The Role of PCPCHs in the Management and Treatment of Patients with Opioid Utilization in a Rural Oregon Medicaid Population

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eocco

EASTERN OREGON
COORDINATED CARE
ORGANIZATION

Outline

- Learning Objectives & Introduction
- Etiology of Chronic Pain & Opioid Use
- Project Concept
- Data Collection & EOCCO Population
- Data Analysis
- Thank you
- Citations
- Question & Answer Period

Disclosure Statement

- I, do not have any relevant financial relationships with any commercial interests.

Learning Objectives

At the end of this presentation, you should have:

- Describe the state of opioid use within Oregon
- Describe how opioid use impacts EOCCO members
- Describe the role that primary care plays in the treatment and management of EOCCO members with opioid use

Introduction: Chelsea Keating

BS in Chemistry
Minors: Math & History

MPH
Epidemiology
IRB Approval

Healthcare Data Analyst
Feb 2014

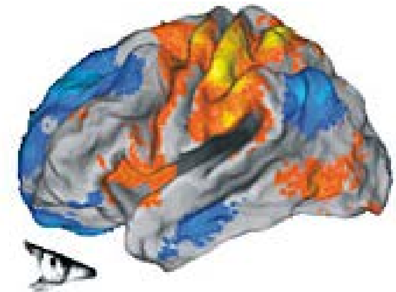
Etiology of Chronic Pain & Opioid Use

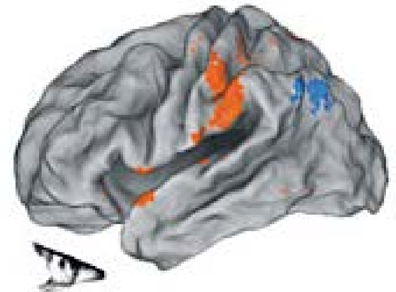
Etiology of Chronic Pain & Opioid Use

100 million Americans suffer from chronic pain:

costs society at least $560-$635 billion annually, an amount equal to about $2,000.00 for everyone living in the U.S.[1]

1. **Nociception:** signal of pain to brain
2. **Neuromodulation:** brain regulation of signals
3. **Central Sensitization:** persistent state of high reactivity

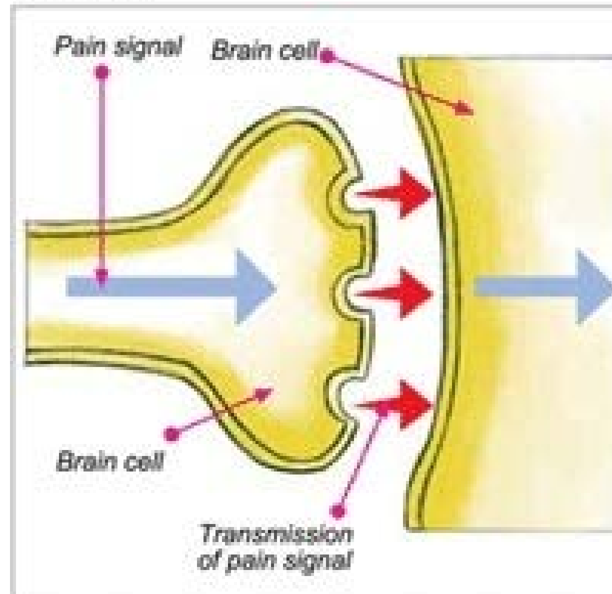




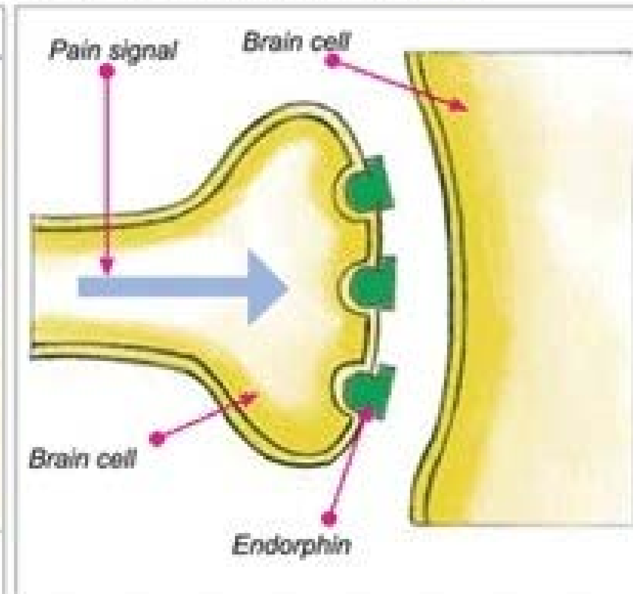
Stillwater Studio. Central Sensitization. Retrieved from: http://www.vancouvercounsellingcentre.com/central-sensitization/

Role of Opioids

- Opioid – Induced Hyperalgesia (OIH)[2]
- Loss of efficacy overtime



The pain signal is transmitted from brain cell to brain cell.



Endorphins combine with receptors to block the transmission of pain.

Quora. Why we get headaches. Retrieved from: https://www.quora.com/When-we-get-headaches-what-really-happens-in-the-brain

Pendulum of Prescribing Patterns

1970s

Controlled Substances Act

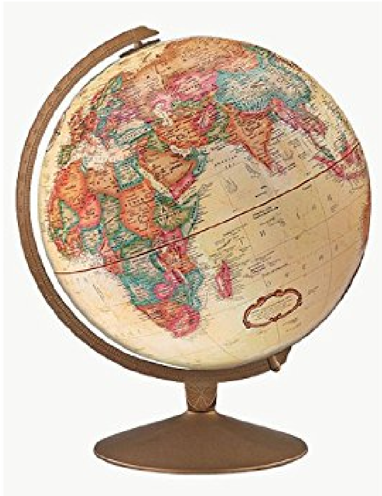
Today

National epidemic

1990s

Strong Marketing from Pharma & the treatment of pain

Opioids: Internationally



Global Population: 7.2 Billion

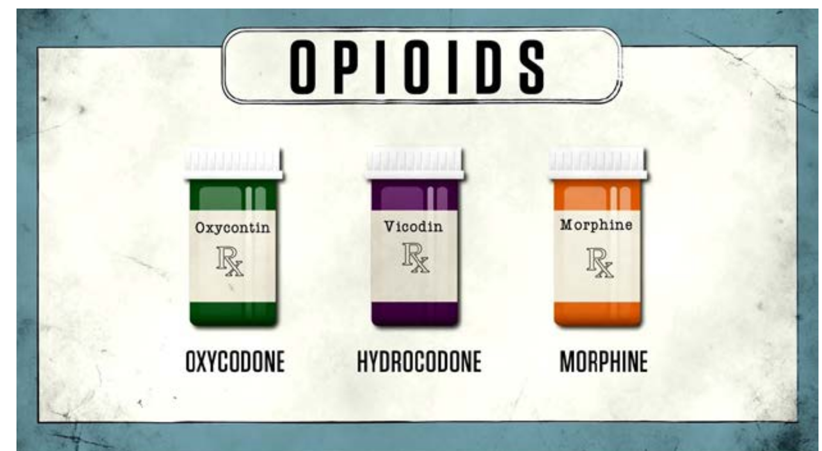
U.S. Population: 319 Million

4.4% of World Share

300 Million Prescriptions in 2015

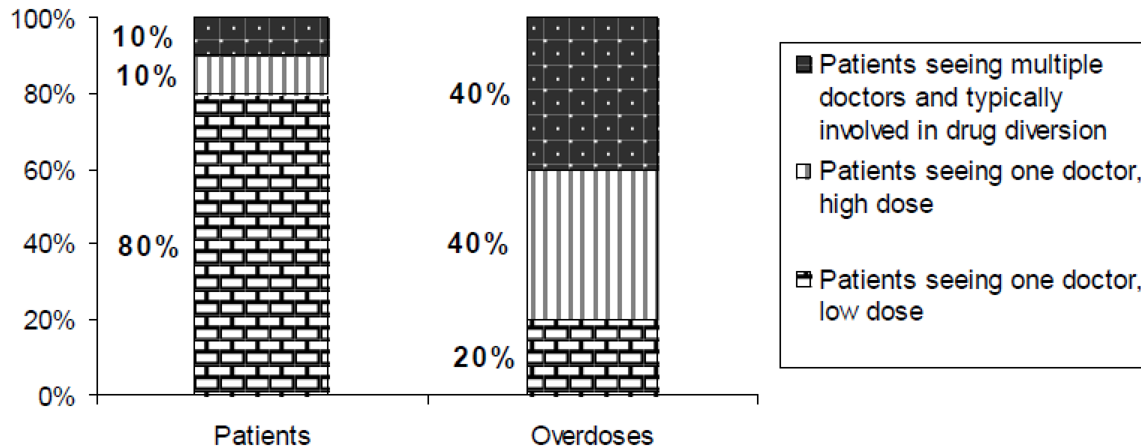
U.S. Consumed: 80%

North America and Western Europe: 95%[3]



Opioids: Nationally

Each day, 91 Americans die from opioid overdoes. During this presentation, 4 Americans will die from an opioid overdose. [4]



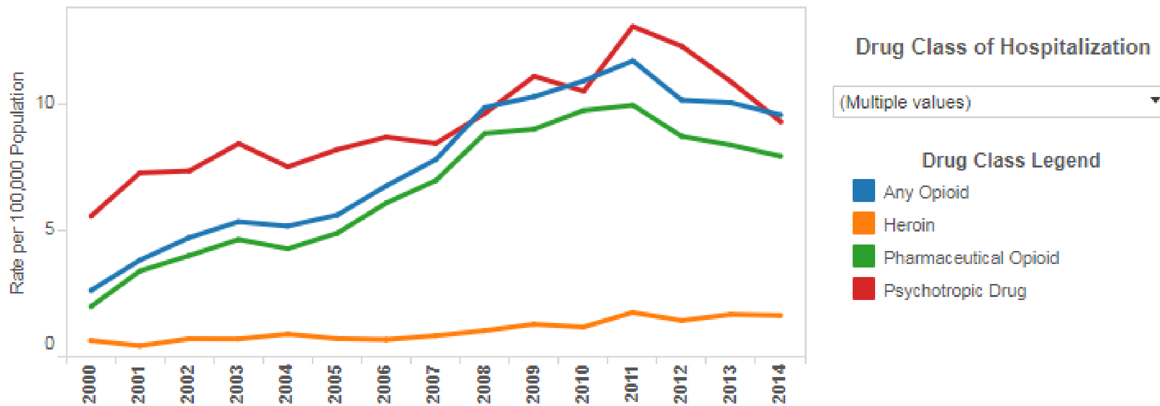
CDC. CDC grand rounds: Prescription drug overdoses – a U.S. epidemic. MMWR. Morb. Mortal Wkly. Rep. 61, 10-13 (2012) (34).

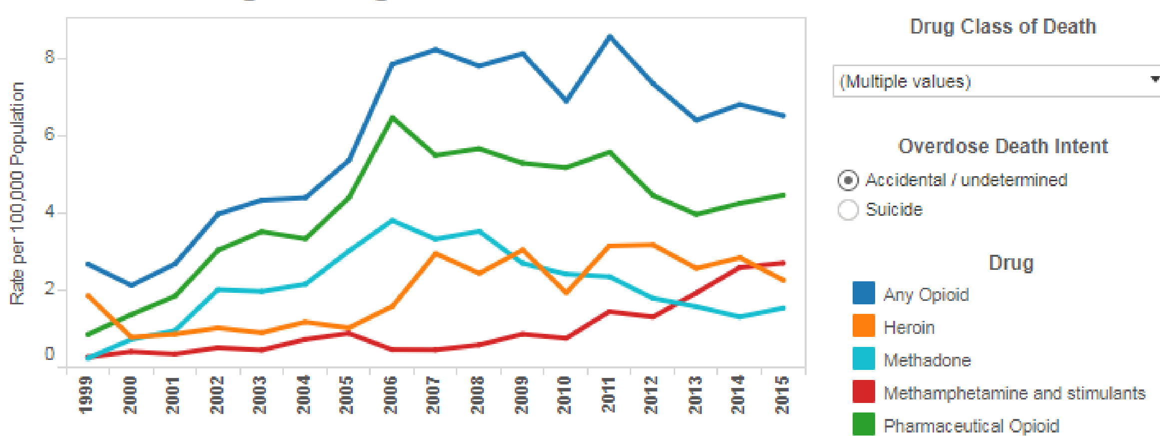
Risk Factors for Prescription Opioid Pain Reliever Abuse and Overdose

- Obtaining overlapping prescriptions from multiple providers and pharmacies.
- Taking high daily dosages of prescription opioid pain relievers.
- Having mental illness or a history of alcohol or other substance abuse.
- Living in rural areas and having low income.

CDC. Risk Factors for Prescription Opioid Abuse and Overdose. Retrieved from: https://www.cdc.gov/drugoverdose/opioids/prescribed.html

Opioids: Oregon[6]



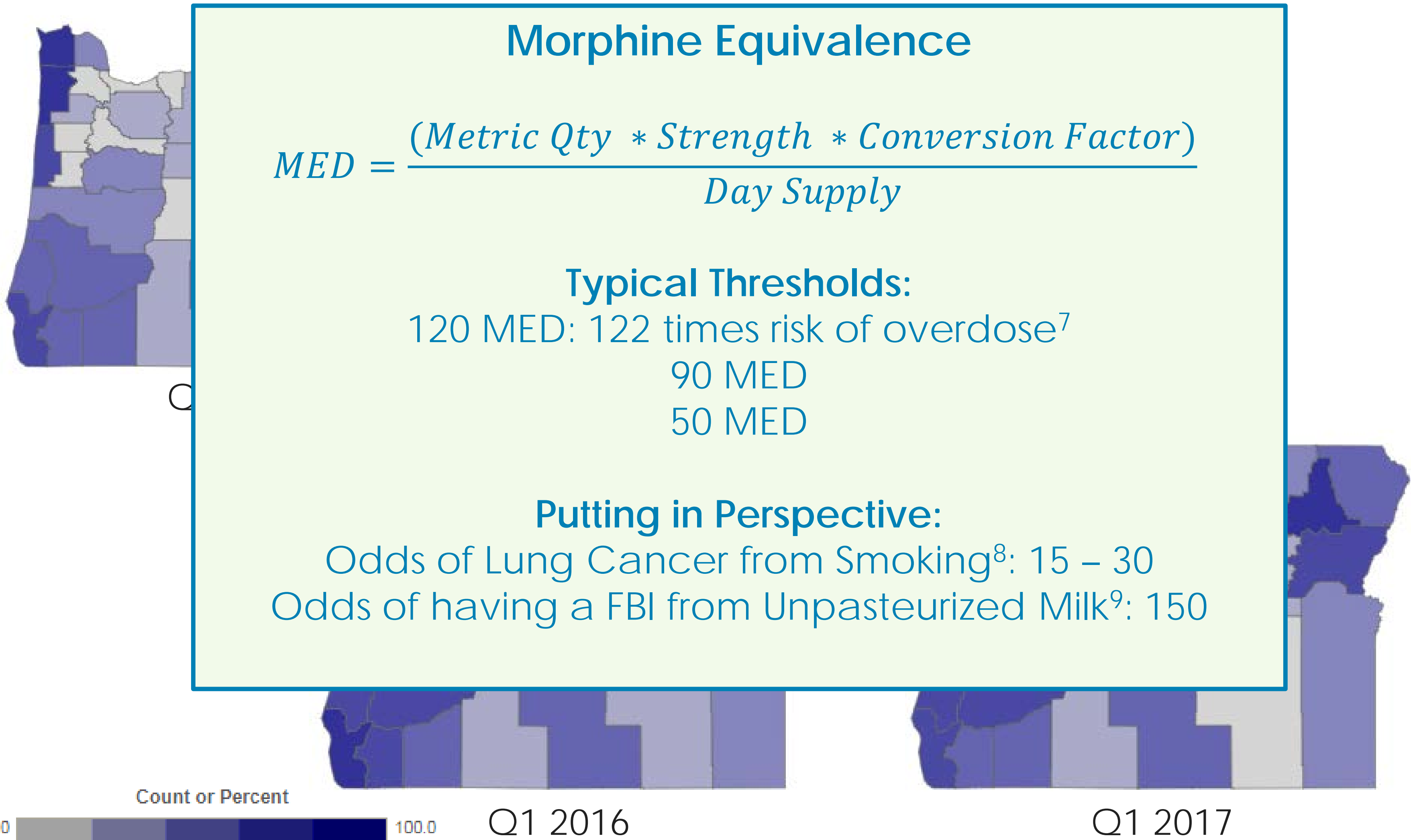


In 2013, **1 in 4** Oregonians received a prescription for opioids.

Oregon is ranked **2nd** in the U.S. for non-medical use of pain relievers. [5]

Risky Prescribing Patterns[6]

> 120 MED individuals per 1,000 Residents



Morphine Equivalence

$$MED = \frac{(Metric\ Qty\ * Strength\ * Conversion\ Factor)}{Day\ Supply}$$

Typical Thresholds:

120 MED: 122 times risk of overdose[7]

90 MED

50 MED

Putting in Perspective:

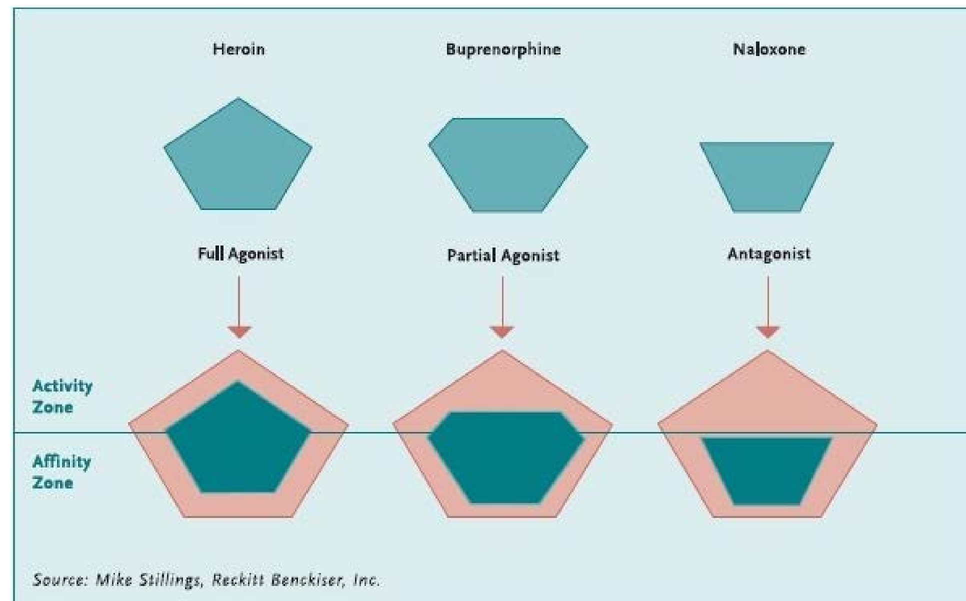
Odds of Lung Cancer from Smoking[8]: 15 – 30

Odds of having a FBI from Unpasteurized Milk[9]: 150

The Alternatives

CDC Recommends the following for patients with chronic pain[10]:

- Acetaminophen (Tylenol®) or ibuprofen (Advil ®)
- Cognitive behavioral therapy
- Physical therapy and exercise
- Medications for depression or for seizures
- Interventional therapies



Dr. Jeffrey Fudin. Bupes, and Subs, and Surgery, Oh my. Retrieved from: http://paindr.com/bupes-and-subs-and-surgery-oh-my/

EOCCO Regional Opioid Prescribing Group (ROPG) & Project Concept

EOCCO ROPG

Grant funding: Lines for Life

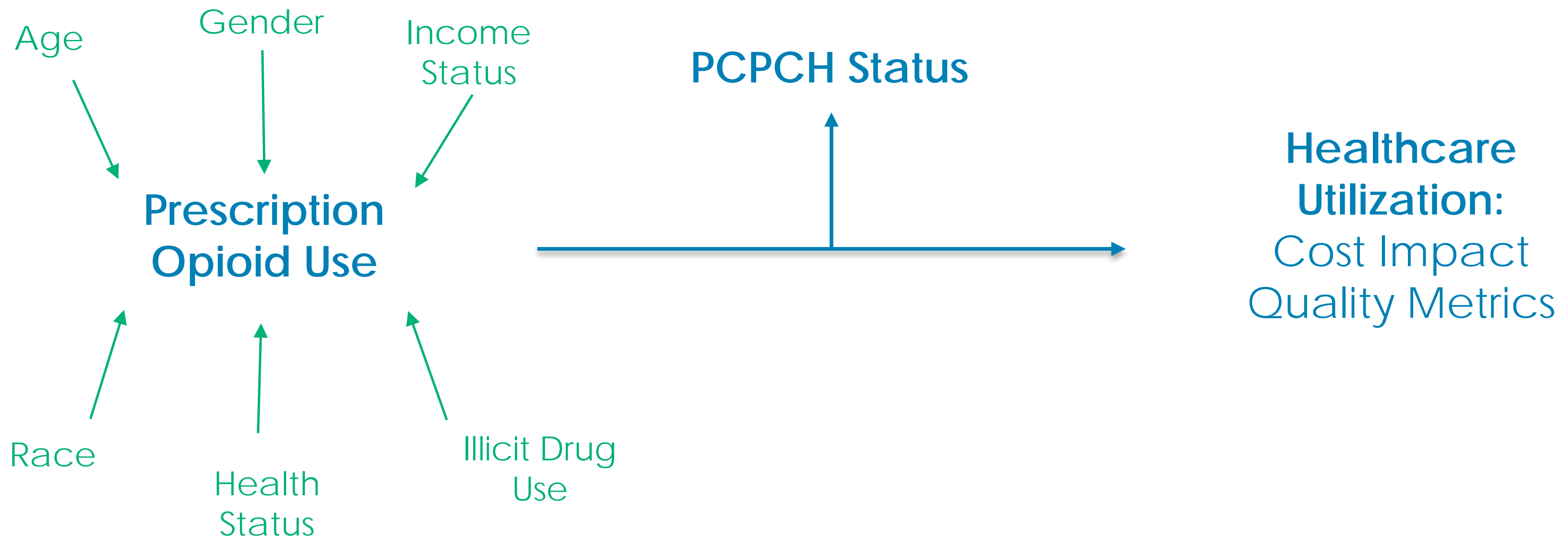
Committee Chair: Dr. Chuck Hofmann

Committee Members:

- Dr. Aaron Gray
- Dr. Amy Boudreau
- Dr. Betsy Anderson
- Bob Coulter
- Dr. Don Benschoter
- Dave Saxey
- Cosette Turnbow
- Dr. Geoffrey Thomas
- Greg Armstrong
- Joel Rice
- Lesa Cahill
- Dr. Liz Powers

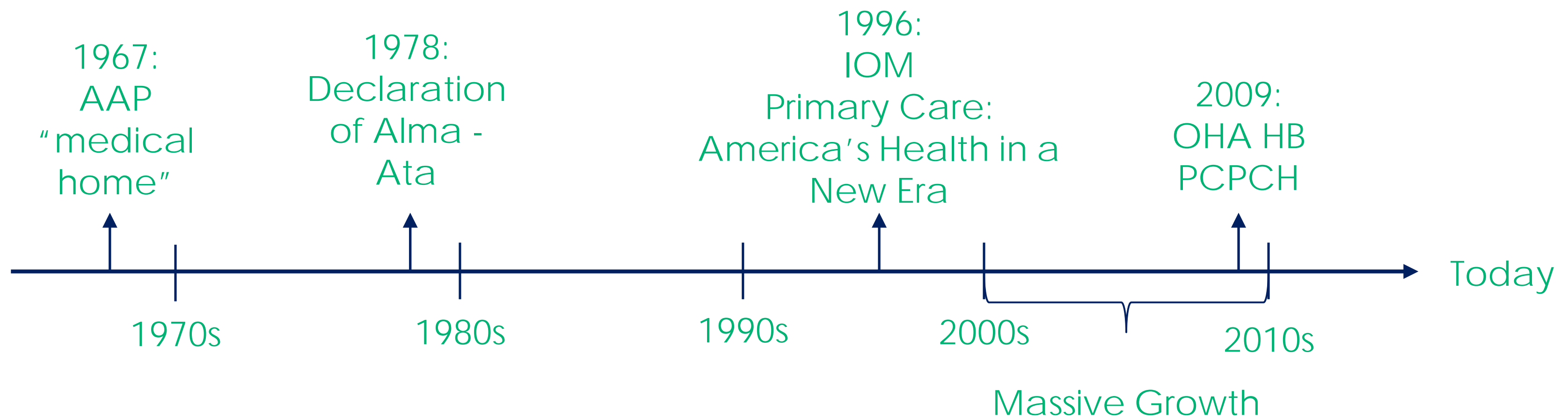
Community Based Participatory Research

We hypothesize that healthcare utilization for Medicaid patients exposed to prescription opioids will be modified by the PCPCH status of their medical home. We expect that PCPCHs will provide more primary care than non-PCPCHs, which will impact the overall spend and determine the amount of alternative services and alcohol and substance abuse treatments patients will receive.



Patient Centered Primary Care Homes (PCPCH)

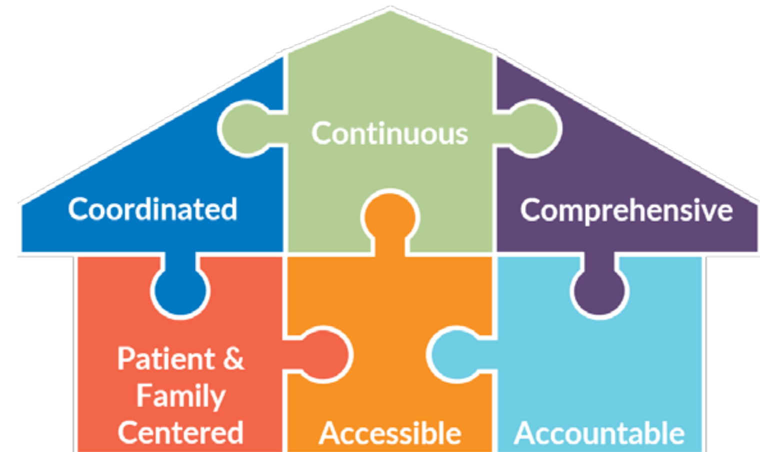
Primary Care and the Medical Home[11]



Oregon Health Authority[12]:

Patient – Centered Primary Care Home

- Capitation rates are used to subsidize additional cost
- OHA Goal: 75% Oregonians have access to a PCPCH by 2015



OHA. Standards of Recognition. Retrieved From: https://www.oregon.gov/oha/pcpch/Pages/standards.aspx

Data Analysis

Moda Health Claims

EOCCO claims are all housed within the Moda Health *Datastor*

- Claims Incurred: Jan 2014 – Sept 2016
- Multiple Claim Data Types
  - Medical Data
  - Pharmacy Data
  - GOBHI (Behavioral Health) Encounter Data
- All analyses done in SAS Enterprise Guide 7.4
- Final dataset is structured for one row per member
  - Total data lines: 10,792

Population

EOCCO Members Enrolled Between 201401 & 201609
Population: **75,599**

Members with Neoplasm Pain and in Palliative Care (**240**)

Members between 0 - 17 (**33,664**)

Continuously Enrolled - 30 out of 33 Member Months (**30,903**)

Eligible Population: **10,792**

Exposed (at least one opioid fill): **6,133**

Unexposed (no opioid fills): **4,659**

Continuous Enrollment

Primary Characteristics:

	Continuously Enrolled	Not Continuously Enrolled
Age:	41.8 ± 0.15	37.6 ± 0.08
Gender:	60% Female	55% Female

Members who are continuously enrolled are:

Diagnoses:

	Odds Ratio
Any Mental Health	3.1
Substance Abuse Related MH	3.2
Non Substance Abuse Related MH	2.2
Chronic Pain	2.0

Procedures:

	Odds Ratio
Alcohol & Substance Abuse Treatment	2.2
Alternative Services	2.8
Surgery	2.0
Emergency Room Visits	1.6

All metrics are statistically significant

Non Continuous Enrollment & Opioid Use

Primary Characteristics:

	Opioid Utilizer	Non Opioid Utilizer
Age:	38.4 ± 0.13	37.2 ± 0.11
Gender:	61% Female	52% Female

Members who do not have continuous enrollment & utilize opioids are:

Diagnoses:

Any Mental Health	2.4
Substance Abuse Related MH	2.3
Non Substance Abuse Related MH	2.1
Chronic Pain	2.7

Procedures:

Alcohol & Substance Abuse Treatment	1.9
Alternative Services	1.8
Surgery	2.8
Emergency Room Visits	2.6

All metrics are statistically significant

Continuous Enrollment & Opioid Use

Primary Characteristics:

	Opioid Utilizer	Non Opioid Utilizer
Age:	41.3 ± 0.2	42.5 ± 0.3
Gender:	65% Female	53% Female

Members who utilize opioids are:

Diagnoses:

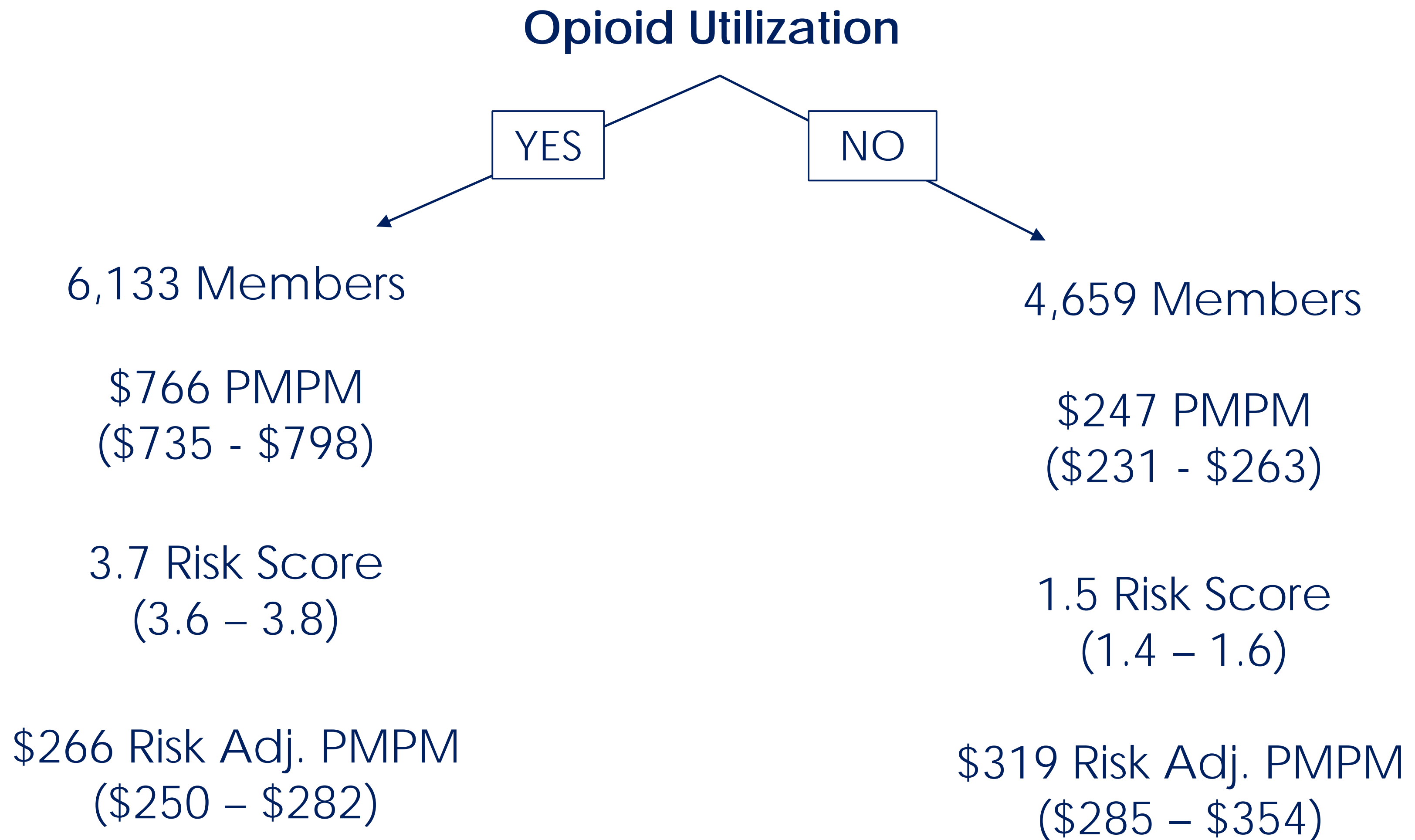
	Odds Ratio
Any Mental Health	1.2
Substance Abuse Related MH	1.1
Non Substance Abuse Related MH	1.3
Chronic Pain	2.0

Procedures:

	Odds Ratio
Alcohol & Substance Abuse Treatment	1.1
Alternative Services	0.9
Surgery	2.1
Emergency Room Visits	2.1

All metrics are statistically significant

Opioid Utilization – Cost Impact



All metrics are statistically significant

Opioid Utilizers & PCPCH Characteristics

Primary Characteristics:

	PCPCH	Non PCPCH
Age:	41.2 ± 0.2	41.4 ± 0.3
Gender:	64% Female	66% Female

Members who utilize opioids and PCPCHs are:

Diagnoses:

Any Mental Health	1.0
Substance Abuse Related MH	1.0
Non Substance Abuse Related MH*	1.1
Chronic Pain*	1.1

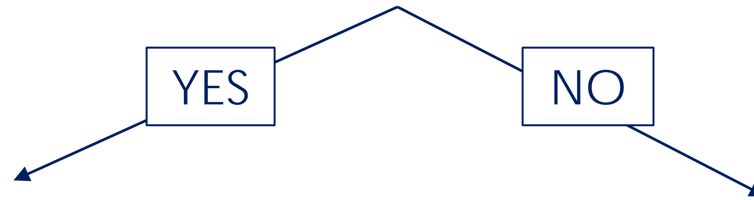
Procedures:

Alcohol & Substance Abuse Treatment	1.0
Alternative Services*	1.0
Surgery	1.1
Emergency Room Visits	1.1

*Metrics are statistically significant

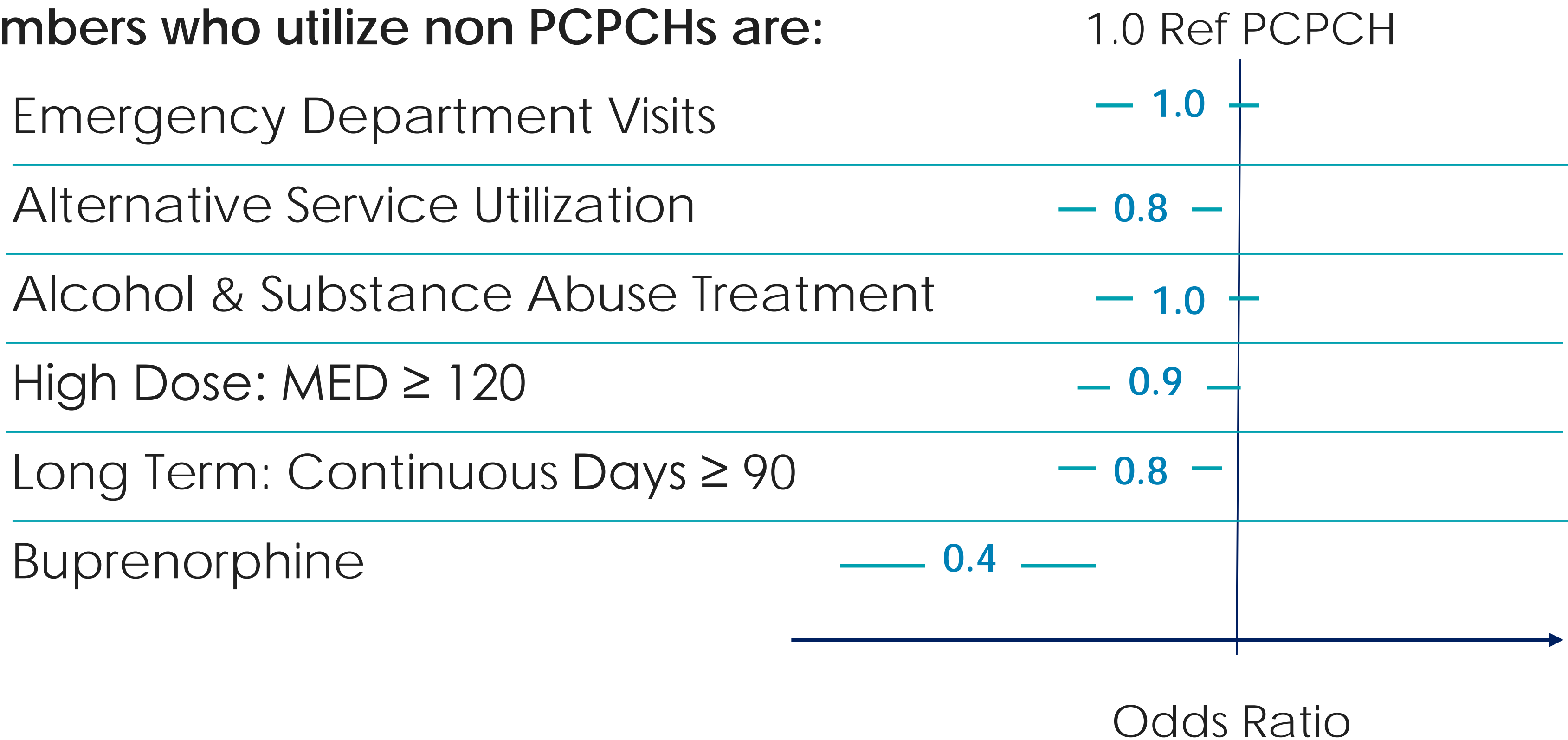
PCPCH – Cost Impact

Opioid Utilization & PCPCPH



YES	NO
3,167 Members	2,851 Members
$755 PMPM ($715 - $793)	$780 PMPM ($729 - $830)
3.7 Risk Score (3.5 – 3.8)	3.7 Risk Score (3.6 – 3.8)
$270 Risk Adj. PMPM ($251 – $290)	$266 Risk Adj. PMPM ($250 – $282)

PCPCH – Quality Measures



Temporality Sub Analysis

Members who had the same Medical Home throughout the study time period (3,998)

Non PCPCH vs 1 or 2 year PCPCH

		Non PCPCH	1 yr. PCPCH	2 yr. PCPCH
	Members	1,760	272	172
Economic	PMPM	$720	$637	$673
	Avg. Risk Score	3.3	3.6	3.1
	Risk Adj. PMPM	$284	$248	$232
Quality	ER Visits	ref	1.31	1.00
	Alternative Services	ref	0.77	0.69
	Alcohol & Substance Abuse Treatment	ref	0.76	0.89
	High Dose	ref	2.12*	1.46
	Long Term	ref	2.72*	1.69*
	Buprenorphine Use	ref	0.89*	-

**Metrics are statistically significant*

Non PCPCH vs 3 – year PCPCH

Primary Characteristics:

	Non PCPCH	3 yr. PCPCH
PMPM:	$720	$799
Avg. Risk Score:	3.3	3.6
Risk Adj. PMPM:	$284	$299

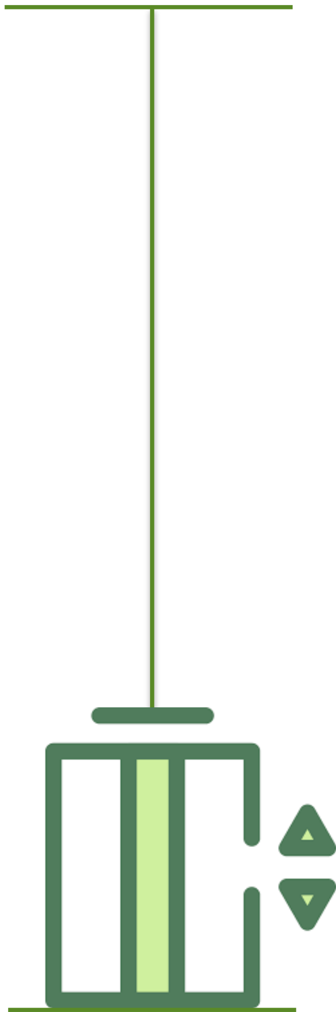
Members who utilized the same PCPCH during the study, are:

Emergency Room Visits	**0.98**
Alternative Services*	**1.38**
Alcohol & Substance Abuse Treatment*	**1.34**
High Dose (MED ≥ 120)	**1.08**
Long Term Use (Consecutive Days ≥ 90)	**1.13**
Buprenorphine*	**4.32**

Odds Ratio

**Metrics are statistically significant*

Results - Elevator Pitch



Although there was no statistical difference between PCPCH vs Non PCPCH in the management & treatment of members with opioid use, we found that when considering the length of time as a designated PCPCH the results were statistically different.

Clinics that adopted the PCPCH model and consistently qualified as a PCPCH during the study time, indicated stronger overall results of management and treatment of members with opioid use. Specifically, when evaluating alternative service utilization, alcohol and substance abuse treatment, and prescribing buprenorphine.

Study Limitations

- Lacks Generalizability
- Adding continuous enrollment cut data that affected external validity
- Comparative populations are not along the same magnitude

CCOs & Opioids

Current Prevalence Rates[10]

Any day >= 120 mg MED, total

2014 state rate | 2015 rate | 2014 rate | Current rate

2014 state rate:
10.6%

PCS-CO 7.1% 10.0%
WVCH 6.8% 9.5%
CPCCO 12.7% 15.0%
JCC 14.4% 16.7%
CHA 5.0% 6.9%
IHN 9.3% 11.1%
EOCCO 13.1% 14.6%
PCS-CG 6.0% 7.4%
TCHP 11.5% 12.9%
Health... 11.0% 12.0%
UHA 5.0% 5.9%
AllCare 5.4% 6.1%
YCCO 8.9% 9.6%
PHJC 8.4% 8.5%
WOAH 6.4% 6.8%
Family... 7.8% 8.5%

Lower is better

Thank you!

Thank you!

- EOCCO Mentor: Dr. Chuck Hofmann
- EOCCO ROPG
- Moda Health Team:
  - Sean Jessup – Director of Medicaid
  - Lori Armitage & Nick Moore – Moda Health Analysts
  - Tina Mody, Pharm.D., MPH – Clinical Pharmacists
- OHSU Team:
  - William Lambert, PhD.
  - Dennis McCarty, PhD.

Citations

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Questions & Answers

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