

Bringing care home

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The pressure on Australian healthcare

Why virtual and home-based care is no longer optional for aged care

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St Vincent's Bringing Care Home strategy

Vision, service scope and what we are building across acute and aged care

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Foundational digital concepts

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Virtual RIR & machine learning in action

Virtual specialist in-reach, HITH patient selection, and reference models

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AI use cases for frontline aged care staff

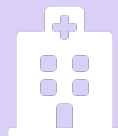
How we've prioritised the most important problems

The system is at a tipping point..



1 in 5

Australians will be
aged 65+ by 2030



43%

of aged care residents
hospitalised each year



↑ 68%

projected home care
demand increase by 2050



\$18B

annual cost of
avoidable hospitalisations

For aged care providers: workforce constraints, regulatory pressure, mandatory care minutes and rising acuity mean that continuing to deliver care the same way is not sustainable. Digital innovation is not a 'nice to have' – it is the pathway to viability.

- ✓ High annual sector turnover & loss of institutional memory
- ✓ Evidence collection obligations across every contact
- ✓ Mandatory care minutes & AN-ACC compliance burden
- ✓ Escalating resident acuity and complex clinical management

St Vincent's: A microcosm of the health system



180

years

Heritage as a social enterprise,
public sector partner & innovator



30K+

people

Clinicians, carers, allied health
and support staff Australia-wide



1M+

contacts p.a.

Patient contacts per year across
hospitals and care services

Our current care portfolio – operating across the full care continuum



**2 major public
hospital networks**

Melbourne & Sydney



**10 private
hospitals**

Nationally



**Virtual & home
care services**

QLD · NSW · VIC



**Residential aged
care facilities**

Across Australia

The Vision: Bringing Care Home

A high value care strategy – acute, virtual, chronic and aged care delivered where people choose to be



Acute Care at Home

Hospital-equivalent care in the home – from pre-admission through post-operative recovery. HITH, virtual ward rounds, remote clinical monitoring. Designed to improve outcomes, enhance recovery, and give hospitals more capacity.



Chronic Care Management

Integrated services for heart failure, COPD and cardiometabolic conditions. Wearable devices, 24/7 monitoring, and a Virtual Care Command Centre to detect, treat and manage issues before they escalate to hospitalisation.



Ageing Care

High-quality, connected aged care at home, in residential care, or wherever people choose. Supported by AI, interoperable data, and a workforce empowered with decision-support tools to deliver safer, more efficient care.

"We'll use the power of our existing networks and 30,000 talented people to build dynamic, interconnected precincts of excellence, research, education and collaboration."



Ageing care

We're leading the development of high-quality, connected aged care that can be delivered at home, in residential care facilities, or anywhere people choose to be.

Foundation #1 – Interoperability: One Patient, One Record

Without interoperability

- Clinicians manually re-enter the same patient data across multiple hospital, residential and community systems
- Transitions of care – hospital to home to aged care – create dangerous information gaps
- Aged care providers lack visibility of discharge summaries and medication changes
- Duplicate testing, delayed care plans, and avoidable readmissions

Our dual-model approach

HL7 FHIR R4 / AU Core

Interoperability layer – real-time patient record sharing across care settings. Core system data consumed by home care, aged care and virtual ward platforms without manual re-entry. Aligned to ADHA My Health Record and AU Core profiles.

Connects: Multiple core information systems · ADHA My Health Record · community providers

OMOP Common Data Model

Analytics layer – standardised observational data model enabling population health analytics, ML model training and outcome research across SVHA's full patient cohort.

Powers: predictive models · benchmarking · research · quality measurement

Foundation #2 – Data Platform & Virtual Care Command Centre

BRONZE – Raw Ingestion

Meditech · WebPAS · AutumnCare · BestMed · RiskMan · Wearable streams · Community EMRs

SILVER – Processed & Enriched

Entity extraction · NLP tagging · Patient knowledge graph · Temporal time-series · Feature store

GOLD – Analytics-Ready

Aggregated insights · Resident profiles · Clinical KPIs · Workforce metrics · Compliance dashboards



Virtual Care Command Centre

- ✓ Real-time patient deterioration alerts
- ✓ Remote monitoring telemetry feeds
- ✓ Care escalation workflows
- ✓ Clinician task management & triage

Key delivery partners & platforms

Foundation #3 – Remote Monitoring to Supplement Clinical Assessment

Traditional clinical assessment

- Point-in-time observation at scheduled review only
- Subjective documentation – shift-dependent and variable
- No clinical data between formal assessments
- Deterioration often missed until an acute event

Digital-augmented assessment

- ✓ Continuous biometric telemetry – objective & timestamped
- ✓ AI synthesis of multi-stream signals for clinician review



Cardiac & vitals monitoring

Continuous ECG, SpO₂, heart rate, respiratory rate via wearable patch – streamed in real time



mHealth & patient-reported

Medication adherence prompts, symptom check-ins, daily self-assessments via mobile app



Ambient sensing

Movement patterns, falls detection, sleep quality and activity levels through passive sensing

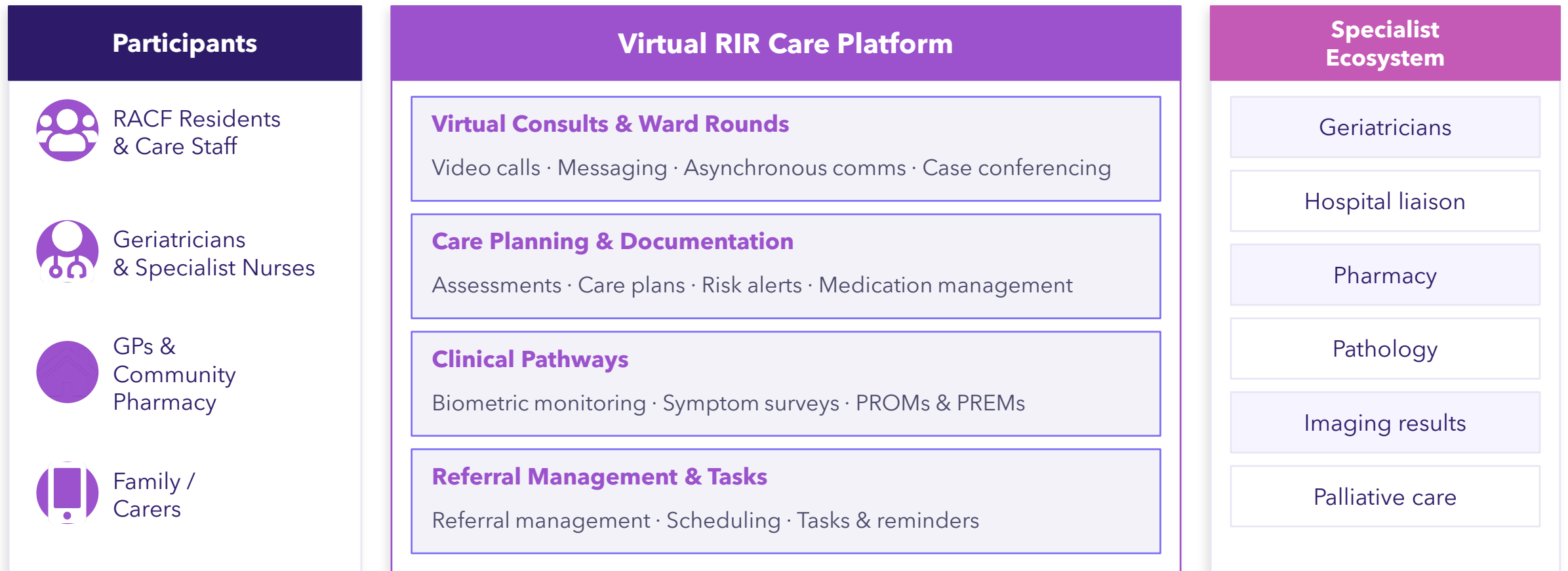


Command Centre integration

All streams feed CommandView for clinician triage, escalation and care plan adjustment

Virtual Residential In-Reach – Specialist Care Without the Transfer

The challenge: When a residential aged care resident needs specialist review, the default is hospitalisation – disruptive, costly, and often avoidable. Virtual RIR brings geriatrician-led specialist care into the facility through a connected digital platform, with care staff, GPs, pharmacy and family all participating in a shared model.



Virtual Specialist In-Reach

The Virtual RIR model applies a well-evidenced virtual specialist care pattern to aged care. Two reference implementations are instructive for SVHA's design:



Mater Hospital – Tele-Neonatology

Queensland, Australia

- ✓ Neonatologists at Mater Brisbane provide real-time specialist guidance to regional Queensland hospitals via secure video link
- ✓ Clinicians initiate a consult within minutes – avoiding high-risk neonatal transfers in critical early hours
- ✓ Shared care plans and digital documentation ensure the specialist review is immediately visible to the bedside team
- ✓ Reduced neonatal transfers, improved clinical confidence in regional settings, and faster escalation when transfer was genuinely needed

Parallel: RACF staff initiate Virtual RIR referral within minutes when resident concern arises



Mayo Clinic – Connected Care Platform

Rochester, USA – International reference

- ✓ Mayo's Connected Care delivers specialist consultations across 4,800+ care sites – including aged and long-term care facilities – through asynchronous and synchronous eConsults
- ✓ Embedded remote monitoring with automated threshold alerting allows specialists to proactively review deteriorating patients before a crisis triggers emergency presentation
- ✓ Clinical data – vitals, notes, imaging – surfaced to the specialist in advance, enabling prepared 10-15 min virtual reviews with documented outcomes
- ✓ Documented reduction in unnecessary referrals, shorter escalation cycles, and measurable improvement in resident-level outcomes

Parallel: pre-populated consult briefs and threshold alerts are our Stage 3 proactive RIR target

From Reactive to Proactive – Interoperability Matures the RIR Model



Stage 1

Reactive

Human-initiated, document-driven

- Concern raised by RACF staff – GP phoned
- Referral faxed or emailed to geriatrician
- Specialist reviews with no prior clinical context
- Each consult starts from scratch – no shared record
- Hospitalisation the default when uncertainty is high

Current state for most RACF interactions



Stage 2

Connected

Platform-enabled, shared care

- Virtual RIR platform connects RACF, GP, geriatrician, pharmacy
- FHIR-enabled: care plans, medications, pathology shared in real time
- Structured referral with triage classification (urgent/routine)
- Video consult with shared documentation – documented once, visible to all
- Specialist decision pushed to all care team members automatically

SVHA Virtual RIR – under design



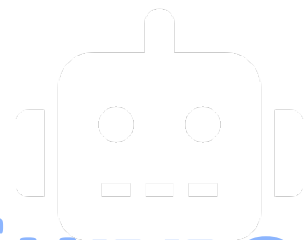
Stage 3

Proactive

AI-augmented, anticipatory care

- Analytics identifies residents trending toward clinical change
- ML model flags deterioration 48-72hrs before acute presentation
- Automated specialist worklist: residents prioritised by acuity trajectory
- Pre-populated consult brief – vitals, notes, prior episodes – ready before the call
- Remote monitoring feeds Command Centre: threshold alerts trigger proactive consult

SVHA roadmap – Future focus



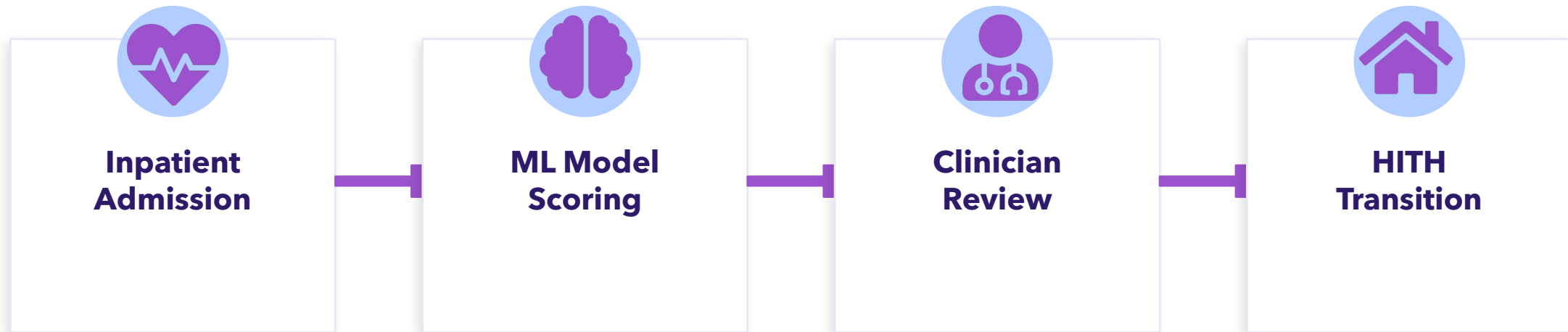
AI to Support Our Frontline Aged Care Staff

Shifting from reactive documentation to proactive intelligence

Use cases from St Vincent's Care Services AI Innovation Program

ML in Action – Selecting the Right Patient for HITH at the Right Time

The challenge: Identifying which hospital inpatients are safe and appropriate to transition to Hospital in the Home requires significant clinician time and subjective judgement – creating bottlenecks and missed opportunities for earlier discharge.



What the model evaluates

- ✓ Diagnosis and clinical acuity scoring
- ✓ Length of stay trajectory and clinical stability
- ✓ Social supports and home environment suitability
- ✓ Prior HITH episodes and readmission history

Value delivered

- ✓ Frees clinician time for high-acuity bedside decisions
- ✓ Reduces average length of inpatient stay
- ✓ Expands HITH capacity – systematically, not ad-hoc
- ✓ Improves patient experience and care autonomy

Our Approach: Start with frontline pain points, not AI tools



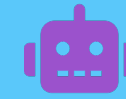
Phase 1: Discovery

We ask: "What problems do your people face?"
Frontline staff workshops surface specific 'How Might We' questions grounded in real operational and clinical pain points.



Phase 2: Solution Design

Map pain points to AI solution concepts. Apply WSJF (Weighted Shortest Job First) scoring to prioritise by business value, time criticality, and risk reduction – not AI novelty.



Phase 3: Proof of Value

Build lightweight, governed MVPs. AI Governance Gate is mandatory before production: clinical safety sign-off, bias assessment, explainability standards, post-deployment monitoring.

WSJF Prioritisation: we score every use case before committing

Business Value

Impact on care outcomes, compliance, revenue or workforce retention

Time Criticality

Urgency of the problem – does delay cause ongoing harm or loss?

Risk Reduction

How much does solving this reduce clinical or operational risk?

Job Size ÷ (effort)

Estimated implementation complexity – smaller = higher priority

AI Use Case – Compound Signal Deterioration Detection

Current State

Humans struggle to track disparate, mild symptoms across different shifts and carers. Deterioration is often not recognised until it has progressed to an acute event requiring hospitalisation.

- Subtle change in appetite (Monday)
- Slightly elevated temperature (Tuesday)
- Mild confusion noted (Wednesday)
- **Acute sepsis presentation (Thursday)**

The AI Shift

ML and GenAI models continuously interrogate progress notes, vitals and observations – cross-referencing against a curated Compound Signal Pattern Library covering sepsis, UTI, pneumonia and stroke.

- ✓ Pattern detected across shifts – not isolated events
- ✓ Clinician alert generated within hours of compound signal
- ✓ Intervention before acute deterioration
- ✓ Reduction in avoidable hospitalisations and SIRS reports

Value: Detects deterioration days before an acute event – reducing SIRS incidents, avoidable hospitalisations and improving resident quality of life.

What This Means for Consumers — Outcomes at the Centre



Care at Home

Receiving hospital-equivalent or aged care support in the comfort and familiarity of home, reducing unnecessary and distressing hospital admissions.



Earlier Intervention

AI-powered deterioration detection means clinical issues are identified days earlier — reducing acute events, emergency presentations, and SIRS incidents.



Connected Experience

St V Passport and St V Hub give consumers and carers a single, trusted digital touchpoint — for health records, care plans, monitoring, and communication.



Dignity & Preference

Technology enables care to follow the person — respecting preference to age in place, with clinical rigour and safety built into every digital interaction.



Family Confidence

Remote monitoring and digital reporting give families real-time confidence that their loved one is safe, monitored, and cared for.



Outcomes Evidence

PROMs and PREMs captured digitally allow continuous measurement and improvement of what matters most to the people in our care.

Key Takeaways



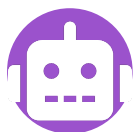
Virtual and home-based care is the future of sustainable healthcare – and aged care is central to that shift.



Interoperability (FHIR R4 / OMOP) is the foundational infrastructure that makes safe, connected care across settings possible.



ML is already at work selecting hospital inpatients for HITH – and remote monitoring is deepening clinical insight between assessments.



Aged care AI use cases – falls prevention, deterioration detection, AN-ACC intelligence – are prioritised, governed, and on roadmap.



Governance is non-negotiable. Every AI application requires clinical safety sign-off, bias assessment, and human oversight before going live.

Thank **you**

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