

Unlocking the Long Tail of Healthcare Innovation

A New Model for Building AI in Health Systems

THE SIGNAL IN BRIEF

Foundation models and natural-language development are dramatically lowering the barriers to building AI, expanding both who can build and which problems are practical to solve.

This creates an opportunity for health systems to tap the expertise of people closest to the work and address a much broader range of clinical and operational challenges.

Capturing that opportunity will require a more distributed approach to development, matching the right builders and resources to the right problems.

The Barriers to Building AI Are Falling

For most of the last decade, building AI was expensive. Organizations needed specialized data scientists and engineers, proprietary datasets, significant infrastructure, and months of development to create useful applications.

That equation is changing quickly, driven by two technology shifts.

Foundation models have made advanced AI broadly accessible. Health systems no longer need to build intelligence from scratch. They can build on top of capable models now available to everyone.

Natural language is becoming a development interface. New platforms allow people to prototype and build AI applications through conversational instructions rather than traditional software code.

Together, these shifts change who can build AI, how quickly ideas can be tested, and which problems are practical to solve, requiring health systems to rethink how AI development is organized.

Unlocking the Long Tail of Healthcare Innovation

The best ideas for improving healthcare have typically come from the people closest to the work. Nurses identify workflow bottlenecks. Care managers understand where patient follow-up breaks down. Quality leaders recognize opportunities to improve safety.

Historically, turning those ideas into technology solutions required scarce development resources. Many entered long IT backlogs or were never pursued because the potential benefit did not justify the cost of building a solution.

AI is changing that equation. As development becomes easier and less expensive, people closest to the work can increasingly prototype solutions themselves, lowering the threshold for what is worth building.

This opens up the long tail of healthcare innovation: as development becomes easier and less expensive, health systems can pursue opportunities that previously would never have made it onto the roadmap.

A Portfolio of Development Models

As the number of problems that can be addressed with AI expands, so does the number and types of people who can participate in solving them. Across our work with health systems, we are seeing three development models take shape.

Citizen Developers

Citizen developers use new AI tools to solve well-defined problems within the workflows they know best. A clinical informaticist, quality improvement manager, operations leader, or clinician might build a knowledge assistant, an administrative automation, a department-specific copilot, or a workflow support agent.

Citizen development can also serve as an incubation model for broader innovation. A solution may begin as a prototype within one department, demonstrate meaningful use and value, and then transition to an enterprise AI or engineering team to be scaled across the organization.

Citizen development is best suited to localized applications with limited authority and controlled access to data and systems.

Enterprise AI Teams

Enterprise AI, digital, engineering, and data science teams remain essential for complex, strategic, or higher-risk applications such as clinical decision support, patient-facing agents, enterprise platforms, and multi-agent systems.

As development becomes distributed, enterprise teams increasingly provide the infrastructure that enables others to build: approved platforms, technical guardrails, evaluation capabilities, and enterprise standards.

Forward-Deployed Product Pods

Some problems sit between these two models. A health system may know it wants to reduce care gaps, improve throughput, or streamline care coordination without knowing exactly what the solution should be.

Forward-deployed product pods bring together clinicians, operational leaders, product experts, implementation leads, and AI engineers to discover, test, refine, and implement solutions around these problems.

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The goal is not to choose one development model. It is to match the development model to the problem, so specialized resources are concentrated where they create the greatest value while expanding the organization's overall capacity to innovate.

Most common today

Emerging

Enterprise AI Teams

Clinical decision support
Patient-facing agents
Multi-agent systems

Citizen Developers

Knowledge assistants
Admin automations
Department copilots
Workflow support agents

Product Pods

Forward-deployed
Reduce care gaps
Improve throughput
Streamline coordination
Solution discovered together

A New Model for AI Innovation

As the barriers to AI development fall, more people can participate in building, more problems become practical to solve, and specialized AI teams can focus their resources where they create the greatest value.

The opportunity is not to turn everyone into an AI developer. It is to create more ways for the people who understand healthcare's problems to participate in solving them, whether by building directly, working alongside technical teams, or identifying ideas that can be prototyped locally and scaled.

The health systems that organize around this shift will be able to turn more of their own ideas into solutions, unlocking a new source of innovation from within.

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