

# PRIMUM

## Reducing High-Risk Opioid Prescriptions



Atrium Health

### A first-of-its-kind technology to reduce high-risk opioid prescriptions across a large, mission-driven healthcare system

Atrium Health's alert system, **Prescription Reporting with Immediate Medication Utilization Mapping (PRIMUM)**, prevents high-risk prescriptions for opioids and benzodiazepines from being written by identifying when signs of a substance use disorder are present in a patient's electronic health record. Too often, prescribers have difficulty assessing a patient's history with controlled substances — either they cannot share patient health records across facilities, or critical information is buried deep within a patient's records. PRIMUM solves this by automatically flagging evidence-based risk factors<sup>1</sup> for substance misuse. After an alert is triggered, physicians choose to either cancel or continue the prescription, or to refer patients to other experts within Atrium Health's network — including addiction and pain management specialists.

"We designed PRIMUM not just for Atrium Health, but for other health professionals as well. 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."



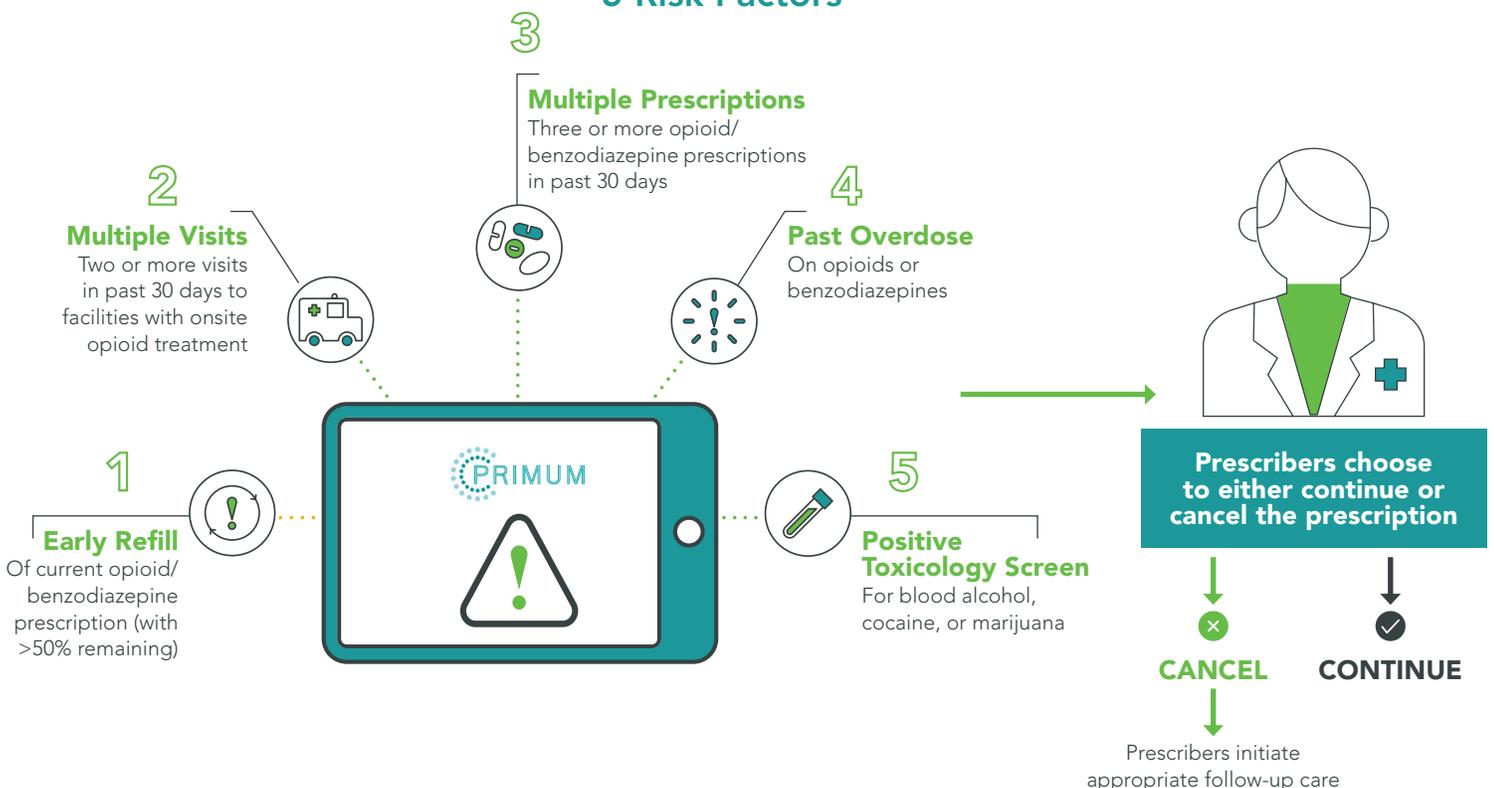
**Joseph Hsu, MD**

Vice Chair of Quality,  
Atrium Health  
Musculoskeletal  
Institute

## How PRIMUM Works

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

### 5 Risk Factors\*



\*Risk factors identified in CDC's 2016 Guidelines for Prescription Opioids for Chronic Pain

# PRIMUM

## Reducing High-Risk Opioid Prescriptions



### Innovation by the Numbers

#### THE PROBLEM



**43%**

of patients who develop an addiction to prescription opioids originally received medication from a health care prescriber<sup>2</sup>



**50%**

of patients taking opioids for at least three months remain on opioids five years later and are likely to become life-long users<sup>3</sup>

#### OUR CONTRIBUTION TO THE SOLUTION

In its first **THREE YEARS** of use



Identified risk factors in  
**1 in 4**  
patients



This prevented nearly  
**43,000**  
high-risk prescriptions for controlled substances across Atrium Health

### What's Next

Through a CDC funded pilot,<sup>4</sup> Atrium Health will document how PRIMUM's early identification of risk factors affects rates of opioid overdoses, use of medication assisted treatment and alternative pain management therapies, and enrollment in addiction support programs. The grant will also allow Atrium Health to expand behavioral health screening into more of our acute care settings over the next three years.

"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."

### Let's Work Together

Atrium Health is currently collaborating with North Carolina policymakers on a public awareness campaign that highlights the risks of opioid use and advises people where to turn for help. We've also worked with regional partners to better link Prescription Drug Monitoring Programs with electronic medical records, to more rapidly respond to cases of overdose, and to prevent opioid misuse and diversion. Finally, we have worked with our electronic health records provider Cerner on an Opioid Toolkit that offers PRIMUM to participating prescribers free of charge. Contact Meghan Wally at [Meghan.Wally@AtriumHealth.org](mailto:Meghan.Wally@AtriumHealth.org) if you would like to learn more about these efforts.



**Rachel Seymour,**  
PhD

Vice Chair of Research,  
Atrium Health  
Musculoskeletal Institute

1. Risk factors identified in the Centers for Disease Control and Prevention 2016 Guidelines for Prescription Opioids for Chronic Pain

2. Sources: The Clinical Journal of Pain, Anesthesia & Analgesia, Journal of General Internal Medicine

3. Sources: The Clinical Journal of Pain, Journal of General Internal Medicine

4. Implementing a Multimodal Path to Recovery (IMPROVE) Pilot: CDC award number R01-CE003001, period of performance: 9/30/2018 – 9/29/2021

#### 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. For more information, visit [AtriumHealth.org](http://AtriumHealth.org).