INROADS AGAINST ADDICTION:

How the Healthcare System is Battling the Opioid Crisis

HEALTHCARE LEADERSHIP COUNCIL

America's opioid epidemic is a crisis that is complex, ever changing, and touches every aspect of American life — our healthcare system's practices, policies, and regulation, our education systems, family life, law enforcement and the role of social services.

All of us in the healthcare industry recognize that it will not be solved overnight. It is also important to understand that much of the conversation around the drug crisis today conflates two different issues: a legitimate healthcare industry and an illicit system that includes heroin and synthetic fentanyl coming from outside of the US — one that is operating beyond the legitimate boundaries of healthcare in its own dark network and led to a doubling in 2016 of fatal drug overdoses from these substances. It should be noted that the work of the members of the Healthcare Leadership Council (HLC) highlighted in this compendium is focused on the legitimate system where our membership has significant reach and fluency.

This compendium represents ideas built on that experience. The HLC membership is a coalition of leaders representing virtually every sector in healthcare: healthcare providers, pharmaceutical companies, medical technology companies, health insurers, pharmacy retailers, distributors and service providers. Each of our member companies is doing important work to help address the issues around opioid abuse and misuse, actions that are described in the following pages. We believe, however, that our best prospects for addressing this national tragedy is through a collaborative approach, bringing together the best ideas and innovations from the private and public sectors.

In addition to this ongoing work, HLC members will be joining with leaders from industry, government, academia, the patient recovery community and experts in addiction and recovery for a national Opioid Crisis Solutions Summit. At this summit, we will be collaborating on topics including opioid care management, technology, and data analytics, and therapeutic innovation, among others.

The task ahead of us is difficult, but the imperative to succeed cannot be overstated. The innovations described within these pages reflect an industry's determination to use its diverse and experienced viewpoints to identify immediate and actionable recommendations that will enable the treatment of pain while minimizing the devastating effects of drug addiction. We look forward to sharing these potential solutions and furthering this essential discussion at the Summit in the coming weeks. We would also like to thank Dr. Mark McClellan and the Duke-Margolis Center for Health Policy for their collaboration on both the compendium and the upcoming Summit.

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Table of Contents

Introduction

The leading cause of injury death in the United States is death by drug overdose. Opioids account for 66 percent of the deaths by drug overdose in the country with 116 Americans, on average, dying each day from opioid overdoses.[i] [ii] [iii] On October 26th 2017, the Department of Health and Human Services declared the opioid epidemic a public health crisis.[iv] The White House has acknowledged that the crisis is one of epic proportion and impacts nearly every community across all 50 states.[v]

This public health issue is of grave concern. The Centers for Disease Control and Prevention (CDC) reports that the number of overdose deaths involving opioids increased fivefold between 1999 and 2016. Victims were mostly men (although the opioid-related mortality gap between men and women is closing), individuals aged 25-54 years, non-Hispanic whites, American Indians, and Alaskan Natives.[vi] [vii]

Tragically, the number of those affected by the epidemic and of those deaths resulting from opioid misuse continues to rise. In 2016 alone, 42,000 people died from opioid overdoses, the highest recorded opioid-related death toll in a calendar year.[viii]

Innovative actions are taking place in all sectors of the healthcare system to address this serious public health crisis. This compendium details several of the programs and initiatives that are combating opioid misuse and addiction. Optimally, these 'gold star' practices will help inform the development of gold standards and, ultimately, a steep and rapid decline in the lives and futures lost to drug overdoses.

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i https://www.hhs.gov/sites/default/files/fy-2019-budget-in-brief.pdf
ii https://www.cdc.gov/drugoverdose/epidemic/index.html
iii https://www.hhs.gov/opioids/
iv https://www.nytimes.com/2017/10/26/us/politics/trump-opioid-crisis.html
v https://www.whitehouse.gov/sites/whitehouse.gov/files/images/Final_Report_Draft_11-1-2017.pdf
vi https://www.cdc.gov/drugoverdose/data/overdose.html
vii https://www.cdc.gov/drugoverdose/epidemic/index.html
viii https://www.cdc.gov/drugoverdose/index.html

Overview/Background

- Adventist Health System is a faith based healthcare organization headquartered in Altamonte Springs, Florida, with over 46 hospital campuses and more than 8,200 licensed beds in 9 states.
- Park Ridge Health, and Adventist Health System hospital, has partnered with HopeRx to address prescription drug abuse in Henderson County.
- In 2010, Don and Julie Huneycutt lost their 20 year-old daughter to an accidental opiate overdose. At the time, they never dreamed the opioid epidemic would spread like wildfire across the nation. They only knew they did not want anyone else to experience the loss they had endured.
- Soon afterward, Henderson County would recognize the increase of prescription drug abuse and began to strategize on how best to tackle the issue.

Description of the program

- In 2013, HopeRx was born from the Henderson County Partnership for Health to address the dangers of prescription drug abuse in Henderson County and help identify effective environmental strategies for prevention as well as treatment options. Based on a public health model, HopeRx held the premise that drug overdose deaths are preventable and that all communities are ultimately responsible for their own health.
- In March of 2014, a community kickoff was held in a town hall fashion where leaders of the community gathered to discuss and develop a strong community response in a multi-step process. The result ignited further engagement of high-level stakeholders from key sectors, hosting of community forums to raise awareness about the dangers of abuse and misuse of prescription medications, and goals to educate the public on preventive strategies.
- It was recognized that it would take an entire community effort to be successful, thus HopeRx was established as a working coalition to address the community need. At that time, Julie and Don Huneycutt had been volunteering as community members who had lost a child to overdose. It was obvious through community engagement that Julie would be an ideal candidate to lead this new coalition, and in accepting the offer, Julie moved forward with passion and purpose to prevent further loss in Henderson County.

Metrics/Results/Value

- Since 2014, HopeRx has been successful in raising awareness of the dangers of overdose from prescription drug abuse through multiple avenues.
- A strong partnership with the Henderson County Sheriffs' office has afforded numerous opportunities for proper diversion by providing drive-through medication drops to dispose of unused and expired medications. To date, the Henderson County Sheriff Office has incinerated over 5,000 lbs. of medications. In 2017 alone, thirteen drug Take Back events were held throughout the County.

- HopeRx has been instrumental in encouraging and making Naloxone available to all first responders as well as law enforcement in Henderson County. Local Free Clinics have Naloxone available at free or reduced cost to those who qualify, and our local pharmacies have a standing order for those who need the opiate reversal drug.
- Now in its fourth year, HopeRx has organized a yearly student campaign in the public middle and high schools to raise awareness about the dangers of substance abuse and encourage students to remain substance free. Student leaders are recognized by county government for their pledge in taking a stand against using drugs. Assemblies are held at each school which include feature speakers from the community who have first-hand experience with substance abuse, and want to share the devastation of addiction in hopes of making an impact on future decisions of students. The week, called 'We Are Hope' week by the students, is filled with activities promoting drug prevention and a positive message that 'You are Hope', and your life matters. Banners from each school are signed with pledges to remain substance free and placed on public display at the historic Courthouse.
- HopeRx has also partnered with United Way to lead a Youth Council, which seeks to address ways to positively promote drug-free campuses throughout Henderson County. Recognizing that many high school students have already experienced addiction in their home and/or received treatment for personal addiction issues, a Teen Hope support group, a place where students can find hope, support and recovery, recently launched in March of 2018. This group meets once a week after school and is overseen by a licensed counselor with a peer-led focus.
- Other initiatives include multiple speaking engagements to civic and faith-based organizations to raise awareness about the importance of locking and/or safely disposing of unused medications. Distribution of materials at health fairs and multiple media appearances, including billboard campaigns, keep the importance of safe medication storage and disposal practices front and center. Lock boxes have been made available and distributed to agencies for clients who may have opiates in the home. Currently, HopeRx is in partnership with Four Seasons Compassion for Life (Hospice) to provide medication lock boxes and DeTerra bags, in home safe medication disposal bags, for families with palliative or hospice patients in the home.

- Changing community perception about addiction is a focal point of moving forward successfully. One of the hallmarks of success for HopeRx has been finding that community champion who is willing to share their story and encourage the destigmatization of addiction. Others are coming forward to add their voice without shame. Addiction has a face.
- Our community, our state, our nation, has to decide that everyone matters, every life is precious, and that even those who tax and burden our resources with addiction are worth saving.
- HopeRx is working to expand their model to include recovery options, to make it available and expected. They recognize that in addition to positive change within prescribing and monitoring of opioids, access to Naloxone, and multiple awareness campaigns, there is still much work to be done. It is a community effort and we must all work collaboratively to effect lasting change. HopeRx seeks to continue to be that connection in our community.

Controlled Substance Order Clearinghouse

Overview/Background

Current System

- At present, no law enforcement agency or private party has the ability to provide real-time, nationwide oversight of all orders for controlled substances. DEA receives reports of certain controlled substance distributions across the country through the Automated Reports and Consolidated Ordering System (ARCOS) system, but the applicable regulations do not require those distributions to be reported until months after they are complete. Nor do the regulations require reports for all controlled substances. Individual manufacturers and distributors, on the other hand, monitor and assess all controlled substance orders before shipment, but those companies lack any visibility into the volume of products their customers purchase from other suppliers, leaving them unable to make fully informed assessments of any given order.

Drawbacks:

- DEA lacks timely and comprehensive information.
- Registrants' programs rely on incomplete information and vary in methodology and application.
- Non-distributor/manufacturer dispensing registrants escape rigorous monitoring by purchasing products from multiple distributors, a common and otherwise legitimate practice.

Description of the Program

- In mid-February, DEA announced a new ARCOS tool that allows manufacturers and distributors to see how many other entities have sold controlled substances to a particular pharmacy in the last six months, a partial step toward more transparency. But the tool does not solve the fundamental problem with the current system. Registrants still lack visibility into the volume of product that the pharmacy purchased from other entities – which is critical to evaluating orders – and it still does not provide information in real time. We need a system that allows for full, real-time visibility into all controlled substance orders.

Proposed Controlled Substance Clearinghouse

- Under this proposal, DEA – utilizing the expertise and systems of a data processing firm – would establish a national clearinghouse for all orders of controlled substances. DEA would gain real time visibility into all orders across the market and the opportunity to halt problematic orders before they are shipped.

How the clearinghouse works:

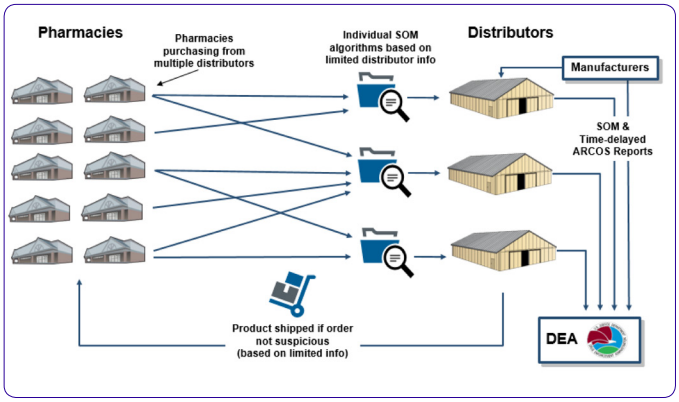
- All orders from pharmacies or other dispensers would pass through DEA's clearinghouse for preliminary evaluation using algorithms that reflect DEA's complete visibility into the market.
- Extreme outliers that may indicate diversion would be automatically rejected and investigated by DEA. All other orders would be forwarded to wholesale distributors for further analysis under registrants' SOM programs. Based on that secondary review, the orders would either be identified as suspicious and rejected and reported to DEA or, if not suspicious, released for shipment.

- Clearinghouse would leverage DEA's Controlled Substance Ordering System (CSOS), already used by many (but not all) DEA registrants, some of which still rely on paper order forms – which are inefficient and prone to human error.
- Pharmacies, distributors and manufacturers would be required to maintain existing anti-diversion safeguards, including suspicious order monitoring programs and effective controls against diversion.
- DEA would contract with data and analysis experts to develop system.
- The program could be funded, in whole or in part, through increased DEA registration fees, which would cover any additional technology infrastructure and staffing.

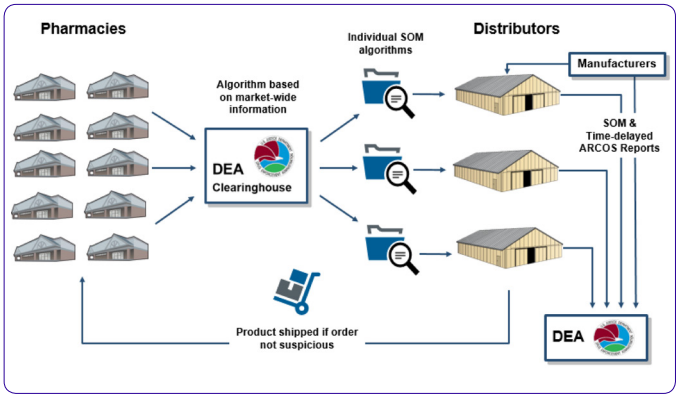
Advantages of DEA clearinghouse

- Adding an additional level of review will result in more effective suspicious order monitoring.
- Provides visibility into all pharmacy orders in real time, eliminating "blind spots."
- Permits implementation of consistent, sophisticated algorithms.
- Leverages preexisting CSOS infrastructure, minimizing cost and ramp up time.
- Could be funded through fees assessed on industry – based on preliminary estimates, an increase of only $2.17 to $2.89 in DEA registration fees per registrant per year would pay for the enhancements.

CURRENT Ordering and Monitoring System



PROPOSED Ordering and Monitoring System



Overview/Background

- AMN Healthcare provides innovative healthcare workforce solutions and staffing services that help clients and healthcare professionals deliver a better patient experience. AMN Healthcare has grown from a travel nursing company into the leading workforce solutions and healthcare staffing source for a wide variety of care settings, including academic medical centers, multi-site metropolitan and regional health systems, community hospitals, rehabilitation, skilled nursing facilities, including our expansion to urgent care and retail care centers.
- AMN Healthcare is the leader and innovator in healthcare workforce solutions and staffing services to healthcare facilities across the nation. AMN delivers managed services programs, healthcare executive search solutions, vendor management systems, recruitment process outsourcing, predictive modeling, and other services. Clients include acute-care hospitals, community health centers and clinics, physician practice groups, retail and urgent care centers, home health facilities, and many other healthcare settings.

Description of the Program

- As a staffing and workforce solutions company, AMN's impact on opioid abuse is around education to the thousands of providers (nurses, doctors and other allied health professionals) that work for their client facilities across the country. AMN has The Center for the Advancement of Healthcare Professionals (https://www.amnhealthcare.com/education_services/) that partners with their clients to address current and future workforce needs and education.

Metrics/Results/Value

- Specifically for the opioid crisis, AMN has posted articles in their RN.com Bulletin (newsletter) https://www.rn.com/ and posts on RN.com social media.
- Another AMN education site is RxSchool https://rxschool.com/ that can provide education on opioid abuse via live webinars and/or distance courses and are in development.
- For physicians, AMN partners with their risk providers to provide free education. They

currently have two courses to help address the national opioid crisis that are available on the AMN/Staff Care landing page (https://www.thedoctors.com/amnhealthcare).

- Courses include:
  - Prescribing Opioids Safely; 1.25 *AMA PRA Category 1 Credits.*™After completing this activity, learners will be able to:
    - Apply the CDC's *Guideline for Prescribing Opioids for Chronic Pain* in their practice.
    - Educate colleagues and office staff about risks associated with prescribing opioids.
    - Identify root causes in opioid related malpractice cases.
    - Apply suggestions to improve how to help patients manage their pain safely.
  - Perspectives on Opioids and Pain Management 1.0 *AMA PRA Category 1 Credits.*™ After completing this activity, learners will be able to:
    - Recognize the impact of opioid prescribing and usage on communities.
    - Identify allegations and contributing factors in malpractice suits related to controlled medications.
    - Take steps to assist patients to manage pain and to minimize addiction to controlled medications.
    - Engage with CME from *The Doctor's Advocate* publication that requires reading three articles and answering questions.
- There is also a new course that is Georgia-specific. This course combines content from the first two courses with an additional module covering certain laws in Georgia. It meets the CME/CE requirement for license renewal that became effective January 2018.
- In addition, the AMN/Staff Care has a page on their website dedicated to resources on the opioid epidemic. https://www.thedoctors.com/articles/the-opioid-epidemic-resources-and-insights/.

Anthem®

Overview/Background

- Anthem is taking a leadership role in addressing the opioid crisis through a holistic strategy focused on prevention, treatment and recovery, and deterrence. Anthem is committed to reducing opioid drug abuse while promoting clinically appropriate care.
- Substance use disorders are chronic conditions best managed through an integrated approach to care, services and supports, requiring evidence-based treatment to maintain stability and recovery. Anthem's emphasis on prevention, treatment and recovery, and deterrence is reflective of its consumer-centric focus.

Description of the Program

Prevention

- Recognizing prevention efforts as the first line of defense in ensuring that a well-meaning attempt to treat pain does not evolve into an opioid use disorder, Anthem has instituted a number of prevention driven initiatives. Early adoption of pharmacy management and data analytics strategies have proven to be significantly effective in reducing unnecessary opioid prescribing. The following initiatives have shown data-driven success:
  - Pharmacy Home programs exist in Anthem's Commercial fully insured and Medicaid lines of business. These programs assign consumers, who meet certain criteria related to medication utilization, to one pharmacy and/or one provider for its prescriptions.
  - Anthem utilizes a Controlled Substance Utilization Monitoring (CSUM) Program to identify consumers receiving multiple controlled substance medications, receiving opioids from multiple providers and filled at multiple pharmacies, or combinations of controlled substances that may indicate risk.

Treatment and Recovery

- Anthem's treatment and recovery approach extends beyond "traditional" medications and care programs. It supports coverage of non-opioid pain relief drugs and non-drug treatments, according to best clinical practice guidelines and scientific evidence, including CDC guidelines.

Project ECHO

- Due to significant Medication Assisted Treatment (MAT) access issues in rural areas, Anthem is working closely to encourage physicians to become MAT certified by providing ongoing technical assistance and training. To enhance these efforts, Anthem has committed to funding and expanding the Extension for Community Healthcare Outcomes (ECHO) project in rural areas nationwide throughout the years of 2018 and 2019. The program began in West Virginia (WV) as a collaboration between Anthem, Project ECHO, the WV Clinical and Translational Science Institute (WVCTSI) at the WV University School of Medicine, and Cabin Creek Health Systems, connecting primary care providers with expert information to treat individuals with substance use disorders.
  - The ECHO model™ links expert specialist teams at an academic 'hub' with primary care clinicians in local communities – the 'spokes' of the model. Together, they participate in weekly teleECHO™ clinics, which are like virtual grand rounds, combined with mentoring and patient case presentations.
  - Taking a Successful Model to Scale: With a regional focus, Anthem is working to develop

similar collaborative relationships with various MAT ECHO™ hubs located across the United States throughout 2018 and 2019, encouraging and facilitating Anthem network providers to enroll as participants or spokes with those hubs. The goal of this approach is to support and rapidly increase the MAT-capabilities of Anthem's provider networks, while increasing access to evidence-based MAT for consumers.

Deterrence

- Anthem has a range of strategies to identify and address instances of opioid fraud, waste, and abuse (FWA), as well as diversion. Anthem's Special Investigations Unit (SIU) contains a team of professionals trained to combat FWA utilizing various methodologies.
- Teams use data mining and analytics to look for questionable prescription trends of individual consumers and target potentially problematic providers when overprescribing is suspected.

Metrics/Results/Value

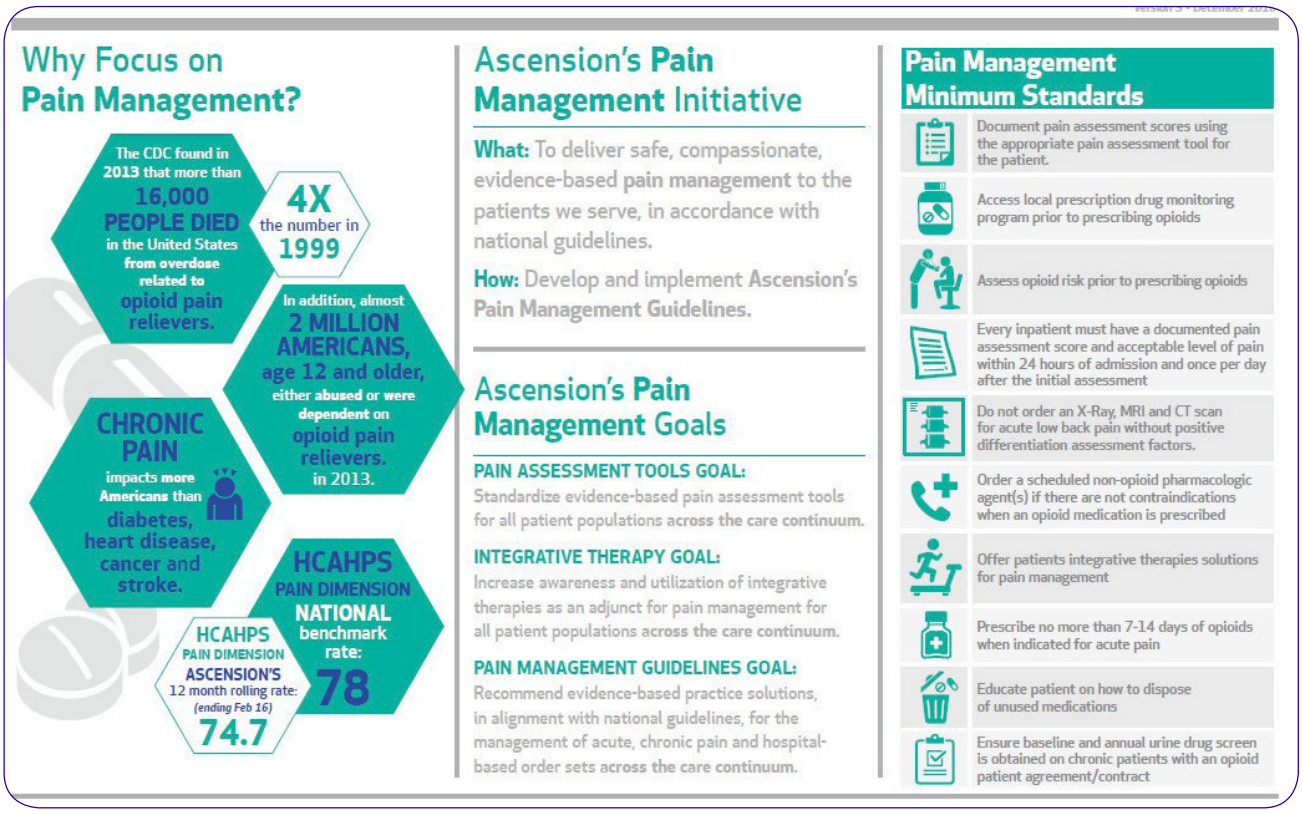
- Anthem aligns its pharmacy benefits with the CDC Guideline, limiting initial short-acting opioid prescriptions to seven days, and instituting prior authorization for all long-acting opioids. Data depicts a significant reduction in opioid fills for Medicaid and Commercial consumers, for which the CDC Guideline has been put in place, versus Medicare Part D which has not experienced such a reduction due to programmatic restrictions to implementing prescription limits.
- Anthem set a goal to reduce by 30 percent the number of prescribed opioids filled at pharmacies since 2012, and achieved that two years ahead of the target date of 2018. Consequently, Anthem updated the goal to reach a 35 percent reduction by the beginning of 2019.
- The Anthem Pharmacy Home programs have reduced hospital and emergency room admissions and increased the number of individuals in substance use disorder treatment. In 2017, 9,133 Medicaid consumers were successfully enrolled, and since the launch in April 2016, the Commercial Pharmacy Home program has enrolled nearly 450 consumers and sent warning letters to over 3,100 consumers who met the defined criteria.
- Additionally, Anthem is committed to doubling the percent of consumers who receive comprehensive MAT by the end of 2019. This is an ambitious goal due to provider shortages – in rural areas in particular – but one to which Anthem is firmly committed.

Overview/Background

- Ascension, the largest non-profit health system in the U.S, is a faith-based healthcare organization dedicated to transformation through innovation across the continuum of care. Ascension includes approximately 165,000 associates and 40,000 aligned providers across 2,600 sites of care – including 151 hospitals and more than 50 senior living facilities – in 22 states and the District of Columbia.
- Ascension is committed to delivering compassionate, personalized care to all, with special attention to persons living in poverty and those most vulnerable. Those suffering from mental disorders and addiction are among the most vulnerable people. The opioid epidemic is troubling many of the communities that Ascension serves, those in rural and urban areas.
- Behavioral and Mental Health is one of Ascension's major service lines, and its health systems are focused on expanding services and education for both traditional and innovative therapies for addiction and other mental and behavioral health issues.
- Ascension providers are committed to preventing opioid abuse, treating those who suffer from abuse and addiction, and advocating for opioid prescription reform. Ascension sites of care across the country are establishing programs and allocating resources to match the efforts of several states to increase advocacy, awareness and access to treatment as a way to combat the opioid abuse epidemic.

Description of the Program

- Ascension collaborated with internal and external pain management and behavioral health specialists and healthcare specialists to:
  - Develop the Ascension Pain Management Guidelines with ten minimum standards throughout the care continuum
  - Standardize evidence-based pain assessment tools for all patient populations across the care continuum
  - Promote the use of integrative therapies
  - Implement de-prescribing practices for intravenous opioids
  - Facilitate multi-modal pain management use through use of a standardized order set
  - Promote outpatient prescribing opioid quantity limits
- From these efforts, all Ascension hospitals, Ascension Living, Ascension At Home, Ascension Medical Group, and the Ascension Behavioral Health Service Line are engaged and have begun to implement the guidelines. Many individual hospitals are also piloting new processes to achieve the desired goal of delivering safe, compassionate, evidence-based pain management to the patients we serve, in accordance with national guidelines.



Metrics/Results/Value

Ascension Medical Group (AMG) Strategy (Nationwide)

- Ascension providers from across the country, representing acute care, ambulatory care, and provider practices have been invited to participate in a task force to share best practices and develop system strategies to help providers and patients overcome opioid usage.
- A policy is being developed to promote the latest evidence and best practices for the safe and effective treatment of acute and chronic pain.
- A curriculum strategy is being developed for providers to reinforce the CDC Guideline for Prescribing Opioids for Chronic Pain.

Ascension's St. Vincent Medical Group Outpatient Strategy (Indiana)

- In 2016, compelled by mounting evidence of opioid harm, Ascension's St. Vincent Medical Group in Indiana made a decision to develop and implement a more robust outpatient opioid policy that focused on patient safety for their 700+ providers.
- System-wide distribution of the policy includes email and video communication to introduce the policy to providers and highlight its importance.
- An Ascension's St. Vincent Medical Group physician champion was established to lead a dialogue about the policy across the system.
- Continuing medical education (CME) programs were developed that focused on safe and responsible treatment of pain. The physician champion delivers on-site CME to local practices. More than 15 practice locations across Indiana have been engaged.
- A central repository for information was developed to house resources, links and documents that providers can access at the point of care regarding the treatment of pain. The site is easily accessible to any provider in Indiana and has been accessed more than 10,000 times.
- Pharmacy consults by request were made available to all providers to give providers the ability to consult with the pharmacy for the optimization of medication and/or weaning of opioids in chronic pain patients (this service is generally reserved for the more high risk or complex patients).

St. Vincent's HealthCare (Florida)

- Emergency Department (ED) focus on reducing injectable opioids (morphine, hydromorphone), which have been associated with increased adverse events. Ascension built educational tools for providers to focus on use of non-opioid or oral opioid alternatives for various pain syndromes.
  - Compared to baseline, Ascension saw a 65 percent reduction in use of these injectable opioids in the ED across all 3 of Ascension's hospitals in Jacksonville.
- Hospital inpatient focus on reducing injectable opioids (morphine, hydromorphone). Ascension adjusted all electronic order sets in their EMR to reduce the dose of these targeted opioids.
  - Compared to baseline, Ascension saw a 63 percent reduction in use of these injectable opioids across Ascension's 3 hospitals in Jacksonville.

Ascension, Seton Medical Center (Texas)

- Multimodal pain management order set pilot at Seton Medical Center Austin, part of Ascension Texas and replicated at St. Vincent's HealthCare, Jacksonville.
- Pilot was started in the total knee/hip replacement (orthopedics) as total knee replacement surgery is the number one cause of chronic opioid use in opioid-naïve patients across the country.
- Main components of the single multimodal pain management order set include:
  - Identify functional Therapeutic Activity Goal (TAG)
  - Increase use of integrative therapies
  - Establish a scheduled non-opioid foundation
  - Use of low dose neuropathic treatment agents
  - Step process for opioid treatment connected with patient's ability to achieve TAG
- Due to the tremendous results, Seton Medical Center Austin expanded the implementation of the multimodal pain management order set across its nine ministries.
- St. Vincent's HealthCare replicated the pilot with an orthopedic surgeon and was able to attain similar results.

- Pilot results include:
  - St. Vincent's HealthCare:
    - 76 percent reduction on inpatient opioid use
    - 52 percent reduction on outpatient opioid use
    - No increase in readmission
  - Seton Medical Center Austin (Texas):
    - Over 70 percent reduction in use of patient controlled analgesia (PCA)
    - The rate of naloxone (reversal agent for oversedation) use in the Texas Ministry Market is less than 50 percent of the use at Ascension hospitals. (0.11 at Ascension Texas compared to 0.30 at all Ascension hospitals in December 2017)
    - No increase in readmission
    - Reduction of more than 200 pain management orders to one single pain management order set that improves compliance to evidence based order set and reduces information system labor maintenance to order sets

Medication Management

- Ascension Therapeutic Affinity Group in partnership with pain management experts developed policies on appropriate use of the following:
  - IV Acetaminophen
  - Topical Benzocaine
  - Codeine
  - Equianalgesic
  - Pain dosing chart
  - Rapid Opioid Detoxification
- Ascension recommended the elimination of codeine in patients under 18 years of age following the release of the FDA safety reports of children developing serious adverse effects or dying after taking codeine for pain relief after tonsillectomy and/or adenoidectomy.
- Developed and implemented guidelines for alternatives to codeine in breastfeeding mothers due to safety concerns for newborns.

Pill Limits

- Many ministries have embraced the Ascension standard of prescribing no more than seven days of opioids when indicated for acute pain.
- Some ministries are notifying providers when they exceed the maximum dose.
- In process of developing a system measure to monitor.

Ascension Guidelines

- Developed and implemented Ascension pain management guidelines with ten minimum standards that include:
  - Document pain assessment scores using the appropriate pain assessment tool for the patient
  - Access local prescription drug monitoring program prior to prescribing opioids
  - Assess opioid risk prior to prescribing opioids
  - Every inpatient must have a documented pain assessment score and acceptable level of pain within 24 hours of admission and once per day after the initial assessment
  - Do not order an X-ray, MRI and CT scan for acute low back pain without positive differentiation assessment factors
  - Order a scheduled non-opioid pharmacologic agent(s) if there are not contraindications when an opioid medication is prescribed
  - Offer patients integrative therapies solutions for pain management
  - Prescribe no more than seven days of opioids when indicated for acute pain
  - Educate patient on how to dispose of unused medications
  - Ensure baseline and annual urine drug screen is obtained on chronic patients with an opioid patient agreement/contract
- Most ministries have a Pain Council that guides the prioritization, development, and implementation of pain policy to meet legislative, regulatory, quality and safety initiatives related to pain.

BlueCross BlueShield of Tennessee

Overview/Background

- Opioid misuse, abuse and addiction has been declared a public health emergency, and few states have been hit as hard as Tennessee. The state currently ranks third in the nation for opioid prescribing and fourth for overdose deaths. In 2016, more Tennesseans died of drug overdose than roadway fatalities.
  - There are many manufacturing jobs in Tennessee, and this type of work can lead to pain. These medications were more frequently prescribed starting in the mid '90s and throughout the 2000s.
  - Tennessee has not always been equipped with programs to help people move away from these medications, or have discussions with people about these drugs. There may not be ready access to alternative therapy options, such as physical therapy, especially for someone in a rural part of the state.
  - As a health plan serving 3.4 million members, BlueCross of Tennessee knows that many people in the state are in need of management for short-term or chronic pain. They see their duty to balance access to appropriate care with a need to mitigate the crisis of misuse and abuse.
- In 2014 BlueCross said, "We're going to treat this as a true epidemic, and tackle it from a variety of perspectives." That includes providers, charitable giving, looking at how and what opioids are covered, etc. There is a lot of community involvement and awareness, getting the word out about this being an epidemic, and having discussions around opioid use and abuse.
- In addition, BlueCross BlueShield of Tennessee Health Foundation has a long history of funding community programs to combat opioid misuse.

Description of the Program

- BlueCross has made a concentrated effort to reduce the number of opioid prescriptions being written, through prior authorization requirements and new quantity limits.
- BlueCross has stepped up education efforts within the provider community, asking what their opioid prescribing looked like and helping them recognize the domino effect associated with these prescriptions. They want to ensure providers are starting with, and continuing, the right dose to ensure people are not at risk for addiction themselves or having too many leftover medications that could fall into the wrong hands.
- BlueCross focuses on babies with neonatal abstinence syndrome (NAS). Many mothers had been using opioids during pregnancy, and babies were born dependent with many associated adverse effects. BlueCross also works with members to provide integrated medical and behavioral healthcare support, along with specialized services for expectant mothers who have become dependent on opioids.
  - Starting in 2013, the BlueCross BlueShield of Tennessee Health Foundation began supporting the efforts of community partners like Dayspring Family Health Center and East Tennessee Children's Hospital to combat the effects of NAS.
- The BlueCross Health Foundation supports drug take-back events that are supervised by law enforcement to reduce the amount of unused opioids in circulation.
- In 2017, BlueCross began ensuring that people with chronic pain, who are taking long-acting opioid medications, are receiving proper doses and have been through proper screenings, based on guidelines from the Centers for Disease

Control and Prevention and the Tennessee Chronic Pain Guidelines.

- BlueCross is examining links between medical management and behavioral health to help identify people with chronic conditions who also have high opioid use and determine how to best educate that population.
- BlueCross is exploring how to determine how many members have received a prescription from a dentist's office.
- They've also expanded and modified quantity limits based on Morphine Equivalent Dosage (MEqD) and require prior authorization for all patients receiving long-acting opioids.
- BlueCross also continues coverage for abuse deterrents and medication-assisted treatments.
- BlueCross is working closely with physicians by sharing best practices and consultation, along with sending data-driven scorecards that evaluate their prescribing patterns relative to peers and notifications about patients who are at high risk for potential abuse.
- BlueCross has supported a statewide education initiative, Count It! Lock It! Drop It! (CLD), which offers residents a simple formula for reducing risk. By counting their pills regularly, storing them securely, and dropping off any unused medications, every patient has a chance to make a dent in Tennessee's opioid crisis.
- BlueCross is using data to identify and remove providers from their networks if their prescribing patterns consistently diverge from best practices.

Metrics/Results/Value

- In 2017, changes instituted by BlueCross resulted in 194,000 fewer prescriptions filled, the equivalent of 12 million pills, representing a six percent decrease in the number of opioid prescriptions per member, per month.
- In partnership with CLD, BlueCross has promoted National Prescription Drug Take-Back Day last fall, and Tennesseans responded by dropping off a record 29,700 pounds of unused or expired medications.
- BlueCross completed nearly 18,000 prior authorization and quantity limit requests and saw a 6 percent reduction in opioid claims – meaning 12 million fewer pills in the hands of Tennesseans and a 10 percent reduction in average MEqD.

Patient Support

- BlueCross integrated a medical and behavioral health approach to case management for at-risk members.
- They developed a specialized approach for expectant mothers with opioid dependence and developed a collaborative program with state agencies for infants born with neonatal abstinence syndrome.

Prescriber Support

- BlueCross has established partnerships to promote best practices in prescribing.
- They developed scorecards for evaluation of a provider's opioid-prescribing patterns compared to peers and guidance and consultation on treatment plans and clinical pathways.
- They also instituted notification of patients at high risk for potential abuse.

BlueCross BlueShield of Tennessee Health Foundation

- Over two years, the BlueCross BlueShield of Tennessee Health Foundation has awarded $2.6 million in support of Count It! Lock It! Drop It! And since 2013, given another $2 million to support addiction treatment programs statewide.

2013

- $400,000 to Helen Ross McNabb Foundation in Sevierville, Chattanooga and surrounding areas
- Two-year grant of $290,000 to Mothers & Infants Sober Together (MIST)

2014

- $1 million grant to build a NAS treatment unit at East Tennessee Children's Hospital in Knoxville

2015

- $400,000 to Dayspring Family Health Center in Jellico to support its fight against NAS
- $75,000 to Make a Difference, Inc. in Memphis to assist individuals with chemical dependency issues
- $100,000 grant to support The Next Door in Nashville and Chattanooga, which helps women battling addiction

2016

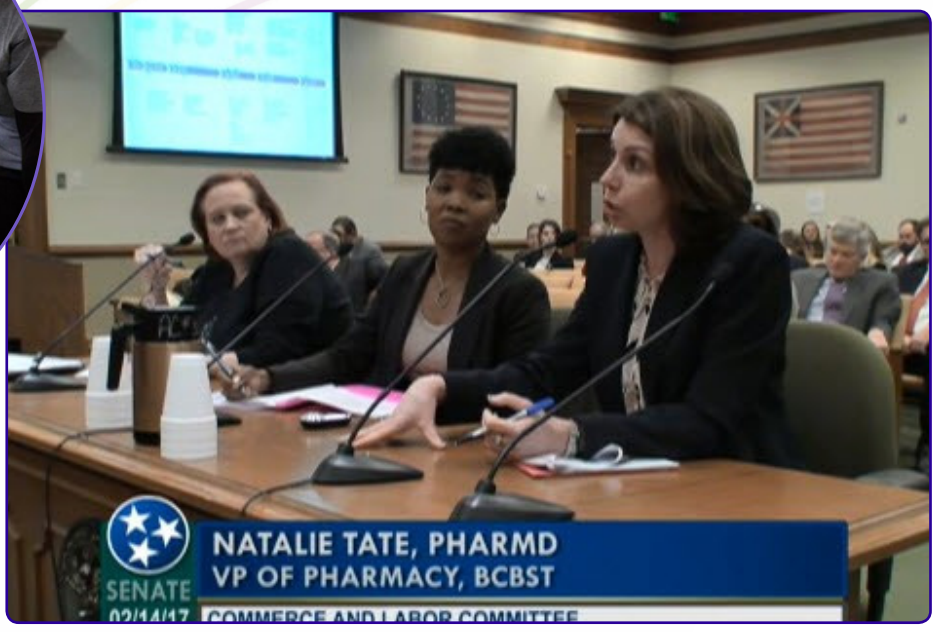
- $100,000 grant to Susannah's House in Knoxville to provide an outpatient and drug treatment program for mothers in recovery
- $2.6 million to date to help the Count It! Lock It! Drop It! campaign combat opioid misuse

2017

- $215,000 to purchase naloxone for Tennessee law enforcement agencies and $35,000 for Law Enforcement Innovation Center (LEIC) Narcan training
- $125,000 to House of Refuge in Chattanooga to support its rehabilitation program

Looking Ahead for 2018

- Potential reductions in quantity limits for members with pharmacy benefits
- Targeted outreach efforts for newer members
- Educating members with chronic conditions who are at high risk for opioid misuse
- Outreach to providers
- Continued community and government partnerships



CardinalHealth

Overview/Background

- Cardinal Health is committed to combatting prescription drug and opioid misuse and empowering healthy communities.
- The people of Cardinal Health care deeply about the devastation opioid abuse has caused American families and communities and are actively demonstrating our commitment to helping solve this public health crisis. From preventing the diversion of controlled substances to investing in programs that provide communities with necessary tools to fight the opioid crisis, the men and women of Cardinal Health are committed to being part of the solution.
- Cardinal Health has been and intends to remain an industry leader in implementing state-of-the-art controls and drug misuse and abuse prevention programs.

Anti-Diversion

- In its role as a pharmaceutical wholesale distributor, Cardinal Health does not manufacture, promote or prescribe prescription medications to members of the public. Their responsibility is to safely and securely transport pharmaceutical and medical supplies from manufacturers to licensed pharmacies.
- Cardinal Health does this by maintaining a state-of-the-art, continuously improving system that uses advanced analytics, technology and on-the-ground deployment of investigators to evaluate all pharmacy customers, scrutinize all pharmaceutical shipments and identify, block and report to regulators all orders of pain medications that do not meet our strict criteria.

Description of the Program

Opioid Action Program

- In November 2017, Cardinal Health launched the Opioid Action Program, a comprehensive effort aimed at helping communities in four of the nation's hardest-hit states combat the opioid epidemic. The pilot program delivers much needed front-line assistance to help prevent opioid abuse and support first responders in Ohio, Kentucky, Tennessee and West Virginia.
- The Opioid Action Program has four elements, each cited by leading experts as critical to the fight to reduce opioid abuse and casualties. These include the distribution of over 80,000 doses of Narcan® free-of-charge to more than 45 nonprofits in our four pilot states for first responders and law enforcement; the expansion of grants for student and prescriber education and community support; sponsorship of more than sixty prescription drug take-back events; and engaging with medical schools across the country along with the Warren Alpert Medical School of Brown University to help generate and disseminate curricula and best practices focused on responsible prescribing of opioids to train the next generation of physicians.
- Additional community support efforts within the Opioid Action Program include providing $20,000 in matching funds to the Greater Kanawha Valley Foundation to support the "Bridge of Hope" scholarship program in West Virginia, which helps individuals recovering from addiction. These resources will help fund higher education and job training scholarships for individuals who are transitioning out of addiction recovery programs.

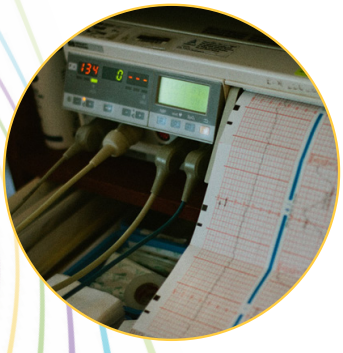
Generation Rx

- For a decade, the Cardinal Health Foundation has partnered with The Ohio State University College of Pharmacy to create the Generation Rx educational program to raise awareness and knowledge about the dangers of prescription drug misuse. In doing so, we strive to enhance medication safety among youth, college students and adults in our communities.
- Generation Rx open source educational materials are easy and accessible tools to help educate audiences of all ages about how to prevent the misuse of prescription drugs. Since the partnership began, the Cardinal Health Foundation has invested millions of dollars and reached over one million people with Generation Rx prevention education programming through partnerships and grants with non-profits across the country.
- These partnerships also include innovative collaborations with pharmacists to share best practices and education around safe use and disposal of prescription medications. Last year, the Cardinal Health Foundation and the Ohio State University College of Pharmacy worked with Kroger and trained more than 250 pharmacists who are educating students in classrooms throughout Ohio using Generation Rx educational materials.
- Supporting drug take-back events has also been a priority for Generation Rx and the Cardinal Health Foundation. In partnership with Kroger, the Cardinal Health Foundation is sponsoring more than 80 take-back days in 22 states.

Metrics/Results/Value

Cardinal Health Foundation

- The Cardinal Health Foundation supports local, national and international programs that improve healthcare efficiency, effectiveness and excellence and the overall wellness of the communities where Cardinal Health's more than 40,000 employees live and work.
- As part of the Opioid Action Program, the Cardinal Health Foundation is building on its legacy of supporting prescription drug misuse prevention education by expanding its community engagement and education grants. The Cardinal Health Foundation is:
  - Providing $25,000 to $35,000 grants to 30 to 50 non-profit organizations in the four pilot states to expand prevention education in K-12 schools and universities. These grants are designed to reach thousands of students in schools, after-school programming and through various youth organizations.
  - Awarding 20 to 30 grants of $25,000 to $50,000 each to healthcare institutions throughout the four pilot states. These grants will support training for prescribers working at those institutions to transform the way they help patients understand and manage their pain, with fewer opioids prescribed.
  - Establishing a third grant opportunity that targets hard-hit communities in Ohio, home to Cardinal Health's headquarters. These grants will fund community collaboratives that are working to reduce opioid addiction, overdoses and opioid-related deaths. The Cardinal Health Foundation expects to fund eight Ohio communities with grants of $75,000 to $100,000 each.



City of Hope®

Overview/Background

- Half of patients with cancer have significant pain at the time of diagnosis and a large majority of patients with advanced-stage cancer experience either moderate or severe pain.
- The origins of our current opiate crisis arose in a setting in which patients in severe acute and chronic pain, most particularly those with cancer, were ineffectively treated.
- Unfortunately, a widespread myth also originated at this time that the risk of addiction to opiates was virtually non-existent; in time, this has proven to be tragically untrue.
- As our nation reels from human toll of the opiate addiction epidemic, however, there is frequently a failure to understand why the risks and need for opiates in patients with cancer might differ from those of the general population.
- While one study observed opiate addiction rates of up to 10 percent in patients with cancer following potentially curative surgery, others have noted that the rate of opiate addiction amongst cancer patients with no prior history of opiate addiction are actually quite low.
- As the national response to the opiate epidemic has accelerated, efforts by the government, payers, and pharmacies to reduce access to opiates have, unintentionally, resulted in shortages of intravenous opiates at cancer hospitals and increased barriers to patients who suffer from cancer-related pain getting access to the necessary medications.
- While many patients without cancer can be effectively managed without the need for opiates, many patients with cancer do require opiates for adequate management of their disease-related pain.
- The importance of opiates in effective, best practice based care of patients with cancer is reflected in the World Health Organization Analgesic Ladder. For those patients with moderate-to-severe pain, opiates remain an essential part of effective care. Denying adequate pain medicine to these patients amounts to substandard care.
- The best model for ensuring that patients with cancer receive adequate pain management while mitigating the risk of addiction, involves delivering care through a multidisciplinary model that applies the biopsychosocial framework to delivering effective pain care to patients in need. The American Pain Society has recommended that patients with chronic cancer-related pain benefit from management that is led by a multidisciplinary care team that is patient and family centered in its care delivery.

Description of the Program

- The City of Hope (COH) is a National Cancer Institute-designated Comprehensive Cancer Center that is located in the greater Los Angeles region that has developed an effective team-based care model for delivering best in class, interdisciplinary, patient-centered care services to patients affected by cancer. COH is a mission-driven organization whose ethos is best summarized by the words of one of its founders, "There is no profit in curing the body, if in the process we destroy the soul." (Figure 1).
- Toward this end, the patients and their families form the 'true north' for care planning, pain, and distress management, for care delivery by these multi-disciplinary teams. These members of these teams work closely in coordination to assure that patients' care needs, including pain, depression, anxiety, insomnia, sexual dysfunction, and spiritual needs are fully addressed. (Figure 2).

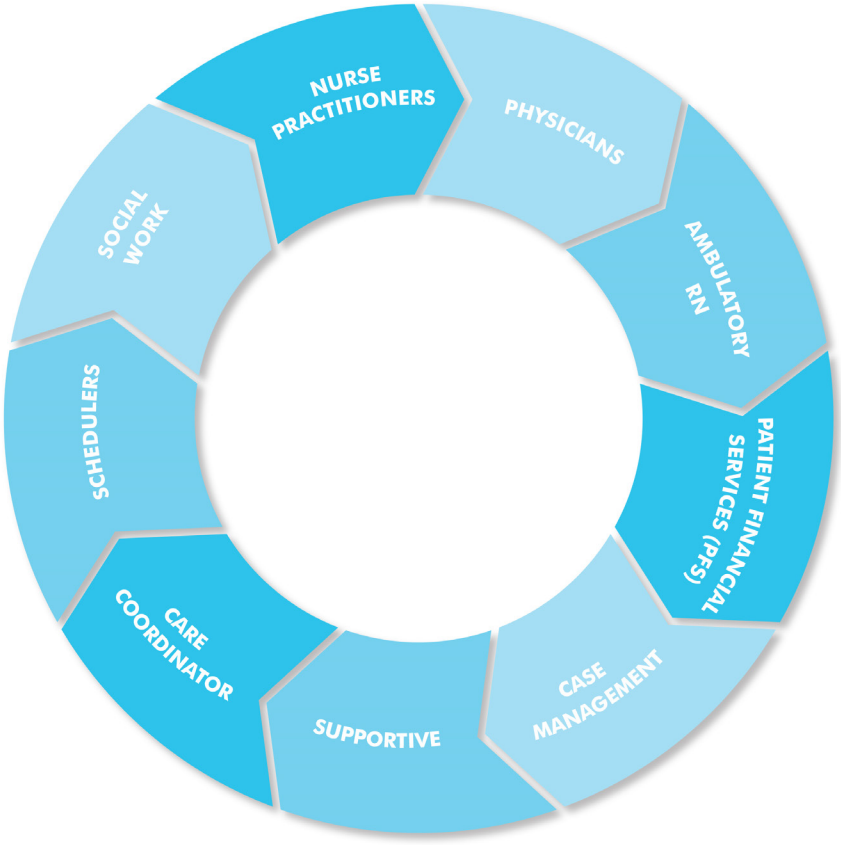
- The unique COH care delivery model includes the use of prospective supportive care medicine support (initiated at the time of diagnosis) that includes a team consisting of palliative care physicians, pain management specialists, psychologists, psychiatrists, social worker, and pastoral care professionals that work in close coordination with the patient's hematologist, medical oncologist, surgeon, and/or radiation oncologist to ensure effective pain management and long-term goal/symptom-focused care of patients and their families.
- The work of this team is further empowered by the use of a proprietary touch-screen based patient screening tool that is effective in capturing patients' physical, emotional, psychological, spiritual, and pain management care needs so that these can be effectively and transparently addressed by the interdisciplinary care team.

Metrics/Results/Value

- The significant success of the COH model is predicated upon a patient and family-centered paradigm that views a narrow focus upon pain or opiate utilization as a missed opportunity for effectively serving the needs of this patient population.
- A system that instead focuses upon managing the patient's experience of distress effectively, including leveraging opiate-based analgesics to manage moderate and severe acute and chronic pain, is far more likely to support the patient's recovery and return to wellness.
- For patients treated with this comprehensive care model, the risk of opiate addiction is less than 5 percent, while the benefits in reducing cancer-related morbidities and in improving the return to wellness are significant.

Figure 1

Figure 2



Cleveland Clinic

Back on TREK

Overview/Background

- The Back on TREK (Transform Restore Empower Knowledge) program is designed to help patients with chronic back pain (>3 months) manage their symptoms with non-opioid therapies, including physical therapy, education in the neuroscience of pain, and behavioral strategies.
- Through this program, Cleveland Clinic is aiming to change the standard of care by treating patients with persistent pain from a biopsychosocial model, with physical therapists and behavioral medicine specialists as the front line providers. Spine specialists are also a part of the multidisciplinary treatment team.
- It is a goal of the program to help patients who are on opioids at the start of the program to taper their use while learning non-pharmacological pain coping strategies though exercise and lifestyle changes.

Description of the Program

- Back pain is a pervasive condition among adults. About 80 percent of adults experience low back pain at some point in their lifetimes. About 20 percent of people affected by acute low back pain develop chronic low back pain with persistent symptoms at one year.
- However, back pain can also be challenging to treat. Patients often confuse hurt with harm and choose to stay inactive when they are experiencing pain. Unfortunately, inactivity can aggravate the root cause of the pain and feed into a vicious cycle of pain and medications such as opioids to further compound the problem.
- Cleveland Clinic developed the Back on TREK program to provide patients with evidence based alternatives to manage chronic back pain. This program is an alternative to opioids for pain management, but is not exclusively for patients on opioid therapy. The program's approach is designed to minimize unnecessary utilization of healthcare and empower patients to self-care, and return to full-time employment.
- Back on TREK is a 12-week interdisciplinary program in which spine specialists have partnered with physical therapists and behavioral medicine specialists to improve outcomes of chronic back pain. Behavioral medicine specialists, physical therapists, physicians and nurses work collaboratively to develop individualized treatment plans.
- The program includes:
  - An initial evaluation by behavioral medicine specialists and physical therapists
  - Individual and group physical therapy sessions focused upon physical reconditioning and reduce fear and avoidance of activity

- Group behavioral medicine sessions focused upon coping with pain and decreasing the sensitivity of the nervous system through relaxation and meditation practice
- Family education as needed
- A Shared Medical Appointment with a Spine Specialist, behavioral medicine specialist and physical therapist for those who are interested
- Monthly "booster" group sessions with physical therapy and behavioral medicine for patients who have completed the program and are seeking further support

Results

- Back on TREK (BoT) continues to demonstrate promising results that show significant changes in back pain related disability and quality of life metrics.
- Compared to a group of similar patients enrolled in outpatient physical therapy, those in BoT had significantly more benefit in absolute change and lower disability at graduation as measured by the Modified Low Back Pain Disability Questionnaire.
- Following BoT, all quality of life measures, such as satisfaction with social roles, pain, sleep disturbance, fatigue, and physical function improved significantly.

connectiveRx

Overview/Background

- ConnectiveRx is the home of the Physician Desk Reference (PDR), trusted by healthcare professionals to deliver credible medication label information and help meet duty to warn requirements for over 70 years.
- The company works across the healthcare ecosystem to deliver clinically relevant medication and adherence information. The company's communications network reaches prescribers, pharmacists and patients using a variety of workflow, digital and non-digital channels.
- Since 2012, PDR has been the communication partner for the FDA-mandated ER/LA Opioid Analgesics REMS for REMS Program Companies (RPC), a consortium of over 30 brand and generic manufacturers of ER/LA opioids. PDR has provided over 38 million medication safety communications to U.S. prescribers since the inception of Risk Evaluation and Mitigation Strategy (REMS).

Description of the Program

Opioid communications delivered over this network amplify public health experts' messages by delivering specific, contextual, targeted and safe use communications to key audiences:

- Prescriber Communications – ConnectiveRx enables safe use messages to be presented to the prescriber when they are writing an opioid prescription. Where Electronic Health Records (EHRs) have connectivity to state level prescription drug monitoring programs (PDMPs), intelligent messaging informed by PDMP data that may flag opioid abuse can also be activated.
- Pharmacist Communications – The ConnectiveRx communications network enables targeted communications to pharmacists via their pharmacy management systems. ConnectiveRx enables safe use messages to pharmacists when prescriptions are being dispensed in the pharmacy. Where pharmacy management systems have connectivity to state level PDMPs, intelligent messaging informed by PDMP data that may flag opioid abuse can also be activated.
- Consumer Education – Personalized safe and responsible use messages are delivered to consumers in the prescriber's office and/or the pharmacy. These messages are triggered by the prescribing or dispensing process, respectively. The message is provided on behalf of the prescriber or pharmacist and is delivered to the consumer via print, text message, email or posting to a patient portal.

FRANCISCAN MISSIONARIES OF OUR LADY HEALTH SYSTEM

Overview/Background

- Opioid pain medications are considered high-risk medications due to the potential for respiratory depression and other adverse effects. Because these medications are frequently used to treat acute pain in the hospital, opioids account for a disproportionate share of preventable adverse drug events.
- Opioid prescribing practices are one of three targeted priorities by the U.S. Department of Health and Human Services to reduce opioid use disorders and overdose. The use of clinical practice guidelines can assist providers in providing safe, effective treatment while reducing the potential for misuse, abuse, or overdose from opioids.
- The Joint Commission Center for Quality and Safety recently released recommendations for inpatient use of opioids which helped to shape the Franciscan Missionaries' guidelines.

Description of the Program

- Franciscan Missionaries of Our Lady Health System recognizes that clinicians are committed to evaluate emergent complaints and to develop a specific treatment plan for that patient encounter.
- They also recognize that guideline care does not substitute for the clinical judgment of the provider.
- Franciscan Missionaries acknowledges the devastating impact of the inappropriate use of controlled substances, specifically opioids and benzodiazepines, by the public and are recommending the following guidelines for use and prescribing of opioids from the hospital setting.

Action

- Through the work and coordination of the Opioid Oversight Committee, it is recommended that hospital clinicians review current policy/practice on use and prescribing of opioids and benzodiazepines and if necessary take action to align the current group approach (or create one if none exists) with the recommended guidelines of the state, CDC and Joint Commission. Hospital and Practice Administrators should also take steps to educate staff about the new/revised guidelines for use and prescribing of controlled substances.

Addressing Chronic Pain in the ED/Hospital Setting

- It is the general expectation that patients on chronic pain medication will have those medications continued while hospitalized. Physicians or their delegates should confirm current prescription status and dosing through the Louisiana Prescription Monitoring Program when continuing these medications in the hospital.
- In compliance with Louisiana State Law and CDC recommendations, one medical provider with an ongoing patient relationship should provide all opioids (narcotics) to treat a patient's chronic pain. Chronic pain medications for conditions such as chronic back pain should not be prescribed from a hospital setting.
- The administration of intravenous and intramuscular opioids for the relief of acute exacerbation of chronic pain is not in the patient's best interest and is discouraged.
- For exacerbations of chronic pain, the emergency or inpatient medical provider should attempt to contact the patient's primary opioid

provider. It is recommended that a summary of the care be sent to the primary opioid provider. If the emergency provider does elect to provide a pain medication prescription for chronic pain, it should be limited to cover until the next business day.

- Hospital-based providers should not provide replacement prescriptions for controlled substances that were lost, stolen, destroyed or finished prematurely.
- Hospital-based providers will not prescribe or dispense suboxone or provide opioid pain pills to those identified enrolled in methadone or suboxone clinic without consultation with the clinic except in case of an acute injury or illness such as a broken bone.
- Long-acting or controlled-release opioids should not be prescribed from the hospital setting with the rare exceptions of cancer, palliative care and hospice patients.

Addressing Acute Pain in the ED/Hospital Setting

- Prescriptions for opioids from the hospital setting for acute injuries, such as broken bones or surgery should cover the shortest appropriate time. In keeping with CDC Best Practice Guidelines and Louisiana Law, these prescriptions should be respectively limited to 5-7 days or less.
- Hospital providers or their delegates should access the Louisiana Prescription Monitoring Program when administering controlled substances or providing outpatient prescriptions.
- Because physical addiction to opioid pain medications starts after only five days, continued narcotic use should be reassessed frequently.
- IV pain medications should be reviewed for conversion to oral in patients who are tolerating a diet. This should be reviewed every 48 hours.
- Narcotics should be ordered after non-narcotic measures have been attempted.

Addressing Doctor Shopping and Suspected Diversion

- A prescription for a controlled substance should not be given to a patient without a government issued photo ID.
- Hospital providers or their delegates should access the Louisiana Prescription Monitoring Program when administering controlled substances or providing outpatient prescriptions.

Hospital Administration Actions

- The hospital will coordinate the care of patients who frequently visit the ED to establish a patient specific policy/treatment plan, which may include treatment referrals for patients with suspected prescription opioid/benzodiazepine abuse problems.
- The hospital will organize efforts to establish pathways for treatment of common painful conditions.
- The hospital will make available alternate, non-pharmacologic treatment modalities for pain.
- The hospital will provide annual education on pain control and expectation setting for pain control in the inpatient environment.
- The hospital will be pro-active in preventing doctor shopping and suspected diversion by creating signage and patient education materials for use in the Emergency Department and Admissions areas.
- As per Joint Commission Recommendations, the hospital will create and implement policies and procedures that allow for a second level review by a pain management specialist or pharmacist of pain management plans that include high-risk opioids, such as methadone, fentanyl, IV hydromorphone and meperidine.

Metrics/Results/Value

- Franciscan Missionaries aims to decrease opioid dependence and opioid-related events by measuring, educating and providing feedback to prescribers on the following metrics:
  - Number of narcotic prescriptions per provider which exceed the duration recommended by CDC guidelines
  - Opioid-related events in hospital patients by opioid-prescriber
  - Morphine equivalents prescribed in hospital by physician per shift worked as compared to peers
- The results of the Complex Patient Care Program which focuses resources on emergency department high utilizers have been very positive. Franciscan Missionaries have seen a 7 percent reduction in recidivism and an even larger decrease in the use of narcotics in this patient population.
- The development and adoption of a care pathway for migraines has promoted evidence-based, non-narcotic treatment of this acute condition. The use of narcotics for this condition has dramatically reduced from usage one year ago. Development of clinical pathways for gastroparesis and low back pain aim to achieve similar goals.

HEARST HEALTH

fdb zynxhealth mcg homecare homebase MEDHOK

Overview/Background

- Hearst Health, a division of the Hearst Corporation, includes the healthcare software and content companies FDB (First Databank), Zynx Health, MCG, Homecare Homebase, and MedHOK. Solutions from Hearst Health span the clinical, pharmacy, home and hospice care, and health insurance markets.
- The mission of Hearst Health is to help guide the most important care moments by delivering vital information into the hands of everyone who touches a person's health journey.
- Each year in the United States, care guidance from the five companies making up the Hearst Health network reaches 85 percent of discharged patients, 205 million insured individuals, 70 million home health visits, and 3.2 billion dispensed prescriptions.

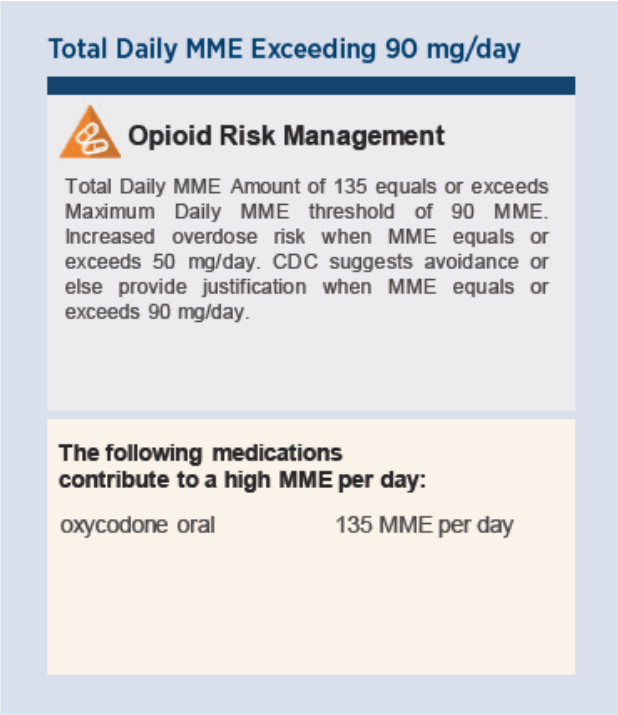
Description of the Programs

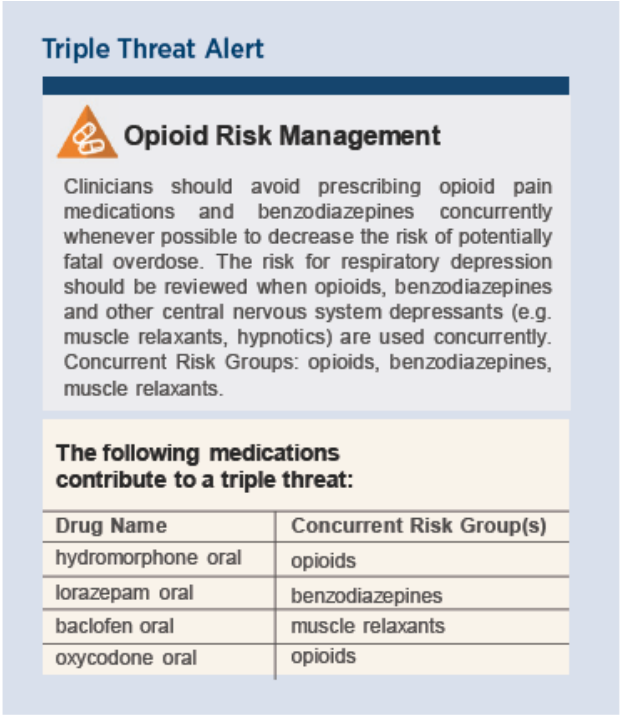
The Hearst Health companies are helping address the opioid crisis by putting the best science into the hands of clinicians and other decision makers in their daily workflow:

- **FDB** is the leading provider of drug and medical device knowledge that helps healthcare professionals make informed decisions. FDB provides the computable knowledge base that enables clinical information systems to process orders, prescriptions, dispensing, and patient medication information.
  - Its solutions apply a distinguishing identifier on all narcotic drugs to enable relevant alerting within the clinical workflow of prescribing physicians and pharmacists to help clinicians identify potentially dangerous therapies for the individual patient, such as:
    - multiple narcotic products provided to the same patient, excessive morphine milligram equivalent (MME) values for drugs based on a cumulative calculation of opioids prescribed,
    - identification of opioids that have a longer duration of action and greater potential for abuse, and
    - the identification of Concurrent Medication Risk Groups, i.e., the "Double Threat" of opioids taken with sedatives/hypnotics and the "Triple Threat" of opioids taken with sedatives/hypnotics as well as muscle relaxants.
  - By integrating the clinical care guidance into the clinicians' daily workflow, FDB helps clinicians adhere to prescribing and dispensing restrictions and guidelines and prevent unsafe drug regimens from reaching the patient.

- **MCG** makes guidelines available in the electronic workflow of clinical and payer stakeholders.
  - MCG supports the management and review of people with chronic pain by using pain assessment tools, screening instruments to determine the appropriateness of prescribing opioids, and referral for non-opioid pain management, such as multidisciplinary pain rehabilitation, chiropractic care, acupuncture, and other invasive or non-invasive procedures used to treat pain.
  - For people who have indications for opioid treatment, outpatient opioid maintenance therapy can be managed with MCG guidelines that align with and operationalize the Centers for Disease Control and Prevention (CDC) guidelines for prescribing opioids for chronic pain.

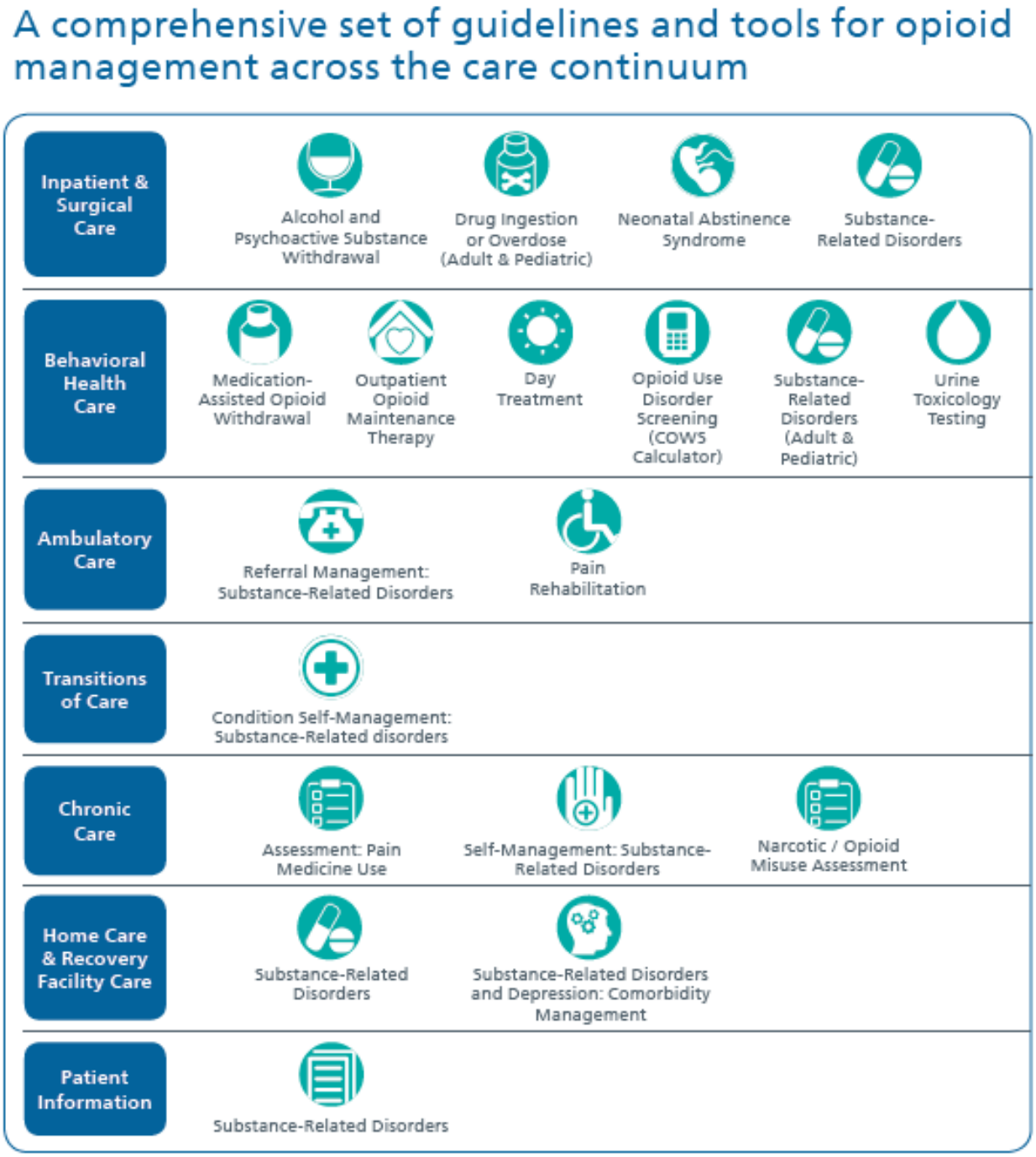
FDB Opioid Risk Management Module™





- For people with opioid use disorders, MCG offers guidance on medication-assisted treatment, referral for behavioral therapies, as well as age-specific treatment and detoxification services for adults and adolescents at all levels of care, including residential treatment.
- MCG solutions help clinicians and payers to:
  - **SCREEN APPROPRIATELY:** Ensure persons get screened appropriately for opioid abuse. And, when medication-assisted treatment with behavioral therapy is needed, document its medical necessity.
  - **MANAGE SYMPTOMS:** In the inpatient setting, manage patients with acute opioid ingestion or who undergo withdrawal from opioids, and use evidence-based tools to provide a safe transition to other levels of care and the outpatient arena.
  - **DELIVER QUALITY CARE:** Improve patient outcomes by training clinical staff on alternatives to opioids for chronic pain management, and equip persons taking opioids with educational handouts to keep them well.
  - **OPTIMIZE UTILIZATION:** Identify problem areas and improve efficiencies by comparing your utilization and costs of services against national and regional benchmarks associated with chronic opioid use.
- **MedHOK**, a leading provider of software-as-a service solutions for health plans, provides a Drug Utilization Review (DUR) evaluation of a patient's drug regimen.
  - A health plan clinician performing a patient's medication review is immediately alerted if there are any duplications of therapy, drug to drug interactions, drug to allergy interactions, drug to age interactions, drug to gender interactions, and/or drug to food interactions identified.

MCG guidelines and tools for opioid management



- MedHOK also helps plans comply with the Centers for Medicare & Medicaid Services (CMS) Part D Overutilization Monitoring System (OMS) by identifying cases of potential opioid overutilization for health plan clinicians to review.

- **Zynx** provides specific, evidence-based clinical tasks for hospital physicians and nurses within their electronic workflow, to help them better manage the patient problem of pain. Hospitals use Zynx solutions at an administrative level for system-wide knowledge management to ensure that the evidence-based interventions are at the fingertips of all bedside clinicians.
  - The evidence foundation includes guideline recommendations from the American Society for Pain Management Nursing and the CDC. These recommendations are synthesized into a plan of care with clear patient goals for managing pain, including control of acute pain and the ability to achieve the maximum level of both physical and psychosocial functioning. This can be accomplished through various evidence-based assessments of physical function, psychosocial function, opioid analgesia side-effect assessment, opioid dependence risk assessment, opioid dependence signs and symptoms assessment, as well as through assessments of pain, pain characteristics, and pain control.
  - Zynx's order sets for pain management and postoperative surgical order sets include reminders for non-opioid management of pain where appropriate, but if indicated, safe medication orderable items for opioids are provided.

Metrics/Results/Value

- A case study from Texas regarding how **MCG**'s ODG solution helped dramatically reduce opioid prescriptions:
  - Opioid costs decreased from 27 percent of the total pharmacy costs in 2009 to 18 percent in 2015.
  - N-drug (Not Recommended) opioid prescriptions with 90+ morphine milligram equivalents (MMEs) per day decreased from 60 percent in 2009 to 57 percent in 2015.
  - Other drug opioid prescriptions with 90+ morphine milligram equivalents (MMEs) per day decreased from 9 percent in 2009 to 7 percent in 2012, but increased to 9 percent in 2015.
  - The number of claims receiving N-drug opioids with 90+ MMEs/day decreased from almost 15,000 in 2009 to less than 500 in 2015.
  - The number of claims receiving other- drug opioids with 90+ MMEs/day decreased from approximately 8,400 in 2009 to less than 5,000 in 2015.

Informing and Tracking Opioid Crisis Initiatives through National and State-Level Opioid Prescribing Analysis

Overview/Background

- IQVIA, formed by the merger of IMS Health and Quintiles Transnational in 2016, connects health data and systems in over 100 countries to provide actionable insights to healthcare stakeholders. IQVIA helps all health stakeholders from providers to payer to manufacturers to government agencies tap into a deeper understanding of diseases, human behaviors and science, to advance cures.
- IQVIA is inspired by the vision to drive healthcare forward using breakthroughs in insights, technology and human intelligence.

Description of the Program

- As part of its work IQVIA has developed, published and shared geographic opioid prescribing analyses with state legislators, professional associations, state medical societies, and congressional offices.
- The most recent data on opioid prescribing, being shared broadly with policymakers and prescribers, shows significant reductions in prescribing.

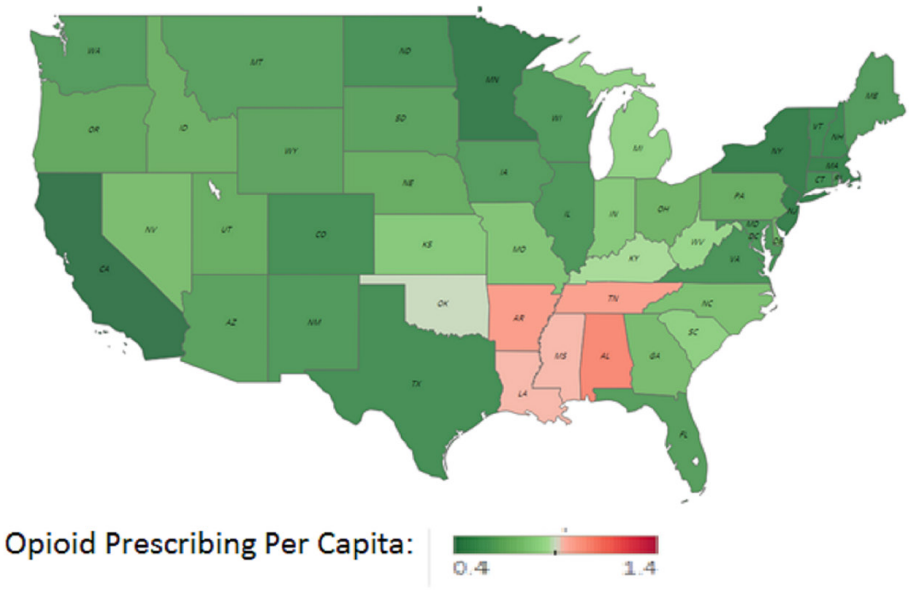
Metrics/Results/Value

Most recent opioid prescribing data yield key insights:

- Continuing an ongoing nationwide trend, 22.2 percent fewer opioid prescriptions were filled in 2017 than had been filled in 2013.
- Every state in the nation has shown a significant reduction in opioid analgesic prescriptions since 2013, and every state showed a decline in the last year.
- In 2017, a total of 196,001,292 opioid prescriptions were filled in the US, representing an 8.9 percent decrease from the prior year – the sharpest one-year decrease we have observed.
- Differences between high-use and low-use states are far less stark than had been observed in prior years, as illustrated by the map below.
- Many states with the most profound abuse problems have exhibited the greatest decline in opioid prescribing. Five of these states have shown decreases of over 30 percent since 2013.

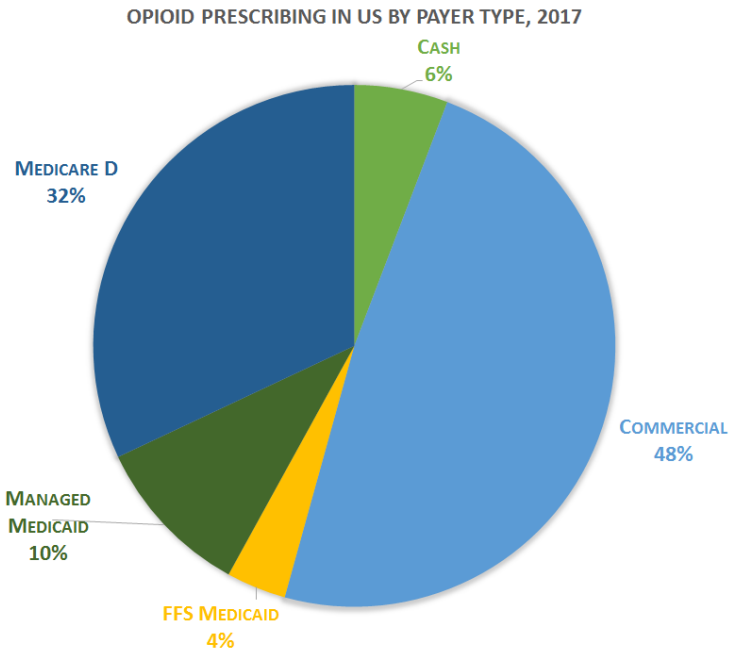
The data table in this section contains IQVIA's projected counts of state-level prescribing of opioids for 2013 through 2017.

Opioid Analgesic Prescribing Rates by State, 2017



Source: Xponent, IQVIA, Danbury, CT, Accessed March 2018

Opioid Prescriptions in USA by Payer Type, 2017



- At the national level, roughly one-half of opioid prescriptions were paid by commercial plans. Another one-third were paid by Medicare Part D. The remainder was split almost evenly between Medicaid and cash.
- This proportion was not uniform across the county as the following maps illustrate.

Source: PayerTrak, IQVIA, Danbury, CT, Accessed March 2018

State and National Totals of Retail Filled Prescriptions: All Opiod Analgesics, 2013-2017

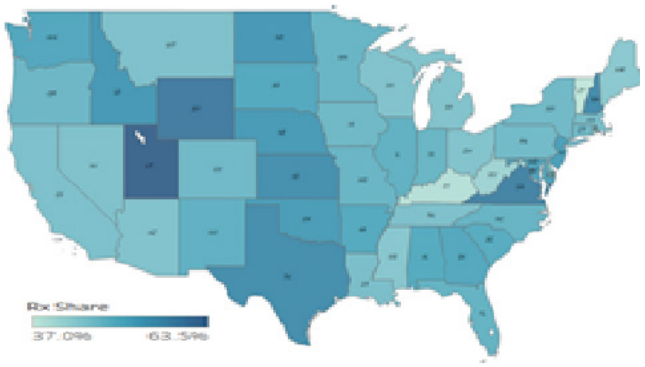
State	2013	2014	2015	2016	2017	Cumulative % change 2013-2017	Percent change 2016-2017
Alabama	6,814,305	6,393,791	5,840,754	5,638,226	5,226,453	-23.3%	-7.3%
Alaska	468,266	457,730	420,617	406,210	371,330	-20.7%	-8.6%
Arizona	5,050,348	5,038,497	4,813,236	4,549,927	4,146,719	-17.9%	-8.9%
Arkansas	3,477,289	3,523,762	3,312,715	3,240,776	3,031,816	-12.8%	-6.4%
California	21,047,372	20,561,933	18,666,608	17,441,819	15,935,858	-24.3%	-8.6%
Colorado	3,678,624	3,637,189	3,471,691	3,191,200	2,903,238	-21.1%	-9.0%
Connecticut	2,512,161	2,476,310	2,297,397	2,050,162	1,825,478	-27.3%	-11.0%
Delaware	823,522	814,682	768,974	717,686	636,103	-22.8%	-11.4%
District of Columbia	530,757	520,817	462,789	424,773	396,380	-25.3%	-6.7%
Florida	13,636,391	13,413,544	12,708,441	12,750,684	12,161,370	-10.8%	-4.6%
Georgia	8,643,869	8,305,929	7,880,524	7,856,894	7,403,647	-14.3%	-5.8%
Hawaii	717,220	694,579	645,508	612,090	566,039	-21.1%	-7.5%
Idaho	1,361,009	1,348,590	1,263,510	1,211,463	1,127,967	-17.1%	-6.9%
Illinois	8,800,796	8,518,837	8,003,978	7,665,040	7,012,770	-20.3%	-8.5%
Indiana	6,924,241	6,307,577	5,837,382	5,527,092	5,114,530	-26.1%	-7.5%
Iowa	2,274,401	2,246,454	2,121,545	1,983,098	1,787,157	-21.4%	-9.9%
Kansas	2,751,590	2,677,203	2,504,956	2,399,365	2,233,674	-18.8%	-6.9%
Kentucky	4,997,389	4,900,964	4,471,521	4,178,616	3,835,758	-23.2%	-8.2%
Louisiana	5,497,900	5,248,487	4,818,945	4,714,697	4,390,626	-20.1%	-6.9%
Maine	1,105,502	1,060,604	985,562	867,776	752,128	-32.0%	-13.3%
Maryland	4,229,380	4,181,855	3,941,165	3,664,825	3,321,383	-21.5%	-9.4%
Massachusetts	4,584,487	4,431,390	4,066,743	3,551,098	3,108,589	-32.2%	-12.5%
Michigan	10,482,299	10,315,827	9,528,806	8,858,912	8,018,969	-23.5%	-9.5%
Minnesota	3,330,832	3,250,152	2,975,420	2,688,110	2,395,469	-28.1%	-10.9%
Mississippi	3,514,236	3,407,069	3,212,366	3,087,482	2,797,901	-20.4%	-9.4%
Missouri	5,755,659	5,602,998	5,217,577	4,955,781	4,568,443	-20.6%	-7.8%
Montana	798,887	776,545	722,011	686,115	616,656	-22.8%	-10.1%
Nebraska	1,497,183	1,470,605	1,378,816	1,325,382	1,229,836	-17.9%	-7.2%
Nevada	2,436,691	2,467,414	2,393,881	2,276,188	2,144,804	-12.0%	-5.8%
New Hampshire	970,834	937,024	886,243	764,009	648,791	-33.2%	-15.1%
New Jersey	5,160,965	5,082,090	4,917,404	4,593,494	3,971,549	-23.0%	-13.5%
New Mexico	1,422,434	1,436,906	1,409,482	1,299,762	1,154,945	-18.8%	-11.1%
New York	10,957,729	10,450,786	10,164,060	9,534,858	8,731,689	-20.3%	-8.4%
North Carolina	9,482,526	9,232,258	8,717,746	8,276,712	7,475,119	-21.2%	-9.7%
North Dakota	505,227	495,555	466,131	441,930	397,286	-21.4%	-10.1%
Ohio	11,261,528	10,794,842	9,955,858	9,057,498	7,884,784	-30.0%	-12.9%
Oklahoma	4,666,575	4,242,737	3,972,838	3,765,604	3,508,003	-24.8%	-6.8%
Oregon	3,456,129	3,389,575	3,145,023	2,897,444	2,573,451	-25.5%	-11.2%
Pennsylvania	11,330,259	11,031,159	10,394,466	9,496,052	8,163,730	-27.9%	-14.0%
Rhode Island	871,892	823,219	732,367	655,736	578,919	-33.6%	-11.7%
South Carolina	4,866,458	4,797,342	4,490,916	4,296,073	3,982,951	-18.2%	-7.3%
South Dakota	570,917	585,432	581,534	554,246	514,472	-9.9%	-7.2%
Tennessee	8,525,017	8,239,110	7,800,947	7,366,191	6,709,154	-21.3%	-8.9%
Texas	18,569,734	17,959,748	15,903,061	15,444,180	14,551,496	-21.6%	-5.8%
Utah	2,364,661	2,308,830	2,186,792	2,107,481	1,975,493	-16.5%	-6.3%
Vermont	418,161	415,687	388,108	348,511	307,528	-26.5%	-11.8%
Virginia	6,346,359	6,047,580	5,608,460	5,240,314	4,526,212	-28.7%	-13.6%
Washington	5,163,236	5,121,469	4,881,633	4,607,428	4,209,000	-18.5%	-8.6%
West Virginia	2,420,990	2,389,802	2,076,883	1,752,690	1,510,207	-37.6%	-13.8%
Wisconsin	4,326,863	4,224,458	3,984,693	3,655,386	3,216,311	-25.7%	-12.0%
Wyoming	413,701	405,626	382,837	374,192	349,111	-15.6%	-6.7%
All States	**251,814,801**	**244,462,569**	**227,780,920**	**215,051,279**	**196,001,292**	**-22.2%**	**-8.9%**

Sources: *Xponent* , IQVIA , Danbury, CT, Accessed March 2017
PayerTrak , IQVIA, Danbury, CT, Accessed March 2018

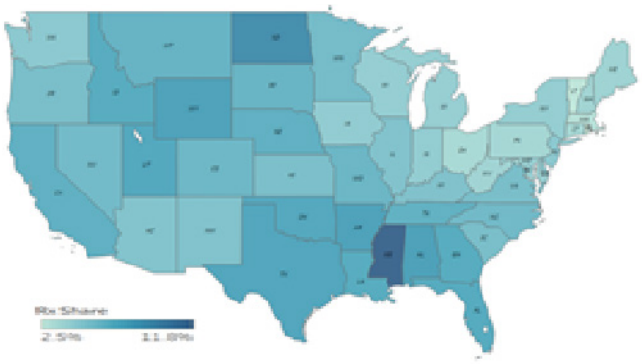
IMS Health & Quintiles are now IQVIA™

Opioid Prescriptions by Payer, 2017

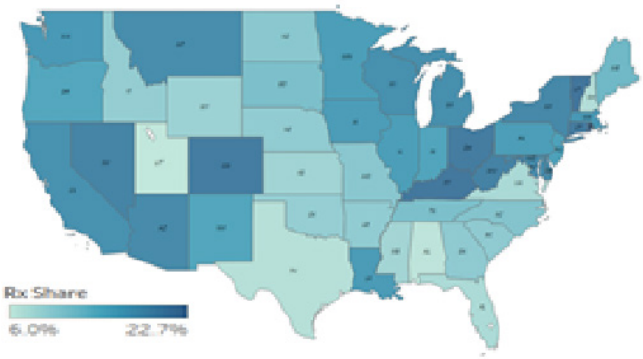
Commercial 3rd Party-Paid Opioid Prescriptions 2017



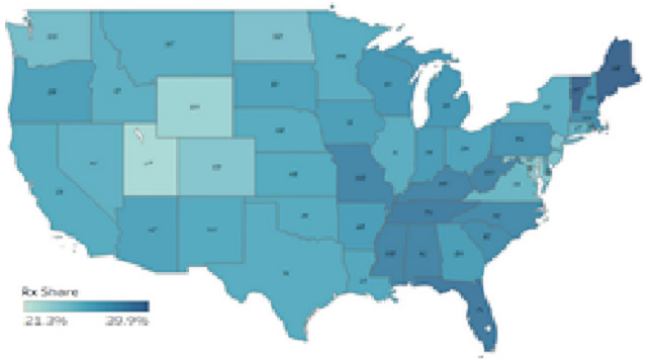
Cash-Paid Opioid Prescriptions 2017



Medicaid-Paid Opioid Prescriptions 2017



Medicare Part D-Paid Opioid Prescriptions 2017

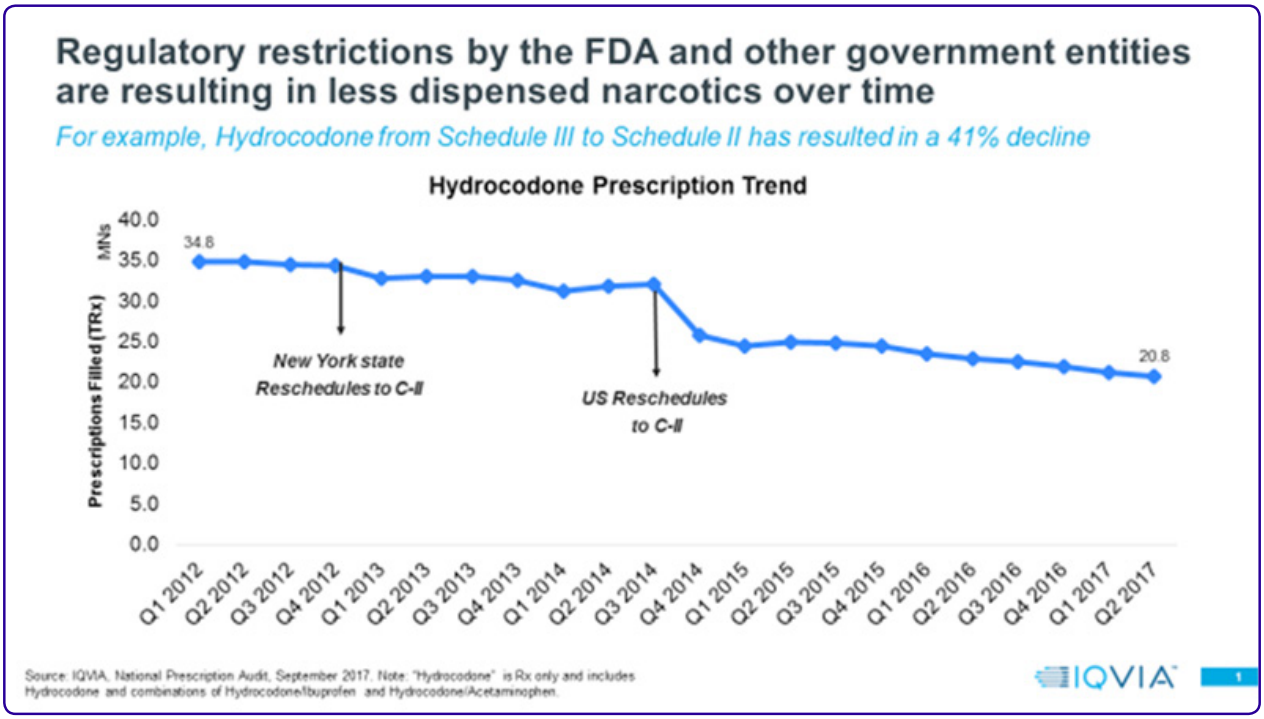


Source: PayerTrak, IQVIA, Danbury, CT, Accessed March 2018

Note: This proportion was not uniform across the country, as the maps below illustrate.

Long-term Trend Analysis

Tracking Impact and Persistency of Effect of Regulatory Change



Overview/Background

- Leidos believes that improved treatment and recovery of opioid dependency, addiction, and use/misuse is possible through data-driven decision-making that is informed with hybrid analysis of both traditional and non-traditional data sets about the patient, the provider, and the larger community within which medical treatment is performed. Such hybrid analysis comprises a mixture of "big data" tools and technology, informing and resulting from investigations ranging from genomic and molecular level biochemistry responses to community-level population health.

Description of the Program

- The following examples of public health strategy decision making are addressable with a comprehensive analytic process, informed with clinical, regulatory, and policy expertise to benefit the goals of today's opioid challenge:
  - Guidance to product developers of (approved and emerging) therapies, including prescribing instructions and regulation of an expanded assessment of patient risk, using genome and molecular pathway level data.
  - Investment in provider education to promote use of existing, safe and effective, approved therapies to combat addiction, using data on provider practices that substantially depart from patterns of best practices.
  - Development of mitigation and prevention efforts tailored to sub-populations of providers, patients, and the wider community about the appropriate use of opioids, using community-level parameters that characterize communities-at-risk of opioid addiction versus populations of opioid-dependent, non-addictive models.
- When properly accessible–in compliance with appropriate PHI/PII governance—data can be collected, curated, modeled for classification and pattern characterization, and visually reported with findings inferred through descriptive and predictive risk-based analysis for opioid-related clinical outcomes. Results of prescriptive analytics can inform appropriate risk anticipation and mitigation strategies for regulatory decision making and patient/provider education and training programs.
- Investigations of opioid-induced immunodeficiency to promote sustained addiction recovery advances in the Life Sciences research have proven the promise of small peptides to block immune checkpoints and activate therapeutic antitumor immunity.
- With the promise of prior successes in malaria and cancer, Leidos is conducting preliminary research of the pharmacological consideration of inhibitors that target opioid addiction-induced immune pathway checkpoints and improve the prospects of life-saving, sustained recovery from opioid addiction.
- Opioid use is shown to be associated with microbiome inflammatory reactions, with implications of lifelong debilitation of the immune system. Therefore, the foundation of Leidos' corporate investment into investigation of opioid effects on the biome derives from their confidence that improved physical health outcome of patients dependent on opioids should improve the sustained recovery, and thereby mitigate the adverse consequences of addiction.
- The purpose of this research is to identify new peptide-level targets and discover a new, safe class of biologics, inspired by and derived from the microbiome, as medical countermeasures against the physical ravages of opioid long-term use, abuse and addiction.

Metrics/Results/Value

- As an example of the benefit of using the hybrid approach of both traditional and non-traditional data sets, Leidos has created a machine learning platform, called Collaborative Advanced Analytics and Data Sharing (CAADS™).
  - The CDC used this Leidos technology to analyze disparate data points collected from the Indiana county health system, the CDC's own internal data, and several sources of publicly available information.
  - The charter was to deliver results to field investigators in a timely fashion in order that the results would be impactful to the community.
  - With CAADS, the CDC investigators were able to rearrange multiple data points, from multiple sources, in a comprehensible and timely fashion to identify HIV outbreak clusters. The visualized data findings identified how HIV diagnoses entered and moved explosively through a community of people who inject drugs over a long term.
  - In addition to tracing the source of an opioid-driven, HIV outbreak in one-sixth the time required when using traditional tools, the hybrid and machine learning methods available in CAADS enabled evidence-based recommendations to help slow the rise in HIV infections among Opana ER (brand name for Oxymorphone) users in the region.
  - The subsequent request to FDA for an investigation of the public health consequences led to the FDA's removal of this opioid from the market.
- Emerging investigations suggest that opioid-induced microbiome dysbiosis is mediated by IL-17A, implying that neutralizing IL-17A is a potential therapeutic for managing sepsis in opioid-treated patients.
  - Preliminary research and development findings identify new peptide level targets and discover a new, safe class of biologics, inspired by, and derived from, the microbiome, as medical countermeasures against the physical ravages of opioid long-term use, abuse and addiction.
  - A successful outcome from this work will lead to future therapeutics that improve physical outcomes by ameliorating immune system fatigue caused by long-term opioid-induced acute and chronic inflammation.

Mallinckrodt Pharmaceuticals

Overview/Background

- Mallinckrodt is a global business that develops, manufactures, markets and distributes specialty pharmaceutical products and therapies.
- Areas of focus include autoimmune and rare diseases in specialty areas like neurology, rheumatology, nephrology, pulmonology and ophthalmology; immunotherapy and neonatal respiratory critical care therapies; and analgesics.
- The company's core strengths include the acquisition and management of highly regulated raw materials and specialized chemistry, formulation and manufacturing capabilities.
- The company's Specialty Brands segment includes branded medicines and its Specialty Generics segment includes specialty generic drugs, active pharmaceutical ingredients and external manufacturing.
- Mallinckrodt Pharmaceuticals is dedicated to providing safe and effective medications for patients with pain and is equally committed to fighting prescription drug abuse, misuse and diversion. Their initiatives support a broad range of programs that encourage the appropriate prescribing, use, storage and disposal of pain medications.
- As an industry pioneer in addressing the problem of prescription drug diversion and misuse and a strong and committed partner to those focused on addressing the problems of drug abuse, Mallinckrodt has advanced solutions to address the significant problem facing rural areas, towns and cities in virtually every state across the U.S.

Description of the Program

- Mallinckrodt works to advance a multimodal approach to pain management (including non-opioid pharmaceutical alternatives), supports the development of abuse deterrent opioids, engages to rid households of unused prescription opioids to prevent diversion, and works to expand access to addiction treatment.
- Medication Assisted Treatment (MAT), combined with counseling and behavioral therapy, has been shown to be the most effective treatment for opioid use disorder, particularly for sustaining long-term recovery. All patients with a substance use disorder should have access to appropriate treatment, including counseling, behavioral therapy and all FDA approved medications. Mallinckrodt is partnering with engaged stakeholders to eliminate barriers to treatment access at the federal and state levels.
- Multimodal analgesia (MMA) combines two or more analgesic agents or techniques that use different mechanisms to provide pain relief with fewer or no opioids. Non-opioid treatments – both pharmacologic and non-pharmacologic – as the foundation of acute pain management, when used in combination with opioids, may reduce opioid doses needed to effectively manage patient pain. Additional benefits of MMA include reduced risk of opioid-related adverse drug events (ADEs); shorter length of stay; less pain during rest and activity; and improved patient satisfaction with treatment.

- Mallinckrodt supports the development of opioids that are harder to manipulate and abuse, and agrees with the Food and Drug Administration that these new formulations may hold promise as one part of a broad effort to reduce the rates of misuse and abuse. They are making significant investments in product lines to develop tamper-resistant and abuse-deterrent technologies.

Metrics/Results/Value

- Misuse of prescription drugs is a problem affecting every community and every type of person, and most people who misuse prescription opioids get them from friends or family. More can be done to generate awareness regarding the importance of safe disposal in order to keep unused prescription medications out of the wrong hands and help prevent misuse and diversion.
- To that end, Mallinckrodt has donated over two million drug deactivation and disposal pouches to community groups, law enforcement, schools, patients and families across the U.S. to help dispose of unused prescription opioids. When completed, over 70 million unused opioid tablets will have been inactivated and no longer present a potential threat for misuse.

Marshfield Clinic®
HEALTH SYSTEM

Overview/Background

- The Marshfield Clinic Health System (MCHS) has executed a multi-faceted approach to fighting the opioid epidemic at the clinical level, through health insurance coverage and by established grassroots, community education, prevention and treatment initiatives.
- MCHS uses a comprehensive approach to combating the growing opioid epidemic throughout the communities in which it serves. MCHS has been a pioneer in this effort long before the nationwide epidemic, and its strategic approach is driven by collaboration between the System's clinical care providers, Security Health Plan (MCHS health plan) and community-based initiatives.

Description of the Program

Best-in-Class Opioid Care Management Programs

- Security Health Plan:
  - Security Health Plan (SHP) of Wisconsin is a not-for-profit health insurance organization sponsored by MCHS. SHP has worked for the past several years with MCHS to enforce responsible prescribing of opioid medications while ensuring appropriate treatment access for patients with opioid use disorders.
  - SHP continuously monitors claims data to identify trends to focus efforts on ways to improve.
- Community-based Initiatives:
  - MCHS believes that prevention of opioid use disorders is most effective at the grass roots community level. The MCHS Center for the Center for Community Health Advancement (CCHA) supports a network, known as the Northwoods Coalition, of over 50 substance abuse coalitions and Native American tribes in Wisconsin. As part of their overall strategy, MCHS has provided $225,000 in Prescription Drug Abuse Prevention grants to various stakeholders to support prevention of prescription drug abuse.
  - The CCHA partnered with the Family Health Center of Marshfield (FHC) to form the HOPE Consortium, a partnership of ten organizations in north-central Wisconsin that came together to address growing problems associated with opioid use disorders.

Role of Technology and Data

- Among the other initiatives MCHS:
  - Worked with CCHA and Security Health Plan to review actions, combine activities, and prevent duplication and ensure that the system has consistent interventions and guidelines.
  - Updated a Medication Treatment Agreement for adults when opioids, stimulants or benzodiazepines are prescribed.
  - Developed an electronic Controlled Medication Toolkit that provides a one stop location for all elements that healthcare providers may access when caring for patients.
  - Redesigned urine drug testing guidelines to be mindful of cost.

Metrics/Results/Value

- Initiatives led by MCHS Controlled Medication Policy Team that includes Dr. Michael Larson, director of controlled medication policy, Luanne Sojka, PharmD., medication safety coordinator,

and Dr. Kori Krueger, director of MCHS's Institute for Quality, Innovation & Patient Safety and others have led to a significant decrease in the prescribing of total morphine milligram equivalents (MME) by 50 percent from 2012 to 2017, and a 29 percent reduction from 2016 to 2017.

- MCHS has been focusing on those individuals who are prescribed 100 Morphine Milligrams Equivalents (MME)/day or more, which is above current guidelines for chronic non-cancer pain. With this group, MCHS has had a focused intervention with providers caring for these patients.
  - As a result, in the past 12 months patients missing either a medication treatment agreement or urine drug test have decreased by 72 percent. Patients missing both a medication treatment agreement and a urine drug test have decreased by 78 percent in the past 12 months.
- Several factors contributed to this significant reduction, including internal training to more than 1,100 MCHS providers and staff on opioid prescribing, peer reviews, data analytics, policy changes and utilization of the controlled medication toolkit.
- In September 2017, the MCHS Recovery Corps program was launched through CCHA, and is unique as the first AmeriCorps program in the nation to address substance abuse by engaging individuals with recovery experience as members. Today, MCHS has 17 recovery coaches trained, serving over 100 recoverees.
- MCHS's Security Health Plan has also achieved a number of accomplishments in the fight against opioids:
  - 22 percent reduction in the number of SHP members receiving initial, or "first-fill," opioid prescriptions since the peak in 2014.
  - 33 percent reduction in the average morphine milligram equivalents (MME) prescribed across all lines of SHP business.
  - 39 percent reduction in SHP high-dose opioid claims since a high in 2012.

MAYO CLINIC

Opioid Stewardship Program

Overview/Background

- Overprescribing can be dangerous for patients and for others. It's important to understand that patients who abuse prescription opioids usually receive them legitimately.
- Recognizing the gravity of the epidemic, Mayo Clinic created the Opioid Stewardship Program to fulfill a commitment to their patients and communities by understanding their own prescribing patterns and developing and implementing internal guidelines for acute and chronic care prescribing. The results have significantly reduced the number of pills being prescribed while still addressing pain management needs.
- Monitoring patients on opioids has decreased use in that population, and studies have indicated that Mayo can anticipate less utilization of resources by patients in primary and specialty care, as well as emergency care.

Description of the Program

Research

- A cross-specialty team of Mayo Clinic surgeons, pain medicine physicians and pharmacists, along with research scientists, data analysts and health systems engineers from the Mayo Clinic Robert D. and Patricia E. Kern Center for the Science of Health Care Delivery is working together to study opioid issues.
- Physicians across the country know overprescribing is a problem. The Mayo study is a first step in determining what is optimal for certain surgeries and, eventually, for individual patients. In contrast to antibiotics, there are no evidence-based guidelines for prescribing opioids after surgery. And because pain is very subjective, it is challenging to create guidelines.
- Based on this research and the work of the Opioid Stewardship Program, the Mayo Clinic Department of Orthopedic Surgery implemented four recommended levels of opioid prescriptions depending on the type of surgery. The goal was to standardize prescribing practices and to provide the lowest effective dose for the shortest period of time, decreasing the risk of opioid dependence or diversion.
- The team has also conducted projects in various surgical specialties to further understand and refine prescribing practice in specific subsets of patients.

Opioid Stewardship Program

- The Opioid Stewardship Program is modeled after the Mayo Clinic antibiotic stewardship program, with the goal of consistent safe prescribing of opioids. The group reviews guidelines from the CDC and others and develops Mayo Clinic guidelines for acute and chronic prescribing.
- Acute prescribing (for 45 days or less) is typical in surgical and emergency departments. Chronic prescribing is typical for primary care providers and specialty providers who maintain patients on opioids.
- The efforts of the Opioid Stewardship Program are focused on the management of acute and chronic prescribing, development of educational tools for providers and patients, monitoring of enterprise prescribing and compliance with guidelines, and development of EPIC tools and workflows related to opioid prescribing.
- This has resulted in standardization of prescribing and monitoring throughout the

enterprise. The first step in this was the development of Mayo Clinic Guidelines for Acute and Chronic Opioid Prescribing, now available to providers on Ask Mayo Expert. Mayo Clinic is also working with the Institute for Clinical Systems Improvement (ICSI) on standardization of opioid management in the state of Minnesota.

Education: Opioid Prescribing Practices

- For more than a decade, the Mayo Clinic School of Medicine has provided extensive education and training on responsible and appropriate opioid prescribing practices for chronic pain, illnesses and palliative care as part of their planned curriculums. Didactic courses and numerous clinical rotations provide students with a strong understanding in this area, as well as knowledge around the risks and signs of addiction, drug abuse, misuse and need for drug diversion prevention.

Practice: Drug Diversion Program

- Mayo Clinic has longstanding controlled substance storage and security programs in place at all sites including drug diversion prevention efforts, surveillance programs and response teams. They perform regular evaluations of the controls and procedures related to controlled substances at Mayo Clinic.

Metrics/Results/Value

- In a recent study, the team reviewed 7,181 opioid prescriptions following 25 common surgical procedures across Mayo Clinic's three campuses in Arizona, Florida and Rochester from 2013 to 2015. They found that the amount of opioids prescribed at discharge from surgery varied both within procedures and by campus. The study found that more than four in five opioid prescriptions given after surgery at Mayo Clinic exceeded guidelines.
- Changes in their prescribing practices has decreased the number of opioid pills prescribed by Mayo Clinic physicians and could amount to hundreds of thousands of pills yearly. This will help reduce rates of addiction in their communities with fewer pills available for diversion. And finally, will also help decrease costs.
- Mayo published a landmark article, Diversion of Drugs Within Health Care Facilities, a Multiple-Victim Crime: Patterns of Diversion, Scope, Consequences, Detection, and Prevention in July 2012 that has been used by many organizations to develop their drug diversion prevention and detection programs. In March, 2016, as part of the Association of American Medical Colleges' (AAMC) statement addressing the opioid epidemic, Mayo Clinic joined academic medical organizations across the country in a commitment to further expand our comprehensive education and training to future care providers on the responsible management of opioids, the complexity of the opioid epidemic and the significant challenges posed by these prescription drugs.
- Mayo Clinic School of Medicine has taken action to expand opioid education and training as part of the AAMC commitment. Beginning in July 2016, each class of medical students will also receive training on chronic pain and opioid pain medications as part of their psychiatry clerkship during their third year.

MCKESSON

Overview/Background

About McKesson

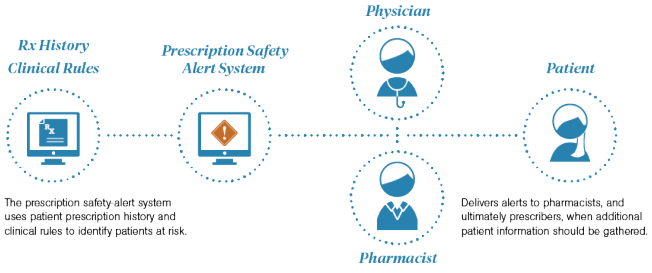
- Every day, McKesson's distribution team delivers life-saving medicine to pharmacies, hospitals, and clinics that serve millions of Americans. We take to heart that at the end of each item delivered there is someone in need. We know that it's not just a package, it's a patient.
- The opioid crisis gripping the nation is one of our biggest public health challenges. We believe this complicated, multi-faceted crisis must be addressed through a comprehensive and collaborative approach. That's why McKesson is committed to working with others to advance public policy recommendations - like the prescription safety alert system technology proposal – and to support innovative programs and partnerships that we believe can have a meaningful impact on this challenging issue.

Description of the Program

McKesson's Initiatives to Address the Opioid Crisis

Creating a Prescription Safety-Alert System

- Using a model conceived by the not-for-profit National Council for Prescription Drug Programs, (NCPDP), McKesson is working to create a prescription safety-alert system. This nationwide clinical alert system would use data analytics to identify patients at risk for opioid overuse, abuse, addiction, or misuse. The safety alert system would employ clinical rules to identify prescription patterns that may indicate abuse/misuse. Pharmacies would receive real-time alerts indicating that the pharmacist should gather additional patient information before dispensing.



- An explanatory video can be found at: http://www.mckesson.com/about-mckesson/fighting-opioid-abuse/rx-safety-alert-system/
- McKesson is also helping lead the Opioid Safety Alliance, a working group of prescribers, dispensers, manufacturers, professional societies, and patients advocating for the use of technology to fight the opioid epidemic.

Educating Independent Community Pharmacy Customers

- McKesson provides its nearly 5,000 HealthMart® independent community pharmacy franchises with access to relevant information, tools, and resources about the prevention of opioid abuse. As independent business owners, Health Mart® members are empowered to become advocates for drug abuse prevention in their communities, starting with their own pharmacies.
- All HealthMart® pharmacies have access to the HealthMart Operations Toolkit, an online portal where pharmacists can access a variety of resources to support the operation of their pharmacies. Through the Health Mart Operations Toolkit, pharmacists can connect to tools and resources to help prevent drug abuse in their communities, including: (1) third-party education and training courses available for the entire pharmacy's staff; (2) information about drug take back solutions available in the market, educational opportunities, and outreach ideas; (3) links to governmental and third-party resources

that provide practical advice for pharmacists and technicians when filling prescriptions; and (4) information about how pharmacies can engage with community resources to promote drug abuse prevention at the local level.

Launching a Foundation to Help Fight the Opioid Epidemic

- In March 2018, McKesson announced a series of company initiatives to help fight the opioid epidemic, including the launch of a foundation dedicated to combatting the crisis. McKesson has committed $100 million to the newly-formed foundation, which is expected to focus on education for patients, caregivers, and providers, addressing key policy issues, and increasing access to life-saving treatments, like opioid overdose reversal medications.
- Details on leadership, strategic priorities, and criteria for giving will be announced in the coming months.

Helping Prevent Substance Abuse Among Veterans

- As part of our long-standing commitment to supporting veterans, McKesson worked with the Community Anti-Drug Coalitions of America (CADCA) to launch a substance abuse prevention pilot program tailored specifically to veterans.
- Five community coalitions from CADCA's National Coalition Academy created and implemented action plans based on the specific demographics of their local veteran populations. McKesson provided funds to CADCA to create programs, services, and tools that are specific to the unique needs of veterans struggling with addiction.

Distributing Drug Deactivation Pouches

- McKesson partnered with the Pennsylvania Attorney General's office to help combat opioid abuse by delivering drug deactivation pouches to local communities. Our sales and account management teams worked with pharmacies in the 12 counties to encourage participation.
- McKesson leveraged its local distribution centers and transportation network to deliver 300,000 pouches to participating pharmacies.

Additional McKesson Initiatives to Combat the Opioid Epidemic

McKesson has also announced the following company initiatives to help combat the opioid crisis:

- Facilitate the use of e-prescribing to reduce fraudulent or counterfeit prescriptions. In 2019, McKesson will stop selling opioids to customers* who cannot accept e-prescribing of controlled substances and will engage with those customers who may need to make the transition.
- Support limited dose packaging to make it easier for doctors to prescribe and pharmacists to dispense in smaller doses, and to reduce the potential for unused product. McKesson will proactively engage with all opioid manufacturing partners in 2018 to develop plans for limited-dose packaging.
- Fast-track distribution of new, non-opioid pain medications. McKesson will work with our manufacturing partners to facilitate immediate availability of these medicines once approved by the FDA.
- Offer free pharmacist training on opioid overdose reversal medications by independent medical experts.

For more information on how McKesson is helping combat the opioid crisis, visit: www.mckesson.com/fightingopioidabuse

**Exceptions to be made for certain populations*

NorthShore University HealthSystem

Enhanced Recovery After Surgery Protocol

Overview/Background

- Nationally, one-third of all patients addicted to opioids took their first opioid medication post-surgery.
- NorthShore University HealthSystem's (NorthShore) enhanced recovery protocol following surgery provides a transformative plan for minimizing pain that has resulted in a dramatic decline in opioid use among our surgical patients.

Description of the Program

Best-in-Class Opioid Care Management Programs

- The concept of Enhanced Recovery After Surgery (ERAS®) was designed to optimize pre-operative, intra-operative, and post-operative patient care. Key interventions include: setting expectations by providing extensive preoperative patient education; encouraging maintenance of nutrition and hydration preoperatively; standardized non-opiate analgesic and anesthetic regimens; and early reintroduction of both nutrition and mobilization for the patients post-operatively.
- Enhanced recovery at NorthShore begins well before the actual surgical procedure by managing patient expectations and engaging them in the process of care. Patients meet one-on-one with a member of the primary surgeon's team to review and discuss written information about their upcoming surgery, necessary preparations, and the anticipated recovery process.

Therapeutic Innovation

- NorthShore supports patient education because the enhanced recovery protocols counter several long-held beliefs. One example is the idea that liquids should be withheld prior to surgery. With enhanced recovery protocols, patients are encouraged to drink clear, carbohydrate-rich liquids up to two hours before surgery. This way, patients come to surgery less dehydrated and not insulin resistant. Nutrition is optimized so they are better able to withstand the stress of surgery in a "fed" versus a "fasted" state. Additionally, patients are encouraged to begin drinking, and even eating, within several hours after surgery. Without opioid medications slowing down the digestive process patients are able to rapidly resume a normal diet and feel better.
- Another important aspect of enhanced recovery is providing patients with scheduled doses of non-narcotic pain medications before, during, and after surgery. Those medications can include acetaminophen, gabapentin, and anti-inflammatory drugs. In addition, patients receive prophylactic anti-nausea medicine.
- A crucial intervention is administering long-lasting, regional pain blocks prior to surgery. These relatively new drugs provide pain relief that can last up to three days. By then, pain can usually be managed with non-narcotic pain medications.

Metrics/Results/Value

- NorthShore initiated the enhanced recovery protocol for colorectal surgery patients in October 2016. By following multiple evidence-based, scientific interventions to minimize pain and decrease recovery time, the hospital median length of stay was reduced by 50 percent, and the percentage of patients requiring opioid medication was reduced from 100 percent pre-implementation to 50 percent post-implementation.
- Building on this success, enhanced recovery protocols are in the process of implementation for six additional procedures – ventral hernia repair, abdominal hysterectomy, elective cesarean section, prostatectomy, spinal fusion surgery, and mastectomy with implant reconstruction.
- NorthShore has completed a 12-month review of 289 colorectal surgery cases. The data shows a consistent reduction of 50 percent in the percentage of patients utilizing opioid medication during their hospital stay. Additionally, about 10 percent of patients who do require opioid medication use fewer than two doses during their hospital stay. The 12-month review also shows a consistent 50 percent reduction in hospital median length of stay.

Chapman Center Fights Addiction for 40 Years

One of the area's strongest resources in helping people recover from alcohol and drug addiction is nearing its 40th anniversary of service.

The Doreen E. Chapman Center offers a holistic and comprehensive treatment plan, leveraging its integration with all of NorthShore to help patients return to optimum health, said Patricia Astrene, LCSW CADC, Clinical Program Manager at the Chapman Center.

(From left) Clinical Practice Manager Patricia Astrene and Dr. Laura Parise, Chapman Center Medical Director and Addiction Psychiatrist.

"One of the reasons I think the Chapman Center is successful is because we take a personalized approach to treatment," she said, adding that the program offers a unique outpatient program that includes a full-time, onsite addiction psychiatrist. "We make every effort to meet the patient where they are at, and with compassion and skill, guide and teach them about their substance use disorder and the recovery process."

The Chapman Center has seen its patient profile change over the years. Heroin and prescription opiate pill abuse is up, but so is treatment for marijuana, she said. Women and young adults make up a larger portion of patients than ever before. "Many patients do not want to leave the community for treatment and benefit from our outpatient detoxification and treatment program preserving their home environment while receiving care."

If you or someone you know is struggling with substance abuse—such as opioids—seeking help is the most important and courageous step you can take. For additional questions, please call (847) 570-4633. To schedule a first appointment, please call the Access Center at (847) 570-2500 option 2.

Opioid Task Force

Overview/Background

- NorthShore University HealthSystem (NorthShore) has taken a multi-pronged approach to addressing safe opioid prescribing in their community.
- In 2016, they convened an Opioid Task Force to address this issue.
- The initial charges of this committee were to develop opioid prescribing standards for outpatient prescribers, to develop office workflows to support these standards, and to develop monitoring standards and a process for focused physician practice evaluation regarding opioid prescribing.
- Over the last 18 months, the Task Force has made considerable progress toward improving the quality and safety of opioid prescribing at NorthShore.

Description of the Program

Highlights of the approach are:

- NorthShore endorsed the CDC Guidelines for Prescribing Opioids for Chronic Pain. The CDC Checklist was disseminated to all primary care physicians.
- In order to educate patients about risks, benefits, and alternatives of opioids, the Task Force wrote a new standard NorthShore opioid agreement document for use across the organization. The agreement provides patient-centered education and safety information in clear and low-literacy language. This agreement was developed among several physician disciplines and was shared with patients who might have such an agreement in place for feedback and input. The prompt to complete the agreement is now embedded in clinician workflows and the failure to complete such agreement is defined as a care gap.
- NorthShore implemented multifaceted physician education options. Over the last year, physicians on the Task Force helped develop a required physician education module introducing the CDC Guidelines and safe prescribing principles. Internal Medicine Grand Rounds focused on safe opioid prescribing in August 2017 and additional educational opportunities are planned for 2018.
- Leaders in the Department of Pathology and Laboratory Medicine facilitated the implementation of an improved urine drug screening and confirmation test providing more accurate and timely information to physicians to aid in safe opioid prescribing.
- A new link in the electronic medical record (EMR) provides point-of-care access to the Illinois Prescription Monitoring Program (PMP) for all prescribers, allowing prescribers to have seamless access to patient controlled substance prescription information in the PMP when it is needed, without having to access the PMP website.
- A prescription validation warning was added informing prescribers when an individual prescription is written for over 50 morphine milligram equivalents per day (MMED) and when the total of all opioid prescriptions exceed 90 MMED. The calculation tool is available in the electronic medical record for review.
- To monitor quality improvement and overall prescribing patterns, a quarterly physician prescribing report was developed ranking physicians by the number of opioids prescriptions written and identifying physicians exceeding the 3rd standard deviation of their peers. A standardized peer case review process was developed to help guide physicians through education and remediation if needed to adhere to the CDC Guidelines and safe prescribing.

Metrics/Results/Value

- NorthShore added a quality measure for safe opioid prescribing to their quality scorecard. For 2018, they are tracking the percent of patients receiving chronic opioids who have signed an opioid agreement with their physician by the 16th week of treatment. Their goal in the first year of implementing this agreement is for at least 50 percent of patients to have this agreement in place.
- The Task Force collected a list of local addiction treatment resources to help physicians identify patients with opioid use disorder and safely transition them into appropriate inpatient or outpatient addiction treatment. A select number of NorthShore primary care physicians are able to provide medication assisted treatment with Buprenorphine as part of their primary care practice.
- Steps over the next six months will be to build EMR tools and office workflows to help physicians and their teams implement the CDC Guidelines, including consideration of non-opioid and non-pharmacological treatments for chronic pain, risk assessment and depression screening for patients prior to opioid initiation, and reminders to review an opioid agreement and assess a urine drug screen.
- Individually, each of the elements of their approach has been powerful tools to support physicians in reducing excessive opioid use and adhering to safe prescribing standards.
- More importantly, their organizational commitment to reducing opioid use has been crucial to educating their patients and prescribers and changing the culture of opioid prescribing at the NorthShore health system.

Overview/Background

- As an alliance of more than 3,900 hospitals (80 percent of U.S. hospitals), hundreds of thousands of physicians and other clinicians, and 150,000 other sites of care, Premier focuses on improving population health through the promotion of collaborative learning opportunities, identification of clinical best practices and systematic use of data and analytics.
- With a large, geographically-diverse provider network, nationwide data representing 45 percent of U.S. discharges, and significant research and clinical expertise, Premier Inc. is uniquely positioned to address important questions on strategies aimed at curbing the growing opioid epidemic in the United States.
- Premier resources and capabilities are being leveraged with existing efforts by both professional organizations (American Medical Association (AMA), American Society of Anesthesiologists (ASA), American Board of Addictive Medicine (ABMA), etc.) and public agencies (Centers for Medicare & Medicaid Services (CMS)) to reduce the impact of opioid misuse and promote safer, effective, evidence-based pain management practices.

Description of the Program

- Addressing this epidemic requires re-educating clinicians and patients across the nation on safe and effective pain management. Premier has utilized its provider network and educational content development and communications vehicles to undertake this work, including:
  - Creating the Safety Institute®, one of the nation's most recognized and frequented websites on patient safety issues, houses information, white papers, resources, and links to Premier's on-demand educational programs on safer use of opioids both in inpatient and outpatient settings.
  - Holding 48 live webinars (that are also recorded) and interactive sessions with subject-matter experts attended by thousands of clinicians and other healthcare professionals providing information and latest updates on health related topics.
  - Creating a national product portfolio for pain management. The Premier Safe Pain Management Product Portfolio is a resource for clinicians and supply chain/materials management personnel to work together to bring products, supplies and technology enablers to bear on making pain management both safer and more cost effective.
  - Working with physician societies on pain management education and behavioral change.

Metrics/Results/Value

- Premier is undertaking a targeted pilot within their CMS sponsored Hospital Improvement Innovation Network (HIIN) to promote opioid stewardship and test how to help curb the national opioid epidemic from a hospital perspective.
- Through the national QUEST® hospital quality and safety performance improvement collaborative, Premier has developed an evidence-based best practices care map that serves as both a diagnostic tool and detailed critical path to high reliability care processes.
- Premier has developed an opioid stewardship program with these real time alerts that is powered by our TheraDoc® technology solution. TheraDoc® is currently used in 1200 hospitals across the nation.

- Premier advocates for policies that impact the ability of healthcare providers to address the epidemic.
- **Performance Measures:** A current gap in improving performance improvement related to opioid use is the absence of effective measures. There are only three National Quality Forum (NQF) endorsed opioid utilization measures. They are all applicable to ambulatory care only. There are no opioid-specific national standards or endorsed opioids measures for hospitalized patients. Absent standardized measures, truly national-level benchmarking and evaluating appropriateness cannot occur.
- **Benchmarking and gap identification:** Premier uses comparative data to identify variation to the benchmarks developed within our QualityAdvisor™ database and works with organizations and clinicians to address the outliers. Premier is developing a benchmarking tool that analyzes the administration of opioids in the Emergency Department.

Overview/Background

- SCAN is a not-for-profit health plan that serves seniors through Medicare Advantage (MA) plans and institutional, chronic care, and dual eligible special needs plans (SNPs). Approximately 194,000 Medicare beneficiaries are enrolled in SCAN's MA plans in California, making it the third largest not-for-profit Medicare Advantage Prescription Drug (MA-PD) plan in the country. Since 1985, SCAN has specialized in providing comprehensive, high quality care to the most vulnerable Medicare beneficiaries, including those who live with multiple chronic conditions, are eligible for nursing home care, and experience difficulty performing activities of daily living.
- Enrollees benefit from SCAN's partnerships with healthcare providers that engage with plan members to provide the right care at the right time, while maximizing beneficiaries' ability to maintain independence. We are proud that SCAN MA Plans received a 4.5 STAR rating for plan year 2018.
- In California, where SCAN operates, a significant number of people have died from opioid overdoses in recent years. In 2016, there were 4,654 deaths in the state from opioids, an increase from 4,521 in 2014. Nationally, there are approximately 4.5 million Americans who have a substance use disorder with prescription painkillers, and one person dies every 18 minutes from an opioid overdose. Costs to address this disease are skyrocketing, with spending on opioid treatment rising by 1,375 percent over five years.
- The opioid epidemic also affects the Medicare population. In 2015, one in three Medicare beneficiaries received a commonly abused opioid and six of every 1,000 Medicare beneficiaries are being diagnosed with opioid use disorder. SCAN estimates that 800 of its beneficiaries were diagnosed with opioid use disorder or abuse in 2017. Also in 2017, SCAN estimates that 120 beneficiaries were undergoing medication assisted treatment for opioid use.

Description of the Program

- SCAN offers all its members a complement of Medication Assisted Treatment (MAT) drugs, e.g., buprenorphine, methadone, on the plan's formulary. Prior authorizations, quantity limits, and step therapy do not apply to these medications. Additionally, SCAN covers Naloxone products (antidote for opioid overdose) without restrictions.
- SCAN has encountered several barriers to treatment for beneficiaries struggling with opioid use disorders. These include: 1) a limited network of providers/specialists who work in addiction medicine; 2) difficulty navigating the healthcare system in order to access needed services; 3) failure to treat the underlying condition, as opposed to treating the symptom (pain); and 4) high cost for specific specialties and services.
- SCAN works with patients who may be at risk for opioid overuse based on their prescriptions by enrolling them into our Potentially Drug Seeking Member (PDSM) case management program. Through this program, the case manager can assess the member's pain management, communicate and coordinate care with all involved providers, develop a plan of action, collaborate with the medical group case manager on the plan of action, and/or consult with the Behavioral Health Specialist.
- SCAN coordinates care across the spectrum of providers and payers. For providers, SCAN identifies potential opioid overutilizers and uses

case managers. Case managers communicate via telephone or letter to different opioid prescribers or provider groups' case managers to ensure that appropriate opioid use and pain agreements are in place, individuals are managed closely, and care is coordinated.

- To coordinate care provided by payers, SCAN checks the Centers for Medicare & Medicaid Services (CMS) Transaction Reply Report file weekly to identify any incoming members from prior plans who have a beneficiary-level point of sale (POS) edit on opioids. For these members, SCAN contacts the prior plan to obtain case documentation on the member and initiates its own review of the member's potential overuse to engage in case management and/or implement a beneficiary-level POS edit.
- SCAN partners with hospitals, physicians, and other providers to identify troubling member patterns related to opioid prescriptions. SCAN contacts providers by phone or letter and disseminates best practices through in-person or webinar trainings. Additionally, SCAN shares information with CMS about potential opioid overutilizers and its case management findings and outcomes through the Overutilization Monitoring System (OMS). SCAN encourages clinically appropriate prescribing of opioids and pain management options that do not include opioids through their PDSM Case Management Program. SCAN's case managers, who are Registered Nurses and Licensed Clinical Social Workers, work with the members and prescribers to resolve opioid overuse.
- During case management, non-opioid and non-pharmacologic treatment to resolve pain is discussed, and medication assisted treatment is offered as a solution to resolve opioid use disorder.

Metrics/Results/Value

- SCAN measures the outcomes of potential opioid overutilizers receiving case management care through pre- and post-case management. Outcomes evaluated include change in number of opioids utilized, and visits related to pain to pharmacies, prescribers, and emergency rooms. Data is tracked quarterly. SCAN evaluates the success of its opioid efforts using five key metrics, noted below. SCAN's efforts show continued progress on lowering opioid utilization.

SCAN Reported Opioid Measures

Measure	Q1 2014	Q4 2017	Change
Percent of Membership Utilizing Opioids	19.00%	14.00%	26% decrease
Percent of Membership Utilizing Concurrent Opioids and Benzodiazepines	3.00%	2.00%	33% decrease
Percent of Membership Utilizing Medication Assisted Treatment (MAT)	0.03%	0.07%	97% increase

2016 CMS Opioid Measures

Plan	High Dose	Multiple Provider	High Dose and Multiple Provider
SCAN	2.14%	0.94%	0.08%
MAPD (Medicare Advantage Prescription Drug plans)	3.44%	1.58%	0.12%

2017 CMS Opioid Measures

Plan	High Dose	Multiple Provider	High Dose and Multiple Provider
SCAN	2.10%	0.78%	0.04%
MAPD (Medicare Advantage Prescription Drug plans)	3.14%	1.25%	0.07%

Opioid Prescribing Rate (2014-2017) - 11% Decrease

Plan	2014	2015	2016	2017
SCAN	5.16%	5.06%	4.94%	4.60%
CA State Average	5.46%	N/A	N/A	N/A
National Average	5.74%	N/A	N/A	N/A

SCAN Success Stories

Overview/Reason for Referral	Case Management Outcome
▶ 57 y/o male ▶ Chronic pain, Morbid obesity, Opioid dependence ▶ Multiple short acting opioids long duration, multiple providers ▶ Discharged from previous pain management clinic drug test violation of pain agreement	▶ Accepted to new pain management clinic ▶ Opioids tapered off/discontinued ▶ Started medication assisted treatment (Suboxone)
▶ 61 y/o male ▶ Lumbago, Chronic pain, Pain in joint, Opioid dependence ▶ Multiple short and long acting opioids, multiple providers, multiple pharmacies	▶ Referral to Pain Management Specialist ▶ Pain agreement between member and specialist ▶ Opioids tapered off/discontinued ▶ Started medication assisted treatment (Suboxone)
▶ 59 y/o male ▶ Chronic pain syndrome, Lumbago, Low back pain, Opioid dependence ▶ Multiple short acting opioids, multiple providers, multiple pharmacies	▶ Referral to Pain Management Specialist ▶ Pain agreement between member and specialist ▶ Opioid dose and quantity reduction

stryker®

Overview/Background

- Stryker supports strengthening public policy to decrease diversion of opioids and has identified a key gap in the chain of custody of controlled substances related to disposal in healthcare settings.
- Estimates suggest that as many as 15 percent of healthcare workers suffer from substance abuse disorder.[i] To this population, inadequate controls on access to opioids can fuel an addiction, exposing caregivers and patients to avoidable risk.
- The DEA requires partially administered multi-dose vials to be rendered "non-retrievable" by registrants under the Controlled Substances Act. Red sharps containers, sewering, and waste bins do not qualify.
- The DEA "strongly encourages all practitioners to continue to adhere to security protocols and procedures that ensure pharmaceutical wastage is not diverted."[ii] The DEA recognizes that far too often, these substances are discarded into waste bins, red sharps containers or otherwise made available for diversion. This is a critical vulnerability.
- Despite the DEA's actions to prevent diversion of discarded opioids, disposal is a weak link in the chain-of-custody, with red sharps containers being specifically recognized as a significant source of diverted opioids.
- DEA has recognized that "sewer system disposal is now explicitly prohibited in many jurisdictions…'sewering (disposal by flushing down a toilet or sink) and landfill disposal (mixing controlled substances with undesirable items such as kitty litter or coffee grounds and depositing in a garbage collection) are examples of current methods of disposal that do not meet the non-retrievable standard.'"[iii]

Description of the Program

- The Cactus Smart Sink System helps bring medical facilities into compliance with relevant laws and regulations by providing a secure and environmentally friendly method of disposal.
  - Stryker's Cactus Smart Sink System is an easy to use, "green" waste solution for unused pharmaceuticals. It accepts unused portions or partial doses of controlled substances and provides for a secure alternative to a sink, toilet, red sharps container or waste bin for drug waste. This innovative and compact system helps bring medical facilities into compliance by eliminating the impact to our environment while preventing unauthorized use of unused DEA-regulated controlled substances.
  - The Cactus Smart Sink System secures and renders controlled substance waste unusable and non-recoverable while providing a secured bridge from traditional drug disposal to proper and responsible disposal.
  - The system utilizes two replaceable cartridges: one liquid cartridge for liquid waste and one solid cartridge for capsules, tablets and patches. Both cartridges allow for continuous disposal over time and are designed to last up to 90 days. The system utilizes automatic timers and weight indicators providing notice when cartridges are full or have expired.

i https://www.deadiversion.usdoj.gov/drug_disposal/dear_practitioner_pharm_waste_101714.pdf

ii https://www.beckershospitalreview.com/opioids/the-opioid-crisis-hits-hospitals-and-healthcare-professionals-the-hardest.html

iii 79 FR 53547

- The system:
  - facilitates properly witnessed wasting of narcotics in the open and near the drug dispensing systems where needed, improving safety and saving time.
  - allows for up-front waste documentation and facilitates this process to be completed immediately (when controlled substances are dispensed) rather than later.
  - provides for secure disposal of unused, partially administered drugs, as opposed to the insertion of drugs into red sharps containers.
  - reduces the opportunities for drug diversion by facilitating two-person witnessed-wasting and by keeping partially filled vials and syringes out of red sharps containers, which have become a key source for drug diversion in medical facilities.
- Congress and executive branch agencies should enact policies to encourage compliance with current laws and regulations and also take steps to strengthen requirements to eliminate vulnerabilities in disposal procedures that can be exploited by addicts to access opioids.

Metrics/Results/Value

- Since 2014, the Drug Enforcement Administration (DEA) standards state that unused controlled substances must be destroyed and in many instances rendered non-retrievable. Cactus is designed to meet these DEA standards.
- It is estimated that as many as 15 percent of healthcare workers suffer from substance use disorder (SUD) higher than the rate of SUD in the overall population[iv], and representing as much as 8 percent of all SUD.
- This cohort may cost the American healthcare system over $5 billion and the overall economy over $40 billion[v]. These workers are particularly susceptible to becoming addicted to opioids because of their access to controlled substances through their employment.
- Data collection related to Controlled Substances Act (CSA) compliance and diversion of wasted opioids is limited and prevents any analysis of the actual magnitude of the risk to patients.
- Greenville Hospital System in South Carolina surveyed their nurses and found that 55 percent of respondents wasted controlled substances in the sewer, 15 percent directly in waste cans, and 10 percent in sharps containers. Only 19.1 percent reported wasting controlled substances in a drug waste container designed to prevent diversion.[vi]
- Proper disposal reduces opportunities for drug diversion.
  - Proper disposal is a key prevention strategy to combat drug abuse and prevent overdose.
  - Cactus Smart Sink renders the drug unusable and non-retrievable, reduces the opportunities for drug diversion by facilitating two-person witnessed-wasting, and keeps partially filled vials and syringes out of red sharps containers, which have become a key source for drug diversion in medical facilities.
- Proper disposal brings healthcare facilities into compliance with disposal requirements.
  - The DEA set out new rules in 2014 regarding the method of destruction of controlled substances.
  - DEA also encourages all practitioners to adhere to security controls and procedures to ensure that pharmaceutical wastage is not diverted.

iv https://www.beckershospitalreview.com/opioids/the-opioid-crisis-hits-hospitals-and-healthcare-professionals-the-hardest.html

v https://www.drugabuse.gov/related-topics/trends-statistics

vi https://www.pppmag.com/article/1038

- Most institutional practitioners have implemented policies that require two persons to witness and record destruction of pharmaceutical wastage.
- Cactus Smart Sink brings medical facilities into compliance while preventing unauthorized use of DEA-regulated controlled substances.

- Proper disposal of controlled substances helps to protect the environment.
  - A five-month Associated Press investigation in 2008 detected a vast array of pharmaceuticals in the drinking water supplies of at least 41 million Americans.[vii]
  - More focus at the federal and state level on no-flush policies for hospital disposal of pharmaceuticals has since elevated attention to the issue.
  - In 2015, the EPA projected that banning healthcare facilities from flushing hazardous waste pharmaceuticals would have prevented the flushing of more than 6,400 tons of such waste annually.[viii]
  - Cactus Smart Sink provides an environmentally friendly method of disposal.

vii http://hosted.ap.org/specials/interactives/pharmawater_site/day1_01.html

viii https://www.epa.gov/hwgenerators/proposed-rule-management-standards-hazardous-waste-pharmaceuticals

surescripts®
The Nation's E-Prescription Network

Overview/Background

- Surescripts is the nation's largest health information network and connects nearly all pharmacies, Electronic Health Records (EHR) vendors, Pharmacy Benefit Managers (PBM), and Clinicians. In 2017 Surescripts processed 13.7 billion healthcare transactions targeted at enhancing prescribing and informing care decisions, including 4.8 million prescriptions and 7 million medication histories each day.
- Surescripts' cross-market experience provides a unique perspective on the role health information technology can play in providing actionable intelligence to help reduce opioid abuse while ensuring that patients receive quality care and clinically appropriate medications. In particular, two of Surescripts' core services – Electronic Prescribing for Controlled Substances (EPCS) and Medication History—are highly effective tools in improving prescribing behavior and preventing opioid misuse and diversion.

Description of the Services

- Electronic Prescribing of Controlled Substances (EPCS) can reduce illegal diversion, a significant driver fueling the opioid epidemic. Up to 9 percent of drugs diverted for abuse are tied to fraud and forgery of paper prescription. Broad adoption of EPCS would eliminate paper–based fraud.
- EPCS also creates electronic records of controlled substance transactions, strengthening surveillance and improving accountability.
- Surescripts' Medication History offers providers access to their patients' dispensed medication history, including controlled substances, over the previous 12 months. The data is refreshed daily and sourced from claims data from Surescripts' commercial, Medicare, Medicaid and PBM partners as well as patient data from pharmacy partners. Data is delivered though providers' EHR systems, which configure it and create user interfaces for seamless use by the provider without having to leave workflow. Surescripts provides Medication History at no cost to EHRs and ambulatory providers.
- Policymakers have long recognized the need for providers to access a medication history for patients who are at risk of opioid-related illness. Medication History accomplishes that task. It can be a powerful tool: providers can access data within workflow and see history that is sourced nationally rather than by state. All providers see the same patient history data regardless of location or prescribing physician, and the network is fully interoperable, with all participants using the same standards and held to the same degree of network quality.

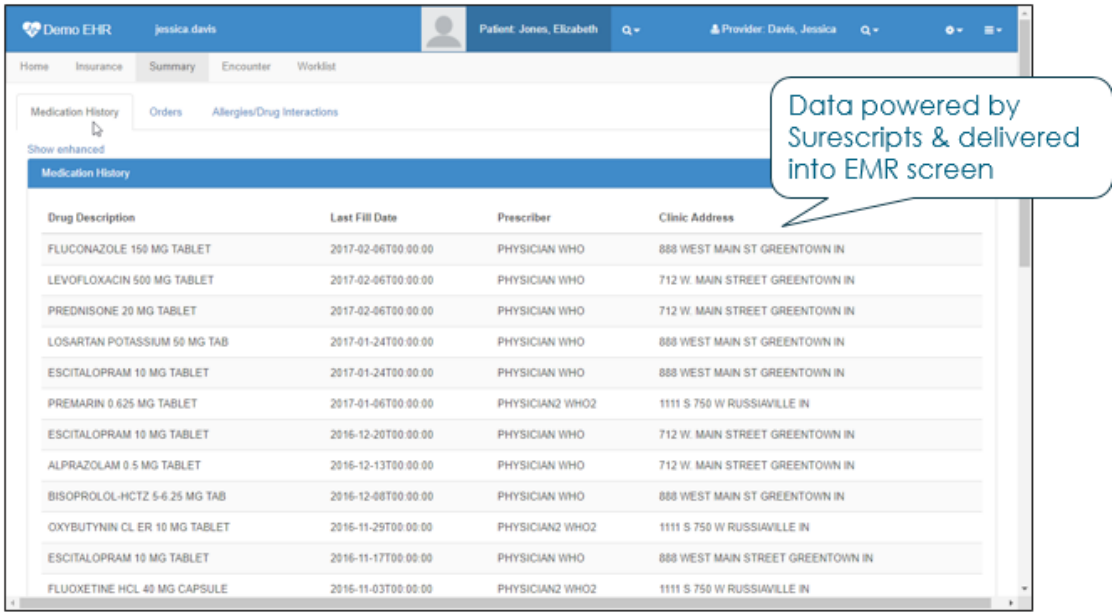
Metrics/Results/Value

- EPCS Metrics: There is a broad range of EPCS adoption and use among states. The most successful states have both EPCS requirements and enforcement provisions in place. New York State's Internet System for Tracking Over-Prescribing (I-STOP) Act requires all prescriptions in the state to be sent by electronic transmission. New York State Bureau of Narcotic Enforcement reports that the e-prescribing mandate is responsible for a 70 percent reduction in loss and theft of prescription forms and an 8 percent reduction in doctor shopping.
- At the federal level, a bipartisan bill has been introduced to require EPCS for the Part D program and the President's Commission on the Opioid Crisis endorsed EPCS in their final report. FDA Commissioner Scott Gottlieb has also cited EPCS as a valuable tool for prevention.

Medication History Metrics

- Surescipts uses a master patient index built on the backbone of the network. The index matches nearly 250 million patients with their records. In 2017, Surescripts delivered 1.46 billion Medication Histories to providers across the nation.

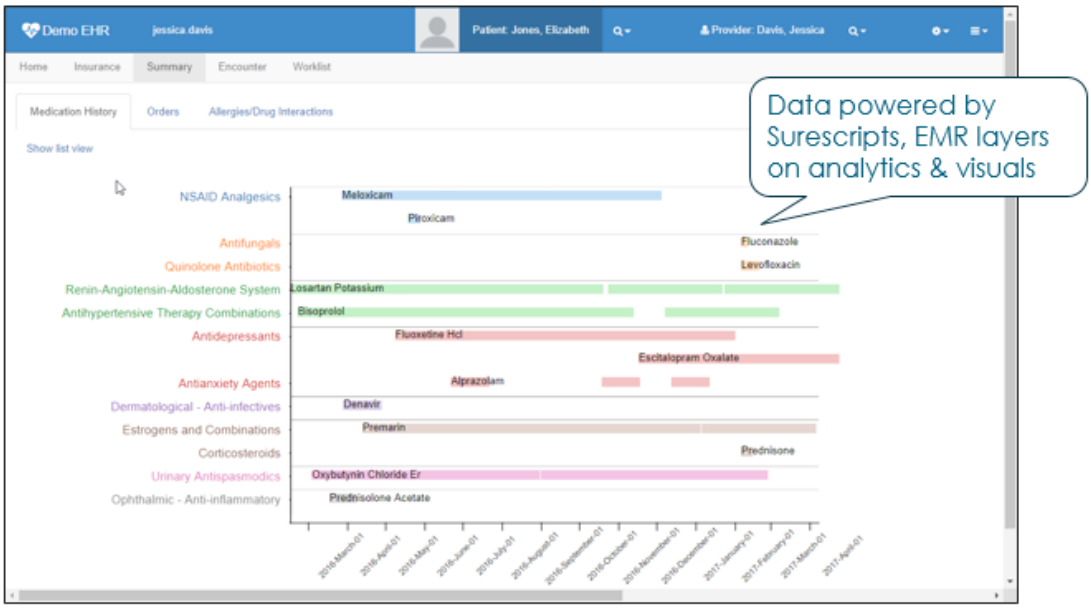
MEDICATION HISTORY DATA IS OFTEN SORTABLE. USERS CAN OFTEN CLICK ON ENTRIES TO SEE ADDITIONAL DETAILS.*



EHR implementations and user interfaces vary. Image above for demonstration purposes only. Not real patient data.

surescripts

MEDICATION HISTORY DATA CAN ALSO BE VISUALIZED TO MORE EASILY SHOW OVERLAPS AND GAPS IN THERAPIES.*



EHR implementations and user interfaces vary. Image above for demonstration purposes only. Not real patient data.

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STRUCTURED DATA ELEMENTS ARE AVAILABLE FOR EACH MEDICATION

Medication History Data Elements

- **Patient Data**: Name, DOB, Gender, Address, Phone, etc…
- **Medication Data**: Name, quantity dispensed, days supply, date filled, date picked-up, refills, SIG, etc…
- **Prescriber Information**: Name, DEA, NPI, Address, Phone Number, etc…
- **Pharmacy Information**: Name, Address, Phone Number, etc…

surescripts

vizient™

Overview/Background

- The Vizient Practice Transformation Network is part of the largest member-driven healthcare performance improvement company in the country, dedicated to innovation that supports its members in their transition to value-based care.
- Vizient worked with the members mentioned to help their improvement initiatives around fighting opioid abuse:

McAlester Regional Healthcare Center

- McAlester Regional Healthcare Center in McAlester, Oklahoma has taken on the fight against opioids and has made enormous progress. The first step was everyone in the practice agreeing that there was indeed a problem that needed a solution. Then, they rallied around a common goal of reducing the number of opioid-related incidents that they were seeing.

Texas Tech University Health Sciences Center Lubbock

- Texas Tech University Health Sciences Center Lubbock (TT Lubbock) has made progress in curtailing the opioid epidemic through a High Risk Medication (HRM) Program. This program was created in response to the opioid crisis.
- TT Lubbock is also a teaching residency program; they wanted to give medical residents tools to go out into future practices armed with a framework with which to comply with government regulations. It was also important to give them a sense of how to best care for chronic pain patients.

Description of the Program

Best-in-Class Opioid Care Management Programs

McAlester Regional Healthcare Center

- The McAlester practice formed a stewardship committee to begin measuring how often they were prescribing opioids and utilization rates of different medications. The stewardship committee was composed of a clinical pharmacist, resident physicians, hospitalists, and emergency department physicians.
- The practice held CME events to help lay the groundwork for what they were doing, and let the clinicians know that they were following the CDC's guidelines on opioid prescriptions. Importantly, they never told clinicians not to prescribe any particular medications, but rather asked if there were alternatives.

Texas Tech University Health Sciences Center Lubbock

- The goals of this program are to:
  - Generate a system that will provide consistency in assessment and documentation of patients' High Risk Medication (HRM) use.
  - Facilitate discussions between patients, providers, and administration regarding the risks, benefits, and appropriateness of treatment HRMs.
  - Enhance patient safety when point (or other covering) providers refill HRMs for teammates.

- The program started with a tiering process piloted on one team within the Family Medicine Clinic, which is also a Patient Centered Medical Home. The population included in the tiering process consisted of patients receiving HRMs for three months or greater.
  - **Tier I -** Patients with few risk factors for abuse, and who are well known to their PCP.
  - **Tier II a -** Providers can use this designation as a transition between Tier II to Tier I.
  - **Tier II -** Patients who are new to the clinic, have a distant history of problematic substance use behaviors, or who have a few minor risk factors for abuse (e.g. arrest history, family history of addiction).
  - **Tier III -** Patients who (by their behavior) appear to be at high risk for substance use problems.
  - **Tier X -** Patients who have committed multiple/major violations to their treatment agreement.

Metrics/Results/Value

McAlester Regional Healthcare Center

- McAlester Regional Healthcare Center rallied around the goal of reducing the number of opioid-related incidents that the practice was seeing by developing a list of metrics for their improvement work including:
  - Prescribing habits
  - Milligram working equivalents written per patient per shift
  - Average amounts of narcotics written per shift
  - Oral vs. IV prescriptions
  - Patient satisfaction
  - Length of stay
  - Readmission rates
- Metrics improved after implementing this initiative. Once the routine narcotics and benzodiazepines were taken off of the order set, mortality immediately decreased and codes went down 15 percent.

Texas Tech University Health Sciences Center Lubbock

- The results of this High Risk Medication (HRM) Program have also been very positive. As they worked through the first few months of tiering, they were able to screen out patients who were abusing HRMs and provide them with assistance.
- The momentum of the program carrying forward has not been an issue thus far; they have been aggressive about not accepting new patients into their practice who are already on HRMs. They deliberately set this bar high to maintain their system of tiering.

HEALTHCARE LEADERSHIP COUNCIL

Healthcare Leadership Council Mission

Quality, Competition, Innovation

The Healthcare Leadership Council (HLC), a coalition of chief executives from all disciplines within American healthcare, is the exclusive forum for the nation's healthcare leaders to jointly develop policies, plans, and programs to achieve their vision of a 21st century system that makes affordable, high-quality care accessible to all Americans.

Members of HLC – hospitals, academic health centers, health plans, pharmaceutical companies, medical device manufacturers, laboratories, biotech firms, health product distributors, pharmacies, post-acute care providers, and information technology companies– envision a quality-driven healthcare system that fosters innovation. HLC members advocate measures to increase the cost-effectiveness of American healthcare by emphasizing wellness and prevention, care coordination, and the use of evidence-based medicine, while utilizing consumer choice and competition to elevate value.

Providing access to health coverage for the uninsured, accelerating the growth of health information technology, and reforming healthcare payment systems to incentivize quality and positive patient outcomes are important HLC priorities, along with improving patient safety, addressing the healthcare workforce shortage, enacting medical liability reforms and developing patient privacy rules that protect confidentiality while enabling the necessary flow of information to healthcare professionals and medical researchers.

HLC shares its vision for quality healthcare with Congress, the administration, the media, the research community, and the public through communications and educational programs. Because of the broad scope of HLC membership, HLC is well known by congressional members and staff as an integral source for comprehensive information on key health issues. HLC staff briefings and events such as the HLC Innovations health fair are well attended by members and staff alike.

And, in the belief that healthcare is essentially local, HLC builds coalitions at the community level to pursue its goals for America's patients. Six regionally based directors conduct activities with members of Congress, organize health briefings and forums to educate local media and the public, and form local health advisory committees to advocate for innovative, high-quality, and affordable healthcare.

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