

**Delivering Safe and Sustainable Clinical Services**

**Tasmanian Green Paper  
20 February 2015**



One Health System  
Department of Health and Human Services  
GPO Box 125  
Hobart Tas 7001

The Medical Technology Association of Australia (MTAA) welcomes the opportunity to contribute to the consultation paper “*Delivering Safe and Sustainable Clinical Services*” Tasmanian Green Paper.

MTAA is the national association representing companies in the medical technology industry.

We firmly believe that remote monitoring is part of the solution that Tasmania requires to deliver a safe and sustainable healthcare service, in particular for the frequent users of the health system with comorbidity issues such as diabetes, obesity and cardiac condition. Our attached response outlines how we envisage remote monitoring technology can assist Tasmania deliver an effective and efficient healthcare system that meets the health needs of its people.

We are eager to continue to work with the Government to address population health needs in Tasmania and are happy to facilitate meetings with our members for ongoing discussions.

Yours sincerely



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Susi Tegen  
Chief Executive

## Introduction

MTAA aims to ensure the benefits of modern, innovative and reliable medical technology are delivered effectively to provide better health outcomes to the Australian community. The member companies cover the spectrum of the industry in Australia, from subsidiaries of major multinational medical technology companies to independent distributors and small and medium sized Australian innovator companies.

Medical technologies are products used in the diagnosis, prevention, treatment and management of disease and disability. Products range from consumable items such as bandages and syringes, to high technology implantable devices such as cochlear implants, cardiac defibrillators and orthopaedic joints, to diagnostic imaging and operating theatre equipment, to products which incorporate biological materials or nanomaterials. The industry is characterised by a high level of innovation, resulting in short life cycles for many products. Medical technology innovation is characteristically incremental in nature. Many medical devices undergo constant development based on feedback from medical practitioners and advances in other sciences relevant to medical technology.

Governments are facing significant challenges in healthcare delivery with the costs of an ageing population, the increase in chronic diseases, coupled with the community's demand for improved health care access. The MedTech industry is well placed to be part of the solution to this, indeed, a partner in holistic planning and integration. That solution lies in our ability to assist in planning as we understand technologies with remote monitoring capabilities which enable health care services for people in the community, outside the hospital system, saving significant costs and improving healthcare services.

The Tasmanian Government has mandated that outcomes from the changes to the Health System are that Tasmanians must have

- Greater access to local primary care services
- Better pathways to specialised care when they need it
- More opportunities for treatment in their community progressing appropriately to hospitalisation only when it is the more appropriate treatment option
- Timely return to home or to a facility closer to home – as soon as it is safe and appropriate
- Better coordinated and more accessible care for those services that are provided outside of their local community
- Care delivered by competent and skilled health workforce
- Access to early care to enable them to return to optimal health and maximum independence

## Issue

There are a number of indicators that strongly support the notion that the health system is not currently sustainable and that a business as usual approach will embed an inefficient system that is not providing good outcomes for the community.<sup>1</sup>

## Government Interest

At the system performance level, Tasmania does not perform well on a number of markers<sup>2</sup>:

- Longest elective surgery waiting time
- Highest rate of adverse events within its hospitals
- Lowest life expectancy
- Highest rates of most chronic diseases
- Age standardised mortality rates are higher than the Australian average for cancer, diabetes, ischaemic heart disease, strokes and self-harm

Maintaining the financial sustainability of Tasmania's health care system will mean ensuring resources are used as efficiently, effectively and sustainably as possible, to maintain and improve quality even as funding becomes tighter.<sup>3</sup>

### **1. Is the Tasmanian health system all it should be, or should we be open to change in order to improve outcomes for all Tasmanians regardless of where they live.**

Globally the challenges of healthcare delivery vary widely, yet health systems around the world have similar objectives: to deliver the highest quality care to the most people possible at the lowest possible cost. Healthcare spending continues to rise. Total health spending in Australia accounted for 9.1% of GDP in 2011-2012 (slightly lower than the OECD average 9.3%)<sup>4</sup>. This equated to an increase of over 5% in real terms compared to a 1% increase on average across OECD<sup>5</sup>.

In the Report to the Tasmanian Treasurer: Analysis of Budget Risk (April 2014), the Treasury suggests that:

*".....the greater risk is associated with the efficient growth component. Tasmania's costs significantly exceed the National Efficient Price (set by the Independent Hospital Pricing Authority) leaving the State Government to make up the shortfall. Without significant service improvement to reduce the average cost per separation Tasmania is likely to continue to operate at significantly above a national efficient cost."<sup>6</sup>*

The state faces higher numbers of elderly people who are sick and need health care services and access to facilities, and a shrinking pool of workers to pay for the ballooning costs. In response to the looming demand for care MTAA sees the time is right for Tasmania to develop a remote health policy that integrates utilisation of the wide range of technologies that fall under the remote health umbrella, to deliver healthcare in a structured, safe, innovative and cost effective way

<sup>1</sup> P3 Supplement No 1 Sustainability and the Tasmanian Health System

<sup>2</sup> *ibid*

<sup>3</sup> P5 Supplement No 1 Sustainability and the Tasmanian Health System

<sup>4</sup> OECD Health Statistics 2014, How does Australia compare

<sup>5</sup> *ibid*

<sup>6</sup> [http://www.treasury.tas.gov.au/domino/df/df.nsf/LookupFiles/Report-to-the-Treasurer-Analysis-of-Budget-Risks-2014.pdf/\\$file/Report-to-the-Treasurer-Analysis-of-Budget-Risks-2014.pdf](http://www.treasury.tas.gov.au/domino/df/df.nsf/LookupFiles/Report-to-the-Treasurer-Analysis-of-Budget-Risks-2014.pdf/$file/Report-to-the-Treasurer-Analysis-of-Budget-Risks-2014.pdf) accessed 20/02/2015



Increasingly healthcare delivery organisations worldwide are rethinking the services they offer as funding and payment models evolve, focusing on wellness and outcomes rather than volumes of services consumed. To achieve this objective, various changes in structure and organisation are required. In both of these aspects, innovation can help to increase value and efficiency. Innovation may include, but is not limited to technological advances as well as new strategies, organisation structures, facilities, processes and partnerships<sup>7</sup>. These strategies will give rise to a more patient-centric care model through better monitoring and management of wellness and chronic disease and enable cost containment while improving overall delivery system health.<sup>8</sup>

MTAA believes it is critical the Tasmanian government act on this impetus for change and develop a vision for an innovative health care system focused on adopting and integrating new technologies as a solution to the challenges it faces. This must take shape by establishing a system that prioritises new ways of doing things, by way of delivery of efficient technologies and remote technologies, processes and business models.

Not only does the medical technology industry offer solutions to current healthcare needs but it is continually researching and developing solutions to the many health issues that Australia and the world face as people live longer lives. The industry looks not only at the health costs incurred “in the medical system” but looks to develop solutions to help keep potential patients out of expensive healthcare facilities.

Tasmania with a population of approximately 500,000 is regarded as a rural area. Currently rural and remote patients do not have equal access to health services and/or are expected to travel many kilometres to attend consultations. This places considerable financial and personal stress on the patient.

Studies have shown that remote monitoring can be used to replace 50–63% of in-clinic visits without adversely affecting patient outcomes<sup>9</sup>. Approximately 90% of cardiac patients, who attend a clinic for routine monitoring, do not require changes to either their device or their medical treatment<sup>10</sup>. A range of implantable medical devices can now be monitored remotely for clinical or device assessment.

#### Example 1

*In 2013, the US Department of Veterans Affairs (VA) Telehealth Service provided care to 608,900 patients (which amounted to 1,793,496 telehealth episodes of care) of which 45% lived in rural areas and who may otherwise have had limited access to VA healthcare<sup>11</sup>. The estimated savings was US\$2000 per patient per annum.*

<sup>7</sup> Bernardo M, Valls J, Casadesus M. Strategic alliances: an analysis of Catalan hospitals. *Rev Panam Salud Publica*, 2012;31 (1) 40-7

<sup>8</sup> The Digital hospital evolution IBM Global Business Services accessed 18/02/2015

<sup>9</sup> Crossley, G.H., et al. and CONNECT investigators (2011). The CONNECT (Clinical Evaluation of Remote Notification to Reduce Time to Clinical Decision) Trial: The Value of Wireless Remote Monitoring With Automatic Clinician Alerts. *Journal of the American College of Cardiology*, 57:1181-89.

<sup>10</sup> Heidebüchel, H. et al. (2008). Potential role of remote monitoring for scheduled and unscheduled evaluations of patients with an implantable defibrillator. *Europace*, 10:351-7.

<sup>11</sup> Telehealth Services in the United States Department of Veterans Affairs, 2014

#### Example 2

*In Australia private care providers such as Feros Care offer fee-for service programs which provide an alternative for individuals who need in-home care but cannot access Government subsidised programs. Services include telecare (emergency response) and telehealth (vital signs monitoring). Telecare sensors coupled with telehealth vital signs monitoring (daily review of vital signs by a nurse) cost less than \$10 per day.*

#### Example 3

*The Australian Antarctic Division has been delivering a telehealth remote monitoring service for workers in the Antarctic. The system has been most effective, it has been innovative in research including space-analogue studies, education and continuing training for the remote doctors. Lessons learned over the past 50 years from the have application for more sophisticated telehealth projects in both Australia and elsewhere<sup>12</sup>. Jeff Ayton, Chief Medical Officer is also actively involved with the Australian College of Rural and Remote Medicine which has been actively using remote health monitoring for a number of years.*

#### Example 4

*The current funding model for dialysis favours in-centre or satellite dialysis – both of which are the most costly and resource intensive modalities. Despite cost studies showing that home dialysis is the most cost-effective of all the dialysis modalities, only around 30% of individuals dialyse at home. An increase in home dialysis utilisation in the next 10 years has been estimated to result in net savings of between \$378 and \$430 million to the Australian healthcare system<sup>13</sup>*

#### Issue

Better Access to Care vs Access to Better Care. Access to services closer to home should not come at the cost of patient safety<sup>14</sup>

#### Government Interest

Convenient, local, 'end of my street' access to some services does not always translate to the same standard of care or health outcomes when compared to care provided at a larger centre, particularly for complex issues<sup>15</sup>.

Where a service is not available locally we need to consider how<sup>16</sup>:

- Provide transport and accommodation assistance
- Bring the service to the patient by some form
  - Utilising visiting specialists
  - Telehealth
  - Better linkages between local providers
  - Improving coordination of emergency retrieval and transport services to ensure faster access in time critical situations

The Tasmanian Government aims to shift its thinking from "better access to care" to "access to better care". However the thinking is still based on traditional methods of delivering health services – a patient being physically seen by a doctor or a

<sup>12</sup> <http://search.informit.com.au/documentSummary;dn=923306084723965;res=IELHEA> accessed 20/02/2015

<sup>13</sup> <http://www.mtaa.org.au/about-the-industry/value-of-technology/home-dialysis/recommendations> accessed 20/02/2015

<sup>14</sup> P16 Delivering Safe and Sustainable Clinical Services – Green Paper

<sup>15</sup> ibid

<sup>16</sup> ibid

healthcare worker, or having to travel to visit a doctor/healthcare worker only to be told everything is fine. A report from Denmark commented that:

*“It is a waste of time when a patient has to spend a whole working day on traveling to the capital for a check-up just to find out if everything is okay. There is no reason to do this if through regular mobile check-ups you can see that everything is fine<sup>17</sup>.”*

Only three places in Europe (Denmark, England and Scotland) have been able to make a breakthrough and integrate telehealth into their standard treatment. In most other EU countries, telehealth primarily exists in the form of ‘promising projects’ but has not been implemented on a large scale. Experience shows that implementing such projects is a complicated process<sup>18</sup>.

Australia has had many successful pilots for remote health, but has not taken the bold movement of fully embedding remote health into the delivery of healthcare services.

#### Example 5

*Cancer patients in Queensland's vast northern region used to travel up to 1,000 kms and be away for days to see their oncologist in Townsville. Today, they visit their local GP hospital or clinic and their oncologist is 'beamed' out to them. The success of turning 18 communities spread over 750,000 square kms into a single oncology practice was achieved in just two years.<sup>19</sup>*

Denmark, England and Scotland have pursued very different strategies in their implementation of telehealth. As UK Prime Minister David Cameron put in a December 2011 speech:

*“just look at out approached to telehealth – getting new technology into patients’ homes so they can be monitored remotely. We’ve trialled it, it’s been a huge success, and now we’re on a drive to roll this out nationwide. The aim – to improve three million lives over the next five years.<sup>20</sup>”*

The following table articulates the approaches that Denmark, Scotland and England have taken to introduce remote health into the mainstream healthcare.

Country	Approach
Scotland	Policy commitment, economic incentives, re-organisation of health care inter alia to integrate health and social care, stakeholders involvement
Denmark	Focus on demand side need, high eHealth deployment, reform of economic incentives (reimbursements), high stakeholders involvement, legal framework improved
England	Policy commitment from the top (Prime Minister), economic incentives, new funding, impact assessment

<sup>17</sup> P52, Guide to the Patients Journey (Danish publication)

<sup>18</sup> P44, Guide to the Patients Journey (Danish publication)

<sup>19</sup> <http://www.ehealth.acrrm.org.au/ehealth-news> accessed 19/02/2015

<sup>20</sup> P44 Guide to the Patient's Journey (Danish publication released for eHealth Week Copenhagen 2012)

However, technology is only part of the solution – the other half is educated patients.

*“We do not want people to remain patients for the rest of their lives, but would rather help them get on with their own lives after a stay in hospital. Patients therefore have to learn about technology and understand their illness better”<sup>22</sup>*

Denmark is adopting a ‘help yourself’ approach to community care. They argue that it is no longer a question of providing the best possible service on behalf of the older population but is a case of helping them to take over as many practical functions in their life as possible<sup>23</sup>.

*“The aim is for people with chronic diseases to take responsibility for as much of their own lives as possible, not for the municipality to provide a pre-defined service. By focusing on the patient’s abilities to manage their own lives, part of the community care workers job has switched from care to coaching, advice and training”<sup>24</sup>*

Adopting remote health will require cultural change. Identifying champions to assist with the cultural change in a similar way to that adopted by Health Services Innovation Tasmania will assist this process. It does not need to lead to losses, nor loss of skills. It will give staff additional skills to maintain patient care.

There are a number of examples in Australia where assistive technologies such as remote health are being used to deliver healthcare in the home at minimal cost.

#### Example 6

*Aged Care provider Feros Care<sup>25</sup> has piloted two telehealth technologies in clients with chronic long term conditions: telecare (alarms, alerts, environmental sensors, falls detectors, medication reminders) and telehealth (home monitoring of vital signs)<sup>26</sup>. The study found that 44% of clients reported a decreased need for routine GP visits and 59% felt less concerned about the severity of their condition. Quality of life was improved for 80% of clients. The findings were so positive that Feros Care now incorporates telecare and telehealth services as part of standard service delivery. Telehealth is considered a fundamental approach to care delivery, rather than an add on.*

Examples of the clinical benefits associated with telehealth and remote monitoring are numerous; a small number are listed below.

- 45% reduction in mortality rates and a 20% reduction in emergency room (ER) admissions in the UK Whole Systems Demonstrator (WSD) Trial, the largest randomised control trial of telehealth in the world ( $n=6,191$  patients and 238 General Practitioner (GP) practices)<sup>27</sup>

<sup>21</sup> P45 Guide to the Patient’s Journey (Danish publication released for eHealth Week Copenhagen 2012)

<sup>22</sup> P46 Guide to the Patient’s Journey (Danish publication released for eHealth Week Copenhagen 2012)

<sup>23</sup> P20, Guide to the Patient’s Journey (Danish publication released for eHealth Week Copenhagen 2012)

<sup>24</sup> ibid

<sup>25</sup> www.feroscare.com.au.

<sup>26</sup> Telehealthcare – Supporting People to Live Safely and Independently at home: An Australian Pilot Program, Feros Care, 2010.

<sup>27</sup> London DHS. (2011). Whole Systems Demonstrator Programme: Headline Findings – December 2011.



- 71% reduction in emergency room admissions in respiratory patients who had oxygen saturation monitored daily<sup>28</sup>
- 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<sup>29</sup>
- 43% reduction in hospitalisations in cardiac patients who transmitted daily electrocardiogram and blood pressure data<sup>30</sup>
- 50% reduction in mortality in a large sample ( $n=69,556$ ) of patients with implantable cardiac devices who were remotely monitored<sup>31</sup>.

An Australian-first cost-effectiveness study of the use of an electronic medication management system over paper-based prescribing has shown that savings from reduced adverse drug events can more than offset the cost of implementing the system. Researchers from Macquarie University and clinical and IT staff from St Vincent's Hospital in Sydney found that the implementation of CSC's MedChart system could provide savings of about \$100,000 a year in a 30-bed ward<sup>32</sup>.

If extrapolated over the whole hospital, it would see savings of an estimated \$2.5 million a year. In addition to reductions in adverse drug events affecting patient safety, the researchers argue that the results should provide some confidence to policy-makers, consumers and clinicians that the benefits of eMM systems provide a sound return on investment.<sup>33</sup>

#### Example 7

*The Federal Government has given special authorisation to St Stephen's Private Hospital in Hervey Bay to trial paperless medications prescribing, dispensing and claiming as a forerunner to the introduction of a national hospital electronic medication chart this financial year<sup>34</sup>*

Remote health technologies can play a critical role in early intervention because patients are managing their condition daily (monitored by clinic/hospital system, community care and other healthcare providers) with in-home telehealth and measuring their own vital signs on a daily basis, meaning they are constantly managing their conditions lessening the chance of needing urgent care or hospitalisation.

Claus Neilsen (International Business Development Manager in DELTA) can already see a third generation of telehealth or rather connected mobile health taking shape, built around fitness devices, health gaming, apps and smartphones or tablets.

<sup>28</sup> Vitacca, M. et al. (2009). Tele-assistance in chronic respiratory failure patients: a randomised clinical trial. *European Respiratory Journal*, 33:411-8.

<sup>29</sup> Darkins, A. et al. (2008). Care Coordination/Home Telehealth: The systematic implementation of health informatics, home telehealth, and disease management to support the care of veteran patients with chronic conditions. *Telemedicine and e-Health*, 14(10):1118-26.

<sup>30</sup> Goernig, M. et al. (2009). Ambulatory disease management in cardiac patients: 12 month follow-up of home care telemedicine in Thuringia by the management program Zertiva®. *Physikalische Medizin, Rehabilitationsmedizin, Kurortmedizin*, 19:9-13.

<sup>31</sup> Saxon, L.A. et al. (2010). Long-term outcome after ICD and CRT implantation and influence of remote device follow-up. The ALTITUDE survival study. *Circulation*, 122:2359-67.

<sup>32</sup> [http://www.pulseitmagazine.com.au/index.php?option=com\\_content&view=article&id=2289:reduction-in-adverse-drug-events-can-offset-costs-of-emm-systems&catid=16:australian-ehealth&Itemid=327&utm\\_source=Pulse%2BIT+-eNewsletters&utm\\_campaign=a61fad8603-Pulse\\_IT\\_eNews\\_13\\_2\\_2015&utm\\_medium=email&utm\\_term=0\\_b39f06f53f-a61fad8603-413061785&mc\\_cid=a61fad8603&mc\\_eid=45fe90e1d4](http://www.pulseitmagazine.com.au/index.php?option=com_content&view=article&id=2289:reduction-in-adverse-drug-events-can-offset-costs-of-emm-systems&catid=16:australian-ehealth&Itemid=327&utm_source=Pulse%2BIT+-eNewsletters&utm_campaign=a61fad8603-Pulse_IT_eNews_13_2_2015&utm_medium=email&utm_term=0_b39f06f53f-a61fad8603-413061785&mc_cid=a61fad8603&mc_eid=45fe90e1d4) accessed 20/02/2015

<sup>33</sup> ibid

<sup>34</sup> [http://www.pulseitmagazine.com.au/index.php?option=com\\_content&view=article&id=2202:st-stephens-hervey-bay-to-trial-paperless-prescribing](http://www.pulseitmagazine.com.au/index.php?option=com_content&view=article&id=2202:st-stephens-hervey-bay-to-trial-paperless-prescribing) accessed 20/02/2015

*“Due to smartphones and tablets, we can jump from the first and directly to the third generation of telehealth. To do it we need standardised ecosystems for data, so that patients can take their own blood pressure at home and send in their data via a smartphone. If that short circuit is to be followed, Nielsen wants decision makers, professionals and patients to rethink healthcare in order to tap the constant inventions at the consumer market.”<sup>35</sup>*

The growing prevalence of lifestyle diseases such as diabetes and cardiovascular disease are concerning. Intelligent wearable technologies (that have been approved by the TGA) have the potential to help prevent the onset of chronic lifestyle diseases in healthy individuals, as well as help prevent and/or potentially reverse disease progression in those already suffering from these conditions.

In healthy individuals, wearable devices can be used as a digital coach to help motivate and influence people to manage their own health, including the adoption of healthy lifestyle choices. In addition, these devices can be used to monitor specific clinical measures, which may alert health professionals to the early signs of disease or sudden exacerbation.

For those diagnosed with a chronic illness, wearable devices enable both patients and clinicians to continuously monitor relevant health metrics and address problems promptly avoiding the need for hospital admission if the patient's condition deteriorates. The devices have the potential to improve patient engagement with their health, enabling them to take a more active role in the management of their condition.

## **2. How would you find out about what travel support, information and services are available to you to get the right care, by the right person, the first time**

By having a better understanding of the population health of specific cohorts (for example frequent users of the health system), a targeted and co-ordinated care approach can be utilised.

Global research suggests that 5% of these patients utilise 50% of your healthcare spend. There is a recognised inability to cost-effectively deliver care to high-cost, complex patients due to the fragmentation of services in our current health and social services system. These patients tend to have multiple comorbidity with psychosocial complications meaning disease specific programs fail to address the core issues. In addition intervention to address social determinants of health is a key success factor in addressing the cost and outcomes of this sub population.

Reversing this trend requires a new model of care, one that is integrated and coordinated across specialties and social services. By supporting this small cohort of patients with a wraparound team comprised of not only clinicians but also social workers, these cohorts of patients can be supported in a targeted and relevant approach to improve health and economic outcomes.

A large non-profit health system in the United States operating over 23 hospitals as well as specialised facilities have implemented such a program.

They have implemented population management solutions that connect an integrated care team to the patient. It enables all stakeholders in the clinical and

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<sup>35</sup> P46 Guide to the Patient's Journey (Danish publication released for eHealth Week Copenhagen 2012)

social management of the patient to identify and address the root causes of the patient's frequent admissions.

Preliminary results from the program are a saving of 33% per patient (average cost per patients prior to program of \$2,910 to \$1,977 6 months post program) with a reduction in hospital admissions of 50%. The program currently has 500 users and is expected to grow to 14,000 users over the next 3 years.

A crucial member of the care team is the health coach who provides self-management and emotional support, acts as a bridge between the clinician and the patient, helps the patient navigate the health and social system and provides the all-important continuity in contact.

#### Example 8

*The introduction of centralised statewide coaching by Queensland Health using the well-regarded COACH (Coaching patients On Achieving Cardiovascular Health) Program (TCP) had statistically significant improvements in cardiovascular risk factor status. The program reduces risk factors for cardiovascular disease and type 2 diabetes in both indigenous and non-indigenous Queenslanders. TCP is a standardised coaching program delivered by telephone and mail-out for people with or at high risk of chronic disease. The nurses coach people to achieve national guideline-recommended target levels for their particular risk factors and to take their medications as recommended.<sup>36</sup>*

### **3. If you are already a user of these services, are they sufficient**

The current services are not sustainable with the growing trends hence; services for individual patients should be reviewed as part of a review of the entire healthcare delivery system in Tasmania. Tasmania has the opportunity to introduce new ways of delivering healthcare that will not only reduce costs over time but improve patient outcomes.

### **4. If it improves the quality and safety of care, do you agree we should limit the number of sites at which some services are provided**

Many services are not about bricks and mortar. Instead the shift should be about understanding the patients' needs and providing the appropriate level of care in the right setting. As the Tasmanian Government has itself acknowledged it is about "Access to Better Care" rather than "Better Access to Care"

### **5. If yes, what should we consider in deciding where a service is located and what support needs to be considered to ensure patients have equitable access**

Once it is known how to service the frequent users of the hospital system then you can consider 'bricks and mortar'. People in the community should be consulted in terms of all options including what is happening in other countries.

<sup>36</sup> [http://www.pulseitmagazine.com.au/index.php?option=com\\_content&view=article&id=2286:telephone-based-coaching-reduces-cardiovascular-risk-factors&catid=16:australian-ehealth&Itemid=327&utm\\_source=Pulse%2BIT+-+eNewsletters&utm\\_campaign=a61fad8603-Pulse\\_IT\\_eNews\\_13\\_2\\_2015&utm\\_medium=email&utm\\_term=0\\_b39f06f53f-a61fad8603-413061785&mc\\_cid=a61fad8603&mc\\_eid=45fe90e1d4](http://www.pulseitmagazine.com.au/index.php?option=com_content&view=article&id=2286:telephone-based-coaching-reduces-cardiovascular-risk-factors&catid=16:australian-ehealth&Itemid=327&utm_source=Pulse%2BIT+-+eNewsletters&utm_campaign=a61fad8603-Pulse_IT_eNews_13_2_2015&utm_medium=email&utm_term=0_b39f06f53f-a61fad8603-413061785&mc_cid=a61fad8603&mc_eid=45fe90e1d4) accessed 20/02/2015

**Issue**

Tasmania's challenge is the lack of a population base, resources, capacity of capability to maintain the full range of clinical services in all centres in a way that can be guaranteed to be safe, reliable, effective and sustainable.<sup>37</sup>

**Government Interest**

The Tasmanian health system shows evidence of unplanned, localised and sporadic growth of services, at times seemingly based around small groups of clinicians. This increases the variability of outputs and outcomes, drives increased costs at the system level and complicates funding projection and planning. It also impacts on the safety and quality of clinical services.<sup>38</sup>

Denmark has succeeded in telehealth, because all relevant stakeholders are encouraged to join.

*"It is not enough to hope that the market alone can push the use of telehealth into care practice. A good model of governance, at regional or national level is crucial to support telehealth in order to reap the benefits. In this process, stakeholders such as the health care professional play a vital role."<sup>39</sup>*

**Example 9**

*Denmark established an entity to facilitate the co-operation between authorities, organisations and private firms linked to the Danish healthcare sector. The entity MedCom contributes to the development, testing, dissemination and quality assurance of electronic communication and information in the healthcare sector with a view to supporting good patient progression<sup>40</sup>*

It is our understanding that Tasmania has worked with the NSW Agency for Clinical Innovation and is putting in place a number of mechanisms eg Tasmanian Health Council plus the combining of the three THOs into one that should encourage better co-ordination of activity. This is crucial

**Example 10**

*The NSW Agency for Clinical Innovation works with clinicians, consumers and managers to design and promote better healthcare for NSW by:*

- *Service redesign and evaluation*
- *Specialist advice on healthcare innovation*
- *Initiatives including guidelines and models of care*
- *Implementation support*
- *Knowledge sharing*
- *Continuous capability building<sup>41</sup>*

**6 How well does the proposed framework align with practice in your discipline**

This question is not within the scope of our area of expertise

**7 Where are the areas of service duplication in your discipline**

<sup>37</sup> P15 Delivering Safe and Sustainable Clinical Services – Green Paper

<sup>38</sup> *ibid*

<sup>39</sup> P44 Guide to the Patient's Journey (Danish publication released for eHealth Week Copenhagen 2012)

<sup>40</sup> <http://www.medcom.dk/wm109991> accessed 20/02/2015

<sup>41</sup> <http://www.aci.health.nsw.gov.au/about-aci/collaboration-innovation-better-healthcare> accessed 20/02/2015

One of the areas of service duplication is patient data. All the existing remote health programs have examples of multiple systems that don't talk to each other but have similar data. The move toward an integrated Tasmanian system rather than 3 THOs will increase efficiency and service delivery. Without electronic health records that all systems and services feed patient information in and out of there will be barriers to take-up and efficiency.

#### Example 11

*In Spain the largest hospital network in the region of Catalonia deployed advanced video-imaging technologies, broadband networks and electronic health records to help professionals around the region to share patient data, provide time sensitive care and improve patient experience in the delivery of care. The ability to connect primary care physicians to hospital professionals has significantly reduced the waiting times for patients to see certain specialists. Letting all hospitals in the network share the same patient data has placed the patient as the focal point of healthcare processes, eliminated duplicate testing, reduced unnecessary hospital displacements and allows for faster response in emergency situations.<sup>42</sup>*

#### Example 12

*St Stephens Hospital, Hervey Bay is the first fully integrated digital hospital in Australia. The Hospital provides the following benefits to patients:*

- *increase in patient safety through a reduction in medical and clinical adverse events*
- *improved communications between the patient and the carer*
- *reduction in length of stay due to improved operational efficiency*
- *rapid intervention during critical periods of care facilitated by real time alerts and reminders*
- *improved medications management*
- *access to modern day electronic media and social information<sup>43</sup>*

## 8 Where are the gaps

There is no connected care between GPs, specialists, hospitals and community care organisations. An electronic health record is one example of this connection

This needs full government support to deliver the system differently – moving away from referring to “where” to referring to “how”.

### Issue

An effective and responsive primary care sector is crucial to promote wellness, limit the long term impact of complex and chronic conditions, keep people out of hospital and ultimately improve the quality of life of Tasmanians<sup>44</sup>. Solutions to the pressure created by increasing demand do not just lie with the clinical redesign of hospital services. They also lie in exploring community based alternatives to hospital care where it is safe and appropriate to do so.<sup>45</sup>

### Government Interest

Primary and community<sup>46</sup> care are central to our vision for a rebuilt health system. There have been increasing costs and investment in the acute care system but there

<sup>42</sup> *The digital hospital evolution* IBM Global Business Services P7

<sup>43</sup> <http://ststephenshospital.com.au/about-us/ehealth-and-the-digital-hospital> accessed 20/02/2015

<sup>44</sup> P20 Delivering Safe and Sustainable Clinical Services – Green Paper

<sup>45</sup> P2 Supplement No.3 Building a Stronger Community Care System

<sup>46</sup> Primary Health Services include a range of allied health, community nursing, pharmacy, diagnostic services, general practice and community support services. In its broader sense, Primary Healthcare can also be taken to



has not been equivalent investment in primary and community care. In fact there is underinvestment and underutilisation of Tasmania's primary community care sectors<sup>47</sup>. To contain the rising cost in the health sector, greater priority will need to be given to primary health care funding where care can be delivered in a more cost effective manner<sup>48</sup>.

A Deloitte economic analysis of Hospital in the Home (HITH) reveals that caring for people in their own homes rather than in hospital can cut costs by a third, while delivering comparable healthcare effects. The cost-benefit analysis supports an expansion of Hospital in the Home services. The Deloitte report reveals a number of key points, including:

- For many conditions, Hospital in the Home is much cheaper than in-patient services. Increased use of these services has the potential to free up beds in hospitals. This is a particularly important consideration in Tasmania, where elective surgery waiting times exceed national averages
- In the face of rising demand for inpatient care and funding pressures, it is even more important to deliver effective, cost-efficient services
- Victoria, which is widely regarded as having the best state healthcare system in the country, started their pilot program for Hospital in the Home in 1994 and have the highest total number of days allocated to Hospital in the Home (nearly 300,000 patient days) in Australia.

In recent years, HITH activity in Victoria has increased substantially. The Victorian Healthcare Association reported that 3.1% of hospital patients in Victoria were seen in their homes and that Victoria accounted for 75% of all HITH activity in Australia in 2009 (Victorian Healthcare Association, 2009). Nearly all Victorian hospitals now have a HITH program. Collectively, these accounted for 32,462 public hospital separations in 2008-09, representing 2.5% of all inpatient admissions and 5% of all bed days in Victoria (AIHW, 2010b; Montalto, 2010)<sup>49</sup>.

By increasing admissions to Hospital in the Home to the Victorian rate of 5.4%, NSW could release a potential annual efficiency of \$33.7M<sup>50</sup>

Remote health represents a vital element in the shift towards providing cost effective health services in the home. Hospital in the Home (HITH) patients are regarded as hospital inpatients and remain under the care of their hospital doctor. Care is provided in the home and a patient receives the same level of care they would in a hospital. There is a difference between home-based care which avoids an admission and is a complete substitute for a hospital stay and HITH which enables early discharge and decreases the length of a stay. Patients who avoid admission usually have a common or chronic condition, with a relatively uncomplicated diagnosis and are more likely to be suited to remote health care.

A wide range of remote health services could be provided as part of HITH services, for example continuous monitoring of vital signs, monitoring of home intravenous infusion technologies, oxygen therapy, rehabilitation, wound care, cardiac monitoring, home dialysis and home-based diagnostic services such as x-ray and hand held ultrasound devices. HITH has been shown to be cost effective for six commonly

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include preventative health services such as smoking cessation programs, lifestyle education, immunisation and screening services, P3 Supplement No.3 Building a Stronger Community Care System

<sup>47</sup> P2 Supplement No.3 Building a Stronger Community Care System

<sup>48</sup> P3 Supplement No 3 Building a Stronger Community Care System

<sup>49</sup> Economic Analysis of Hospital in the Home, Deloitte Access Economics 2011

<sup>50</sup> NSW Hospital in the Home brochure

occurring Australian Refined Diagnosis Related Groups (AR-DRGs) in Victoria. On average, HITH care cost 22% less than hospital care<sup>51</sup>.

#### Example 13

*Nearly every hospital in Victoria has a HITH program (39 services deliver to 52 sites). Hospital in the Home care is also available in other states and territories, however in 2009 75% of all HITH activity was in Victoria<sup>52</sup>. NSW also has a HITH program (Community Acute/Post Acute out-of-hospital program, CAPAC), however in NSW only 1.6% of traditional hospital activity is delivered in the community, while in Victoria the figure is 5.4%<sup>53</sup>.*

#### Example 14

*Remote health is well suited to monitoring patients who are at risk of admission to hospital. Remote health technologies could be included in services provided under programs such as the Hospital Admission Risk Program (HARP) in Victoria (e.g., usual care self-management programs). The HARP program has included additional services to provide care for older people (HARP Better Care of Older People, HARP BCOP). An evaluation of the HARP BCOP found that clients had a 64% reduction in hospital separations and a 55% reduction in emergency room presentations following intervention<sup>54</sup>.*

Remote health services can play an important role in decreasing avoidable admissions and readmissions. Hospital in the Home services tend to be short term, i.e., for acute or post-acute care.

Remote health technologies provide effective solutions for keeping people out of hospital long term. MTAA has calculated that cost savings of around \$3.1 billion per annum could be achieved if care was provided in the home (**see Appendix A**). Cost savings can be achieved by using home monitoring to delay admission to residential care, provide cheaper alternatives to community care packages, decrease emergency department admissions, decrease potentially preventable hospitalisations, decrease use of Royal Flying Doctors services, reduce patient transports, travel and unnecessary tests and decrease the costs associated with chronic disease management.

### **9 Are there any services being inappropriately provided or planned at your facility**

This question is not within the scope of our area of expertise

### **10 How do we promote and maintain safe primary and community care to consumers and communities such that they seek out these services rather than attend Emergency Departments when their conditions are more advanced**

In the Danish paper “Guide to the Patient’s Journey”, a care provider commented that:

<sup>51</sup> Deloitte, Access Economics. Economic analysis of Hospital in the Home (HITH). Hospital in the Home Society of Australasia. 2011.

<sup>52</sup> Report on evaluation of Hospital in the Home Programs. Department of Health. DLA Philips Fox.

<sup>53</sup> NSW Ministry of Health. (2012). Hospital in the home.

<sup>54</sup> Victorian Government Department of Human Services. (2006). HARP improving care hospital admission risk program.

*“The most important experience gained from our work is having treatment located in the home of the patient, is that even the simplest technology can really help. Patients are capable of more than they think and, in particular, more than the professionals believed<sup>55</sup>.”*

Older people fall more frequently than the young, and their falls can be both debilitating for them and costly to society.

*“Every time an elderly citizen breaks a hip it costs nearly €50,000 to treat and re-habilitate them. If this fails they will need a place in a care home. A small effort on an electronic balance board steers away from this worrying development.<sup>56</sup>.”*

Mayo Clinic has released the results of their study of Fitbit as a tool to support rehabilitation post hip surgery:

*“The study, Functional Recovery in the Elderly After Major Surgery: Assessment of Mobility Recovery Using Wireless Technology, also tracked where the patients went after discharge: home, home with home health care, or skilled-nursing facilities. On recovery day 2, people who were going home took an average of 675 steps while people in the other two discharge groups took only 108 steps.*

*The team concluded that patients who were moving more on recovery day two were more likely to be discharged early or discharged to their homes. The team saw tremendous potential to use this data to set expectations for the speed of recovery and to design care plans more carefully for individuals. The report said:*

*Once we know the expected mobility by day for a 70-year-old female coronary artery bypass grafting, total hip arthroplasty, or colectomy patient, we can early identify pending recovery failure and triggers for intervention(s).<sup>57</sup> “*

In Tasmania a new study project is being conducted to investigate whether interactive digital technology can be used to improve the volume of activity that stroke survivors can undertake and to determine if there are benefits to upper limb function or mobility using this technology<sup>58</sup>.

## **11 How do we determine which services to focus on to expand the role of primary and community care**

Global research suggests that 5% of patients utilise 50% of healthcare spend. These patients tend to have multiple comorbidity with psychosocial complications meaning disease specific programs fail to address the core issues. In addition intervention to address social determinants of health is a key success factor in addressing the cost and outcomes of this sub population. There is a recognised inability to cost-effectively deliver care to high-cost, complex patients due to the fragmentation of services in our current health and social services system.

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<sup>55</sup> P 38, Guide to the Patient's Journey (Danish publication released for eHealth Week Copenhagen 2012)

<sup>56</sup> P56 Guide to the Patient's Journey (Danish publication released for eHealth Week Copenhagen 2012)

<sup>57</sup> <http://medcitynews.com/2013/09/mayo-clinic-study-fitbit-data-can-be-an-early-warning-sign-of-slow-recovery-from-surgery/> accessed 20/02/2015

<sup>58</sup> <http://michaelferguson.com/2014/12/exciting-study-into-innovative-stroke-rehabilitation/> accessed 20/02/2015

We estimate the target population for these very high users of the health system in Tasmania to be approximately 300 patients. Based on estimated average inpatient hospital costs for this cohort, savings of upwards of \$40k per annum per patient (a saving of at least \$3.6m per annum) could be achieved if a more coordinated care model was adopted (see our comments in Question 2)<sup>59</sup>.

## **12 What services do you currently receive in a hospital setting that you think could be safely delivered in your community**

The 2010 review into the Victorian Hospital in the Home program identified that patients were strongly supportive of both the concept and, in general, the delivery of care, despite many expressing surprise that the service existed at all. The low level of prior awareness of the programs is an important observation<sup>60</sup>.

In the Tasmanian Health System Study 2013, participants were asked for their views on eHealth.

*“Almost all participants felt that medical records aspect of the e-health concept was a great idea. The main benefits were seen to be the elimination of duplicating medical histories with different health professionals, and doctors/surgeons having immediate access to important medical history in emergency situations.*

*There were more mixed reactions towards the aspect of speaking with a doctor over the phone or on a video conference. While many felt that it would be acceptable in some instances, such as for the discussion of general symptoms, others felt that they would need physical examination for a final diagnosis in many cases<sup>61</sup>*

*However some were strongly in favour of the concept, and suggested that if they were teamed with a GP who was consulting with a specialist on the conference call, this would be extremely beneficial, as the GP would be able to provide an accurate description of the physical aspects that the specialist couldn't determine remotely, and they would also be able to translate the medical jargon that the specialist used<sup>62</sup>.”*

Patients are willing to pay for convenient remote health services. Bradford et al. (2004) found that 55% of patients with chronic heart failure would be willing to pay a small fee to access remote health rather than travelling to a doctor's office for at least some of their care<sup>63</sup>. A survey of 3,000 people on willingness to pay for mHealth services such as medication reminders and remote monitoring found that a sizeable proportion were willing to pay USD 15 to 58 per month for a remote monitoring solution<sup>64</sup>. In the UK, around 50% of people using personal alarms pay for them out of their own pocket. The figure for alerting devices is 31%<sup>65</sup>. These findings suggest that some form of co-payment is not a barrier to use of remote health technologies.

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<sup>59</sup> Source Philips Healthcare

<sup>60</sup> Michael Montalto, *The 500-bed hospital that isn't there: the Victorian Department of Health review of the Hospital in the Home program*, p 598, MJA Vol 193 Number 10 15 November 2010

<sup>61</sup> Woolcott Research, P31 Tasmanian Health System Study, Jan 2013

<sup>62</sup> Woolcott Research, P32 Tasmanian Health System Study, Jan 2013

<sup>63</sup> Bradford, W.D. et al. (2004). Willingness to pay for telemedicine assessed by the double-bounded dichotomous choice method. *Journal of Telemedicine and Telecare*, 10(6):325-30.

<sup>64</sup> McKinsey mHealth World Survey 2009.

<sup>65</sup> Lloyd, J. The Future of Who Uses Telecare. The Strategic Society Centre, September 2012.

**Issue**

Patients waiting too long for their Elective Surgery has been a long standing problem in Tasmania<sup>66</sup>. We need to improve the relationship between the public and private sectors to improve access to elective surgery and reduce waiting times.<sup>67</sup>

**Government Interest**

Additional funding/capacity alone is unlikely to address the issues Tasmania has with long waiting patients. Systemic change is required to improve long term efficiency, effectiveness, and sustainability. Such change will need to involve the reform of how patients get placed on the waiting list, how they are categorised, how they are 'treated in turn', and how their cancellations are managed<sup>68</sup>.

### **13 How can we better help you understand the standard of care that you are entitled to, and support your involvement in your healthcare decisions**

Communication between patient, GP, physician, community care providers is vital. A good example is the Canterbury Health Board in New Zealand which has shifted from 'silo care' towards greater connectivity between services and sharing of patient data to achieve greater efficiencies and outcomes. This would assist with the management of patients with chronic diseases and the aged care sector in particular

The DREAMING <sup>69</sup>project in the European Union set out to pilot new, economically sustainable home assistance and eInclusion services which are able to extend the independent living of elderly citizens in their homes, and address their loneliness. The final report was delivered at the end of 2012 and the findings were<sup>70</sup>:

- Services were generally accepted well by the trial participants
- Reduced spend on clinical resources
  - Reduction in overall cost of care for people in the group was show to be as big as 31.3% in Denmark
- In most countries, recovery of the initial investment is achieved within a period of 30 months

### **14 What public/private partnerships should we explore for the delivery of health services in Tasmania)**

MTAA considers that there are three possible areas of public/private partnership

#### **1) Public Hospital/Private Hospital**

The green paper has outlined how this could potentially work/

#### **2) Public system and private business (risk sharing)**

In the UK a private economy of telecare exists whereby telecare services (alarms/alerts) are purchased and used without the involvement of government agencies (although in some cases telecare is funded by the National Health Service (NHS)).

#### **Example 15**

*An example is the contract between NHS Gloucestershire (UK) and telehealth supplier Tunstall Healthcare. This is a full managed service including leasing, asset management, calibration, refurbishment, installation, patient training, triage and*

<sup>66</sup> P2. Supplement 5 Elective Surgery

<sup>67</sup> P9 Supplement 5 Elective Surgery

<sup>68</sup> ibid

<sup>69</sup> <http://www.dreaming-project.org/> accessed 20/02/2015

<sup>70</sup> ibid



*technical support.*

Another alternative to high-cost upfront procurement is a system where items such as a remote blood pressure monitor are paid for via a monthly contract (in a similar way to how an iPhone is purchased).

Rob Ten Hoedt, Executive Vice President & President, Medtronic EMEA & Canada commented in an article in Harvard Business Review that:

*“To expand our market share we developed a model where we own the cath lab infrastructure for the hospitals, including the equipment, and their doctors do the procedures. It’s a wonderful model because we’re becoming part of the solution to rising healthcare costs”.<sup>71</sup> This is a model that they are also considering for Australia.”*

In Australia private care providers such as Feros Care offer fee-for service programs which provide an alternative for individuals who need in-home care but cannot access Government subsidised programs. Feros Care has developed a cost model that has been integrated into their current service delivery. Telecare sensors coupled with remote health vital signs monitoring (daily review of vital signs by a nurse) cost less than \$10 per day. In many cases the cost comes out of a client’s Packaged Care funding; in other cases patients and families are willing to pay a small cost to remain living in their own home.

### **3) Public private whole of system planning**

MTAA and its members firmly believe that the MedTech industry is not a seller of ‘widgets’ it is a provider of healthcare solutions. For this reason MTAA is developing a MedTech Blueprint that will drive and support the industry’s continued contribution to, and integration of:

- the Australian population’s health needs
- research & development opportunities
- industry development
- communications
- rural and remote health care
- indigenous health
- finance
- trade
- manufacturing
- education
- employment
- ageing and social services
- small and medium business needs

The Blueprint will articulate the significant challenge that is faced in healthcare delivery now and in the future, considering the costs of an ageing population, the increase in chronic diseases, coupled with the community’s desire for improved health care delivery. It will explain how the MedTech industry is well placed to be part of the solution to this, indeed, a partner in holistic planning and integration. That solution lies in our ability, in particular, to develop technologies with remote monitoring capabilities which enable health care services for people in the community, outside the hospital system, saving significant costs and improving healthcare services.

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<sup>71</sup> Harvard Business School Review May 13 2013 Omar Ishrak: Building Medtronic Globally p11

**15 What services do not have sufficient volume or activity in Tasmania to maintain a safe, high quality of service**

This question is not within the scope of our area of expertise

**16 What additional areas should we be considering for interstate partnerships in order to improve service within Tasmania**

Interstate partnerships can be delivered both ways. There is no reason why Tasmania can not be providing healthcare services for other states. Tasmania is a microcosm of Australia and if Tasmania can develop a best practice system for remote monitoring, it could be a provider to other States indeed globally

The delivery of best practice Intensive Care Unit (ICU) care is highly dependent on the availability of adequate clinical resourcing to support the patients 24/7. The shortage of Intensive Care nurses and physicians further challenge the ability to deliver effective care under growing demand for services and budget constraints.

**Example 16**

*ICU admissions at RHH, the state tertiary referral centre, increased by around 8% per year from the 2011-14 period compared to 2007-10. LGH has had similar increases in the past few years and both continue to have upward trends in admissions (ANZICS 2014 Annual Report).*

ICU and High Dependency Units (HDU) patients are one of the highest cost categories for in hospital treatment. Any opportunity to improve outcomes for patients and reduce length of stay will result in significant savings to the health system. Telehealth in ICU/HDU clinically transforms the model of care, using a proactive care model that provides a solution to growing physician and nurse shortages while dramatically improving quality of care. Through an ideal blend of medicine with technology, this care model leverages clinical expertise, patented processes, and cutting-edge technologies to improve critical care delivery. The program utilises bi-directional audio/video technology, population management tools, proprietary clinical decision support, real-time and retrospective reporting tools and targeted process redesign.

The largest study of critical care telemedicine entitled “A Multi-center Study of ICU Telemedicine Reengineering of Adult Critical Care,” reveals improvements in patient survival of 26% and reductions in length of stay by 20% for a telehealth supported ICU program. The study covered 118,990 critical care patients, across 56 intensive care units (ICUs), 32 hospitals and 19 health systems over a five-year period in the United States. The results were statistically significant on both an unadjusted and severity-adjusted basis.

The setup of a regional or national monitoring service in collaboration has the potential to enable more efficient utilisation of Tasmania critical care resources and deliver further budget efficiency amid rising costs. This advantage is even more pronounced due to staff shortages to support overnight monitoring. The economic rationale for such a model would be supported by the reduction in length of stay in ICU/HDU supporting capacity and budget constraints.

As in customers such as Mercy Health outlined below, this facility can then be extended to drive improved efficiency and patient outcomes in areas such as Telestroke and Acute Care management.

#### Example 17

*The sixth largest Catholic health care system in the U.S., Mercy operates 32 hospitals and 300 outpatient facilities across Arkansas, Kansas, Missouri and Oklahoma, Louisiana, Mississippi and Texas, over 3 million patients a year. Mercy's eICU and telestroke programs have been in operation since 2006. The positive impact of telehealth on length of stay, readmissions and patient safety is a game changer and why Mercy is now expanding this service into acute care as well*

*"We have never been more convinced of the power of telehealth to improve patient access and outcomes and reduce costs", said Lynn Britton, Mercy's president and CEO. Adding acute care telehealth services is a natural extension of our successful eICU and telestroke programs and will allow us to support our mission to provide quality care to patients in need, regardless of location." <sup>72</sup>*

- Readmissions reduction – Recorded discharge instructions, uploaded into a patient engagement portal to reinforce self-care and adherence to therapies at home.
- Increased patient safety – Automated monitoring of vital signs with remote triggers around early warning signs, to avoid complications, including cardio-pulmonary arrest.
- Increased patient satisfaction – Video visitation, enabling patients to easily interact with family members and friends.
- Clinical best practices – Including early detection of sepsis, pressure ulcer management and fall prevention.

Mercy's acute care program is designed to complement its home care technology, all of which will be critical components of the Mercy virtual care centre, one of the first freestanding facilities of its kind in the U.S. The centre will be staffed by hundreds of health care providers linked electronically to Mercy and other partner hospitals, via telehealth technology.

#### **17 What services, despite comparatively low volumes, should we continue or invest in in Tasmania, and what interstate supports may be required to maintain them**

This question has been addressed in Question 16

<sup>72</sup> [http://www.philips.com.au/b-dam/b2bhc/master/whitepapers/telehealth/H2H\\_BROCHURE-singlepages\\_Mar6\\_2014.pdf](http://www.philips.com.au/b-dam/b2bhc/master/whitepapers/telehealth/H2H_BROCHURE-singlepages_Mar6_2014.pdf) accessed 20/02/2015

## Appendix E

### Home Care Potential Cost Savings

Area of cost saving	Assumption	Cost saving
<b>Residential Care</b>	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) <sup>73</sup>	<b>\$525,950,000</b>
<b>Community care packages</b>	HACC assists 637,521 clients per year at a cost per year of \$2,600 p.p. (sum \$1.6 b) <sup>74</sup> , 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 <sup>75</sup> per year at a cost of \$110 per day p.p. (\$250 m). Assume 5% of (\$2.3 b) no longer need packages <sup>76</sup>	<b>\$114,537,530</b>
<b>Emergency Department admissions</b>	Category 5 patients are non-urgent with minor illnesses or stable chronic conditions with complicating symptoms and account for 12% of emergency department presentations <sup>77</sup> . 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 emergency department is \$373 <sup>78</sup> . Assume 20% of patients can avoid an emergency department visit (at a cost of \$322 m)	<b>\$64,454,400</b>
<b>Potentially preventable hospitalisations (PPHs)</b>	The average cost of an admission to a public hospital in 2008-09 was \$4,471, PPHs represent 9.3% of separations <sup>79</sup> . 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 preventable hospitalisation	<b>\$385,420,767</b>
<b>Flying Doctors services in rural areas</b>	In 2008-09 the Royal Flying Doctors Service undertook 36,892 aeromedical evacuations <sup>80</sup> at an approximate cost of \$5,500 per evacuation (total cost = \$202 m). Assume 20% of evacuations can be avoided	<b>\$40,581,200</b>
<b>High level</b>	In June 2008 there were 157,087 individuals	<b>\$272,200,354</b>

<sup>73</sup> Sweeney K. (2010). Smart Technology for Healthy Longevity Economic Analysis. A report prepared for the Australian Academy of Technological Sciences and Engineering (ATSE). Centre for Strategic Economic Studies, Victoria University, Melbourne.

<sup>74</sup> Commonwealth Government of Australia. (2009). Home and Community Care Program- 2007-08 Annual Report

<sup>75</sup> Australian Institute of Health and Welfare (AIHW). (2009). Residential aged care in Australia 2007-08: a statistical overview. Aged care statistic series 28. Cat. no. AGE 58 Canberra.

<sup>76</sup> As at 1 July 2015 these programs will change

<sup>77</sup> Statistics from Hospital Services in Australia, State of our Public Hospitals. June, 2010.

<sup>78</sup> NSW Policy Directive, 2008/2009.

<sup>79</sup> AIHW. (2009). Australian hospital statistics 2007-08. Health services series no. 33. Cat. no. HSE 71. Canberra.

<sup>80</sup> Royal Flying Doctor Service. (2009). Australian Council. Annual Report 2008-09.

<b>residential care</b>	who were permanent residents in rest homes at a cost of \$36,100 per person <sup>81</sup> (total cost \$5.6 b). 24% of residents were low care <sup>82</sup> (i.e., the percent you would hope to target with home monitoring interventions). Assume that 20% could remain in the community	
<b>Chronic disease management</b>	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 <sup>83</sup> (\$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	<b>\$1,380,000,000</b>
<b>Patient transports, travel and unnecessary tests</b>	Access Economics <sup>84</sup> 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	<b>\$296,000,000</b>
<b>Veterans Home Care (VHC)</b>	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 <sup>85</sup> . Approximately 80,000 people in 2006-07 were approved for services <sup>86</sup> . Assume a 10% reduction in the need for services	<b>\$9,500,000</b>
<b>Patient Assisted Travel Schemes (PATS)</b>	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) <sup>87</sup> . Assume a 20% reduction in travel costs	<b>\$16,195,000</b>
		<b>\$3,104,839,250</b>

<sup>81</sup> Department of Health and Ageing, Annual Report at

[http://www.health.gov.au/internet/main/publishing.nsf/Content/Annual-report 2008-09](http://www.health.gov.au/internet/main/publishing.nsf/Content/Annual-report%202008-09) Canberra: 2009.

<sup>82</sup> AIHW. (2009). Residential aged care in Australia 2007–08: a statistical overview. Aged care statistic series 28. Cat. no. AGE 58 Canberra.

<sup>83</sup> AIHW. (2006). Chronic diseases and associated risk factors in Australia. Cat. No. PHE. 81. Canberra.

<sup>84</sup> Access Economics. (2010). Financial and externality impacts of high-speed broadband for telehealth. Report by Access Economics for Department of Broadband, Communications and the Digital Economy.

<sup>85</sup> Productivity Commission. (2008). Trends in Aged Care Services: some implications, Commission Research Paper. Canberra.

<sup>86</sup> Australian Government. (2008). Veteran's Home Care. Annual Statistical Summary 2006-07.

<sup>87</sup> Commonwealth Government of Australia. (2007). The Senate Standing Committee on Community Affairs. Highway to health: better access for rural, regional and remote patients.