

## YALE NEW HAVEN CASE STUDY

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

#### 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 (SUD) solution, advanced analytics, and patient-matching technology—with its Epic electronic health record (EHR) system.

#### ABOUT THE CUSTOMER

- 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*
- Bamboo Health client since 2017

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# The Challenge



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## Treating patients with Substance Use Disorder in the Emergency Department

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.



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# The Solution

Yale New Haven Health implemented Bamboo Health's NarxCare SUD advanced analytics solution. "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 Bamboo Health 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

## Yale New Haven Health by the Numbers



Connecticut's largest  
healthcare provider



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



Yale New Haven's Adult ED  
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)



Uses Epic EHR platform



Integrated Bamboo Health's  
NarxCare via PMP Gateway  
into EPIC



# 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 help better inform clinicians 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.

A check of NarxCare revealed a Narx 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 abuse 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 SUD services and address the rapidly escalating opioid crisis. Bamboo Health solutions are being utilized to support these objectives.

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





# Bamboo Health Solutions Implemented by Yale New Haven Health

## **NARXCARE**

An SUD solution that enables 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 EHRs and pharmacy management systems have established connectivity with PMP Gateway to integrate PDMP data, analytics, tools, and resources directly into their clinical workflow.

## **BAMBOO HEALTH PATIENT MATCHING**

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. Bamboo Health Patient Matching helps prevent medical identity theft, medication errors and testing errors, wrong person procedures, or even death.

## **How Does NarxCare Scoring Work?**

The Narx Score is a weighted combination of multiple variables including number of providers, number of pharmacies, strength of dispensations, and overlapping prescriptions. 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. The Narx Score has a time element such that more recent activity is weighted more heavily than distant activity. Scores are computed for three different drug types: specifically, narcotics, sedatives, and stimulants.



# About Bamboo Health

Bamboo Health (formerly known as Appriss Health + Patient Ping) is a healthcare technology solutions company, focused on fostering care collaboration and providing information and actionable insights across the entire continuum of care. As one of the largest, most diverse care collaboration networks in the country, our technology solutions equip healthcare providers and payers with software, information, and insights to facilitate whole person care across the physical and behavioral health spectrums. **By serving 2,500 hospitals, 7,800 post-acute facilities, 25,000 pharmacies, 37 health plans, 45 state governments, and over one million acute and ambulatory providers through more than 500 clinical information systems electronically, we impact over 1 billion patient encounters annually in provider workflow.** Health systems, payers, providers, pharmacies, governments, individuals, and other organizations rely on Bamboo Health to improve care and reduce cost.



**HOW CAN WE HELP? TELL US YOUR NEEDS.  
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