Developing a policy strategy for telehealth in Australia

A summary of the telehealth FUTURES forum

TELEHEALTH
represents an opportunity for dramatic healthcare changes in Australia

Australia has been actively researching, implementing and using telehealth for decades. However, despite apparent enthusiasm, telehealth remains underutilised and is not part of routine care.
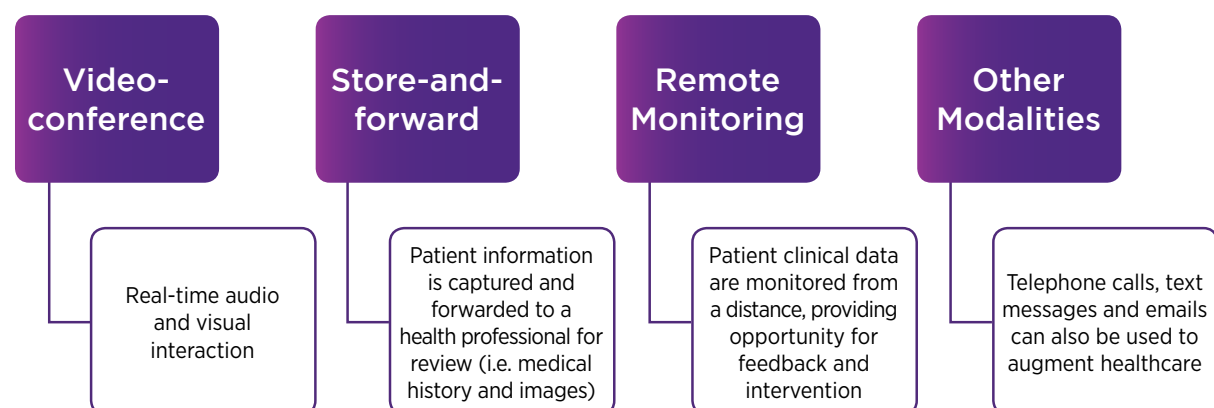
Innovations that broaden the application of telehealth strategies are evolving, but policy and funding constraints limit their implementation in Australia. Targeted policy changes are required to combat barriers to wide-scale implementation and uptake.

This document summarises discussions from the Telehealth FUTURES forum held in Brisbane, October 15th, 2019. The goal of the forum was to identify what needs to change in Australia for telehealth to become an integral part of routine care.

What is telehealth?

Telehealth is the delivery of care from a distance. It can be used for assessment, diagnosis, treatment, monitoring and follow-up of patients remotely. Telehealth can be provided synchronously or asynchronously. The format can be healthcare practitioner to practitioner, patient to healthcare practitioner, or group consultation between patients or practitioners. It can also involve patients and clinicians interacting with wearable or other monitoring devices and decision support algorithms.

Types of telehealth

Video-conference	Store-and-forward	Remote Monitoring	Other Modalities
Real-time audio and visual interaction	Patient information is captured and forwarded to a health professional for review (i.e. medical history and images)	Patient clinical data are monitored from a distance, providing opportunity for feedback and intervention	Telephone calls, text messages and emails can also be used to augment healthcare

## Videoconference activity is increasing in Australia

Medicare and state government health services support videoconference services by health professionals to rural communities.[1] However, support for telehealth uptake in metropolitan locations is minimal.

Funding for community telehealth in Australia - 23 of the 5700 telehealth codes on the Australian Medicare Benefits Schedule (MBS) relate to funding for community telehealth. These item numbers enable healthcare providers to receive a rebate for telehealth consultations they provide to patients in eligible rural and remote locations. A total of 821,191 episodes of telehealth services were rebated by Medicare between July 2011 and June 2018.
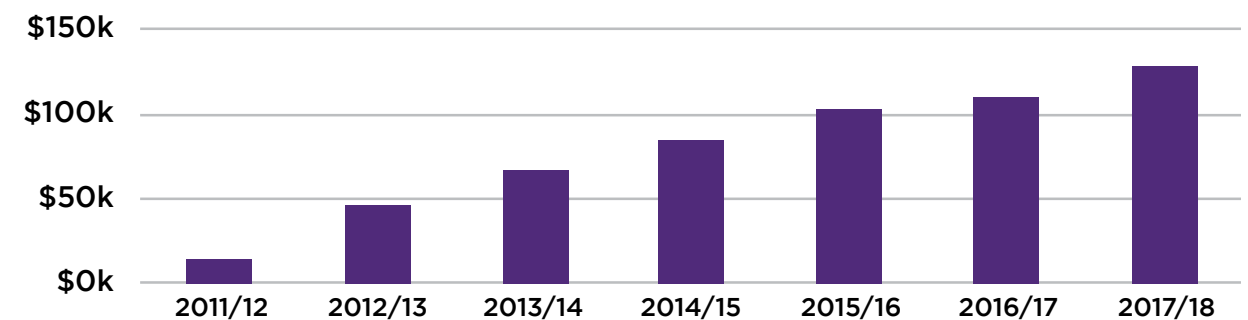
Medicare-rebated telehealth services delivered in all states, 2011/12 - 2017/18

Funding for hospital telehealth in Australia - Under the National Activity Based Funding (ABF) scheme, hospitals are able to claim reimbursement for outpatient telehealth services. Activity has been steadily increasing since 2013. For these consultations, telehealth is considered to be interchangeable with an in-person consultation, provided patient location meets eligibility criteria.
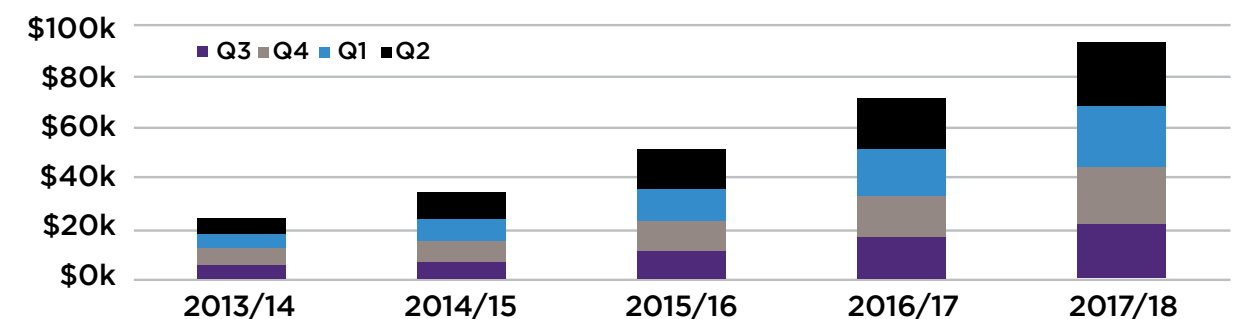
Non-admitted patient telehealth service events in Queensland 2013/14 to 2017/18

Private cost of commercial services – private services also exist where patients pay the full fee themselves.

What needs to change?

To become integral to routine care, telehealth has to be implemented within a fractured healthcare system or alternatively, telehealth could be used as a catalyst for change in the Australian health system.

Current issues identified within the Australian healthcare system that impact telehealth

Needs	Drivers identified... OR Result of this unmet need...
...to address the prevalence of low-value and no-value care	Driven by the perverse incentives created by current fee-for-service funding models
...to reform the rates of medical specialisation	Driven by the disparity of earnings between specialists and primary care doctors
	Results in models of care where chronic disease is unnecessarily managed by specialists instead of primary care practitioners
...to avoid incentivising low-value and no-value care	Requires caution to be used when discussing implementation of uncapped fee-for-service payments for telehealth
...for patient-centricity in healthcare delivery	Patients lack of access to their own health data
	Tendency by clinicians to not include patients in their own healthcare management (catering to the lowest common denominator of health literacy)
...for the health system to be responsive to patient needs rather than prescriptive	Current system fosters time-recurring appointments (e.g. every six months)
	Digital health initiatives could improve responsiveness
...for funding for allied health professions	Driven by the emphasis on medical professions in health systems
...to evaluate implemented telehealth programs	Resulting from poor data collection and availability, and limited data linkage
...introduction of new services by clinicians	Clinician and patient-driven innovation could reduce health system fragmentation and inefficiency
...clinicians to be willing to use telehealth in practice	Poor uptake is driven in part by the belief that in-person or "See, Touch, Feel" is always better
...system changes to support telehealth models of care (delivery mode agnostic)	MBS mostly requires patient to be seen in-person
	MBS only funds video-consultations, without support for remote monitoring and store-and-forward modalities
...private provider use of telehealth to increase	Poor uptake driven by the low profitability of telehealth models

Principles for telehealth

Telehealth is critical for health system sustainability and providing for patient needs. Australia has been actively exploring and trialling telehealth as a means of delivering health services. However, telehealth remains underutilised and is only rarely part of routine care.

What needs to change in Australia for telehealth to become an integral part of routine care? At present, Australian funding policy primarily supports specialist video-consultations to rural and remote locations. Telehealth strategies present opportunities to re-engineer healthcare to improve clinical effectiveness, and increase service efficiency among all health practitioners, in both cities and rural communities. Changes to healthcare delivery are likely to have positive effects on patient convenience and engagement. Such changes are essential to modernise healthcare delivery and secure a sustainable health system into the future.

Telehealth Principles wheel:
- 10 Consumer centric — respecting of choice, improve health literacy and co-designed with meaningful outcomes
- 1 Drive population health — through personal wellness and system improvement
- 2 Comprehensive & inter-disciplinary
- 3 Increase access — accessible to disadvantaged populations and communities
- 4 Achievable — be pragmatic, agile and with high utility
- 5 Safe & secure
- 6 Cost-effective — provide value for money with aligned incentives
- 7 Drive change — avoiding perverse incentives and outcomes, and drive integration
- 8 Agnostic — both technology- and provider-neutral
- 9 Workforce — be implemented by a workforce fit for purpose

Policy solutions

Forum participants proposed the following actions to successfully enact policy changes:

1. Engaging with consumers
- Identify which groups of people will most benefit from telehealth (e.g. patients with a chronic disease) and target these groups for co-design and initial implementation
- Telehealth awareness campaign to make consumers aware of the capability and the "business case" i.e. travel savings versus out-of-pocket expense for healthcare
- Invest in consumer expertise i.e. pay for involvement in co-design

2. Engaging politicians to drive the policy change
- Consider a Commonwealth parliamentary inquiry into telehealth
- Contribute to the 10-year National Preventive Health Strategy, the 2030 Vision for mental health, the 10-year Primary Health Care Plan, and other healthcare policy reform activities

3. Health workforce
- Development of the workforce by providing telehealth specific training
- National directory of telehealth providers

4. Developing a telehealth implementation strategy
- Targeted implementation efforts rather than system-wide
- Replication of effective services

5. Funding
- Explore MBS funding models to support all modalities of telehealth, especially models other than fee-for-service
- Fund telehealth to mitigate provider-induced demand
- Investigate support for all forms of telehealth and virtual health in existing non-fee-for-service programs
- Develop separate funding for chronic disease
- Incentivise telehealth
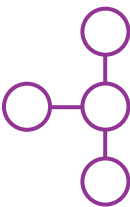
6. Infrastructure
- Consumer ownership of and access to health records and their personal data
- National infrastructure for store-and-forward healthcare
- Integrated data platforms for individuals, designed with the capacity for secondary use of data for research
- Development of technical standards for software and data

Background information

Prior to the Telehealth FUTURES forum, participants were provided with examples of services that were improved or re-engineered thanks to telehealth. These examples have been implemented overseas or on a small scale in Australia. Additionally, opinions from the Australasian Telehealth Society state representatives were presented.

"Telehealth can expand the reach of healthcare..."
- New England Journal of Medicine[2]

> **"** *Telehealth doesn't replace in-person healthcare. Instead, virtual care integrates video, phone, email and messaging into a person's healthcare.[3]* **"**

The following pages contain a sample of the background reading from the Telehealth FUTURES forum.

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OPINIONS FROM THE AUSTRALASIAN TELEHEALTH SOCIETY

What needs to change in your state/country for telehealth to become an integral part of routine care?

WESTERN AUSTRALIA

- A robust effective funding/business model for private and public telehealth usage.

- MBS access for GPs to undertake telehealth GP consults with patients in areas of unmet need.

- Effective remote community access to digital communication infrastructure to enable telehealth service access to address what is now a serious digital inequity, adding to poorer health outcomes for geographically disadvantaged people.

- Improve integration between digital systems.

NORTHERN TERRITORY

- Recognition of telehealth and other digital health opportunities as critical components for a sustainable, equitable and accountable service portfolio.

- A cultural change is required to shift the status quo of standard in-person health services; strategies should be aimed at building capacity and skills within the resource profile for the main metro and hospital networks and similarly extending this capacity to train and advance regional and remote communities.

- The extension of digital stakeholder networks should be at the forefront of service design and funding agreements.

SOUTH AUSTRALIA

- Funding for recipient end of telehealth consultations.

- Seamless in and out connectivity for video applications between primary care and SA Health network.

- Integration of Point of Care testing network and results with primary care and hospital applications.

- Comprehensive internet coverage in all facilities.

QUEENSLAND

- A major barrier to telehealth adoption continues to be staffing resources within respective clinical areas.

- Clinicians need to be willing to practice and undertake the effort and disruption to change their practice to incorporate telehealth.

- Telehealth should be available to all patients, irrespective of their location.

NEW ZEALAND

- Funding is needed to include this as an integral part of routine care in New Zealand.

VICTORIA

- Establish a state-wide (or nation-wide) telehealth strategy and framework.

- Include telehealth access as a 'usual' mode of access for funding.

- Integrate telehealth access into standard workflows and systems, especially electronic health systems and standard workplace desktop environments.

- Improve resources in rural areas where there is: failing infrastructure, no human resources to develop modern services, expensive or unreliable internet and poor collaboration between some health services competing for funding.

TASMANIA

- Changes to MBS funding for general practitioners would encourage uptake.

- Develop stable IT platforms that include a virtual waiting room.

- Set KPIs around service delivery for clinical specialties.

- Integration of telehealth into existing models of care.

www.aths.org.au

Telehealth improves access to care

Example – Veterans Affairs

The US Department of Veterans Affairs (VA) is using videoconference and other communication strategies, store-and-forward, and remote monitoring to increase clinical capacity and drive patient-centred care. Telehealth has enabled VA to significantly redesign services in response to the needs of patients.
"[VA's] experience is that an enterprise-wide home telehealth implementation is an appropriate and cost-effective way of managing chronic care patients in both urban and rural settings."[4]

Telehealth can help drive better outcomes

VA case study found that using telehealth resulted in...

59% fewer hospital days

35% lower hospital admissions

$2000 saved per patient per year

VA Telehealth Services uses health informatics, disease management and telehealth technologies to target care and case management to improve access to care, thereby improving the health of veterans.

"VA leads the nation in using new technology to improve the delivery of care."
- US Department of Veterans Affairs

Telehealth reduces opportunity costs for patients

Example – Research on patient opportunity costs

Redesigning services to incorporate telehealth reduces costs and time away from usual activities for patients. A 2015 study published in The American Journal of Managed Care demonstrated that a standard medical consultation consumes at least 2 hours of a patient's time for a 20-minute consultation. The opportunity cost was found to be US$43 per visit per patient.

- Total annual opportunity costs to patients for physician visits in the United States were US$52 billion in 2010.[5]

- For every dollar spent in visit reimbursement, an additional 15 cents of patient opportunity costs occurs.[5]

- The average opportunity cost for an ambulatory medical visit was US$43, which exceeds the average patient's out-of-pocket payment for ambulatory telehealth visits.[5]

- Accounting for patient opportunity costs is important for examining US healthcare system efficiency and for valuing innovations that improve the efficient delivery of care.[5]

"Time spent per year by employed adults seeking medical care exceeded the number of annual hours worked by more than half a million full-time employees, and the societal opportunity costs are greater than US$50 billion a year."[5]

Telehealth allows asynchronous patient care

Example – Teleophthalmology & Teledermatology

Despite the promising results of pilot studies and programs, store-and-forward telehealth has not yet been implemented at scale in Australia. Appropriate funding incentives, set-up costs, security and interoperability with existing electronic medical records have been cited as the main challenges in the adoption.

Teledermatology: Reviews published in JAMA Dermatology in 2016 and 2017 support the potential clinical and economic benefits for teledermatology services. "[Teledermatology] appears to be cost-effective when [it is] used as a triage mechanism to reduce in-person appointments. The cost-effectiveness [of teledermatology] increases when patients are required to travel farther distances to access dermatology services."[6] "Teledermatology reduces waiting times and reported patient satisfaction is high."[7]

Teleophthalmology: Findings reported in JAMA Internal Medicine of a "quasi-experimental, pretest-posttest evaluation of a teleretinal diabetic retinopathy screening program" in the US showed that "the need for more than 14,000 visits to specialty care professionals was eliminated, annual rates of screening for diabetic retinopathy increased by 16.3%, and wait times for screening were reduced by 89.2%."[8]

These results demonstrated that "With standardisation and oversight, primary care–based teleretinal diabetic retinopathy screening programs can maximize access and efficiency."[8]

Telehealth allows culturally appropriate care for Indigenous peoples

Example – Cherbourg Ear Screening Service

The delivery of specialist health services to people living in Indigenous communities is an important challenge. Telehealth is unlikely to completely replace the need for patient travel or outreach clinics; however, replacing a proportion of these appointments with telehealth may reduce overall cost and patient burden.

For rural Indigenous populations, telehealth is likely to have advantages beyond cost savings because it reduces the time away from usual activities for both the patients and health professionals.

The Cherbourg mobile ear screening service for Indigenous health services was supported by the local community.

The health workers travel to forty schools in the South Burnett region, providing routine ear health screening of local children. The otoscopic images and hearing tests captured by the health workers are reviewed by Brisbane-based ENT surgeons, who recommend follow-up if required.[9,10]

"With Aboriginal people, we have a very extended kinship...Especially if something's wrong with one family member, the whole family will come together. You could end up with a big group on your telehealth linkups."[11]

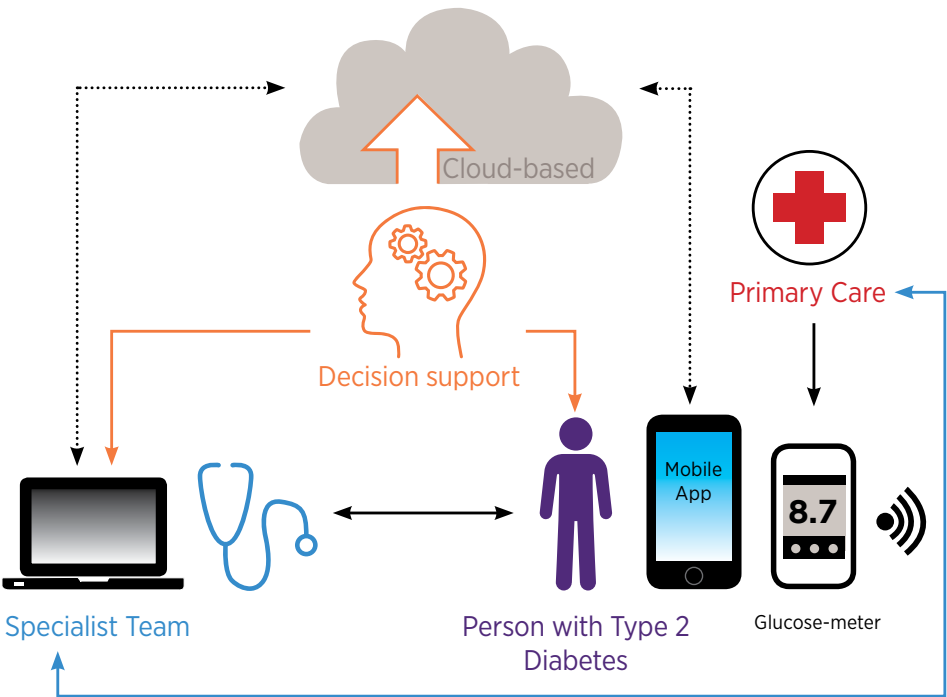# Telehealth enables care delivery to be redesigned

Example – REMODeL Diabetes Project

Research examining remote monitoring for chronic disease management is being conducted globally. A local example is the REMODeL program, which has been piloted and validated in Brisbane. Patients with diabetes record their clinical data in an app, which uploads the data to a server where it is reviewed by a nurse or endocrinologist. The system offers text-based encouragement to patients, day-to-day patient feedback, and an ability to avoid attending the outpatient clinic on many occasions.

Mobile Diabetes Management System: a collaboration between Metro South Health, UQ Centre for Health Services Research (CHSR) and the Commonwealth Scientific and Industrial Research Organisation (CSIRO).

Cloud-based

Decision support

Primary Care

Specialist Team

Person with Type 2 Diabetes

Mobile App

8.7

Glucose-meter

The app improves the quality and timeliness of blood sugar readings and gives patients immediate feedback in the form of graphs, charts, and tables. Patients can be contacted if there are any concerns about their readings, or recommendations can be made through the app.[12]

"Initial results indicate a 1% reduction in HbA1c for REMODeL trial patients, a 30% reduction in outpatient appointments required, and high patient satisfaction."[13]

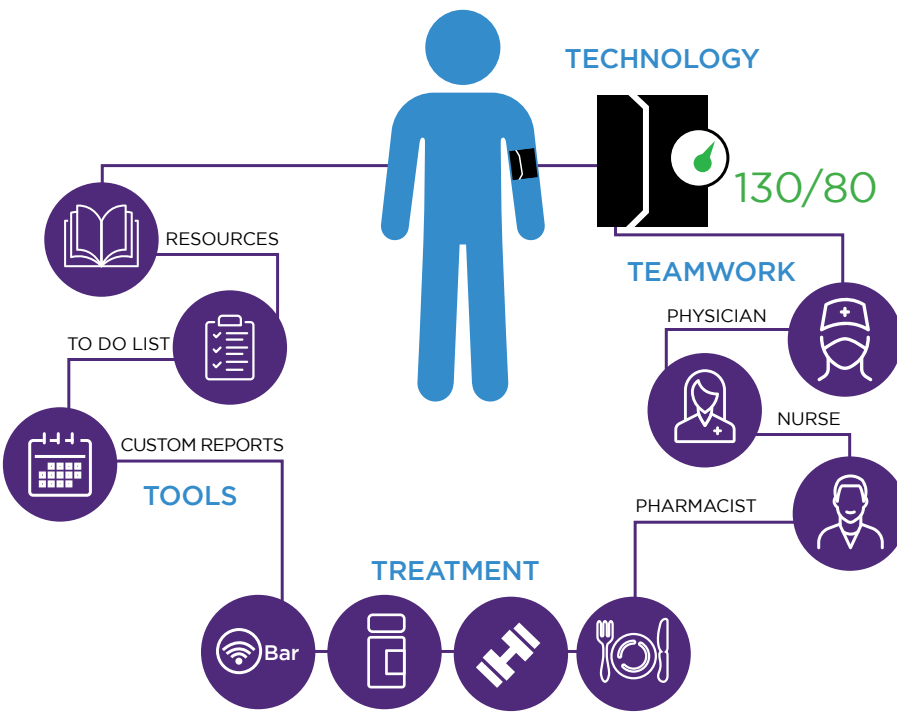# Telehealth changes the role of healthcare practitioners

Example – Ochsner Health

Ochsner Health is successfully using telehealth to improve clinical outcomes for patients with chronic diseases such as hypertension and diabetes. In a radical departure from usual primary care practice, blood pressure control is managed remotely by health coaches and pharmacists, resulting in dramatic improvements in patient engagement and blood pressure control. After 60 days of treatment, this system secured blood pressure control in 62% of patients, compared to 13% who were managed using usual care.

Ochsner Health is changing the model of care for hypertension

TECHNOLOGY

130/80

RESOURCES

TO DO LIST

CUSTOM REPORTS

TOOLS

TEAMWORK

PHYSICIAN

NURSE

PHARMACIST

TREATMENT

Bar

"Typically, hypertension patients see their physician a few times a year. Now, we are offering a new way to deliver care in patients with chronic diseases in which we can communicate with the patient in a more intimate way, more frequently," - Richard Milani, MD, Chief Clinical Transformation Officer, Ochsner Health System

Telehealth services are flexible and responsive to patient needs
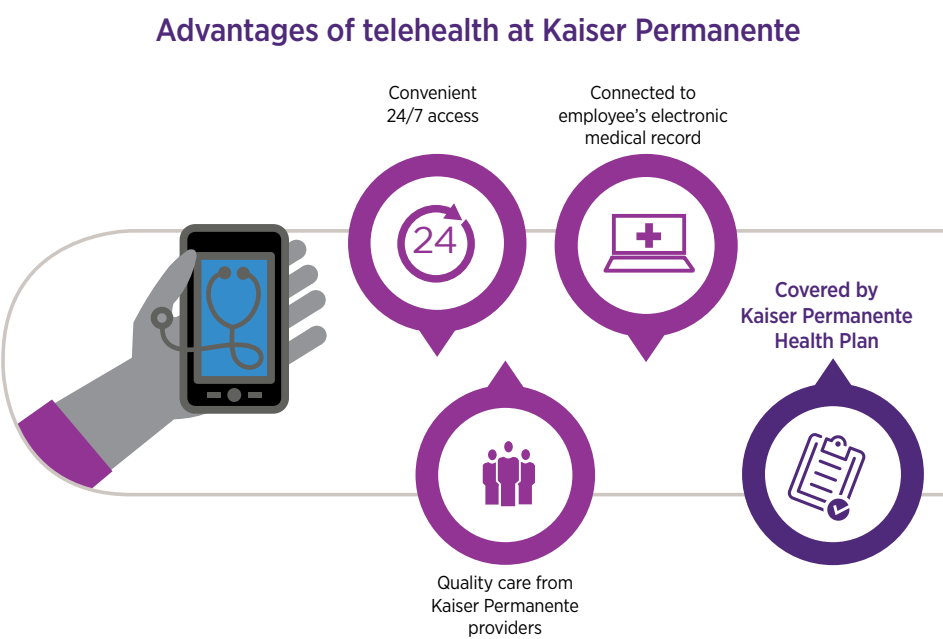
Example – Kaiser Permanente 🇺🇸

Kaiser Permanente is reducing in-person medical visits by diversifying the communication channels available between patients and doctors. The success of the model demonstrates that a proportion of traditional clinic visits can be replaced by secure messaging, videoconferencing and voice calls. This reduces the burden on patients and increases clinician productivity. Over 50% of health consultations are now "virtual".

In 2017, these virtual visits comprised 34 million instant messages, 140 thousand video-consultations, and 43 million phone consultations.[14] At Kaiser Permanente, care is delivered:

By phone - Save a trip to your doctor's office and schedule a phone appointment instead, or call an advice nurse for on-demand guidance.

By email - Connect with your care team anytime. Most members receive a reply within 48 hours, often sooner.

By video - Schedule an appointment with your doctor, meet with a specialist, or have an on-demand video visit with an on-call physician.

Advantages of telehealth at Kaiser Permanente

- Convenient 24/7 access
- Connected to employee's electronic medical record
- Covered by Kaiser Permanente Health Plan
- Quality care from Kaiser Permanente providers

> "60% of our members say digital tools from Kaiser Permanente have helped them save time by avoiding an office visit — while still getting the care they need."
> - Kaiser Permanente User Experience Survey, 2014

# Telehealth integrates with decision support software

Example – Babylon Health 🇬🇧

Babylon Health digital care delivery strategies have recently been adopted by the UK National Health System (NHS). By combining the ever-growing power of artificial intelligence with the best medical expertise of humans, systems like Babylon aspire to deliver unparalleled access to healthcare. These include AI-driven decision support and 24/7 video-consultations, personalised health assessments, prescription and medication delivery, and referrals to specialists.

Babylon Health (adopted by the NHS) is redesigning the systems for triage and first response.
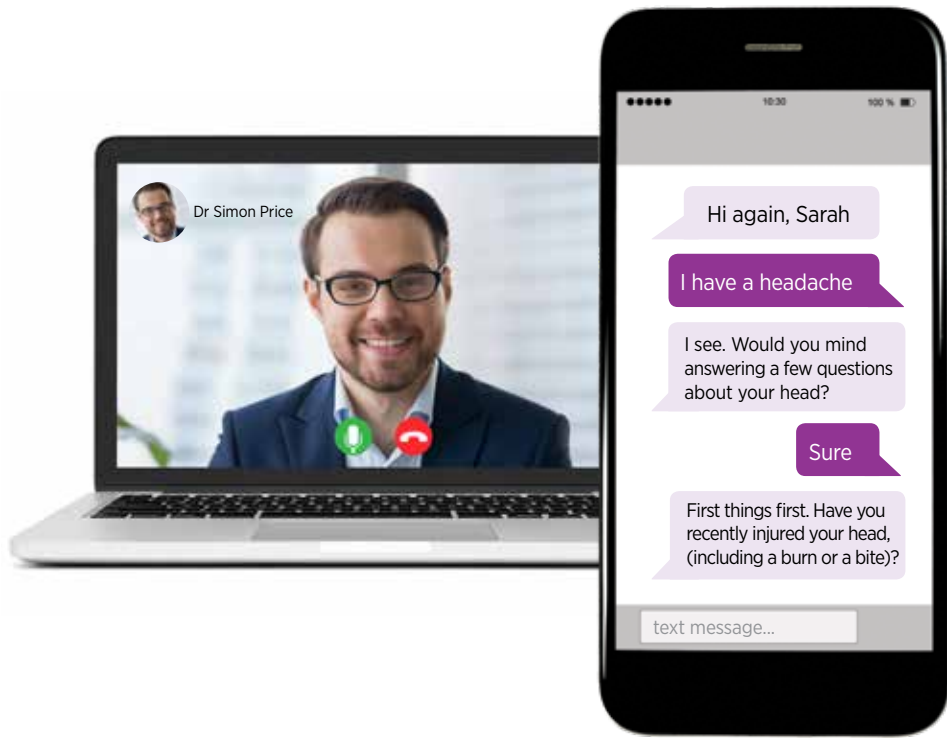
> "It's a fantastic service, you can have a consultation within an hour and all info is fed back to our doctors."
> - Highlands Surgery GP Practice Manager

Telehealth increases the productivity of services by reducing clinician travel

Example – TinyEYE

Allied health models such as the Canadian TinyEYE program provide evidence for the increased productivity that can be achieved when appropriate appointments can be conducted using telehealth. TinyEYE provides speech and occupational therapy services to schools and children's homes, avoiding most travel and reaching communities without any other possible access. Elimination of travel time for clinicians enables them to manage significantly greater caseloads.

TinyEYE software engineers and therapists work to improve online therapy for students to make it effective and efficient, aiming to stay at the forefront of online therapy innovation.

"I love working with TinyEYE! In a small and remote community, TinyEYE has come to our rescue! The students love the games and the novelty of talking to someone live online. The students are getting top quality service with TinyEYE." - Tara, Special Education Director

Acknowledgements & references

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13. Menon Anish. "REthinking MOdel of Diabetes care utilising E-health (REMODEL)." Successes and Failures in Telehealth Conference. 1 – 3 November 2016. Auckland, New Zealand.

14. Reed, Mary E., et al. "Real-Time Patient–Provider Video Telemedicine Integrated with Clinical Care." New England Journal of Medicine 379.15 (2018): 1478-1479.

For further information

Ochsner Health (USA): ochsner.org/hypertension-digital-medicine
Veterans Affairs (USA): telehealth.va.gov
TinyEYE (Canada): info.tinyeye.com
Cherbourg Ear Screening Service (Australia): coh.centre.uq.edu.au/research-area/indigenous-health
Babylon Health (UK): babylonhealth.com/nhs
Kaiser Permanente (USA): about.kaiserpermanente.org

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