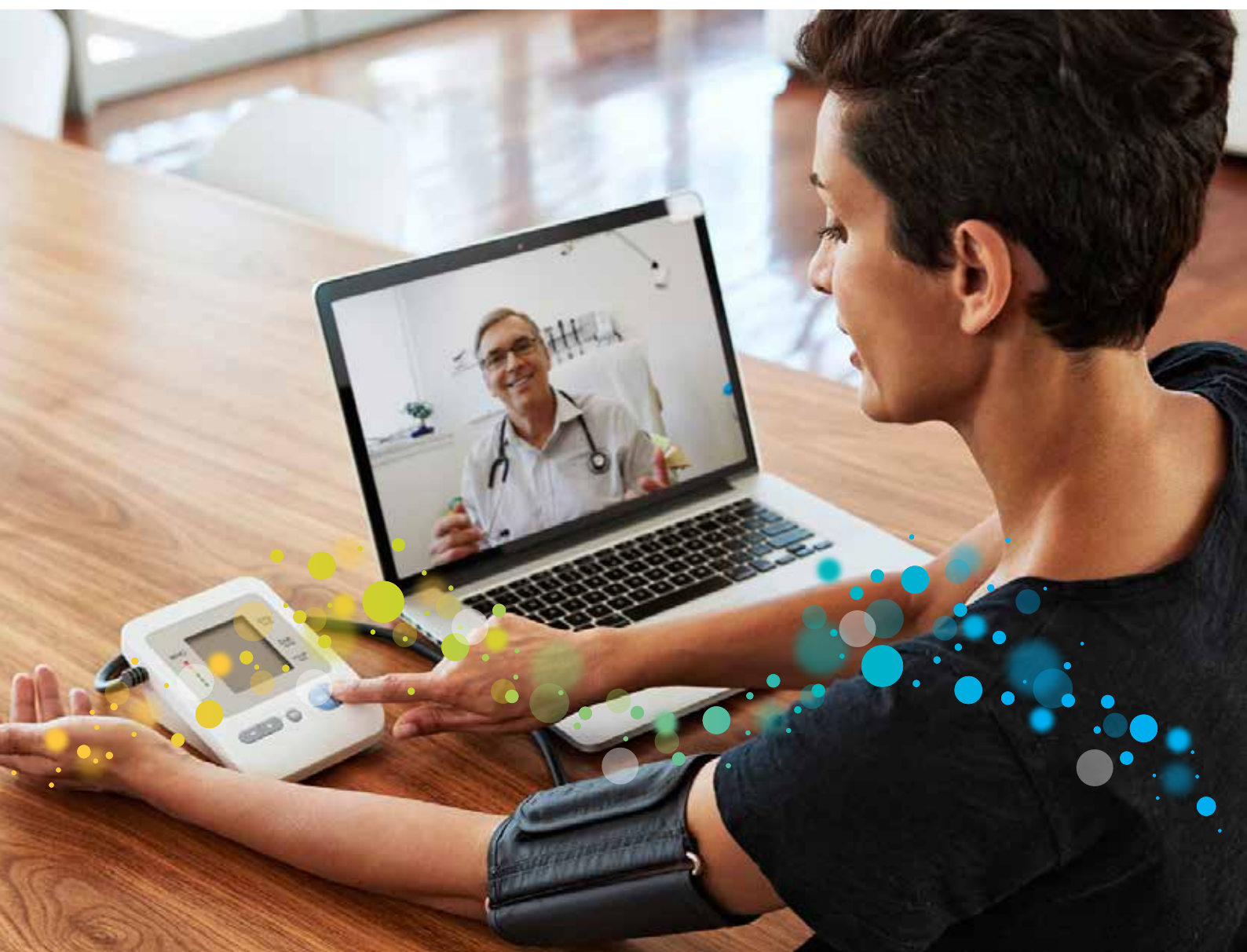


nbn's guide to health in the home

How fast broadband is helping to connect us to anytime, anywhere healthcare



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network

Foreword

by Dr. Ginni Mansberg, Sydney GP, family health expert and advocate for **nbn's** Digital Diagnosis campaign

I know in theory we all want to be healthy, however often the realities of life can get in the way. Thankfully, these days with increasing access to fast and reliable broadband, the tools to manage your personal and family health are available at the click of a button.

These days, neither lack of time nor geographical location can cop the blame for not giving your health top priority. With more Australians gaining access to the **nbn™** network, now anyone from anywhere can access a midwife in the middle of the night, book a doctor's appointment online, keep track of immunisations and check-ups with electronic health records, and watch online videos to help them make more informed health decisions.

As a mother and family GP, I have firsthand experience with the benefits of Telehealth.

For my patients, whether they're a busy working mum needing info on their kids' health, or are looking after an elderly relative via in-home monitoring - Telehealth is empowering Aussies to take charge of their health, more efficiently than ever before.

However, uncertainty around online health does exist, especially with so much scrutiny around misdiagnosis via websites offering health information'. Many Aussies are worried about what Telehealth actually is and how it can benefit them.

This report was developed by **nbn**, the company building Australia's broadband network and aims to demystify Telehealth and communicate its many benefits. I encourage you to utilise this information and feel empowered to harness Telehealth to better manage your health.



About Dr Ginni Mansberg

Dr. Ginni Mansberg is a Sydney GP, who has been practicing for more than 20 years. She specialises in family health, parenting and general health management.

For more information about Dr. Ginni Mansberg visit www.drginni.com.au.

About nbn

nbn (the company) was established on 9 April, 2009 to design, build and operate Australia's new broadband network.

nbn is a wholly-owned Commonwealth company - a Government Business Enterprise - and is represented by Shareholder Ministers; the Minister for Communications and the Minister of Finance.

For more information about **nbn**, visit nbnco.com.au.

Telehealth: what is it and why do you need it?

A quarter of respondents very interested in knowing more about the online Telehealth services available to them.

Telehealth 101

Telehealth refers to health information and services delivered through the Internet in order to support anyone, at any time, in any location.

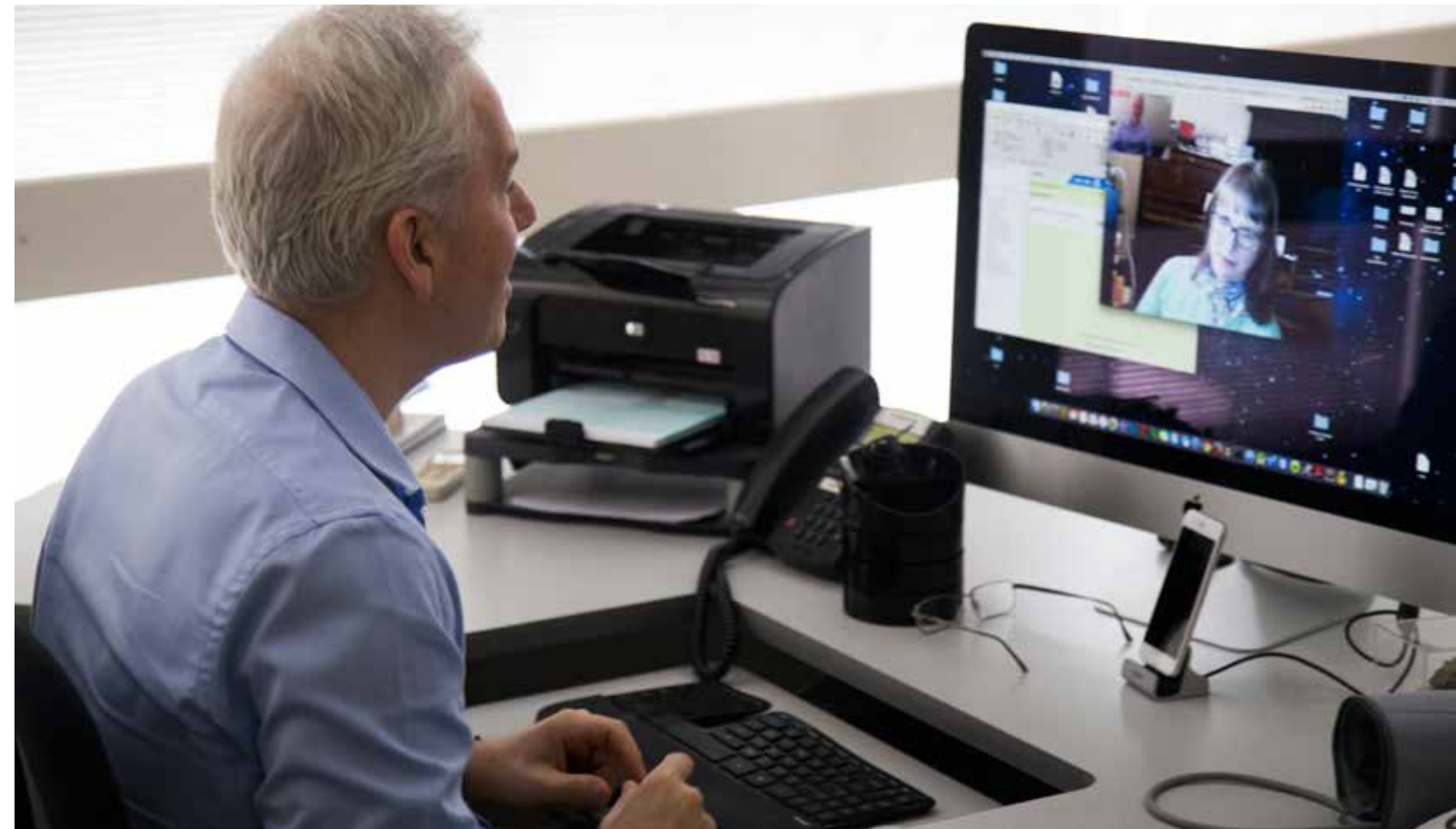
With the plethora of online Telehealth tools available at the click of a button, Australians no matter where they live can manage their health from home.

According to a recent report by CSIRO, adoption of Telehealth services such as high-definition video streaming, will not only help people in regional Australia manage chronic disease remotely, but it will also alleviate the need for expensive specialist fly-ins that can cost thousands of dollars¹.

With approximately \$154.6 billion spent on Australia's health in 2013-14², Telehealth is enabling Aussies to easily access health care services and will help relieve pressures on the current health system.

On average, 23,000 people are admitted to hospital every day in Australia³. Access to a fast, reliable network means patients can be monitored from the comfort of their own home, freeing up hospital beds for people in need.

No matter if you live in the city or the country, the benefits of harnessing Telehealth are endless; whether it's to support people through pregnancy, help manage the care of elderly parents, or to just keep fit and healthy everyday.



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Telehealth: what is it and why do you need it?

Telehealth can benefit all Australians, no matter where they live

- Access to doctors and specialists anytime, anywhere;
- Reduced visits to the doctor and associated costs;
- Anonymity and comfort of accessing help from home, especially if the health concern is considered embarrassing or uncomfortable;
- Opportunity for patients to actively participate in the management of their health with enhanced access to services and medical supervision.

Elderly Aussies and their carers can feel safe to manage health at home

- Approximately half of all Australians suffer from a chronic disease.⁴ With access to Telehealth services; the aging population can now be active participants in managing their health;
- Paramedics respond to 74,000 emergencies categorised as falls every year.⁵ With access to fast broadband, via the **nbn**[™] network, there is an opportunity to create smarter and safer homes to help the elderly live at home for longer;
- Rapidly-advancing technology has led to connected devices that measure blood pressure, blood sugar, body weight, temperature and can help address a variety of health concerns; this has meant Australians can access the care they need more conveniently from their homes.

Growing families can gain information, advice and organisation tools

- Expectant mothers and families can now undertake regular check-ups and help manage their pregnancies online via services such as Pregnancy, Birth & Baby⁶ - a government funded website that not only provides information for mothers throughout the course of their pregnancy, but also offers an online video call service where they can speak to a counsellor from the comfort of their own home;
- Connected devices and apps such as Baby Tracker⁷ that can help new parents keep track of things like feeding times and nappy changes.

Regional and remote Australians can access services not available in their location

- Prior to now connected areas having a reliable Internet connection, many Australians living in regional and remote areas had to travel long distances to access health care services. Now people are able to access the help they need remotely with services such as GP2U - a Melbourne based company that offers convenient video consultations with Australian doctors and medical specialists⁸;

- With only 58 GPs and 589 nurses per 100,000 residents in remote parts of Australia⁹, access to Telehealth services will give patients in these areas access to specialist services from all over the world, and may help reduce the need for hospitalisation;
- Chronic disease patients living in remote Australia are admitted to hospital more than twice as often as people living in major cities⁹. Telehealth services will allow for earlier diagnosis, prevention and management of chronic conditions.

Doctors and medical personnel can be more efficient and continue their education

- Transferring large image or video files to other facilities, colleagues or patients is now not only possible, it is immediate;
- New insights, support tools and software are available at the click of a button with helpful websites such as The Australian E-Health Research Centre¹⁰;
- Online video tutorials, TED talks and seminars can provide remote training to increase skills and specialist areas.

Improved access to healthcare for Australians living with a disability

- New technologies delivered via video conferencing are improving access to healthcare services for Australians living with a disability.
- For example, video remote interpreting (VRI) is a service which uses devices such as web cameras or videophones to provide sign language or spoken language interpreting services from a healthcare professional to patients with a hearing impairment. This is done through a remote or offsite interpreter, in order to communicate with persons with whom there is a communication barrier.

Telehealth Technologies: the online tools you need to manage your health at home



Video-conferencing: real-time patient to doctor communication and medical education;



Connected devices: Internet connected in-home monitors, sensors and machines for the purpose of health and wellbeing;



Streaming media: online video tutorials, patient testimonials, educational videos;



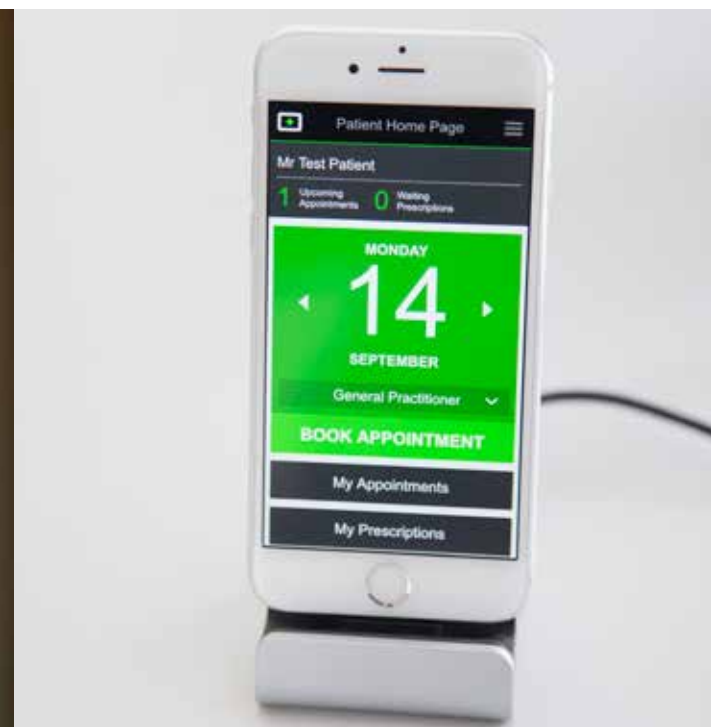
Digital images: the storage and sending of medical imagery such as x-rays and scans;



Wireless communication: email, online instant messaging, forums and social media;



Apps: the amazing number of apps for the purpose of monitoring exercise, food consumption and general health.



Click your way to a happier, healthier life

Fast Internet enabling a digital healthcare revolution

New nbn research reveals access to fast broadband is enabling Aussies to manage health from home.

“With high speed broadband, people can have a conversation via HD video-conferencing with a remote health specialist on the other side of the country, or the world, without the frustration of their connection continually dropping out. Sending large files to healthcare professionals – such as photos or videos documenting a health condition – should no longer crash the household Internet. It can be a breeze to book an appointment online with a GP, outside of office hours and without having to wait for a very busy receptionist to answer the call,” says Dr. Ginni Mansberg.

Australians can now be spoiled for choice with all the great technology available. Now the biggest challenge is helping people learn more about it all and get them started on their journey to more convenient healthcare. Regardless of whether people have heard about telehealth or not, 1 in 4 respondents (25 per cent) were very interested in learning more about telehealth and over half (57 per cent) were somewhat interested.

Here’s a run down on how Australians are currently using Telehealth, what they think about it, and how they think it could change their lives, according to the latest **nbn** research.

Busy schedules demand efficiency when visiting the GP

While face-to-face consultations will always play an important role, Telehealth services are offering a practical solution for Aussies to manage health at home.

A staggering 70 per cent of respondents have delayed arranging a visit to the GP. The waiting time is a big factor-putting people off a visit, with 28 per cent not wanting to waste time in a waiting room.

Interestingly, 29 per cent of people have delayed arranging a GP visit because they are not sure if they actually need to go. For those pregnant or new parents’ in particular, not having to take time off work is also a big factor with 34 per cent surveyed having delayed a visit for this reason.

Telehealth is allowing people to seek information online in the first instance before going to the GP – 22 per cent of Aussies surveyed are already logging online as their first port of call. Many GP offices are also using online appointment bookings and more than a third of respondents (36 per cent) are taking advantage of this convenient function; enabling them to save time travelling and waiting in line¹².



Dr. Ginni Mansberg’s top websites, apps, and the latest tech to start managing your health online

Helpful tools to manage your health every day:

- **Ehealth.gov.au:** can be accessed online from a computer, tablet or smartphone and is an official electronic summary of your health records that allows healthcare providers to access your key information, which can be crucial in providing treatment.
- **Healthvault.com:** is a tool that allows families to do everything from store health records, keep up to date on immunisations, allergies and have information available to help make managing family health easier and more efficient.
- **Cvdcheck.org.au;** is the ultimate evidence based cardiovascular disease check-up created by Diabetes Australia, the National Heart Foundation of Australia, Kidney Health Australia and the National Stroke Foundation. The website includes a downloadable risk calculator, and resources for consumers and health professionals.



Revolutionary Telehealth technology available soon:

- **Care Assessment Platform (CAP);** In a world first randomised controlled trial, CSIRO and Queensland Health developed and trialed a mobile phone based cardiac rehabilitation program. An app on a smartphone allows patients to collect data such as blood pressure and physical activity and view educational material. A weekly phone call with a mentor provides the coaching typically given in a National Heart Foundation program. This eliminates the need to travel to appointments and allows patients to begin rehabilitation from their own home¹¹. CSIRO is working with service providers to roll this out – look out for the CardiHab app available on the Apple App store or Google play store.
- **Remote-I;** Developed by CSIRO, the technology captures high-resolution images of a patient’s retina, which can then be forwarded to city-based practitioners who will determine the need for a live consultation. This device enables remote delivery of specialist eye care to people living in rural and remote areas who have little or no access to regular eye screening¹². The technology was trialed as part of the Commonwealth governments NBN tele-health trials to Torres Strait and the WA Goldfields.

What’s popular in Telehealth right now



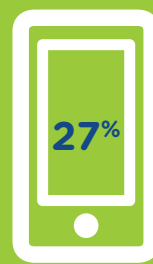
Searching for general health information is the most common usage of Telehealth at the moment, with 67 per cent of those who used telehealth services taking advantage of the wealth of information available online.



Scheduling appointments online is also popular with 36 per cent of Telehealth users opting to manage their bookings this way.



Telehealth users are watching and reading patient testimonials (28 per cent) to learn more about a topic, or get a better understanding of what it’s like to live with a condition.



27 per cent of respondents find fitness apps useful in helping support their goals of a healthier, fitter life.

Specialist websites to go to when you need help:

- **Ecouch.anu.edu.au:** is a website that offers free self-help units for sufferers of depression and anxiety, as well as people going through divorce and bereavement.
- **PanicCentre.net:** a free online and interactive program, consisting of interactive games and downloadable relaxation music. Moodgym is designed to help people make sense of thoughts and emotions and prevent depression.
- **Smilingmind.com.au:** an online app-based program that aims to give a sense of calm and contentment to young people. Free modern meditation programs are available to anyone wanting to practice mindfulness in their lives.



An insight into online care from one of Australia's leading dedicated telehealth practices

At GP2U our mission is to provide healthcare on our patients terms by allowing them to consult with a doctor from where and when it suits them

Based in Tasmania, I started GP2U in 2011 as a solution to bridge the Aussie health divide and provide care to people no matter where they live. Since inception we have grown from treating just regional patients to now having thousands of patients right across the country who access a wide variety of healthcare providers. Via the **nbn™** network my national virtual medical centre is able to provide healthcare online across not just to all of Australia, but around the globe.

Australia being such a large country means that many are geographically remote, which can be challenging in terms of health care. The health divide is a real issue, meaning that unfortunately not all Aussies are receiving the medical attention they need. However, with more Australians gaining access to faster broadband, more people now have direct access to GPs and specialists no matter where they live.

At GP2U we provide a myriad of online treatments, from GPs to psychiatrists to dermatologists. Via video-conferencing, we are able to offer an alternative to the traditional healthcare pathways. GP2U has been able to utilise the **nbn** network to save thousands of lives by provisioning access to life saving HepC medications for patients around the world.

As a specialist in provisioning the new medication we have been able to promote our scripting service internationally, allowing patients to safely exercise their right import medication, saving ten of thousands of dollars and delivering outstanding health outcomes

Online care is no longer just for regional and remote residents. City-based patients are now also taking advantage of online care and enjoying the convenience of seeing a doctor from the comfort of their home. This has meant a time-efficient solution to the modern-day Aussie who is pressed for time, helping the sick, the elderly, new parents and those who can't physically get to their doctor.

Without the **nbn** network my business wouldn't be able to meet its potential, our consultations are smooth and intimate and patients feel as cared for as if they were sitting in a doctors surgery. Quality online care cannot happen without a world class internet infrastructure.

Dr. James Freeman, GP2U



Australia's future with Telehealth

Fast broadband empowering Aussies to be active participants in managing their health from home

The roll out of fast broadband via the **nbn™** network is allowing more people to harness everything from GP video-conferencing to fitness apps.

As more people understand and gain access to Telehealth services research shows that almost two thirds (62 per cent) of respondents would feel more equipped to make informed health decisions. A large percentage of people would feel safer knowing they can monitor their health from home (57 per cent), and almost one in two feel they would be more efficient and productive.

As Australians become more connected they are becoming active participants in managing personal and family health. Telehealth tools and services are just a click away.

About this report:

This report was commissioned by **nbn**, the company building Australia's broadband network and developed by Colmar Brunton, with an Australian sample size of 1,534 people – November 2015. All statistics quoted in this report are derived from this sample save where otherwise stated.

It offers advice on Telehealth from Dr. Ginni Mansberg who is an advocate for **nbn's** Digital Diagnosis campaign.

This report also includes data from credible medical sources as CSIRO, Australian E-Health Research Centre and Deaf Services Australia.

This report should not be relied upon as a substitute for the advice of medical professionals. In addition, Telehealth services are not a substitute for a doctor or other medical professional, but work alongside these services to allow people to better manage their health and wellbeing.

An insight into Telehealth from a busy working dad

“The way we can now access Telehealth services for my daughter's condition has hugely benefited our family life, we can even Skype our doctor from the comfort of our own home”

The arrival of the **nbn™** network in Somerset has meant big things for both my family and my work life. The biggest impact of all has been the ways we have been able to care for my daughter's medical condition.

Her condition requires regular consultations with a Melbourne-based specialist. Before the rollout of the **nbn™** network in our area we had to fly back and forth for her specialist appointments, which also meant frequent flight and accommodation bills. Skype calls for these consultations weren't really an option as our previous internet connection we used to have was slow and unreliable and it would frequently drop out.

Now we have access to fast and reliable broadband via an **nbn™** service provider, we're able to consult with our daughter's doctor via Skype from the comfort of our own home.

Although we were at first sceptical about being able to receive the same quality of care we receive in person, dialling in to see the doctor is something our daughter actually looks forward to. We're able to fit our appointments into our schedule eliminating any disruption to our family routine. The quality of our sessions are fantastic, no dropouts mean the appointments run on time, the sound is clear and in real-time.

Not only have we seen emotional benefits, we've also saved hundreds of dollars in travel costs.

Paul Morse





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This report was published by nbn co limited, the company building Australia's broadband network and is reviewed by a number of health industry bodies including CSIRO, Australian E-Health Research Centre and Deaf Services Australia.

References:

1. CSIRO, "A digitally enabled health system", <https://publications.csiro.au/rpr/download?pid=csiro:EP145606&dsid=DS1>
2. Australian Institute of Health and Welfare, Expenditure FAQ, <http://www.aihw.gov.au/expenditure-faq/>
3. Australian Institute of Health and Welfare, How much do we spend on health?, <http://www.aihw.gov.au/australias-health/2012/spending-on-health/>
4. Australian Institute of Health and Welfare 2012. Australia's health 2012, 1 in 5 Australians affected by multiple chronic diseases, media release, 12 August 2015, <http://www.aihw.gov.au/media-release-detail/?id=60129552034>
5. Ambulance Service of New South Wales, 2012, Falls land at top of Ambulance jobs, media release, 1 April, Ambulance Service of New South Wales, Sydney, <http://www.ambulance.nsw.gov.au/Media/docs/120401%20AprilFallsDay-b5331e2a-959b-4445-b244-5f7da2b653b7-0.pdf>
6. Pregnancy Birth and Baby: <http://www.pregnancybirthbaby.org.au/>
7. Baby Tracker App: <https://itunes.apple.com/au/app/baby-tracker-feeding-timer/id779656557?mt=8>
8. nbn commissioned Dr James Freeman, founding owner of GP2U, to act as an advocate for its Digital Diagnosis campaign.
9. Department of Health and Ageing (2012), National Strategic Framework for Rural and Remote Health, [http://www.ruralhealthaustralia.gov.au/internet/rha/publishing.nsf/Content/EBD8D28B517296A3CA2579FF000350C6/\\$File/NationalStrategicFramework.pdf](http://www.ruralhealthaustralia.gov.au/internet/rha/publishing.nsf/Content/EBD8D28B517296A3CA2579FF000350C6/$File/NationalStrategicFramework.pdf)
10. The Australian E-Health Research Centre (<https://aehrc.com/>)
11. Care Assessment Program: <http://www.csiro.au/en/Research/DPF/Areas/Digital-health/Improving-access/Online-rehab>
12. Remote-I: <http://www.csiro.au/en/Research/DPF/Areas/Digital-health/Improving-access/Eyecare>
13. Health Direct Australia, Pregnancy Birthday & Baby, <http://www.healthdirect.gov.au/pregnancy-birth-and-baby>
14. National Vascular Disease Prevention Alliance (NVDPA), <http://www.cvdcheck.org.au/>

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