Welcome!

Please answer the poll question while we wait to begin. The webinar will start at 12:30 PM

If you can't see the poll, follow the directions to the right. Don't worry if you are unable to answer the poll questions.

Note:

All participants are **muted.**

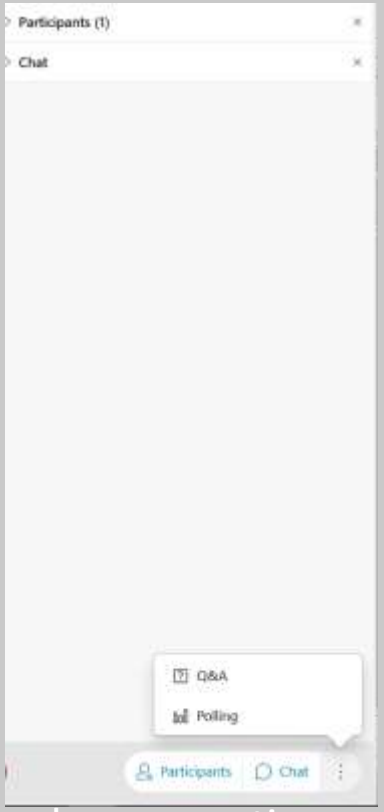
Webinar **materials** will be shared after the session ends.

There will be time for a **Q&A** at the end.

To Access Poll and Q&A:

Desktop

Look for the Panel Options icon on the bottom right corner of the panel (…)



Click on **Polling and Q&A** to participate during the webinar

Mobile App

Look for the Panel Options icon (…) at the bottom next to the leave meeting icon ×.

Click on **Polling and Q&A** to participate during the webinar

UCONN HEALTH

Taking the Pain out of Pain Management

Through the Optimal use of Health IT

ACPE UAN: 0009-9999-21-001-L08-P

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This webinar is funded by a grant from:

The Connecticut Office of Health Strategy did not influence the content of this program.

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New CME Series – with CPE sought as appropriate

Health Information Technology for Clinicians: How to Achieve Optimal Outcomes

Webinars and In-person events

Activity Director: Thomas Agresta MD, MBI

Department of Family Medicine, Center for Quantitative Medicine

UConn Health

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Health Information Technology for Clinicians:
How to Achieve Optimal Outcomes

Sample Topics

- Medication Safety/ Reconciliation
- Health Data Analytics
- eCQMs (electronic clinical quality measures)
- TeleHealth
- Precision Medicine
- Health Information Exchange
- Patient Consent models
- Public Health Informatics
- Patient-Generated Data

This series is funded by a grant from the Connecticut Office of Health Strategy, which did not influence the content of the program.

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Learning objectives

1. Define the current situation with opioid prescribing in Connecticut and regionally.
2. Describe the current statutory requirements for prescription drug monitoring program (PDMP) access in Connecticut funding opportunities.
3. Explain the various integration methods of the PDMP into the electronic health record (EHR) and assess each method.
4. Describe lessons learned through a pilot project of CDS (clinical decision support) Connect for pain management.
5. Discuss the opportunities supported by the Agency for Healthcare Research and Quality to deploy clinical decision support for pain management that is easier to adopt, use, and maintain.

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Housekeeping

All participant lines will be muted during the panel discussion

The panelist will address you questions during the Q/A session from the Q/A chat feature

If we are not able to address your question today, we will follow up with you directly using your registered email.

This session will be recorded and available for download along with the slides used today.

Instructions on how to access will be sent after the session to your registered email along with instructions to earn CME and CPE credit.

UCONN HEALTH

Presenters

Marghie Giuliano, RPh, CAE

CEO
Giuliano Consulting, LLC

Rodrick J. Marriott, PharmD

Director
Department of Consumer Protection, Drug Control Division

Paul Matthews

Chief Technology Officer/ Chief Information Security Officer
OCHIN

Disclosures: All presenters have reported they have no conflicts to disclose

UCONN HEALTH

Presenters

Stacie Carney, MD

Chief Medical Information Officer
OCHIN

Edwin Lomotan, MD

Chief of Clinical Informatics
Agency for Healthcare Research and Quality

Disclosures: All presenters have reported they have no conflicts to disclose

UCONN HEALTH

CURRENT TRENDS IN OPIOID PRESCRIBING

January 13,2021

The IPRO QIN-QIO: Who We Are

Quality Improvement Organizations
Sharing Knowledge. Improving Health Care.
CENTERS FOR MEDICARE & MEDICAID SERVICES

IPRO QIN-QIO

Healthcentric Advisors
Qlarant

The federally funded Medicare Quality Innovation Network–Quality Improvement Organization for 11 states and the District of Columbia

- A collaboration of three organizations: IPRO, Healthcentric Advisors, and Qlarant, led by IPRO.
- Offering resources and support to healthcare providers and the patients and residents they serve
- Promoting patient and family engagement in care
- Supporting implementation and strengthening of innovative, evidence-based, and data-driven methodologies to support improvements
- Work toward better care, healthier people and communities, and smarter spending
- Collaborate with providers, practitioners and stakeholders at the community level to share knowledge, spread best practices and improve care coordination

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Opioid Death Data

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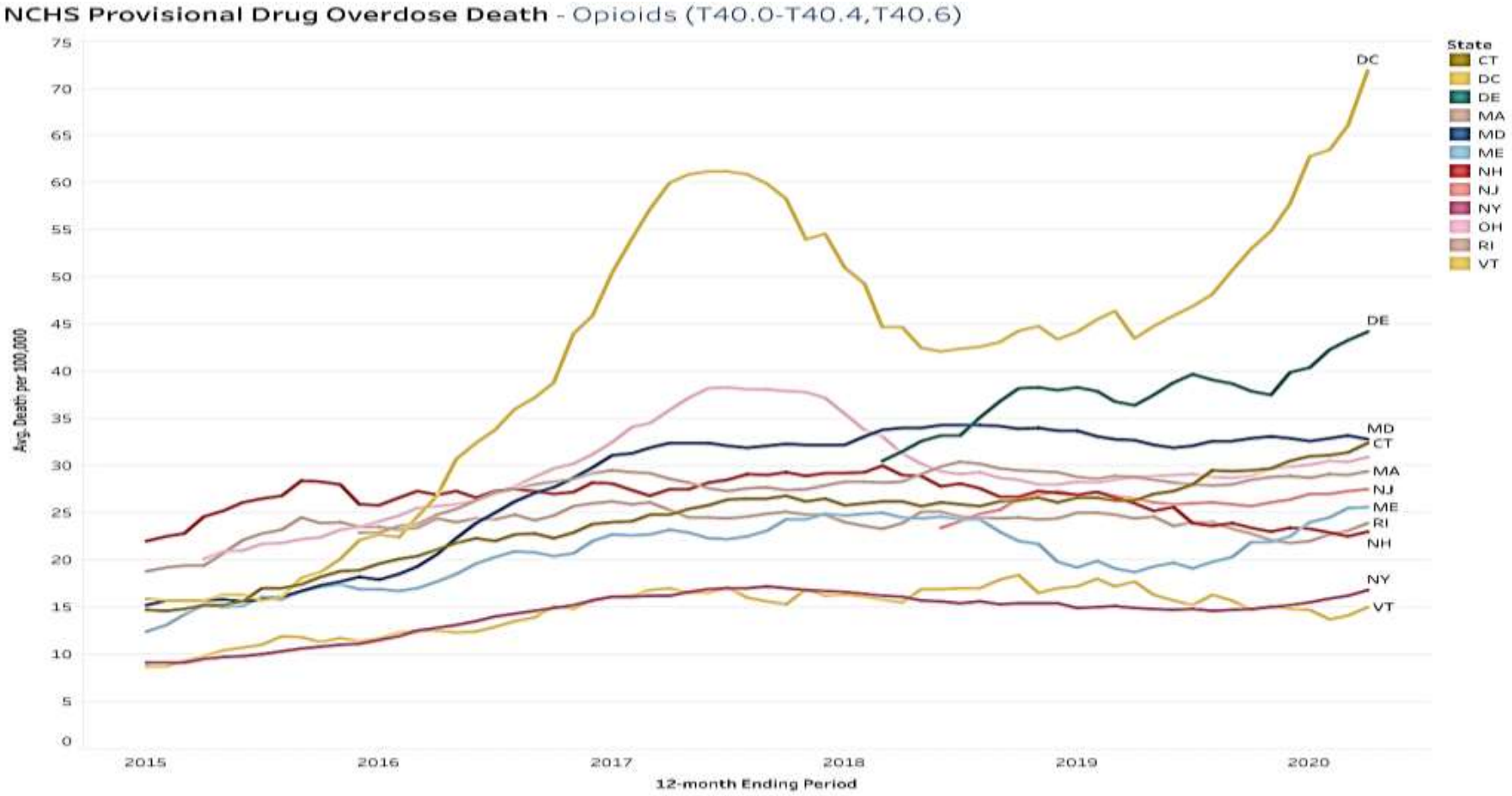

CDC National Center for Health Statistics Provisional Drug Overdose Deaths due to Opioids, 2015- April 2020

Existing Opioid Overdose Root Causes

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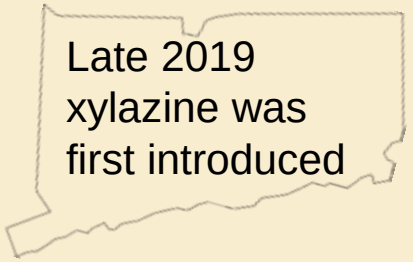
- ***Root causes of opioid overdose and deaths have been exacerbated and amplified by the COVID-19 pandemic***

Changes in illicit drug supplies



Patient access to services

Person level factors

- Existing untreated or undertreated behavioral health conditions
- Existing vulnerabilities in at-risk populations, rural settings and social determinants of health

COVID-19 Factors and the Opioid Epidemic

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COVID-19 factors and existing root causes of opioid overdose and deaths have created an unprecedented "twindemic"

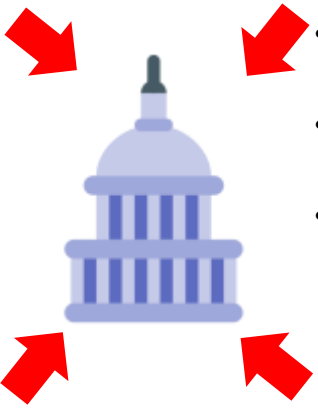
Illicit drug supplies

- Harmful substitutions & combinations
- Disruption of usual drug sources

Reduced or lack of access to services

- Resource diversion to COVID-19 and civil movements
- Temporary closures of OUD treatment services
- Telemedicine limitations
- PPE limitations, syringe access limitations
- Naloxone distribution interruptions
- Lack of patient follow up
- Health system downsizing

State level factors



- Technical infrastructure in Maine and Vermont is limited (internet access/phone service)
- Maryland's direct outreach to homes of non-fatal overdoses was suspended
- New Jersey defunded the Homeless Outreach Coalition by ~ $1 million resulting in a lack of stable housing for homeless people with opioid use disorder, exacerbated by COVID-19 and job losses.

Person level factors

- COVID-19 related triggers for opioid misuse & OUD relapse
- Deterioration in mental health with no access to behavioral health supports
- Exacerbation of vulnerabilities in at-risk populations
- Not accessing OUD treatment due to fear of contracting the virus, quarantine after being exposed to the virus or actually having COVID-19
- Using opioids in isolation

Drug Overdose Deaths in CT 2015 to 2020

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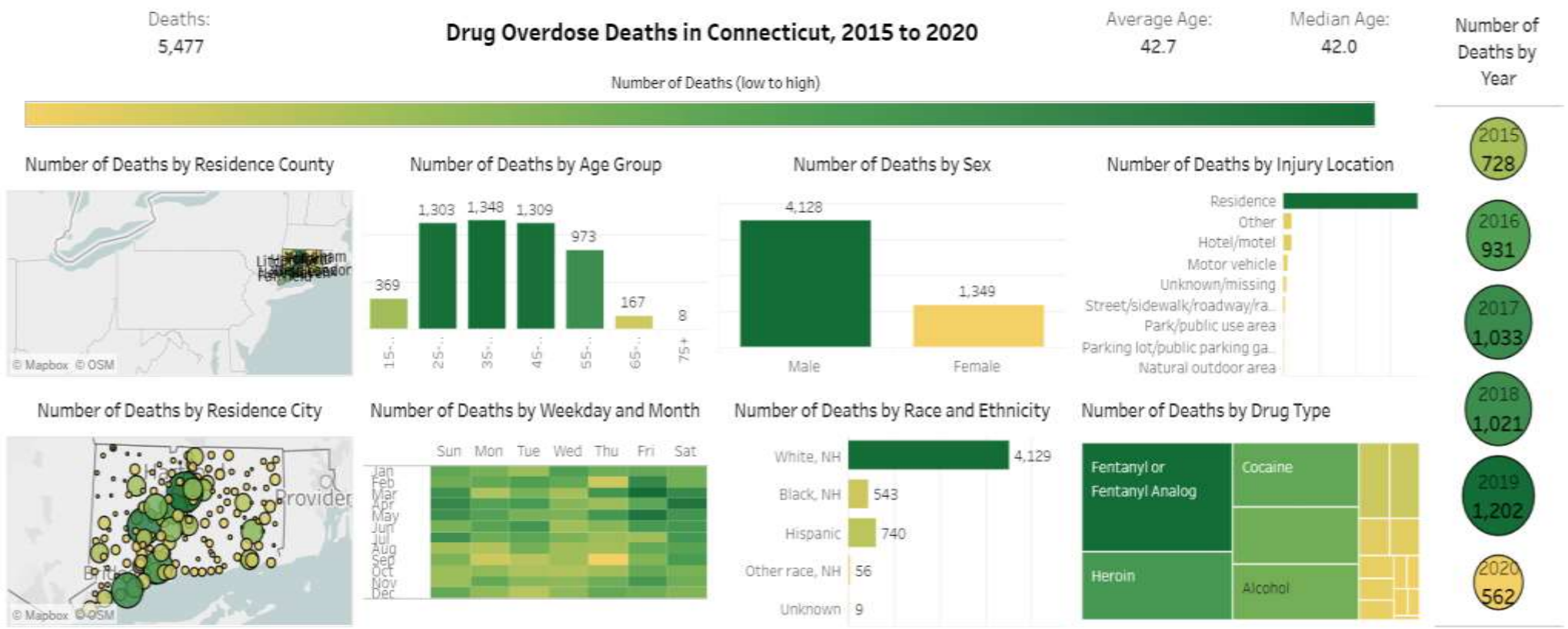

Note: Data source is the Connecticut State Unintentional Drug Overdose Reporting System (SUDORS). Data for 2020 is considered preliminary and may be subject to change. Last updated 7/22/20.

CMS Medicare Part D Opioid Prescribing Mapping Tool

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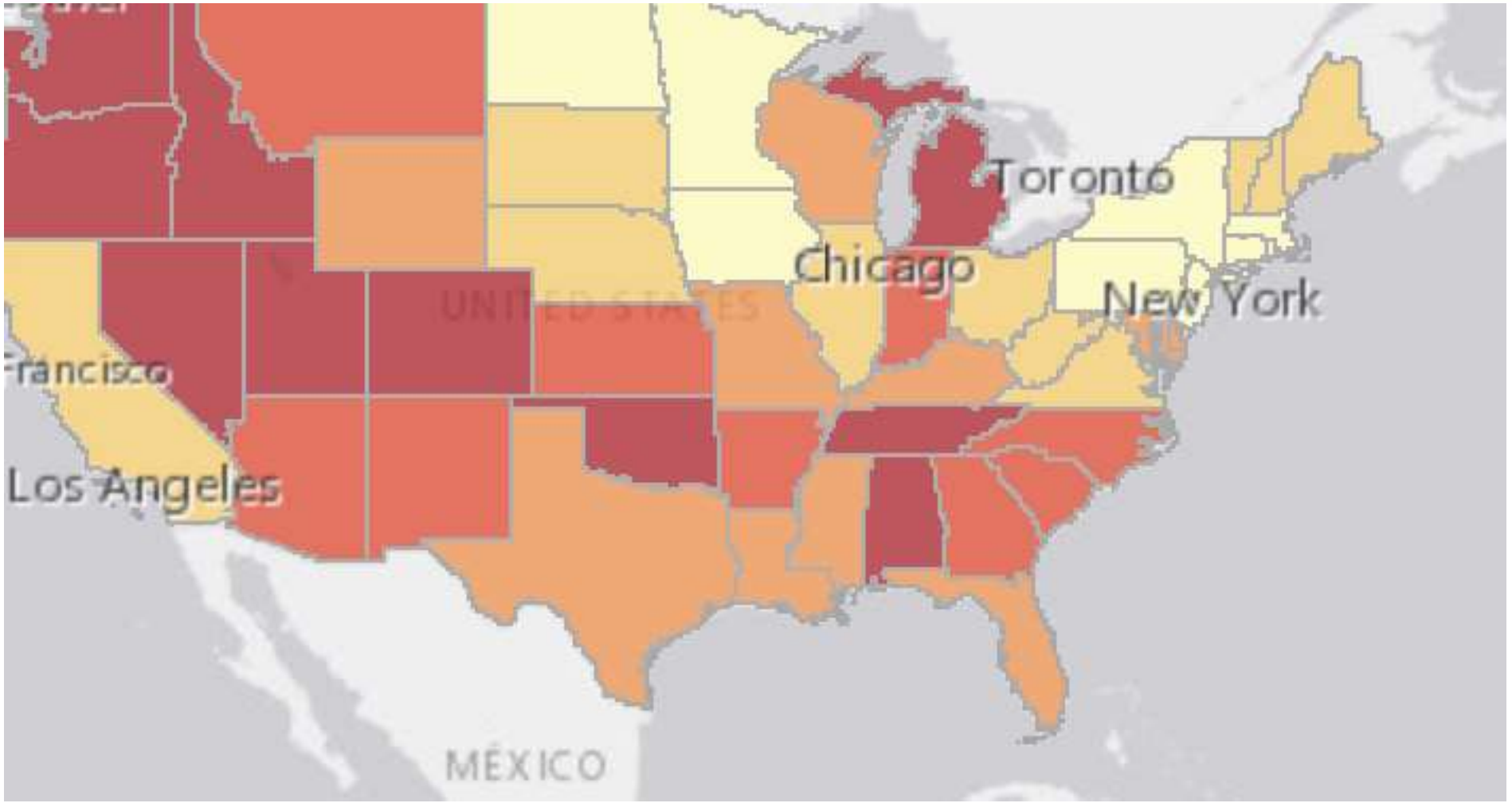

LEGEND

State Level

Opioid Prescribing Rate 2017

- 6.16% to 7.16%
- 5.54% to 6.16%
- 4.98% to 5.54%
- 4.35% to 4.98%
- 2.70% to 4.35%
- No Data

https://cms-oeda.maps.arcgis.com/apps/MapSeries/index.html?appid=735f83ac6e984d6fade11b241d295585

Connecticut Prescribing

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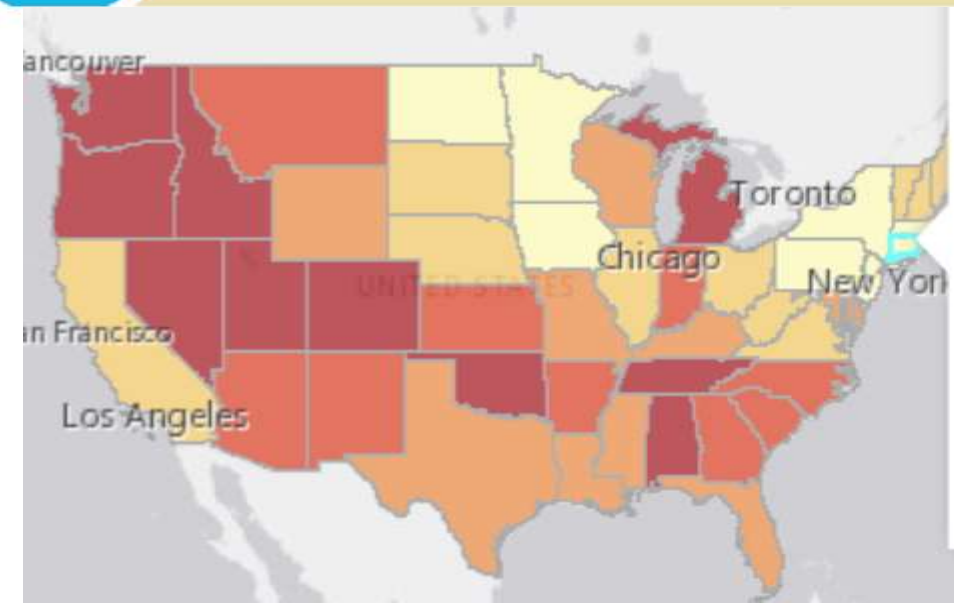
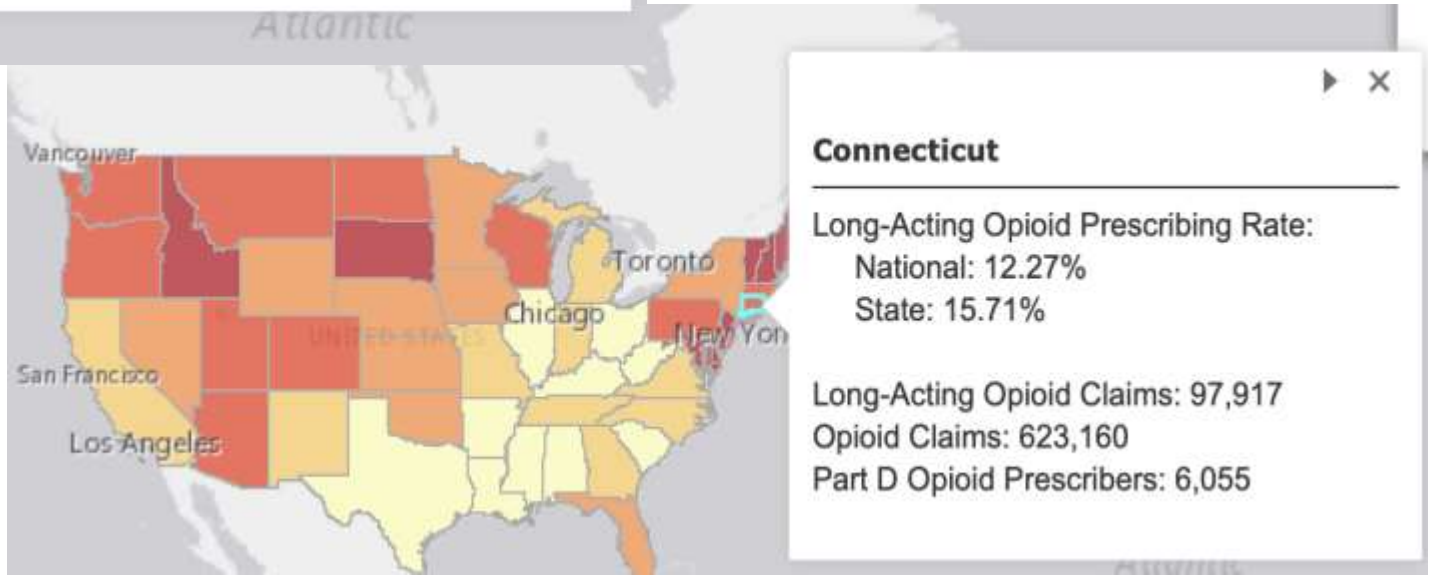


Connecticut

Opioid Prescribing Rate:
National: 5.05%
State: 3.75%

Opioid Claims: 623,160
Overall Claims: 16,632,214
Part D Prescribers: 17,461



Connecticut

Long-Acting Opioid Prescribing Rate:
National: 12.27%
State: 15.71%

Long-Acting Opioid Claims: 97,917
Opioid Claims: 623,160
Part D Opioid Prescribers: 6,055

IQIVA Report Trends

- Total opioid prescriptions have declined by 40 % since 2011
- Total Medicare opioid prescriptions have increased by 2% since 2011
- Prescribing has declined in prescriptions with high-risk tiers greater than or equal to 90 MMEs
- In 2019, opioid MME per capita declined in every state compared to 2018, with the national average declining by 15%.
- Co-prescribing with benzodiazepines is declining except for in the Medicare population

IPRO QIN-QIO Opioid Utilization Dashboard

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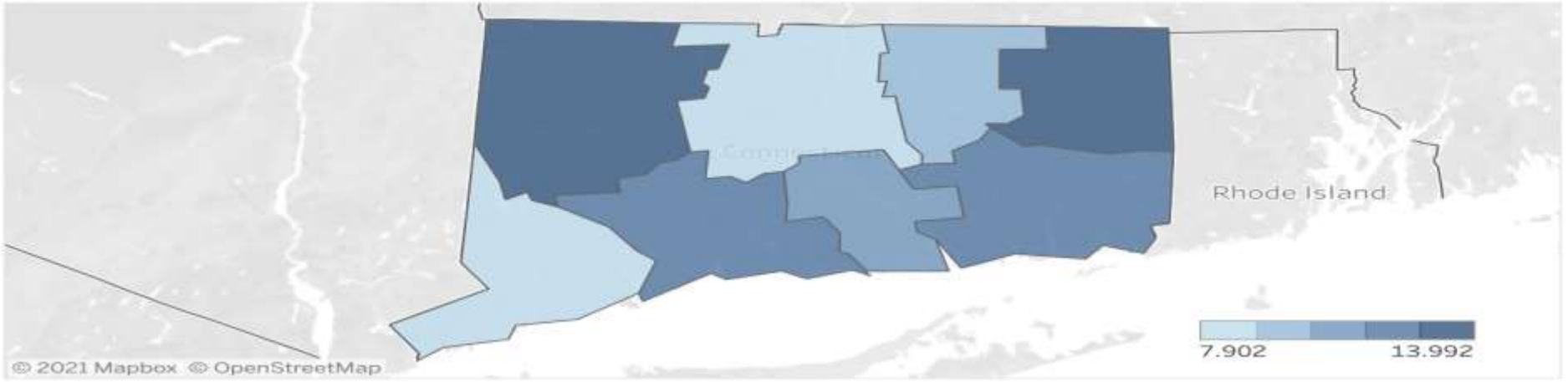
Beneficiaries Utilizing Opioids Per 1,000 Medicare Population



Select State
CT

Select Time Period
- (•) Q1Q2 2019
- ( ) Q3Q4 2019
- ( ) Q1Q2 2020

Select 90-Day Average MME Tier
- (•) Overall Opioid
- ( ) 90 - 119MME
- ( ) 120 - 239MME
- ( ) 240MME Higher

Beneficiaries Utilizing Opioids Per 1,000 by County

State	County Name	
CT	WINDHAM	13.992
	LITCHFIELD	13.732
	NEW LONDON	12.319
	NEW HAVEN	12.102
	MIDDLESEX	10.521
	TOLLAND	9.406
	HARTFORD	8.301
	FAIRFIELD	7.902

Average (11.034)

Percent Change in Opioid State Rate from Previous Time Period

State	County Name	2019	2020
CT	WINDHAM	↑ 19.31%	↓ -36.81%
	LITCHFIELD	↑ 3.21%	↓ -36.68%
	NEW LONDON	↑ 14.41%	↓ -39.50%
	NEW HAVEN	↑ 12.62%	↓ -38.11%
	MIDDLESEX	↑ 7.69%	↓ -39.03%
	TOLLAND	↑ 11.72%	↓ -36.38%
	FAIRFIELD	↑ 14.27%	↓ -36.03%
	HARTFORD	↑ 8.70%	↓ -38.00%
		Q4	Q2

Percentage of unique Medicare Fee-for-Service beneficiaries on benzodiazepines who received any opioid concurrently or high-dose of opioid (≥90 morphine milligram equivalents (MME) concurrently in IPRO QIN-QIO area

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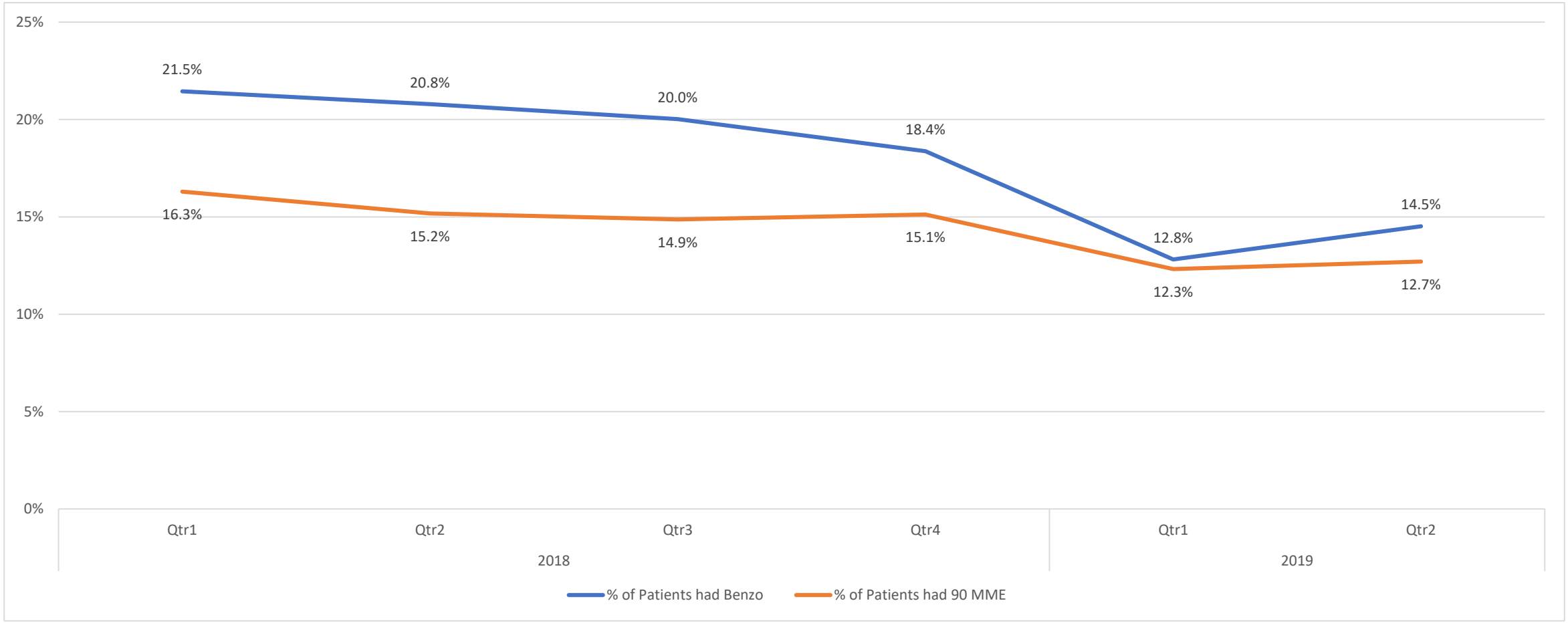

IPRO QIN-QIO Concomitant Benzodiazepine Utilization Dashboard

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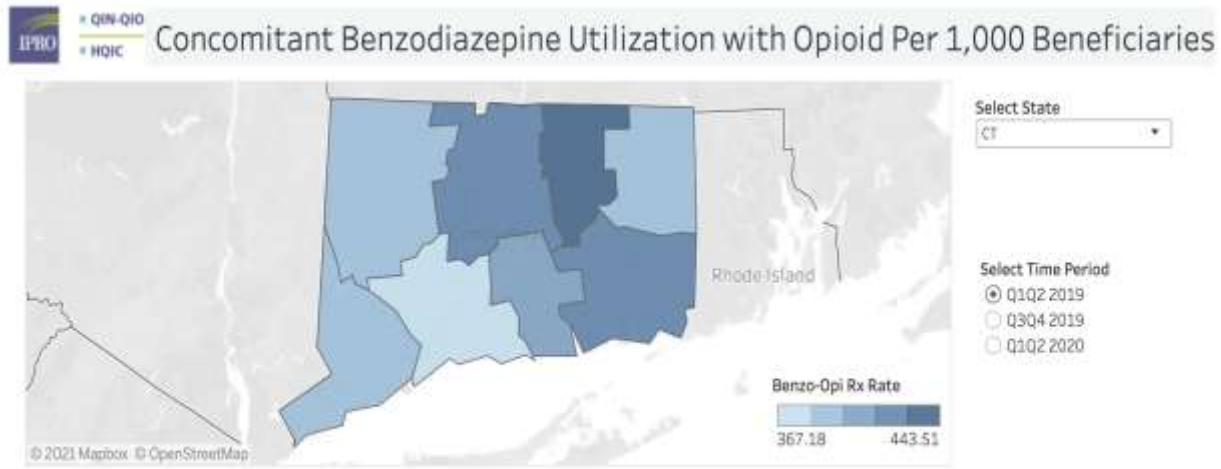

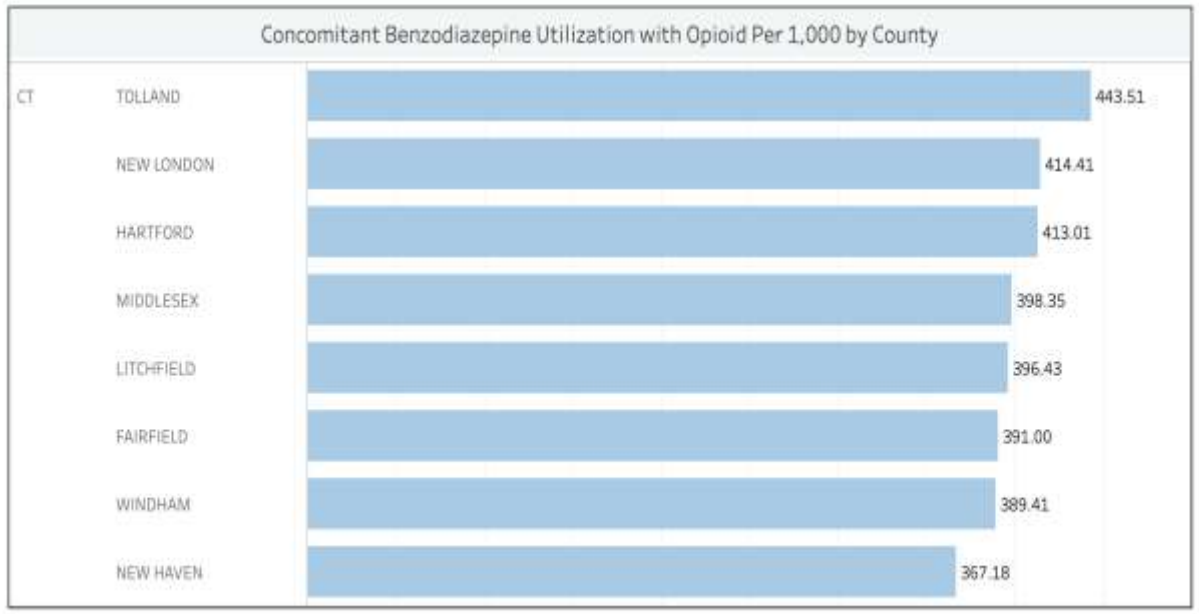

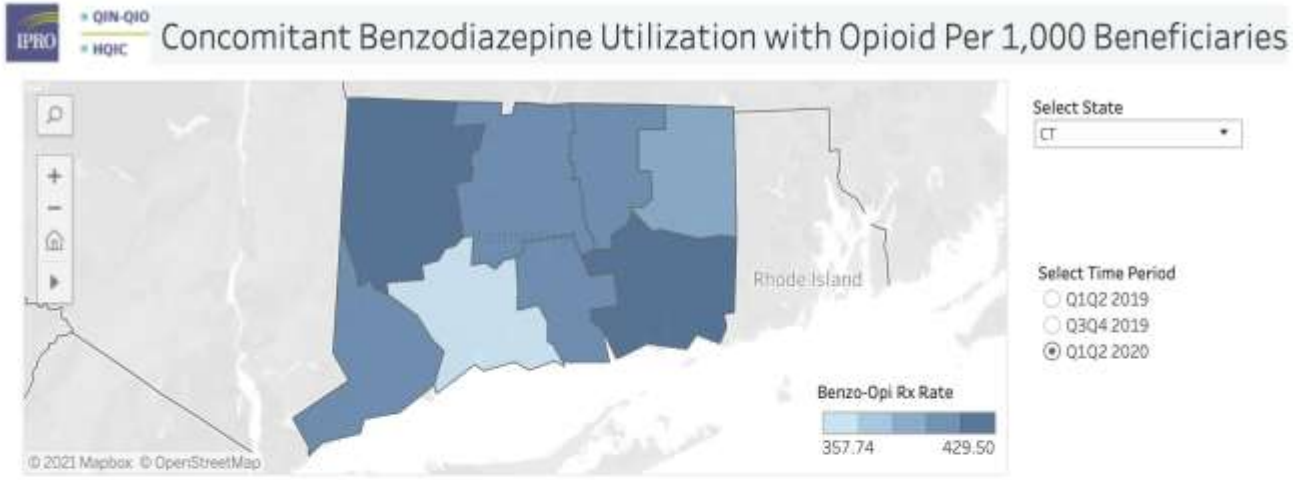

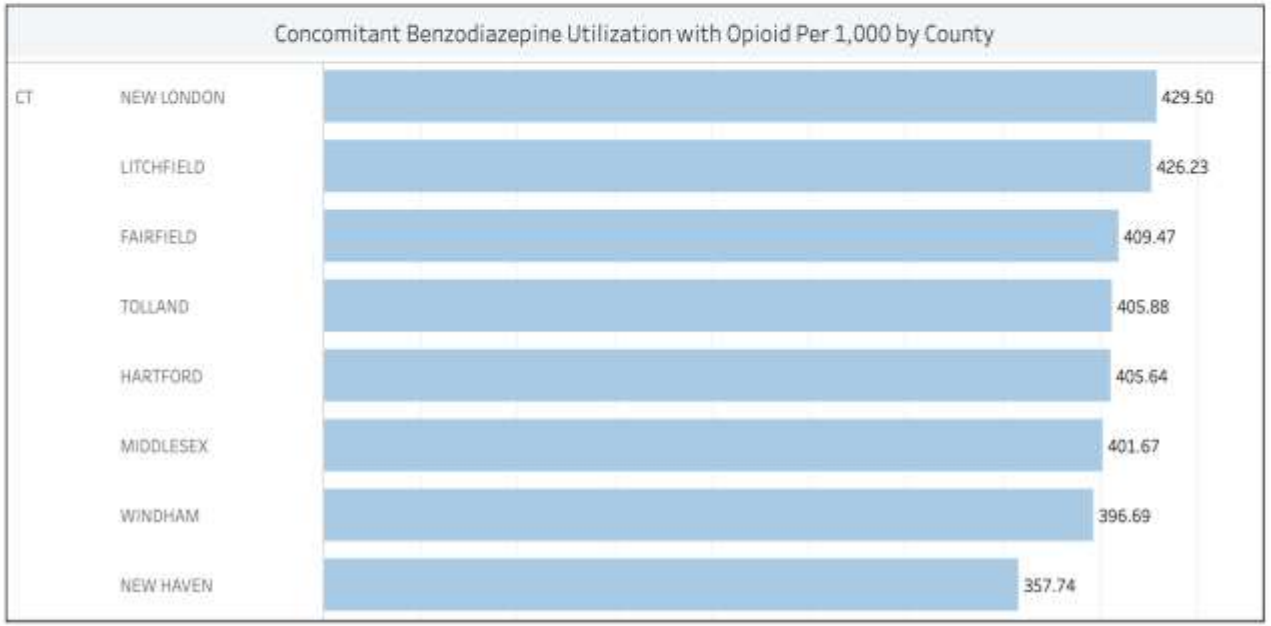

Twindemic Harm Reduction Tactics

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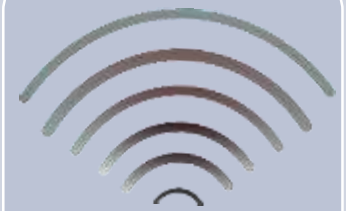
COVID-19



Identify opportunities for increased naloxone access

Assist communities and organizations in increasing patient identification of opioid use disorder, patient education and access to medication assisted therapy

Promote opioid prescribing and pain management best practices

Assist in the identification and mitigation of stigma and implicit bias that may hinder uptake and effectiveness of OUD treatment

Describe how to identify and address social determinants of health

Improve substance user health and promote immunization

Community Engagement

- **Focus on key priority areas**
  - Data driven improvement
    - Working with state and community level key stakeholders to obtain more comprehensive/updated opioid related data
    - Encourage data transparency and public reporting
  - Prioritizing OUD and BH screening and treatment, naloxone distribution and decreasing poly-substance use
  - Connect high performers to challenged communities to spread best practices

Health IT Recommendation

- The right data should be available in the workflow of clinicians, such as prescribers and pharmacists, in a user friendly manner for them to reduce harm, reduce risk and improve outcomes.

Poll

Do you currently care for patients with acute or chronic pain?

a) Yes
b) No

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CONNECTICUT DEPARTMENT OF
CONSUMER PROTECTION

Securing a Safe & Fair Marketplace.

Current PDMP Statutes, Access and Funding

Rodrick J. Marriott,
PharmD
Director
Drug Control Division

Definitions/Acronyms

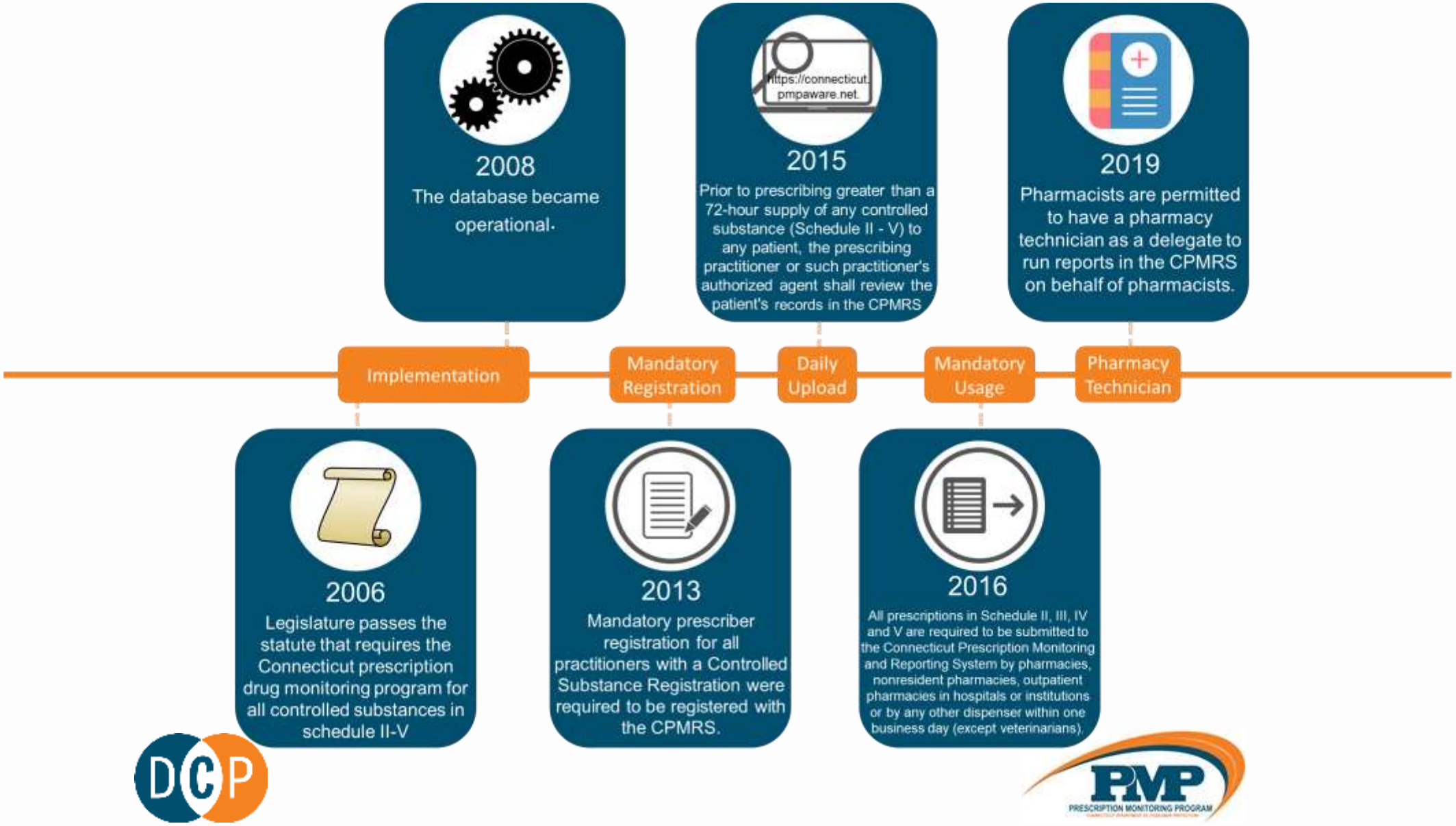
CPMRS – Connecticut Prescription Monitoring and Reporting System also known as Prescription Drug Monitoring Program (PDMP) or Prescription Monitoring Program (PMP)

Controlled Substances – Include all medications in schedule II, III, IV, and V. In Connecticut, marijuana dispensed as part of the medical marijuana program is a Schedule II and therefore dispensations uploaded into the CPMRS.

Aware – web-based application for accessing the CPMRS.

Gateway – vendors name for portal that permits access to the CPMRS via an active programming interface (API).

Connecticut Law



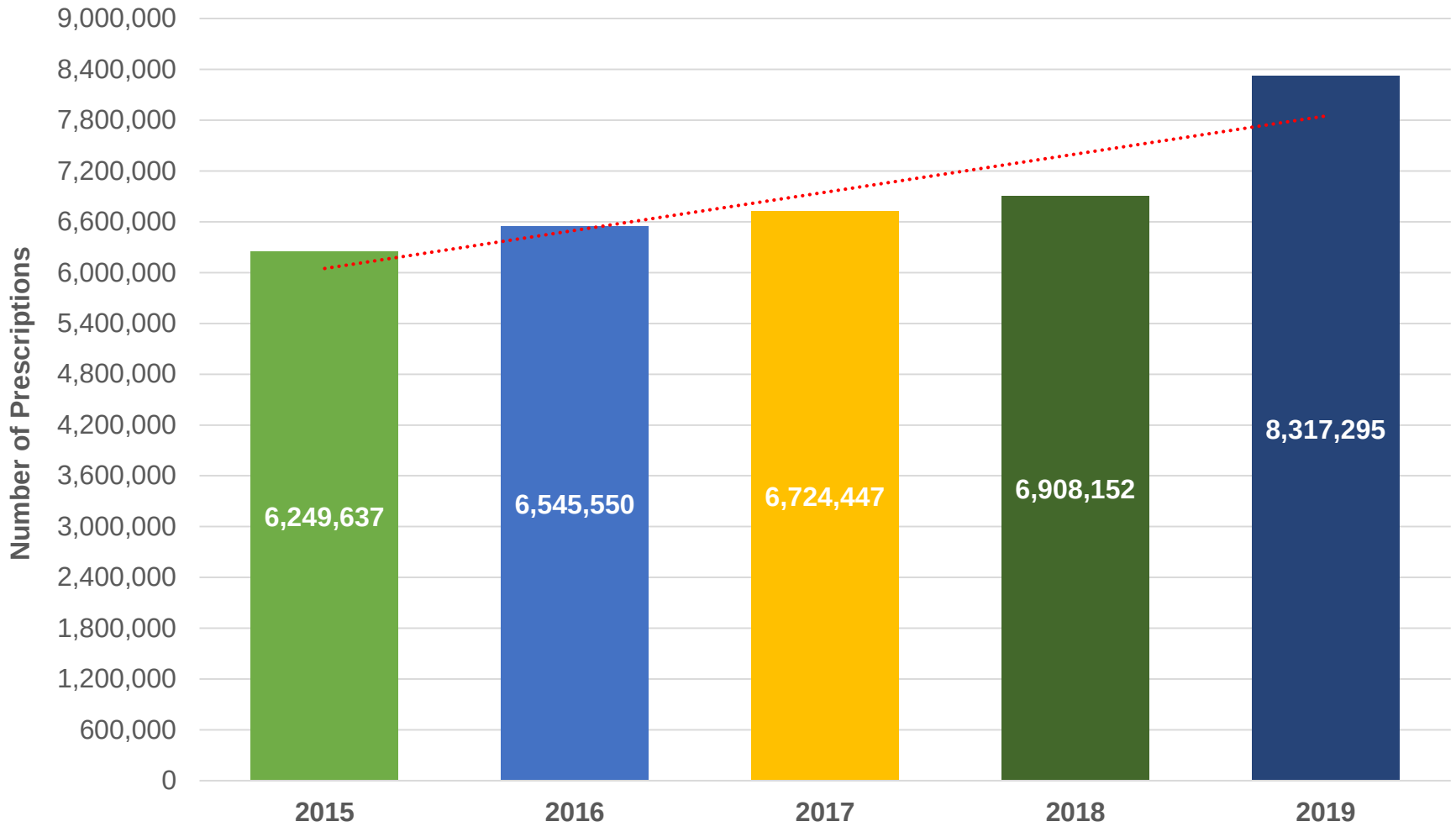
Who Must Report?

- Pharmacies
  - Resident - 683
  - Non-Resident - 968

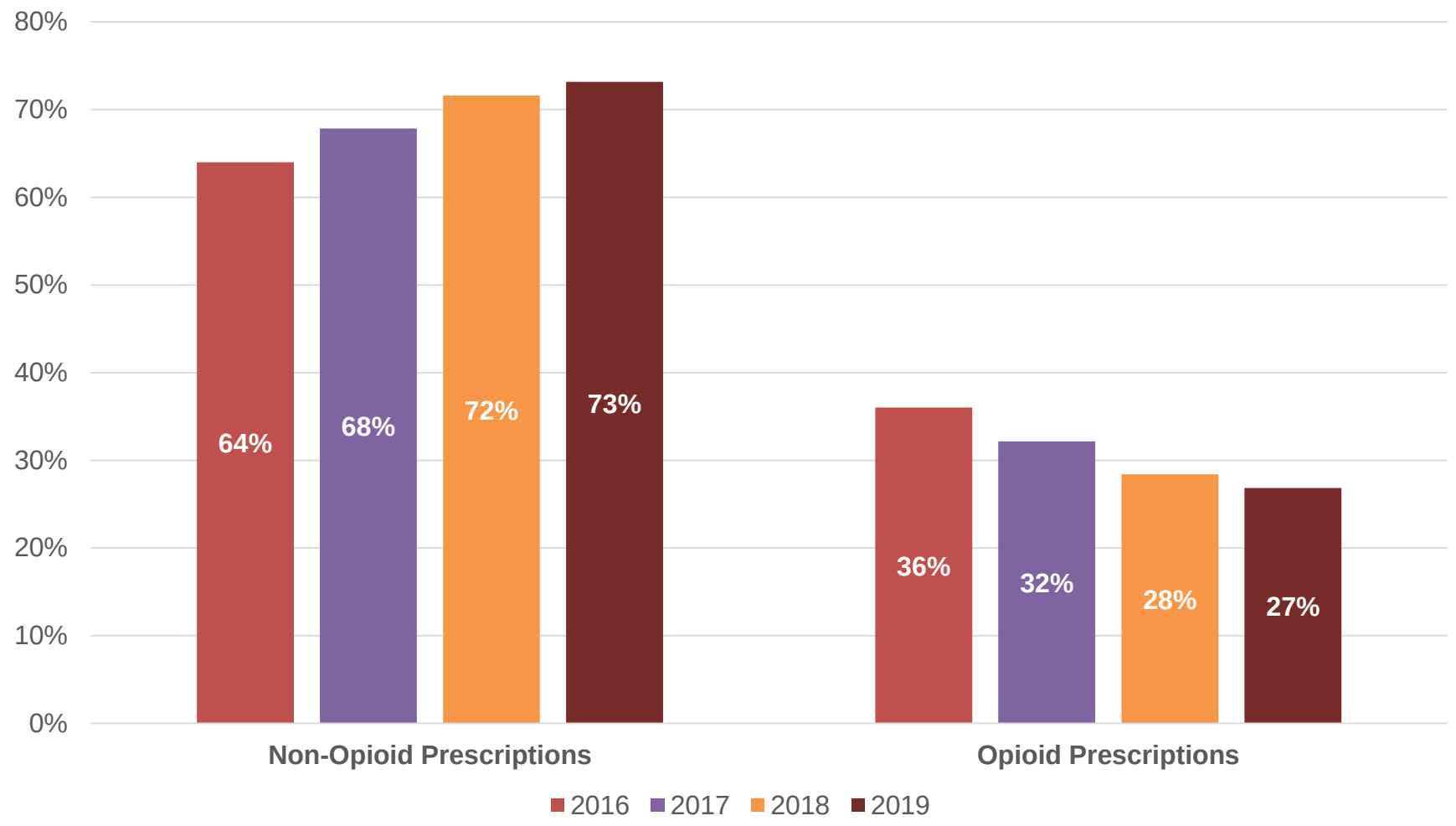
- Medical Marijuana Dispensaries
  - 18 total

- Dispensing Prescribers (e.g. veterinarians)
  - 6,256 self-identified that they dispense

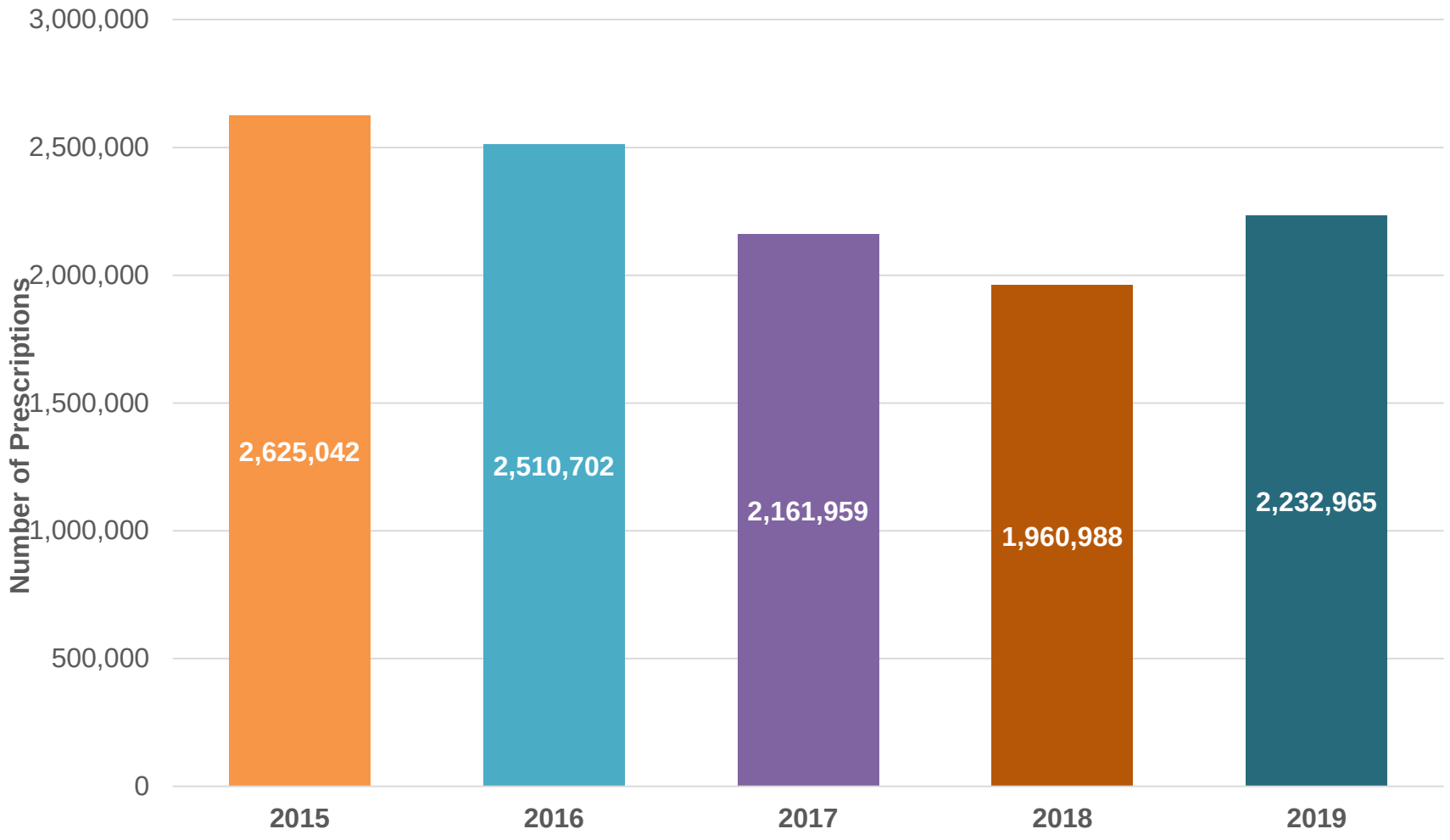
Controlled Substance Rx/Year



Opioid vs. Non-Opioid Prescriptions



Opioid Prescriptions per Year

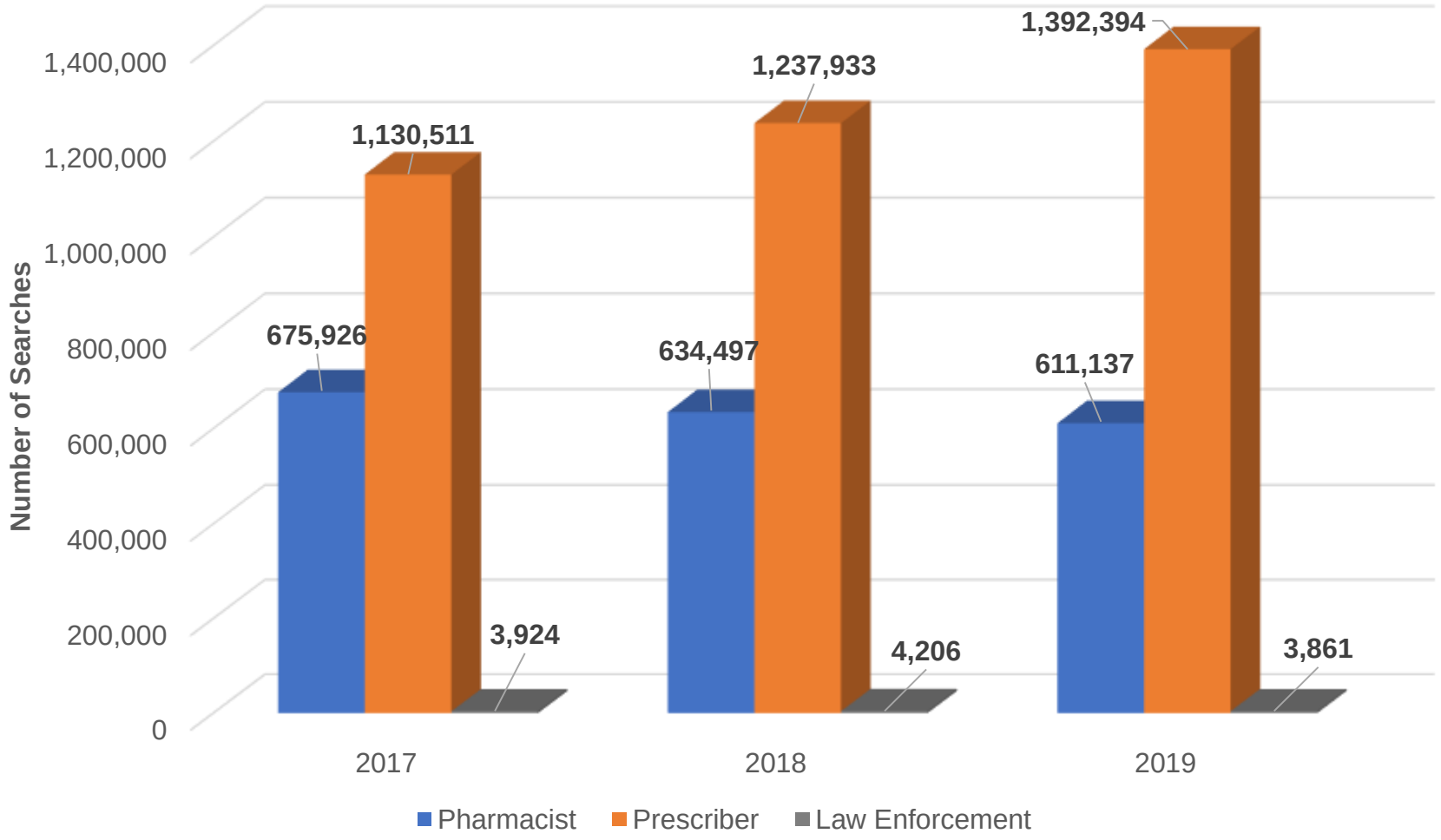


Access to the Database

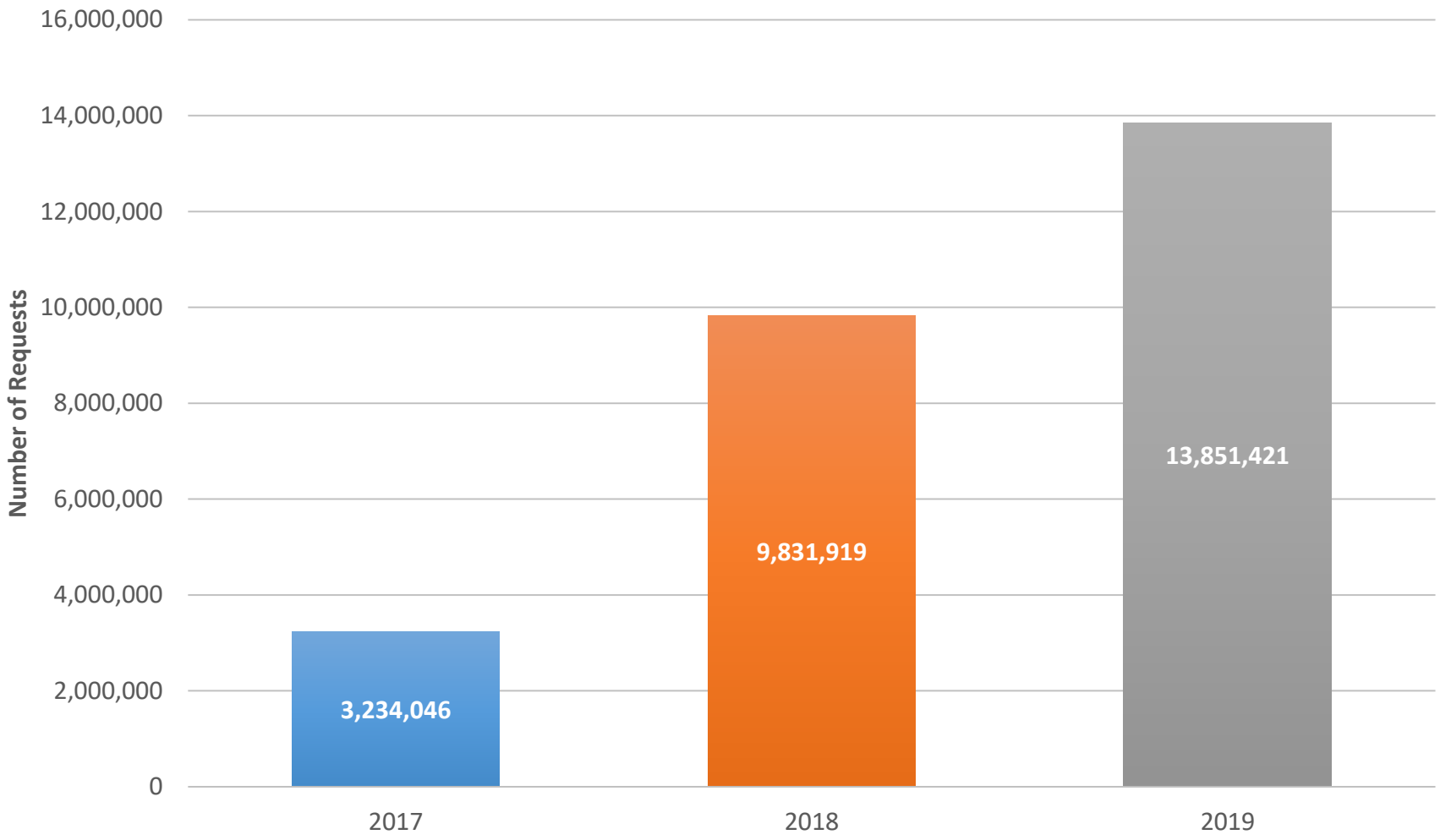
Access Points

- Aware Platform – web-based interface to the database where that provides access to the permitted users (prescribers, pharmacists, delegates, etc.)
- Mobile Application – available for Apple and Android software
- Integration – allows the data to be integrated into the electronic health record (EHR) via the Gateway (more on this to come)

CPMRS User Searches per Year

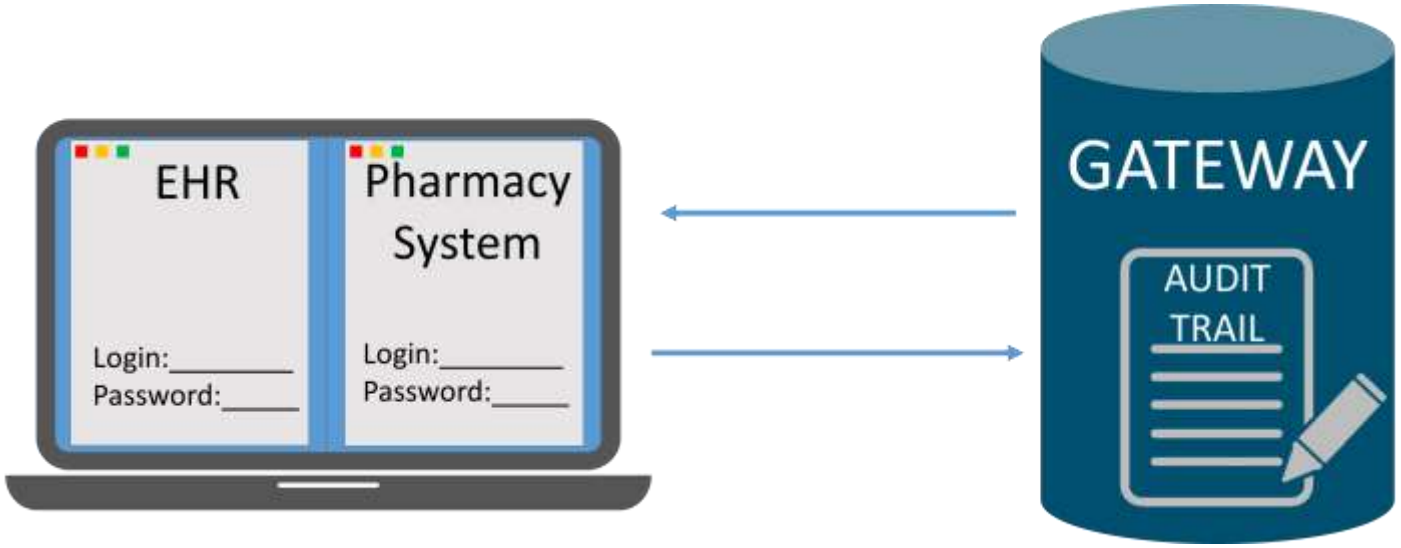


Gateway Requests per Year



Gateway authorizes users access to one-click integration of CPMRS patient reports and NarxCare into their EHRs, pharmacy management systems, and health information exchanges.

Gateway

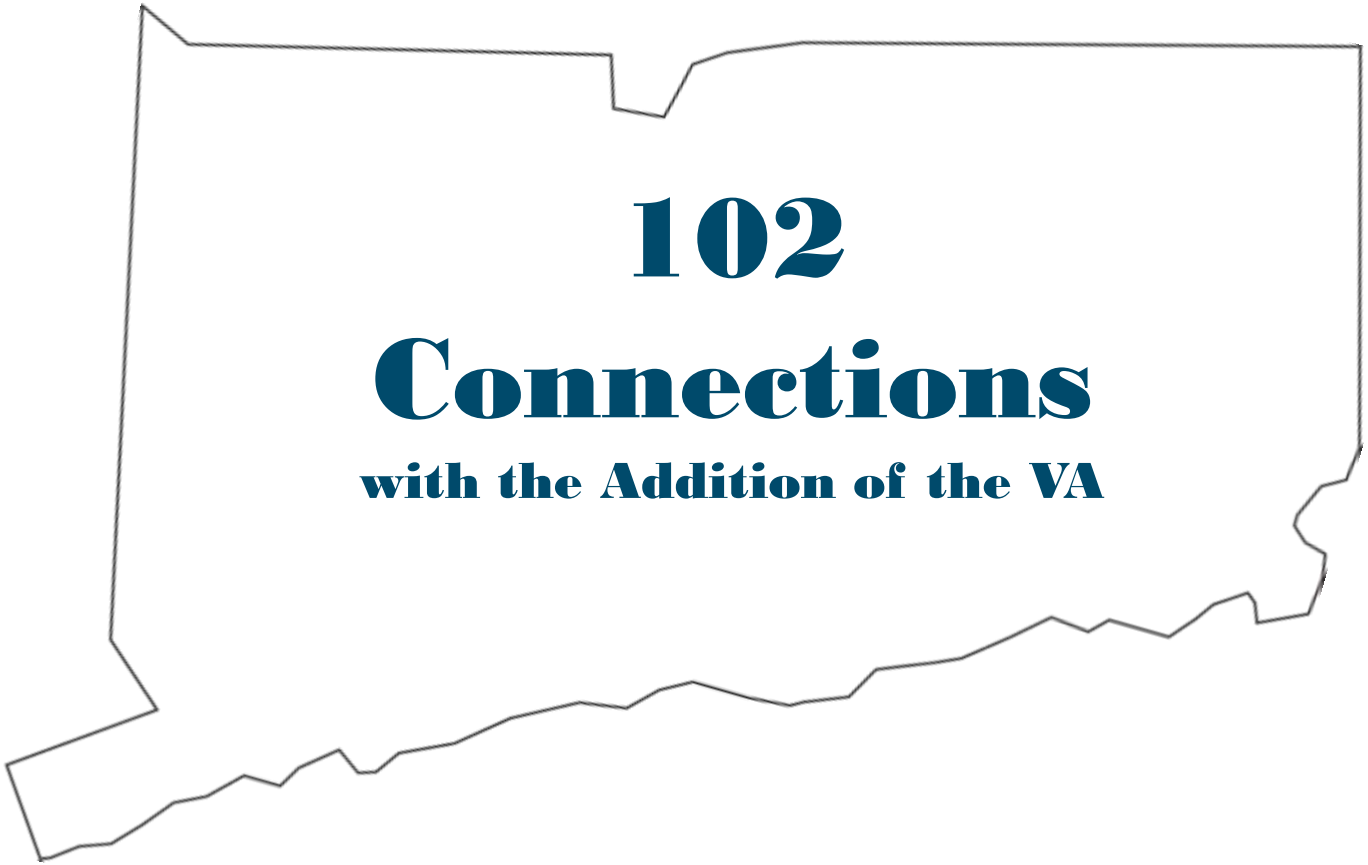


Has an API to assist in the integration

Enhances the end user experience with easier access to the data

Reduces the risk of inappropriate searches

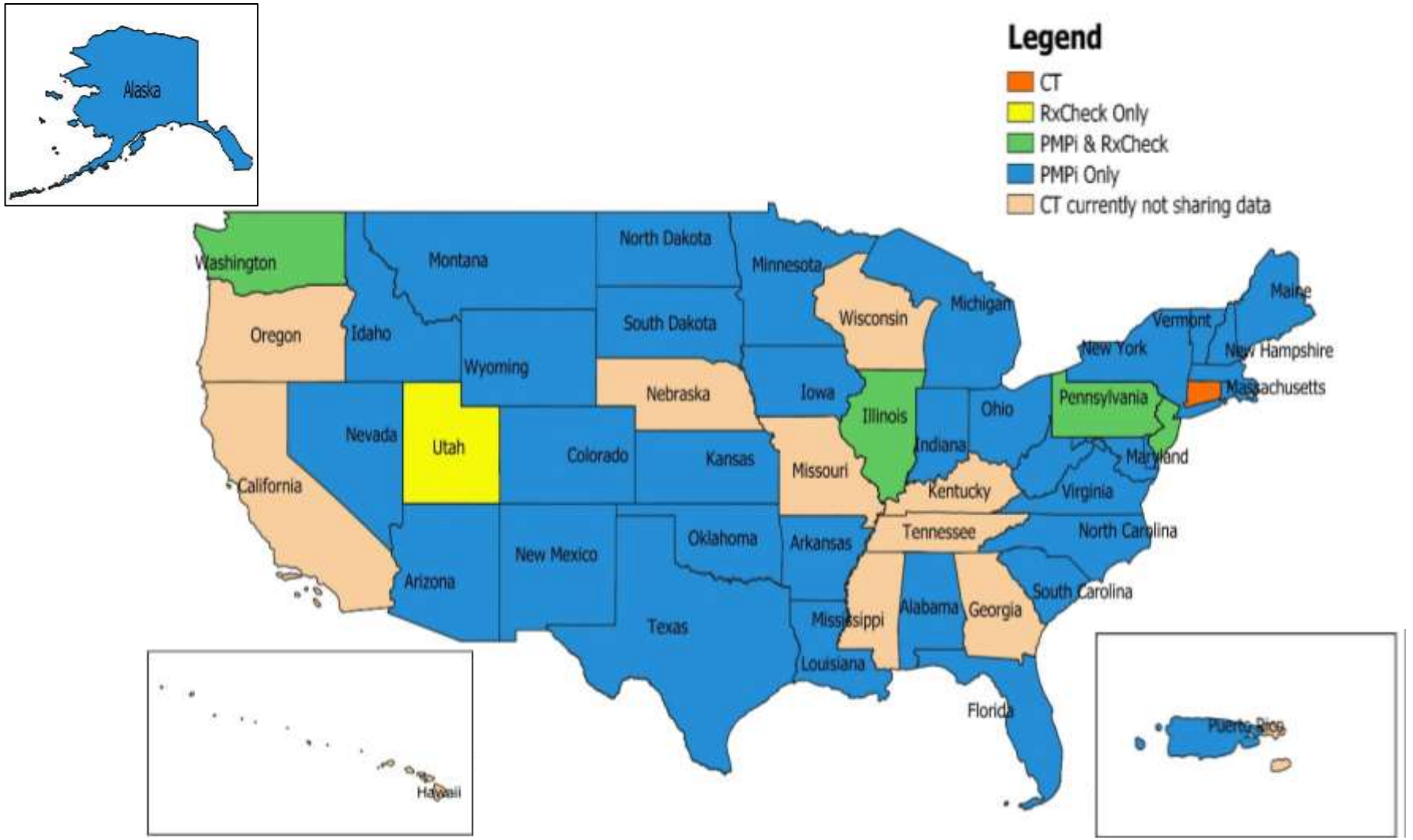
Integration



Clinical Alerts

	Prescriber & Dispenser	Daily Active MME	Opioid & Benzodiazepine
Generated when	a specified number of prescribers and/or dispensers is met or exceeded within a set time period.	the daily active MME is ≥ a specified values.	prescribed concurrently
Current Threshold Current Threshold	5 Prescriber AND 5 Pharmacies WITHIN the last 3 months.	90 MME/day	

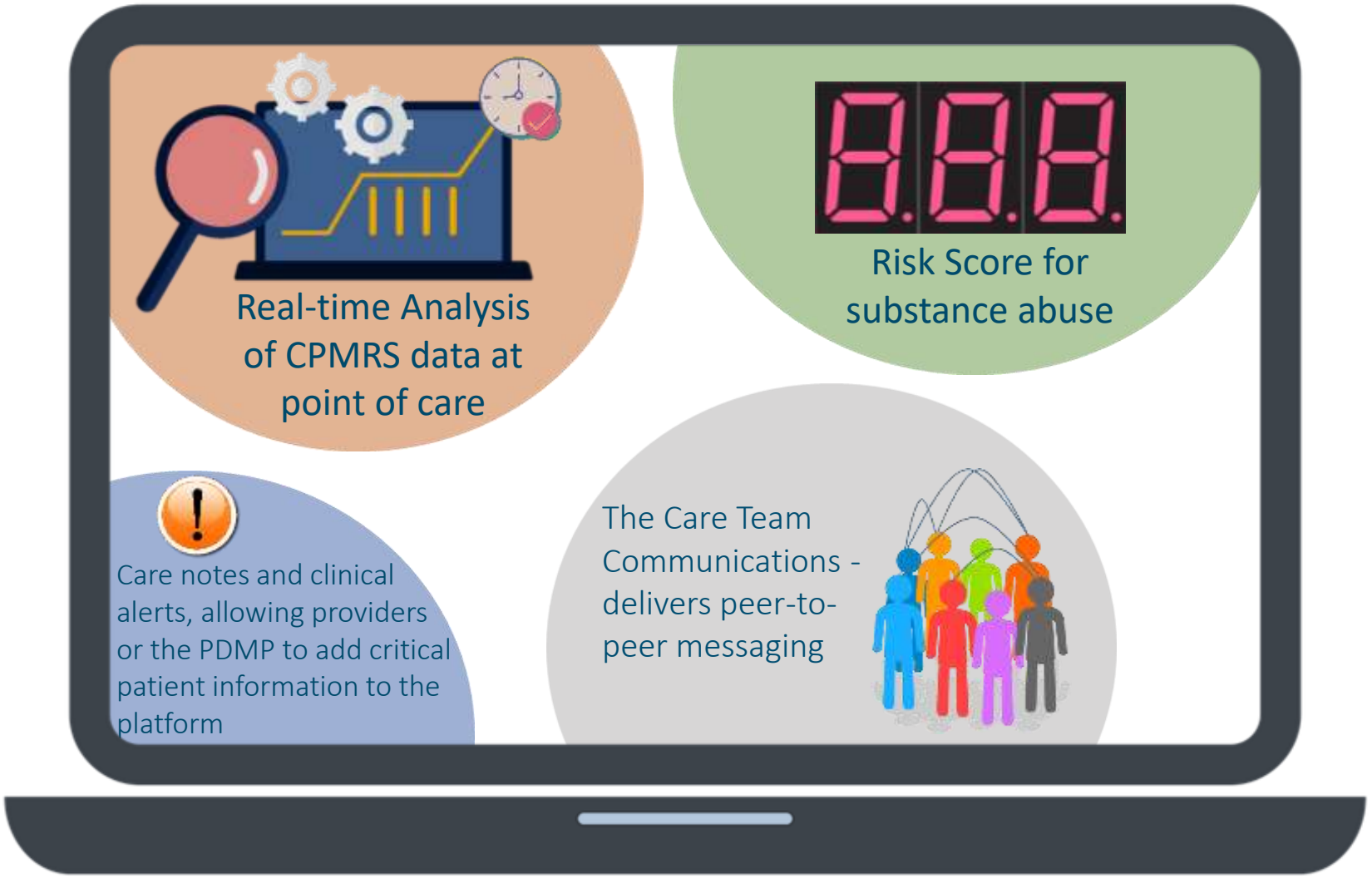
Data Sharing States



DCP

PMP
PRESCRIPTION MONITORING PROGRAM

NarxCare


Real-time Analysis of CPMRS data at point of care
Risk Score for substance abuse
Care notes and clinical alerts, allowing providers or the PDMP to add critical patient information to the platform
The Care Team Communications - delivers peer-to-peer messaging

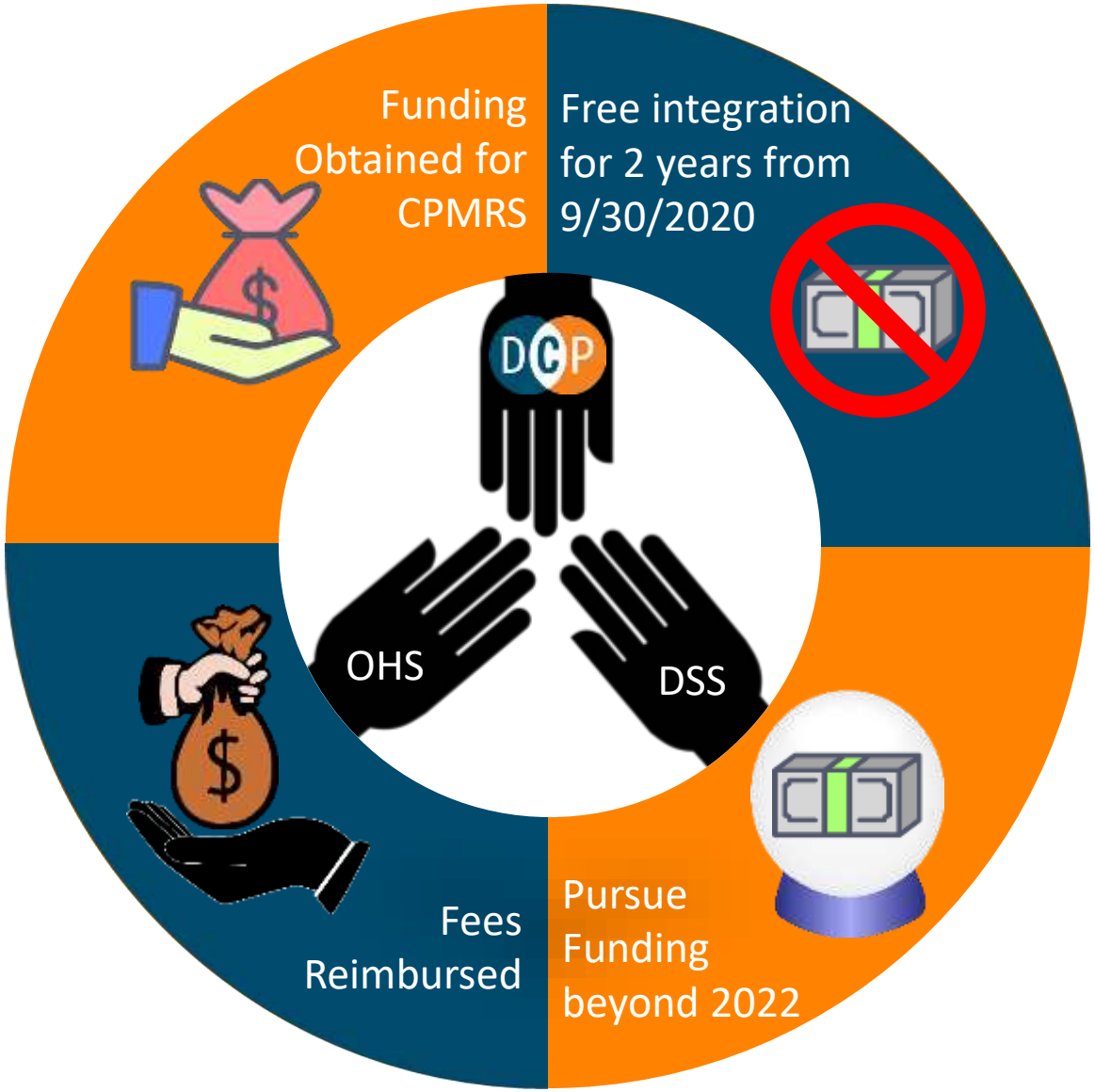
Prescriber Reports

The Prescriber Report is intended to give prescribers insight into their opioid prescribing patterns.

Issued quarterly to all registered CPMRS users with an active account AND a defined role AND specialty who have written at least ONE opioid prescription during the prior six-month period.

Disclaimer: Comparisons with peer groups are meant to give prescribers a point of reference. The PMP recognizes that no two practice settings are identical. Additionally, this report is not intended to be an indication that the prescriber or his/her patients have done something wrong. If you believe one or more of your patients may have substance use disorder (SUD), we encourage you to review the PMP educational materials, www.ct.gov/dcp/pmp, which includes topics on referring patients to treatment for SUD, approaches to addressing SUD with patients, and effective opioid tapering practices.

Funding Integration



Prescription Monitoring Program

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Valerie Maignan, MPH

450 Columbus Boulevard Suite 901
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Phone: 860-713-6073
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Poll

How do you access the state prescription drug monitoring program (PDMP) when caring for patients?

a) State Web Portal
b) Embedded link in the EHR/Pharamacy IT system that opens the portal
c) Single sign-on through the EHR/Pharmacy IT system
d) Data is integrated directly into the EHR/ Pharmacy IT System
e) Don’t access
f) Don’t know

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PDMP Integration: OCHIN Experience

Paul Matthews, CTO

OCHIN

A driving force for health equity

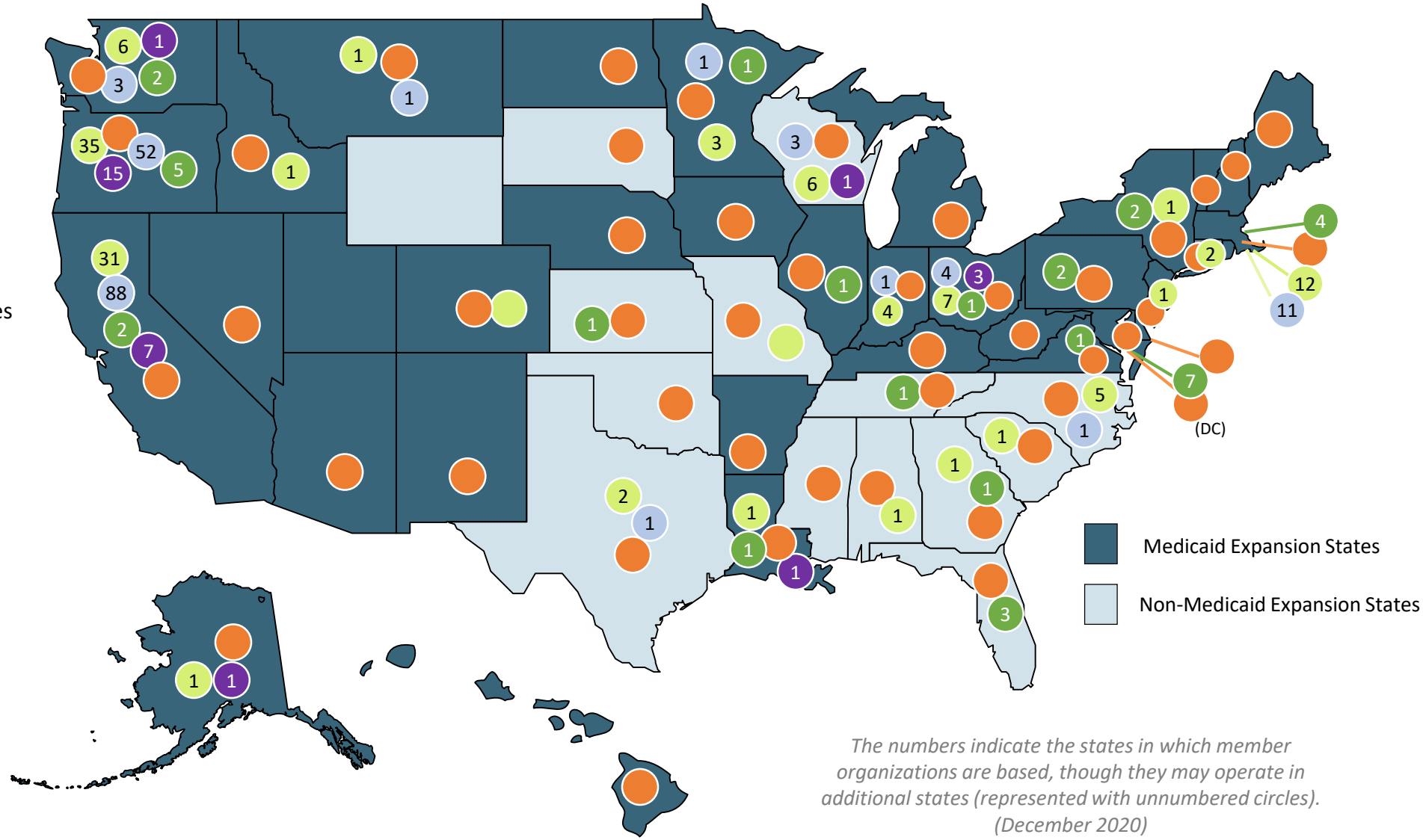
A driving force for health equity

Technology	Research	Support Services
Data Analytics	Chronic Pain & Opioids	Billing
Electronic Health Records	Diseases Affecting the Safety Net	Compliance & Security
Networking & Broadband	Health Equity & Health Policy	Technical Assistance
Telehealth	Social Determinants of Health	Staff Augmentation

OCHIN Supports Over 500 Sites Nationwide and Growing

OCHIN Offerings

- **OCHIN Billing**
  29 Organizations
- **OCHIN Broadband**
  166 Organizations; 459 Sites
- **OCHIN Epic**
  122 Organizations
- **OCHIN Research**
  35 Partners; 42 Members
- **OCHIN Services**
  400+ Organizations



The numbers indicate the states in which member organizations are based, though they may operate in additional states (represented with unnumbered circles). (December 2020)

Moving Data to Create a Nationwide Health Care System

173M+ Clinical Summaries exchanged since 2010

10.8M annual exchanges with non-Epic organizations

Regional Exchanges

- 20 contracted/legacy HIEs
- 10 HIEs in pipeline

Community Referrals

- 17 members live with 8 partners
- 35 health systems in pipeline

State Registries

- 27 PDMP integrated members
- 53 members in process for PDMP
- 24 immunization registries (15 bi-directional)
- 5 immunization registries in process

Federal Partners

- 25K annual exchanges with Social Security Administration
- 93K annual exchanges with Department of Veterans Affairs
- Carequality exchange framework
- eHealth Exchange HUB two-way participant

Laboratory

- 50 Labs (all bidirectional)

Electronic Case Reporting (eCR)

- 503K messages triggered by COVID events since April 2020

As of January 2021

ONC - Interoperability Standards Advisory (ISA)

Allows a Prescriber to Request a Patient's Medication History from a State Prescription Drug Monitoring Program (PDMP) [1]

Type	Standard / Implementation Specification	Standards Process Maturity	Implementation Maturity	Adoption Level	Feder
Implementation Specification	NCPDP SCRIPT Standard, Implementation Guide, Version 10.6	Final	Production	●●○○○	No
Implementation Specification	NCPDP SCRIPT Standard Implementation Guide Version 2013101	Final	Production	Feedback Requested	No
Implementation Specification	NCPDP SCRIPT Standard, Implementation Guide, Version 2017071	Final	Production	●●○○○	No
Standard	Standard HL7®, Version 2	Final	Production	Feedback Requested	No
Standard	PMIX, Version 2	Final	Production	●●●●○	No
Standard	CDS Hooks Services	Final	Production	●●○○○	No
Emerging Standard	*HL7® FHIR® Implementation Guide: US Meds ST U2*	*Balloted Draft*	*Pilot*	*Feedback Requested*	*No*
Emerging Standard	*SMART on FHIR®*	*In Development*	*Production*	●●●○○	*No*

Specifications can be daunting:

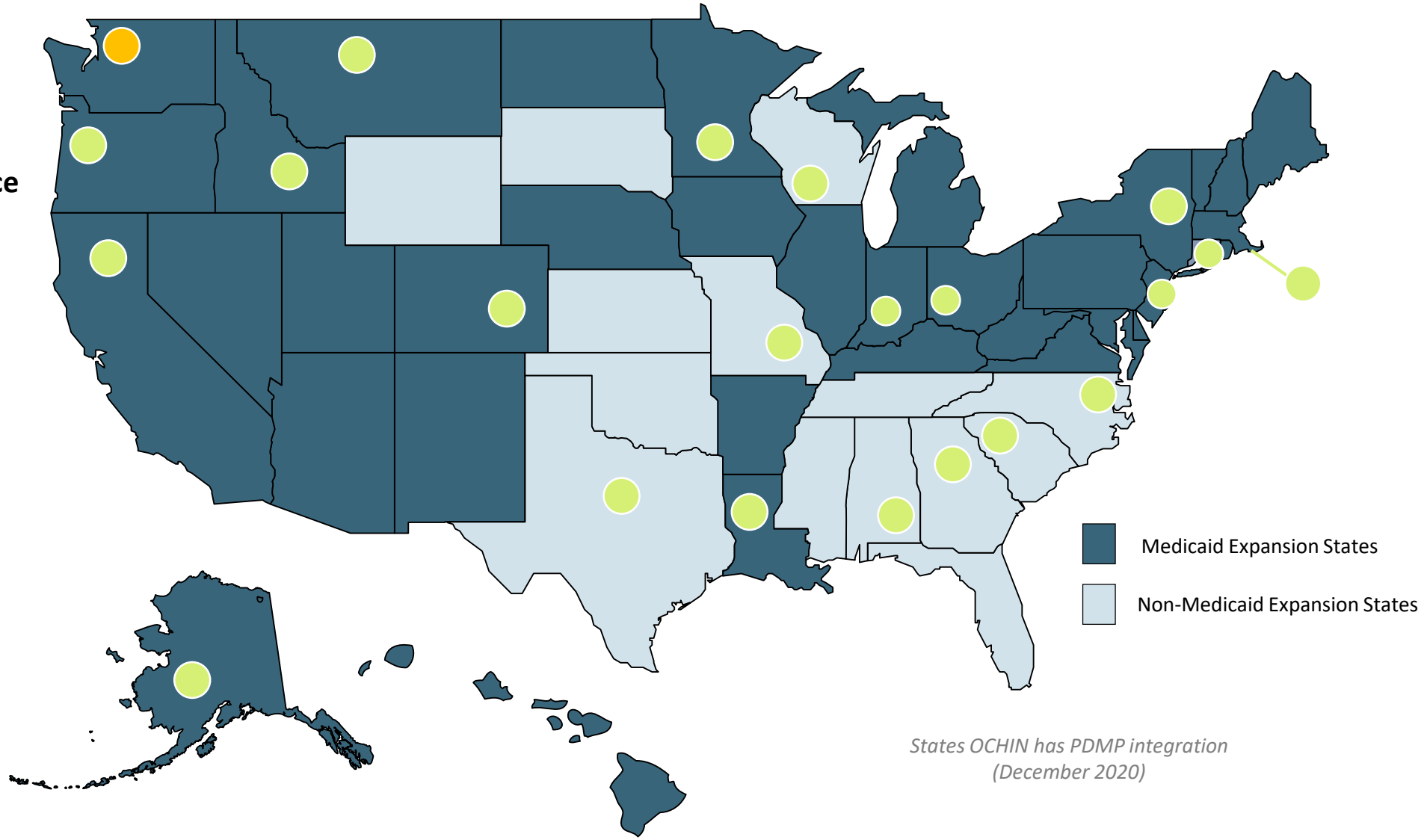
This list of specifications for connection to a PDMP can be overwhelming. Understanding you States requirement, and your application vendors options is the best place to start

[1] https://www.healthit.gov/isa/allows-a-provider-request-a-patients-medication-history-a-state-prescription-drug-monitoring

OCHIN PDMP Integrations to a single EHR Platform

Connection Method

- 3rd Party Web Service
- NCPDP Script



States OCHIN has PDMP integration (December 2020)

Integration of PDMP into the Medical Record Platform

Option 1: **Web Service (Single Sign-On) via 3rd Party Gateway**

- Simple integration allowing for a Report (HTML) to be display with all relevant data
- Allows for advanced patient matching that increases provider satisfaction
- Simplifies regulatory limitations across multiple state registries

Option 2: **Prescription Monitoring Information Exchange (PMIX) via 3rd Party Gateway**

- Utilizes NCPDP interface to a 3rd Party translation gateway that then use PMIX to connect to the PDMP
- Allows for discrete exchange of Rx data
- State regulations on the secondary use and storage of Rx data from the PDMP can limit functionality

Option 3: **NCPDP SCRIPT Standard Interface directly to the PDMP**

- Integration allows for discrete data exchange with ability to reconcile
- Patient matching is limited and can result in lower satisfaction levels
- State regulations on the secondary use and storage of Rx data from the PDMP can limit functionality

Your implementation method comes with some trade-offs:

Meeting multiple state regulatory requirements versus ability to utilize returned data for secondary needs

Integration of PDMP “Regulatory Requirements”

Regulatory requirement will vary by state requiring careful consideration when choosing your integration method.

- Does the state allow for the storage of the returned data
- Does the state allow for secondary display of returned data
- Does the state have specific audit reporting requirement

Does your organization cross state boundaries:

If your organization has facilities in more that one state be mindful, you will need to make sure your implementation can meet disparate regulations and you may have to implement additional interfaces

Pain Management CDS: OCHIN Experience

Stacie Carney, CMIO

OCHIN

A driving force for health equity

Let’s start with a case…

You are a PCP seeing your ninth patient of the day: a 56-year-old man with diabetes, depression, and severe knee pain. Your clinic’s social determinants of health screen also indicates financial strain and marginal housing. Along with BID naproxen, your patient has been taking one hydrocodone a few times a week, started by his previous clinician, and would like to increase the hydrocodone to daily, in order to try to get back to work.

You recently heard at a CME course that the CDC 2016 guidelines for prescribing opioids for chronic pain emphasize a comprehensive assessment and discussion of risks and benefits regularly, before and during pain treatment. However, your next patient is waiting….

The Population We Serve

6M Active Patients

73% Female | **14%** Children

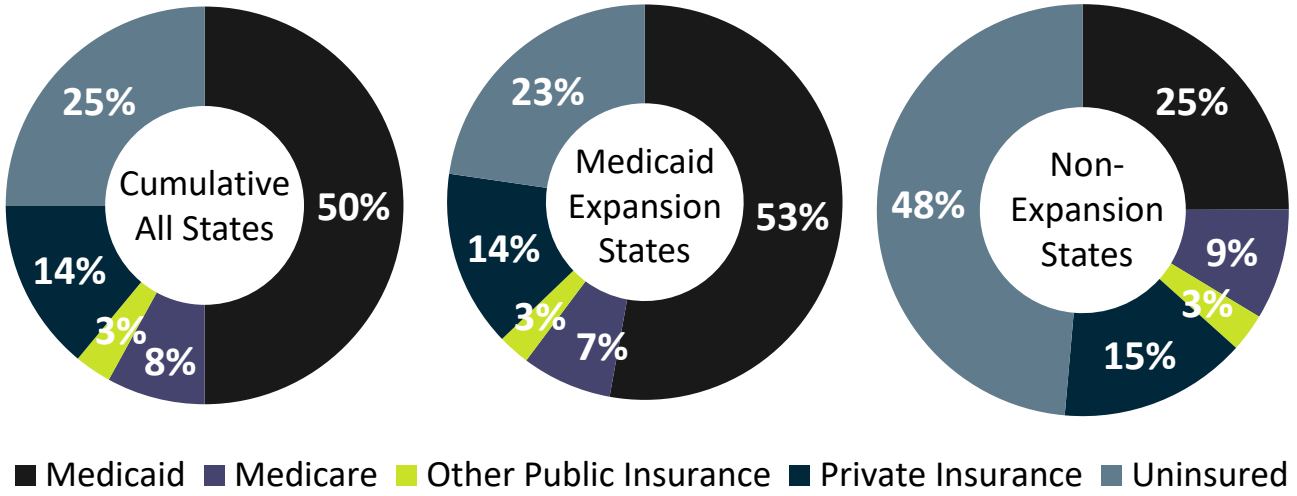
45% At or Below Federal Poverty Level

Diversity

42% Racially Diverse | **26%** Hispanic

30% Best Served in a Language Other than English

Payer Mix

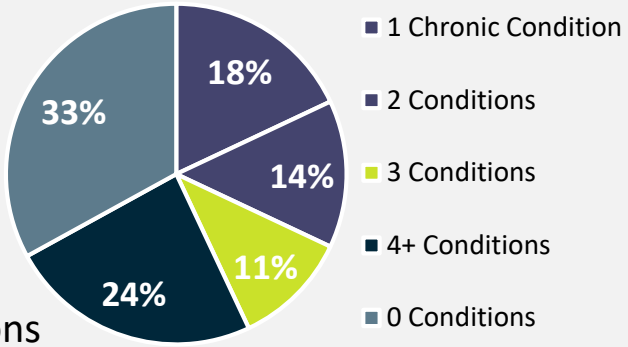


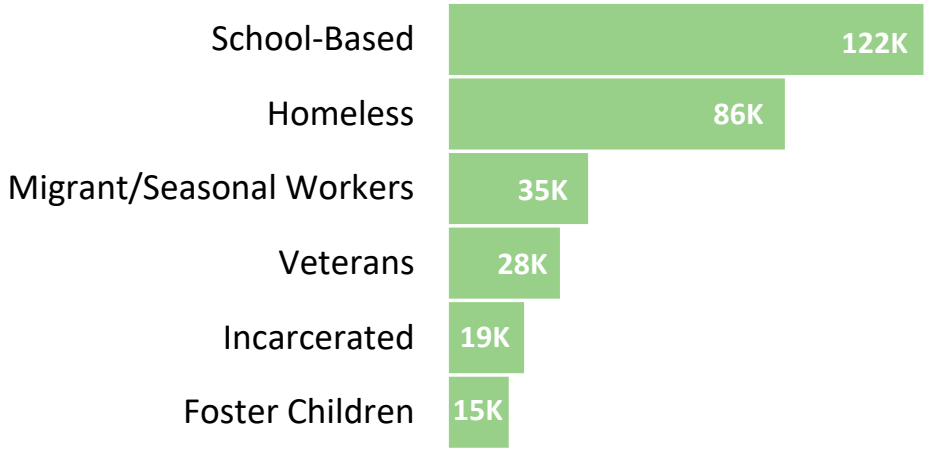
Chronic Conditions

67% One or more chronic condition

49% Two or more chronic conditions

60% One or more MH/BH diagnosis among patients with chronic conditions





Power of the Platform: A Community Record

- ✓ Better Care Coordination
- ✓ Instantaneous Data
- ✓ Simpler Reporting
- ✓ Reduced Costs
- ✓ Reduced Data/Reporting Issues

OCHIN Epic – Customized to the Needs of Safety Net Providers

Safety Net Customizations

- Alternative Payment
- Behavioral Health
- Chronic Opioid Management
- Corrections Health
- Healthcare for the Homeless
- Enabling Services
- Maternal Care Management
- PACE – *Coming Soon*
- Refugee Health
- Ryan White
- Social Determinants Tracking
- State specific programs and reporting
- STD
- Tuberculosis
- Title X
- UDS and Other Regulatory Requirements

Plus support for many specialties and care settings

Statistics

3M Active Patients*

122 Clinic Organizations

In **22** States

44M Clinical Records Exchanged Last 12 Months

**Patients seen in an OCHIN Epic clinic in the last three years (Sept. 2020)*

OCHIN Clinical Knowledge Management

1. Maintenance of evidence-based clinical content in our products
2. Specific clinical guideline sources that OCHIN aims to support for members through structured clinical decision support
3. Framework for collaborative-wide decision support, and customization where possible
4. Vision: Support up to date content and provide the ability to customize where possible

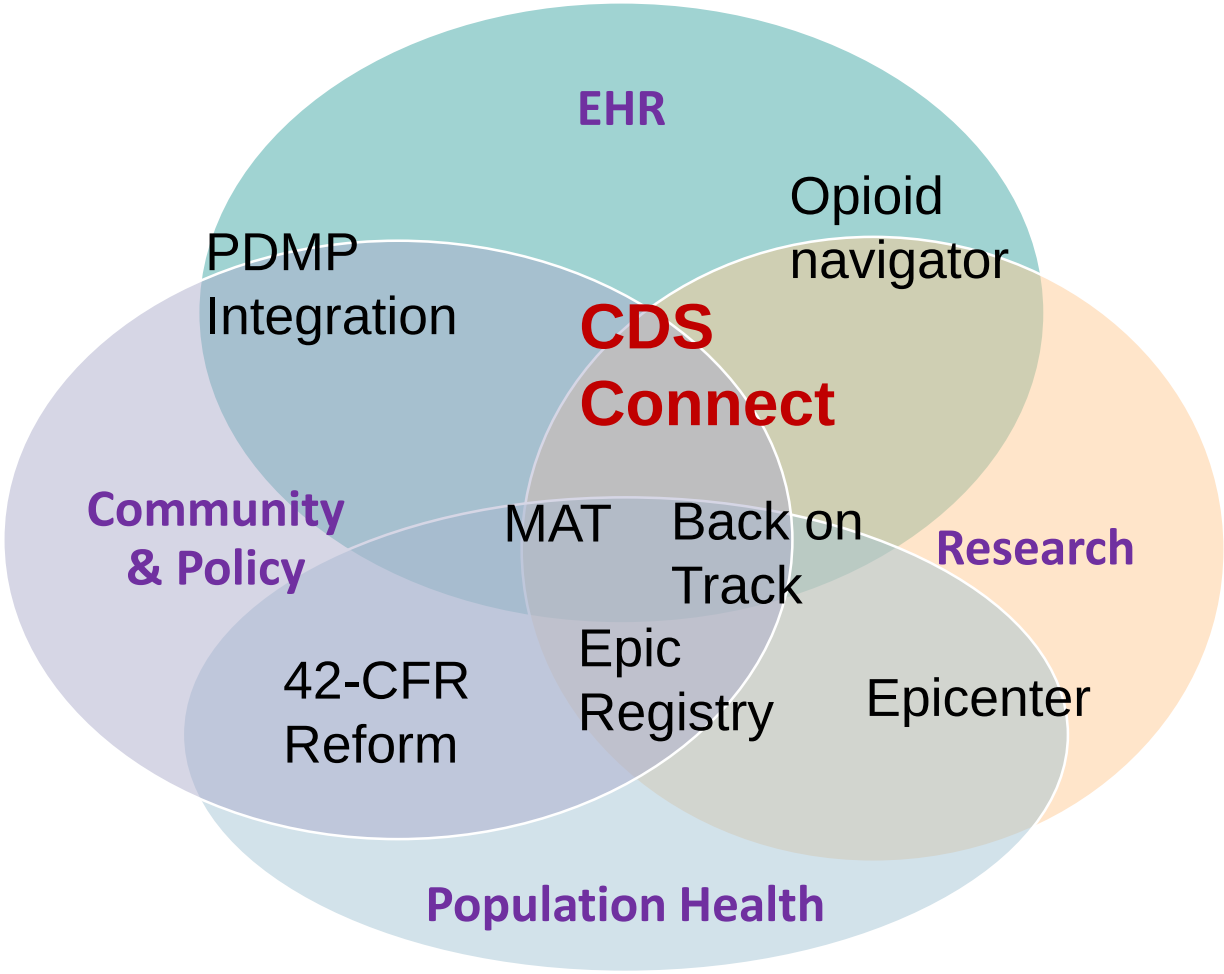
Core Guidelines Sources:

Primary
USPSTF
CDC/ACIP

Additional
American Diabetes Association
American Academy of Pediatrics
SAMHSA
ACC/AHA
ACOG
ASCCP
And more

CDS Connect Pilot March-August 2018

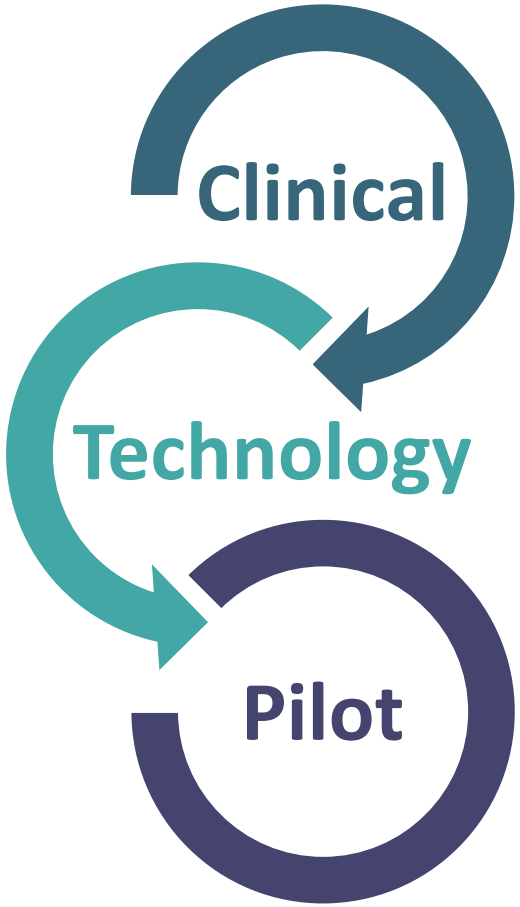
Context: Opioid-Released Projects at OCHIN, 2018



OCHIN's CDS Connect Journey: Piloting Pain Management Decision Support a New Way

Why we participated:

- *CDS Connect project offered connection to evidence-base content maintained externally*
- Highly relevant subject material
- Supported by AHRQ, skilled technology partner in MITRE



Clinical Basis

MITRE had considered various approaches to the 2016 CDC Guideline for Prescribing Opioids for Chronic Pain. OCHIN's considerations - impactful for patients and care teams, technically feasible

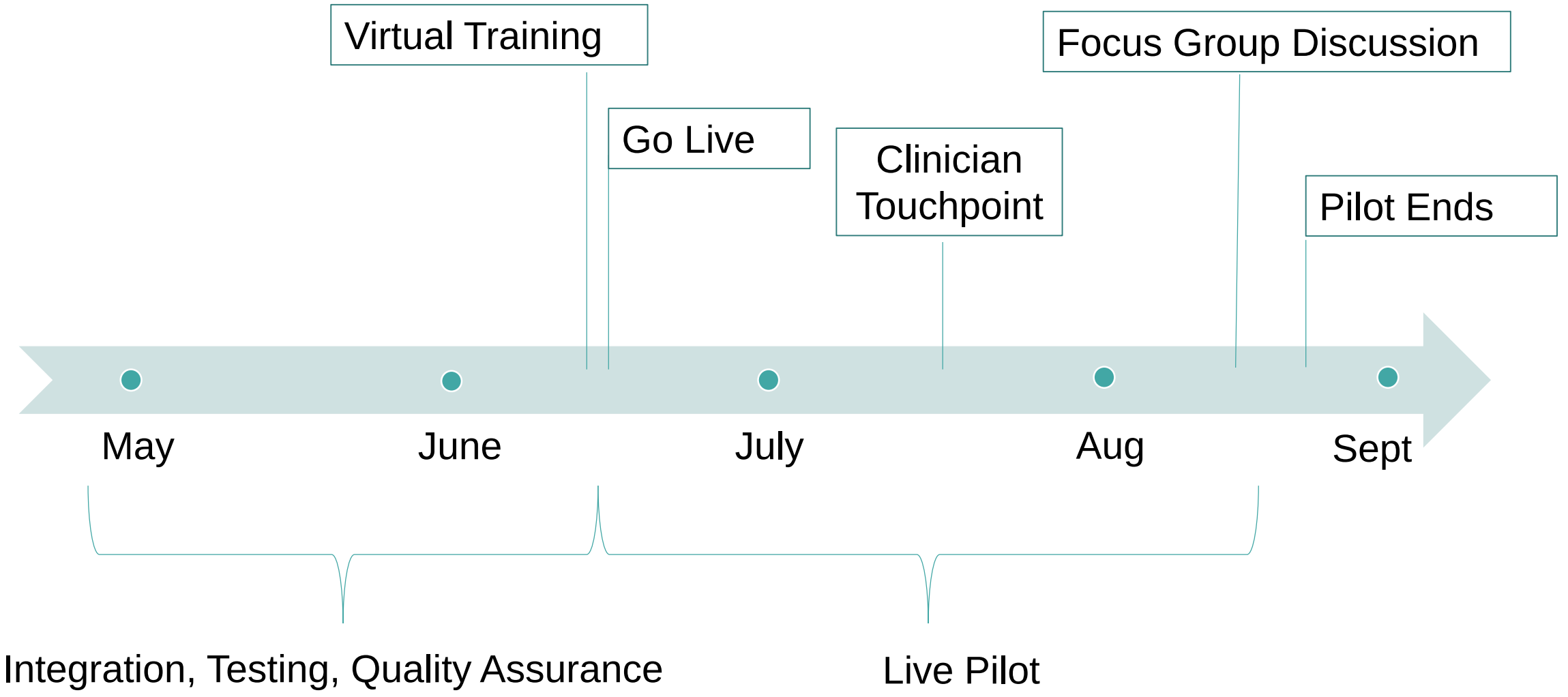
Technology- Artifact design

Pain summary – an organized presentation of a patient's structured EHR data relating to 2016 CDC Guideline. FHIR API used

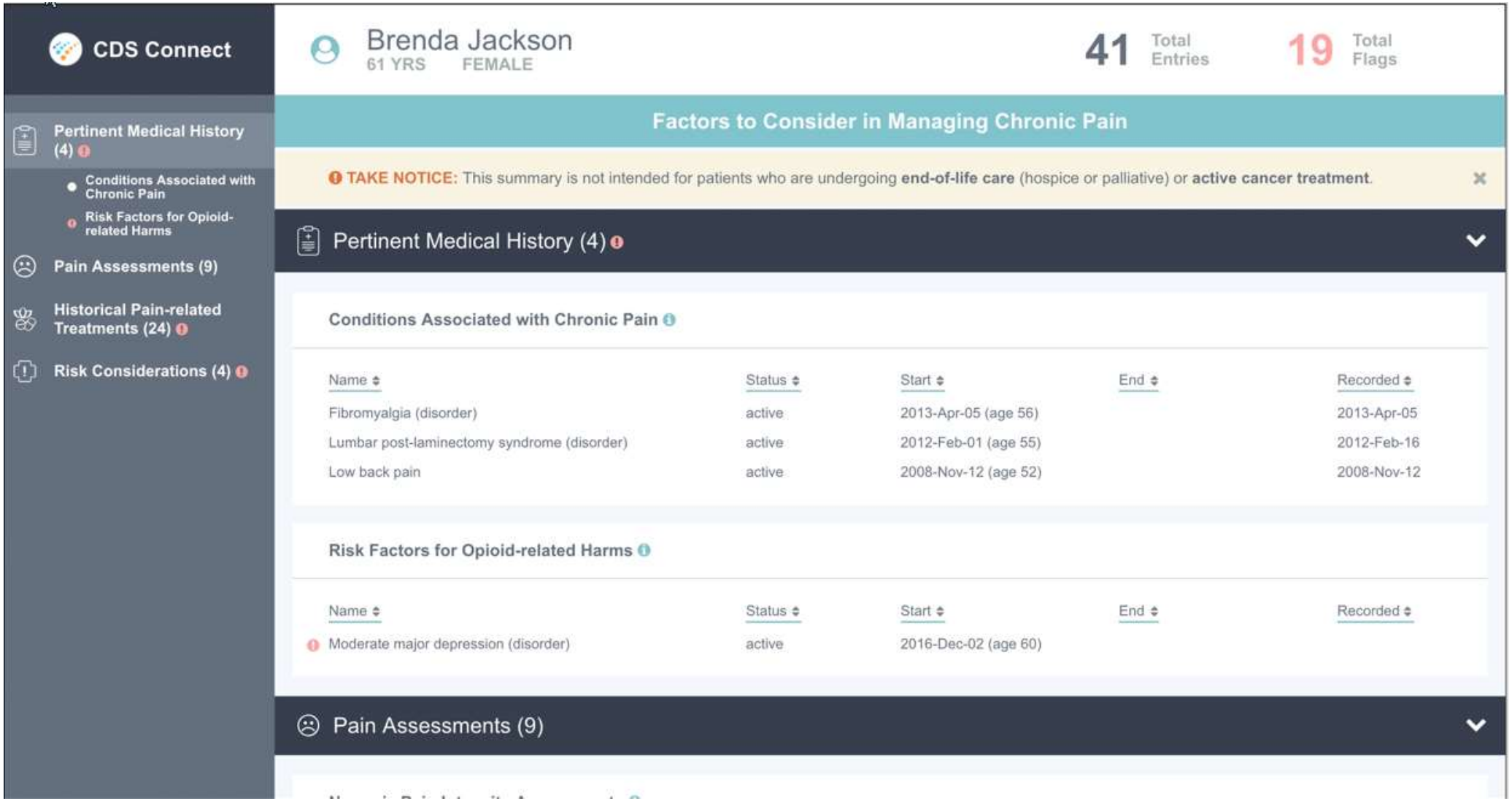
Pilot

Piloted at one OCHIN member clinic

CDS Connect Pilot: 2018 Timeline



Pain Management Summary



Source: CDS Connect program, AHRQ, https://cds.ahrq.gov/cdsconnect/artifact/factors-consider-managing-chronic-pain-pain-management-summary

OCHIN CDS Connect Pilot: Results

Successes

- Successful integration- proof of concept a success!
- CDS trigger 100% reliable
- Clinician feedback:
  - ‘Simple and intuitive’
  - Reduced burden
  - Benefited care
  - Informed decision making

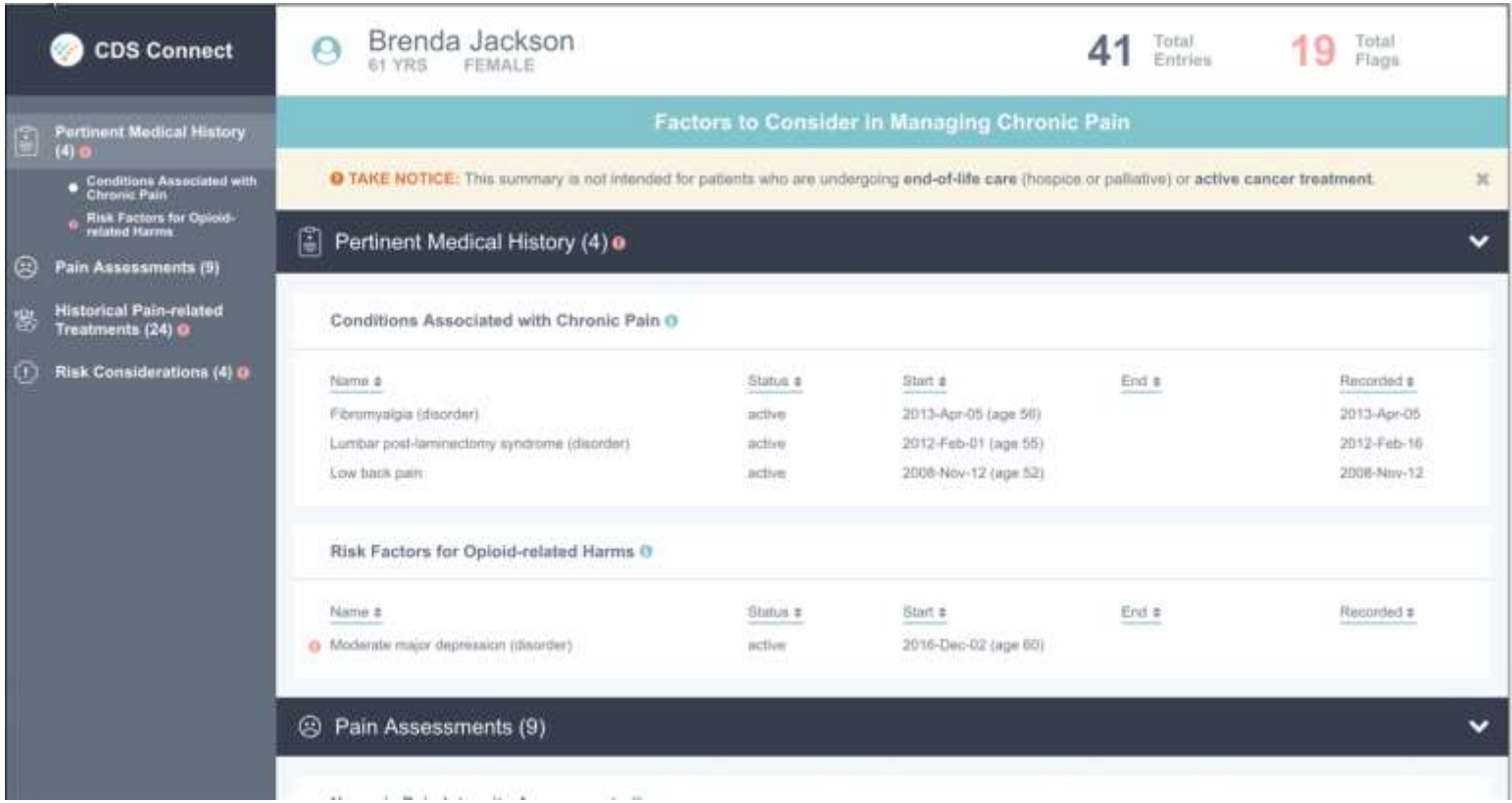
Lessons Learned

- Not all required discrete data was available via native FHIR API, customization needed
- Lag time (click->summary)
  - Improved with troubleshooting
- Participants raised questions clinically related but out of scope
  - MME, PDMP, UDS, CSA
- Short timeline
  - Challenging to engage users and change workflow
  - Strains ability to assess, adjust, spread

Back to our Case…

Clinician clicks on pain summary link:

- Quickly sees several areas recommended for review
- Feels more confident in conducting focused treatment discussion
- Reviews data along with patient



Source: CDS Connect program, AHRQ, https://cds.ahrq.gov/cdsconnect/artifact/factors-consider-managing-chronic-pain-pain-management-summary

Progress made in supporting guideline-based pain care

OCHIN remains highly interested in use of CDS repository

Poll

Which of the following is the most important information to see during pain management visit?

a). Information from the PDMP embedded in the clinician workflow of the EHR

b). Non-narcotic pain medications used for pain

c). Non-pharmaceutical pain therapies

d). Historical pain related treatment

e). All of the above

UCONN HEALTH



AGENCY FOR HEALTHCARE RESEARCH AND QUALITY

AHRQ

Advancing Shareable, Interoperable Clinical Decision Support

Edwin Lomotan, MD, FAAP, FAMIA

Agency for Healthcare Research and Quality

January 13, 2021

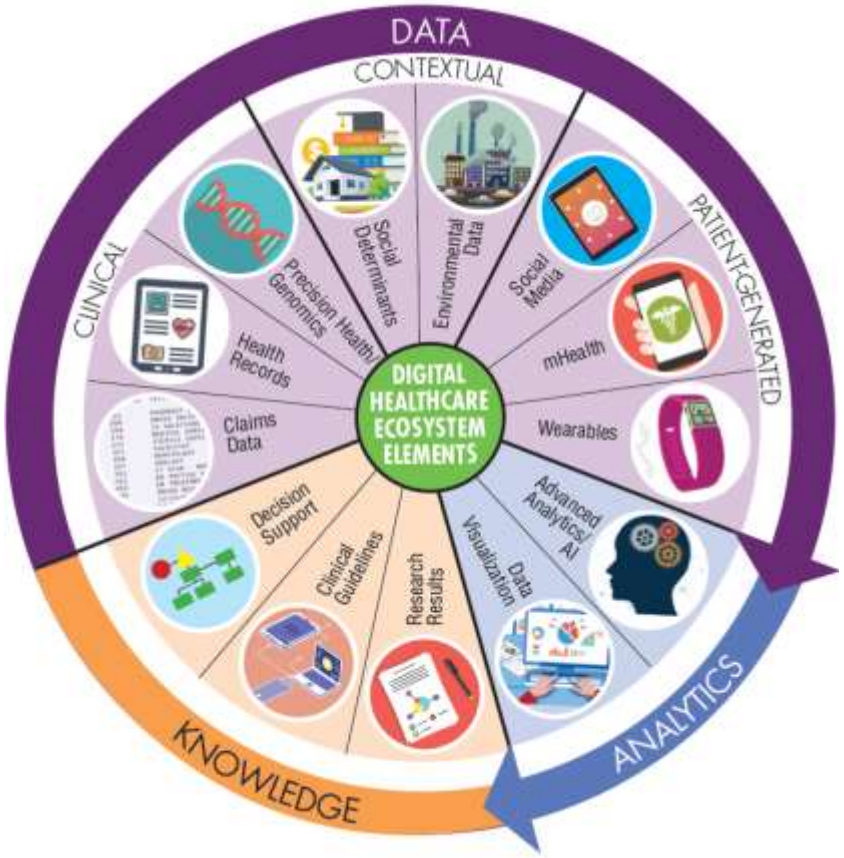
Agency for Healthcare Research and Quality
Division of Digital Healthcare Research

AHRQ Mission

To produce evidence to make health care safer, higher quality, more accessible, equitable, and affordable, and to work within HHS and with other partners to make sure that the evidence is understood and used

Division of Digital Healthcare Research

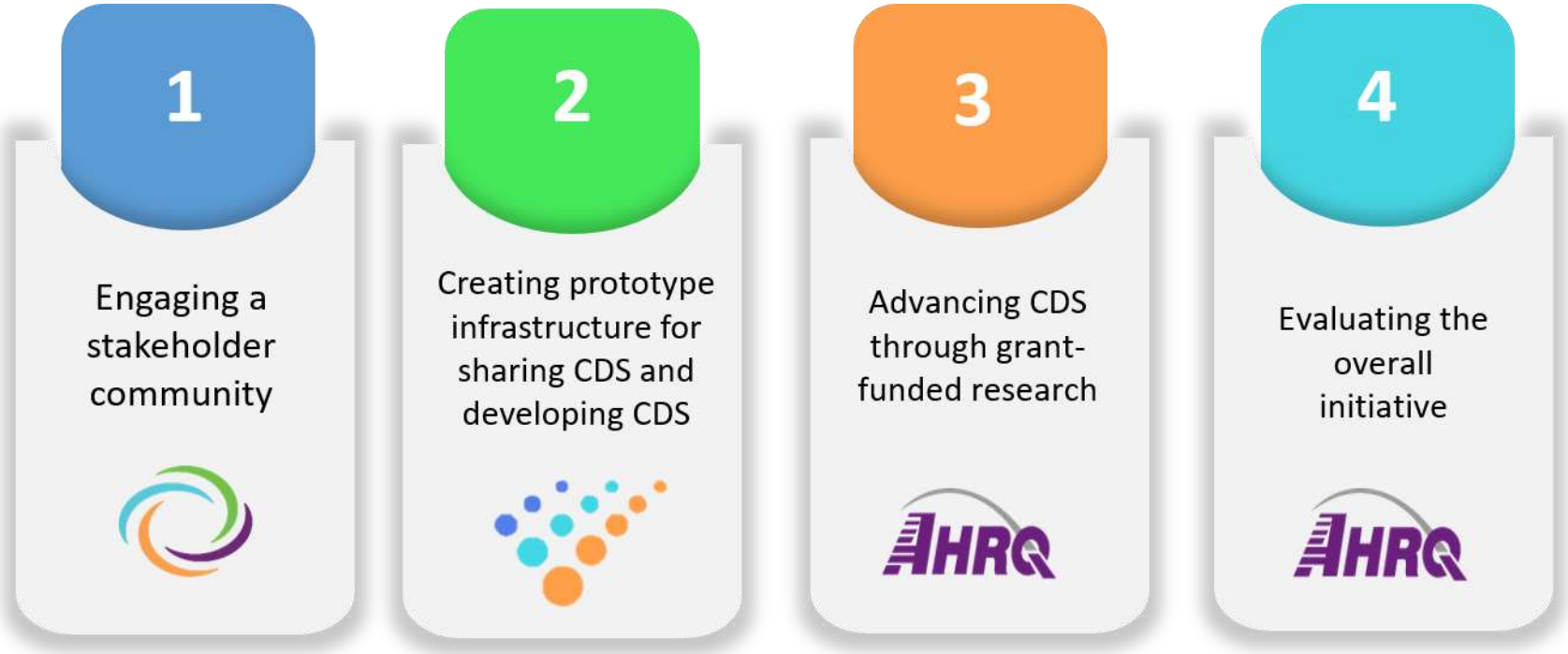
- Located within the Center for Evidence and Practice Improvement
- In 2019, the program supported 120 research grants and seven contracts that represent a total investment of $150M
  - $43M to improve patient engagement and shared decision-making
  - $71M to support clinician decision-making
  - $35M to improve delivery of health care at the system level



Source: https://digital.ahrq.gov/2019-year-review

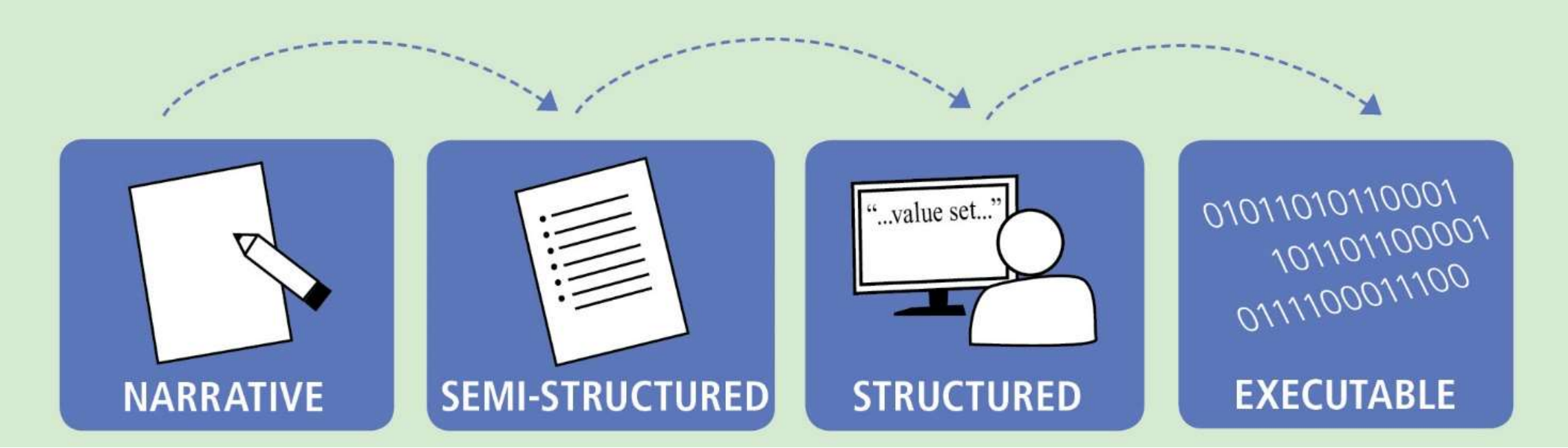
AHRQ CDS Initiative (2016-)

Advancing evidence into practice through CDS and making CDS more shareable, standards-based and publicly- available



https://cds.ahrq.gov

Transforming Evidence-based Knowledge into Clinical Decision Support



Level 1 (or "L1")

Level 2 (or "L2")

Level 3 (or "L3")

Level 4 (or "L4")

Adapted from: Boxwala, A. A., et al. (2011). "A multi-layered framework for disseminating knowledge for computer-based decision support." Journal of the American Medical Informatics Association : JAMIA 18 Suppl 1: i132-139.

L1 to L2 Translation

"Before starting, and periodically during continuation of opioid therapy, clinicians should evaluate risk factors for opioid-related harms. Clinicians should incorporate into the management plan strategies to mitigate risk, including considering offering naloxone when factors that increase risk for opioid overdose, such as history of overdose, history of substance use disorder, higher opioid dosages (greater than or equal to [≥] 50 morphine milligram equivalents [MME]/day), or concurrent benzodiazepine use, are present."

Artifact Representation

Triggers

Trigger type: Named event

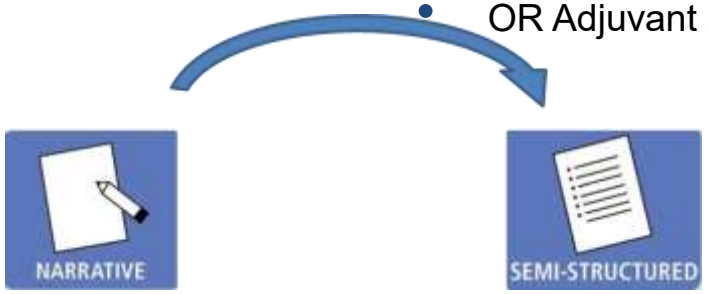
Trigger event: Clicks on link to Pain Management Summary

Inclusions

Age>=18 years

AND

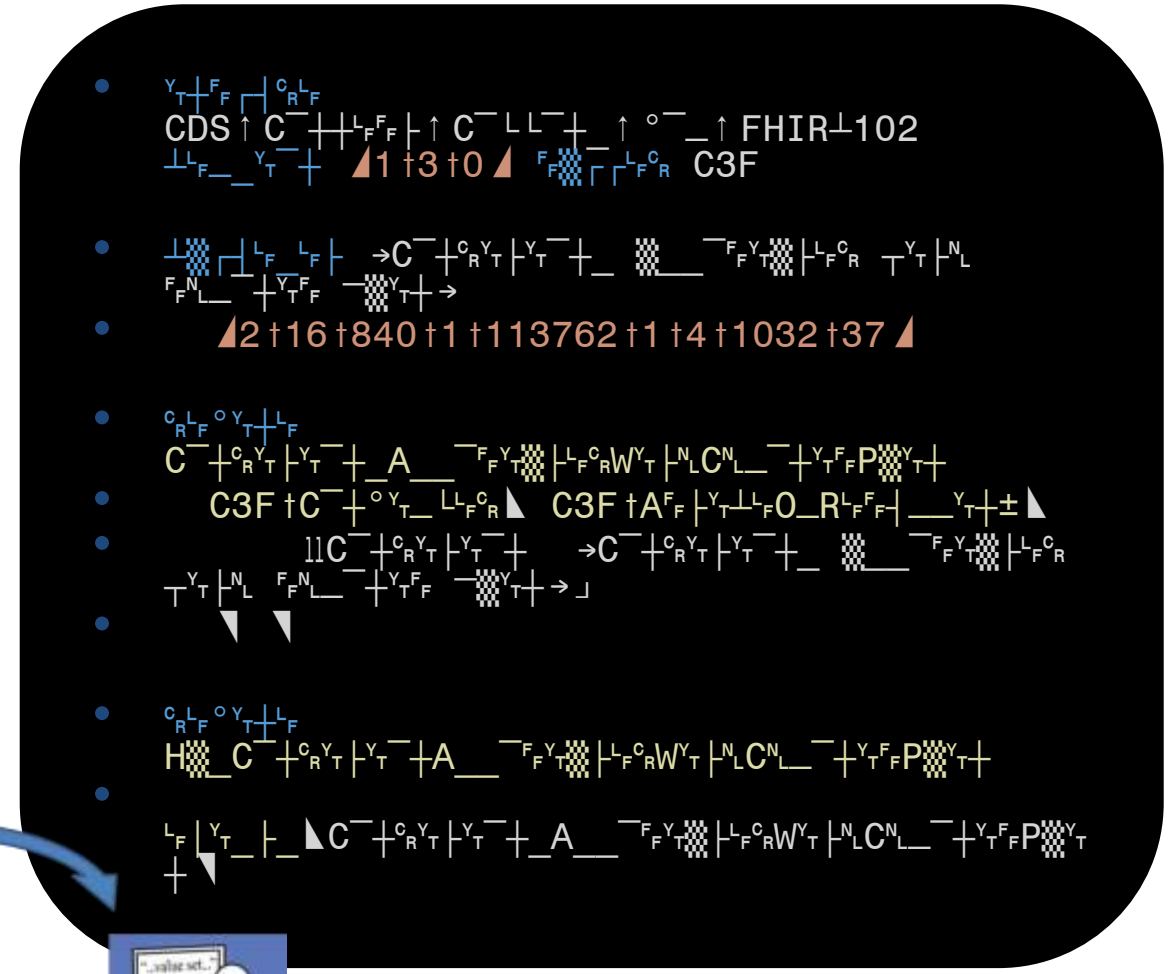
- OR Conditions associated with chronic pain (confirmed, active or recurring status, onset date, asserted date, abatement date)
- Opioid pain medication
  - Orders (date, active, completed, or stopped within past 180 days)
  - Statements (date, active, or completed within past 180 days)
- OR Adjuvant analgesic medication …



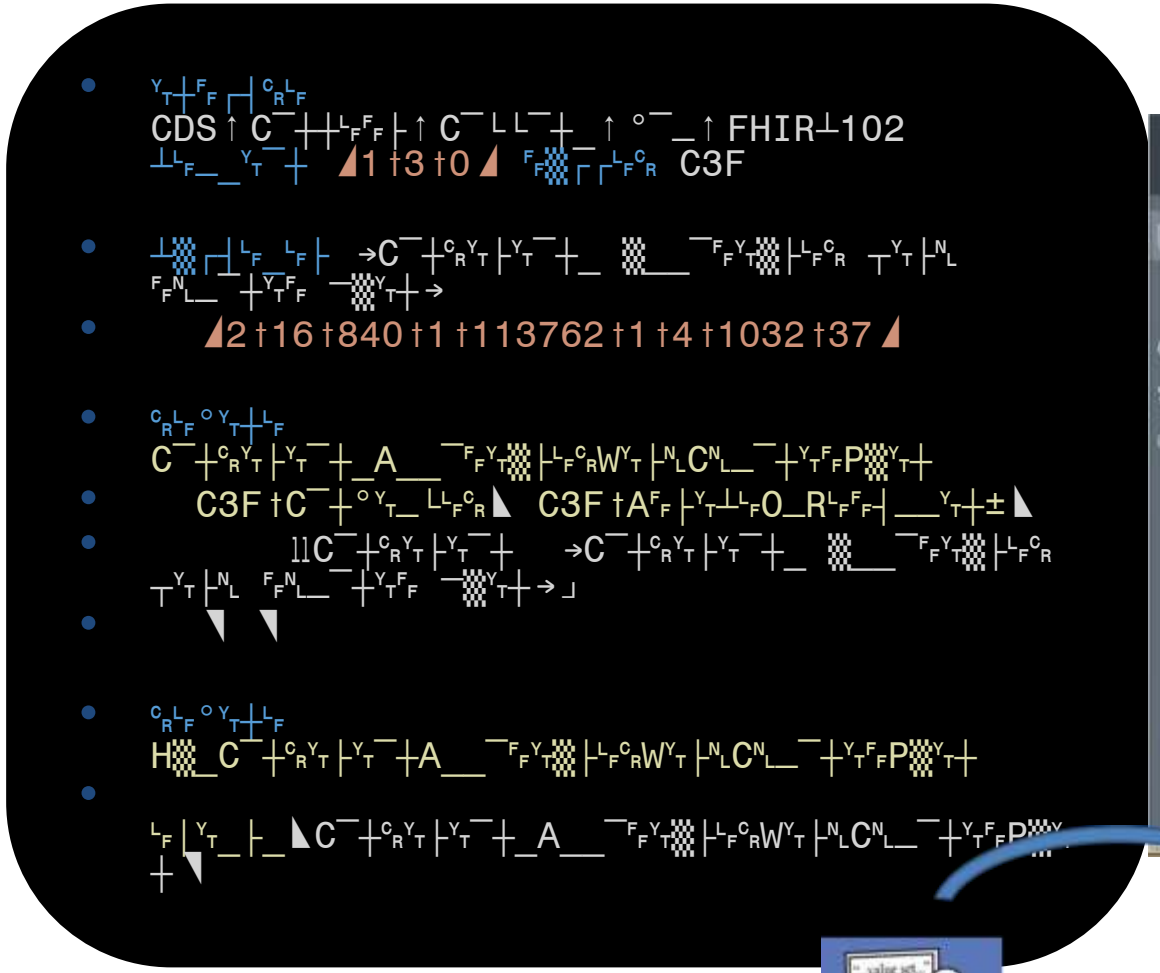
L2 to L3 Translation

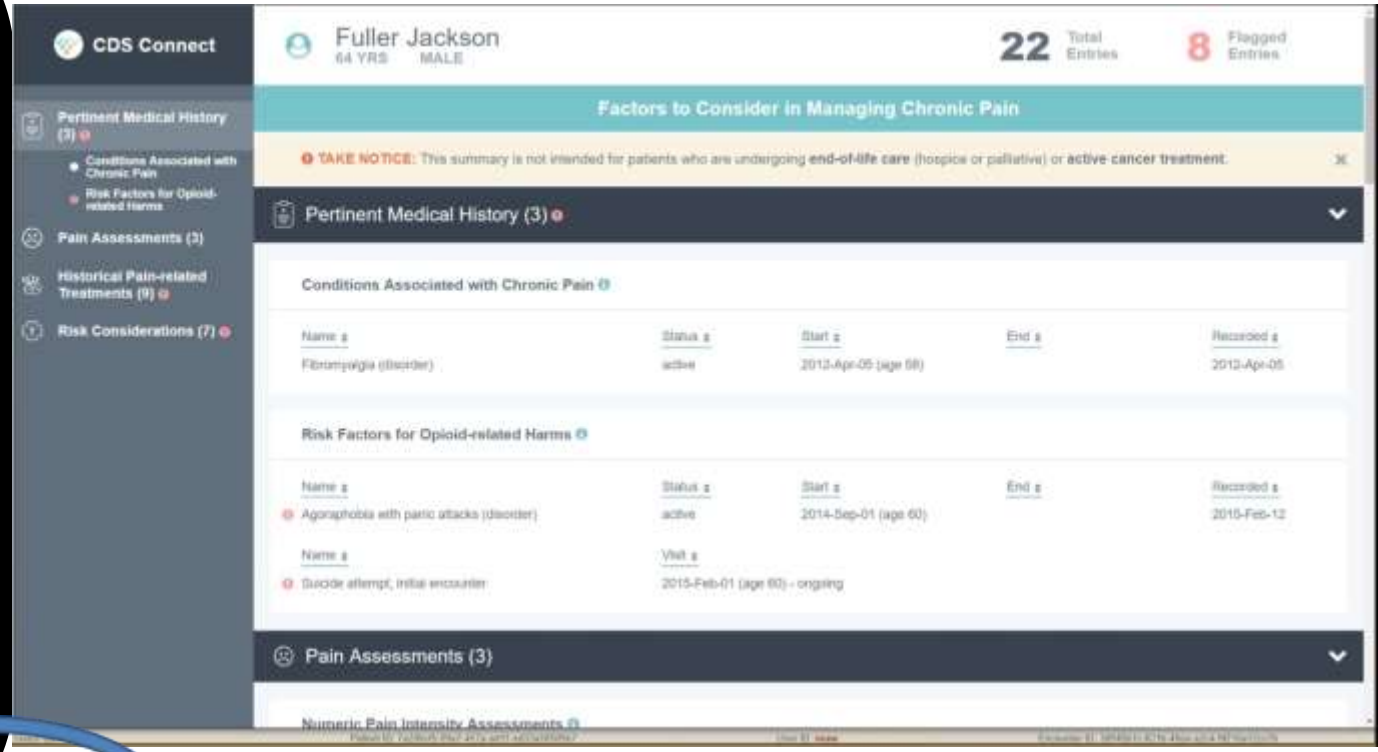
Artifact Representation
Triggers
Trigger type: Named event
Trigger event: Clicks on link to Pain Management Summary
Inclusions
Age>=18 years
AND

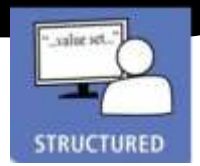
- OR Conditions associated with chronic pain (confirmed, active or recurring status, onset date, asserted date, abatement date)
- Opioid pain medication
  - Orders (date, active, completed, or stopped within past 180 days)
  - Statements (date, active, or completed within past 180 days)
- OR Adjuvant analgesic medication …



L3 to L4 Translation







AHRQ CDS Connect

A website

- A place to discover shared CDS

A platform

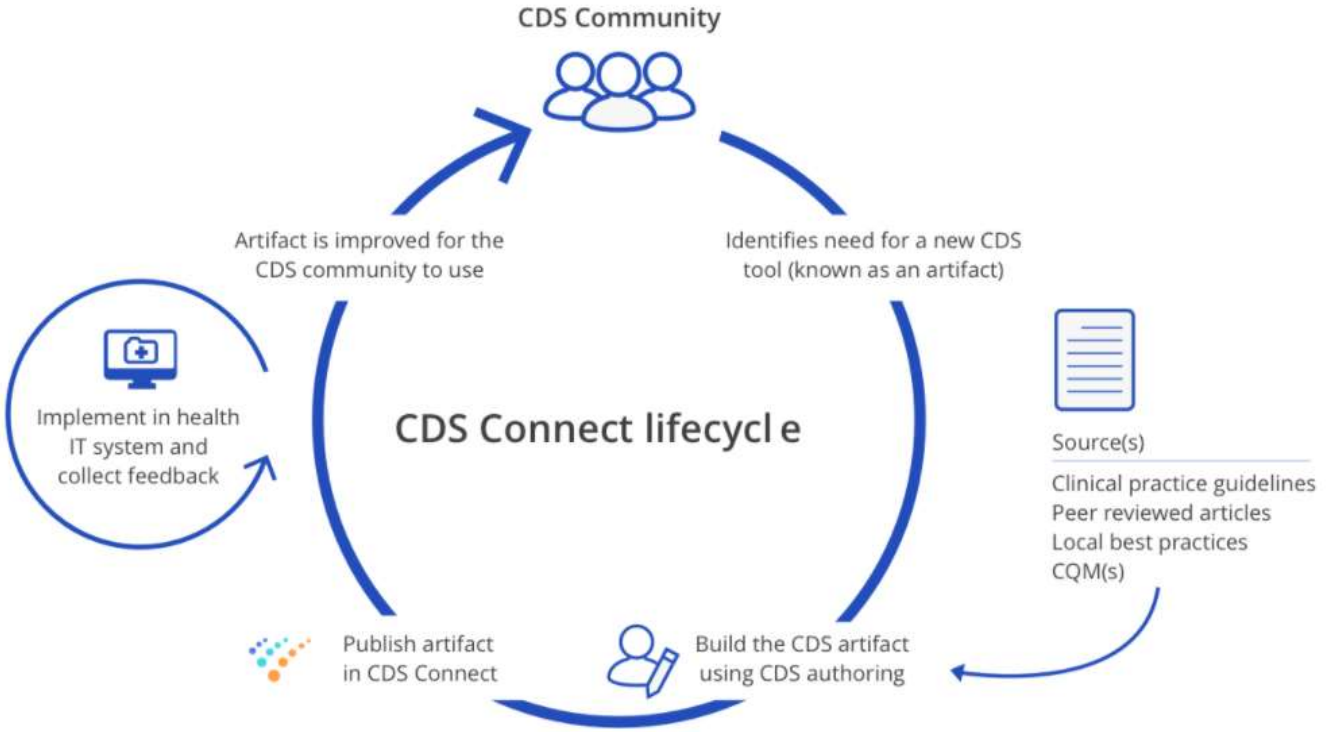
- To share CDS “artifacts”

A set of tools

- Including a CDS Authoring Tool and other open-source software

A community

- Of users and work group members from a diverse set of perspectives



https://cds.ahrq.gov/cdsconnect

CDS Connect

Agency for Healthcare Research and Quality

Search All AHRQ Sites | Careers | Contact Us | Español | FAQs | Email Updates

PATIENT-CENTERED OUTCOMES RESEARCH

Search

Authoring Tool

Login

Clinical Decision Support

Accelerating Evidence into Practice through CDS

CDS Home | Overview | CDS Connect | Learning Network | Evaluation | Funding Opportunities | Resources | Contact Us

Welcome | About | Governance | Artifacts | Authoring Tool | Community | FAQ

Welcome to CDS Connect

The CDS Connect Project is a freely available web-based platform that enables the clinical decision support (CDS) community to identify evidence-based care, translate and codify information into an interoperable health IT standard, and leverage tooling to promote a collaborative model of CDS development.

The CDS Connect Repository supports AHRQ's mission to disseminate and implement patient-centered outcomes research findings into clinical practice through CDS. Entries in this repository include CDS "artifacts" – actionable medical knowledge (e.g., clinical practice guidelines, peer-reviewed articles, local best practices, and clinical quality measures) translated into computable and interoperable decision support.

The Repository hosts numerous artifacts in varying forms and maturity across a variety of clinical topics, from 'analytic, diagnostic and therapeutic techniques and equipment' to 'psychiatry and psychology'. A variety of organizations contribute artifacts to the Repository, including other Federal agencies.

For more information, see the FAQ

AHRQ CDS Connect: A Primer (3 minutes, 35 seconds)

Alternative Audio-Described Version (4 minutes, 49 seconds)

CDS Connect Repository

Clinical
Accelerating Evide
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Welcome
Welcome / Artifa
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- **Pertinent Me**
factors for opi
- **Pain Assessm**
- **Historical Tre**
pharmacologi
- **Risk Consider**
drug screen re
assessments r

Artifact Type
Data Summary
Creation Date
Fri, 06/01/2018 - 1
Version
0.1

IMPLEMENTATION DETAILS

Engineering Details

This CDS logic is expressed using Clinical Quality Language (CQL) and either the FHIR Draft Standard for Trial Use 2 (DSTU2) or Release 4 (R4) data model. All value sets referenced in the logic are published on the Value Set Authority Center (VSAC). Additional details about these resources can be accessed via the following URLs:

CQL: https://ecqi.healthit.gov/cql

FHIR DSTU2: https://www.hl7.org/fhir/DSTU2/resourcelist.html

FHIR R4: https://hl7.org/fhir/R4/resourcelist.html

VSAC: https://vsac.nlm.nih.gov/

The Pain Management Summary artifact provides relevant information to consider when managing a patient's pain. The information is presented to the clinician as a Pain Management Summary, implemented as a web-based SMART on FHIR application. The application serves as a CQL integration engine to enable integration of the CQL logic and results with an EHR (such as Epic and Cerner) via the SMART on FHIR API. Implementers should work with their EHR vendor to determine the steps necessary to register and integrate a SMART on FHIR application within their EHR. Technical details regarding the SMART on FHIR API can be found on the SMART Health IT Web site.

The specific method used to invoke the Pain Management Summary CDS and present the SMART on FHIR application is dependent on implementation decisions made at each site. For the initial pilot of this artifact, the site elected to invoke the Pain Management CDS when a clinician clicks on a "Pain Summary Information" link found within a specific patient record in the EHR.

As discussed previously, the logic used to query and return data for the Pain Management Summary is expressed in the CQL. However, it is important to note that the CQL code does not enact any alerts and/or notifications to reinforce specific CDC guidelines, potential contraindications, or patient safety warnings related to the data that is displayed. Instead, rules were embedded in the SMART on FHIR application to enact notifications displayed as flags, counts, and additional information to further contextual awareness of where a CDC recommendation statement intersects with the displayed data. Future implementers may opt to include the notifications in the CQL, others may opt to expand the notifications in the app. Iterations will likely be informed by capabilities, modules, and the user interface of the EHR, among many other considerations. Figure 1 below displays the first portion of a populated Pain Management Summary. The alert flags display as an exclamation point within a red circle to alert the clinician to an entry of potential concern, based on the CDC guidelines. The Summary can be navigated by scrolling or via the navigation shortcuts on the left-hand side of the page.

IANAGEMENT-SUMMARY.

595.19 KB
406.23 KB
727.03 KB
72.02 KB
130.54 KB
676.22 KB
206.93 KB

AHRQ Funding Opportunity for Advancing Evidence into Practice through CDS

Disseminating and Implementing Patient-Centered Outcomes Research (PCOR) Evidence into Practice through Interoperable Clinical Decision Support

- Invites R18 grant applications that disseminate and implement patient-centered outcomes research evidence in clinical practice by scaling computer-based, interoperable clinical decision support
- The first standard due date for the FOA is January 25, 2021.

https://grants.nih.gov/grants/guide/pa-files/PA-20-074.html

Poll

If a SMART on FHIR form was available in the EHR/Pharmacy IT System what is the most important CDS action for it to do?

a) Pre-populate a medication order
b) Documents that PDMP data were reviewed over the course of the visit
c) Provide functionality to perform pain medication reconciliation
d) Help manage the problem list
e) Functionality to create a pain medication taper with editable fields (rate, type, etc)

UCONN HEALTH

Questions

- Panelist's contact information
  - Marghie Giuliano, CEO, Giuliano Consulting, marghiegiuliano@comcast.net
  - Rod Marriot, Director, Drug Control Division dcp.pmp@ct.gov
  - Paul Matthews, CTO, OCHIN matthewsp@ochin.org
  - Stacie Carney, CMIO, OCHIN carneys@ochin.org
  - Ed Lomotan, Chief of Clinical Informatics, AHRQ Edwin.Lomotan@ahrq.hhs.gov
- Contact us for further information / HIELearning@uchc.edu Or
- Visit us at: https://health.uconn.edu/health-interoperability-learning/

Stay tuned for the next event!

UCONN HEALTH

Thank You

UCONN HEALTH