



# Restored Confidence

## **When 92% Isn't Good Enough: How Lahey Health Used Lighthouse to Reach 99%+ IRR for the AFib Registry**

In the third quarter, Lahey Health was doing what they had always done. An experienced AFib abstractor was abstracting cases manually, relying on years of knowledge, careful chart review, and professional judgment. She knew the work well and took real pride in getting it right.

She completed her first five AFib cases, and as part of the standard process, the Carta Healthcare team reviewed them using inter-rater reliability (IRR) measurement. At Lahey Health, IRR scores are more than a quality metric. They directly affect registry confidence, reporting credibility, and downstream performance measurement.

When the results came back, they were hard to believe. Her average IRR score was 92.29 percent, well below Carta Healthcare's required range of 98 to 99 percent.

The score hit her hard. After years of experience and careful effort, seeing a result like that made her question herself. It was frustrating and discouraging, especially knowing she had approached the work with the same diligence she always had.



Then Q4 arrived, and everything changed. Lahey Health introduced Lighthouse, Carta Healthcare's AI-powered abstraction platform, for all AFib abstractors. Lighthouse is built on a Hybrid Intelligence model, which means advanced AI continuously analyzes the medical record to surface relevant data, while expert human abstractors review, validate, and apply clinical judgment to every case.

From that point on, she was no longer working alone. Lighthouse used AI to scan across progress notes, discharge summaries, and historical encounters, flagging details that are easy to miss in manual review. She remained fully in control of the abstraction process, but now with AI enforcing registry logic and consistency in the background.

**When she completed her next five cases, the difference was immediately apparent. Her average IRR score jumped to 99.09 percent, an improvement of nearly seven points.**

**This time, she was ecstatic.**

The improvement was not about effort or experience. It was about overcoming the natural limits of manual abstraction in complex, fragmented medical records. Hybrid Intelligence combined the strengths of AI and human expertise, reducing variability while preserving accountability.

**For Lahey Health, the impact was clear. Lighthouse delivered higher data quality, greater consistency across abstractors, and faster alignment with registry requirements. For the abstractor, it restored confidence. And for leadership, it reinforced a critical insight: the future of clinical data work is not humans or AI alone, but a Hybrid Intelligence approach where each does what it does best.**