

# Stimulant prevalence and outcomes in a health system: implications for stimulant clinical trials

Meeting on Measures of Outcome for Stimulant Trials (MOST)

Connie Weisner  
Felicia Chi  
Andrea Kline-Simon  
Wendy Lu

Behavioral Health, Aging, and Infectious Disease Section Chief  
Division of Research, Kaiser Permanente

Professor, Department of Psychiatry, University of California, San Francisco



ACTION Meeting  
Rockville, MD  
March 25-26, 2015



# Overview

- Health plan context
- Prevalence and characteristics of stimulant dependent patients (in membership and AOD treatment)
  - What the population looks like
  - What patients and other stakeholders want from treatment
- Outcomes and endpoints

# Health plan context

- Affordable Care Act – Changes related to Substance Use
  - Innovations and interest in treatment
- Employer-based health care
  - Multiple stakeholders
- Treatment entry
  - Implications for outcomes

# What patients want from treatment

- Addiction Severity Index
  - How important to you now is treatment for these drug (alcohol, employment, legal, family, mental health, medical problems?)
    - Not at all
    - Slightly
    - Moderately
    - Considerably
    - Extremely
- Treatment goal

# Non-SU outcomes

- Heterogeneous reasons for people coming to treatment
  - Medical, social consequences related to those reasons

# California Division North (by county)



Private, non-profit, staff-model managed care health plan

3.7 million members in 15 counties (about 45% of insured population in the region – size & diversity increasing with ACA)

16 hospitals, pharmacies in each Medical Center

Electronic medical record

Integrated health care system (medical, psychiatry, & AOD services)

Harmonized data across 18 health plans

# Patient Characteristics

# Adult **Health Plan Members** with a Stimulant Disorder Diagnosis in 2014 (N=7,450)\*

**Female** 40%

**Male** 60%

## **Age**

18-29 28%

30-44 36%

45-64 34%

65+ 3%

## **Race/Ethnicity**

African American 11%

Asian Pacific Islander 6%

Hispanic 20%

Native American 2%

White 57%

Missing 3%

\* .3% of adult membership



# Adult **Health Plan Members** with a Cocaine Disorder Diagnosis in 2014 (N=3,415)\*

**Female** 35%

**Male** 65%

## **Age**

18-29 26%

30-44 28%

45-64 41%

65+ 5%

## **Race/Ethnicity**

African American 35%

Asian Pacific Islander 4%

Hispanic 18%

Native American 0.5%

White 37%

Missing 3%

\*.1% of adult membership

# MH diagnoses among adult KPNC members with stimulant dependence/abuse diagnoses

	<b>Members (N=7,450)</b>	
Depressive Disorders	1638	38.7%
Anxiety disorders	1309	31.0%
Bipolar Spectrum Disorders	813	19.2%
Attention Deficit Disorders	226	5.3%
Other Psychoses	428	10.1%
Schizophrenia Spectrum Disorders	236	5.6%
Personality Disorders	292	6.9%
Autism Spectrum Disorders	5	0.1%

# MH diagnoses among adult KPNC members with cocaine dependence/abuse diagnoses

	<b>Members (N=3,415)</b>	
Depressive Disorders	994	37.2%
Anxiety disorders	743	27.8%
Bipolar Spectrum Disorders	382	14.3%
Attention Deficit Disorders	86	3.2%
Other Psychoses	184	6.9%
Schizophrenia Spectrum Disorders	151	5.6%
Personality Disorders	154	5.8%
Autism Spectrum Disorders	1	0%

# Treatment Studies

- Sacramento (1995 and 1998)
- San Francisco (2014)

# AOD Treatment\*

- Detoxification (mostly ambulatory)
- Early decision groups
- Day treatment
- Outpatient
- Aftercare
- Individual counseling
- Drug testing
- Medications
  - Disulfiram, Acamprosate, Naltrexone, Vivitrol, Suboxone

\* *Primarily abstinence-based*

# Sacramento AOD Treatment Samples (*stimulant dependence/abuse*, N=509) 1995 & 1998

Years of regular stimulant use

0 years	11%
1 - 2	33%
3 - 5	13%
6 - 30	43%

# Sacramento Treatment Samples (*cocaine dependence/abuse*, N=186) 1995 & 1998

Years of regular cocaine use

0 years	12%
1 - 2	38%
3 - 5	11%
6 - 30	40%

Medical and psychiatric conditions of  
*stimulant dependent/abuse patients*  
Sacramento AOD treatment, 1998

---

Any	50%
Medical	34%
Psychiatric	31%

---



# Medical and Psychiatric Conditions of *cocaine dependence/abuse patients* Sacramento AOD treatment, 1998

---

Any	49%
Medical	38%
Psychiatric	24%

---

# **Stimulant use at 12 months (past 30 days) based on use at 6 months (past 30 days)**

*(of those with stimulant dependence/abuse at intake)*

*Sacramento AOD treatment 1995 & 1998 (N=461)*

	<b>Days of use at 12 months</b>		
<b>Days of use at 6 months</b>	<b>0 days</b>	<b>1-4 days</b>	<b>More than 4 days</b>
<b>0 days</b>	95%	3%	2%
<b>1-4 days</b>	77%	18%	5%
<b>5 or more days</b>	53%	13%	33%

p=.0001

**Cocaine use at 12 months** (past 30 days) based on  
 use at 6 months (past 30 days)  
*(of those with cocaine dependence/abuse at intake)*  
*Sacramento AOD treatment 1995 & 1998 (N=152)*

**Days of use at 12 months**

<b>Days of use at 6 months</b>	<b>0 days</b>	<b>1-4 days</b>	<b>More than 4 days</b>
<b>0 days</b>	95%	5%	1%
<b>1-4 days</b>	33%	33%	33%
<b>5 or more days</b>	54%	15%	31%

p=.0001

San Francisco Chemical  
Dependency Treatment data  
2014 (N=504)

# Prevalence of Medical Conditions of AOD Patients (Stimulant Dependence/Abuse) (San Francisco AOD treatment, 2014, N=504)\*

Any medical condition	52%
Any psychiatric condition	77%
Depression	56%
Anxiety	58%
Major Psychosis	22%
Injuries and overdoses	38%
Asthma	9%
Hypertension	16%
Ischemic Heart disease	6%
Hepatitis C	6%

\* Stimulant dependence/abuse  
(N=64), 12.7% of sample

# Prevalence of Medical Condition of SU Patients (Cocaine Dependence/Abuse (San Francisco AOD treatment, 2014, N=504)\*

Any medical condition	91%
Any psychiatric condition	78%
Depression	58%
Anxiety	58%
Major Psychosis	18%
Injuries and overdoses	44%
Asthma	10%
Hypertension	20%
Ischemic Heart disease	2%
Pneumonia	6%

Cocaine dependence (N= 79),  
15.7% of sample

Over the past year, use of amphetamines at intake  
*of those with stimulant dependent/abuse*  
(San Francisco treatment data 2014, N = 64)

---

4 or more times a week	45%
------------------------	-----

2-3 times a week	17%
------------------	-----

2-4 times a month	31%
-------------------	-----

Once a month or less	1%
----------------------	----

---

Over the past year, use of use cocaine at intake of  
*those with cocaine dependence/abuse*  
(San Francisco treatment data 2014, N=79)

---

4 or more times a week	28%
------------------------	-----

2-3 times a week	27%
------------------	-----

2-4 times a month	46%
-------------------	-----

Once a month or less	0%
----------------------	----

---



# Use of prescription stimulants in 30 days before entering treatment\*

(Of those stimulant dependent at intake, San Francisco treatment data, 2014, N=64)

0 days	89%
2-10 days	6%
20+ days	6%

\* Mean = 2days (SD=6.44)

# Stimulant use at **12 months** based on use at 6 months (N=56)

	Days of use at 12 months		
Days of use at 6 months	0 days	1-4 days	More than 4 days
0 days	85%	2%	2%
1-4 days	63%	25%	13%
5 or more days	43%	14%	29%

p=.0003

# Cocaine use at 12 months based on use at 6 months (N=73)

## Days of use at 12 months

Days of use at 6 months	0 days	1-4 days	More than 4 days
0 days	92%	2%	2%
1-4 days	43%	43%	0%
5 or more days	60%	0%	40%

p=.001

# Summary/Issues in new medications

- High prevalence of medical and psychiatric conditions
- Some small indication that 1-4 days of use/month at the end of treatment may have benefits
- Primary care and AOD programs – different issues

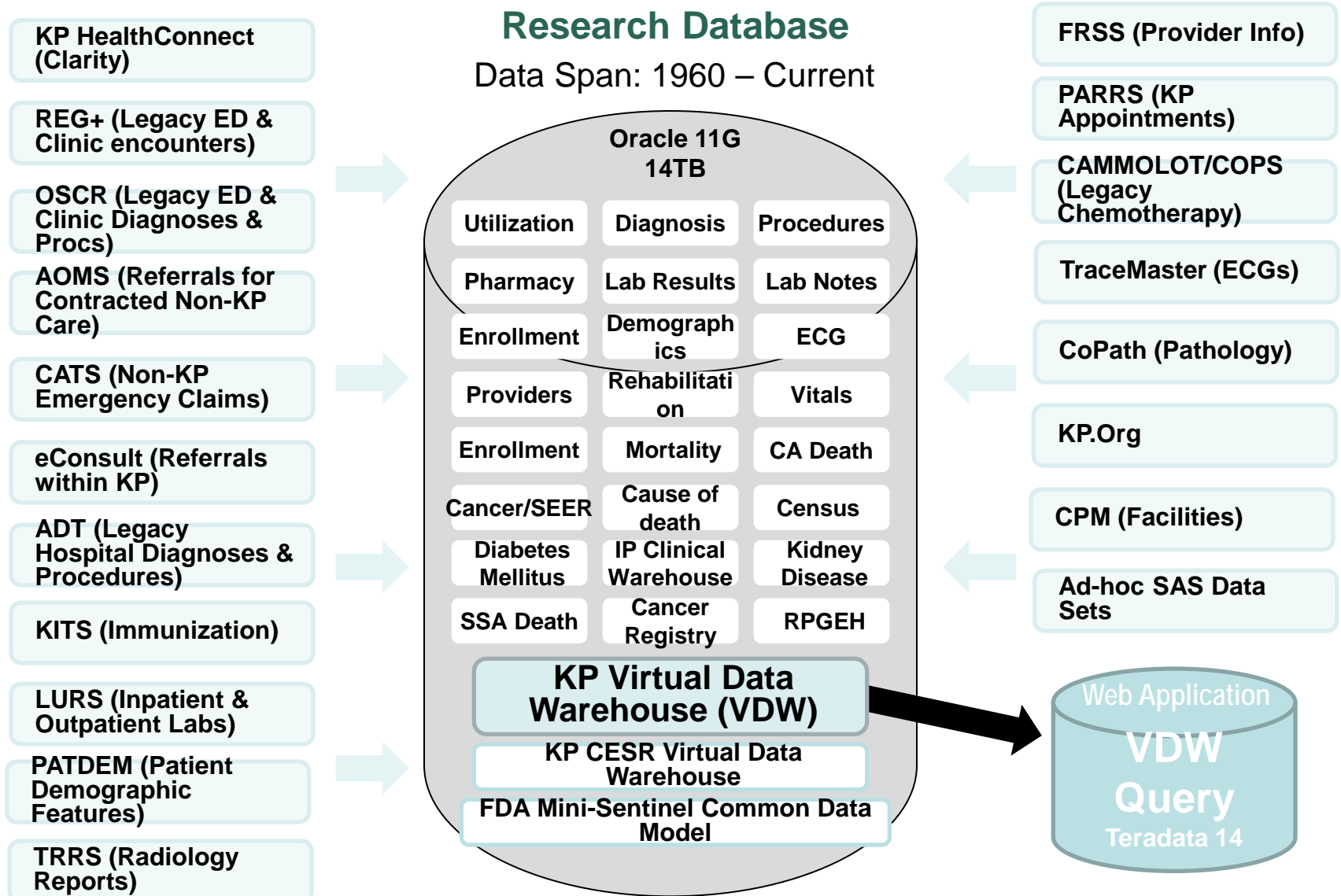
# Caveats/Limitations

- Study of those entering treatment, rather than on those dependent on only one substance
- Program goal is abstinence – not treating reducing use
- Small samples
- Only examined stimulant outcomes – not other SU or medical/social functioning or health care utilization (although have data to do so)

# Issues in New Medications

- Exclusion criteria of clinical trials vs. complexity of real world patients – clinician questions
- In primary care and/or chemical dependency programs – different issues/outcomes
- Need larger samples – potential of using EHR for rapid queries

# Division of Research, Kaiser Permanente



# AOD Research at Division of Research

## Principal Investigators

Cynthia Campbell, PhD  
Lyndsay Avalos, PhD  
Derek Satre, PhD  
Stacy Sterling, MSW, MPH (DrPH cand)  
Kelly Young-Wolff, PhD  
Connie Weisner, DrPH, LCSW

## Health Economist

Sujaya Parthasarathy, PhD

## Senior Research Administrator

Alison Truman, MHA

## Analysts/Biostatisticians

Felicia Chi, MPH  
Andrea H Kline Simon, MS  
Wendy Lu, MPH  
Tom Ray, MBA  
Jessica Allison, PhD

## Interview Supervisor

Gina Smith Anderson

## Project Coordinators

Agatha Hinman, BA  
Monique Does, BA  
Sabrina Wood, BA  
Luanna Acton, BA

## Research Associates

Nancy Charvat-Aguilar  
Jillrose Julag-Ay  
Rahel Negusse  
Georgina Berrios  
Elinette Nicolas  
Chris Miller  
Virginia Browning  
Melanie Jackson  
Diane Lott-Garcia  
Irene Kane

## KPNC Members

## KPNC Primary Care

## KPNC Chemical Dependency Quality Improvement Committee

## KPNC Adolescent Medicine Specialists Committee

## KPNC OB/GYN and Early Start Program

## KPNC Pediatrics Department

## KPNC Regional Mental Health and Chemical Dependency

## Research Clinicians

Thekla B Ross, PsyD  
Ashley Jones, PsyD  
Amy Leibowitz, PsyD  
Catherine Marino, PsyD

## Clinical Partners

Anna Wong, PhD  
Charles Wibbelsman, MD  
David Pating, MD  
Barry Levine, MD  
Charles Moore, MD, MBA  
Don Mordecai, MD  
Cosette Taillac, LCSW  
Murtuza Ghadiali, MD  
Mason Turner, MD  
Barrett Levine, MD



# Thank you!

Constance.Weisner@KP.org  
Connie.Weisner@UCSF.edu