

# How One of the Nation's Largest Hospitals Integrated Prescription Monitoring and Advanced Analytics to Address the Opioid Epidemic and Potentially Save Lives

Yale  
NewHaven  
Health  
Yale New Haven  
Hospital

## Executive Summary

In an emergency department (ED), where every second is critical, it's imperative that a patient's controlled substance information be easily accessible.

Vivek Parwani, MD MHA FACEP, Medical Director of the Adult Emergency Department at Yale New Haven Hospital, explains the successful integration of a state-of-the-art opioid stewardship solution—which includes the nation's leading substance use disorder platform, advanced analytics, and patient-matching technology—with its Epic electronic health record (EHR) system.

## The Challenge

The ED is a 24/7/365 operation. The Adult ED at Yale New Haven Hospital sees as many as 300 patients a day, and two thirds of those are at off hours. "We need to have quick and easy access to their opiate and other controlled substance prescription history at any time of day. Until we had these tools integrated into our daily routine, our clinicians had to separately log into the state prescription drug monitoring program (PDMP) to check a patient's prescription history," says Parwani.

A separate login was necessary for the EHR and the PDMP. This cumbersome process involved frequent login ID changes, and often tracking down a staff member for help logging in. That process could often take as long as 10 minutes. For that reason, a patient's controlled substance history was often never checked. The technology struggle of looking at multiple websites was a real burden.

## About the Client

- Ranked among the best hospitals in the nation, according to *U.S. News and World Report*
- Named one of the most wired hospitals in the country, according to *Hospitals and Health Networks*
- Appriss Health client since 2017

## Challenge

- Treating patients with substance use disorder in the Adult Emergency Department

## Solution

- Integrating the PDMP and NarxCare into the Epic EHR system

## Benefit

- Potentially saving lives by improving the patient care, outcomes, and safety

## The Solution

Yale New Haven Health implemented Appriss Health's NarxCare substance use disorder advanced analytics platform. "NarxCare has had the biggest impact of any tool we have integrated into the EHR," says Parwani. "We are able to see the Narx Score on the patient's profile within the EHR. That has really made a big difference. We have everything in one place to fully evaluate the patient's history, and the graphs make the evaluation fast and streamlined.

"Now the overdose risk score is as easily accessible as a patient's height, weight, and allergies. To have that as part of their integral care has really been a big success," Parwani continues. "When we pull up the PDMP report, it's consistent with reality. And the Appriss ID patient matching technology ensures that we are viewing the right patient's prescription history, and that records are up to date."

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-VIVEK PARWANI, MD MHA FACEP

MEDICAL DIRECTOR, ADULT EMERGENCY DEPARTMENT  
YALE NEW HAVEN HOSPITAL

## Helping Save Lives

Frequently, patients present with an altered level of consciousness, even unresponsive. Often, there is no information available to help figure out the cause. Having quick, easy access to controlled substance prescription history can make a huge impact on decision-making in the ED. Seeing a patient's controlled substance prescription history in a matter of seconds, rather than the several minutes it might have taken before, gives the doctor the ability to potentially save a patient's life.

Yale New Haven Hospital treated "JW," a 78-year-old female patient who was having a hard time breathing and presented to her primary care office with hypoxia (a low oxygen level). JW was a former smoker who had suffered a heart attack and chronic obstructive pulmonary disease (COPD). The clinicians who sent her to the ED were unsure which condition was causing her hypoxia. Testing for both heart failure and COPD were unrevealing.

## Yale New Haven Health System by the Numbers



Connecticut's largest health care provider



With **1,548 beds**, Yale New Haven Hospital is the **fourth largest hospital** in the United States



Yale New Haven's Adult Emergency Department **treats more than 100,000 patients annually**



Experienced a **30% increase** in ED visits for **opioid overdose** in just one year (mid-2016 to mid-2017)



Implemented EPIC EHR platform in 2013



Integrated Appriss Health's NarxCare via PMP Gateway into EPIC in 2017

A check of NarxCare revealed a Norx Score of 571, which caused concern. The physicians who sent her to the ED were unaware of other prescribers. Like many patients, JW did not understand the risks of polypharmacy, the simultaneous use of multiple drugs to treat a single ailment or condition. Access to NarxCare in the EHR allowed the ED physician to very quickly see what was wrong. Yale New Haven physicians worked with JW's team of doctors to assure a single provider and transparency of her prescriptions. On that day in the ED, NarxCare helped save her life.

## Exceptional Reliability

"The integration process was quick and efficient. We were up and running within two months. From a provider's perspective it was seamless. It has been exceptionally reliable and one of the few interventions or tools that have been praised across the board by our staff," Parwani says.

He continues, "NarxCare has helped us combat the opiate epidemic by quickly and easily viewing patient's controlled substance history, detecting misuse earlier, and allowing doctors to intervene in those cases."

## Opioid Facts for Connecticut



In 2017, there were **955 overdose deaths involving opioids** – a rate of **27.7 deaths per 100,000 persons**, which is twice the national rate of 14.6 deaths per 100,000 persons.



**Prescription opioids were involved in 273 deaths in 2017**, a more than fourfold increase from 60 in 2012. The rate of overdose deaths involving opioid prescriptions steadily rose from 1.6 deaths per 100,000 persons in 2012 to 7.7 deaths per 100,000 persons in 2017.

*Opioid Summaries by State, National Institute on Drug Abuse, 2019*

## Yale New Haven Health's Response to the Opioid Crisis

Yale New Haven Health adopted system-wide objectives to expand substance use disorder services and address the rapidly escalating opioid crisis. Appriss Health solutions are being utilized to support these objectives.

- Ensure that medical professionals screen for substance use disorder, integrating new and efficient screening tools into the EHR
- Expand access to evidence-based substance use disorder treatment providers and programs
- Use EHR data to improve care throughout the system

## Appriss Health Solutions Implemented by Yale New Haven Health

### NarxCare™

A substance use disorder platform that empowers prescribers and dispensers to identify patients who may be at risk for prescription drug addiction, overdose, and death, and equips clinicians and care teams with the tools and technology they need to help those patients. NarxCare aggregates and analyzes prescription information from providers and pharmacies and presents interactive, visual representations of that information, as well as advanced analytics and risk scores to help physicians, pharmacists, and care teams provide better patient safety and outcomes.

### PMP Gateway™

A managed service platform provides healthcare providers with comprehensive connectivity, clinical decision support, patient support and engagement, and care coordination. The nation's largest EHR and pharmacy management systems have established connectivity with PMP Gateway to integrate PDMP data, analytics, tools, and resources directly into their clinical workflow.

### Appriss ID

An identity resolution system processes records from various data sources to identify a single individual's records and provides the most accurate record of a patient's history. Appriss ID prevents medical identity theft, medication errors and testing errors, wrong person procedures, or even death.

## About Appriss Health

Appriss Health provides the nation's most comprehensive platform for opioid stewardship and the early identification, prevention, and management of substance use disorder (SUD). We provide state government agencies with the most advanced repository of controlled substance dispensing information, and deliver real-time clinical decision support, critical insights and interventions to physicians, pharmacists, and care team members through millions of patient encounters each year. Our solutions enable healthcare providers, pharmacists, and care team members to assess and manage clinical risk in order to positively impact patient safety and population health outcomes.

## How Does NarxCare Scoring work?

The Narx Score is a weighted combination of multiple variables (drug equivalents, number of providers, potentiating drugs, number of pharmacies, and number of overlapping prescription days). The score is intended to create a composite risk index, which increases as the value of one or more of the risk factors in a PDMP report increases. Narx Scores have been computed for 3 different drug types; specifically, narcotics, sedatives, and stimulants.

The NarxScore has a time element such that more recent activity is weighted more heavily than distant activity. Increasing numbers of providers, pharmacies, milligram equivalencies, and overlapping prescriptions result in a higher score.