

# AI Inside: An Overview of AI in Telehealth

**Jordan Berg**  
Program Director  
Telehealth Technology Assessment Center

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**Calvin Ross**  
Technology Specialist  
Telehealth Technology Assessment Center



# The Telehealth Technology Assessment Center

- Funded by **HRSA's Office for the Advancement of Telehealth (OAT)**
- Provides **technology assessment resources and technical assistance for telehealth**
- Technology Focus Areas:
  - Telehealth Devices
  - Remote Patient Monitoring (RPM)
  - Broadband and Connectivity
  - Artificial Intelligence and Healthcare

TTAC is hosted by the **Alaska Native Tribal Health Consortium (ANTHC)**, one of the largest tribal health organizations in the United States.

# What do we do?



Technical Assistance:

Individual  
Organizational



Technology Resources:

Innovation Watch  
Technology Overviews  
Technology Toolkits



Technology  
Demonstrations:

Virtual Demonstrations  
Technology Showcases

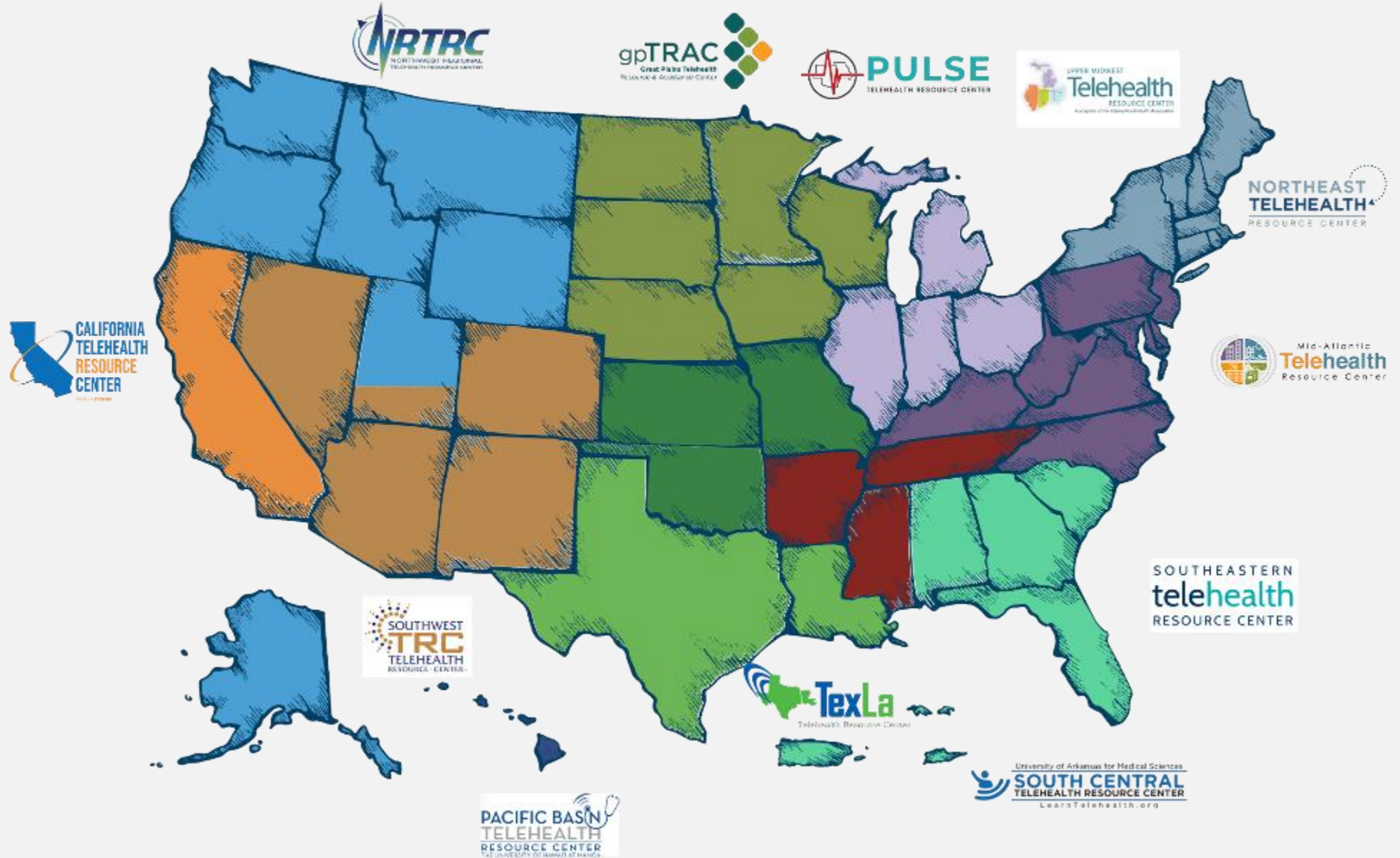


# National Consortium of Telehealth Resource Centers

Our website hosts many resources. If you can't find what you're looking for, contact your regional TRC:

[www.TelehealthResourceCenter.org](http://www.TelehealthResourceCenter.org)

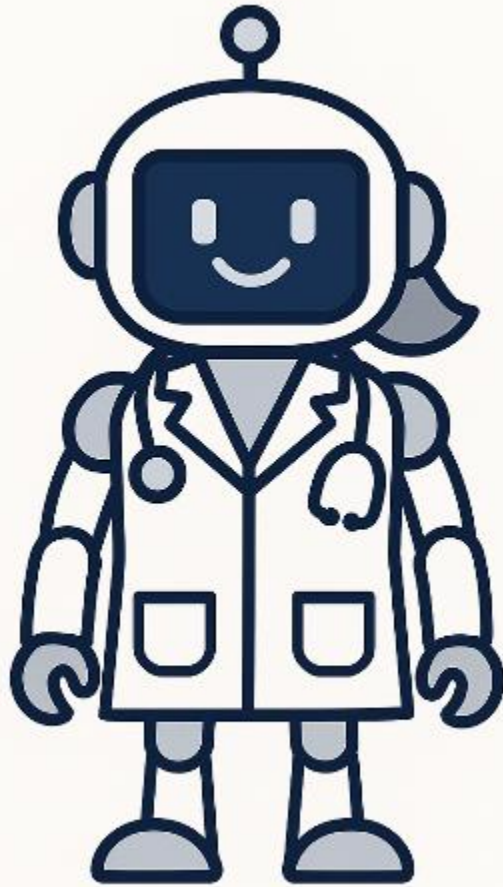
2 NATIONAL RESOURCE CENTERS



# The Big Questions

1. What actually counts as AI in healthcare?
2. Which AI tools make sense for telehealth and rural care?
3. What risks should organizations understand?





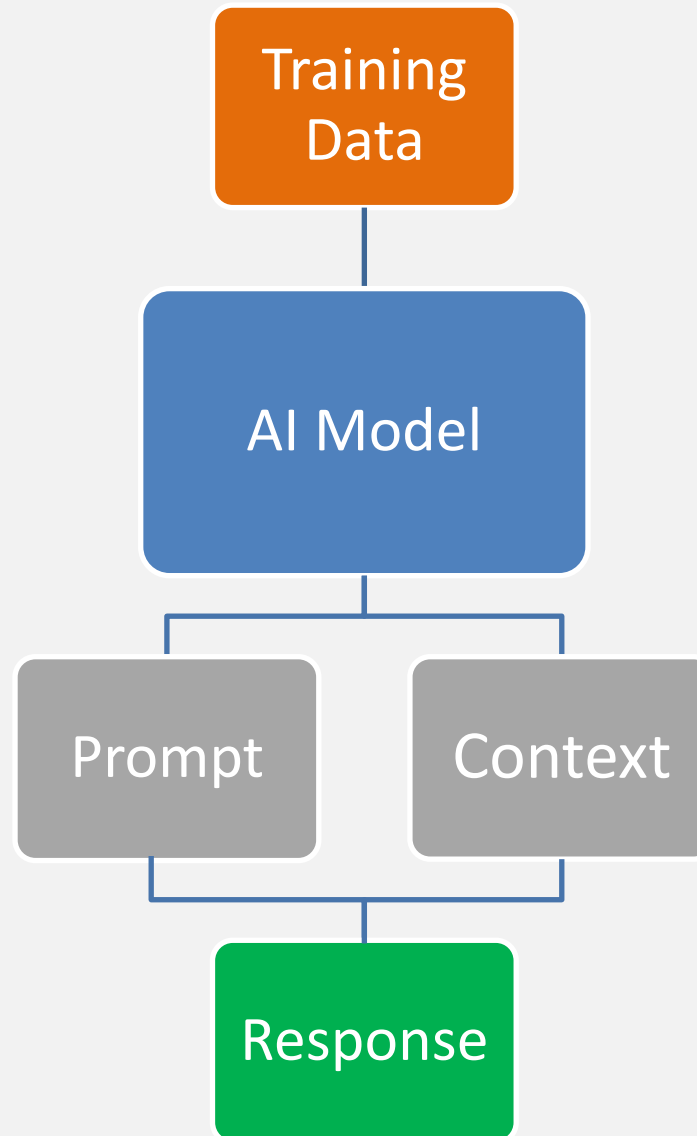
## Key Definitions- Healthcare AI

- “Artificial Intelligence in healthcare refers to the utilization of computer algorithms and models to simulate human intelligence processes, such as learning, reasoning, and decision-making, with the aim of improving healthcare delivery, patient outcomes, and administrative efficiency.”

-Rural Providers Guide to AI in Healthcare

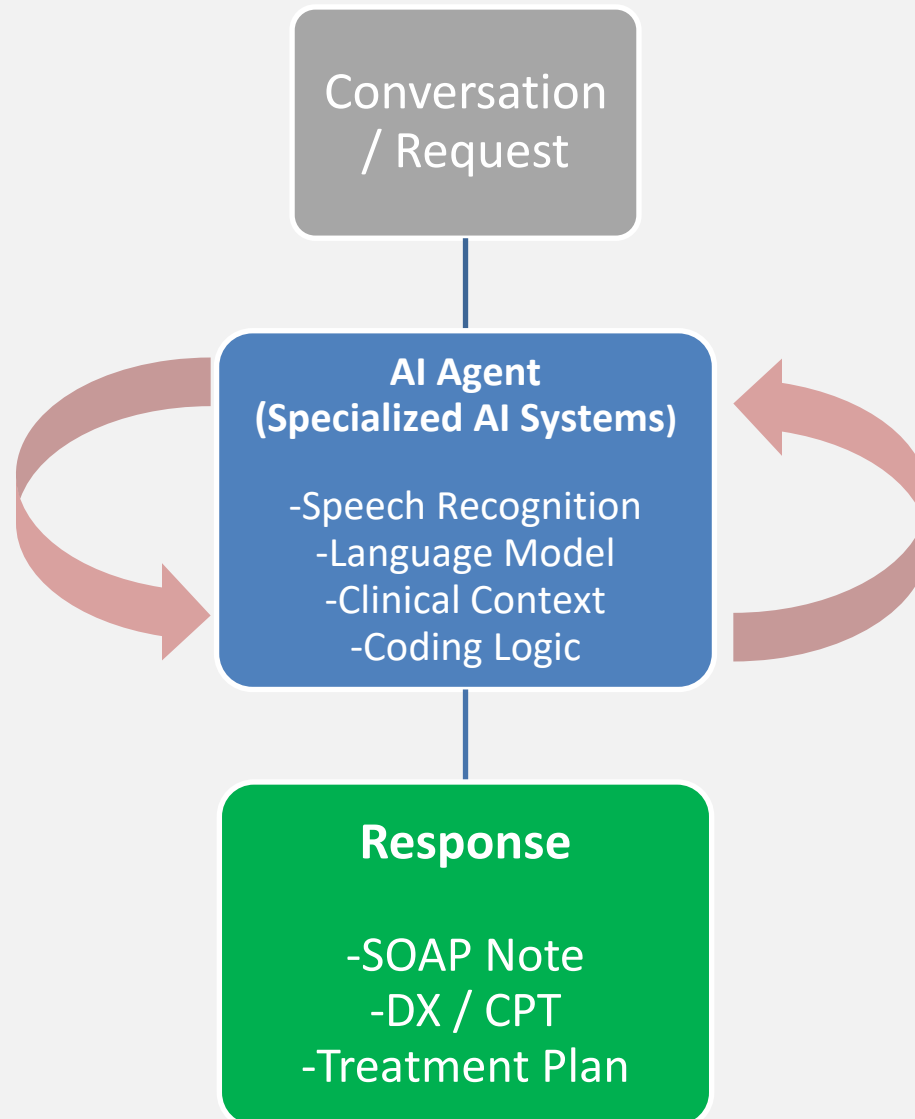
# How Generative AI Works

(A vast oversimplification)







# Agentic AI

(Another vast oversimplification)



# Types of AI in Healthcare

	<b>Generative AI</b> 	<b>Expert Systems</b> 	<b>Predictive Models</b> 	<b>Computer Vision</b> 
<b>Job</b>	Create Content, Support dialogue	Apply rule-based logic*	Forecast outcomes	Recognize images/ pathology

# Where AI is Already Showing Up

## Patients

- symptom questions
- medication advice
- lab interpretation
- behavioral health questions

## Providers

- note drafting
- clinical research
- message summarization

## Organizational

- predictive models
- analytics
- RPM monitoring
- decision support

# Questions people ask AI...

“Does this look infected to you?”

“Should I see a doctor?”

“Can you explain these lab results?”

“Why am I feeling depressed?”

# Generative AI in Telehealth

## What it does

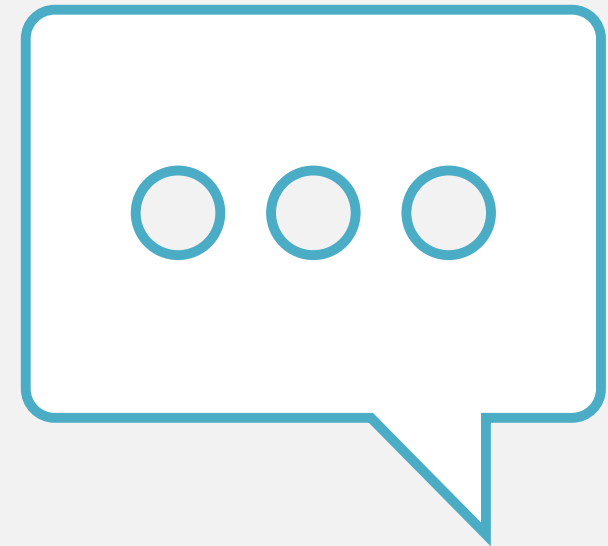
- Creates text, summaries, and instructions
- Supports natural language conversation
- Converts unstructured information into usable documentation

## Why it matters for rural care

- Reduces documentation burden for small teams
- Expands staff capacity without adding FTEs
- Improves patient communication between visits

## Telehealth examples

- Ambient scribing during video visits
- Automated chart summaries
- Patient chatbots for triage or follow-up



# Expert Systems in Telehealth

## What they do

- Apply rule-based clinical logic
- Guide structured decision pathways
- Standardize workflows and safety checks

## Why it matters for rural care

- Creates consistency across limited staff
- Supports clinicians working outside their specialty
- Reduces risk in low-resource settings

## Telehealth examples

- Drug interaction alerts during remote visits
- EHR triage and care pathways
- Coding and compliance checks



# Predictive Models in Telehealth

## What they do

- Forecast clinical outcomes
- Detect early signs of deterioration
- Identify population-level risk patterns

## Why it matters for rural care

- Helps staff focus on the highest-risk patients
- Supports proactive chronic disease management
- Reduces avoidable ED visits and transfers

## Telehealth examples

- RPM trend alerts for CHF/COPD
- Readmission risk scoring
- No-show prediction for telehealth scheduling



# Computer Vision in Telehealth

## What it does

- Analyzes images and video
- Detects abnormalities for clinician review
- Supports remote diagnostics

## Why it matters for rural care

- Expands screening capabilities locally
- Reduces unnecessary referrals and travel
- Enables earlier detection when specialists are scarce

## Telehealth examples

- Dermatology review from patient photos
- Diabetic retinopathy screening cameras
- AI-assisted radiology prioritization



# How AI Can Help Rural Healthcare

## Patient-Facing → Extend Care

- Chatbots for triage & follow-up
- Remote monitoring with AI interpretation
- Virtual assistants for patient navigation

## Provider-Facing → Reclaim Time

- Clinical decision support
- Documentation help (speech-to-text, summarization)
- Coding & billing support

## Organization-Facing → Manage Limited Resources

- Population health analytics
- Resource allocation forecasts
- Surge prediction (ED visits, chronic disease trends)

# Emerging AI Risk Areas

## Patient-Facing

- Relying on AI for:
  - symptom interpretation
  - decisions on when to seek care
- misunderstood or inaccurate AI-generated medical explanations
- AI tools being used for behavioral health support

## Provider-Facing

- entering PHI into consumer AI tools
- using AI outputs without validation
- overreliance on automated documentation or summaries
- automation bias in decision support tools

## Organization-Facing

- evaluating AI vendors and product claims
- building and maintaining data governance and compliance
- supporting deployment of rapidly advancing technologies
- determining appropriate use cases and oversight

# In Conclusion...

1. AI simulates intelligence but does not replace clinical judgment
2. AI is a family of technologies with different strengths and risks
3. Many telehealth tools already contain AI capabilities
4. Successful use depends on choosing the right use cases and governance

# Questions and Discussion



# Thank You



Contact Us:

[www.telehealthtechnology.org](http://www.telehealthtechnology.org)