

# ADDRESSING THE OPIOID CRISIS IN THE CAROLINAS

Reducing high-risk prescriptions and expanding substance use treatment across a large, mission-driven hospital system



## Atrium Health

## Overview

America's opioid crisis has taken a heavy toll on North and South Carolina. According to the latest CDC data, rates of opioid prescriptions in the Carolinas rank among the nation's highest, and opioid-related deaths have surged. North Carolina saw the nation's second-largest increase in deaths from opioids in 2017. That same year, nearly 3,500 people lost their lives to opioid overdose across the two states.<sup>1</sup>

### ATRIUM HEALTH AT THE FOREFRONT OF SOLUTIONS

Every day, doctors, nurses, mental health professionals, emergency department staff, and paramedics see the devastating consequences of the opioid crisis firsthand. We play a crucial role in halting opioid over-prescription and ensuring that patients have access to life saving treatment for substance use disorders. At Atrium Health, our technological innovations quickly and accurately recognize opioid use disorders, ensuring that patients can be connected to the care they need. With 900+ care locations and more than 12 million interactions with patients every year, our approach has the potential to change the trajectory of the opioid crisis across our entire region.

### OUR PROMISE TO PATIENTS

As a system that includes safety-net hospitals, we never turn patients away — no matter how great their needs. From urban areas to small rural towns, Atrium Health works with underserved communities that have been particularly hard-hit by the opioid crisis. Our scalable technologies work equally well in high tech medical centers and facilities with fewer resources. We believe that every patient deserves world-class care — whether they proactively seek our substance use treatment or enter our emergency departments in crisis.

### AN INTEGRATED APPROACH TO A COMPLEX HEALTH CRISIS

Identifying and appropriately treating opioid use disorders requires insights from a variety of health professionals. Atrium Health's network of 6,500+ diverse health specialists work from a common electronic health record, which allows them to communicate across the patient's care continuum, and to see a patient's complete health history in one location. The result: every prescriber has a holistic view of every patient, and every patient gets the best possible treatment, regardless of where they receive care.

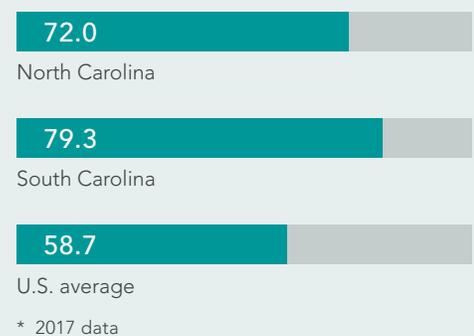
## Innovation

### PRESCRIPTION REPORTING WITH IMMEDIATE MEDICATION UTILIZATION MAPPING (PRIMUM)

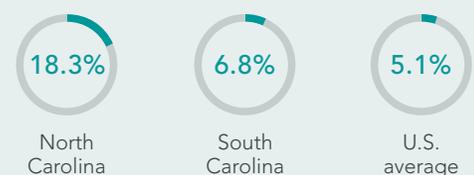
Too often, prescribers have difficulty assessing a patient's history with controlled substances — either they don't have access to the patient's health records across facilities, or critical information is buried deep within a patient's health record. Atrium Health's first-of-its-kind alert system, PRIMUM, solves these issues. The PRIMUM logic seamlessly integrates into prescribers' workflow, providing real time intelligence at a critical moment: before writing a prescription.

## Opioids in the Carolinas

Opioid prescriptions per 100 persons\*



Increase in opioid-related deaths<sup>+</sup>



<sup>+</sup> From 2016–2017  
Source: U.S. Centers for Disease Control and Prevention (CDC)



1. Source: U.S. Centers for Disease Control and Prevention

“Our goal was to provide actionable information at the moment it is needed most — before writing a prescription. PRIMUM removes physicians’ implicit biases for what an opioid use disorder looks like.”

— Rachel Seymour, PhD, Vice Chair of Research, Atrium Health Musculoskeletal Institute

PRIMUM flags the electronic health records of patients who demonstrate evidence-based risk factors<sup>2</sup> for misuse, abuse, and diversion of opioids and benzodiazepines, preventing high-risk prescriptions from being initiated. These objective measures remove the unconscious bias that may contribute to disparities in care.



**PRIMUM uses electronic health records to warn physicians when a patient has a problematic history with opioids, such as a past overdose, testing positive for illicit substances, or early prescription refills.**

*For illustrative purposes only*

In its first two years of “live” use, PRIMUM identified risk factors in one in four patients. Ultimately, this prevented more than 23,000 high-risk prescriptions for controlled substances across our system. Once PRIMUM identifies the signs of a substance use disorder, prescribers then initiate appropriate follow-up care, which can include non-opioid pain management, patient education, and referrals to addiction and behavioral health specialists within Atrium Health.

Atrium Health is one of a select group of health care systems working to operationalize the CDC’s guidelines for prescription opioids for chronic pain. PRIMUM is a central part of this effort. The tool gets “smarter” the more it’s used and has the potential to be deployed by many other health systems across the country.

## EXPANDING SUBSTANCE USE SCREENINGS

Addiction can afflict anyone. We recognize the strong link between substance use and mental illness and promote early intervention with addiction specialists to get patients on the road to recovery. Our behavioral health services have five key initiatives designed to support patients in need:

- Screening for substance use disorders:** Across all emergency departments and inpatient admissions, our integrated Behavioral Health screening process helps to identify substance use disorders and connect patients to follow-up care.
- Educating prescribers:** We train our physicians on the dangers of opioids, how to effectively manage opioid use, best practice treatment modalities such as medication assisted treatment, along with added monitoring of prescribing practices.
- Educating patients and families:** We empower people to better understand the science of addiction, how to recognize problems with opioids, and where to get help.
- Providing real-world support:** Peer support specialists who have lived through mental illness or addiction are strategically placed in our psychiatric emergency department — the only one of its kind in the Southeast region. These specialists are able to engage with patients and connect them to the right level of care.
- Continuing care:** As part of our statewide initiative to reduce opioid overdose deaths, we received 700+ naloxone (overdose reversal drug) kits from the Substance Abuse and Mental Health Services Administration to distribute to patients with opioid use disorders and their families in various emergency departments in 2018.

2. Risk factors identified in CDC’s 2016 Guidelines for Prescription Opioids for Chronic Pain

## How PRIMUM Works

PRIMUM triggers an alert when one of five risk factors are identified in a patient’s health record



### 5 Risk Factors



1. “Early refill” of current opioid/benzodiazepine prescription (with >50% remaining)



2. Two or more ED or Urgent Care visits with onsite opioid treatment within past 30 days



3. Three or more opioid/benzodiazepine prescriptions within past 30 days



4. Past opioid or benzodiazepine overdose



5. Positive toxicology screen for blood alcohol, cocaine, or marijuana



Prescribers choose to either continue or cancel the prescription



CANCEL



CONTINUE

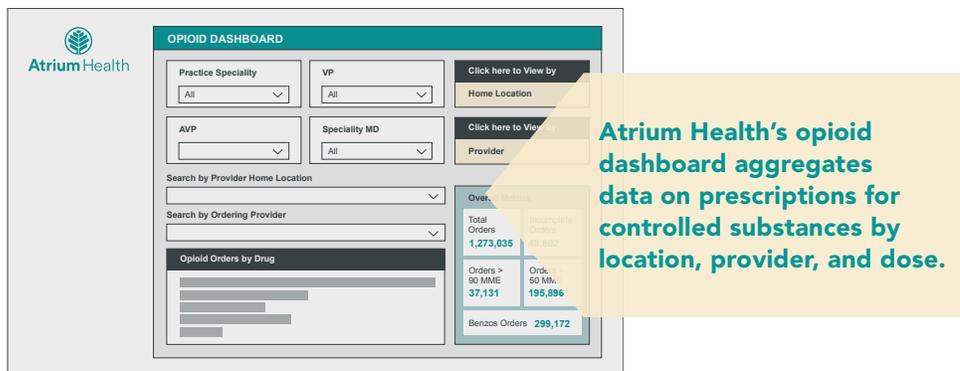
Prescribers initiate appropriate follow-up care

“Through early intervention, behavioral health care, and ongoing support, we are saving lives that would be otherwise be lost to opioid overdoses.”

— Stephen Wyatt, DO, Medical Director of Addiction Medicine

## CONNECTING THE DOTS IN PRESCRIBING PATTERNS

Because the opioid crisis cuts across medical specialties, so does our approach to care. Using our centralized electronic health records, we’ve developed an innovative “opioid dashboard” that allows medical experts to identify trends in prescribing habits across different locations and specialties. Armed with this information, we can quickly address problems within our system where rates of opioid prescriptions exceed the average and self-correct.



For illustrative purposes only

## PAIN MANAGEMENT IN CANCER CARE

World-class care means taking advantage of the full range of techniques and therapies proven to help patients manage their pain. Our Levine Cancer Institute is an innovator in this area. As the population of people undergoing cancer treatment grows, so does the number of people who live with the burden of severe pain. Atrium Health has embraced Integrative Oncology, which uses safe, evidence-based complementary medicine alongside conventional cancer treatment. It seeks to improve the mind, body, and spirit through nonpharmacologic, non-invasive, and non-surgical treatments. Recent Levine Cancer Institute research has documented the benefits of mindfulness, acupuncture, and healing touch in cancer patients.

“We designed PRIMUM not just for Atrium Health, but for other health professionals as well. The tool is extremely versatile — it can integrate easily within many different electronic health records and care settings. If more health care systems adopted PRIMUM, it would dramatically reduce the number of opioid prescriptions given to high-risk patients. This could turn the tide of the U.S. opioid crisis over time.”

— Joseph Hsu, MD, Vice Chair of Quality, Atrium Health  
Musculoskeletal Institute

## Our substance use treatment options include:

### Inpatient

We provide a medical detoxification unit and dual diagnosis unit for patients with mental illness and substance use disorder needing a higher level of care.

### Outpatient

We have an established program which allows patients to adjust their intensity of care depending on where they are in their recovery journey, including substance use assessments, intensive outpatient treatment, medication assisted therapy, and individual/family counseling.

### Aftercare

We offer education, access to group meetings, and individual/family counseling.



Healing Touch practitioners use light, sweeping hand motions to balance energy that has been disrupted due to stress, illness, injury, grief, or medical treatments such as chemotherapy and radiation.

Oncology Massage therapists apply gentle pressure and kneading of patients' muscles and joints to reduce pain associated with cancer and the side effects of drug treatments.

A recent study of 291 Levine Cancer Institute patients receiving Healing Touch and 281 patients receiving Oncology Massage reported significantly reduced pain, with at least a  $\pm 2$ -point reduction in pain scores on a scale from 0=no pain to 10=worst pain possible.



# Atrium Health

## About Atrium Health

Atrium Health, previously Carolinas HealthCare System, one of the nation's leading and most innovative healthcare organizations, provides a full spectrum of healthcare and wellness programs throughout the Southeast region. Its diverse network of care locations includes academic medical centers, hospitals, freestanding emergency departments, physician practices, surgical and rehabilitation centers, home health agencies, nursing homes and behavioral health centers, as well as hospice and palliative care services. Atrium Health works to enhance the overall health and well-being of its communities through high-quality patient care, education and research programs, and numerous collaborative partnerships and initiatives.

### Size and scope

<b>65,000+</b> teammates	<b>16,000+</b> nurses	<b>3,000+</b> physicians
<b>44</b> hospitals	<b>35</b> emergency departments	<b>30</b> urgent care locations
<b>25+</b> cancer care locations		

Responsible for **\$9.9 billion**  
(net operating revenue)

**\$2.9 billion** in the last five years invested in renovations, new care locations, equipment upgrades, and other capital projects

### In one day at Atrium Health

<b>31,750+</b> patient encounters (1 every 3 seconds)	<b>23,000</b> physician visits	<b>13,975</b> virtual care encounters
<b>4,200</b> emergency department visits	<b>600+</b> home health visits	<b>550+</b> surgeries
<b>88</b> babies delivered	<b>85+</b> new primary care patients	

**\$5.6 million** in uncompensated care and other benefits to our community

“I almost wrote an opioid prescription for a patient who had a prior issue with narcotics. Our EMR picked up on a drug screen from many years back. I went back and started a conversation. She was quick to say, ‘Please, I don’t want any opioid medications.’ She told me about her history, and we were able to work through that together.”

— Matt Sullivan, MD, Associate Chief Medical Informatics Officer

## What’s Next

### THE IMPLEMENTING A MULTIMODAL PATH TO RECOVERY (IMPROVE) PILOT

Over the next three years, Atrium Health will aim to show how early identification of risk factors reduces opioid overdoses and improves both patient safety and pain management in acute care settings. With \$2.24 million in CDC funding, the [IMPROVE Pilot](#) will document the benefits of PRIMUM and expand behavioral health and depression screening to get more patients into treatments including mental health counseling, medication assisted treatment, and alternative pain management therapies.

### EXPANDING PEER SUPPORT SPECIALISTS

A pilot program funded by the North Carolina Hospitals Association will incorporate peer support specialists into all Atrium Health emergency departments. These specialists connect patients and their families to treatment after they have been diagnosed with a substance use disorder, often as the result of an overdose or injury.

### WORKING WITH POLICYMAKERS

Atrium Health is collaborating with policymakers at the local, state, and federal levels to integrate successful efforts and break down barriers in data sharing and treatment. This includes efforts to better link Prescription Drug Monitoring Programs (PDMPs) with electronic medical records, to work with poison control centers to rapidly respond to cases of overdose, and to support law enforcement efforts to prevent opioid misuse and diversion.

### IDENTIFYING WHAT WORKS AND MAKING IT WORK FOR MORE PEOPLE

Atrium Health’s approach to opioids reflects a steadfast commitment to improve the health of the communities we serve. Every year, our large healthcare system touches the lives of millions. This presents a unique opportunity to identify trends across a network of 900+ locations. We learn from each patient interaction involving opioids and share those lessons with our peers. This kind of public health strategy is what’s needed to turn around the opioid crisis across the Carolinas — and further — for all.