BLOG: How They Did IT

Epic Hyperdrive Responsiveness Through the Clinician's Eyes

By Thomas Charlton, CEO Goliath Technologies

One of the largest Nonprofit Health Systems in the US was experiencing clinician and nursing complaints from users of Epic Hyperdrive. They engaged Goliath to help them frame up the size of the problems, isolate root cause, and determine a remediation plan based on the findings.

This post will be in two parts due to the nature of the engagement. Each will represent how we worked with our client to deliver an improved clinician experience. First, we needed to separate the "perception" of clinician experience based on subjective feedback and reality based on empirical data to determine the "true" experience through the eyes of the clinician.

Want to learn more? Request to speak with a healthcare IT consultant.

Challenge

"We had spotty complaints from very vocal and prominent surgeons in one of our geographic regions which amplified the feedback. Both Clinical and IT Executives wanted to understand the extent of the issues and if possible, the contributing factors so they could be remediated. I exhausted all tools at my disposal as well as our primary Citrix consulting vendor. Nothing provided insight into the issues. Then, we reached out to another region that was using Goliath Technologies and asked for assistance."

- Health System Project Leader

The frustration was acute, like a 911 call without an address. The executives wanted to respond to and resolve the reported issues but there was no actionable data, so our first challenge was to understand the true extent of the issues our client was facing.

As a general statement, IT and Clinical executives have difficulty knowing at a meaningful level whether clinicians are having issues with speed and reliability when it comes to Epic Hyperdrive or any other EHR, business, or clinical application. This is not from a lack of interest or investment. Health systems in the US are estimated to spend

between $250,000 and $2 million per year on clinician and staff surveying, depending on the size and number of physicians.

The problem is traditional methods rely on clinician feedback or self-reporting. Surveys or feedback sessions, regardless of the methodology used to conduct them, receive between >10%-25% participation. Add to that, according to the AMIA less than 10%-15% of clinicians even report EHR slowness or logon problems to help desk.

Finally, when it comes to understanding EHR speed and reliability issues specifically, it is impossible to arrive at actionable data through human interaction. In direct interaction, a clinician or user can describe their experience using the application at a nuanced level. Conversely, even the best description of speed and reliably issues are usually conflated and ambiguous, “Epic is slow”, or “My logon is slow”.

To quantify or frame the extent of the clinician issues, we correlated user experience data into our Epic Hyperdrive and Citrix Clinician Experience Reports. Though this is complimentary to other feedback mechanisms, it is vastly different in two ways:

- We use digital data to provide the nuanced details that are missing from most descriptions of speed and reliability issues. Technology is needed to translate technical challenges impacting a clinician’s experience.
- Data is correlated from 100% of clinicians without the need for their participation. This is not a sample, it is the entire user base.

We began to gather and correlate the data represented below (Image A).

Note: We were able to correlate and present this data within five business days to provide a full view of clinician experience from every user, location, application, and specialty.

This uppermost presentation layer allows us to see the numbered data quickly:

1. Data by health system or clinic location.
2. Clinician experience score based on the user experience metrics that are automatically compared to industry best practices.
3. Total number of users correlated with those that are experiencing speed and reliability issues.
4. Speed and reliability root cause analysis to see quickly why issues are occurring so we can focus on those areas for remediation.
5. Logon times for those locations and users.
6. High level summary data to convey initial impressions and areas for remediation focus.

Image A: Epic Hyperdrive & Citrix Clinician Experience Data

EPIC Clinician Experience Analytics

1 Health System Location	2 Clinician Experience Score	3 Total Users	Users Experiencing Speed and Reliability Issues	4 Speed and Reliability Root Cause Analysis				5 Logon Performance		6 Summary Review
				Slow Speed from User Location	Slowness Due to Network	Slowness Due to User Activity	Critical Slowness	Logon >= 30s	Reconnects >= 10s	
University Hospital	93	4267	25 <1%	5	19	1	1	225	20	Best scorecard we have ever to date. The few outlying, impacted users seem to be experiencing network-based issues. Evaluate these users with the poorest scores to identify any common factors.
Oncology Center	93	1624	17 1%	8	10	4	1	72	9	The few outlying, impacted users seem to be experiencing network-based issues impacting S&R. Evaluate these users with the poorest scores to identify any common factors. Logon times as a percentage of users is significant >30 seconds while there are no issues with reconnects. Initial logons require further investigation, consult product details.
Children's Hospital	92	2662	44 2%	35	15	5	4	167	25	Just over 5% of users are impacted, largely by local client connectivity. Complaints from these users can be investigated at the endpoint. Initial Logons require investigation see product details.
Orthopedic Surgery Center	92	731	11 2%	8	5	3	7	11	8	Just over 12% of users are impacted, largely by local client connectivity. Complaints from these users can be investigated at the endpoint. initial logon and reconnects are an issue here and likely Wi-Fi related at the surgery center location.
Ambulatory Surgery Center	68	142	47 33%	36	29	8	31	30	23	Just over 7% of users are impacted, largely by network delays. Investigate users with the poor Network scores to identify any common factors.
Regional Hospital	61	1936	739 38%	704	398	183	361	652	214	~25% of users experiencing S&R largely by local client connectivity. Complaints from these users can be investigated at the endpoint for network conditions and endpoint activity. Initial Logon times significant so consult product details on specific users from this location over past 30 days.

These data-driven insights unite clinical and IT teams around facts, not opinions. Shared, unbiased data enables productive collaboration between Clinical and IT leadership, so permanent remediation actions can be approved and implemented. Now, from an IT perspective, many hours are saved attempting to quantify and identify the clinicians who are experiencing issues and the corresponding root cause, often multiplied over the course of months.

We met with both Clinical and IT executives so we could review the data and immediately draw a few conclusions:

- In aggregate, overall EHR speed and reliability were within acceptable ranges. So, the initial perception of broad poor experience was exaggerated.
- There were several locations experiencing clear issues with clinician experience, but they were not caused by Epic Hyperdrive or the datacenter infrastructure.
- Further investigation was required in areas experiencing poor performance, but the aperture for investigation was significantly narrowed by the data, allowing for much more productive and efficient investigation.

In a follow-on post, we will discuss the findings in more depth and how we worked with health IT and clinicians to fully understand, quantify, and resolve chronic speed and reliability issues.

If you would like to discuss further, reach out directly at techinfo@goliathtechnologies.com or request to speak with a healthcare IT consultant.

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