Medical Technology Association of Australia

Pre-Budget Submission to Treasury 2011-2012

MEDICAL TECHNOLOGY FOR A HEALTHIER AUSTRALIA

Executive Summary

The Medical Technology Association of Australia (MTAA) represents the manufacturers, exporters, importers and distributors of medical technology products in Australia. Medical technologies are products used in the diagnosis, prevention, treatment and management of disease and disability.

MTAA's pre-Budget submission to Treasury proposes two areas of focus for healthcare investment to better support elderly Australians and Australians with chronic diseases to remain in the community and avoid unnecessary or premature admission to aged care facilities or hospitals. The areas for investment are through provision of subsidised medical products and through increased use of monitoring technologies.

Australia's growing population of both elderly and chronically ill people makes it imperative that government investigate, and invest in, solutions that improve self-care and enable those who are capable of doing so, to remain in their own homes. The cost of avoidable hospital admissions alone is significant, approximately 9% of all hospitalisations, amounting to around $250 million per annum. In comparison the proposed Essential Care scheme is estimated to cost approximately $667 million per annum, less savings through consolidation of existing arrangements at $73 million per annum.

In addition MTAA proposes improved access to monitoring technologies that assist the elderly and chronically ill to continue to live in their homes. Appropriate funding is achieved through two mechanisms. The first is to include remote patient monitoring under the Medicare Benefits Schedule item numbers for telehealth. The second is to make provision for inclusion of monitoring technologies as part of community care packages, or as part of reimbursable private health insurance benefits for those with private health insurance.

To date health reforms have focused on ensuring access by Australians to hospital treatment when it is needed. This remains important. However if the Commonwealth Government is also to ensure that the health budget in future years remains manageable as a proportion of the gross domestic product, it is essential that we identify and fund mechanisms that encourage, and support, Australians to remain in their communities, to avoid hospitalisation where it is not essential, and to defer admission to aged care facilities. MTAA's proposals work to achieve these objectives.

Each of the proposals is addressed in summary form on the following two pages with detailed analysis and costings in the annexures.

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Pre-Budget submission 2011-2012
Essential Care List for sub-acute medical products and consumables

Proposal

- Government subsidy for an Essential Care List (ECL) for sub-acute medical products and medical consumables within the 2011-2012 Budget cycle
- Current Commonwealth, State and Territory schemes to be merged into a single scheme.

Rationale

- There are a range of sub-acute medical products available to Australians
- Current funding mechanisms are variable with some items funded by the Commonwealth Government and some by State and Territory schemes. Other products are unfunded, or self-funded
- Appropriate use of subsidised medical products for chronically ill and elderly Australians will ensure patients can be properly supported in the community
- MTAA proposes that all essential care medical consumables be funded under a single umbrella and that the scheme operates similarly to a simplified Pharmaceutical Benefit Scheme.

Products

- Oxygen supplies/consumables
- Compression hosiery, bandages and garments for lymphoedema
- Continence products
- Modern wound care devices (including wound dressings)
- Breast prosthetics (non-implantable)
- Pumps and consumables for insulin delivery
- Continuous flow pumps for drug delivery and consumables
- Continuous positive airways pressure (CPAP)/sleep apnoea devices
- Laryngitic products
- Glucose monitoring devices used by insulin dependent diabetics

Cost

- MTAA estimates the cost of funding the scheme at approximately $667 million per annum
- The estimate cost combines current expenditure in the various schemes across Commonwealth and State health budgets, with additional products that are currently unfunded or self-funded.

Estimated Cost Savings

- Immediate cost savings of $73 million through integration of existing schemes
- Cost savings of $257 million per annum through avoidance of unnecessary hospital admissions.

Detail of the proposal and cost analysis is at Attachment A.

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Pre-Budget submission 2011-2012
Remote Patient Monitoring

Proposal

- Government funding for remote patient monitoring to be included within the 2011-2012 budget cycle
- Reimbursement for monitoring/assessment of medical information collected remotely to be included within Medicare Benefits Schedule (MBS) item numbers for telehealth
- Devices which support patient monitoring should be funded as a part of community care packages and/or via private health insurance.

Rationale

- Australians need improved access to medical technology and monitoring that assists independent living, decreases emergency room and hospital admissions and enables them to remain in their own homes.

The types of devices that can be used to monitor patients in their homes include:

- Electrocardiogram (ECG) for cardiac management
- Implantable cardiac devices with wireless monitoring capabilities (e.g. pacemakers, cardiac defibrillators)
- Wireless devices combining satellite global positioning systems (e.g. for dementia patients who wander)
- Portable anticoagulation monitors
- Smart incontinence management systems and enuresis devices
- Remote monitoring and assistance for cochlear implantees
- Alarm systems to monitor falls and other medical alerts
- Home monitoring devices for pulse, blood pressure, heart rate, heart rate variability, epilepsy and weight monitoring.

Cost

- Phase 1 preliminary costs to be included within the $402.2 million allocated to MBS item numbers for telehealth.

Estimated Costs Savings

- Potential cost savings to the Commonwealth Government of $3.1 billion per annum through improved management of patients.

Detail of the proposal and cost analysis is at Attachment B.

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Attachment A

Essential Care List for sub-acute medical products and consumables

1. Overview

MTAA would like to see the 2011-2012 Federal Budget include funding for an Essential Care List (ECL) scheme for consumable medical items to aid patients to manage their medical conditions at home. There are a wide range of sub-acute medical products that can assist Australians to stay in their homes. While these are funded in other countries, current funding mechanisms in Australia are ad hoc. Both the type of product and the amount available may differ depending upon the state and where the person lives. The name of the scheme may differ from State to State. At present many essential care medical consumable items are either unfunded and therefore a patient cost, or if funded, vary in availability and subsidy. Some assistance is available from the Federal Government; other support is from State Governments. Some products are provided ex gratia by healthcare practitioners who understand the need of the patient for the benefit that can be gained from use of a particular product.

Products identified in an initial scope of the scheme include:

- Oxygen supplies/consumables
- Compression hosiery, bandages and garments for lymphoedema
- Continence products
- Modern wound care devices (including wound dressings)
- Breast prosthetics (non-implantable)
- Pumps and consumables for insulin delivery
- Continuous flow pumps for drug delivery and consumables
- Continuous positive airways pressure (CPAP)/sleep apnoea devices
- Laryngitic products
- Glucose monitoring devices used by insulin dependent diabetics

2. The need for medical technology to support Australian patients in the community

In 2008-09 health expenditure in Australia was $112.8 billion. Only 2% of this amount was for preventive services or health promotion(1). A large proportion of health expenditure is spent on chronic disease management in the hospital setting. There are a wide range of sub-acute medical products that can assist Australians to stay in their homes. There are a number of schemes funded by the Federal Government that fund medical consumables for patients with diabetes, stomas and incontinence. Additionally each state and territory has some provision for essential care items; however the focus is on visual or hearing impairments and mobility. We suggest bringing all schemes under one umbrella with the aim of ensuring equitable provision of medical consumables to patients.

By 2050 Australia will see the number of people aged 65-84 years double and the number of people aged over 85 quadruple(2). Current spending on aged care is expected to more than double by 2049-50. Forecasts by the National Health and Hospitals Reform Commission(3) state that the number of aged care places will need to double by 2030 in order to meet demand. An additional strain on the healthcare system is a shortage of informal care-givers, nurses(4) and doctors(5).

In Australia more than two thirds of all health expenditure is associated with chronic disease management ($75 billion in 2008-09) and in 2006 chronic disease (including cancers) was responsible for over 80% of the burden of disease and injury(6). There has been a shift in chronic disease management from acute care in hospitals to home or residential care. Older Australians wish to

remain in their homes for as long as possible and the provision of appropriate medical items can delay transition into hospital or residential care. It is known that intervention in earlier stages in the trajectory of chronic disease may delay nursing home entry(7).
The conditions that can be best managed and monitored at home include many of those which are more prevalent with age, for example stable chronic diseases such as asthma, chronic obstructive pulmonary disease (COPD) diabetes and cardiovascular conditions.

3. Federal schemes

The Department of Veterans Affairs (DVA) supports veterans to remain independent in their homes. The Repatriation Pharmaceutical Benefits Scheme (RPBS)[1] and the Rehabilitation Appliance Program (RAP)[2] provide access to products such as pharmaceuticals and wound dressings (RPBS); continence, diabetes, oxygen and CPAP, mobility and functional support, and personal response systems (through the RAP).

Of the products identified in the initial scope of the scheme, diabetes consumables, ostomy and continence products are funded through schemes established by the Australian Government. Approximately 910,000 persons benefited from services and consumables provided under the National Diabetes Services Scheme (NDSS) in 2008/09(8). The products are provided to people registered with NDSS through Diabetes Australia offices, by mail order and through accredited sub-agents such as pharmacies, hospital clinics and other outlets. Products include: pen needles and syringes, blood and urine glucose testing strips and insulin infusion pump consumables.

There are approximately 30,000 ostomates who receive support through the Commonwealth-funded Stoma Appliance Scheme (SAS)[3]. Ostomates receive products under the SAS through approved volunteer stoma associations. The stoma associations purchase stoma related products from suppliers and distribute to their members as required.

The Australian Government also provides a subsidy to eligible people through the Continence Aids Payment Scheme (CAPS)[4]. The scheme provides a direct payment ($489.95) to patients enabling them to shop around and identify the best value product for their needs. The level of subsidy is subject to indexation. Some states also provide top-up funding.

The only Federal scheme for modern wound care devices (MWCD) is a national dressing scheme for patients with Epidermolysis Bullosa (worth $16.4 million over four years from January 2010). Expenditure by Federal Government on major schemes is outlined in Table 1.

Table 1: Federal Government funded schemes

Scheme	Cost p.a.	Source
Department of Veterans Affairs: Rehabilitation Appliances Program (RAP)	$119,800,000	Australian Government. Department of Veterans' Affairs Annual Report, 2009-10.
Continence Aids Payment Scheme (CAPS)	$11,000,000	Continence Aids Assistance Scheme (CAAS), (2006-07), data from PWC (2009). Disability Investment Group, National Disability Insurance Scheme, Final Report
National Diabetes Services Scheme (NDSS)	$135,815,193	Department of Health and Ageing website: http://www.health.gov.au/
Program 2.4 Aids and Appliances (includes insulin pumps for Type 1 diabetics under the age of 18, Stoma Appliance Scheme, Epidermolysis Bullosa	$252,585,000	Australian Government. Department of Health and Ageing Annual Report 2009-10 page 118

[1] The RPBS provides a wide range of pharmaceuticals and dressings at a concessional rate for the treatment of eligible veterans, war widows/widowers, and their dependants.
[2] The RAP assists veterans, war widows and widowers and dependants to be as independent and self-reliant as possible in their own home.
[3] http://www.health.gov.au/internet/main/publishing.nsf/Content/Stoma+Appliance+Scheme-1; accessed 25.07.10.
[4] http://www.continence.org.au/pages/continence-aids-payment-scheme-caps.html accessed 14.07.10.

Dressings Scheme)		
Total		**$519,200,193**

4. State and Territory schemes

Each state and territory government has a program to fund sub-acute medical items and assistive devices. While most states do not fund MWCD some do, but to a limited extent (in South Australia and Western Australia dressings are provided to a limited degree by home nursing services). A list of states' schemes and the type of technologies available are outlined in Table 2.

Table 2: State and Territory Government funded schemes

State/Program	Aids covered	
ACT – ACT Equipment Scheme (ACTES)	• Wheelchairs and scooters • Continence aids • Prosthesis • Walking aids	• Personal aids • Wigs • Home modifications
NSW – Program of appliances for disabled people. (PADP)	• Communication aids • Aids to nutrition • Orthoses • Beds/sleeping equipment • Alarms • Mobility aids	• Pain management aids • Pressure garments • Toileting/showering aids • Continence aids • CPAP devices • Transfer aids
NT – Territory Independence and Mobility Equipment (TIME) Scheme	Loan of: • Mobility aids • Incontinence aids • Home modifications	• Personal care aids • Respiratory or aids • Other-such as feeding equipment
QLD – Medical Aids Subsidy Scheme (MASS).	• Communication aids • Continence aids • Medical grade footwear • Oxygen cylinders and concentrators	• Daily living aids • Orthoses • Mobility aids
SA- Independent Living Equipment Program (ILEP)	• Mobility aids • Communications aids • Medical grade footwear	• Transfer aids • Personal care aids • Prostheses
TAS – Community Equipment Scheme (CES)	Loan of: • Lymphoedema bandages • Mobility aids • Self-care aids • Surgical footwear • Transfer devices	• Seating and sleeping aids • Continence aids • Communication devices • Home modifications • Respiratory aids
VIC – Victorian Aids and Equipment Program (AEP)	• Non-disposable continence aids • Orthoses • Electrolarynxes and voice prostheses • Wigs • Electronic communication aids • Oxygen • Mobility aids	• Equipment for personal use • Home modifications • Lymphoedema garments • Ramps • Pressure care equipment • Wheelchairs • Environmental control units
WA- Community Aids and Equipment program (CAEP)	Loan of: • Mobility aids • Seating equipment • Walking aids • Orthoses	• Transfer aids • Bed equipment • Personal care aids • Prostheses

The cost of state and territory schemes are shown in Table 3 (modified from (9)).

Table 3: Cost of State and Territory Schemes*

State/Territory Scheme	Cost per annum
ACT	
ACT Equipment Scheme	$913,000 (07-08)
Domiciliary Oxygen Scheme	$417,000 (07-08)
Continuous Positive Airway/ Variable Positive Airway Pressure (CPAP/VPAP) Scheme	$162,000 (07-08)
ACT Spectacles Subsidy Scheme	$700,271 (06-07)
Breast Prosthesis Scheme	$23,000
NSW	
Program of Appliances for Disabled People (PADP)	$24,200,000
Aids for People in DAHDC Accommodation Services	$3,000,000
NT	
Territory Independence Mobility Equipment (TIME) Scheme	$1,512,000
QLD	
Medical Aids Subsidy Scheme (MASS)	$33,500,000(08-09)
SA	
Disability SA -Independent Living Equipment Programme - equipment for Adults (ILEP)	$2,800,000
Disability SA Equipment Program	$5,778,200
TAS	
Statewide Community Equipment Scheme	$1,300,000 (07-08)
Statewide Continence Aids Scheme	$370,000
Spectacles and Intra-Ocular Assistance Scheme	$820,604
Home Oxygen Scheme	$271,000
Spinal Account	$271,000
VIC	
Victorian Aids and Equipment Scheme (A&EP)	$31,900,000
WA	
Community Aids and Equipment Program (CAEP)	$8,750,000
Total	**$116,688,075**

*The sum cost of Commonwealth and State/Territory Schemes (Tables 1 and 3) is $635,888,268.

5. Establishment of an Essential Care List

The development of an ECL will ensure that sub-acute care medical products needed by patients for their care, and in some cases, survival, are readily available using a system that is equitable, transparent, and affordable. The scheme will enable subsidised access to essential care medical technologies that provide necessities to chronically ill or incapacitated patients in the community setting. The items intended for inclusion in the scheme are consumable, single use, non-implantable medical products, together with the hardware that the consumables are used with, essential to maintain an acceptable quality of life for afflicted patients who without government subsidy would not have adequate access to life supporting medical technology.

In general the products contemplated by the scheme can be characterised as aids for daily living that are for the critical care of a patient or that improve the quality of a patient's life. These will often be consumable items that are low technology. In some cases however they may be durable products, and may involve much higher levels of technology sophistication. The product range will also include the hardware that is supported by the consumables.

MTAA has consulted widely on the possible structure and operation of the scheme. With the exception of patients who currently benefit from subsidized access to ostomy products through the Stoma Appliance Scheme, and the suppliers who support the patients, the proposed scheme has received universal support. Bodies consulted were:

- Aged Care Association Australia
- Australian Council of Stoma Associations
- Australian Medical Association

- Australian Nursing Federation
- Australian Practice Nurses Association
- Australian Wound Management Association
- Consumers Health Forum
- Continence Foundation
- Continence Nurses
- Kidney Health Australia
- Pharmacy Guild of Australia
- Royal District Nursing Service (Vic)
- Royal Australian College of Surgeons

MTAA's conception of an Australian scheme is that it will operate similarly to a very simplified Pharmaceutical Benefit Scheme. While many of the products likely to be included in the scheme do not require a health technology assessment, there are some products which lend themselves to differential pricing based on additional patient benefit to attract uplift on the base level or benchmark price.

The following criteria are proposed for products to be listed on the ECL:

- Products are essential to the patient's quality of life or survival, in all settings outside hospitals including the community setting and residential care
- Products should be capable of self administration or administration with the help of a carer or, if required, by a relevant healthcare professional (which would include home visiting nurses)
- Products must be safe and efficacious and, where regulated, included on the Australian Register of Therapeutic Goods (ARTG)
- Products are appropriate for prescribing in the community setting
- Products are clinically effective – required levels of clinical evidence will be higher where similar products have not been listed before or where a manufacturer or supplier seeks a higher price than for similar products already listed
- The cost of the product is relative to its clinical effectiveness.

There are several key issues for consideration in shaping the scheme. These include:

- Assessment by a health professional for a patient to enter the scheme
- Clinical eligibility criteria
- Patient entitlement
- Product range
- Assessment of products to enter the scheme.
- Current Australian Government funded schemes
- Pricing
- Delivery mechanisms.

These issues are covered in detail at: http://www.mtaa.org.au/pages/page264.asp. In brief, patient access to ECL items would need to be assessed by a health professional with eligibility based on clinical criteria. There are multiple delivery mechanisms for the products currently supplied under the various schemes funded by the federal and state governments. These include consumer groups, pharmacists, healthcare professionals, contractors and manufacturers/suppliers. One option would be to consider multiple supply routes, with pharmacies as the default in the absence of other appropriate supply mechanisms. Other delivery options include by post, by relevant healthcare professionals (such as home visiting nurses), through community pharmacies, or through appliance contractors (as in the Part IX of the Drug Tariff in the UK[5]).

[5] UK Drug Tariff Part IX established under Section 41 of the NHS Act 1977.

6. Cost

The scheme is not intended to be fully-funded, but requires a degree of patient co-contribution. Present state and territory schemes all rely on some degree of patient contribution (which is usually determined through means testing). Important considerations are as follows. Patient co-payment must not be so significant that patients reuse consumable items rather than replacing them. High technology medical items tend to be rapidly replaced with innovative new items and there must be a mechanism by which products can be reviewed and reassessed as they date and no longer provide the additional patient benefit in comparison with competing products in the same group.

MTAA estimates the cost of funding the scheme at $667 million per annum, dependent on the scope of included items (costs are outlined in Appendix A). This sum is a combination of what is currently being spent in the various schemes across Commonwealth and State health budgets, plus additional areas that are currently unfunded or self-funded. The figures are similar to the sum cost of $636 million currently spent on Commonwealth and State/Territory Schemes (see Tables 1 and 3).

7. Cost Savings

We have calculated cost savings conservatively, taking into account the cost of an average DRG per separation and assuming that approximately 9.3%[6] of separations for chronic conditions could be prevented. With this approach cost savings from the ECL scheme are approximately $250 million (for full details see Appendix B).

There are also cost savings which can be achieved through the merger of current stand-alone schemes. A review of the Program of Appliances for Disabled People (PADP) in NSW estimated that if local lodgement centres were abolished and the scheme was centralized that savings of over $2.8 million would be generated(10). This is 11.5% of the total spend on the PADP (see Table 3). Applying this percent to the total of Commonwealth and State/Territory schemes returns a national cost saving of $73 million.

8. Conclusion

There are a wide range of sub-acute medical consumables that can be used to respond to the challenges of ageing and chronic disease in Australia. Government-subsidised aged care services are currently provided to approximately 900,000 older Australians(11). When care needs can not be met in the community, individuals are transitioned to residential care settings. There are a number of examples where care is pushed into hospital settings that could be provided in the home. For example, patients with chronic wounds are most appropriately treated at home (by community nurses) or in the GP's office(12). Because modern wound care products are not funded, patients end up being treated in (costly) hospital settings.

The provision of Essential Care items will decrease ER visits, decrease unnecessary hospitalizations, avoid inappropriate transition to residential care and achieve cost savings through maintaining people in their own homes. MTAA strongly argues that the provision of care that enables individuals to be treated in the home environment is far more cost effective than *all* other alternatives. A range of technologies are available to support patients who wish to remain in their own homes. MTAA strongly supports the creation of an Essential Care List to improve access of Australians to medical products and devices that enable them to maintain an independent life in their community for as long as they are capable of doing so.

[6] AIHW. Separation statistics for selected potentially preventable hospitalizations for chronic conditions for all states and hospitals, 2007-08.

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Appendix A: Essential Care List costs

ECL Category	ECL cost (may include device)
Oxygen supplies/consumables	13,766 x $3,945 (average cost of concentrator and $200 consumables) = $54,306,870
Compression hosiery, bandages and garments for lymphodaema	300,000 (assumes funding for patients with all forms of primary and secondary lymphodaema) x $300 = $90,000,000
Continence products	18,000 x $610[7] (this is the average of the subsidies for each state/territory, incorporating the $490 from CAAS = $10,980,000
Modern wound care devices (including wound dressings)	200,000 (chronic wounds), includes venous leg ulcers x $259[8] = $51,800,000
Breast prosthetics (non-implantable)	$6,200,000 (allocated pa)
Insulin pumps and continuous flow pumps, and consumables (pens, strips, pump consumables)	~$8,444,233 per year allocated for IPCs[9]. The cost of covering additional IPCs for pump users is: batteries ($84 pa) + lancets ($24 pa) + skin adhesives and swabs ($335 pa) [5,000 x $443 = $2, 215,000]. The cost of covering 2,500[10] pumps at $8,000 each = $20,000,000 Total: $30,659,233
CPAP/sleep apnoea devices	16,000[11] x $1,800 (machine) + $350 (consumables) ($2,150) = $34,400,0
Laryngitic products	500 x $5,000 (speech generating devices and accessories) = $2,500,000
Home dialysis devices, consumables and set-up costs	10,062 x $38,424 = $386,622,288
TOTAL	**$667,468,391**

[7] Moore et al. (2006).
[8] Gross, P. & Graves, N. (2006).
[9] NDSS statistics.
[10] Approximate number of new users of insulin pumps per year.
[11] In 2004 there were 68,000 full PSGS performed in Australia. If you assume 66% were diagnostic, half went onto CPAP and most (70%) stayed on it, the CPAP figure would be 16,000.

Appendix B Cost savings from reduced hospitalisations

ECL Category	Cost savings associated with reducing hospitalisation
Oxygen supplies/consumables	Of 13,766 assume 9.3%[12] (*n*=1,280) will be inappropriately admitted to hospital at an average cost of $1,718 ($1,788 average DRG cost, public; $1,648 average DRG cost, private)[13] **= savings of $2,199,040**
Compression hosiery, bandages and garments for lymphodaema	In 2007-08 there were 3,274[14] separations (2,347 public, 927 private) for enlarged lymph nodes and oedema. The cost of treating circulatory disorders is $7,850 (average DRG cost, public) and $6,202 (average DRG cost, private) = $24,173,204. Assume 9.3% (*n*=304) will be inappropriately admitted to hospital **= savings of $2,248,108**
Continence products	In 2007-08, there were 3,862 separations (1,403 public, 2,459 private) for faecal and urinary incontinence with an average cost of $3,885[15] per separation = $15,003,870. Assume 9.3% (*n*=359) inappropriate admissions **= savings of $1,395,360**
Modern wound care devices	In 2007-08 there were 72,599 separations for skin ulcers, open wounds and burns (63,202 public, 9,397 private) at a cost of $3,885 per separation = $282,047,115. Assume 9.3% (*n*=6,751) inappropriate admissions **= savings of $26,230,382**
Breast prosthetics	n/a (2007-08 there were 10,568 separations for breast cancer surgery).
Insulin pumps and continuous flow pumps, and consumables	In 2007-08 there were 237,119[16] separations for potentially preventable diabetes complications at a cost of $8,603, (average DRG cost, public)[17] or $7,017 (average DRG cost, private) per separation. Average = $7,810 = $1,851,899,390. Assume 9.3% (*n*=22,052) inappropriate admissions **= savings of $172,226,643**
CPAP/sleep apnoea devices	In 2007-08 there were 43,277 (7,257 public, 36,020 private) hospital sleep studies[18]. There were 36,135 hospitalizations for sleep apnoea (7,598 public, 28,537 private) at a cost of $1,394 (average DRG cost, public) or $653 (average DRG cost, private) – per separation[19] = $29,226,273. Assume 9.3% inappropriate admissions (*n*= 3,361) **= savings of $2,718,043**
Laryngitic products	In 2007-08 there were 242 laryngectomy procedures performed (198 public, 44 private) and 319 application, insertion or removal procedures on the larynx (203 public, 116 private).
Home dialysis devices, consumables and set-up costs	In 2007-08 there were 990,787[20] (825,331 public, 165,456 private) separations for dialysis care and 9,397 (5,728 public, 3,615 private) separations for peritoneal dialysis. These cost $470,480,890 (average DRG costs, public) and $72,832,110 (average DRG costs, private) = $543,313,000. Assume 9.3% (*n*=92,184) inappropriate admissions **= savings of $50,528,109**
TOTAL	**$257,545,685**

[12] 9.3% preventable separations for chronic conditions: AIHW. Separation statistics for selected potentially preventable hospitalisations for chronic conditions for all states and hospitals, 2007–08.
[13] DRG Costs in Public and Private Hospitals 2007-08.Policy Directive NSW Health Episode Funding Policy 2008/2009. Document number PD2008_063.
[14] AIHW: Selected separation statistics(a) for all principal diagnoses in 3-character ICD-10-AM groupings, public hospitals, Australia, 2007–08.
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Attachment B

Remote Patient Monitoring

1. Overview

A large proportion of health expenditure in Australia is spent on chronic disease management in the hospital setting. Australia has an ageing population and is facing an increase in the demand for hospital and aged care services(1), nurses(2) and doctors(3). There are a wide range of medical devices that have wireless capabilities and can be used to monitor patients in their homes. The conditions most suitable for home monitoring include many of those which are more prevalent with age, such as diabetes, cardiovascular disease, cardiac arrhythmias and chronic obstructive pulmonary disease (COPD). Remote patient monitoring is associated with many benefits to the patient and the health system and should be included within the 2011-2012 Federal Budget.

Telehealth is the delivery of medical services through information technology and telecommunications. It is an overarching definition that includes remote patient monitoring. Remote patient monitoring (or telemonitoring) covers the exchange of medical data between a patient who is at home and a healthcare professional based (usually) in a medical centre. Patient data are transferred using phone lines or wireless technology[21]. In some cases devices may have a diagnostic (e.g. an implantable loop recorder) or assessment (e.g. incontinence sensors) application or monitor symptoms associated with an undiagnosed condition (e.g. atrial fibrillation). A number of surgically implanted devices can be monitored remotely for clinical or device assessment (e.g. pacemakers and cardiac defibrillators). Vital signs monitoring uses equipment and medical devices installed in the patient's home to identify trends and send alerts when necessary in order to detect symptom exacerbations, intervene early and reduce hospital admissions.

Personal alarms are a good example of a simple form of home monitoring that is used by older Australians to gain faster assistance in an emergency, decrease anxiety about falls and increase the amount of time they are able to remain in their homes(4). A more sophisticated example of remote patient monitoring is the wireless technology to monitor implantable cardiac devices which has been available for some time in Australia (adoption has been limited by a lack of physician reimbursement for remote monitoring). In Australia, adequate reimbursement policies and guidelines are needed before these technologies can be delivered to patients.

Federal Government has pledged $402.2 million over four years for Medicare rebates for online consultations for patients in rural areas, financial incentives for health professionals to deliver online services, expansion of the GP after hours helpline and training and supervision for professionals using online technologies. The provision of medical consultations via video conference will enable patients in rural areas better access to care. Medicare Benefits Schedule (MBS) telehealth item numbers will be introduced in July 2011, but may be constrained to video consultations. MTAA strongly advocates that funding for remote patient monitoring be included in the funding for MBS telehealth item numbers. Additionally, patients should be able to access equipment/technology to monitor vital signs through either community care packages or private health insurance.

21 Definition adapted from the European Coordination Committee of the Radiological, Electromedical and Healthcare IT industry (COCIR).

2. Medical technology to support Australian patients in the community

Older Australians and those with chronic disease wish to remain in their homes for as long as possible with the support of medical technologies that can delay or stop the transition into hospital or residential care. Intervention in earlier stages in the trajectory of chronic disease may delay nursing home entry(5) and there are a number of predictable factors that lead to individuals being placed in residential care, the impact of which could be lessened if reimbursement for home monitoring were available.

3. Clinical benefits associated with remote patient monitoring

There are many clinical benefits associated with remote patient monitoring, examples include:

- An increase in mean survival time in a sample of 387 diabetic patients who undertook daily monitoring of vital signs(6)
- Significant improvement in glycemic control in diabetic patients who transmitted blood glucose and blood pressure data to a telehealth nurse(7)
- A 71% reduction in Emergency Room (ER) admissions in respiratory patients who had oxygen saturation measured by pulse oximetry and monitored daily(8)
- A reduction in the number of hospital readmissions in patients with angina(9)
- Significant improvements in health related quality of life and a decrease in mortality in COPD patients using home monitoring(10)
- A 25% reduction in numbers of bed days of care and a 19% reduction in hospital admissions in 17,025 veterans with chronic disease who were enrolled in a home telehealth program(11)
- A telehealth program run by Silver Chair in Western Australia has reported a decrease in the number of COPD related ER admissions by almost 50%(12)
- A 43% reduction in hospitalizations and a 68% reduction in bed days of care in cardiac patients who transmitted daily ECG and blood pressure data(13)
- Reduced office visits and earlier detection of clinical anomalies such atrial arrhythmias in patients with implantable cardiac devices who were monitored remotely using automated, wireless technology(14)
- Faster detection of clinically actionable events in patients with cardiac pacemakers(15)
- A significant decrease (45%) in the need for in-patient hospital evaluation in 1,339 patients with implanted cardiac defibrillators who were remotely monitored(16)
- Reduced time to clinical decision in a large group (*n*=2,000) of patients with implantable cardiac devices who were monitored using wireless telemetry devices and alerts(15)
- Detection of a far greater number of clinical or device related events than during scheduled office visits in patients with implantable cardiac devices(16)
- Earlier detection of clinically relevant events, most of which occurred within a month of follow-up in patients with implantable cardiac devices(17)
- A 50% reduction in the risk of heart failure related readmission and 55% reduction in cardiovascular mortality in chronic heart failure patients monitored at home(18)
- A 50% reduction in mortality in a large sample (*n*=69,556) of patients with implantable cardiac devices, including cardiac defibrillators(19).

4. Federal schemes for remote patient monitoring

MTAA has advocated that the $402.2 million set aside for telehealth be inclusive of remote patient monitoring. There is currently no Federal funding or policy for remote patient monitoring. A small number of devices that fit under the telemonitoring umbrella are funded in an ad-hoc way. For example, individuals who are eligible for Department of Veterans Affairs (DVA) assistance may apply for a personal response system. A small number of items are funded by private health insurance and are listed on the Prostheses List (e.g. cardiac interloop recorders and defibrillators). In these cases the device is funded and the monitoring capabilities tend to be a free or unfunded adjunct.

5. State and Territory Schemes for remote patient monitoring

There are no specific state or territory schemes for remote patient monitoring, however, there are a number of telehealth programs and pilots currently deployed in each state. At the level of state government there are also funded initiatives to develop integrated models of care for chronic disease (e.g. the Hospital Admission Risk Program in Victoria)[22].

6. Funding considerations

There are two cost considerations. The first is the cost of the service (education, care provision, data transmission and monitoring). We propose flexible MBS telehealth item numbers that consider telemonitoring or remote consultations in the same way as a traditional face-to-face consult (see below).

The second is the cost of medical consumables or devices (including hardware, software and medical devices). Some items could be provided with community care packages. In some cases, an item may already be listed on the Prostheses List (e.g. implantable cardiac devices, glucose monitoring devices). A contribution from private health insurance for devices for privately insured patients could also be considered. It is likely that components such as monitors and some peripheral devices (e.g. scales, blood pressure monitors) can be rented and remain the property of the supplier. Many devices will be relatively inexpensive (e.g. vital signs monitors). Some high technology items (e.g. pacemakers) are likely to be listed on the Prostheses List. In any case, a patient co-payment could apply.

7. Funding using MBS item numbers

Federal Government is introducing almost $402.2 million to fund telehealth. To date, it is not known whether this will cover video consultations only, or whether the MBS item numbers proposed for telehealth would also cover assessment of medical information collected in the patient's home. Remote patient monitoring (with the exception of telepsychiatry) is not currently funded under the MBS. A doctor would need to find the most appropriate item number to cover a service. In most cases, there is no item number and a doctor must fit the service within an existing item number. Currently data collected remotely can be monitored in a number of ways: the patient can review it themselves (in which case no reimbursement is required), the patient may share the report as part of a regular face-to-face consult, or the patient may share the report with their health care providers and the consultation with the multi-disciplinary team can take place as part of case conferencing.

Reimbursement for reviewing medical data collected remotely could be covered using MBS telehealth item numbers. Remote monitoring devices vary and in some cases a nurse, GP or allied health professional may be able to assess data, but in the case of implantable cardiac devices a specialist would need to review data. For this reason MBS item numbers need to be flexible enough to cover data monitoring by a range of health professionals (we are not recommending that item numbers be extended to professionals who do not already have an MBS provider number). Reimbursement of health professionals should be aligned with current payment for traditional face-to-face consults and follow the same sets of principles outlined in the MBS.

8. Funding using Community Care Packages

Patients who wish to remain in the community and be monitored with appropriate medical technology are not funded to do so. Rather there is a perverse incentive for patients to enter residential care in order to receive accommodation and care subsidies. The majority of aged care in Australia is community based and elderly people receive aged care services in their homes or in aged-care accommodation. The Federal Government funds three programs designed for people who are eligible for residential care but who choose, with support, to remain in the community[23]. In most cases, community care programs charge their clients a fee. The fee is often quite minimal and is means tested. Remote patient monitoring could be included in any of the packages below.

[22] http://www.health.vic.gov.au/harp-cdm/.
[23] Department of Health and Ageing, 2009.

- Home and Community Care (HACC) services provide a few hours of hours of service per week, including home modifications, personal care, domestic help and assistance by allied health care professionals.
- Community Aged Care Packages (CACPs) support older people with significant care needs to remain in their own homes or retirement villages. Around 5-6 hours of direct assistance per week are provided. Assistance includes on call access to emergency assistance is required.
- Extended Aged Care at Home (EACH) and Extended Aged Care at Home Dementia (EACH-D) packages provide 15-20 hours of high level care support per week.

9. Cost Savings

Remote patient monitoring can achieve considerable cost savings in a number of areas:

- **Reducing visits to specialists:** in-hospital follow-up visits of patients with pacemakers or implantable cardiac devices, typically take 15 minutes for each patient, twice a year. These can be safely replaced with remote follow-ups which take 1-2 minutes(16).
- **Avoiding symptom exacerbations that lead to hospitalizations:** remote monitoring cab be used to detect dangerous trends such as weight gain due to fluid retention or lung dysfunction in cardiac and COPD patients.
- **Reducing potentially preventable hospitalizations (PPHs):** 9.3% of all hospitalizations in Australia are PPHs, which are often associated with chronic ailments, which could be prevented or managed through effective, timely care (usually non-hospital).
- **Reducing age related PPHs:** increasing age is a predictor of PPHs(20). Significant cost savings can be achieved if elderly patients are able to be monitored at home.
- **Reducing emergency room visits:** category 5 patients are considered non-urgent and usually have minor illnesses or stable chronic conditions such as diabetes with relatively minor complicating symptoms. In 2008-09 they accounted for 12% of ER presentations(21). Of 7.2 million presentations during this time period, 864,000 (12%) people may have avoided admission had they been targeted using home monitoring.
- **Reducing nursing home admissions:** remote monitoring has been found to reduce nursing home admissions by 7.7%(22). The hazard of nursing home placement increases significantly with age, incontinence, impaired peak expiratory flow, heart disease and physical disability(23). These factors are all amenable to home monitoring interventions.
- **Keeping low-care residential patients in their homes:** dependency levels for residential aged care are determined by the Resident Classification Scale which determines subsidy levels. In 2008, approximately 70% of residents were in high-care categories and 30% in low-care categories, the latter of who would most likely benefit from appropriate home monitoring.
- **Decreasing the burden on health care professionals:** remote patient monitoring increases staff efficiency(24) and decreases home visits and travel time(25). When technology can take over routine monitoring, staff can spend more time on direct patient care.
- **Reducing patient transport costs:** remote monitoring can reduce the use of patient transport services. These services (largely made up of ambulance services) had the second highest percentage growth in expenditure in Australia in 2008–09(26).
- **Reduced hospitalizations:** a 7% reduction in hospitalization was reported in a meta-analysis of remote monitoring of heart failure patients that included a total of 8,612 patients(27).

Cost savings will vary depending on the technology selected and the patient group. A recent report, Smart Technology for Healthy Longevity, by the Australian Academy of Technological Sciences and Engineering (ATSE) covers the need for 'ageing-in-place' policies and outlines the potential for smart technology to deliver substantial cost savings in Australia. The report estimates potential costs savings to the Australian Government of up to $526m per year(28). This was based on the assumption that 10% of individuals currently in residential care (at a cost of $36,100 per annum) could be maintained in their homes on community care packages (at a cost of $2,600 per year for CACP clients). The review does not take into account the costs of peripheral devices and monitoring, or any cost savings associated with reduced ER visits, doctor visits or hospitalizations. We have outlined cost savings to Government of $3.1 billion. Reduced need for residential care and residential care packages, reduced costs of ER admissions, potentially preventable hospitalizations, Flying Doctors services in rural areas, patient transports, travel and unnecessary tests and a reduction in the costs associated with associated with chronic disease management. This fits with estimates by Access

Economics(29) of cost savings of $2-4 billion per year.

10. International Comparisons

One of the major barriers to the wide spread adoption of remote patient monitoring in Australia is lack of reimbursement. The United States has overcome this barrier and remote monitoring has been approved by the Centers for Medicare and Medicaid (CMS) for reimbursement. Most telemedicine providers bill as usual and do not use modifiers or specialized CPT codes. In the US, home monitoring has been adopted by a number of health insurance providers. In a trial using at-home blood pressure monitors and automated web-based reporting tools, Kaiser Permanente found that patients using home monitoring were 58% more likely to have their blood pressure controlled to healthy levels compared to those receiving usual care(30). A recent analysis of 37 clinical trials (including 9,446 individuals) found that those using home blood pressure monitors were able to decrease their blood pressure and were twice as likely to reduce the numbers of medications needed to treat their blood pressure. Those patients whose data were automatically sent to a doctor's office had the best outcomes(31). It has been these types of results that have led to an increase in the number of health insurers who cover remote patient monitoring.

11. Conclusion

The aim of community care is to aid frail elderly people and those with disabilities to remain either in their own homes or in assisted living arrangements. When care needs can not be met in the community, individuals are transitioned to residential care settings.

MTAA argues that in many cases care needs can be met in the community and strongly supports the establishment of schemes that enable equitable patient access to medical products and technologies. The provision of appropriate home monitoring will decrease ER visits, decrease unnecessary hospitalizations, avoid inappropriate transition to residential care and achieve cost savings through maintaining people in their own homes.

The MTAA strongly argues that the provision of care that enables individuals to be treated in the home environment is far more cost effective than *all* other alternatives. A range of technologies exist to assist and support patients who wish to remain in their own homes. The challenge currently faced is determining how to best fund a range of assistive technologies and devices for independent living and home monitoring of medical conditions that will maintain the independence of older Australians. In the future, the provision of home healthcare is likely to be the only economically viable option.

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Appendix A: Home Care Potential Cost Savings

Area of cost saving	Assumption	Cost saving
Residential Care	10% of current residential population (*n*=15,700) could be supported in the community on an HACC package ($2,600) versus residential care ($36,100)(13)	**$525,950,000**
Residential care packages	HACC assists 637,521 clients per year at a cost per year of $2,600 p.p. (sum $1.6 b)(14), CACP assists 40,280 clients each year at a cost of $9,500 p.p. (sum $383 m), EACH and EACH-D packages assist 4,244 and 1,996 people(15) per year at a cost of $110 per day p.p. ($250 m). Assume 5% of ($2.3 b) no longer need packages	**$114,537,530**
Emergency room admissions	Category 5 patients are non-urgent with minor illnesses or stable chronic conditions with complicating symptoms and account for 12% of ER presentations(16). In 2008-09 864,000 (12%) admissions may have been avoided with appropriate medical home care/monitoring. The average cost for a visit to an ER is $373(17). Assume 20% of patients can avoid an ER visit (at a cost of $322 m)	**$64,454,400**
Potentially preventable hospitalizations (PPHs)	The average cost of an admission to a public hospital in 2008-09 was $4,471, PPHs represent 9.3% of separations(18). A total of 431,023 separations were for chronic conditions such as COPD, congestive heart failure and diabetes complications (cost $1.9 b). Assume 20% of patients can avoid a PPH	**$385,420,767**
Flying Doctors services in rural areas	In 08-09 the RFDS undertook 36,892 aeromedical evacuations(19) at an approximate cost of $5,500 per evacuation (total cost = $202 m). Assume 20% of evacuations can be avoided	**$40,581,200**
High level residential care	In June 2008 there were 157,087 individuals who were permanent residents in rest homes at a cost of $36,100 per person(8) (total cost $5.6 b). 24% of residents were low care(15) (i.e. the percent you would hope to target with home monitoring interventions. Assume that 20% could remain in the community	**$272,200,354**
Chronic disease management	2007-08 health expenditure in Australia was $103.6 billion. In Australia more than two thirds of all health expenditure is associated with chronic disease management(6) ($69 b). Assume that home care will detect symptoms earlier and enable better provision of care to patients with chronic diseases and that at a minimum 2% of costs will be saved	**$1,380,000,000**
Patient transports, travel and unnecessary tests	Access Economics(20) assessed US cost savings data for patient transports and transfers and unnecessary tests with telehealth. Using a simple population relativity, they estimate savings of around $296 m per year in Australia	**$296,000,000**
Veterans Home Care (VHC)	The VHC program, provided through the DVA, provides a range of low-level home care services to enable independent living. In 2006/07, expenditure on the VHC program was approximately $95 m(21). Approximately 80,000 people in 2006/07 were approved for services(22). Assume a 10% reduction in the need for services	**$9,500,000**
Patient Assisted Travel Schemes (PATS)	Approximately $81 m is spent on various state and territory government PATS per year. This sum includes: NSW (15.9 m), ACT ($625,000), NT ($6 m), SA ($6.95 m), TAS ($1.6 m), VIC ($6 m), WA ($13.9 m) and QLD ($30 m)(23). Assume a 20% reduction in travel costs	**$16,195,000**
		$3,104,839,250