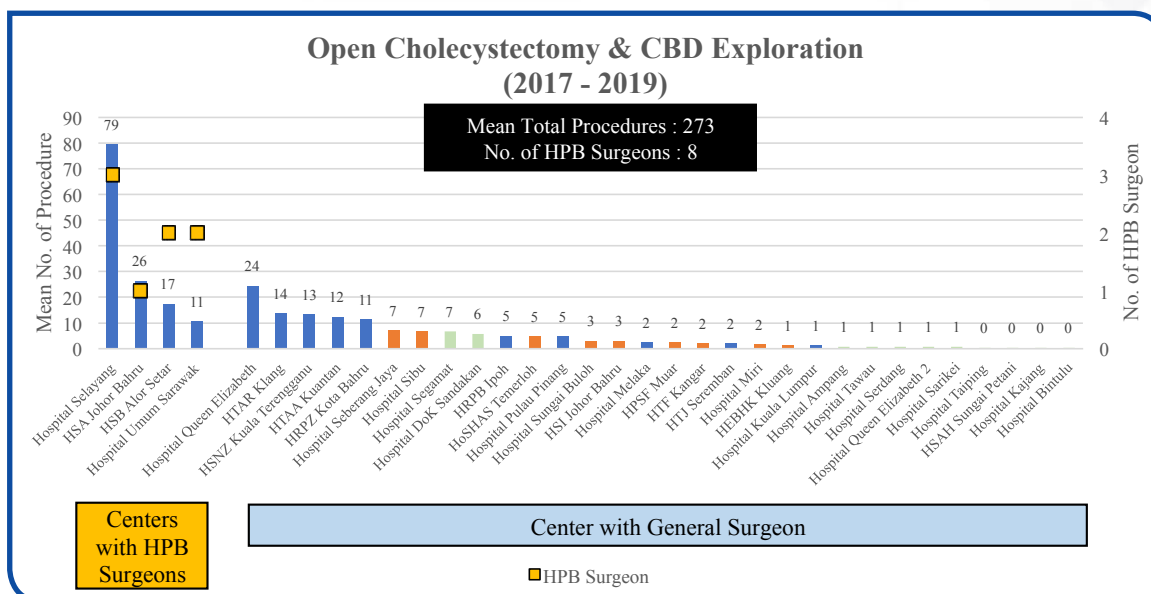


Figure 7.9.10 : Open Cholecystectomy and CBD Exploration by BMS Hospital Category

CHOLECYSTECTOMY WITH CBD EXPLORATION

HOSPITAL CATEGORY	2017	2018	2019
Big	225	212	235
Medium	30	30	46
Small	266	251	20
TOTAL	266	251	301

Table 7.9.7: Open Cholecystectomy and CBD Exploration by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



CHOLECYSTECTOMY WITH CBD EXPLORATION

NO	HOSPITALS	2017	2018	2019	MEAN NO. OF PROCEDURES	HPB SURGEON
1	Hospital Selayang	90	75	73	79	3
2	HSA Johor Bahru	17	32	30	26	1
3	Hospital Queen Elizabeth	16	20	37	24	
4	HSB Alor Setar	21	8	23	17	2
5	HTAR Klang	19	13	9	14	
6	HSNZ Kuala Terengganu	10	18	12	13	
7	HTAA Kuantan	10	12	15	12	
8	HRPZ Kota Bahru	13	8	13	11	
9	Hospital Umum Sarawak	6	14	12	11	2
10	Hospital Seberang Jaya	6	9	6	7	
11	Hospital Sibul	4	1	15	7	
12	Hospital Segamat	5	2	13	7	
13	Hospital DoK Sandakan	5	5	7	6	
14	HRPB Ipoh	5	4	6	5	
15	HoSHAS Temerloh	0	8	6	5	
16	Hospital Pulau Pinang	9	3	2	5	
17	Hospital Sungai Buloh	3	4	2	3	
18	HSI Johor Bahru	3	4	2	3	
19	Hospital Melaka	4	2	1	2	
20	HPSF Muar	4	2	1	2	
21	HTF Kangar	1	0	5	2	
22	HTJ Seremban	2	2	2	2	
23	Hospital Miri	2	1	2	2	
24	HEBHK Kluang	1	0	3	1	
25	Hospital Kuala Lumpur	3	1	0	1	
26	Hospital Ampang	0	0	2	1	
27	Hospital Tawau	1	0	1	1	
28	Hospital Serdang	2	0	0	1	
29	Hospital Queen Elizabeth 2	2	0	0	1	
30	Hospital Sarikei	0	2	0	1	
31	Hospital Taiping	0	0	1	0	
32	HSAH Sungai Petani	1	0	0	0	
33	Hospital Kajang	0	1	0	0	
34	Hospital Bintulu	1	0	0	0	
TOTAL		266	251	301	273	8

Table 7.9.8 : Open Cholecystectomy and CBD Exploration by Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



7.9.3 Hepatectomy

a. Total

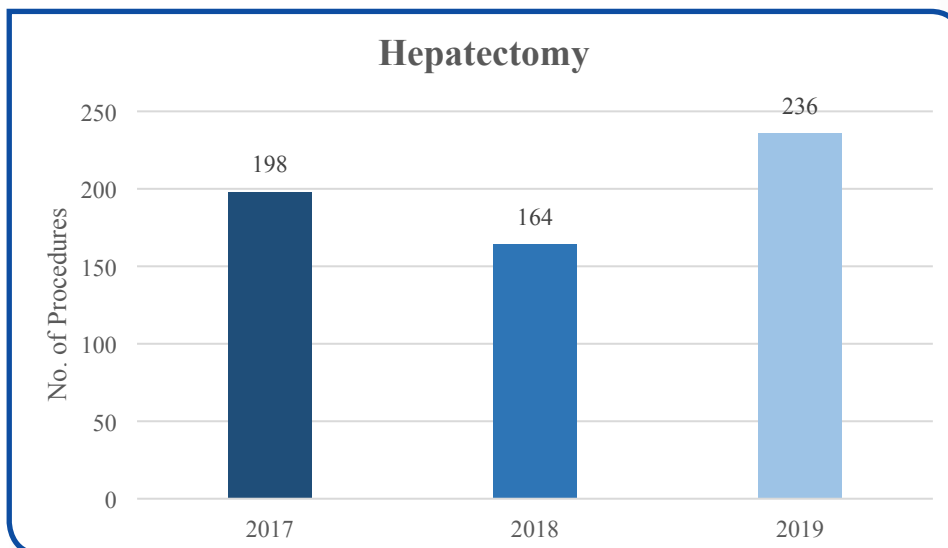


Figure 7.9.11: Total Number of Hepatectomy

b. By BMS Category

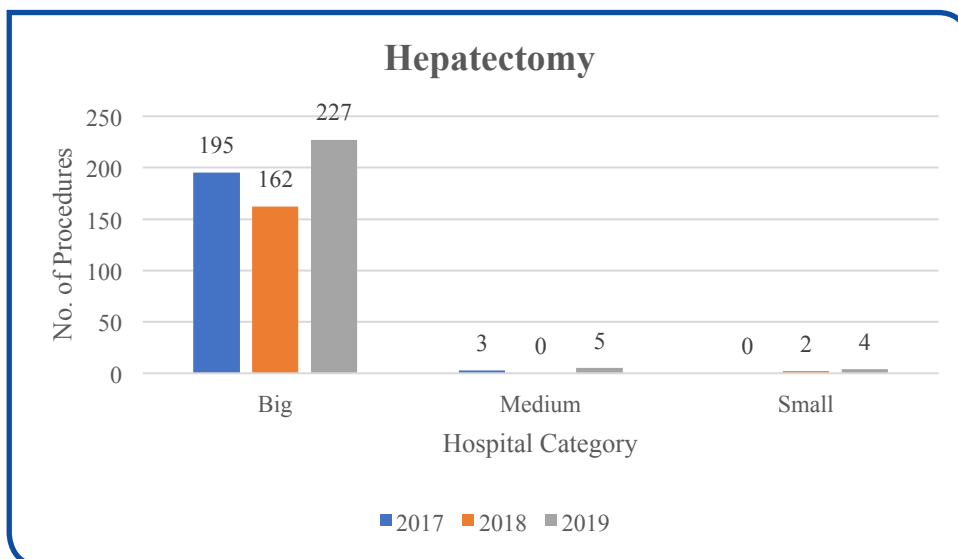


Figure 7.9.12 : Total Number of Hepatectomy by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



c. By BMS Hospital Category

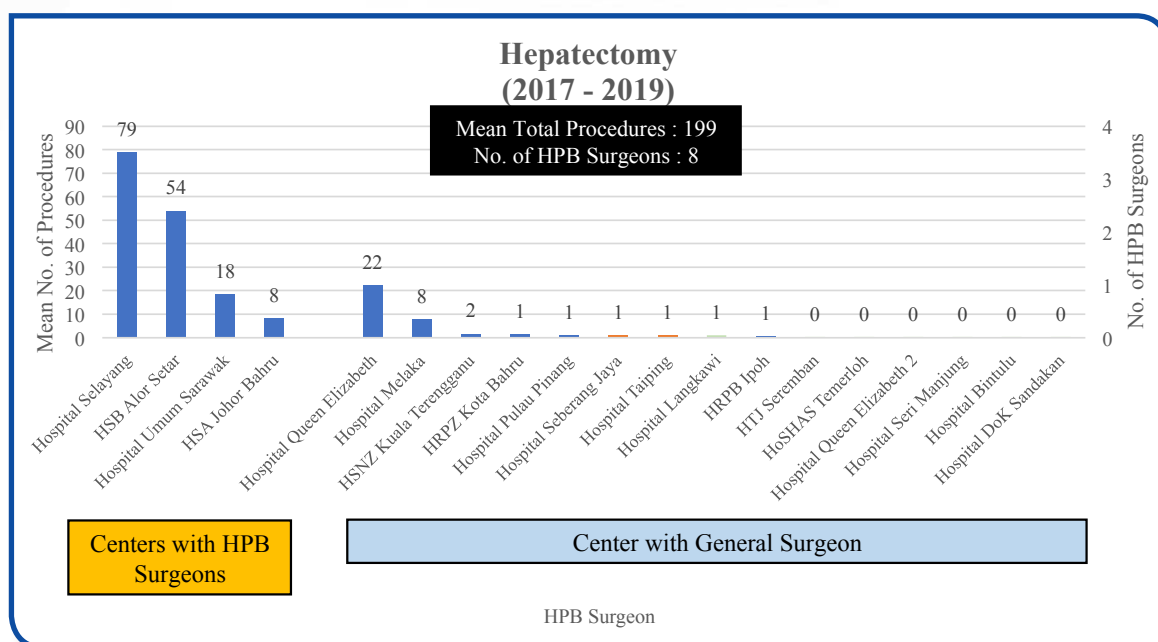


Figure 7.9.13 : Total Number of Hepatectomy by BMS Hospital Category

HEPATECTOMY

HOSPITAL CATEGORY	2017	2018	2019
Big	195	162	227
Medium	3	0	5
Small	0	2	4
TOTAL	198	164	236

Table 7.9.9 : Total Number of Hepatectomy by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



HEPATECTOMY

NO	HOSPITALS	2017	2018	2019	MEAN NO. OF PROCEDURES	HPB SURGEON
1	Hospital Selayang	71	80	85	79	3
2	HSB Alor Setar	63	44	55	54	2
3	Hospital Queen Elizabeth	31	5	31	22	
4	Hospital Umum Sarawak	19	9	27	18	2
5	HSA Johor Bahru	0	5	20	8	1
6	Hospital Melaka	8	14	2	8	
7	HSNZ Kuala Terengganu	2	2	1	2	
8	HRPZ Kota Bahru	1	2	1	1	
9	Hospital Pulau Pinang	0	0	3	1	
10	Hospital Seberang Jaya	1	0	2	1	
11	Hospital Taiping	0	0	3	1	
12	Hospital Langkawi	0	1	2	1	
13	HRPB Ipoh	0	0	2	1	
14	HTJ Seremban	0	1	0	0	
15	HoSHAS Temerloh	1	0	0	0	
16	Hospital Queen Elizabeth 2	1	0	0	0	
17	Hospital Seri Manjung	0	0	1	0	
18	Hospital Bintulu	0	0	1	0	
19	Hospital DoK Sandakan	0	1	0	0	
TOTAL		198	164	236	199	8

Table 7.9.10 : Total Number of Hepatectomy by Hospital Category

7.9.4 Whipple's Procedure

a. Total

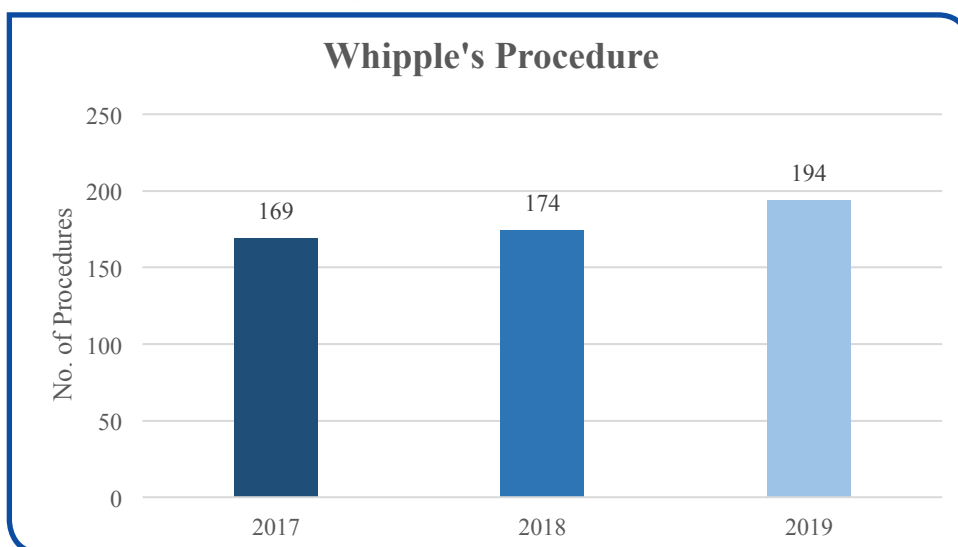


Figure 7.9.14 : Total Number of Whipple's Procedure

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



b. By BMS Category

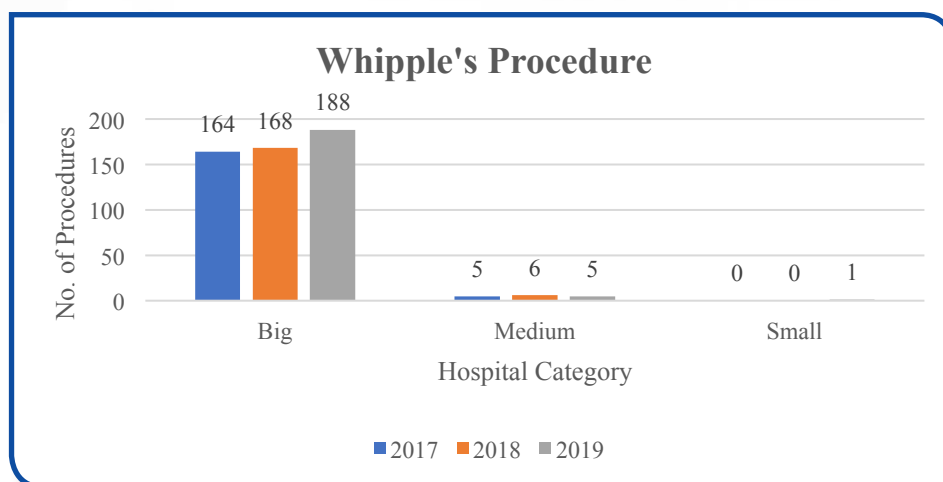


Figure 7.9.15 : Whipple's Procedure by BMS Category

c. By BMS Hospital Category

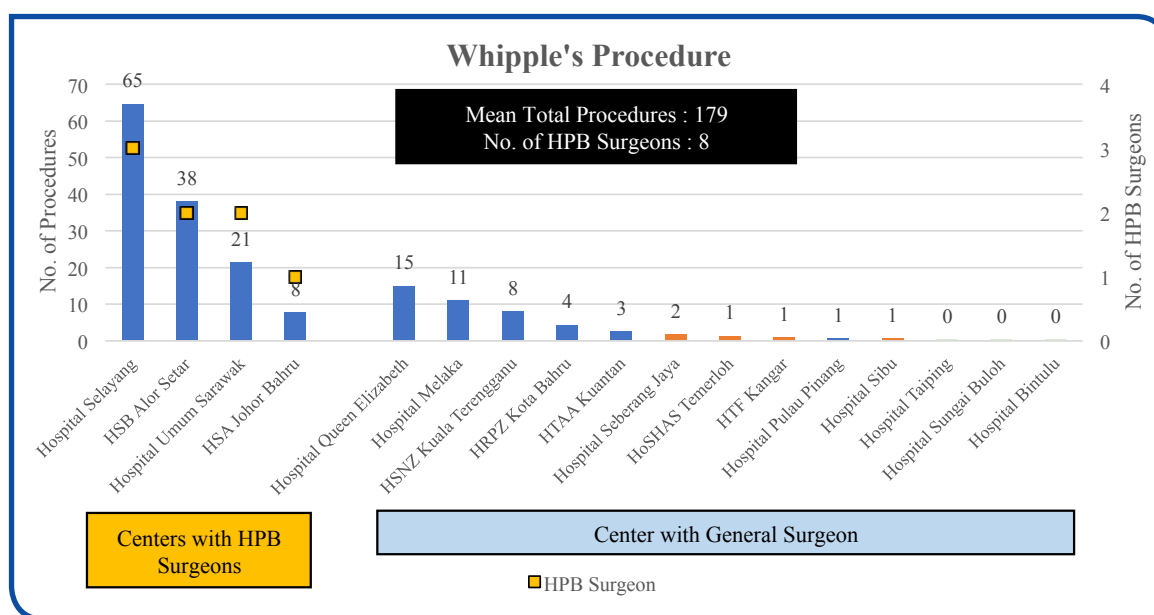


Figure 7.9.16: Whipple's Procedure by BMS Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



WHIPPLE'S PROCEDURE

HOSPITAL CATEGORY	2017	2018	2019
Big	195	162	227
Medium	3	0	5
Small	0	2	4
TOTAL	198	164	236

Table 7.9.11 : Total Number of Whipple's Procedure by BMS Category

WHIPPLE'S PROCEDURE

NO	HOSPITALS	2017	2018	2019	MEAN NO. OF PROCEDURES	HPB SURGEON
1	Hospital Selayang	64	66	64	65	3
2	HSB Alor Setar	36	27	51	38	2
3	Hospital Umum Sarawak	14	23	27	21	2
4	Hospital Queen Elizabeth	17	10	18	15	
5	Hospital Melaka	15	14	4	11	
6	HSNZ Kuala Terengganu	8	10	6	8	
7	HSA Johor Bahru	1	10	12	8	1
8	HRPZ Kota Bahru	5	5	3	4	
9	HTAA Kuantan	4	3	1	3	
10	Hospital Seberang Jaya	1	4	0	2	
11	HoSHAS Temerloh	4	0	0	1	
12	HTF Kangar	0	0	3	1	
13	Hospital Pulau Pinang	0	0	2	1	
14	Hospital Sibul	0	1	1	1	
15	Hospital Taiping	0	0	1	0	
16	Hospital Sungai Buloh	0	1	0	0	
17	Hospital Bintulu	0	0	1	0	
	TOTAL	169	174	194	179	8

Table 7.9.12: Total Number of Whipple's Procedure by Hospital Category



7.10 Colorectal

List of procedures selected for Colorectal workload measurement are:

- i. Abdomino-Perineal Resection
- ii. Ultra Low Anterior Resection
- iii. Low Anterior Resection
- iv. Anterior Resection
- v. Hartmann's Procedure
- vi. Hemicolectomy (Right / Left/ Sigmoid)
- vii. Total Colectomy
- viii. Stapler Hemorrhoidectomy
- ix. Open Fistula-in-ano Procedure

a. Total

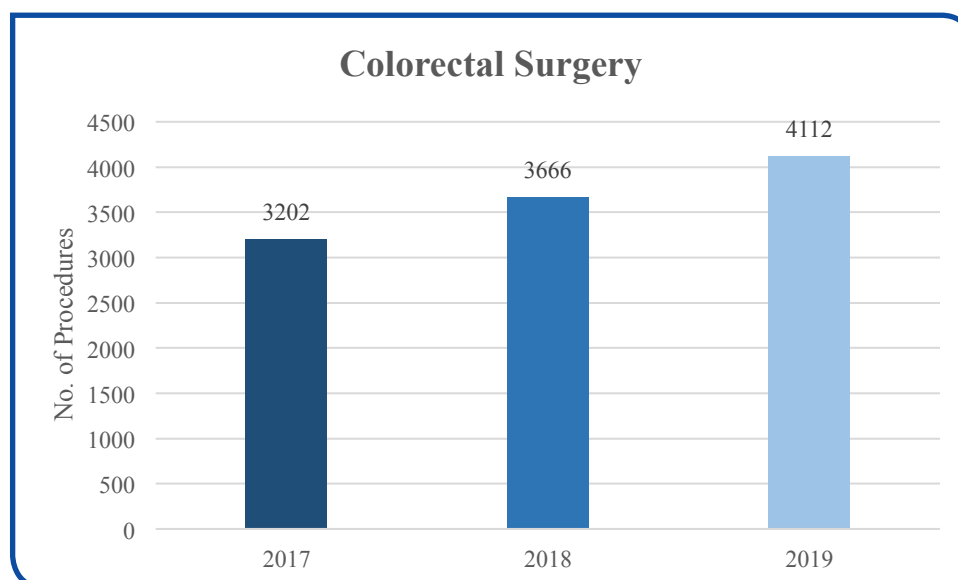


Figure 7.10.1 : Total Number of Colorectal Surgery

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



b. By BMS Category

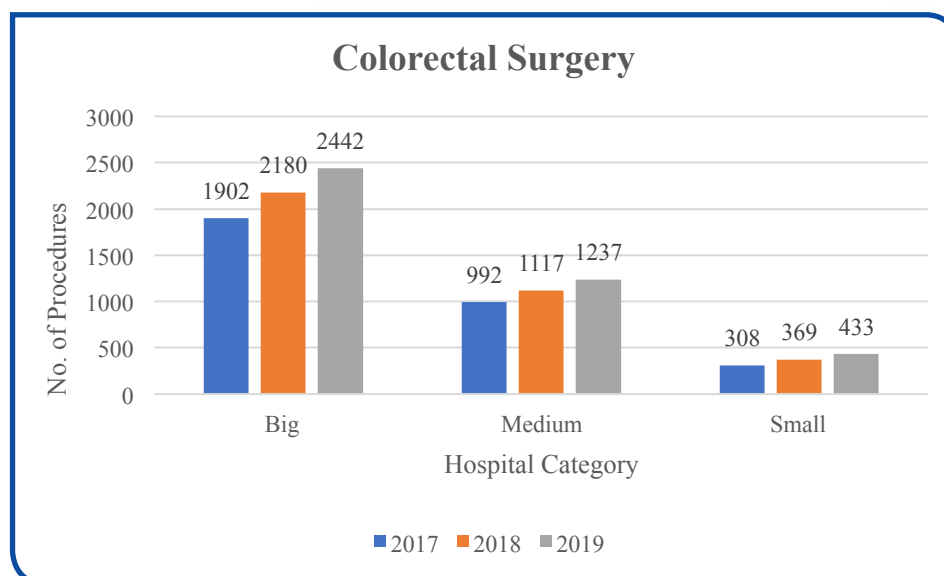


Figure 7.10.2 : Colorectal Surgery by BMS Category

c. By BMS Hospital Category

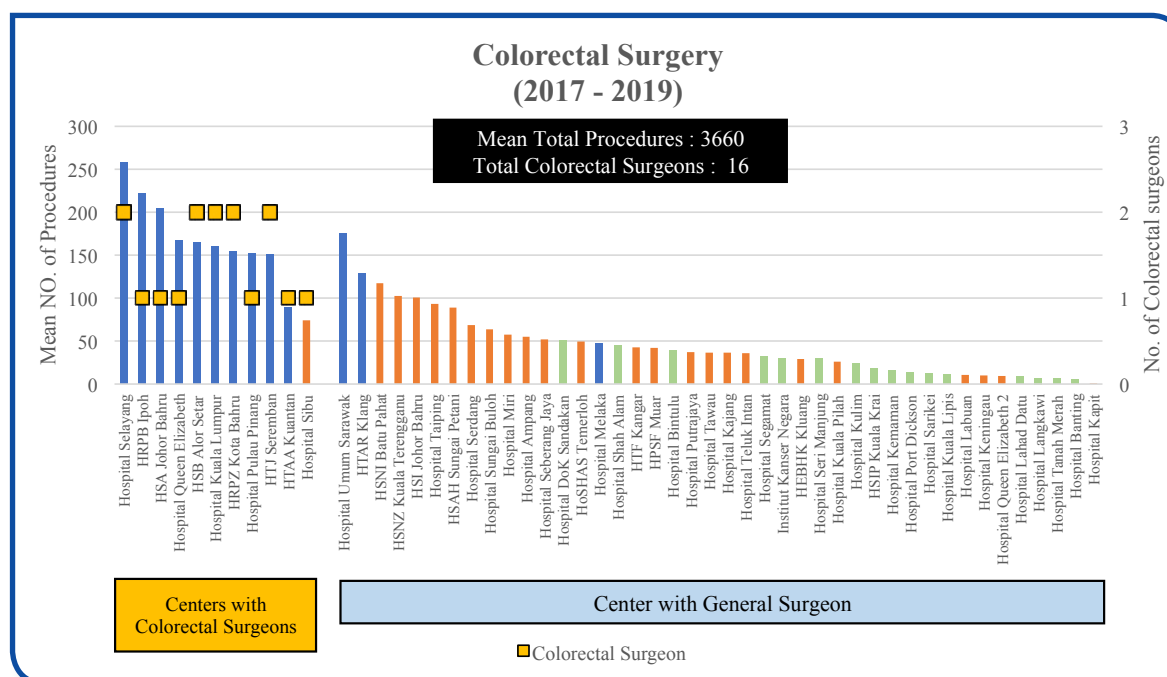


Figure 7.10.3 : Colorectal Surgery by BMS Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



d. Types of Colorectal Surgery

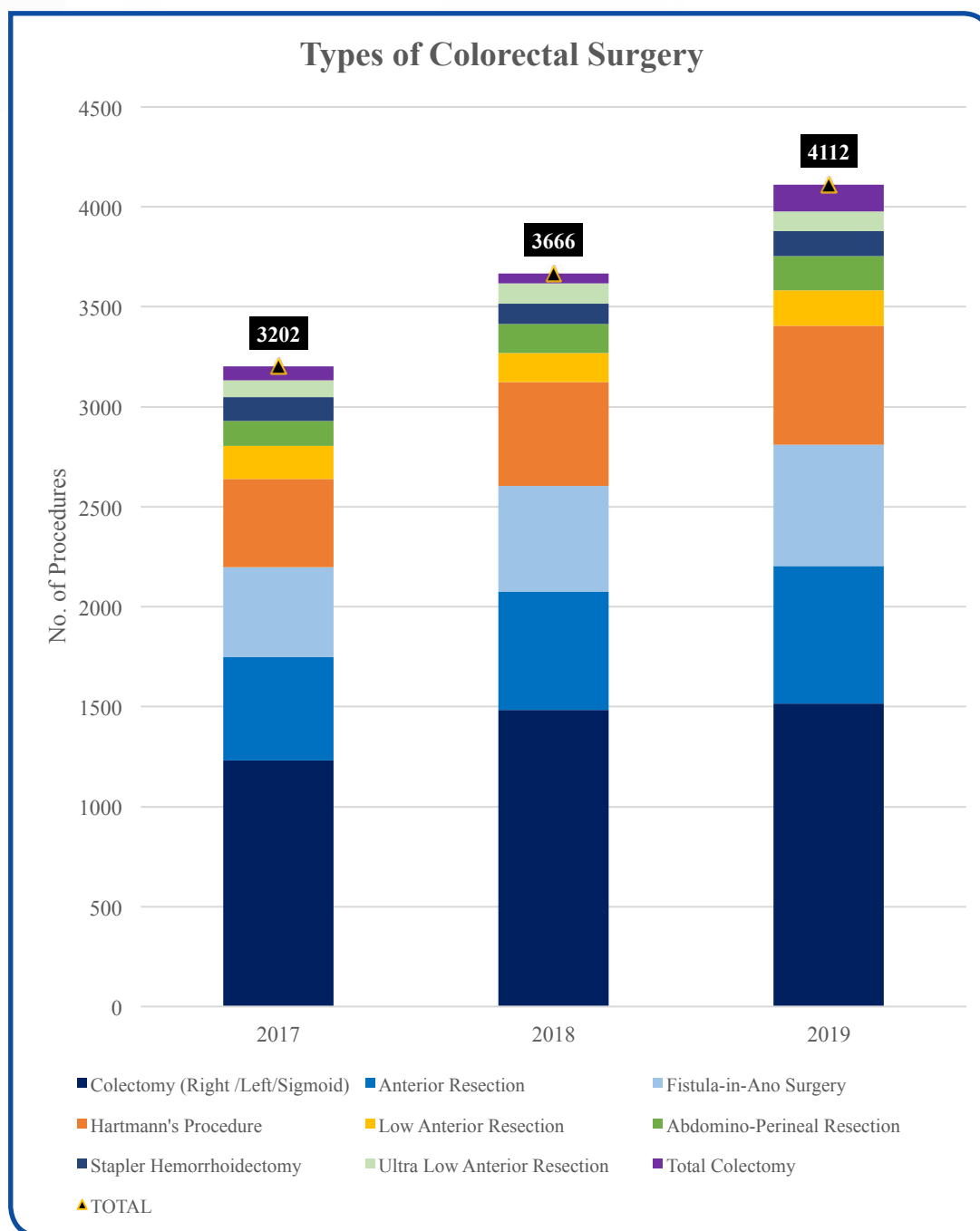


Figure 7.10.4 : Types of Colorectal Sugery

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



COLORECTAL SURGERY

HOSPITAL CATEGORY	2017	2018	2019
Big	1902	2180	2442
Medium	992	1117	1237
Small	308	369	433
TOTAL	3202	3666	4112

Table 7.10.1 : Colorectal Surgery by BMS Category

COLORECTAL SURGERY

PROCEDURE TYPE	2017	(%)	2018	(%)	2019	(%)
Colectomy (Right /Left/Sigmoid)	1231	38%	1482	40%	1515	37%
Anterior Resection	516	16%	594	16%	689	17%
Fistula-in-Ano Surgery	451	14%	529	14%	607	15%
Hartmann's Procedure	440	14%	520	14%	594	14%
Low Anterior Resection	167	5%	143	4%	179	4%
Abdomino-Perineal Resection	125	4%	147	4%	170	4%
Stapler Hemorrhoidectomy	117	4%	100	3%	124	3%
Ultra Low Anterior Resection	86	3%	101	3%	98	2%
TOTAL	3202	100%	3666	100%	4112	100%

Table 7.10.2 : Types of Colorectal Surgery

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



COLORECTAL SURGERY

NO	HOSPITALS	2017	2018	2019	MEAN NO. OF PROCEDURES	HPB SURGEON
1	Hospital Selayang	241	256	275	257	2
2	HRPB Ipoh	168	241	256	222	1
3	HSA Johor Bahru	185	218	208	204	1
4	Hospital Umum Sarawak	175	173	178	175	
5	Hospital Queen Elizabeth	130	159	212	167	1
6	HSB Alor Setar	150	148	197	165	2
7	Hospital Kuala Lumpur	156	127	196	160	2
8	HRPZ Kota Bharu	127	138	198	154	2
9	Hospital Pulau Pinang	141	156	160	152	1
10	HTJ Seremban	141	150	162	151	2
11	HTAR Klang	118	149	119	129	
12	HSNI Batu Pahat	98	147	106	117	
13	HSNZ Kuala Terengganu	63	130	114	102	
14	HSI Johor Bahru	113	80	108	100	
15	Hospital Taiping	80	78	121	93	
16	HSAH Sungai Petani	92	87	88	89	
17	HTAA Kuantan	75	90	101	89	1
18	Hospital Sibul	61	77	84	74	1
19	Hospital Serdang	58	80	68	69	
20	Hospital Sungai Buloh	58	70	62	63	
21	Hospital Miri	54	56	62	57	
22	Hospital Ampang	35	54	76	55	
23	Hospital Seberang Jaya	42	54	60	52	
24	Hospital DoK Sandakan	37	68	48	51	
25	HoSHAS Temerloh	44	64	41	50	
26	Hospital Melaka	32	45	66	48	
27	Hospital Shah Alam	34	61	41	45	
28	HTF Kangar	30	41	57	43	
29	HPSF Muar	31	31	65	42	
30	Hospital Bintulu	30	25	63	39	
31	Hospital Putrajaya	36	29	47	37	
32	Hospital Tawau	41	37	32	37	
33	Hospital Kajang	33	26	50	36	
34	Hospital Teluk Intan	35	31	41	36	
35	Hospital Segamat	31	31	35	32	
36	Institut Kanser Negara	39	21	29	30	
37	HEBHK Kluang	19	28	41	29	
38	Hospital Seri Manjung	28	24	36	29	
39	Hospital Kuala Pilah	20	34	24	26	
40	Hospital Kulim	27	17	28	24	
41	HSIP Kuala Krai	11	18	25	18	
42	Hospital Kemaman	5	20	22	16	
43	Hospital Port Dickson	12	20	8	13	
44	Hospital Sarikei	12	12	13	12	
45	Hospital Kuala Lipis	6	18	10	11	
46	Hospital Labuan	10	9	12	10	
47	Hospital Keningau	4	4	22	10	
48	Hospital Queen Elizabeth 2	12	13	4	10	
49	Hospital Lahad Datu	4	9	12	8	
50	Hospital Langkawi	4	0	17	7	
51	Hospital Tanah Merah	8	4	6	6	
52	Hospital Banting	4	7	6	6	
53	Hospital Kapit	2	1	0	1	
TOTAL		3202	3666	4112	3660	16

Table 7.10.3 : Colorectal Surgery by Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



7.10.1 Whipple's Procedure

a. Total

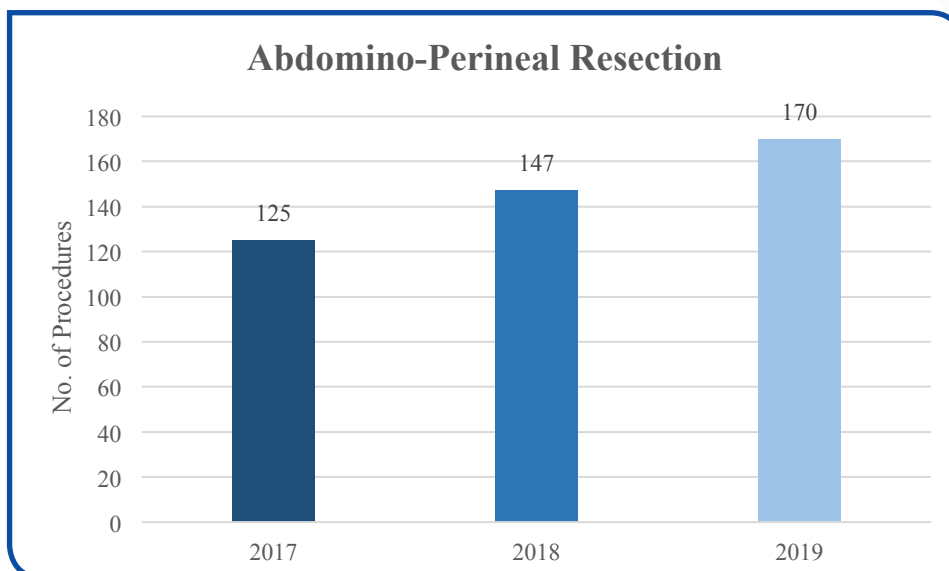


Figure 7.10.5 : Total Number of APR

b. By Modality if Approach

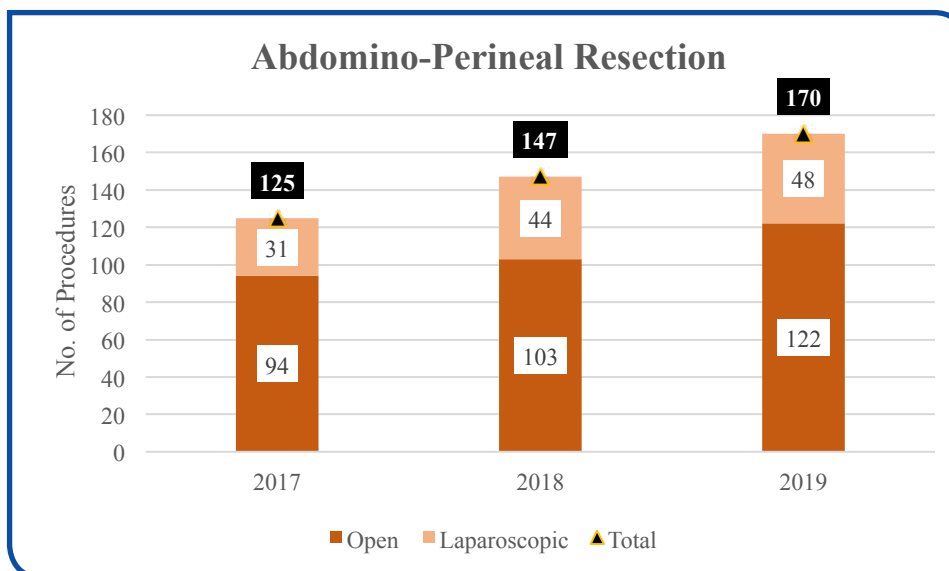


Figure 7.10.6 : APR by Modality of Approach

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



c. By BMS Category

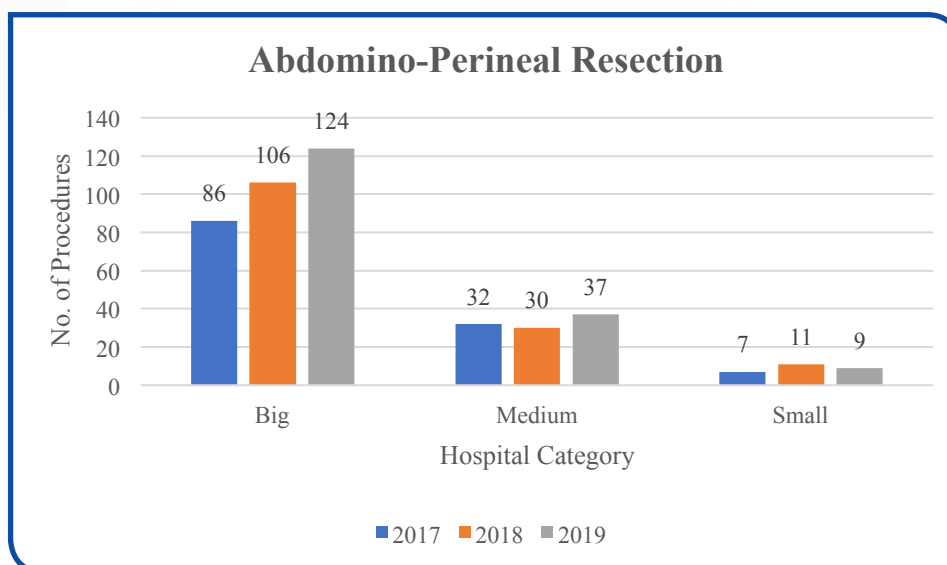


Figure 7.10.7 : APR By BMS Category

d. By BMS Hospital Category

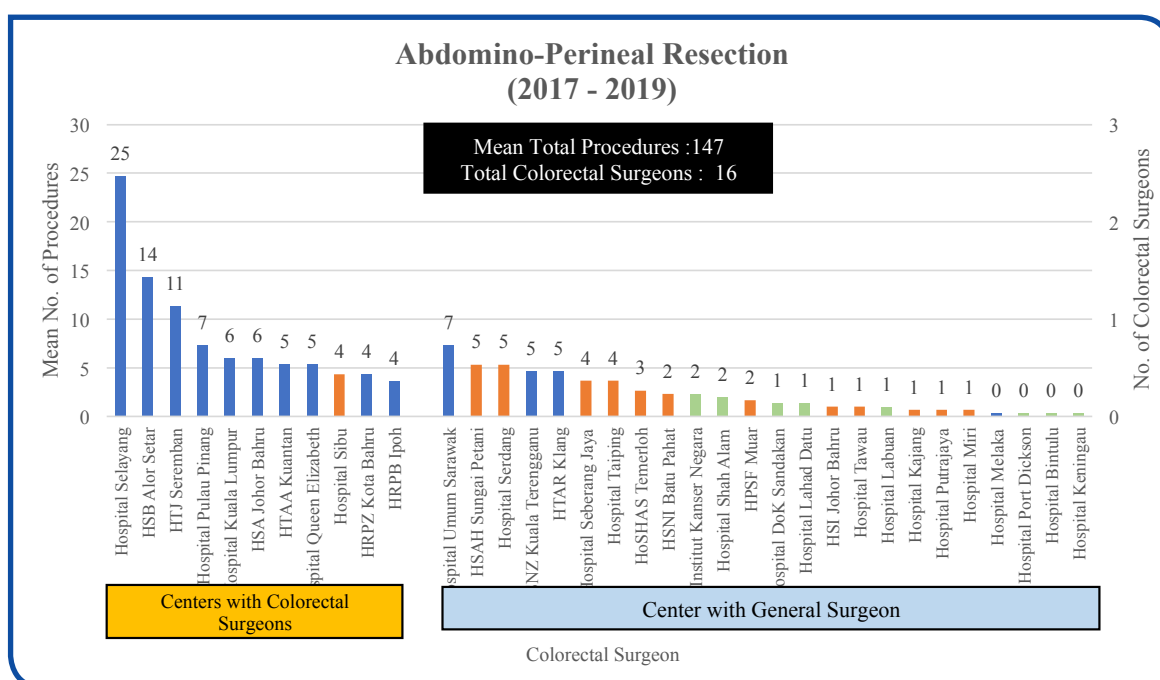


Figure 7.10.8 : APR by BMS Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019

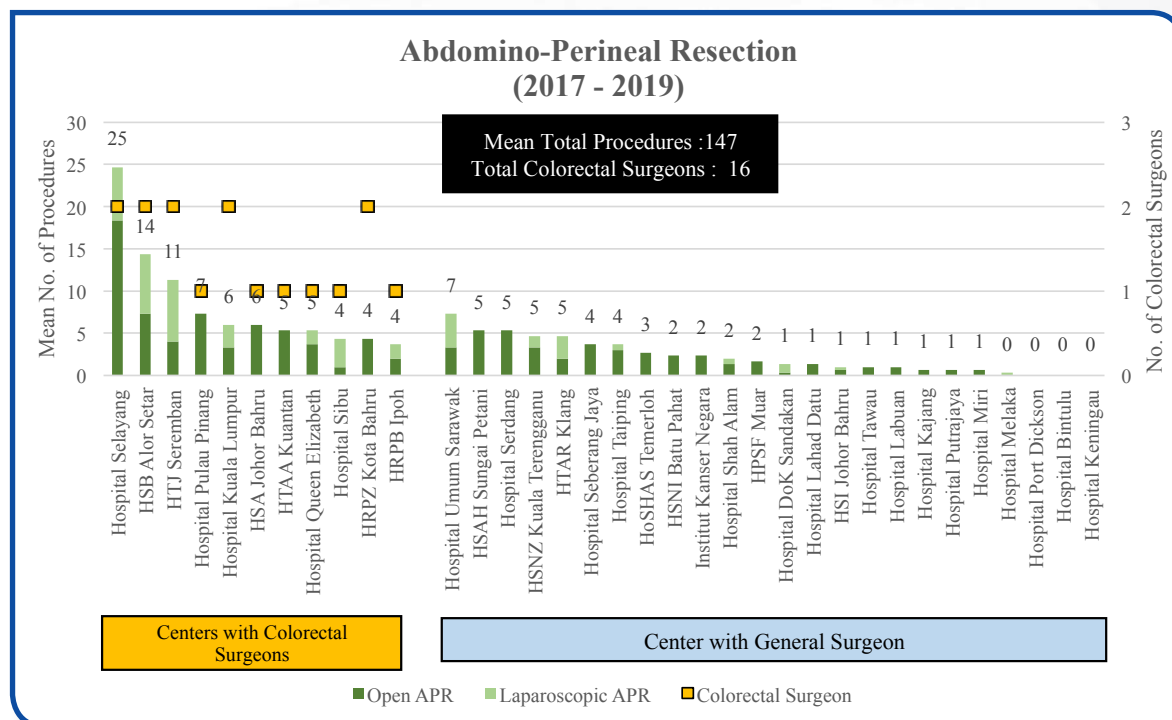


Figure 7.10.9 : APR by Modality of Approach

ABDOMINO-PERINEAL RESECTION

HOSPITAL CATEGORY	2017	2018	2019
Big	86	106	124
Medium	32	30	37
Small	7	11	9
TOTAL	125	147	170

Figure 7.10.10 : Total Number of APR by BMS Category

ABDOMINO-PERINEAL RESECTION

PROCEDURE TYPE	2017	(%)	2018	(%)	2019	(%)
APR - Open	94	75%	103	70%	122	72%
APR - Laparoscopic	31	25%	44	30%	48	28%
TOTAL	125	100%	147	100%	170	100%

Figure 7.10.11 : APR by Modality of Approach

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



ABDOMINO-PERINEAL RESECTION

NO	HOSPITALS	OPEN				LAPAROSCOPIC				TOTAL MEAN PROCEDURES (a+b)	NO. OF COLORECTAL SURGEONS
		2017	2018	2019	MEAN NO. OF PROCEDURES (a)	2017	2018	2019	MEAN NO. OF PROCEDURES (b)		
1	Hospital Selayang	12	13	30	18	5	7	7	6	25	2
2	HSB Alor Setar	4	2	16	7	3	6	12	7	14	2
3	HTJ Seremban	7	2	3	4	8	8	6	7	11	2
4	Hospital Umum Sarawak	2	5	3	3	4	7	1	4	7	
5	Hospital Pulau Pinang	9	11	2	7	0	0	0	0	7	1
6	Hospital Kuala Lumpur	2	2	6	3	2	1	5	3	6	2
7	HSA Johor Bahru	5	8	5	6	0	0	0	0	6	1
8	HTAA Kuantan	6	8	2	5	0	0	0	0	5	1
9	Hospital Queen Elizabeth	5	5	1	4	0	2	3	2	5	1
10	HSAH Sungai Petani	11	1	4	5	0	0	0	0	5	
11	Hospital Serdang	6	6	4	5	0	0	0	0	5	
12	HSNZ Kuala Terengganu	0	5	5	3	1	0	3	1	5	
13	HTAR Klang	3	0	3	2	3	3	2	3	5	
14	Hospital Sibul	0	3	0	1	1	2	7	3	4	1
15	HRPZ Kota Bharu	0	7	6	4	0	0	0	0	4	2
16	HRPB Ipoh	3	0	3	2	2	3	0	2	4	1
17	Hospital Seberang Jaya	2	6	3	4	0	0	0	0	4	
18	Hospital Taiping	2	0	7	3	2	0	0	1	4	
19	HoSHAS Temerloh	1	3	4	3	0	0	0	0	3	
20	HSNI Batu Pahat	3	2	2	2	0	0	0	0	2	
21	Institut Kanser Negara	5	0	2	2	0	0	0	0	2	
22	Hospital Shah Alam	0	4	0	1	0	2	0	1	2	
23	HPSF Muar	1	4	0	2	0	0	0	0	2	
24	Hospital DoK Sandakan	1	0	0	0	0	1	2	1	1	
25	Hospital Lahad Datu	0	1	3	1	0	0	0	0	1	
26	HSI Johor Bahru	0	0	2	1	0	1	0	0	1	
27	Hospital Tawau	1	0	2	1	0	0	0	0	1	
28	Hospital Labuan	0	2	1	1	0	0	0	0	1	
29	Hospital Kajang	1	1	0	1	0	0	0	0	1	
30	Hospital Putrajaya	0	1	1	1	0	0	0	0	1	
31	Hospital Miri	1	0	1	1	0	0	0	0	1	
32	Hospital Melaka	0	0	0	0	0	1	0	0	0	
33	Hospital Port Dickson	0	1	0	0	0	0	0	0	0	
34	Hospital Bintulu	0	0	1	0	0	0	0	0	0	
35	Hospital Keningau	1	0	0	0	0	0	0	0	0	
	TOTAL	94	103	122	106	31	44	48	41	147	16

Table 7.10.4 : Total Number of APR by Modality of Approach by Hospitals

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



7.10.2 Ultra Low Anterior Resection (ULAR)

a. Total

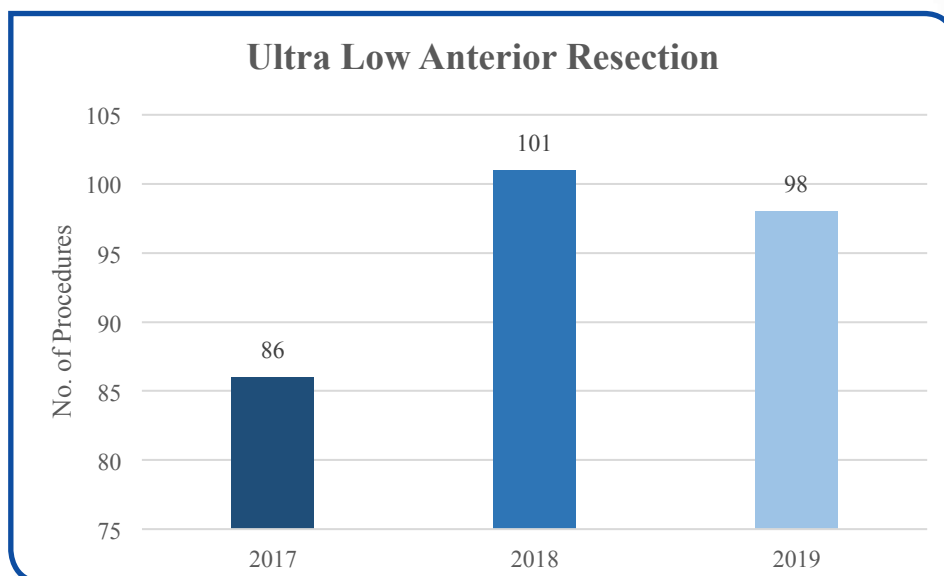


Figure 7.10.12 : Total Number of ULAR

b. By Modality of Approach

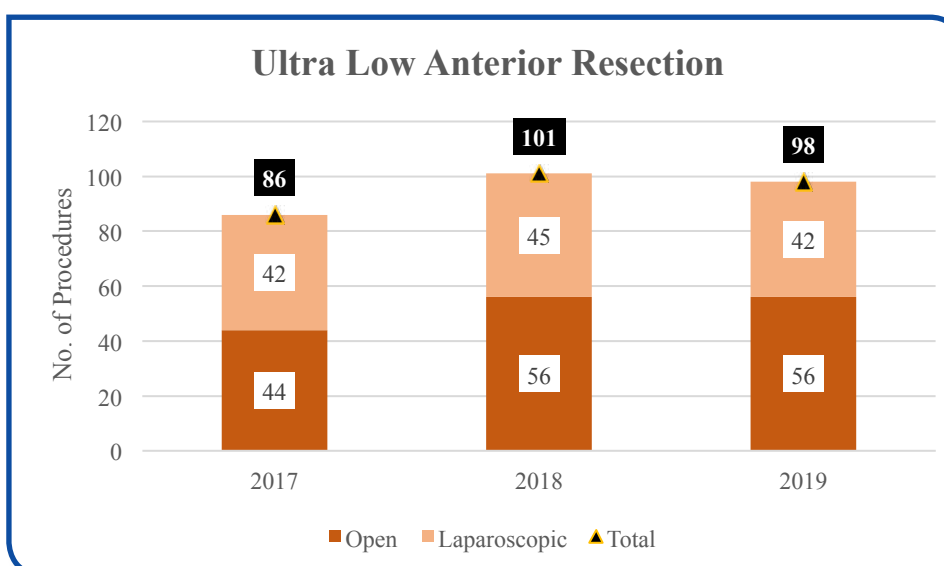


Figure 7.10.13 : ULAR by Modality of Approach

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



c. By BMS Category

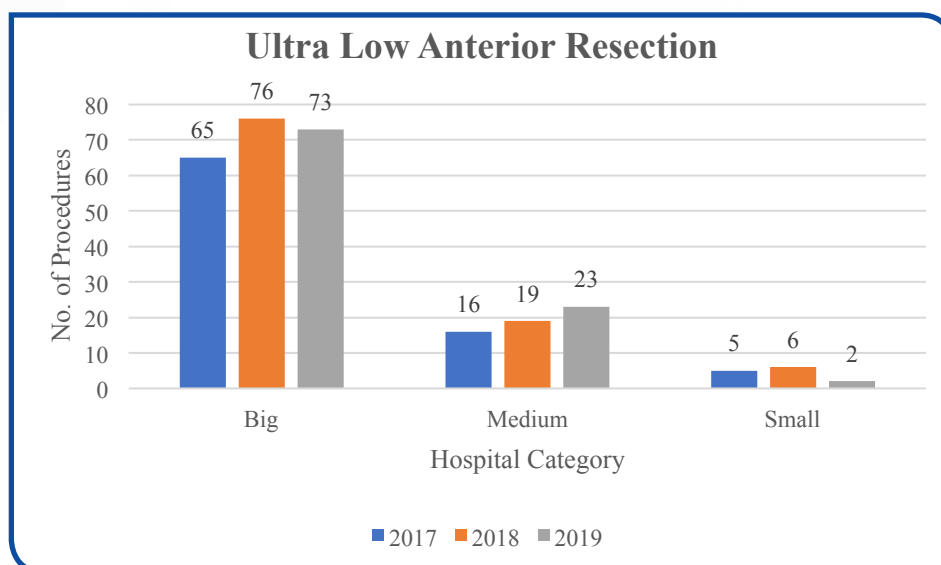


Figure 7.10.14 :ULAR by BMS Category

d. By BMS Hospital Category

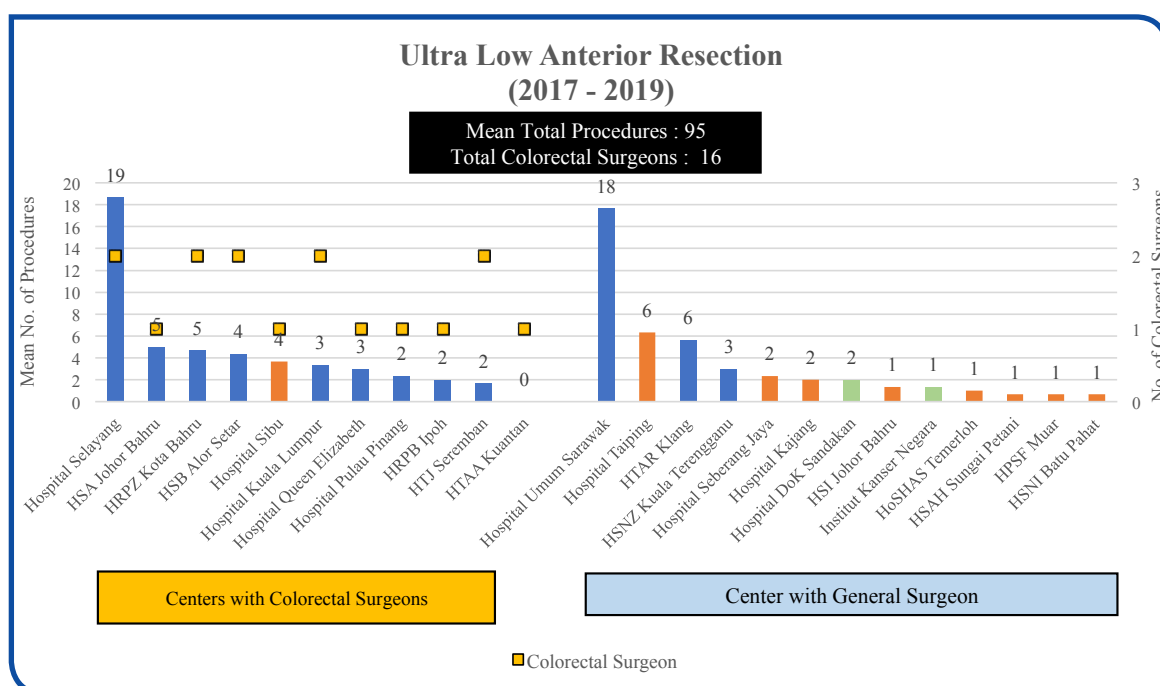


Figure 7.10.15 : ULAR by BMS Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019

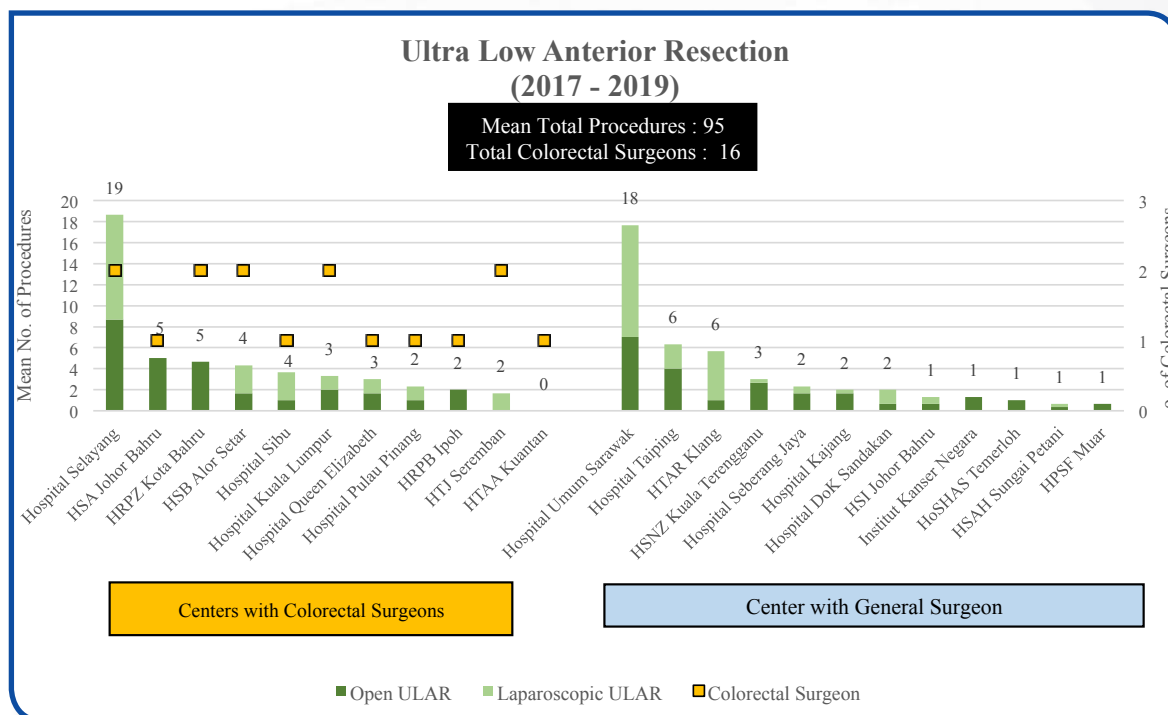


Figure 7.10.16 : ULAR by Modality of Approach

ULTRA LOW ANTERIOR RESECTION

HOSPITAL CATEGORY	2017	2018	2019
Big	65	76	73
Medium	16	19	23
Small	5	6	2
TOTAL	86	101	98

Table 7.10.5 : Total Number of ULAR by BMS Category

ULTRA LOW ANTERIOR RESECTION

PROCEDURE TYPE	2017	(%)	2018	(%)	2019	(%)
APR - Open	44	51%	56	55%	56	57%
APR - Laparoscopic	42	49%	45	45%	42	43%
TOTAL	86	100%	101	100%	98	100%

Table 7.10.6 : ULAR by Modality of Approach

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



ULTRA LOW ANTERIOR RESECTION

NO	HOSPITALS	OPEN				LAPAROSCOPIC				TOTAL MEAN PROCEDURES (a+b)	NO. OF COLORECTAL SURGEONS
		2017	2018	2019	MEAN NO. OF PROCEDURES (a)	2017	2018	2019	MEAN NO. OF PROCEDURES (b)		
1	Hospital Selayang	2	14	10	9	10	13	7	10	19	2
2	Hospital Umum Sarawak	11	4	6	7	16	14	2	11	18	
3	Hospital Taiping	3	3	6	4	4	1	2	2	6	
4	HTAR Klang	0	3	0	1	3	4	7	5	6	
5	HSA Johor Bahru	4	6	5	5	0	0	0	0	5	1
6	HRPZ Kota Bharu	4	4	6	5	0	0	0	0	5	2
7	HSB Alor Setar	0	0	5	2	0	1	7	3	4	2
8	Hospital Sibul	1	1	1	1	2	5	1	3	4	1
9	Hospital Kuala Lumpur	4	2	0	2	3	1	0	1	3	2
10	HSNZ Kuala Terengganu	4	2	2	3	1	0	0	0	3	
11	Hospital Queen Elizabeth	0	3	2	2	1	3	0	1	3	1
12	Hospital Seberang Jaya	1	2	2	2	0	0	2	1	2	
13	Hospital Pulau Pinang	0	0	3	1	0	0	4	1	2	1
14	HRPB Ipoh	2	2	2	2	0	0	0	0	2	1
15	Hospital Kajang	1	2	2	2	0	0	1	0	2	
16	Hospital DoK Sandakan	1	1	0	1	0	3	1	1	2	
17	HTJ Seremban	0	0	0	0	0	0	5	2	2	2
18	HSI Johor Bahru	1	0	1	1	0	0	2	1	1	
19	Institut Kanser Negara	2	2	0	1	0	0	0	0	1	
20	HoSHAS Temerloh	1	1	1	1	0	0	0	0	1	
21	HSAH Sungai Petani	0	1	0	0	1	0	0	0	1	
22	HPSF Muar	1	1	0	1	0	0	0	0	1	
23	HSNI Batu Pahat	0	2	0	1	0	0	0	0	1	
24	HTF Kangar	0	0	1	0	0	0	0	0	0	
25	Hospital Miri	0	0	0	0	0	0	1	0	0	
26	Hospital Kulim	0	0	0	0	1	0	0	0	0	
27	Hospital Bintulu	1	0	0	0	0	0	0	0	0	
28	Hospital Banting	0	0	1	0	0	0	0	0	0	
29	Hospital Melaka	0	0	0	0	0	0	0	0	0	
30	HTAA Kuantan	0	0	0	0	0	0	0	0	0	1
	TOTAL	44	56	56	52	42	45	42	43	95	16

Table 7.10.7 : ULAR by Modality of Approach by Hospitals

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



7.10.3 Low Anterior Resection (LAR)

a. Total

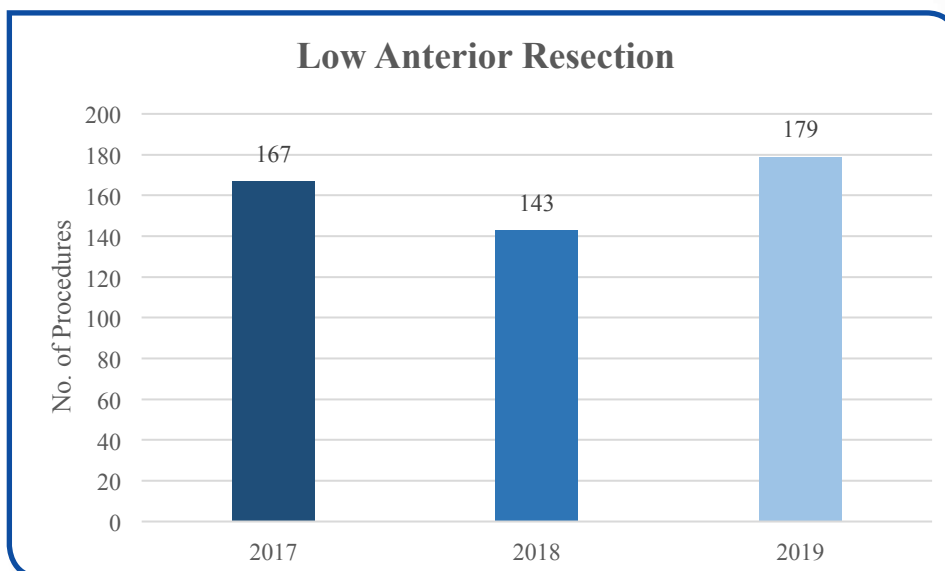


Figure 7.10.17 : Total Number of LAR

b. By Modality of Approach

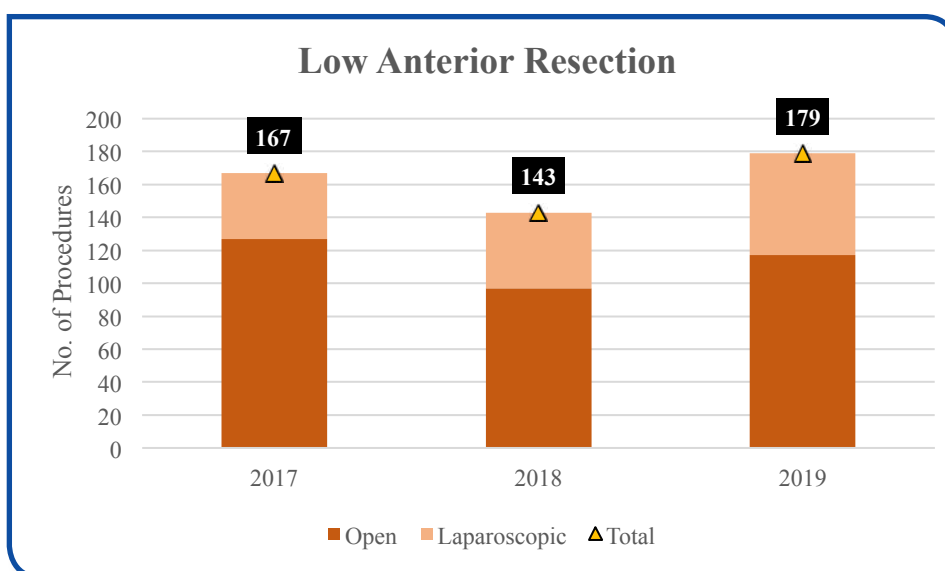


Figure 7.10.18 : Total Number of LAR by Modality of Approach

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



c. By BMS Category

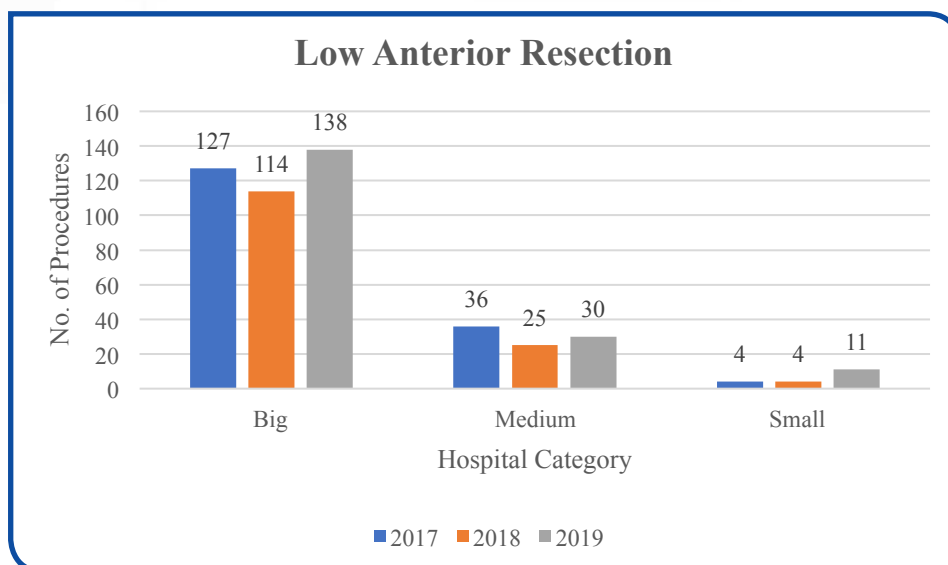


Figure 7.10.19 : LAR by BMS Category

d. By BMS Hospital Category

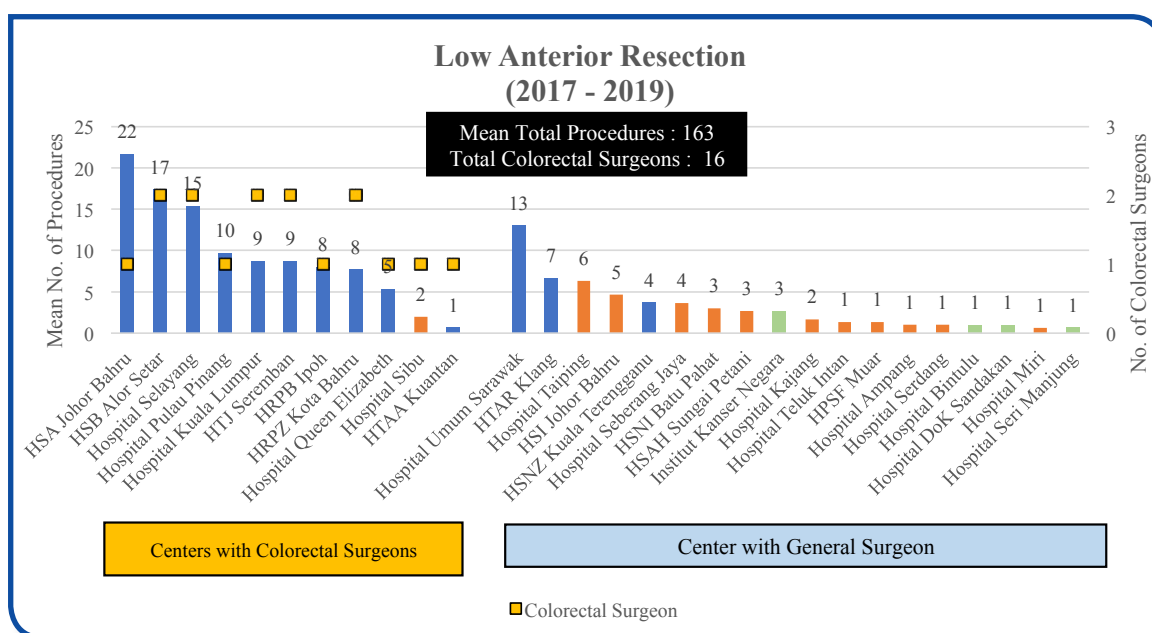


Figure 7.10.20 : LAR by BMS Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019

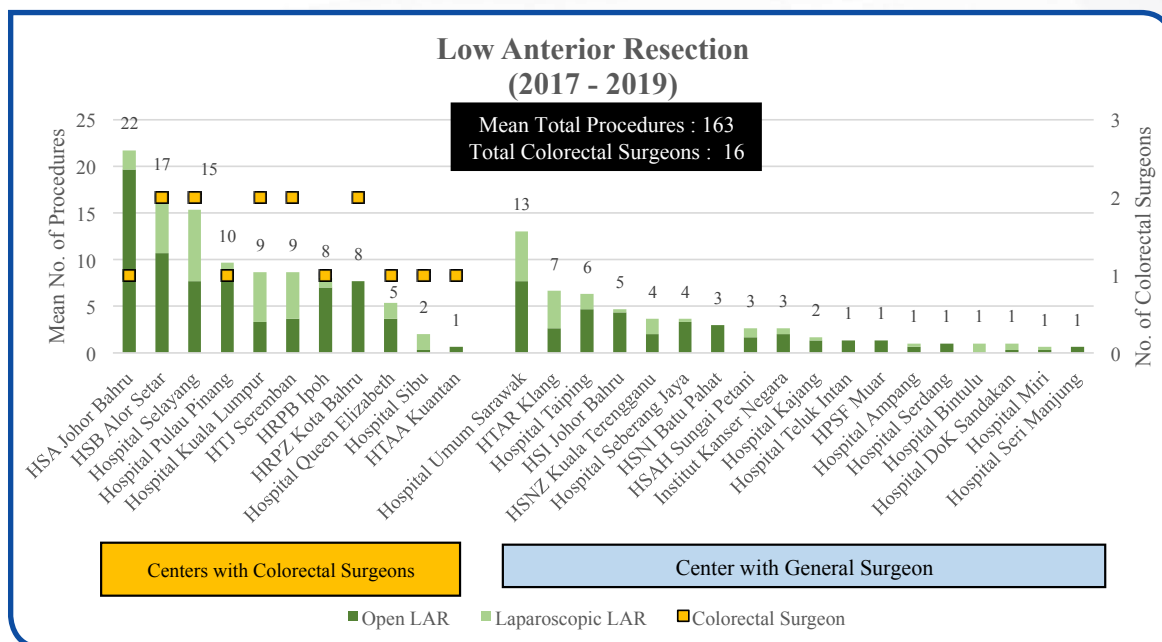


Figure 7.10.21 : LAR by Modality of Approach

LOW ANTERIOR RESECTION

HOSPITAL CATEGORY	2017	2018	2019
Big	127	114	138
Medium	36	25	30
Small	4	4	11
TOTAL	167	143	179

Table 7.10.8 : Total Number of LAR

LOW ANTERIOR RESECTION

PROCEDURE TYPE	2017	(%)	2018	(%)	2019	(%)
LAR - Open	127	76%	97	68%	117	65%
LAR - Laparoscopic	40	24%	46	32%	62	35%
TOTAL	167	100%	143	100%	179	100%

Table 7.10.9 : LAR by Modality of Approach

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



LOW ANTERIOR RESECTION

NO	HOSPITALS	OPEN				LAPAROSCOPIC				TOTAL MEAN PROCEDURES (a+b)	NO. OF COLORECTAL SURGEONS
		2017	2018	2019	MEAN NO. OF PROCEDURES (a)	2017	2018	2019	MEAN NO. OF PROCEDURES (b)		
1	HSA Johor Bahru	19	16	24	20	5	1	0	2	22	1
2	HSB Alor Setar	14	11	7	11	4	8	8	7	17	2
3	Hospital Selayang	8	4	11	8	6	8	9	8	15	2
4	Hospital Umum Sarawak	5	9	9	8	8	4	4	5	13	
5	Hospital Pulau Pinang	11	12	4	9	0	0	2	1	10	1
6	Hospital Kuala Lumpur	1	3	6	3	4	4	8	5	9	2
7	HTJ Seremban	9	1	1	4	6	6	3	5	9	2
8	HRPB Ipoh	10	4	7	7	1	2	0	1	8	1
9	HRPZ Kota Bharu	9	7	7	8	0	0	0	0	8	2
10	HTAR Klang	2	3	3	3	0	6	6	4	7	
11	Hospital Taiping	5	5	4	5	1	0	4	2	6	
12	Hospital Queen Elizabeth	2	3	6	4	0	0	5	2	5	1
13	HSI Johor Bahru	8	2	3	4	0	0	1	0	5	
14	HSNZ Kuala Terengganu	1	1	4	2	2	1	2	2	4	
15	Hospital Seberang Jaya	3	3	4	3	0	0	1	0	4	
16	HSNI Batu Pahat	7	0	2	3	0	0	0	0	3	
17	HSAH Sungai Petani	3	1	1	2	2	1	0	1	3	
18	Institut Kanser Negara	3	2	1	2	0	0	2	1	3	
19	Hospital Sibul	1	0	0	0	1	4	0	2	2	1
20	Hospital Kajang	0	3	1	1	0	0	1	0	2	
21	Hospital Teluk Intan	0	1	3	1	0	0	0	0	1	
22	HPSF Muar	2	2	0	1	0	0	0	0	1	
23	Hospital Ampang	1	1	0	1	0	0	1	0	1	
24	Hospital Serdang	0	2	1	1	0	0	0	0	1	
25	Hospital Bintulu	0	0	0	0	0	0	3	1	1	
26	Hospital DoK Sandakan	1	0	0	0	0	1	1	1	1	
27	HTAA Kuantan	0	0	2	1	0	0	0	0	1	1
28	Hospital Miri	1	0	0	0	0	0	1	0	1	
29	Hospital Seri Manjung	0	0	2	1	0	0	0	0	1	
30	HTF Kangar	0	0	1	0	0	0	0	0	0	
31	Hospital Putrajaya	0	0	1	0	0	0	0	0	0	
32	HoSHAS Temerloh	1	0	0	0	0	0	0	0	0	
33	Hospital Kulim	0	1	0	0	0	0	0	0	0	
34	Hospital Segamat	0	0	1	0	0	0	0	0	0	
35	HSIP Kuala Krai	0	0	1	0	0	0	0	0	0	
TOTAL		127	97	117	114	40	46	62	49	163	16

Table 7.10.10 : LAR by Modality of Approach by Hospitals

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



7.10.4 Anterior Resection (AR)

a. Total

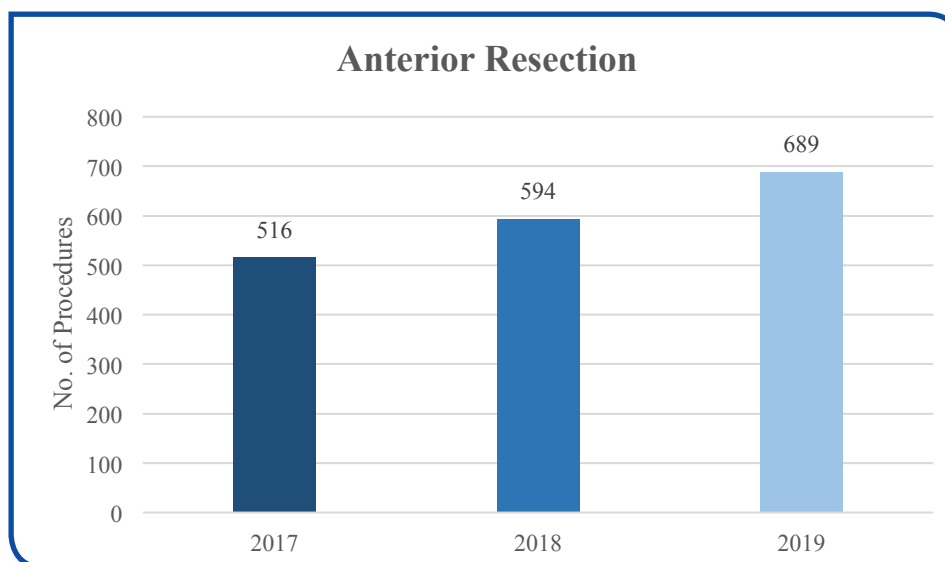


Figure 7.10.-22 : Total Number of Anterior Resection

b. By Modality of Approach

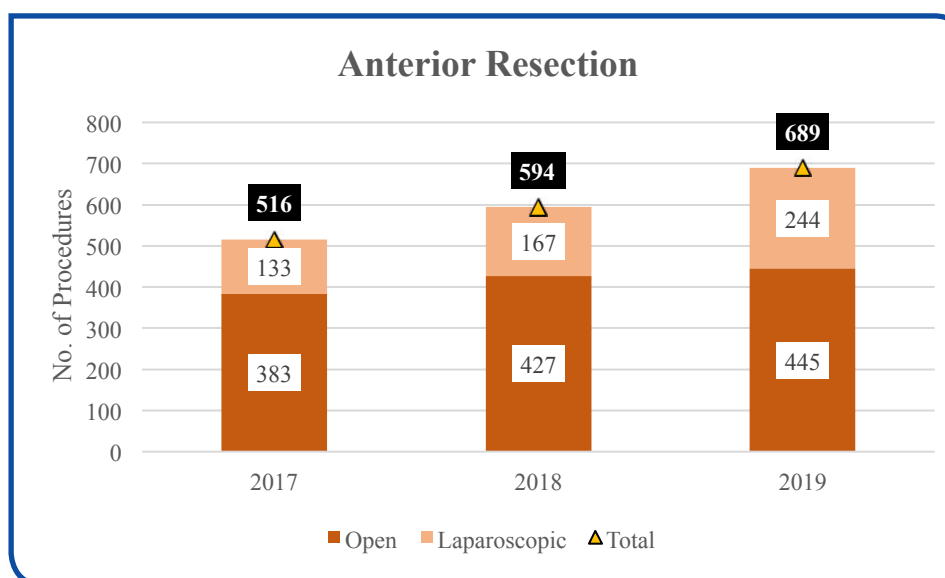


Figure 7.10.23 : Anterior Resection by Modality of Approach

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



c. By BMS Category

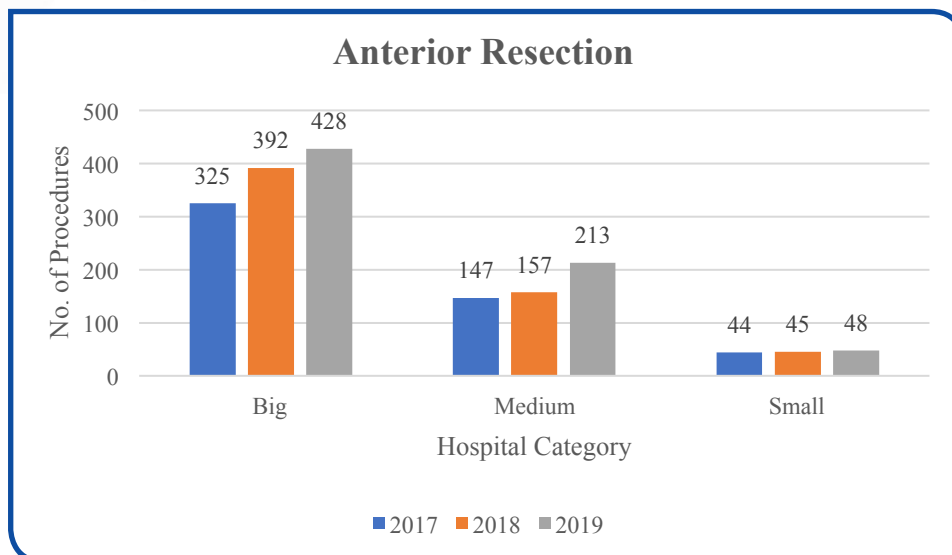


Figure 7.10.24 : Anterior Resection by BMS Category

d. By BMS Hospital Category

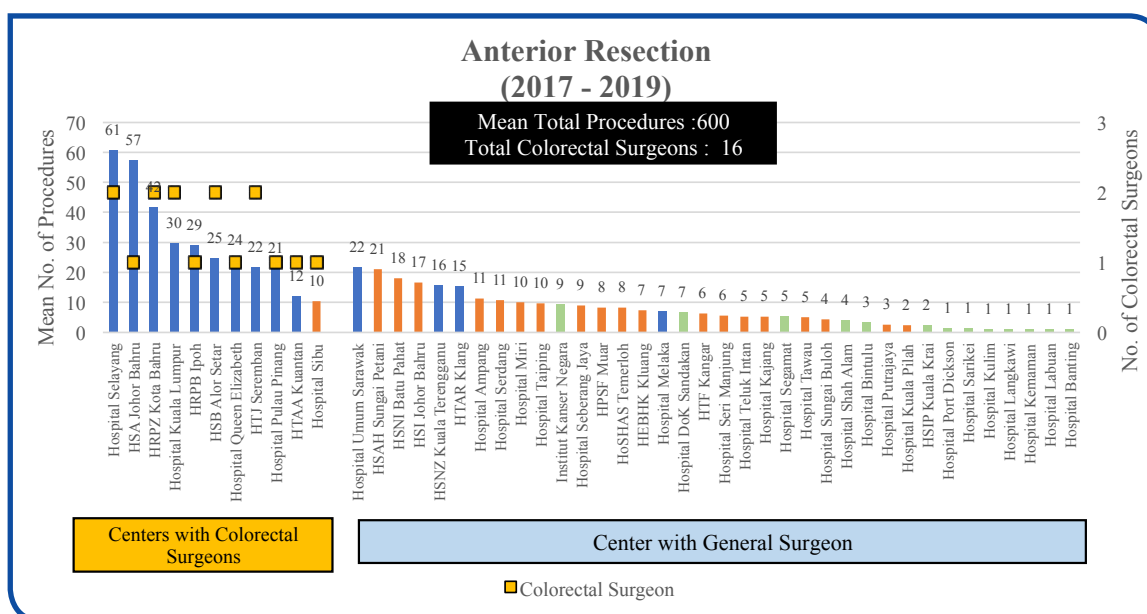


Figure 7.10.25 : Anterior Resection by BMS Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019

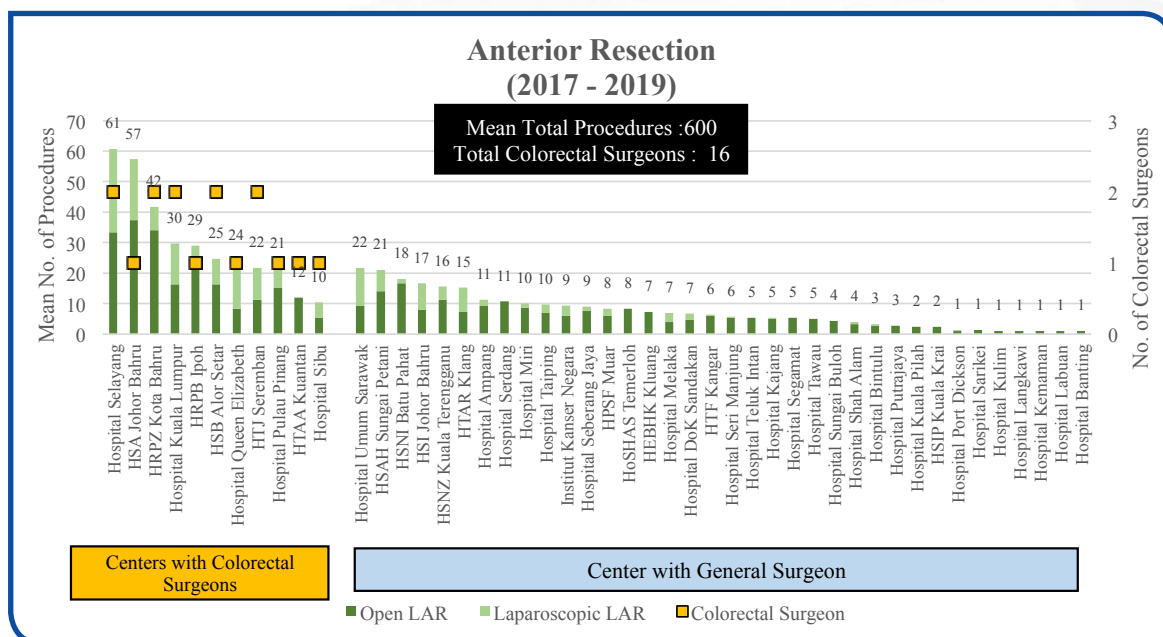


Figure 7.10.26 : Anterior Resection by Modality of Approach

ANTERIOR RESECTION

HOSPITAL CATEGORY	2017	2018	2019
Big	325	392	428
Medium	147	157	213
Small	44	45	48
TOTAL	516	594	689

Table 7.10.11 : Anterior Resection by BMS Category

ANTERIOR RESECTION

PROCEDURE TYPE	2017	(%)	2018	(%)	2019	(%)
LAR - Open	383	74%	427	72%	445	65%
LAR - Laparoscopic	133	26%	167	28%	244	35%
TOTAL	516	100%	594	100%	689	100%

Table 7.10.12 : Anterior Resection by Modality of Approach

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



ANTERIOR RESECTION

NO	HOSPITALS	OPEN				LAPAROSCOPIC				TOTAL MEAN PROCEDURES (a+b)	NO. OF COLORECTAL SURGEONS
		2017	2018	2019	MEAN NO. OF PROCEDURES (a)	2017	2018	2019	MEAN NO. OF PROCEDURES (b)		
1	Hospital Selayang	36	37	27	33	34	25	23	27	61	2
2	HSA Johor Bahru	38	39	35	37	14	23	23	20	57	1
3	HRPZ Kota Bharu	31	21	50	34	5	8	10	8	42	2
4	Hospital Kuala Lumpur	15	16	18	16	10	15	15	13	30	2
5	HRPB Ipoh	13	24	34	24	2	8	6	5	29	1
6	HSB Alor Setar	13	17	19	16	6	9	10	8	25	2
7	Hospital Queen Elizabeth	2	10	13	7	17	7	23	16	24	1
8	HTJ Seremban	12	16	6	11	7	12	12	10	22	2
9	Hospital Umum Sarawak	6	12	10	9	13	10	14	12	22	1
10	Hospital Pulau Pinang	15	17	14	15	0	0	18	6	21	1
11	HSAH Sungai Petani	14	15	13	14	3	8	10	7	21	1
12	HSNI Batu Pahat	17	13	20	17	1	3	0	1	18	1
13	HSI Johor Bahru	10	6	8	8	1	4	21	9	17	1
14	HSNZ Kuala Terengganu	6	21	7	11	3	2	8	4	16	1
15	HTAA Klang	6	10	6	7	7	11	6	8	15	1
16	HTAA Kuantan	10	15	11	12	0	0	0	0	12	1
17	Hospital Ampang	12	7	9	9	0	2	4	2	11	1
18	Hospital Serdang	6	11	15	11	0	0	0	0	11	1
19	Hospital Sibu	1	8	7	5	3	6	6	5	10	1
20	Hospital Miri	13	5	8	9	0	0	4	1	10	1
21	Hospital Taiping	7	5	9	7	1	0	7	3	10	1
22	Institut Kanser Negara	10	1	7	6	1	5	4	3	9	1
23	Hospital Seberang Jaya	8	8	7	8	0	4	4	1	9	1
24	HPSP Muar	7	6	5	6	0	0	7	2	8	1
25	HoSHAS Temerloh	12	8	5	8	0	0	0	0	8	1
26	HEBHK Kluang	3	9	10	7	0	0	0	0	7	1
27	Hospital Melaka	4	2	6	4	0	5	4	3	7	1
28	Hospital Dak Sandakan	4	6	4	5	1	3	2	2	7	1
29	HTF Kangar	8	5	5	6	0	0	1	0	6	1
30	Hospital Seri Manjung	4	4	8	5	1	0	0	0	6	1
31	Hospital Teluk Intan	5	6	5	5	0	0	0	0	5	1
32	Hospital Kajang	1	6	8	5	0	0	1	0	5	1
33	Hospital Segamat	7	4	5	5	0	0	0	0	5	1
34	Hospital Tawau	7	4	4	5	0	0	0	0	5	1
35	Hospital Sungai Buloh	5	2	6	4	0	0	0	0	4	1
36	Hospital Shah Alam	0	3	7	3	2	0	0	1	4	1
37	Hospital Bintulu	3	5	0	3	1	0	1	1	3	1
38	Hospital Putrajaya	0	4	4	3	0	0	0	0	3	1
39	Hospital Kuala Pilah	1	6	0	2	0	0	0	0	2	1
40	HSIP Kuala Krai	3	0	1	2	0	0	0	0	2	1
41	Hospital Port Dickson	3	0	0	1	0	1	0	0	1	1
42	Hospital Sarikei	0	0	1	1	0	0	0	0	1	1
43	Hospital Kulim	0	0	3	1	0	0	0	0	1	1
44	Hospital Langkawi	2	0	1	1	0	0	0	0	1	1
45	Hospital Kemaman	0	2	1	1	0	0	0	0	1	1
46	Hospital Labuan	1	2	0	1	0	0	0	0	1	1
47	Hospital Banting	0	2	1	1	0	0	0	0	1	1
48	Hospital Queen Elizabeth 2	1	0	0	0	0	0	0	0	0	1
49	Hospital Tanah Merah	0	1	0	0	0	0	0	0	0	1
50	Hospital Keningau	0	0	1	0	0	0	0	0	0	1
51	Hospital Lahad Datu	0	0	1	0	0	0	0	0	0	1
52	Hospital Kuala Lipis	0	1	0	0	0	0	0	0	0	1
53	Hospital Kapit	0	0	0	0	0	0	0	0	0	1
TOTAL		383	427	445	418	133	167	244	181	600	16

Table 7.10.13 : Anterior Resection by Modality of Approach by Hospitals

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



7.10.5 Hartmann's Procedure

a. Total

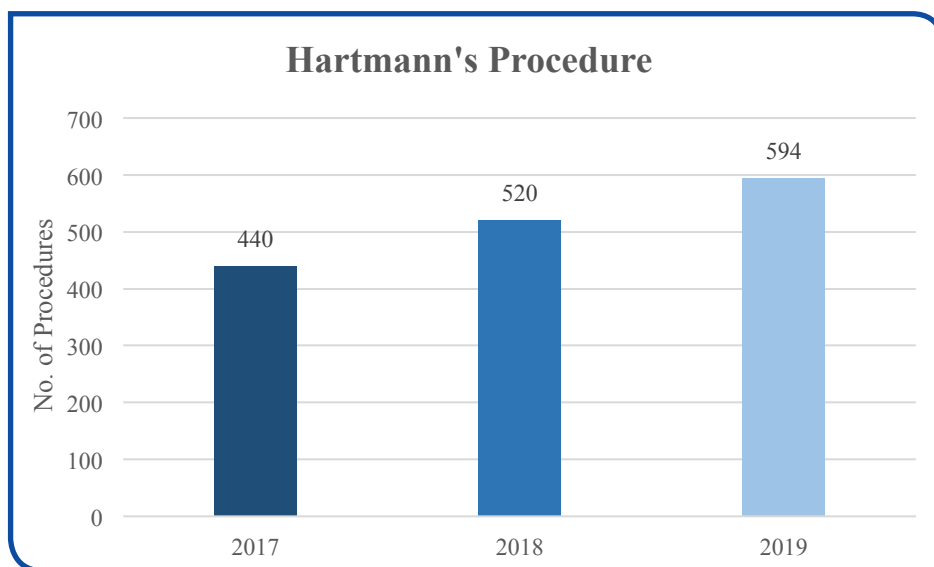


Figure 7.10.27 : Total Number of Hartmann's Procedure

b. By Modality of Approach

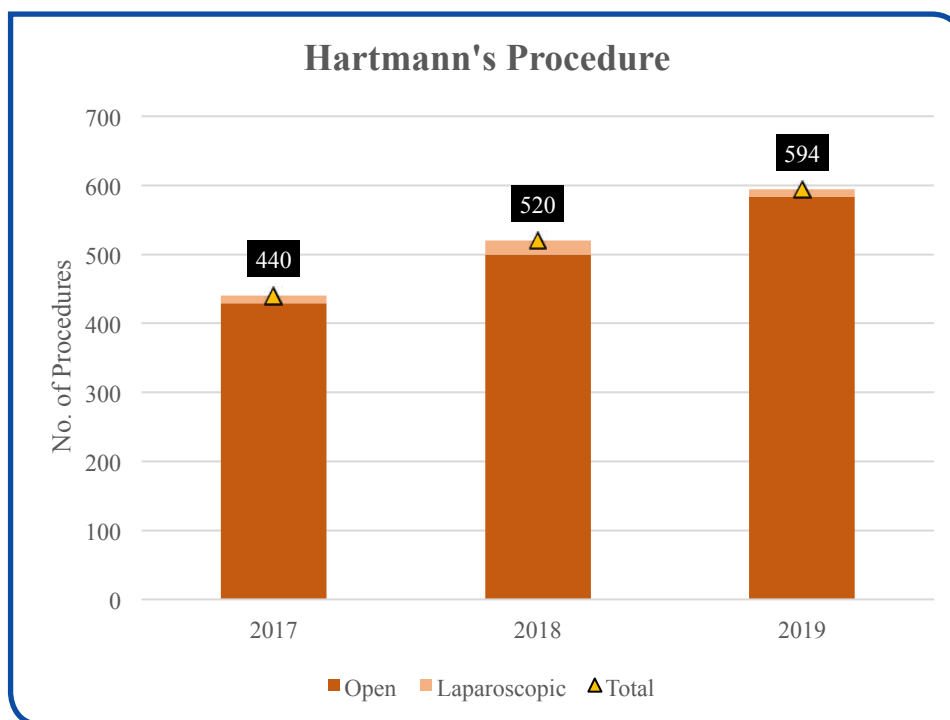


Figure 7.10.28 : Hartmann's Procedure by Modality of Approach

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



c. By BMS Category

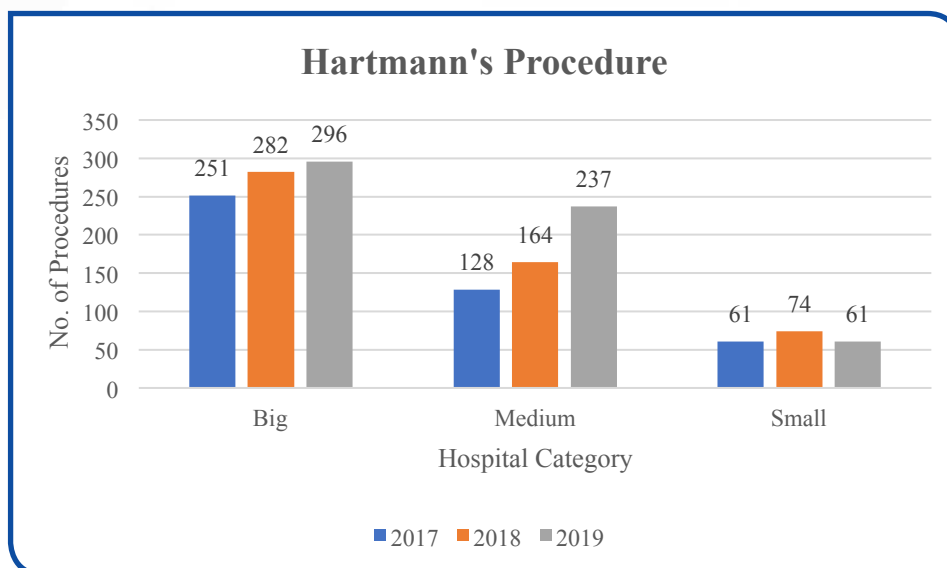


Figure 7.10.29 :Hartmann's Procedure by BMS Category

d. By BMS Hospital Category

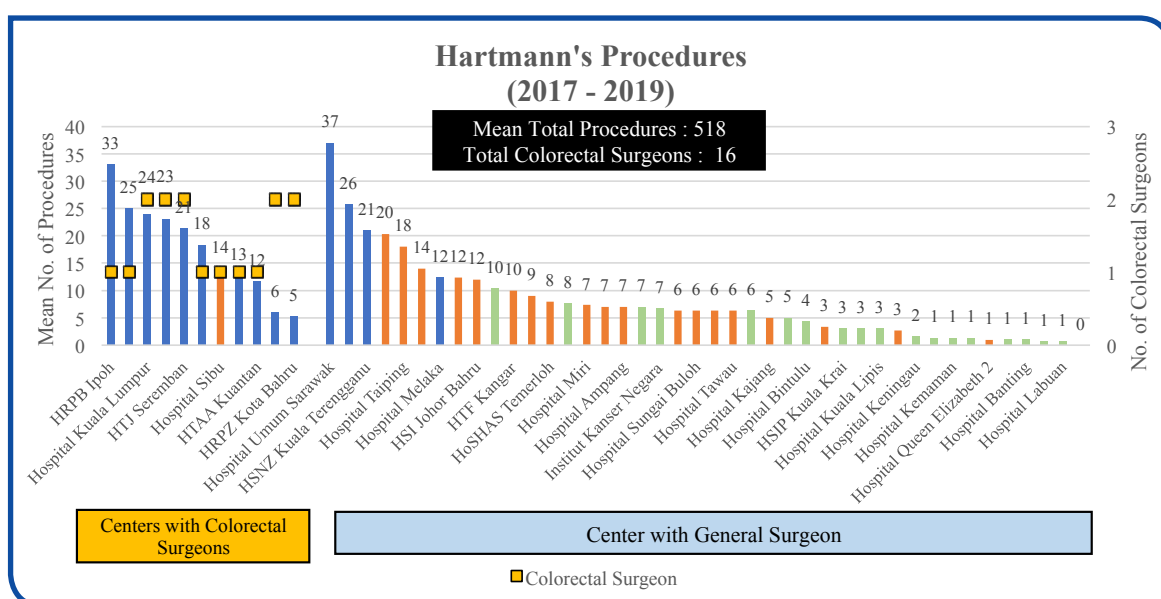


Figure 7.10.30 : Hartman's Procedure by BMS Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019

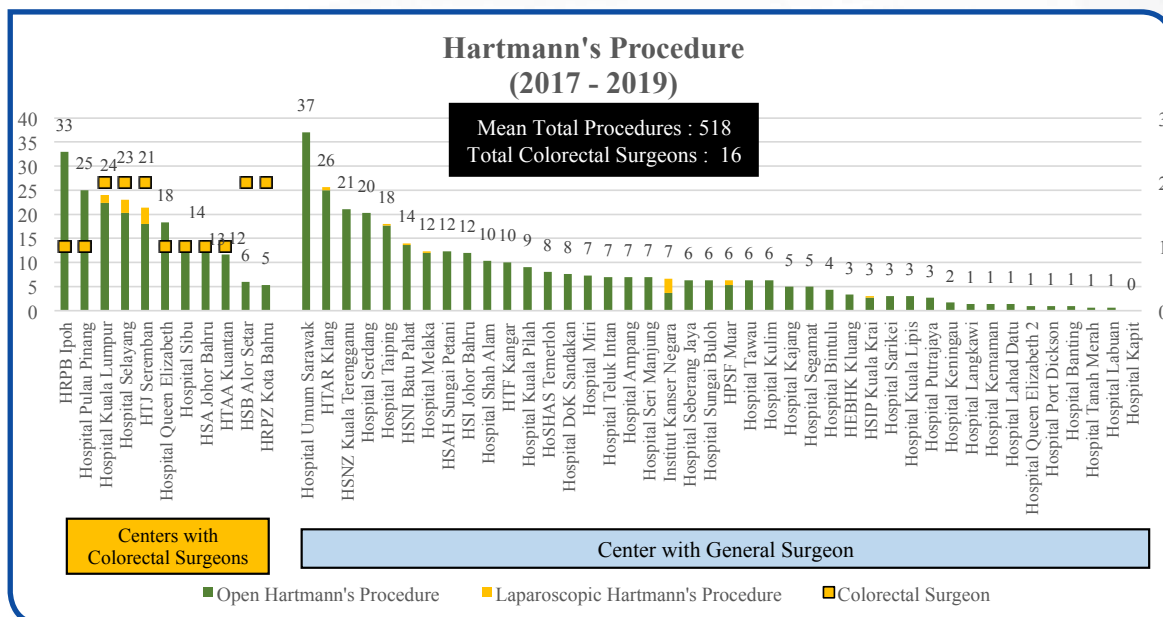


Figure 7.10.31 : Hartmann's Procedure by Modality of Approach

HARTMANN'S PROCEDURE

HOSPITAL CATEGORY	2017	2018	2019
Big	251	282	296
Medium	128	164	237
Small	61	74	61
TOTAL	440	520	594

Table 7.10.14 : Hartman's Procedure by BMS Hospital Category

HARTMANN'S PROCEDURE

PROCEDURE TYPE	2017	(%)	2018	(%)	2019	(%)
Hartmann Procedure - Open	429	98%	500	96%	583	98%
Hartmann Procedure - Laparoscopic	11	3%	20	4%	11	2%
TOTAL	440	100%	520	100%	594	100%

Table 7.10.15 : Hartmann's Procedure by Modality of Approach

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



HARTMANN'S PROCEDURE

NO	HOSPITALS	OPEN			LAPAROSCOPIC				TOTAL MEAN PROCEDURES (a+b)	NO. OF COLORECTAL SURGEONS
		2017	2018	2019	MEAN NO. OF PROCEDURES (a)	2017	2018	2019		
1	Hospital Umum Sarawak	37	38	36	37	0	0	0	37	
2	HRPB Ipoh	26	30	43	33	0	0	0	33	1
3	HTAR Klang	36	27	12	25	0	1	1	26	
4	Hospital Pulau Pinang	33	27	15	25	0	0	0	25	1
5	Hospital Kuala Lumpur	21	26	20	22	2	2	1	24	2
6	Hospital Selayang	12	23	26	20	2	1	5	23	2
7	HTJ Seremban	12	18	24	18	5	5	0	21	2
8	HSNZ Kuala Terengganu	11	29	23	21	0	0	0	21	
9	Hospital Serdang	4	19	38	20	0	0	0	20	
10	Hospital Queen Elizabeth	9	19	27	18	0	0	0	18	1
11	Hospital Taiping	18	23	12	18	1	0	0	18	
12	HSNI Batu Pahat	10	18	13	14	0	0	1	14	
13	Hospital Sibul	7	14	21	14	0	0	0	14	1
14	HSA Johor Bahru	12	7	18	12	1	0	0	13	1
15	Hospital Melaka	8	11	17	12	0	1	0	12	
16	HSAS Sungai Petani	14	9	14	12	0	0	0	12	
17	HSI Johor Bahru	14	4	18	12	0	0	0	12	
18	HTAA Kuantan	13	12	10	12	0	0	0	12	1
19	Hospital Shah Alam	11	15	5	10	0	0	0	10	
20	HTF Kangar	4	8	18	10	0	0	0	10	
21	Hospital Kuala Pilah	5	8	14	9	0	0	0	9	
22	HosHAS Temerloh	2	13	9	8	0	0	0	8	
23	Hospital DoK Sandakan	6	10	7	8	0	0	0	8	
24	Hospital Miri	1	9	12	7	0	0	0	7	
25	Hospital Teluk Intan	10	3	8	7	0	0	0	7	
26	Hospital Ampang	5	9	7	7	0	0	0	7	
27	Hospital Seri Manjung	10	10	1	7	0	0	0	7	
28	Institut Kanser Negara	8	1	2	4	0	9	0	7	
29	Hospital Seberang Jaya	0	9	10	6	0	0	0	6	
30	Hospital Sungai Buloh	3	8	8	6	0	0	0	6	
31	HPSP Muar	4	2	10	6	0	0	3	6	
32	Hospital Tawau	13	5	1	6	0	0	0	6	
33	Hospital Kulim	5	1	13	6	0	0	0	6	
34	HSB Alor Setar	5	1	12	6	0	0	0	6	
35	HRPZ Kota Bharu	6	4	6	5	0	0	0	5	2
36	Hospital Kajang	7	2	6	5	0	0	0	5	2
37	Hospital Segamat	3	8	4	5	0	0	0	5	
38	Hospital Bintulu	3	3	7	4	0	0	0	4	
39	HEBHK Kluang	0	0	10	3	0	0	0	3	
40	HSIP Kuala Krai	2	2	4	3	0	1	0	3	
41	Hospital Sarikei	2	4	3	3	0	0	0	3	
42	Hospital Kuala Lipis	1	5	3	3	0	0	0	3	
43	Hospital Putrajaya	3	1	4	3	0	0	0	3	
44	Hospital Keningau	0	0	5	2	0	0	0	2	
45	Hospital Langkawi	2	0	2	1	0	0	0	1	
46	Hospital Kemaman	3	1	0	1	0	0	0	1	
47	Hospital Lahad Datu	2	2	0	1	0	0	0	1	
48	Hospital Queen Elizabeth 2	3	0	0	1	0	0	0	1	
49	Hospital Port Dickson	0	0	3	1	0	0	0	1	
50	Hospital Banting	1	2	0	1	0	0	0	1	
51	Hospital Tanah Merah	1	0	1	1	0	0	0	1	
52	Hospital Labuan	1	0	1	1	0	0	0	1	
53	Hospital Kapit	0	0	0	0	0	0	0	0	
	TOTAL	429	500	583	504	11	20	11	518	16

Table 7.10.16 : Hartman's Procedure by Modality of Approach by Hospitals

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



7.10.6 Hemicolectomy (Right / Left / Sigmoid)

a. Total

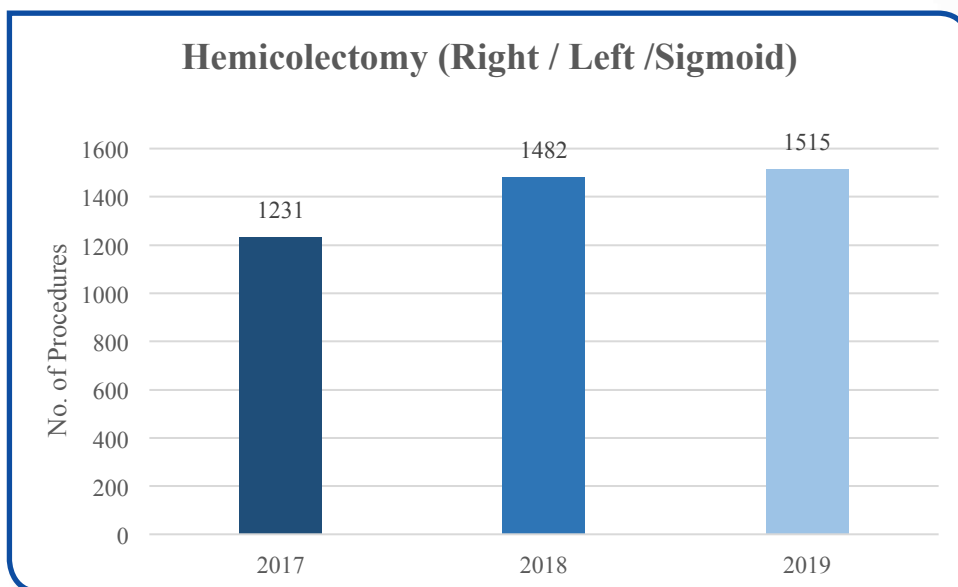


Figure 7.10.32 : Total Number of Hemicolectomy

b. By BMS Category

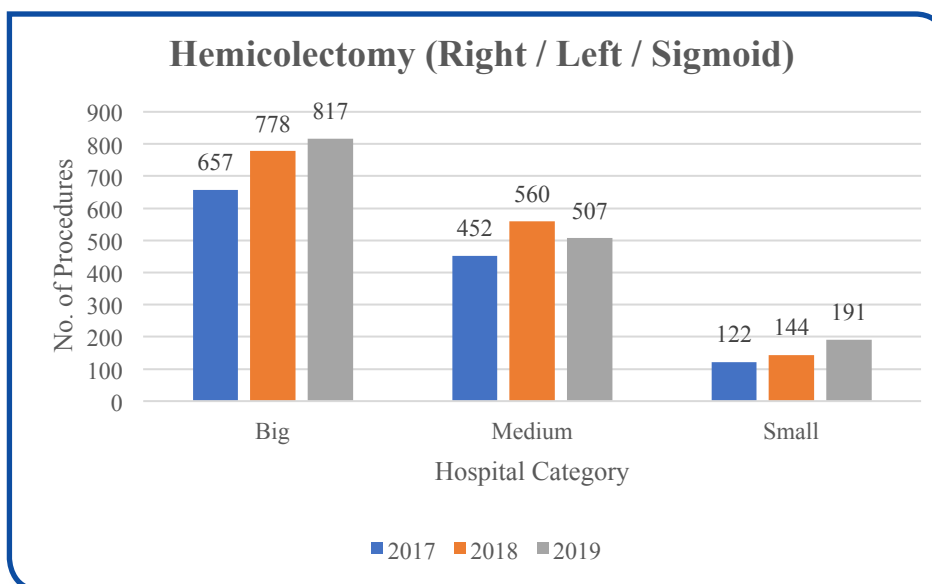


Figure 7.10.33 : Hemicolectomy by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



c. By BMS Hospital Category

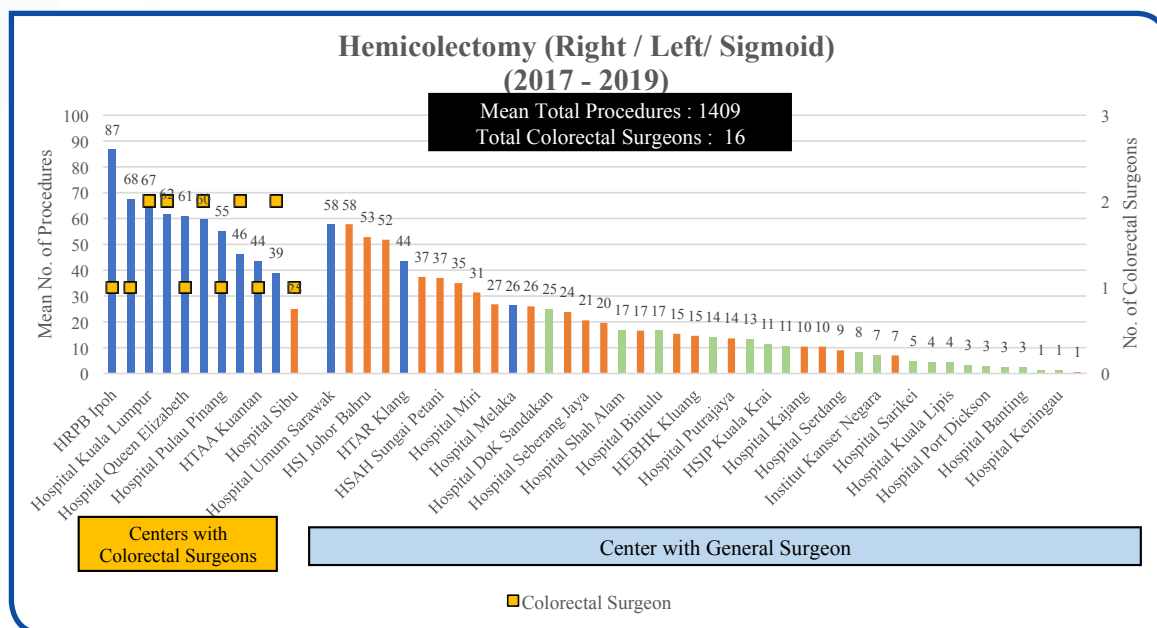


Figure 7.10.34 : Hemicolectomy by BMS Hospital Category

HEMICOLECTOMY

HOSPITAL CATEGORY	2017	2018	2019
Big	657	778	817
Medium	452	560	507
Small	122	144	191
TOTAL	1231	1482	1515

Table 7.10.14 : Hartman's Procedure by BMS Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



HEMICOLECTOMY (RIGHT/ LEFT/ SIGMOID)

NO	HOSPITALS	2017	2018	2019	MEAN NO. OF PROCEDURES	COLORECTAL SURGEON
1	HRPB Ipoh	59	130	71	87	1
2	HSA Johor Bahru	63	75	65	68	1
3	Hospital Kuala Lumpur	74	38	90	67	2
4	HSB Alor Setar	80	70	35	62	2
5	Hospital Queen Elizabeth	55	56	72	61	1
6	Hospital Selayang	48	52	79	60	2
7	Hospital Umum Sarawak	54	58	61	58	
8	HSNI Batu Pahat	47	72	54	58	
9	Hospital Pulau Pinang	44	55	66	55	1
10	HSI Johor Bahru	68	58	32	53	
11	Hospital Sungai Buloh	48	59	48	52	
12	HTJ Seremban	48	44	47	46	2
13	HTAR Klang	29	44	58	44	
14	HTAA Kuantan	38	42	51	44	1
15	HRPZ Kota Bahru	29	40	48	39	2
16	Hospital Taiping	35	29	48	37	
17	HSAH Sungai Petani	32	41	38	37	
18	HSNZ Kuala Terengganu	17	51	37	35	
19	Hospital Miri	30	34	30	31	
20	HoSHAS Temerloh	24	35	21	27	
21	Hospital Melaka	19	23	37	26	
22	Hospital Ampang	10	29	39	26	
23	Hospital Sibul	27	28	20	25	1
24	Hospital DoK Sandakan	19	29	27	25	
25	HTF Kangar	18	27	26	24	
26	Hospital Seberang Jaya	19	23	20	21	
27	Hospital Tawau	18	23	18	20	
28	Hospital Shah Alam	11	26	14	17	
29	Hospital Teluk Intan	13	21	16	17	
30	Hospital Bintulu	17	6	27	17	
31	HPSF Muar	10	10	26	15	
32	HEBHK Kluang	11	15	18	15	
33	Hospital Segamat	12	15	15	14	
34	Hospital Putrajaya	8	9	24	14	
35	Hospital Kemaman	2	17	21	13	
36	HSIP Kuala Krai	7	10	17	11	
37	Hospital Kulim	12	10	10	11	
38	Hospital Kajang	12	8	11	10	
39	Hospital Kuala Pilah	9	14	8	10	
40	Hospital Serdang	7	14	6	9	
41	Hospital Seri Manjung	7	5	13	8	
42	Institut Kanser Negara	10	1	11	7	
43	Hospital Queen Elizabeth 2	6	11	4	7	
44	Hospital Sarikei	4	5	6	5	
45	Hospital Tanah Merah	7	3	3	4	
46	Hospital Kuala Lipis	2	7	4	4	
47	Hospital Labuan	3	3	4	3	
48	Hospital Port Dickson	2	2	5	3	
49	Hospital Lahad Datu	2	2	4	3	
50	Hospital Banting	3	3	2	3	
51	Hospital Langkawi	0	0	4	1	
52	Hospital Keningau	0	0	4	1	
53	Hospital Kapit	2	0	0	1	
TOTAL		1231	1482	1515	1409	16

Table 7.10.18 : Hemicolectomy by Hospitals category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



7.10.7 Total Colectomy

a. Total

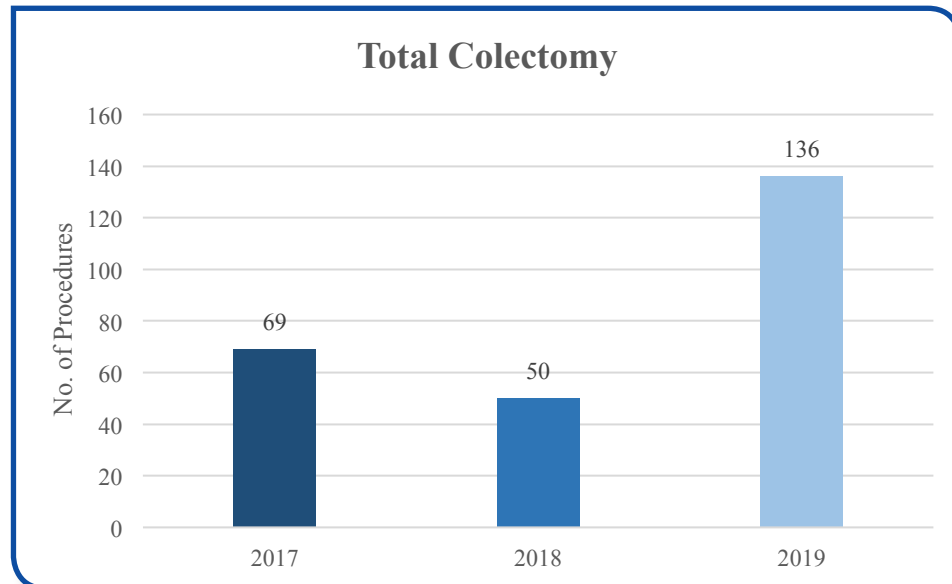


Figure 7.10.35 : Total number of Total Colectomy

b. By BMS Category

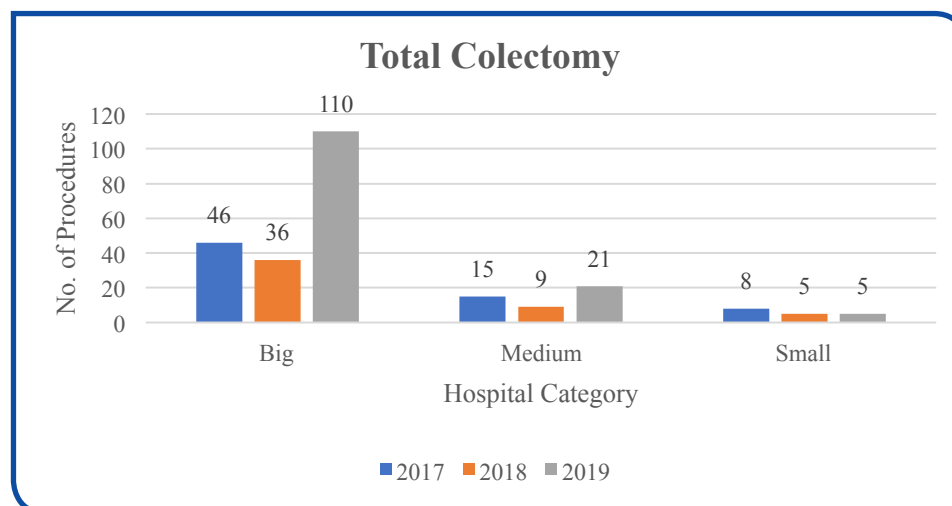


Figure 7.10.36 : Total Colectomy by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



c. By BMS Hospital Category

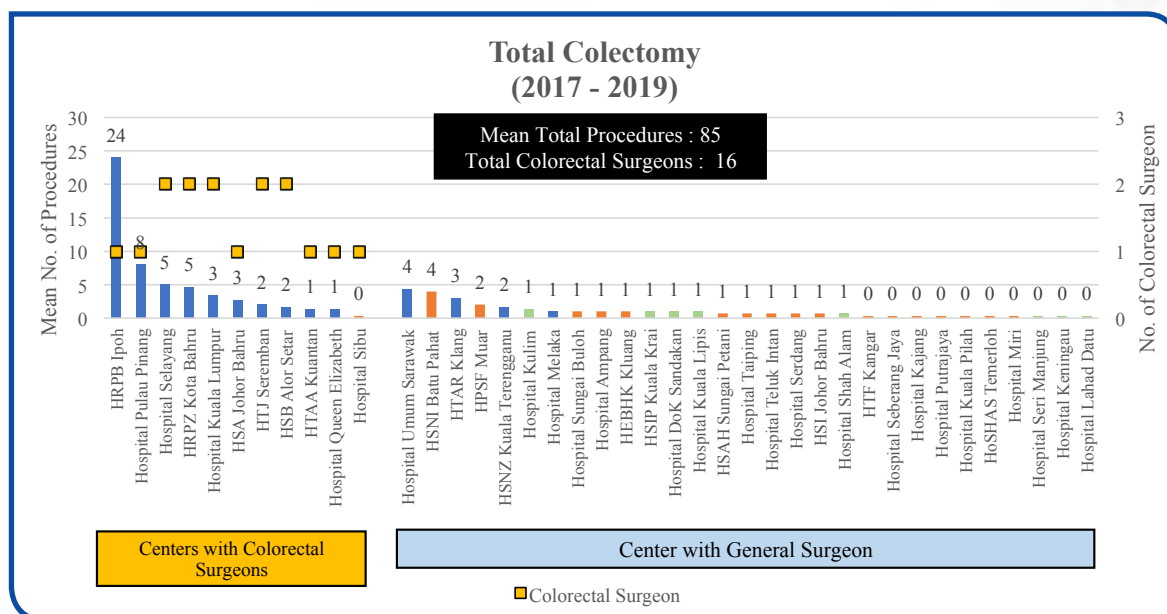


Figure 7.10.37 : Total Colectomy by BMS Hospital Category

TOTAL COLECTOMY

HOSPITAL CATEGORY	2017	2018	2019
Big	46	36	110
Medium	15	9	21
Small	8	5	5
TOTAL	69	50	136

Table 7.10.19 : Total Colectomy by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



TOTAL COLECTOMY

NO	HOSPITALS	2017	2018	2019	MEAN NO. OF PROCEDURES	COLORECTAL SURGEON
1	HRPB Ipoh	9	3	60	24	1
2	Hospital Pulau Pinang	8	11	5	8	1
3	Hospital Selayang	7	1	7	5	2
4	HRPZ Kota Bahru	4	3	7	5	2
5	Hospital Umum Sarawak	4	1	8	4	
6	HSNI Batu Pahat	2	4	6	4	
7	Hospital Kuala Lumpur	6	0	4	3	2
8	HTAR Klang	1	2	6	3	
9	HSA Johor Bahru	2	4	2	3	1
10	HTJ Seremban	3	3	0	2	2
11	HPSF Muar	2	0	4	2	
12	HSB Alor Setar	1	1	3	2	2
13	HSNZ Kuala Terengganu	0	4	1	2	
14	HTAA Kuantan	0	0	4	1	1
15	Hospital Queen Elizabeth	0	1	3	1	1
16	Hospital Kulim	2	0	2	1	
17	Hospital Melaka	1	2	0	1	
18	Hospital Sungai Buloh	2	1	0	1	
19	Hospital Ampang	0	1	2	1	
20	HEBHK Kluang	0	1	2	1	
21	HSIP Kuala Krai	1	0	2	1	
22	Hospital DoK Sandakan	1	2	0	1	
23	Hospital Kuala Lipis	1	2	0	1	
24	HSAH Sungai Petani	1	0	1	1	
25	Hospital Taiping	0	1	1	1	
26	Hospital Teluk Intan	2	0	0	1	
27	Hospital Serdang	1	0	1	1	
28	HSI Johor Bahru	1	0	1	1	
29	Hospital Shah Alam	1	0	1	1	
30	HTF Kangar	0	1	0	0	
31	Hospital Seberang Jaya	0	0	1	0	
32	Hospital Kajang	0	0	1	0	
33	Hospital Putrajaya	1	0	0	0	
34	Hospital Kuala Pilah	1	0	0	0	
35	HoSHAS Temerloh	1	0	0	0	
36	Hospital Sibu	1	0	0	0	1
37	Hospital Miri	0	0	1	0	
38	Hospital Seri Manjung	1	0	0	0	
39	Hospital Keningau	1	0	0	0	
40	Hospital Lahad Datu	0	1	0	0	
41	Hospital Queen Elizabeth 2	0	0	0	0	
42	Hospital Tawau	0	0	0	0	
43	Hospital Langkawi	0	0	0	0	
44	Institut Kanser Negara	0	0	0	0	
45	Hospital Port Dickson	0	0	0	0	
46	Hospital Segamat	0	0	0	0	
47	Hospital Kemaman	0	0	0	0	
48	Hospital Tanah Merah	0	0	0	0	
49	Hospital Bintulu	0	0	0	0	
50	Hospital Sarikei	0	0	0	0	
51	Hospital Kapit	0	0	0	0	
52	Hospital Labuan	0	0	0	0	
53	Hospital Banting	0	0	0	0	
	TOTAL	69	50	136	85	16

Table 7.10.20 : Total Colectomy by Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



7.10.8 Stapler Hemorrhoidectomy

a. Total

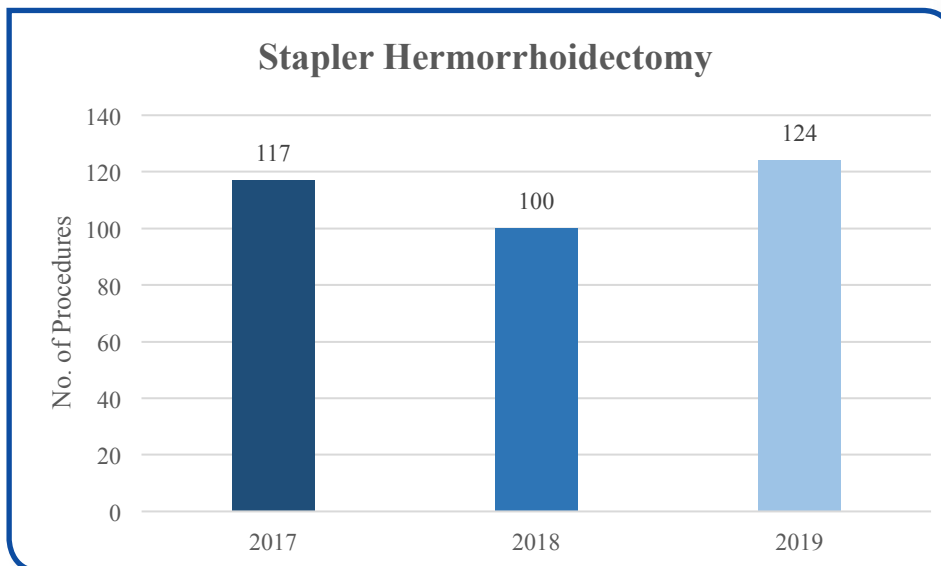


Figure 7.10.38 : Total Number of Stapler Hemorrhoidectomy

b. By BMS Category

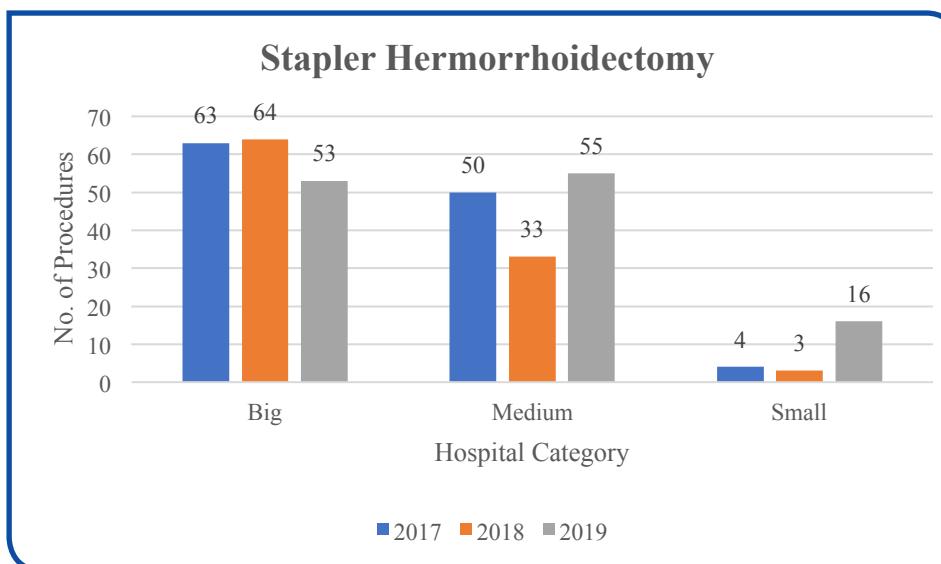


Figure 7.10.39 : Stapler Hemorrhoidectomy by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



c. By BMS Hospital Category

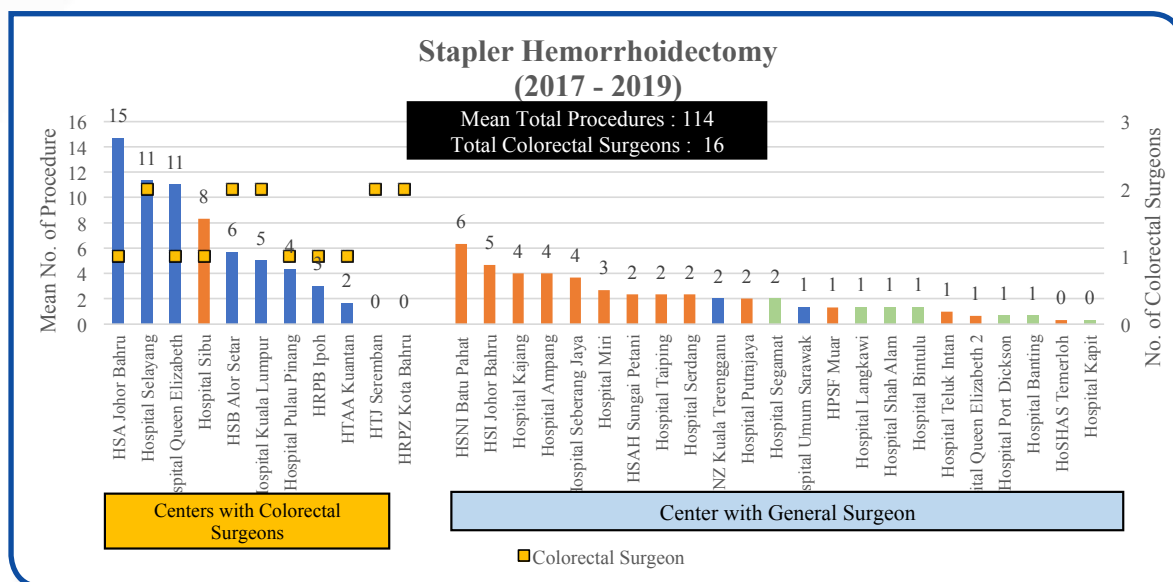


Figure 7.10.40 : Stapler Hemorrhoidectomy by BMS Hospital Category

STAPLER HEMORRHOIDECTOMY

HOSPITAL CATEGORY	2017	2018	2019
Big	63	64	53
Medium	50	33	55
Small	4	3	16
TOTAL	117	100	124

Table 7.10.21: Stapler Hemorrhoidectomy by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



STAPLER HEMORRHOIDECTOMY

NO	HOSPITALS	2017	2018	2019	MEAN NO. OF PROCEDURES	COLORECTAL SURGEON
1	HSA Johor Bahru	9	21	14	15	1
2	Hospital Selayang	18	12	4	11	2
3	Hospital Queen Elizabeth	16	15	2	11	1
4	Hospital Sibul	7	1	17	8	1
5	HSNI Batu Pahat	1	15	3	6	
6	HSB Alor Setar	5	5	7	6	2
7	Hospital Kuala Lumpur	7	5	3	5	2
8	HSI Johor Bahru	4	2	8	5	
9	Hospital Pulau Pinang	2	3	8	4	1
10	Hospital Kajang	8	0	4	4	
11	Hospital Ampang	7	2	3	4	
12	Hospital Seberang Jaya	7	2	2	4	
13	HRPB Ipoh	1	1	7	3	
14	Hospital Miri	3	5	0	3	1
15	HSAH Sungai Petani	2	1	4	2	
16	Hospital Taiping	1	0	6	2	
17	Hospital Serdang	6	0	1	2	
18	HSNZ Kuala Terengganu	4	2	0	2	
19	Hospital Putrajaya	1	3	2	2	
20	Hospital Segamat	1	0	5	2	
21	HTAA Kuantan	0	0	5	2	1
22	Hospital Umum Sarawak	1	0	3	1	
23	HPSF Muar	0	0	4	1	
24	Hospital Langkawi	0	0	4	1	
25	Hospital Shah Alam	1	2	1	1	
26	Hospital Bintulu	0	0	4	1	
27	Hospital Teluk Intan	2	0	1	1	
28	Hospital Queen Elizabeth 2	1	1	0	1	
29	Hospital Port Dickson	2	0	0	1	
30	Hospital Banting	0	0	2	1	
31	HoSHAS Temerloh	0	1	0	0	
32	Hospital Kapiti	0	1	0	0	
33	HTJ Seremban	0	0	0	0	2
34	HRPZ Kota Bharu	0	0	0	0	2
TOTAL		117	100	124	114	16

Table 7.10.22: Stapler Hemorrhoidectomy by Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



7.10.9 Fistula-in-ano Surgery

a. Total

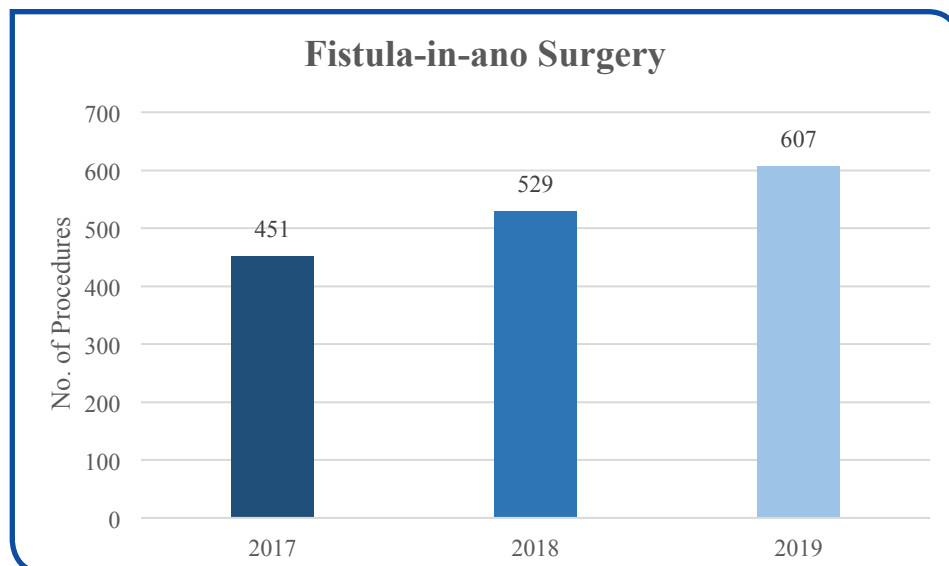


Figure 7.10.41 : Total Number of Fistula-in-ano Surgery

b. By BMS Category

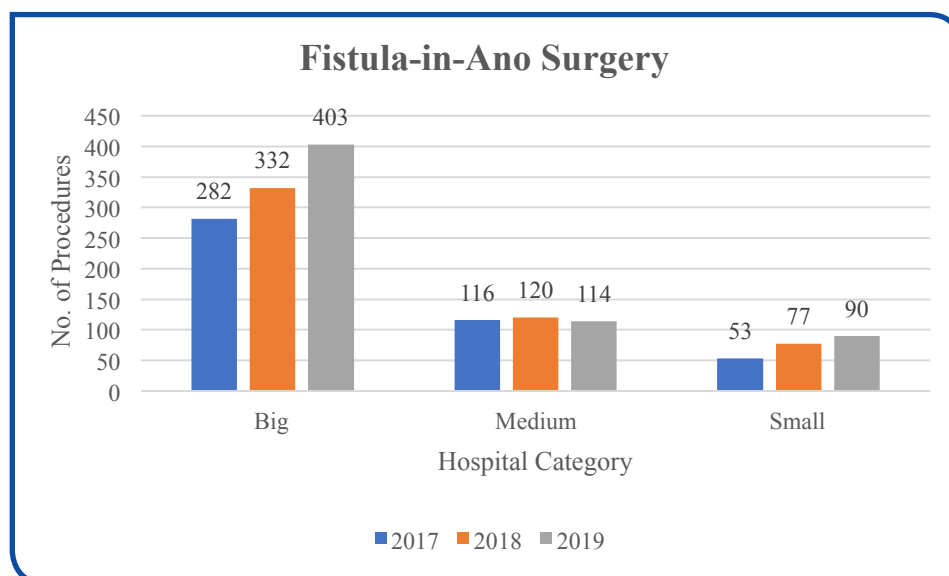


Figure 7.10.42 : Fistula-in-ano Surgery by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



c. By BMS Hospital Category

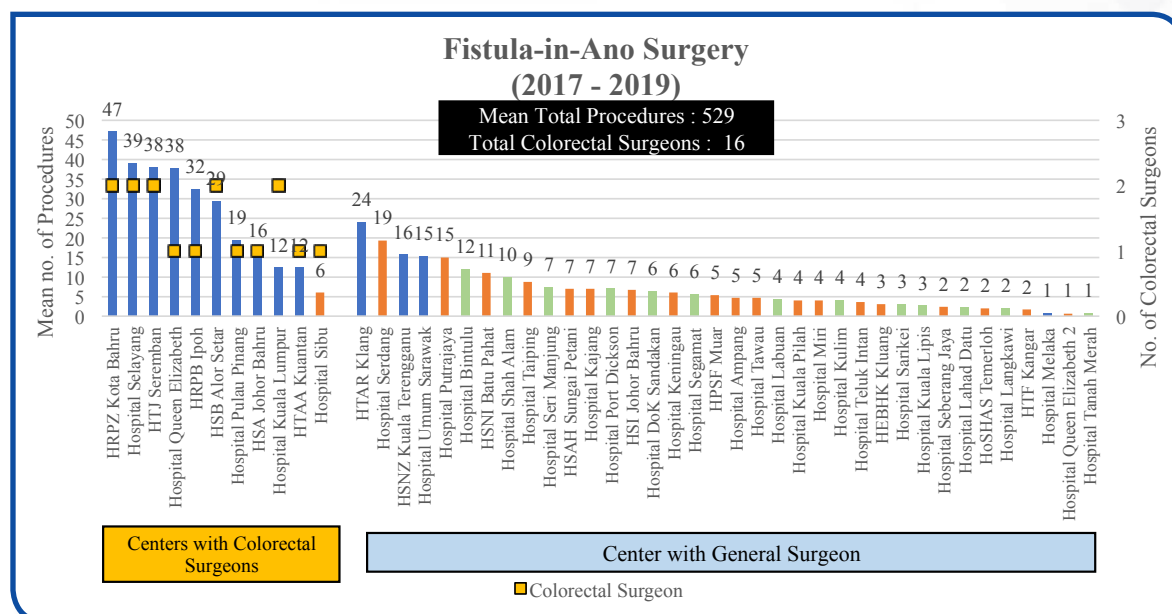


Figure 7.10.43 : Fistula-in-ano Surgery by BMS Hospital Category

OPEN FISTULA-IN-ANO

HOSPITAL CATEGORY	2017	2018	2019
Big	282	332	403
Medium	116	120	114
Small	53	77	90
TOTAL	451	529	607

Table 7.10.23 : Fistula-in-ano Surgery by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



OPEN FISTULA IN ANO PROCEDURES

NO	HOSPITALS	2017	2018	2019	MEAN NO. OF PROCEDURES	COLORECTAL SURGEON
1	HRPZ Kota Bahru	39	44	58	47	2
2	Hospital Selayang	41	46	30	39	2
3	HTJ Seremban	24	35	55	38	2
4	Hospital Queen Elizabeth	23	35	55	38	1
5	HRPB Ipoh	40	34	23	32	1
6	HSB Alor Setar	15	17	56	29	2
7	HTAR Klang	28	35	9	24	
8	Hospital Pulau Pinang	19	20	19	19	1
9	Hospital Serdang	28	28	2	19	
10	HSA Johor Bahru	13	18	17	16	1
11	HSNZ Kuala Terengganu	13	12	22	16	
12	Hospital Umum Sarawak	14	11	21	15	
13	Hospital Putrajaya	23	11	11	15	
14	Hospital Kuala Lumpur	5	12	20	12	2
15	HTAA Kuantan	8	13	16	12	1
16	Hospital Bintulu	5	11	20	12	
17	HSNI Batu Pahat	10	18	5	11	
18	Hospital Shah Alam	8	9	13	10	
19	Hospital Taiping	0	11	15	9	
20	Hospital Seri Manjung	5	5	12	7	
21	HSAH Sungai Petani	9	9	3	7	
22	Hospital Kajang	3	4	14	7	
23	Hospital Port Dickson	5	16	0	7	
24	HSI Johor Bahru	6	3	11	7	
25	Hospital DoK Sandakan	3	12	4	6	
26	Hospital Sibul	9	5	4	6	1
27	Hospital Keningau	2	4	12	6	
28	Hospital Segamat	8	4	5	6	
29	HPSF Muar	4	6	6	5	
30	Hospital Ampang	0	3	11	5	
31	Hospital Tawau	2	5	7	5	
32	Hospital Labuan	5	2	6	4	
33	Hospital Kuala Pilah	4	6	2	4	
34	Hospital Miri	5	3	4	4	
35	Hospital Kulim	7	5	0	4	
36	Hospital Teluk Intan	3	0	8	4	
37	HEBHK Kluang	5	3	1	3	
38	Hospital Sarikei	3	3	3	3	
39	Hospital Kuala Lipis	2	3	3	3	
40	Hospital Seberang Jaya	2	1	4	2	
41	Hospital Lahad Datu	0	3	4	2	
42	HoSHAS Temerloh	2	3	1	2	
43	Hospital Langkawi	0	0	6	2	
44	HTF Kangar	0	0	5	2	
45	Hospital Melaka	0	0	2	1	
46	Hospital Queen Elizabeth 2	1	1	0	1	
47	Hospital Tanah Merah	0	0	2	1	
48	Hospital Sungai Buloh	0	0	0	0	
49	Institut Kanser Negara	0	0	0	0	
50	Hospital Kemaman	0	0	0	0	
51	HSIP Kuala Krai	0	0	0	0	
52	Hospital Kapit	0	0	0	0	
53	Hospital Banting	0	0	0	0	
TOTAL		451	529	607	529	16

Table 7.10.24 : Fistula-in-ano Surgery by Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



7.11 Vascular

List of procedures selected for Vascular workload measurement are:

- Chemoport insertion
- Brachio-Cephalic Fistula (BCF) and Radio-Cephalic Fistula (RCF) Creation
- High Saphenous Vein Ligation (HSVL) and Stripping
- Embolectomies

7.11.1 Chemoport Insertion

a. Total

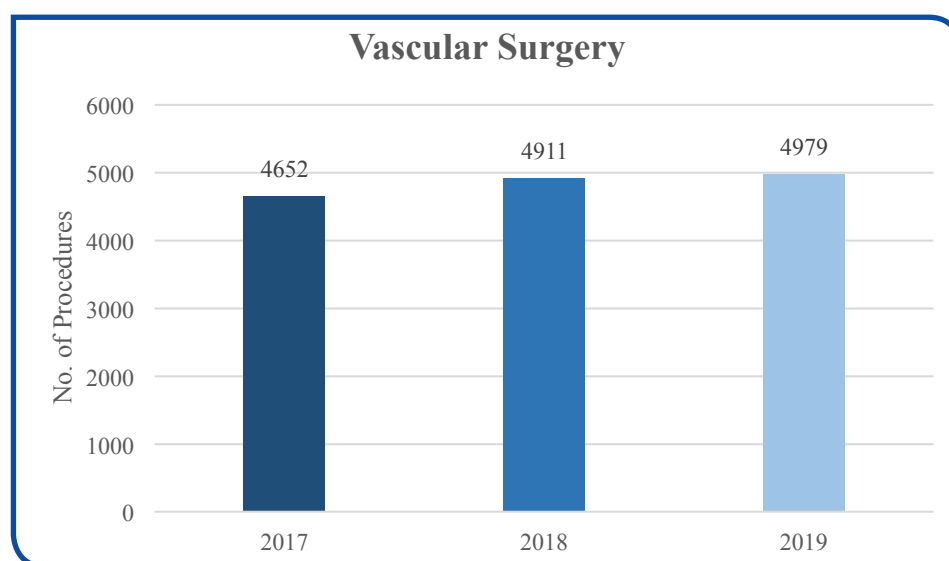


Figure 7.11.1 : Total Number of Vascular Surgery

b. By BMS Category

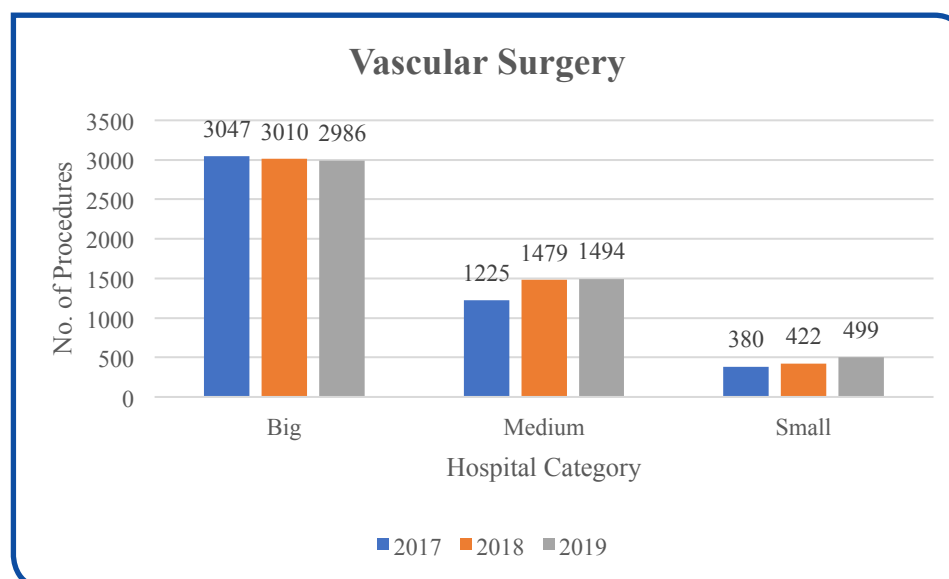


Figure 7.11.2 : Vascular Surgery by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



c. By BMS Hospital Category

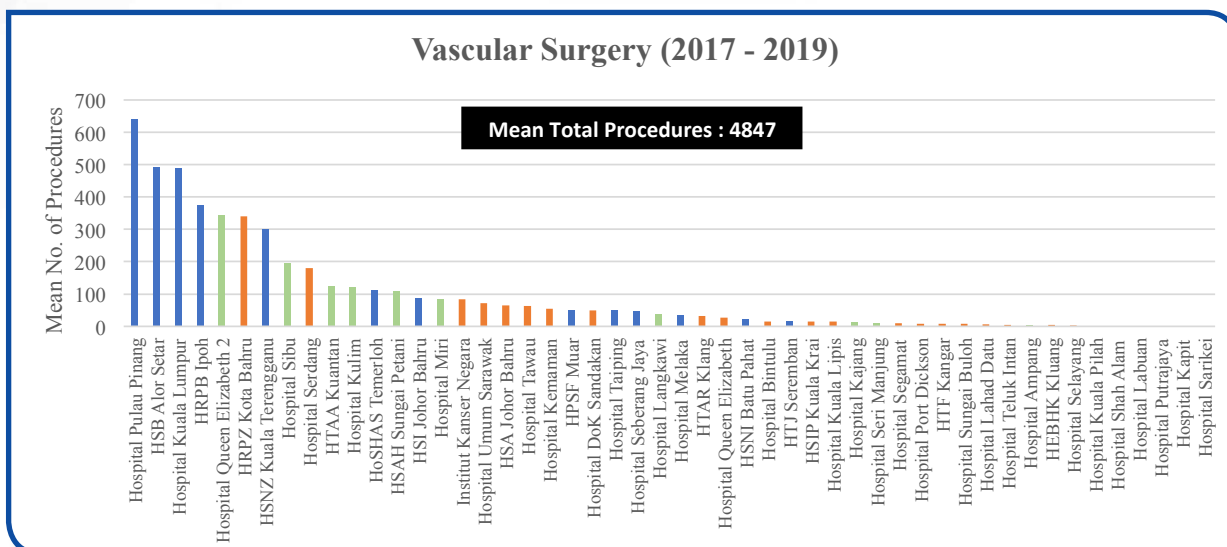


Figure 7.11.3 : Vascular Surgery by BMS Hospital Category

d. Types of Vascular Surgery

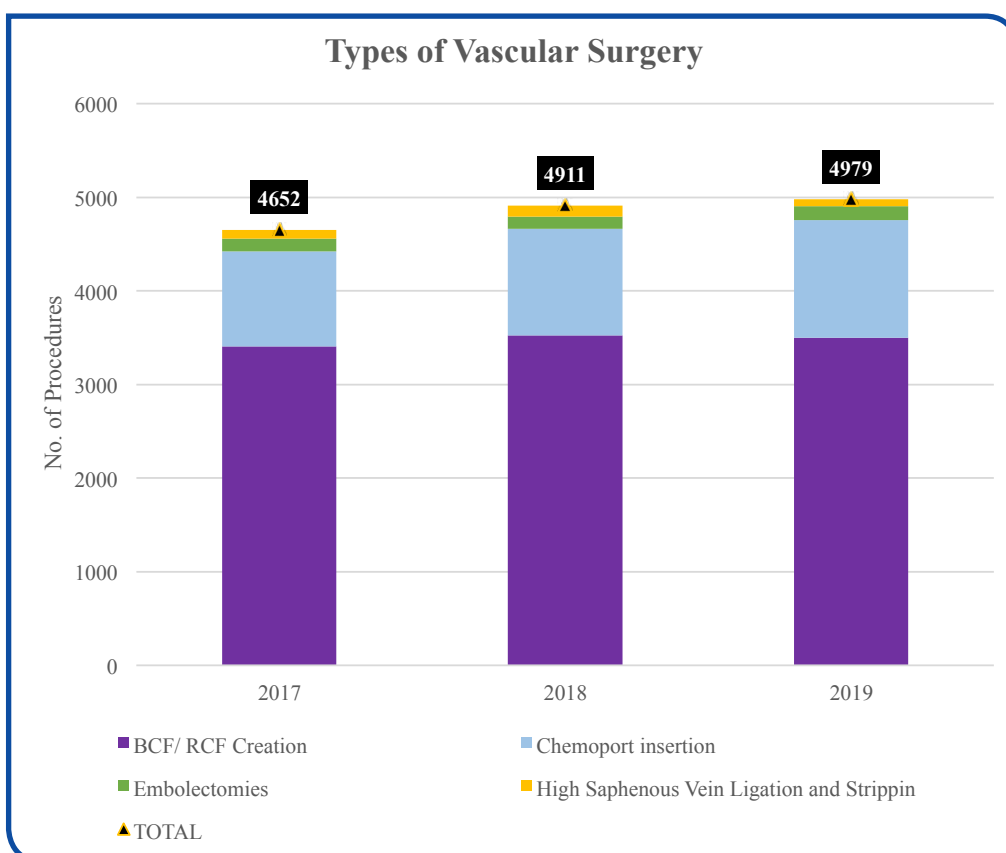


Figure 7.11.4 : Types of Vascular Surgery

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



VASCULAR SURGERY

HOSPITAL CATEGORY	2017	2018	2019
Big	3047	3010	2986
Medium	1225	1479	1494
Small	380	422	499
TOTAL	4652	4911	4979

Table 7.11.1 Vascular Surgery by BMS Category

VASCULAR SURGERY BY GENERAL SURGEONS

PROCEDURE TYPE	2017	(%)	2018	(%)	2019	(%)
Chemoport insertion	1013	22%	1135	23%	1258	25%
BCF/ RCF Creation	3406	73%	3526	72%	3499	70%
High Saphenous Vein Ligation and Stripping	96	2%	117	2%	72	1%
Embolectomies	137	3%	133	3%	150	3%
TOTAL	4652	1.0	4911	100%	4979	100%

Table 7.11.2 : Types of Vascular Surgery

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



VASCULAR SURGERY BY GENERAL SURGEONS

NO	HOSPITALS	MEAN NO. OF PROCEDURES				TOTAL MEAN PROCEDURES (a+b+c+d)
		CHEMOPORT INSERTION (a)	BCF /RCF CREATION (b)	HSVLT & STRIPPING (c)	EMBOLECTOMIES (d)	
1	Hospital Pulau Pinang	139	489	2	8	637
2	HSB Alor Setar	173	314	1	5	492
3	Hospital Kuala Lumpur	17	435	13	24	489
4	HRPB Ipoh	18	355	1	0	374
5	Hospital Queen Elizabeth 2	9	334	0	2	345
6	HRPZ Kota Bharu	101	186	2	4	293
7	HSNZ Kuala Terengganu	43	223	0	3	270
8	Hospital Sibü	0	185	6	4	196
9	Hospital Serdang	0	161	9	10	181
10	HTAA Kuantan	34	81	8	2	125
11	Hospital Kulim	10	111	0	1	122
12	HoSHAS Temerloh	9	98	2	1	110
13	HSAH Sungai Petani	38	51	0	2	91
14	HSI Johor Bahru	86	0	1	1	87
15	Hospital Miri	4	76	2	3	85
16	Institut Kanser Negara	84	0	0	0	84
17	Hospital Umum Sarawak	3	44	18	7	72
18	HSA Johor Bahru	12	35	3	15	65
19	Hospital Tawau	23	39	0	1	62
20	Hospital Kemaman	13	38	0	3	54
21	HPSF Muar	44	5	2	1	51
22	Hospital DoK Sandakan	5	43	1	1	50
23	Hospital Taiping	36	12	0	1	49
24	Hospital Seberang Jaya	1	36	10	1	48
25	Hospital Langkawi	1	34	3	0	37
26	Hospital Melaka	33	0	0	2	35
27	HTAR Klang	25	0	1	6	32
28	Hospital Queen Elizabeth	23	1	2	1	26
29	HSNI Batu Pahat	23	0	0	0	24
30	Hospital Bintulu	15	1	0	0	16
31	HTJ Seremban	5	8	0	3	15
32	HSIP Kuala Krai	5	0	0	10	15
33	Hospital Kuala Lipis	2	12	0	0	14
34	Hospital Kajang	11	0	0	0	11
35	Hospital Seri Manjung	5	0	0	4	9
36	Hospital Segamat	0	6	2	1	9
37	Hospital Port Dickson	3	4	0	1	8
38	HTF Kangar	8	0	0	0	8
39	Hospital Sungai Buloh	2	6	1	0	8
40	Hospital Lahad Datu	2	4	0	0	6
41	Hospital Teluk Intan	4	0	0	1	5
42	Hospital Ampang	0	2	3	0	5
43	HEBHK Kluang	2	0	1	2	5
44	Hospital Selayang	1	1	0	0	2
45	Hospital Kuala Pilah	2	0	0	0	2
46	Hospital Shah Alam	0	0	2	0	2
47	Hospital Labuan	0	2	0	0	2
48	Hospital Putrajaya	1	0	0	0	1
49	Hospital Kapit	0	0	0	1	1
50	Hospital Sarikei	0	0	0	0	0
51	Hospital Tanah Merah	0	0	0	0	0
52	Hospital Keningau	0	0	0	0	0
53	Hospital Banting	0	0	0	0	0
TOTAL		1135	3477	95	140	4847

Table 7.11.3 : Vascular Surgery by Hospitals

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



7.11.2 BCF/ RCF Creation

a. Total

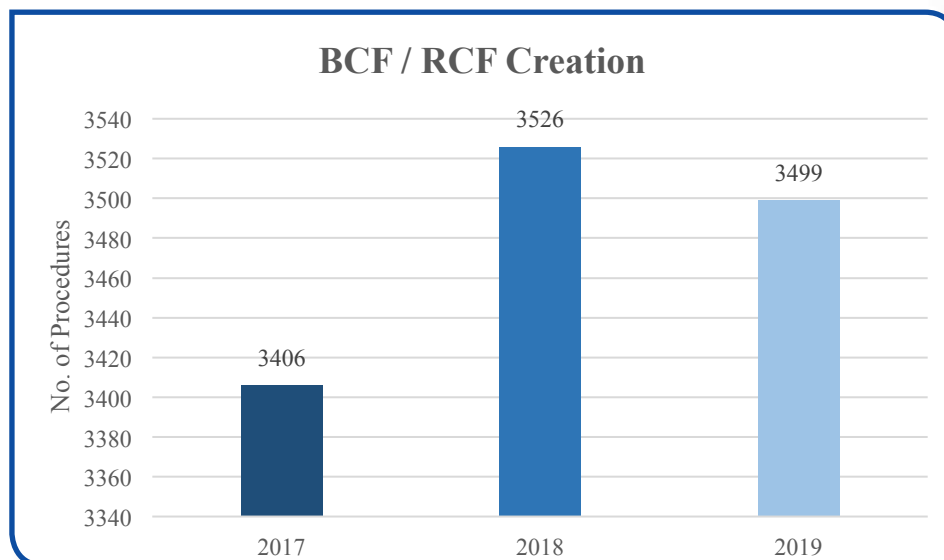


Figure 7.11.5 : Total Number of BCF / RCF Creation

b. By BMS Category

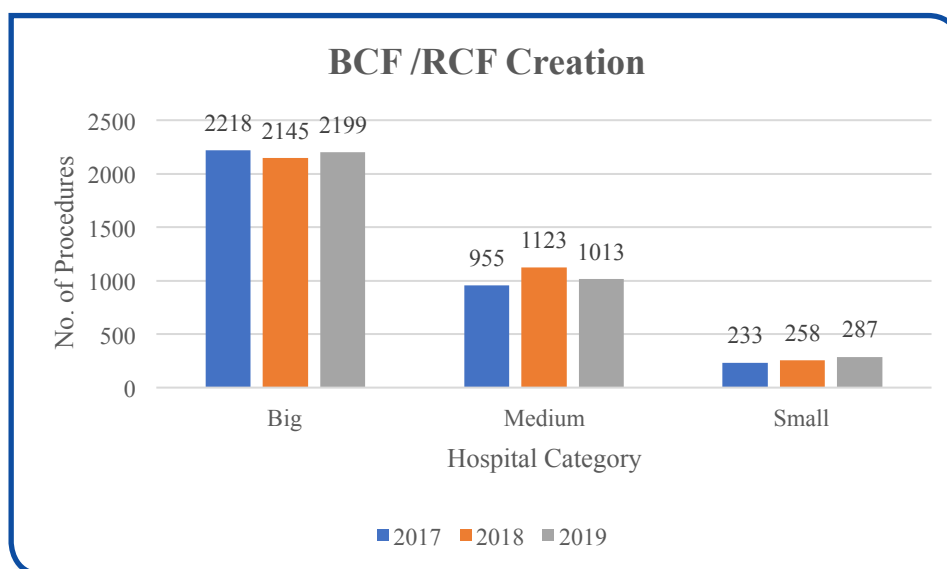


Figure 7.11.6 : BCF / RCF Creation by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



c. By BMS Hospital Category

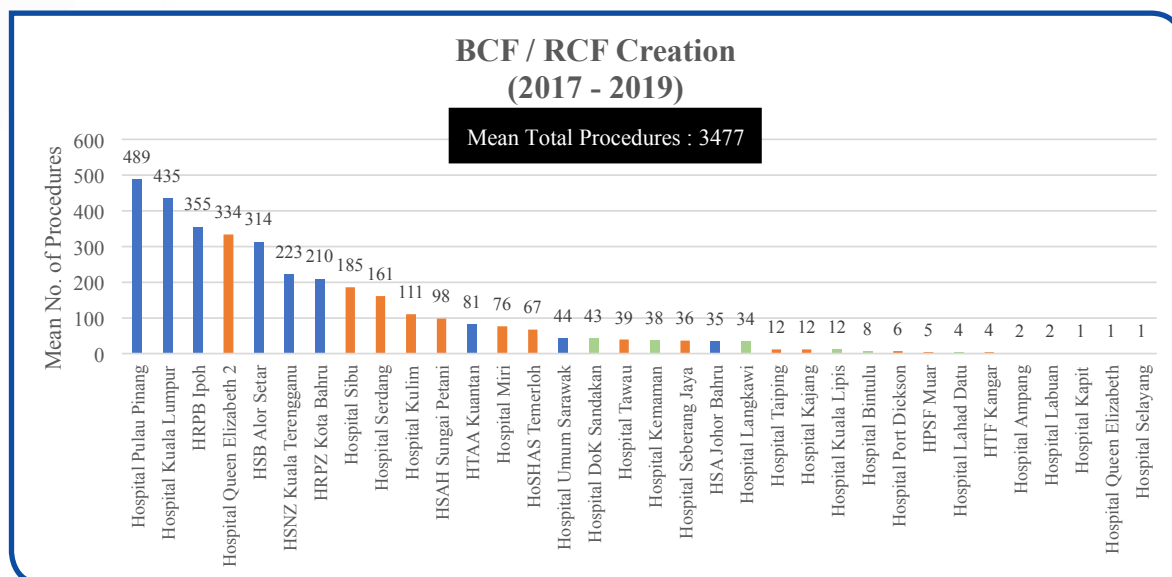


Figure 7.11.7 : BCF / RCF Creation by BMS Hospital Category

BCF / RCF CREATION

HOSPITAL CATEGORY	2017	2018	2019
Big	2218	2145	2199
Medium	955	1123	1013
Small	233	258	287
TOTAL	3406	3526	3499

Table 7.11.4 : BCF / RCF Creation by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



BCF / RCF CREATION

NO	HOSPITALS	2017	2018	2019	MEAN NO. OF PROCEDURES
1	Hospital Pulau Pinang	456	460	550	489
2	Hospital Kuala Lumpur	480	394	431	435
3	HRPB Ipoh	423	329	314	355
4	Hospital Queen Elizabeth 2	261	336	404	334
5	HSB Alor Setar	330	350	261	314
6	HSNZ Kuala Terengganu	173	207	290	223
7	HRPZ Kota Bahru	206	213	210	210
8	Hospital Sibul	177	183	196	185
9	Hospital Serdang	259	202	23	161
10	Hospital Kulim	107	123	103	111
11	HSAH Sungai Petani	49	135	109	98
12	HTAA Kuantan	63	81	100	81
13	Hospital Miri	79	88	60	76
14	HoSHAS Temerloh	51	70	80	67
15	Hospital Umum Sarawak	45	46	41	44
16	Hospital DoK Sandakan	44	41	43	43
17	Hospital Tawau	36	16	64	39
18	Hospital Kemaman	32	42	41	38
19	Hospital Seberang Jaya	28	72	8	36
20	HSA Johor Bahru	40	65	0	35
21	Hospital Langkawi	35	31	35	34
22	Hospital Taiping	5	7	25	12
23	Hospital Kajang	0	14	23	12
24	Hospital Kuala Lipis	4	3	30	12
25	Hospital Bintulu	7	6	10	8
26	Hospital Port Dickson	0	0	19	6
27	HPSF Muar	0	0	14	5
28	Hospital Lahad Datu	0	12	1	4
29	HTF Kangar	10	0	2	4
30	Hospital Ampang	0	0	5	2
31	Hospital Labuan	0	0	5	2
32	Hospital Kapit	4	0	0	1
33	Hospital Queen Elizabeth	2	0	0	1
34	Hospital Selayang	0	0	2	1
TOTAL		3406	3526	3499	3477

Table 7.11.5: BCF / RCF Creation by Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



7.11.3 High Saphenous Vein Ligation (HSVL) and Stripping

a. Total

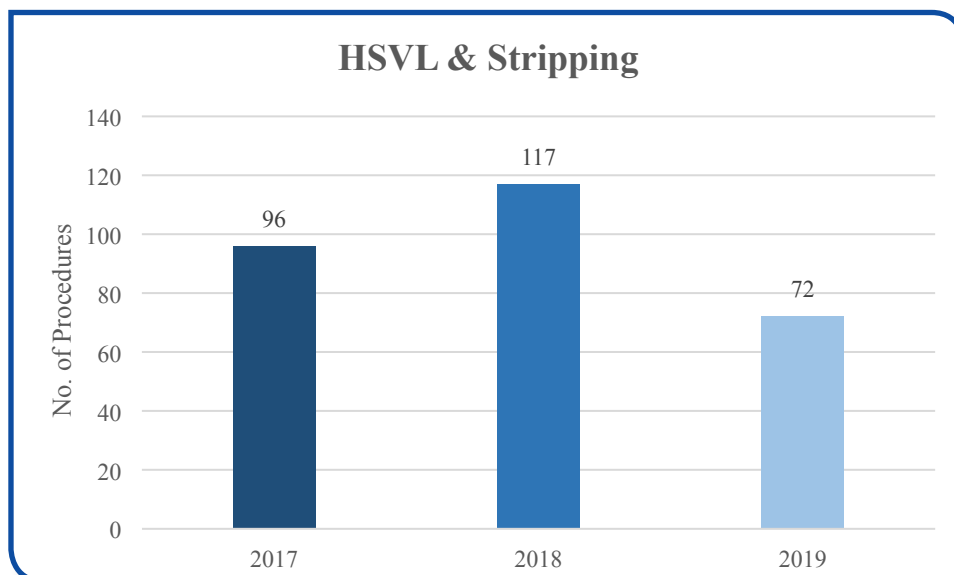


Figure 7.11.8 : Total Number of HSVL and Stripping

b. By BMS Category

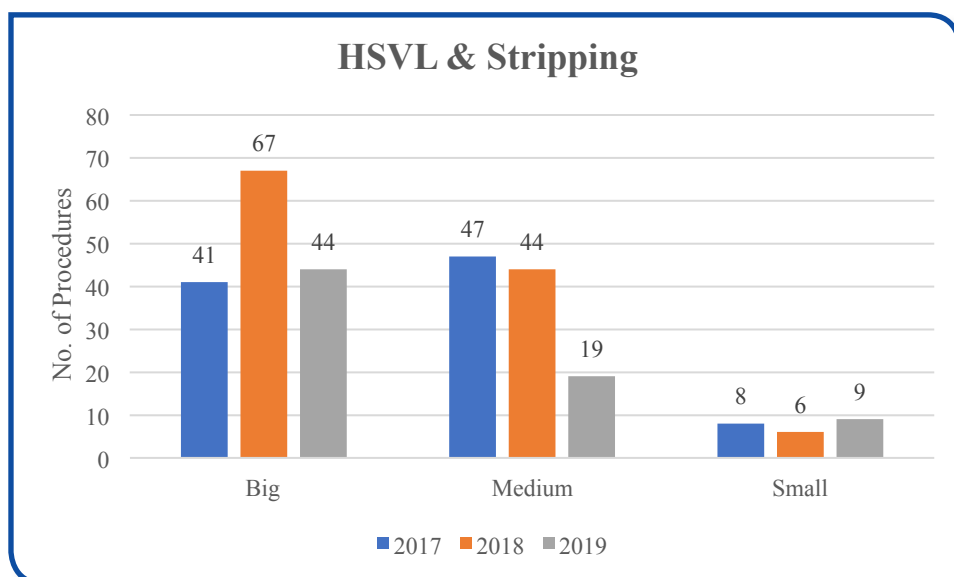


Figure 7.11.9 : HSVL and Stripping by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



c. By BMS Hospital Category

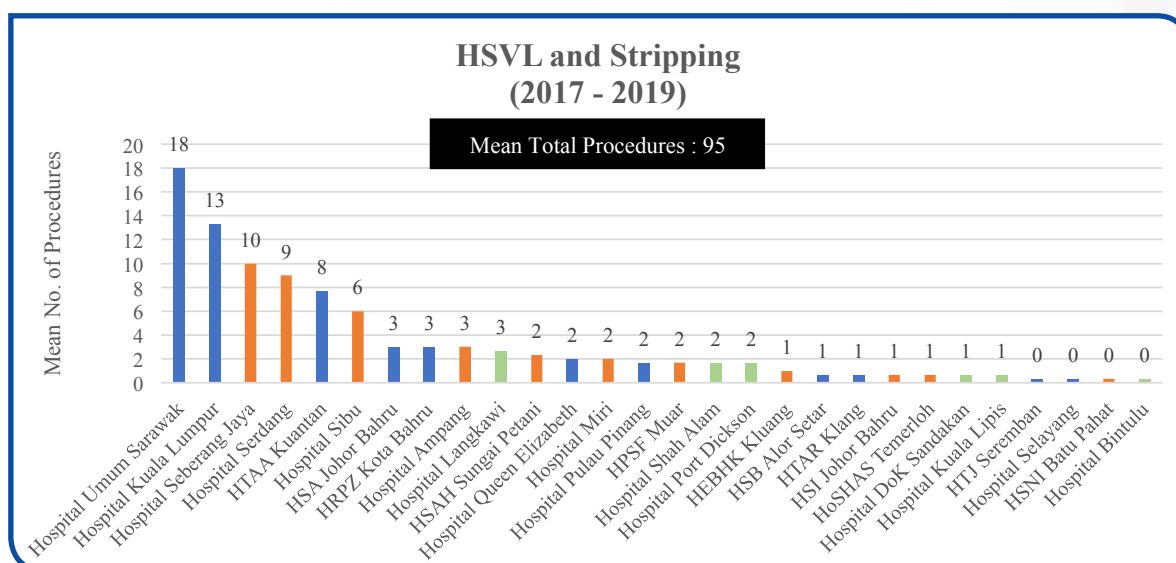


Figure 7.11.10 : HSV and Stripping by BMS Hospital Category

HIGH SAPHENOUS VEIN LIGATION & STRIPPING

HOSPITAL CATEGORY	2017	2018	2019
Big	41	67	44
Medium	47	44	19
Small	8	6	9
TOTAL	96	117	72

Table 7.11.6: HSV and Stripping by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



HIGH SAPHENOUS VEIN LIGATION & STRIPPING

NO	HOSPITALS	2017	2018	2019	MEAN NO. OF PROCEDURES
1	Hospital Umum Sarawak	10	29	15	18
2	Hospital Kuala Lumpur	17	9	14	13
3	Hospital Seberang Jaya	14	16	0	10
4	Hospital Serdang	17	10	0	9
5	HTAA Kuantan	3	15	5	8
6	Hospital Sibul	8	7	3	6
7	HSA Johor Bahru	8	1	0	3
8	HRPZ Kota Bahru	1	1	7	3
9	Hospital Ampang	0	8	1	3
10	Hospital Langkawi	2	3	3	3
11	HSAH Sungai Petani	1	1	5	2
12	Hospital Queen Elizabeth	1	3	2	2
13	Hospital Miri	2	1	3	2
14	Hospital Pulau Pinang	0	5	0	2
15	HPSF Muar	3	0	2	2
16	Hospital Shah Alam	3	2	0	2
17	Hospital Port Dickson	0	1	4	2
18	HEBHK Kluang	1	0	2	1
19	HSB Alor Setar	0	1	1	1
20	HTAR Klang	0	2	0	1
21	HSI Johor Bahru	0	0	2	1
22	HoSHAS Temerloh	1	0	1	1
23	Hospital DoK Sandakan	0	0	2	1
24	Hospital Kuala Lipis	2	0	0	1
25	HTJ Seremban	0	1	0	0
26	Hospital Selayang	1	0	0	0
27	HSNI Batu Pahat	0	1	0	0
28	Hospital Bintulu	1	0	0	0
TOTAL		95	116	72	94

Table 7.11.7 : HSVL and Stripping by Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



7.11.4 Embolectomies

a. Total

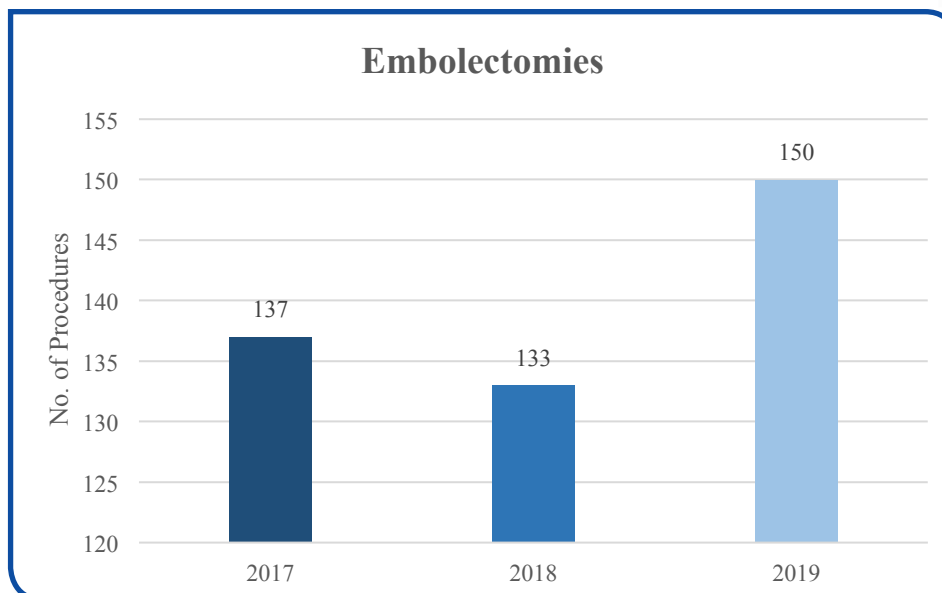


Figure 7.11.11 : Total Number of Embolectomies

b. By BMS Category

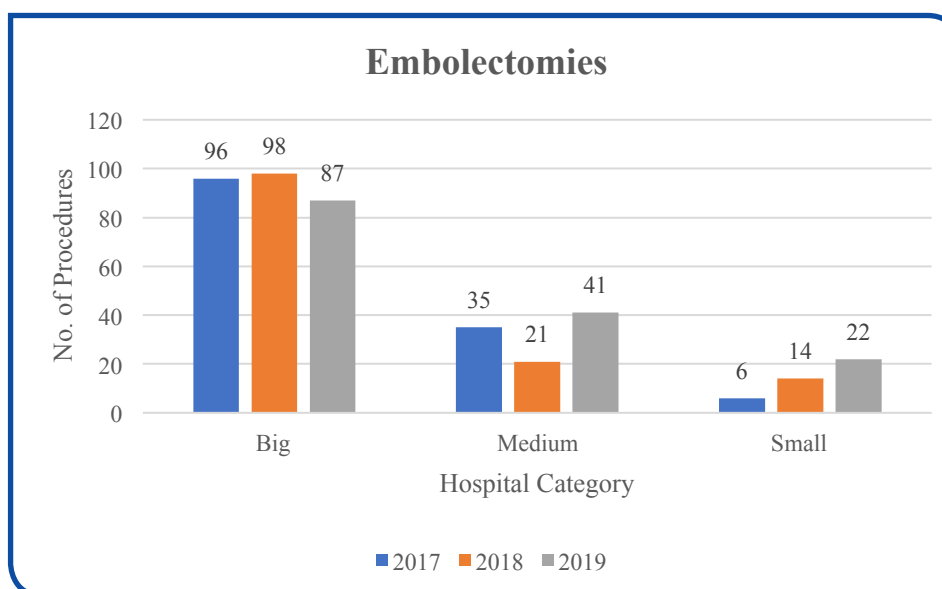


Figure 7.11.12 : Embolectomies by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



c. By BMS Hospital Category

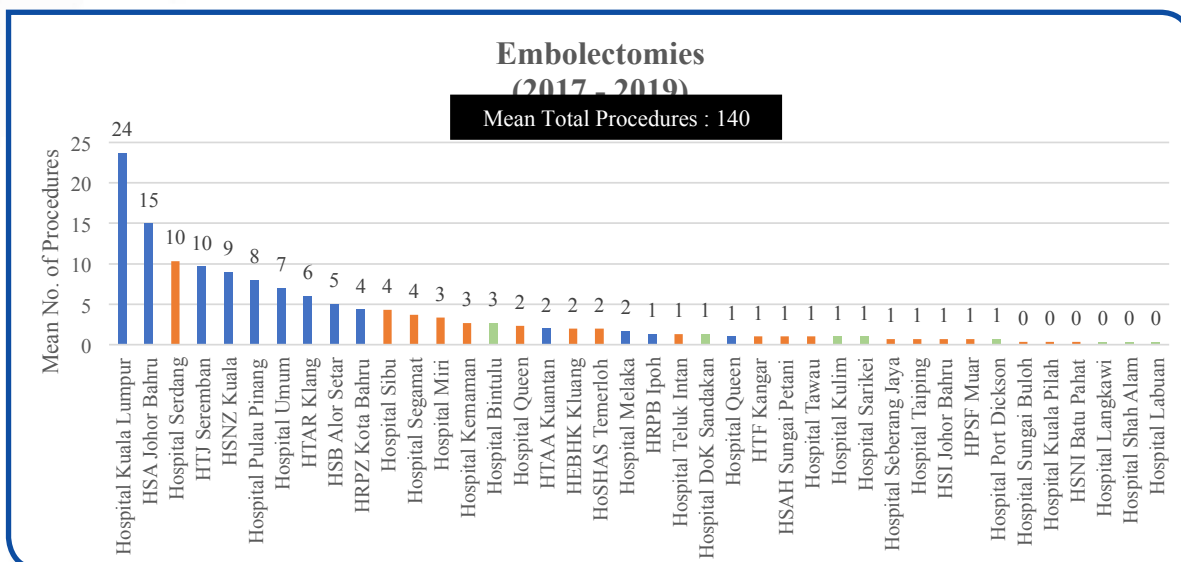


Figure 7.11.13 : Embolectomies by BMS Hospital Category

EMBOLECTOMIES

HOSPITAL CATEGORY	2017	2018	2019
Big	96	98	87
Medium	35	21	41
Small	6	14	22
TOTAL	137	133	150

Table 7.11.8 : Embolectomies by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



EMBOLECTOMIES

NO	HOSPITALS	2017	2018	2019	MEAN NO. OF PROCEDURES
1	Hospital Kuala Lumpur	21	23	27	24
2	HSA Johor Bahru	25	13	7	15
3	Hospital Serdang	21	6	4	10
4	HTJ Seremban	11	15	3	10
5	HSNZ Kuala Terengganu	4	13	10	9
6	Hospital Pulau Pinang	8	6	10	8
7	Hospital Umum Sarawak	10	6	5	7
8	HTAR Klang	3	9	6	6
9	HSB Alor Setar	7	4	4	5
10	HRPZ Kota Bharu	3	5	5	4
11	Hospital Sibul	6	3	4	4
12	Hospital Segamat	2	3	6	4
13	Hospital Miri	3	2	5	3
14	Hospital Kemaman	0	7	1	3
15	Hospital Bintulu	3	1	4	3
16	Hospital Queen Elizabeth 2	0	0	7	2
17	HTAA Kuantan	4	0	2	2
18	HEBHK Kluang	0	2	4	2
19	HoSHAS Temerloh	0	2	4	2
20	Hospital Melaka	0	1	4	2
21	HRPB Ipoh	0	0	4	1
22	Hospital Teluk Intan	0	0	4	1
23	Hospital DoK Sandakan	1	1	2	1
24	Hospital Queen Elizabeth	0	3	0	1
25	HTF Kangar	0	0	3	1
26	HSAH Sungai Petani	2	0	1	1
27	Hospital Tawau	0	3	0	1
28	Hospital Kulim	0	0	3	1
29	Hospital Sarikei	0	0	3	1
30	Hospital Seberang Jaya	1	1	0	1
31	Hospital Taiping	0	2	0	1
32	HSI Johor Bahru	0	0	2	1
33	HPSF Muar	1	0	1	1
34	Hospital Port Dickson	0	1	1	1
35	Hospital Sungai Buloh	0	0	1	0
36	Hospital Kuala Pilah	0	0	1	0
37	HSNI Batu Pahat	1	0	0	0
38	Hospital Langkawi	0	0	1	0
39	Hospital Shah Alam	0	1	0	0
40	Hospital Labuan	0	0	1	0
TOTAL		137	133	150	140

Table 7.11.9 : Embolectomies by Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



7.12 Spleen (Elective only)

7.12.1 Elective Splenectomy

a. Total

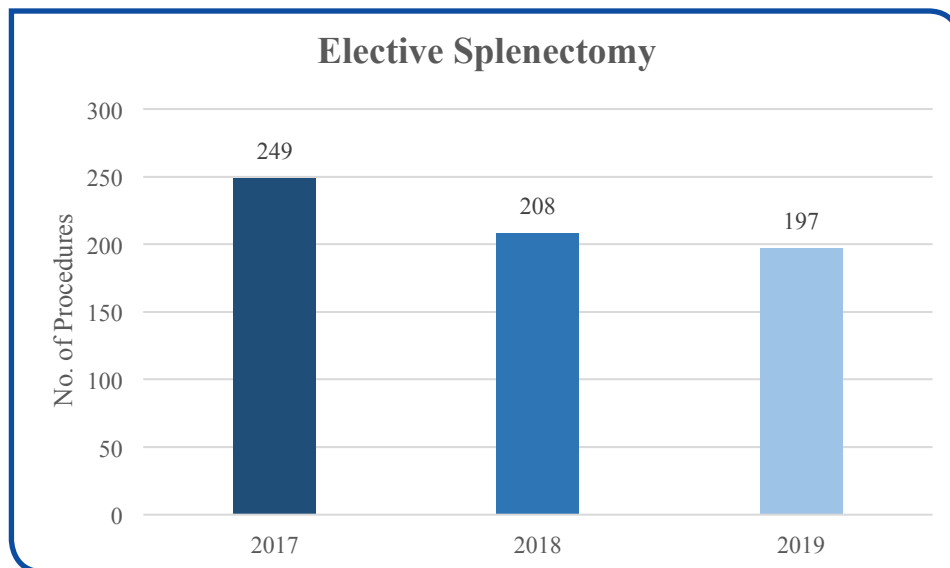


Figure 7.12.1: Total Number of Elective Splenectomy

b. By BMS Category

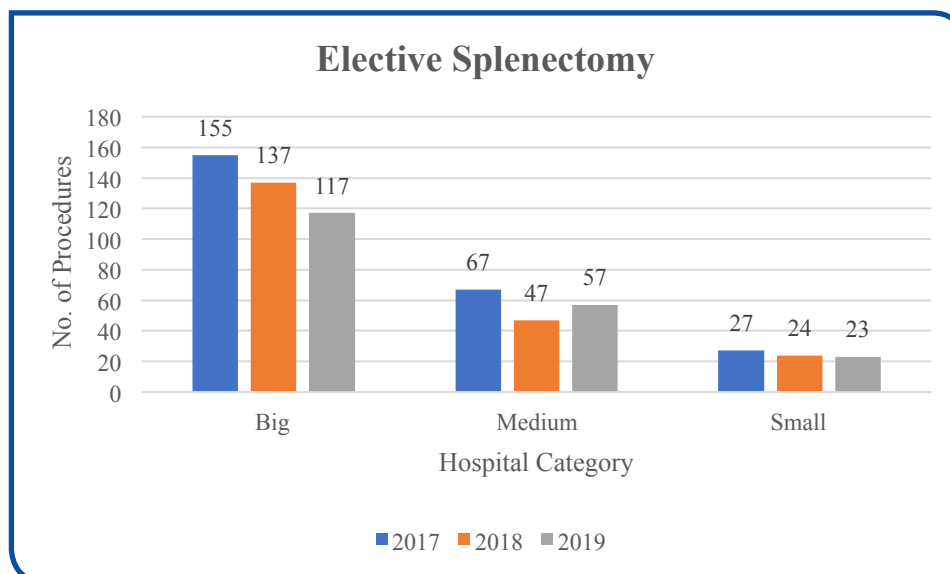


Figure 7.12.2 : Elective Splenectomy by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



c. By BMS Hospital Category

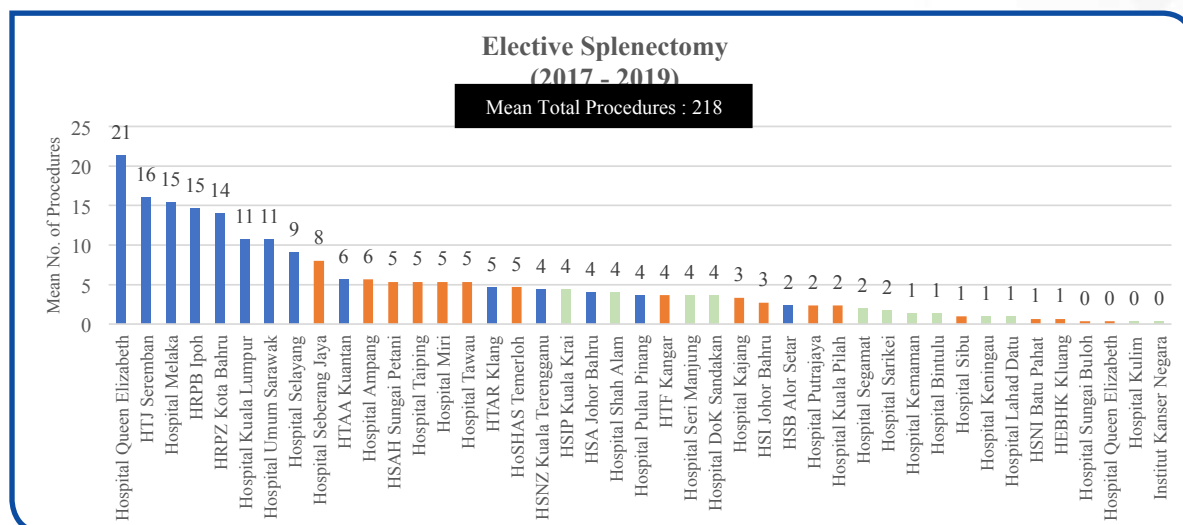


Figure 7.12.3: Elective Splenectomy by BMS Hospital Category

ELECTIVE SPLENECTOMY

HOSPITAL CATEGORY	2017	2018	2019
Big	155	137	117
Medium	67	47	57
Small	27	24	23
TOTAL	249	208	197

Table 7.12.1 : Total Number of Elective Splenectomy by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



ELECTIVE SPLENECTOMY

NO	HOSPITALS	2017	2018	2019	MEAN NO. OF PROCEDURES
1	Hospital Queen Elizabeth	22	16	26	21
2	HTJ Seremban	17	18	13	16
3	Hospital Melaka	19	23	4	15
4	HRPB Ipoh	23	17	4	15
5	HRPZ Kota Bharu	13	12	17	14
6	Hospital Kuala Lumpur	9	4	19	11
7	Hospital Umum Sarawak	15	16	1	11
8	Hospital Selayang	11	3	13	9
9	Hospital Seberang Jaya	7	8	9	8
10	HTAA Kuantan	5	8	4	6
11	Hospital Ampang	7	4	6	6
12	HSAG Sungai Petani	4	5	7	5
13	Hospital Taiping	6	5	5	5
14	Hospital Miri	7	5	4	5
15	Hospital Tawau	8	1	7	5
16	HTAR Klang	7	6	1	5
17	HoSHAS Temerloh	11	2	1	5
18	HSNZ Kuala Terengganu	3	5	5	4
19	HSIP Kuala Krai	2	6	5	4
20	HSA Johor Bahru	3	4	5	4
21	Hospital Shah Alam	4	3	5	4
22	Hospital Pulau Pinang	6	2	3	4
23	HTF Kangar	0	4	7	4
24	Hospital Seri Manjung	5	6	0	4
25	Hospital DoK Sandakan	2	2	7	4
26	Hospital Kajang	6	4	0	3
27	HSI Johor Bahru	0	0	8	3
28	HSB Alor Setar	2	3	2	2
29	Hospital Putrajaya	5	2	0	2
30	Hospital Kuala Pilah	4	2	1	2
31	Hospital Segamat	4	2	0	2
32	Hospital Sarikei	2	2	1	2
33	Hospital Kemaman	3	1	0	1
34	Hospital Bintulu	2	2	0	1
35	Hospital Sibu	1	1	1	1
36	Hospital Keningau	3	0	0	1
37	Hospital Lahad Datu	0	0	3	1
38	HSNI Batu Pahat	0	1	1	1
39	HEBHK Kluang	1	1	0	1
40	Hospital Sungai Buloh	0	1	0	0
41	Hospital Queen Elizabeth 2	0	1	0	0
42	Hospital Kulim	0	0	1	0
43	Institut Kanser Negara	0	0	1	0
TOTAL		249	208	197	218

Table 7.12.2 : Elective Splenectomy by Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



7.13 Appendix

List of procedures selected for Appendix workload measurement are:

- Lanz appendicectomy
- Laparoscopic Appendicectomy
- Midline Laparotomy with Appendicectomy
- Midline Laparotomy with Limited Right Hemicolectomy

a. Total

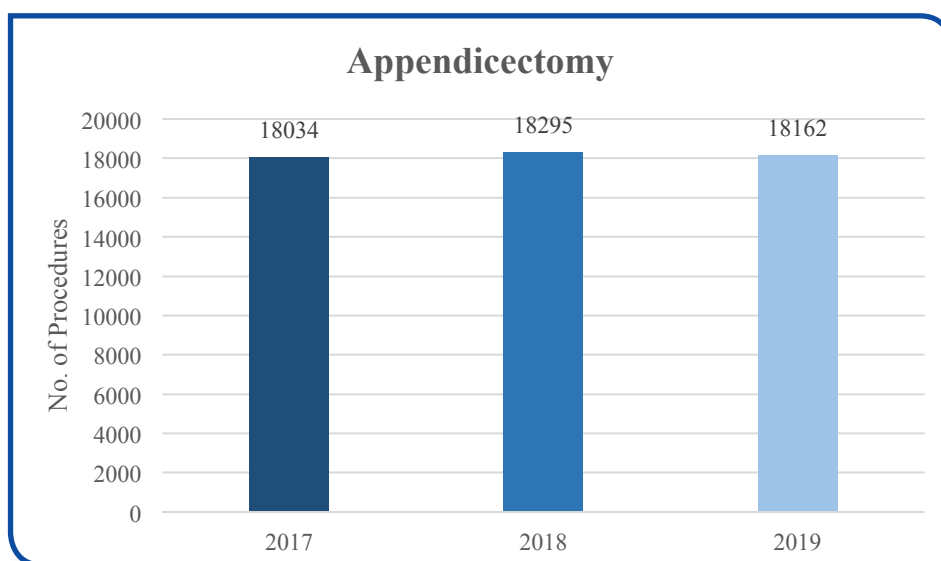


Figure 7.13.1: Total Number of Appendicectomy

b. By BMS Category

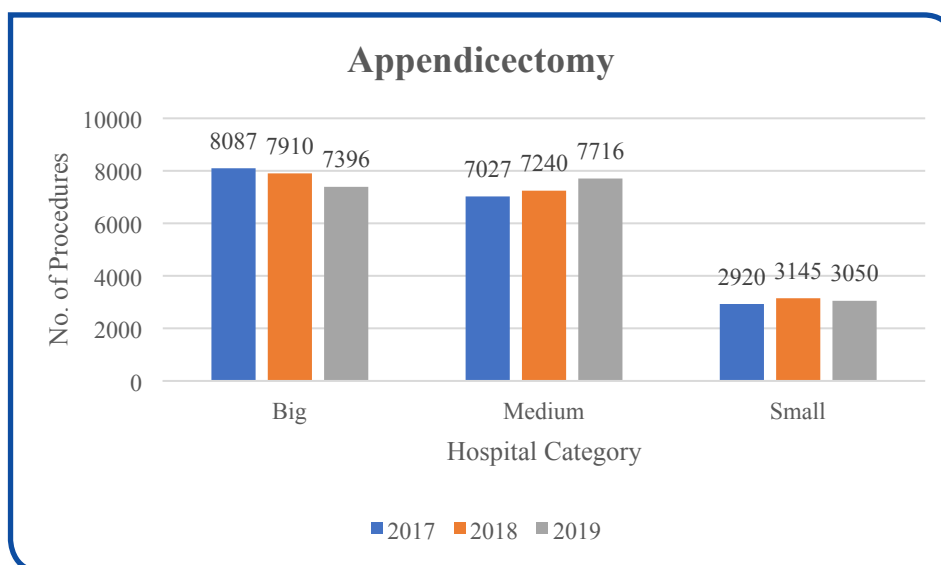


Figure 7.13.2 : Appendicectomy by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



c. By BMS Hospital Category

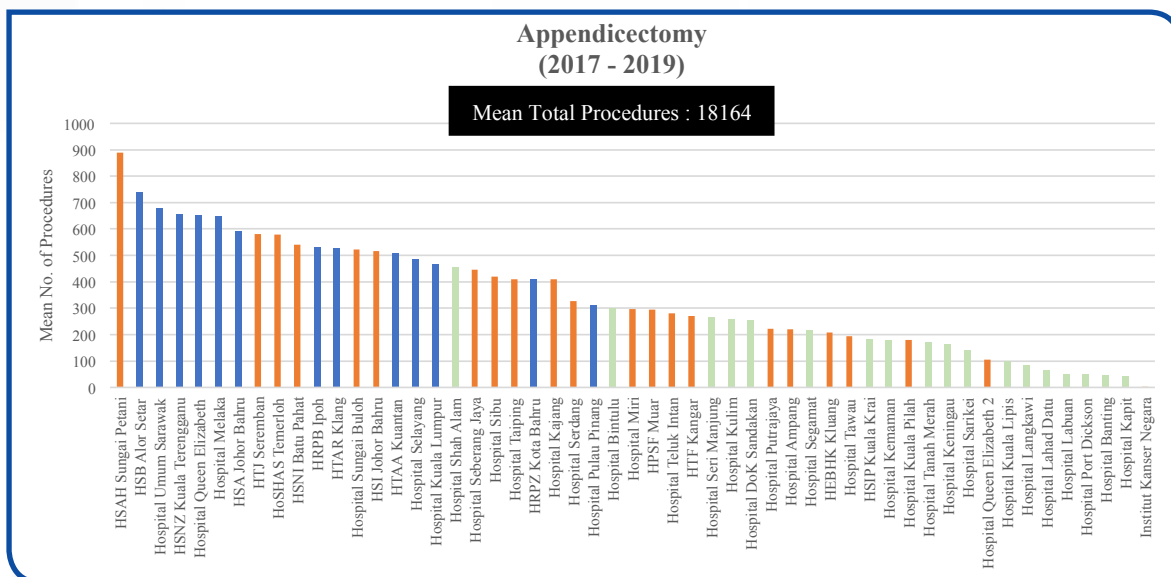


Figure 7.13.3 : Appendicectomy by BMS Hospital Category

d. By Modality of Approach

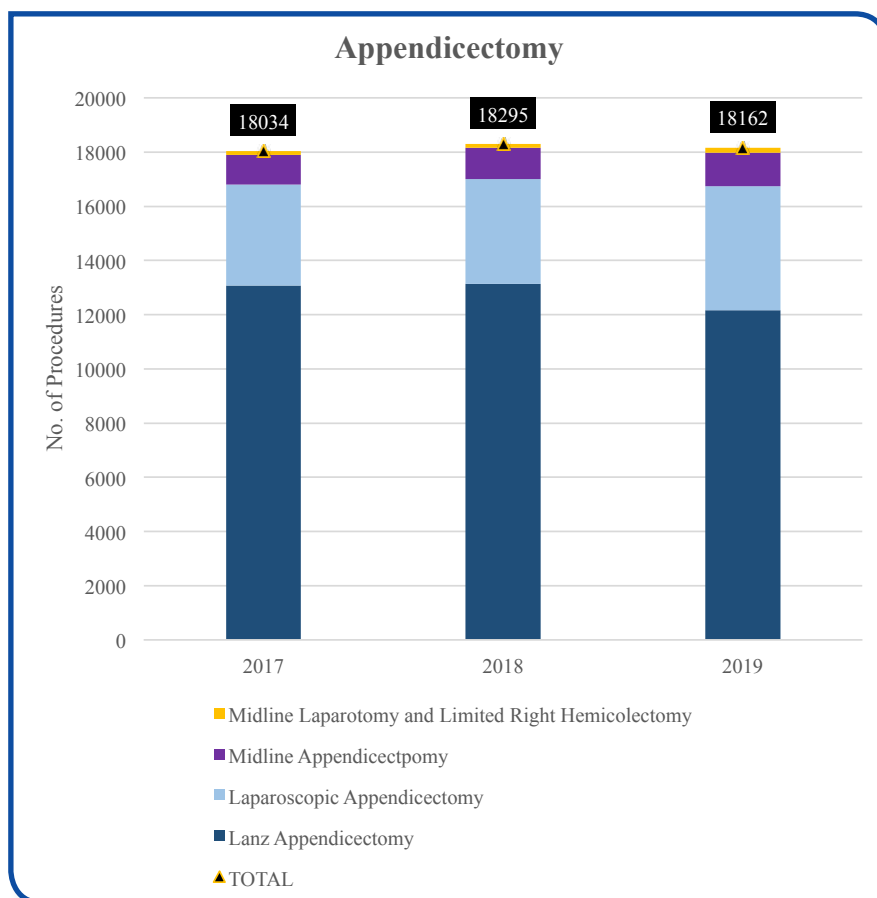


Figure 7.13.4 : Types of Appendicectomy

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



APPENDICECTOMY

HOSPITAL CATEGORY	2017	2018	2019
Big	8087	7910	7396
Medium	7027	7240	7716
Small	2920	3145	3050
TOTAL	18034	18295	18162

Table 7.13.1: Total Number of Appendicectomy by BMS Category

APPENDICECTOMY

PROCEDURE TYPE	2017	(%)	2018	(%)	2019	(%)
Lanz Appendicectomy	13069	72%	13135	72%	12171	67%
Laparoscopic Appendicectomy	3731	21%	3870	21%	4570	25%
Midline Appendicectomy	1086	6%	1144	6%	1230	7%
Midline Laparotomy and Limited Right Hemicolectomy	148	1%	146	1%	191	1%
TOTAL	18034	100%	18295	100%	18162	100%

Table 7.13.2: Types of Appendicectomy

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



APPENDICECTOMY

NO	HOSPITALS	MEAN NO. OF PROCEDURES				TOTAL MEAN PROCEDURES (a+b+c+d)
		LANZ APPENDICECTOMY (a)	LAPAROSCOPIC APPENDICECTOMY (b)	MIDLINE LAPAROTOMY AND APPENDICECTOMY (c)	MIDLINE LAPAROTOMY AND LIMITED RIGHT HEMICOLECTOMY (d)	
1	HSAH Sungai Petani	780	85	20	4	889
2	HSB Alor Setar	561	176	1	3	741
3	Hospital Umum Sarawak	400	237	40	4	680
4	HSNZ Kuala Terengganu	400	228	30	0	657
5	Hospital Queen Elizabeth	250	343	59	2	653
6	Hospital Melaka	621	12	15	2	651
7	HSA Johor Bahru	421	89	76	5	591
8	HTJ Seremban	98	452	27	4	580
9	HoSHAS Temerloh	454	67	49	8	579
10	HSNI Batu Pahat	461	44	30	6	541
11	HRPB Ipoh	169	270	86	7	533
12	HTAR Klang	401	55	67	4	527
13	Hospital Sungai Buloh	448	44	30	0	522
14	HSI Johor Bahru	456	46	13	1	516
15	HTAA Kuantan	418	44	46	2	510
16	Hospital Selayang	298	163	17	8	486
17	Hospital Kuala Lumpur	385	52	19	10	466
18	Hospital Shah Alam	419	7	31	0	456
19	Hospital Seberang Jaya	327	98	17	4	445
20	Hospital Sibul	232	162	23	2	419
21	Hospital Taiping	165	211	31	3	410
22	HRPZ Kota Bahru	153	217	36	3	409
23	Hospital Kajang	291	89	17	12	409
24	Hospital Seri Manjung	304	35	15	2	356
25	Hospital Serdang	225	81	16	5	327
26	Hospital Pulau Pinang	160	127	23	3	313
27	Hospital Bintulu	182	100	17	2	301
28	Hospital Miri	194	64	16	23	297
29	HPSF Muar	201	52	39	3	294
30	Hospital Teluk Intan	227	27	23	2	280
31	HTF Kangar	243	5	20	3	271
32	Hospital Kulim	214	29	15	3	261
33	Hospital DoK Sandakan	184	34	34	3	254
34	Hospital Putrajaya	191	17	12	1	221
35	Hospital Ampang	185	23	10	2	221
36	Hospital Segamat	176	27	13	1	218
37	HEBHK Kluang	161	14	32	2	209
38	Hospital Tawau	162	18	12	1	193
39	HSIP Kuala Krai	138	27	17	0	181
40	Hospital Kemaman	172	4	5	0	181
41	Hospital Kuala Pilah	124	46	7	2	179
42	Hospital Tanah Merah	156	4	8	3	171
43	Hospital Keningau	141	22	2	0	166
44	Hospital Sarikei	128	4	7	1	141
45	Hospital Queen Elizabeth 2	44	56	4	0	104
46	Hospital Kuala Lipis	84	8	6	1	100
47	Hospital Langkawi	61	11	8	3	83
48	Hospital Lahad Datu	57	2	8	1	67
49	Hospital Labuan	49	2	1	0	52
50	Hospital Port Dickson	21	26	3	0	51
51	Hospital Banting	45	0	2	0	47
52	Hospital Kapit	42	1	0	0	43
53	Institut Kanser Negara	0	0	0	0	0
TOTAL		12881	4057	1153	162	18253

Table 7.13.3: Types of Appendicectomy by Hospitals

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



7.13.1 Lanz Appendicectomy

a. Total

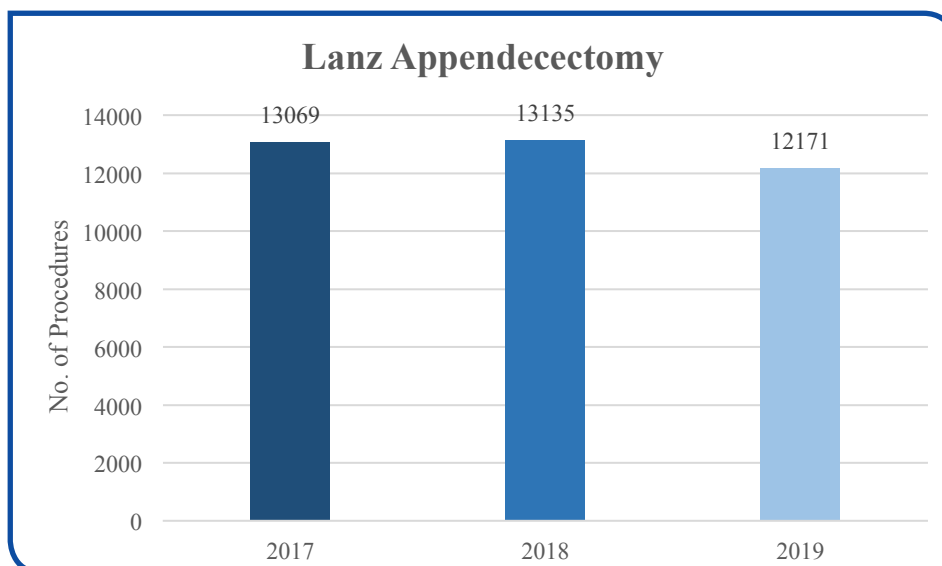


Figure 7.13.5 : Total Number of Lanz Appendicectomy

b. By BMS Category

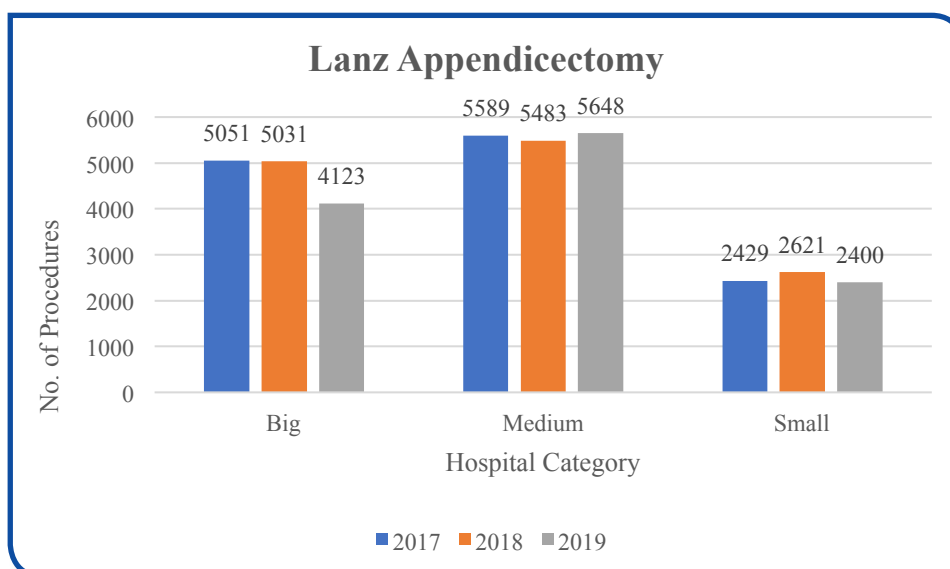


Figure 7.13.6 : Lanz Appendicectomy by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



c. By BMS Hospital Category

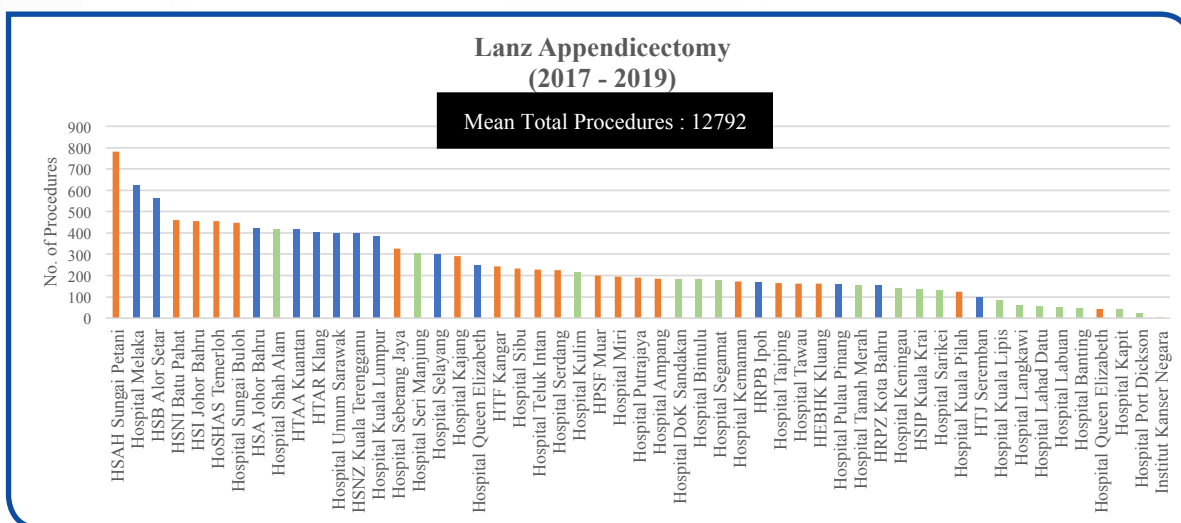


Figure 7.13.7 : Lanz Appendicectomy by BMS Hospital category

LANZ APPENDICECTOMY

HOSPITAL CATEGORY	2017	2018	2019
Big	5051	5031	4123
Medium	5589	5483	5648
Small	2429	2621	2400
TOTAL	13069	13135	12171

Table 7.13.4 : Lanz Appendicectomy by BMS category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



LANZ APPENDICECTOMY

NO	HOSPITALS	2017	2018	2019	MEAN NO. OF PROCEDURES
1	HSAH Sungai Petani	671	816	854	780
2	Hospital Melaka	776	510	578	621
3	HSB Alor Setar	557	684	443	561
4	HSNI Batu Pahat	340	443	600	461
5	HSI Johor Bahru	546	421	402	456
6	HoSHAS Temerloh	400	558	405	454
7	Hospital Sungai Buloh	340	449	554	448
8	HSA Johor Bahru	513	476	274	421
9	Hospital Shah Alam	327	464	465	419
10	HTAA Kuantan	431	481	342	418
11	HTAR Klang	399	362	441	401
12	Hospital Umum Sarawak	343	481	376	400
13	HSNZ Kuala Terengganu	478	434	287	400
14	Hospital Kuala Lumpur	390	356	409	385
15	Hospital Seberang Jaya	324	300	358	327
16	Hospital Seri Manjung	196	213	235	304
17	Hospital Selayang	293	309	292	298
18	Hospital Kajang	361	285	227	291
19	Hospital Queen Elizabeth	196	325	228	250
20	HTF Kangar	230	253	247	243
21	Hospital Sibul	330	209	156	232
22	Hospital Teluk Intan	289	235	158	227
23	Hospital Serdang	199	164	312	225
24	Hospital Kulim	328	169	145	214
25	HPSF Muar	177	201	225	201
26	Hospital Miri	166	192	224	194
27	Hospital Putrajaya	179	193	201	191
28	Hospital Ampang	164	172	219	185
29	Hospital DoK Sandakan	194	179	179	184
30	Hospital Bintulu	197	219	129	182
31	Hospital Segamat	244	154	131	176
32	Hospital Kemaman	147	183	186	172
33	HRPB Ipoh	162	216	130	169
34	Hospital Taiping	188	151	155	165
35	Hospital Tawau	221	157	109	162
36	HEBHK Kluang	202	147	135	161
37	Hospital Pulau Pinang	175	161	144	160
38	Hospital Tanah Merah	145	172	150	156
39	HRPZ Kota Bahru	206	155	98	153
40	Hospital Keningau	156	148	120	141
41	HSIP Kuala Krai	88	164	161	138
42	Hospital Sarikei	94	172	119	128
43	Hospital Kuala Pilah	190	97	86	124
44	HTJ Seremban	132	81	81	98
45	Hospital Kuala Lipis	79	90	84	84
46	Hospital Langkawi	60	59	64	61
47	Hospital Lahad Datu	52	46	72	57
48	Hospital Labuan	43	48	55	49
49	Hospital Banting	48	44	42	45
50	Hospital Queen Elizabeth 2	72	40	21	44
51	Hospital Kapit	30	56	40	42
52	Hospital Port Dickson	1	40	23	21
53	Institut Kanser Negara	0	1	0	0
TOTAL		13069	13135	12171	12792

Table 7.13.5 : Lanz Appendicectomy by Hospital category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



7.13.2 Lanz Appendicectomy

a. Total

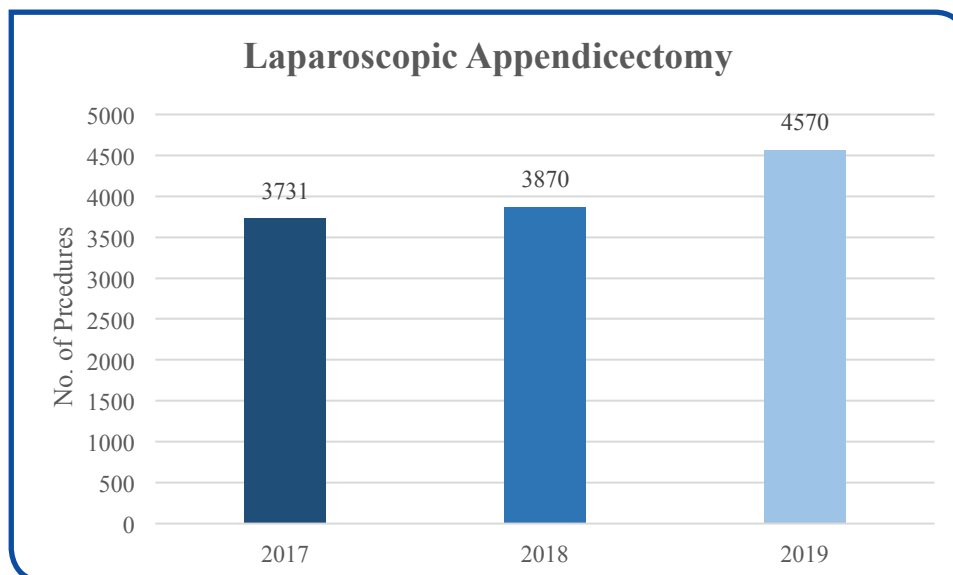


Figure 7.13.8 : Total Number of Laparoscopic Appendicectomy

b. By BMS Category

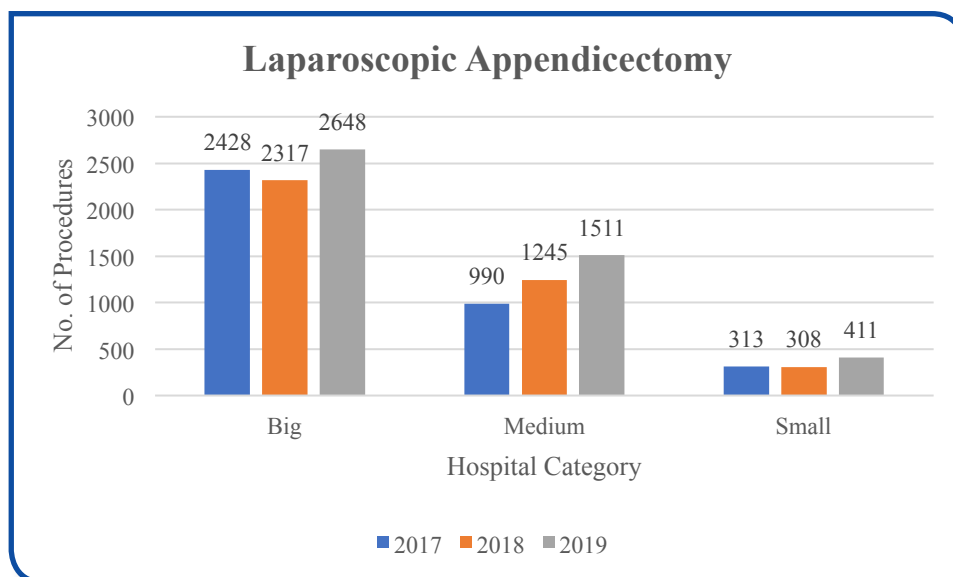


Figure 7.13.9 : Laparoscopic Appendicectomy by BMS category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



c. By BMS Hospital Category

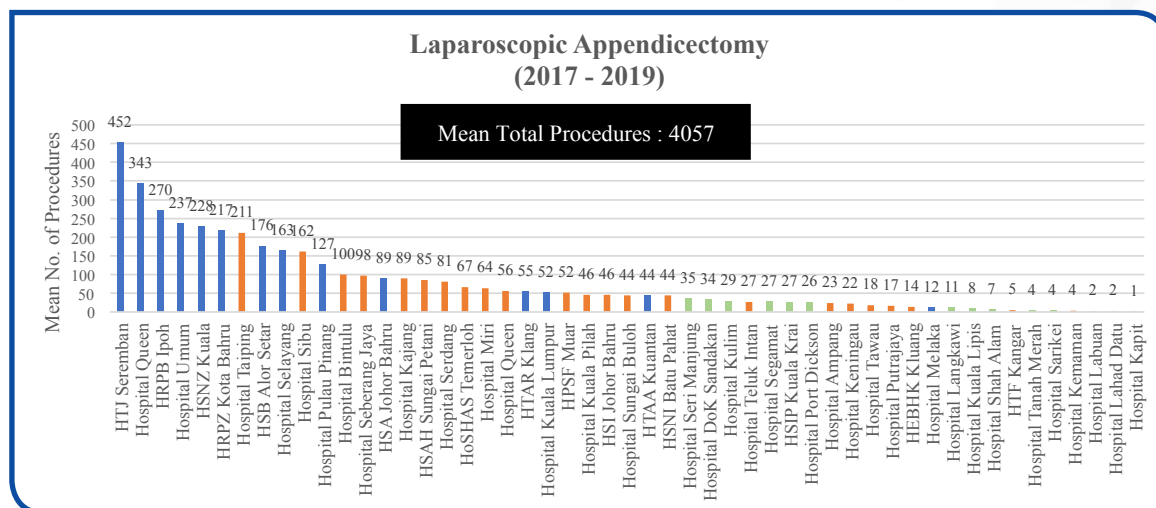


Figure 7.13.10 : Laparoscopic Appendicectomy by BMS Hospital Category

LAPAROSCOPIC APPENDICECTOMY

HOSPITAL CATEGORY	2017	2018	2019
Big	2428	2317	2648
Medium	990	1245	1511
Small	313	308	411
TOTAL	3731	3870	4570

Table 7.13.6 : Total Number of Laparoscopic Appendicectomy by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



LAPAROSCOPIC APPENDICECTOMY

NO	HOSPITALS	2017	2018	2019	MEAN NO. OF PROCEDURES
1	HTJ Seremban	557	427	371	452
2	Hospital Queen Elizabeth	335	325	368	343
3	HRPB Ipoh	349	204	258	270
4	Hospital Umum Sarawak	231	231	249	237
5	HSNZ Kuala Terengganu	259	220	204	228
6	HRPZ Kota Bharu	177	188	287	217
7	Hospital Taiping	174	246	213	211
8	HSB Alor Setar	140	161	226	176
9	Hospital Selayang	105	175	210	163
10	Hospital Sibul	118	177	191	162
11	Hospital Pulau Pinang	128	112	142	127
12	Hospital Bintulu	83	76	141	100
13	Hospital Seberang Jaya	64	93	136	98
14	HSA Johor Bahru	33	87	148	89
15	Hospital Kajang	35	93	140	89
16	HSAH Sungai Petani	76	70	110	85
17	Hospital Serdang	78	59	106	81
18	HoSHAS Temerloh	67	61	73	67
19	Hospital Miri	47	63	82	64
20	Hospital Queen Elizabeth 2	83	49	37	56
21	HTAR Klang	41	53	70	55
22	Hospital Kuala Lumpur	33	57	65	52
23	HPSF Muar	37	31	87	52
24	Hospital Kuala Pilah	42	55	40	46
25	HSI Johor Bahru	15	50	72	46
26	Hospital Sungai Buloh	56	27	50	44
27	HTAA Kuantan	37	66	28	44
28	HSNI Batu Pahat	32	79	20	44
29	Hospital Seri Manjung	53	30	22	35
30	Hospital DoK Sandakan	10	39	52	34
31	Hospital Kulim	38	21	27	29
32	Hospital Teluk Intan	13	29	40	27
33	Hospital Segamat	11	47	24	27
34	HSIP Kuala Krai	21	20	39	27
35	Hospital Port Dickson	18	19	42	26
36	Hospital Ampang	18	20	32	23
37	Hospital Keningau	27	13	26	22
38	Hospital Tawau	21	19	14	18
39	Hospital Putrajaya	7	20	24	17
40	HEBHK Kluang	3	4	34	14
41	Hospital Melaka	3	11	22	12
42	Hospital Langkawi	8	7	19	11
43	Hospital Kuala Lipis	14	10	1	8
44	Hospital Shah Alam	12	8	1	7
45	HTF Kangar	4	0	10	5
46	Hospital Tanah Merah	11	2	0	4
47	Hospital Sarikei	5	4	4	4
48	Hospital Kemaman	1	7	4	4
49	Hospital Labuan	0	2	5	2
50	Hospital Lahad Datu	1	1	4	2
51	Hospital Kapit	0	2	0	1
52	Institut Kanser Negara	0	0	0	0
53	Hospital Banting	0	0	0	0
TOTAL		3731	3870	4570	4057

Table 7.13.7 : Laparoscopic Appendicectomy by Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



7.13.3 Midline Laparotomy and Appendicectomy

a. Total

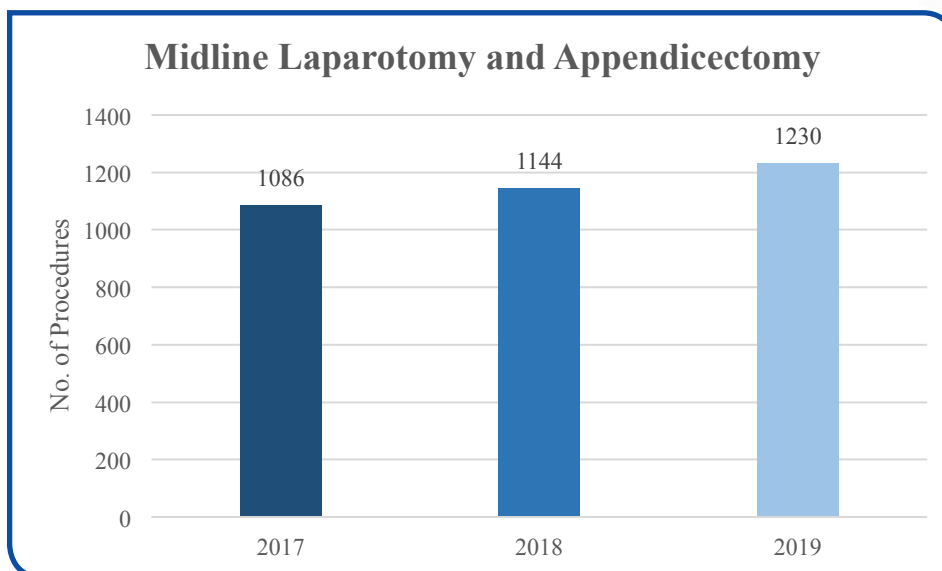


Figure 7.13.11 : Total Number of Midline Laparotomy and Appendicectomy

b. By BMS Category

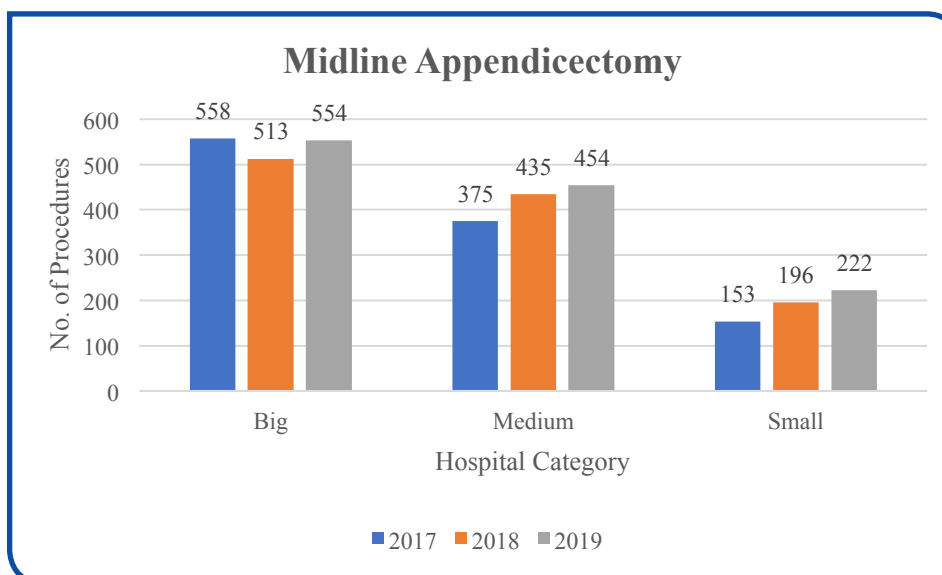


Figure 7.13.12 : Midline Laparotomy and Appendicectomy by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



c. By BMS Hospital Category

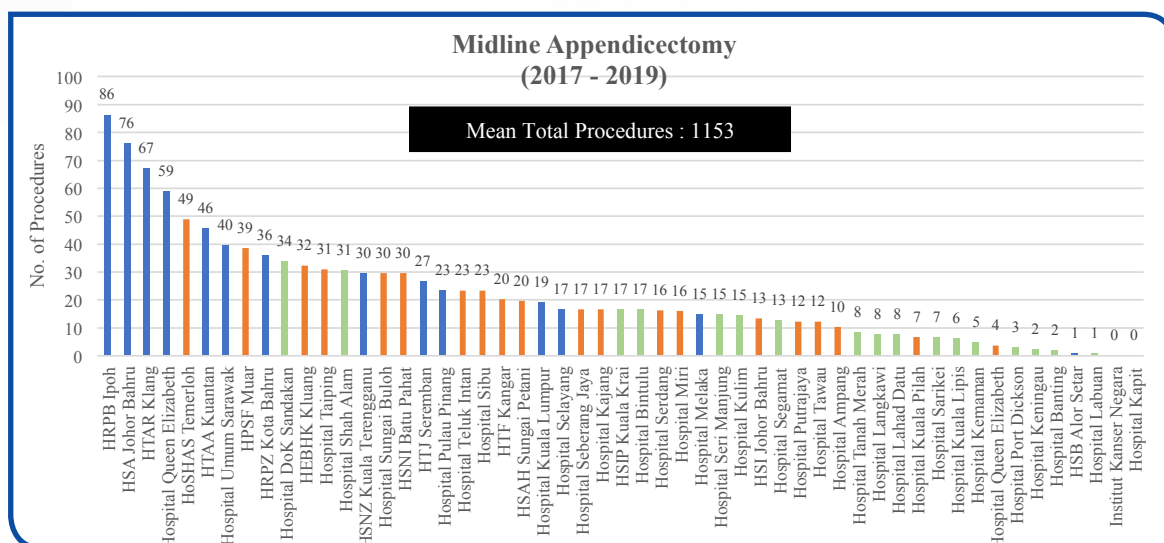


Figure 7.13.13 : Total Number of Midline Laparotomy with Appendicectomy by BMS Hospital Category

MIDLINE LAPAROTOMY WITH APPENDICECTOMY

HOSPITAL CATEGORY	2017	2018	2019
Big	558	513	554
Medium	375	435	454
Small	153	196	222
TOTAL	1086	1144	1230

Table 7.13.8 : Total Number of Midline Laparotomy with Appendicectomy by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



MIDLINE LAPAROTOMY WITH APPENDICECTOMY

NO	HOSPITALS	2017	2018	2019	MEAN NO. OF PROCEDURES
1	HRPB Ipoh	83	77	99	86
2	HSA Johor Bahru	89	62	77	76
3	HTAR Klang	56	80	66	67
4	Hospital Queen Elizabeth	107	35	35	59
5	HoSHAS Temerloh	48	59	40	49
6	HTAA Kuantan	44	51	42	46
7	Hospital Umum Sarawak	38	36	45	40
8	HPSF Muar	36	27	53	39
9	HRPZ Kota Bahru	28	22	58	36
10	Hospital DoK Sandakan	35	36	31	34
11	HEBHK Kluang	20	43	34	32
12	Hospital Taiping	43	13	37	31
13	Hospital Shah Alam	15	42	35	31
14	HSNZ Kuala Terengganu	31	37	21	30
15	Hospital Sungai Buloh	31	32	26	30
16	HSNI Batu Pahat	26	22	41	30
17	HTJ Seremban	20	39	21	27
18	Hospital Pulau Pinang	19	22	29	23
19	Hospital Teluk Intan	19	32	19	23
20	Hospital Sibul	16	27	27	23
21	HTF Kangar	0	30	31	20
22	HSAH Sungai Petani	22	24	13	20
23	Hospital Kuala Lumpur	27	10	21	19
24	Hospital Selayang	5	21	24	17
25	Hospital Seberang Jaya	22	12	16	17
26	Hospital Kajang	19	19	12	17
27	HSIP Kuala Krai	12	18	20	17
28	Hospital Bintulu	18	11	21	17
29	Hospital Serdang	17	19	13	16
30	Hospital Miri	2	20	26	16
31	Hospital Melaka	11	21	13	15
32	Hospital Seri Manjung	13	13	19	15
33	Hospital Kulim	14	15	15	15
34	HSI Johor Bahru	15	10	15	13
35	Hospital Segamat	8	16	14	13
36	Hospital Putrajaya	14	10	13	12
37	Hospital Tawau	0	23	14	12
38	Hospital Ampang	6	4	21	10
39	Hospital Tanah Merah	9	11	5	8
40	Hospital Langkawi	4	4	15	8
41	Hospital Lahad Datu	6	8	9	8
42	Hospital Kuala Pilah	12	5	3	7
43	Hospital Sarikei	7	3	10	7
44	Hospital Kuala Lipis	6	3	10	6
45	Hospital Kemaman	2	9	4	5
46	Hospital Queen Elizabeth 2	7	4	0	4
47	Hospital Port Dickson	0	3	6	3
48	Hospital Keningau	0	0	7	2
49	Hospital Banting	2	3	1	2
50	HSB Alor Setar	0	0	3	1
51	Hospital Labuan	2	1	0	1
52	Institut Kanser Negara	0	0	0	0
53	Hospital Kapit	0	0	0	0
TOTAL		1086	1144	1230	1153

Table 7.13.9: Midline Laparotomy with Appendicectomy by Hospital

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



7.13.4 Midline Laparotomy and Limited Right Hemicolectomy

a. Total

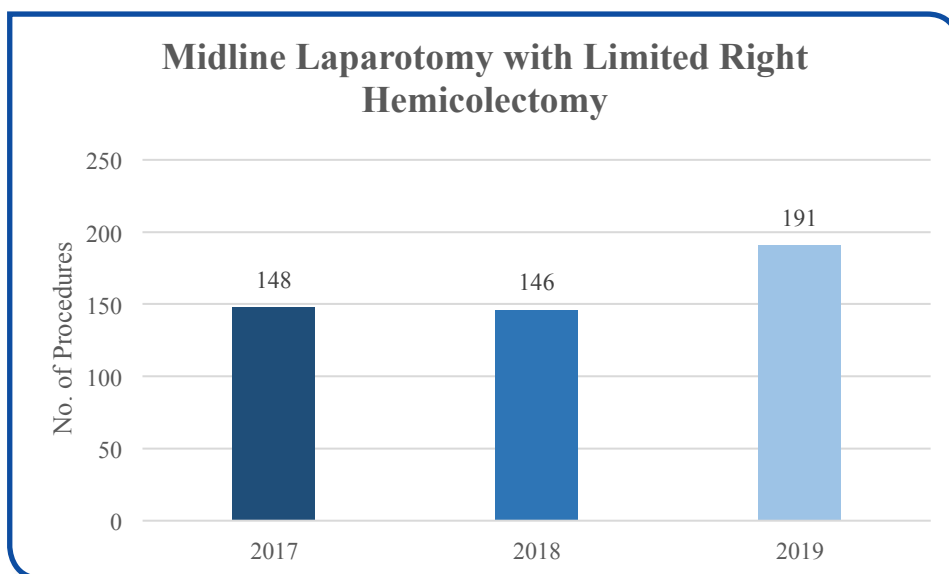


Figure 7.13.14: Total Number of Midline Laparotomy with Limited Right Hemicolectomy

b. By BMS Category

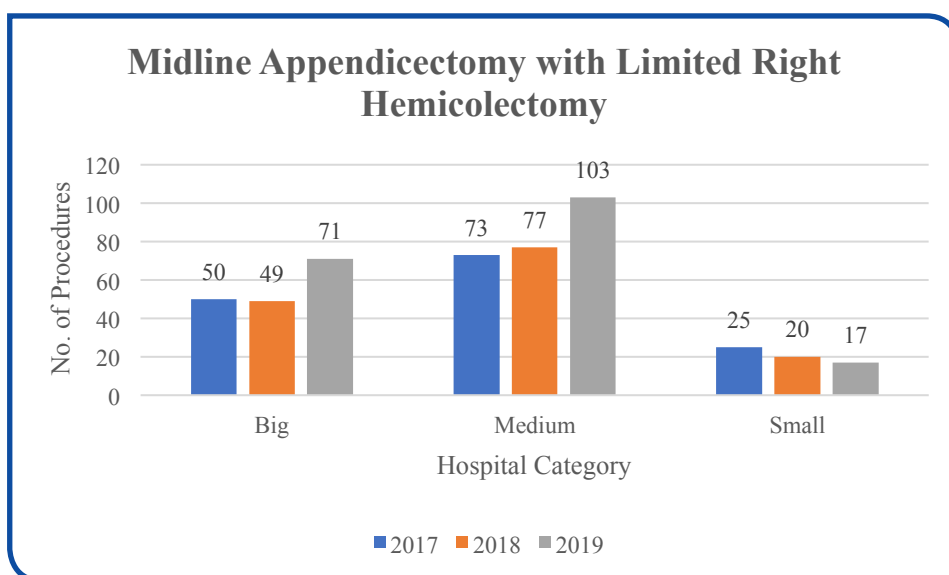


Figure 7.13.15 : Midline Laparotomy with Limited Right Hemicolectomy by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



c. By BMS Hospital Category

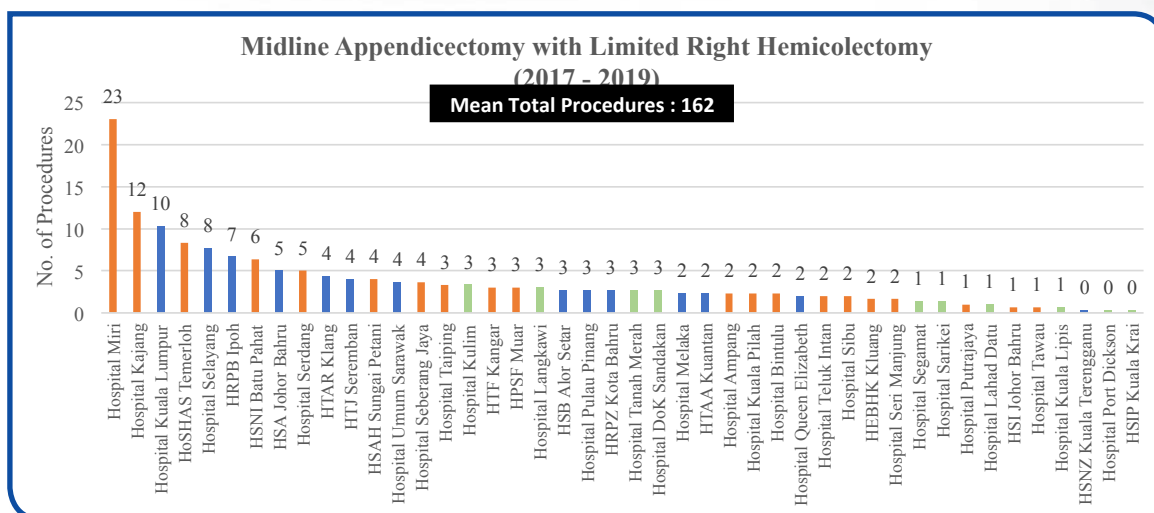


Figure 7.13.16: Midline Laparotomy with Limited Right Hemicolectomy by BMS Category

MIDLINE LAPAROTOMY WITH LIMITED RIGHT HEMICOLECTOMY

HOSPITAL CATEGORY	2017	2018	2019
Big	50	49	71
Medium	73	77	103
Small	25	20	17
TOTAL	148	146	191

Table 7.13.10: Midline Laparotomy with Limited Right Hemicolectomy by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



MIDLINE LAPAROTOMY WITH LIMITED RIGHT HEMICOLECTOMY

NO	HOSPITALS	2017	2018	2019	MEAN NO. OF PROCEDURES
1	Hospital Miri	24	24	21	23
2	Hospital Kajang	13	19	4	12
3	Hospital Kuala Lumpur	5	3	23	10
4	HoSHAS Temerloh	2	12	11	8
5	Hospital Selayang	5	11	7	8
6	HRPB Ipoh	6	7	7	7
7	HSNI Batu Pahat	1	6	12	6
8	HSA Johor Bahru	6	4	5	5
9	Hospital Serdang	1	5	9	5
10	HTAR Klang	9	3	1	4
11	HTJ Seremban	2	5	5	4
12	HSAG Sungai Petani	3	1	8	4
13	Hospital Umum Sarawak	6	5	0	4
14	Hospital Seberang Jaya	7	1	3	4
15	Hospital Taiping	5	0	5	3
16	Hospital Kulim	6	2	2	3
17	HTF Kangar	0	0	9	3
18	HPSF Muar	1	4	4	3
19	Hospital Langkawi	6	3	0	3
20	HSB Alor Setar	0	0	8	3
21	Hospital Pulau Pinang	4	2	2	3
22	HRPZ Kota Bharu	4	4	0	3
23	Hospital Tanah Merah	0	3	5	3
24	Hospital DoK Sandakan	2	3	3	3
25	Hospital Melaka	2	0	5	2
26	HTAA Kuantan	0	3	4	2
27	Hospital Ampang	1	0	6	2
28	Hospital Kuala Pilah	5	2	0	2
29	Hospital Bintulu	5	0	2	2
30	Hospital Queen Elizabeth	1	2	3	2
31	Hospital Teluk Intan	5	0	1	2
32	Hospital Sibul	2	0	4	2
33	HEBHK Kluang	3	2	0	2
34	Hospital Seri Manjung	2	3	0	2
35	Hospital Segamat	1	3	0	1
36	Hospital Sarikei	2	1	1	1
37	Hospital Putrajaya	0	1	2	1
38	Hospital Lahad Datu	0	0	3	1
39	HSI Johor Bahru	0	0	2	1
40	Hospital Tawau	0	0	2	1
41	Hospital Kuala Lipis	1	1	0	1
42	HSNZ Kuala Terengganu	0	0	1	0
43	Hospital Port Dickson	0	1	0	0
44	HSIP Kuala Krai	0	0	1	0
45	Hospital Sungai Buloh	0	0	0	0
46	Hospital Queen Elizabeth 2	0	0	0	0
47	Hospital Shah Alam	0	0	0	0
48	Institut Kanser Negara	0	0	0	0
49	Hospital Kemaman	0	0	0	0
50	Hospital Kapit	0	0	0	0
51	Hospital Keningau	0	0	0	0
52	Hospital Labuan	0	0	0	0
53	Hospital Banting	0	0	0	0
TOTAL		148	146	191	162

Table 7.13.11: Midline Laparotomy with Limited Right Hemicolectomy by Hospital

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



7.14 Inguinal Hernia Surgery

List of procedures selected for Hernia workload measurement are:

- Inguinal Hernia Repair under Local Anaesthesia (LA) – Daycare
- Inguinal Hernia Repair under Local Anaesthesia (LA) – Inpatient
- Inguinal Hernia Repair under General Anaesthesia (GA) - Open
- Inguinal Hernia Repair under General Anaesthesia (GA) - Laparoscopic

a. Total

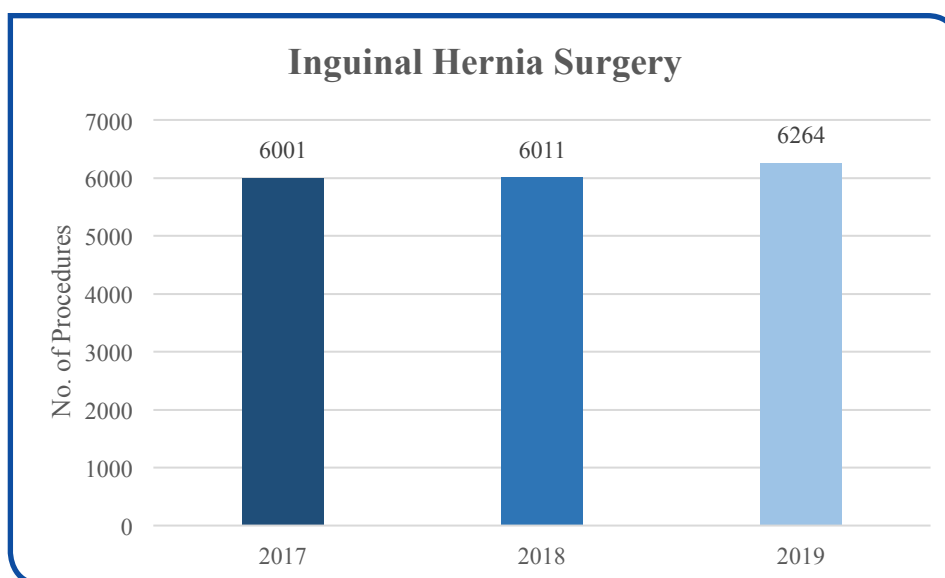


Figure 7.14.1 : Total Number of Inguinal Hernia Surgery

b. By BMS Category

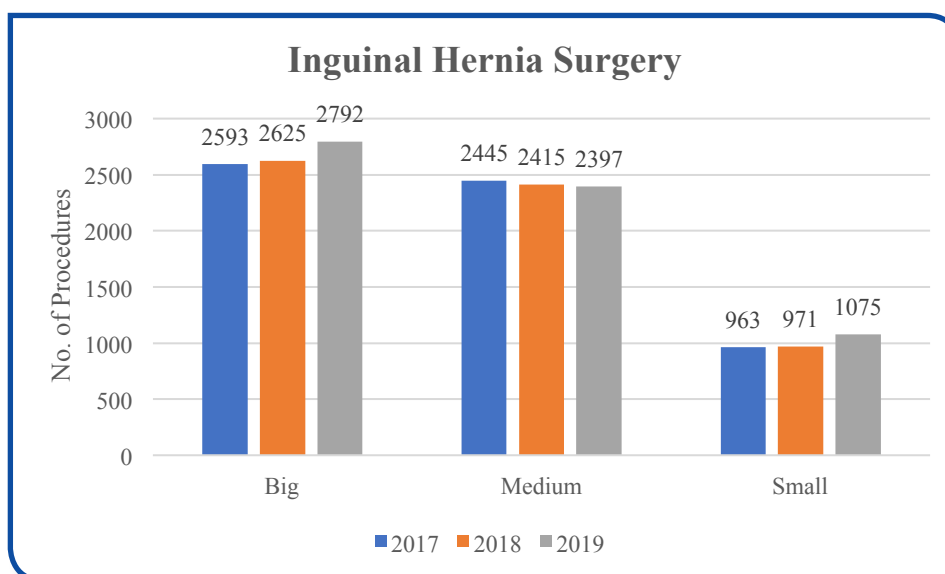


Figure 7.14.2: Inguinal Hernia Surgery by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



c. By BMS Hospital Category

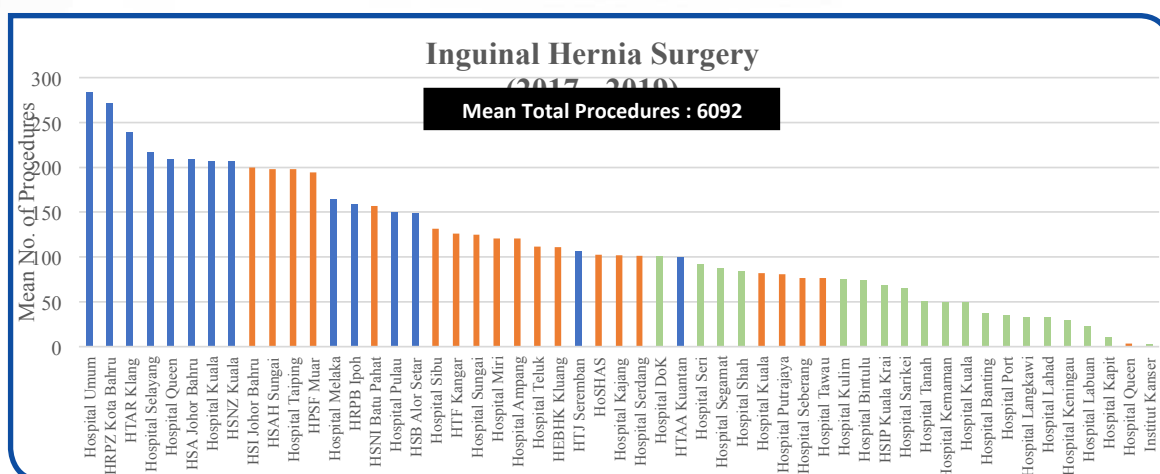


Figure 7.14.3 : Inguinal Hernia Surgery by BMS Hospital Category

d. Types of Hernia Surgery

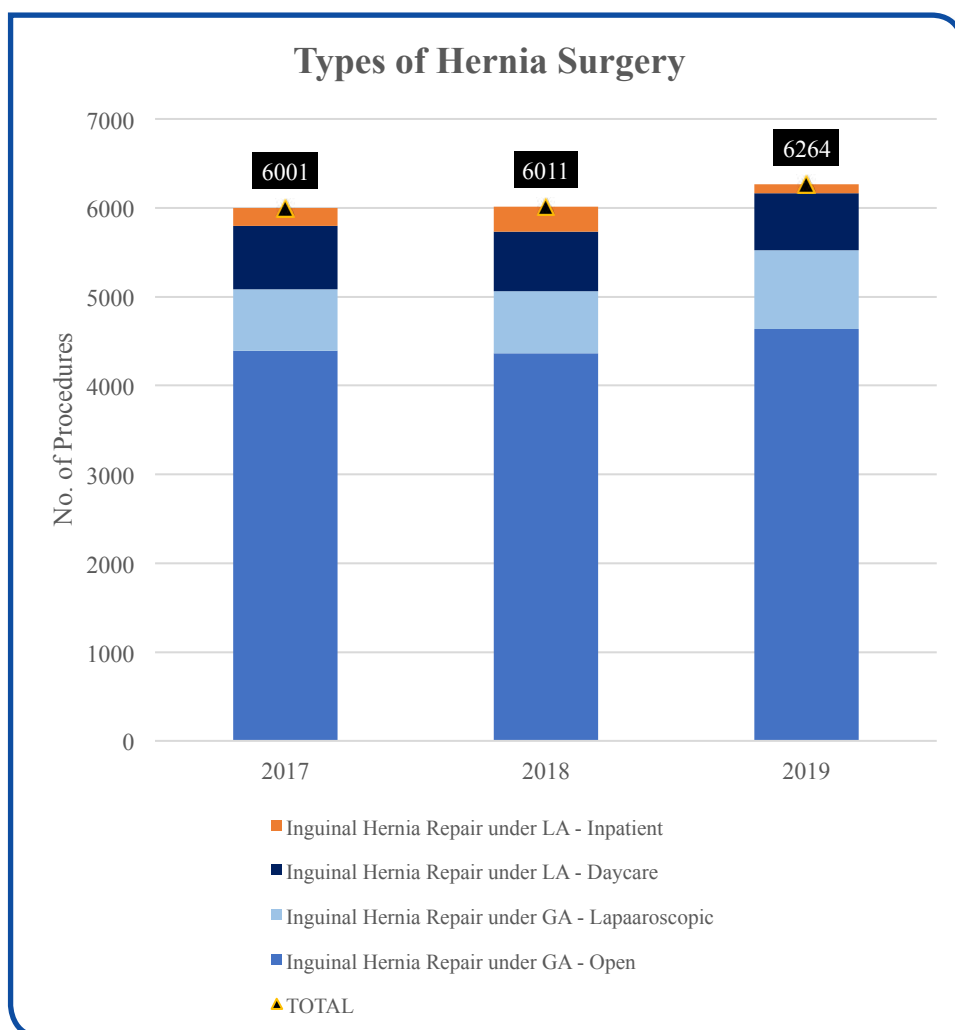


Figure 7.14.4: Types of Inguinal Hernia Surgery

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



TOTAL INGUINAL HERNIA SURGERY

HOSPITAL CATEGORY	2017	2018	2019
Big	2593	2625	2792
Medium	2445	2415	2397
Small	963	971	1075
TOTAL	6001	6011	6264

Table 7.14.1: Total Number of Inguinal Hernia surgery by BMS Category

TYPES OF INGUINAL HERNIA SURGERY

PROCEDURE TYPE	2017	(%)	2018	(%)	2019	(%)
Inguinal Hernia Repair under LA - Daycare	712	12%	670	11%	643	15%
Inguinal Hernia Repair under LA - Inpatient	204	3%	279	5%	98	1%
Inguinal Hernia Repair under GA - Open	4391	73%	4360	73%	4636	10%
Inguinal Hernia Repair under GA - Laparoscopic	694	12%	702	12%	887	74%
TOTAL	6001	100%	6011	100%	6264	100%

Table 7.14.2: Types of Inguinal Hernia Surgery

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



INGUINAL HERNIA SURGERY

NO	HOSPITALS	2017	2018	2019	MEAN NO. OF PROCEDURES
1	Hospital Umum Sarawak	291	283	276	283
2	HRPZ Kota Bharu	261	293	260	271
3	HTAR Klang	252	222	244	239
4	Hospital Selayang	183	154	313	217
5	Hospital Queen Elizabeth	207	198	223	209
6	HSA Johor Bahru	172	229	225	209
7	Hospital Kuala Lumpur	151	231	239	207
8	HSNZ Kuala Terengganu	216	197	207	207
9	HSI Johor Bahru	169	154	277	200
10	HSAH Sungai Petani	200	235	159	198
11	Hospital Taiping	171	209	214	198
12	HPSF Muar	199	190	194	194
13	Hospital Melaka	193	176	124	164
14	HRPB Ipoh	202	142	132	159
15	HSNI Batu Pahat	174	150	147	157
16	Hospital Pulau Pinang	144	143	162	150
17	HSB Alor Setar	158	168	121	149
18	Hospital Sibul	147	120	128	132
19	HTF Kangar	128	122	128	126
20	Hospital Sungai Buloh	123	129	122	125
21	Hospital Miri	124	132	106	121
22	Hospital Ampang	117	149	95	120
23	Hospital Teluk Intan	95	114	125	111
24	HEBHK Kluang	94	116	123	111
25	HTJ Seremban	89	122	107	106
26	HoSHAS Temerloh	114	76	118	103
27	Hospital Kajang	101	102	103	102
28	Hospital Serdang	146	105	53	101
29	Hospital DoK Sandakan	112	89	102	101
30	HTAA Kuantan	74	67	159	100
31	Hospital Seri Manjung	85	86	104	92
32	Hospital Segamat	94	93	74	87
33	Hospital Shah Alam	55	85	112	84
34	Hospital Kuala Pilah	95	87	64	82
35	Hospital Putrajaya	84	80	79	81
36	Hospital Seberang Jaya	81	60	89	77
37	Hospital Tawau	78	82	70	77
38	Hospital Kulim	74	61	92	76
39	Hospital Bintulu	100	47	77	75
40	HSIP Kuala Krai	48	74	84	69
41	Hospital Sarikei	73	66	58	66
42	Hospital Tanah Merah	70	39	43	51
43	Hospital Kemaman	39	47	64	50
44	Hospital Kuala Lipis	39	56	53	49
45	Hospital Banting	40	37	34	37
46	Hospital Port Dickson	16	45	44	35
47	Hospital Langkawi	27	36	37	33
48	Hospital Lahad Datu	29	32	39	33
49	Hospital Keningau	33	30	26	30
50	Hospital Labuan	19	28	21	23
51	Hospital Kapit	7	17	9	11
52	Hospital Queen Elizabeth 2	5	3	3	4
53	Institut Kanser Negara	3	3	2	3
TOTAL		6001	6011	6264	6092

Table 7.14.3: Total Inguinal Hernia Surgery by Hospitals

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



7.14.1 Inguinal Hernia Repair under LA

a. Total

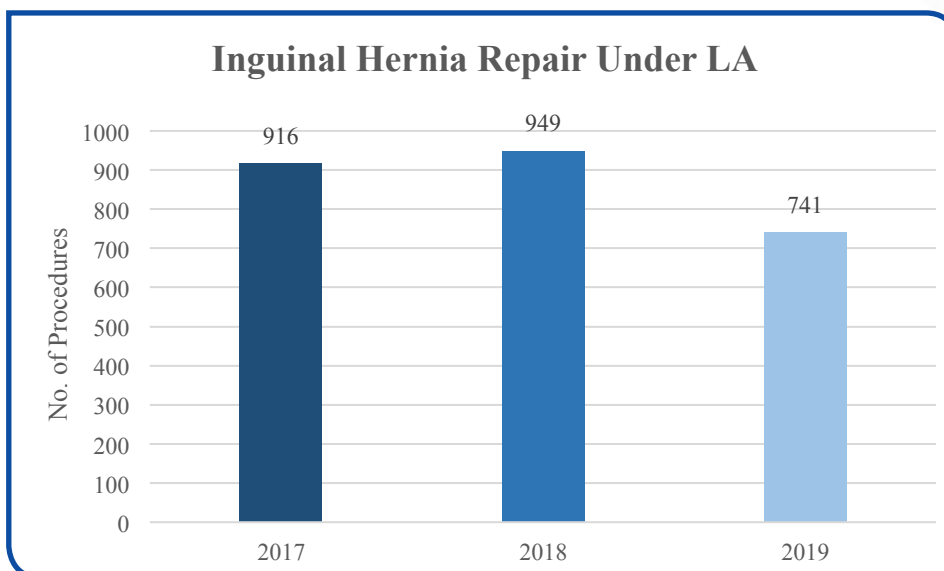


Figure 7.14.5: Total Number of Inguinal Hernia Repair under LA

b. By BMS Category

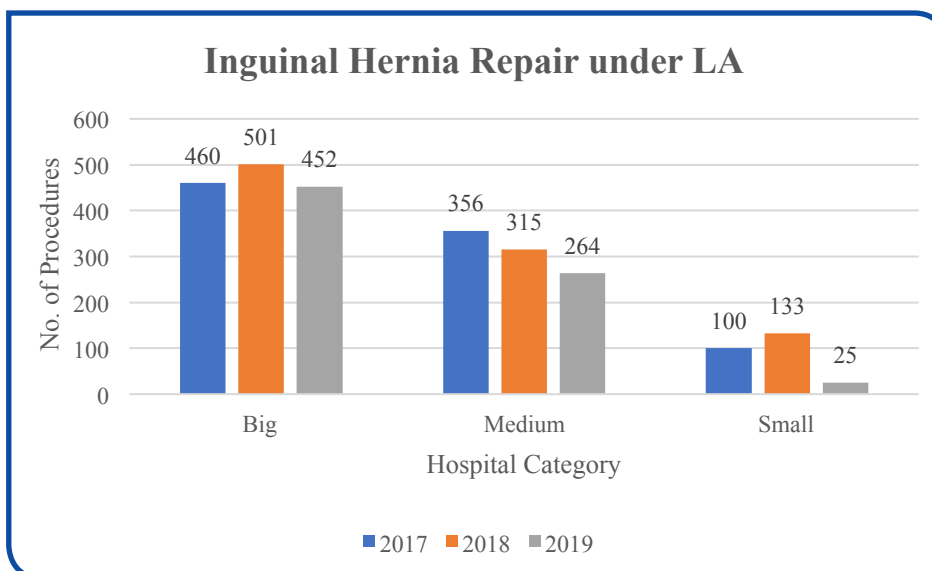


Figure 7.14.6: Inguinal Hernia Repair under LA by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



c. By BMS Hospital Category

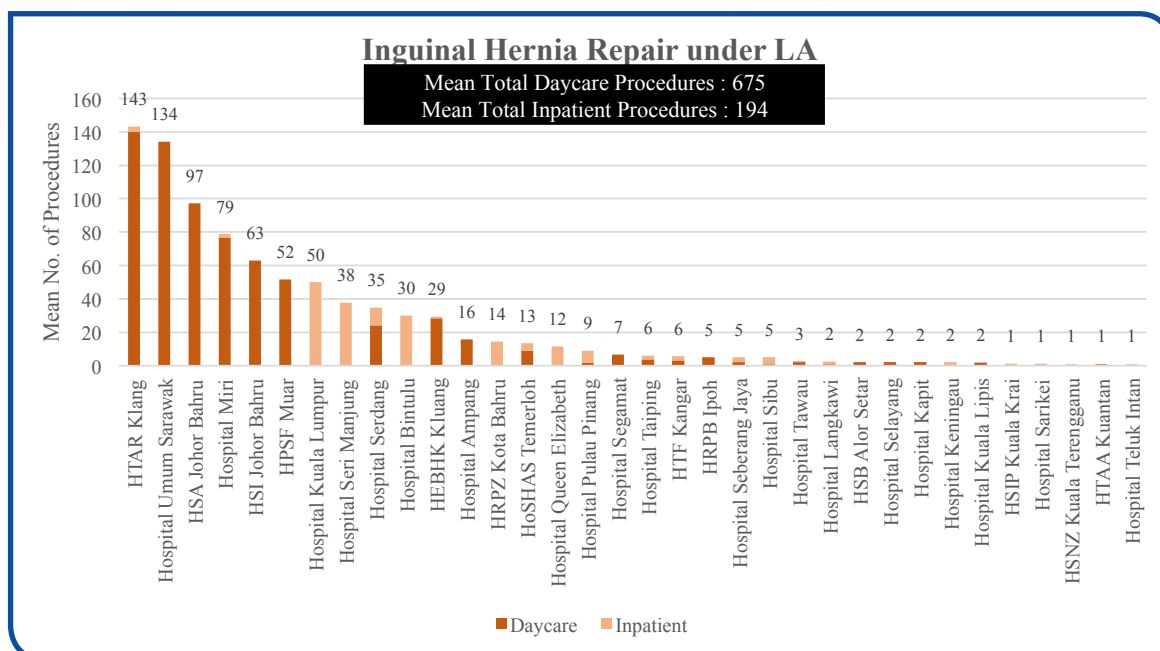


Figure 7.14.7 : Inguinal Hernia Repair under LA by Hospital Category

d. By Type of Surgery

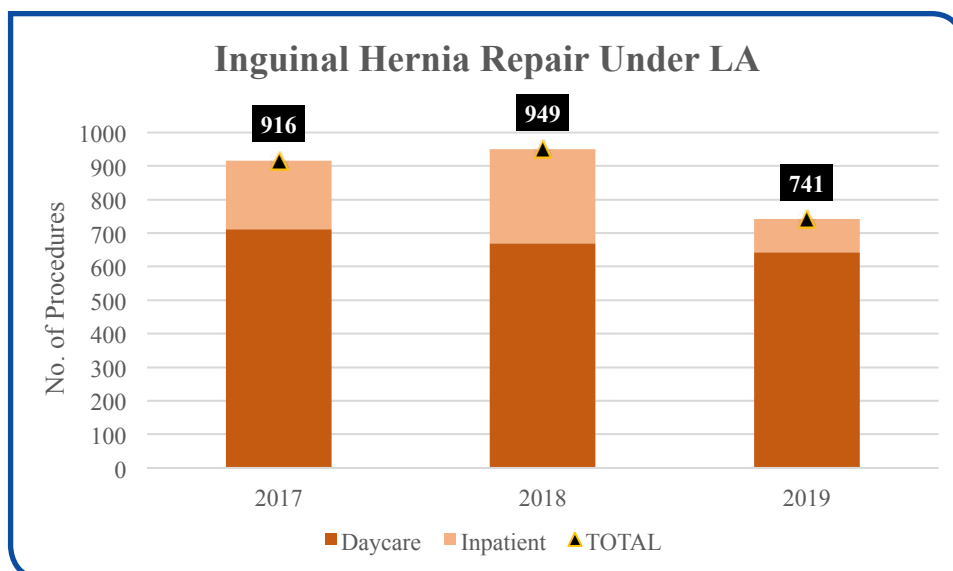


Figure 7.14.8: Types of Inguinal Hernia Repair under LA

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



INGUINAL HERNIA REPAIR UNDER LA

HOSPITAL CATEGORY	2017	2018	2019
Big	460	501	452
Medium	356	315	264
Small	100	133	25
TOTAL	916	949	741

Table 7.14.4: Total Number of Inguinal Hernia Repair under LA by BMS Category

INGUINAL HERNIA REPAIR UNDER LA

PROCEDURE TYPE	2017	(%)	2018	(%)	2019	(%)
Daycare Inguinal Hernia Repair	712	78%	670	71%	643	87%
Inpatient Inguinal Hernia Repair	204	22%	279	29%	98	13%
TOTAL	916	100%	949	100%	741	100%

Table 7.14.5: Types of Inguinal Hernia Repair under LA

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



INGUINAL HERNIA REPAIR UNDER LA

NO	HOSPITALS	MEAN NUMBER		
		DAYCARE (a)	INPATIENT (b)	TOTAL MEAN PROCEDURES (a + b)
1	HTAR Klang	140	3	143
2	Hospital Umum Sarawak	134	0	134
3	HSA Johor Bahru	97	0	97
4	Hospital Miri	77	2	79
5	HSI Johor Bahru	63	0	63
6	HPSF Muar	52	0	52
7	Hospital Kuala Lumpur	0	50	50
8	Hospital Seri Manjung	0	38	38
9	Hospital Serdang	24	11	35
10	Hospital Bintulu	0	30	30
11	HEBHK Kluang	28	1	29
12	Hospital Ampang	16	0	16
13	HRPZ Kota Bahru	0	14	14
14	HoSHAS Temerloh	9	4	13
15	Hospital Queen Elizabeth	0	12	12
16	Hospital Pulau Pinang	2	7	9
17	Hospital Segamat	7	0	7
18	Hospital Taiping	4	2	6
19	HTF Kangar	3	3	6
20	HRPB Ipoh	5	0	5
21	Hospital Seberang Jaya	2	3	5
22	Hospital Sibul	1	4	5
23	Hospital Tawau	2	1	3
24	Hospital Langkawi	1	1	2
25	HSB Alor Setar	2	0	2
26	Hospital Selayang	2	0	2
27	Hospital Kapit	2	0	2
28	Hospital Keningau	0	2	2
29	Hospital Kuala Lipis	2	0	2
30	HSIP Kuala Krai	0	1	1
31	Hospital Sarikei	0	1	1
32	HSNZ Kuala Terengganu	0	1	1
33	HTAA Kuantan	1	0	1
34	Hospital Teluk Intan	0	1	1
35	HTJ Seremban	0	0	0
36	Hospital Kulim	0	0	0
37	Hospital DoK Sandakan	0	0	0
38	Hospital Melaka	0	0	0
39	HSAN Sungai Petani	0	0	0
40	Hospital Kajang	0	0	0
41	Hospital Sungai Buloh	0	0	0
42	Hospital Putrajaya	0	0	0
43	Hospital Kuala Pilah	0	0	0
44	HSNI Batu Pahat	0	0	0
45	Hospital Queen Elizabeth 2	0	0	0
46	Hospital Shah Alam	0	0	0
47	Institut Kanser Negara	0	0	0
48	Hospital Port Dickson	0	0	0
49	Hospital Kemaman	0	0	0
50	Hospital Tanah Merah	0	0	0
51	Hospital Lahad Datu	0	0	0
52	Hospital Labuan	0	0	0
53	Hospital Banting	0	0	0
TOTAL		675	194	869

Table 7.14.6: Total Number of Inguinal Hernia Repair under LA by Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



7.14.1.1 Daycare

a. By BMS Hospital Category

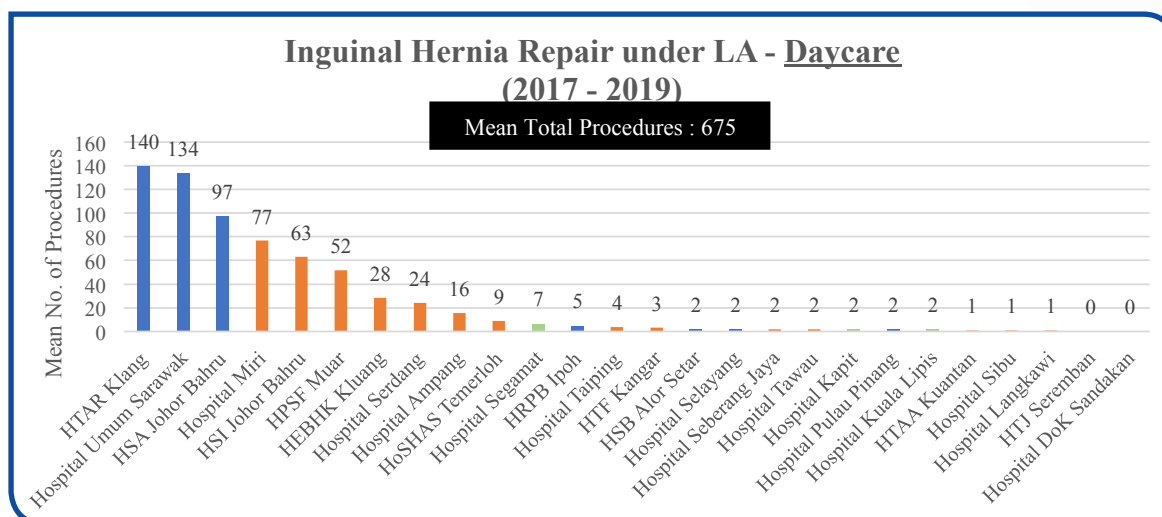


Figure 7.14.9 : Inguinal Hernia Repair Under LA (Daycare) by Hospital

INGUINAL HERNIA REPAIR UNDER LA - DAYCARE

NO	HOSPITALS	2017	2018	2019	MEAN NO. OF PROCEDURES
1	HTAR Klang	159	137	124	140
2	Hospital Umum Sarawak	146	127	129	134
3	HSA Johor Bahru	57	104	131	97
4	Hospital Miri	103	100	27	77
5	HSI Johor Bahru	52	62	75	63
6	HPSF Muar	51	56	48	52
7	HEBHK Kluang	25	19	41	28
8	Hospital Serdang	52	19	1	24
9	Hospital Ampang	21	19	7	16
10	HoSHAS Temerloh	22	0	5	9
11	Hospital Segamat	3	17	0	7
12	HRPB Ipoh	9	3	3	5
13	Hospital Taiping	0	2	9	4
14	HTF Kangar	0	0	9	3
15	HSB Alor Setar	2	1	3	2
16	Hospital Selayang	0	0	6	2
17	Hospital Seberang Jaya	5	1	0	2
18	Hospital Tawau	0	0	6	2
19	Hospital Kapit	4	1	1	2
20	Hospital Pulau Pinang	0	2	3	2
21	Hospital Kuala Lipis	0	0	5	2
22	HTAA Kuantan	0	0	3	1
23	Hospital Sibul	0	0	3	1
24	Hospital Langkawi	0	0	3	1
25	HTJ Seremban	1	0	0	0
26	Hospital DoK Sandakan	0	0	1	0
TOTAL		712	670	643	675

Table 7.14.7 : Inguinal Hernia Repair Under LA (Daycare) by Hospital

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



7.14.1.2 Inpatient

a. By BMS Hospital Category

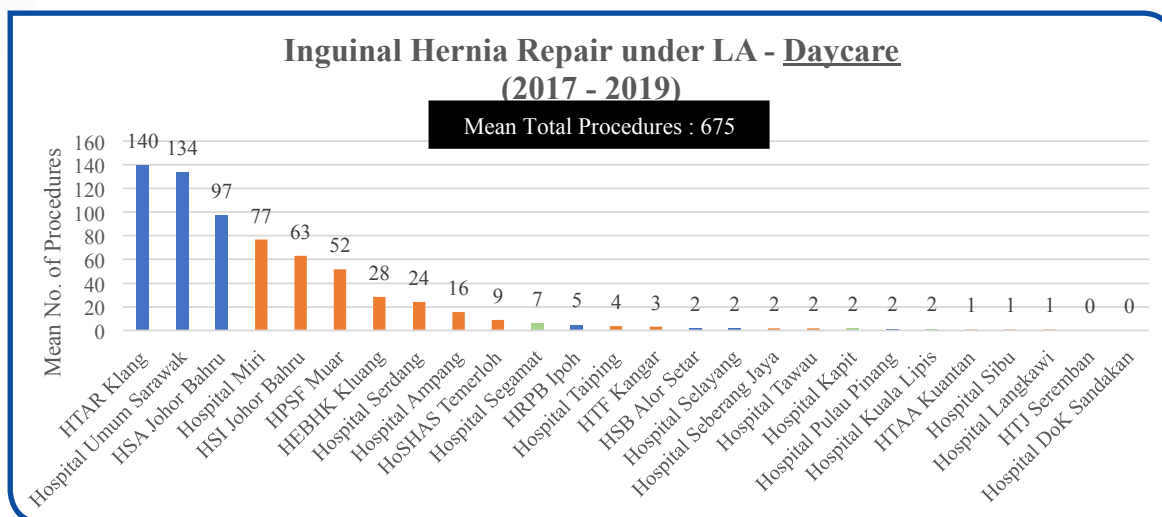


Figure 7.14.10 : Inguinal Hernia Repair under LA (Inpatient) by Hospital

INGUINAL HERNIA REPAIR UNDER LA - INPATIENT

NO	HOSPITALS	2017	2018	2019	MEAN NO. OF PROCEDURES
1	Hospital Kuala Lumpur	59	91	0	50
2	Hospital Seri Manjung	49	64	0	38
3	Hospital Bintulu	41	47	2	30
4	HRPZ Kota Bharu	22	19	2	14
5	Hospital Queen Elizabeth	1	4	30	12
6	Hospital Serdang	12	15	5	11
7	Hospital Pulau Pinang	0	7	15	7
8	HoSHAS Temerloh	1	11	1	4
8	Hospital Sibul	7	5	0	4
10	Hospital Seberang Jaya	3	6	0	3
11	HTF Kangar	0	0	8	3
12	Hospital Taiping	0	0	7	2
13	Hospital Miri	0	0	6	2
14	Hospital Keningau	0	0	6	2
15	Hospital Langkawi	0	0	4	1
16	HSIP Kuala Krai	0	3	1	1
17	Hospital Sarikei	2	1	1	1
18	HSNZ Kuala Terengganu	0	0	3	1
19	Hospital Teluk Intan	1	0	2	1
20	HEBHK Kluang	1	0	2	1
21	Hospital Tawau	0	0	2	1
22	Hospital Kulim	1	0	0	0
23	Hospital Kuala Lipis	0	0	1	0
TOTAL		204	279	98	194

Table 7.14.8 : Inguinal Hernia Repair under LA (Inpatient) by Hospital

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



7.14.2 Inguinal Hernia Repair under GA

a. Total

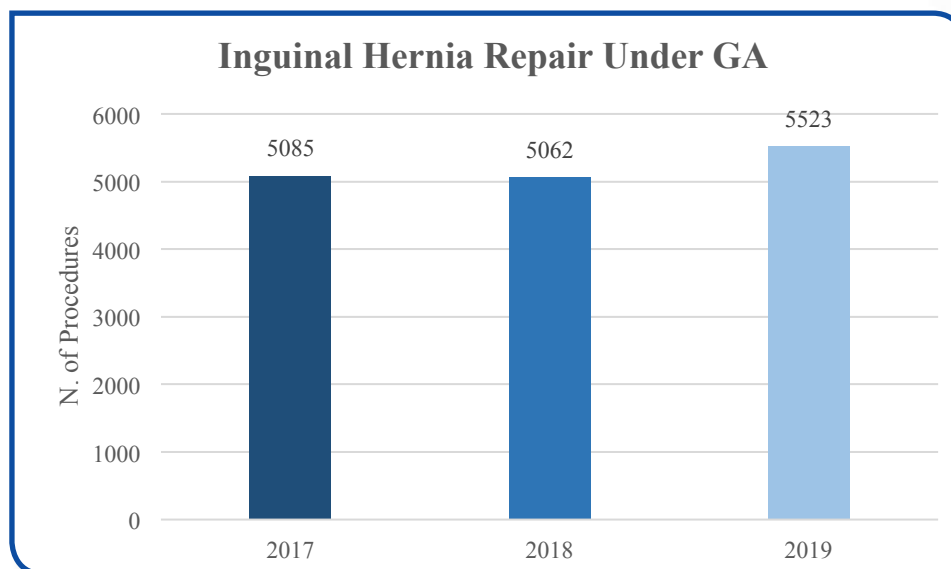


Figure 7.14.11 : Total Number of Inguinal Hernia Repair under GA

b. By BMS Category

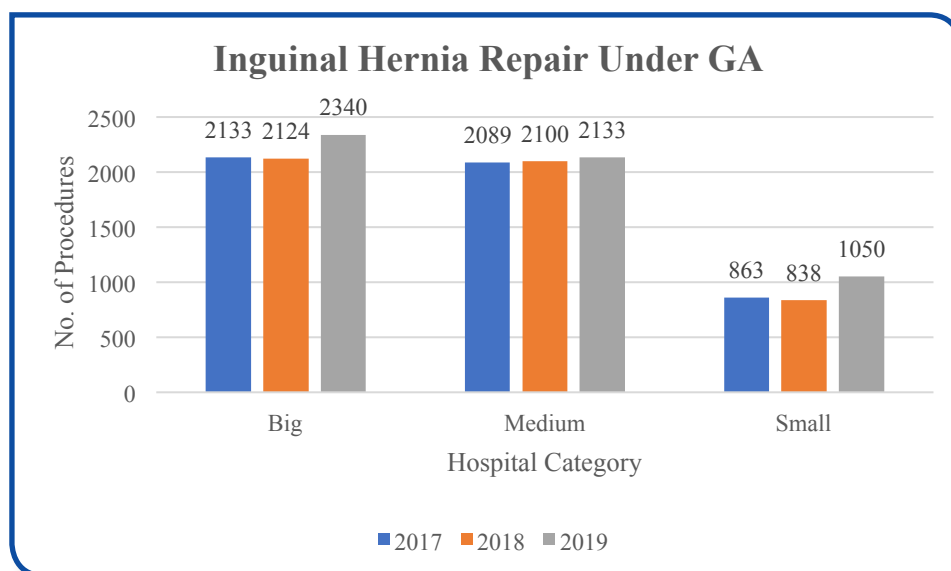


Figure 7.14.12 : Inguinal Hernia Repair under GA by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



c. By BMS Hospital Category

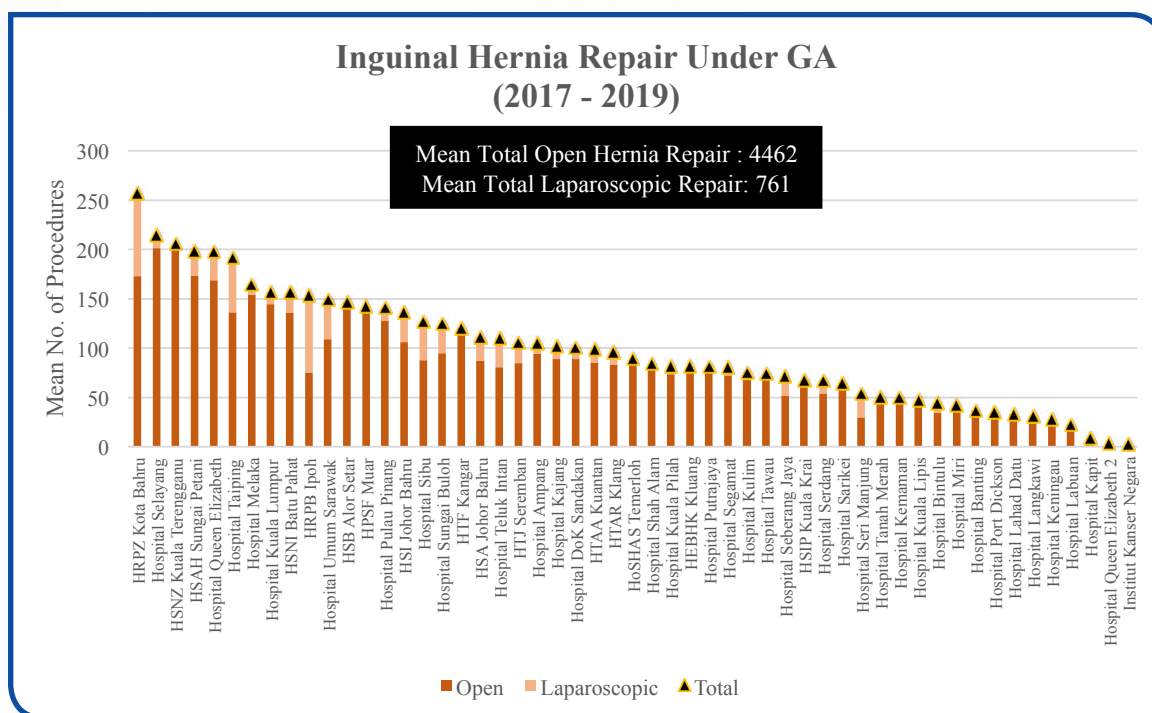


Figure 7.14.13 : Inguinal Hernia Repair under GA by Hospitals

d. Types of Inguinal Hernia Repair under GA

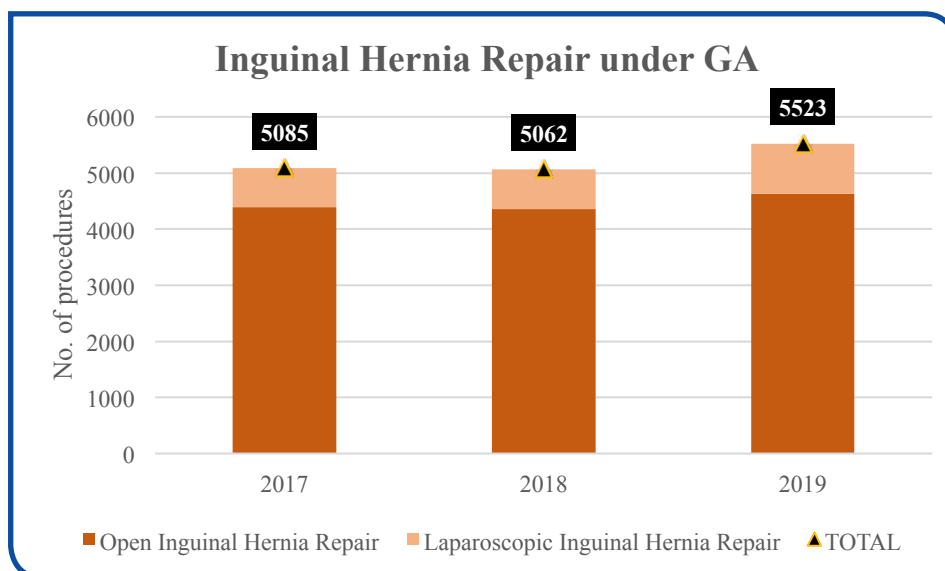


Figure 7.14.14: Types of Inguinal Hernia Repair under GA

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



INGUINAL HERNIA REPAIR UNDER GA

HOSPITAL CATEGORY	2017	2018	2019
Big	2133	2124	2340
Medium	2089	2100	2133
Small	863	838	1050
TOTAL	5085	5062	5523

Table 7.14.9 : Total Number of Inguinal Hernia Repair under GA

INGUINAL HERNIA REPAIR UNDER GA

PROCEDURE TYPE	2017	(%)	2018	(%)	2019	(%)
Open Inguinal Hernia Repair	4391	86%	4360	86%	4636	84%
Laparoscopic Inguinal Hernia Repair	694	14%	702	14%	887	16%
TOTAL	5085	100%	5062	100%	5523	100%

Table 7.14.10: Inguinal Hernia Repair under GA by Modality of Approach

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



INGUINAL HERNIA REPAIR UNDER GA

NO	HOSPITALS	MEAN NUMBER		
		OPEN	LAPAROSCOPIC	TOTAL
1	HRPZ Kota Bahru	173	84	257
2	Hospital Selayang	201	13	215
3	HSNZ Kuala Terengganu	200	5	206
4	HSAH Sungai Petani	174	24	198
5	Hospital Queen Elizabeth	169	29	198
6	Hospital Taiping	136	56	192
7	Hospital Melaka	154	10	164
8	Hospital Kuala Lumpur	144	13	157
9	HSNI Batu Pahat	135	22	157
10	HRPB Ipoh	75	78	154
11	Hospital Umum Sarawak	109	40	149
12	HSB Alor Setar	146	1	147
13	HPSF Muar	140	3	143
14	Hospital Pulau Pinang	128	13	141
15	HSI Johor Bahru	106	31	137
16	Hospital Sibul	88	39	127
17	Hospital Sungai Buloh	95	30	125
18	HTF Kangar	120	0	120
19	HSA Johor Bahru	87	24	111
20	Hospital Teluk Intan	80	30	110
21	HTJ Seremban	85	21	106
22	Hospital Ampang	94	10	105
23	Hospital Kajang	89	13	102
24	Hospital DoK Sandakan	89	12	101
25	HTAA Kuantan	85	14	99
26	HTAR Klang	83	13	96
27	HoSHAS Temerloh	85	4	89
28	Hospital Shah Alam	80	4	84
29	Hospital Kuala Pilah	74	8	82
30	HEBHK Kluang	76	6	82
31	Hospital Putrajaya	77	4	81
32	Hospital Segamat	72	8	80
33	Hospital Kulim	68	8	75
34	Hospital Tawau	69	5	74
35	Hospital Seberang Jaya	52	20	72
36	HSIP Kuala Krai	67	0	67
37	Hospital Serdang	54	13	67
38	Hospital Sarikei	64	0	64
39	Hospital Seri Manjung	30	24	54
40	Hospital Tanah Merah	51	0	51
41	Hospital Kemaman	50	0	50
42	Hospital Kuala Lipis	44	4	47
43	Hospital Bintulu	35	10	45
44	Hospital Miri	40	2	42
45	Hospital Banting	37	0	37
46	Hospital Port Dickson	31	4	35
47	Hospital Lahad Datu	33	0	33
48	Hospital Langkawi	24	7	31
49	Hospital Keningau	28	0	28
50	Hospital Labuan	23	0	23
51	Hospital Kapit	8	1	9
52	Hospital Queen Elizabeth 2	3	1	4
53	Institut Kanser Negara	2	1	3
TOTAL		4462	761	5223

Table 7.14.11: Inguinal Hernia Repair under GA by Hospital

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



7.14.2.1 Open

a. By BMS Hospital Category

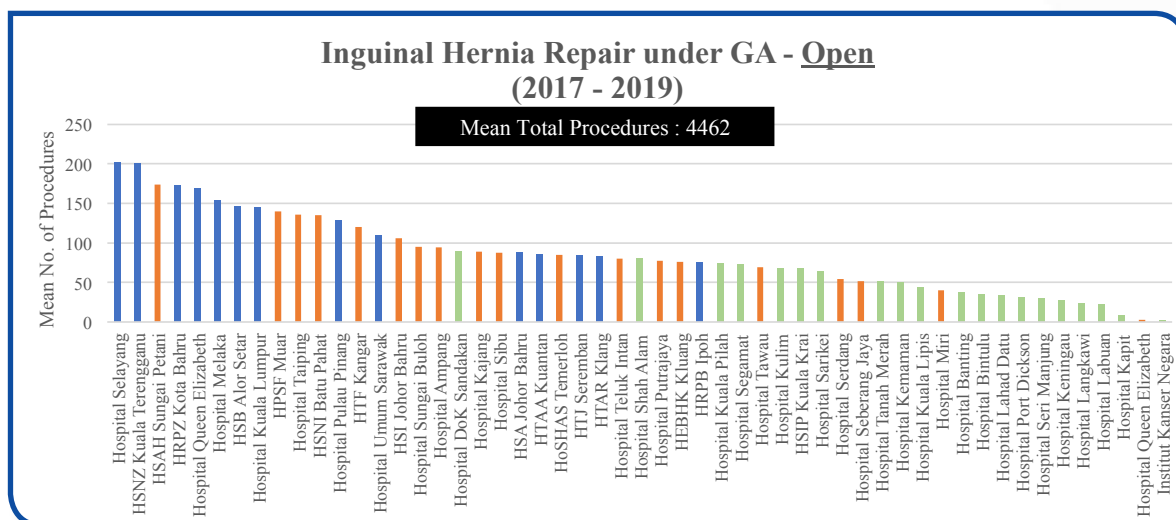


Figure 7.14.15 : Open Inguinal Hernia Repair under GA by BMS Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



INGUINAL HERNIA REPAIR UNDER GA - OPEN

NO	HOSPITALS	2017	2018	2019	MEAN NO. OF PROCEDURES
1	Hospital Selayang	174	138	292	201
2	HSNZ Kuala Terengganu	208	193	200	200
3	HSAH Sungai Petani	180	213	128	174
4	HRPZ Kota Bharu	171	173	175	173
5	Hospital Queen Elizabeth	176	181	149	169
6	Hospital Melaka	193	168	101	154
7	HSB Alor Setar	156	167	116	146
8	Hospital Kuala Lumpur	92	125	216	144
9	HPSF Muar	148	134	137	140
10	Hospital Taiping	123	166	119	136
11	HSNI Batu Pahat	152	124	130	135
12	Hospital Pulau Pinang	140	118	125	128
13	HTF Kangar	128	122	111	120
14	Hospital Umum Sarawak	109	114	104	109
15	HSI Johor Bahru	110	87	121	106
16	Hospital Sungai Buloh	80	103	102	95
17	Hospital Ampang	82	127	74	94
18	Hospital DoK Sandakan	106	78	83	89
19	Hospital Kajang	91	84	91	89
20	Hospital Sibul	105	74	84	88
21	HSA Johor Bahru	95	95	72	87
22	HTAA Kuantan	57	67	132	85
23	HoSHAS Temerloh	91	55	109	85
24	HTJ Seremban	67	98	89	85
25	HTAR Klang	71	70	107	83
26	Hospital Teluk Intan	73	92	76	80
27	Hospital Shah Alam	55	77	108	80
28	Hospital Putrajaya	81	76	75	77
29	HEBHK Kluang	68	90	70	76
30	HRPB Ipoh	93	46	87	75
31	Hospital Kuala Pilah	79	80	62	74
32	Hospital Segamat	86	66	65	72
33	Hospital Tawau	74	79	55	69
34	Hospital Kulim	68	60	75	68
35	HSIP Kuala Krai	48	70	83	67
36	Hospital Sarikei	71	65	57	64
37	Hospital Serdang	58	57	47	54
38	Hospital Seberang Jaya	50	42	63	52
39	Hospital Tanah Merah	70	39	43	51
40	Hospital Kemaman	39	47	64	50
41	Hospital Kuala Lipis	38	46	47	44
42	Hospital Miri	21	32	68	40
43	Hospital Banting	40	37	34	37
44	Hospital Bintulu	38	0	66	35
45	Hospital Lahad Datu	29	32	39	33
46	Hospital Port Dickson	15	36	42	31
47	Hospital Seri Manjung	11	11	67	30
48	Hospital Keningau	33	30	20	28
49	Hospital Langkawi	22	28	22	24
50	Hospital Labuan	19	28	21	23
51	Hospital Kapit	3	14	8	8
52	Hospital Queen Elizabeth 2	3	3	3	3
53	Institut Kanser Negara	1	3	2	2
TOTAL		4391	4360	4636	4462

Table 7.14.12 : Open Inguinal Hernia Repair under GA by Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



7.14.2.2 Laparoscopic

a. By BMS Hospital Category

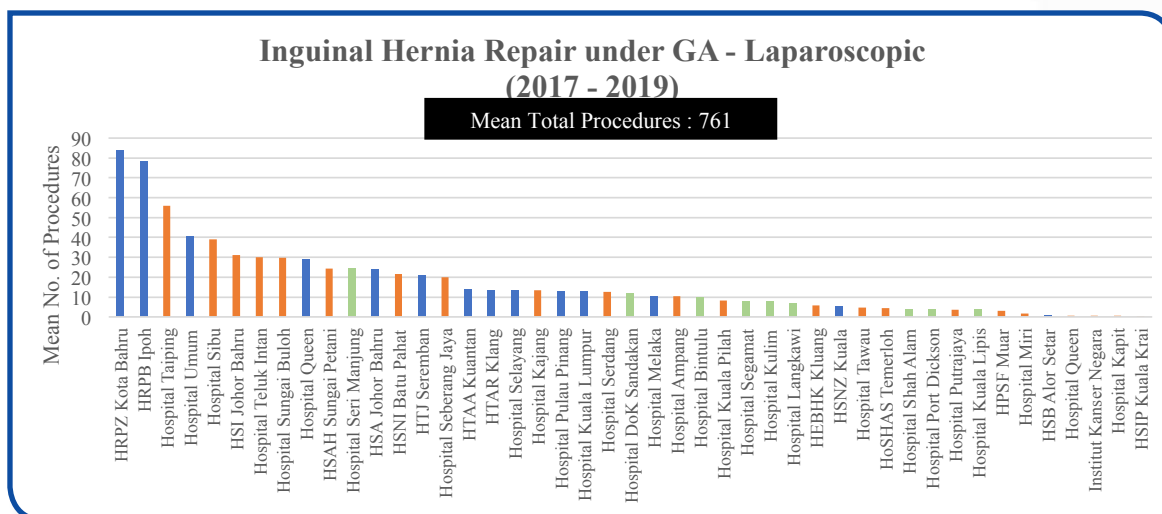


Figure 7.14.16 : Laparoscopic Inguinal Hernia Repair under GA by BMS Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



INGUINAL HERNIA REPAIR UNDER GA - LAPAROSCOPIC

NO	HOSPITALS	2017	2018	2019	MEAN NO. OF PROCEDURES
1	HRPZ Kota Bahru	68	101	83	84
2	HRPB Ipoh	100	93	42	78
3	Hospital Taiping	48	41	79	56
4	Hospital Umum Sarawak	36	42	43	40
5	Hospital Sibu	35	41	41	39
6	HSI Johor Bahru	7	5	81	31
7	Hospital Teluk Intan	21	22	47	30
8	Hospital Sungai Buloh	43	26	20	30
9	Hospital Queen Elizabeth	30	13	44	29
10	HSAH Sungai Petani	20	22	31	24
11	Hospital Seri Manjung	25	11	37	24
12	HSA Johor Bahru	20	30	22	24
13	HSNI Batu Pahat	22	26	17	22
14	HTJ Seremban	21	24	18	21
15	Hospital Seberang Jaya	23	11	26	20
16	HTAA Kuantan	17	0	24	14
17	HTAR Klang	18	9	13	13
18	Hospital Selayang	9	16	15	13
19	Hospital Kajang	10	18	12	13
20	Hospital Pulau Pinang	4	16	19	13
21	Hospital Kuala Lumpur	0	15	23	13
22	Hospital Serdang	24	14	0	13
23	Hospital DoK Sandakan	6	11	18	12
24	Hospital Melaka	0	8	23	10
25	Hospital Ampang	14	3	14	10
26	Hospital Bintulu	21	0	9	10
27	Hospital Kuala Pilah	16	7	2	8
28	Hospital Segamat	5	10	9	8
29	Hospital Kulim	5	1	17	8
30	Hospital Langkawi	5	8	8	7
31	HEBHK Kluang	0	7	10	6
32	HSNZ Kuala Terengganu	8	4	4	5
33	Hospital Tawau	4	3	7	5
34	HoSHAS Temerloh	0	10	3	4
35	Hospital Shah Alam	0	8	4	4
36	Hospital Port Dickson	1	9	2	4
37	Hospital Putrajaya	3	4	4	4
38	Hospital Kuala Lipis	1	10	0	4
39	HPSF Muar	0	0	9	3
40	Hospital Miri	0	0	5	2
41	HSB Alor Setar	0	0	2	1
42	Hospital Queen Elizabeth 2	2	0	0	1
43	Institut Kanser Negara	2	0	0	1
44	Hospital Kapit	0	2	0	1
45	HSIP Kuala Krai	0	1	0	0
TOTAL		694	702	887	761

Table 7.14.13: Laparoscopic Inguinal Hernia Repair under GA by Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



7.15 Pediatric Hernia and Scrotal Surgery

List of procedures selected for Pediatric's workload measurement are:

- i. Unilateral Herniotomy
- ii. Bilateral Herniotomy
- iii. Orchidopexy
- iv. Orchiectomy

a. Total

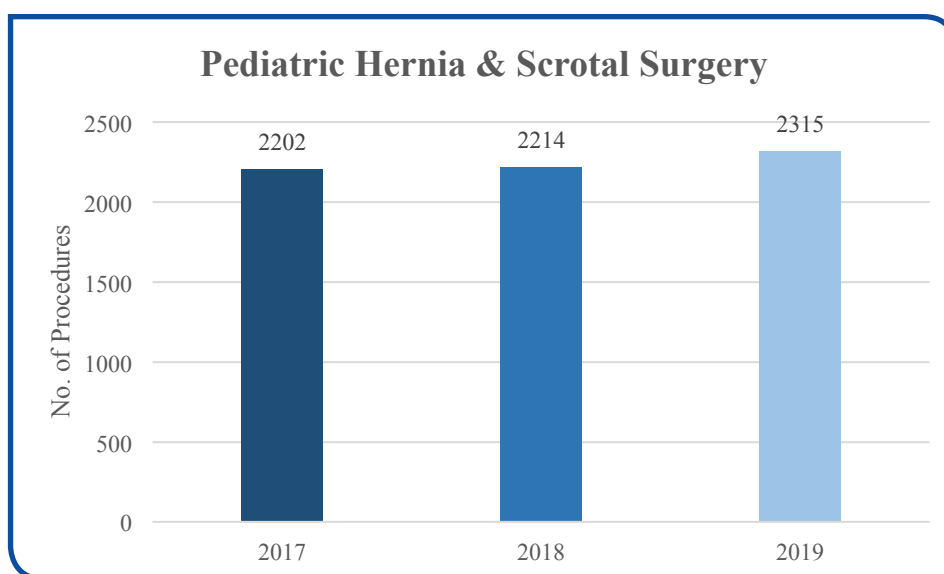


Figure 7.15.1 : Total number of Pediatric Hernia and Scrotal Surgery

b. By BMS Category

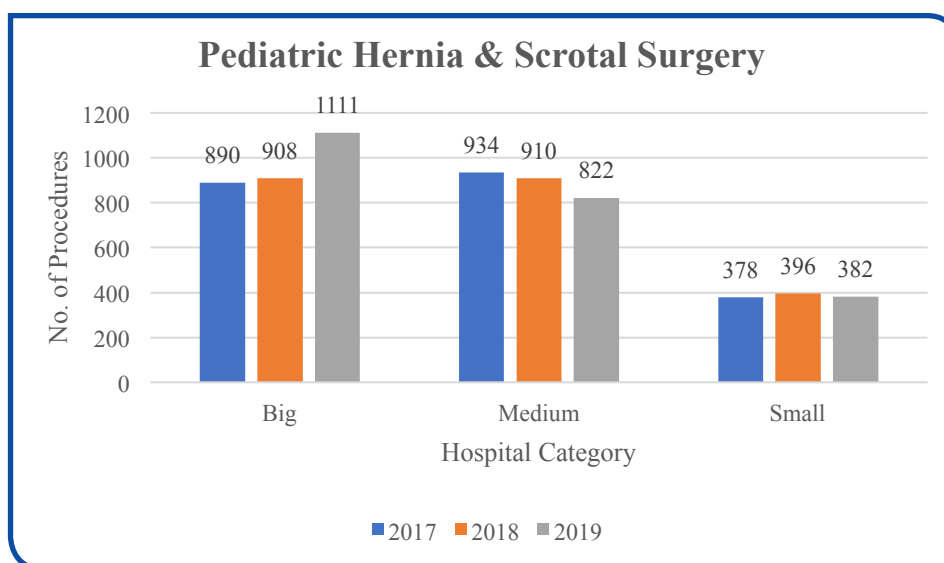


Figure 7.15.2: Pediatric Hernia and Scrotal Surgery by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



c. By BMS Hospital Category

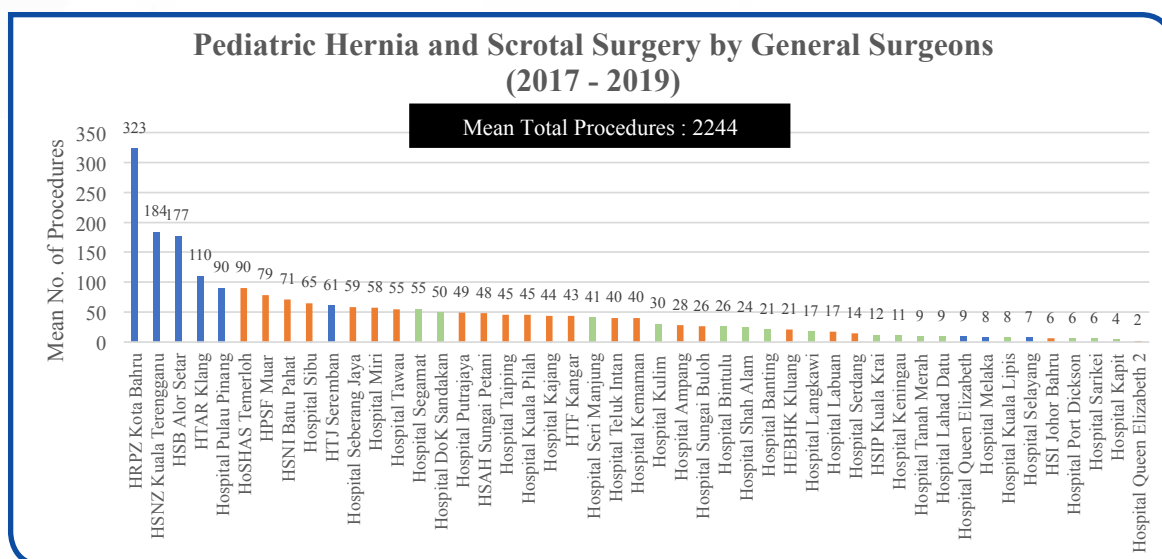


Figure 7.15.3: Pediatric Hernia and Scrotal Surgery by BMS Hospital Category

d. Types of Pediatric Surgery by General Surgeon

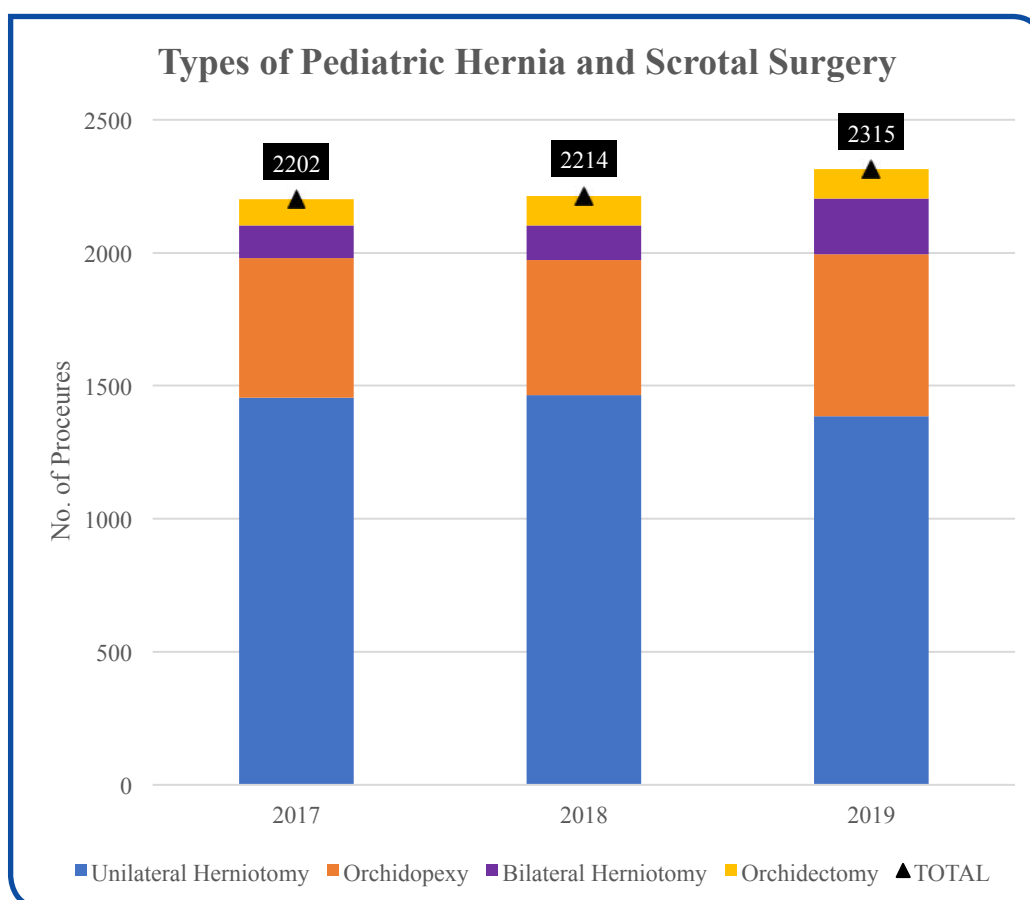


Figure 7.15.4: Types of Pediatric Hernia and Scrotal Surgery

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



PEDIATRIC HERNIA AND SCROTAL SURGERY

HOSPITAL CATEGORY	2017	2018	2019
Big	890	908	1111
Medium	934	910	822
Small	378	396	382
TOTAL	2202	2214	2315

Table 7.15.1: Pediatric Hernia and Scrotal Surgery by BMS Category

PEDIATRIC HERNIA AND SCROTAL SURGERY

PROCEDURE TYPE	2017	(%)	2018	(%)	2019	(%)
Unilateral Herniotomy	1456	66%	1466	66%	1385	60%
Bilateral Herniotomy	122	6%	130	6%	211	9%
Orchidopexy	524	24%	507	23%	609	26%
Orchidectomy	100	5%	111	5%	110	5%
TOTAL	2202	100%	2214	100%	2315	100%

Table 7.15.2 : Types of Pediatric Hernia and Scrotal Surgery

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



PAEDIATRIC HERNIA AND SCROTAL SURGERY

NO	HOSPITALS	2017	2018	2019	MEAN NUMBER
1	HRPZ Kota Bahru	365	302	303	323
2	HSNZ Kuala Terengganu	164	115	272	184
3	HSB Alor Setar	161	194	176	177
4	HTAR Klang	92	109	130	110
5	Hospital Pulau Pinang	80	86	105	90
6	HoSHAS Temerloh	92	88	90	90
7	HPSF Muar	76	88	72	79
8	HSNI Batu Pahat	72	67	75	71
9	Hospital Sibul	64	83	48	65
10	HTJ Seremban	9	74	101	61
11	Hospital Seberang Jaya	80	54	42	59
12	Hospital Miri	54	65	54	58
13	Hospital Tawau	60	70	35	55
14	Hospital Segamat	57	44	64	55
15	Hospital DoK Sandakan	46	59	44	50
16	Hospital Putrajaya	51	44	52	49
17	HSAH Sungai Petani	63	40	41	48
18	Hospital Taiping	32	41	63	45
19	Hospital Kuala Pilah	44	56	36	45
20	Hospital Kajang	38	46	47	44
21	HTF Kangar	67	23	40	43
22	Hospital Seri Manjung	46	53	24	41
23	Hospital Teluk Intan	41	51	29	40
24	Hospital Kemaman	56	40	24	40
25	Hospital Kulim	36	27	27	30
26	Hospital Ampang	16	24	44	28
27	Hospital Sungai Buloh	33	31	15	26
28	Hospital Bintulu	37	17	24	26
29	Hospital Shah Alam	16	21	34	24
30	Hospital Banting	12	22	30	21
31	HEBHK Kluang	15	24	23	21
32	Hospital Langkawi	10	13	28	17
33	Hospital Labuan	18	14	19	17
34	Hospital Serdang	17	12	14	14
35	HSIP Kuala Krai	6	10	19	12
36	Hospital Keningau	3	20	10	11
37	Hospital Tanah Merah	15	9	4	9
38	Hospital Lahad Datu	0	8	20	9
39	Hospital Queen Elizabeth	8	8	10	9
40	Hospital Melaka	4	14	5	8
41	Hospital Kuala Lipis	2	18	3	8
42	Hospital Selayang	7	6	9	7
43	HSI Johor Bahru	16	3	0	6
44	Hospital Port Dickson	6	9	3	6
45	Hospital Sarikei	12	5	1	6
46	Hospital Kapit	0	7	4	4
47	Hospital Queen Elizabeth 2	3	0	2	2
48	HRPB Ipoh	0	0	0	0
49	Hospital Kuala Lumpur	0	0	0	0
50	HSA Johor Bahru	0	0	0	0
51	HTAA Kuantan	0	0	0	0
52	Hospital Umum Sarawak	0	0	0	0
53	Institut Kanser Negara	0	0	0	0
TOTAL		2202	2214	2315	2244

Table 7.15.3 : Pediatric Hernia & Scrotal Surgery By Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



7.15.1 Unilateral Herniotomy

a. Total

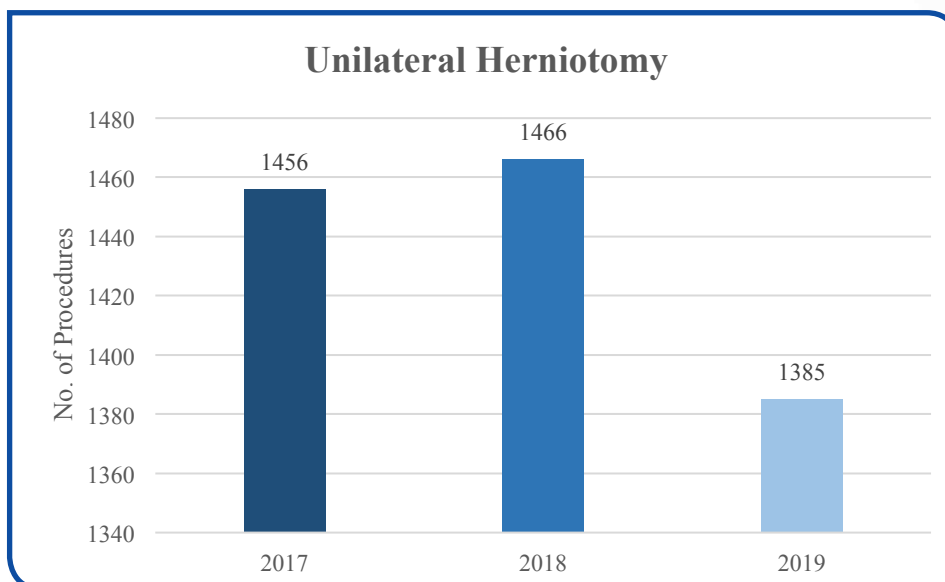


Figure 7.15.5: Total Number of Unilateral Herniotomy

b. By BMS Category

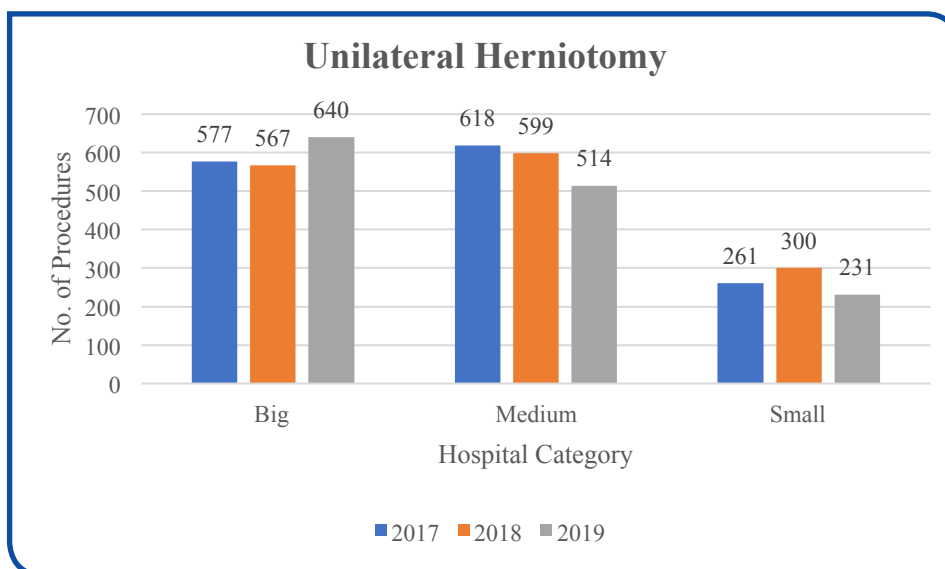


Figure 7.15.6 : Unilateral Herniotomy by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



c. By BMS Hospital Category

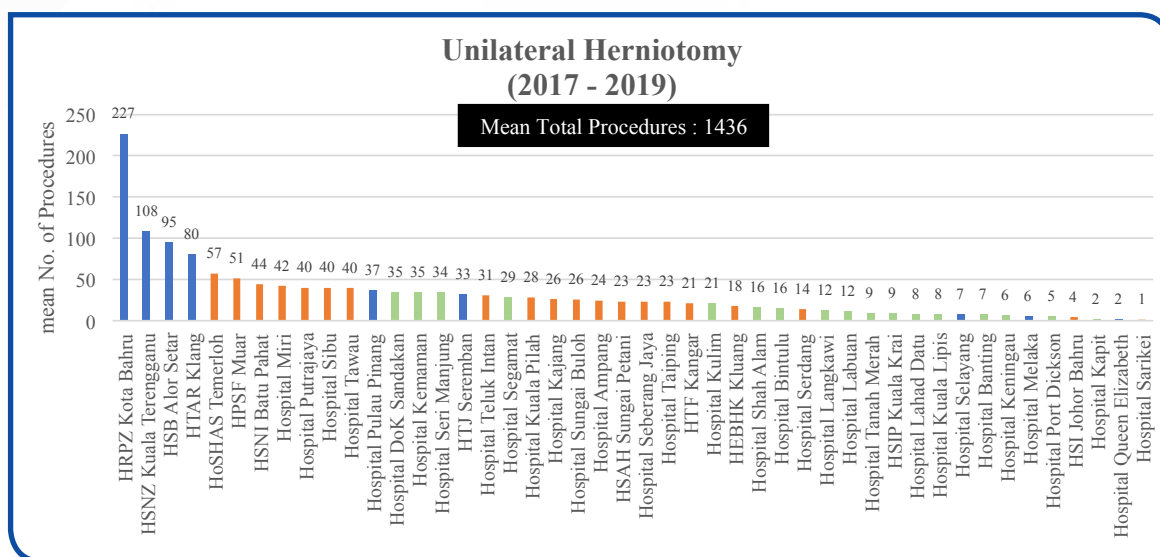


Figure 7.15.7: Unilateral Herniotomy by BMS Hospital Category

UNILATERAL HERNIOTOMY

HOSPITAL CATEGORY	2017	2018	2019
Big	577	567	640
Medium	618	599	514
Small	261	300	231
TOTAL	1456	1466	1385

Table 7.15.4: Total Number of Unilateral Herniotomy by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



UNILATERAL HERNIOTOMY

NO	HOSPITALS	2017	2018	2019	MEAN NUMBER
1	HRPZ Kota Bharu	261	229	190	227
2	HSNZ Kuala Terengganu	89	60	175	108
3	HSB Alor Setar	98	112	76	95
4	HTAR Klang	77	73	91	80
5	HoSHAS Temerloh	51	58	62	57
6	HPSF Muar	53	58	43	51
7	HSNI Batu Pahat	45	39	49	44
8	Hospital Miri	45	53	28	42
9	Hospital Putrajaya	40	38	42	40
10	Hospital Sibul	36	51	33	40
11	Hospital Tawau	50	44	25	40
12	Hospital Pulau Pinang	42	31	38	37
13	Hospital DoK Sandakan	29	49	27	35
14	Hospital Kemaman	46	36	22	35
15	Hospital Seri Manjung	38	43	21	34
16	HTJ Seremban	1	42	55	33
17	Hospital Teluk Intan	29	39	25	31
18	Hospital Segamat	39	26	21	29
19	Hospital Kuala Pilah	30	37	17	28
20	Hospital Kajang	23	30	25	26
21	Hospital Sungai Buloh	32	30	15	26
22	Hospital Ampang	13	21	39	24
23	HSAH Sungai Petani	44	11	15	23
24	Hospital Seberang Jaya	32	21	17	23
25	Hospital Taiping	19	26	25	23
26	HTF Kangar	35	12	17	21
27	Hospital Kulim	22	19	21	21
28	HEBHK Kluang	14	17	23	18
29	Hospital Shah Alam	11	12	25	16
30	Hospital Bintulu	21	12	14	16
31	Hospital Serdang	16	12	14	14
32	Hospital Langkawi	10	13	14	12
33	Hospital Labuan	12	11	12	12
34	Hospital Tanah Merah	14	9	4	9
35	HSIP Kuala Krai	6	10	10	9
36	Hospital Lahad Datu	0	8	15	8
37	Hospital Kuala Lipis	2	18	3	8
38	Hospital Selayang	7	6	9	7
39	Hospital Banting	4	9	9	7
40	Hospital Keningau	0	13	6	6
41	Hospital Melaka	2	13	2	6
42	Hospital Port Dickson	6	7	3	5
43	HSI Johor Bahru	11	2	0	4
44	Hospital Kapit	0	3	3	2
45	Hospital Queen Elizabeth	0	1	4	2
46	Hospital Sarikei	1	2	1	1
47	HRPB Ipoh	0	0	0	0
48	Hospital Kuala Lumpur	0	0	0	0
49	HSA Johor Bahru	0	0	0	0
50	HTAA Kuantan	0	0	0	0
51	Hospital Umum Sarawak	0	0	0	0
52	Hospital Queen Elizabeth 2	0	0	0	0
53	Institut Kanser Negara	0	0	0	0
TOTAL		1456	1466	1385	1436

Table 7.15.5: Unilateral Herniotomy by Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



7.15.2 Bilateral Herniotomy

a. Total

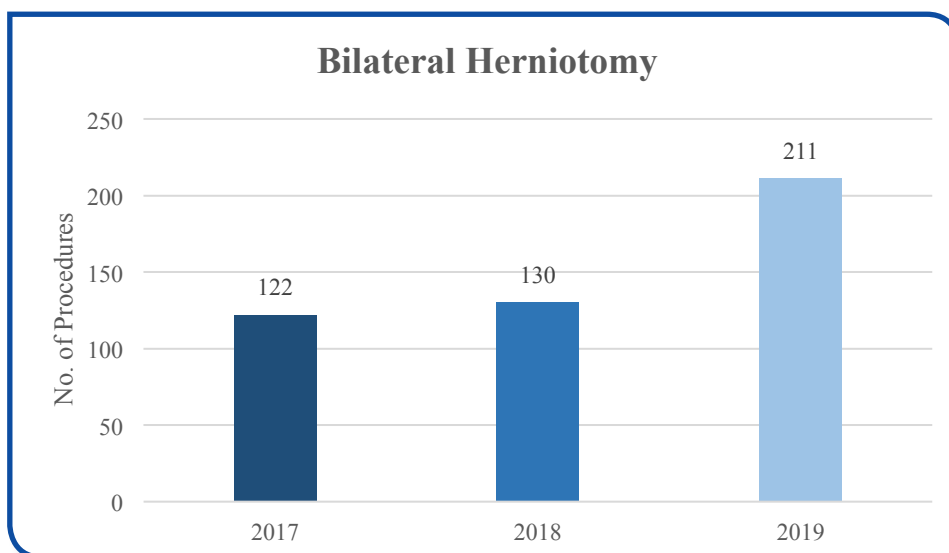


Figure 7.15.8: Total Number of Bilateral Herniotomy

b. By BMS Category

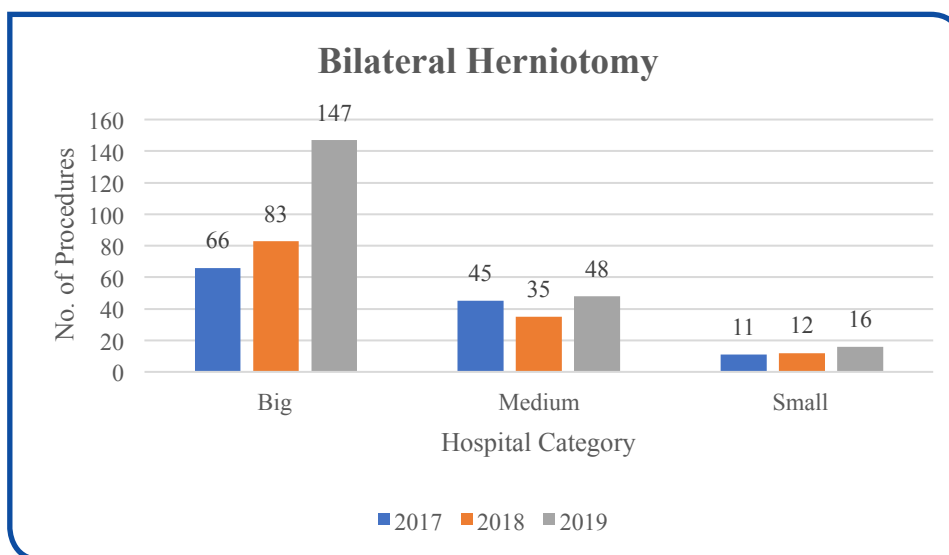


Figure 7.15.9: Bilateral Herniotomy by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



c. By BMS Hospital Category

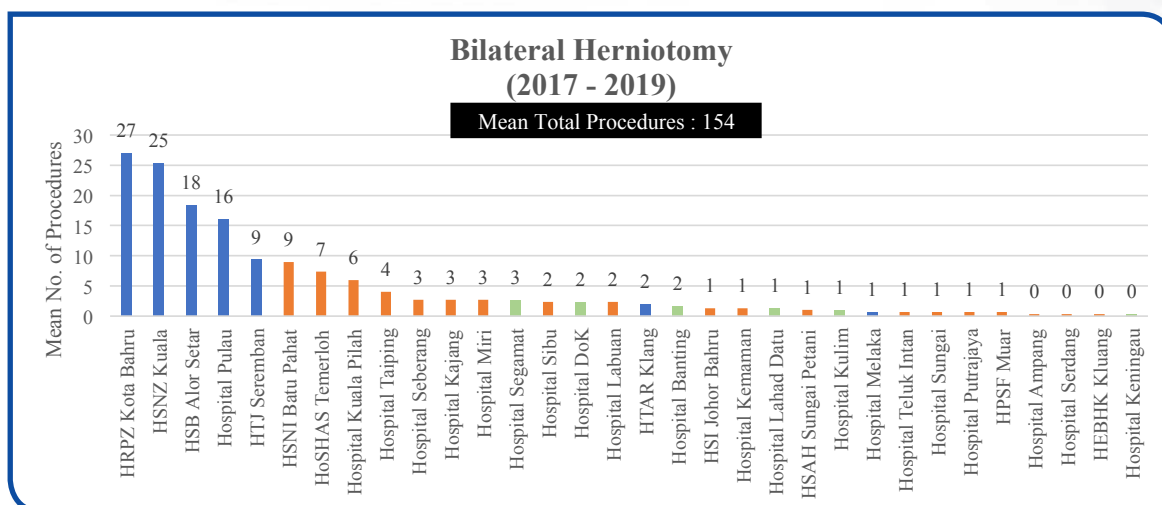


Figure 7.15.10: Bilateral Herniotomy by BMS Hospital Category

BILATERAL HERNIOTOMY

HOSPITAL CATEGORY	2017	2018	2019
Big	66	83	147
Medium	45	35	48
Small	11	12	16
TOTAL	122	130	211

Table 7.15.6: Total Number of Bilateral Herniotomy by BMS category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



BILATERAL HERNIOTOMY

NO	HOSPITALS	2017	2018	2019	MEAN NUMBER
1	HRPZ Kota Bahru	20	24	37	27
2	HSNZ Kuala Terengganu	22	21	33	25
3	HSB Alor Setar	12	14	29	18
4	Hospital Pulau Pinang	11	12	25	16
5	HTJ Seremban	0	8	20	9
6	HSNI Batu Pahat	10	8	9	9
7	HoSHAS Temerloh	8	8	6	7
8	Hospital Kuala Pilah	6	5	7	6
9	Hospital Taiping	5	6	1	4
10	Hospital Seberang Jaya	5	0	3	3
11	Hospital Kajang	2	1	5	3
12	Hospital Miri	0	0	8	3
13	Hospital Segamat	0	2	6	3
14	Hospital Sibul	1	4	2	2
15	Hospital DoK Sandakan	1	3	3	2
16	Hospital Labuan	2	3	2	2
17	HTAR Klang	0	3	3	2
18	Hospital Banting	2	3	0	2
19	HSI Johor Bahru	3	1	0	1
20	Hospital Kemaman	3	1	0	1
21	Hospital Lahad Datu	0	0	4	1
22	HSAH Sungai Petani	1	0	2	1
23	Hospital Kulim	3	0	0	1
24	Hospital Melaka	1	1	0	1
25	Hospital Teluk Intan	2	0	0	1
26	Hospital Sungai Buloh	1	1	0	1
27	Hospital Putrajaya	0	0	2	1
28	HPSF Muar	0	0	2	1
29	Hospital Ampang	0	0	1	0
30	Hospital Serdang	1	0	0	0
31	HEBHK Kluang	0	1	0	0
32	Hospital Keningau	0	0	1	0
TOTAL		122	130	211	154

Table 7.15.7: Bilateral Herniotomy by Hospital Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



7.15.3 Orchidopexy

a. Total

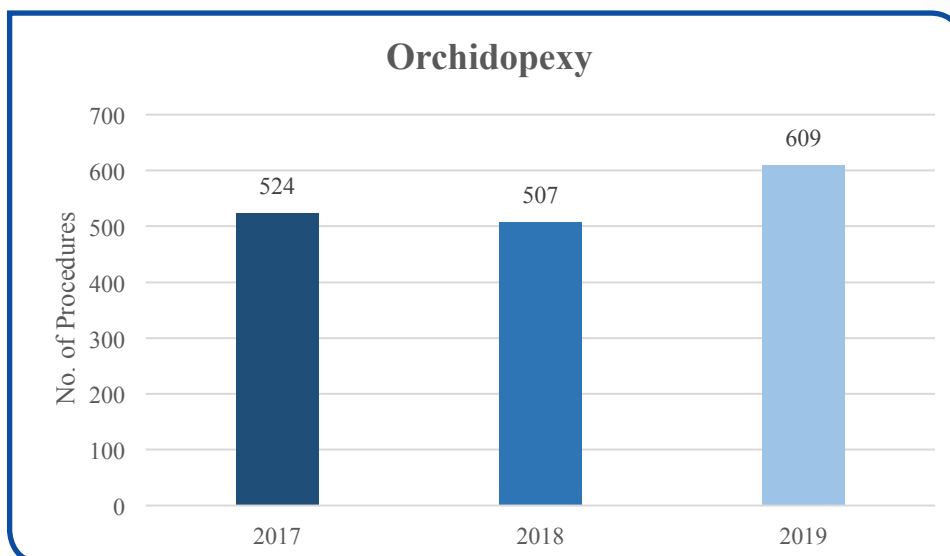


Figure 7.15.11: Total Number of Orchidopexy

b. By BMS Category

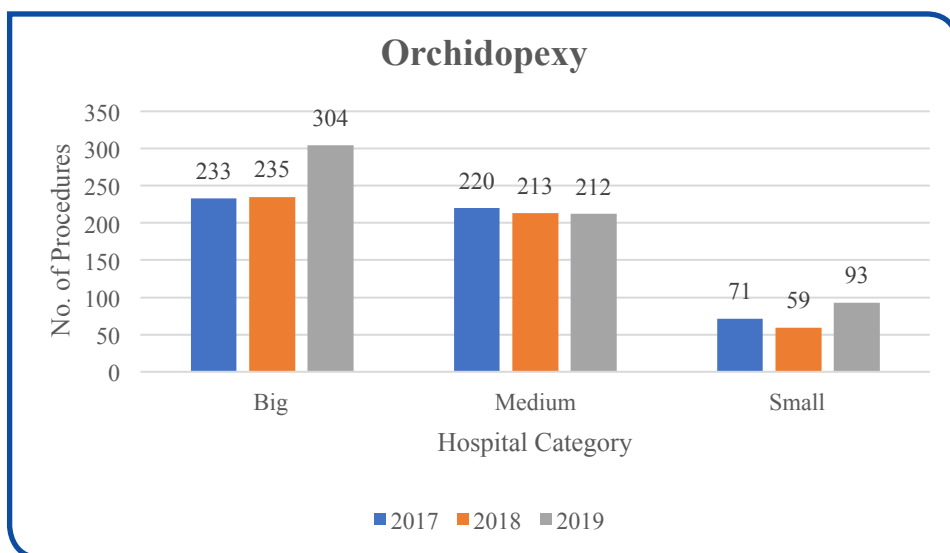


Figure 7.15.12: Orchidopexy by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES)
CENSUS REPORT 2016-2019



c. By BMS Hospital Category

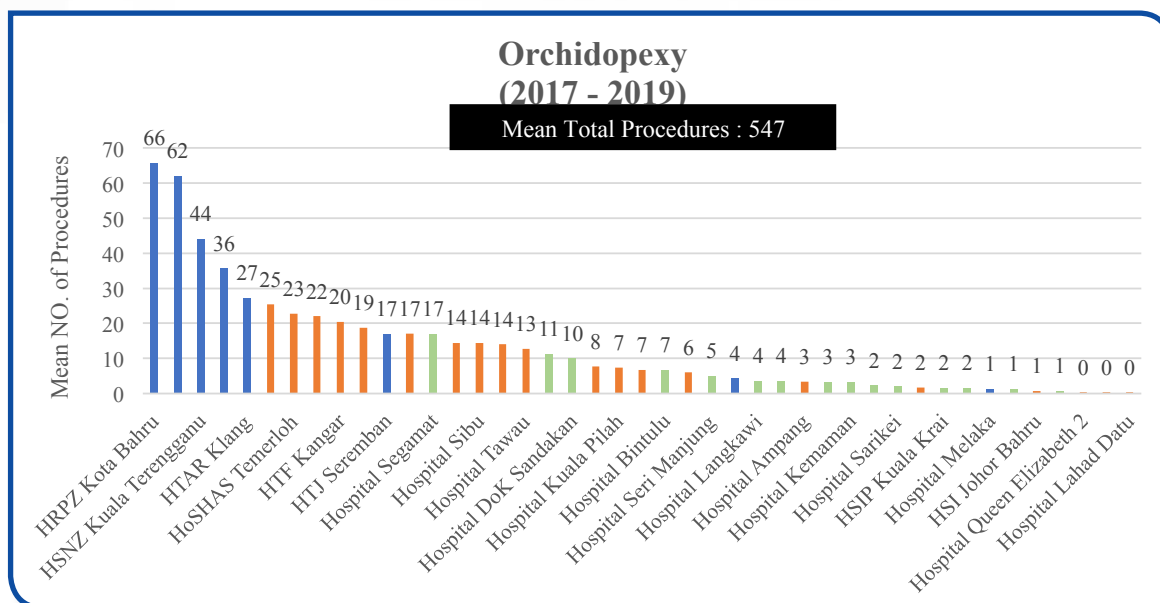


Figure 7.15.13: Orchidopexy by Hospital Category

ORCHIDOPEXY

HOSPITAL CATEGORY	2017	2018	2019
Big	233	235	304
Medium	220	213	212
Small	71	59	93
TOTAL	524	507	609

Table 7.15.8: Orchidopexy by BMS Category

GENERAL SURGERY

INPATIENT, OUTPATIENT, ENDOSCOPY AND SURGERY (IOES) CENSUS REPORT 2016-2019



ORCHIDOPEXY

NO	HOSPITALS	2017	2018	2019	MEAN NUMBER
1	HRPZ Kota Bharu	82	44	71	66
2	HSB Alor Setar	51	68	67	62
3	HSNZ Kuala Terengganu	45	27	60	44
4	Hospital Pulau Pinang	26	40	41	36
5	HTAR Klang	15	32	35	27
6	Hospital Seberang Jaya	36	24	16	25
7	HoSHAS Temerloh	29	19	20	23
8	HPSF Muar	12	27	27	22
9	HTF Kangar	32	11	18	20
10	HSAH Sungai Petani	14	26	16	19
11	HTJ Seremban	7	21	23	17
12	HSNI Batu Pahat	16	18	17	17
13	Hospital Segamat	15	12	24	17
14	Hospital Kajang	11	15	17	14
15	Hospital Sibul	15	16	12	14
16	Hospital Taiping	6	5	31	14
17	Hospital Tawau	10	20	8	13
18	Hospital Banting	6	9	19	11
19	Hospital DoK Sandakan	11	7	12	10
20	Hospital Miri	6	3	14	8
21	Hospital Kuala Pilah	7	8	7	7
22	Hospital Teluk Intan	9	11	0	7
23	Hospital Bintulu	10	2	8	7
24	Hospital Putrajaya	11	3	4	6
25	Hospital Seri Manjung	7	7	1	5
26	Hospital Queen Elizabeth	6	3	4	4
27	Hospital Langkawi	0	0	11	4
28	Hospital Keningau	2	6	3	4
29	Hospital Ampang	3	3	4	3
30	Hospital Kulim	4	3	3	3
31	Hospital Kemaman	5	3	2	3
32	Hospital Labuan	4	0	3	2
33	Hospital Sarikei	5	1	0	2
34	HEBHK Kluang	1	4	0	2
35	HSIP Kuala Krai	0	0	5	2
36	Hospital Kapit	0	4	1	2
37	Hospital Melaka	1	0	3	1
38	Hospital Shah Alam	1	3	0	1
39	HSI Johor Bahru	2	0	0	1
40	Hospital Port Dickson	0	2	0	1
41	Hospital Queen Elizabeth 2	0	0	1	0
42	Hospital Tanah Merah	1	0	0	0
43	Hospital Lahad Datu	0	0	1	0
TOTAL		524	507	609	547

Table 7.15.9 : Orchidopexy by Hospital Category

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7.15.4 Orchidectomy

a. Total

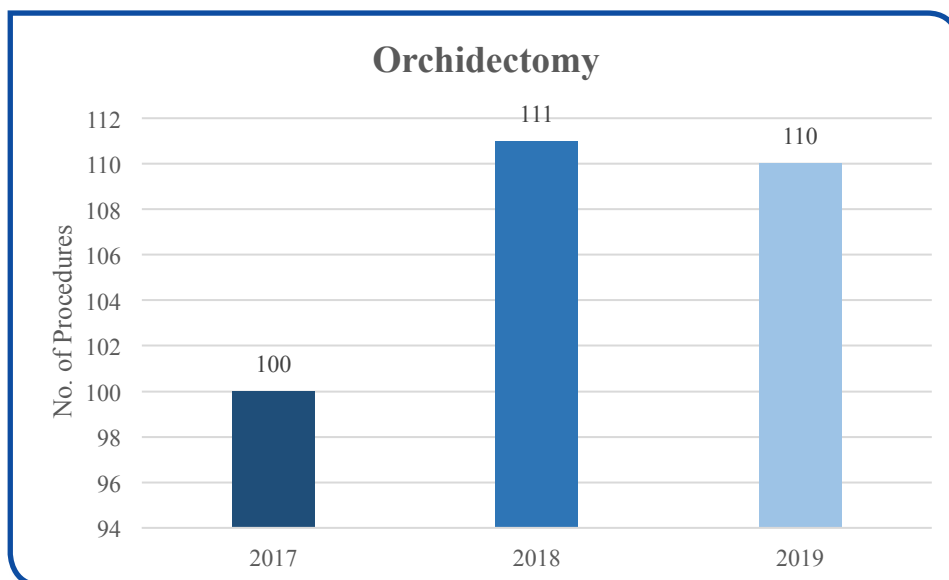


Figure 7.15.14: Total Number of Orchidectomy

b. By BMS Category

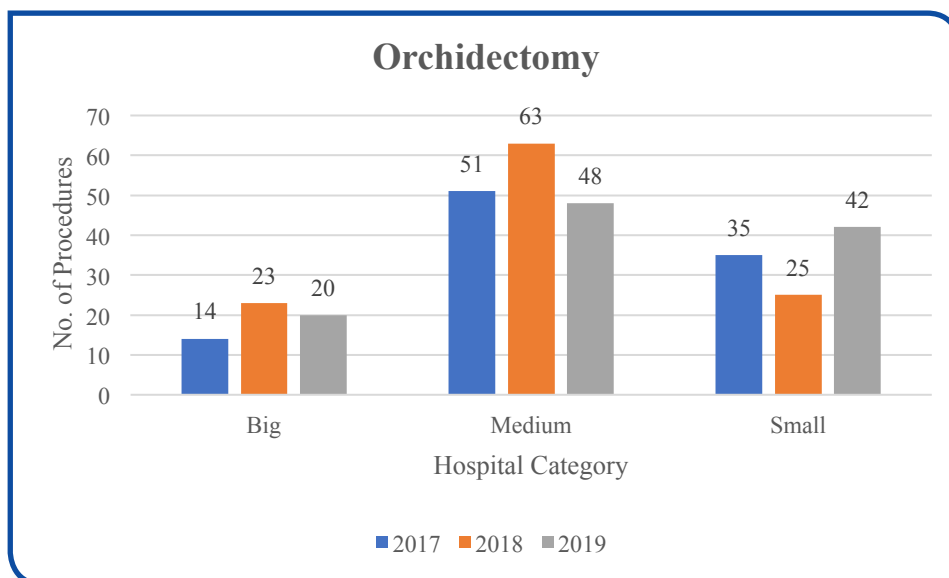


Figure 7.15.15: Orchidectomy by BMS Category

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c. By BMS Hospital Category

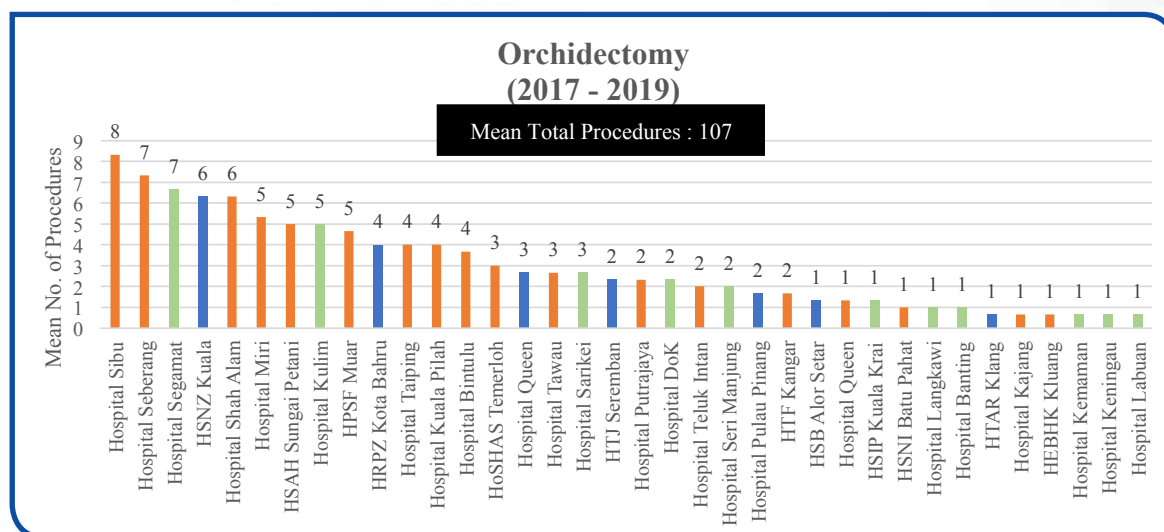


Figure 7.15.16: Orchidectomy by BMS Hospital Category

ORCHIDECTOMY

HOSPITAL CATEGORY	2017	2018	2019
Big	14	23	20
Medium	51	63	48
Small	35	25	42
TOTAL	100	111	110

Table 7.15.10: Total Number of Orchidectomy by BMS Category

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ORCHIDECTOMY

NO	HOSPITALS	2017	2018	2019	MEAN NO. OF PROCEDURES
1	Hospital Sibul	12	12	1	8
2	Hospital Seberang Jaya	7	9	6	7
3	Hospital Segamat	3	4	13	7
4	HSNZ Kuala Terengganu	8	7	4	6
5	Hospital Shah Alam	4	6	9	6
6	Hospital Miri	3	9	4	5
7	HSAH Sungai Petani	4	3	8	5
8	Hospital Kulim	7	5	3	5
9	HPSF Muar	11	3	0	5
10	HRPZ Kota Bharu	2	5	5	4
11	Hospital Taiping	2	4	6	4
12	Hospital Kuala Pilah	1	6	5	4
13	Hospital Bintulu	6	3	2	4
14	HoSHAS Temerloh	4	3	2	3
15	Hospital Queen Elizabeth	2	4	2	3
16	Hospital Tawau	0	6	2	3
17	Hospital Sarikei	6	2	0	3
18	HTJ Seremban	1	3	3	2
19	Hospital Putrajaya	0	3	4	2
20	Hospital DoK Sandakan	5	0	2	2
21	Hospital Teluk Intan	1	1	4	2
22	Hospital Seri Manjung	1	3	2	2
23	Hospital Pulau Pinang	1	3	1	2
24	HTF Kangar	0	0	5	2
25	HSB Alor Setar	0	0	4	1
26	Hospital Queen Elizabeth 2	3	0	1	1
27	HSIP Kuala Krai	0	0	4	1
28	HSNI Batu Pahat	1	2	0	1
29	Hospital Langkawi	0	0	3	1
30	Hospital Banting	0	1	2	1
31	HTAR Klang	0	1	1	1
32	Hospital Kajang	2	0	0	1
33	HEBHK Kluang	0	2	0	1
34	Hospital Kemaman	2	0	0	1
35	Hospital Keningau	1	1	0	1
36	Hospital Labuan	0	0	2	1
	TOTAL	100	111	110	107

Table 7.15.11: Orchidectomy by Hospital Category



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9 Appendix

APPENDIX 1

1	TRAUMA
1.1	Craniotomy
1.2	Trauma (Blunt) Laparotomy
1.3	Trauma (Blunt) Laparoscopy
1.4	Trauma (Penetrating) Laparotomy
1.5	Trauma (Penetrating) Laparoscopy
1.6	Thoracotomy (Blunt)
1.7	Thoracotomy (Penetrating)
2	ENDOCRINE (THYROID, PARATHYROID, ADRENAL)
2.1	Hemithyroidectomy
2.2	Total Thyroidectomy
2.3	Total Thyroidectomy with Neck Dissection
2.4	Total Parathyroidectomy
2.5	Focus Parathyroidectomy
2.6	Adrenalectomy - Open
2.7	Adrenalectomy - Laparoscopic
3	BREAST
3.1	Hookwire Localization and Excision (HWLE)
3.2	Simple Mastectomy / Radical Mastectomy
3.3	Axillary Clearance
3.4	Unilateral Mastectomy & Axillary Clearance
3.5	Bilateral Mastectomy & Axillary Clearance
3.6	Wide Local Excision
3.7	Wide Local Excision (including oncoplastic surgery) + AC
3.8	Wide Local Excision without AC + Lat. Dorsi Flap
3.9	Wide Local Excision with AC + Lat. Dorsi Flap
3.10	Mastectomy + AC + Breast Reconstruction with or without contralateral Mastopexy
4	THORACIC
4.1	VATS
4.2	Thoracotomy
5	UPPER GASTROINTESTINAL TRACT (UPPER GI)
5.1	Esophagocardiomyotomy (Heller's operation)
5.2	Esophagogastrectomy
5.3	Esophagectomy - Transhiatal
5.4	Esophagectomy - Ivor Lewis / McKeown / Open
5.5	Esophagectomy - Laparoscopic / Thoracoscopic assisted
5.6	Fundoplication - Open
5.7	Fundoplication - Laparoscopic
5.8	Underrunning Bleeding Ulcer - Duodenum / Gastric
5.9	PGU / PDU Simple Closure Omentum Patch - Open
5.10	PGU / PDU Simple Closure Omentum Patch - Laparoscopic
5.11	PGU/PDU Partial Gastrectomy * Data collection begins 2019*
5.12	Gastrectomy - Total / Partial - Open
5.13	Gastrectomy - Total / Partial - Laparoscopic

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6	BARIATRIC SURGERY
6.1	Sleeve Gastrectomy
6.2	Other Bariatric Procedures
7	HEPATOPANCREATICOBILIARY (HPB)
7.1	Cholecystectomy - Laparoscopic
7.2	Cholecystectomy - Open
7.3	Cholecystectomy & CBD exploration
7.4	Hepatectomy
7.5	Whipple's Procedure
8	SPLEEN (ELECTIVE ONLY)
8.1	Splenectomy - Open
8.2	Splenectomy - Laparoscopic
9	APPENDIX
9.1	Lanz Appendectomy - Acute Appendicitis
9.2	Lanz Appendectomy - Perforated Appendicitis
9.3	Laparoscopic Appendectomy - Acute Appendicitis
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9.6	Midline Laparotomy with Limited Right Hemicolectomy
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10.1	Abdomino-perineal resection (APR) - Open
10.2	Abdomino-perineal resection (APR) - Laparoscopic
10.3	Ultra Low Anterior Resection - Open
10.4	Ultra Low Anterior Resection - Laparoscopic
10.5	Low Anterior Resection - Open
10.6	Low Anterior Resection - Laparoscopic
10.7	Anterior resection - Open
10.8	Anterior resection - Laparoscopic
10.9	Hartmann Procedure - Open
10.10	Hartmann Procedure - Laparoscopic
10.11	Colectomy (Right / Left / Sigmoid) - Open
10.12	Colectomy (Right / Left / Sigmoid) - Laparoscopic
10.13	Total-Colectomy - Open
10.14	Total-Colectomy - Laparoscopic
10.15	Hemorrhoidectomy - Stapler
10.16	Fistula-in-Ano Surgery
11	INGUINAL HERNIA SURGERY
11.1	Daycare Inguinal Hernia Repair - Under LA
11.2	Inpatient Inguinal Hernia Repair - Under LA
11.3	Inguinal Hernia Repair - GA Open
11.4	Inguinal Hernia Repair - GA Laparoscopic
12	VASCULAR
12.1	Chemoport insertion
12.2	BCF/RCF creation
12.3	High Saphenous Vein Ligation & Stripping
12.4	Embolectomies
13	PEDIATRICS
13.1	Herniotomy - Unilateral
13.2	Herniotomy - Bilateral
13.3	Orchidopexy
13.4	Orchidectomy

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