Australasian Association of Nuclear Medicine Specialists

Australasian Association of Nuclear Medicine Specialists Position Statement: Re-Indexation of Nuclear Medicine Items on Medicare Benefits Schedule (MBS) – February 2022

Background

Nuclear medicine is a specialty that uses small amounts of radioactive materials or "tracers" to provide a picture of organ and tissue physiology and structures in order to diagnose, stage and treat disease. This allows the nuclear medicine specialist to visualise disease in organs and tissues that are traditionally difficult to see using other imaging techniques such as x-rays, CT and MRI. Nuclear medicine doctors are medical specialists with around eight years of post-graduate medical training.

Nuclear medicine is a critical clinical tool for assessing, diagnosing, staging and treating illnesses and conditions early and effectively, providing functional information versus a point in time image (such as an x-ray). The use of nuclear medicine can optimise patient treatment and outcomes by enabling a more accurate, targeted diagnosis and assessment of medical conditions.

Nuclear medicine tests allow quick and accurate diagnoses of a wide range of conditions and diseases, suchas heart disease, blood clots in lungs, bone infections, orthopaedic injuries, tumours, and cancer metastasis(spread). It is also used to detect conditions such as irregular blood flow to tissues and blood cell disorders.

In addition, nuclear medicine therapy may be used to control, and in some cases cure, a range of conditions using targeted isotope delivery to the cancer cells– a rapidly growing field called theranostics. These include thyroid cancer, overactive thyroid, prostate cancer, neuroendocrine tumours and bone pain caused by cancer metastasis. Theranostics combines nanotechnology with personalised medicine to significantly improve treatment efficacy and deliver therapy to targeted tissue.

On average every Australians will require more than two nuclear medicine procedures during their lifetime.

This results in over 700,000 nuclear medicine services being delivered in Australia every year.

Background: MBS indexation freeze

MBS rebates were initially frozen by the Labor government in 1998 and have not been indexed for 23 years. Over that time the effective cost of nuclear medicine for service providers has grown and is now unsustainable.

In the 2018-2018 Budget, the government announced it would commence the phased reintroduction of indexation of MBS rebates in recognition of the growing gap between service costs and the government's contribution to patients' health care costs.

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Indexation for targeted diagnostic imaging services was restored from July 2020. Nuclear medicine and MRI were initially excluded; however, re-indexation for MRI has now been scheduled for July 2022, leaving nuclear medicine as the only component of diagnostic imaging not scheduled to be re-indexed.

The extent of the cost gap

Reimbursement rates for nuclear medicine have not been indexed for 23 years, while inflation has risen over 58 per cent since rebates were frozen in 1998.[1]

Over this timeframe, the cost of delivering nuclear medicine services has grown significantly, partly due to the cost of radioactive isotopes which have seen a dramatic cost increase and supply chain issues globally.The cost of radiopharmaceuticals is not funded separately, but rather is expected to be covered under theMBS fee-for-service pricing structure.

In a 2012 MBS Review of Funding for Diagnostic Services, it was noted that 'schedule fees for nuclear medicine do not necessarily recognise the large variation in the cost of radiopharmaceuticals needed to perform them', acknowledging that, in some instances, radiopharmaceutical costs can be higher than the schedule fee.[2]

The MBS Review Taskforce then acknowledged in its 2018 final report that the availability and utilisation of nuclear medicine treatments in Australia are *"significantly affected by these pricing issues, with rebates failing to cover the cost of the radiopharmaceuticals"* (pg. 37).[2] The Taskforce recommended that the fees for nuclear medicine items be increased so that they adequately cover the cost of radiopharmaceuticals and their administration – however, four years on, this recommendation has still not been adopted.

The table below, produced by the MBS Review Taskforce in 2018, highlights the extent of the cost gap between some radiopharmaceutical prices and MBS fees:

Radiopharmaceutical	Item No.	MBS Fee (AUD)[1]	Quoted Price (AUD)[2]	Gap (AUD)
Y-90 citrate (for intracavity administration)	16003	650.50	2,169.00	**1518.50**
I-131 (thyroid cancer)	16006	499.85	652.86	**153.01**
P-32	16012	295.15	2,250.00	**1954.85**
Sm-153 lexidronam	16018	2,442.45	4,130.06	**1687.61**

1. Fee includes radiopharmaceutical and administration
2. Excluding delivery fee. Correct at 26/09/2017, for delivery to a large Australian metropolitan hospital.

[1] MBS Review Taskforce: Final Report on the MBS Items for Nuclear Medicine, 2018.
[2] Australian Institute of Health and Welfare, *Cancer in Australia 2021.* Available online: https://www.aihw.gov.au/reports/cancer/cancer-in-australia-2021/summary (accessed 24 January 2022)

Implications of the multi-decade freeze

The growing gap between MBS rebates and service delivery costs can only be offset by providers in a limited number of ways, such as through:

- Out-of-pocket costs for consumers;
- Costs being absorbed by the service provider; and
- Creating efficiencies in service delivery or limiting the availability of some services to reduce costs.

None of these strategies is sustainable over the long term and without re-indexation they will lead to increased costs for patients and reduced access to critical services.

The lack of adequate funding is also impacting on the nuclear medicine workforce, in particular the attractiveness of the specialty for trainees. Since 2017 there has been an annual decline in the number of nuclear medicine trainees. In 2021 there were only 25 trainees across 44 accredited training positions.

Anecdotal evidence from AANMS members suggests that this is due to a combination of inadequate funding and a lack of interest in nuclear medicine training due to the perception that other specialties are better funded, remunerated and supported by the government.

The need to restore indexation

Nuclear medicine has improved patient care across a wide range of conditions in many ways. By enabling non-invasive imaging of metabolic functions within the body, it allows specialists to cost-effectively obtain medical information that would otherwise be unavailable or would require more invasive procedures such as biopsy or surgery.

The recent MBS Review highlights a number of important benefits of nuclear medicine in Australia, and its role in enhancing clinical effectiveness and outcomes: Some examples include:[3]

- FDG-PET imaging has demonstrated a significant impact on the management of nearly all solid tumours. The MBS Review Taskforce for Nuclear Medicine noted that *"cancer care would likely be altered in large numbers of Australian patients if there was greater access to PET services before and after their treatment" (pg. 34).*
- ^{68}Ga DOTATATE PET was considered by the Committee to be the *"best test for neuroendocrinetumours"*
- ^{68}Ga-PSMA PET has been demonstrated to have *"improved diagnostic accuracy compared to conventional imaging for the staging and re-staging of men with prostate cancer, principally throughthe detection of otherwise unsuspected sites of disease"*
- Selective internal radiation therapy (SIRT) has clinical evidence for effectiveness for metastatic colorectal cancer, neuroendocrine tumours, other liver-dominant metastatic tumours (e.g. breast cancer), cholangiocarcinoma and hepatocellular carcinoma.
- Nuclear medicine lung items are indicated for pre-operative assessment for lung volume reduction surgery, assessment of activity of inflammatory lung disease and suspected pulmonary embolism.
- Nuclear medicine liver and spleen studies assist in the diagnosis of functional gall bladder syndromes and can help characterise liver and splenic lesions.

[3] MBS Review Taskforce: Final Report on the MBS Items for Nuclear Medicine, 2018.

- Nuclear medicine's imaging technique is effective in the diagnosis and assessment of neurological disorders including Parkinson's disease and dementias including Alzheimer's disease.

The committee's sentiment about nuclear medicine and its role in cancer is important. In 2021 it is estimated that 151,000 Australians will be diagnosed with cancer.[4] Cancer incidence continues to grow in Australia, as does cancer survival due to advances in screening, early detection and better outcomes from treatment. In addition, an increase in late stage cancer presentations is predicted as a result of delayed screening due to the COPVID -19 pandemic. In 2020 direct heath system costs related to cancer were estimated at $4.5 billion per annum.[5]

With early diagnosis using nuclear medicine, these costs can be reduced greatly. For example, early detection of bowel cancer can result in the removal of the cancer for a cost of less than $2,000. However, if caught at a later stage, the cost rises to $66,000 on average. As roughly 78% of these cases are diagnosed in late stages, the savings that could be gained from the increased use of nuclear medicine for early diagnoses is significant.[6] A 2008 Commonwealth funded PET Management Impact study also demonstrated the significant impact of nuclear medicine on management and outcomes for patients with recurrent colorectal cancer.[7]

When these benefits are expanded to cancer diagnoses writ large, the economic benefits of re-indexation, and thus increased usage, of nuclear medicine related items for diagnosis become evident.

The cost of status-quo maintenance

There are ultimately two outcomes that could occur if this status-quo is maintained

1. *Reduced availability of nuclear medicine services*

As costs continue to increase, this lack of indexation will result in nuclear medicine practitioners reducing their scope of services, as the revenue derived from providing some services is not sufficient to cover the total costs of service provision.

According to a survey conducted by Synergies of 64 AANMS members, 59 per cent of respondents indicated they had responded to rising costs by ceasing to provide some nuclear medicine procedures. A further 22 per cent indicated they closed sites altogether. These respondents have instead utilised inferior services that provide better renumeration through the MBS.

For a number of conditions nuclear medicine procedures are clearly the most effective means of diagnosing and/or treating these conditions. While in some cases there are alternative procedures that can be used as substitutes for nuclear medicineprocedures, these are less precise and less effective and hence lead to inferior patient health outcomes and often additional costs being imposed on the healthcare system. As discussed above, the economic losses suffered by failing to detect a cancer in early stages are significant.

4 Australian Institute of Health and Welfare, Cancer in Australia 2021. Available online: https://www.aihw.gov.au/reports/cancer/cancer-in-australia-2021/summary (accessed 24 January 2022)

5 Synergies Economic Consulting, *Economic cost of lack of indexation for nuclear medicine*, 2021.

6 Scott et al. (2008), *PET Changes Management and Improves Prognostic Stratification in Patients with Recurrent Colorectal Cancer:Results of a Multicenter Prospective Study*, Journal of Nuclear Medicine, Vol. 49, No. 9, pp. 1451 – 1457. 2008

7 This figure is based historical Consumer Price Index (CPI) data from the past 21 years. It assumes that future inflation will remainconsistent with historical trends.

2. Increased out of pocket costs for patients

Practitioners may continue to provide nuclear medicine services but be forced to shift the costs of provision onto the patient in order to maintain the economic viability of conducting the procedures. This will ultimately result in nuclear medicine services becoming increasingly cost prohibitive to patients. Due to Medicare regulations concerning gap payments, the relatively high cost of individual test and the risk to practices of delayed or "lost" payment cheques, the pressure to bulk bill is very high and many would rather cease providing a test that is only marginally profitable rather than risk even more by delayed payments and increased cost of administrating the process of Medicare cheque recovery and banking.

Where nuclear medicine diagnostic testing is superior to alternative methods, and patients are unable to access services due to the increasing out-of-pocket costs, there will be an increased risk of adverse health outcomes and additional downstream costs on the health system.

AANMS Position

The AANMS is seeking an initial 10 per cent increase for all MBS items for nuclear medicine in the 2022-23 Budget, to bring reimbursement levels closer to appropriate levels. Given that inflation has risen over 58 percent since rebates were frozen in 1998, this initial payment is crucial to re-establish the viability of nuclear medicine in Australia.

In subsequent years, nuclear medicine MBS items should be reindexed in line with inflation, based on theConsumer Price Index (CPI).

As demonstrated above, nuclear medicine services are crucial to the health of all Australians, and indexation will not only maintain and improve access to essential nuclear medicine services, but will prove considerably cost-effective over the long term.

Budget

Initial year: Approximately $33.6 million.

Ongoing estimated cost over the forward estimates7: Approximately $9.3 million per year.

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