



Medicare Benefits Schedule Review Taskforce

Final Report on the review of Ophthalmology MBS items

2020

Important note

This report contains the final recommendations from the MBS Review Taskforce following the consultation of the Ophthalmology Clinical Committee Report with stakeholders. This report is now subject to consideration by Government.

The Taskforce welcomes ongoing feedback on this or any MBS Review report via mbsreviews@health.gov.au.

Confidentiality of comments:

If you would like your feedback to remain confidential please mark it as such. It is important to be aware that confidential feedback may still be subject to access under freedom of information law.

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1.1 Executive summary

1.2 Key recommendations

The 15 members of the Ophthalmology Clinical Committee, led by Chair Dr Bradley Horsburgh, have reviewed 189 items and recommended some level of revision to 31. The MBS Review Taskforce appreciates and recognises their work and careful consideration of the relevant MBS items, and broadly supports the recommendations of the Committee.

The most important ophthalmology recommendations are summarised below.

Five items were considered obsolete and have been recommended for removal from the MBS.

Detailed recommendations and accompanying rationales for all items, as well as broader issues, can be found in Sections 4 to 14 of this report.

1.2.1 Compliance

During its review, the Committee identified various opportunities to clarify, apply contemporary clinical standards and practice and update definitions and when needed, address compliance issues relating to several items under consideration. These issues are discussed within each relevant item's detailed recommendation in Sections 4 to 14.

The Committee recommended improving definitions, which will in-turn improve compliance and audit functions to identify and prevent low-value use or unintended or intended misuse of MBS items. Although every effort has been made to align the proposed item descriptors with contemporary best practice, it is not possible (nor is it desirable) to create descriptors that account for every complexity of clinical medicine. Improving definitions will clarify how items should be used appropriately, and compliance and audit functions would help to ensure that items are used appropriately and as intended.

The Committee notes that the Department's Compliance team is uniquely positioned to identify anomalous behaviour by providers, and believes that Compliance has a critical role to play in preventing and remedying low-value care, which has only been partly fulfilled in previous years.

The Committee recommended that Compliance work with the Royal Australian and New Zealand College of Ophthalmologists (RANZCO) to support the effective implementation of these recommendations. For example, RANZCO and MBS Compliance could work together to monitor eye injection frequency which is currently reported to the Department of Health (the Department), but not accessed in terms of how many right and how many left eye injections are being carried out on each individual over a year.

1.2.2 Retinal electrophysiology

The Committee recommended changing the retinal electrophysiology item descriptors to ensure that they are only performed by specialists with suitable training and expertise, according to the relevant professional guidelines. The Committee also recommended that the Department monitor these clinicians to ensure that services are performed in accordance with specified standards of care. These tests are highly specialised and are used to detect retinal disease. They should only be performed in centres that adhere to the required standard of care, specified by the International Society for Clinical Electrophysiology of Vision (ISCEV).

Restricting item descriptors to ophthalmologists

The Committee recommended changing the following item descriptors to restrict use to ophthalmologists, or a technician on behalf of an ophthalmologist:

- Item 11204: Electroretinography.
- Item 11205: Electro-oculography.
- Item 11211: Dark adaptometry.

The Committee noted that items 11204 and 11205 were recently changed (effective November 2017) to exclude claiming by general practitioners (GPs). This amendment has been effective, with no services claimed by GPs in 2018. However, the Committee felt that further restrictions were required due to:

- Significant geographic variation in service provision.
- A higher than expected number of clinicians claiming these items.
- The broad range of specialty clinicians co-claiming item 11205. Ophthalmologists only claim 1 per cent of episodes. Neurologists claim the majority of episodes (50 per cent), indicating significant and broad indication creep.

Restricting use of items to specialists

The Committee recommended changing the descriptor for item 11210 (pattern electroretinography) to restrict use to specialists, excluding GPs.

A variety of specialists claim this item (in addition to ophthalmologists), including neurologists, general surgeons, paediatricians and GPs. The purpose of this recommendation is to exclude GPs from using this highly specialised item, recognising the appropriate equipment and training/expertise necessary.

This will prevent claims for services that are not provided in accordance with the item descriptor.

Other specialists have not been restricted from using this item. Unlike items 11204, 11205 and 11211, specialists other than ophthalmologists (mainly neurologists) have the requisite equipment and expertise to perform and interpret this test.

Monitoring service provision

The Committee recommended that the Department investigate clinicians claiming items 11204, 11205 or 11211 who are not located in areas with specialised retinal electrophysiology centres.

The Committee suspects that some clinicians are using these items in a manner that does not comply with best-practice standards of care, which are referenced in the item descriptors and detailed in the explanatory notes.

1.2.3 Computerised perimetry

The Committee respectfully recommended that the Optometry Clinical Committee investigate the optometric computerised perimetry items for possible inappropriate use.

Computerised perimetry has become the standard of care in optometric and ophthalmic practice for the assessment and monitoring of the visual field defects caused by glaucoma. These are not screening tests and should be performed for specified indications only.

The Committee noted that computerised perimetry services performed by ophthalmologists appear to be in line with expectations, with the rate of servicing increasing exponentially with age (in a similar way to glaucoma prevalence rates). However, service rates by age and growth for optometric item 10940 do not appear to be in line with expectations. Service growth for item 10940 was double the rate of comparable ophthalmology items (8 per cent and 4 per cent per year, respectively). The rate of servicing also did not increase exponentially with age. Instead, it dropped off for patients aged 80 years and above, and was higher than expected for those aged 50 and below. The Committee felt that this may indicate that computerised perimetry is being used as a screening tool.

The Committee recognised that the optometric items are beyond its remit but wished to acknowledge the need for better targeting of patients for testing. This would allow for a higher rate of glaucoma assessment and represents an opportunity for collaborative research between ophthalmologists and optometrists to achieve the best monitoring rates for glaucoma patients.

*Please note: The Taskforce asked the Optometry Committee as part of its discussions to **provide clarification on the usage of its Computerised Perimetry items**. Below is the response from Optometry Clinical Committee.*

- 1. An increasing number of therapeutic optometrists who are highly skilled at detecting, monitoring and treating a wide range of eye diseases.*
- 2. A dramatic increase in the availability of optical coherence tomography (OCT) OCT has revolutionised ophthalmic care, enabling far earlier diagnosis of conditions such as glaucoma, exudative macular degeneration and diabetic macular oedema.*
- 3. Optometrists are primary eyecare practitioners who use visual fields as part of a diagnostic test regime on indication as per the schedule. Optometrists conduct over 75% of all eye examinations in Australia and need to differentiate the normal and healthy against conditions and diseases of the eye and visual pathway.*

This response was accepted by the Taskforce in December 2018.

1.2.4 Eye injections

Creating separate items for eye injections for the left and right eye

The Committee recommended creating two separate items for eye injections—one for the left eye and one for the right eye—to allow for appropriate monitoring of treatment frequency.

The Committee noted that Medicare cannot provide searchable per-eye data. This information is crucial to determine and monitor treatment frequency, which occurs on a per-eye basis.

Very low frequency treatment (fewer than three injections a year in each eye, per patient) and very high frequency treatment (more than 12 injections a year in each eye, per patient) may represent low-value care.

Monitoring treatment frequency

The Committee recognised the need to monitor treatment frequency for item 42738 due to:

- High service growth of 14 per cent per year between the 2013/14 financial year (FY) and FY2017/18 (although the Committee noted that this rate is expected to decline in the coming years).
- Large variation in the frequency of injections per patient.

Providing clinician education

The Committee recognised that RANZCO can play a role in educating clinicians on appropriate treatment frequency, and that MBS Compliance can support these efforts through an audit of treatment frequency.

A panel of experts from the Australian and New Zealand Society of Retinal Specialists could formulate clinical practice guidelines for the use of intravitreal anti-vascular endothelial growth factor (anti-VEGF) therapy and these could then be incorporated into the item descriptor.

Limiting in-hospital treatment

The Committee recommended restricting the patient setting to outpatient by reclassifying item 42738 as a Type C procedure, with an exclusion for Modified Monash Model¹ (MMM) regions 5, 6 and 7. A Type C procedure does not normally need hospital treatment and requires clinicians to fill out a form to justify in-hospital use.

The Committee noted that in-hospital treatment for intravitreal eye injections should occur in fewer than 3 per cent of patients. It currently occurs in 18 per cent of patients, and this number is increasing. This is largely unnecessary and may be due to financial incentives. Evidence supporting this recommendation includes RANZCO's

Choosing Wisely guidelines, as well as rates of in-hospital services in other jurisdictions (for example, rates of 1–2 per cent in the United States).

1.2.5 Cataract surgery

The Committee has not recommended item-level changes but has commented on three issues relevant to cataract surgery: rural and remote access, bulk billing and referral guidelines.

Rural and remote access

The Committee recognised the logistical difficulties in servicing rural and remote areas for cataract surgery.

It further noted that inequity in access extends to all eye services.

It has made a general recommendation to incentivise rural and remote ophthalmology services. (Recommendation 14, Section 12.3).

Bulk billing

The Committee recognised that the bulk-billing rate for cataract surgery is low, with an average rate of 3.5 per cent.

It also noted that the bulk-billing rate only varies slightly across socio-economic groups, ranging from 2.0 per cent in the least disadvantaged group to 5.9 per cent in the most disadvantaged group in FY2015/16.

The Committee agreed that this low bulk-billing rate may be driven by additional costs of cataract surgery that are not covered by the MBS. These costs are usually covered by private health insurance. (For example, the cost of intra-ocular lenses and theatre fees, which are typically \$1,800–\$2,200, must be paid by an uninsured patient, irrespective of what fee is charged by the ophthalmologist.)

Patients/consumers in lower socio-economic groups without private health

insurance may seek treatment in the public system which already have considerable waiting lists.

Referral guidelines

The Committee recognised that several jurisdictions include visual acuity (in combination with quality of life or functional capacity) in cataract surgery referral guidelines, including in Victoria, New Zealand and Sweden. However, the Committee considers the United Kingdom's National Institute for Health and Care Excellence (NICE) guidelines to be more reflective of modern practice which could be adopted more widely in Australia. These guidelines do not include Snellen visual acuity and emphasise the effects of cataract on the patient's ability to perform day-to-day activities.

The Committee considered that the use of Snellen visual acuity was a rationing mechanism and noted that this measure does not adequately represent visual function and important criteria such as contrast sensitivity and glare.

1.2.6 Obsolete items

The Committee assessed the clinical relevance of items in its area of responsibility, including those with low service volumes in FY2016/17.

Based on this review, the Committee recommended removing five items from the MBS.

The Committee noted that four additional items are already listed for deletion, effective November 2018.

1.2.7 Oculoplastic and orbital items

The Committee considered the Australian and New Zealand Society of Ophthalmic Plastic Surgeons' (ANZSOPS) recommendations on oculoplastic and orbital items and

supports several of these recommendations to modernise terminology, reflect current best practice, and avoid indication creep and inappropriate co-claiming.

1.2.8 Inappropriate co-claiming

The Committee recommended introducing co-claiming restrictions for three items, having identified inappropriate co-claiming patterns:

- Item 42632: Conjunctival peritomy or repair of corneal laceration by conjunctival flap.
- Item 42647: Removal of corneal scars by partial keratectomy.
- Item 42773: Pneumatic retinopexy for retinal detachment.

1.2.9 Telemedicine

The Committee acknowledged that telemedicine items are not within its scope, and that the Optometry Clinical Committee and the Specialist and Consultant Physician Clinical Committee will determine the final recommendations.

However, the Committee has suggested an approach to restructuring MBS telemedicine items, including for the consideration of the Optometry Clinical Committee.

It noted that telemedicine has a crucial role to play in improving rural and remote eye health, given the maldistribution of the ophthalmology workforce and current uptake issues and the considerable international evidence for, and the beneficial usage of, telemedicine, remote monitoring and “store and forward”.

An issue in the Australian model, is the lack of co-ordination built into the service funding (unlike in other countries) to ensure consulting times of both sides are aligned.

The proposed structure focuses on coordination and asynchronous health care and would be delivered through introducing two new teleophthalmology items:

- Item A: Virtual “home visit” via telephone or video with only patient present.
- Item B: Asynchronous management “store and forward’ advice via report to optometrist and patient, for optometry referrals only, with a requirement to send a formal report to the optometrist and patient.

1.2.10 General recommendations

Ongoing review process

The Committee recommended implementing an ongoing review process to maintain MBS alignment with contemporary clinical practice, and to ensure that significant recommendations achieve the intended outcomes.

Rural and remote incentives

The Taskforce has recommended that the Government consider implementing a mechanism to cover the additional costs of rural and remote service provision.

The Committee proposed three options for developing an incentive scheme to encourage ophthalmologists to provide services in MMM regions 5, 6 and 7, for targeted improvement of rural and remote eye services to assist in closing the gap in eye health and vision care by 2020².

1.2.11 New items

The Committee recommended several new items for the treatment of glaucoma. These treatments reflect modern best practice but are not currently listed on the MBS.

The Committee recognised that these procedures require ongoing assessment of clinical efficacy and best practice and nominated Associate Professor Paul Healey and Professor Stephanie Watson to work with the Department and RANZCO on this. RANZCO has agreed to sponsor Medical Services Advisory Committee (MSAC) applications for these items and will provide the necessary supporting evidence.

1.2.12 Cataract surgery and eye injections – questions from the Taskforce

The Taskforce requested that the Committee respond to three questions related to stakeholder concerns about cataract surgery and eye injection schedule fees and out-of-pocket costs³.

The Taskforce seeks stakeholder input on three actions recommended by the Committee to address these concerns:

- Allocate more funding to public hospital ophthalmology staff specialist positions in the public system so that public hospitals have the capacity to treat more patients. These positions should only be made available to ophthalmologists who will participate in the training and supervision of registrars, junior doctors, nurses and optometrists, orthopaedists and students of these professions
- Provide greater patient education on the costs of services so patients know that they have a right to contact clinics and inquire about costs. The Committee felt that this information should not be delivered via a clinician rating tool, but that consumer education on patients' rights and options should be made available.
- A whole of health system review to develop a consumer centred health system.

1.2.13 Additional Taskforce recommendations

Following the presentation of the recommendations of the Ophthalmology Clinical Committee to the Taskforce in November 2018, the Taskforce considered the report, and agreed to include two additional recommendations, relating to intravitreal injections and the ophthalmology workforce.

First, the Taskforce recommends adjusting the rebate on the intravitreal injection items to a level in line with the more complex peri/retrobulbar injections, item 18240.

The Taskforce notes that this would not preclude the intravitreal injection items to be co-claimed with a consultation.

The primary rationale for this recommendation is to align the rebate with the relative complexity of the procedure; in comparing the relatively simpler intravitreal injection procedure to peri/retrobulbar and other injections, the Taskforce noted that the present rebates do not reflect the relative complexities of the procedures.

Second, the Taskforce recommends a review of the broader ophthalmology workforce, with a particular focus on assessing supply issues, and the benefits of expanding the workforce qualified to deliver particular ophthalmology services.

In relation to this review, the Taskforce recommends a specific focus to assess the expansion of intravitreal injections to include appropriately trained nurse practitioners and optometrists, working to updated guidelines.

This recommendation is in response to evidence of clinical need, maldistribution of clinicians and constraints on overall supply.

1.3 Consumer impact summary

The Committee brought together clinicians with experience in and a commitment to the care of people with ophthalmic conditions to examine how well MBS items match current clinical practice and meet the needs of Australians.

This section provides a more detailed discussion of the consumer impacts of the recommendations outlined in this report, using the consumer framework.

A list of the recommendations, written in plain English, can be found in Appendix A – Summary for consumers.

The MBS Review Taskforce has been asked to review, advise and make recommendations on aspects of the MBS, to deliver an affordable and universally accessible, best practice, individual patient focused, valuable health care system; in context, how the MBS contributes to a modern, transparent and responsive system.

Recommendations to government should demonstrate value for the health system and value and best practice for the patient.

The OCC report has focused on the clinical opinion and available evidence relating to ophthalmic services and how any changes, or not, would affect consumers. Broader aspects, including system level and patient out of pocket costs, sustainability and measures to achieve a more 'patient-centred' approach, are critical aspects of a sustainable high value health care system.

There is likely to be significant public interest in the report given the high variability in service access including rural and remote, the rapid increase in service uptake due to an ageing population, budgetary impact, and high out of pocket charges experienced for some procedures and by some consumers.

Additional consumer and public input would provide further insights into how the community accesses services and to identify areas for future improvement.

It is particularly crucial that a "whole of system" approach be taken when seeking this input, as a change in one area of the system, may not produce the change required or sought, unless the other aspects of the system are taken into consideration.

The Ophthalmology Clinical Committee notes that systems to focus on patient centred approach to high value ophthalmology services will require changes to be made along the system. This would include:

- improved clinician education
- improved patient/consumer education
- patient/consumer oriented professional standards
- consideration of the current difficulties patients/consumers have in accessing publicly provided services
- exploring opportunities for a more flexible, trained workforce
- consideration of out of pocket costs to patients/consumers
- the variety and amount of private health insurance coverage

- private health premiums
- how to meet the high costs associated with consumables
- informed patient consent
- services integration and coordination and
- cultural factors that can improve eye health outcomes and the role and responsibility of the public system.

Ultimately it is essential that consumers are informed about services, treatment, options and costs in a clear and open way.

Patients/consumers with chronic conditions, and in particular those without private health insurance, and those who live outside major urban centres frequently find it difficult to access treatment within the public system, and as result bear a considerable economic and social burden within the private system. This is likely to continue while Australia's population ages.

The consumers on the committee have highlighted the need for a systems level response which includes key stakeholders in the system to address these concerns. This has been recommended by various consumer groups, within the context of Australia's Federal, State and private health system having served us well in the past, but with demographic, economic and societal changes now needing a crucial review and change to meet the future needs.

1.3.1 Consumer representative framework

The consumer representative used the following framework to assess recommendations.

1. If changes to an MBS item were recommended, or if the item was recommended for deletion, the consumer representatives considered the following questions:
 - a. Would there be a positive or negative impact on patient/consumer safety?
 - b. Would there be a positive or negative impact on the quality of services provided?

- c. Would there be any limitations on access, particularly for people living in rural and remote locations or people with special needs, including Aboriginal and Torres Strait Islander people?
- d. Would the efficacy of the test or treatment (or sometimes a series of tests or treatments) be reduced or increased?
- e. Would the changes reduce or increase costs, and is there the potential for a perverse outcome?
- f. Would the change increase accountability by providing conditions against which clinicians could be measured?
- g. Would the change increase data collection for research, monitoring and audit purposes?

1.3.2 Ophthalmology outcomes

During the review of ophthalmology MBS items, clinician expert opinion was relied upon in several instances where the research did not demonstrate a clear position. In some instances, there was disagreement among clinicians. In general, the consumer issues were resolved as follows.

- **Safety:** None of the Committee's recommendations appear to negatively affect the safety of ophthalmology services.
- **Quality:** Many of the recommended changes seek to improve the quality of care, primarily by aligning the MBS with evidence-based practice which was updated with and reflected current published peer-reviewed research or clinical guidelines. None of the recommendations should negatively affect the quality of ophthalmology services. However, it is important to note that, in some instances, rural or remote populations and/or Aboriginal and Torres Strait Islander people have poorer access to consistent quality care than populations in cities. It is difficult to achieve the right balance in such instances, because many people prefer to receive services close to their home—even if local services are of an inferior quality—rather than travelling to a major centre for treatment. The continued development of care pathways and ongoing evidence

review, along with improved transparency relating to available services and costs, would assist consumers in making informed decisions about their treatment. Patient health literacy remains an important problem to be addressed.

- **Access:** None of the recommended changes negatively affect appropriate access, although existing issues facing rural areas persist (see above). The delay in service access, the travel and time away from work and family are cost and wellbeing issues, which need to be addressed. It was also noted that some patient/consumer groups have been receiving services they do not need, which can result in either negative health impacts or neutral health impacts with unnecessary cost. The availability of Telehealth and Store and Forward for continued remote and rural screening and monitoring was seen as a service which not only provided greater access, but reduced the cost of travel, hospitalisation and other costs at a later date.
- **Effectiveness:** None of the recommended changes have a negative impact on effectiveness.
- **Accountability:** There is an opportunity to require specific data collection and reporting on meaningful key performance indicators to ensure that MBS items are being used appropriately. In many instances, the Committee added wording to item descriptors specifically to facilitate the correct usage of item numbers and auditing for quality purposes.
- **Data collection:** Data collection for research, monitoring and auditing purposes presents a huge opportunity for a revised MBS. The definitions attached to the revised items should generally improve opportunities to use this data for targeted research in the future.

2 About the Medicare Benefits Schedule (MBS) Review

2.1 Medicare and the MBS

2.1.1 What is Medicare?

Medicare is Australia's universal health scheme that enables all Australians (and some overseas visitors) to have access to a wide range of health services and medicines at little or no cost.

Introduced in 1984, Medicare has three components:

- Free public hospital services for public patients.
- Subsidised drugs covered by the Pharmaceutical Benefits Scheme (PBS).
- Subsidised health professional services listed on the MBS.

2.2 What is the MBS?

The MBS is a listing of the health professional services subsidised by the Australian Government. There are more than 5,700 MBS items that provide benefits to patients for a comprehensive range of services, including consultations, diagnostic tests and operations.

2.3 What is the MBS Review Taskforce?

The Government established the Taskforce as an advisory body to review all MBS items to ensure they are aligned with contemporary clinical evidence and practice and improve health outcomes for patients. The Taskforce is also modernising the MBS by identifying any services that may be unnecessary, outdated or potentially unsafe. The MBS Review is clinician-led, and there are no targets for savings attached to the review.

2.3.1 What are the goals of the Taskforce?

The Taskforce is committed to providing recommendations to the Minister that will allow the MBS to deliver on each of these four goals:

- **Affordable and universal access**—the evidence demonstrates that the MBS supports very good access to primary care services for most Australians, particularly in urban Australia. However, despite increases in the specialist workforce over the last decade, the countervailing increase in part time practitioners and increasing patient needs have left access to many specialist services remaining problematic, with some rural patients particularly under-served.
- **Best-practice health services**—one of the core objectives of the MBS Review is to modernise the MBS, ensuring that individual items and their descriptors are consistent with contemporary best practice and the evidence base when possible. Although the MSAC plays a crucial role in thoroughly evaluating new services, the vast majority of existing MBS items pre-date this process and have never been reviewed.
- **Value for the individual patient**—another core objective of the review is to have an MBS that supports the delivery of services that are appropriate to the patient’s needs, provide real clinical value and do not expose the patient to unnecessary risk or expense.
- **Value for the health system**—achieving the above elements will go a long way towards achieving improved value for the health system overall. Reducing the volume of services that provide little or no clinical benefit will enable resources to be redirected to new and existing services that have proven benefits but are underused, particularly for patients who cannot readily access these services.

2.4 The Taskforce’s approach

The Taskforce is reviewing existing MBS items, with a primary focus on ensuring that individual items and usage meet the definition of best practice. Within the Taskforce’s brief, there is considerable scope to review and provide advice on all aspects that would contribute to a modern, transparent and responsive system. This

includes not only making recommendations about adding new items or services to the MBS, but also about an MBS structure that could better accommodate changing health service models.

The Taskforce has made a conscious decision to be ambitious in its approach, and to seize this unique opportunity to recommend changes to modernise the MBS at all levels, from the clinical detail of individual items, to administrative rules and mechanisms, to structural, whole-of-MBS issues. The Taskforce will also develop a mechanism for an ongoing review of the MBS once the current review has concluded.

As the MBS Review is clinician-led, the Taskforce decided that clinical committees should conduct the detailed review of MBS items. The committees are broad-based in their membership, and members have been appointed in an individual capacity, rather than as representatives of any organisation.

The Taskforce asked the committees to review MBS items using a framework based on Professor Adam Elshaug's appropriate use criteria⁵. The framework consists of seven steps:

1. Develop an initial fact base for all items under consideration, drawing on the relevant data and literature.
2. Identify items that are obsolete, are of questionable clinical value⁶, are misused⁷ and/or pose a risk to patient safety. This step includes prioritising items as "priority 1", "priority 2" or "priority 3", using a prioritisation methodology (described in more detail below).
3. Identify any issues, develop hypotheses for recommendations and create a work plan to arrive at recommendations for each item.
4. Gather further data, clinical guidelines and relevant literature to make provisional recommendations and draft accompanying rationales, as per the work plan. This process begins with priority 1 items, continues with priority 2

items and concludes with priority 3 items. This step also involves consultation with relevant stakeholders within the committee, working groups, and relevant colleagues or Colleges. For complex cases, full appropriate use criteria were developed for the item's explanatory notes.

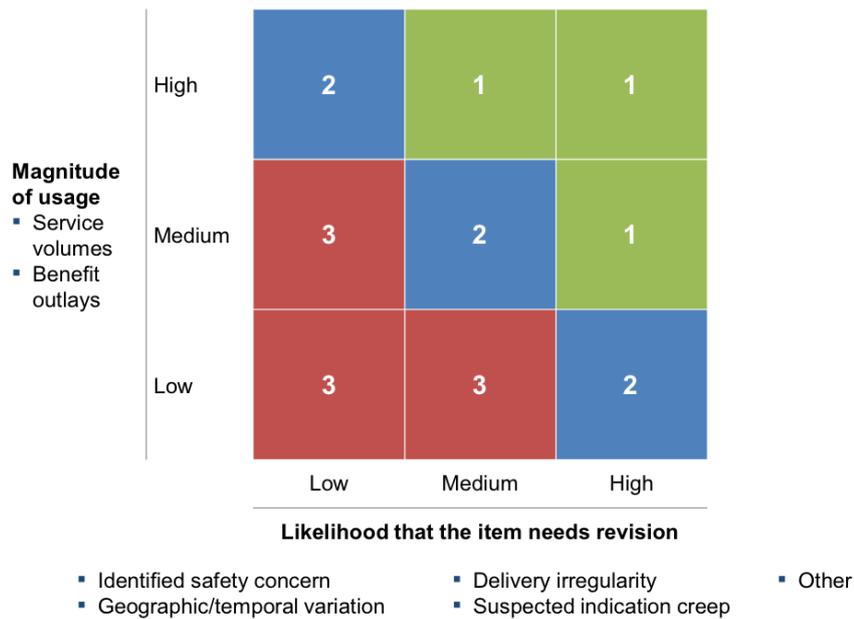
5. Review the provisional recommendations and the accompanying rationales, and gather further evidence as required.
6. Finalise the recommendations in preparation for broader stakeholder consultation.
7. Incorporate feedback gathered during stakeholder consultation and finalise the review report, which provides recommendations for the Taskforce.

All MBS items will be reviewed during the course of the MBS Review. However, given the breadth of the review, and its timeframe, each clinical committee has to develop a work plan and assign priorities, keeping in mind the objectives of the review.

Committees use a robust prioritisation methodology to focus their attention and resources on the most important items requiring review. This is determined based on a combination of two standard metrics, derived from the appropriate use criteria:

- Service volume.
- The likelihood that the item needs to be revised, determined by indicators such as identified safety concerns, geographic or temporal variation, delivery irregularity, the potential misuse of indications or other concerns raised by the clinical committee (such as inappropriate co-claiming).

Figure 1: Prioritisation matrix



For each item, these two metrics were ranked high, medium or low. These rankings were then combined to generate a priority ranking ranging from one to three (where priority 1 items are the highest priority for review and priority 3 items are the lowest priority), using a prioritisation matrix (Figure 1). Clinical committees use this priority ranking to organise their review of item numbers and apportion the amount of time spent on each item.

3 About the Ophthalmology Clinical Committee

The Committee was established in June 2018 to make recommendations to the Taskforce on MBS items within its remit, based on rapid evidence review and clinical expertise. The Taskforce asked the Committee to review ophthalmic-related MBS items.

3.1 Ophthalmology Clinical Committee members

The Committee consists of 15 members, whose names, positions/organisations and declared conflicts of interest are listed in Table 1.

Table 1 : Ophthalmology Clinical Committee members

Name	Position/organisation	Declared conflict of interest
Dr Bradley Horsburgh (Chair)	Ophthalmologist, Royal Brisbane Hospital; Immediate Past President, Royal Australian and New Zealand College of Ophthalmologists	Claims in-scope MBS items
Assoc. Prof. Alex Hunyor	Ophthalmologist - Vitreoretinal/Macular Specialist; Visiting Medical Officer, Vitreoretinal Unit, Sydney Eye Hospital; Clinical Associate Professor, University of Sydney; Director, Retina Associates	Claims in-scope MBS items; Chair of Medical Committee, Macular Disease Foundation Australia; Board member of the Australian Society of Ophthalmologists
Assoc. Prof. Angus Turner	Ophthalmologist, Director of Lions Outback Vision; Policy Committee Member, Vision 2020; Co-Chair, Eye Health Advisory Committee, Western Australia Department of Health; Co-Chair, Indigenous Eye Health Committee, Royal Australian and New Zealand College of Ophthalmologists	Claims in-scope MBS items
Prof. Stephanie Watson	Ophthalmologist – Cataract, Cornea and Laser Surgeon; Professor, Save Sight Institute, University of Sydney; Chair, Ophthalmic Research Institute of Australia; member, Australian and New Zealand Corneal Society	Claims in-scope MBS items; State representative for New South Wales Corneal Society; interest in a day surgery
Assoc. Prof. Paul Healey	Ophthalmologist, Clinical Associate Professor, University of Sydney; Ophthalmic Surgeon, glaucoma and cataract, diseases of the eye	Claims in-scope MBS items;
Prof. Hugh Taylor	Ophthalmologist; Melbourne Laureate Professor, Harold Mitchell Chair of Indigenous Eye Health, Melbourne School of Population and Global Health, The University of Melbourne	None
Assoc. Prof. Stephen	Dermatologist; Clinical Associate Professor of	None

Name	Position/organisation	Declared conflict of interest
Shumack	Dermatology, Northern Clinical School, The University of Sydney; Chair, Dermatology, Allergy, and Immunology Clinical Committee; Chair, Skin and Cancer Foundation Australia; Chair, Non-Melanoma Skin Cancer Guidelines Review Committee	
Assoc. Prof. John Laidlaw	Neurosurgeon with expertise in cranial surgery, neurosurgery, spinal disorders and trauma; Head of Cerebrovascular Disorders and Deputy Director of Neurosurgery at Royal Melbourne Hospital	None
Dr Linda Mann	General Practitioner; GP Clinical Lead, HealthPathways Sydney; Clinical Lecturer, Department of GP, Sydney University	None
Ms Rebecca James (Consumer)	Consumer; Member of the MBS Review Taskforce; former member of the Medical Services Advisory Committee	None
Ms Susanne Tegen (Consumer)	Consumer; rural advocate; Member of the Royal Australian College of Surgeons International Medical Graduates (IMG) Committee; Member of the Federal Training Committee Australian Orthopaedic Association, Member Consumer Health Forum, former CE of the Medical Technology Association of Australia; Former CE of The Royal Australian and New Zealand College of Ophthalmologists, Member CHARGE Syndrome Association	Spouse is a practising ophthalmologist
Dr Jo Sutherland (Taskforce Ex-Officio)	Member of the MBS Review Taskforce; Visiting Medical Officer (VMO) Anaesthetist at Coffs Harbour Health Campus; Conjoint Associate Professor with the University of New South Wales Rural Medical School	None
Prof. Michael Grigg (Taskforce Ex-Officio)	Member of the MBS Review Taskforce; Vascular Surgeon	None
Prof. Adam Elshaug (Taskforce Ex-Officio)	Member of the MBS Review Taskforce; Professor of Health Policy, HCF Research Foundation; Professorial Research Fellow and Co-Director of the Menzies Centre for Health Policy at the University of Sydney; member of the Choosing Wisely Australia advisory group, the Choosing Wisely International Planning Committee and the Australian Commission on Safety and Quality in Health Care's (ACSQHC) Atlas of Healthcare Variation Advisory Group; Elected Member of the Executive Committee of the Health Services Research Association of Australia and New Zealand	None
Assoc. Prof. Susan Wearne	Senior Medical Adviser in the Health Workforce Division in the Department of Health; Clinical	Spouse is a practising ophthalmologist

Name	Position/organisation	Declared conflict of interest
Medical Advisor	Associate Professor, The Australian National University; Part-time GP at East Canberra General Practice and Central Clinic in Alice Springs	

3.2 Conflicts of interest

All members of the Taskforce, clinical committees and working groups are asked to declare any conflicts of interest at the start of their involvement and are reminded to update their declarations periodically. A complete list of declared conflicts of interest can be viewed in Table 1.

It is noted that the ophthalmologist Committee members share a common conflict of interest in reviewing items that are a source of revenue for them (i.e., members claim the items under review). This conflict is inherent in a clinician-led process, and having been acknowledged by the Committee and the Taskforce, it was agreed that this should not prevent a clinician from participating in the review.

3.3 Areas of responsibility of the Committee

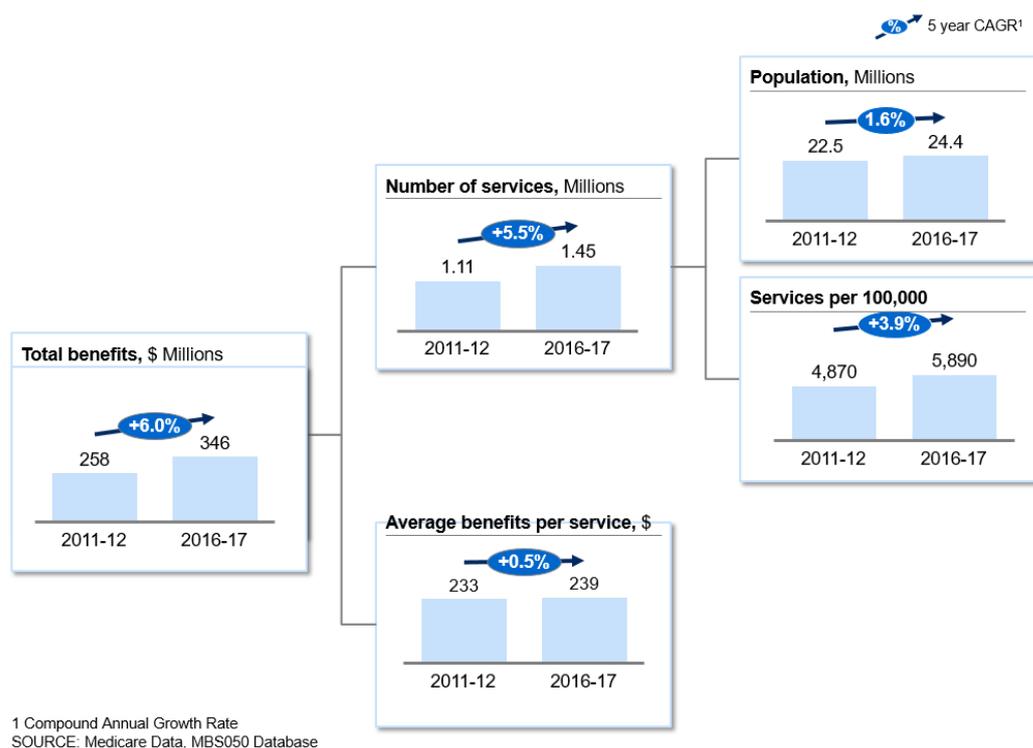
The Committee reviewed 189 ophthalmology MBS items.

In FY2016/17, these items accounted for approximately 1.45 million services and \$346 million in benefits.

Over the past five years, service volumes for these items have grown at 5.5 per cent per year, and total benefits have increased by 6.0 per cent per year. This growth is largely explained by an increase in the number of services per capita (Figure 2).

Eye injections and cataract surgery account for 42 per cent of total services and 67 per cent of benefits paid.

Figure 2: Drivers of ophthalmology item growth, FY2011/12 to FY2016/17



3.4 Summary of the Committee’s review approach

The Committee completed a review of its items across four full committee meetings (two teleconferences and two in-person meetings). It developed the recommendations and rationales contained in this report during these meetings.

The review drew on various types of MBS data, including data on utilisation of items (services, benefits, patients, clinicians and growth rates); service provision (type of clinician, geography of service provision); patients (demographics and services per patient); co-claiming or episodes of services (same-day claiming and claiming with specific items over time); and additional clinician and patient-level data, when required.

The review also drew on data presented in the relevant literature and clinical guidelines, all of which are referenced in the report. Guidelines and literature were identified through medical journals and other sources, such as Cochrane Reviews, professional societies.

4 Retinal electrophysiology recommendations

4.1 Overview

Retinal electrophysiology tests are used to detect retinal disease and are highly specialised. They should only be performed in centres that adhere to the required standard of care, as specified by the International Society for Clinical Electrophysiology of Vision (ISCEV).

The Committee noted that items 11204 and 11205 have recently been amended (effective November 2017) to exclude claiming by GPs. This amendment has proved effective, with no services claimed by GPs in 2018. However, the Committee felt that further restrictions were required due to:

- Significant geographic variation in service provision.
- A higher than expected number of clinicians claiming these items.
- The broad range of specialty clinicians co-claiming item 11205. Ophthalmologists claim just 1 per cent of episodes. Neurologists claim the majority of episodes (50 per cent), indicating significant and broad indication creep.

4.2 Electroretinography, electro-oculography and dark adaptometry

Table 2 : Item introduction table for items 11204, 11205 and 11211

Item	Descriptor	Schedule fee	Benefits FY2016/17	Services FY2016/17	Services 5-year service change % (CAGR)
11204	Electroretinography of one or both eyes by computerised averaging techniques, including 3 or more studies performed according to current professional guidelines or standards, performed by or on behalf of a specialist or consultant physician in the practice of his or her speciality.	\$108.25	\$332,720	3,557	18.5%

Item	Descriptor	Schedule fee	Benefits FY2016/17	Services FY2016/17	Services 5-year service change % (CAGR)
11205	Electrooculography of one or both eyes performed according to current professional guidelines or standards, performed by or on behalf of a specialist or consultant physician in the practice of his or her speciality.	\$108.25	\$1,376,128	14,766	15.9%
11211	Dark adaptometry of 1 or both eyes with a quantitative estimation of threshold in log lumens at 45 minutes of dark adaptations	\$108.25	\$20,745	223	-0.3%

4.2.1 Recommendation 1

- Items 11204, 11205 and 11211
 - Amend the item descriptors to restrict use to ophthalmologists, or a technician on behalf of an ophthalmologist, by incorporating the following wording: “performed by or on behalf of a specialist practising in his or her speciality of Ophthalmology”.
 - Investigate clinicians who are not based at specialised retinal electrophysiology centres in Australia (Figure 3).

4.2.2 Rationale for Recommendation 1

This recommendation prevents claims for services that do not adhere to the item descriptors. It is based on the following.

- Items 11204 and 11205
 - This recommendation replaces the current descriptor restriction for items 11204 and 11205 (“performed by or on behalf of a specialist or consultant physician in the practice of his or her speciality”).
 - A broad range of specialty clinicians are claiming item 11205 and, to a lesser extent, item 11204. The Committee reviewed MBS data from January 1 to March 31 2018 and found the following:

- Item 11205: Ophthalmologists made 1 per cent of claims (45 episodes), neurologists made 55 per cent of claims (1,729 episodes), and ear, nose and throat specialists made 28 per cent of claims (894 episodes). The Committee agreed that this represents significant and broad indication creep.
- Item 11204: Ophthalmologists made 75 per cent of claims (265 episodes), endocrinologists made 9 per cent of claims (34 episodes), neurologists made 8 per cent of claims (27 episodes), and ear, nose and throat specialists made 8 per cent of claims (29 episodes). The Committee agreed that this represents mild indication creep.
- The Committee is unaware of the specific services provided by non-ophthalmic specialists but is confident that they do not include electro-oculograms (item 11205) or electroretinograms (item 11204). Accepted professional ISCEV standards state that these tests should only be done in specialised retinal electrophysiology units. The literature recognises that the practice of clinical visual electrophysiologic testing is a subspecialty of ophthalmic care that requires specific training and dedication to become proficient.⁸
- Item 11211
 - This recommendation places an additional restriction on the descriptor for item 11211.
 - This item has been restricted to promote consistency among retinal electrophysiology items, which should only be performed by ophthalmologists, or technicians on behalf of an ophthalmologist, and to prevent future indication creep. The Committee recognised that ophthalmologists currently claim all services.
- Items 11204, 11205 and 11211
 - The Committee recommended investigating clinicians who are not based at specialised retinal electrophysiology centres. It noted significant geographic variation in service provision for these items (Figure 4) and suspects that some clinicians are using the items in a manner that is not compliant with best-practice ISCEV standards of care. These standards are referenced in the item descriptors and detailed in the explanatory notes. This

recommendation should minimise the number of services performed outside specialised retinal electrophysiology centres.

- The Committee also noted that variation in servicing among ophthalmologists is higher than expected and requires further investigation by MBS Compliance.

4.3 Pattern electroretinography

Table 3 : Item introduction table for item 11210

Item	Descriptor	Schedule fee	Benefits FY2016/17	Services FY2016/17	Services 5-year service change % (CAGR)
11210	Pattern electroretinography of 1 or both eyes by computerised averaging techniques, including 3 or more studies performed according to current professional guidelines or standards	\$108.25	\$74,944	770	1.8%

4.3.1 Recommendation 2

- Item 11210: Amend the item descriptor to restrict GP and non-specialist use by incorporating the following wording: “performed by or on behalf of a specialist or consultant physician in the practice of his or her speciality”.

4.3.2 Rationale for Recommendation 2

This recommendation prevents claims for services that do not adhere to the item descriptor. It is based on the following.

- MBS data indicates that ophthalmologists, neurologists, general surgeons, paediatricians and GPs claim item 11210.
- This recommendation excludes GPs from claiming this highly specialised item, recognising that they do not have the appropriate equipment or training to interpret the results. The Committee noted that while the volume of GP claims is low, it has increased from 0.1 per cent in FY2016/17 to 10 per cent (87 services)

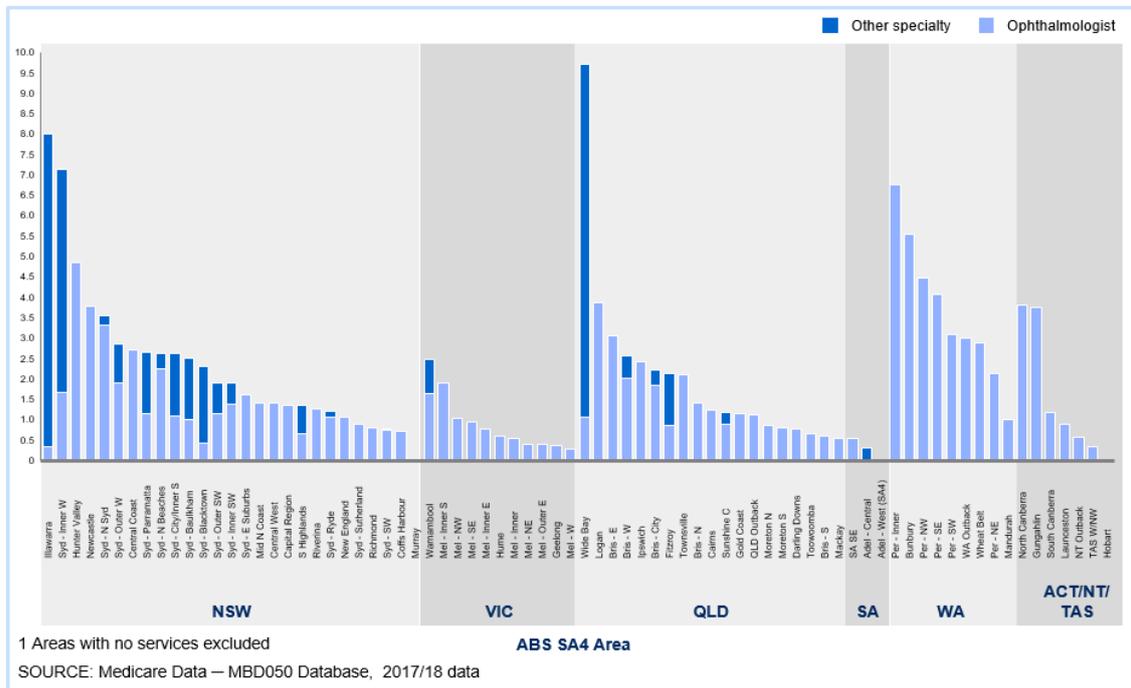
in FY2017/18. This recommendation is intended to prevent future indication creep.

- This restriction will not apply to ophthalmologists or neurologists. Specialists other than ophthalmologists (mainly neurologists) have the requisite equipment and expertise to perform and interpret this test.

Figure 3: Specialised retinal electrophysiology centres in Australia

<u>VICTORIA (Melbourne)</u>	<u>NSW (Sydney)</u>	<u>QLD (Brisbane)</u>	<u>SA (Adelaide)</u>	<u>WA (Perth)</u>
<ul style="list-style-type: none"> • Royal Victorian Eye and Ear Hospital • Eye Surgery Associates (Dr Heather Mack) • Essendon Retina (Dr Marc Sarossy) • Royal Children's Hospital 	<ul style="list-style-type: none"> • Save Sight Institute (Sydney Eye Hospital) • Prince of Wales Hospital / Sydney Childrens Hospital • Centre for Eye Health • Children's Hospital Westmead • Macquarie University Hospital 	<ul style="list-style-type: none"> • Queensland Eye Institute • Lady Cilento Children's Hospital 	<ul style="list-style-type: none"> • Women's and Children's Hospital 	<ul style="list-style-type: none"> • Sir Charles Gairdner (Dept Med Tech and Physics)
<div style="border: 1px solid black; padding: 5px;"> <ul style="list-style-type: none"> • No centres in ACT, NT or Tasmania which perform retinal electrophysiology according to <u>ISCEV</u> guidelines • This information will be referred to Compliance to investigate provider location </div>				

Figure 4: Item 11204 services per 100,000 population by SA4, ophthalmologists versus other specialists, January to March 2018



5 Computerised perimetry recommendations

5.1 Overview

Computerised perimetry has become the standard of care in optometric and ophthalmic practice for the assessment and monitoring of the visual field defects caused by glaucoma. These tests are not intended to be used for screening purposes and should be performed for specified indications only.⁹ The Committee is concerned about variation in service provision across the ophthalmic and optometric items, particularly the variation in services per capita by age group.

The ophthalmology computerised perimetry items (11221–12225) accounted for 320,848 services in FY2016/17. Item 11221 accounted for 97 per cent of these services. The optometry computerised perimetry items (10940 and 10941) accounted for 421,576 services in FY2016/17. Item 10940 accounted for 96 per cent of these services.

5.2 Computerised perimetry

Table 4 : Item introduction table for items 11221, 11222, 11224 and 11225

Item	Descriptor	Schedule fee	Benefits FY2016/17	Services FY2016/17	Services 5-year service change % (CAGR)
11221	Full quantitative computerised perimetry (automated absolute static threshold), not being a service involving multifocal multichannel objective perimetry, performed by or on behalf of a specialist in the practice of his or her specialty, if indicated by the presence of relevant ocular disease or suspected pathology of the visual pathways or brain with assessment and report, bilateral — to a maximum of 2 examinations (including examinations to which item	\$67.75	\$19,508,314	320,848	3.7%

Item	Descriptor	Schedule fee	Benefits FY2016/17	Services FY2016/17	Services 5-year service change % (CAGR)
	11224 applies) in any 12 month period				
11222	Full quantitative computerised perimetry (automated absolute static threshold), not being a service involving multifocal multichannel objective perimetry, performed by or on behalf of a specialist in the practice of his or her specialty, with assessment and report, bilateral, if it can be demonstrated that a further examination is indicated in the same 12 month period to which item 11221 applies due to presence of 1 of the following conditions: (a) established glaucoma (when surgery may be required within a 6 month period) if there has been definite progression of damage over a 12 month period; (b) established neurological disease which may be progressive and if a visual field is necessary for the management of the patient; (c) monitoring for ocular disease or disease of the visual pathways which may be caused by systemic drug toxicity, if there may also be other disease such as glaucoma or neurological disease; each additional examination	\$67.75	\$73,473	1,133	10.6%
11224	Full quantitative computerised perimetry (automated absolute static threshold), not being a service involving multifocal multichannel objective perimetry, performed by or on behalf of a specialist in the practice of his or her specialty, if indicated by the presence of relevant ocular disease or suspected pathology of the visual pathways or brain with assessment and report, unilateral — to a maximum of 2 examinations (including examinations to which item	\$40.85	\$333,663	8,867	1.5%

Item	Descriptor	Schedule fee	Benefits FY2016/17	Services FY2016/17	Services 5-year service change % (CAGR)
	11221 applies) in any 12 month period				
11225	Full quantitative computerised perimetry (automated absolute static threshold), not being a service involving multifocal multichannel objective perimetry, performed by or on behalf of a specialist in the practice of his or her specialty, with assessment and report, unilateral, if it can be demonstrated that a further examination is indicated in the same 12 month period to which item 11224 applies due to presence of 1 of the following conditions: (a) established glaucoma (when surgery may be required within a 6 month period) if there has been definite progression of damage over a 12 month period; (b) established neurological disease which may be progressive and if a visual field is necessary for the management of the patient; (c) monitoring for ocular disease or disease of the visual pathways which may be caused by systemic drug toxicity, if there may also be other disease such as glaucoma or neurological disease; each additional examination	\$40.85	\$2,056	48	-6.7%

5.2.1 Recommendation 3

- Items 11221, 11222, 11224 and 11225: No change.
- The Committee recommended that the Optometry Clinical Committee investigate the optometric computerised perimetry items for possible inappropriate use.

Please note: *The Taskforce asked the Optometry Committee as part of its discussions to **provide clarification on the usage of its Computerised Perimetry items.** Below is the response from Optometry Clinical Committee.*

1. An increasing number of therapeutic optometrists who are highly skilled at detecting, monitoring and treating a wide range of eye diseases.
2. A dramatic increase in the availability of optical coherence tomography (OCT) OCT has revolutionised ophthalmic care, enabling far earlier diagnosis of conditions such as glaucoma, exudative macular degeneration and diabetic macular oedema.
3. Optometrists are primary eyecare practitioners who use visual fields as part of a diagnostic test regime on indication as per the schedule. Optometrists conduct over 75% of all eye examinations in Australia and need to differentiate the normal and healthy against conditions and diseases of the eye and visual pathway.

This response was accepted by the Taskforce in December 2018.

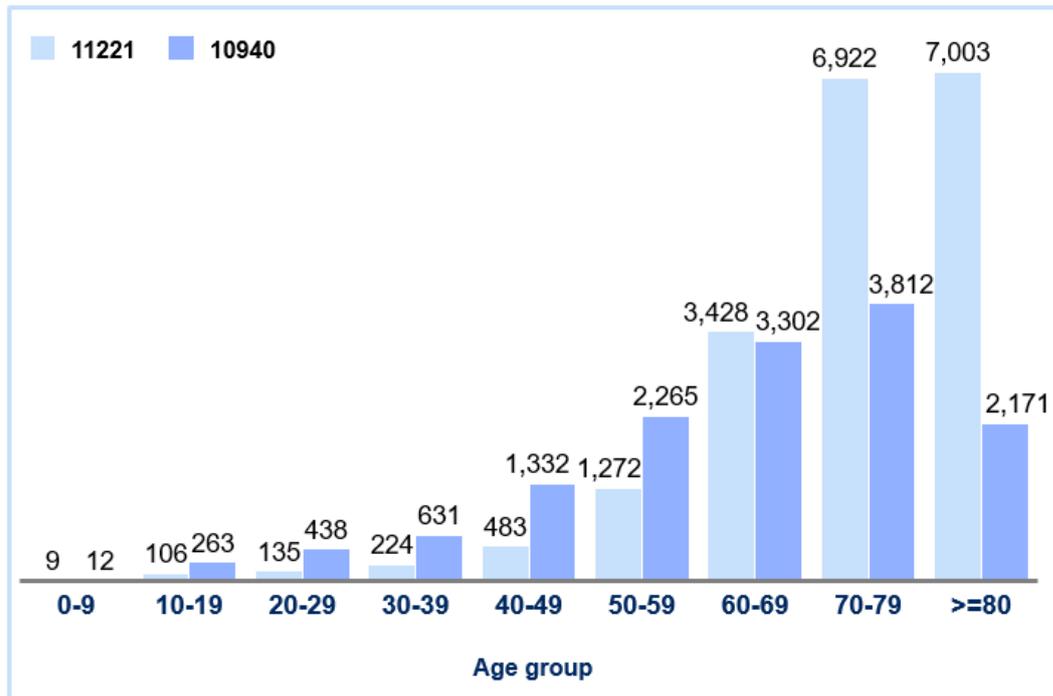
5.2.2 Rationale for Recommendation 3

This recommendation focuses on reducing low-value care. It is based on the following.

- The Committee noted that computerised perimetry services performed by ophthalmologists appear to be in line with expectations: the rate of services per capita increases exponentially with age (Figure 5), similar to glaucoma prevalence rates (based on Australian population studies)¹⁰.
- However, service rates by age and growth for optometric item 10940 do not appear to be in line with expectations. The Committee felt that this may indicate that computerised perimetry is being used as a screening tool.
 - Service growth for item 10940 was double the rate of comparable ophthalmology items (8 per cent and 4 per cent per year, respectively).
 - Servicing did not increase exponentially with age. Instead, it dropped off for patients aged 70 years and above and was higher than expected for those aged 50 and below (Figure 5).
- The Committee recognised that the optometric items are beyond its remit but wished to acknowledge the need to improve targeting of patients for testing.

This would allow for a higher rate of glaucoma assessment. It also represents an opportunity for collaborative research between ophthalmologists and optometrists to achieve the best monitoring rates for glaucoma patients, using the RANZCO guidelines (which have already been adopted by groups within the optometric profession).

Figure 5: Item 11221 versus item 10940 services per 100,000 population by age group, FY2016/17



6 Eye injection recommendations

6.1 Overview

Intravitreal eye injections are used to treat retinal conditions, predominantly age-related macular degeneration, diabetic retinopathy and retinal vein occlusions. These conditions can affect one or both eyes and often require a course of repeated intravitreal injections.

Anti- VEGF therapy injections are the most common type of intravitreal injections. They inhibit the growth of abnormal new blood vessels, and reduce leakage from blood vessels.

The two anti-VEGF drugs listed on the PBS are Lucentis (ranibizumab) and Eylea (aflibercept).

Most procedures are performed under item 42738, but 2 per cent are claimed under item 42739, which involves the provision of anaesthetic services.

The Committee noted that there is no universally accepted treatment regimen that defines a required frequency of treatment to achieve optimal visual outcomes while balancing the burden of long-term and frequent treatment.¹¹

6.2 Eye injections

Table 5 : Item introduction table for items 42738 and 42739

Item	Descriptor	Schedule fee	Benefits FY2016/17	Services FY2016/17	Services 4-year service change % (CAGR) 2012/13-2017/18
42738	Paracentesis of anterior chamber or vitreous cavity, or both, for the injection of therapeutic substances, or the removal of	\$300.75	\$118,341,850	408,516	13.5%

Item	Descriptor	Schedule fee	Benefits FY2016/17	Services FY2016/17	Services 4-year service change % (CAGR) 2012/13-2017/18
	aqueous or vitreous humours for diagnostic or therapeutic purposes, 1 or more of, as an independent procedure.				
42739	Paracentesis of anterior chamber or vitreous cavity, or both, for the injection of therapeutic substances, or the removal of aqueous or vitreous humours for diagnostic or therapeutic purposes, 1 or more of, as an independent procedure, for a patient requiring anaesthetic services. (Anaes.)	\$300.75	\$1,884,422	9,092	-6.2%

6.2.1 Recommendation 4

- Item 42738: Create two new items to replace this item.
 - These new items would specify whether the injection is administered into the left or right eye.
 - The items would retain the current descriptor for item 42738, with the additional specification of either left or right eye.

6.2.2 Rationale for Recommendation 4

This recommendation aims to improve the quality of care for patients and reduce low-value care. It is based on the following.

- MBS data does not stipulate which eye is being treated, which makes it difficult to interpret clinician behaviour and identify low-value care.
- Treatment regimens are still evolving, and per-eye data is required to assist in defining frequency criteria. MBS data shows large variation in patient treatment

frequency, and the Committee felt that the lowest and highest treatment frequencies may reflect low-value care (Figure 6).

- More than 24 injections per year for both eyes can exceed the recommended frequency supported by drug information and randomised clinical trials, assuming that only one therapeutic agent is being injected. Monthly injections are considered the maximum treatment frequency, but 0.4 per cent of patients (247) received 24 or more injections in FY2016/17.
- Fewer than three injections per year most likely indicates low-value care. In FY2016/17, 31 per cent of patients (21,222) received three or fewer injections. However, the Committee recognised that there are several valid reasons for low treatment frequency, and that this would be too difficult to monitor.

6.2.3 Recommendation 5

- Monitor treatment frequency for eye injections once per-eye data is available.
- Specifically, the Committee recommends that:
 - MBS Compliance audits clinicians who administer a very high frequency of injections (greater than 12 per eye) or have a large proportion of patients with a very low frequency of injections (three or fewer per year) and requests that these clinicians justify treatment with clinical indications.
 - RANZCO assists in determining clinically appropriate justifications for high or low frequencies of injections.

6.2.4 Rationale for Recommendation 5

This recommendation focuses on improving the quality of care for patients and reducing low-value care. It is based on the observations discussed in the rationale for Recommendation 4.

6.2.5 Recommendation 6

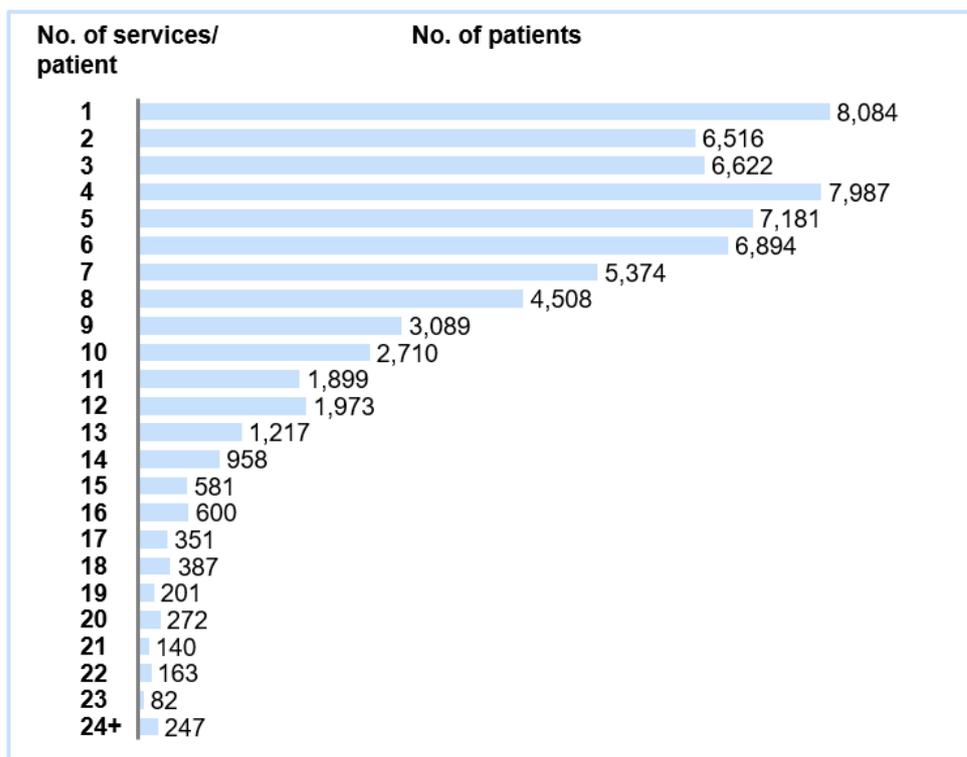
- Facilitate RANZCO education of clinicians on appropriate treatment regimens by disease type, ideally in the form of guidelines.

- A panel of experts from the Australian and New Zealand Society of Retinal Specialists could formulate clinical practice guidelines for the use of intravitreal anti-VEGF therapy.

6.2.6 Rationale for Recommendation 6

This recommendation focuses on improving the quality of care for patients and reducing low-value care. It is based on the observations discussed in the rationale for Recommendation 4.

Figure 6: Item 42738 patient count by frequency of services, FY2016/17



6.2.7 Recommendation 7

- Item 42738: Recommend this item for reclassification as a Type C procedure by the National Procedures Banding Committee, to inform its banding in the system used for private hospitals, with an exclusion for MMM regions 5, 6 and 7.
 - A Type C procedure does not normally need hospital treatment and requires clinicians to fill out a form to justify in-hospital use. The Committee agreed

that clinically justifiable reasons for in-hospital intravitreal injections include the following:

- Nystagmus or eye movement disorder.
 - Cognitive impairment precluding safe intravitreal injection without sedation.
 - Patient under the age of 18.
 - Patient unable to tolerate intravitreal injection under local anaesthetic without sedation.
 - Endophthalmitis or other inflammation requiring more extensive anaesthesia (for example, peribulbar).
- The Committee recognises that this procedure is being carried out in day surgeries because it is defined as a Type B procedure, which allows regular in-hospital use. It was also acknowledged that philosophically, for some surgeons the setting is the preferred clinically appropriate environment for the patient whether they are covered by private health funding or not.
- Item 42739: No change.

6.2.8 Rationale for Recommendation 7

This recommendation focuses on reducing low-value care. It is based on the following.

- In-hospital intravitreal injections for retinal disease such as macular degeneration should occur in fewer than 3 per cent of patients. It currently occurs in 18 per cent of patients, and this number is increasing. The Committee felt that this is largely unnecessary and may be due to financial incentives.
- RANZCO's Choosing Wisely guidelines specify that injections should not be performed in a hospital or day surgery unless there is a valid clinical indication. They can be safely performed on an outpatient basis¹² The most severe complication of intravitreal injections is infection inside the eye (endophthalmitis).¹³ Various studies have compared injections given in an outpatient setting with those performed in an operating theatre and found no significant difference in endophthalmitis rates.¹⁴

- The protocols for performing injections on an outpatient basis are detailed in guidelines developed by RANZCO for performing intravitreal therapy and include the use of standard aseptic technique, topical antiseptic in the conjunctival sac, and a face mask.¹⁵
- In the United States and the United Kingdom, eye injections are not performed in hospital unless there are exceptional circumstances (such as a general anaesthetic requirement). In the United Kingdom, injections are performed in a procedure room. In the United States, they are performed “in office”.¹⁶
- Performing these injections in a hospital or day surgery adds significant cost to the procedure with no apparent clinical benefit.¹⁷

7 Cataract surgery recommendations

7.1 Overview

The Committee considers cataract surgery to be a mature procedure with well-documented outcomes and impacts. It noted that growth is lower than population growth for ageing populations, and that there is a decline in services for patients over the age of 80, which may be due to more than 50 per cent of patients in this age group having already received cataract surgery.

The Committee identified three main issues relevant to cataract surgery:

- Rural and remote access.
- Bulk billing.
- Referral guidelines.

7.1.1 Rural and remote access

The Committee noted that there are logistical difficulties in providing eye services to rural and remote areas, particularly cataract surgery services. These servicing issues are accompanied by a higher prevalence of eye disease among rural Australians, particularly Aboriginal and Torres Strait Islander people, compared to their urban counterparts¹⁸. The rate of blindness among Aboriginal and Torres Strait Islander adults is 2.8 per cent—6.2 times the rate for the total population. The occurrence of cataract is also higher: 11 per cent of Aboriginal and Torres Strait Islander people aged over 55 report a history of cataract, compared with 7 per cent of non-Indigenous people.¹⁹

The Committee also noted that cataracts in patients from rural/remote areas are often more complex, and that clinicians experience attendance issues, both of which make the provision of services less efficient. For example, the Committee noted that clinicians in Perth see double the number of patients for the same kind of operation, compared to remote areas, despite efforts to improve the efficiency of rural/remote

service delivery. In addition, surgeries in urban areas have well trained teams who regularly work with the surgeon, whereas in rural areas, the nursing and support staff generally work across all specialties of visiting surgeons.

The Committee agreed that rural and remote servicing issues extend beyond cataract surgery and has made a general recommendation to incentivise rural and remote ophthalmology services (See Section 12.3).

7.1.2 Bulk billing

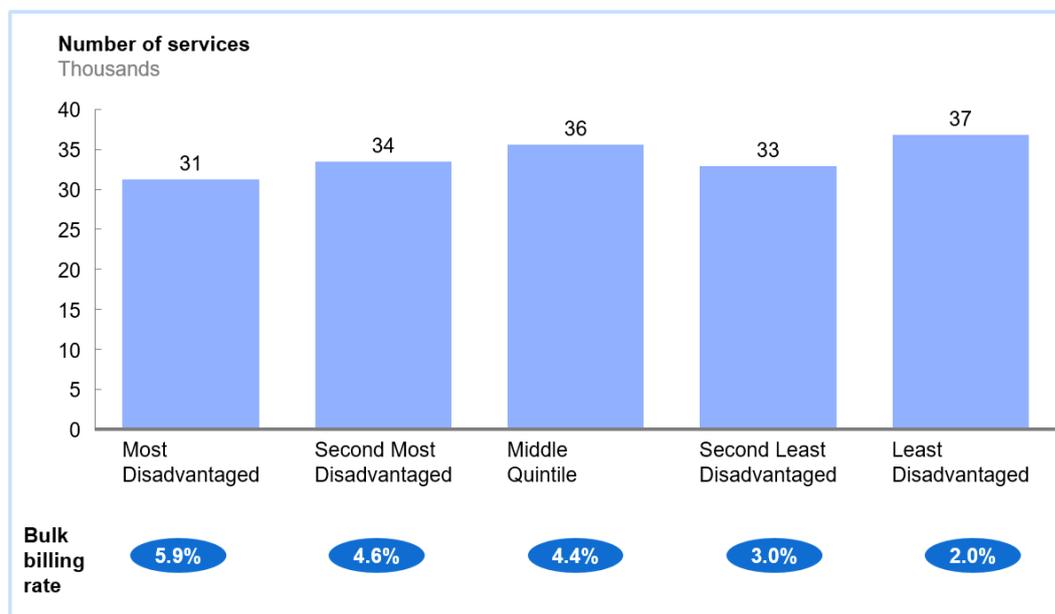
The Committee noted that the bulk-billing rate for cataract surgery is low, with an average rate of 3.5 per cent. It also noted that the bulk-billing rate only varies slightly across socio-economic groups, ranging from 2.0 per cent in the least disadvantaged group to 5.9 per cent in the most disadvantaged group in FY2015/16. This low bulk-billing rate may reflect additional costs of cataract surgery that are not covered by the MBS. These costs are usually covered by private health insurance (for example, the cost of intra-ocular lenses, theatre fees), but patients from lower socio-economic groups and/or rural and remote areas may not have private health insurance and may seek treatment in the public system instead. It was also discussed that bulk-billing rates for other high-volume surgical procedures were similarly low.

7.1.3 Referral guidelines

The Committee recognised that several jurisdictions include visual acuity (in combination with quality of life or functional capacity) in cataract surgery referral guidelines, including in Victoria, New Zealand and Sweden. However, the Committee considers the United Kingdom's National Institute for Health and Care Excellence (NICE) guidelines to be more reflective of modern practice and could be adopted more widely in Australia. These guidelines do not include Snellen visual acuity and emphasise the effects of cataract on the patient's ability to perform day-to-day activities.

The Committee considered that the use of Snellen visual acuity was a rationing mechanism and noted that this measure does not adequately represent visual function and important criteria such as contrast sensitivity and glare.

Figure 7: Item 42702 socio-economic status of patients, number of services and bulk-billing rate, FY2015/16



7.2 Cataract surgery

Table 6 : Item introduction table for item 42702

Item	Descriptor	Schedule fee	Benefits FY2016/17	Services FY2016/17	Services 5-year service change % (CAGR)
42702	Lens extraction and insertion of artificial lens, excluding surgery performed for the correction of refractive error except for anisometropia greater than 3 dioptres following the removal of cataract in the first eye (Anaes.)	\$760.65	\$98,995,528	173,193	3.1%

7.2.1 Recommendation 8

- Item 42702: No change.

7.2.2 Rationale for Recommendation 8

This recommendation focuses on aligning the MBS with modern best practice. It is based on the following.

- The Committee agreed that there are broader issues that cannot be resolved by item-level changes to the MBS and require further investigation beyond the scope of the MBS Review, as well as MBS Compliance action. For example, it acknowledged geographical variation in services and noted that RANZCO is working with the Australian Atlas of Healthcare Variation to understand the underlying issues associated with this variation. The maldistribution of ophthalmologists, like other clinicians across Australia, is one of the causes of undersupply outside major urban areas. RANZCO is implementing a regional training scheme where registrars will be based in regional locations and rotated into cities for specialist training. Health literacy of patients/consumers is also an important issues in lower socio-economic communities and rural and remote areas.
- The Committee considered both the volume of services and service growth for cataract surgery to be in line with expectations. Services per capita declined among people aged 80 and above at a rate of -0.7 per cent per year between FY2010/11 and FY2016/17. Growth is relatively low for other population groups, ranging from 0.2 per cent to 2.2 per cent per capita. The Committee agreed that this decline in services for patients over the age of 80 is probably because more than 50 per cent of patients in this age group have already received cataract surgery.
- Regarding purely refractive lens surgery, the Committee noted that occasionally an educated patient asks for a clear lens exchange surgery to be billed as a cataract surgery. This is rare and explicitly excluded in the item descriptor, but it may explain the 0.2 per cent of total services provided to patients below 40 years of age. The Committee recommends that MBS Compliance investigate

these cases, noting that there are legitimate uses of 42702 under age 40, such as premature cataract due to other ocular or systemic conditions.

7.2.3 Taskforce commentary

While the Taskforce does not intend to override the Clinical Committee’s recommendation of no change to the cataract surgery item, it considered it important to include additional facts on the cataract surgery rebate. These facts were circulated to the Clinical Committee throughout the review process.

The Taskforce noted the following facts:

- The average time to perform a cataract surgery has decreased from ~60 minutes 20 years ago, to 30 minutes today;²⁰ and
- The rebate per hour of \$1,140, is much higher than the rebate per hour of for other comparable surgical items (Figure 8):²¹ 1.7 times greater, or \$481 per hour greater, than the rebate per hour for the next comparable procedure (prostatectomy); and 2.3 times greater, or \$639 per hour greater, than the average rebate per hour based on comparable procedures.

Figure 8: Cataract surgery rebate per hour vs other comparable surgical items, FY2016/17

Cataract surgery rebate per hour vs other comparable surgical items

Procedure	Relative rebate per hour, ¹ Percent of median rebate	Number of services per year, thousands
Cataract surgery	275	173
Prostatectomy	159	11
Fibreoptic colonoscopy	141	326
Knee replacement	105	26
Hip replacement	103	18
Shoulder reconstruction	100	9
Central vein catheterisation, open	96	7
Lip, eyelid or ear excision/repair	86	8
Tonsils and/or adenoids removal	85	11
Laparoscopic appendicectomy	59	8
Femoral/inguinal hernia, laparoscopic	57	16

Criteria for selecting surgical items for comparison²

- 2,500+ procedures per year claimed independently with anaesthetic time codes
- Range of specialities and fees
- Require anaesthetic support
- Require expert knowledge of procedure technique
- Require an operating theatre
- Have common risks to patient (e.g., haemorrhage, infection, perforation)

¹ Indexed to 100% avg. Rebate/hour calculated as: time - weighted average time (excluding bottom quartile services) based on anaesthetic time code, rebate - based on average rebate per service for FY2016/17, including the impact from multiple services rule and excluding safety net benefits
² All items that meet the listed criteria represent 33% of surgical items claimed independently in more than 2,500 episodes/ear in FY2016/17

8 Obsolete item recommendations

8.1 Overview

The Committee assessed MBS items within its area of responsibility for clinical relevance, which included reviewing items with low service volumes. Based on this review, the Committee recommended removing five items from the MBS and updating one item descriptor.

The Committee noted that an additional four items are already listed for deletion, effective November 2018.

8.2 Obsolete items

Table 7 : Item introduction table for items 42741, 42524, 42593, 42783, 42786, 42789, 42792, 42806, 42807, 42808 and 43023

Item	Descriptor	Schedule fee	Benefits FY2016/17	Services FY2016/17	Services 5-year service change % (CAGR)
42741	Posterior juxtасcleral depot injection of a therapeutic substance, for the treatment of subfoveal choroidal neovascularisation due to age-related macular degeneration, 1 or more of (Anaes.)	\$300.75	\$94,331	391	-24.70%
42524	Orbit, skin graft to, as a delayed procedure (Anaes.)	\$204.60	\$-	0	-100.00%
42593	Lacrimal gland, excision of palpebral lobe (Anaes.)	\$204.60	\$153	1	-32.20%
42783	Laser trabeculoplasty - each treatment to 1 eye - where it can be demonstrated that a 5th or subsequent treatment to that eye (including any treatments to which item 42782 applies) is indicated in a 2 year period (Anaes.) (Assist.)	\$451.10	\$1,365	4	32.0%

Item	Descriptor	Schedule fee	Benefits FY2016/17	Services FY2016/17	Services 5-year service change % (CAGR)
42786	Laser iridotomy - each treatment episode to 1 eye - where it can be demonstrated that a 3rd or subsequent treatment to that eye (including any treatments to which item 42785 applies) is indicated in a 2 year period (Anaes.) (Assist.)	\$353.35	\$901	3	24.6%
42789	Laser capsulotomy—each treatment episode to one eye—if it can be demonstrated that a third or subsequent treatment to that eye (including any treatments to which item42788 applies) is indicated in a 2 year period— other than a service associated with a service to which item 42702 applies (Anaes.) (Assist.) (Anaes.) (Assist.)	\$353.35	\$605	2	0.0%
42792	Laser vitreolysis or corticolysis of lens material or fibrinolysis, excluding vitreolysis in the posterior vitreous cavity —each treatment to one eye—if it can be demonstrated that a third or subsequent treatment to that eye (including any treatments to which item42791 applies) is indicated in a 2 year period (Anaes.) (Assist.) (Anaes.) (Assist.)	\$353.35	\$9,293	25	90.4%
42806	Iris tumour, laser photocoagulation of (Anaes.) (Assist.)	\$353.35	\$1,879	8	-14.00%
42807	Photomydriasis, laser	\$355.80	\$42,773	198	15.10%
42808	Laser peripheral iridoplasty	\$355.80	\$102,344	401	34.50%
43023	Infusion of verteporfin for discontinued photodynamic therapy, where a session of therapy which would have been provided under item 43021 or 43022 has been discontinued on medical grounds.	\$88.50	\$-	0	100.00%

8.2.1 Recommendation 9

- Items 42471, 42524, 42593, 42806, 42807 and 43023: Delete items.
- Item 42808: Amend the item descriptor to incorporate laser photomydriasis by changing wording to “laser iridoplasty”.
- The Committee noted that items 42783, 42792, 42786 and 42789 are already listed for deletion, due to the disbanding of the Medicare Claims Review Panel (MCRP), effective November 2018.

8.2.2 Rationale for Recommendation 9

This recommendation focuses on aligning the MBS with modern best practice. It is based on the following.

- Item 42741
 - This item was created for a very specific mode of delivering a medication that is no longer available in Australia (anecortave acetate). This item should no longer be used. The Committee suspects it is being used for other (off-label) drugs.
- Item 42806
 - The Committee consulted with clinicians who practice ocular oncology in Australia, who confirmed that they do not use this item, and it does not have clinical merit.
- Item 42593
 - The Committee determined that this item has no clinical merit. It has very low service volumes and the ANZSOPS has recommended it for deletion.
- Items 42524 and 43023
 - The Committee determined that these items have no clinical merit, given that no services are being performed.
- Items 42807 and 42808
 - These items describe two similar procedures involving laser photocoagulation to the iris. Combining these items into a single item will streamline the MBS, with no impact on patient care, access or cost.

9 Oculoplastic and orbital item recommendations

9.1 Overview

The Committee considered the ANZSOPS' recommendations on oculoplastic and orbital items and supports several of its recommendations to modernise terminology, reflect current best practice, and avoid indication creep and inappropriate co-claiming.

9.2 Oculoplastic and orbital amendments

Table 8 : Item introduction table for items 42506, 42509, 42510, 42530, 42533, 42536, 42539, 42542, 42590, 42593, 42623, 42626, 42629, 42863 and 42866

Item	Descriptor	Schedule fee	Benefits FY2016/17	Services FY2016/17	Services 5-year service change % (CAGR)
42506	Eye, enucleation of, with or without sphere implant (Anaes.) (Assist.)	\$481.25	\$2,438	8	-29.8%
42509	Eye, enucleation of, with insertion of integrated implant (Anaes.) (Assist.)	\$609.05	\$7,783	23	-2.4%
42510	Eye, enucleation of, with insertion of hydroxy apatite implant or similar coralline implant (Anaes.) (Assist.)	\$702.05	\$21,062	40	-11.3%
42530	Orbit, exploration with or without biopsy, requiring removal of bone (Anaes.) (Assist.)	\$631.75	\$8,285	24	-6.2%
42533	Orbit, exploration of, with drainage or biopsy not requiring removal of bone (Anaes.) (Assist.)	\$406.05	\$46,521	169	6.7%
42536	Orbit, exenteration of, with or without skin graft and with or without temporalis muscle transplant (Anaes.) (Assist.)	\$834.60	\$6,694	17	-2.2%

Item	Descriptor	Schedule fee	Benefits FY2016/17	Services FY2016/17	Services 5-year service change % (CAGR)
42539	Orbit, exploration of, with removal of tumour or foreign body, requiring removal of bone (Anaes.) (Assist.)	\$1,188.20	\$33,660	45	-6.8%
42542	Orbit, exploration of anterior aspect with removal of tumour or foreign body (Anaes.) (Assist.)	\$503.85	\$26,750	82	-5.9%
42590	Canthoplasty, medial or lateral (Anaes.) (Assist.)	\$338.35	\$772,645	5,361	2.4%
42623	Dacryocystorhinostomy (Anaes.) (Assist.)	\$699.45	\$743,514	1,537	1.1%
42626	Dacryocystorhinostomy where a previous dacryocystorhinostomy has been performed (Anaes.) (Assist.)	\$1,128.05	\$156,567	195	-2.9%
42629	Conjunctivorhinostomy including dacryocystorhinostomy and fashioning of conjunctival flaps (Anaes.) (Assist.)	\$849.70	\$18,181	31	10.3%
42863	Eyelid, recession of (Anaes.) (Assist.)	\$774.55	\$463,447	879	5.5%
42866	Entropion or tarsal ectropion, repair of, by tightening, shortening or repair of inferior retractors by open operation across the entire width of the eyelid (Anaes.) (Assist.)	\$751.85	\$1,662,403	3,216	5.1%
42872	Eyebrow, elevation of, for parietic states (Anaes.) (Assist.)	\$240.70	\$70,304	404	18.5%

9.2.1 Recommendation 10

- Change the proposed item descriptors to the following:
 - Item 42506: Eye, enucleation of, without insertion of implant (anaes.) (assist.).
 - Item 42509: Eye, enucleation of, with insertion of non-integrated implant, without muscle attachment.

- Item 42510: Eye, enucleation of, with insertion of coralline or integrated implant, with attachment of at least the four rectus muscles (with or without oblique muscles) to the implant or its wrap or where myoconjunctival insertion of extraocular muscles are fashioned when another type of integrated implant is used.
- Item 42530: Orbit, exploration requiring removal of bone (orbitotomy) for access, with subsequent drainage or biopsy, including repair of any bone and/or soft tissue surgical defect, not being a service to which items 45590 or 45593 apply.
- Item 42533: Orbit, exploration of, without requiring removal of bone (orbitotomy) for access, with drainage or biopsy, including repair of any bone and/or soft tissue surgical defect.
- Item 42536: Orbit, exenteration of, including repair of any bone and/or soft tissue surgical defect, with or without skin graft and with or without temporalis muscle transplant.
- Item 42539: Orbit, exploration of, requiring removal of bone (orbitotomy) for access, for removal of tumour or foreign body (not incisional biopsy), including repair of any bone and/or soft tissue surgical defect.
- Item 42542: Orbit, exploration of, anterior aspect with removal of tumour or foreign body (not incisional biopsy), including repair of any bone and/or soft tissue surgical defect.
- Item 42590: Canthoplasty, medial or lateral, not to be used where cosmetic blepharoplasty is concurrently performed.
- Item 42623: Dacryocystorhinostomy, external or endonasal approach, including any sinus or turbinate or uncinata operation performed by same surgeon for access, with or without silicone intubation stenting.
- Item 42626: Dacryocystorhinostomy, where a previous dacryocystorhinostomy has been performed, external or endonasal approach, including any sinus or turbinate or uncinata operation performed by same surgeon for access, with or without silicone intubation/stenting.
- Item 42629: Dacryocystorhinostomy with placement of a permanent bypass tube from the conjunctival sac to the nasal cavity.

- Item 42863: Eyelid, upper or lower, recession of, by open operating on and direct release of the lid retractors, one eye.
- Item 42866: Entropion or tarsal ectropion, repair of, by tightening, shortening or repair of inferior retractors by open operation across the entire width of the eyelid – not to be used for closure of the retractors in using conjunctival approaches for performing fat pad reduction or orbital surgery.
- Item 42872: Eyebrow, direct eyebrow lift in parietic states, or in involuntal states where vision is obscured as evidenced by the resting of upper lid skin on the eyelashes in straight ahead gaze, documented photographically (anaes.).

9.2.2 Rationale for Recommendation 10

This recommendation focuses on modernising the Schedule. It is based on the following.

- Items 42506, 42509 and 42510: Changes have been made to the item descriptors to reflect current practice and terminology, as well as the relative complexity of each procedure.
- Items 42530, 42533, 42536, 42539, 42542, 42623, 42626, 42629 and 42863: Changes have been made to the item descriptors to specify the level of complexity and avoid inappropriate co-claiming.
- Items 42590 and 42866: Item descriptors have been changed to avoid indication creep.

10 Co-claiming recommendations

10.1 Overview

The Committee investigated co-claiming patterns for several items and identified inappropriate co-claiming for three items.

10.2 Co-claiming restrictions

Table 9 : Item introduction table for items 42632, 42647 and 42773

Item	Descriptor	Schedule fee	Benefits FY2016/17	Services FY2016/17	Services 5-year service change % (CAGR)
42632	Conjunctival peritomy or repair of corneal laceration by conjunctival flap (Anaes.)	\$117.35	\$8,247	113	-11.32%
42647	Corneal scars, removal of, by partial keratectomy, not being a service associated with a service to which item 42686 applies (Anaes.)	\$204.60	\$65,435	437	3.12%
42773	Detached retina, pneumatic retinopexy for, not being a service associated with a service to which item 42776 applies (Anaes.) (Assist.)	\$902.30	\$608,509	1,666	-14.4%

10.2.1 Recommendation 11

- Items 42632, 42647 and 42773: Change the item descriptors to restrict co-claiming.
 - Item 42632: Exclude co-claiming with item 42686. The proposed item descriptor is as follows:
 - Conjunctival peritomy or repair of corneal laceration by conjunctival flap, not being a service associated with a service to which item 42686 applies (Anaes.)

- Item 42647: Exclude co-claiming with item 42650. The proposed item descriptor is as follows:
 - Corneal scars, removal of, by partial keratectomy, not being a service associated with a service to which item 42686 or 42650 applies (Anaes.)
- Item 42773: Exclude co-claiming with any item. The proposed item descriptor is as follows:
 - Detached retina, pneumatic retinopexy for, as an independent procedure (Anaes.) (Assist.)

10.2.2 Rationale for Recommendation 11

This recommendation prevents inappropriate co-claiming. It is based on the following.

- Item 42632
 - MBS data indicated that this procedure was claimed with 10 different item numbers between March 1 and July 1 2017. It was primarily co-claimed with item 42686 (pterygium, removal of). The Committee considers this clinically unnecessary and inappropriate.
- Item 42647
 - MBS data indicated that this procedure was claimed with 18 different item numbers between March 1 and July 1 2017. The Committee was particularly concerned about claiming with item 42650 (cornea, epithelial debridement for corneal ulcer or corneal erosion, excluding aftercare), which was co-claimed in 11 per cent of episodes. The Committee considers this clinically unnecessary and inappropriate.
- Item 42773
 - The item descriptor was changed in November 2012 at RANZCO's suggestion, in response to suspected indication creep. Service volumes have not decreased as much as expected since that change.
 - MBS data indicated that this procedure was claimed with 23 different item numbers between March 1 and July 1 2017. It was most frequently co-claimed with item 42725 (in 95 per cent of episodes). The procedure of

pneumatic retinopexy clearly describes a specific method of retinal detachment repair which does not include vitrectomy (item 42725).

11 Telemedicine recommendations

11.1 Overview

The Committee acknowledges that telemedicine items are not within its area of responsibility, and that the Optometry Clinical Committee will determine the final recommendations. However, the Committee has suggested an approach to restructuring MBS telemedicine items for the consideration of the Optometry Clinical Committee. It noted that telemedicine has a crucial role to play in improving rural and remote eye health, given the maldistribution of the ophthalmology workforce and limited uptake in the current system.

11.2 Restructuring telemedicine items

11.2.1 Recommendation 12

- Introduce two new teleophthalmology item numbers that include asynchronous options:
 - Item A: Virtual “home visit” via telephone or video with only patient present, for optometry referrals only.
 - Item B: Asynchronous management advice via report to optometrist and patient, for optometry referrals only, with a requirement to send a formal report to the optometrist and patient.

11.2.2 Rationale for Recommendation 12

This recommendation aims to increase the uptake of telehealth services and promote a coordinated and asynchronous approach to eye health care. It is based on the following.

- The current system presents difficulties in coordination, requiring three people to be present at once. This means that if someone is running late, it affects everyone. Asynchronous health care is important and has been proven internationally to be effective in the coordination of telehealth, improving rural

and remote and elderly access and reducing patient/consumer cost due to travel and time “downstream”.

- There is significant maldistribution in the ophthalmology workforce across Australia, with 84 per cent of ophthalmologists working in metropolitan areas.²²
- Ophthalmology telehealth services have a single referral group: optometrists. This is an unusual primary care source with advanced equipment. Ophthalmologists often receive multiple scans, images or field tests in a patient referral, which require asynchronous interpretation of results.

12 General recommendations

12.1 Overview

The Committee made two general recommendations, with unanimous support. These recommendations address broad issues, rather than individual MBS items.

12.2 Ongoing review

12.2.1 Recommendation 13

- Implement an ongoing review process for all ophthalmology items, including a review of recommendations 12 months after implementation.

12.2.2 Rationale for Recommendation 13

This recommendation seeks to maintain MBS alignment with contemporary clinical practice, and to facilitate reviews of significant recommendations after implementation to ensure that the intended outcomes are achieved.

12.3 Rural and remote incentives

12.3.1 Recommendation 14

- Undertake targeted improvement of rural and remote eye services to assist in closing the gap in eye health and vision care by 2020²³. The Committee recommended that the Government implement a mechanism to cover additional costs of rural and remote service provision, and proposed three implementation options
- The Taskforce were unable to fully endorse these options, but agree on the general recommendation that the Government implement a mechanism to cover the additional costs of rural and remote service provision.

12.3.2 Rationale for Recommendation 14

This recommendation seeks to improve equity of access to eye services across Australia. It is based on the following.

- Through this recommendation, the Committee seeks to address:
 - The higher prevalence of eye disease in rural Australians compared to their urban counterparts, particularly among the Aboriginal and Torres Strait Islander population.
 - The maldistribution in the ophthalmology workforce across Australia.
 - Insufficient funding for rural/remote clinicians. Current outreach funds focus on assisting patients in accessing available health services, rather than incentivising clinicians to provide services. There is competition for funding across specialties and allied health.
 - Patient/consumer health literacy education be increased

13 New item recommendations

13.1 Overview

The Committee recommended several new items for the treatment of glaucoma. These treatments reflect modern best practice but are not currently listed on the MBS.

The Committee recognised that these procedures require ongoing assessment of clinical efficacy and appropriate practice to enable implementation and nominated Associate Professor Paul Healey and Professor Stephanie Watson to work with the Department and RANZCO on this.

RANZCO has agreed to sponsor MSAC applications for these items and will provide the necessary supporting evidence.

13.2 Glaucoma procedures

13.2.1 Recommendation 15

- Consider the creation of several new items for the treatment of glaucoma which have been proposed by Australia New Zealand Glaucoma Society (ANZGS). These new items would cover the following procedures:
 - Repair of cyclodialysis cleft.
 - Glaucoma, drainage device, removal or insertion of intraluminal stent or tying off of lumen.
 - Sutured pupiloplasty for traumatic mydriasis.
 - Conjunctival flap repair of leaking blebs.
 - 5-FU injection post filtration surgery, not associated with needling.
 - OCT diagnosis/monitoring of glaucoma, optic disc photographs.
 - Delimiting (by conjunctival incision and suturing) of bleb for dysaesthesia or over-filtration.
 - Drainage of choroidal effusions.

- Trans-conjunctival bleb compression suturing.

13.2.2 Rationale for Recommendation 15

This recommendation focuses on aligning the MBS with modern best practice. It is based on the following.

- These treatments reflect modern best practice in the Committee's view but are not currently listed on the MBS. RANZCO has agreed to sponsor MSAC applications for these items and will provide the necessary supporting evidence.
- The Committee nominated Associate Professor Paul Healey and Professor Stephanie Watson to work with the Department and RANZCO on an ongoing assessment of clinical efficacy and appropriate practice.

14 Cataract surgery and eye injections – questions from the Taskforce

14.1 Overview

The Taskforce requested that the Committee respond to three questions related to stakeholder concerns about cataract surgery and eye injection schedule fees and out-of-pocket costs.

The Taskforce recognised that while the primary focus of the MBS Review is ensuring that individual items and usage meet the definition of best practice, there is considerable scope to review and provide advice on all aspects that would contribute to a modern, transparent and responsive system.

The Committee has made two recommendations related to these questions.

14.2 Questions and recommendations

Question 1: The MBS rebate/schedule fee for cataract surgery and eye injections is higher on a time basis than other schedule items. Can this be justified?

Answer:

- The Committee considers the cataract surgery schedule fee to be justified. This schedule fee has already been reduced three times (in 1987, 1996 and 2009) and frozen since 2010; and there has been no material change in the time efficiency of cataract surgery since the late 1990s. The introduction of new technology, such as toric intra-ocular lenses, has also increased patient expectations. Responding to these expectations requires enhanced preoperative technical measurement and additional staff, equipment and infrastructure.
- The Committee considers the current eye injection schedule fee to be justified. The schedule fee underpins service delivery, particularly for patients initially treated in the overburdened public system then transferred to private ophthalmologists, and those treated in “privatised” clinics associated with public hospitals. The Committee noted that almost all intravitreal injections also

include an OCT service and consultation. The MBS only has an initial OCT item, and a subsequent consultation item number 105 can no longer be charged at the time of an intravitreal injection (effective November 1, 2017).

The Committee suggested an OCT item be introduced, to fund subsequent OCT scans, and that the eye injection schedule fee be lowered by approximately the amount of the OCT schedule fee. The Committee's reason for this was that it considered current treatment regimens to rely on the use of OCT to determine the need for / timing of intravitreal (eye) injections. The Committee notes that a further MSAC application would likely be necessary for such an item, given MSAC's recent review of OCT.

Question 2: Out-of-pocket costs for eye injections and cataract surgery are high. What can be done to reduce the financial burden on patients?

Answer:

Expanding and improving public hospital service provision through improved funding for ophthalmology staff specialists, as well as infrastructure and services themselves. This is further detailed in Recommendation 16 below.

Improving consumer knowledge of, and access to, accurate information (health literacy) regarding the costs of specialist services, as described in Recommendation 17 below.

The Committee noted the high level of variation in out-of-pocket fees charged by clinicians for the same treatment, and believes this to contribute to the high out-of-pocket levels for some patients. The MBS could further assist consumers by monitoring providers charging anomalous out-of-pocket levels.

14.2.1 Recommendation 16

- Allocate more funding for ophthalmology staff specialist positions in the public system. These positions should only be made available to ophthalmologists who will participate in the training and supervision of registrars.
- Health services research should be imbedded into any plans for the delivery of ophthalmology in the public sector. Not only should staff have roles in training

registrars, funding should also be available for health services research conducted in collaboration with the university system.

14.2.2 Rationale for Recommendation 16

This recommendation aims to reduce the financial burden on patients and improve timely access to ophthalmology services. It is based on the following.

- The Committee agreed that the public system needs to be improved in terms of capacity and efficiency to allow uninsured patients to seek timely access to cataract surgery within public hospitals.
- The Committee felt that patient concerns were mainly driven by costs that are not covered by the MBS, such as theatre and lens costs for cataract surgery. Patients without private health insurance must pay these additional costs in the private system, irrespective of the surgeon's fee.
- There is a maldistribution of Ophthalmologists, hence access for rural and regional patients is affected.
- The Committee noted the importance of providing sustainable care in the public system and felt that mandating training and supervision for any funded position would enable this.
- There is a large range of out of pocket costs between various areas of Australia/states funded privately.

14.2.3 Recommendation 17

- Provide more consumer education to increase health literacy on the costs of services. Eye health care consumers should know that they have a right to contact clinics and inquire about costs. The Committee felt that this information should not be delivered through a clinician rating tool, but that consumer education on patients' rights and options should be made available.

14.2.4 Rationale for Recommendation 17

This recommendation focuses on improving consumer knowledge and informed consent. It is based on the following.

- The Committee recognised that a lack of consumer awareness about costs and treatment options may be a market driver of high costs for consumers. The Committee awaits the recommendations of the Government’s Out-of-Pocket Committee and anticipated out-of-pocket cost website, which is currently under construction.

Question 3: Long public hospital waitlists for cataract surgery and recent workforce reports indicate ophthalmology supply issues. How should this be addressed?

Answer:

- The Committee recognised that the public system has long waitlists for ophthalmology services and lacks the resources to cope with demand. Recommendations 16 and 17 address this question.

15 Additional Taskforce Recommendations

15.1.1 Overview

Following the presentation of the recommendations of the Ophthalmology Clinical Committee to the Taskforce in November 2018, the Taskforce considered the report, and agreed to include two additional draft recommendations, relating to intravitreal injections and the ophthalmology workforce as detailed in this section.

The first recommendation relates to changes to the rebate for intravitreal injections items (items 42738, 42739 and 42740). While it was noted the Taskforce holds responsibility for final endorsed recommendations from any clinical committee it establishes under the MBS Review, the Taskforce considered it important to refer this additional recommendation back to the Clinical Committee for consideration and input, to enable members to consider the additional recommendation, including the Taskforce's rationale, prior to finalising the report.

The Chair of the Clinical Committee subsequently considered this recommendation, and provided subsequent advice to the Taskforce. It was noted that while the Chair was not prepared to endorse this recommendation, as the governing body for the Review the Taskforce is responsible for all recommendations and agreed this recommendation should proceed to public consultation. This recommendation therefore stands alongside other draft recommendations within the report, noting that it has originated from the Taskforce.

The second recommendation relates to the broader ophthalmology workforce and is in response to evidence of clinical need, maldistribution of clinicians and constraints on overall supply. This recommendation focuses on expanding the workforce able to administer intravitreal injections, to enable non-ophthalmologists to deliver this treatment, supported by international evidence of this practice and its safety.

15.1.2 Recommendation 18

- The Taskforce recommends aligning intravitreal injection items with peri/retrobulbar injections, item 18240. (The Taskforce notes that this would not preclude the intravitreal injection items to be co-claimed with a consultation.)
- Taskforce recommends creation of a new item number for Optical Coherence Tomography (OCT). The Taskforce recommends that claiming of the item be allowable up to six times per year, per patient, for management of macular degeneration.
- The Taskforce recommends that consideration be given to potential fee bundling models for ongoing management of macular degeneration.

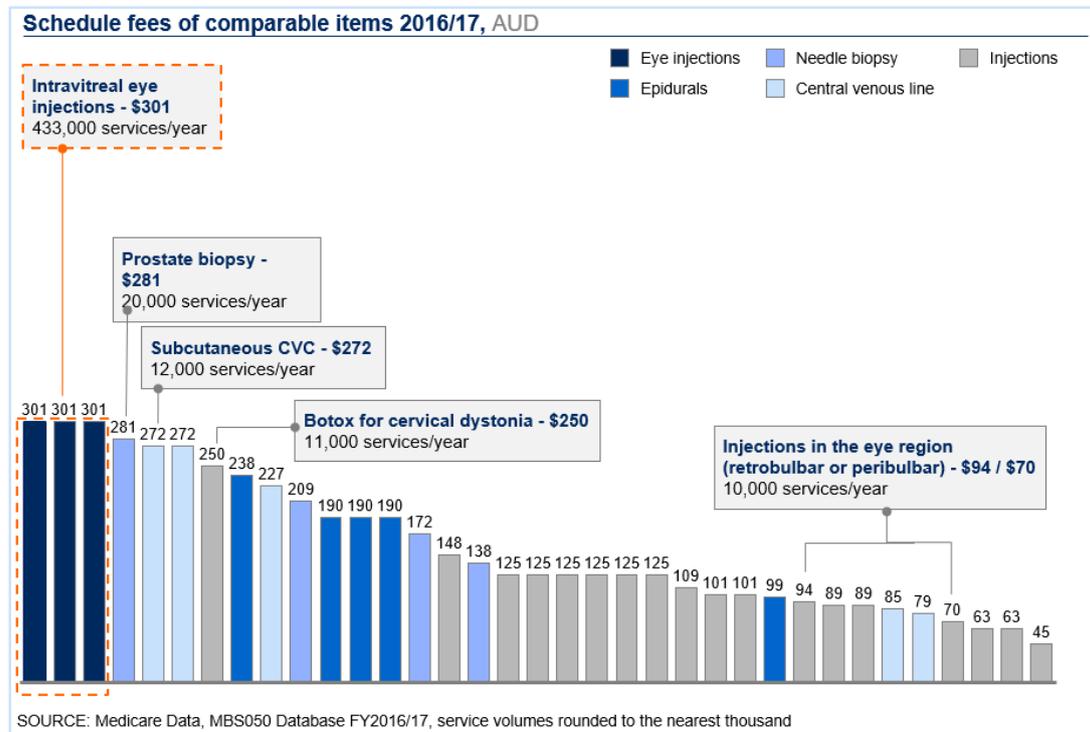
15.1.3 Rationale for Recommendation 18

The primary rationale for this recommendation is to align the relative complexity of all eye injection procedures.

- In comparing the intravitreal injection procedure to peri/retrobulbar injections, the Taskforce noted that the rebates do not reflect the relative complexities; most notably, that peri/retrobulbar injections are technically more demanding, requiring a more complex injection technique through multiple planes without direct observation of the infiltrated space, as well as comparable levels of potential complications, preparation and aftercare.
- The Taskforce recognises the importance of OCT as the standard of care for ongoing management of ocular diseases and recommends the inclusion of OCT in the MBS.

Comparisons to a broad range of injections on the MBS Schedule also indicates a significantly high Schedule fee (see Figure 9).²⁴

Figure 9 : Eye injections Schedule fee vs other comparable items



- The Taskforce also noted that international evidence suggests appropriately trained nurses, optometrists and general practitioners can safely perform intravitreal injections (see recommendation 19) whereas both the Royal Colleges of Anaesthetists and Ophthalmologists in the United Kingdom recommends that only trained anaesthetists or ophthalmologists should perform peribulbar or retrobulbar blocks because of these patients' potential co-morbidities and higher risk of ocular and systemic complications.²⁹
- The Taskforce notes in particular that intravitreal injections have been performed by specially trained nurses at the Auckland District Health Board since 2012. These clinics have been expanded over time to become standalone injection clinics run by Nurse Practitioners (NPs). The NPs assess patients, make decisions on the need for intravitreal injections and arrange for follow up. These clinics run autonomously with collaboration of Senior Medical Officers (SMOs) rather than ophthalmologists. In addition, these

clinics utilise Registered Nurse injectors with extended practice qualifications whose practice is overseen by the NPs and the SMOs. At the Auckland DHB 98% of the 16,000 intravitreal injections annually are delivered by nurses.¹ At least 50% of the remainder of NZ DHBs have also adopted this practice.

15.1.4 Recommendation 19

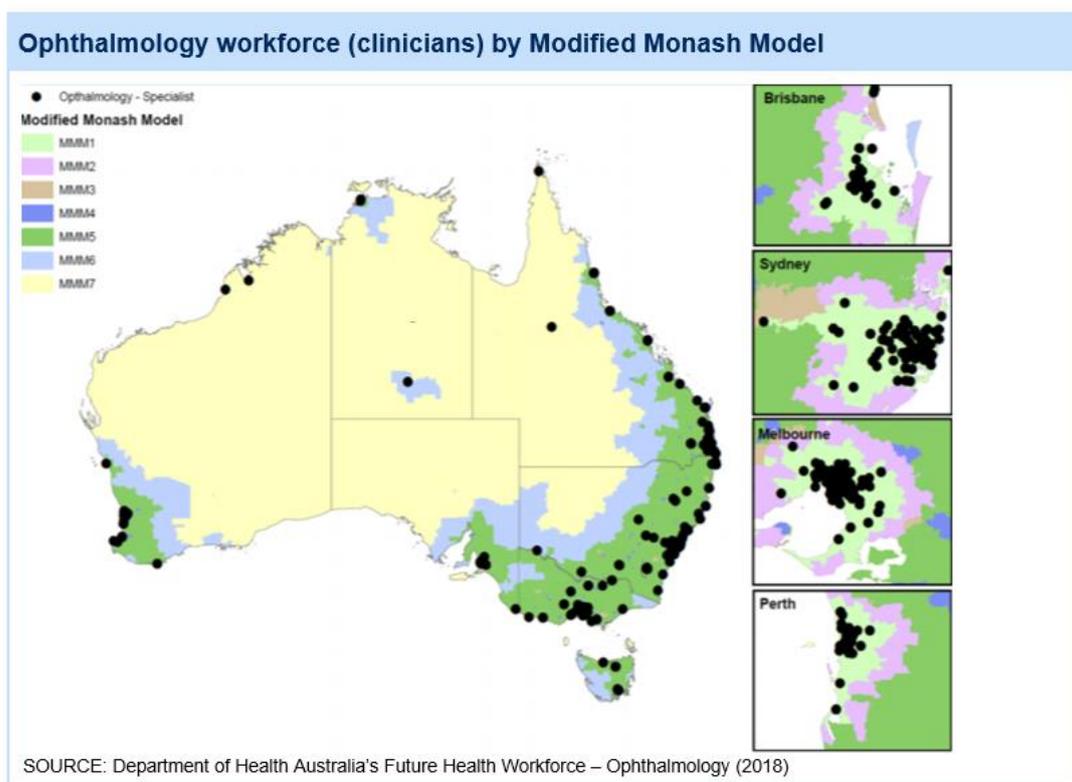
- The Taskforce recommends a review of the broader ophthalmology workforce, with a particular focus on assessing supply issues, servicing both the private and public sectors, and the benefits of expanding the workforce qualified to deliver particular ophthalmology services.
- In relation to this review, the Taskforce recommends a specific focus to assess the expansion of intravitreal injections to include appropriately trained nurse practitioners, optometrists and general practitioners, working to updated guidelines.
- The Taskforce notes that this requires Royal Australian and New Zealand College of Ophthalmologists, the Royal Australian College of General Practitioners, the Australian College of Nurse Practitioners and the Australian College of Optometry to play a role in this expansion; for example, through the release of updated guidelines specifying that trained nurse practitioners, optometrists and general practitioners may deliver this procedure, as well as by supporting appropriate training programs.

15.1.5 Rationale for Recommendation 19

- The primary rationale for this recommendation is to increase equitable and timely access to intravitreal injections across Australia, including rural and remote areas.
 - The Taskforce noted that this rationale is supported by the following:
-

- A) Ophthalmology supply issues, including workforce maldistribution and projected total undersupply
 - The Department of Health Workforce Report (2018) found there were 990 accredited ophthalmology specialists with current medical registration in 2016.³⁰ The large majority were clinicians and, of those, 83 per cent were located in Modified Monash Model 1 (major cities).³¹ Only 16 per cent of the workforce worked in the public sector. Figure 10 illustrates the MMM and density of the ophthalmology workforce within metropolitan areas.

Figure 10 : Ophthalmology workforce geographic distribution



- The Report also noted that the demand for ophthalmology services is estimated to grow at 2.8 per cent per year to 2030³², and that projections reveal an undersupply of ophthalmology specialists throughout this projection period. For these projections, supply was determined using the characteristics of the known current workforce and projecting this forward with known and projected trainee inflows and exit trends from the workforce and included public and private

utilisation patterns and population growth. In 2016, the initial year for the projections, it is assumed that supply and demand is in balance.

- Long public hospital waiting times for ophthalmology. In 2016/17, the median waiting time was 73 days, for admissions from public hospital elective surgery waiting lists for ophthalmology³³.
- International eye health workforce rates indicate Australia has 36 surgical ophthalmologists per million people, ranking it in the bottom three for OECD countries with available data. Optometry rates are reasonably high, at 184 per million³⁴.
- B) International evidence from published, peer-reviewed clinical studies demonstrates that, with the correct training and protocols in place, NP-administered intravitreal injections are as safe as ophthalmologist-delivered services
 - Nurse administration of intravitreal injections is most established in the UK National Health System (NHS), where this care delivery model has been recognised and codified by the Royal College of Ophthalmologists³⁵. Safety and outcomes have been studied in a number of peer-reviewed prospective studies and audits³⁶, and a systematic review³⁷.
 - Further, nurse-delivered intravitreal injection services have been studied (and results published in the medical literature) in Denmark³⁸ and New Zealand³⁹, and reported in Spain, Australia, Scandinavia, Singapore, and elsewhere⁴⁰. The NZ experience has been referred to under recommendation 18. It is also noted that in NZ, NPs are responsible for other Ophthalmological procedures as well, including running Macular Degeneration clinics, and Meibomian Cyst clinics, administering Botox for hemifacial spasm and giving sub-Tenons anaesthetic blocks for cataract surgery.
 - Nurse-delivered services are not typical practice in the United States, however the literature suggests that there is growing interest arising from the need to explore more cost-effective service delivery models⁴¹.

- As NP-delivered intravitreal injections have become more widespread across the UK NHS, the Royal College of Ophthalmologists (in the UK) have published best practice guidelines, based largely on the experience of Moorfields Eye Hospital NHS Foundation Trust and others. The latest update to this guidance was issued in 2018⁴².
- C) Expansion of the workforce to enable optometrists to perform eye injections in the U.S. in certain states
 - The scope of practice laws varies from state to state, allowing optometrists to administer the eye injections necessary to treat AMD⁴³.
 - For example, Georgia passed legislation to enable optometrists to perform eye injections once they had completed a specialised 30-hour injectables training program, supervised by a licensed and board-certified ophthalmologist⁴⁴.

Case study: Moorfields Eye Hospital NHS Foundation Trust, UK

Context: Moorfields was subject to the same substantial increases in demand (30%+ year-on-year increases in activity volume) and medical ophthalmologist supply constraints as other hospitals, including RD&E. As the largest specialist eye hospital in the UK, it had the capacity to take a national lead on this issue.

Implementation: The Trust implemented indemnity procedures, clinical governance and training and assessment to enable the effective roll-out of nurse practitioner administered intravitreal injections. Complications for 4,000 consecutive NP-delivered intravitreal injections were recorded over 4 months.

Outcome: Since developing the service internally, Moorfields has become a national and international training provider for enhanced nursing roles in medical retina services. There were no cases of endophthalmitis, retinal detachment, lens damage, loss of central artery perfusion, uveitis, or vitreous haemorrhage.

Case study: Royal Devon & Exeter NHS Foundation Trust (RD&E), UK

Context: Existing resources were considered insufficient to cope with the new level of ongoing demand for intravitreal injections, and neither capacity nor finance was available to increase medical staffing.

Implementation: The Clinical Governance Committee (CGC) agreed to “accept vicarious liability” on behalf of the Trust for a suitably qualified and experienced Nurse Practitioner (NP) to deliver intravitreal injections with appropriate training, supervision and assessment by the senior consultant ophthalmic surgeon. The NPs conducted the first 20 (minimum) injections under the direct supervision of the senior consultant ophthalmologist. Nurse-delivered injections were subject to clinical audit, with complication rates.

Outcome: In the first five years, 84% of intravitreal injections were delivered by NPs and this has since grown to become an almost entirely nurse-delivered service. Incidence of post-injection endophthalmitis for nurse-administered injections was 0.04%, which compares favourably to the 0.05% observed in the MARINA study, 0.1% in the ANCHOR study, and is similar to the 0.025% estimated in the British Ophthalmological Surveillance Unit survey.

Case study: New Zealand Auckland District Health Board

Rationale: Nurse-delivered services were explored in 2012 as a response to growth in demand for intravitreal injections. The Auckland District Health Board (ADHB) agreed to fund an 18-month pilot study of nurse-administered intravitreal injections in 2012, based largely on the experience of the NHS in the UK.

Implementation: Approval for the study was obtained from the Nursing Council of New Zealand, and the Chief Medical Officer and Chief Nursing Officer of the hospital where the pilot would take place. Protocols for training and indemnity were jointly developed by the Consultant Ophthalmologist leading the project, ADHB, and the University of Auckland Ophthalmology Department. Once the NPs had received initial training, the first 50 procedures were carried out under direct consultant ophthalmologist supervision. After that, the NPs carried out intravitreal injections independently, with a consultant ophthalmologist immediately available in a parallel clinic. The consultant ophthalmologist retained clinical responsibility for patients received the nurse-administered therapies. All NP-delivered intravitreal injections were recorded in an ongoing audit.

Outcome: There were no cases of retinal damage, lens damage or cataract, or central retinal artery occlusion. The rates of endophthalmitis observed were within the range of rates – 0.02% to 0.7% – reported in clinical trials of ophthalmologist-delivered intravitreal injections. After two years, >90% of all intravitreal injections (provided at the hospital) were delivered by NPs, and the volume of patients per clinic was the same for NPs as for ophthalmologists.

16 Stakeholder impact statement

Both patients/consumers and clinicians are expected to benefit from these recommendations because they address concerns regarding patient safety, appropriate use and access of care. The Committee also considered each recommendation's impact on clinician groups to ensure that any changes were reasonable and fair. However, if the Committee identified evidence of potential item misuse or safety concerns, recommendations were made to encourage best practice, in line with the overarching purpose of the MBS Review.

The changes recommended to the ophthalmology items predominantly seek to attain these goals by:

- Improving safe practices: for instance, by ensuring that retinal electrophysiology procedures are performed by appropriate providers in the correct setting; by deleting five obsolete items; and by recommending the creation of new items for the treatment of glaucoma given recent advances in technology and practice.
- Encouraging appropriate use: for instance, by monitoring the frequency of eye injections for outlier providers and limiting in-hospital treatment to appropriate cases, and introducing co-claiming restrictions for three items.
- Improving access to care: for instance, by incentivising provision of services in rural and remote areas and for Indigenous populations.

Appendix A Summary for consumers

This table describes the medical service, the recommendation(s) of the clinical experts and why the recommendation(s) has been made.

Recommendation 1: Amend the item descriptors to restrict use to Ophthalmologists by incorporating the following wording: “performed by or on behalf of a specialist practising in his or her speciality of Ophthalmology.”

Item	What it does	Committee recommendation	What would be different	Why
11204	Electroretinography is used to diagnose diseases of the retina including retinitis and hereditary conditions and diabetic retinopathy. It measures the electrical responses of cell types in the retina and requires specialized training and equipment to conduct the test and interpret results. This is performed on one or both eyes.	The committee recommend changing the item to restrict use to by or on behalf of Ophthalmologists, only.	Item could only be claimed by or on behalf of Ophthalmologists	The item is currently being claimed by clinicians other than ophthalmologists, potentially exposing patients to unnecessary risks and expense. This procedure should be performed in a specialized electrophysiology centre, currently located in Melbourne, Sydney, Brisbane, Adelaide and Perth, according to standards set by the International Society for Clinical Electrophysiology of Vision. (ISCEV)

Item	What it does	Committee recommendation	What would be different	Why
11205	<p>Electrooculography measures the movement of the eye through electrodes either above or below the eye.</p> <p>This is performed on one or both eyes.</p>	<p>The committee recommend changing the item to restrict use to by or on behalf of Ophthalmologists, only.</p>	<p>Item could only be claimed by or on behalf of Ophthalmologists,</p>	<p>To reduce inappropriate use as the committee noted a higher number of specialty clinicians claiming this item, with only 1 per cent claimed by Ophthalmologists. This procedure should be performed in a specialized electrophysiology centre, currently located in Melbourne, Sydney, Brisbane, Adelaide and Perth, according to standards set by the International Society for Clinical Electrophysiology of Vision. (ISCEV)</p>
11211	<p>Dark adaptometry is a process of measuring the way the eye recovers from sensitivity to dark, when going from light to dark conditions.</p> <p>This is done on one for both eyes for 45 minutes of dark adaptations.</p>	<p>The committee recommend changing the item to restrict use to by or on behalf of Ophthalmologists, only.</p>	<p>Item could only be claimed by or on behalf of Ophthalmologists,</p>	<p>To reduce inappropriate use as the committee noted this item was being claimed by clinicians other than ophthalmologists. This procedure should be performed in a specialized electrophysiology centre, currently located in Melbourne, Sydney, Brisbane, Adelaide and Perth, according to standards set by the International Society for Clinical Electrophysiology of Vision. (ISCEV)</p>

Recommendation 2: Amend the item descriptor to restrict GP and non-specialist use by incorporation the following wording: “performed by or on behalf of a specialist or consultant physician in the practice of his or her speciality.”

Item	What it does	Committee recommendation	What would be different	Why
11210	Pattern Electroretinography of 1 or both eyes, including 3 or more studies performed according to current professional guidelines or standards.	Change the description to restrict to GP and non-specialist use.	Item could only be claimed by specialists and ophthalmologists who have the requisite training and equipment.	To ensure appropriate quality care and use by limiting use of this item to specialists and ophthalmologists who have the equipment and expertise to perform and interpret the test.

Recommendation 3: No change to computerised perimetry

Item	What it does	Committee recommendation	What would be different	Why
11221, 11222, 11224 and 11225	Items relating to perimetry which measures a person’s field of vision.	No change.	All items in this category remain the same.	The committee notes that these items performed by Ophthalmologists are in line with expectations. The items currently reflect best practice. The Committee noted the relatively higher growth of computerised perimetry services conducted by optometrists and recommended this be subject to review.

Recommendation 4: Create two new items to replace item 42738

Item	What it does	Committee recommendation	What would be different	Why
42738	Paracentesis of anterior chamber is a technique to reduce fluid pressure inside the eye, either via injection of substances of removal of fluids. For diagnostic or therapeutic purposes, 1 or more as an independent procedure.	Recommend there be an item for the right eye and an item for the left eye.	The item will specify which eye.	Medicare doesn't currently report on the data which identifies which eye is being treated. This change will enable monitoring of item use.
42739	Paracentesis of anterior chamber is a technique to reduce fluid pressure inside the eye, either via injection of substances of removal of fluids. For diagnostic or therapeutic purposes, 1 or more as an independent procedure. For patients requiring anaesthetic services.	Recommend there be an item for the right eye and an item for the left eye.	The item will specify which eye.	Medicare reporting doesn't currently identify which eye is being treated. This change will enable monitoring of item use.

Recommendation 7: Item 42738 to be reclassified as a Type C procedure by the NPBC, with an exclusion for Modified Monash Model 5,6,7.

Item	What it does	Committee recommendation	What would be different	Why
42738	Paracentesis of anterior chamber is a technique to reduce fluid pressure inside the eye, either via injection of substances or removal of fluids. For diagnostic or therapeutic purposes, 1 or more as an independent procedure.	A type C Procedure does not normally need in hospital treatment and requires providers to fill out a form to justify hospital use.	The process would not be performed in a hospital or day surgery without prior approval.	To support best practice. In the majority of cases this procedure should be performed / provided out of hospital, unless the patient has a disability and / or is extremely anxious. Performing the procedure in a hospital or day surgery adds significant cost with no clinical benefit. The clinician may however prefer to provide the treatment in a day hospital setting as a preference

Recommendation 8: No change to item 42702

Item	What it does	Committee recommendation	What would be different	Why
42702	Removal of the lens and insertion of an artificial lens. This item excludes surgery performed for the correction of a refractive error (where the shape of the eye makes it difficult to focus on light). An exception is anisometropia (where two eyes have unequal refractive power) following the removal of a cataract in the first eye.	No change.	No change.	The Committee considered the volume of service and service growth to be in line with expectations of demographic trends.

Recommendation 9: Items for deletion

Item	What it does	Committee recommendation	What would be different	Why
42741	Injection of a therapeutic substance, for the treatment of age-related macular degeneration.	The committee recommends this item for deletion.	Item is no longer accessible.	This item was created for a very specific mode of delivering a medication that is no longer available in Australia. This item is for a service that should no longer be used.
42524	A skin graft to the eye socket.	The committee recommends this item for deletion.	Item is no longer accessible.	The Committee determined that this item is no longer best practice or current.

Item	What it does	Committee recommendation	What would be different	Why
42593	Removal of part of the lacrimal (tear producing) gland.	The committee recommends this item for deletion.	Item is no longer accessible.	The Committee determined that this treatment and item is no longer best practice or current. It has very low service volumes and is recommended it for deletion.
42806	Iris tumour, laser photocoagulation (surgery to shrink or destroy abnormal structures in the retina).	The committee recommends this item for deletion.	Item is no longer accessible.	The Committee consulted with clinicians who practice ocular oncology in Australia, who confirmed that this item is no longer best practice or current.
42807	Photomydriasis, laser, is a procedure to enlarge constricted pupils in open angle glaucoma. Open Angle Glaucoma is where the eyes drainage canals are become clogged causing damage to the optic nerve.	The committee recommends this item for deletion.	Item is no longer accessible.	This item will be combined with 42808 into a single item, with no impact on patient care, access or cost.
42808	Laser peripheral iridoplasty, a treatment for angle closure glaucoma. Angle closure glaucoma is where there is a rapid build-up of fluid inside the eye creating pressure.	The committee recommends that laser iridoplasty (currently item 42807) be combined into this item to form a new item 42808.	Item is no longer accessible.	This item will be expanded to include the old item 42807, with no impact on patient care, access or cost.

Item	What it does	Committee recommendation	What would be different	Why
43023	This item describes a laser procedure to treat the abnormal growth of leaky blood vessels in the eye caused by macular degeneration.	The committee recommends this item for deletion.	Item is no longer accessible.	The Committee determined that this item is no longer clinically best practice or current.

Recommendation 10: Amending the proposed item descriptors

Item	What it does	Committee recommendation	What would be different	Why
42506	The removal of the eye that leaves the eye muscles and surrounding orbital contents in place, with or without sphere implant.	The Committee recommends updating the wording to read, 'Eye, enucleation of, without insertion of implant (anaes.) (assist)'	The item would now specify without sphere implant.	Item descriptors should specify the nature of the service provided to avoid inappropriate claiming. This wording will reflect current practice and terminology, as well as the relative complexity of the procedure.
42509	The removal of the eye that leaves the eye muscles and surrounding orbital contents in place with insertion of integrated implant.	The Committee recommends updating the wording to read, 'Eye, enucleation of, with insertion of non-integrated implant, without muscle attachment'.	Change to the MBS item descriptor to reflect current practice and quality care for patients.	Item descriptors should specify the nature of the service provided to avoid inappropriate claiming. This wording will reflect current practice and terminology, as well as the relative complexity of the procedure.

Item	What it does	Committee recommendation	What would be different	Why
42510	The removal of the eye that leaves the eye muscles and surrounding orbital contents in place, with insertion of hydroxyapatite implant (made of calcium phosphate) or similar coralline implant (made of manufactured marine coral).	The Committee recommends updating the wording to read, 'Eye, enucleation of, with insertion of coralline or integrated implant, with attachment of at least the four rectus muscles (with or without oblique muscles) to the implant or its wrap or where myoconjunctival insertion of extraocular muscles are fashioned when another type of integrated implant is used'.	Change to the MBS item descriptor to reflect current practice and quality care for patients.	Item descriptors should specify the nature of the service provided to avoid inappropriate claiming. This wording will reflect current practice and terminology, as well as the relative complexity of the procedure.
42530	An exploration of the eye socket with or without biopsy, requiring removal of bone.	The Committee recommends updating the wording to read, 'Orbit, exploration requiring removal of bone (orbitotomy) for access, with subsequent drainage or biopsy, including repair of any bone and/or soft tissue surgical defect, not being a service to which items 45590 or 45593 apply'.	Change to the MBS item descriptor to reflect current practice and quality care for patients.	To specify the level of complexity, define procedure and avoid inappropriate claiming of this item.
42533	An exploration of the eye socket with drainage or biopsy not requiring removal of bone.	The Committee recommends updating the wording to read, 'Orbit, exploration of, without requiring removal of bone (orbitotomy) for access, with drainage or biopsy, including repair of any bone and/or soft tissue surgical defect'.	Change to the MBS item descriptor to reflect current practice and quality care for patients.	To specify the level of complexity, define procedure and avoid inappropriate claiming of this item.

Item	What it does	Committee recommendation	What would be different	Why
42536	The removal of the eyeball and surrounding tissues, with or without skin graft and with or without temporalis muscle transplant.	The Committee recommends updating the wording to read, 'Orbit, exenteration of, including repair of any bone and/or soft tissue surgical defect, with or without skin graft and with or without temporalis muscle transplant'.	Change to the MBS item descriptor to reflect current practice and quality care for patients.	To specify the level of complexity, define procedure and avoid inappropriate claiming of this item.
42539	An exploration of the eye socket with removal of tumour or foreign body, requiring removal of bone.	The Committee recommends updating the wording to read, 'Orbit, exploration of, requiring removal of bone (orbitotomy) for access, for removal of tumour or foreign body (not incisional biopsy), including repair of any bone and/or soft tissue surgical defect'.	Change to the MBS item descriptor to reflect current practice and quality care for patients.	To specify the level of complexity, define the procedure and avoid inappropriate claiming of this item.
42542	The exploration of the eye socket and front third of the eye with removal of tumor or foreign body.	The Committee recommends updating the wording to read, 'Orbit, exploration of, anterior aspect with removal of tumour or foreign body (not incisional biopsy), including repair of any bone and/or soft tissue surgical defect'.	Change to the MBS item descriptor to reflect current practice and quality care for patients.	To specify the level of complexity, define procedure and avoid inappropriate claiming of this item.

Item	What it does	Committee recommendation	What would be different	Why
42590	Canthoplasty is a procedure to create an upward slant in the outer corner of the eyelid. Medial or lateral.	The Committee recommends updating the wording to read, 'Canthoplasty, medial or lateral, not to be used where cosmetic blepharoplasty is concurrently performed'.	Change to the MBS item descriptor to reflect current practice and quality care for patients.	To avoid inappropriate use of this item.
42623	Dacryocystorhinostomy is a surgical procedure to restore the flow of tears into the nose and eliminate fluid retention.	The Committee recommends updating the wording to read, 'Dacryocystorhinostomy, external or endonasal approach, including any sinus or turbinate or uncinat operation performed by same surgeon for access, with or without silicone intubation stenting'.	Change to the MBS item descriptor to reflect current practice and quality care for patients.	To specify the level of complexity, define procedure and avoid inappropriate claiming of this item.
42626	Dacryocystorhinostomy where a previous dacryocystorhinostomy has been performed. Dacryocystorhinostomy is a surgical procedure to restore the flow of tears into the nose and eliminate fluid retention.	The Committee recommends updating the wording to read, 'Dacryocystorhinostomy, where a previous dacryocystorhinostomy has been performed, external or endonasal approach, including any sinus or turbinate or uncinat operation performed by same surgeon for access, with or without silicone intubation/stenting'.	Change to the MBS item descriptor to reflect current practice and quality care for patients.	To specify the level of complexity, define procedure and avoid inappropriate claiming of this item.

Item	What it does	Committee recommendation	What would be different	Why
42629	<p>Conjunctivorhinostomy is the surgical creation of a passage through the front surface of the eye to the nasal cavity including dacryocystorhinostomy and fashioning of conjunctival flaps.</p> <p>Dacryocystorhinostomy is a surgical procedure to restore the flow of tears into the nose and eliminate watering of the eye.</p> <p>A conjunctival flap is a thin flap used to cover the passage into the nose</p>	<p>The Committee recommends updating the wording to read, 'Dacryocystorhinostomy with placement of a permanent bypass tube from the conjunctival sac to the nasal cavity'.</p>	<p>Change to the MBS item descriptor to reflect current practice and quality care for patients.</p>	<p>To specify the level of complexity, define procedure and avoid inappropriate claiming of this item.</p>
42863	<p>Recession of the eyelid.</p>	<p>The Committee recommends updating the wording to read, 'Eyelid, upper or lower, recession of, by open operating on and direct release of the lid retractors, one eye'.</p>	<p>Change to the MBS item descriptor to reflect current practice and quality care for patients.</p>	<p>To specify the level of complexity, define procedure and avoid inappropriate claiming of this item.</p>

Item	What it does	Committee recommendation	What would be different	Why
42866	Entropion is a condition where the eyelid turns inwards. This item covers repair of this through tightening, shortening or repair of inferior retractors by open operation across the entire width of the eyelid (Anaes.) (Assist.)	The Committee recommends updating the wording to read, 'Entropion or tarsal ectropion, repair of, by tightening, shortening or repair of inferior retractors by open operation across the entire width of the eyelid – not to be used for closure of the retractors in using conjunctival approaches for performing fat pad reduction or orbital surgery'.	Change to the MBS item descriptor to reflect current practice and quality care for patients.	To ensure appropriate claiming of this item and support quality care for patients.
42872	Elevation of the eyebrow for paretic states (a paretic state is where an area is partially paralyzed)	The Committee recommends updating the wording to read, 'Eyebrow, direct eyebrow lift in paretic states, or in involuntal states where vision is obscured as evidenced by the resting of upper lid skin on the eyelashes in straight ahead gaze, documented photographically'.	Change to the MBS item descriptor to reflect current practice and quality care for patients.	To ensure appropriate claiming of this item and support quality care for patients.

Recommendation 11: Co-Claiming Restrictions

Item	What it does	Committee recommendation	What would be different	Why
42632	Conjunctival peritomy is where a strip of the conjunctiva (the clear, thin membrane that covers part of the front surface of the eye and the inner surface of the eyelids) of an eye is removed, or repair of corneal laceration (cut on the clear front window of the eye) by conjunctival flap (a biologic patch, to restore a damaged corneal surface).	The Committee recommends changing the item descriptor to restrict co-claiming with item 42686. The item would read, 'Conjunctival peritomy or repair of corneal laceration by conjunctival flap, not being a service associated with a service to which item 42686 applies (Anaes.)'	Change to the MBS item claiming restrictions would ensure item is claimed appropriately.	To ensure appropriate claiming of this item and support quality care for patients.
42647	Removal of corneal scars by partial keratectomy – a removal of the layer of the cornea, usually by laser. Not associated with a service where item 42686 applies	The Committee recommends changing the item descriptor to restrict co-claiming with item 42650. The item would read, 'Corneal scars, removal of, by partial keratectomy, not being a service associated with a service to which item 42686 or 42650 applies (Anaes.)'	Change to the MBS item claiming restrictions would ensure item is claimed appropriately.	To ensure appropriate claiming of this item and support quality care for patients.

Item	What it does	Committee recommendation	What would be different	Why
42773	Pneumatic retinopexy, is a procedure to correct a detached retina using gas bubbles, not associated with a service where item 42776 applies.	<p>The Committee recommends changing the item descriptor to restrict co-claiming with any other item.</p> <p>The committee recommends updating the wording to read, 'Detached retina, pneumatic retinopexy for, as an independent procedure (Anaes.) (Assist.)'</p>	Change to the MBS item claiming restrictions would ensure item is claimed appropriately.-	To ensure appropriate claiming of this item and support quality care for patients.

Recommendation 12: Restructuring Telemedicine items

Item	What it does	Committee recommendation	What would be different	Why
New Item	Virtual 'home visit' via telephone or video with only the patient present, for optometry referrals only.	This recommendation aims to increase patient access via the uptake of telehealth services and promote a coordinated and asynchronous Asynchronous communication is a method of segmented communication, where both parties involved can interact with each other at different times that are appropriate for them. This includes taking of photos of the eye in remote communities, storing them into a secure drop box with other similar photos, awaiting to be reviewed by a clinician who checks the photos at a time that is suitable to them.	The current system presents difficulties in coordination, requiring three people to be present at once. This means that if someone is running late, it affects everyone. Asynchronous health care has been proven internationally to be effective in the coordination of telehealth.	To improve patient care with a coordinated approach and provide greater access for patients in rural and remote areas and in instances where they cannot reach an ophthalmologist in person.

Item	What it does	Committee recommendation	What would be different	Why
New Item	Management advice provided via a report to the optometrist and patient, for optometry referrals only. With a requirement to also send a formal report to the optometrist and patient.	This recommendation aims to increase the access to and uptake of telehealth services and promote a coordinated and asynchronous (where multiple things are) approach to eye health care.	Telehealth services will provide greater access for patients in rural and remote areas and in instances where they cannot reach an ophthalmologist in person	To improve patient care with a coordinated approach, and to enable rural and remote access to co-ordinated patient care.

Recommendation 13: Ongoing review process

Item	What it does	Committee recommendation	What would be different	Why
N/A	N/A	The committee recommends the implementation of an ongoing review process for all ophthalmology items.	All ophthalmology items and recommendations will be reviewed, including all recommendations 12 months after implementation.	To maintain MBS alignment with contemporary clinical practice, and to facilitate reviews of significant recommendations.

Recommendation 14: Rural and remote incentives

Item	What it does	Committee recommendation	What would be different	Why
N/A	N/A	The Committee recommends that the Government implement a mechanism to cover additional costs of rural and remote service provision.	Targeted improvement of rural and remote eye services to assist in closing the gap in eye health and vision care by 2020.	To improve equity of access to eye services across Australia, given the maldistribution of the ophthalmology workforce, and higher prevalence of eye disease and insufficient funding in rural and remote areas.

Recommendation 15: Create new items for the treatment of glaucoma

Item	What it does	Committee recommendation	What would be different	Why
New Item	<p>Repair of cyclodialysis cleft.</p> <p>A cleft occurs where there is a separation of the muscles behind the eye.</p>	<p>Create a new item</p> <p>The committee recommends these items be introduced to provide treatment for glaucoma.</p>	<p>Consumers will have access to best practice treatments for glaucoma.</p>	<p>This item reflects current best practice and creates MBS access to patients for glaucoma treatment.</p>
New Item	<p>Glaucoma (a group of eye diseases where vision is lost due to damage to the optic nerve), drainage device, removal or insertion of intraluminal stent (a tiny tube inserted into a blocked passageway to keep it open) or tying off of lumen (tube such as a blood vessel or cavity).</p>	<p>Create a new item</p> <p>The committee recommends these items be introduced to provide treatment for glaucoma.</p>	<p>Consumers will have access to best practice treatments for glaucoma.</p>	<p>This item reflects current best practice and creates MBS access to patients for glaucoma treatment.</p>
New Item	<p>Sutured pupiloplasty for traumatic mydriasis.</p> <p>This is a procedure to the repair the iris which has become dilated and is not reacting properly to light.</p>	<p>Create a new item</p> <p>The committee recommends this item be introduced to provide treatment for glaucoma.</p>	<p>Consumers will have access to best practice treatments for glaucoma.</p>	<p>This item reflects current best practice and creates MBS access to patients for glaucoma treatment.</p>

Item	What it does	Committee recommendation	What would be different	Why
New Item	Conjunctival flap repair of leaking blebs (a blister like fluid collection).	Create a new item. The committee recommends this item be introduced to provide treatment for glaucoma.	Consumers will have access to best practice treatments for glaucoma.	This item reflects current best practice and creates MBS access to patients for glaucoma treatment.
New Item	5-FU is a chemotherapy drug injection given post filtration surgery where a small channel is created to direct fluid away from the eye, not associated with needling.	Create a new item The committee recommends this item be introduced to provide treatment for glaucoma.	Consumers will have access to best practice treatments for glaucoma.	This item reflects current best practice and creates MBS access to patients for glaucoma treatment.
New Item	Optical Coherence Tomography (OCT - is a non-invasive imaging test using light waves to take cross-section pictures of your retina) diagnosis and monitoring of glaucoma (a group of eye diseases where vision is lost due to damage to the optic nerve), optic disc photographs.	Create a new item The committee recommends this item be introduced to provide treatment for glaucoma.	Consumers will have access to best practice treatments for glaucoma.	This item reflects current best practice and creates MBS access to patients for glaucoma treatment.

Item	What it does	Committee recommendation	What would be different	Why
New Item	Determining the limits of a bleb (a blister like fluid collection) for dysaesthesia (painful or burning) through cutting through the conjunctiva (membrane that covers the front of the eye).	Create a new item The committee recommends this item be introduced to provide treatment for glaucoma.	Consumers will have access to best practice treatments for glaucoma.	This item reflects current best practice and creates MBS access to patients for glaucoma treatment.
New Item	Drainage of choroidal effusions. Choroidal effusions are a build-up of fluid between the blood vessel layer in the eye and the white outer covering of the eye and can occur after glaucoma surgery.	Create a new item The committee recommends this item be introduced to provide treatment for glaucoma.	Consumers will have access to best practice treatments for glaucoma.	This item reflects current best practice and creates MBS access to patients for glaucoma treatment.
New Item	A trans-conjunctival bleb is a blister like fluid collection across the membrane that covers the front of the eye. This item covers the compression suturing of this condition.	Create a new item The committee recommends this item be introduced to provide treatment for glaucoma.	Consumers will have access to best practice treatments for glaucoma.	This item reflects current best practice and creates MBS access to patients for glaucoma treatment.

Recommendation 16: Increase funding for ophthalmology in the public system

Item	What it does	Committee recommendation	What would be different	Why
N/A	N/A	The recommendation is to allocate more funding to ophthalmology staff specialists in the public system.	These positions would only be made available to ophthalmologists who will participate in the training and supervision of registrars, and health services research would be embedder into care delivery.	There are long waiting lists in some public hospitals, low levels of bulk billing for some privately provided services and considerable out of pocket costs that have to be borne by patients. Training additional clinicians may reduce the financial burden on patients and improve timely access to ophthalmology services.

Recommendation 17: Improve consumer education

Item	What it does	Committee recommendation	What would be different	Why
N/A	N/A	The recommendation is to provide more consumer education on the costs of eye health services, patient's rights to information and comparison of costs. In addition, health product literacy programmes should be increased to raise awareness amongst consumers about which private health fund/schedule offers cover for their health and medical need, in the setting they seek.	Information would be delivered to consumers on patients' rights and options for eye health care, in addition to costing ranges on the Government's Out of Pocket costs web site.	Current lack of consumer awareness about costs and treatment options may be a market driver of high costs for consumers. Consumers need advice and support in considering their treatment options, risks and potential costs of treatment, and to make decisions according to their needs and preferences.

17 Glossary

Term	Description
ACT	Australian Capital Territory
Anti-VEGF	Anti-vascular endothelial growth factor
ANZOPS	Australian and New Zealand Society of Ophthalmic Plastic Surgeons
ASO	Australian Society of Ophthalmology
CAGR	Compound annual growth rate or the average annual growth rate over a specified time period.
Change	When referring to an item, "change" describes when the item and/or its services will be affected by the recommendations. This could result from a range of recommendations, such as: (i) specific recommendations that affect the services provided by changing item descriptors or explanatory notes; (ii) the consolidation of item numbers; and (iii) splitting item numbers (for example, splitting the current services provided across two or more items).
Delete	Describes when an item is recommended for removal from the MBS and its services will no longer be provided under the MBS.
DVA	Department of Veterans' Affairs
FY	Financial year
GP	General practitioner
High-value care	Services of proven efficacy reflecting current best medical practice, or for which the potential benefit to consumers exceeds the risk and costs.
Inappropriate use / misuse	The use of MBS services for purposes other than those intended. This includes a range of behaviours, from failing to adhere to particular item descriptors or rules through to deliberate fraud.
ISCEV	International Society for Clinical Electrophysiology of Vision
IVI	Intravitreal injection

Low-value care	Services that evidence suggests confer no or very little benefit on consumers; or for which the risk of harm exceeds the likely benefit; or, more broadly, where the added costs of services do not provide proportional added benefits.
MBS	Medicare Benefits Schedule
MBS item	An administrative object listed in the MBS and used for the purposes of claiming and paying Medicare benefits, consisting of an item number, service descriptor and supporting information, schedule fee and Medicare benefits.
MBS service	The actual medical consultation, procedure or test to which the relevant MBS item refers.
Misuse (of MBS item)	The use of MBS services for purposes other than those intended. This includes a range of behaviours, from failing to adhere to particular item descriptors or rules through to deliberate fraud.
MMM	Modified Monash Model
MSAC	Medical Services Advisory Committee
MSR	Multiple Services Rule
New service	Describes when a new service has been recommended, with a new item number. In most circumstances, new services will need to go through the MSAC. It is worth noting that implementation of the recommendation may result in more or fewer item numbers than specifically stated.
NICE	National Institute for Health and Care Excellence
No change or leave unchanged	Describes when the services provided under these items will not be changed or affected by the recommendations. This does not rule out small changes in item descriptors (for example, references to other items, which may have changed as a result of the MBS Review or prior reviews).
OCT	Optical Coherence Tomography
Obsolete services / items	Services that should no longer be performed as they do not represent current clinical best practice and have been superseded by superior tests or procedures.
PBS	Pharmaceutical Benefits Scheme
RANZCO	Royal Australian and New Zealand College of Ophthalmologists

Store and Forward	Store-and-Forward Telehealth involves the acquisition and storing of clinical information (e.g. data, image, sound, video) that is then forwarded to (or retrieved by) another site for clinical evaluation
The Committee	The Ophthalmology Clinical Committee of the MBS Review
The Minister	Minister for Health
The Taskforce	The MBS Review Taskforce
Total benefits	Total benefits paid in 2016/17 unless otherwise specified.



18 References

- 1) The Modified Monash Model (MMM) is a recently developed geographical classification system, using up-to-date population data, which the Government can use to better address the maldistribution of medical services across Australia.
- 2) Vision 2020 Australia, in collaboration with 14 organisations working in Aboriginal and Torres Strait Islander eye health, is calling on the Australian Government to build on its commitment to close the gap in eye health and vision care.
- 3) The Taskforce notes that the first consumer concerns raised during the MBS Review process were about cataract surgery out-of-pocket costs. The Department has received numerous eye injection complaints throughout the MBS Review process.
- 4) OCT is a non-invasive imaging technique used for diagnosis and/or treatment guidance for conditions including retinal disease and assessment and monitoring of glaucoma.
- 5) Over 150 potentially low-value health care practices: an Australian study. Elshaug, Adam, et al. 2012, *The Medical Journal of Australia*, pp. 556-560.
- 6) The use of an intervention that evidence suggests confers no or very little benefit on patients; or where the risk of harm exceeds the likely benefit; or, more broadly, where the added costs of the intervention do not provide proportional added benefits.
- 7) The use of MBS services for purposes other than those intended. This includes a range of behaviours, from failing to adhere to particular item descriptors or rules through to deliberate fraud.
- 8) Whatham Ar, Nguyen V, Zhu Y, Hennessy M, Kalloniatis M (2014), 'The value of clinical electrophysiology in the assessment of the eye and visual system in the era of advanced imaging', *Clinical and Experimental Optometry*, 97(2):99-115.
- 9) Choosing Wisely Australia guidance note developed by RANZCO: "In the absence of relevant history, symptoms and signs, 'routine' automated visual fields and optical coherence tomography are not indicated; automated perimetry is only required when significant field defects are suspected."
- 10) Mitchell P, Smith W, Attebo K, Healey PR. Prevalence of open-angle glaucoma in Australia: The Blue Mountains Eye Study. *Ophthalmology*. 1996;103:1661–1669



- 11) Gemenetzi, Maria & J. Patel, Praveen. (2017). A Systematic Review of the Treat and Extend Treatment Regimen with Anti-VEGF Agents for Neovascular Age-Related Macular Degeneration. *Ophthalmology and Therapy*. 6. 10.1007/s40123-017-0087-5.
- 12) Choosing Wisely and Royal Australian and New Zealand College of Ophthalmologists: tests, treatments and procedures clinicians and consumers should question. Recommendation 4.
- 13) Shimada H, Hattori T, Mori R, Nakashizuka H, Fujita K, Yuzawa M. Minimizing the endophthalmitis rate following intravitreal injections using 0.25% povidone-iodine irrigation and surgical mask. *Graefe's Archive for Clinical and Experimental Ophthalmology* 2013;251(8):1885-90.
- 14) Tabandeh H, Boscia F, Sborgia A, et al. Endophthalmitis associated with intravitreal injections: office-based setting and operating room setting. *Retina* 2014;34:18–23.
- 15) The Royal Australian and New Zealand College of Ophthalmologists. Guidelines for performing intravitreal therapy 2006/2012. Available from: http://www.ranzco.edu/images/documents/policies/CPG004_Intravitreal_Injections.pdf.
- 16) Tabandeh H, Boscia F, Sborgia A, et al. Endophthalmitis associated with intravitreal injections: office-based setting and operating room setting. *Retina* 2014;34:18–23.
- 17) Merani R, Hunyor AP. Endophthalmitis following intravitreal anti-vascular endothelial growth factor (VEGF) injection: a comprehensive review. *Int J Retina Vitreous*. 2015 Jul 21;1:9. Review.
- 18) Fagan XJ, Al-Qureshi S. Intravitreal injections: a review of the evidence for best practice. *Clinical & Experimental Ophthalmology* 2013;41(5):500-7.
- 19) The Royal Australian and New Zealand College of Ophthalmologists. Guidelines for performing intravitreal therapy 2006/2012. Available from: http://www.ranzco.edu/images/documents/policies/CPG004_Intravitreal_Injections.pdf.
- 20) Choosing Wisely and Royal Australian and New Zealand College of Ophthalmologists: tests, treatments and procedures clinicians and consumers should question. Recommendation 4.
- 21) This rate accounts for differences in age between Aboriginal and Torres Strait Islander and non-Indigenous populations. Randall DA, Reinten T, Maher L, et al. Disparities in cataract surgery between Aboriginal and non-Aboriginal people in New South Wales, Australia. *Clinical & Experimental Ophthalmology*. 2014;42(7):629-636.



- 22) Randall DA, Reinten T, Maher L, et al. Disparities in cataract surgery between Aboriginal and non-Aboriginal people in New South Wales, Australia. *Clinical & Experimental Ophthalmology*. 2014;42(7):629-636.
- 23) Average time determined by co-claimed anaesthetic time items (MBS data FY2016/17) and clinical input.
- 24) Criteria for selecting surgical items for comparison: 2,500+ procedures per year claimed independently with anaesthetic time codes; Range of specialities and fees; Require anaesthetic support; Require expert knowledge of procedure technique; Require an operating theatre; Have common risks to patient (e.g., haemorrhage, infection, perforation). All items that meet the listed criteria represent 33% of surgical items claimed independently in more than 2,500 episodes/year in FY2016/17.
- 25) Calculation method: Rebate per hour calculated on the following basis: time - weighted average time (excluding bottom quartile services) based on anaesthetic time code, rebate - based on average rebate per service for FY2016/17, including the impact from multiple services rule and excluding safety net benefits.
- 26) Department of Health, Australia's Future Health Workforce – Ophthalmology, 2018.
- 27) Vision 2020 Australia, in collaboration with 14 organisations working in Aboriginal and Torres Strait Islander eye health, is calling on the Australian Government to build on its commitment to close the gap in eye health and vision care.
- 28) Notes: Criteria for selecting comparable injection items: Nature of procedure (penetrative injection of iatrogenic substance, or direct biopsy into tissue (not into formed tract); Preparation (Requires preparation and drape, injection/biopsy and examination/post-procedural observations); Risk to patient (Risk of infection, haemorrhage, injury to organ or tissue); Equipment required (Sterile field and local anaesthetic); Specialist required (Requires expert understanding of anatomy).
- 29) Royal College of Anaesthetists and Royal College of Ophthalmologists, Local anaesthesia for ophthalmic surgery joint guidelines, Feb 2012.
- 30) Department of Health, Australia's Future Health Workforce – Ophthalmology, 2018.
- 31) The MMM is a classification system that better categorises metropolitan, regional, rural and remote areas according to both geographical remoteness and town size.



- 32) Department of Health, Australia's Future Health Workforce – Ophthalmology, 2018.
- 33) Australian Institute of Health and Welfare: Median waiting time for admissions from public hospital elective surgery waiting lists, by surgical specialty, 2016/17.
- 34) International Council of Ophthalmology, countries last updated between 2012 – 2014, Ministry of Health, Labour and Welfare Japan, 2014; Australian Institute of Health and Welfare, 2017; European Council of Optometry and Optics, 2017; US Department of Labour, 2017; Review of Optometry, 'A snapshot of optometry around the world', 2009; Vision Atlas Global Action Plan, 2014.
- 35) Royal College of Ophthalmologists, Ophthalmic Service Guide: Intravitreal injection therapy, May 2018 (revised August 2018). Accessed 15/01/2019: <https://www.rcophth.ac.uk/wp-content/uploads/2018/02/Intravitreal-Injection-Therapy-August-2018-2.pdf>
- 36) DaCosta et al, Implementation of a nurse-delivered intravitreal injection service, *Eye*, 2014, 28, 73-740; Michelotti et al, Transformational change: nurses substituting for ophthalmologists for intravitreal injections – a quality-improvement report, *Clin Ophthalmol*, 2014, 8, 755-761; Simcock et al, A safety audit of the first 10,000 intravitreal ranibizumab injections performed by nurse practitioners, *Eye*, 2014, 28, 1161-1164; Varma et al, A novel approach to expanding the role of nurses to deliver intravitreal injections for patients with age-related macular degeneration, *Int J Ophthalmic Pract* 2013, 4, 68-74.
- 37) Gregg E, Nurse-led ranibizumab intravitreal injection in wet age-related macular degeneration: a literature review, *Nursing Standard*, 2017.
- 38) Hasler et al, Safety study of 38,503 intravitreal ranibizumab injections performed mainly by physicians in training and nurses in a hospital setting, *Acta Ophthalmologica*, 2015, 93, 122-125.
- 39) Samalia et al, Nurse Specialists for the administration of anti-vascular endothelial growth factor intravitreal injections, *New Zealand Medical Journal*, 2016, 129, 1438.
- 40) RNIB, Nurses are the new injection service, 2015. Accessed 15/01/2019: <https://www.rnib.org.uk/nb-online/nurses-take-charge-needles>; Michelotti et al, Transformational change: nurses substituting for ophthalmologists for intravitreal injections – a quality-improvement report, *Clin Ophthalmol*, 2014, 8, 755-761.
- 41) Li et al, Nurse-administered intravitreal injections: a systematic review, *Graefes Arch Clin Exp Ophthalmol*, 2015, 253, 1619-1621.



- 42) Royal College of Ophthalmologists, Ophthalmic Service Guide: Intravitreal injection therapy, May 2018 (revised August 2018). Accessed 15/01/2019: <https://www.rcophth.ac.uk/wp-content/uploads/2018/02/Intravitreal-Injection-Therapy-August-2018-2.pdf>
- 43) American Optometric Association: Clinical Eye Care - Doctors' of optometry AMD assessments comparable to ophthalmologists.
- 44) American Optometric Association: Clinical eye care - Optometrists AMD assessments comparable to ophthalmologist's outcome.