MIYA PRECISION VIRTUAL CARE

ALCIDION

Why invest in an integrated virtual care solution, rather than a stand-alone remote patient monitoring system?

The case for Integrated Virtual Care

There is an expectation that virtual care and virtual hospital models will contribute to alleviating the increasing demand on healthcare services and provide a scalable approach to mitigate workforce shortages across the health system.

Health services we interviewed shared their ambition to safely manage up to 5-10 times the number of patients at home or in the community, compared to their current inpatient bed capacity.

To achieve this, virtual care need to leverage technology to:

1. Provide a sustainable staffing model - increase productivity by managing patients by exception, and assisting clinicians to focus on what needs their attention, whilst also automating workflows.

2. Deflecting capacity from hospital-based treatment into the home setting and community - by enabling telehealth visits, patient self-service and Remote Patient Monitoring (RPM).

Virtual Care services can provide lower cost per episode of care and can be economically cheaper to scale. McKinsey recently estimated the average cost saving from delivering care virtually, compared to brick-and-mortar hospital care. This was assessed across 28 high-volume diagnosis related groups (DRGs) in Australia at $1,400 per episode if virtual beds have no impact on hospital occupancy and $3,300 if the virtual care or virtual hospital service reduces the need to build new physical hospital beds. [1]

Further, virtual care provides a means to deliver patient-centred care which considers patient comfort and preference. It can provide access to care for patients who are unable to attend a physical care setting and improve overall population health outcomes by reducing inequity.

An often-overlooked aspect is that virtual care models and virtual hospital services can become the catalyst to provide a seamless omni-channel experience for clinicians when platforms and services are well integrated. Investing in virtual care therefore, if planned correctly, can be an investment in clinician satisfaction and improved clinician experience.

A recent Deloitte report[2] highlighted that with the backing of robust, integrated technology solutions and steadfast governance structures at local, state and national levels, virtual health services are poised to become essential and enduring components of the broader healthcare system.

Data interoperability will play a pivotal role in bridging the gaps between fragmented care settings, dismantling service silos and facilitating the development of reimagined healthcare pathways. The power of data will further unlock untapped value in the healthcare system, paving the way for more sophisticated, precise and timely interventions through the incorporation of explainable Artificial Intelligence (AI).

The potential for the healthcare system extends beyond merely virtual health; it encompasses the opportunity to digitise new workflows and alleviate the friction currently experienced by healthcare

[1] McKinsey Virtual Hospital Diagnostic CXO Report, February 2023
[2] Deloitte, Care 'Without Walls' Report, March 2023

workers. By embracing these advancements, we can create a more streamlined, efficient and patient-focused healthcare experience for all.

To achieve the above outcomes, the technology platform selected should be tightly integrated into the wider ecosystem, architected to make use of existing and newly created patient data to support clinical decision making and service improvement with the clinician and patient experience at its core.

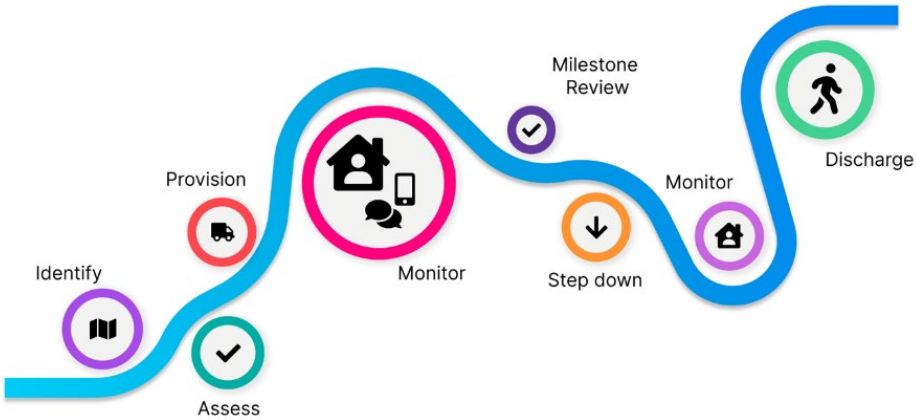
"We've had an EMR for close to 30 years. We need to bring that rich capability in the virtual care context and so ***we need platforms and tools that are deeply integrated with that platform and that's really the approach that we took when we selected Alcidion through our competitive process.*** *We wanted a tool set that could work with that existing infrastructure, bring the best of that infrastructure whilst also allowing us to reach into people's homes with devices and technology and services that they like."*

Richard Taggart, Former Sydney LHD CIO at "The Frontline of Virtual Care" Webinar, November 2022

The Alcidion Approach

The following provides a high-level capability summary of Alcidion's foundational platform Miya Precision, which is used by Sydney Local Health District's RPA Virtual Hospital as their Virtual Care Information System.

Outlined are the key capabilities supporting care models along the virtual care maturity continuum - from health services looking to begin their virtual care journey by virtualising a few selected care pathways, to healthcare organisations that have the ambition to provide all aspects of acute hospital care, by means of an integrated virtual hospital.



Miya Precision – Typical Virtual Care Patient Journey for inpatient-step down services including remote monitoring

Miya Precision supports all aspects of virtual care, from triage and emergency management capability (e.g. the Virtual Emergency Department), inpatient step-down services (e.g. post-surgical early discharge to home based care), specialty care services (e.g. RPM of certain cardiac conditions, diverticulitis, gestational diabetes, etc.) all the way to comprehensive acute care provision by a dedicated virtual hospital, such as the Royal Prince Alfred Virtual Hospital (RPA Virtual).

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"We've talked to a lot of agencies (100+) about their virtual care ambitions, and what they've been doing over the last couple of years, and ***a platform that integrates clinical data from wearable devices with the electronic medical record is absolutely the fundamental infrastructure that a virtual hospital requires.*** *We haven't found any other agencies out there that have said to us 'this is how we've done that' so we're very excited about further refining our Miya Precision virtual care product and sharing that work with others."*

Miranda Shaw, General Manager RPA Virtual at the "The Frontline of Virtual Care" Webinar, November 2022

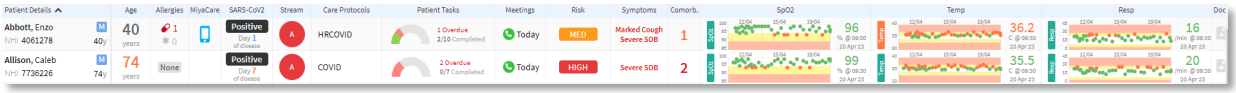
Miya Precision is a cloud-hosted healthcare informatics platform that enables healthcare organisations to address an extensive range of clinical challenges and provide an enterprise-level foundation to address continuously evolving models of care:

- It is natively designed to ingest healthcare data from multiple sources such as the Electronic Medical Record (EMR), patient-entered data, connected medical devices, community, general practice and unify their representation in the modern interoperability standard Fast Healthcare Interoperability Resource (FHIR) format
- The platform is designed from the ground up for two-way interoperability so data captured and processed in Miya Precision can be synchronised in real-time with other systems e.g. the EMR, specialty clinical and operational systems and Patient Administration Systems (PAS)
- It tracks data provenance so the same category of data can be viewed and analysed in different ways (e.g. hospital vs device vitals, clinician vs patient stated, etc.)
- It provides standard terminology and ontology management (SNOMED, ICD, etc.) to provide a discrete yet coherent view of longitudinal data. Clinical staff have real-time access in the application to risk-rated lab results, radiology reports/images, documentation, referrals, encounters, medication and patient history
- In contrast to stand-alone RPM systems, Miya Precision is designed to monitor patients across different care settings e.g. inpatient and virtual care
- It includes an integrated Clinical Decision Support (CDS) engine that allows healthcare organisations to define clinical rules and integrate AI algorithms to detect changes in health care trajectory, identify clinical risks, risk-stratify patient cohorts and reinforce best practice
- It supports flexible notification and escalation policies that ensure that the right staff are notified at the right time of opportunities to preventatively mitigate patient risk
- The platform has a highly configurable front-end (200+ interactive widgets) that allows healthcare organisations to configure the user interface to manage different patient cohorts as well as different models of care, leading to faster adoption
- The open standards-based approach (FHIR Server) allows healthcare organisations to build applications and functions on top of Miya Precision

Miya Precision has features to support scalable collaborative care including:

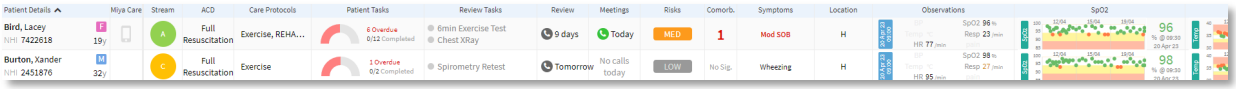
- Candidate detection (using EMR integration and Natural Language Processing (NLP) to analyse clinical notes) to identify high risk cohorts for virtual care (e.g. avoidance programs for ED; substitution services for inpatients; high risk re-admission patients; etc.)
- Deliver "Speed to Value" providing a fully open and interoperable platform which is vendor agnostic in its approach so that diverse and innovative care models can be safely and quickly deployed using a variety of different RPM devices and applications
- Deploy configurable care plans and rules that underpin clinical care workflows for different patient cohorts. See examples below:

COVID Home Monitoring



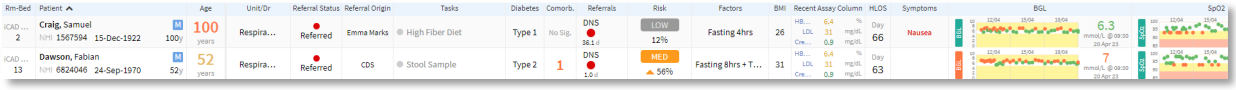
Acute Diverticulitis Home Monitoring

COPD Home Monitoring



Diabetes Home Management

Inpatient Referral Review for Diabetes Home Management



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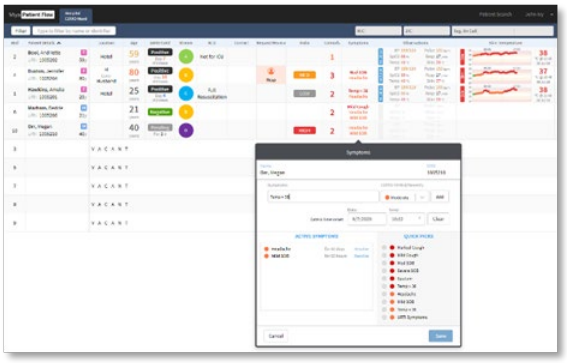
*"We wanted to be very **modular in our approach because we knew that we would need to add or take away services to try and land on those services that really had the highest level of clinical outcomes**, patient experiencing and clinician experience, but also to have the breadth and depth of toolsets so that we can be flexible and add on new models of care overtime."*

Richard Taggart, Former Sydney LHD CIO at the recent "The Frontline of Virtual Care" Webinar, November 2022

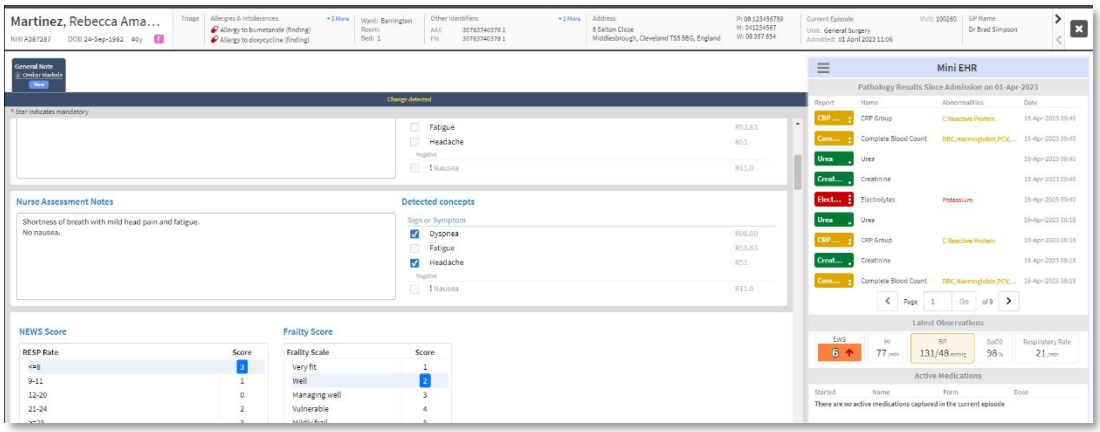
Where data is not available from enterprise systems or the patient, clinicians directly update information in the clinical monitoring dashboard. This ensures the latest status is presented. Additionally, they leverage the dynamic eNoting capabilities, with NLP to automatically detect concepts as well as use voice recognition.

The example on the right illustrates updates to a tailored list of symptoms.

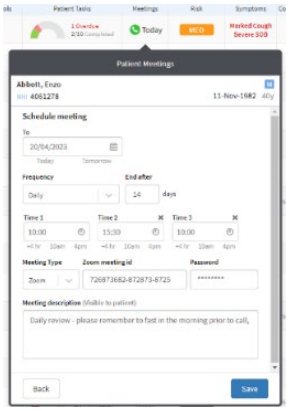
The example below illustrates a progress note following a virtual consultation, including dynamic update of quality measures/scores, in the context of the patient's lab/rad results and recent vitals.



Miya Precision – COVID-19 Symptom Recording Dashboard



Miya Precision – eNoting/Smart Noting capabilities



Miya Precision – Integrated Telehealth capabilities

Patient Contact enables appointment scheduling and reminders to display on the clinician dashboard. This provides a convenient, time saving and streamlined experience for clinicians.

This feature is integrated with third party communication and scheduling solutions such as Healthdirect, Microsoft Teams, PEXIP, Zoom and Coviu.

Using this capability, the care team can directly engage with patients for scheduled and unscheduled tele-visits via our patient app, or any third-party or partner consumer portal or application.

This synchronisation means that patients are always aware of their scheduled activities.

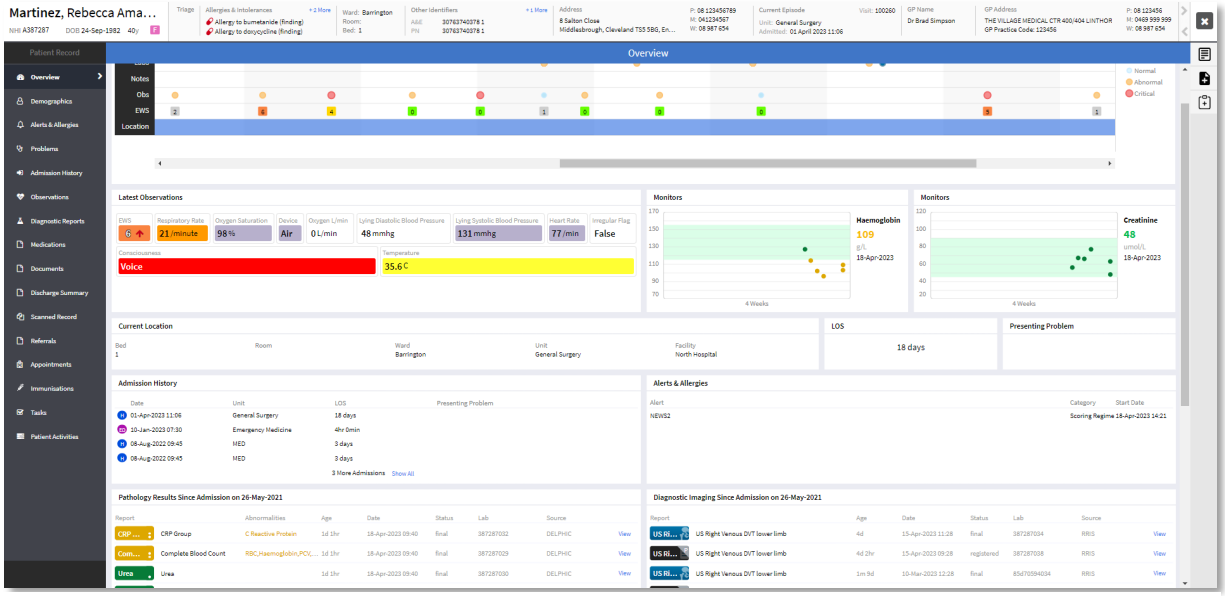
"The Miya Precision platform has been able to make it easier for the nursing staff to keep track of the patients and reducing some of that time to schedule the calls, as they're already prescheduled, and also just having that oversight of the patients has made it a lot easier to coordinate those medical reviews."

Kiah Fleming, Nurse Unit Manager, RPA Virtual

Miya Precision's CDS provides a powerful method of defining and validating rules. It can aid in candidate detection, highlight risk/s based on advanced algorithms and "tag" patients or events in real-time (with full patient and organisational context). For example, this capability can create a real-time output of patient lists aligned with specific criteria as defined in a nominated care pathway across progress notes, labs, results, events, patient history, etc.

Miya Precision analyses all rules and outputs to ensure consistency and accuracy. Action templates allow clinicians to quickly implement mitigation strategies such as ordering new tests, referring to other services, changing drug doses, creating tasks for follow up, etc.

Active CDS is possible due to the FHIR-standards based longitudinal record that underpins the Miya Precision platform. This capability also provides clinicians with a complete view of a patient's record across the care continuum.

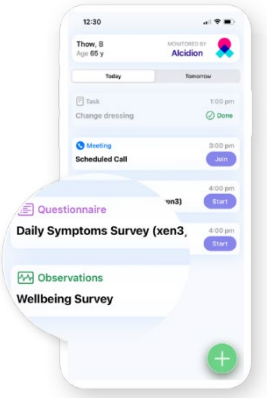


Miya Precision – Longitudinal patient record

Patient Engagement Application & Remote Patient Monitoring

Our patient facing mobile application, Miya Care, acts as both a guide for the patient through their care journey and a tool to capture information which is surfaced back to clinicians on the speciality dashboards. This is available in a BYOD model that allows patients to use their own devices and/or a Mobile Device Management (MDM) controlled enterprise mode enabling equitable care for patients that do not have a mobile device.

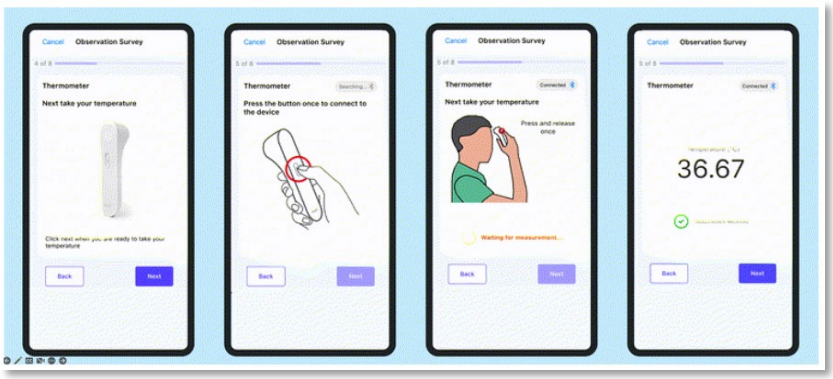
It is designed with an easy-to-use interface that facilitates patient and clinician collaboration and communication.



Miya Care – Patient Survey

Miya Care provides several features to facilitate excellence in virtual care and RPM, including:

- High level patient information and care plans for which the patient is registered
- Configurable questionnaires with animated instructions to patients in an intuitive way to allow the capture of key information
- Creation, completion and tracking adherence to scheduled care protocols and ad-hoc tasks
- Notifications to complete assigned tasks e.g. observation capture, questionnaires, symptom scoring, patient reported measures and delivery of education material
- Recording observations and other questionnaires in flexible ways to facilitate the needs of different patient cohorts
- Issuing reminders for medications, upcoming appointments and scheduled video/voice calls
- Facilitating patient monitoring through device agnostic integration with prompts to connect biometric equipment if required
- Native Bluetooth integration with RPM devices in a vendor and device agnostic model

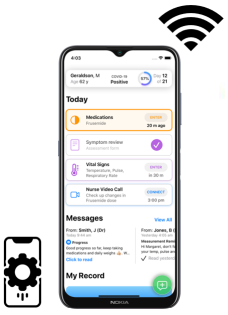


Miya Care – Patient guided process (inc. animations) for integrated vital measurement from Bluetooth-connected RPM devices

Device Management as a Managed Service

Alcidion provides an end-to-end RPM device managed service which includes the full supply chain for patient devices.

This includes the provision and dispatch of Health Service branded kits with RPM devices, aligned with the patients care needs, direct to the patient. This is facilitated through the Miya Precision platform.



To date, we have integrated with iHealth devices. However, the service is completely agnostic to the device types and as such we offer a vendor neutral and flexible model for virtual care.

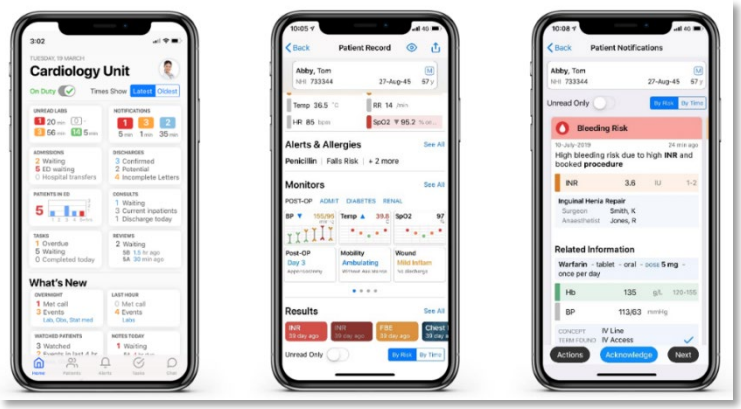
The device management service delivers remote support via call-centre capability for patient device support, optional at home device setup services, as well as handling the entire device life cycle including device return, testing, fault management, replacements, sanitisation, and refurbishment.

We also provision secure mobile device managed handsets and data connectivity packages to support patients, in both metro and rural settings.

Integrated Clinician Mobile Solution

Alcidion offer an advanced mobile application, Miya Memory, that provides clinicians with information from their existing systems (e.g. clinical, administrative, diagnostic, etc.) and their virtual care information system (Miya Precision) on a consolidated mobile application.

It is designed to present CDS risk rated information so clinicians can quickly see emerging clinical risk and outstanding tasks and automate clinical best practice with a few taps. This mobility means that clinicians have access to information wherever and whenever it is needed.



Miya Memory – Mobile EMR App

FOR MORE INFORMATION, PLEASE EMAIL INFO@ALCIDION.COM
TO DISCUSS YOUR VIRTUAL CARE NEEDS

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