City of Hope®

CUSTOMER SPOTLIGHT

How City of Hope Is Bringing Data Science Into the Clinical Workflow

SUMMARY:

City of Hope's Applied AI and Data Science team uses **Posit Connect as the central hub for deploying tools across clinical and business operations**, from comorbidity documentation to a tool that accelerates clinical trial feasibility by identifying eligible patient cohorts and assessing site readiness using a single, AI-enabled front end. Now they're working with Posit to embed those tools directly inside Epic, so clinicians can access data science output without ever leaving the workflow where they actually work.

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ABOUT:

City of Hope is one of the largest and most advanced cancer research and treatment organizations in the United States, and one of the leading research centers for diabetes and other life-threatening illnesses. Its mission is to make hope a reality for all touched by cancer and diabetes. City of Hope's leading centers and outpatient sites are in the major metropolitan areas in Southern California, Arizona, Illinois, and Georgia, making City of Hope accessible to **more than 86 million Americans.**

The Challenge:

Production Data Science in a Clinical Environment

Deploying data science in healthcare means more than building a good model. The tools that Matt Maloney, Director of Applied AI and Data Science, and his team build at City of Hope end up in clinical workflows, billing systems, and executive dashboards, and getting something deployed, maintained, and used where the real work happens.

- **FRAGMENTED OWNERSHIP AND VISIBILITY:** Expanding into DevOps and AI required an independent deployment platform. Software engineering handoffs split visibility and made production issues difficult to quickly diagnose.
- **INFRASTRUCTURE COORDINATION BOTTLENECKS:** Deploying data products required coordinating across separate infrastructure and security teams. Operating on individual timelines delayed final deployment by several weeks.

The Solution:

Posit Connect as the Hub

Posit Connect gave the City of Hope data science team a place to iterate and deploy. Shiny applications, scheduled scripts, API endpoints, and automated reports all live on Connect, accessible to internal stakeholders across clinical and business functions without a handoff in between.

- **DIVERSE HIGH IMPACT APPLICATIONS:** Posit Connect hosts clinical tools that track comorbidity gaps and evaluate trials, alongside critical business applications managing revenue cycles, philanthropy, and financial forecasting workflows to review thousands of notes daily.
- **STREAMLINED GOVERNANCE AND COLLABORATION:** City of Hope's AI Governance Committee reviews every use case for HIPAA compliance and ethics, helping clinical finance, biostatistics, and data science teams safely collaborate on analytics workflows across the enterprise.

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The Next Frontier:

Embedding Posit Inside Epic

The most ambitious integration City of Hope is working with Posit on right now is to embed Shiny applications hosted on Posit Connect inside Epic, their electronic health record system, so that clinicians never have to leave the environment where they spend their day.

The goal is straightforward: when a physician opens a patient record, the tool they need is already there, pre-populated with that patient's context. No separate window, no manual entry, no context switch. In a clinical setting where time in any patient interaction is already constrained, an extra step can mean a tool simply doesn't get used.

The integration will work by passing patient context, like a medical record number, directly from Epic into the Shiny app. For the City of Hope team, that means:

- Tools built by data scientists can reach clinicians inside the workflow where decisions get made
- Patient context loads automatically, removing manual steps and number of clicks for already time-pressed users
- The data science team can continue owning and iterating on the tools with fewer moving technical pieces to manage.

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