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ARTIFICIAL INTELLIGENCE (AI) IMPLEMENTATION GUIDE

A practical guide to support the successful implementation and adoption of AI tools
in Community Health Centers

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PREFACE

Artificial Intelligence (AI) is now at the center of digital transformation, enhancing healthcare delivery, customer experience, and operational efficiency. However, its complexity raises challenges around ethics, data governance, transparency, and integration.

In healthcare, AI offers opportunities to support clinical decisions, streamline workflows, and provide personalized, patient-centered care. Thoughtfully applied, AI can meaningfully enhance mission-driven care without being a one-size-fits-all solution. However, AI brings significant risks, such as those listed below:

Bias affecting safety-net populations: Models trained on commercially insured or academic datasets may perform poorly for Medicaid, uninsured, immigrant, or rural populations commonly served by health centers

Clinical errors and overreliance: AI outputs may be inaccurate or incomplete, and excessive reliance on them by clinicians could lead to missed diagnoses or inappropriate treatment decisions.

EHR integration and workflow risk: AI layered onto EHRs (e.g., Athena, eCW, NextGen, Epic) may disrupt established workflows, create duplicate work, or introduce data integrity issues.

Hallucinations and documentation risk: AI may generate clinical notes, exam findings, or histories that were never performed, creating audit risk, liability exposure, and potential payer recoupment.

Vendor opacity and contract risk: AI functionality may be embedded in EHR upgrades or third-party tools without clear disclosure, making it difficult to assess risk, data use, or liability.

Privacy and security risks: Use of AI tools can increase the risk of PHI exposure, data leakage, or noncompliance with HIPAA and state privacy laws.

Lack of transparency: Many AI systems cannot clearly explain how they reach conclusions, making it difficult to validate or defend their decisions clinically or legally.

Regulatory and liability uncertainty: Accountability is often unclear when AI contributes to errors, increasing malpractice and organizational risk.

Quality measurement and performance reporting: AI incorrectly categorizes patients, leading to inflated quality metrics submitted for reimbursement or reporting purposes.

Billing and coding: AI tool select higher acuity codes without sufficient clinical justification.

Staff training and change fatigue: Under-resourced organizations may lack the capacity to train staff in appropriate AI use, leading to misuse or overreliance.

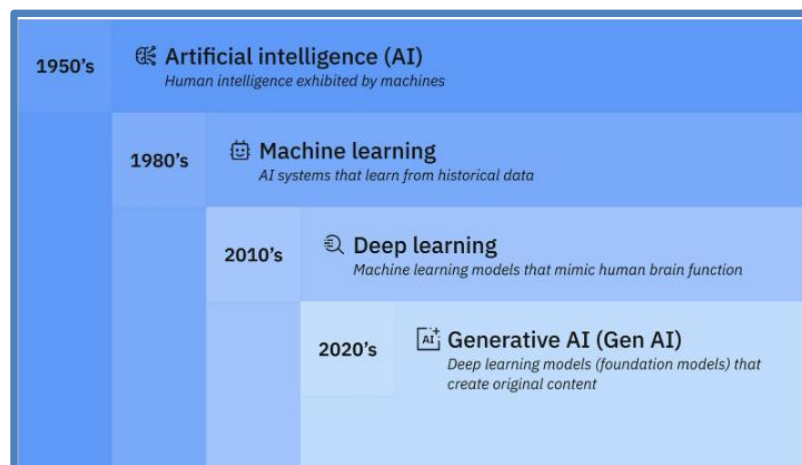
AI tool/model degradation: AI performance can decline over time as clinical guidelines, populations, or data inputs change, leading to unsafe recommendations.

WHAT IS ARTIFICIAL INTELLIGENCE?

Artificial intelligence refers to computer systems designed to perform tasks that typically require human intelligence, such as reasoning, decision-making, and creative problem-solving (NASA, 2024).

ARTIFICIAL INTELLIGENCE SYSTEMS

Evolution of Artificial Intelligence



Stryker & Kavlakoglu (2024)

There are various types of AI systems, each developed to perform distinct and specialized tasks:

Machine Learning: A branch of AI that enables systems to learn and improve from data without being explicitly programmed. It allows computers to enhance their performance on specific tasks through experience.

Deep Learning: A subset of machine learning that uses artificial neural networks to analyze large datasets and solve complex problems, such as image recognition and natural language processing.

Natural Language Processing: A field of AI focused on enabling computers to understand, interpret, and generate human language in a meaningful way.

Expert Systems: AI programs that replicate the decision-making abilities of human experts by using a knowledge base and a set of rules to analyze and solve specific problems.

Generative AI: A type of AI designed to create new content, such as text, images, audio, or code that learns from existing data patterns.

Speech Recognition: Technology that allows machines to receive, interpret, and respond to spoken language, converting speech into text or actions.

Rule-Based Systems: AI systems that operate using a set of predefined rules to make decisions or carry out tasks, often used in well-structured, predictable environments.

Computer Vision: An AI field that enables machines to interpret and process visual information from the world, often using cameras and advanced image analysis techniques.



Cognitive Computing: AI systems that simulate human thought processes to solve complex problems, drawing on techniques from machine learning, pattern recognition, and natural language processing.

Robotics: The use of AI in designing and programming robots to perform tasks that are repetitive, hazardous, or require precision, often combining mechanical engineering and intelligent software.

Pinto (2023)

ARTIFICIAL INTELLIGENCE IMPLEMENTATION GUIDE

This document serves as a practical guide to support the successful implementation of AI tools in community health centers, promoting transparency and accountability in both processes and outcomes.

1. STRATEGIC ALIGNMENT

Goal: Align AI initiatives with strategic business priorities.

Tasks

- Identify core business challenges or opportunities that you are trying to address.
- Create an AI vision/mission statement aligned with organizational strategy.
- Secure executive sponsorship and define leadership accountability.
- Set measurable organization goals/KPIs for AI adoption (e.g., decrease provider documentation burden by 10%, increase patient registration by 15%, decrease no-show rates by 15%).
- Define targets for reduced costs and/or increased revenue from AI investments.
- Establish budgets that include implementation costs and maintenance costs.

2. ORGANIZATIONAL & TECHNICAL READINESS ASSESSMENT

Goal: Evaluate current capabilities & assess readiness to support AI.

Tasks

- Assess the current IT infrastructure to ensure compatibility with AI tools.
- Review internal skills/resources to support implementation and ongoing support.
- Establish a cross-functional project team and define roles.
- Develop strategies to promote stakeholder buy-in and identify champions.
 - Designate individuals across departments who are enthusiastic about AI adoption and can serve as internal advocates, subject matter experts, and points of contact throughout implementation.
- Develop a comprehensive project plan (including scope, budget, & timeline).



3. AI GOVERNANCE STRUCTURE, ETHICS & RISK MANAGEMENT

Goal: Maintain oversight and mitigate risks.

Tasks

- Establish a governance team (Including Executive Leadership, Clinical, Operational, Compliance/Legal).
- Develop AI policies/procedures to govern responsible use, implementation, adoption, and sustainability.
See sample policies in Additional Resources below
- Determine whether informed consents are needed for patients so they can understand the AI's specific role, data use, potential benefits, and risks.
- Identify and document AI-related risks, as well as privacy and regulatory compliance requirements (including HIPAA, state laws, and, if applicable, General Data Protection Regulation [GDPR Compliance](#)).

4. PRIORITIZATION & USE CASES IDENTIFICATION

Goal: Identify, evaluate, and prioritize viable AI use cases.

Tasks

- Quantify implementation value through quality, outcomes, clinician and patient experience, cost savings, and revenue generation.
- Conduct cross-functional meetings to evaluate the current state, identify AI use cases, and set implementation priorities.
- Categorize use cases (e.g., automation, prediction, personalization).
- Score use cases (impact vs. feasibility).
 - **Impact:** How much benefit or value will this tool bring if implemented?
High impact: Big positive change, solves a critical problem, improves outcomes significantly.
Low impact: Small or minor improvement.
 - **Feasibility:** How realistic or practical is it to implement this tool?
High feasibility: Easy to do, low cost, minimal resources required.
Low feasibility: Difficult, expensive, requires complex resources or approval.
- Document findings from AI use case testing:
 - **Purpose:** Clearly state what the AI tool is being used for.
 - **Vendor Information:** Record vendor claims, known limitations, transparency gaps, and any AI features included in EHR updates or third-party tools.
 - **Data Access:** List what data the AI uses (EHR fields, free text, claims data).
 - **Outputs:** Were the AI tool's results accurate? Were they verified and signed off by the AI governance team (or responsible party)?
 - **Risks and Mitigation:** Note any risks, such as incorrect outputs (hallucinations), bias, workflow disruption, or overreliance, and explain how these risks will be managed.
 - **Performance Monitoring:** Describe how the AI's performance will be tracked over time, including error reporting, user feedback, and audit results.
 - **Training:** Document required user training and the type of training.
See sample Use Case Intake Form in Additional Resources



5. DATA STRATEGY & PREPARATION

Goal: Ensure the tool has access to the data it needs to produce outputs.

Tasks

- Define required datasets per use case:
 - Determine what information the AI tool needs to perform its intended function and deliver the desired outcomes.
 - **Example:** If the AI is used to predict patient no-shows, define which data it needs, such as appointment history, demographics, reminders sent).
- Implement data governance, access controls, and privacy measures.
- Assign roles for data ownership, stewardship, and quality assurance.

6. TECHNOLOGY & VENDOR SELECTION

Goal: Choose the right tools and platforms for development and deployment.

Tasks

- Identify systems or applications for integration and ensure compatibility with source systems (e.g., EHRs, EDRs).
 - Identify and evaluate vendors (include appropriate staff in this process).
- Request a demo and inquire about data accuracy, sensitivity, and specificity (false-positive rates).
- Inquire whether the AI training data is inclusive and comprehensive.
- Request referrals from organizations already using this tool/system:
 - Ask the vendor for organizations already using the tool.
 - Check reputable websites to compare tool specific rankings for usability and customer satisfaction (You may need to create logins to see reviews). Reputable websites include:
 - [KLAS](#)
 - [Gartner](#)
 - [AVIA Marketplace](#)
- Establish a Business Associate Agreement (BAA) with the AI vendor.
- Ensure interoperability with source systems (examples: EMR, EDR).
- Evaluate costs and Return on Investment (ROI).
- Purchase the desired AI tool/system.

See sample Vendor Due Diligence Checklist in Additional Resources

7. TOOL/SYSTEM VALIDATION

Goal: Test and validate the AI tool/system.

Tasks

- Define testing/validation plans, including test scripts for use case(s).
- Select cross-functional testers.
- Document testing/validation results.
- Conduct fairness and bias assessments.

See sample Fairness Bias checklist in Additional Resources



8. IMPLEMENTATION & SUPPORT

Goal: Operationalize and deploy the AI tool/system for production use.

Tasks

- Set go-live date
- Review rollout plan (pilot or full rollout).
- Develop end-user training documentation and provide end-user training.
- Establish rollout support (vendor or internal support).
 - Leverage AI champions throughout implementation (as defined in step 2).
- Establish a rollback plan
 - Define a clear process to revert the change if needed during implementation.

9. CHANGE MANAGEMENT & USER ADOPTION

Goal: Foster organizational buy-in and adoption.

Tasks

- Develop a change management structure and communication plan.
- Gather post-implementation feedback from end-users.
- Celebrate wins.
- Document lessons learned.

10. CONTINUOUS MONITORING & OPTIMIZATION

Goal: Ensure ongoing performance and value of the tool/system.

Tasks

- Monitor KPIs, financial impact, and AI system performance.
- Implement vendor updates and address end-user feedback.
- Reassess the AI tool annually or as organizational needs change.
- Retire AI tools with persistent inequitable outcomes.
- Document evaluations, updates, and improvement actions.



ADDITIONAL RESOURCES

Sample AI Policies

AI Use Case Intake Checklist

AI Vender Due Diligence Checklist

AI Fairness – Bias Checklist

[Click here to access Additional Resources](#)

(Forms adapted from OpenAI)

DIGITAL MEDICINE SOCIETY (DIME)

[DIME - Health AI Readiness Assessment](#)

COALITION OF HEALTH AI (CHAI)

[AI Governance Playbooks](#)

AVIA INTELLIGENCE PLATFORM

AVIA Marketplace is a digital platform that enables safety-net providers to easily connect, share insights, and learn from one another's experiences about digital tools, such as EMRs, AI, remote patient monitoring, and other technologies. The platform also offers vendor profiles and market data for different health information technologies and their vendors. The platform includes over 150 products used by Safety Net organizations from over 60 vendors, as well as over 20 Safety Net provider reviews.

Creating a profile takes 3-5 minutes

1. Click here to create a free account: [AVIA Marketplace account here](#)
2. Set up a profile using [this quick guide](#)

To see safety net solutions companies or reviews:

1. Open any *Category*, *Search*, or *Reviews* page.
2. Click **Filter** → scroll down → check **Safety Net organizations**.



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