DELIVER
Research for better healthcare closer to home

What leads to remote patient monitoring success?

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The challenge

There is good evidence that a well-designed remote patient monitoring program can enhance patient care, improve health outcomes, and decrease health care costs. However, it requires careful planning, a change in current practice, and ongoing evaluation and improvement to be effective.

What we did

This evidence snapshot uses a non-systematic approach, rapidly reviewing the most relevant, recent, and high quality evidence to answer this question. The evidence is reviewed alongside one academic expert and one content expert, in order to produce a brief evidence summary that is "good enough" to inform health services of relevant topics.[1] This document alone is not sufficient to solely inform decision-making.

What does the evidence say about remote patient monitoring success?

Understand external factors that lead to success and failures. It is critical to understand that the success of a remote patient monitoring program can be impacted significantly by external factors outside of your control. Some of these factors include government policy, reimbursement models, levels of interoperability and digital maturity within a health service, and connectedness between primary, secondary, and specialist care within Australia. The first step is to be aware of how these may impact your remote patient monitoring program. Many remote patient monitoring programs begin as an experiment with temporary funding, then fail due to these barriers.[2]

Nominate your champions and build a community of practice. In addition to external factors, there are many patient and clinician factors that lead to remote patient monitoring successes and failures.[3] Digital health is rapidly changing, and successful digital health innovation hinges on the skills and motivation of the digital health champions within a health service.[4] They also need the support of a broader community of practice. Identify champions and connect them with the network they need to succeed.

Clearly define the goals and objectives. Determine what specific health conditions or patient demographics you'll target. Remote patient monitoring programs can reduce health service costs, improve clinical outcomes, improve patient experience, but only when programs are clearly matched to

patient need.[5] It is critical that you can clearly define what you want to change, so you can set up the program and evaluate outcomes accordingly. Ideally, this will be done using a learning health systems approach, which essentially means that you are determining the goals and objectives of your remote patient monitoring program based on relevant data sources that indicates the need.[6]

Select your technology. Technology selection should be informed directly by the goals and objectives of your remote patient monitoring program. Choose the right technology and devices for monitoring patients' vital signs and health data. Ensure that these devices are user-friendly and reliable. Think through robust security measures to protect patient data from breaches. In Australia, the vendor market is emerging in this space, and rapidly changing, making technology selection challenging for health services. Where possible, enlist the help of digital health experts to help with technology selection.

Re-design the relevant workflow. Remote patient monitoring is a tool that must be used within a model of care, meaning that a re-design of care pathways is needed to optimally implement RPM. Unfortunately, there has been relatively little research attention paid to this important component of the remote patient monitoring.[2] One of the biggest barriers to remote patient monitoring success is lack of clinician buy-in.[5] Identify these individuals early and engage with them to change workflow. Some of the steps include thinking through how to involve the relevant healthcare professionals in the remote patient monitoring program to review patient data and provide timely interventions when necessary, setting up alert systems to notify healthcare providers of critical changes in a patient's condition, and developing clinical protocols and guidelines for healthcare providers to follow when responding to patient data, including escalation procedures.

Determine pathways for patient onboarding and support. Set up the onboarding and support process needed for patients using the program. Digital literacy, health literacy, levels of English language comprehension, disability, and many other factors contribute to a patient's readiness to engage with remote patient monitoring technology. It is important to set up a system to sufficiently educate and train patients on how to use the monitoring devices, interpret the data, and understand the significance of the metrics being tracked, as well as the process for patients to receive the hardware and software, and what to do when the tech doesn't work. It is important to assign tech support roles within the workflow. It is a myth that older individuals cannot engage with these programs.[7] While they may need more on boarding support, evidence shows those over 70 have the highest levels of compliance.[7]

Conduct evaluation and gather feedback. Establish mechanisms for quality assurance, including routine monitoring of the remote patient monitoring program's effectiveness and patient satisfaction. Continuously assess the remote patient monitoring program's performance and gather feedback from both patients and healthcare providers to make improvements.

What does this mean for health services?

These steps can be considered as an evidence-informed guide in terms of how to design a remote patient monitoring program within an Australian context, and can be used by health services to guide their thinking around new and existing remote patient monitoring programs.

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The DELIVER Research Project:

- Identifies what the people and healthcare providers of western Victoria need most in terms of home-based healthcare services
- Designs and tests the best way to deliver these services, so that home-based healthcare services will continue to grow and improve across the region and beyond
- Supports the growth of research in western Victoria, so that future research findings can quickly be translated to improvements in healthcare

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