**HI-IQ**®

WORKFLOW EVOLVED. DATA EMPOWERED.

# GOING BELOW SKIN DEEP

## IR practices are tapping into the value of HI-IQ for insight that the EMR alone can't deliver

Interventional radiology emerged out of a physician's desire to give a patient better than the prevailing options. It's that spirit of "limitless potential" that has led to thousands of groundbreaking procedures. So it's no surprise that many IR practices are finding ways to "do better" than standard-issue electronic medical records (EMRs).

Specifically, they're tapping into the breadth of data analysis offered by HI-IQ — a highly robust platform designed by members of the Society of Interventional Radiology (SIR) to address the unique needs of their specialty. As the value-based care model takes shape, IR specialists are embracing HI-IQ as an important tool in managing quality assurance, complications and physician training. It's a way to capture valuable insight on the vast breadth of procedures being performed within their unique specialty. Insight that helps deliver better care.

## Contrasting IR-specific needs like no other system can

HI-IQ is built to address the complexities that aren't inherent in other specialties. Colorado Imaging Associates (CIA) is an example of a practice whose needs far exceed the capabilities of generic hospital systems.

"The kind of quality data points we want to track — was this a complication or not, was it major or minor — that data simply doesn't exist in any other database in the hospital," says Jeffrey Moulton, MD, FACR. "There's no way (an IT department) could write an electronic interface that says, 'this was a complication of this procedure.' That requires a physician to look at the case and make a subjective judgment about what went on. The data is so unique."

Dr. Moulton explains that over the last 20 years, HI-IQ has been CIA's tool of choice for managing complication data that's — well, complicated. "HI-IQ is a flexible program that allows us to customize the information we need, in the way that makes sense to our practice," he says.

## Revealing remarkable insight — in multiple dimensions

CIA has nine interventional radiologists contracted to provide services for five hospitals in the Centura Health system statewide. Using the newest, cloud-based version of HI-IQ, physicians are able enter post-operative notes and details immediately after the procedure from any location. Success and complication rates can be compared by procedure and by physician. Other quality measures can be analyzed across multiple data points to provide a clear picture of the efficacy of a procedure beyond just success rates. Was it safer than the alternative? Less costly in terms of consumption and staff time?

"Hospital administrators are concerned with getting patients treated and discharged as quickly as possible, and with fewer resources," Dr. Moulton explains. "HI-IQ gives us the ability to add certain data points that help demonstrate the value of IR in delivering patient care safely and more efficiently than surgery or some other means. In our practice we've even used HI-IQ to evaluate the benefit of using one type of device versus another to determine our treatment plan. This level of insight is extremely helpful when we have three or four options that vary in cost."

## Comparing complications to the standard

Tracking complications is incredibly valuable — but HI-IQ goes further by enabling practices to benchmark their own data against SIR standards. So, for example, a specialist performing a percutaneous colonic stent can readily compare his or her results to statistical, evidence-based information compiled by SIR.

"The SIR data isolates problem areas to focus on," explains Douglas Sutton, RN MSN, who manages the interventional radiology department at the University of Vermont Medical Center. "We can easily see if we're in the ballpark — and mirror SIR's recommendations if we're not."

SIR ENDORSED

## Delivering intelligence that drives smart growth (and makes hospitals take note)

As the value of IR becomes evident in the growing numbers of procedures and patients, many IR practices struggle to get cases in and out quickly. Hospital space is limited; the practice can't just add a suite at its discretion. So when University of Vermont Medical Center's IR team was bursting at the seams, Sutton leveraged HI-IQ to make a case for expansion.

"I was able to demonstrate, from the data, that our outpatient case load was high enough to warrant more support for patient prep and recovery," he says. "The analysis I pulled from HI-IQ lead to the approval of a 16-bed prep and recovery unit. That was huge for us."

## Assuring patient safety

University of Vermont Medical Center is a high-volume academic institution that appreciates the speed and granularity of HI-IQ. When the IR department received notice from the infectious disease team about a "smattering" of vascular access cases, Sutton had all the information at his fingertips to crack the code.

"We pulled the day sheets and service activity from HI-IQ. Within four hours we were able to rule out possible procedural causes and started focusing on the single room where these cases were coming from. We determined that the infections were caused by microbes that had formed on some duct tape used in the ventilation system. The problem was corrected — and the infections stopped."

While this was an exceptional case, Sutton says it demonstrates the power of HI-IQ in vetting out trends and patterns that can be acted on. In 2016 his institution installed a software program to track the amount of ionizing radiation emanating from the machines. Data on the fluoro time, doses and air kerma were recorded and fed into the HI-IQ database. Sutton was able to query HI-IQ to calculate the radiation average by case type.

"In a matter of keystrokes, we were able to extract information from HI-IQ that would have taken many hours if not days to produce otherwise," he explains, adding that as a result of this research, University of Vermont Medical Center was able to achieve a 50% reduction in radiation delivered to patients. Another win for patient safety.

## Supporting medical education

The value of data in medical training can't be overstated. Institutions such the University of Vermont Medical Center and Indiana University School of Medicine rely on HI-IQ to support credentialing and certification of their fellows. The data repository provides a historical record of each trainee's procedures and performance, providing insight not only on their proficiency but also the diversity of cases they're being exposed to.

"It's precisely the kind of detail that the Accreditation Council for Graduate Medical Education (the entity that oversees credentialing of resident and fellow programs) wants to see to validate our program," says Sutton.

## Minimally invasive technology. (Of course.)

True to the nature of IR, HI-IQ is designed for simplified implementation with minimal impact on the healthcare system's staff.

John Burns, IT manager for radiology at Indiana University Health Physicians, recently directed the department's conversion to the cloud-based HI-IQ IRIS. The endeavor was especially challenging because it crossed two separate partner entities — the IUH system of physician practices and other care facilities, and the Indiana University School of Medicine.

"The HI-IQ team had all the documentation ready to go — it was like, 'Here are the ports, here's how to configure the firewall rules and VPN tunnels,'" Burns recalls. "Plus, HI-IQ integrates effortlessly with most hospital and radiology information systems, so setting everything up was quite easy from our point of view. We were up and running in about a month whereas with some other vendors it can take six months or more to complete a basic implementation."

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>
> —Douglas Sutton
> University of Vermont Medical Center

## Ensuring a well-functioning practice

In describing the overall value that HI-IQ brings to the IR practice, Douglas Sutton of University of Vermont Medical Center sums it up this way: "The ability for me to produce what our physicians need — not only from a quality assurance point of view but at the bedside, with well-performing equipment and information that makes their day run smoothly — that's key to our success.

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