

AI In Pharmacy

Practical applications, risks and what's next



Presenter Disclosures

Josh Batterink	I do not have any current or past relationships with commercial entities
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Agenda

1. AI Introduction
 2. AI Background
 - Large Language Models
 - AI Agents
 3. Current State
 4. Barriers to Expansion
 5. Questions
-



What is Artificial Intelligence (AI)?

Refers to computer systems designed to perform tasks that previously required human intelligence, such as:

- Understanding language
 - Recognizing patterns
 - Making predictions or recommendations
 - Learning from data over time
-



Large Language Model (LLM)

LLM = An AI system trained on massive amounts of text to understand and generate human-like language.

Model Components

- Multimodality
- tokens and context
- Size and efficiency and trade-offs

Model characteristics will determine the situations where it can be used as well as cost effectiveness

AI Agents and Agentic Workflows

- A goal-directed software "entity"
 - Perceives inputs
 - Completes tasks within the parameters provided
 - "Reflects" on completed tasks to allow for iteration
- May have multiple agents working collaboratively

Hi, I am Fraser, your digital health care navigator.

I can help you find the right service based on information you share with me.

If you already know what service you need, click on a box below.

If you aren't sure, click on 'Fraser, can you help me?' to start a chat.

My knowledge is still growing. Visit our [main website](#) to find information on more services, including:

- [Lab appointments](#)
- [Immunizations](#)
- [Location and parking information](#)
- [Billing and fees](#)
- [Careers](#)



 Chat with Fraser! X

Find a service

Amazon One Medical introduces agentic Health AI assistant for simpler, personalized, and more actionable health care

This AI-powered health assistant provides 24/7 health guidance and takes action to connect you to your provider, book appointments, read labs, and manage meds.

HealthCare AI Agents

Speech Preprocessing

Background
Speech Isolation



Clinical Speech
Recognition System



Bilingual Switch



Slurred Speech
Comprehension



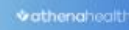
Clarify Automatic
Speech Recognition



EHR Extraction



Seamless Integration
Into All of the Large EHRs and CRMs

     [+ More](#)

Supervisor Models



Escalations



Labs & Vitals



Off-Label
(Pharma)



Nutrition



+More
>30 Models



Med
Stoppage



Medication
Identification



Condition-
specific
disallowed
OTCs



Overdose



Do No Harm
Guardrail



MCI



SDOH



DME



Multi-call
Memory

Primary Model



300B Custom Distilled
Dense Model

Outputs



HD Voice Quality



Custom Empathetic
Voice (TTS)



Dynamic Personality



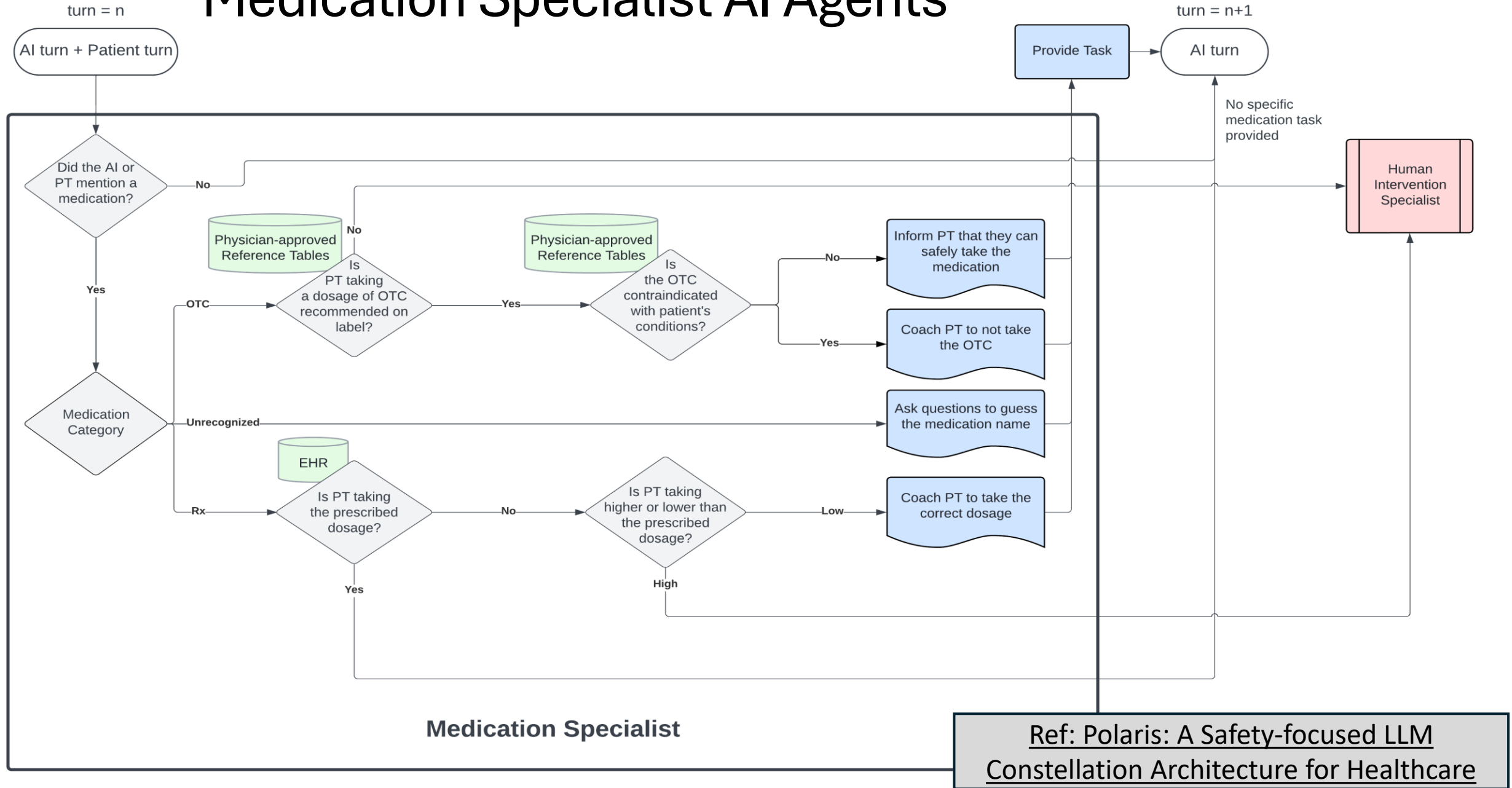
Clinical Documentation
Engine

Seamless Write Back Integration
Into All of the Large EHRs and CRMs

     [+ More](#)

Research - Hippocratic AI

Medication Specialist AI Agents





Current State: AI in Pharmacy



Example - WinRx AI OCR (Optical Character Recognition)

WinRx = Community pharmacy software used in BC



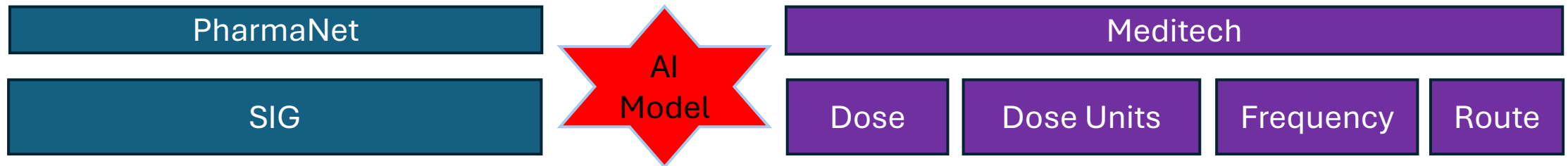
company. This technology automatically categorizes incoming faxes by reviewing the information, organizing it in a format usable by the pharmacist, and then creating a notification for manual verification. Mrar estimates the tool saves him approximately 3.5 minutes for each prescription he fills.

[WinRx AI OCR Fax Service Demo](#)

[AI Adoption: British Columbia pharmacists experiment with new tools | BC Pharmacy Association](#)

Meditech PharmaNet Integration

1. Meditech requests PharmaNet information for a patient
2. DrFirst queries PharmaNet and receives profile
3. DrFirst uses AI model to parse discrete fields from SIG field
4. Discrete fields flow into Meditech
5. Data is verified by a clinician in Meditech



DrFirst Clinical-Grade AI

Exploring agentic AI for BPMH



Best Possible Medication History (BPMH) is an essential part of medication reconciliation and the patient journey

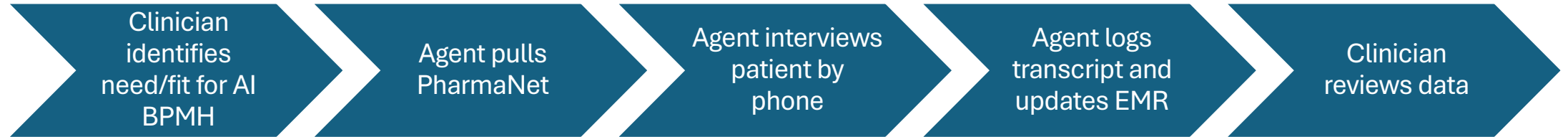


Electronic BPMH is both time and resource intensive



Using an AI Agent to conduct BPMH may be a cost effective way to improve BPMH and MedRec completion rates

Agentic AI BPMH – Simplified Workflow



- Agent must be able to follow a BPMH interview script using conversational language
- Agent must be able to incorporate PharmaNet data into interview
- Agent must be able to escalate to human when certain guardrails are exceeded
- Agent must be able to capture transcript of call
- Agent must be able to return discrete data back to the EMR either via a direct data feed or by mimicking screen clicks

Agentic AI BPMH – Important Considerations

- Guardrails and checks to ensure safety of AI model
- Human in the loop
- Data residency / data ownership
- Upfront cost of implementation and ongoing cost model
- Developing the right patient inclusion/exclusion criteria

If successful may free up pharmacists to perform higher value clinical interventions or to perform BPMH on more complex patients

Agentic AI Pre-admission / Post-admission Pilot

- AI agent phone call before colonoscopy to provide pre-colonoscopy instructions
- AI agent phone call post discharge to provide post discharge counselling and assessment



Current State: AI beyond Pharmacy



Where are we using AI in patient care?



Using AI at work...

What are our Health Authorities doing to respond to the growing use of AI?

APPROPRIATE USE OF GENERATIVE ARTIFICIAL INTELLIGENCE (GENAI)

1. Introduction

1.1. Description

This policy addresses the use of [Generative Artificial Intelligence \(GenAI\)](#) at Vancouver Coastal Health Authority (VCH).

The purpose of this policy is to ensure the use of GenAI tools at VCH:

- is safe, effective, and beneficial;
- aligns with VCH's mission and values;
- complies with professional, ethical, and legal obligations; and
- protects sensitive and [Confidential Information](#), and [Staff](#) and [Client Personal Information](#).

1.2. Scope

This policy applies to all Staff, including [Medical Staff](#) and [Credentialed Medical Providers](#) (referred to collectively as "Staff" in the remainder of the policy), and to all VCH facilities, services, and programs.

2. Policy

Clients must be notified if they are interacting with a GenAI tool, such as an AI chat bot.

If Staff are inputting Client Personal Information into a GenAI tool, Staff must inform Clients of how GenAI is being used in relation to their Personal Information and health care decisions. Staff must obtain Client consent at each Client encounter prior to inputting their Personal Information into the tool. Staff may obtain the consent verbally.

Staff who are regulated health professionals must comply with their regulatory college's rules, standards, and guidance on the use of GenAI tools.

Staff are responsible for any GenAI-created content they use in their work. Staff must apply prudent judgment and review all content.

Before using any GenAI created content, Staff must verify its accuracy. Staff must ensure they do not rely on hallucinated content.

Staff must review GenAI created content to ensure it:

- does not infringe on copyright or other intellectual property rights;
- is evidence-based; and
- complies with VCH policies.

Staff must be cognizant that GenAI content very likely contains biases and may further perpetuate bias. Staff must review all GenAI content for biases and make reasonable efforts to reduce or eliminate biased content.

Staff must acknowledge the use of GenAI in all generated content when Staff rely on it, when required by law, or when required by their professional regulatory college.

Artificial Intelligence

This content will be revised as new information, policies and legislation are updated/become available.

Artificial Intelligence (AI) is a technology system that can mimic human behavior and decision-making processes. AI can analyze, learn and reason to identify and make decisions or solve problems quickly

AI is transforming how we work and deliver care, offering powerful tools to improve efficiency, accuracy and outcomes amid growing operational pressures. As we recognize its potential, we are taking steps to ensure that it is used in a safe and responsible way that protects privacy and is aligned with policy.

VCH is collaborating with other health organizations to create a unified approach that benefits patients and improves care while ensuring that human oversight, patient privacy and research remain central to decision making.

Read: [New VCH Appropriate Use of Generative AI Policy, November 2025](#)

[Feb. 11, 2025: Use of DeepSeek banned for health authority use](#)

Do you have a question about AI at VCH or a specific AI project you want to develop? Fill out the form below or email datagovernance@vch.ca.

AI Inquiry and Project Intake Form



Using AI to Improve Discharge Planning

Leverage a machine learning solution that provides predictive information at the patient level to reduce overall length of stay and improve patient flow.



To support **prioritization** of patients for discharge-related planning and action.

- Earlier identification of which patients are likely nearing the end of their acute phase of care.
- This could facilitate proactive discharge coordination, help focus limited resources, enhance team communication and handovers.

Workflow

The daily Discharge Priority Report is available for staff to review

Priority patients are discussed in rounds and barriers to discharge are reviewed

The interdisciplinary team prioritizes early discharge planning for priority patients

GENERATED ON
January 30, 2023 7:00am

Discharge Priority Report

Priority Patients

Location	Prediction	Order	MRN	Patient	Sex/Age	Days	Tasks
8A01-01	High Priority	—	88945678	GM	M 55	3	BW, CON
8A02-02	High Priority	—	84510377	FW	F 43	21	DI, CON
8A03-01	High Priority	—	54039771	GG	F 62	11	BW

All Patients

Changed value from the last report on January 29, 2023 at 3:30pm

Location	Prediction	Order	MRN	Patient	Sex/Age	Days	Tasks
8A01-01	High Priority	—	88945678	GM	M 55	3	BW, CON
8A01-02	Medium Priority	—	51032460	CL	F 76	4	—
8A02-01	Low Priority	—	99803104	TR	M 58	4	DI
8A02-02	High Priority	—	84510377	FW	F 43	21	DI, CON
8A03-01	High Priority	—	54039771	GG	F 62	11	BW
8A03-02	—	D/C	51447302	AB	M 87	11	BW
8A04-01	Low Priority	—	51447302	AB	M 87	11	BW

BW

CON

DI

Bloodwork
Consult
Diagnostic Imaging

Destroy after use

Please delete this document after use to protect the privacy of our patients and their PHI.

Model Information: Discharge Prediction Version: 2022-09-22

SIGNAL 1

Powered by Signal 1
33 Hazelton Ave. 4th Floor
Toronto ON M5R 2E3

What is an AI Scribe?

An ambient AI scribe **listens to clinical conversations**, uses natural language processing to **auto-generate draft SOAP notes**, and lets you **review, edit, and paste** them into a patient's Electronic Health Record—streamlining documentation without interrupting patient rapport.



Why AI Scribes?



Improved
Patient
Experience



Provider Time
Saving



Improved
Provider
Well-Being

BC AI Scribe Pilots: Two Streams



Pursuing both EHR-integrated and stand-alone solutions to balance long-term system integration with immediate impact. While EHR integration is the goal for seamless workflows, stand-alone solutions offer a quicker, cost-free way to reduce administrative burden in the short term.



Enterprise AI Scribe (integrated with Cerner and Meditech)

- Often more expensive, so need to do business case
- EHR integration offers additional AI features long term



Non-EHR integrated

- Offer screen reading compliant tools to providers sooner
 - Vetted Solutions for post-pilot self-pay
- May end up being enterprise integrated solution (leveraging pilot evaluation and experience to prepare)

Project Scope

Multivendor pilot that will be implemented across VPP and FHA

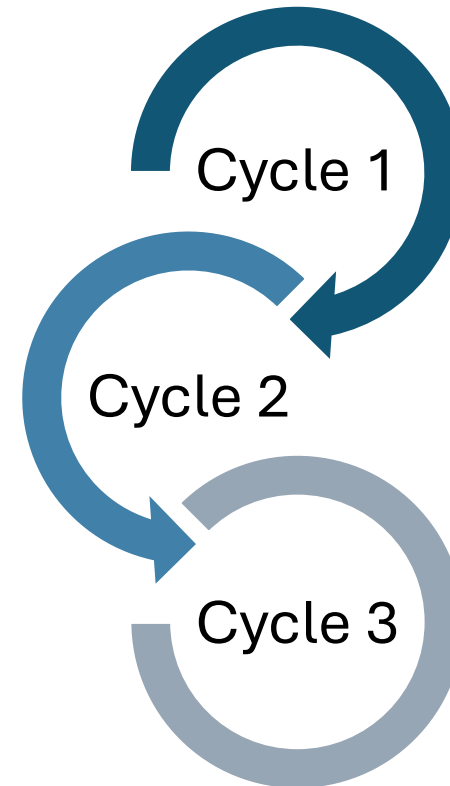
Participating Vendors

(providing both AI scribe and dictation capabilities):

1. Tali
2. Autochart.AI
3. Empathia
4. Heidi
5. Mutuo
6. Scribeberry

Key Project Details

- **Duration:** July 21 to Dec. 1, 2025
- **Structure:** Three cycles (six weeks each)
- **Opportunity:** Try up to three different AI scribes (one per cycle)
- **Goal:** Provide free access to privacy- and security-compliant AI scribe tools for medical staff, and discounted pricing after the trial.
- **Setting:** Outpatient, ambulatory care and emergency department

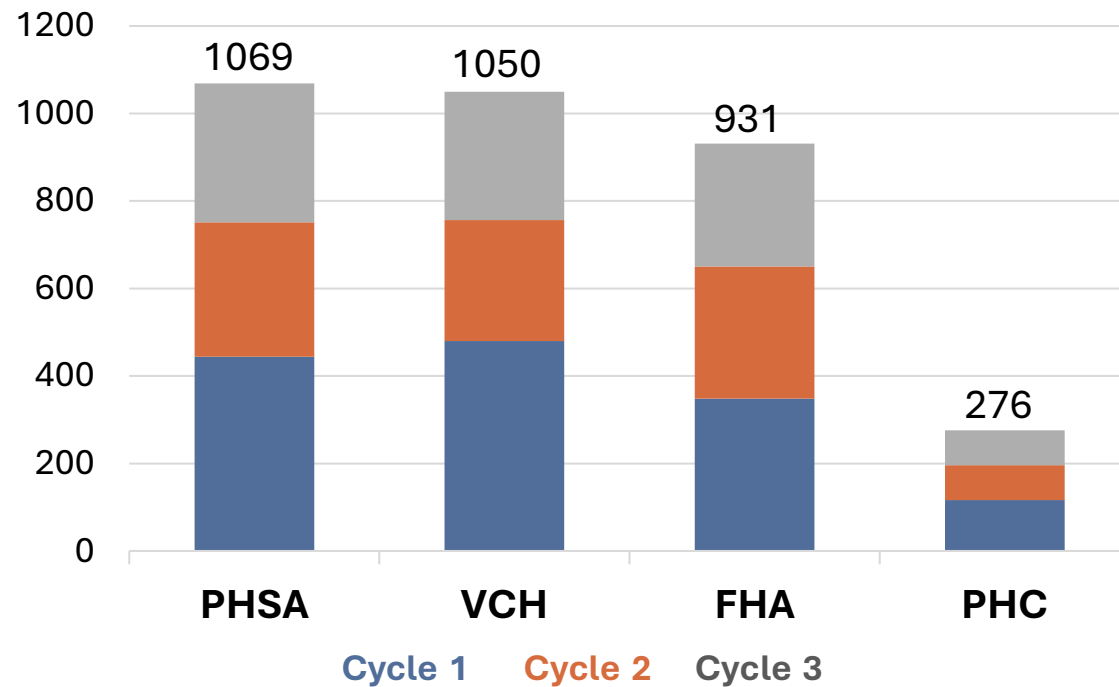


At any point, providers can subscribe to the tool for the discounted rate.

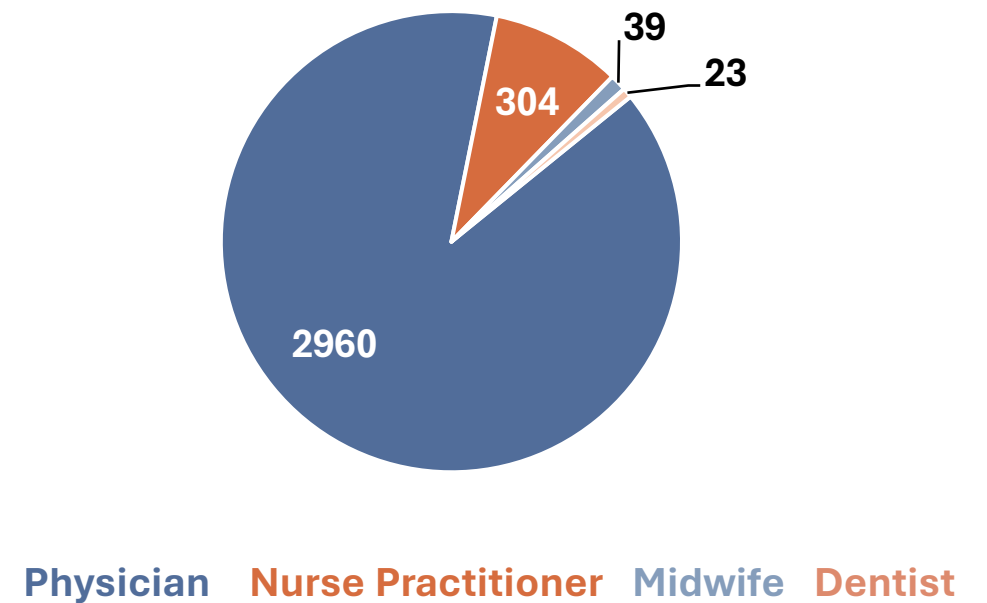
*discount will last one year

Adoption

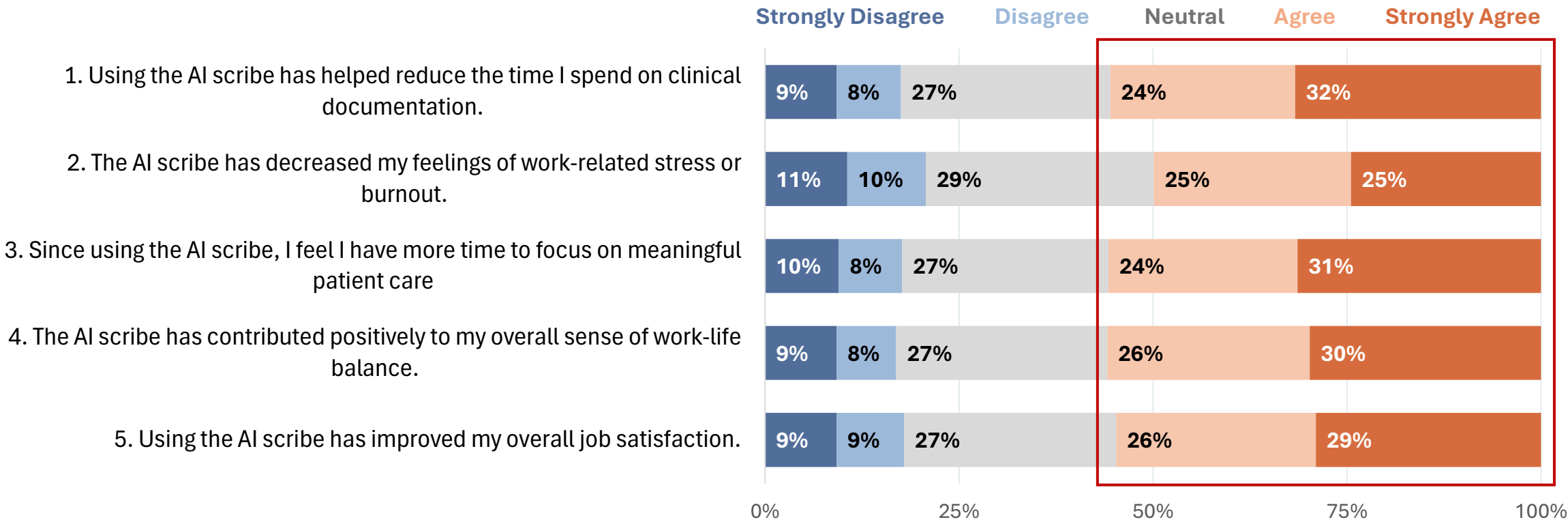
Total Enrollment by Health Authority (N = 3326)



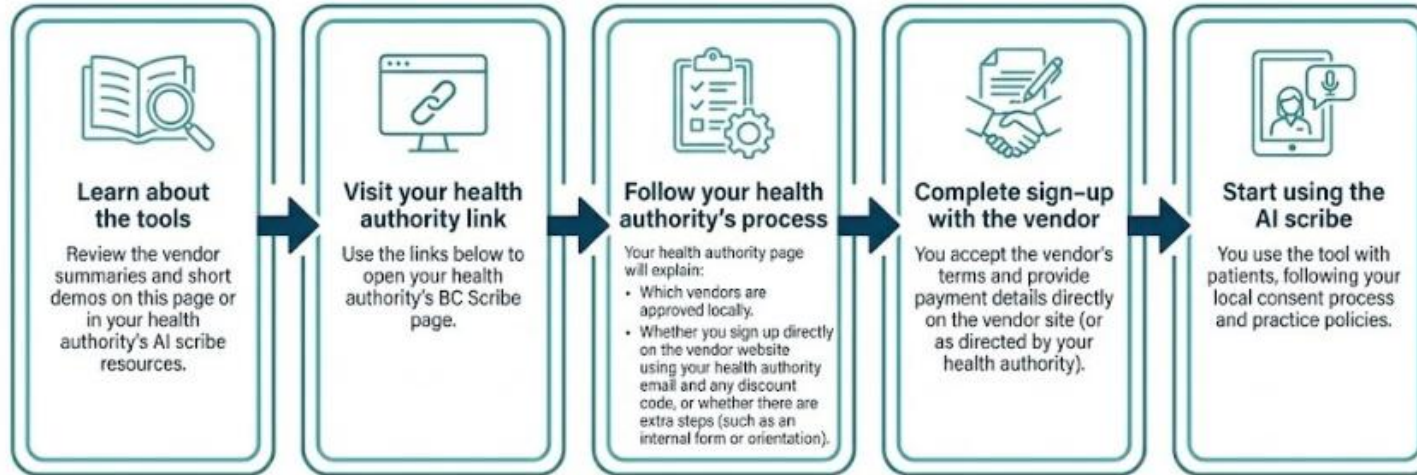
Total Enrollment by Professional Designation (N = 3326)



Medical Staff Wellbeing



BC Scribe Self Pay Program: Steps to Get Started



Where Do I Start?

Please visit your health authority link to see which tools are approved for your area, how to sign up, what support is available, and other local details:

- Fraser Health, PHC, PHSA, VCH : 🖱️ [Click Here](#)
- Northern Health: 🖱️ [Click Here](#)
- Interior Health: 🖱️ [Click Here](#)
- Island Health: 🖱️ [Click Here](#)

<https://www.himconnect.ca/physicians-and-clinicians/bc-scribe-self-pay-program>



Barriers to AI Implementation





Regulatory, Privacy and Cost

Regulatory

- College or other oversight bodies with requirements that are focused on **process** rather than **outcome**
- Liability when there is patient harm with AI

Privacy

- Data residency and data sovereignty requirements
 - Data must be processed and stay within Canada
 - AI Datacenters are less common in Canada and **accessibility** of highest performance chips is limited

Cost

- Implementation and ongoing costs can be significant
 - Many AI technologies are unproven presenting risks to demonstrating positive return on investment
-



Clinical and Ethical Concerns

- Lack of transparency in algorithms
 - Biases in training data
 - Sycophancy / hallucinations
 - Alignment mismatch
-

Selection and Implementation Challenges

Exhibit: The steep drop from pilots to production for task-specific GenAI tools reveals the GenAI divide

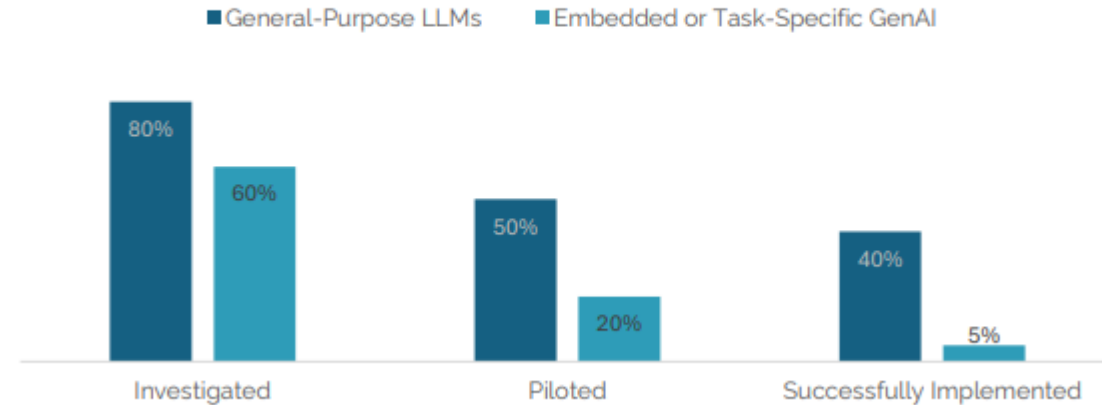
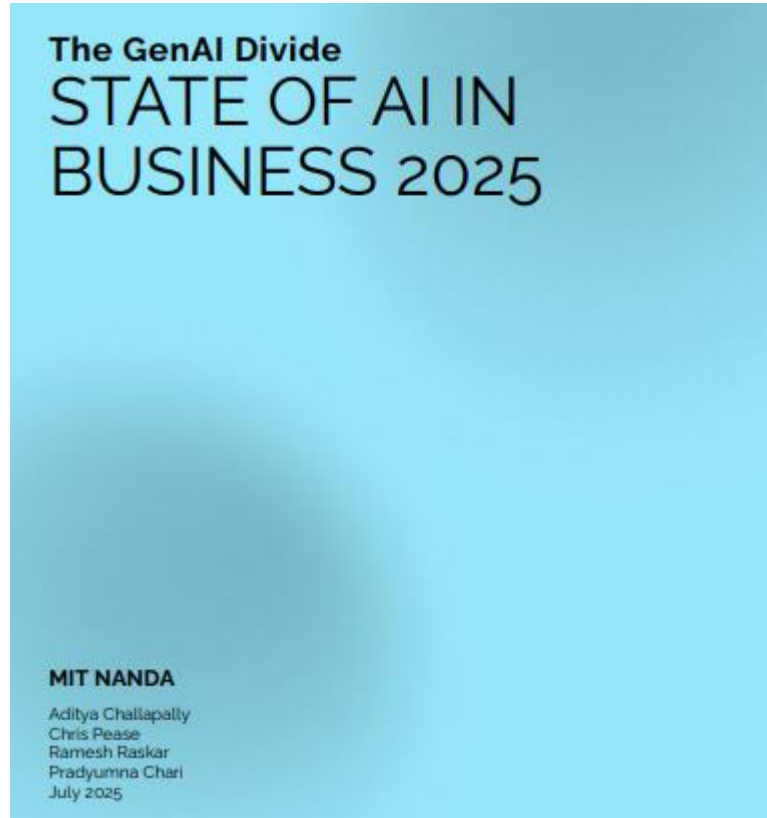


Exhibit: Why GenAI pilots fail: top barriers to scaling AI in the enterprise

Users were asked to rate each issue on a scale of 1-10



MIT Nanda - State of AI in Business 2025



Panel Discussion

