



Prescription Drug Monitoring Programs Current State, Future Trends, and Innovation

A Roadmap for Success



MI Automated Prescription System (MAPS)

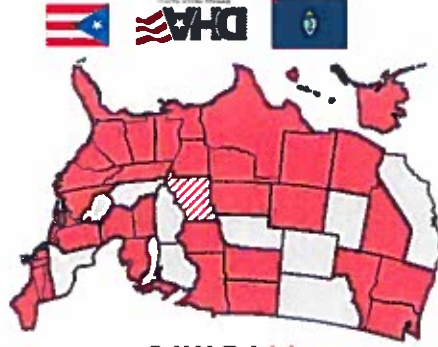
SUD Risk Identification

Appriss Health PDMP Data Activities

PMP AwareX[™]
PDMP Platform

350 million controlled
substance prescriptions
per year

44 PDMPs



Platform(s)
we provide

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PMP INTERCONNECT[®]
PDMP Interstate Sharing Hub

29 million
transactions
per month

NO COST to the states

49 PDMPs



Data to which
we have access

25 million
transactions per
month

38 States



States in which
we integrate with
clinical systems

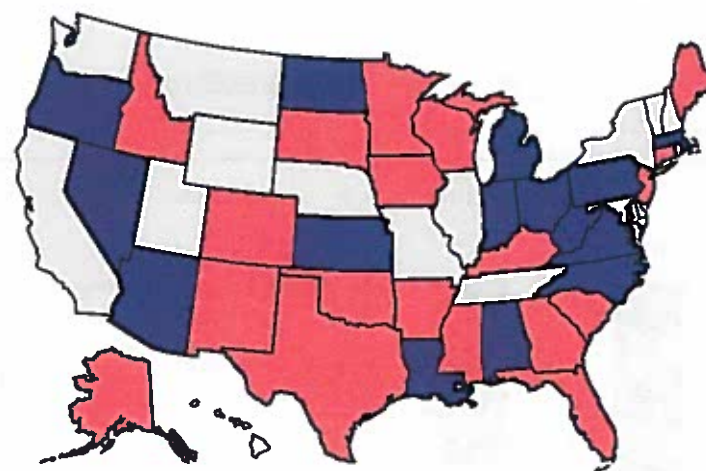
PMP Gateway[™]
PDMP Clinical
Workflow Integration

PMP Gateway: Clinical Workflow Integration

What it does Integrates PDMP information into clinical information systems and workflow.
Dramatically increases the use of PDMPs.



PMP Gateway™



Number of states
Gateway is live

37

Number of Gateway
transactions per month

23 million

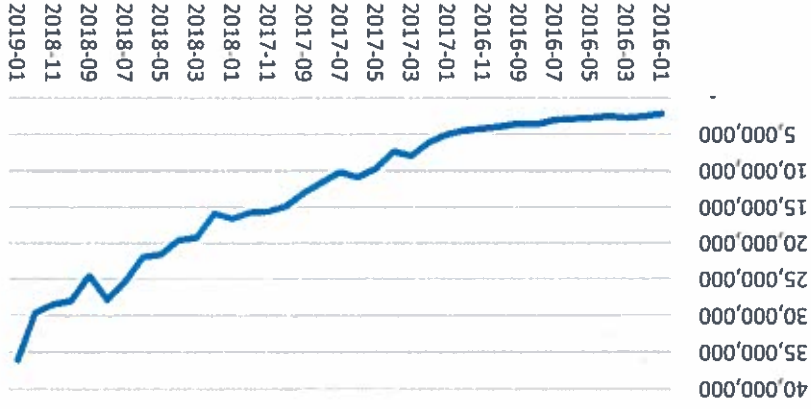
Number of states
sponsoring Gateway

16

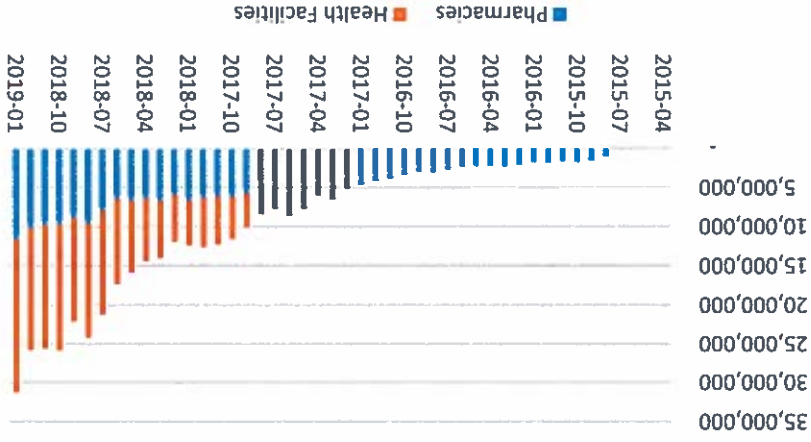
- Gateway live
- Gateway live and state-sponsored

Rapid PDMP Innovation and Growth

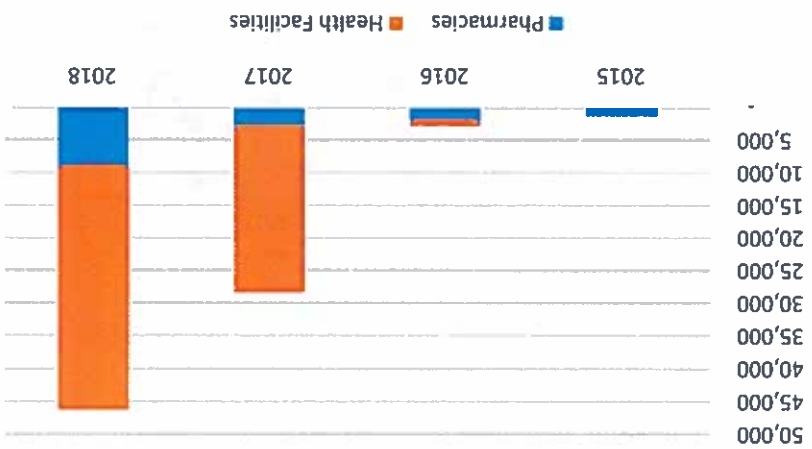
Interstate Search Requests Per Month (Through PMP InterConnect)



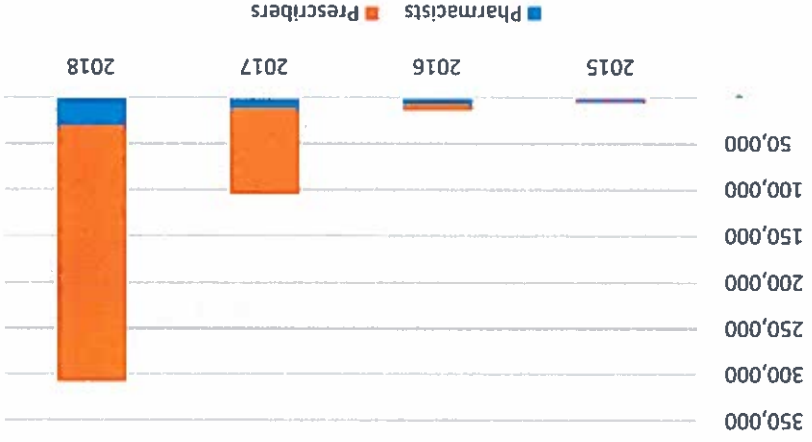
Integrated Search Requests by Type



Est. Integrated Facilities by Type

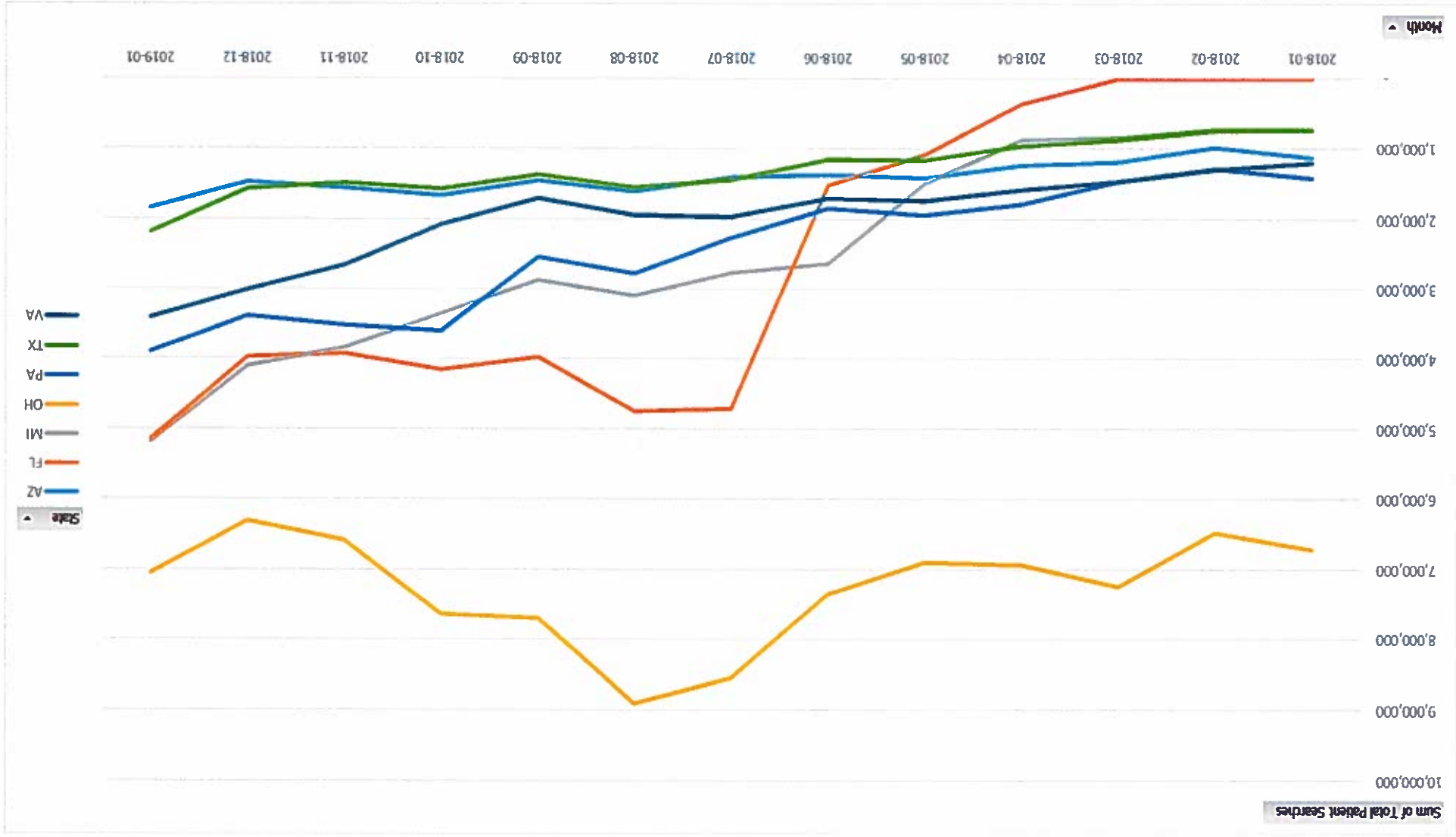


Est. Integrated Requesters by Type



Michigan Progress and Impact

Gateway Integration Progress



NarxCare - PDMP as an Analytics and Clinical Platform

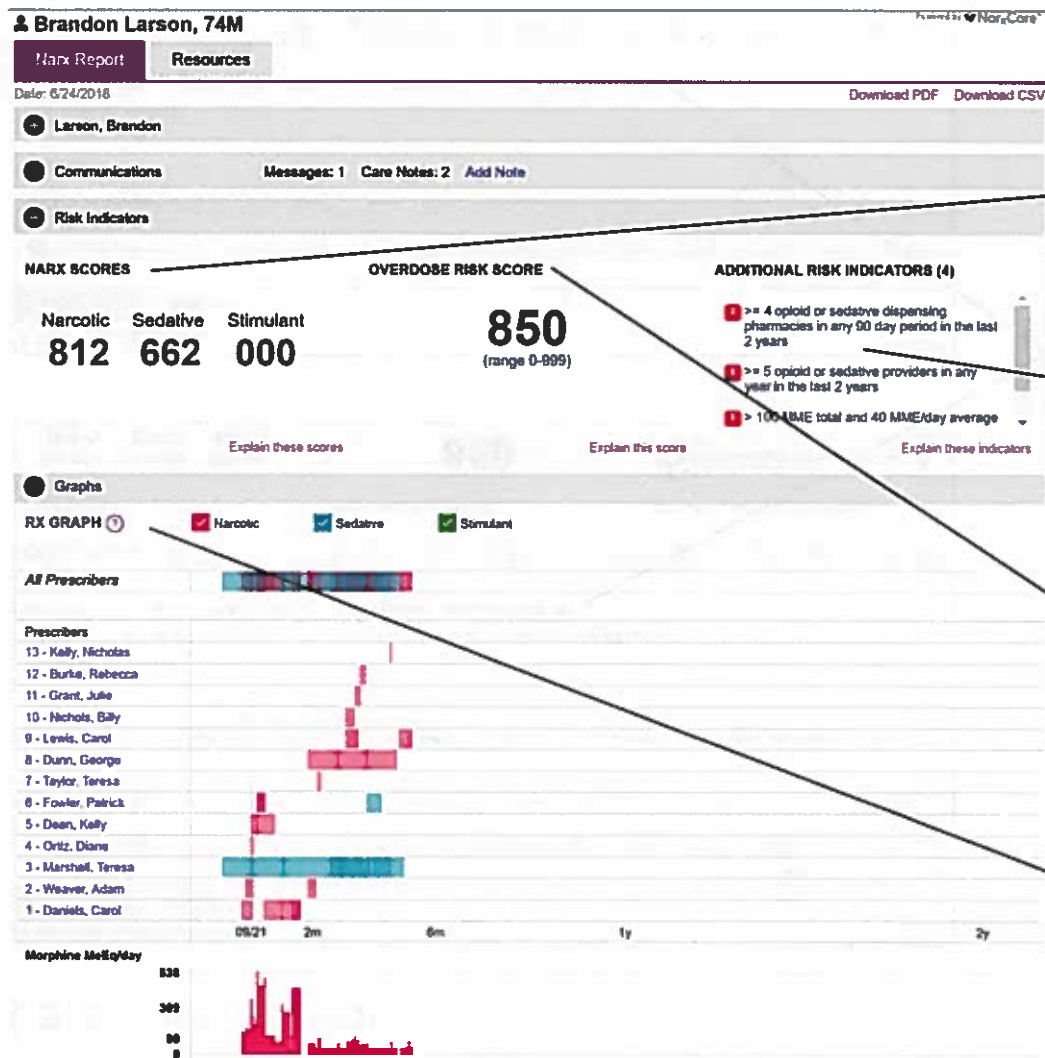
Appriss Health customers as well as other PDMPs have rapidly embraced the PDMP as far more than a controlled substance medication history

- Additional Data
 - PDMPs are adding data sets to enhance the power of the information (history of non-fatal overdose, drug court, criminal justice, toxicology)
- Analytics and Visualizations
- Care Coordination
- Clinical Tools

SUD Diagnosis Vs. Appropriate Prescribing Only

- Physicians are viewing PDMP analytics for every patient to diagnose possible SUD
- The crisis is too widespread to only understand information for patients for whom a prescription is being contemplated

Clinical Platform Approach: Analytics and Visualizations



Represent controlled substance history

Prominent risk indicators highlight important information from many data sets

Machine-learning derived score predicting risk of unintentional overdose death

Can incorporate many data sets

Rx Graph clearly displays vital information difficult to ascertain from "Med History" view

Clinical Platform Approach Care Coordination

Brandon Larson, 74M
Date: 6/7/2018
New Report Resources

812 662 000
Narcotic Sedative Stimulant

OVERDOSE RISK SCORE
710

Risk Indicators

Care Notes (2) add note
[03/17/2017 1603:57] — from Alame Jackson, M.D. to Darrah, Carol — I wanted to let you know the patient was treated for an unintentional prescription overdose. The patient states his current pain regimen does not control pain adequately.
[04/07/2017 0701:34] — from Robin Bryant M.D. — Please ensure patient has narcotic prescription available at all times.
[04/07/2017 1304:58] — from System Admin — Patient has a care manager - care_plan_029265.pdf

Messages (1)

Communications

Larson, Brandon

Additional Risk Indicators (4)

ADDITIONAL RISK INDICATORS (4)
 ≥ 4 opioid or sedative dispensing pharmacies in any 90 day period in the last 2 years

Carl Crawford, 30M
Date: 11/13/2018
New Report Resources

941 711 000
Narcotic Sedative Stimulant

OVERDOSE RISK SCORE
710

Risk Indicators

Care Notes (1) add note
[04/07/2017 1304:58] — from System Admin — Patient has a care manager available but not assigned. Make fictional

Messages (0)

Communications

Crawford, Carl

Additional Risk Indicators (3)

ADDITIONAL RISK INDICATORS (3)
 ≥ 4 opioid or sedative dispensing pharmacies in any 90 day period in the last 2 years

Messages and Care Notes enable important information and care coordination, such as insertion of a care plan for all treating providers to access or creation of a referral to care management

Clinical Platform Approach Opioid Treatment Agreement

Menu Jim Hulzenga

RxSearch > Patient Request

STATE DEPARTMENT OF HEALTH
Powered by *NorxCor*

Carol Gray, 75F

Narx Report | Resources

Date: 8/24/2018 Download PDF Download CSV

Gray, Carol

Communications

Messages (0)

Care Notes (1) [add note](#)

[03/27/2017 1303:57] — from Stacy Jackson, NP — This patient has a pain contract in place. [pain_contract_dh_02142017.pdf](#)

Risk Indicators

NARX SCORES			OVERDOSE RISK SCORE	ADDITIONAL RISK INDICATORS
Narcotic	Sedative	Stimulant	640 (range 0-999)	<ul style="list-style-type: none"> ≥ 4 opioid or sedative pharmacies in any 90 2 years ≥ 5 opioid or sedative year in the last 2 year ≥ 100 MME total and
692	581	000		

[Explain these scores](#) [Explain the score](#)

Graphs

RX GRAPH Narcotic Sedative Stimulant

All Prescribers

Prescribers

- 7 - Gutierrez, Kathy
- 6 - Stone, Gary
- 5 - Lewis, Tina
- 4 - Ortiz, Frances
- 3 - Simpson, Martha
- 2 - Hudson, Jessica
- 1 - Cooper, Lon

Morphine McEq/day

320

280

Care Notes also enable flagging and insertion of an Opioid Treatment Agreement, an emerging requirement from CMS and elsewhere

Pain Treatment with Opioid Medications: Patient Agreement*

Stacy Jackson understand and voluntarily agree that (initial each statement after reviewing):

- I will keep (and be on time for) all my scheduled appointments with the doctor and other members of the treatment team.
- I will participate in all other types of treatment that I am asked to participate in.
- I will keep the medicine safe, secure and out of the reach of children. If the medicine is lost or stolen, I understand it will not be replaced until my next appointment, and may not be replaced at all.
- I will take my medication as instructed and not change the way I take it without first talking to the doctor or other member of the treatment team.
- I will not call between appointments, or at night or on the weekends looking for refills. I understand that prescriptions will be filled only during scheduled office visits with the treatment team.
- I will make sure I have an appointment for refills. If I am having trouble making an appointment, I will tell a member of the treatment team immediately.
- I will treat the staff at the office respectfully at all times. I understand that if I am disrespectful to staff or disrupt the care of other patients my treatment will be stopped.
- I will not sell this medicine or share it with others. I understand that if I do, my treatment will be stopped.

Clinical Platform Approach

Clinical Tools Version 1.0

▲ Brandon Larson, 74M

Narr Report

Resources

Access to Treatment

Mat Providers

Find the 30 closest MAT providers for this patient. The patient's zip code is prep-populated if available. View more information about the treatment locator.

Search for providers near:

Zip Code

45245

Submit

Educational Resources

INFORMATIONAL DOCUMENTS

Click the associated link and print. View more information about resources.

What You Need to Know

WHAT YOU NEED TO KNOW
PRESCRIPTION OPIOIDS
PRESCRIPTION OPIOIDS: WHAT YOU NEED TO KNOW (PDF)

Prescription Opioids: What You Need to Know (PDF)



Pocket Guide: Tapering

POCKET GUIDE: TAPERING
TAPERING FOR CHRONIC PAIN

Fact Sheet

FACT SHEET FOR PRESCRIBING OPIOIDS FOR CHRONIC PAIN

Promoting Safer and More Effective Pain Management (PDF)



Opioids and Chronic Pain

PROMOTING SAFER AND MORE EFFECTIVE PAIN MANAGEMENT

Pregnancy and Opioids

Pregnancy and Opioids Pain Management (PDF)



Checklist

CHECKLIST FOR PRESCRIBING OPIOIDS FOR CHRONIC PAIN

MAT Locator provides a list of buprenorphine prescribers close to the patient (using SAMSHA's database)

CDC information sheets are available to be printed and handed to patients

MAPS is a leading provider of behavioral health services, including substance use treatment, mental health, and crisis services. MAPS is committed to providing high-quality, evidence-based care to our patients and is continuously innovating to improve our services. MAPS is currently exploring several new initiatives, including the use of telehealth, mobile health, and data analytics to enhance our care delivery. MAPS is also focused on expanding our reach to underserved communities and is currently exploring several new markets. MAPS is committed to providing high-quality, evidence-based care to our patients and is continuously innovating to improve our services.

Continued MAPS Innovation

- New initiatives include the use of telehealth, mobile health, and data analytics to enhance our care delivery.
- MAPS is also focused on expanding our reach to underserved communities and is currently exploring several new markets.
- MAPS is committed to providing high-quality, evidence-based care to our patients and is continuously innovating to improve our services.

MAPS is committed to providing high-quality, evidence-based care to our patients and is continuously innovating to improve our services.

Appriss ID – Major Innovation in Patient Matching

- Appriss data science team spent 9 months researching and developing a new patient clustering engine

- Developed new advanced algorithms to improve quality patient linking
- New clustering engine yields a 3% improvement vs. previous engine

Improved linking of patients with different addresses and with last name changes

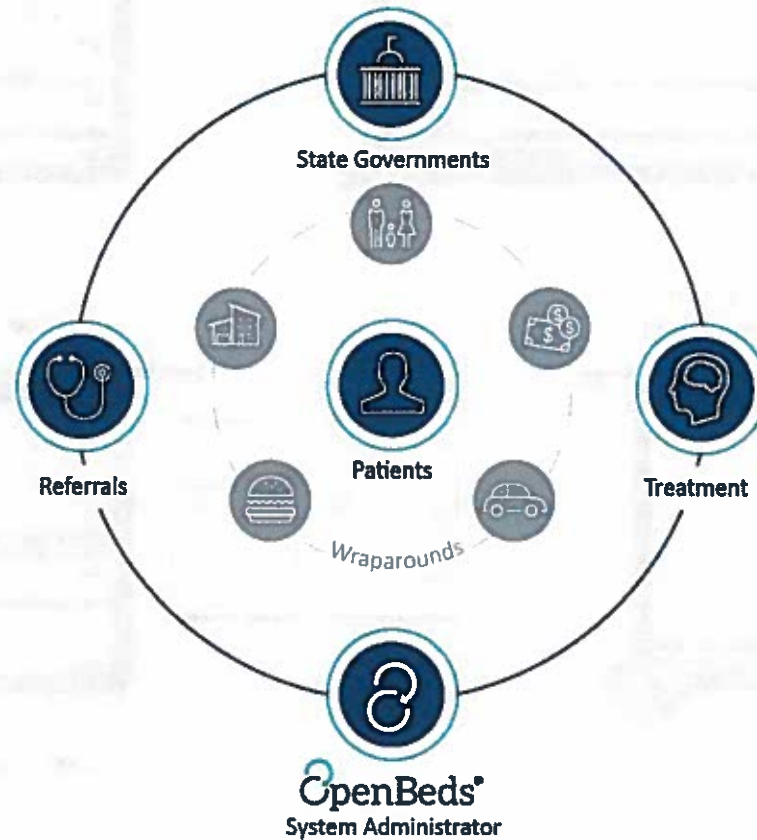
Reduced number of web portal searches resulting in multi-patients from 1.01% to .26% and reduced the number of PMP Gateway/NarxCare searches resulting in multi-patients from .27% to .09%

Greatly reduces the number of times a user has to manually log into PMP AWARE to go through the manual pick list process to view the patient report

OpenBeds[®] Assessment & Digital Referral Network

Referrals

- Medical facilities
- Justice system
- County authority
- Outpatient treatment facility
- Acute detoxification facility
- Patients
- Care managers
- Health plans
- MCO's



Receiving

- Acute Inpatient Care
- Withdrawal Management
- Medication-Assisted Treatment
- Residential Treatment Program
- Partial Hospitalization
- Intensive Outpatient Treatment
- Outpatient Counseling
- Recovery Housing
- Recovery Support Services

OpenBeds® Workflow

Referral to placement in minutes



Referring agencies view and select active treatment facilities.

Treatment facilities are alerted to referral requests and communicate patient acceptance.



Treatment facilities onboard and accept patient into care.



Referring agencies create and send digital referrals to proper treatment facilities.



Live Resource Planning Solution

What's Being Dispensed?

Prescriptions dispensed
(updated every 24 hours)

Pharmacies



State PDMP



What's Being Used?

Drug test results reported
(updated every 24 hours)

Hospitals

Pain Clinics

Physician Offices

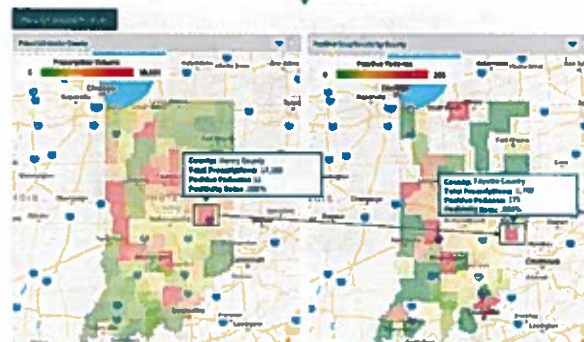
Treatment Centers

Employers

Prisons

Coroner

Appriss Health hc1 Opioid
Resource Planning Tool



- Identify hot spots and high risk areas
- Prioritize prevention and treatment programs
- Identify regions in need of MAT
- Empower local agencies to study their data
- Identify trends that are indicative of adverse events

Collection of Additional Data Sets to Improve Risk Identification

Non-fatal Overdose



- First responders and EDS
- Personally identifiable to aid individuals
- For use by PDMPs and appropriate government entities, such as ODMap

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Controlled Substance Pick-up



- ID of person who picks up prescription
- Common source of diversion
- For inclusion in PDMP

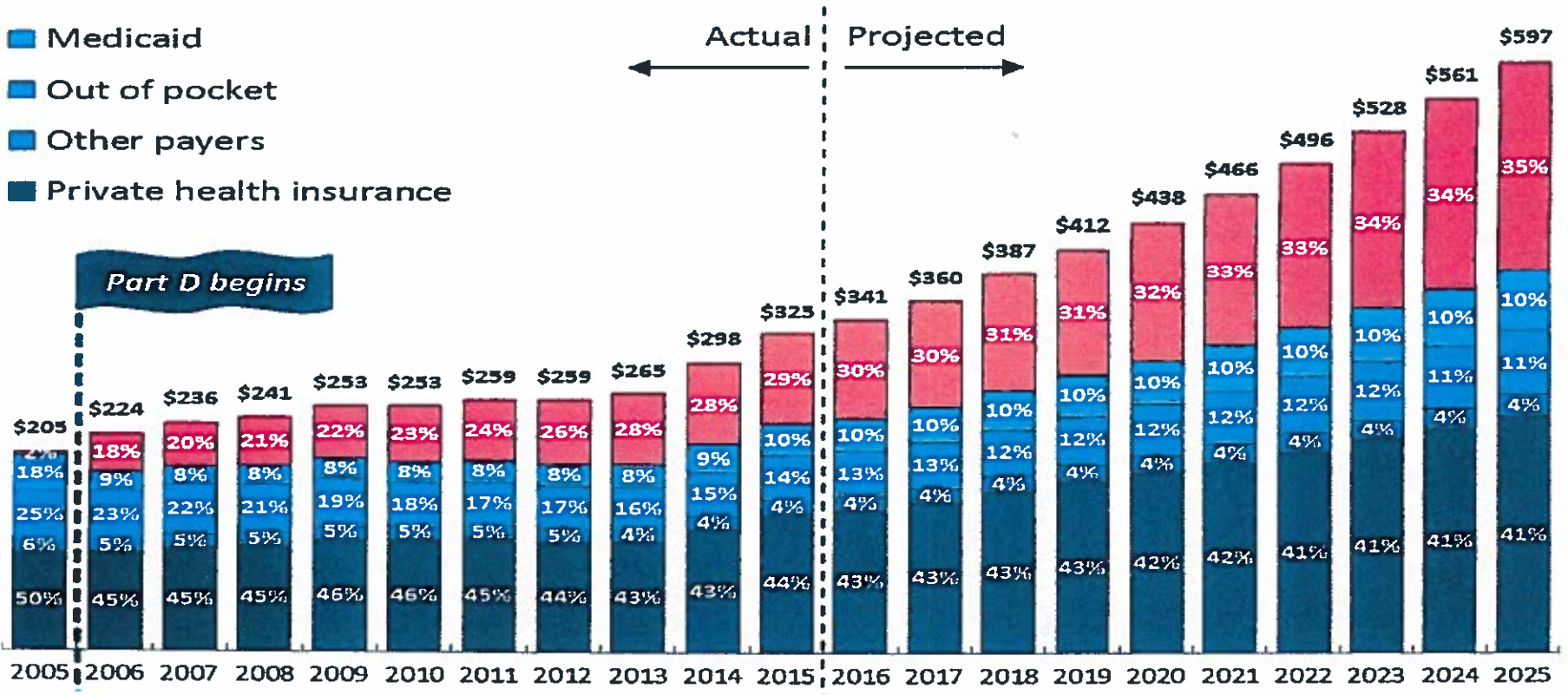
Justice



- Real-time incarceration and bookings data
- For healthcare use only
- Can improve predictive models and enable alerts upon release to prevent overdose

U.S. Prescription Drug Spend (in billions)

- Medicare
- Medicaid
- Out of pocket
- Other payers
- Private health insurance



SOURCE: Kaiser Family Foundation analysis of CMS National Health Expenditure Data for Historical (CY2005-2015) and Projected (CY2016-2025) Retail Prescription Drug Expenditures.

DRUG PRICES IN THE U.S. VS. OTHER MAJOR COUNTRIES

	GERMANY	FRANCE	U.K.	JAPAN	CANADA	U.S.
LANTUS DIABETES	\$61	\$47	\$64	\$64	\$67	\$186
CRESTOR HIGH CHOLESTEROL	\$41	\$20	\$26	\$29	\$32	\$86
ADVAIR ASTHMA/COPD	\$38	\$35	\$47	\$51	\$74	\$155
GLANUVIA DIABETES	\$39	\$35	\$48	\$47	\$68	\$169
ENBLENZUM OSTEOARTHRITIS	\$1,749	\$982	\$1,158	\$980	\$1,164	\$2,504
IMMUTEG LEUKEMIA	\$3,003	\$2,303	\$2,645	\$2,206	\$2,421	\$10,122

SOURCE: GLAXOSMITHKLINE, "THE U.S. PAYS A LOT MORE FOR TOP DRUGS THAN OTHER COUNTRIES," DEC. 10, 2015. U.S. PRICES FOR A 30-DAY SUPPLY AND AFTER APPLICABLE DISCOUNTS.

