FEE BENCHMARKS ADVISORY COMMITTEE REPORT

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PREFACE

Letter from Chairman, Fee Benchmarks Advisory Committee, to Minister for Health

5 November 2018

Dear Minister,

I am pleased to submit the report of the Fee Benchmarks Advisory Committee.

Our Committee was appointed in January 2018 to develop an approach for setting reasonable fee benchmarks for surgical procedures and services. Intended as a common reference for all stakeholders, the fee benchmarks aim to guide doctors in setting their fees, support patients and caregivers in making more informed decisions on their care options, and enable payers (e.g. insurers and employers) to better manage and assess claims.

As tasked by MOH, our Committee focused on private specialists' professional fees for surgical procedures as a start. Over the past ten months, we have thoroughly studied over 200 procedures that are commonly performed in the private sector to determine reasonable fee ranges that would be fair and useful to all stakeholders. For each procedure, we examined the current charging practices based on empirical fee data, considered factors which may have influenced charging practices including inflation and technical aspects, and consulted specialists from the relevant fields for their expert views. We also sought to understand any underlying drivers for variations and growth in fees over the years.

Ultimately, the effectiveness of the benchmarks will depend on how well they are accepted by all stakeholders. Our Committee therefore conducted over 20 consultation sessions to engage a wide range of stakeholders, including doctors, insurers, hospital administrators, regulators, unions and patient advocates, to seek their views. We carefully considered all the feedback, and kept in mind the need to balance the different, and at times conflicting, interests and perspectives of the various stakeholders.

This report lays out our recommendations for the introduction of benchmarks, focusing on professional fees for common surgical procedures in the private sector. We have also provided further context and recommendations on how the benchmarks should be interpreted and appropriately used.

While our mandate was focused on the development of fee benchmarks, we have made a number of other observations and recommendations in the report. These relate to patient education on the use of the benchmarks and the need to continuously

refine the Table of Surgical Procedures, in response to the feedback that we received from stakeholders.

Our Committee would like to thank the Ministry of Health staff for supporting and enabling our work. We are also grateful to the many individuals and organisations who have shared their thoughts and feedback so as to make this effort possible. We hope that all stakeholders would use the benchmarks appropriately and as a result, contribute to making our healthcare system more sustainable.

Yours sincerely,

Dr Lim Yean Teng
Chairman
On behalf of the Fee Benchmarks Advisory Committee, including members:

Dr Ang Chong Lye
Mr Cheong Thiam Beng Benedict
Dr Ho Kok Sun
Mr Karthikeyan Krishnamurthy
Dr Lam Kian Ming
Dr Lim Hui Ling
Ms Ngiam Siew Ying
Dr Phua Kai Hong
Mr Richard Wyber
Dr Tan Boon Yeow
Dr Toh Choon Lai
Mr Zainul Abidin Rasheed

Response from the Minister for Health to Chairman, Fee Benchmarks Advisory Committee

9 November 2018

Dear Dr Lim Yean Teng,

I would like to thank you and members of the Fee Benchmarks Advisory Committee for developing an approach to determine reasonable fee benchmarks for medical procedures and services and recommending benchmarks for private sector professional fees for common surgical procedures.

The Ministry accepts the Committee's report, and agrees with the key recommendations on the fee benchmarks and how they are to be interpreted and used. We note that the Committee has discussed the issues thoroughly and consulted widely. The approach for developing the benchmarks takes into account the interests of the stakeholders, including patients, providers and payers, while ensuring that it would contribute to a sustainable healthcare system.

The Ministry will work with all stakeholders to ensure that the benchmarks are understood, accepted and used appropriately and effectively. We will continue to work with the Committee to review and expand the fee benchmarks in future.

Let me thank you and your Committee members once again for the immense time and effort you have dedicated to developing the fee benchmarks. I am confident that the fee benchmarks will play an important role in contributing to a more sustainable healthcare system, so that the current and future generations of Singaporeans will continue to receive good and affordable care.

Yours sincerely,

Gan Kim Yong
Minister for Health

EXECUTIVE SUMMARY

1 This report lays out the Fee Benchmarks Advisory Committee's recommendations on reasonable fee benchmarks for professional fees for common surgical procedures in the private sector. It details the key principles and approach adopted to determine the benchmarks, the feedback received from the different stakeholders who were consulted, and the recommendations of the Committee both with regard to the fee benchmarks as well as how they should be applied.

Fee Benchmarks as a common reference for all stakeholders

2 In 2017, MOH announced that it would introduce fee benchmarks in 2018, as part of a larger strategy to keep healthcare costs sustainable for Singaporeans. As a start, the benchmarks would focus on professional fees for common surgical procedures as it is one of the areas where fees had increased significantly over the years. The fee benchmarks aim to provide all stakeholders – doctors, patients and caregivers, and payers - a common reference for reasonable fees for these procedures to help each make better informed decisions.

3 The Fee Benchmarks Advisory Committee, chaired by Dr Lim Yean Teng, was appointed in January 2018 to develop an approach for setting the fee benchmarks and recommend appropriate benchmarks for medical procedures and services. The Terms of Reference of the Committee were as follows:

a. Recommend to MOH, reasonable fee benchmarks for medical procedures and services for practitioners following the analysis of empirical fee data;

b. Endorse the general methodology for deriving the reasonable fee benchmarks of medical procedures and services;

c. Assess the reasonable fee benchmarks for procedures and services where the general methodology is not appropriate, such as procedures with very low volumes, large variances, sudden large fluctuations, and little or no fee data.

d. Review the recommended fee benchmarks periodically to ensure they remain relevant and up to date.

e. Suggest areas where the fee benchmarks can be applied to manage escalating healthcare costs.

Principles and approach for determining the fee benchmarks

4 The Committee developed the fee benchmarks to serve as a reference rather than a strict cap for compliance. The fee benchmarks are designed to cover routine and typical surgical procedures in the private sector rather than outliers or exceptions, and are recommended as reasonable fee ranges in view of the variation in complexity of cases within each surgical procedure.

5 The scope of the fee benchmarks for professional fees does not include the public sector. In the public sector, doctors are salaried employees and unlike in the private

sector, doctors do not charge a separate fee for surgical procedures. The Committee noted that for the same reason, MOH currently publishes surgeon fee as part of the breakdown of total operation fee only for the private sector but not for the public sector.

6 The following five key guiding principles were adopted to ensure that the fee benchmarks would be fair and appropriate:

a. The benchmarks should be a reasonably narrow range in order to be meaningful to stakeholders.

b. The benchmarks should be commensurate with the time, effort and expertise needed by the doctor.

c. The benchmarks should take into account the complexity associated with the procedure.

d. The benchmarks should allow some increase in fees over the years.

e. The benchmarks should generally reflect the current charging practices for typical cases to ensure relevance.

7 The Committee also took into account the following factors when determining what would constitute a reasonable fee range:

a. Actual 2017 data for surgical procedures performed for Singaporean patients in the private sector, including
   i. Fee distribution by episodes, i.e. the spread of fees charged, and shape of the distribution, across episodes.
   ii. Fee distribution by doctor, i.e. the spread of fees charged by individual doctors performing the procedures.

b. Fee ranges stipulated in the 2006 Singapore Medical Association's Guidelines on Fees (GOF) and inflation from 2006 to 2017, for comparison with actual fees in 2017.

c. Technical aspects of the surgical procedures, including time, effort and expertise required for a typical case, and relative complexity compared to similar or related procedures.

Stakeholder engagement

8 The Committee consulted widely and sought feedback from the medical community, health insurers, providers, unions and consumer advocacy groups as well as regulators to refine the fee benchmarks and recommendations.

Key recommendations

9 The Committee's recommended set of fee benchmarks for private specialists' professional fees (excluding anaesthetist fee and GST) for surgical procedures can be found in Annex D. This set of benchmarks serves as a reference, and is not a cap that all stakeholders have to adhere to. Charges that depart from the fee benchmarks may be reasonable if there are valid justifications.

10 The Committee also recommends that stakeholders use the fee benchmarks in the following manner:

a. Patients should use the benchmarks to have a discussion with their doctors to better understand their condition, available treatment options and fees.

b. Doctors should use the benchmarks when determining fair and appropriate fees, and make reference to it when they provide financial counselling to patients. Doctors should also provide explanations to patients, caregivers and payers if their fees depart from the benchmarks.

c. Payers (such as insurers) should use the benchmarks to improve the design of insurance plans, claims assessment and selection of preferred healthcare providers, while ensuring that the decisions are reasonable to other stakeholders, especially the policyholders.

d. The Government should ensure that the fee benchmarks are periodically updated to stay relevant. It should make the fee benchmarks accessible and easily understood by all stakeholders.

11 The Committee also recommends that MOH review the Table of Surgical Procedures (TOSP) regularly and provide greater clarity on selected procedures that the specialists have given feedback on during the consultations sessions on fee benchmarks. This would facilitate future review of the fee benchmarks.

Conclusion

12 Our Committee hopes that the set of fee benchmarks will help to improve price transparency and empower various stakeholders in making better informed healthcare decisions, and play a part towards keeping our healthcare system sustainable for current and future generations.

MAIN REPORT

1 This report lays out the Fee Benchmarks Advisory Committee's recommendations on reasonable fee benchmarks for professional fees for common surgical procedures in the private sector. It details the key principles and approach adopted to determine the benchmarks, the feedback received from the different stakeholders who were consulted, and the recommendations of the Committee both with regard to the fee benchmarks as well as how they should be applied.

Background

Rising healthcare cost

2 Globally, healthcare cost inflation typically outstrips that of consumer inflation and the same is observed in Singapore[1]. Between 2011 and 2016, National and Government Healthcare Expenditure increased at almost three and four times the rate of growth for Gross Domestic Product (GDP) respectively[2].

3 In particular, fees in the private sector have escalated rapidly. For the period 2007 to 2017, the average total inpatient bill size for Singapore Citizens in the private sector increased more rapidly than that in the public sector. See Figure 1.

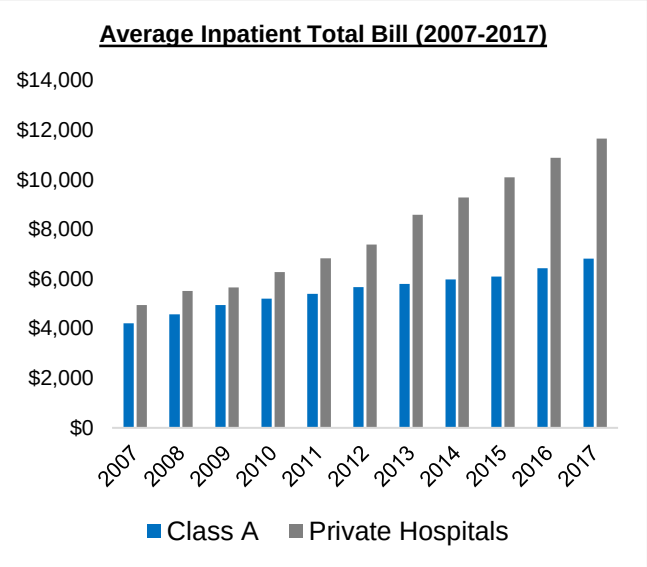

Figure 1. Average Inpatient Total Bill (2007 - 2017). Private inpatient bills grew at 9.0% per year compared to 4.9% per year for Class A (public sector) inpatient bills.

4 While higher growth in healthcare expenditure is expected with an ageing population, ageing does not fully account for the healthcare cost increases. Increasing healthcare utilisation at all age groups and medical inflation are also key contributing factors. It is critical to keep this trend in check to ensure that current and future generations of Singaporeans can continue to receive good and affordable healthcare.

5 The Committee notes that to meet our long term healthcare needs in a sustainable manner, the Ministry of Health (MOH) has focused on "3 Beyonds" to aid efforts in investing in health, shifting the centre of gravity in care provision, and pushing for value-based healthcare:

[1] For the ten-year period from 2007 to 2017, the Consumer Price Index ("CPI") for healthcare increased by 2.6% per year, higher than the general CPI which increased 2.3% per year for the same period.
[2] For the period 2011 to 2016, the GDP compounded annual growth rate (CAGR) was 4.3%. In contrast, the National Healthcare Expenditure increased from $11.4 billion to $20.7 billion (CAGR of 11.6%) while the Government Healthcare Expenditure (GHE) increased from $4.1 billion to $9.3 billion (CAGR of 18%).

a. Moving beyond healthcare to health by moving upstream in health promotion and disease prevention to keep Singaporeans healthy.

b. Moving care beyond the hospital to the community to shift the centre of gravity of care delivery from the acute hospital closer to the community and patients' homes.

c. Shifting beyond quality to value for patients through appropriate care and optimising outcomes from resources.

6 The Committee also notes that the introduction of fee benchmarks is meant to support the shift towards value-based healthcare and to complement other MOH policies and initiatives to encourage prudent use and charging of healthcare services. MOH shared with the Committee that its efforts to shift 'Beyond quality to value' had started some years back, with a major milestone being the setting up of the Agency for Care Effectiveness (ACE) to provide Appropriate Care Guides and Drug Guidances to help medical professionals and patients identify treatments with good outcomes at affordable costs.

7 MOH also assured the Committee that while the fee benchmarks would apply only to the private sector, it is working with public healthcare institutions to benchmark quality and cost indicators to aid healthcare professionals in reducing unnecessary variations in quality and cost. The Committee also notes that the roll-out of fee benchmarks would aid stakeholders in making more informed healthcare decisions, especially in light of the co-payment requirement for new Integrated Shield Plan riders that will be implemented from April 2019.

Enabling informed decisions through greater transparency

8 The Committee agrees with MOH that sustainable and affordable healthcare could only be achievable through the collective responsibility of everyone involved. **Individuals** should take good care of their health and make informed choices about their care options. **Healthcare professionals** should provide quality care that is appropriate for their patients' needs, and charge reasonable fees for their services. **Healthcare providers** also need to charge reasonably and continue to improve productivity to deliver greater value for patients. **Payers** such as insurers can help to manage cost increases by designing incentives within their insurance plans that encourage prudent use of healthcare services. The **Government**, as a regulator, payer and policymaker, needs to support the stakeholders in making better informed decisions that could contribute to a more sustainable system (see Figure 2).

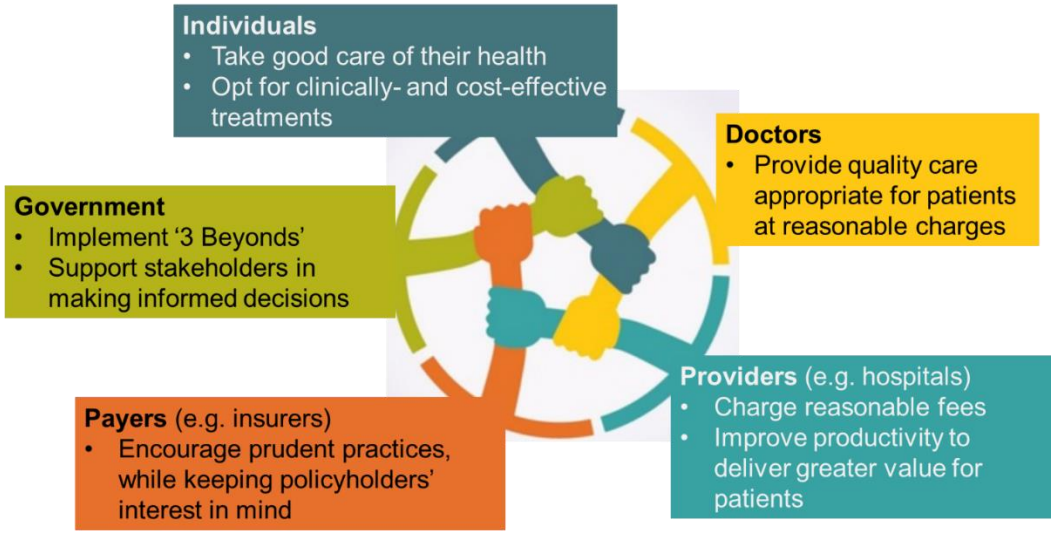

Figure 2. Sustainable healthcare only be achievable through the collective responsibility of everyone involved – individuals, doctors and providers, insurers and the government.

9 Greater transparency helps to reduce information asymmetry and supports stakeholders in making more informed decisions. The Committee notes that MOH started publishing 'Total Hospital Bill' information for common conditions in 2003 and has progressively increased the number of conditions published, as well as expanded the range of healthcare providers covered to include private hospitals. In 2014, 'Total Operation Fees' for common surgical procedures at the public hospitals were published. This was extended to private hospitals in 2016, with additional breakdown into 'Facility Fees', 'Surgeon Fees' and 'Anaesthetist Fees.

10 Prior to 2007, the Singapore Medical Association (SMA) also published a Guidelines on Fees (GOF), providing guidance to private sector doctors on their fees. However, it was withdrawn in 2007 due to anti-competitive concerns, and these concerns were confirmed by the Competition Commission of Singapore in 2010. From the fee benchmarks consultation sessions, the Committee also heard from doctors that they welcomed the publication of fee benchmarks as it has been requested for by the medical community for a number of years.

11 Besides the medical community, the Committee is aware that insurers have also requested that MOH drive the publication of fee benchmarks. It was one of the recommendations made by the Health Insurance Task Force (HITF), which was an industry-led initiative to evaluate the issue of increasing pressures on Integrated Shield Plans (IP) premiums and make recommendations to moderate the escalation of future IP premiums in Singapore. Their report in 2016 recommended that fee benchmarks be focused on professional fees given the urgency to manage healthcare costs escalation, and for benchmarks on other services (implants, facility fees and consumables) to be considered in future. The HITF believed that the adoption of fee benchmarks is paramount to improving transparency of medical costs in Singapore.

Objectives of Fee Benchmarks

12 In 2017, MOH announced that it would be introducing fee benchmarks in 2018 to provide all stakeholders a reference for reasonable fee ranges for professional fees for common surgical procedures. The benchmarks aim to help all stakeholders make better informed decisions:

a. For patients and caregivers, the benchmarks would facilitate a conversation with their doctors and healthcare providers about their treatment and the corresponding fees, and empower them in making more informed decisions on their care options.

b. For doctors and providers, the benchmarks should be used as a reference when setting fair and appropriate fees for their services and when providing financial counselling to the patients on their fees. It would also serve as a guide for doctors when they refer patients to other doctors or providers.

c. For payers such as insurers, the benchmarks could enable them to improve their claims assessment, product design and selection of panel of preferred providers.

d. For regulators, such as the Singapore Medical Council (SMC) and the MOH, the benchmarks would serve as a useful reference. It will enable MOH to monitor trends in a more targeted manner. For the SMC, it could facilitate better consistency in assessing complaints and disciplinary cases on overcharging.

Fee Benchmarks Advisory Committee

13 On 21 January 2018, MOH appointed an independent committee to develop an approach for setting reasonable fee benchmarks and recommend appropriate benchmarks for medical procedures and services. The Terms of Reference of the Committee were as follows:

a. Recommend to MOH, reasonable fee benchmarks for medical procedures and services for practitioners following the analysis of empirical fee data;

b. Endorse the general methodology for deriving the reasonable fee benchmarks of medical procedures and services;

c. Assess the reasonable fee benchmarks for procedures and services where the general methodology is not appropriate, such as procedures with very low volumes, large variances, sudden large fluctuations, and little or no fee data.

d. Review the recommended fee benchmarks periodically to ensure they remain relevant and up to date.

e. Suggest areas where the fee benchmarks can be applied to manage escalating healthcare costs.

14 To ensure that the views of various stakeholders are represented, the Committee comprises members from different backgrounds. The members include representatives from the medical community and healthcare providers, unions and consumer advocates, payers from both the public and private sectors, and academia. (see Annex A).

Introduction of Fee Benchmarks

15 Given the varied types and categories of fees that make up a healthcare bill, the Committee will carry out its work in phases.

Current Scope

16 As a start, the Committee was tasked by MOH to focus on private specialists' professional fees for common surgical procedures, given that professional fees [3] for surgical procedures made up about 30% of an inpatient bill, or about 50% of a day surgery bill on average. Data on professional fees for surgical procedures in the private sector are also available as MOH collects such data from the healthcare providers.

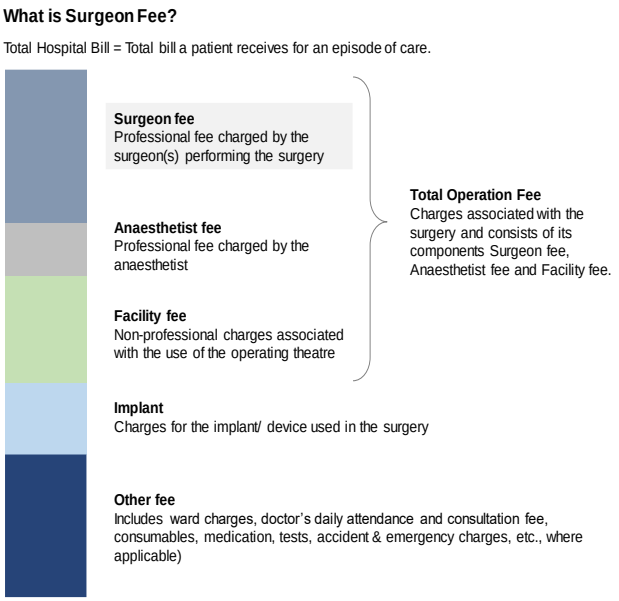

Figure 3. Components of bill involving surgical procedure (note: relative proportion is illustrative)

17 Given the primary objective of good and affordable healthcare for Singaporeans, the Committee focused on procedures undertaken by Singapore Citizens. The Table of Surgical Procedures[4] (TOSP) was selected as the basis for the benchmarks, as it is currently used as a reference in the design of various healthcare financing schemes such as MediSave, MediShield Life and private insurance schemes. Stakeholders are familiar with it.

18 The Committee identified over 200 surgical procedures with at least 30 cases performed by specialists from the private sector in 2017 based on data submitted by private healthcare providers[5], to ensure sufficient empirical basis upon which to set the fee benchmarks. The procedures span across a range of specialties, and account

[3] Professional fees for surgical procedures do not include the doctor's daily attendance fees and other consultation charges.
[4] The Table of Surgical Procedures categorises procedures into 21 tables (Table 1A/B/C to Table 7A/B/C) by complexity, with lower tables being of lower complexity.
[5] The source of data is MOH Mediclaim system, which healthcare providers such as hospitals submit inpatient and day surgery information to, including cases that claimed for MediShield Life, Integrated Shield Plans and MediSave.

for more than 85% of cases involving procedures and 75% of professional fee for procedures in the private sector in 2017.

19 The current scope of the fee benchmarks does not include the public sector. In the public sector, doctors are salaried employees and there is no separate doctor fee charged for the surgical procedure, unlike the private sector. The surgeon fees between public and private sectors are thus not comparable. The Committee notes that for the same reason, MOH currently publishes surgeon fee as part of the breakdown of total operation fee only for the private sector.

Future Scope

20 The Committee will work in conjunction with MOH to consider potential areas to cover in future. During the course of stakeholder engagements, the Committee received suggestions from various stakeholders on such areas to focus on in future. Several examples included anaesthetist fees, hospital charges such as facility fees and consumables, as well as high-cost implants. The Committee will consider these suggestions.

21 The Committee will also monitor the bills and charging practices following the release of the fee benchmarks, and consider the approach for periodic updating of the published fee benchmarks to ensure they remain relevant and updated.

Principles for the Development of Fee Benchmarks

Three Key Design Parameters

22 The Committee adopted **three key design parameters** when developing the fee benchmarks:

a. First, it recognised the intent that the benchmarks are to serve as a common reference rather than a strict cap that stakeholders such as doctors and payers have to adhere to.

b. Second, the Committee intended that the benchmarks should cover routine and typical cases in the private sector, rather than outliers or exceptional cases that could be of unusual circumstances or complexity which would not suitably fall within a set of benchmarks.

c. Third, the Committee recognised that there would be variation in complexity of cases within each surgical procedure. Hence, the recommended benchmarks for each procedure are a range of fees instead of a single figure.

Five Guiding Principles

23 The fee benchmarks would need to serve various stakeholders with very different interests - on one hand, it will influence how doctors and providers charge, and on the other hand, it will affect how payers pay and how patients consider their healthcare decisions. The Committee therefore had to carefully balance the perspectives of the various stakeholders. To do so, it adopted **five key guiding principles** to ensure that the fee benchmarks would be fair and appropriate:

a. The benchmarks should be a reasonably narrow range in order to be meaningful to stakeholders.

b. The benchmarks should be commensurate with the time, effort and expertise needed by the doctor;

c. The benchmarks should take into account the complexity associated with the procedure;

d. The benchmarks should allow for some increase in fees over the years; and

e. The benchmarks should generally reflect the majority of current charging practices for typical cases, and cover the majority of cases and doctors' typical charges.

Approach for the Development of Fee Benchmarks

24 In determining the benchmarks, the Committee considered a range of factors that could affect what would constitute a reasonable fee range. International fee schedules or fee guidelines were also referenced, although the Committee assessed that the underlying cost structure and healthcare delivery and financing systems for other countries are different from Singapore's.

25 The key considerations are outlined below:

a. Actual 2017 data. The Committee took reference from a comprehensive set of actual transacted data from 2017 when determining the recommended range of fees. The data included cases for Singaporean patients submitted by private healthcare providers that are accredited for MediSave and MediShield Life. The data also included (a) cases of different complexity, (b) cases performed by doctors of varying seniority and experience, (c) cases where additional assistance from another surgeon or surgical nurse was required, as well as (d) emergency cases that required urgent attention and could be performed after office-hours.

b. Fee distribution by episode. The Committee examined the spread of fees, focusing on the 25th, 50th, and 75th percentile fees, and the shape of the fee distribution i.e. whether the fees were normally distributed or skewed in a particular direction. Where possible, the Committee further studied factors that could explain the fee distribution observed – for instance, fee variances by setting (e.g. inpatient versus ambulatory setting), the adequacy of the

TOSP category, whether cases were for first-time treatment or recurrent treatment done within a year, among others.

c. Fee distribution by doctor. The Committee took into account the number of private sector doctors who performed the surgery and whether cases were relatively well spread across the doctors, to avoid having benchmarks that were skewed by the charges of a small number of doctors.

   The Committee also considered the spread of fees charged by each doctor and across doctors. Specifically, to ensure that the fee benchmarks would be relevant, the Committee would check whether the recommended upper bound of fee benchmark for each surgical procedure covered what most doctors charge for their typical cases (using median fee of each doctor as a proxy).

d. Fee ranges stipulated in the 2006 GOF issued by SMA, and inflation. The Committee also considered what doctors accepted as reasonable fees in the past by taking reference from the 2006 GOF recommended by SMA for the equivalent (or similar) procedure, where available. By adjusting the GOF for inflation[6] and comparing fees with the transacted fees in 2017, the Committee gained a useful understanding of the growth in fees over the years.

e. Technical factors of the procedure. The Committee also sought input from relevant specialists on the time, effort and expertise required to perform the procedure for typical cases. The technical complexity of a procedure was compared to similar or related surgical procedures, and surgical procedures of similar TOSP table number. The Committee also sought input on whether there had been significant advancements in technology or shifts in the standard techniques used (e.g. shift from open surgery to laparoscopic surgery or other minimally invasive techniques). In some cases, the advancements in the technology has enabled the procedure to become a viable alternative to older or more complex patient populations where these were previously not available or possible (e.g. coronary stenting, coronary artery bypass graft).

26 The Committee determined the reasonable fee benchmark for each procedure after considering the factors above, keeping in mind that the fee benchmarks are meant to cover typical cases rather than all situations. In cases where the growth in fees was not significant, or where there was an underlying rationale for the growth, the lower bound of the fee range was set around the 25th percentile, and the upper bound at around the 75th percentile, of the 2017 fees for that surgical procedure. Where fees were found to have grown significantly without a corresponding underlying reason for the growth, the fee range was moderated after careful deliberation.

27 In addition, where the fee range is wide due to known variation in the types of cases, the Committee worked with the relevant specialist(s) to provide an

[6] The inflation factor used was based on the hospitalisation component of the healthcare Consumer Price Index. It was 3.9% a year for the period 2006 to 2017. Source: Department of Statistics.

accompanying note for the fee benchmark. Such notes serve to explain the type of cases that would be associated with fees at the upper bound of the benchmark.

28 After developing a preliminary set of benchmarks for over 200 procedures, the Committee also checked that the fee benchmarks for surgical procedures within each specialty were broadly congruent with their relative complexity, and any moderation to the fee benchmarks was consistently applied across specialities.

See Annex C for an illustrative example.

Limitations

29 In determining the fee benchmarks, the Committee had to work within certain limitations:

a. Table of Surgical Procedure. The current TOSP on which the benchmarks are based was not designed for the purpose of setting fees for the private sector. As such, there were some limitations. For example, for selected procedures, the descriptions were broad and could encompass a range of techniques used by doctors, which would in turn lead to a wide range of cases being categorised under the procedure, and correspondingly a wide variation in fees. In such cases, the Committee provided additional explanatory notes, where possible, to facilitate understanding and appropriate use of the benchmarks. Issues relating to the surgical procedures identified during deliberation of fee benchmarks development were recorded and sent to the TOSP Review Committee for their attention and review.

b. Recency of data. As the Committee started its work in January 2018, the Committee studied data from 2017 as it was the latest year for which a full year's data was available.

c. Comprehensiveness and accuracy of data. Healthcare providers in Singapore are required to submit bill data for cases treated to MOH. The completeness and accuracy of the data considered by the Committee was therefore dependent on the underlying robustness of the data submitted by the healthcare providers. In the course of developing the fee benchmarks, MOH found that there could be a small proportion of cases that might not be captured in the system (e.g. those that claimed employer health benefits). However, MOH tested and found that the dataset used covers the majority of cases.

Stakeholder Engagement and Consultation

30 As part of the development process of the benchmarks, the Committee consulted various stakeholders to seek feedback on a preliminary set of fee benchmarks, in order to refine the fee benchmarks before finalising its recommendations.

Who the Committee engaged

31 The Committee met with various stakeholders, including the following:

a. Specialist doctors[7]
b. Council members of the Professional Bodies (Academy of Medicine Singapore, Singapore Medical Association and the College of Family Physicians) representing the wider medical community
c. Health insurers as well as third party administrators
d. Hospital administrators
e. Representatives from Consumers Association of Singapore (CASE) and National Trades Union Congress (NTUC)
f. Regulators such as Singapore Medical Council and the Competition and Consumer Commission of Singapore.

See Annex B for full list of stakeholders engaged.

What the Committee heard

32 Overall, the Committee was encouraged by the feedback and support for the introduction of fee benchmarks. Through the consultation sessions, stakeholders understood the intent of the fee benchmarks to contribute towards a more sustainable healthcare system for the future. They recognised that the Committee had to balance the different interests and perspectives of different stakeholders, which could sometimes be conflicting.

33 The stakeholders provided a range of feedback and suggestions which were useful for the Committee's deliberations, and the key points are summarised below.

a. Adequacy of the proposed for the fee benchmarks. The Committee noted that doctors from a number of specialties asked for higher fee benchmarks for some procedures given their high business cost, which were mainly driven by clinic rentals, premiums for medical malpractice insurance, and clinic manpower.

   On the other hand, there were concerns about possible fee increases if doctors adjust their fees to the middle and/ or upper end of the fee benchmarks even for simple cases. The Committee also observed that the existing fee schedules for insurers' panels of providers were generally lower than the recommended fee benchmarks and noted concerns that allowing

[7] The Committee met about 120 specialists from more than 10 specialties over 14 consultation sessions. The specialists were primarily from the private sector who were nominated by professional bodies and medical societies of the relevant disciplines, as well as the private hospitals.

higher fee benchmarks could lead to higher premiums for policyholders (for individual health plans) and employers (for group health plans).

On high business costs

"The other issue to raise is the medical indemnity that OGs [obstetricians and gynaecologists] have to pay. It has risen by more than 100% in the last 4 years. Not just the 3.9% inflation that was used to calculate the increment for the fees…While there were significant jumps in the cost of the indemnity, we as OGs are careful not to do the same jumps in increments to our clinical fees and hence we have been behind the curve for the last few years."

- Obstetrics & gynaecology private specialists

"Medical malpractice fees have increased sharply in recent years. Cost for staff has also increased and we have difficulty retaining staff. These business cost increases need to be factored into the inflation rate."

- General surgery private specialist

On cost impact to insurers

"Quite a number of the fee benchmarks are higher than the current insurers' corporate and TPA [third party administrator] fee schedules. Will this unintentionally result in panel doctors wanting to increase fees, or pull out from panels if the benchmarks are higher? This would lead to an overall increase in healthcare costs, as the benchmarks provide the moral ground for doctors to charge accordingly."

- Insurance company

b. Range of fee benchmarks. The Committee noted requests from some doctors that the range of fee benchmarks should be wider for some procedures for several reasons. First, the time and effort needed of a doctor could vary significantly for the same procedure depending on the complexity of the patient. Second, charging practices may differ if the procedure was done by specialists from different specialties. Third, fees could vary depending on the technique used for surgical procedures that are broadly defined in the TOSP.

For other procedures with wide fee benchmarks, other doctors suggested that the fee ranges could be narrowed so that the difference between the upper and lower bound was easier to explain to patients. The Committee also acknowledged insurers' requests for additional explanatory notes for procedures with wider fee benchmarks, to aid payers and patients in interpreting the benchmarks and have a more informed conversation with the doctors.

On explanatory notes

"Would a wide fee range allow doctors to move to the top end of the fees for even the simpler cases? Notes accompanying the benchmarks would be important, especially for those with a wide fee range."

- Insurance company

c. Anaesthetist fee. The Committee did not cover fee benchmarks for anaesthetist fee in the current scope. Many doctors requested the Committee to provide some guidance for anaesthetist fees, especially for the lower table TOSP procedures (i.e. simpler surgical procedures), as providing anaesthesia is a critical component of surgery. Given the current practice whereby anaesthetist fees are set with reference to the surgeon fees (i.e. as a proportion of surgeon fees), many surgeons expressed concerns with difficulty in finding an anaesthetist for low table TOSP procedures. This is especially so for procedures done after office hours, or during weekends and public holidays. They gave feedback that it would be useful to have a common reference on reasonable anaesthetist fees to facilitate timely provision of care to patients.

The Committee also noted feedback from the College of Anaesthesiology that the structure of anaesthetist fee could require a fundamental study and review. The Committee will consider developing fee benchmarks for anaesthetist fees in future after a more detailed study.

d. Other suggestions

i. Expansion of fee benchmarks to cover other services. The Committee noted feedback across all stakeholder groups that other charges besides professional fees (e.g. facility fee, consumables, high-cost implants) have also escalated rapidly over the years and that the Committee could consider fee benchmarks for these areas in future.

ii. Periodic review of fee benchmarks. The medical community asked that the benchmarks be updated regularly to keep up with evolving clinical practices and technology. However, the doctors consulted also acknowledged that the process of developing fee benchmarks was resource-intensive and time-consuming. Frequent extensive reviews would thus be challenging.

iii. Eligibility for co-payment cap. In March 2018, MOH announced that from 1 April 2019, any new Integrated Shield Plan rider policy will be required to include a co-payment component, though subject to a cap if the treatment is pre-authorised by the insurer or provided by a provider on the insurer's panel. During the consultation on the fee benchmarks, doctors suggested that their patients should be eligible for the co-payment cap as long as their fees were within the fee benchmarks, even if they are not on insurers' panels. The Committee noted that this was

not under the purview of the Committee but have conveyed the feedback to insurers and MOH for their consideration.

Key Recommendations

Recommendation on the fee benchmarks

34 Based on the principles, approach, as well as the feedback received from stakeholders, the Committee recommends fee benchmarks for 222 surgical procedures. In addition, explanatory notes are provided for selected procedures to facilitate interpretation of the benchmarks (see Annex D).

35 The recommended benchmarks should be read in conjunction with the following points to note:

a. Reference - The benchmarks serve as a reference, and are not a cap that has to be strictly adhered to. Charges that depart from the benchmarks may not be unreasonable, particularly where a case is unusual in its context or complexity. Doctors can charge outside of the fee benchmarks, with valid justification but should generally inform the patient and the insurer (where applicable) before the procedure is carried out, except when circumstances do not permit him / her to do so.

b. Typical cases - The benchmarks are meant to cover routine and typical cases, rather than cases of exceptional complexity. However, each benchmark is a range of fees, to cater for some variation in patients' condition and complexity. The lower end of the fees is generally associated with less complex cases, whereas the higher end of fees is associated with more complex ones.

c. Emergency and after-office hours services - In determining the benchmarks, the Committee referenced fee distributions that took into account all cases, including cases that could have taken place as emergency or are performed after-office hours. Nonetheless, outlier charges (fees above the 75th percentile and below the 25th percentile) were generally not included within the fee benchmarks set. Thus, doctors are advised to explain to patients in advance where possible if their fees for cases requiring emergency and after-office hours would exceed the benchmarks.

d. Assistance at operations - In determining the benchmarks, the Committee considered fees incurred by all medical practitioners, and/ or surgical nurses involved and assisting in the procedure. The recommended benchmarks thus refer to the total professional fees for the surgical procedure, including any necessary assistance. Doctors should exercise judgment in requiring such assistance to ensure patient safety, quality of care and operative efficiency. Prior to the procedure, doctors are advised to inform patients of any assistance required.

e. When more than one surgical procedure is carried out - The recommended benchmarks are for cases in which only a single procedure is performed on

the patient on any one occasion. These cover the majority of procedures being done. However, in some cases, it could be in patients' interest to perform more than one procedure in the same sitting. Doctors should first and foremost assess the need for such procedures based on patient safety, operative efficiency and the quality of care in doing so. In general, if the procedures are performed through the same incision, the fees should not be the sum of individual fees of each procedure. Nonetheless, where doctors assess that a "1+1" computation is fair (e.g. if performing the combination of procedures together in a sitting involves higher complexity, and does not result in any time saving than if done separately), they can do so with proper justification.

f. Goods and Services Tax (GST) - The benchmarks exclude GST.

g. Anaesthetist fee – The benchmarks proposed are for surgeon fees but excludes anaesthetist fee.

Recommendations for how stakeholders could apply the benchmarks

36 To ensure that the benchmarks are effective and helpful to all stakeholders, the Committee would like to recommend that stakeholders use the fee benchmarks in the following manner:

Doctors

37 Doctors should satisfy themselves that the fee charged in each case is fair, reasonable and appropriate for the services provided, with due consideration of the particular circumstances of the case and the patient. They should use the benchmarks when determining fair and appropriate fees and make reference to it when they provide financial counselling to their patients on their fees. They should also explain to patients and other stakeholders (e.g. insurers and regulators) if their charges exceed the benchmarks.

Patients

38 Patients are encouraged to use the benchmarks as a reference to have a conversation with their doctors and to make informed decisions on the care options. Patients can consider discussing the following questions with their doctors:

4 questions patients should ask doctors:

1. What is the treatment or procedure for?
2. Why is this treatment or procedure needed? Are there alternatives/ other options?
3. What outcome can be expected for a typical case? What are the possible risks and complications?
4. How much would this treatment or procedure cost for a typical case? How much would it would cost in his / her particular case and why?

39 In having a conversation with the doctor to better understand the fees quoted, it would be helpful for patients to keep the fee benchmarks in mind as a reference. Patients should also bear in mind that fees alone are not a direct measure of quality, and higher fees do not necessarily mean better quality care.

40 If the patient has doubts even after discussion with the doctor, the patient can consider approaching his referring doctor or his Family Doctor for advice.

Payers

41 Payers such as insurers and third party administrators should reference the benchmarks fairly and appropriately in setting fee schedules and negotiating contract fees for their panels. While the contracts between doctors and payers are business transactions mutually agreed upon by the parties, it would be good practice to explain to stakeholders such as policyholders and doctors the justifications for departing from the fee benchmarks if needed.

42 While payers are encouraged to use the benchmarks in claims management and their policy design, they should use the benchmarks reasonably and consider flexibility in processes and policies to ensure that patients are not disadvantaged when the circumstances and fees are justifiable.

Government

43 The government should ensure that the benchmarks are updated periodically and continue its efforts to guide appropriate charging of other healthcare costs, such as hospital charges, implants and facility fee.

44 The government should also continue to support stakeholders' use of the benchmarks by ensuring that they are readily accessible to the public and presented in a way that is easy to understand and use. In addition, more could be done for patient education and the government could work with various stakeholders to explore ways to better empower and guide patients in having a discussion on treatment options and fees with their providers.

45 In addition, when the fee benchmarks become more comprehensive and established in future, the government could consider requiring doctors and/or providers to refer to the fee benchmarks when advising patients on fees, in line with increasing price transparency for patients to make more informed decisions.

Other Recommendations

46 Table of Surgical Procedures (TOSP) – The Committee recommends that MOH review the description and table number of the procedures on which specialists have raised feedback during the consultation sessions. This would enable more consistent coding by different specialists and a more standardised data collection, which could be helpful in future review of fee benchmarks.

Appreciation

47 The Committee would like to thank the following doctors for contributing their valuable time and expertise in advising on the technical aspects of the procedures in their respective specialties.

Specialty	Technical expert	Designation
Cardiology	Adjunct Associate Professor Lim Soo Teik	Deputy Medical Director and Senior Consultant from a public healthcare institution
Obstetrics & Gynaecology (O&G)	Associate Professor Tan Thiam Chye	Senior Consultant and Head, Department of Obstetrics & Gynaecology from a public hospital
Ophthalmology	Associate Professor Lim Tock Han	Senior Consultant from a public hospital and member of MOH TOSP Review Committee
General Surgery	Professor Tan Su-Ming	Senior Consultant from a public hospital and member of MOH TOSP Review Committee
	Associate Professor Kenneth Mak	Senior Consultant from a public hospital and member of MOH TOSP Review Committee
	Dr Julian Wong Chi Leung	Senior Consultant and Head of Vascular Surgery Division from a public hospital
Orthopaedic Surgery	Dr Sarvaselan R E Sayampanathan	Master, Academy of Medicine Singapore and member of MOH TOSP Review Committee
	Professor Wong Hee Kit	Senior Consultant, Spine Surgery, and Chair of Orthopaedics, Hand and Reconstructive Microsurgery at a public healthcare cluster
Hand surgery	Dr Alphonsus Chong	Head and Senior Consultant, Department of Hand and Reconstructive Microsurgery from a public hospital
Otorhinolaryngology (Ear, Nose, Throat)	Associate Professor Lu Kuo Sun Peter	Senior Consultant from a public hospital and member of MOH TOSP Review Committee
Plastic surgery	Associate Professor Foo Chee Liam	Senior Consultant from a public hospital and member of MOH TOSP Review Committee
Urology	Assistant Professor David Terrence Consigliere	Senior Consultant from a public hospital

Annex A - Fee Benchmarks Advisory Committee Composition

Name	Designation
Dr Lim Yean Teng (Chairman)	Senior Consultant & Cardiologist, Cardiology Associates Pte Ltd
Dr Ang Chong Lye	Senior Adviser, SingHealth; Senior Consultant, Singapore National Eye Centre; Ophthalmologist
Mr Benedict Cheong	Chief Executive Officer, Temasek Foundation International; Chairman, Medifund Advisory Council
Dr Ho Kok Sun	Council Member, Academy of Medicine Singapore; General Surgeon
Mr Karthikeyan Krishnamurthy	Vice President, National Trades Union Congress (NTUC) Central Committee; Vice President, Consumer Association of Singapore (CASE) Central Committee
Dr Lam Kian Ming	Chief Executive Officer, Mount Alvernia Hospital
Dr Lim Hui Ling	Honorary Assistant Secretary, College of Family Physicians Singapore; Family Physician
Ms Ngiam Siew Ying	Deputy Secretary (Policy), Ministry of Health
Dr Phua Kai Hong	Professor, Lee Kuan Yew School of Public Policy, National University of Singapore
Dr Tan Boon Yeow	Chief Executive Officer and Senior Consultant, St Luke's Hospital
Dr Toh Choon Lai	Council Member, Singapore Medical Association; Orthopaedic Surgeon
Mr Richard Wyber	Chairman, Life Insurance Association workgroup for implementation of Health Insurance Task Force recommendations Head, Healthcare & Vitality Marketing, AIA Singapore
Mr Zainul Abidin Rasheed	Former Senior Minister of State, Ministry of Foreign Affairs

Fee Benchmarks Advisory Committee Secretariat (From MOH)

Dr Daphne Khoo
Dr Lim Eng Kok
Ms Lee Shuyi
Ms Jayne Yap
Dr Matthew Niti
Ms Mok Wei Ying
Dr Li Zongbin
Dr Elliot Eu

Annex B - List of groups/ organisations that participated in the consultation sessions

Professional Bodies

1. Academy of Medicine Singapore (AMS)
2. Singapore Medical Association (SMA)
3. College of Family Physicians Singapore (CFPS)

Medical Societies

4. Singapore Society for Cosmetic (Aesthetic) Surgeons
5. Society of Colorectal Surgeons (Singapore)
6. Singapore Association of Plastic Surgeons
7. Dermatological Society of Singapore
8. Singapore Society of Ophthalmology
9. Gastroenterological Society of Singapore
10. Breast Reconstruction Awareness (Singapore)
11. Obstetrical & Gynaecological Society of Singapore
12. Singapore Cardiac Society
13. Society of Otolaryngology, Head & Neck Surgery Singapore
14. Singapore Urological Association
15. Singapore Orthopaedic Association
16. Singapore Spine Society
17. Singapore Society of Hand Surgery

Private Hospital Groups

18. Gleneagles Hospital (Parkway)
19. Mount Elizabeth Novena Hospital (Parkway)
20. Mount Elizabeth Hospital (Parkway)
21. Parkway East Hospital (Parkway)
22. Raffles Hospital
23. Mount Alvernia Hospital
24. Thomson Medical Centre
25. Farrer Park Hospital
26. Concord International Hospital

Insurers & Third Party Administrators

27. Life Insurance Association (LIA)
28. AIA
29. Aviva
30. AXA
31. Great Eastern Life
32. NTUC Income
33. Prudential
34. Alliance Healthcare Group
35. Fullerton Health
36. Adept Health
37. Raffles Health Insurance
38. FWD
39. Manulife
40. TMLS
41. MHC
42. Parkway Shenton
43. Safe Meridian
44. IHP

Groups representing patient / consumer interests

45. Consumers Association of Singapore (CASE)
46. National Trades Union Congress (NTUC)

Regulators

47. Singapore Medical Council (SMC)
48. Competition and Consumer Commission of Singapore (CCCS)

Annex C - Illustrative example on the approach for determining Fee Benchmarks

In determining the benchmarks for each of the surgical procedure, the Committee considered a range of factors that could affect what would constitute a reasonable fee range. The considerations are illustrated using the procedure, removal of tonsils, which could be with or without the accompanying removal of other lymphoid tissue, as an example.

Example: SM705T Tonsils, Various Lesions, Removal with/without Adenoidectomy (TOSP Table 3B)

1) The Committee examined the 2017 actual transacted fees for private specialists and considered the spread of fees across cases, using 25th to 75th percentile fees as a starting basis as that would cover the majority of the cases. In this example, the 25th and 75th percentiles were $4,050 and $5,450 respectively, which was a fairly narrow range, and the shape of the distribution was relatively normal. See Figure 4.

2) The Committee also considered what the fee range was for the equivalent procedure in the 2006 edition of Singapore Medical Association Guideline on Fees and adjusted the upper bound for inflation to 'what it could have been' in 2017 for comparison. In this example, this inflation-adjusted upper bound was closer to the 25th percentile, indicating that overall fees had increased faster than inflation since 2006.

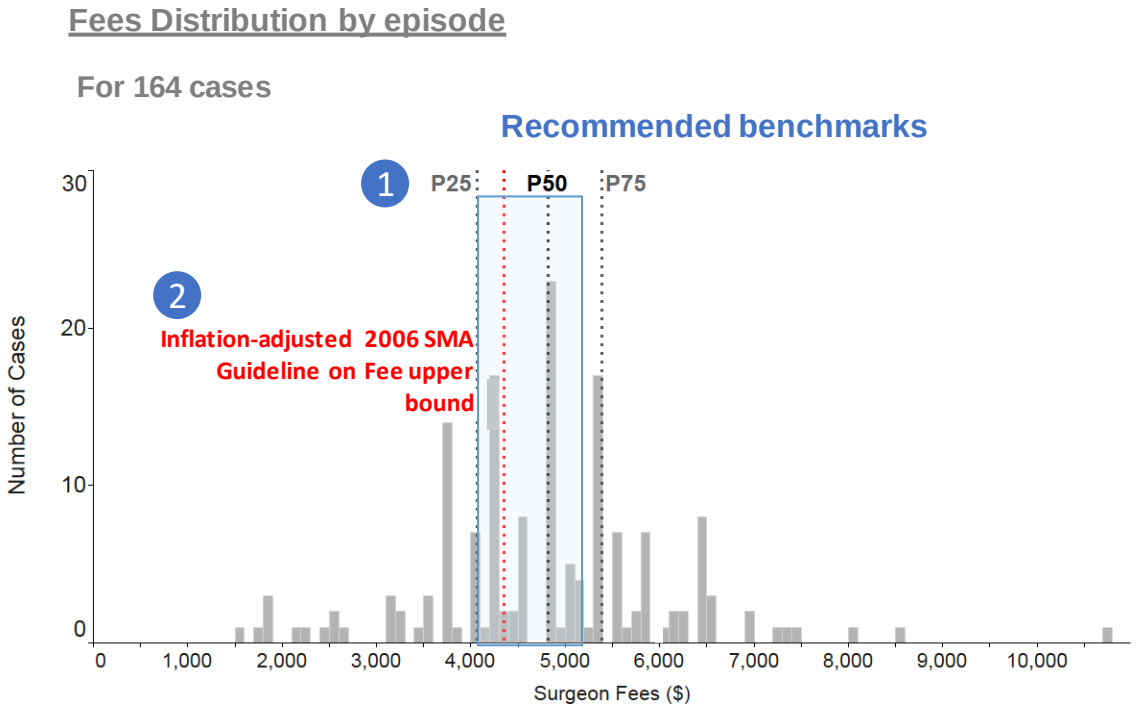

Figure 4. Fee distribution by cases involving tonsil removal.

3) The Committee consulted experts to understand any underlying reason for the shift in fees (e.g. whether there was a significant shift in technique / technology / complexity of the procedure or other considerations regarding the technical aspect of the procedure).

4) The Committee also examined the spread of fees across private sector surgeons who performed the procedure. The Committee noted that in this example, the 25th to 75th percentile covered a large majority of the surgeons' median fees. After careful consideration, the Committee assessed that it would be reasonable to moderate the upper bound of the fee benchmarks from the 75th percentile. After adjustment, the Committee noted that the upper bound reflected a good majority of the cases and surgeons' median fees in 2017. See Figure 5.

5) The Committee also checked that the recommended fee benchmark for this procedure is congruent compared to the fee benchmarks for other otorhinolaryngology (Ear, Nose, Throat) procedures.

6) In this example, as the range of the fee benchmark was assessed to be reasonably narrow, it would not be necessary to provide additional notes to explain cases associated with the range.

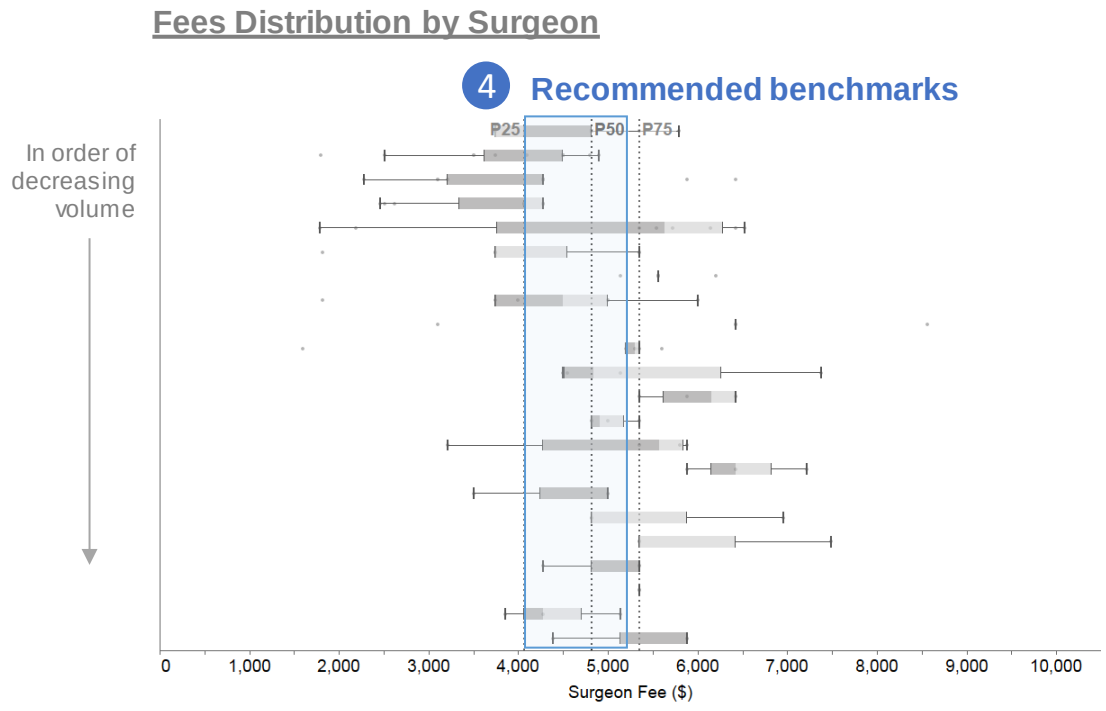

Figure 5. Fee distribution by surgeon. Each row represents the range of fees charged by a surgeon. The surgeons are ranked by descending order of volume of cases performed in 2017.

Annex D - Benchmarks with Explanatory notes (by Table of Surgical Procedures)

SA – Integumentary (Skin and Breast)

S/N	TOSP	Description	Table No.	Fee Benchmarks	
				Lower bound ($)	Upper bound ($)
1	SA852S	Skin and Subcutaneous Tissue, Tumor/Cyst/Ulcer/ Scar, Excision Punch/Shave biopsy, Lesion size up to and including 15mm in diameter	1A	240	1,000
		Note: Benchmarks include excision biopsy cases.			
2	SA840S	Skin and Subcutaneous Tissue, Hematoma, Abscess/Cellulitis/Similar lesion<3cm, Saucerisation/lncision & Drainage	1A	230	1,050
3	SA853S	Skin and Subcutaneous Tissue, Wound, Debridement <3cm	1A	240	1,150
		Note: Higher end of fees may be associated with very contaminated/ dirty wounds or deep wounds requiring extensive debridement.			
4	SA854S	Skin and Subcutaneous Tissue, Wound (large>3cm), Secondary Suture	1A	750	1,550
		Note: Higher end of fees may be associated with wounds that require revision prior to secondary suture, to enable a tension free wound closure.			
5	SA865S	Skin, Keratoses/ Warts/ Tags/ Similar Lesions, Excision (not more than 5 lesions)	1B	350	630
6	SA800S	Skin and Mucous Membrane, Various Lesions, Excision Biopsy	1B	350	800
7	SA710B	Breast, Various Lesions, Trucut Biopsy, ultrasound guided or stereotactic (single)	1B	780	1,200
		Note: Higher end of fees may be associated with lesions that are more complex to biopsy (e.g. small size in inaccessible location).			
8	SA843S	Skin and Subcutaneous Tissue, Laceration (superficial) of less than 7cm, Repair	1B	280	1,800
9	SA702S	Skin and Subcutaneous Tissue, Tumor/Cyst/Ulcer/Scar, Excision biopsy, Lesion size more than 15mm in diameter	1B	910	1,900
		Note: Higher end of fees may be associated with a location of higher morbidity such as the face or a joint flexure.			
10	SA841S	Skin and Subcutaneous Tissue, Hematoma /Carbuncle Cellulitis/Similar Lesion>3cm, Saucerisation/lncision with Drainage	1B	700	2,200
		Note: Higher end of fees may be associated with a location of higher morbidity such as the face or a joint flexure.			

S/N	TOSP	Description	Table No.	Fee Benchmarks	
				Lower bound ($)	Upper bound ($)
11	SA709B*	Breast, Various Lesions, Trucut Biopsy, ultrasound guided or stereotactic (multiple)	1C	910	2,250
		Note: Higher end of fees may be associated with lesions that are more complex to biopsy (e.g. small size in inaccessible location)			
12	SA839S*	Skin and Subcutaneous Tissue, Hemangioma/Lymphangioma (small), Excision	2A	1,350	2,500
13	SA701S	Skin and Subcutaneous Tissue, Tumor/Cyst/Ulcer/Scar, Excision biopsy, removal of 2 or more or recurrent or complicated (adherent), excision	2A	800	2,800
		Note: Higher end of fees may be associated with a location of higher morbidity such as the face or a joint flexure.			
14	SA704B	Breast, Lumps, Imaging Guided Vacuum assisted Biopsy / Mammotome, Single lesion	2B	1,650	2,700
		Note: Higher end of fees may be associated with more inaccessible locations.			
15	SA850S	Skin and Subcutaneous Tissue, Sinus (deep>3cm), Excision with/without biopsy	2B	1,800	3,000
16	SA715S	Soft Tissue (Lower Limb), Tumor/Tumor-like Lesions, Marginal Excision	2C	2,150	3,200
17	SA811S	Skin and Subcutaneous Tissue, Deep>3cm/Extensive Contaminated Wound, Debridement	2C	1,400	3,200
		Note: Higher end of fees may be associated with a location of higher morbidity such as the face or a joint flexure.			
18	SA812B	Breast, Lump (single), Excision biopsy	2C	2,500	3,200
		Note: Higher end of fees may be associated with procedures involving larger lesions.			
19	SA706B	Breast, Lumps, Imaging Guided Vacuum assisted Biopsy / Mammotome, > 1 lesions	2C	2,300	4,150
		Note: Fees are typically higher when more biopsies are performed. Higher end of fees may be associated with 4 or more lesions, whereas the lower end of fee range may be associated with 2 lesions or less.			
20	SA712B	Breast, Various Lesions, wire localisation, excision (single)	3A	2,500	4,000
		Note: Higher end of fees may be associated with recurrent surgery, locations that are harder to access and defects that require mobilization of breast tissue for a more cosmetically acceptable appearance			
21	SA813B	Breast, Lumps (multiple/bilateral), Excision biopsy	3A	3,200	5,350

* For this procedure, there was less than 30 Singapore Citizen cases performed in the private sector in 2017. The benchmarks were determined taking into account the benchmarks of a related procedure with at least 30 Singapore Citizen cases performed in the private sector in 2017.

S/N	TOSP	Description	Table No.	Fee Benchmarks	
				Lower bound ($)	Upper bound ($)
		Note: Higher end of fees may be associated with more difficult locations, procedures involving larger lesions and/or greater number of lesions.			
22	SA838S	Skin and Subcutaneous Tissue, Hemangioma/Lymphangioma (moderate), Excision	3A	2,950	5,550
		Note: Higher end of fees are associated with a location of higher morbidity such as the face or a joint flexure.			
23	SA803S	Skin and Subcutaneous tissue(ear/nose/eyelid/face) complex lacerations, repair	3B	3,200	5,000
24	SA842S	Skin and Subcutaneous tissue, Lacerations (deep >3cm/multiple) lacerations, repair/toilet & suture, with/without debridement	3B	3,200	5,000
25	SA822B	Breast, Tumor (malignant), Wide Excision/ Lumpectomy/ Segmental Mastectomy/ Partial Mastectomy	3B	3,200	5,450
		Note: Higher end of fees may be with lesions in locations that are harder to access, and defects that require mobilization of breast tissue for a more cosmetically acceptable appearance			
26	SA711B*	Breast, Various Lesions, wire localisation, excision (multiple)	3B	3,650	5,600
		Note: Higher end of fees may be associated with recurrent surgery, more lesions, locations that are harder to access and defects that require mobilization of breast tissue for a more cosmetically acceptable appearance			
27	SA707B	Breast, Tumor (malignant), Wide Excision/ Lumpectomy/ Segmental Mastectomy/ Partial Mastectomy, with Sentinel Node Biopsy/ Axiliary Node Sampling	3C	5,350	9,200
		Note: Higher end of fees may be associated with lesions in locations that are harder to access, and defects that require mobilization of breast tissue for a more cosmetically acceptable appearance. Higher fees can also be associated with more sentinel nodes or challenging locations.			
28	SA716S	Soft Tissue (Lower Limb), Tumors (benign), Wide Excision Biopsy	4A	3,200	5,350
29	SA721S	Soft Tissue (Upper Limb), Tumors (benign), Major Excision Biopsy	4A	3,250	5,350
30	SA837S*	Skin and Subcutaneous Tissue, Hemangioma/Lymphangioma (large), Excision	4A	3,600	6,000

* For this procedure, there was less than 30 Singapore Citizen cases performed in the private sector in 2017. The benchmarks were determined taking into account the benchmarks of a related procedure with at least 30 Singapore Citizen cases performed in the private sector in 2017.

S/N	TOSP	Description	Table No.	Fee Benchmarks	
				Lower bound ($)	Upper bound ($)
31	SA826B*	Breast, Tumor (malignant), Simple Mastectomy	4A	4,050	7,000
		Note: Higher end of fees may be associated with larger tumours with chest wall invasion or extensive skin invasion.			
32	SA705B	Breast, Lump, more than 4 cm (removal) with parenchymal flap closure (unilateral/bilateral)	4A	4,300	8,050
		Note: Higher end of fees may be associated with recurrent surgery, locations that are harder to access and larger, odd-shaped defects that require greater expertise for flap closure			
33	SA823B	Breast, Tumor (malignant), Wide Excision/ Lumpectomy/ Segmental Mastectomy/ Partial Mastectomy, with Axiliary Clearance, with/without Sentinel Node Biopsy	4B	5,150	9,000
		Note: Higher end of fees may be associated with lesions in locations that are harder to access, and defects that require mobilization of breast tissue for a more cosmetically acceptable appearance. *Higher fees can also be associated with involved enlarged axillary lymph nodes with surrounding tissue invasion.*			
34	SA827B	Breast, Tumor (malignant), Simple Mastectomy with Sentinel Node Biopsy/ Axiliary Node Sampling	4C	5,250	9,500
		Note: Higher end of fees may be associated with larger volume of breast tissue and larger tumors with surrounding invasion. Higher fees may be associated with more sentinel nodes/more challenging locations of nodes.			
35	SA824B	Breast, Tumor (malignant), Simple Mastectomy with Axiliary Clearance, with/ without Sentinel Node Biopsy	5A	5,450	10,700
		Note: Higher end of fees may be associated with larger volume of breast tissue and larger tumors with surrounding invasion. *Higher fees may be associated with involved enlarged axillary lymph nodes with surrounding tissue invasion.*			
36	SA836S*	Skin and Subcutaneous Tissue, Hemangioma/Lymphangioma (large and deep-seated), Excision	5C	6,400	7,750

* For this procedure, there was less than 30 Singapore Citizen cases performed in the private sector in 2017. The benchmarks were determined taking into account the benchmarks of a related procedure with at least 30 Singapore Citizen cases performed in the private sector in 2017.

SB – Musculoskeletal

S/N	TOSP	Description	Table No.	Fee Benchmarks	
				Lower bound ($)	Upper bound ($)
1	SB745J	Joint, Various Lesions, Joint aspiration/arthrocentesis/injection	1A	300	1,600
		Note: Higher end of fees may be associated with deeper joints (e.g. hips) while the lower end of fee range is associated with superficial joints (eg. knees).			
2	SB803N	Nail, Infection/Injury, Avulsion	1A	500	1,600
		Note: Higher end of fees may be associated with more than one nail avulsion performed, greater trauma of the distal phalanx or where the avulsion is associated with a large extent of excision.			
3	SB802U	Upper Limb, Fracture/Dislocation, Manipulation and Reduction	1B	1,050	2,150
4	SB826B	Bone (Upper Limb), Simple Implants, Removal (eg: K-wires, wires, pins, screws only)	1C	1,000	2,400
		Note: Higher end of fees may be associated with a greater number of or deeper-set implants			
5	SB809B*	Bone (Lower Limb), Simple Implants, Removal (e.g screw/wire/pins)	1C	1,250	2,700
		Note: Higher end of fees may be associated with a greater number of or deeper-set implants			
6	SB709H	Hand, Flexor Tendon, Trigger Finger (single), Release	2A	1,250	2,400
7	SB808B	Bone (Lower Limb), Plates and Screws/Nails, Removal	2B	2,500	3,850
8	SB825B	Bone (Upper Limb), Plates and Screws, Removal	2B	2,500	3,850
9	SB805T	Tendon Sheath (Upper Limb), De Quervain's (unilateral), Release	3A	2,050	3,650
10	SB708H	Hand, Flexor Tendon, Trigger Finger (multiple), Release	3A	1,700	3,850
		Note: Higher end of fees may be associated with more finger releases.			
11	SB809T	Tendon-Achilles (Lower Limb), Disruption, Repair	3A	5,150	7,200
12	SB722F	Foot, Fractures, Simple, single	3B	4,000	5,350
13	SB800P	Patella, Fracture, Open Reduction and Internal Fixation	3B	6,000	8,550
14	SB804H	Hand, Crush Injuries (complex), Wound Debridement	3C	2,750	4,000

* For this procedure, there was less than 30 Singapore Citizen cases performed in the private sector in 2017. The benchmarks were determined taking into account the benchmarks of a related procedure with at least 30 Singapore Citizen cases performed in the private sector in 2017.

S/N	TOSP	Description	Table No.	Fee Benchmarks	
				Lower bound ($)	Upper bound ($)
15	SB704H	Hand, Closed fracture, ORIF complex/ plate and screws (single)	3C	4,300	7,200
16	SB801A	Ankle, ankle fracture, unimalleolar, ORIF	3C	6,000	7,500
17	SB740S	Spine, Various lesions, Vertebroplasty or kyphoplasty, Single level	4A	5,000	6,400
		Note: Higher end of fees may be associated with more complex cases.			
18	SB808K	Knee, Various Lesions, Meniscectomy with/without Arthroscopy	4A	4,800	6,950
19	SB700H	Hip/Knee, Hip/Knee Therapeutic Arthroscopy	4A	5,700	7,500
		Note: Benchmarks are for procedures for the knee arthroscopy.			
20	SB700A	Ankle, ankle fracture, Bimalleolar, ORIF	4A	6,550	8,550
21	SB701C	Clavicle, Clavicle Fracture, Comminuted Plating With or without Bone Grafting	4A	5,350	8,550
22	SB705A*	Ankle, Therapeutic arthroscopy	4A	4,800	8,550
23	SB819H	Hand, Tumors, Excision with Dissection of Neurovascular Bundle	4B	3,350	4,800
24	SB801R	Radius and Ulna, Fracture/Dislocation, Open Reduction and internal fixation with or without bone grafting	4B	6,300	8,550
25	SB706W	Wrist, Distal radius fracture, Open Reduction and Internal Fixation (ORIF) (complex, with autologous bone graft)	4C	6,400	9,800
26	SB715K	Knee, Meniscus/Cartilage, Arthroscopic meniscal repair	5A	6,400	9,350
27	SB707S	Shoulder, Shoulder soft tissue injury, Arthroscopic/Open Bankart or Superior Labrum from anterior to posterior (SLAP) repair	5A	6,650	10,700
28	SB709S*	Shoulder, Shoulder soft tissue injury, Arthroscopic/Open decompression alone	5A	6,650	10,700
29	SB708S	Shoulder, Shoulder soft tissue injury, Arthroscopic/Open Bankart repair with Superior Labrum from anterior to posterior (SLAP) repair/rotator cuff repair	5B	8,550	10,700
30	SB710S	Shoulder, Shoulder soft tissue injury, Arthroscopic/Open decompression with cuff repair	5B	9,650	12,050

* For this procedure, there was less than 30 Singapore Citizen cases performed in the private sector in 2017. The benchmarks were determined taking into account the benchmarks of a related procedure with at least 30 Singapore Citizen cases performed in the private sector in 2017.

S/N	TOSP	Description	Table No.	Fee Benchmarks	
				Lower bound ($)	Upper bound ($)
31	SB838H	Hip, Various Lesions, Hemi-Arthroplasty	5C	6,400	9,100
32	SB801B	Bone (Lower Limb), Deformities, Corrective Surgery with Internal Fixation with or w/o Fluoroscopy	5C	7,500	9,400
33	SB700K	Knee, Arthroscopy, knee ligament reconstruction (1 or more)	5C	6,700	10,150
34	SB819B	Bone (Upper Limb), Deformities, Osteotomies with Plate Fixation and with or w/o Fluoroscopy and with or without bone graft	5C	6,950	10,150
35	SB701K	Knee, Ligaments/Meniscus/Cartilage/Bone combined, Arthroscopic ACL or PCL reconstruction	5C	7,500	10,700
36	SB704K	Knee, Ligaments/Meniscus/Cartilage/Bone combined, Arthroscopic ligament reconstruction with meniscectomy	5C	8,550	10,700
37	SB712K	Knee, Meniscus/Cartilage (small defects), Open/Arthroscopic Mosaicplasty or OATS	5C	6,950	10,700
38	SB800K	Knee Ligaments, Disruption, Reconstruction and Repair	5C	8,050	10,700
39	SB703K	Knee, Ligaments/Meniscus/Cartilage/Bone combined, Arthroscopic ligament reconstruction with meniscal repair	5C	8,400	11,500
40	SB711S	Shoulder, Shoulder soft tissue injury, Arthroscopic/Open decompression with cuff repair & excision of distal clavicle	5C	8,550	12,300
41	SB723S	Spine, Prolapsed Disc, Discectomy, Single Level	5C	10,000	12,850
42	SB810K	Knee, Various Lesions, Primary Total Joint Replacement (Unilateral), open/MIS/navigated	6A	8,250	10,700
43	SB816S	Spine, Various Lesions, Decompression Laminectomy, single level (1 or 2 roots)	6A	9,650	12,850
44	SB839H	Hip, Various Lesions, Primary Total Joint Replacement, open/MIS/navigated	6A	8,550	12,850
45	SB803C	Cervical Spine, Various Lesions, Anterior Decompression and Fusion (single level)	6A	11,900	16,050
46	SB716K	Knee, Various Lesions, Primary Total Joint Replacement (Unilateral) with augmentation, requiring extra implants or bone grafts, open/MIS/navigated	6B	8,550	12,000
47	SB727S	Spine, Various Lesions, Decompression Laminectomy, Multiple Levels (open or MIS)	6B	9,650	14,500
48	SB741S	Spine, Various Lesions-Decompression, Interbody Fusion (circumferential fusion with	7A	13,450	18,200

S/N	TOSP	Description	Table No.	Fee Benchmarks	
				Lower bound ($)	Upper bound ($)
		instrumentation and cages) - Open or MIS or with Computer Navigation			
49	SB809K	Knee, Various Lesions, Total Joint Replacement (Bilateral)	7B	11,750	17,100
50	SB729S	Spine, Various Lesions, Decompression, Spinal Instrumentation, Multiple Levels	7B	16,050	20,100

SC – Respiratory

S/N	TOSP	Description	Table No.	Fee Benchmarks	
				Lower bound ($)	Upper bound ($)
1	SC703B*	Bronchus/Lung, Bronchoscopy with/without biopsy	1B	1,050	1,600
2	SC704B	Bronchus/Lung, Bronchoscopy with biopsy, bronchoalveolar lavage	2A	1,050	2,000

* For this procedure, there was less than 30 Singapore Citizen cases performed in the private sector in 2017. The benchmarks were determined taking into account the benchmarks of a related procedure with at least 30 Singapore Citizen cases performed in the private sector in 2017.

SD – Cardiovascular

S/N	TOSP	Description	Table No.	Fee Benchmarks	
				Lower bound ($)	Upper bound ($)
1	SD722V	Vein, Various Lesions, Imaging Guided Peripheral Insertion of Central Catheter (PICC)	1C	640	1,000
2	SD721V*	Vein, Various Lesions, Imaging guided Insertion of Tunnelled Central Venous Catheter	2A	850	1,400
		Note: Higher end of fees may be associated with recurrent cases or altered anatomy			
3	SD707B	Blood Vessels, Portacath, removal	2A	400	1,450
		Note: Higher end of fees may be associated with more difficult portacath removals eg. when catheter is fractured or has displaced, with need for surgical exploration to identify and remove entire length of catheter.			
4	SD723V*	Vein, Various Lesions, Imaging Guided Venous Port Insertion	2C	850	1,800
		Note: Higher end of fees may be associated with altered anatomy, small vein, redo cases			
5	SD706B	Blood Vessels, Portacath, Insertion	3A	1,200	2,700
		Note: This procedure involves open surgical insertion via venous cutdown.			
6	SD715H	Heart, Coronary angiography (with Left Ventriculography)	3A	2,150	3,200
7	SD811H	Heart, Coronary angiography (Selective)	3A	2,150	3,200
8	SD713V	Vein, Varicose Veins, Imaging Guided Endovenous Laser Treatment, 1 leg	3B	4,350	6,500
		Note: Higher end of fees may be associated with larger veins, lenth of vein to be treated, or procedure including ablation of small saphenous vein (SSV).			
9	SD821A	Artery, Various Lesions, Arterio-venuous Fistula Creation	3C	1,700	3,850
		Note: Higher end of fees may be associated with complex or re-do fistulas that are at the same site.			
10	SD707H	Heart, Cardiac Catheterisation (left) and Intracoronary Pressure Wire without Percutaneous Transluminal Coronary Angioplasty (PTCA)	3C	4,300	5,350
11	SD809H	Heart, Coronary Artery Disease, Cardiac Catherisation and Coronary Angiogram	4A	3,000	4,350
12	SD810H	Heart, Coronary Disease, Coronary Angioplasty (transluminal), with/without angiocardiography	4A	6,000	9,000
		Note: This code is for simple one-vessel coronary angioplasty. Excludes angioplasty for multiple vessels, which should be coded under SD713H.			

* For this procedure, there was less than 30 Singapore Citizen cases performed in the private sector in 2017. The benchmarks were determined taking into account the benchmarks of a related procedure with at least 30 Singapore Citizen cases performed in the private sector in 2017.

S/N	TOSP	Description	Table No.	Fee Benchmarks	
				Lower bound ($)	Upper bound ($)
13	SD802H	Heart, Arrhythmia, Catheter Ablation, with/without Electroanatomical Mapping	4A	4,000	12,000
		Note: Lower end of fees may be associated with Simple Radiofrequency Catheter Ablation (eg SVT) with or without Electrophysiology Study; and higher end of fees may be associated with Complex Radiofrequency Catheter Ablation (with 3D mapping) with or without Electrophysiology Study.			
14	SD712H	Heart, Percutaneous Transluminal Coronary Angioplasty (PTCA) + stenting (1 vessel) - Complex (defined as > 1 hr), with/without IVUS/FFR	4A	6,700	12,200
		Note: Higher end of fees may be associated with complex interventions which include: *- Complex Chronic Total Occlusion e.g. retrograde CTO intervention* *- Complex bifurcation/ trifurcation; or* *- Cases requiring haemodynamic support (e.g. IABP, Impella or LVAD)*			
15	SD714H	Heart, Primary Percutaneous Transluminal Coronary Angioplasty for ST-elevation Myocardial Infarction	4B	9,650	12,850
16	SD713H	Heart, Percutaneous Transluminal Coronary Angioplasty (PTCA) + stenting (more than 1 vessel) - Intravascular Ultrasound (IVUS), Fractional Flow Reserve (FFR)	4B	9,000	13,900
		Note: This code is for multivessel stenting, with or without invasive intracoronary imaging or physiologic guidance.			
17	SD812H	Heart, Coronary Disease, Coronary Artery Bypass Graft (Open)	7A	16,050	25,000
		Note: Higher end of fees may be associated with high risk surgeries, and/or repeat heart bypass surgeries, including: (1) cases with operative risks that are Logistic Euroscore 6 and above, and/or (2) re-do Coronary Artery Bypass Graft with failed grafts, and/ or (3) cases requiring haemodynamic support (e.g. IABP, Impella or LVAD).			

SE – Hemic & Lymphatic

S/N	TOSP	Description	Table No.	Fee Benchmarks	
				Lower bound ($)	Upper bound ($)
1	SE802L	Lymph node (cervical), Various Lesions, Excision Biopsy	2C	2,300	3,750

SF - Digestive

S/N	TOSP	Description	Table No.	Fee Benchmarks	
				Lower bound ($)	Upper bound ($)
1	SF804T	Tongue, Tongue Tie, Release	1A	280	850
2	SF701I	Intestine/Stomach, Upper GI endoscopy with / without biopsy	1B	600	1,000
		Note: Higher end of fees may be associated with altered anatomy, more biopsies or biopsies of lesions in challenging locations.			
3	SF710C	Colon, Sigmoid, Sigmoidoscopy (flexible), Fibreoptic with/without biopsy	1B	600	1,000
4	SF841A	Anus, Perineal Abscess, Saucerisation/Drainage	1B	1,250	2,950
		Note: Lower end of fees may be associated with straight forward incision, saucerisation and drainage. Higher end of fees may be associated with deep seated abscesses requiring more complex techniques of drainage and/or requiring a drain or seton. Ischorectal abscess drainages should be coded under: SF840A Anus, Ischiorectal Abscess, Saucerisation.			
5	SF833A	Anus, Fistula-in-ano, Excision/ Fistulectomy	2B	2,000	3,200
		Note: Higher end of fees may be associated with recurrent surgery, more complex fistulae			
6	SF700I	Intestine/Stomach, Upper GI endoscopy with polypectomy/ removal of foreign body/diathermy of bleeding lesions / injection of varices / removal of single polyp	2C	1,000	1,600
7	SF702C	Colon, Colonoscopy (diagnostic), fibreoptic with/without biopsy	2C	1,100	1,600
8	SF703C	Colon, Colonoscopy (screening), fibreoptic with/without biopsy	2C	1,100	1,600
9	SF836A	Anus, Hemorrhoids, Hemorrhoidectomy with or without sigmoidoscopy	2C	2,650	3,400
		Note: Higher end of fees may be associated with sigmoidoscopy or more difficult haemorrhoidectomy eg. for prolapsed haemorrhoids.			
10	SF704C	Colon, Colonoscopy (diagnostic), fibreoptic with removal of polyp (single or multiple less than 1cm)	3A	1,500	2,150
		Note: Higher end of fees may be associated with polyps in challenging locations, more polyps or additional measures to achieve hemostasis.			
11	SF706C	Colon, Colonoscopy (screening), fibreoptic with removal of polyp (single or multiple less than 1cm)	3A	1,500	2,150
		Note: Higher end of fees may be associated with polyps in challenging locations, more polyps or additional measures to achieve hemostasis			
12	SF818A	Abdominal Wall, Inguinal Hernia (infants & children), Herniotomy (Unilateral)	3A	1,950	2,350

S/N	TOSP	Description	Table No.	Fee Benchmarks	
				Lower bound ($)	Upper bound ($)
13	SF837A	Anus, Hemorrhoids,Stapled haemorrhoidectomy	3A	3,000	3,750
14	SF814A*	Abdominal Wall, Epigastric/Umbilical Hernia, Repair (laparoscopic or open)	3A	2,650	4,350
		Note: Higher fees may be associated with larger defects and mesh placement. (Recurrent surgery should be coded under SF823A.)			
15	SF705C	Colon, Colonoscopy (diagnostic), fibreoptic with removal of polyps (multiple more than 1cm)	3B	1,700	2,550
		Note: Higher end of fees may be associated with polyps in challenging locations, larger polyps, more polyps or additional measures to achieve hemostasis			
16	SF819A	Abdominal Wall, Inguinal/Femoral Hernia, Unilateral Herniorrhaphy (laparoscopic or open)	3B	3,200	5,350
		Note: Higher end of fees may be associated with larger hernia sacs, femoral hernias, hernias with complications and emergency surgery. Recurrent surgery should be coded under SF823A.			
17	SF849A	Appendix, Various Lesions, Appendicectomy Without Drainage, Open/Laparoscopic	3B	4,200	6,700
		Note: Higher end of fees may be associated with challenging locations e.g. retrocecal appendix, adhesions from previous surgery, additional measures to secure the base and perforation. (Recurrent hernia should be coded under SF823A.)			
18	SF822A*	Abdominal Wall, Strangulated/Obstructed Hernia, Repair without Bowel Resection	3C	3,950	4,300
		Note: Higher end of fees may be associated with emergency surgery, previous surgery and adhesions and larger defects			
19	SF832A	Anus, Fistula-in-ano (high), Fistulectomy & Colostomy, or complex and recurrent fistulectomy	3C	3,100	4,300
		Note: Higher end of fees may be associated with extensive perianal sepsis associated with the fistula.			
20	SF708B	Bile Duct, Endoscopic Retrograde Cholangiopancreatography (ERCP) with sphincerotomy /removal of stone/ insertion of biliary stent	3C	3,200	4,350
		Note: Higher end of fees may be associated with more complex cases, e.g. altered anatomy, larger, harder stones, more stones, difficult bile duct cannulation etc.			

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S/N	TOSP	Description	Table No.	Fee Benchmarks	
				Lower bound ($)	Upper bound ($)
21	SF817A*	Abdominal Wall, Inguinal Hernia (infants & children), Herniotomy (Bilateral)	4A	3,000	4,500
22	SF801G	Gallbladder, Various Lesions, Cholecystectomy (open or lap)	4A	5,350	7,500
		Note: Complicated surgery should be coded under SF706G.			
23	SF723A	Appendix, Various Lesions/Abscess, Appendicectomy with Drainage (Open/Laparoscopic)	4A	5,250	8,000
24	SF823A	Abdominal Wall, Ventral/Incisional/Recurrent Hernia, Repair (laparoscopic or open)	4A	4,400	8,000
		Note: Higher end of fees may be associated with ventral/incisional hernia repair with complex abdominal wall reconstruction using component separation technique or mobilisation of myofascial flaps or recurrent hernia repair. Lower end of fee range is associated with Ventral/incisional hernia repair of abdominal wall, with primary closure of fascial defect or mesh repair (laparoscopic/open)			
25	SF820A	Abdominal Wall, Inguinal/Femoral Hernia, Bilateral Herniorrhaphy (laparoscopic or open)	4C	5,000	8,000
		Note: Higher end of fees may be associated with recurrent surgery, larger hernia sacs, femoral hernias, hernias with complications or emergency surgery.			
26	SF706G	Gallbladder (acute/complicated) open or laparascopic cholecyestectomy	4C	5,550	8,600
		Note: Higher end of fees may be associated with recurrent surgery, adhesions, altered anatomy, previous inflammation of the gallbladder and biliary tree or for impacted stone.			
27	SF705G*	Gallbladder, Various lesions, open/laparoscopic cholecystectomy and transcystic common bile duct exploration	5A	6,500	10,000
		Note: Higher end of fees may be associated with recurrent surgery, adhesions, altered anatomy, previous inflammation of the gallbladder and biliary tree or for impacted stone. *Higher end of fees may also be associated with more complex CBDE.*			
28	SF814P	Parotid, Tumor, Superficial Parotidectomy	5C	9,300	12,650
29	SF803C	Colon, Various Lesions, Right/Left Hemicolectomy (laparoscopic or open)	5C	10,100	14,450
		Note: Higher end of fees may be associated with recurrent surgery, adhesions or more complex cases such as larger tumors with invasion into surrounding structures.			
30	SF714P*	Parotid, Total Parotidectomy, with/without preservation of facial nerve	6A	12,850	17,500

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S/N	TOSP	Description	Table No.	Fee Benchmarks	
				Lower bound ($)	Upper bound ($)
31	SF701C	Colon, Anterior Resection (open or laparoscopic)	6C	10,700	16,050
		Note: Higher end of fees may be associated with more complicated and difficult resections, particularly for low anterior resection.			
32	SF703R*	Rectum, Ultra-low Anterior Resection (Total Mesorectal Excision) With/Without PLND	6C	14,450	20,700
		Note: Higher end of fees may be associated with recurrent surgery or more complex cases such as those involving lymphadenectomy			

SG – Urinary

S/N	TOSP	Description	Table No.	Fee Benchmarks	
				Lower bound ($)	Upper bound ($)
1	SG713B	Bladder, Cystoscopy, with or without biopsy	1B	700	1,150
2	SG718B	Bladder/Urethra, Cystoscopy, with urethral dilatation	1C	800	1,350
3	SG709B	Bladder, Cystoscopy, removal of foreign body/ureteric stent	2C	910	1,500
4	SG714B	Bladder/Urethra, Transurethral Resection of Bladder Tumour (<3cm)	4A	3,750	4,300
5	SG701U	Ureter, Extra Corporeal Shockwave Lithotripsy (ESWL) for ureteric stone	4A	3,200	4,700
6	SG702U	Ureter, Calculus, Ultrasound Lithotripsy	4A	4,000	4,750
7	SG800U	Ureter, Ureteroscopy and lithotripsy	4A	4,000	4,750
8	SG802K	Kidney, Calculus, Extra Corporeal Shockwave Lithotripsy (ESWL)	4B	3,650	5,150
9	SG700P	Prostate Gland, Various Lesions, Transurethral Resection of Prostate (TURP) (less than 30 gm)	4B	4,500	6,400
10	SG702P	Prostate Gland, Various Lesions, Transurethral Resection of Prostate (TURP) (more than 30 gm)	5C	5,350	7,500

* For this procedure, there was less than 30 Singapore Citizen cases performed in the private sector in 2017. The benchmarks were determined taking into account the benchmarks of a related procedure with at least 30 Singapore Citizen cases performed in the private sector in 2017.

SH – Male Genital

S/N	TOSP	Description	Table No.	Fee Benchmarks	
				Lower bound ($)	Upper bound ($)
1	SH808P	Penis, Paraphimosis/ Phimosis/ Reduction Prepuce, Circumcision	1B	350	700
		Note: Fee range for infants aged ≤ 6 month for which plastibell/ clamp technique is used.			
2	SH808P	Penis, Paraphimosis/ Phimosis/ Reduction Prepuce, Circumcision	1B	950	2,150
		Note: Fee range for patients aged > 6 months.			
3	SH834P	Prostate Gland, Various Lesions, Trans-Rectal Ultrasound (TRUS) guided biopsy	1B	1,050	1,500
4	SH831P	Prostate Gland, Various Lesions, Saturation Robotic Transrectal/Transperineal Biopsy	1B	1,950	3,200
5	SH835P	Prostate Gland, Various Lesions, Saturation Prostate Biopsy	2A	1,950	3,200
6	SH802V	Vas Deferens, Various Lesions, Varicocelectomy (Microsurgical)	3C	4,300	5,900
7	SH830P	Prostate Gland, Various Lesions, Radical Prostatectomy (open/laparascopic/robotic)	6A	16,300	20,350

SI – Female Genital

S/N	TOSP	Description	Table No.	Fee Benchmarks	
				Lower bound ($)	Upper bound ($)
1	SI806C	Cervix, Polyp, Excision/Erosion (simple) with Biopsy	1B	300	820
		Note: Higher end of fees may be associated with more polyps being excised.			
2	SI820V	Vulva, Abscess, Incision	1B	850	1,950
		Note: Higher end of fees may be associated with a larger or deeper abscess.			
3	SI823V	Vulva, Bartholin Cyst, Incision/Marsupialization with or without use of Laser	1B	850	1,950
		Note: Higher end of fees may be associated with a larger or deeper cyst or with the use of a laser.			
4	SI810C	Cervix, Various Lesions, Colposcopy and Biopsy	1C	450	820
5	SI818U	Uterus, Genetic Abnormality/Fetal Maturity, with/without Ultrasound Guided Amniocentesis	1C	480	950
6	SI817U	Uterus, Genetic Abnormality, Ultrasound Guided Chorionic Biopsy	1C	860	1,050
7	SI820U	Uterus, Gravid, Evacuation (simple/TOP)	2A	700	1,550
8	SI843U	Uterus, Various Lesions, Curettage with/without Dilatation	2A	1,050	1,800
9	SI707C	Cervix, Various Lesions, Colposcopy, Laser Vapourisation/Loop Electrosurgical Excision Procedure/Laser Excision of Transformation Zone with Biopsy	2A	1,250	2,700
		Note: Higher end of fees may be associated with laser surgery and could be more extensive.			
10	SI819U	Uterus, Gravid, Evacuation (complicated)	2B	1,300	2,150
11	SI805C	Cervix, Polyp, Excision/Erosion (complicated) includes D&C with Biopsy	2B	1,500	2,450
12	SI725U	Uterus/cervix, Hysteroscopy, Diagnostic, D&C	2B	1,800	3,150
13	SI836U	Uterus, Pregnancy, Vaginal Delivery (with or without episiotomy repair)	2B	2,050	3,400
14	SI704C	Cervix, Transcervical resection (TCR) Polyp (<2cm), hysteroscopic	2B	2,550	3,750
15	SI842U	Uterus, Various Lesions, Curettage with Colposcopy/Biopsy/Diathermy/ Cryosurgery/Laser Therapy of Cervix	2C	1,250	2,300
16	SI705C	Cervix, Transcervical resection (TCR) Polyp (>2cm), hysteroscopic	2C	2,700	4,000
17	SI833U	Uterus, Pregnancy, Assisted Vaginal Delivery ± Twins ± Breech	3A	2,450	4,050

S/N	TOSP	Description	Table No.	Fee Benchmarks	
				Lower bound ($)	Upper bound ($)
18	SI803C	Cervix, Cervical Intraepithelial Neoplasia, Cone Biopsy with/without laser	3A	2,500	4,350
19	SI701O	Ovary, Tumor/Cyst, Ovarian Cystectomy,MIS/robotic (Simple) (<5cm) With Biopsy	3C	4,500	7,300
20	SI700L	Laparoscopy, Therapeutic, except for Retrieval and Placement of Gametes and Placement of Embryos	3C	4,800	7,750
21	SI834U	Uterus, Pregnancy, Caesarean Section (classical/lower segment)	4A	3,400	4,800
22	SI802O	Ovary, Tumor/Cyst, Cystectomy (complicated) (>5cm)	4A	6,400	8,550
23	SI803U	Uterus, Benign Conditions, Total Hysterectomy with/without Salpingo-Oophorectomy	4A	6,400	9,050
24	SI806O	Ovary, Tumor/Cyst, Oophorectomy/Salpingo-Oophorectomy (complicated)	4A	6,350	9,100
25	SI832U	Uterus, Pregnancy and Multiparity, Lower Segment/Classical Caesarean Section and Tubal Ligation	4B	4,000	5,700
26	SI700O	Ovary, Tumor/Cyst, Ovarian Cystectomy, MIS /robotic(Complicated) (>5cm)	4B	6,700	9,000
27	SI815U	Uterus, Fibroids, Myomectomy (complicated) (>5cm)	5A	6,400	8,900
28	SI708U	Uterus, Fibroids, Myomectomy, MIS (Complicated) (>5cm)	5A	6,950	9,650
29	SI712U	Uterus, Hysterectomy, MIS (Complicated) (>12 weeks)	5A	7,500	10,450
30	SI812U	Uterus, Endometriosis, Hysterectomy with/without Salpingo-Oophorectomy	5C	6,450	10,250
31	SI804U	Uterus, Broad Ligament Tumor, Hysterectomy	5C	6,700	10,450
32	SI825U	Uterus, Malignant Condition, Extended Hysterectomy with/ without lymphadenectomy	5C	9,000	14,450
		Note: Higher end of fees may be associated with the removal of more lymph nodes and more extensive surgical dissection. Complex cases may require technical skills from sub-specialists.			
33	SI800O	Ovary, Malignant Tumor/Cyst, Total Hysterectomy Bilateral Salpingo-Oophorectomy with Omentectomy, Surgical Staging with/without Lymphadenectomy	5C	12,650	16,050

SJ – Endocrine

S/N	TOSP	Description	Table No.	Fee Benchmarks	
				Lower bound ($)	Upper bound ($)
1	SJ701T	Thyroid, Various Lesions, Imaging Guided Percutaneous Aspiration / Biopsy	1B	440	900
		Note: Higher end of fees may be associated with biopsies of more lesions e.g. >3.			
2	SJ802T	Thyroid, Various Lesions, Hemithyroidectomy/Partial Thyroidectomy	4A	6,400	8,450
3	SJ803T	Thyroid, Various Lesions, Total/Subtotal Thyroidectomy	5C	6,400	11,750
		Note: Higher end of fees may be associated with altered anatomy, larger thyroid or recurrent surgery.			

SK – Nervous

S/N	TOSP	Description	Table No.	Fee Benchmarks	
				Lower bound ($)	Upper bound ($)
1	SK711S*	Spine, Paravertebral anaesthetic, more than 2 levels	2A	1,250	2,150
2	SK717N	Nerve (Upper Limb), Carpal Tunnel Syndrome, Release (unilateral) (with Endoneurolysis)	3A	2,150	3,350
3	SK705S	Spinal/Epidural, Facet Joint, Various lesions, Imaging Guided, Radiofrequency, Cervical/Lumbar/Thoracic, More than 3 joints	4A	4,300	6,400
		Note: Higher end of fees are associated with treatment for more joints.			

* For this procedure, there was less than 30 Singapore Citizen cases performed in the private sector in 2017. The benchmarks were determined taking into account the benchmarks of a related procedure with at least 30 Singapore Citizen cases performed in the private sector in 2017.

SL – Eye

S/N	TOSP	Description	Table No.	Fee Benchmarks	
				Lower bound ($)	Upper bound ($)
1	SL846E	Eyelids, Tumor, Shaving Excision	1A	300	1,000
		Note: Higher end of fees may be associated with a large tumor, or an excision involving a large skin area			
2	SL723E	Eyelids, Chalazion Cyst, Excision under general anaesthesia	1A	850	1,450
		Note: Higher end of fees may be associated with excision of larger or multiple chalazions/ styes. TOSP code will undergo description change with effect from 2 Jan 2019 to SL723E Eyelids, Chalazion or Stye excision under General Anaesthesia.			
3	SL724E	Eyelids, Stye, Incision under general anaesthesia	1A	850	1,450
		Note: Higher fees may be associated with excision of larger or multiple chalazions/ styes. TOSP code will be removed and merged under SL723E Eyelids, Chalazion or Stye excision under General Anaesthesia with effect from 2 Jan 2019.			
4	SL700V	Vitreous, Intravitreal Injections	1B	690	1,600
5	SL815L	Lens, Various Lesions, Yag Laser Capsulotomy	2A	960	1,600
6	SL801I	Iris, Various Lesions, Laser Iridotomy	2C	1,050	1,950
7	SL803C	Conjunctiva, Pterygium, Removal with conjunctival graft	2C	1,700	2,750
8	SL704R	Retina/Macula, Grid and focal laser photocoagulation	3A	1,600	2,600
9	SL805R	Retina, Tears, Photocoagulation (laser) (Unilateral)	3B	1,650	2,350
10	SL700R	Retina, Laser retinopexy, complex (subretinal fluid, vitreous haemorrhage, multiple tears)	3B	2,150	3,200
11	SL804R	Retina, Tears, Cryotherapy or Photocoagulation (laser) (Bilateral)	3C	1,700	3,050
12	SL808L	Lens, Cataract, Extraction with Intra-ocular Lens Implant (Unilateral Left)	4A	2,550	3,950
13	SL809L	Lens, Cataract, Extraction with Intra-ocular Lens Implant (Unilateral Right)	4A	2,550	3,950
14	SL834E	Eyelids, Ptosis, Correction Levator Palpebrae Superioris Resection (unilateral)	4A	3,100	4,800
15	SL807L	Lens, Cataract, Extraction with Intra-ocular Lens Implant (Bilateral)	5A	4,300	6,000
16	SL810L	Lens, Cataract, Extraction with Intra-ocular Lens Implant and Trabeculectomy with/without antimetabolites	5A	4,300	6,200

S/N	TOSP	Description	Table No.	Fee Benchmarks	
				Lower bound ($)	Upper bound ($)
17	SL833E	Eyelids, Ptosis, Correction Levator Palpebrae Superioris Resection (bilateral)	5B	5,350	8,000
18	SL701V	Vitreous, Various Lesions, Complex Posterior Vitrectomy (PVR, GRT, trauma)	6B	6,400	11,750
19	SL801V	Vitreous, Various Lesions, Posterior Vitrectomy (pars plana/ sclerotomy/ lensectomy-extraction with Intra-ocular Lens Implant/ endolaser/ membrane peels)	6B	8,560	12,850

SM – Ear, Nose and Throat (ENT)

S/N	TOSP	Description	Table No.	Fee Benchmarks	
				Lower bound ($)	Upper bound ($)
1	SM700N	Nose, Nasendoscopy	1A	160	380
		Note: Lower end of fees may be associated with follow up /repeat scopes for a previously known condition			
2	SM831E	Ear, Tympanic Membrane, Unilateral,myringotomy without tube	1B	440	1,050
3	SM700I	Inferior Turbinate reduction (submucous diathermy oblique radiofreqeuncy)	1C	450	1,600
4	SM832E	Ear, Tympanic Membrane, Unilateral myringotomy with tube	2A	680	2,150
5	SM708E*	Ear, Tympanic Membrane, Bilateral myrinqotomy with tube	2B	1,150	3,450
6	SM714N	Nose, Various Lesions (turbinates), turbinectomy/turbinoplasty/Submucous Resection (with or without endoscopes)	2C	1,050	2,900
7	SM705T	Tonsils, Various Lesions, Removal with/without Adenoidectomy	3B	4,050	5,350
8	SM709S*	Sinuses - Nasal, Infection, Functional Sinuscopic Ethmoidectomy (Unilateral)	4A	5,050	7,650
9	SM703S*	Sinuses - Nasal, Infection, Functional Sinuscopic Ethmoidectomy (Bilateral)	5A	6,500	9,150
10	SM714S	Sinuses - Nasal, Various Lesions, Fronto-nasal Ethmoidectomy with/without Sphenoidotomy	5C	6,700	10,300

* For this procedure, there was less than 30 Singapore Citizen cases performed in the private sector in 2017. The benchmarks were determined taking into account the benchmarks of a related procedure with at least 30 Singapore Citizen cases performed in the private sector in 2017.