



**Medical Technology**  
Association of Australia



*Connecting health services with the future:  
Modernising Medicare by providing rebates for  
online consultations*

*27 January 2011*

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MEDICAL TECHNOLOGY FOR A HEALTHIER AUSTRALIA

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## 1. About the medical technology industry

The Medical Technology Association of Australia (MTAA) represents the manufacturers, exporters, importers and distributors of medical technology products in Australia. The medical technology industry manufactures many products that contribute to the health of Australians. These include a range of devices that can be used to monitor patients in their homes (e.g. implantable cardiac defibrillators/pacemakers with wireless monitoring capabilities, heart rate and other vital signs monitors, pressure sensors, enuresis sensors and medical alarms and alerts). The medical technology industry had sales in Australia of more than \$7 billion in 2008/09 and employs more than 17,500 people. It is strongly research-based, often working closely with healthcare professionals to design and develop products for improved patient benefit.

## 2. Connecting health services with the future: modernising Medicare by providing rebates for online consultations

The Federal Government has committed \$402.2 million to provide Medicare Rebates for online consultations across a range of specialities. Telehealth facilities will be used to link patients in rural areas with specialists in cities or major regional centres. The availability of online consultations will increase access to healthcare for individuals living in remote areas. The initiative will commence in July 2011 and will provide:

- Medicare rebates for online consultations across a range of specialties, providing around 495,000 services over four years to patients in rural, remote and outer metropolitan areas
- Financial incentives for specialists, General Practitioners (GPs) and other health professionals to participate in delivering online services
- \$50 million to expand the GP after hours helpline and include the capacity for the helpline to provide online triage and basic medical advice via videoconferencing
- Training and supervision for health professionals using online technologies.

MTAA recommends that Medicare Benefits Schedule (MBS) item numbers for telehealth include reimbursement for the assessment and monitoring of medical data collected from a patient's home (remote patient monitoring). MBS item numbers for telehealth should be flexible enough to cover services provided by a doctor, nurse, allied health professional or specialist.

MTAA commends the initiatives listed above and welcomes the opportunity to comment on the discussion paper and make specific recommendations. The paper invites comment on the following issues:

<b>Optimal practice models</b>	Practice models best suited to the online format, including whether there will always be a need for the patient to be 'accompanied' by a health care provider, appropriate settings for consultations and mechanisms to 'connect'
<b>GPs and specialists</b>	Optimal specialties—to consider which specialties, or types of consultations within broad specialties, are particularly suited to the online format
<b>Remuneration models</b>	To develop remuneration models for online consultations, including the development of appropriate Medicare item structures
<b>Financial incentives</b>	To develop options for the effective allocation of financial incentives, with regard to the need to promote both initial uptake of online consultations and ongoing participation
<b>Training and support</b>	To identify priority areas requiring training and ongoing support
<b>Technical issues</b>	To consider technical issues to ensure the connectivity and interoperability of systems

<b>Limitations other than technological or financial</b>	To promote the adoption of online consultations by identifying and addressing the concerns of doctors and patients on matters of appropriate clinical standards, and issues in relation to the practice of specialties which may make certain specialties more or less suitable for online consultations
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### 3. Defining telehealth

Telehealth is the delivery of health care services using information technology. Telehealth can mean secure text messaging between doctors to change a medication dose, a videoconference between a patient in a rural area and a specialist in the city, electronic medication reminders, store-and-forward transfer of digital photography for diagnosis, or vital signs monitoring with in-patient or mobile devices that help healthcare professionals monitor trend data such as blood pressure, weight and other physiological signs. Patient data from medical devices can be transferred using phone lines or wireless technology. 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). Telehealth can empower patients by enabling them to view customised content sent to them by their health professional and manage their own health.

The discussion paper considers only one aspect of telehealth: online or video consultations. However it is important to consider a broad definition of telehealth. Telehealth is not about replacing the traditional doctor-patient relationship, rather it is about enhancing and extending it to more people and regions of the country. Australia must harness the benefits of interoperable health technologies connected by fixed, wireless, or broadband solutions that have led to major innovations in other industries – to improve long term and chronic care. These types of technologies allow patients and healthcare professionals to use real-world, remotely collected data to make health care decisions on a continuous basis rather than waiting for physician office visits or emergency situations. Tracking vital signs and other health data on a regular basis and sharing it via secure electronic systems offers many benefits, for example:

- Empowering patients with tools that help them make sense of, and manage, their own care
- Collecting real-world biological and behavioural data and trends in the home with alerts when data are out of range
- Facilitating virtual visits with healthcare professionals, when appropriate, via a range of electronic media
- Enabling social networking, awareness and care support from family and friends who are nearby or distant
- Personalising care plans and educational content for each patient based on their needs, preferences, physiological data, and capabilities
- Triaging precious medical resources to enable the right amount of care to occur in the right place and time.

New technologies will not replace clinic visits; rather they will provide care that complements traditional practice. There will always be a need for hospitals and clinics. However, even today, we too often use these expensive institutional settings for every healthcare needs – even when they are not necessary (e.g. treating non-urgent conditions in an emergency room). By providing telehealth consultations and monitoring health from home, patients of any age and their caregivers, become more engaged in self-care. Telehealth can improve patient access to care, particularly in rural areas by easing logistical burdens and reducing or eliminating unnecessary travel for routine checkups. In addition, healthcare professionals

are provided with more information upon which to base medical decisions than just a single or quarterly office visit.

Personal alarms are a good example of a simple form of telehealth home monitoring that are used by older Australians to gain faster assistance in an emergency and increase the amount of time they are able to remain in their homes(1). Another example of a telehealth consultation is the technology to remotely monitor implantable cardiac devices. This technology has been available for some time in Australia, however adoption has been limited by a lack of reimbursement for specialist monitoring of data. In Australia, adequate reimbursement for telehealth (inclusive of funding of the device and physician reimbursement) is needed before these types of technologies can be delivered to patients.

Medical consultations that involve the exchange of information (as opposed to physical examination) can be carried out over videoconference or online, however telehealth consultations can also occur in a number of other ways, for example:

- Implantable cardiac devices are able to wirelessly transmit cardiac data or information regarding the performance of a device, which can be assessed by a specialist without the need for all routine check ups to be face-to-face (the patient will still have regular appointments with their physician, however these may be less frequent)
- 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 and intervene early
- Incontinence assessment does not have to take place in a hospital or nursing home. A device with enuresis sensors can record incontinence events over a 72 hour period while the patient is at home
- Diabetic patients can have insulin levels and other vital signs monitored remotely showing immediate results and trend lines
- There are a number of wireless devices that combine satellite global positioning systems and can be used to track dementia patients who wander
- Cognitive assessments can be performed in a patient's home using a personal computer and data automatically scored and sent to a specialist in a different location
- Patient safety can be monitored in the home using a range of alarms, alert systems and sensors (e.g. to detect falls)
- Maternal health can be addressed through sensors, text advice and daily vital signs monitoring
- Education and training for patient self-management and care plans can be undertaken via videoconference
- Critical care and evaluation can be undertaken in the case of telestroke diagnosis and treatment
- There are a range of Therapeutic Goods Administration (TGA) approved home telehealth systems that record and transmit daily vital signs. Peripheral devices can be used to monitor pulse, weight, blood pressure, temperature, epilepsy and subjective symptoms associated with a range of chronic diseases.

These types of services differ in their complexity and the way that they are delivered. Store-and-forward, or asynchronous telehealth, involves the exchange of pre-recorded data (e.g. routine checking of vital signs data collected in the patient's home). Real time, or synchronous telehealth, requires two or more individuals to be simultaneously present, exchanging live information (e.g. a videoconference between a patient in a rural location and a specialist in a city hospital). These differences provide unique challenges for any model of reimbursement.

#### **4. Current funding mechanisms for telehealth in Australia**

A range of telehealth programs and pilots are currently deployed in each state and territory. There is no Federal funding for telehealth consultations, other than telepsychiatry and teleradiology. Patients who wish to remain in the community and be monitored with appropriate medical technology are not funded to do so. In many cases the technology is already available and many high-tech devices can simply be connected beside the bed for transfer of device data while the patient is asleep. Data can automatically be uploaded and sent for assessment using wireless technology at pre-determined time points.

A small number of devices that fit under the remote monitoring umbrella are funded in an ad-hoc way. For example, individuals who are eligible for Department of Veterans Affairs (DVA) assistance may apply under the Rehabilitation Appliances Program for a personal response system. Private health insurance provides funding for implantable devices which may have remote monitoring capabilities, through the Department of Health and Ageing's Prostheses List. In these cases the device (less any remote monitoring capability) is funded, and the service component (monitoring by an appropriate professional) is unfunded.

Currently data collected remotely can be monitored in several ways: the patient may share the report as part of a regular face-to-face consultation, or the patient may share the report with their health care provider and the consultation with the multi-disciplinary team can occur as a case conference.

Telehealth consultations (with the exception of telepsychiatry and teleradiology) are not currently funded under the MBS. Accordingly while some clinicians may have the facility to remotely monitor their patients and see merit in doing so, there is no reimbursement mechanism to support the procedure.

#### **5. Benefits of telehealth consultations to Australia**

A large proportion of health expenditure in Australia is spent on chronic disease management in the hospital setting. There are a number of ways that telehealth can benefit the health system by providing technologies that keep older Australians in their homes and delay or defer institutional care:

- Older Australians wish to remain in their homes for as long as possible and are accepting of technology that enables them to do so(2)
- There is a shortage of informal care-givers, nurses(3) and doctors(4). The ability to monitor patients at home will, to some extent, ease this burden
- Telehealth consultations increase timely access to specialist medical professionals, particularly for individuals living in remote areas (many specialist services are centralized)
- The conditions that can be best monitored at home include those that are more prevalent with age, for example stable chronic diseases such as asthma, chronic obstructive pulmonary disease (COPD), diabetes, cardiovascular disease, cardiac arrhythmias and dementia
- A range of chronic conditions can be monitored remotely to avoid symptom exacerbations that lead to hospitalization or use of other health resources. For example, remote monitoring can be used to detect dangerous trends such as weight gain due to fluid retention or lung dysfunction in cardiac and COPD patients
- There are a number of predictable factors that lead to older patients being placed in residential care, the impact of which could be lessened if patients could be assessed remotely (e.g. falls, dementia, incontinence)(5)

- Approximately 12% ( $n=864,000$  in 2008-09) of patients who present at an emergency room are Category 5 - non-urgent, usually with minor illnesses or stable chronic conditions and minor complicating symptoms(6). Appropriate home monitoring could diminish this number
- 9.3% of potentially preventable hospitalizations (PPHs) are due to chronic ailments, which could be prevented or managed through effective, timely care (usually non-hospital)
- Telehealth consultations provide a viable alternative to outpatient or doctor visits. For example, in-hospital follow-up visits of patients with pacemakers or implantable cardiac devices, typically take 15 minutes for each patient, twice a year. In some cases, these can be safely replaced with a remote follow-up which takes 1-2 minutes(7)
- Home monitoring enables intervention in the earlier stages of the trajectory of chronic disease(8)
- Telehealth consultations have been found to reduce nursing home admissions by 77%(9). The hazard of nursing home placement increases significantly with age, incontinence, impaired peak expiratory flow, heart disease and physical disability(10). These factors are all amenable to home interventions
- Telehealth consultations increases staff efficiency(11) and decrease home visits and travel time(12). When technology can take over routine monitoring, staff can spend more time on patients who require direct care
- Telehealth consultations 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(13)
- Telehealth consultations increase patient quality of life and adherence to treatment regimes(14)
- Telehealth consultations can assist people to remain in the workforce. The annual loss of workforce participation from chronic disease in Australia was around 537,000 person-years of participation in employment and approximately 47,000 person years of part-time employment in 2009(15).

## 6. Clinical effectiveness of remote patient monitoring

There are a number of clinical benefits associated with remote monitoring and telehealth consultations. Examples include:

- An increase in mean survival time in a sample of 387 diabetic patients who undertook daily vital signs monitoring(16)
- Significant improvement in glycemic control in diabetic patients who transmitted blood glucose and blood pressure data to a telehealth nurse(17)
- A 71% reduction in ER admissions in respiratory patients who had oxygen saturation measured by pulse oximetry and monitored daily(18)
- A reduction in the number of hospital readmissions in patients with angina(19)
- Significant improvements in health related quality of life and a decrease in mortality in COPD patients using home monitoring(20)
- 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(21)
- A 43% reduction in hospitalizations and a 68% reduction in bed days of care in cardiac patients who transmitted daily electrocardiogram (ECG) and blood pressure data(22)

- Reduced office visits and earlier detection of clinical anomalies such as atrial arrhythmias in patients with implantable cardiac devices who were monitored remotely using automated, wireless technology(23)
- A significant decrease (45%) in the need for in-patient hospital evaluation in 1,339 patients with implanted cardiac defibrillators who were remotely monitored(7)
- 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(24)
- Detection of a far greater number of clinical or device related events than during scheduled office visits in patients with implantable cardiac devices(7)
- 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(25)
- A 50% reduction in mortality in a large sample ( $n=69,556$ ) of patients with implantable cardiac devices, including cardiac defibrillators(26)
- A decrease in blood pressure and a reduction in the number of medications need to treat high blood pressure in a recent analysis of 37 clinical trials, including 9,446 individuals using home blood pressure monitors(27)
- Telehealth consultations have been shown to be beneficial for the majority of stable patients who do not require device or medication changes when attending an in-office follow up. Remote consultations enable clinicians to focus their attention on patients who require a higher level of care and arrange rapid care for patients whose conditions are deteriorating(28-29).

## **7. Cost effectiveness of telehealth consultations**

Cost savings will vary depending on the technology selected and the patient group. A recent report by the Australian Academy of Technological Sciences and Engineering (ATSE) estimates potential cost savings to the Australian Government of up to \$526 million per year(30). 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 devices and monitoring, or cost savings associated with reduced emergency room admissions, doctor visits or hospitalizations.

We have outlined cost savings to Government of \$3.1 billion per year (see Appendix A). This is in line with estimates by Access Economics(31) of cost savings of \$2-4 billion per year. Considerable savings can be achieved by reducing the need for residential care and residential care packages and reducing the costs associated with emergency room admissions, potentially preventable hospitalizations, flying doctors services in rural areas, patient travel and unnecessary tests and chronic disease management. In addition to direct cost savings, there are a number of indirect cost savings associated with telehealth, for example, reducing patient travel time, reducing the burden on family members and caregivers and loss of income etc.

## **8. Specific Responses to issues for consideration**

### **8.1 Optimal Practice Models**

The model currently envisaged for telehealth consultations involves a GP/health professional and a patient in a medical setting in a rural area and a specialist in a city or major regional area. However, telehealth encompasses much broader practice models, examples of which include:

- A patient in their home uploading daily vital signs data that are monitored by a telehealth clinician
- An online consultation between a patient in a rural location and a city GP or specialist
- A patient with an implantable cardiac device uploading ECG data that are monitored for device failure or clinical change by a specialist
- A patient in their home using an incontinence assessment device where data are assessed by a nurse in a hospital
- A patient in a rural area with an implantable cochlear device that needs re-programming by a specialist located in the city
- A patient who has a falls sensor that alerts emergency help from a professional in close proximity
- A patient in a rural area accessing an online cognitive assessment
- A patient with diabetes whose insulin levels are remotely monitored by an allied health professional who specialises in diabetes
- A patient in a rural or urban setting receiving psychiatric or psychological counselling services in the privacy of their home
- A patient with stroke symptoms in a community centre or rural hospital connected to a neurostroke centre
- A patient with diabetic retinopathy in a rural area receiving teleophthalmology services from a city specialist.

The examples above reflect the need for broad practice models that encompass a range of options under which a telehealth consultation can occur. MBS item numbers for telehealth should take into account future technologies. In the future wireless technology will enable many medical devices to be monitored from a distance, effectively assisting with 'hospital in the home' type care.

The discussion paper states that Medicare rebates will be available for the GP, nurse practitioner, midwife, Aboriginal health worker or practice nurse attending the patient at that 'end' of the consultation where clinically necessary. However, in some cases a patient need not be accompanied by a health professional. Routine monitoring of patients with chronic disease may not require a consultation by a GP or a specialist; rather the assessments may be undertaken by a practice nurse or allied health professional. In the case of routine checking of data from an implanted device, the specialist may be a cardiologist. MBS item numbers for telehealth should include cases where consultations include physiological data or information from subjective, symptom-based questionnaires that have been automatically uploaded from the patient's home. For this reason facilities, or appropriate settings, for telehealth should include the patient's home.

Access to telehealth should not be limited to rural patients. In the US restriction of telehealth services to rural areas was associated with lack of uptake. It is now recognized that a large number of individuals with chronic illness live in major urban areas and can access greater levels of care via telehealth services. Restricting telehealth item numbers to "live" online consultations is likely to constrain the utilization of telehealth in Australia. Telehealth growth in the US was stagnant until more flexible rules were introduced (in the US only 10% of telehealth services are live)<sup>1</sup>.

## **8.2 Optimal Specialties**

The discussion paper notes that telehealth services are likely to be most beneficial to patients of consultant physicians, surgeons, endocrinologists, dermatologists, ophthalmologists, psychiatrists, paediatricians and geriatricians. Telehealth consultations will

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<sup>1</sup> <http://www.ctel.org/expertise/reimbursement/medicare-reimbursement/>

vary and in some cases a nurse, GP or allied health professional may be able to assess data, however in some cases specialist review of data will be required. For this reason MBS item numbers must 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).

Other broad specialties that are suited to the online format include patients who:

- Have stable chronic diseases such as diabetes or heart disease that need routine monitoring
- Are weak and frail and who would benefit from alarms or alert systems to maintain independence
- Have implantable devices that require routine maintenance
- Have at-risk pregnancies.

Eligibility should be wide enough to include patients who have difficulties accessing healthcare, regardless of location.

### **8.3 Remuneration Models**

Careful remuneration models for telehealth consultations must be developed, including appropriate item structures. The discussion paper outlines two approaches to the structure of MBS items. The first is unique item numbers, for use solely on telehealth consultations by GPs and other professionals. The second allows the use of existing GP and specialist consultation items in conjunction with 'add-on' telehealth items for use with online consultations.

Telehealth items cover a range of categories (e.g. a telehealth consultation could take the form of a diagnosis, case review or assessment of physiological data). Current MBS categories are listed below<sup>2</sup>.

- Category 1: Professional Attendances (includes telepsychiatry)
- Category 2: Diagnostic procedures and investigations (could include remote assessment)
- Category 3: Therapeutic procedures
- Category 4: Oral and maxillofacial services
- Category 5: Diagnostic imaging services (includes radiology)
- Category 6: Pathology services
- Category 7: Cleft lip and cleft palate services
- Category 8: Miscellaneous services.

One possibility would be to consider using a code or a suffix affixed to an existing MBS item number to denote that it is used in a telehealth context. This means that it is already an approved Medicare service but delivered via remote means and as such is still subject to initial approval mechanisms and Quality Framework review if necessary. A second possibility would be the creation of a new Category (Category 9) for MBS telehealth items that includes video or online consultations and remote patient monitoring. The rationale behind developing a new Category for telehealth is that these services reflect a change in care and differ in fundamental ways from traditional MBS consultations and will be subject to different regulations. For example:

- Traditional MBS items are historically based on face-to-face consultations

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<sup>2</sup> Australian Government, Department of Health and Ageing, Medicare Benefits Schedule Book, November 2010.

- Traditional MBS items consider a patient and a single practitioner, rather than a patient and more than one health professional
- Traditional MBS items provide a Medicare benefit to a patient for a single service
- Traditional MBS items do not include brief consultations or review of data collected in the home
- Traditional MBS items do not consider remuneration to more than one facility
- Traditional MBS items do not consider the patient's home as a facility
- Traditional MBS items do not provide for wellness and prevention services.

Telehealth items should, where possible, follow the same sets of principles outlined in the MBS and be aligned with traditional face-to-face consultations. Items in Category 1 (Professional Attendances) are divided into different levels (Level A-D) depending on the duration and complexity of the case. A similar set of principles should be applied to Category 9 Telehealth items.

In the case of remote monitoring and review of data, a capitated model might be considered where a clinician is paid once per year per patient to provide the service. An annual once off fee per patient per year could be considered to ensure there is no over servicing, i.e. the physician would only get paid once regardless of how many data transmissions and reviews of data occur. Calculations for an annual fee could be made based on the number of online consultations expected per year.

Fee relativities across specialties should be considered. Reimbursement will vary between telehealth services for vital signs monitoring, online consultations delivered via videoconference and remote monitoring/telehealth consultations for patients with implantable medical devices. In some cases it may be appropriate to place an annual cap on payments, or if necessary a discount rate to reflect more efficient service delivery methods (for example, brief review and routine data monitoring). Telehealth fee levels should follow current guidelines that outline reimbursement for health professionals, e.g. practice nurses or specialists. Differential fees for telehealth should reflect the time and the degree of complexity of the service. For regular MBS consultations each level of fee is a different item number. Those items identified by 'S' apply in cases where procedures have been rendered by a specialist. Those items identified by the letter 'G' apply in other cases. These principles could be applied to MBS telehealth items.

The discussion paper asks for consideration of consistency of items with existing telehealth items (e.g. telepsychiatry). Telepsychiatry is currently included in Category 1 (Professional Attendances) and defined as "electronic transmission of psychiatric consultations, advice or services in digital form from one location to another using a data communication link provided by a third party carrier, or carriers". Consultations cover assessment, diagnosis, treatment and review. Telepsychiatry items 353 to 361 are available for use when a referred patient is located in a regional, rural or remote area. Items 364-370 cover face-to-face consultations that occur as a result of a telepsychiatry referral. The MBS outlines the duration of the consultation and the number of consultations allowed in a calendar year (usually no more than 12). Timeframes include consultations of less than 15 minutes, 15 to 30 minutes, 30 to 45 minutes, 45 to 75 minutes and over 75 minutes duration. Practitioners must keep a record of care provided during sessions and all providers are required to comply with standards covering videoconferencing. MTAA suggests that MBS telepsychiatry items be moved to the telehealth category for consistency.

#### **8.4 Medicare Regulations**

Codes of conduct and practice should cover how telehealth services can be maintained and billed appropriately. Category 9 would differ from other MBS categories in that in some

cases (e.g. video consultations between patients in rural regions and city specialists) it may reimburse the participation of two practitioners in a single service and the payment to the patient of more than one Medicare benefit for a single service. Regulations should include a code of practice and guidelines<sup>3</sup> for telehealth service delivery that cover interoperability, reliability, standards of care, clinical guidelines and guidance regarding service provision/withdrawal and safety etc.

Telehealth is reimbursed by Centers for Medicare and Medicaid (CMS) in the United States. Initial mandates for reimbursement contained a large number of constraints resulting in minimal reimbursement for services. These included limiting reimbursement to rural regions with health professional shortages, excluding remote patient monitoring (store-and-forward telemedicine services), implementing a 75%/25% fee split between the consulting physician and the referring practitioner, limiting reimbursement to specific Current Procedural Terminology (CPT) codes and excluding registered nurses. The initial fee-splitting in the US seemed to invite fraud and was inconsistent with the anti-kickback statutes in the US (it meant that referrers got a 'cut' for every referral, regardless of complexity)(32).

Legislative changes in the US have increased telehealth utilization in both the public and private health system. The Benefits Improvement and Protection Act of 2000 (BIPA) abolished the fee splitting requirement and established a \$20 fee for referrers, increased the number of eligible geographical sites, expanded the number of eligible CPT codes and permitted reimbursement for certain store-and-forward services. Remote monitoring services such as viewing ECG data are considered in the same way as if the services were delivered on site and reimbursed accordingly, regardless of location. Remote assessment of pacemakers and cardiac event recorders are covered using specific CPT codes.<sup>4</sup> There are detailed guidelines covering evaluation and frequency of pacemaker monitoring (there are over 200 pacemaker models and guidelines have been developed to best determine frequency of monitoring and maximum claims frequency etc)<sup>5</sup>.

## **8.5 Financial Incentives**

The discussion paper references the need to promote both the initial uptake of online consultations and ongoing participation.

There will be costs associated with the initial set up of telehealth services (for example, videoconferencing and computer equipment). Capital costs will need to be covered for hardware, software and internet connections to enable online consultations. These costs should be covered either as a one-time payment and considered separately to MBS item numbers or as an ongoing rental and service agreement with Medicare (it is likely that many practices will already have the necessary infrastructure in place). Additional funding will be needed for monthly broadband connection service charges.

Remote patient monitoring for patients with chronic disease has been shown to reduce hospital readmissions and the number of patient bed days. For this reason, an MBS reimbursement model should be designed to target those patients who will benefit most by having funding provided for the ongoing monitoring of their conditions. Prevention and keeping patients out of institutions is the overarching goal of telehealth and should be compensated in terms of those benefits. MTAA proposes that these services be reimbursed through:

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<sup>3</sup> for example see, the 'Quality Practice Guidelines for Telepsychiatry' outlined by the Royal Australian and New Zealand College of Psychiatrists.

<sup>4</sup> <http://www.cms.hhs.gov/manuals/102>

<sup>5</sup> Medicare National Coverage Determinations Manual, Chapter 1, Part 1 (Sections 10 – 80.12) Coverage Determinations.

- Payment for equipment (or a monthly rental fee) – e.g. a computerized home monitor and peripherals
- Payment for broadband connection fees
- MBS item numbers for telehealth that cover a range of medical consultations via videoconference
- MBS item numbers for telehealth that cover monitoring and assessment of vital signs and other medical data collected from the patients home
- MBS item numbers for telehealth that cover payment for clinician review and coaching (as required) to use videoconferencing, educational content and contact with the patient
- In regards to incentives for telehealth, consideration should be given to reimbursement and compensation for health professionals who use telehealth for preventative measures leading to cost reductions and improvements in healthcare (different to the regular model of care outlined under the MBS).

While initial costs should be covered, there should be limits on financial incentives for ongoing participation. Certain MBS items are associated with incentive payments through the Practice Incentives Program (PIP) in addition to the standard Medicare rebate. The provision of PIP payments might be considered for the first year of telehealth service provision. The Australian (newspaper) reported that telehealth payments may be up to \$100 per GP consultation and \$180 per specialist consultation<sup>6</sup> These amounts are higher than the costs of a standard MBS item consultation, presumably due to the cost of both a specialist on one end and a patient who is accompanied by a nurse, doctor, or allied health professional on the other. Costs should be in line with the cost of a traditional face-to-face consultation. In some cases the costs will be less. For example, in the case of telehealth consultations for data monitoring, the cost of only one health professional will be covered (and the consultation may be brief).

Reimbursement needs to be in line with the cost of the service provided and provided as specified in the care plans developed by the healthcare professionals. Telehealth costs need to be constrained as telehealth consultation should be considered routine medical practice. Reimbursing telehealth services in the same manner as a traditional face-to-face consultation, following the same principles outlined in the MBS, will ensure that telehealth services become routine. Reimbursement for telehealth should mirror reimbursement for a traditional consultation. If a telehealth consultation includes the same staff and achieves the same goal as a face-to-face consultation, the fee should reimburse accordingly.

The cost of medical devices in the patient's home (including hardware, software and medical peripherals) will need an alternate funding source. This could occur in multiple ways. Some items could be provided with community care packages. In some cases, given a specific home monitoring MBS procedure number, the item may be reimbursed with the implantable device on the Protheses List. A contribution from Private Health Insurance for devices for privately insured patients could also be considered (refer to MTAA's pre-Budget submission to Treasury 2011-2012<sup>7</sup>).

Currently there are only a small number of Medicare item numbers for telepsychiatry and teleradiology services, however these enable only the specialist participating in the

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<sup>6</sup> <http://www.theaustralian.com.au/national-affairs/ample-rebates-offset-by-savings/story-fn59niix-1225907023269>

<sup>7</sup> <http://www.mtaa.org.au/pages/images/MTAA%20pre-Budget%20submission%202011-2012%20final.pdf>

consultation to bill Medicare (acting as a bit of a disincentive). The overall uptake of telepsychiatry has been low. The low response appears to have been due to lack of support and training, technological difficulties, limiting of service provision to rural areas and medicolegal and remuneration issues(33).

Medicare Australia monitors payments on claims through a program of audits including random compliance and targeted compliance audits. Data from 1999 show that the most common type of Medicare fraud was misrepresentation of an item number, e.g. claiming a long versus a standard consultation(34). With telehealth consultations, there will almost certainly be an electronic trace associated with a consultation (e.g. the total time of a call or the time a data file is open). An additional safeguard is ensuring that patients are aware of claims made in regard to consultations (an annual fee, rather than a fee per service might address this issue).

## **8.6 Training and support**

Expansion of telehealth as a mechanism for health delivery requires development of curricula and credentialing for telehealth workers. There are a number of specific actions which could be taken, for example:

- Workforce: Commission a study to identify the types of care workers need to support telehealth and community-based care
- Workflow: Develop workflow models (staffing models, shift design, care management) for telehealth coordination across patients, families and healthcare professionals that support the transition from clinic care to videoconference consultations, remote patient monitoring and virtual home care
- Health IT Workforce: Accelerate job training programs and growth of a workforce with expertise in health IT design, telehealth, remote patient management, engineering, usability, and health informatics
- Credentialing: Develop certification and credentialing of telehealth workers and GPs, allied health professionals, nurses and specialists involved in telehealth delivery.

Ten health professions across Australia are subject to national regulation. The ten professions regulated by the Australian Health Practitioner Regulation Agency (AHPRA)<sup>8</sup> are chiropractic, dental, medical, nursing and midwifery, optometry, osteopathy, pharmacy, physiotherapy, podiatry and psychology. From 2012 Aboriginal and Torres Strait Islander health practitioners, Chinese medicine practitioners, medical radiation practitioners and occupational therapists will also be included in the national scheme. This means that telehealth policy can be developed and implemented nationally for all health professionals regardless of state/territory.

## **8.7 Technical issues**

The Federal Government is investing in the National Broadband Network (NBN). In rolling out the NBN, the government must ensure that the community is prepared for the use of home healthcare technologies. The following issues should be considered:

- Standards: As diagnostic, self-care and telehealth delivery technologies extend into the home and community, it is important that they be interoperable and 'plug and play' to enable both patients and healthcare professionals to install and use them. Standards such as those developed by Continua should be adopted and promoted to drive such interoperability. The Continua Health Alliance is an international industry

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<sup>8</sup> <http://www.ahpra.gov.au/>

group of approximately 240 healthcare providers, communications and medical device companies who are working towards establishing systems of interoperable telehealth devices and standards. The Continua guidelines are based on proven connectivity standards and include Bluetooth and USB for wireless and wired connections. All companies whose products are certified using Continua standards are interoperable with other Continua-certified products, meaning that information can be easily shared with healthcare providers and carers

- **Broadband:** Ubiquitous, affordable broadband is essential for extending healthcare into the home, particularly for communities that are rural and underserved. As the NBN is rolled out, it will be necessary to ensure the infrastructure meets the requirements for a community to ensure adequate connectivity among all of the constituents in a coordinated care model: hospitals, clinics, doctors' offices, laboratories, pharmacies and homes. Flexible connection services should be expedited for patients with health related needs
- **Policy:** To ensure that Australian policy makers are aware of the latest technology advancements, the Department of Health and Ageing should establish a telehealth advisory committee to inform policy awareness of new technologies, studies and initiatives as part of a national effort to modernise standards of telehealth care.

### 8.8 Limitations to uptake of telehealth

In general individuals are accepting of technologies that will enable them to maintain their independence and stay in their own homes. Recent Australian research has assessed the perceptions of elderly people towards wireless sensor network technologies for health monitoring, with a focus on wireless motes designed to collect physiological data such as ECG, blood sugar, oxygen levels and weight etc. Steele et al.(2) found that independence is highly valued and that any system that prolongs it will be considered. Interestingly, privacy was not considered particularly important as individuals preferred knowing that help was readily available over privacy or confidentiality. One participant stated that: "*When you get old you don't really care about privacy, you just want to know someone will come to help you*".

Some of the limitations regarding infrastructure and reimbursement may be allayed with the rollout of the NBN and the provision of MBS item numbers for telehealth from July 2011. There are however a range of additional barriers to the uptake of telehealth consultations. These are listed in table 1.

**Table 1: Barriers to the uptake of telehealth**

Barrier	Example
<b>Barriers influencing the user</b>	<ul style="list-style-type: none"> <li>• Lack of awareness or acceptance by the user that they need assistance</li> <li>• Variations in the ability of the user to use the technology</li> <li>• Difficulties associated with simplifying complex technology for older individuals</li> <li>• Privacy concerns with monitoring and surveillance</li> <li>• Ethical issues regarding informed consent in individuals with cognitive decline (e.g. Alzheimer's patients)</li> <li>• Lack of clarity in the aged care system and difficulties accessing and making decisions about, often complex, technologies.</li> </ul>
<b>Barriers due to cost</b>	<ul style="list-style-type: none"> <li>• The cost of the technology, particularly in the first instance</li> <li>• The large number of technologies and the difficulty in choosing a solution</li> <li>• Cost shifting and incentives, e.g. a provider may invest in a technology however the return on investment may not benefit the payer. For example, in the private sector, health funds who may potentially be prepared to pay for home monitoring telecardiology devices are reluctant as the economic beneficiaries are the patients and (public) emergency departments and hospitals</li> </ul>

	<ul style="list-style-type: none"> <li>• Different systems, e.g. primary, secondary and tertiary care are often governed under different administrative systems</li> <li>• Lack of consistent policies for reimbursement (and reluctance to use a technology without reimbursement)</li> <li>• Perverse incentives, currently financial help is provided to those in high level care facilities, but not to those who wish to have their health monitored at home.</li> </ul>
<b>Barriers due to legislation and regulation</b>	<ul style="list-style-type: none"> <li>• Lack of reimbursement for telehealth consultations</li> <li>• Lack of clear standards and policies from Federal Government regarding telehealth</li> <li>• Different state and territory funding streams</li> <li>• Liability concerns by healthcare professions (e.g. missing a medical alert)</li> <li>• Need for engagement with all stakeholders, including Government, Medicare, Therapeutic Goods Association (TGA), industry, healthcare professionals and private health insurers</li> <li>• Lack of enforceable standards for home monitoring.</li> </ul>
<b>Barriers due to systems</b>	<ul style="list-style-type: none"> <li>• Access to high speed broadband</li> <li>• Lack of interoperability between systems</li> <li>• Lack of information sharing between key stakeholders</li> <li>• Lack of infrastructure to deliver care in the home setting</li> <li>• Lack of unique patient identifier and electronic health records</li> <li>• Difficulties in scalability of systems</li> <li>• Need for training.</li> </ul>

## 9. Conclusion

A transitional period for MBS telehealth item numbers should be considered. MTAA welcomes any initiatives that keep patients out of hospitals and residential care facilities by enabling access to medical care in their own homes. The provision of MBS item numbers for telehealth is the first step in this process. MTAA proposes flexible MBS item numbers for telehealth consultations which include a range of practices (e.g. video conference consultations, remote monitoring) and enable better access to healthcare and technology, for all patients, regardless of location.

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## Appendix A. Telehealth Potential Cost Savings

Reduced costs	Assumption	Saving
<b>Residential care</b>	The majority leaving a care package enter residential care. A place in a high level care facility has an average annual cost of \$48,550 (or \$17,750 in low care facilities)(35). Assume that 10% of the current residential population ( $n=15,700$ ) could be supported in the community on a Home and Community Care (HACC) package (\$2,600) versus residential care (\$36,100)(36).	<b>\$525,950,000</b>
<b>Residential care packages</b>	The HACC program assists 637,521 clients per year at a cost of \$2,600 per person (total cost \$1.6 b)(37). The Community Aged Care Package (CACP) assists $n=40,280$ per year at a cost of \$9,500 per person (total cost \$382 m). The Extended Aged Care at Home (EACH) and Extended Aged Care at Home Dementia (EACH-D) packages assist 4,244 and 1,996(38) people per year at a cost of \$110 per day per person (\$250 m). Assume 5% of overall total (\$2.3 b) no longer need packages.	<b>\$114,537,530</b>
<b>Emergency Room (ER) admissions</b>	In 2008-09 Category 5 patients accounted for 12% of ER presentations(6). Of 7.2 million presentations, 864,000 (12%) people may have been better treated using appropriate home monitoring. The average cost for a visit to an ER is \$373(39). Assume 20% of patients can avoid an ER visit (at a cost of \$322 m).	<b>\$64,454,400</b>
<b>Potentially preventable hospitalizations (PPHs)</b>	The average cost of an admission to a public hospital in 2008-09 was \$4,471. In 2007-08, selected PPHs represented 9.3% of all separations in Australian Hospitals (40). 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.	<b>\$385,420,767</b>
<b>Royal Flying Doctors Services (RFDS) in rural areas</b>	In 2008-09 the RFDS undertook 36,892 aeromedical evacuations(41) at an approximate cost of \$5,500 per evacuation (total cost = \$202 m). Assume 20% of evacuations could be avoided.	<b>\$40,581,200</b>
<b>High level residential care</b>	In June 2008 there were 157,087 individuals who were permanent residents in rest homes at a cost of \$36,100 per person(42) (total cost \$5.7 b). 24% of residents were low care(43) (i.e. the percent you would hope to target with home monitoring). Assume that 20% could be cared for at home.	<b>\$272,200,354</b>
<b>Chronic disease management</b>	2007-08 health expenditure in Australia was \$103.6 b. In Australia more than two thirds of all health expenditure is associated with chronic disease management(44) (\$69 b). Assume that telehealth monitoring will detect symptoms earlier and enable better provision of care to patients with chronic diseases and a minimum of 2% of costs can be saved.	<b>\$1,380,000,000</b>
<b>Patient transports, travel and unnecessary tests</b>	Access Economics(31) accessed US cost savings data for patient transports and transfers and unnecessary tests with telehealth. Using a simple population relativity, they estimate cost savings of \$296 m per year in Australia.	<b>\$296,000,000</b>
<b>Veterans Home Care (VHC)</b>	The VHC program provides a range of low-level home care services to enable independent living. Expenditure in 2006/07 was \$95 m(45). Assume a 10% reduction in need.	<b>\$9,500,000</b>
<b>Patient Assisted Travel Schemes (PATS)</b>	Approximately \$81 m is spent on state and territory PATS per year. This 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)(46). Assume a 20% PATS reduction.	<b>\$16,195,000</b>
<b>Total savings</b>		<b>\$3,104,839,250</b>

