
**Medicare Benefits Schedule Review
Taskforce**

**Fourth report from the
Diagnostic Imaging Clinical
Committee – Pulmonary Embolism
and Deep Vein Thrombosis**

December 2016

Important note

The views and recommendations in this review report from the clinical committee have been released for the purpose of seeking the views of stakeholders.

This report does not constitute the final position on these items which is subject to:

△ Stakeholder feedback;

Then

△ Consideration by the MBS Review Taskforce;

Then *if endorsed*

△ Consideration by the Minister for Health; and

△ Government.

Stakeholders should provide comment on the recommendations via the online consultation tool.

Confidentiality of comments:

If you want 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.

Table of Contents

1. Executive Summary	3
1.1 Areas of responsibility of the Pulmonary Embolism (PE) and and Deep Vein Thrombosis (DVT) Working Group.....	3
1.2 Key recommendations	5
1.3 Consumer engagement.....	4
2. About the Medicare Benefits Schedule (MBS) Review.....	6
2.1 Medicare and the MBS	6
2.2 What is the MBS Review Taskforce?.....	6
2.3 Methods: The Taskforce’s approach.....	7
2.4 Prioritisation process	7
3. About the PE and DVT Working Group	8
3.1 Diagnostic Imaging Clinical Committee members	8
3.2 Pulmonary Embolism and Deep Vein Thrombosis Working Group members.....	9
3.3 Conflicts of interest.....	10
4. Areas of responsibility of the PE and DVT Working Group	11
5. Duplex Ultrasound for DVT	12
5.1 MBS items for duplex ultrasound for DVT	12
5.2 MBS Data for DVT imaging.....	13
5.3 Issues.....	14
5.4 Recommendation 1 MBS explanatory notes for the MBS items dealing with diagnostic imaging for DVT	14
5.5 Recommendation 2 - Co-claiming duplex scanning for DVT and chronic venous disease ...	16
5.6 Recommendation 3 Redundant items for DVT imaging	16
6. PE Imaging Items	18
6.1 MBS items for PE Imaging	18
6.2 MBS data for PE Imaging.....	19
6.3 Issues.....	20
6.4 Recommendation 4 - MBS explanatory notes for the MBS items dealing with diagnostic imaging for PE	20
7. Stakeholder impact statement	22
8. Conclusion.....	22
9. References	23
10. Glossary.....	24
Appendix A PE and DVT items: Recommendations list	25
Appendix B Vascular Ultrasound items (Group I1 Subgroup 3) and Urological Ultrasound	28
Appendix C Summary for consumers	32

List of Tables

Table 1: Diagnostic Imaging Clinical Committee Members	8
Table 2: Pulmonary Embolism and Deep Vein Thrombosis Working Group Members	9
Table 3: Items for duplex ultrasound for DVT introduction table	12
Table 4: MBS 2014-15 Statistics - Duplex ultrasound items for DVT	13
Table 5 Co-claiming of duplex scanning for DVT and chronic venous disease on the same patient same day (2014-15)	13
Table 6 Items for PE imaging introduction table.....	18
Table 7: MBS 2014-15 Statistics – Computed Tomography Pulmonary Angiography	19
Table 8: MBS 2014-15 Statistics – Ventilation Perfusion (V/Q) Scans.....	19
Recommendation 1 MBS explanatory notes for the MBS items dealing with diagnostic imaging for DVT	32
Recommendation 2 Co-claiming duplex scanning for DVT and chronic venous disease	33
Recommendation 4 MBS explanatory notes for the MBS items dealing with diagnostic imaging for PE	34

1. Executive Summary

The Medicare Benefits Schedule (MBS) Review Taskforce (the Taskforce) is undertaking a program of work that considers how more than 5,700 items on the MBS can be aligned with contemporary clinical evidence and practice and improves health outcomes for patients. The Taskforce will also seek to identify any services that may be unnecessary, outdated or potentially unsafe.

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

- △ Affordable and universal access
- △ Best practice health services
- △ Value for the individual patient
- △ Value for the health system.

The Taskforce has endorsed a methodology whereby the necessary clinical review of MBS items is undertaken by Clinical Committees and Working Groups. The Taskforce has asked the Clinical Committees to undertake the following tasks:

1. Consider whether there are MBS items that are obsolete and should be removed from the MBS.
2. Consider identified priority reviews of selected MBS services.
3. Develop a program of work to consider the balance of MBS services within its remit and items assigned to the Committee.
4. Advise the Taskforce on relevant general MBS issues identified by the Committee in the course of its deliberations.

The recommendations from the Clinical Committees are released for stakeholder consultation. The Clinical Committees will consider feedback from stakeholders and then provide recommendations to the Taskforce in a Review Report. The Taskforce will consider the Review Report from Clinical Committees and stakeholder feedback before making recommendations to the Minister for consideration by Government.

1.1 MBS Review process

The Taskforce has endorsed a process whereby the necessary clinical review of MBS items is undertaken by Clinical Committees and Working Groups. The Taskforce asked all committees in the second tranche of the Review process to review MBS items using a framework based on Appropriate Use Criteria accepted by the Taskforce. This framework includes the following steps: (i) review data and literature relevant to the items under consideration; (ii) identify MBS items that are potentially obsolete, are of questionable clinical value, are misused and/or pose a risk to patient safety; and (iii) develop and refine recommendations for these items, based on the literature and relevant data, in consultation with relevant stakeholders. In complex cases, full appropriate use criteria were developed for an item's descriptor and explanatory notes. All second-tranche committees involved in this Review adopted this framework, which is outlined in more detail in Section 2.3.

The recommendations from the Clinical Committees will be released for stakeholder consultation. The Clinical Committees will consider feedback from stakeholders and then provide recommendations to the Taskforce in Review reports. The Taskforce will consider the Review reports from Clinical Committees, along with stakeholder feedback, before making recommendations to the Minister for Health for consideration by the Government.

1.2 Consumer engagement

The Working Group did not have a consumer representative. However, the Committee had a consumer representative. The Working Group recommendations have been summarised for consumers (Appendix C). The consumer items table describes the medical service, the recommendation of the clinical experts, and why the recommendation has been made.

The proposed changes to the MBS will improve the accuracy and quality of care being provided to patients.

The Committee believes it is important to find out from consumers if they will be helped or disadvantaged by the recommendations – and how, and why. Following the public consultation, the Committee will assess the advice from consumers and decide whether any changes are needed to the recommendations. The Committee will then send the recommendations to the Taskforce. The Taskforce will consider the recommendations as well as the information provided by consumers in order to make sure that all the important concerns are addressed. The Taskforce will then provide the recommendation to government.

1.3 Areas of responsibility of the Pulmonary Embolism (PE) and Deep Vein Thrombosis (DVT) Working Group

The Working Group's brief was to review Pulmonary Embolism (PE) and Deep Vein Thrombosis (DVT) related imaging items (Appendix A and B) and make recommendations to the Diagnostic Imaging Clinical Committee (the Committee) based on evidence and clinical expertise. The Working Group reviewed PE items, and items relating to DVT imaging tests. All recommendations relating to these items are included in this report for consultation.

The review drew on various types of MBS data, including data on utilisation of items (services, benefits, patients, providers and growth rates); service provision (type of provider, 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 provider 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 sourced primarily from Choosing Wisely Australia.

An inclusive set of stakeholders is engaged in consultation on the recommendations outlined in this report. Following this period of consultation, the recommendations will be presented to the MBS Review Taskforce. The Taskforce will consider stakeholder feedback before making recommendations to the Minister for Health for consideration by the Government.

1.4 Key recommendations

The complete recommendations (and their accompanying rationales) for all items can be found in Sections 5 and 6, and in Appendix C (in table summary form).

The changes focus on encouraging best practice and simplifying the MBS to improve patient care by (i) improving the clarity of descriptors (with support from explanatory notes), and (ii) providing clinical guidance for appropriate use through explanatory notes. The recommendations are summarised below.

1.4.1 MBS explanatory notes for imaging for DVT and PE

Draft MBS explanatory notes were developed for the MBS items dealing with diagnostic imaging for DVT and PE as below:

- △ medical practitioners referring patients for duplex ultrasound for suspected lower limb DVT (items 55221, 55244) should read and consider The Royal Australian and New Zealand College of Radiologists [RANZCR 2015 Choosing Wisely recommendations](#), or such clinical RANZCR Choosing Wisely recommendations as succeed it; and
- △ medical practitioners referring patients for imaging for suspected PE (items 57351, 57356, 61328, 61340, 61348) should read and consider The Royal Australian and New Zealand College of Radiologists [RANZCR 2015 Choosing Wisely recommendations](#), or such clinical RANZCR Choosing Wisely recommendations as succeed it.

Education of requesters on the Choosing Wisely Recommendations should be implemented. The provision of educational strategies is not within the remit of the MBS but rather the MBS could leverage off educational strategies developed by the Colleges or a third-party organisation such as NPS MedicineWise whose primary role is to provide general education to health professionals.

1.4.2 Co-claiming duplex scanning for DVT and chronic venous disease

In the case of a same provider undertaking venous ultrasound for the same patient on the same day that:

- △ it is inappropriate to claim ultrasound items for both acute DVT and chronic venous disease on the same leg in the same patient on the same day
- △ the only exception to the above recommendation is a patient being actively prepared with ultrasound for superficial varicose vein ablation (by whatever method), where the deep venous system of the same leg has to also be scanned on the same day to exclude fresh DVT
- △ the multiple services rules for diagnostic ultrasound apply and should be adhered to

1.4.3 Redundant items for PE and DVT imaging

It is recommended a mechanism is identified to reduce the number of NK (services performed on old equipment), which duplicate regular items and lengthen the Diagnostic Imaging Services Table (DIST), as a class solution. The Committee will separately consult on recommendations about capital sensitivity.

2. About the Medicare Benefits Schedule (MBS) Review

2.1 Medicare and the MBS

What is Medicare?

Medicare is Australia's universal health scheme, which enables all citizens (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.

What is the Medicare Benefits Schedule (MBS)?

The Medicare Benefits Schedule (MBS) is a listing of the health professional services subsidised by the Australian government. There are over 5,700 MBS items which provide benefits to patients for a comprehensive range of services including consultations, diagnostic tests and operations.

2.2 What is the MBS Review Taskforce?

The Government established the MBS Review Taskforce (the Taskforce) as an advisory body to review all of the 5,700 MBS items to ensure they are aligned with contemporary clinical evidence and practice and improve health outcomes for patients. The Taskforce will also modernise the MBS by identifying any services that may be unnecessary, outdated or potentially unsafe. The Review is clinician-led, and there are no targets for savings attached to the Review.

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 key 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, access to many specialist services remains problematic with some rural patients being particularly under-served.
- △ **Best practice health services**— one of the core objectives of the Review is to modernise the MBS, ensuring that individual items and their descriptors are consistent with contemporary best practice and the evidence base where possible. Although the Medical Services Advisory Committee (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 a 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 of the vision will go a long way to 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 benefit and are underused, particularly for patients who cannot readily access those services currently.

2.3 The Taskforce's approach

The Taskforce is reviewing the 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 advise on all aspects which would contribute to a modern, transparent and responsive system. This includes not only making recommendations about new items or services being added to the MBS, but also about a MBS structure that could better accommodate changing health service models.

The Taskforce has made a conscious decision to be ambitious in its approach and seize this unique opportunity to recommend changes to modernise the MBS on 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 the ongoing review of the MBS once the current Review is concluded.

As the Review is to be clinician-led, the Taskforce has decided that the detailed review of MBS items should be done by Clinical Committees. The Committees are broad based in their membership and members have been appointed in their individual capacity, not as representatives of any organisation. This draft report details the work done by the specific Clinical Committee and describes the Committee's recommendations and their rationale.

This report does not represent the final position of the Committee. A consultation process will inform recommendations of the Committee and assist it in finalising its report to the MBS Review Taskforce.

Following consultation, the Committee will provide its final advice to the MBS Review Taskforce. The Taskforce will consider the Review Report from Clinical Committees and stakeholder feedback before making recommendations to the Minister for consideration by Government.

2.4 Prioritisation process

All MBS items will be reviewed during the course of the MBS Review. However, given the breadth of and timeframe for the Review, each Clinical Committee has needed to develop a work plan and assign priorities keeping in mind the objectives of the Review. With a focus on improving the clinical value of MBS services, the Clinical Committees have taken account of factors including the volume of services, service patterns and growth and variation in the per capita use of services, to prioritise their work.

In addition to MBS data, important resources for the Taskforce and the Clinical Committees have included:

- △ The Choosing Wisely recommendations, both from Australian and internationally
- △ National Institute for Health and Care Excellence (NICE UK) Do Not Do recommendations and clinical guidance

- △ Other literature on low value care, including Elshaug et al's Medical Journal of Australia article on potentially low value health services
- △ The Australian Commission on Safety and Quality in Health Care's (ACSQHC) Atlas of Healthcare Variation.

3. About the PE and DVT Working Group

The Pulmonary Embolism and Deep Vein Thrombosis Working Group (the Working Group) was established to make recommendations to the MBS Review Taskforce on the review of MBS items within its remit, based on rapid evidence review and clinical expertise. The Working Group consists of seven members, whose names, positions/organisations, and declared conflicts of interest are listed in Section 3.1.

3.1 Diagnostic Imaging Clinical Committee members

Table 1: Diagnostic Imaging Clinical Committee Members

Name	Position/Organisation	Declared conflict of interest
Professor Ken Thomson (Chair)	Program Director, Radiology and Nuclear Medicine, Alfred Hospital	User of MBS services
Professor Stacy Goergen	Director of Research, Monash Imaging; Clinical Adjunct Professor, Southern Clinical School, Monash University	User of MBS services
Professor Alexander Pitman	Director of Nuclear Medicine and PET, Lake Imaging ;Adjunct Professor, Medical Imaging, University of Notre Dame	User of MBS services
Dr William Macdonald	Executive Director, Imaging West Head, Nuclear Medicine, Fiona Stanley Hospital; President, Australasian Association of Nuclear Medicine Specialists	User of MBS services
Dr Richard Ussher	Director of Training, Radiology, Ballarat Health Services; Director, Grampians BreastScreen	User of MBS services
Dr Walid Jammal	Clinical Lecturer, Faculty of Medicine, University of Sydney; Conjoint Senior Lecturer, School of Medicine, University of Western Sydney; Private practice	User of MBS services

Name	Position/Organisation	Declared conflict of interest
Associate Professor Rachael Moorin	Associate Professor, Health Policy & Management, School of Public Health, Curtin University; Principal Researcher, Health Centre of Excellence, Silver Chain Group; Adjunct Associate Professor, University of Western Australia	Nil
Dr David Brazier	Radiologist, Royal North Shore Hospital	User of MBS services
Dr Phil Hayward	Research Fellow, Centre for Health Economics Research and Evaluation	Nil
Professor Jenny Doust	Professor of Clinical Epidemiology, Centre for Research in Evidence Based Practice, Bond University; General Practitioner	User of MBS services
Ms Geraldine Robertson	MBS Review Representative Consumer, Consumers Health Forum & Breast Cancer Network Australia	Nil
Dr Bastian Seidel	Director, Huon Valley Health Centre; Clinical Professor, Faculty of Health, University of Tasmania; Chair, Tasmanian Faculty, The Royal Australian College of General Practitioners; General Practitioner, Private practice	User of MBS services
Dr Matthew Andrews	MBS Review Taskforce (Ex-Officio)	User of MBS services

3.2 Pulmonary Embolism and Deep Vein Thrombosis Working Group members

Table 2: Pulmonary Embolism and Deep Vein Thrombosis Working Group Members

Name	Position/Organisation	Declared conflict of interest
Professor Alexander Pitman (Chair)	Director of Nuclear Medicine and PET, Lake Imaging Professor, Medical Imaging, University of Notre Dame; Professor, Rural Clinical School and Department of Anatomy, the University of Melbourne	None to declare (Employed as a radiologist and nuclear medicine specialist, and reports CTPA, VQ and DVT US studies as a fractional part of generalist clinical work)
Dr Walid Jammal	Clinical Lecturer, Faculty of Medicine, University of Sydney	Uses the MBS items under review

Name	Position/Organisation	Declared conflict of interest
	Conjoint Senior Lecturer, School of Medicine, University of Western Sydney Private practice	
A/Professor Taryn Bessen	Consultant Radiologist, Royal Adelaide Hospital, SA Head, Quality and Safety, SA Medical Imaging Associate Professor, Faculty of Health Sciences, University of Adelaide	Uses the MBS items under review
A/Professor John Troupis	Consultant Radiologist, Monash Health	Uses the MBS items under review
A/Professor Mark Howard	Director, Victorian Respiratory Support Service, Austin Health Board Member, Australasian Sleep Association	Uses the MBS items under review
A/Professor David McClure	Consultant Vascular & Endovascular Surgeon, Barwon Health, Geelong Associate Professor Vascular Surgery, Deakin University Director, Geelong Vascular Service	Uses the MBS items under review
Dr Harry Gibbs	Medical Director, Vascular Laboratory, Alfred Hospital	Uses the MBS items under review

3.3 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 reminded to update their declarations periodically.

4. Areas of responsibility of the PE and DVT Working Group

The principal purpose of this review was to consider:

1. whether current items reflect contemporary best clinical practice based on scientific data
2. whether patients have access to health services that have the potential to improve health outcomes through improved diagnostic accuracy and decision-making and/or harm reduction
3. whether changes to item descriptors, item existence, scope of referral privileges and location of items in clinical sections would support evidence-based practice and more appropriate utilisation or would allow more accurate evaluation of utilisation patterns.

Relevant MBS items for PE and DVT were reviewed. The review drew on various types of MBS data, including data on utilisation of items (services, benefits, patients, providers and growth rates); service provision (type of provider, 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 provider 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 sourced primarily from Choosing Wisely Australia.

5. Duplex Ultrasound for DVT

The principal purpose of this review was to consider the appropriate use of diagnostic imaging for PE and DVT. Appropriate use is defined as use which reaches a clinically meaningful diagnosis at a sufficient level of certainty in the least number of diagnostic steps, with due regard to patient safety, radiation dose, local expertise and accessibility, and cost to Medicare.

The recommendations are presented in item groups below, with higher priority groups presented first.

5.1 MBS items for duplex ultrasound for DVT

Table 3: Items for duplex ultrasound for DVT introduction table

Item	Descriptor	Schedule fee
55244	Duplex scanning, unilateral, involving B mode ultrasound imaging and integrated doppler flow measurements by spectral analysis of veins in the lower limb, below the inguinal ligament, for acute venous thrombosis, not being a service associated with a service to which an item in Subgroup 1 (with the exception of item 55054) or 4 applies (R)	\$169.50
55221	DUPLEX SCANNING, unilateral, involving B mode ultrasound imaging and integrated Doppler flow measurements by spectral analysis of veins in the lower limb, below the inguinal ligament, for acute venous thrombosis, not being a service associated with a service to which an item in Subgroups 1 (with the exception of items 55026 and 55054) or 4 of this Group applies (R) (NK)	\$84.75
55246	Duplex scanning, unilateral, involving B mode ultrasound imaging and integrated doppler flow measurements by spectral analysis of veins in the lower limb, below the inguinal ligament, for chronic venous disease, not being a service associated with a service to which an item in Subgroup 1 (with the exception of item 55054) or 4 applies (R)	\$169.50
55222	DUPLEX SCANNING, unilateral, involving B mode ultrasound imaging and integrated Doppler flow measurements by spectral analysis of veins in the lower limb, below the inguinal ligament, for chronic venous disease, not being a service associated with a service to which an item in Subgroups 1 (with the exception of items 55026 and 55054) or 4 of this Group applies (R) (NK)	\$84.75

5.2 MBS Data for DVT imaging

Table 4: MBS 2014-15 Statistics - Duplex ultrasound items for DVT

Items	55244	55221	55246	55222
Services 2014-15	299,191	405	127,318	276
Benefits 2014-15	\$44.6 million	\$33,019	\$18.1 million	\$17,084
2011-12 to 2014-15 growth in benefits	25.4%	8477.3%	17.4%	N/A
Number of patients	213,028	274	71,053	172
Number of providers	3,399	6	2,147	Less than 5

Source: Department of Health, published and unpublished data, based on date of processing data for financial year 2014-15

There were no concerns with the data provided for MBS items for DVT imaging, including data on the number of services for DVT items performed in 2014–2015 by requester's clinical specialty. The MBS data for the items was considered to be reasonable and compatible with clinically appropriate imaging use.

Table 5 Co-claiming of duplex scanning for DVT and chronic venous disease on the same patient same day (2014-15)

In 2014/15, same patient same day		Episodes	Number Services	Benefits Paid
Same or Different providers	55246C, 55244T	2,356	5,911	\$701,558
	Other combinations of the duplex scanning for DVT and chronic venous disease	93	228	\$31,268
	Total	2,449	6,139	\$732,826
Same provider	55246C, 55244T	2,349	5,895	\$699,005
	Other combinations of the duplex scanning for DVT and chronic venous disease	12	32	\$1,856
	Total	2,361	5,927	\$700,861

Source: Department of Health, unpublished data, based on date of service using data processed up to 30 August 2015

Additional data on the number of services for DVT items requested by different provider specialities show that a larger number of services are requested, particularly in the primary care setting, where approximately 158,000 services were ordered by general practitioners during 2014–2015. This is compatible with appropriate clinical use of diagnostic imaging.

5.3 Issues

- △ The MBS Group I1 Ultrasound Subgroup 3 Vascular contains a number of items that describe the same procedure and have the same MBS fees for different vessels and for subsequent pathologies. Anecdotal evidence suggests that some providers have been claiming the wrong items of the same value due to the complexity of this part of the schedule.
- △ There was also concern that vascular imaging may be done for a screening purpose noting that, Medicare does not support screening ultrasound.
- △ The principal purpose of this review of duplex ultrasound for DVT was to consider:
 - whether changes should be made to the MBS items to support the Choosing Wisely recommendations (below) for duplex compression ultrasound for suspected lower limb DVT
 - whether the USA and Canada Choosing Wisely recommendations that do not support routine vascular ultrasound in post-operative knee and hip arthroplasty patients should be supported
 - the necessity of having different ultrasound items for different vascular systems; and
 - the appropriateness of co-claiming duplex scanning for acute DVT and chronic venous disease for the same patient on the same day.

5.4 Recommendation 1 MBS explanatory notes for the MBS items dealing with diagnostic imaging for DVT

5.4.1 Recommendation

- △ Introduce an MBS explanatory note stating that medical practitioners referring patients for duplex ultrasound for suspected lower limb DVT (items 55221, 55244) should read and consider the following Royal Australian and New Zealand College of Radiologists [RANZCR 2015 Choosing Wisely recommendations](#):
 - Don't request duplex compression ultrasound for suspected lower limb deep venous thrombosis in ambulatory outpatients unless the Wells Score (deep venous thrombosis risk assessment score) is greater than 2, OR if less than 2, D dimer assay is positive.
- △ Education of target referrers on the Choosing Wisely Recommendations should be implemented. The provision of educational strategies is not within the remit of the MBS but rather the MBS could leverage off educational strategies developed by the Colleges or a third-party organisation such as NPS MedicineWise whose primary role is to provide general education to health professionals.

5.4.2 Rationale

- △ The Choosing Wisely recommendations from the USA and Canada as they are currently written have not been supported. There are several issues with scientific validity of the Choosing Wisely recommendations from the USA and Canada and the American Academy of Orthopaedic Surgeons (AAOS) guidelines as they apply to DVT US, in particular:
 - these recommendations and guidelines do not allow for clinical situations where ultrasound requests are justified by clinical judgement.
 - Choosing Wisely recommendations are biased in that they are orthopaedic-centric and make a number of unjustified assumptions about DVT ultrasound;
 - AAOS guidelines do not reflect Australian practice
 - AAOS guidelines are primarily concerned with reducing mortality rather than reducing morbidity and potential costs associated with post-surgery venous thromboembolism
- △ The Committee advised against restricting the use of duplex compression ultrasound only to the circumstances outlined in the RANZCR Choosing Wisely recommendations for suspected lower limb DVT, because doing so may inadvertently lead to poorer patient outcomes. The RANZCR Choosing Wisely recommendations apply to ambulatory adult outpatients with suspected DVT who are not excluded from the Wells score on its exclusion criteria. The RANZCR Choosing Wisely recommendations can't be applied to non-ambulatory patients; paediatric or pregnant patients; inpatients; or patients excluded from the Wells score.
- △ The RANZCR Choosing Wisely recommendations for suspected lower limb DVT are based on the best evidence currently available to guide clinical practice. However, the Committee was concerned with:
 - the availability of highly-sensitive D-dimer assays within varying health care settings
 - that the RANZCR Choosing Wisely recommendations are not applicable to non-ambulatory patients; paediatric or pregnant patients; inpatients; or patients excluded from the Wells score.
 - real world limitations on patients and resources.
- △ The Committee noted the USA and Canada Choosing Wisely recommendations that do not support routine vascular ultrasound in post-operative knee and hip arthroplasty patients. However, they recommended the inclusion of a statement in the MBS item descriptor or explanatory notes, stating that ultrasound is not to be used for screening, as sufficient to prompt consideration prior to requesting ultrasounds for DVT in post-operative knee and hip arthroplasty patients.
- △ While it is reasonable for referrers to be reminded to indicate the reasons for referral, enforcing the inclusion of clinical notes for investigation would be logistically difficult.

5.5 Recommendation 2 - Co-claiming duplex scanning for DVT and chronic venous disease

5.5.1 Recommendation

- △ Provide the following clarification on the appropriateness and application of co-claiming rules in the case of the same provider undertaking venous ultrasound for the same patient on the same day:
 - it is inappropriate to claim ultrasound items for both acute DVT and chronic venous disease on the same leg in the same patient on the same day
 - the only exception to the above recommendation is a patient being actively prepared with ultrasound for superficial varicose vein ablation (by whatever method), where the deep venous system of the same leg has to also be scanned on the same day to exclude fresh DVT
 - the multiple services rules for diagnostic ultrasound apply and should be adhered to

5.5.2 Rationale

- △ MBS statistics suggested that, while the majority of patients only had one duplex scanning (either for DVT or chronic venous disease) within one day, there were 2,449 episodes (accounting for 0.38% of total services for item 55244) of co-claiming of duplex scanning for DVT and chronic venous disease on same day in 2014–15.
- △ The requirement to perform duplex scanning for acute DVT and for chronic venous disease where both legs are examined in the same patient on the same day occurs very infrequently and therefore routine co-claiming of these two items is not appropriate clinical practice. However, co-claiming may occur when there are different providers involved. Therefore, there was consideration of the appropriateness of co-claiming for acute and chronic indications in the same patient on the same day when the same or different providers deliver this service.
- △ Acute DVT and chronic venous disease items are two alternative MBS items and therefore it is recommended that it is inappropriate to claim both items on the same leg of the same patient on the same day.

5.6 Recommendation 3 Redundant items for DVT imaging

5.6.1 Recommendation

It is recommended that a mechanism is identified to reduce the number of NK (services performed on old equipment), which duplicate regular items and lengthen the Diagnostic Imaging Services Table (DIST), as a class solution. The Committee will separately consult on recommendations about capital sensitivity.

5.6.2 Rationale

- △ A broader review of the vascular ultrasound items (Group I1 Ultrasound , Subgroup 3) with a view to fragment or consolidate MBS items is required and will be done at a later stage in the review.

- △ Fragmenting ultrasound items for different vascular systems offers a theoretical potential to collect utility data. However, the consolidation of MBS item numbers will simplify the DIST and will facilitate good clinical practice.

6. PE Imaging Items

6.1 MBS items for PE Imaging

Table 6 Items for PE imaging introduction table

Item	Descriptor [date last amended]	Schedule fee
57351	<p>COMPUTED TOMOGRAPHY - spiral angiography with intravenous contrast medium, including any scans performed before intravenous contrast injection - 1 or more spiral data acquisitions, including image editing, and maximum intensity projections or 3 dimensional surface shaded display, with hardcopy recording of multiple projections, where:</p> <p>a) the service is not a service to which another item in this group applies; and</p> <p>(b) the service is performed for the exclusion of acute or recurrent pulmonary embolism; acute symptomatic arterial occlusion; post operative complication of arterial surgery; acute ruptured aneurysm; or acute dissection of the aorta, carotid or vertebral artery; and</p> <p>(c) the services to which 57350 or 57355 apply have been performed on the same patient within the previous 12 months; and</p> <p>(d) the service is not a study performed to image the coronary arteries (R) (K) (Anaes.)</p>	\$510.00
57356	<p>COMPUTED TOMOGRAPHY - spiral angiography with intravenous contrast medium, including any scans performed before intravenous contrast injection - 1 or more spiral data acquisitions, including image editing, and maximum intensity projections or 3 dimensional surface shaded display, with hardcopy recording of multiple projections, where:</p> <p>a) the service is not a service to which another item in this group applies; an</p> <p>b) the service is performed for the exclusion of acute or recurrent pulmonary embolism; acute symptomatic arterial occlusion; post operative complication of arterial surgery; or acute ruptured aneurysm; acute dissection of the aorta, carotid or vertebral artery; and</p> <p>(c) the services to which 57350 or 57355 apply have been performed on the same patient within the previous 12 months; and</p> <p>(d) the service is not a study performed to image the coronary arteries (R) (NK) (Anaes.)</p>	\$264.15
61328	Lung perfusion study, with planar imaging and single photon emission tomography or planar imaging, or single photon emission tomography (R)	\$227.65
61340	Lung ventilation study using aerosol, technegas or xenon gas, with planar imaging and single photon emission tomography or planar imaging or single photon emission tomography (R)	\$253.00
61348	Lung perfusion study and lung ventilation study using aerosol, technegas or xenon gas, with planar imaging and single photon emission tomography, or planar imaging, or single photon emission tomography (R)	\$443.35

6.2 MBS data for PE Imaging

Table 7: MBS 2014-15 Statistics – Computed Tomography Pulmonary Angiography

Item numbers	57351	57356
Services 2014/15	9,949	57
Benefits 2014/15	\$4.5 million	\$12,224
2011-12 to 2014-15 growth in benefits	40.1%	550.1%
Number of patients	8,870	48
Number of providers	1,737	25

Source: Department of Health, published and unpublished data, based on date of processing data for financial year 2014-15

Table 8: MBS 2014-15 Statistics – Ventilation Perfusion (V/Q) Scans

Item numbers	61328	61340	61348
Services 2014/15	465	135	20,841
Benefits 2014/15	\$94,688	\$31,142	\$8.3 million
2011-12 to 2014-15 growth in benefits	20.9%	-32.3%	15.5%
Number of patients	452	134	19,275
Number of providers	139	63	428

Source: Department of Health, published and unpublished data, based on date of processing data for financial year 2014-15

There were no concerns with the data provided for MBS items for PE imaging, including data on the number of services performed in 2014–2015 by requester's clinical specialty. The MBS data for the items was considered to be reasonable and compatible with clinically appropriate imaging use. Additionally, it was noted that the number of PE items was relatively small, on a per capita basis, likely because the majority are performed outside of Medicare, while most DVT items were requested in primary care.

Additional data on the number of services for PE items requested by different provider specialities showed a relatively small number of services for PE diagnosis in comparison to DVT. This small number of Medicare services can be attributed to the large number of PE diagnoses conducted in the public hospital emergency department setting, where services are not billed to Medicare.

6.3 Issues

Through the Choosing Wisely initiative, the Royal Australian and New Zealand College of Radiologists (RANZCR) recommends that PE diagnosis should be commenced by using PE-rule out tools, including negative D dimer results, before applying imaging tests, such as computed tomography pulmonary angiography (CTPA).

For patients who do require imaging there is a need to consider the relative clinical utility of CTPA and ventilation perfusion (V/Q) scans in the broad population and in specific groups such as pregnant women.

The principal purpose of this review of imaging (including CTPA and V/Q) to exclude PE was to consider:

- △ whether PE should be diagnosed using PE-rule out tools, including negative D dimer results, rather than imaging tests such as CTPA
- △ the relative utility of V/Q lung scans versus CTPA in various patient populations including pregnant women
- △ if explicit guidance on prerequisites for testing are required for the MBS items.

Using the MBS data, it is not possible to know the indication for the use of the imaging tests. Similarly, a data request which looks at the claiming of a D dimer test for patients that had either of the below imaging tests is not possible, as the D dimer test is bundled in an item with other coagulation studies.

6.4 Recommendation 4 - MBS explanatory notes for the MBS items dealing with diagnostic imaging for PE

6.4.1 Recommendation

- △ Introduce an MBS explanatory stating that medical practitioners referring patients for suspected PE (items 57351, 57356, 61328, 61340, 61348) should read and consider the following Royal Australian and New Zealand College of Radiologists [RANZCR 2015 Choosing Wisely recommendations](#):
 - Don't request any diagnostic testing for suspected pulmonary embolism (PE) unless indicated by Wells Score (or Charlotte Rule) followed by PE Rule-out Criteria (in patients not pregnant). Low risk patients in whom diagnostic testing is indicated should have PE excluded by a negative D dimer, not imaging.
- △ Education of target referrers on the Choosing Wisely Recommendations should be implemented. The provision of educational strategies is not within the remit of the MBS but rather the MBS could leverage off educational strategies developed by the Colleges or a third-party organisation such as NPS MedicineWise whose primary role is to provide general education to health professionals.

6.4.2 Rationale

- △ The Committee advised against replacing imaging tests with PE-rule out tools for the diagnosis of PE.
- △ PE-rule out tools can guide the appropriate use of diagnostic imaging in patients whose clinical indication and circumstance fit the diagnostic rules. However, PE-rule out tools are not designed to replace imaging tests, as they are not applicable to all clinical circumstances.
- △ Incorporating the Choosing Wisely recommendations on the use of PE-rule out tools into MBS item descriptors would be difficult as:
 - PE-rule out tools, written in clinical guidance language, are not readily adaptable to linear-list MBS DIST descriptors which are written in legislative regulatory language and can result in inappropriate patient inclusion or exclusion.
 - MBS item descriptors are static while PE-rule out tools should be regularly revised in response to change in patient demographics, evolution of disease pathology and new research.
- △ The Committee advised against incorporating the RANZCR Choosing Wisely recommendations into the MBS item descriptors used for PE diagnostic imaging because in the future these recommendations may no longer be consistent with good clinical practice.
- △ The Committee noted that V/Q studies should not be restricted to pregnant patients as there are a number of valid indications for these studies in non-pregnant patients.
- △ In regard to the relative clinical utility of V/Q and CTPA in their use to diagnose PE, it was observed that:
 - patient populations and valid clinical scenarios exist where one test is clinically advantageous over the other;
 - patients and valid clinical scenarios exist where one of the two tests cannot be used at all on safety or practical grounds, and the other test must be used instead; for example, patients who are unable to lie down, patients who require a lower radiation dose or patients who may have contraindications to CTPA;
 - a small non-zero technical failure and indeterminacy rate for each test exists, which may necessitate using the other test as backup;
 - patient populations and valid clinical scenarios (typically complex and chronic) exist, where combined utilisation of both the tests is clinically appropriate and correct;
 - the two tests provide equivalent diagnostic information in the majority of patients and clinical circumstances, and the relative utilisation reflects local expertise and availability.

7. Stakeholder impact statement

Patients and providers are expected to benefit from the recommendations, as fewer and clearer item descriptors (supported by explanatory notes) will minimise confusion for providers and facilitates best-practice clinical care for patients.

8. Conclusion

These recommendations are submitted for consultation in the hope that they improve access to affordable, best-practice health services and help to ensure high-value care for patients and the healthcare system. It welcomes any feedback or comments on the recommendations, particularly if any of the recommendations appear contrary to this aspiration.

9. References

This contains references to sources and materials referenced in this report.

- i. Elshaug, A et al (2016), “Appropriate Use Criteria”. Professor Elshaug is an internationally recognised health researcher and policy advisor from the University of Sydney and ministerial appointee to the Taskforce.
- ii. American Medical Society for Sports Medicine. Choosing Wisely: Five Things Physicians and Patients Should Question. 2014. (accessed 16 August 2016).
- iii. The Royal Australian and New Zealand College of Radiologists. Choosing Wisely: tests, treatments and procedures clinicians and consumers should question. 2015. (accessed 16 August 2016) at: <http://www.choosingwisely.org.au/recommendations/ranzcr>
- iv. American Academy of Orthopaedic Surgeons. Clinical Practice Guidelines. Preventing Venous Thromboembolic Disease in Patients Undergoing Elective Hip and Knee Arthroplasty. 2011. (accessed 16 August 2016) at: http://www.aaos.org/research/guidelines/VTE/VTE_full_guideline.pdf
- v. The Australian Commission on Quality and Safety in Health Care’s (ACQSHC). Atlas of Clinical Variation. 2015;
- vi. Department of Health. Various Medicare Australia Data Medicare Australia 2016.

10. Glossary

Term	Description
CTPA	Computed Tomography Pulmonary Angiogram
Department, The	Australian Government Department of Health
DHS	Australian Government Department of Human Services
DICC	Diagnostic Imaging Clinical Committee
DIST	Diagnostic Imaging Services Table
DVT	Deep vein thrombosis
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 ranging from failing to adhere to particular item descriptors or rules, through to deliberate fraud.
Low-value care	The use of an intervention which evidence suggests confers no or very little benefit on patients, or that the risk of harm exceeds the likely benefit, or, more broadly, that the added costs of the intervention 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, comprising an item number, service descriptor and supporting information, Schedule fee and Medicare benefits.
MBS service	The actual medical consultation, procedure, test to which the relevant MBS item refers.
MSAC	Medical Services Advisory Committee
NK	Services performed on old equipment
NR	Not requested
PBS	Pharmaceutical Benefits Scheme
PCC	Pathology Clinical Committee
PE	Pulmonary embolism
RACGP	Royal Australian College of General Practitioners
RANZCR	The Royal Australian and New Zealand College of Radiologists
Taskforce, The	MBS Review Taskforce

Term	Description
v/q	Ventilation–perfusion

Appendix A PE and DVT items: Recommendations list

Item	Item Description	Recommendation	Page reference
55221	DUPLEX SCANNING, unilateral, involving B mode ultrasound imaging and integrated Doppler flow measurements by spectral analysis of veins in the lower limb, below the inguinal ligament, for acute venous thrombosis, not being a service associated with a service to which an item in Subgroups 1 (with the exception of items 55026 and 55054) or 4 of this Group applies (R) (NK) <i>(See para DIQ of explanatory notes to this Category)</i>	Change	14
55222	DUPLEX SCANNING, unilateral, involving B mode ultrasound imaging and integrated Doppler flow measurements by spectral analysis of veins in the lower limb, below the inguinal ligament, for chronic venous disease, not being a service associated with a service to which an item in Subgroups 1 (with the exception of items 55026 and 55054) or 4 of this Group applies (R) (NK) <i>(See para DIQ of explanatory notes to this Category)</i>	Change	16
55244	DUPLEX SCANNING, unilateral, involving B mode ultrasound imaging and integrated Doppler flow measurements by spectral analysis of veins in the lower limb, below the inguinal ligament, for acute venous thrombosis, not being a service associated with a service to which an item in Subgroups 1 (with the exception of item 55054) or 4 of this Group applies - (R) <i>(See para DIQ of explanatory notes to this Category)</i>	Change	14
55246	DUPLEX SCANNING, unilateral, involving B mode ultrasound imaging and integrated Doppler flow measurements by spectral analysis of veins in the lower limb, below the inguinal ligament, for chronic venous disease, not being a service associated with a service to which an item in Subgroups 1 (with the exception of item 55054) or 4 of this Group applies - (R) <i>(See para DIQ of explanatory notes to this Category)</i>	Change	16

Item	Item Description	Recommendation	Page reference
61328	<p>LUNG PERFUSION STUDY, with planar imaging and single photon emission tomography OR planar imaging, or single photon emission tomography (R)</p> <p>Fee: \$227.65 Benefit: 75% = \$170.75 85% = \$193.55</p>	Change	20
57351	<p>COMPUTED TOMOGRAPHY - spiral angiography with intravenous contrast medium, including any scans performed before intravenous contrast injection - 1 or more spiral data acquisitions, including image editing, and maximum intensity projections or 3 dimensional surface shaded display, with hardcopy recording of multiple projections, where:</p> <p>(a) the service is not a service to which another item in this group applies; and</p> <p>(b) the service is performed for the exclusion of acute or recurrent pulmonary embolism; acute symptomatic arterial occlusion; post operative complication of arterial surgery; acute ruptured aneurysm; or acute dissection of the aorta, carotid or vertebral artery; and</p> <p>(c) the services to which 57350 or 57355 apply have been performed on the same patient within the previous 12 months; and</p> <p>(d) the service is not a study performed to image the coronary arteries (R) (K) (Anaes.)</p>	Change	20
57356	<p>COMPUTED TOMOGRAPHY - spiral angiography with intravenous contrast medium, including any scans performed before intravenous contrast injection - 1 or more spiral data acquisitions, including image editing, and maximum intensity projections or 3 dimensional surface shaded display, with hardcopy recording of multiple projections, where:</p> <p>a) the service is not a service to which another item in this group applies; an</p> <p>b) the service is performed for the exclusion of acute or recurrent pulmonary embolism; acute symptomatic arterial occlusion; post operative complication of arterial surgery; or acute ruptured aneurysm; acute dissection of the aorta, carotid or vertebral artery; and</p> <p>(c) the services to which 57350 or 57355 apply have been performed on the same patient within the previous 12 months; and</p> <p>(d) the service is not a study performed to image the coronary arteries (R) (NK) (Anaes.)</p>	Change	20
61340	<p>LUNG VENTILATION STUDY using aerosol, technegas or xenon gas, with planar imaging and single photon emission tomography OR planar imaging or single photon emission tomography (R)</p> <p>Fee: \$253.00 Benefit: 75% = \$189.75 85% = \$215.05</p>	Change	20

Item	Item Description	Recommendation	Page reference
61348	<p>LUNG PERFUSION STUDY AND LUNG VENTILATION STUDY using aerosol, technegas or xenon gas, with planar imaging and single photon emission tomography, OR planar imaging, or single photon emission tomography (R)</p> <p>Fee: \$443.35 Benefit: 75% = \$332.55 85% = \$376.85</p>	Change	20

Appendix B Vascular Ultrasound items (Group I1 Subgroup 3) and Urological Ultrasound

Item	Descriptor
55220	DUPLEX SCANNING, unilateral, involving B mode ultrasound imaging and integrated Doppler flow measurements by spectral analysis of arteries or bypass grafts in the lower limb OR of arteries and bypass grafts in the lower limb, below the inguinal ligament, not being a service associated with a service to which an item in Subgroups 1 (with the exception of items 55026 and 55054) or 4 of this Group applies (R) (NK) <i>(See para DIQ of explanatory notes to this Category)</i>
55221	DUPLEX SCANNING, unilateral, involving B mode ultrasound imaging and integrated Doppler flow measurements by spectral analysis of veins in the lower limb, below the inguinal ligament, for acute venous thrombosis, not being a service associated with a service to which an item in Subgroups 1 (with the exception of items 55026 and 55054) or 4 of this Group applies (R) (NK) <i>(See para DIQ of explanatory notes to this Category)</i>
55222	DUPLEX SCANNING, unilateral, involving B mode ultrasound imaging and integrated Doppler flow measurements by spectral analysis of veins in the lower limb, below the inguinal ligament, for chronic venous disease, not being a service associated with a service to which an item in Subgroups 1 (with the exception of items 55026 and 55054) or 4 of this Group applies (R) (NK) <i>(See para DIQ of explanatory notes to this Category)</i>
55223	DUPLEX SCANNING, unilateral, involving B mode ultrasound imaging and integrated Doppler flow measurements by spectral analysis of arteries or bypass grafts in the upper limb OR of arteries and bypass grafts in the upper limb, not being a service associated with a service to which an item in Subgroups 1 (with the exception of items 55026 and 55054) or 4 of this Group applies (R) (NK) <i>(See para DIQ of explanatory notes to this Category)</i>
55224	DUPLEX SCANNING, unilateral, involving B mode ultrasound imaging and integrated Doppler flow measurements by spectral analysis of veins in the upper limb, not being a service associated with a service to which an item in Subgroups 1 (with the exception of items 55026 and 55054) or 4 of this Group applies (R) (NK) <i>(See para DIQ of explanatory notes to this Category)</i>
55226	DUPLEX SCANNING, bilateral, involving B mode ultrasound imaging and integrated Doppler flow measurements by spectral analysis of extra-cranial bilateral carotid and vertebral vessels, with or without subclavian and innominate vessels, with or without oculoplethysmography or peri-orbital Doppler examination, not being a service associated with a service to which an item in Subgroups 1 (with the exception of items 55026 and 55054) or 4 of this Groups applies (R) (NK) <i>(See para DIQ of explanatory notes to this Category)</i>
55227	DUPLEX SCANNING involving B mode ultrasound imaging and integrated Doppler flow measurements by spectral analysis of intra-abdominal, aorta and iliac arteries or inferior vena cava and iliac veins OR of

Item	Descriptor
	<p>intra-abdominal, aorta and iliac arteries and inferior vena cava and iliac veins, excluding pregnancy related studies, not being a service associated with a service to which an item in Subgroups 1 (with the exception of items 55026 and 55054) or 4 of this Group applies (R) (NK)</p> <p><i>(See para DIQ of explanatory notes to this Category)</i></p>
55228	<p>DUPLEX SCANNING involving B mode ultrasound imaging and integrated Doppler flow measurements by spectral analysis of renal or visceral vessels OR of renal and visceral vessels, including aorta, inferior vena cava and iliac vessels as required excluding pregnancy related studies, not being a service associated with a service to which an item in Subgroups 1 (with the exception of items 55026 and 55054) or 4 of this Group applies (R) (NK)</p> <p><i>(See para DIQ of explanatory notes to this Category)</i></p>
55229	<p>DUPLEX SCANNING involving B mode ultrasound imaging and integrated Doppler flow measurements by spectral analysis of intra-cranial vessels, not being a service associated with a service to which an item in Subgroups 1 (with the exception of items 55026 and 55054) or 4 of this Group applies (R) (NK)</p> <p><i>(See para DIQ of explanatory notes to this Category)</i></p>
55230	<p>DUPLEX SCANNING involving B mode ultrasound imaging and integrated Doppler flow measurements by spectral analysis of cavernosal artery of the penis following intracavernosal administration of a vasoactive agent, performed during the period of pharmacological activity of the injected agent, to confirm a diagnosis of vascular aetiology for impotence, where a specialist in diagnostic radiology, nuclear medicine, urology, general surgery (sub-specialising in vascular surgery) or a consultant physician in nuclear medicine attends the patient in person at the practice location where the service is rendered, immediately prior to or for a period during the rendering of the service, and that specialist or consultant physician interprets the results and prepares a report, not being a service associated with a service to which an item in Subgroups 1 (with the exception of items 55026 and 55054) or 4 of this Group applies (R) (NK)</p> <p><i>(See para DIQ of explanatory notes to this Category)</i></p>
55232	<p>DUPLEX SCANNING involving B mode ultrasound imaging and integrated Doppler flow measurements by spectral analysis of cavernosal tissue of the penis to confirm a diagnosis and, where indicated, assess the progress and management of:</p> <ul style="list-style-type: none"> (a) priapism; or (b) fibrosis of any type; or (c) fracture of the tunica; or (d) arteriovenous malformations; <p>where a specialist in diagnostic radiology, nuclear medicine, urology, general surgery (sub-specialising in vascular surgery) or a consultant physician in nuclear medicine attends the patient in person at the practice location where the service is rendered, immediately prior to or for a period during the rendering of the service, and that specialist or consultant physician interprets the results and prepares a report, not being a service associated with a service to which an item in Subgroups 1 (with the exception of items 55026 and 55054) or 4 of this Groups applies (R) (NK)</p>

Item	Descriptor
	<i>(See para DIQ of explanatory notes to this Category)</i>
55233	DUPLEX SCANNING, unilateral, involving B mode ultrasound imaging and integrated Doppler flow measurements by spectral analysis of surgically created arteriovenous fistula or surgically created arteriovenous access graft in the upper or lower limb, not being a service associated with a service to which an item in Subgroups 1 (with the exception of items 55026 and 55054) or 4 of this Group applies (R) (NK) <i>(See para DIQ of explanatory notes to this Category)</i>
55235	DUPLEX SCANNING, involving B mode ultrasound imaging and integrated Doppler flow measurements by spectral analysis of arteries or veins OR arteries and veins, for mapping of bypass conduit prior to vascular surgery, not being a service associated with a service to which an item in Subgroups 1 (with the exception of items 55026 and 55054), 3 or 4 of this Group applies - including any associated skin marking (R) (NK) <i>(See para DIQ of explanatory notes to this Category)</i>
55236	DUPLEX SCANNING, unilateral, involving B mode ultrasound imaging and integrated Doppler flow spectral analysis and marking of veins in the lower limb below the inguinal ligament prior to varicose vein surgery, not being a service associated with a service to which an item in Subgroups 1 (with the exception of items 55026 and 55054), 3 or 4 of this Group applies - including any associated skin marking (R) (NK) <i>(See para DIQ of explanatory notes to this Category)</i>
55238	DUPLEX SCANNING, unilateral, involving B mode ultrasound imaging and integrated Doppler flow measurements by spectral analysis of arteries or bypass grafts in the lower limb OR of arteries and bypass grafts in the lower limb, below the inguinal ligament, not being a service associated with a service to which an item in Subgroups 1 (with the exception of item 55054) or 4 of this Group applies - (R) <i>(See para DIQ of explanatory notes to this Category)</i>
55244	DUPLEX SCANNING, unilateral, involving B mode ultrasound imaging and integrated Doppler flow measurements by spectral analysis of veins in the lower limb, below the inguinal ligament, for acute venous thrombosis, not being a service associated with a service to which an item in Subgroups 1 (with the exception of item 55054) or 4 of this Group applies - (R) <i>(See para DIQ of explanatory notes to this Category)</i>
55246	DUPLEX SCANNING, unilateral, involving B mode ultrasound imaging and integrated Doppler flow measurements by spectral analysis of veins in the lower limb, below the inguinal ligament, for chronic venous disease, not being a service associated with a service to which an item in Subgroups 1 (with the exception of item 55054) or 4 of this Group applies - (R) <i>(See para DIQ of explanatory notes to this Category)</i>
55248	DUPLEX SCANNING, unilateral, involving B mode ultrasound imaging and integrated Doppler flow measurements by spectral analysis of arteries or bypass grafts in the upper limb OR of arteries and bypass grafts in the upper limb, not being a service associated with a service to which an item in Subgroups 1 (with the exception of item 55054) or 4 of this Group applies - (R)

Item	Descriptor
	<i>(See para DIQ of explanatory notes to this Category)</i>
55252	<p>DUPLEX SCANNING, unilateral, involving B mode ultrasound imaging and integrated Doppler flow measurements by spectral analysis of veins in the upper limb, not being a service associated with a service to which an item in Subgroups 1 (with the exception of item 55054) or 4 of this Group applies - (R)</p> <p><i>(See para DIQ of explanatory notes to this Category)</i></p>
55274	<p>DUPLEX SCANNING, bilateral, involving B mode ultrasound imaging and integrated Doppler flow measurements by spectral analysis of extra-cranial bilateral carotid and vertebral vessels, with or without subclavian and innominate vessels, with or without oculoplethysmography or peri-orbital Doppler examination, not being a service associated with a service to which an item in Subgroups 1 (with the exception of item 55054) or 4 of this Groups applies - (R)</p> <p><i>(See para DIQ of explanatory notes to this Category)</i></p>
55276	<p>DUPLEX SCANNING involving B mode ultrasound imaging and integrated Doppler flow measurements by spectral analysis of intra-abdominal, aorta and iliac arteries or inferior vena cava and iliac veins OR of intra-abdominal, aorta and iliac arteries and inferior vena cava and iliac veins, excluding pregnancy related studies, not being a service associated with a service to which an item in Subgroups 1 (with the exception of item 55054) or 4 of this Group applies - (R)</p> <p><i>(See para DIQ of explanatory notes to this Category)</i></p>
55278	<p>DUPLEX SCANNING involving B mode ultrasound imaging and integrated Doppler flow measurements by spectral analysis of renal or visceral vessels OR of renal and visceral vessels, including aorta, inferior vena cava and iliac vessels as required excluding pregnancy related studies, not being a service associated with a service to which an item in Subgroups 1 (with the exception of item 55054) or 4 of this Group applies - (R)</p> <p><i>(See para DIQ of explanatory notes to this Category)</i></p>
55280	<p>DUPLEX SCANNING involving B mode ultrasound imaging and integrated Doppler flow measurements by spectral analysis of intra-cranial vessels, not being a service associated with a service to which an item in Subgroups 1 (with the exception of item 55054) or 4 of this Group applies - (R)</p> <p><i>(See para DIQ of explanatory notes to this Category)</i></p>
55282	<p>DUPLEX SCANNING involving B mode ultrasound imaging and integrated Doppler flow measurements by spectral analysis of cavernosal artery of the penis following intracavernosal administration of a vasoactive agent, performed during the period of pharmacological activity of the injected agent, to confirm a diagnosis of vascular aetiology for impotence, where a specialist in diagnostic radiology, nuclear medicine, urology, general surgery (sub-specialising in vascular surgery) or a consultant physician in nuclear medicine attends the patient in person at the practice location where the service is rendered, immediately prior to or for a period during the rendering of the service, and that specialist or consultant physician interprets the results and prepares a report, not being a service associated with a service to which an item in Subgroups 1 (with the exception of item 55054) or 4 of this Group applies - (R)</p> <p><i>(See para DIQ of explanatory notes to this Category)</i></p>

Appendix C **Summary for consumers**

This table describes the medical service, recommendations of the Clinical Experts and why the recommendation has been made.

Recommendation 1 MBS explanatory notes for the MBS items dealing with diagnostic imaging for DVT

Item	What it does	Committee recommendation	What would be different	Why
55244, 55221	Duplex scanning for suspected lower limb deep vein thrombosis	<p>The Committee recommends that Reference to the RANZCR Choosing Wisely recommendations be made in the explanatory notes to MBS item descriptors for DVT ultrasound.</p> <p>Current clinical evidence suggests that duplex compression ultrasound should not be requested for suspected lower limb deep venous thrombosis in ambulatory outpatients unless the Wells Score (deep venous thrombosis risk assessment score) is greater than 2, OR if less than 2, D dimer assay is positive.</p>	To prompt consideration to clinical guidelines.	To promote best clinical practice in accordance to current evidence.

Recommendation 2 Co-claiming duplex scanning for DVT and chronic venous disease

Item	What it does	Committee recommendation	What would be different	Why
55244, 55221, 55246, 55222	Duplex scanning for acute and chronic venous disease.	<p>It is inappropriate to claim ultrasound items for both acute DVT and chronic venous disease on the same leg in the same patient on the same day. The only exception to the above recommendation is a patient being actively prepared with ultrasound for superficial varicose vein ablation (by whatever method), where the deep venous system of the same leg has to also be scanned on the same day to exclude fresh DVT.</p> <p>In addition the multiple services rules for diagnostic ultrasound apply and should be adhered to.</p>	Acute DVT and chronic venous disease items would not be able to be co-claimed on the same leg of the same patient on the same day by a same provider, except where a patient is being actively prepared with ultrasound for superficial varicose vein ablation (by whatever method), where the deep venous system of the same leg has to also be scanned on the same day to exclude fresh DVT.	To promote best clinical practice - routine co-claiming of these two items is not appropriate clinical practice.

Recommendation 3 Redundant items for DVT imaging

Item	What it does	Committee recommendation	What would be different	Why
It is recommended that a mechanism is identified to reduce the number of NK (services performed on old equipment), which duplicate regular items and lengthen the Diagnostic Imaging Services Table (DIST), as a class solution. The Committee will separately consult on recommendations about capital sensitivity.				

Recommendation 4 MBS explanatory notes for the MBS items dealing with diagnostic imaging for PE

Item	What it does	Committee recommendation	What would be different	Why
57351, 57356, 61328, 61340, 61348	Ventilation perfusion (V/Q) scans and CTPA for the diagnosis of pulmonary embolism	<p>Current clinical evidence suggests that diagnostic testing for suspected pulmonary embolism (PE) should not be requested unless indicated by Wells Score (or Charlotte Rule) followed by PE Rule-out Criteria (in patients not pregnant). Low risk patients in whom diagnostic testing is indicated should have PE excluded by a negative D dimer, not imaging.</p> <p>To reflect this, the Committee recommends that Reference to the RANZCR Choosing Wisely recommendations be made in the explanatory notes used for PE diagnostic imaging items.</p>	Updating explanatory notes will prompt consideration to be given to clinical guidelines.	To promote best clinical practice in accordance to current evidence.