# VA AI Tech Sprint 4 – Provider Burnout

## Introduction and Orientation


**Hosted and Presented by:**

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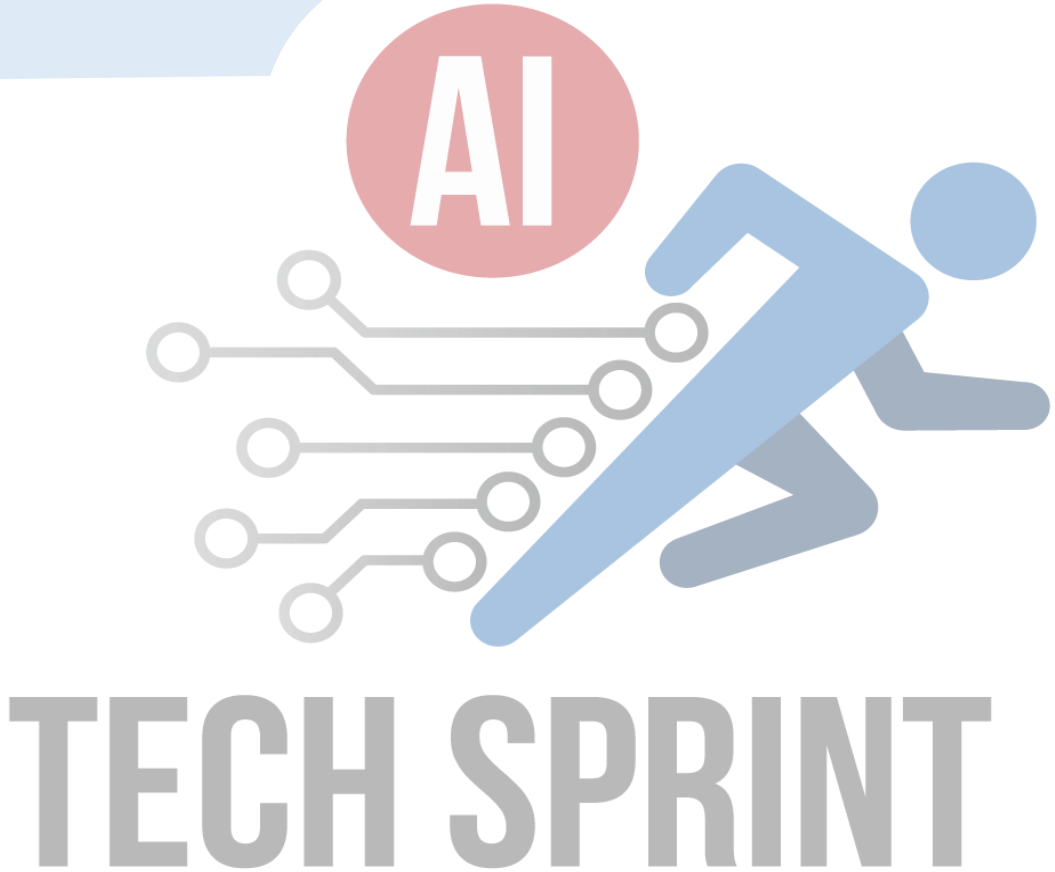
# Agenda

| SUBJECT |
| --- |
| **Introduction** Donna Hill |
| **Opening Remarks** Dr. Susan Kirsh |
| **Schedule and Gate 1** Donna Hill |
| **CCR Track Overview** Dr. Scott Pawlikowski<br>• Track Overview<br>• Review of Requirements and Scoring Criteria for all gates |
| **Ambient Dictation Track Overview** Dr. Scott Wiltz<br>• Track Overview<br>• Review of Requirements and Scoring Criteria for all gates |
| **Q&A** |
| **Closing Remarks** |



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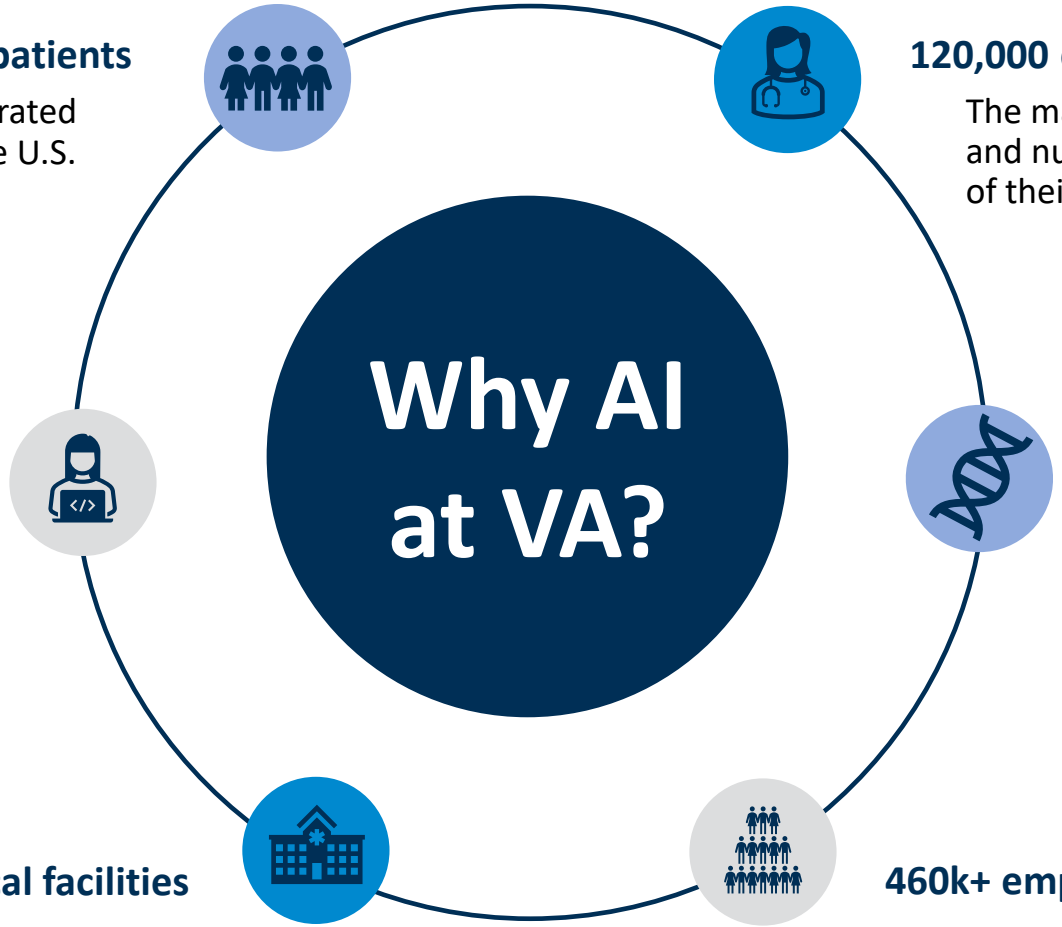
# Opening Remarks

# A Journey in Innovation

- The US Department of Veterans Affairs has a proud history of driving health care forward through research and innovation. Contributions include:
  - Nicotine patch
  - Liver transplant
  - Cardiac pacemaker
- We are continuing this journey of innovation by using cutting-edge technology, such as artificial intelligence (AI).
- Now, we look forward to supporting providers with the latest AI enabled tools to reduce burnout and ultimately improve care for our Veterans.

# Why AI at VA?



**9.1 million patients**

VA is the largest integrated health care system in the U.S.

**120,000 clinicians**

The majority of U.S. doctors and nurses do at least some of their training at VA

**2 million claims processed per year**

Providing benefits to more than 6 million Veterans, survivors, and their families

**1 million+ genomic donations**

VA has the largest genomic database tied to medical records in the world

**1,200+ medical facilities**

Veterans receive care across all U.S. states and territories

**460k+ employees**

More than 1 in 700 U.S. adults are VA employees

# AI Tech Sprint Schedule

# Weekly Learning Sessions

| Date | Topic | Speaker |
|---|---|---|
| January 25th | **VA IT and Cloud Computing Systems** | Sarah MacDawutey |
| February 1st | **Trustworthy AI** | Dr. Joshua Mueller |
| February 8th | **Integrated Veteran Care** | Dr. Blake Anderson |
| February 15th | **SimLEARN** | Dr. Scott Wiltz |
| February 22nd | **A Day in the Life of a VA Practitioner** | Dr. Scott Pawlikowski |
| February 29th | **TBD** | TBD |
| March 7th | **Human Factors Engineering – Accessibility and 508 Compliance** | John Brown, Ross Speir |
| March 14th | **Human Factors Engineering – UI/UX, Usability, and Engagement** | John Brown, Ross Speir |
| March 21st | **Privacy and Consent in the Medical Space** | Dr. Cynthia Geppert |
| March 28th | **Federal Contracting** | Matthew Newell |

# AI Tech Sprint Schedule

January 19, 2024

**AI Tech Sprint Kickoff**

January 22 – February 2, 2024

**Gate 1** Submissions Accepted

February 9, 2024

**Gate 1** Participants Notified of Results

February 10 - 20, 2024

**Gate 2** Submissions Accepted

March 8, 2024

**Gate 2** Participants Notified of Results

April 5, 2024

**Gate 3** Final Submissions Due

May 2024

**Demo Day and Awards Ceremony** *Date TBD*

# Requirements and Scoring Criteria – Gate 1

**Overall score:** PASS/FAIL

1. **Basic Quality checks**
   *Does the solution run in VA environment and generate expected output?*
2. **Acceptable IT performance/requirements**
   *Contestant answers IT questionnaire*

Must PASS **both** evaluations to proceed.

# Community Care Records Track

# Community Care Records Track Overview

## GOAL

Develop an AI-based system capable of ingesting a diverse corpus of community care records, ranging from patient encounters to complex medical documents.

## REQUIREMENTS

The system should feature advanced entity recognition and medical text summarization capabilities that comply with VA resources and enterprise technology monitoring systems.

## OUTPUT

A searchable, quality transcript that highlights significant events from episodes of care and engineered to integrate VA CDW Delta Lake (Summit Data Platform Health Information Exchange documents) and other VA data sources.

Additionally, the system should be scalable and offer advanced features like:

- A hyperlinked table of contents
- Development of a concise summary narrative for documents exceeding 20 pages
- Source vetting for optimal original sources
- Extraction of structured data elements (e.g. occurrence and results of preventive health activities, such as immunizations given, cervical cancer screening results with pap/HPV results, lung cancer screening CT results with Lung-Rads classification, etc.) that can be integrated into VA's EHR and Summit Data Platform

# Primary Care Challenges: Non-VA Documents

*Primary Care teams receive digital documents from a variety of sources external to VA*

- Some documents pertain to care in the community authorized by VA
- Some documents pertain to care in the community sought by the Veteran through their own means (Medicare benefits, supplemental insurance benefits, private pay)

**Regardless of source, Primary Care teams need efficient and effective ways to review and disposition these documents**

# Primary Care Challenges: Non-VA Documents

*Example*

Some external documents that relate to a single episode of non-VA care (e.g. inpatient admission) can be very bulky—100 to 200+ pages printed

- Reviewing these documents for salient clinical information is akin to finding needles in a haystack—labor and time intensive hunting and gathering process

Beyond this, the specific morsels of salient clinical information may be different for various disciplines involved in the care of the Veteran (e.g. Primary Care vs. Cardiology)

# Primary Care Challenges: Non-VA Documents

- Some of the clinical information contained within may pertain to relevant, VA-specific Clinical Reminders/Recommendations and Clinical Performance Measures
- Satisfying the logic for these Clinical Reminders/Recommendations and establishing completion of these Clinical Performance Measures often require **discrete, structured data elements** to be present within the Electronic Health Record
- Clinical Care team members within Primary Care and other disciplines are often the vector that transforms relevant non-VA medical document information into VA-specific structured data elements—**labor and time-intensive process**

# Requirements and Scoring Criteria – Gates 2 & 3

## GATE 2

### Evaluation Goal

Generate numeric score to rank contestants for selection to move into phase 3

### Deliverables from Contestant

- Solution with instructions provided that can used on VA GFE (there will not be an opportunity to troubleshoot installation similar to Phase 1)
- Responses to Trustworthy AI Questionnaire

### Evaluation Components

- TAI Criteria (contestant answers questionnaire)
- Quantitative assessment of solution output
- Clinical review of generated summary document
- Overall weighted score calculated considering all factors

## GATE 3

### Evaluation Goal

Generate numeric score to rank contestants for placement

### Deliverables from Contestant

- Solution provided that can used on VA GFE.
- Recorded presentation/demonstration of software (max 10 min) and supporting materials
- This will use data from Phase 2

### Evaluation Components

- Qualitative assessment of solution demonstration/presentation
- Quantitative assessment of solution output
- Clinician review of generated note text
- Overall score calculated considering all factors

# Ambient Dictation Track

# Ambient Dictation Track Overview

## GOAL

Create an AI-enabled tool that can extract transcripts and key details from ambient recordings of patient encounters in primary care, mental health, and specialty care settings within VA and then generate documentation for the encounter.

## DESIRABLE FEATURES

- The ability to populate heterogenous existing note templates
- Discretely identify symptoms, diagnoses, orders, and recommendations implied by treatment plans
- Maintain performance across different accents, levels of background noise, and telehealth settings

## REQUIREMENTS

- System must leverage conversational and directed voice prompting engineered to generate real-time recommendations, retrieve patient and health system information, generate clinical decision support tools and integrate external predictive models.
- System must feature a high degree of security, including automatic deletion of local copies of recordings/transcripts stored on any local devices.
- The tool should generate a high-quality encounter note, summarizing the visit into a format that is both detailed and EHR agnostic and interfaced with the active VA EHR systems.

# Requirements and Scoring Criteria – Gates 2 & 3

## EVALUATION GOAL

- Gate 2: Generate numeric score to rank contestants for selection to move into phase 3.
- Gate 3: Generate numeric score to rank contestants for final placement

## DELIVERABLES FROM CONTESTANT

- Solution with instructions provided that can used on VA GFE (there will not be an opportunity to troubleshoot installation with VA OIT here like in phase 1). Must provide for Gates 2 **and** 3.
- Responses to TAI Questionnaire
- Recorded presentation/demonstration of software (max 10 min) and supporting materials.

## EVALUATION COMPONENTS

- Quantitative evaluation
- Qualitative evaluation
- Clinician review

# Ambient Dictation Track Evaluation Plan

## QUANTITATIVE EVALUATION

Output for recorded scenarios

- Accurate identification of speakers
- Accuracy of words detected (transcript)
- Accurate detection of medical entities and related values

## QUALITATIVE EVALUATION

Recorded presentation using Data from Phase 2

- Purposeful
- Effective & Safe
- Secure & Private
- Integration

## CLINICIAN REVIEW

Panel of VA clinicians will review notes produced by each solution and score them against notes written by other VA clinicians.

- PDQI-9 (validated tool for clinical notes)
  - Clinician-generated notes as baseline
  - AI-generated notes compared to baseline
  - Scores reported as % of baseline
- QNOTE tool will be used as tiebreaker in Phase 3

# Q&A

# In Closing

- AI Tech Sprints accelerate VA innovations and vastly expand our ability to work with many different partners in industry and academia
- We continue to iterate on these offerings to serve the needs of our Veterans and VA, and look to offer various models of future tech sprints in the future
- We appreciate the work you each have done and will do over the course of the sprint to help us meet our mission of serving our Veterans, their families, and their caregivers

# Thank You!