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# Fighting the Opioid Epidemic with the Right People and the Right Tools

QLIK

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By now, most people are aware that the opioid epidemic is an incredibly serious problem in the United States. But a number of recent studies paint a pretty grim picture about just how bad things are from coast to coast.

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According to a study conducted by the National Institute on Drug Abuse, more than 115 people die every single day in this country by way of an opioid overdose. Not only do about 21–29% of people who are prescribed opioids misuse them, but somewhere between 8–12% of those people end up with a legitimate problem. Roughly 4–6% of those people will eventually transition to heroin.

In addition to the human toll, the economic impact of this issue costs the economy about \$78.5 billion per year. This includes healthcare, addiction treatment, the cost to the justice system, lost productivity, and much more.

Part of the reason why I became a healthcare professional was to help address these types of issues head-on in any way I could.

## How Do You Fight a Nationwide Epidemic?

I'm a Registered Nurse and my background is in the Intensive Care Unit. I got into the healthcare profession a little over ten years ago. Nursing is an amazing profession for a multitude of reasons. It allows for flexibility, not only in the hours, but the type of healthcare settings and patients you want to care for. It opens doors to such a large variety of opportunities, including informatics and analytics. You also experience situations that are unlike any other profession, which are emotionally rewarding and professionally fulfilling.

My interest in helping fight the opioid epidemic is on a personal level. There are multiple people in my life who have been affected by the opioid epidemic. I've seen firsthand what happens when someone falls victim to this type of temptation. I knew in my heart I had to do whatever was needed to help stop other people from falling into this trap. Even the ability of preventing one person from becoming addicted is worth the effort.

Part of the reason why I joined Jefferson Health—and why I eventually transitioned over to the Business Intelligence Team—was the ability to effect change through data. As an ICU nurse, I was able to help a few patients each day, but with this job we have the ability to impact all the lives seen at Jefferson. For the opioid crisis, it was important for data and analytics to have a seat

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something this difficult.

When it comes to battling the opioid crisis, analytics may be the most powerful tool available today.

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In Philadelphia, the mayor established a task force that's involved in a multi-disciplinary effort with law enforcement, fire rescue, healthcare, and public education. Jefferson Health recently joined this task force. Our Chief Medical Officer (CMO), Dr. Edmund Pribitkin, has been working very closely to help battle abuse and gain both insight and transparency from a data perspective around the epidemic. Jefferson Health has an opioid task force as well which includes providers, nursing, pharmacy, administration, IT, and analytics.

If you try to answer a question like *how do we analyze the utilization and ordering of opioids*, your most important resource is data. You need real information about real people that, when analyzed, can help you uncover a much more accurate and thorough story than any other method.

## Combating the Opioid Epidemic with Modern Technology

Over the last year, our team was approached by our CMO to create a solution that would let us disseminate and share information at the clinical chair department level.

One of the key metrics we wanted to track was prescription quantity—particularly with orders over seven days. Patients who take prescription drugs longer than seven days have a much higher risk of becoming addicted, so we needed to dive deeper into those cases.

We also had to take a look at the overall distribution and ordering durations. This includes metrics such as orders with over one hundred pills, as well as patients who have two or more opioid orders within three days.

[in](#) 4[t](#) 4[f](#) 20[LINK](#)

A high-level dashboard as the first page in the application would allow for a quick view of what is happening in the organization. If we built a dashboard that included a visual that allowed for trends of prescriptions by month, this would help us understand if our interventions are causing changes in ordering.

Data itself isn't enough. Powerful dashboards allow you to act on your findings. @qlik

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We needed a web-based application where the group could log in and see the current status, with the ability to drill down to trending metrics month-over-month.

The major challenge we faced, almost immediately, was the complexity of this type of data. Additionally, as a health system, we needed to pull different types of data from various systems into the same analysis and do this constantly. Because the number of different EHRs deployed throughout the health system, we needed a platform that would allow us to consolidate everything to guarantee the visibility and transparency the situation demanded. We quickly began leveraging both our EHR and Qlik Sense, and the results have been incredible.

## Let Analytics Be Your Guide

Qlik Sense has made a monumental difference in the way we track prescriptions by patient. Using the data aggregated in the platform, we have a way to see overall ordering trends. This includes a sheet to display patients with two or more prescriptions in a thirty-day period. Once we select an individual patient, we identify who gets prescriptions from multiple providers versus who has one provider ordering all of them. We even know exactly what they're on, like Methadone or Oxycontin. If one patient is identified to have multiple prescriptions, we can quickly follow up with providers to understand why.

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Our approach to prescription quantity has been the exact same way. With a few clicks, we can see who is ordering the most quantity by provider and also their specialty. We know the top ten orders that are over one hundred pills.

## Fixing Processes

With our new insights, we've even improved workflow issues. When providers enter and cancel and order within a short time frame, it's often because they made a mistake or need to make a change. But the problem is once that first order is out to a local pharmacy to fill, the second order doesn't replace it. Instead, it's added to it. The physician would have to pick up the phone and call the pharmacy to cancel the first order. Not many people did that.

Based on what we noticed and the trends we uncovered, we were able to re-educate physicians on the e-prescribing workflow to help make sure there weren't two prescriptions waiting for a patient who was already at an increased risk of addiction.

## Act Now to Save Lives

It's not just that we have insights—we're actually acting on them. Thanks to the platform we've built, we can work directly with our EHR vendor to calculate things like morphine equivalent daily dose (MEDD). I can see what the MEDD is for any particular patient at the touch of a button. Not every clinician truly understands MEDD or what the recommended dose is, so we are working to put instructions within the system about the calculation along with recommendations.

Fighting the opioid crisis isn't only the responsibility of the ordering clinician, but they do play an important role. Today, because we can show patients who are on opioids within the system and what their MEDD is, anyone who opens that chart can intervene with that patient's prescription if necessary.

As a pilot, one of our physician builders also changed the default on the duration of prescriptions. Basically, we made the default shorter. After our change, from January to March, we saw a 50% decrease in the number of prescriptions over seven days in duration. The best part is that bec

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knowledge of the

switch, the results just happened. We didn't get any negative feedback from physicians about that change. It was almost like it went unrecognized—people just used the default.

## The Future Is Finally a Bright One

But more than anything, I love the way our new system has allowed my team to empower our colleagues. Currently, I would say that between 30-40% of our job involves training education. It's incredibly rewarding to see a colleague understand the new power they have to drive real insights. It lets us ask tough questions and uncover better answers than we could in the past. The platform also lets us work as a unified team while we do it.

Don't just show your team analytics. Empower them to use it on their own.

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The opioid epidemic is a problem that looks like it may get worse before it gets better. Most of us already know someone who's been affected by the crisis. And if you don't, the chances are high you will at some point in the not-too-distant future.

Initially, it was the nursing profession that drove me into healthcare. Now, seeing the valuable of analytics, and the progress we are making that would not have been impossible a few years ago, is what keeps me going.

[in](#) 4[t](#) 4[f](#) 20[LINK](#)



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Experienced Clinical Informatics Specialist with a demonstrated history of working in the hospital & health care industry. Skilled in Health Informatics, Data Analysis, Nursing, Critical Care, and Epic Systems. Strong research professional with a Master of Science - MS focused in Nursing Informatics from Thomas Jefferson University.

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