Empower Clinical Leadership with AI

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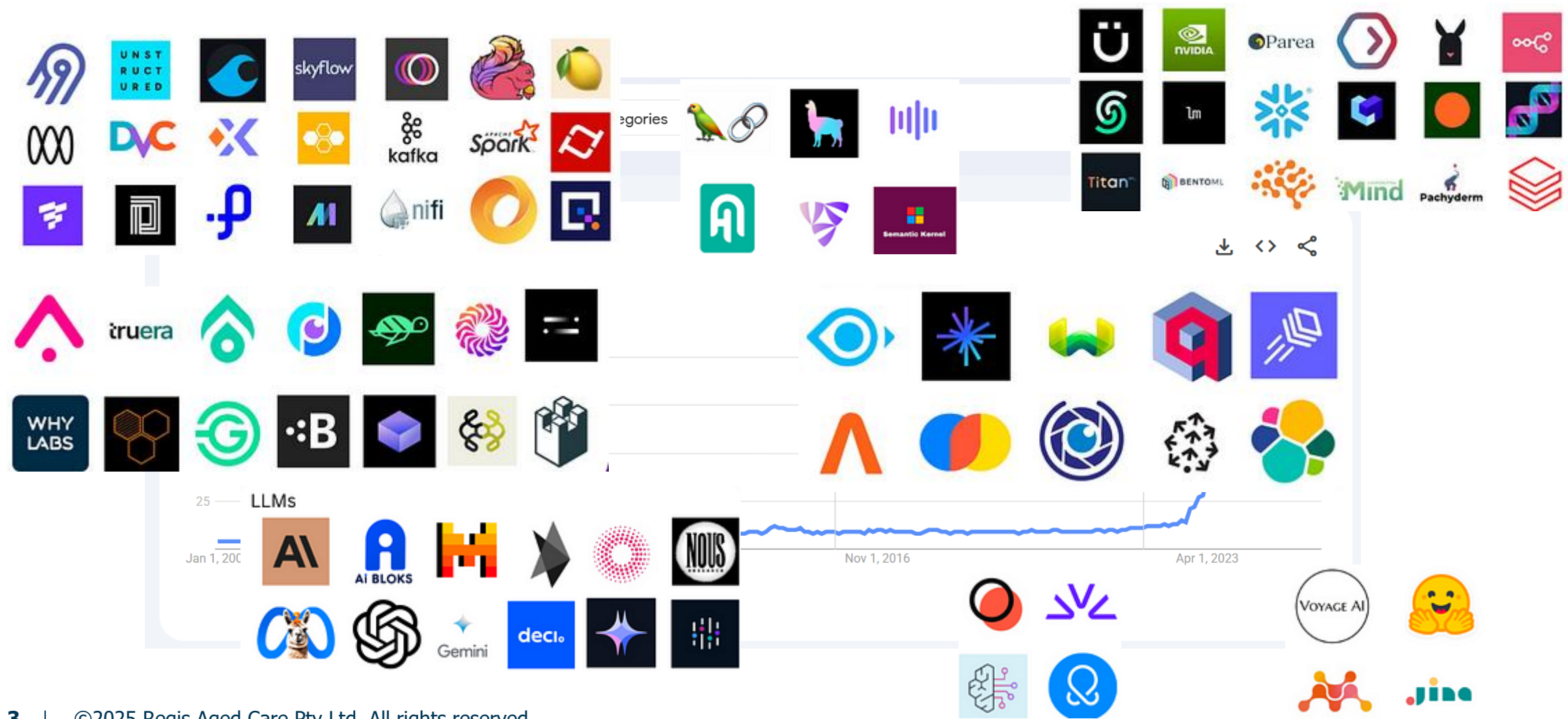
Acknowledgement of Country

Regis acknowledges the Traditional Owners of Country throughout Australia and recognises the continuing connection to lands, waters and communities.
We pay our respect to Elders past and present.

In November 2022, GPT became accessible to the public and AI systems grew exponentially since then.

The Challenge

Senior clinicians typically spend up to **40% of their time at their desks** primarily reviewing residents' progress notes, creating follow-up plans and completing administrative tasks.

This creates a cascade of challenges:

⚠ High stress and time pressure to be on the floor

🧩 Rushed or incomplete review

⏳ Follow-up plans are delivered in an untimely manner

🔍 Critical information can be missed

The Opportunity

A custom Regis AI System to **unlock clinical efficiency** and accuracy.

It generates summaries of progress notes, assists with creating follow-up plans, and **acts as a virtual assistant** to:

- **Surface key clinical events** quickly and consistently, reducing the risk of missed insights.

- **Accelerate the creation of follow-up plans**, enabling timely and informed care interventions.

- **Free up senior clinicians' time** to focus on direct resident care.

Choosing the appropriate large language model (LLM) was the first step in building a safe and effective custom AI System.

Criteria

☑ High data analysis capability

☑ Fast

☑ Cost-effective at scale

☑ Securely hosted in Australia

☐ Specifically trained on clinical data of the Australian market

☐ Can analyse 100,000 words single handedly and accurately

GPT-4o met most of these needs and became the starting point.

But regardless of the underlying large language model (LLM), we designed the AI System to be flexible and clinically safe.

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1. Prompt engineering

2. Grounding using Retrieval Augmented Generation (RAG)

3. Chunking strategy

4. Modular prompt management

* Currently limited to what's available in Microsoft.

Engineered prompts are just a **button click** away.

➔

Regis Health Care

NEW CHAT   DOWNLOAD CHAT

Summary of Clinical Events

A complete overview of significant clinical events and interventions of each resident.

Agitation

Highlights residents who were agitated and how it was managed.

BNO/Constipation

Tracks residents with constipation or no bowel movements and interventions.

←

Immediate Clinical Concerns

Lists residents with urgent health issues requiring immediate attention.

Non-Regular Medication and Evaluation

Tracks residents who received as needed, nurse-initiated and emergency medications and the outcomes.

Refusal of Care

Lists residents who refused care and actions taken to address it.

→

Hello! I'm your Clinical Care AI Assistant.

I'm here to help you by highlighting key clinical events from Progress Notes, such as:

- Agitation
- BNO/constipation
- Immediate concerns
- Non-regular medications
- Refusal of care
- Signs of pain or infection

Upload your file, and I'll summarize the details you need to support better care decisions!

57 minutes ago

2025_05_15_17_49_11_Chelmer Boyland Wing 13-14 Jan 2025.pdf

A minute ago

File: *2025_05_15_17_49_11_Chelmer Boyland Wing 13-14 Jan 2025.pdf* uploaded successfully.

A minute ago

Type your message

ACCURACY TEST

Clinical Concern	Clinician Accuracy	Generic AI System (closed) Accuracy	Regis AI System Accuracy
Immediate Clinical Concerns	53%	29%	**76%**
Signs of Pain	**92%**	38%	69%
Constipation	**100%**	63%	84%
Agitation	50%	63%	**100%**
Medication	71%	38%	**76%**
Refusal of Care	67%	50%	**75%**
Total	74%	46%	**79%**

Accuracy is based on how many residents were identified who exhibited specific clinical concerns.

Pilot Insights

Aim: The AI System to transform the daily routine of the Clinical Leadership Team (CLT)

A day in the life of a CLT <u>before</u> introducing the AI System

7.30am
- Arrives at work, completes walkaround and checks in with nurses
- Begins responding to ad hoc clinical issues

9am – 10.30 am
- Attends frontline meeting and nurses' huddle with limited clinical oversight
- Continues responding reactively to priority tasks

~2-3pm
- Progress notes not able to be reviewed until the afternoon.
- Follow-up plan created (through a time-consuming process of extracting information and writing)
- Plan typically sent to RNs around 3pm
- Occasionally unable to complete review until the next day

A day in the life of a CLT when <u>using</u> the AI System

7.30am
- Arrives, completes walkaround and nurse check-ins

8am – 8.10am
- Uploads 24-hour progress notes to AI system
- AI generates a clinical summary and a preliminary, draft follow-up plan, and CCM to review

9am – 10.30 am
- Attends frontline meeting and nurses' huddle better prepared and with clearer oversight of clinical issues

<12 noon
- Edits the AI-generated follow up plan based on meetings, progress notes and resident check-ins
- Sends the plan to nurses before 12 noon, enabling earlier action on care priorities

The AI System saved time by accelerating care follow ups

Previously 1.5 - 3 hours (depending on the day's complexity, interruptions and prior nurse communication)

- Analysing clinical information
- Making phone calls to gather context
- Following up with nurses and escalating issues
- Making follow-up plans

When using the AI System Under 1 hour

~2 hours per day is saved per CCM!
Time savings reading the progress notes vary by person, the real benefit emerged in streamlining the creation of follow-up plans

Routine with AI
Here is the new daily routine with AI:

7.30am
- Arrives, completes walkaround and nurse check-ins

8am – 8.10am
- Uploads 24-hour progress notes to AI system
- AI generates a clinical summary and a preliminary, draft follow-up plan, and CCM to review

9am – 10.30 am
- Attends frontline meeting and nurses' huddle better prepared and with clearer oversight of clinical issues

<12 noon
- Edits the AI-generated follow up plan based on meetings, progress notes and resident check-ins
- Sends the plan to nurses before 12 noon, enabling earlier action on care priorities

The AI System saved time by accelerating care follow ups

Previously   1.5- 3 hours (depending on the day's complexity, interruptions and prior nurse communication)

- Planning and analysing clinical information
- Making phone calls to gather context
- Following up with nurses and escalating issues
- Making follow-up plans

When using the AI System   Under 1 hour

~2 hours per day is saved per CCM!
Time savings reading the progress notes vary by person, the real benefit emerged in streamlining the creation of follow-up plans

Where is that time going?

Resident care
More time spent directly with residents, checking on wellbeing, addressing risks and being on the floor.

"There are no tools that help us spend more time with residents. This one actually does!"

- CCM

Proactive staff support
More frequent check-ins and communication with nurses and ensuring smoother and more effective delegation of tasks.

But beyond time savings, the AI System builds clinical confidence, clarity and coordination.

Benefit

1	Enables earlier care interventions and issue prevention
2	Supports better prioritisation
3	Reduces unnecessary back-and-forth with RNs
4	Reduces cognitive load and enhances comprehension
5	Improves team confidence and leadership

Overall, the AI System was found to be clinically accurate and easy to use.

0 Hallucinations

"Mostly easy"

"Very easy"

During the 2-week trial, the AI System provided **no made-up or clinically inaccurate information**.

94% of the time, senior clinicians rated the system as **"very easy"** to use.

For clinicians who experienced challenges with reviewing progress notes and creating follow-up plans, the AI System was rated **"very helpful" every day of the trial.**

We are introducing the AI System as a supportive companion, not as a replacement for clinical judgement.

Clinical Event Summary Assistant
This tool is to support Clinicians – not replace their clinical judgement.

What it is

An AI-powered assistant for staying on top of what's happening with your residents. This tool reads through uploaded progress notes and helps you quickly understand the key clinical events in the past 24 hours.

What it's not

- It's not a replacement for reading individual progress notes.
- It's not a diagnosis or decision-making tool.
- It's not replacing your clinical judgement.

When it's useful

Before frontline meetings: Walk in feeling more prepared to discuss your residents.

During RN huddles: Quickly spot which residents have had significant clinical changes.

Planning follow-up care: Get a clear picture of what's been happening, so you can decide what actions may be needed next.

We enabled responsible AI adoption through learning, guidance, and continuous reinforcement.

Created training videos
Development of a series of AI System training videos.

Designed and tested new prompt buttons
Build and validate pre-written prompts.

Onboarding Workshops
To educate clinicians on the use of AI (Dos & Don'ts)

Crafted Quick Reference Guide (QRG)
One-page guide with sample prompts, dos and don'ts, and tool tips.

Added an Incident Escalation Process
Defining how issues with AI output are identified, reported, and resolved.

Created Policy on AI for Clinical Use
Introduced clear guidance aligned with safety, privacy, and clinical standards.

Added Process for Reading Progress Notes
Reinforcing the expectation that AI is a support tool, not a replacement.

Resources

AI Clinical Use Guide — Guidance for clinicians (Australian Commission on Safety and Quality in Health Care / Australian Government Department of Health, Disability and Ageing)

A National Policy Roadmap for Artificial Intelligence in Healthcare (Australian Alliance for Artificial Intelligence in Healthcare)

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Questions

Thank you!