Australian Government

Australian Government response to the Senate Community Affairs References Committee Report:

Availability of new, innovative and specialist cancer drugs in Australia

November 2017

Introduction

In December 2014, the Senate referred the matter of the availability of new, innovative and specialist cancer drugs in Australia to its Community Affairs References Committee. The Committee reported on 17 September 2015, noting that over 45,000 people would die from cancer in 2015, representing three out of every ten deaths registered in Australia. The Committee recommended a comprehensive review of Australia's medicine registration and reimbursement systems, a review of current data collection mechanisms for cancer medicines and an examination of the feasibility of establishing a national register of cancer medicines.

Cancer, a generic term describing a large group of diseases, is among the leading causes of morbidity and mortality worldwide. Australia has among the highest incidence of cancer in the world[1] but it also has one of the world's best survival outcomes[2]. This is because of its comprehensive health care system which delivers access to skilled health professionals, effective and appropriate treatments, high quality care, affordable medicines and ongoing education. In Australia, over the period 2009-2013, people diagnosed with cancer had a 68% chance of surviving for at least 5 years, a significant improvement from 48% over the period 1984-1988[3].

Australian governments currently spend an estimated $4-5 billion per annum on the treatment of cancer[4]. With an ageing population and the prevalence of cancer trending upwards, the health and economic impacts on individuals and the health system can be expected to continue to increase. A key driver of Australian Government expenditure is the growth in the number and cost of medicines subsidised through the Pharmaceutical Benefits Scheme (PBS) for the treatment of cancer.

The Australian Government is strongly committed to the objective of the National Medicines Policy: 'timely access to the medicines that Australians need, at a cost individuals and the community can afford'. It is acknowledged that without the PBS listing of medicines, patients could face prohibitive costs of thousands of dollars per course of cancer treatment.

It is important that any new subsidised treatments are evidence-based. The Pharmaceutical Benefits Advisory Committee (PBAC) utilises health technology assessment (HTA) as a necessary tool to guide its decisions on whether to recommend a medicine for reimbursement on the PBS. The HTA covers a range of processes and mechanisms that use scientific evidence to bring a considered and objective approach to determining the clinical benefits, safety, clinical effectiveness and value for money of new medicines compared with the price being sought by the medicine sponsor.

Evidence based objective assessment is important as the prices requested by sponsors seeking PBS listing are generally higher than for current listed medicines. Failing to properly assess medicines could result in misallocation of scarce health resources and lead to high opportunity costs in terms of health losses for other patients.

In 2015-16, the Australian Government spent over $11 billion on PBS and RPBS medicines, of which $1.9 billion was for cancer medicines, that is, around one in every six dollars of PBS expenditure

[1] http://globocan.iarc.fr/Pages/fact_sheets_cancer.aspx
[2] Australian Institute of Health and Welfare 2017. Cancer in Australia 2017. Cancer Series no. 101. Cat. no. CAN 100. Canberra: AIHW
[3] Australian Institute of Health and Welfare 2017. Cancer in Australia 2017. Cancer Series no. 101. Cat. no. CAN 100. Canberra: AIHW
[4] Deloitte Access Economics, July 2013: *Access to cancer medicines in Australia. & AIHW, 2013: Health system expenditure on cancer and other neoplasms in Australia, 2008-09.*

subsidises cancer medicines. The average reimbursement price for cancer medicines increased 133 percent in real terms from 1999-2000 to 2011-2012. In contrast, the price of non-cancer prescription medicines increased 37 percent in the same period[5].

There are approximately 110 cancer medicines available on the PBS. From October 2013 to August 2017, the Australian Government has approved over 60 new cancer medicines (or amended listings) at a total cost to government (estimated for the relevant budget period at the time of each listing) of around $4 billion. This includes new treatments for advanced pancreatic cancer, melanoma, rare giant cell bone tumours, advanced breast cancer, and ovarian, fallopian tube, and primary peritoneal cancer. All cancer medicines in receipt of a positive PBAC recommendation have either been listed, or are in the process of being listed. Current PBS listed cancer medicines and patient numbers are at **Attachment A**.

Cancer is and remains an active area of global research yielding many new treatments and diagnostic methods. The global market for cancer medicines reached $91 billion in 2013, up from $71 billion in 2008[6] (a 28 percent increase). Reports indicate over 1000 new therapies are at different stages of development. This is both exciting and challenging for governments, clinicians and patients worldwide. Challenges include providing timely access to medicines, evaluating appropriate levels of reimbursement and determining the best treatment options, often based only on limited but evolving data and limited real world experience of both the benefits and harms of the new treatments.

The first disbursement of the Medical Research Future Fund (MRFF) was announced in the context of the 2017-18 Budget. This package totals $65.9 million and includes the establishment of a $13 million Rare Cancers and Rare Diseases research grants program to stimulate clinical trial and registry activity with priority to be given to under-researched health priorities. This competitive grant program will target public good clinical trials and registries that address areas of health burden and unmet need. Novel and innovative trial designs and recruitment strategies and the application of precision medicine will also be encouraged. This investment is important as the Rare Cancers Australia report[7] describes how patients with rare cancers are disadvantaged due to limited access to new research, effective treatments and support. Support for cancer research directly addresses one of the report's recommendations.

In its March 2015 submission to the Senate Inquiry, the PBAC observed that many new cancer medicines are not dramatically more effective than existing treatments and the health benefits of new cancer medicines are often small[8]. A recent study of cancer medicines approved by the US Food and Drug Administration between 2002 and 2014 indicated that the average improvement in survival was about 2.1 months. While this provided a cancer patient near the end of life with modest benefits, it often came with significant toxic effects and usually at a cost that is substantially higher than older medicines and other new non-cancer medicines[9]. Temel et al[10] indicate that two

[5] Karikios DJ et al (2014). Rising cost of anticancer drugs in Australia. Internal Med. J. 44(5):458:63.
[6] IMS Institute for Healthcare Informatics (2014) Innovation in Cancer Care and Implications for Health Systems: Global Oncology Trend Report.
[7] Rare cancers Australia report: Rare Solutions: A time to Act, 9 August 2017
[8] PBAC submission to the Senate Community Affairs References Committee Inquiry into the availability of new, innovative and specialist cancer drugs in Australia, 16 March 2015.
[9] Fojo, T et al (2014) Unintended consequences of expensive cancer therapeutics-the pursuit of marginal indications and a me-too mentality that stifles innovation and creativity. JAMA Otolaryngol Head Neck Surg. Doi:10.1001/jamaoto.2014.1570.
[10] Temel JS et al. (2010) Early palliative care for patients with metastatic non-small cell lung cancer. New England J Med. 2010; 363:733-742.

months additional survival can be less than that associated with even minimal palliative care, with palliative care offering better quality of life.

A key challenge for the Australian Government is to balance the competing demands within the health system across a broad disease spectrum. The Government must also balance expenditure not only on medicines for cancer treatment, but also with the equally important and necessary investments in disease prevention, early detection and accurate diagnosis. For example, it is estimated that more than 30 percent of cancer deaths may be prevented by modifying or avoiding key risk factors, and thus avoiding expensive medicine treatments. Further deaths can be prevented through cancer screening where early detection of cancer can be more effectively treated.

The Australian Government has invested in cancer prevention through successful measures such as immunisation and screening programs. The human papillomavirus (HPV) vaccine is provided in schools to all males and females aged 12-13 years through the National Immunisation Program (NIP). Free HPV vaccines have been made available through school based programs for girls since 2007 and boys since 2013. A 2015 independent evaluation of the Australian HPV Vaccination Program (conducted by the National Centre for Immunisation Research and Surveillance at the University of Sydney) found that the Program had been successful in reducing the incidence of cervical abnormalities in young women and anogenital warts in men and women. These reductions are expected to significantly reduce the prevalence of cervical cancer among women.

The Australian Government funds the National Bowel Screening Program and contributes funding to BreastScreen Australia and the National Cervical Screening Program. The Australian Government is establishing the National Cancer Screening Register to support invitations to screen, follow up and collection of cancer diagnostic outcomes for the bowel and cervical screening programs.

Australia's achievement of world leading cancer survival rates is a clear sign that the current system is working.

The Australian Government agrees that improving and streamlining existing regulatory and assessment processes for new medicines are key strategies which will offer the best prospects of maintaining Australia's record of supporting timely access to cost-effective cancer medicines that deliver proven health gains. The Government understands that a strong partnership between industry, prescribers and consumers is key to this process and is actively working with stakeholders in this area. For example, the Australian Government Department of Health continues collaborative discussions with industry about the future PBS availability of immunotherapies, which are new types of medicines for cancer that use part of a person's immune system to treat a range of cancer types.

Some of these immunotherapy medicines have already been listed (see **Attachment A)**. There are currently two immunotherapies subsidised for melanoma and the Government has recently extended the PBS listing for one immunotherapy to include the additional indications of non-small cell lung cancer and renal cell carcinoma. The Government will continue to engage constructively with sponsors to expand the indications for this important breakthrough in cancer treatment.

There have been a number of major reform initiatives relating to the regulatory processes administered by the Therapeutic Goods Administration (TGA) and HTA pathways for reimbursement for the PBS and the Medicare Benefits Schedule (MBS) in the last decade. These

reforms have already produced improvements in coordination, transparency and timeliness of assessments.

Significantly, the Expert Panel Review of Medicines and Medical Devices Regulation[11] (MMDR) examined Australia's medicines and medical devices regulatory framework and processes administered by the TGA. The MMDR Review made a number of recommendations about expanded regulatory pathways, stronger alignment with overseas regulatory processes, enhanced post-market monitoring and improved transparency and predictability of regulatory processes and decisions.

On 15 September 2016, the Australian Government released its response to the Review[12]. The MMDR Government response identifies ways to improve access to therapeutic goods, including cancer medicines for Australian patients, and remove unnecessary red-tape for industry, whilst maintaining Australia's high standards for efficacy, quality and safety of therapeutic goods. These reforms are now being implemented by the TGA in consultation with industry, health professionals and consumers. Progress on the public consultation for the implementation of these reforms is available on the TGA website[13].

RECOMMENDATION 1:

The committee recommends that the Australian Government initiate a comprehensive review of the system for the registration and subsidisation of medicines. The review should examine:

- all available pathways for the registration and listing of new medicines, or new indications for medicines already registered on the ARTG and listed on the Pharmaceutical Benefits Scheme, including making provision for utilisation of assessments conducted by comparable overseas regulators; provision for clinicians and/or patient groups to apply for an extension of existing registrations to additional indications, managed access programs and risk-sharing, and the adoption of more flexible evidential requirements;
- options for improving the operation of assessment processes including:
  - enhancing engagement with sponsors and other stakeholders to better tailor their applications to the requirements of the PBAC, including consideration of pre-application planning meetings;
  - applying tiered assessment processes as a means of matching resources to the complexity of applications;
  - encouraging greater cooperation between the PBAC, the TGA and the Medical Services Advisory Committee, including examination of options for enhancing the operation of parallel processing arrangements; and
  - ensuring greater transparency throughout the assessment process;
- options for expanding the post-market review of medicines;

[11] Expert Panel, Review of Medicines and Medical Devices Regulation: Report to the Minister for Health on the Regulatory Framework for Medicines and Medical Devices (31 March 2015), available at: http://www.health.gov.au/internet/main/publishing.nsf/Content/Expert-Review-of-Medicines-and-Medical-Devices-Regulation

[12] Commonwealth of Australia (Department of Health), Australian Government Response to the Review of Medicines and Medical Devices Regulation (September 2016) available at: https://www.tga.gov.au/mmdr#austgovt

[13] https://www.tga.gov.au/implementation-reforms-public-consultation-forecast

RECOMMENDATION 1 (continued):

• enhancing and formalising mechanisms for consumers and clinicians to play a more central and substantial role in the evaluation of new medicines and new indications for already listed medicines, including:

  • consideration of options for expanding consumer and clinician representation on the PBAC;

  • enhancing existing avenues for stakeholder input, including the use of consumer and patient hearings; and

  • avenues for incorporating public perspectives on overarching moral, ethical and opportunity cost considerations into PBAC decision making processes, including consideration of models employed by comparable overseas regulators; and

• options for ensuring that the necessary administrative and technical resources are available to support the implementation of an enhanced PBAC system.

The Australian Government supports the intent of the recommendation.

Improving regulatory and reimbursement assessment processes and pathways

1. Regulatory processes

The TGA is responsible for regulating the supply, import, export, and manufacturing of all therapeutic goods in Australia. Pharmaceutical companies apply for TGA registration to supply medicines in Australia (and to enable subsequent PBS listing for government subsidisation of medicines) at their discretion. Often companies make decisions as to the order of submissions at a global strategic level, with a preference for earlier submissions in larger markets such as the USA and Europe. Comparisons of dates of regulatory submissions show that new products are submitted in Australia a median of 99 days after they are submitted to the US Food and Drug Authority (FDA)[14].

The Australian Government's response to the MMDR Review notes that streamlined approval of medicines, including novel and lifesaving therapies, offers significant benefits to consumers, health professionals and industry. The Government has accepted the majority of the recommendations, including: the introduction of new expedited assessment pathways; making greater use of assessments from comparable overseas regulators; enhanced post-market monitoring; and streamlined access to unapproved products under the Special Access Scheme and the Authorised Prescriber Scheme.

Patients and sponsors will benefit from two expedited pathways being implemented by the TGA, which will help to achieve earlier regulatory approvals of new life-saving medicines such as new cancer medicines, or to extend uses of existing medicines to treat a new population of patients (for example, a treatment already approved for one type of cancer being used to treat another type of cancer).

[14] Centre for Innovation in Regulatory Science R&D Briefing 59: the impact of the evolving regulatory environment on the approval of new medicines across six major authorities 2006-2015, CIRS 2016.

The Priority Review pathway was implemented on 1 July 2017, enabling eligible medicines that have complete quality, safety and efficacy data to be assessed three months faster than under the current framework. A Provisional Approval pathway will also be implemented enabling certain promising medicines to become available up to two years earlier on the basis of early clinical data on efficacy and safety. Additionally, closer alignment of the TGA with other similar international regulatory agencies should open the door to increased opportunities to undertake work sharing, as a means of bringing new medicines to the Australian market more quickly. By offering work-sharing options, sponsors may seek approval in Australia at the same time as applying overseas. For medicines that have already been approved overseas by a comparable overseas regulator, the TGA is also implementing a process where sponsors can supply the un-redacted overseas assessment reports for use by the TGA in making its decision. Both processes are being trialled as part of TGA's ongoing involvement in international harmonisation activities.

The Provisional Approval pathway will allow sponsors to seek a provisional registration on the basis of a limited clinical data set and with limited duration. Sponsors will be required to meet conditions imposed by the TGA, including a requirement to collect and submit additional data to confirm adequate safety and efficacy standards, before the medicine is considered for full registration. If the required data cannot be provided within the required timeframe then the provisional registration will lapse, unless an extension has been granted. Other conditions may be applied within the enhanced medicines vigilance framework that is being developed by the TGA. Full details of the new pathway are being worked through prior to implementation, which is subject to the passage of amendments to the TGA's legislative framework.

The MMDR Review did not include consideration of PBS listing and PBAC processes. However implementation activities in response to the MMDR Review will impact on these processes. The Australian Government is working to ensure that, where necessary, the PBS and PBAC processes are modified to take best advantage of the outcomes of the MMDR Review. For example, the parallel evaluation process of the TGA and the PBAC is being re-examined and modified to become more agile, and to take into account the new Provisional Approval pathway. Opportunities to share the assessment of data that may be in common to the TGA and PBAC review processes are also being examined (see point 3 below).

In addition to the MMDR Review, reforms to the Australian Orphan Drug Program were also implemented by the TGA on 1 July 2017. An orphan drug is used to treat, prevent or diagnose a rare disease, affecting only a small number of Australian patients. The aim of the program is to provide an incentive to industry sponsors to bring medicines for rare diseases to the Australian market that might otherwise not be available. Some cancers are classified as rare diseases and a number of orphan drugs benefiting from the program are cancer medicines. The incentive is in the form of a TGA waiver of application and evaluation fees. As part of the reforms, the orphan drug criteria have been amended to create a fairer program that aligns more closely with international criteria, does not impede the availability of drugs for rare diseases and remains financially viable for the TGA as pharmaceutical development moves towards more targeted therapies aimed at smaller populations of patients. All applications for orphan drug designation made after 1 July 2017 must address the new criteria in order to be eligible for the fee waiver.

2. Reimbursement processes

The PBAC advises the Australian Government on medicines to be subsidised through the PBS. The PBAC's assessment of medicines for cancer and other diseases is relatively fast in comparison to

other developed countries, taking 17 weeks from receipt of an application to PBAC consideration. The assessment process is, however, highly specialised and involves complex evidence. There are also an increasing number of submissions to list medicines on the PBS. The Australian Government, in conjunction with the PBAC, continues to work with industry and consumers to improve assessment processes, ensuring they provide efficient and effective systems that are transparent. The Government is also working to improve stakeholders' understanding of PBAC processes.

In October 2016, the PBAC finalised the review of its Guidelines to ensure that the HTA methodologies used are consistent, transparent and incorporate international best practice. The revision has provided an opportunity to address matters raised in the Senate report such as clinical evidence requirements, handling cross-over in cancer medicine trials and the use of surrogate outcomes to assess the effectiveness of new medicines. The revisions to the Guidelines have enhanced assessment processes for cancer medicines for timely inclusion on the PBS.

In May 2015, the Australian Government announced the 2015-16 PBS Access and Sustainability package which was developed following consultation and negotiations with consumers, pharmacists, medicine sponsors, wholesalers and doctors. In relation to the Senate report's recommendations about the operations of the PBAC, the package recognised the significant increase in the number and complexity of submissions to list medicines on the PBS, and provided funding to enable progressive changes to be introduced to improve PBAC operation and listing times.

Reforms included expansion of the PBAC membership from 18 to 21 members to enable additional consumer and industry representation and a new Deputy Chair role. A PBAC Executive will assess the fit-for purpose (triaging) assessment of submissions for PBAC consideration. The implementation of these reforms is being progressed as part of work being undertaken with medicine sponsors to better tailor and improve the efficiency of the assessment of medicines for PBS subsidy.

The Senate report also noted the potential of managed access programs to accelerate the reimbursement process for certain medicines including cancer medicines. Managed access programs provide a framework for listing medicines with high unmet clinical need on the PBS where there is evidence of a significant net benefit from the therapy but the magnitude of the benefit (for pricing) is yet to be fully determined.

A revised Framework for the Managed Access Program for submissions to the PBAC (MAP Framework) was endorsed by the PBAC in March 2015 and again in December 2015. The Managed Access Program is a policy priority of the Access to Medicines Working Group (AMWG) and under the Strategic Agreement with Medicines Australia (MA), the parties will continue to consult with each other through the AMWG to address the issues currently being considered by the AMWG. Significant progress had been made towards the development of the Managed Access Program process.

In the Strategic Agreement with MA announced in the 2017-18 Budget, the Government has consolidated its commitment to list new and innovative medical treatments, and to do so in a fiscally responsible manner. To this end, the Strategic Agreement includes statutory price reductions to F1 medicines that will provide $1.8 billion in savings. These savings will be reserved

to fund new and amended PBS listings, which will include new cancer drugs that are recommended by the PBAC over the period of the Agreement.

The Strategic Agreement also provides medicine pricing certainty and policy stability over five years which will encourage international pharmaceutical companies to bring their new cancer drugs to Australia.

The Government and MA will work together to improve timeliness, transparency and efficiency in PBS listing processes. This work will assist in improving PBS listing times for innovative cancer medicines recommended by PBAC. Specifically, the Strategic Agreement commits to reducing the time from PBAC recommendation to listing by an average of two months (clause 10.3.1d) and targeting a 50 percent reduction in the number of resubmissions to the PBAC (clause 10.3.1e) during the term of the agreement.

The Agreement provides a further platform for continued dialogue and consultation for how the Government and MA can continue the important work of bringing new and innovative medicines to Australian patients through the PBS. Both the Government and MA commit to the continuation of existing discussion forums, in addition to the formation of a Joint Oversight Committee under the agreement to review progress towards and achievement of the commitments in the Agreement.

3. Enhancing joint medicine submission pathways

Discussions with industry are continuing regarding a pilot project involving a joint TGA/PBAC pre-submission meeting, use of a single clinical evaluation report that meets both regulatory and reimbursement authority requirements, and information sharing for post-market monitoring. This trial will examine opportunities for streamlining and reducing duplication and if successful, could improve approval and listing times for medicines, benefiting patients.

Under the current process, concurrent evaluations of medicines by the TGA and the PBAC can be undertaken through parallel processing which aim to encourage expedited listing and subsidy of new and innovative medicines in Australia. Since its introduction in 2011, 40 medicines to treat cancer have been considered under TGA/PBAC parallel processes.

Since 2011, at least 24 co-dependent technologies applications (where the Medical Services Advisory Committee (MSAC) considers funding for a test or medical service that is required to determine eligibility of patients for a medicine being assessed by the PBAC) have been identified and assessed through a coordinated assessment approach between the MSAC and the PBAC. The 2016 PBAC guidelines updated formal guidance on this process.

While there is some variability in individual circumstances, the TGA/PBAC parallel processing can allow medicine reimbursement around four months earlier than if the medicine registration and reimbursement assessment processes occurred sequentially. By way of example, a medicine, ofatumumab, for the treatment of chronic lymphocytic leukaemia was lodged with the PBAC under the parallel process in 2014 and was recommended for PBS listing seven weeks after the TGA's approval. If parallel processing was not available, the recommendation for listing could not have occurred until six months after the TGA's approval.

4. Transparency and stakeholder input

The Australian Government recognises that partnering with stakeholders is key to the delivery of a successful health system. A variety of initiatives to increase stakeholder involvement and transparency in the regulation and reimbursement systems are in place and others are planned.

An Australian Public Assessment Record (AusPAR) provides information about the evaluation of a prescription medicine and the considerations that led the TGA to approve or not approve a prescription medicine submission.

The first AusPAR was published in November 2009 as part of TGA's implementation of the increased transparency strategy under the Business Process Reforms for Prescription Medicines.
The publication of an AusPAR is an important part of the transparency of the TGA's decision-making processes. The TGA's approach to AusPARs is consistent with similar transparency measures introduced within the European Union and United States.

AusPARs are published on the TGA website[15]. The TGA currently publishes an AusPAR for the majority of applications under the category of 'major submission' for the inclusion of a prescription medicine on the Australian Register of Therapeutic Goods (ARTG). This includes submissions for new chemical and biological entities, extension of indication/s and significant variations to already registered prescription medicines.

The reforms to the regulation of medicines following the MMDR Review include improved regulatory guidance information and the establishment of a support service, which was launched in June 2017, to assist small and medium sized enterprises to navigate the regulatory processes.

Applicants planning to seek PBS listing for a medicine can use pre-PBAC submission meetings with secretariat staff to obtain guidance on how best to present the available evidence to the PBAC.

In 2015, the PBAC acknowledged feedback from consumers and clinicians by introducing consumer and patient hearings prior to PBAC meetings. These hearings provide stakeholders with the opportunity for direct communication with the PBAC regarding medicines that are being considered for PBS listing. This is in addition to the online facility that allows consumers to provide written input on upcoming PBAC agenda items[16].

Consumer hearings have now been held on five occasions and allowed for a range of consumer groups to speak directly to the PBAC on more than a dozen new medicine submissions for conditions including melanoma, haematological and gastrointestinal cancers, Crohn's disease and chronic hepatitis C. The PBAC is currently undertaking a review of consumer hearings with a view to improving their value for consumer groups and the PBAC, and consolidating their place in the PBS assessment process.

Further, a Consumer Consultative Committee has also been established, to provide strategic advice and support to the principal HTA committees (that is, the PBAC, MSAC, and Prostheses List Advisory Committees) and the Department of Health to ensure optimal consumer engagement and participation in the HTA processes of the Australian Government.

[15] https://www.tga.gov.au/australian-public-assessment-reports-prescription-medicines-auspars
[16] http://www.pbs.gov.au/info/industry/listing/elements/pbac-meetings/agenda/march-2017-pbac-meeting-agenda

The Consumer Consultative Committee's terms of reference outline that the purpose of the Committee are as follows:

- to act as an advisory group for the Department of Health to provide a consumer perspective on all HTA matters of relevance to Australian consumers and communities;
- to inform policy on consumer/ patient matters in HTA of significance to Australian consumers and the community;
- to promote improved communication, collaboration, engagement, mutual understanding and operational efficiencies across the HTA Committees and Sub-Committees where consumer representatives are involved;
- to identify gaps and opportunities for consumer engagement across Department of Health HTA processes, that can inform the evidence and assessment requirements of the relevant Committees;
- to collaborate with the Department of Health on strategies to engage with consumer / patient groups to help them provide information, education and support on engagement with HTA methods and procedures;
- to support the Department of Health in promoting greater public understanding of HTA decision-making processes, and increasing the transparency to the public of how these assessment decisions are made; to develop and communicate evidence about consumer values, needs and perspectives to all aspects of the HTA sector, including external stakeholders; and
- to enhance methods for formal patient inputs and integration in the assessment frameworks and identified priorities for consumers and communities, which would include activities such as training, feedback to patient groups and conflict of interest requirements.

The PBAC also releases public summary documents after each PBAC meeting to better inform stakeholders about the PBAC's decision-making. The PBAC is currently undertaking a quality improvement project to address the clarity and completeness of the information provided in public summary documents. However, PBAC is constrained in this objective by the commercial-in-confidence aspects of medicine companies' submissions, and the secrecy provisions of Section 135A of the *National Health Act 1953*. As a consequence, it will not always be possible for the PBAC to include all of the information it has assessed in a public summary document for a medicine. Sponsor sensitive information often includes, for example, unpublished clinical trial results and the prices proposed in PBS listing applications. The Australian Government is supportive of disclosure of sufficient information to allow the reasons for PBAC decisions to be transparent and readily understood.

5. Expanding post-market review of medicines

The Australian Government supports the opportunity to investigate expanding post-market review activities to better ensure the continued safe, effective and cost-effective use of medicines. Post-market review and surveillance cannot and should not substitute for adequate pre-approval evaluation of medicines, but it supports the quality use of medicines, a key objective of the National Medicines Policy, and is central to delivering improved health outcomes for Australians.

A variety of post-market review activities are already in place in the TGA and for the PBS, as noted in the Senate report.

As a result of the MMDR the TGA's post-market monitoring processes will be enhanced to include better integration and timely analysis of available datasets. More specifically this will include: enhanced access to electronic reporting of adverse events; enhanced monitoring of risk management plans required for high risk medicines; investigation of how the use of available health datasets could enhance post-market safety surveillance of medicines; and increased collaboration with overseas regulatory agencies to share information relating to safety or efficacy. A new scheme to alert practitioners and consumers that a medicine is newly registered will also be developed to further encourage reporting of any adverse events. The development of a more comprehensive post-market monitoring scheme will enhance consumer protection and complement existing post-market monitoring processes.

Post-market reviews of PBS medicines have been a core function of the PBAC for many years. In 2011, the Post-market Review Program was funded to develop a formal process for monitoring the use of PBS medicines in clinical practice. The program supports a National Medicines Policy key objective - the quality use of medicines. Post-market reviews seek to ensure the continued safe, effective and cost-effective use of PBS medicines. Post-market reviews have also considered matters relating to the ongoing management and administration of the PBS.

In response to stakeholder concerns about processes and outcomes of previous reviews, in March 2015, the Government agreed a PBS Post-market Review Framework with industry, including with Medicines Australia. The Framework provides a systematic approach to the conduct of post-market reviews for PBS listed medicines. Key steps in a review include: identification of potential reviews by the PBAC or through analyses undertaken by the Drug Utilisation Sub-Committee (DUSC); Government approval and announcement of the review on the PBS website; public consultation on the draft terms of reference before the review commences, and then subsequently on the review terms of reference and the draft review report; establishment of an expert review reference group; sponsor feedback; evidence collection by an independent evaluator; and PBAC consideration of the final report and recommendations to Government.

RECOMMENDATION 2:

The committee recommends that the Australian Government commission a review of current data collection mechanisms for cancer medicines, including identification of:

- obstacles to the integration of existing databases and potential avenues for addressing these;
- opportunities to incorporate data from post-market evaluations; and
- avenues for capturing data relating to the off-label use of cancer medicines.

The Australian Government supports the intent of the recommendation. A variety of existing activities provide the Government with data on cancer and its treatment.

The Government notes the importance of having effective mechanisms for collecting and analysing clinical data in relation to the use of cancer and other medicines to provide information that can be used with confidence in decision making by all stakeholders.

The Government also notes there are currently mandatory requirements to report new cancers diagnosed (other than basal and squamous cell carcinomas of the skin) to state and territory based

cancer registries. Data from these registries are used by a range of researchers, and also by the AIHW to compile its annual *Australian Cancer Database.* This is a collection of all primary, malignant cancers diagnosed in Australia since 1982 that is used by AIHW to monitor cancer incidence, mortality, survival and prevalence nationally.

The Australian Government is investing in a national register to assist in the prevention of cancer. The new single National Cancer Screening Register, linking to My Health Record and other systems, combines separate state and territory cervical screening registers and a paper based bowel screening register.

The Australian Government through Cancer Australia is undertaking an initiative which aims to strengthen national cancer data capacity through the collection, transfer, collation and the reporting of standardised national data on stage, treatment and recurrence (STaR) for all cancers. The STaR initiative is being undertaken in collaboration with relevant Australian Government departments and agencies, and state and territory governments and their population-based cancer registries. The STaR initiative will address the lack of national data on the severity of cancer at diagnosis, which treatments are applied, and the recurrence of cancer after treatment.

Disease specific state based cancer registries, such as the NSW and Victorian Prostate Cancer Registry and the Victorian Lung Cancer Clinical Quality Registry (VLCR) have also been established. The VLCR collects data on the patterns of care and outcomes from public and private hospitals and aims to provide a complete dataset on disease stage, pathology, medicine utilisation, and real life clinical use and safety issues. The VLCR is exploring extending the registry across Australia pending discussions with the other states and territories.

The Government also notes the role of the DUSC of the PBAC in evaluating the use of certain cancer medicines listed on the PBS. DUSC analyses data on actual utilisation compared with the use as recommended by the PBAC. These reviews of drug utilisation are conducted routinely 24 months following PBS listing or when specifically requested by PBAC.

When DUSC reviews the utilisation of cancer medicines, where appropriate the report is made publicly available. DUSC reports can be accessed via the PBS website. Recent reports considered by DUSC include the utilisation of medicines for the treatment of chronic myeloid leukaemia, bone metastases, renal cell carcinoma, melanoma, prostate cancer, gastrointestinal stromal tumour, breast cancer and lung cancer.

The experience gained from these data collection approaches and cancer registries will inform future developments in data collection. It is important to ensure that public investments in data collection integrate with broader health systems, such as the My Health Record, to ensure the ongoing usefulness and usability of datasets.

The My Health Record gives healthcare providers access to patient information such as medications, test results, discharge summaries, allergies and immunisations. In a recent release, the Medicines Information view was deployed and can quickly sort and display medicines information held in a patient's My Health Record. Additionally, the Australian Digital Health Agency has been working to connect more community pharmacies to the My Health Record. This allows pharmacists to check a person's allergies and medical history before dispensing a medication as well as upload dispensing information into a person's record for their health care team to see.

The My Health Record will move to opt out consumer participation arrangements in 2018 and from this time will begin to capture a range of information. This data will provide unprecedented opportunities for researchers and policy makers.

RECOMMENDATION 3:
The committee recommends that the Australian Government establish a Steering Committee to examine the feasibility of establishing a national register of cancer medicines.

The Australian Government does not agree to this recommendation. The cost of establishing such a register is likely to be considerable. Consideration would need to be given to the opportunity cost of this investment in other areas of the cancer control continuum such as prevention and screening. The Australian Government must balance this investment for the best outcomes to control cancer.

The National Cancer Statistics Clearing House (NCSCH), administered by the AIHW, was established as the national repository of cancer incidence and mortality statistics. The NCSCH maintains the Australian Cancer Database — a data collection of all primary, malignant cancers diagnosed in Australia since 1982 and collected through the state and territory based cancer registries — that is used to monitor cancer incidence, mortality, survival and prevalence nationally. There are also other established cancer clinical registries such as the above mentioned VLCR and the prostate cancer registries.

The Australian Government considers the existing cancer data collections and the increasing use of digital health records may assist in collecting data and tracking the effectiveness of medicines. The Government notes the value of expertise that Cancer Australia and the AIHW can contribute in any future work on a national register for cancer medicines.

Attachment A

Cancer Medicines listed on the PBS from 1 October 2013

Name of medicine	Indication	Average patients per year	Actual listing date
dabrafenib (Tafinlar®)	malignant melanoma	835	1-Dec-13
everolimus (Afinitor®)	tuberous sclerosis complex	182	1-Dec-13
sunitinib (Sutent®)	pancreatic neuroendocrine tumour	51	1-Dec-13
erlotinib (Tarceva®)	lung cancer	331	1-Jan-14
gefitinib (Iressa®)	lung cancer	331	1-Jan-14
cyclophosphamide	many types of cancer	*	1-Jan-14
pazopanib (Votrient®)	advanced soft tissue sarcoma	96	1-Mar-14
denosumab (Xgeva®)	bone tumour	86	1-Apr-14
panitumumab (Vectibix®)	colorectal cancer	910	1-Apr-14
plerixafor (Mozobil®)	cancer of the blood or lymph nodes	169	1-Apr-14
temozolomide (Temodel®)	brain tumour	*	1-Apr-14
everolimus (Afinitor®)	advanced breast cancer	1340	1-Jun-14
bevacizumab (Avastin®)	advanced epithelial ovarian, fallopian tube or primary peritoneal cancer	494	1-Aug-14
everolimus (Afinitor®)	stage IV clear cell variant renal cell carcinoma	321	1-Sep-14
eribulin mesilate (Halaven®)	breast cancer	268	1-Oct-14
nab paclitaxel (Abraxane®)	stage IV (metastatic) adenocarcinoma of the pancreas	1538	1-Nov-14
rituximab (Mabthera®)	follicular lymphoma	2550	1-Dec-14
brentuximab vedotin (Adcetris®)	lymphoma	41	1-Dec-14
enzalutamide (Xtandi®)	prostate cancer	923	1-Dec-14
panitumumab and cetuximab (Vectibix® and Erbitux®)	metastatic colorectal cancer	# -317	1-Jan-15
capecitabine (Capecitabine Actavis®) (Capecitabine Alphapharm®) (Capecitabine Apotex®) (Capecitabine GH®) (Capecitabine Sandoz®) (Capecitabine-DRLA®) (Xelabine®) (Xeloda®)	breast cancer, colorectal cancer, colon cancer and oesophago-gastric cancer	*	1-Mar-15
mercaptopurine (Allmercap®)	paediatric acute lymphoblastic leukaemia	280	1-Mar-15
rituximab (Mabthera®)	non-Hodgkin's lymphoma	*	1-Apr-15
everolimus (Afinitor®)	metastatic or unresectable, well-differentiated malignant pancreatic neuroendocrine tumour (pNET)	52	1-Apr-15

Name of medicine	Indication	Average patients per year	Actual listing date
ofatumumab (Arzerra®)	chronic lymphocytic leukaemia	348	1-Apr-15
cetuximab (Eribitux®)	metastatic colorectal cancer	1735	1-Jun-15
crizotinib (Xalkori®)	non-small cell lung cancer	154	1-Jul-15
trastuzumab (Herceptin®) trastuzumab emtansine (Kadcyla®) pertuzumab (Perjeta®)	breast cancer	590	1-Jul-15
trametinib (Mekinist®)	malignant melanoma	1036	1-Aug-15
pomalidomide (Pomalyst®)	multiple myeloma	599	1-Aug-15
obinutuzumab (Gazyva®)	chronic lymphocytic leukaemia	366	1-Aug-15
pembrolizumab (Keytruda®)	melanoma	1100	1-Sep-15
sunitinib (Sutent®)	stage IV clear cell renal cell carcinoma, gastrointestinal stromal tumours and pancreatic neuroendocrine tumours	*	1-Sep-15
ponatinib (Iclusig®)	chronic myeloid leukaemia and acute lymphoblastic leukaemia	125	1-Nov-15
trastuzumab (Herceptin®)	gastric cancer	125	1-Jan-16
ruxolitinib (Jakavi®)	myelofibrosis	967	1-Feb-16
leuprorelin (Lucrin Depot 6 month PDS®)	prostate cancer	2560	1-Mar-16
trastuzumab (Herceptin®)	breast cancer	*	1-Apr-16
arsenic (Phenasen®)	acute promyelocytic leukaemia	72	1-Apr-16
dabrafenib + trametinib (Tafinlar® + Mekinist®)	unresectable stage III and stage IV malignant melanoma	*	1-Apr-16
bendamustine (Ribomustin®)	non-Hodgkin's lymphoma and mantle cell lymphoma	662	1-May-16
nivolumab (Opdivo®)	melanoma	1157	1-May-16
trastuzumab emtansine and lapatinib (Kadcyla® and Tykerb®)	breast cancer	*	1-May-16
bevacizumab (Avastin®)	advanced cervical cancer	227	1-Sep-16
tamoxifen (Nolvadex-D®)	reduction of breast cancer risk	9827	1-Oct-16
leuprorelin and bicalutamide (Bi-ELIGARD CP®)	metastatic (stage D) prostate cancer	prescription based	1-Dec-16
lenvatinib (Lenvima®)	radioactive iodine refractory differentiated thyroid cancer	140	1-Dec-16
ceritinib (Zykadia®)	non-small cell lung cancer	123	1-Feb-17
olaparib (Lynparza®)	ovarian, fallopian tube, and primary peritoneal cancer	237	1-Feb-17
lenalidomide (Revlimid®)	newly diagnosed multiple myeloma	2,000	1-Feb-17
brentuximab vedotin (Adcetris®)	relapsed or refractory Hodgkin's lymphoma for patients who were autologous stem cell transplant (ASCT) naïve.	97	1-Apr-17

Name of medicine	Indication	Average patients per year	Actual listing date
brentuximab vedotin (Adcetris®)	relapsed or refractory CD30+ Hodgkin lymphoma following autologous stem cell transplant (ASCT) experienced	39	1-Apr-17
pembrolizumab (Keytruda®)	unresectable or metastatic melanoma	279	1-Apr-17
vemurafenib (Zelboraf®) cobimetinib (Cotellic®)	unresectable stage III or IV malignant melanoma	271	1-Apr-17
vismodegib (Erivedge®)	metastatic or locally advanced basal cell carcinoma (BCC)	113	1-Apr-17
blinatumomab (Blincyto®)	relapsed or refractory Philadelphia chromosome negative B-precursor acute lymphocytic leukaemia (ALL)	63	1-May-17
vorinostat (Zolinza®)	relapsed or refractory cutaneous T-cell lymphoma	43	1-Jul-17
nivolumab (Opdivo®)	non-small cell lung cancer	4066	1-Aug-17
nivolumab (Opdivo®)	renal cell carcinoma	520	1-Aug-17

*These changes to restrictions did not change the treated patient population.

Listings for panitumumab and cetuximab in the treatment of later-line metastatic colorectal cancer (mCRC) were amended to be limited to patients whose tumours have RAS WT status rather than KRAS WT status.