Clinical AI Toolkit: Quick Start Guide

Minimum Viable Evaluation (MVE)

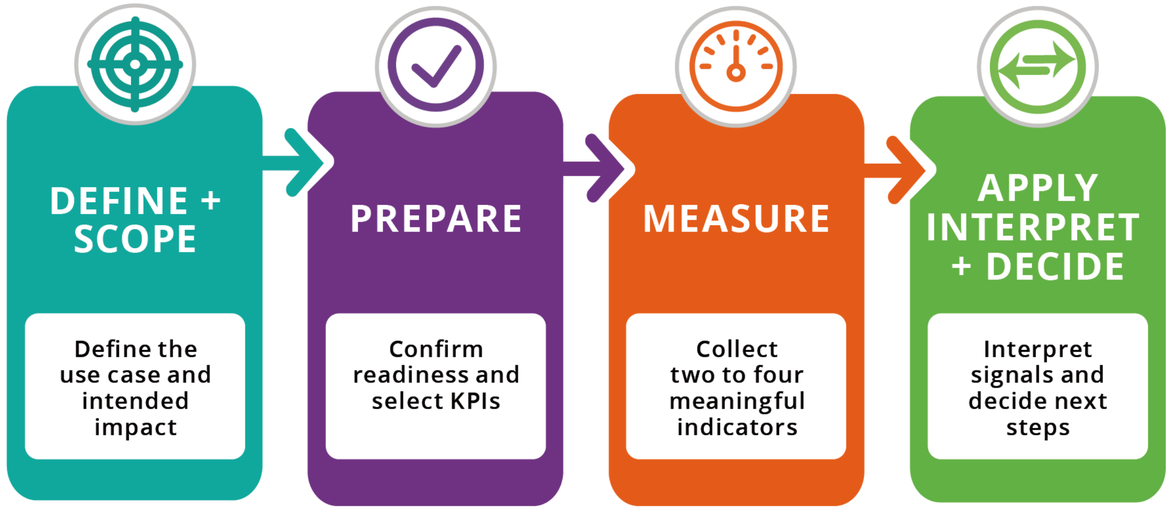
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A practical starting point for early-stage AI evaluation

This lightweight guide walks your team through running a Minimum Viable Evaluation (MVE) — a structured but low-burden approach to generating early signals of impact from clinical AI implementations.

What is a Minimum Viable Evaluation (MVE)?

- Most organizations do not need a full research study or formal health technology assessment to begin learning from early implementation.
- An MVE helps teams generate early signals of impact using a small number of meaningful indicators and existing data sources.
- The goal is not to measure everything. The goal is to determine whether the AI tool appears safe, useful, and valuable enough to continue, refine, or scale.



Minimum Means Minimum. Use existing data wherever possible. Focus on 2–4 meaningful indicators. Directional insight is acceptable. Small samples are okay. Support a real implementation decision. Do not overcomplicate the evaluation.

Step 1. Define + Scope

Before collecting any data, clearly document what you are evaluating. A well-defined use case keeps the evaluation focused and ensures your team is measuring what matters.

Use this step to align stakeholders on scope, users, and expected impact in plain language.

What to document		Examples
AI tool name and type	→	Ambient AI documentation assistant
Clinical or operational use case	→	Reduce physician documentation burden
Intended users and setting	→	Physicians in outpatient clinical settings
Expected impact in plain language	→	Reduce after-hours charting and improve workflow efficiency
Primary and secondary domains	→	Primary: Operational/Secondary: Experience

Step 2. Prepare

Before measuring impact, confirm the basics are in place. The goal is not to complete a formal implementation assessment, but to ensure the AI tool can be reasonably evaluated and that workflow impacts can be interpreted consistently.

This step helps validate that your MVE is set up for success without unnecessary overhead.

Considerations

- Ensure the tool's integration into existing clinical workflows is mapped and communicated to users
- Confirm that a simple pre-implementation baseline can be reasonably captured
- Allocate minimal time for observation, data collection, and gathering initial user feedback
- Confirm that end-users receive training/guidance on the tool’s intended function/usage protocols
- Identify available existing data sources (e.g., EHR, scheduling software) for KPI measurement
- Document concurrent changes (e.g., staffing, workload, policy updates) that may influence outcomes



Keep readiness proportional. You do not need a formal implementation program to begin an MVE. The goal is to set realistic expectations and identify glaring gaps, not to achieve perfection.

Step 3. Measure

Choose a small number of practical indicators that directly relate to your intended impact, are feasible to measure with existing data sources, and will support your implementation decision.

The KPI domains below reflect the primary ways healthcare organizations are assessing clinical AI implementations, informed by the Digital Health Canada Clinical AI Environmental Scan.

Domain		Example
Clinical	→	Summarization quality, observed harm or safety concerns
Operational	→	Documentation time, hours saved, clinical workflow fit, user adoption rate
Experience	→	Clinician-reported value, after-hours charting, ease of use
Equity	→	Access, fairness, and equity impact
Financial	→	Cost, ROI, and resource utilization signals

Most successful MVEs use only 2–4 indicators. Select KPIs that are directly actionable and can be measured with data you already have or can reasonably collect.

Capture a simple baseline

A perfect baseline is not required. Use existing reports, operational dashboards, manual samples, or clinician self-report to establish a reasonable before-state. Directional comparison is sufficient for early-stage evaluation.

Example:
AI Documentation Assistant

KPI	Before	After
Documentation time	22 minutes	15 minutes
After-hours charting	High	Reduced
User adoption	n/a	57%

Directional is acceptable. A rough before-and-after comparison is enough to generate meaningful early signals.

Measure early signals during the pilot

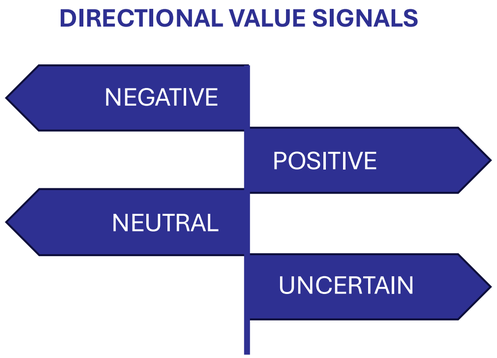
Focus on workflow, usability, and value. Repeat the same indicators consistently, document contextual factors, collect clinician feedback, and note workflow/safety concerns as they arise.

Adoption *Are people using the tool consistently?*	Track uptake rates and frequency of use across your pilot group
Workflow impact *Is workflow improving?*	Look for changes in task completion time, handoff quality, and process friction
Clinician experience *Is burden decreasing?*	Gather brief feedback on workload, ease of use, and satisfaction
Safety observations *Are there unresolved concerns?*	Document any safety issues, unexpected outputs, or workflow disruptions
Directional ROI *Is there an early value signal?*	Note time savings, reduced burden, and potential capacity gains

Early-stage evaluation is directional. You do not need definitive proof of impact to support an early implementation decision. Focus on adoption, workflow impact, clinician experience, safety observations, and directional ROI signals.

Interpret the results

Use this traffic-light framework to guide your team's implementation decision. Each category reflects a different level of signal strength and corresponding action. Document your rationale clearly to inform future scaling or refinement decisions.





Continue/Scale
Adoption is meaningful
Workflow impact is positive
No major unresolved concerns
Directional ROI signals are positive



Continue with conditions
Adoption is uneven
Workflow concerns remain
Note quality varies
Additional monitoring is required



Pause/Reassess
Adoption is low
Significant concerns unresolved
No clear value signal emerging

Time saved does not automatically equal realized capacity. Document the specific workflow or operational context in which time savings were observed.

Mistakes to avoid

Early-stage AI evaluation is straightforward when you keep it simple. These are the most frequent pitfalls teams encounter—and how to avoid them.

Selecting too many KPIs	Stick to 2–4 indicators. More data does not mean better decisions—it creates analysis paralysis.
Waiting for perfect data	Directional insight is acceptable. A rough baseline is better than no baseline at all.
Treating evaluation as formal validation	An MVE is not a research study. It is a practical tool to support a real implementation decision.
Assuming time saved = access gains	Observed time savings do not automatically translate into realized operational capacity.
Over-focusing on technical metrics	Prioritize workflow, usability, and clinician experience over accuracy scores or system performance data.

Minimum Viable Evaluation Worksheet

Use this worksheet during your planning or debrief session. Complete each section with your team to structure the evaluation and capture key decisions.

MVE Worksheet Section 1

AI Tool + Intended Impact

AI Tool

Problem being solved

Expected impact

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MVE Worksheet Section 2

Evaluation Scope

Pilot area/users	
Implementation date	
Evaluation period	

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MVE Worksheet Section 3

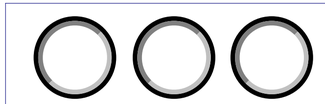
KPI Selection

KPI	Baseline available?	Post-implementation data?
	○ ○	○ ○
	○ ○	○ ○
	○ ○	○ ○
	○ ○	○ ○

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MVE Worksheet Section 4

Baseline + Post-Implementation Comparison

Indicator	Baseline	Current state	Direction
			
			
			
			

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MVE Worksheet Section 5

Clinician Experience Check

What are clinicians reporting? Capture positive and negative signals and concerns

Workload	
Workflow	
Documentation	
Patient interaction	
Quality	
Usability	

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MVE Worksheet Section 6

Safety and Oversight

Any observed safety concerns, workflow issues, or unexpected outputs?

Safety	
Workflow	
Outputs	

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MVE Worksheet Section 7

Directional ROI Signals

Time savings	
Reduced admin	
Capacity gains	
Other	

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MVE Worksheet Section 8

Recommendation

Continue/scale ☐ **Continue with conditions** ☐ **Pause/Reassess** ☐

Key rationale

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