
Building AI for Primary Care
A Participatory Design Playbook for the Clinical Frontline.
Not just users. Co-creators.

## The EHR Era: Top-Down Design

Tools built primarily for billing compliance rather than clinical support. Resulted in workflow friction, professional distress, and early retirement.


We cannot afford to deploy AI the way we deployed EHRs. How we build matters as much as what we build.

## The AI Era: Participatory Design

Tools built to facilitate what drags on care systems. Designed to reduce burden and empower the foundation of healthcare.


Our North Star for every AI deployment.
Patient Experience
Enhancing satisfaction and access.
Health Equity
Addressing disparities in care delivery.
Outcomes
Improving clinical health results.
Reduced Cost
Eliminating unnecessary healthcare spending.
Professional Well-being
Reducing clinician and staff burnout.
Our North Star for every AI deployment.
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# Comparison of Design Methodologies in Healthcare AI

| Who Decides? | Top-Down Design | User-Centered Design (UCD) | Participatory Design (CBPR Aligned) |
|---|---|---|---|
| User Role | Executives & IT | Developers | Clinical Team + Developers |
| Timeline of Input | Passive Recipients | Test Subjects (Observation) | Co-Design Partners |
| Outcome | Post-Launch | Testing Phase | Longitudinal (Start to Finish) |
| | Frustration & Workarounds | Usable, but potentially misaligned | High Adoption & Workflow Harmony |

**Participatory Design shifts users from subjects of observation to equal partners in innovation.**

# The Co-Design Lifecycle for Healthcare AI

Our North Star for every AI deployment.

**Iterate:** Code loops back to drafting.

## Discover
Identify needs, understand barriers, target specific pain points.

## Design
Ideate concepts, synthesize findings, define requirements.

## Build
Develop low-to-high fidelity iterative prototypes.

## Test
Pilot in real-world contexts, refine solutions.

**Longitudinal Co-Design Input:** The clinical voice remains present across all 4 stages.

Participatory Design shifts users from subjects of observation to equal partners in innovation.

Medical Assistants & Nurses

Health Care Navigators

Front Desk & Schedulers

Behavioral Health & MDs

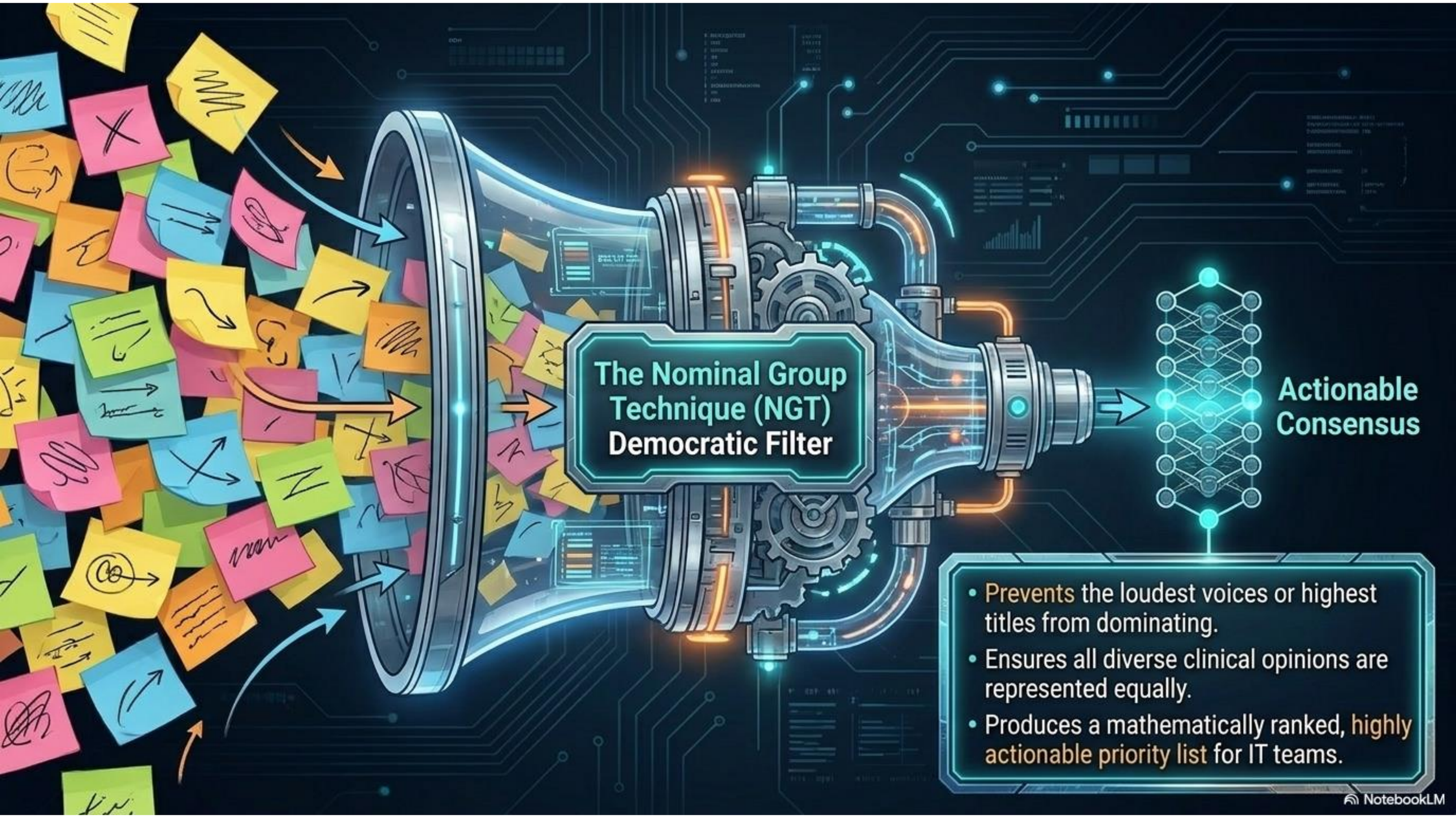


## Phase 1: DISCOVER

Identifying the right AI targets requires a broad assessment of the entire clinical ecosystem.

**Obstacle:** IT teams may feel territorial, or clinics cite lack of time.

**Solution:** Frame this as a standard Continuous Quality Improvement (CQI) procedure. Advocate for protected time (e.g., lunch hour with food provided).


The Nominal Group Technique (NGT) Democratic Filter
Actionable Consensus
• Prevents the loudest voices or highest titles from dominating.
• Ensures all diverse clinical opinions are represented equally.
• Produces a mathematically ranked, highly actionable priority list for IT teams.
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## Step 1: Preparation

Assemble 5-9 diverse clinic members. Secure a comfortable room (U-shaped tables). Provide food. Craft a clear prompt (e.g., "What repetitive tasks take time away from patient care?").

## Step 2: Silent Generation

Independent, silent writing of ideas.

Why? Allows time for reflection and avoids conformance pressure.

## Step 3: Round-Robin Recording

Facilitator records one idea from each participant verbatim on a flip chart.

Why? Separates the idea from the person; encourages hitchhiking on other ideas.

## Step 7: Final Vote

Locking in the group's mathematical consensus.


## Step 4: Serial Discussion

Clarifying each idea sequentially.

The goal is understanding, not debate or argument.

## Step 6: Discussion of Vote

Addressing anomalies.

Discussing items that received surprisingly high or votes to ensure no misunderstandings.

## Step 5: Preliminary Voting

Independent judgment to narrow the field.
Uses Rating or Ranking mechanics.

Actionable Consensus

# The Mechanics of Consensus: Rating vs. Ranking

## The Rating Method


Pro: Captures the intensity of preference.

Participants distribute 100 points across ideas. They can weight heavily on one idea.

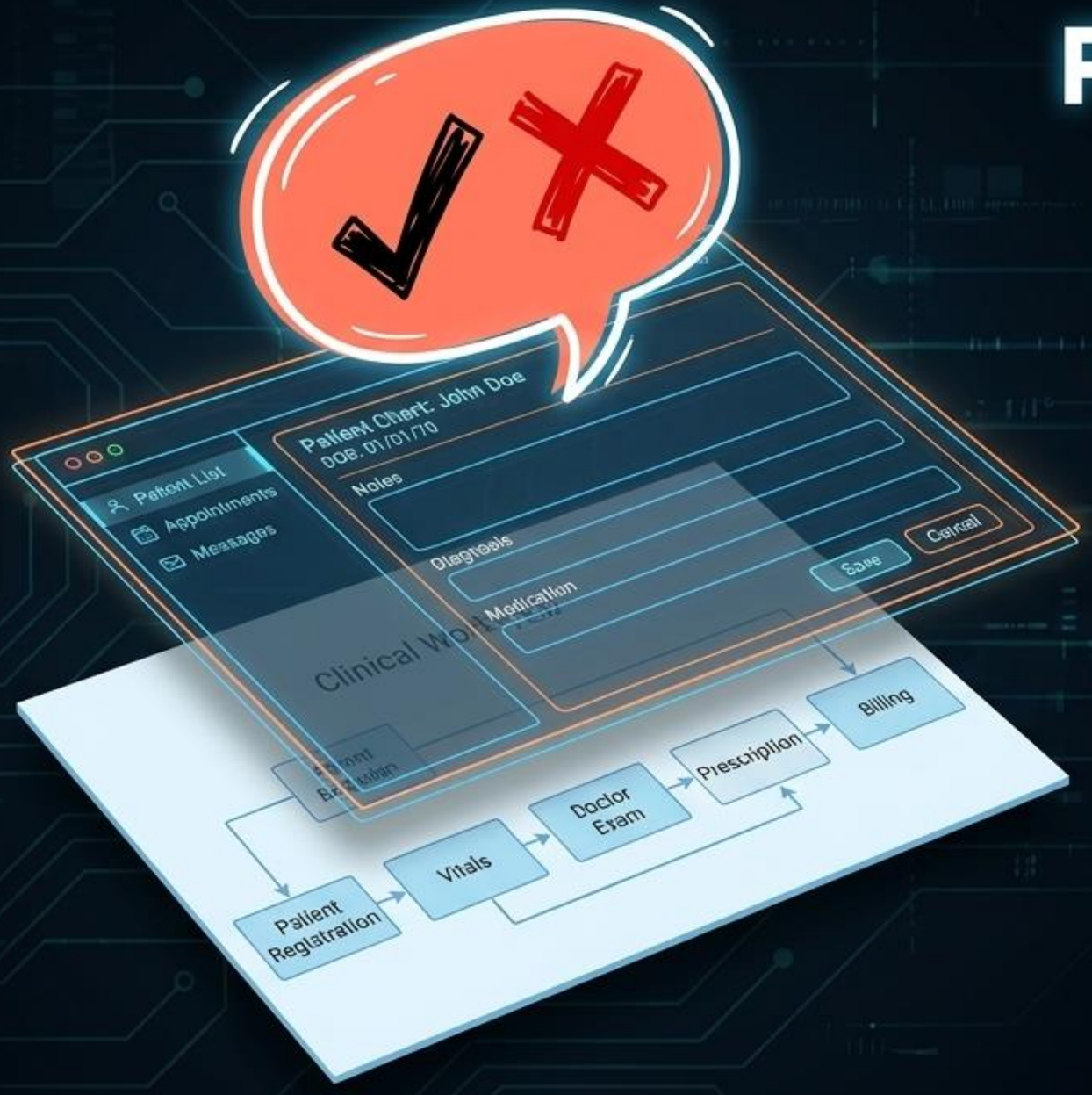
## The Ranking Method


Pro: Forces strict prioritization and eliminates ties.

Participants select half the ideas and rank them sequentially.

**Both methods transition individual judgments into a defensible, democratic group decision.**

# Phase 2: DESIGN




**Design isn't just about the software; it's about how the software alters the clinic's workflow.**

## Key Methodology: "Think Aloud" Testing

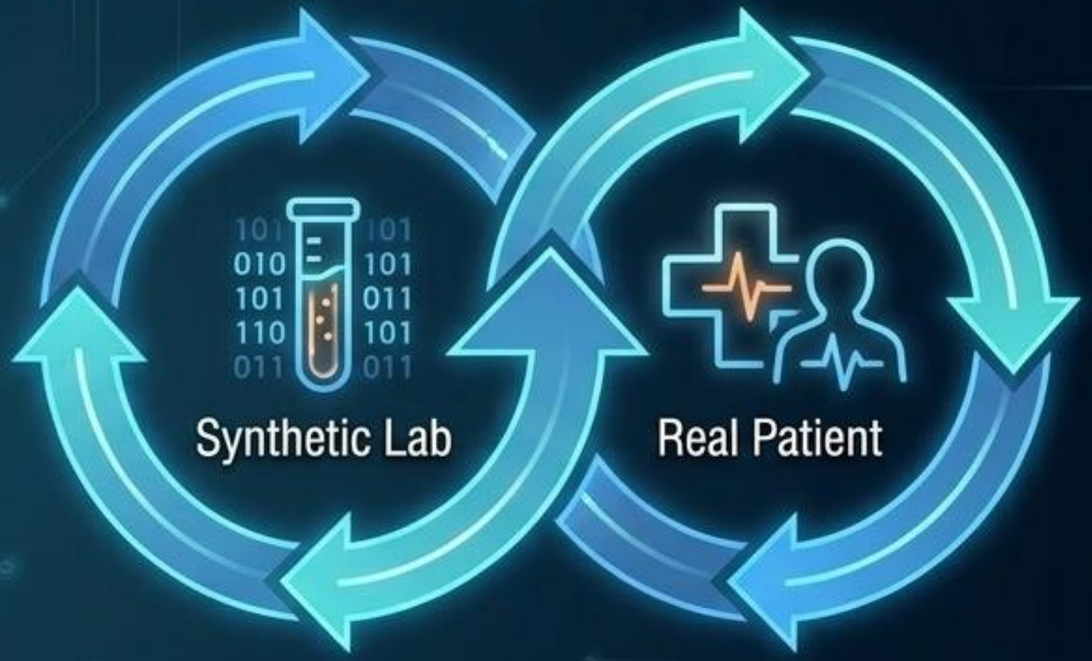
- 1. Provide clinical staff with low-fidelity prototypes.
- 2. Have them interact with the tool while speaking their internal monologue aloud.
- 3. Instantly identifies UI friction and illogical workflows before a single line of code is written.

# Phase 3: BUILD

IT and programmers integrate the tool into existing infrastructure.

**Crucial Rule:** Maintain strict accountability back to the co-design team. Any technical modifications to the design must be reviewed by the clinical users.

# Phase 4: TEST




Utilize existing clinic CQI frameworks.

- Test first with synthetic data, then graduate to a controlled real-world clinical pilot.

# The Human Reality

# The Digital Reality


## Requirement Engineering (RE)

Eliciting, defining, and documenting exactly what stakeholders need the system to do.

Process mining reveals how users actually navigate the current system (identifying bottlenecks).

Requirement Engineering uses this data to build future solutions that reflect reality, not assumptions.

## Process Mining

Analyzing actual system event logs and click data.

# Real-World Output: Pilot Learnings (UW Northgate & San Francisco)

### Inbox Triage

Automating MyChart messages to route non-medical requests away from providers.

### Continuity Scheduling

AI scheduling tools that factor in the likelihood of no-shows and prioritize panel continuity.

### Ambient Documentation

AI speech-to-text to instantly draft visit notes.

### Complex Care Summaries

Generating meaningful, concise summaries of lengthy hospital stays for the PCP.

When empowered, clinical teams don't ask for sci-fi novelties; they ask for practical tools to save time and reduce cognitive load.

**AI integration into primary care is inevitable; repeating the mistakes of the EHR era is a choice. Empower your frontline teams to own the deployment.**

# Start Tomorrow Checklist

## Identify a Champion

Find an influential clinical leader to sponsor the initiative.

## Schedule a Discover Lunch

Book a 90-minute NGT workshop with a diverse cross-section of your clinic (MAs, Front Desk, MDs).

## Target an Operational Drag

Start with a single, high-friction administrative task, not a massive diagnostic overhaul.