



The Royal Australian and New Zealand College of Radiologists®

RANZCR Response to Inquiry into Availability and accessibility of diagnostic imaging equipment around Australia

Executive Summary

The availability and accessibility of diagnostic imaging is a critical issue for our health system. Medical imaging is an essential part of Australia's healthcare, allowing us to find and treat injury or disease earlier and more effectively than ever before.

It is important to note that the availability and accessibility of diagnostic imaging services is dependent on more than equipment, but the complex interaction of different healthcare professionals working as a team, medical interpretation of images by a radiologist, software and technology systems.

While this inquiry relates to diagnostic imaging equipment, our submission covers related systemic issues of professional supervision, funding and primarily focuses on access to MRI equipment.

Quality standards and appropriate professional supervision of MRI must be put in place to ensure that all patients can access high quality, affordable imaging and MRI services.

Funding MRI services in Australia must change to significantly increase access, support patient management and improve clinical outcomes. This includes government investment to increase in the number of MRI scanners eligible for Medicare rebates and significantly expand the clinical indications which are funded under Medicare rules. Despite the 2012 expansion of access and availability, MRI services remain severely underutilised in Australia compared to similar OECD countries.

MRI access is limited by restrictive funding from the federal government and complex Medicare eligibility rules. This includes Medicare rules governing which machines can claim rebates, restrictions in referral pathways, and failure to expand MRI rebates to industry accepted clinical indications.

Severely limited access to MRI services is having a profound impact on patients, in particular young patients and cancer patients. We are seeing overuse of CT (with associated exposure to ionising radiation) and a failure to implement best practice use of MRI services, including in the management of cancer. Patients are facing high out of pocket costs, significant delays while waiting for public access or simply forgoing MR imaging altogether at the expense of their health.

Recommendations:

- 1. Introduction of Phase 1 of The Quality Framework to lay groundwork for enforcement of the professional supervision requirements.**
- 2. In line with RANZCR's recommendation for a Quality Framework for Diagnostic Imaging, MRI must be provided with an on-site radiologist to oversee appropriate use.**
- 3. The system of eligibility for certain MRI machines must be reformed:**
 - a. All partially eligible units should become fully eligible.**
 - b. A clear and transparent process for new machines to gain eligibility should be introduced**
- 4. Reintroduction of full indexation for Radiology services (including all MRI services).**



About The Royal Australian and New Zealand College of Radiologists

The Royal Australian and New Zealand College of Radiologists (RANZCR) is the peak body advancing patient care and quality standards in the clinical radiology and radiation oncology sectors. It represents over 4,000 medical specialist members in Australia and New Zealand.

Clinical radiology relates to the diagnosis or treatment of a patient through the use of medical imaging. This includes the use of plain X-ray, computed tomography (CT), magnetic resonance imaging (MRI), ultrasound, nuclear medicine and PET to produce images that are interpreted by a radiologist to aid them and other clinicians in the diagnosis and treatment of their patients. This includes pre-natal care (obstetric ultrasounds), to neonates and children through to the elderly, from dating scans to non-invasive treatment for cancer. Radiology touches people throughout their life.

The speciality of radiation oncology focuses on the use of radiation to treat cancer and other diseases. Radiation therapy is an effective, safe and cost effective method of treating cancer, and is involved in 40% of cancer cures. Unfortunately, while one in two cancer patients would benefit from radiation therapy, only about one in three will actually receive the treatment. One major reason for this is a lack of awareness about radiation therapy

Consultation Feedback

Thank you for the opportunity to contribute to this important consultation.

The availability and accessibility of diagnostic imaging is a critical issue for our health system. Medical imaging is an essential part of Australia's healthcare, allowing us to find and treat injury or disease earlier and more effectively than ever before.

While this inquiry relates to diagnostic imaging equipment, our submission covers related systemic issues of professional supervision, funding and primarily focuses on access to MRI equipment.

MRI has been an incredible advancement in the practice of radiology. It provides an unrivalled ability to image multiple body systems and emits no ionising radiation. It is most suitable for high level diagnosis of diseases of the musculoskeletal system and central nervous system; early detection of tumours and other abnormalities in areas such as the breast, prostate, spinal cord and brain; and staging tests for various cancers (e.g. rectum and cervix). In the vast majority of cases, MRI can, and should, replace the use of CT in children given the radiation risks involved.

Unfortunately, access to MRI is being restricted by eligibility and funding arrangements at the Commonwealth level. The current system of limiting MBS eligibility to particular MRI machines is restricting patient access, impacting competition within the radiology sector and skewing referral patterns. This has led to Australia having one of the lowest utilisation rates for MRI among OECD nations.

RANZCR's view that access to quality MRI services should be enabled through appropriately accredited comprehensive practices, supervised by a qualified radiologist rather focusing solely on equipment or locations. Moreover, a wider range of patient presentations and clinical indications should attract Medicare funding.

A Quality Framework for Diagnostic Imaging

Implementation of the Quality Framework for Diagnostic Imaging, a long overdue reform, is essential to ensure access to high-quality diagnostic imaging through consistent application of professional supervision rules. The Quality Framework puts patients first by boosting the quality of medical imaging services in Australia and improving patient health and safety.

The Quality Framework is a reform proposal developed in 2012 by RANZCR and the Australian Diagnostic Imaging Association (ADIA) to improve professional supervision and clinical oversight of radiology services with on-site supervision by a clinical radiologist.

The Quality Framework supports comprehensive practices which provide a minimum of plain X-ray, CT and ultrasound and have a clinical radiologist on site to supervise all medical services. This enables more direct oversight of imaging referrals, particularly in relation to the appropriateness of the referral – that is, the balanced determination of whether a patient should undertake a test, weighing the diagnostic benefit against the cost, time, stress, radiation exposure – and when to recommend a more suitable test, therefore enhancing patient care.

On 5 June 2016, the Turnbull Government committed to implement the Quality Framework. RANZCR welcomed this announcement as the cornerstone to safe and appropriate use of DI services. We have been disappointed with the ongoing delays in implementing the Quality Framework and urge the government to proceed with implementation of Phase 1 as soon as possible. Patients are being put at risk by these delays.

Imaging Guidelines

International evidence supports the efficacy of clinical decision support in reducing overall imaging and changing the ordering behaviour of referring practitioners. RANZCR strongly supports the use of clinical decision support, integrated (preferably electronically) at the point of referral into the referring practitioner's normal workflow, to assist in determining appropriate imaging for their patients and reduce unnecessary or low value examinations.

Clinical pathways and guidelines need to be complemented by reliable and credible sources of information which are also available for patients, including at the point of referral and in radiology practices. This will assist patients to be better informed and more involved in decisions about their health, including management of their expectations, and addressing patient access to appropriate services.

RANZCR supports raising the profile of Healthdirect Australia, with its links to trusted sites such as InsideRadiology (www.insideradiology.com.au) and Choosing Wisely, as the first port of call for patients to obtain health related information.

Terms of Reference

- a. geographic and other disparities in access to diagnostic imaging equipment;**

The current system of limiting MBS eligibility to particular machines is restricting patient access, impacting competition within the radiology sector and skewing referral patterns.

Access to MRI

Despite the 2012 expansion of access and availability of MRI¹, MRI services remain under-utilised in Australia when compared to similar OECD countries.

The charts in Appendix 1 and 2, taken from the OECD² highlight this concern. Despite minor discrepancies in the Australian statistics reported by the OECD, the data provide an indicative benchmark against other OECD countries.

Australia currently has a respectable number of MRI units (14.3 units per million population in 2016) when compared to other OECD countries. However, our utilisation (41 MRI services per million population) lags well behind comparable countries such as Canada, France and the United States. This is despite Australia having more units per million of population than countries such as Canada, Ireland and France. This result is likely due to the slower adoption of this established technology in Australia due to the eligibility rules, funding and referral restrictions.

Geographic access to MRI is uneven across Australia. Appendix 3 charts the location of machines with full and partial eligibility across Australia. This chart demonstrates that there is limited access to MRI in regional areas, particularly in Queensland.

Restrictions in the referral pathway

Current limitations on GP referral rights to a small number of clinical indications are a further limit on patient access to MRI. Patients should be evaluated based on their individual clinical indicators with a treatment path appropriate for their situation.

GPs have the skills and competence to make the appropriate clinical decision for their patient. Ensuring that GPs have referral rights for MRI services means that a GP will be able to retain management of their patient. This can potentially avoid unnecessary specialist referrals, saving both the patient and health system time and expense.

Appropriate imaging and good clinical decision making can be supported by use of clinical decision support.

Specialist referral restrictions on MRI have skewed GP choice of imaging modality towards CT, and in combination with the restriction on the rights of radiologists to substitute an MRI when an inappropriate CT has been requested, are potentially compromising clinically optimal imaging and patient welfare. By contrast with MRI, Australia has one of the highest levels of access to CT amongst OECD countries with

¹ <http://www.health.gov.au/internet/budget/publishing.nsf/Content/budget2011-hmedia04.htm>

² <https://data.oecd.org/health.htm>

OECD (2017), Magnetic resonance imaging (MRI) units (indicator). doi: 10.1787/1a72e7d1-en (Accessed on 06 September 2017)

OECD (2017), Magnetic resonance imaging (MRI) exams (indicator). doi: 10.1787/1d89353f-en (Accessed on 06 September 2017)

an estimated 63.2 CT scanners per million population in 2016, compared to similar countries such as the United States (41.9), Canada (14.8) and New Zealand (17.9)³.

The use of clinical decision support or imaging guidelines will be important in ensuring that any expansion of Commonwealth support for MRI remains sustainable and appropriate. RANZCR strongly supports the use of clinical decision support, integrated (preferably electronically) at the point of referral into the referring practitioner's normal workflow, to assist in determining appropriate imaging for their patients and reduce unnecessary or low value examinations.

Approval of new Medicare items

The number of MRI tests that are listed on the MBS is too limited. Despite considerable efforts to make the process more efficient, it still takes a considerable time for the Medical Service Advisory Committee (MSAC) to approve gold standard radiology tests as the process is, in some instances, not suited to radiology. For example, randomised controlled trials are not available for radiology tests such as breast MRI, and greater weight should be attributed to the opinion of referring stakeholders who have no financial interest. The delays associated with MSAC approval have left patients with the option of paying out of pocket for MRI services or doing without.

Pelvic MRI is a clear example of limited funding for a valuable part of cancer care. Pelvic MRI is frequently used for people with cervical cancer. It can assist in radiologic staging, restaging and planning of external beam radiation therapy. Pelvic MRI is currently funded under MBS Item 63470 and 63473 however these items have a restriction that they can only be charged once in a patient's lifetime. In the course of cervical cancer treatment additional MRI scans are either paid for by the patient, the public system or not done at all. This disproportionately affects the most vulnerable: the disadvantaged, rural, and Aboriginal and Torres Strait Islander patients.

MRI is also recommended for cervix cancer brachytherapy planning as it enables more accurate contouring, and improved clinical outcomes with greater local control, overall survival, and reduced treatment related toxicity. Unfortunately, adoption of Image Guided Brachytherapy utilising MRI remains limited in Australia due to funding constraints as these patients generally cannot afford out-of-pocket expenses⁴.

Impact on children

It has been clearly established in the scientific literature that there is a significant long term risk to children from exposure to ionising radiation through the use of CT⁵. Multiple well publicised scientific papers have demonstrated the link between use of CT scans in childhood with a long term increased risk of cancer⁶. In the vast majority of cases, MRI can, and should, replace the use of CT in children. We acknowledge that MRI is

³ OECD (2017), Computed tomography (CT) scanners (indicator). doi: 10.1787/bedece12-en (Accessed on 06 September 2017)

⁴ Potter, R., et al., Clinical outcome of protocol based image (MRI) guided adaptive brachytherapy combined with 3D conformal radiotherapy with or without chemotherapy in patients with locally advanced cervical cancer. *Radiother Oncol*, 2011. 100(1): p. 116-23.

⁵ Matthews et al, *BMJ* 2013; 346. Cancer risk in 680 000 people exposed to computed tomography scans in childhood or adolescence: data linkage study of 11 million Australians.

⁶ Matthews et al, as above. Pearce et al, Radiation exposure from CT scans in childhood and subsequent risk of leukaemia and brain tumours: a retrospective cohort study, *Lancet* 2012.

not always clinically and radiologically appropriate, and that CT imaging will continue to play a role in paediatric imaging.

The current under-funding of MRI services by the Commonwealth Government is putting children at risk of cancers such as leukaemia and brain cancer by encouraging the inappropriate use of CT.

Impact on cancer patients

MRI is an incredibly useful imaging modality for the diagnosis and staging of many cancers. It is frequently used in radiation oncology, for example to allow the radiation oncologist to better delineate tumours and the adjacent normal structures in their treatment planning. The ability to import an MRI scan directly into radiation therapy treatment planning system is the standard care for many patients, particularly for prostate, cervix, and head and neck cancers.

Unfortunately, access to scans is limited and variable. This particularly impacts those who cannot afford the out of pocket expenses and may end up with delays while waiting for a public hospital scan or to access a rebatable machine.

As outlined above, restrictions on the clinical indications available under Medicare are also harming patients.

b. arrangements for Commonwealth subsidy of diagnostic imaging equipment and services;

The current arrangements for Commonwealth support of diagnostic imaging are unfair and inequitable. They are impacting the ability of patients to access MRI services.

Maintaining quality standards in MRI

Key to the arrangements for any Commonwealth subsidy will be ensuring that the structural components of providing an MRI service maintain quality standards.

A key issue is the supervision requirements for the provision of MRI services. The current intention behind existing legislative arrangements for MRI is that a qualified radiologist is present on site for the delivery of services.

It is clear that some providers are exploiting a loophole that exists in the regulations regarding on-site supervision, particularly for the provision of CT services. This loophole should be remedied immediately with the implementation of phase 1 of the Quality Framework, outlined earlier.

RANZCR has been advocating for the implementation for the Quality Framework for many years. We have been disappointed by the failure of the Coalition Government to implement the first phase of the Quality Framework in line with their 2016 election commitment.

In line with RANZCR's recommendation for a Quality Framework for Diagnostic Imaging, MRI must be provided with an on-site radiologist to oversee appropriate use. This is intended to be covered in a later phase of implementation of the Quality Framework.

Providing medical practitioner

As outlined in the RIS Consultation in May 2015⁷ the supervision requirements for MRI (DIST Division 2.5, section 2.5.3) “do not specify the qualifications required for health practitioners who can provide these services under the supervision of a radiologist”.

As the RIS Consultation notes, “research has shown that poor MRI services can lead to significant levels of false positive and false negative findings that may lead to unnecessarily invasive medical interventions”.⁸

Radiologists are medical specialists trained to provide imaging services, including MRI. To maintain high quality reporting standards, radiologists currently do MRI specific continuing professional development (CPD) and are required to complete a minimum, 30 CPD points per triennium. RANZCR strongly supports maintaining this standard for the provider of MRI services.

Eligibility of Equipment

The current system of limiting MBS eligibility to particular machines is restricting patient access, impacting competition within the radiology sector and skewing referral patterns.

The current system of full and partial eligibility is overly complicated and bureaucratic. New MRI machines are granted eligibility on an inconsistent ad hoc basis. Furthermore, the current system has distorted competition within the radiology sector creating a business asset that is available to some and not others without regard to population need or some other transparent benchmark. There is no transparency from the Commonwealth Government over criteria for new machines to become eligible for MBS rebates.

It is RANZCR’s view that an optimal outcome for patients would be to allow all MRI machines to become eligible for MBS rebates, as is the case in many other countries. Although this eligibility should continue to be conditional on the relevant provider meeting the MRI Quality Program, part of the existing eligibility system.

Certainly, all current partially eligible machines should become fully eligible to remove this unnecessary distortion in the provision of services.

Further, MRI machines that are not currently eligible for rebates should be able to apply through a clear and transparent process to determine eligibility based on the local health service delivery and population’s health need.

One possible solution would be to allow eligible machines based on the local population’s health needs, hospital infrastructure and services being delivered at those locations. An additional approach might be to create an Australian Atlas of Healthcare

⁷ Improving the quality and safety of Medicare funded diagnostic imaging services through the enhancement of regulatory and accreditation requirements. Consultation Regulation Impact Statement. May 2015.

⁸ Improving the quality and safety of Medicare funded diagnostic imaging services through the enhancement of regulatory and accreditation requirements. Consultation Regulation Impact Statement. May 2015. At page 18.

Variation⁹ looking at current access to MRI under Medicare and use that to determine areas with poor access.

Funding of Diagnostic Imaging

The failure of the Coalition Government to reintroduce the indexation of diagnostic imaging Medicare rebates alongside GPs has been a disappointing blow to our sector.

Re-indexation was a key component to the Government's election commitment to diagnostic imaging in 2016. The partial indexation of some tests from 2020 is not a sustainable solution. This will create a two-tiered system providing incentives that preference some modalities over others. Further, it will add unnecessary complexities to MBS billing.

After 18 years of frozen Medicare rebates, the diagnostic imaging sector is stretched thin leading to increasing gap payments and out of pocket costs for patients. Rebates for diagnostic imaging services have not been indexed since 1998. As the Deloitte Report¹⁰ notes, non-indexation has led to rebates being inappropriately low overall with some items markedly underfunded compared to others.

Clinical radiologists are medical specialists who support diagnosis and decision-making across the healthcare system and their expertise should be reimbursed fairly.

Appropriate use of imaging

As outlined above, the use of clinical decision support will be important in ensuring that any expansion of Commonwealth support for MRI remains sustainable and appropriate. RANZCR strongly supports the use of clinical decision support, integrated at the point of referral into the referring practitioner's normal workflow, to assist in determining appropriate imaging for their patients and reduce unnecessary or low value examinations.

c. out-of-pocket costs for services that are not subsidised by the Commonwealth and the impact of these on patients; and

There is a lack of data available on the out of pocket costs for imaging services that are not subsidised by the Commonwealth. To our knowledge, such data is not captured.

Feedback from clinicians providing MRI services suggests that an average out of pocket payment for an ineligible MRI test could be between \$200 and \$500 depending on the nature and complexity of the exam. For example, an MRI of the brain receives a Medicare rebate of around \$400 and a patient could expect to pay that amount of money if they went to a practice without a licensed MRI machine.

Further data should also be gathered on the number of patients who may forego a test due to the out of pocket cost or access an alternate modality that is reimbursed. This is concerning. MRI tests can have significant implications for a patient, for example back

⁹ See the Australian Commission on Safety and Quality in Healthcare at <https://www.safetyandquality.gov.au/atlas/>

¹⁰ Independent evaluation of the commercial environment of comprehensive diagnostic imaging practices, Final Report. Deloitte Access Economics. April 2017.

pain where there are red flags for a tumour or infection; imaging of the brain and spinal cord; or for accurate cancer staging.

The high utilisation of CT in Australia, as outlined above, suggests that some patients may be accessing CT instead of MRI services. While CT can be a highly effective imaging modality, it is inferior to MRI in a number of circumstances including almost all brain studies, as well as most spine and joint studies.

The current system of Commonwealth funding of MRI is therefore incentivising patients to access a suboptimal imaging service.

d. the respective roles of the Commonwealth, states and other funders in ensuring access to diagnostic imaging services.

No comment provided.

Recommendations

- 1. Introduction of Phase 1 of The Quality Framework to lay groundwork for enforcement of the professional supervision requirements for diagnostic imaging equipment**
- 2. In line with RANZCR's recommendation for a Quality Framework for Diagnostic Imaging, MRI must be provided with an on-site radiologist to oversee appropriate use.**
- 3. The system of eligibility for certain MRI machines must be reformed:**
 - a. All partially eligible units should become fully eligible.**
 - b. A clear and transparent process for new machines to gain eligibility should be introduced**
- 4. Reintroduction of full indexation for Radiology services (including all MRI services).**

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The Royal Australian and New Zealand College of Radiologists
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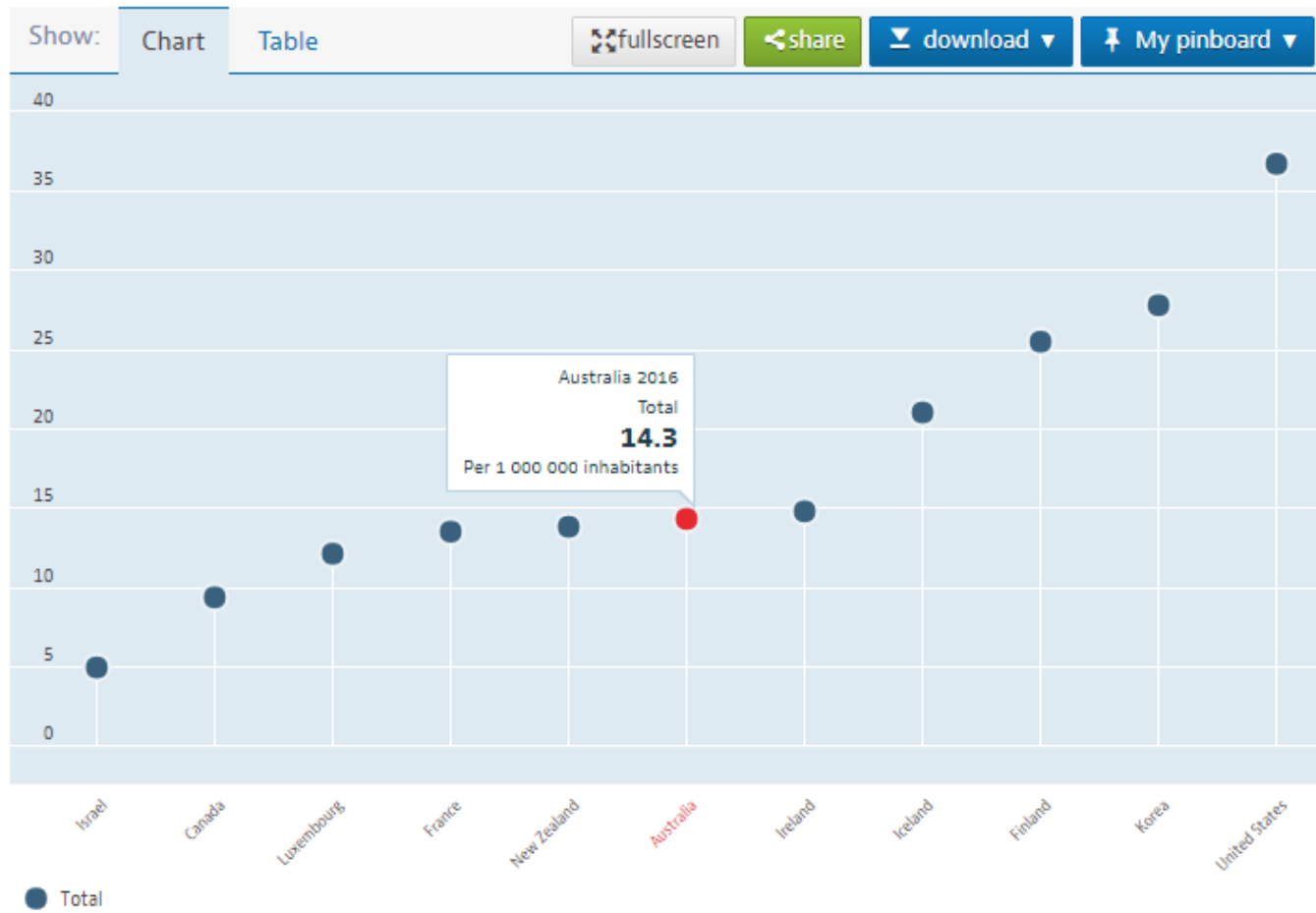


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Appendix 1: Magnetic resonance imaging (MRI) units, Total, Per 1 000 000 inhabitants 2016

Source: OECD (2017), Magnetic resonance imaging (MRI) units (indicator). doi: 10.1787/1a72e7d1-en (Accessed on 06 September 2017)

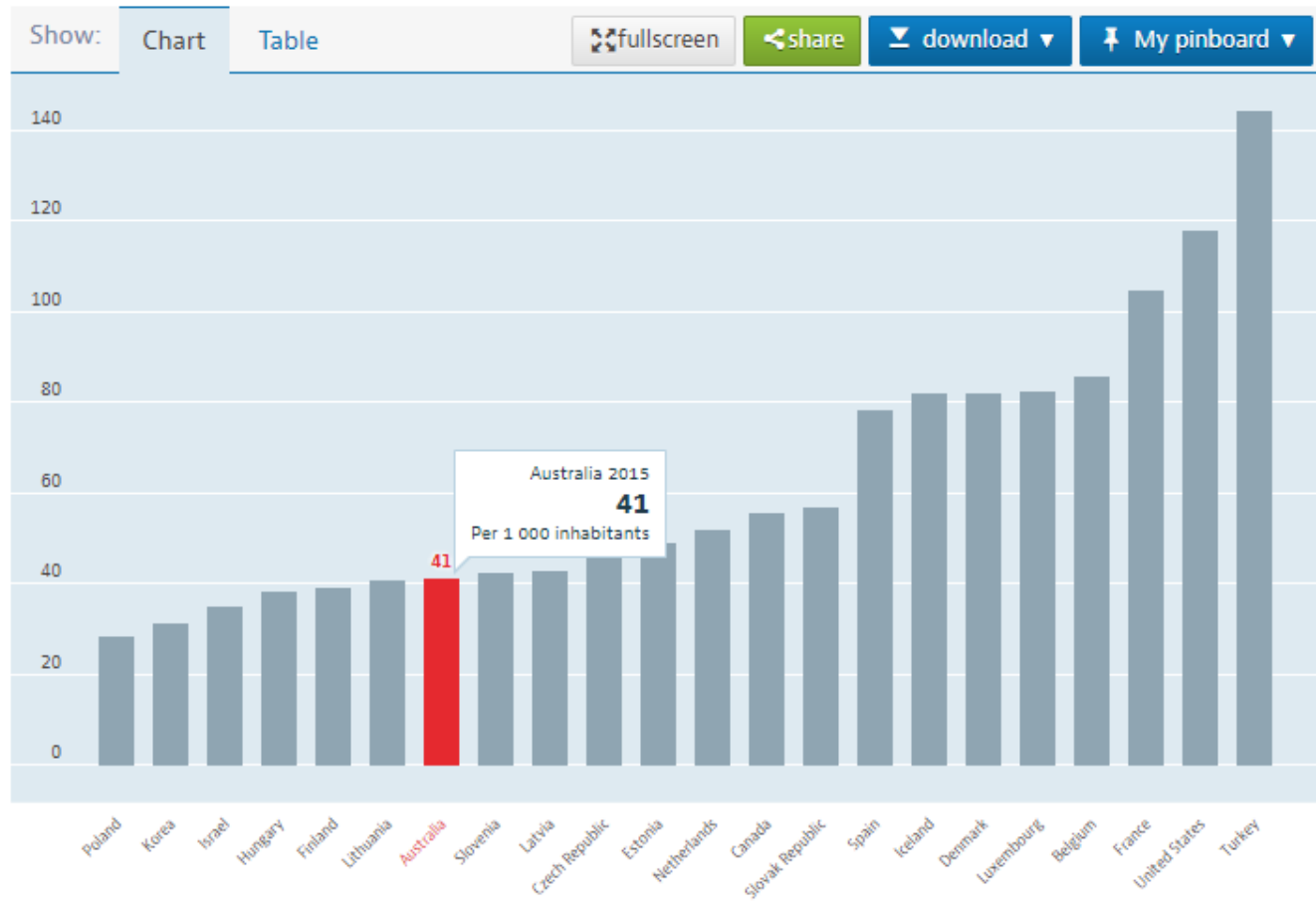
Magnetic resonance imaging (MRI) units Total, Per 1 000 000 inhabitants, 2016 Source: Health care resources



Appendix 2: Magnetic resonance imaging (MRI) exams, Total, Per 1 000 000 inhabitants 2015

Source: OECD (2017), Magnetic resonance imaging (MRI) exams (indicator). doi: 10.1787/1d89353f-en (Accessed on 06 September 2017)

Magnetic resonance imaging (MRI) exams Total, Per 1 000 inhabitants, 2015 Source: Health care utilisation



Appendix 3: MRI Locations around Australia

Source: RANZCR, based on Department of Health data acquired at <http://www.health.gov.au/internet/main/publishing.nsf/Content/mri-index>.

