Learnings from EDIE Implementation in San Francisco Bay Area

Maria Raven, MD, MPH, MSc

UCSF Medical Center

Emergency Department Information Exchange Program (EDIE)

- Platform that identifies patients who reach specific threshold of ED use: counts ED visits for all EDs on platform (not just your hospital)
  - Visits to ≥3 different EDs in the last 3 months
  - 5 or more ED visits to any ED on platform in last 12 months.

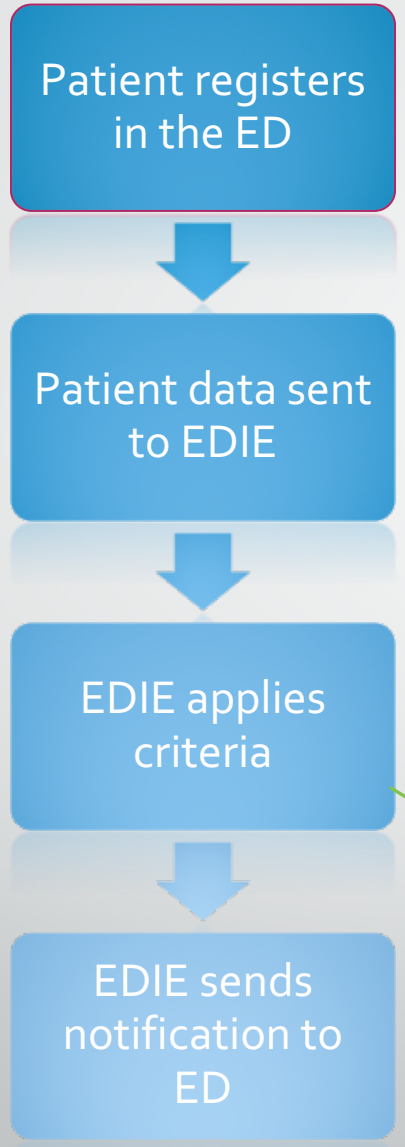
Why do we need a platform like EDIE?

- Frequent ED users represent a vulnerable (and at times, high cost) population
  - Higher admission rates, poorer social determinants of health, high tri-morbid illness, many unmet needs
- EDIE allows accurate classification of frequent ED users based on data from multiple sites
- Care Guideline input allows care coordination and notifications
- ED staff notified in real time, can take action

What motivated the SF Bay Area?

- Desire to tackle the issue of frequent ED use as a symptom of larger delivery system problems
- Easy to use, inexpensive product
- Incentivized by local Medi-Cal Health Plan (San Francisco Health Plan)
  - Allows for improved care coordination for their high risk members

How does EDIE work?

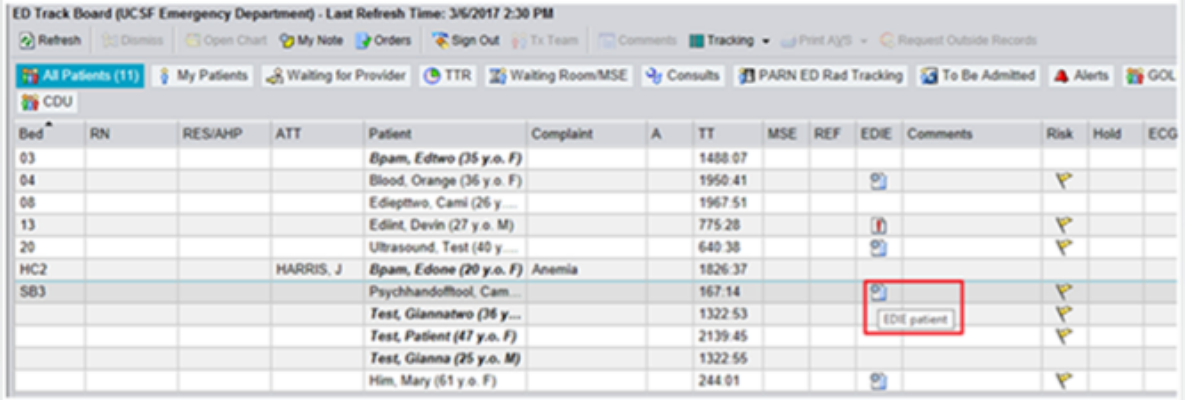


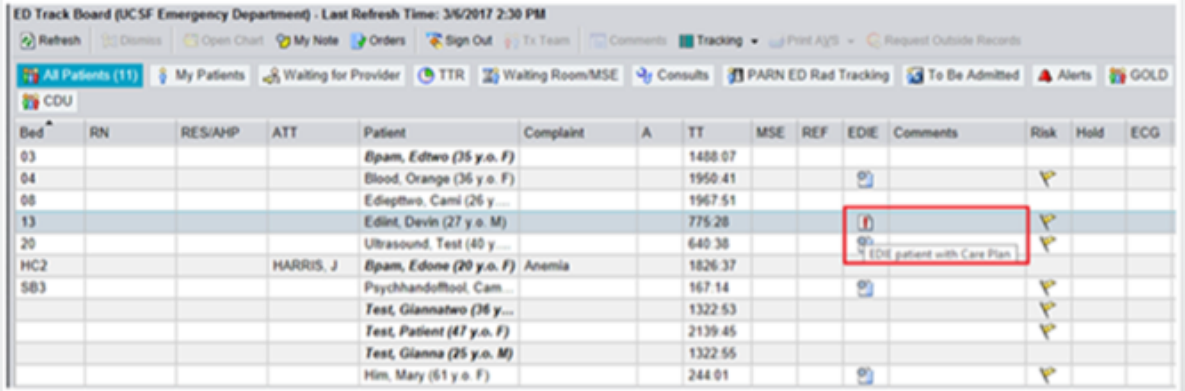
- EDIE is integrated with EPIC with its own dedicated column on the patient track board

- EDIE report includes ED visit history, primary care physician contact information, current medications, existing care plans, security alerts

EDIE Criteria
- 5 Visits in the last 12 months
- 3 different EDs in the last 2 months
- Care Guideline in place

EDIE in EPIC


ED Track Board (UCSF Emergency Department) - Last Refresh Time: 3/6/2017 2:30 PM
Refresh
Dismiss
Open Chart
My Note
Orders
Sign Out
Tx Team
Comments
Tracking
Print A(V)S
Request Outside Records
All Patients (11)
My Patients
Waiting for Provider
TTR
Waiting Room/MSE
Consults
PARN ED Rad Tracking
To Be Admitted
Alerts
GOL
CDU
Bed
RN
RES/AHP
ATT
Patient
Complaint
A
TT
MSE
REF
EDIE
Comments
Risk
Hold
ECG
03
Bpam, Edtwo (35 y.o. F)
1488:07
04
Blood, Orange (36 y.o. F)
1950:41
08
Ediepttwo, Cami (26 y....
1967:51
13
Edlint, Devin (27 y.o. M)
775:28
20
Ultrasound, Test (40 y....
640:38
HC2
HARRIS, J
Bpam, Edone (20 y.o. F)
Anemia
1826:37
SB3
Psychhandofftool, Cam...
167:14
Test, Giannatwo (36 y...
1322:53
EDIE patient
Test, Patient (47 y.o. F)
2139:45
Test, Gianna (25 y.o. M)
1322:55
Him, Mary (61 y.o. F)
244:01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EDIE patient with Care Plan
HC2
HARRIS, J
Bpam, Edone (20 y.o. F)
Anemia
1826:37
SB3
Psychhandofftool, Cam...
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Test, Giannatwo (36 y...
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Him, Mary (61 y.o. F)
244:01


Results for orders placed or performed during the hospital encounter of 02/07/17
ED Information Exchange
Result
Value
Ref Range
EDIE Careplan
EDIE Security
1
Narrative
EDIE21 52TEST97580804
Criteria met for sending notification
test
This patient has registered at the UCSF Emergency Department
ED Care Guidelines
There are currently no ED Care Guidelines in EDIE for this patient. Please check your facility's medical records system.
Recent Emergency Department Visit Summary
Admit Date Facility City State Type Major Type Diagnoses or Chief Complaint
Feb 7, 2017 UCSF San F. CA Emergency Emergency
Recent Inpatient Visit Summary
No recorded inpatient visits.
E.D. Visit Count (12 mo.)
Facility Visits
UCSF 1
Total 1
Note: Visits indicate total known visits.
The above information is provided for the sole purpose of patient treatment. Use of this information beyond the terms of Data Sharing Memorandum of Understanding and License Agreement is
Close

Care Provider Info

Care Guidelines

Care History

Security Event

PDMP Information

Visit History

PreManage ED ALERT 05/27/2016 04:12 AM Darwin, Charles (DOB: 02/12/1909)

This patient has registered at the **Henry Medical Center Emergency Department**. You are being notified because this patient has recommended Care Guidelines. For more information please login to EDIE and search for this patient by name.

Care Providers

Provider	Type	Phone	Fax	Service Dates
Ben A Zaniello MD	Primary Care	(206) 555-1213	(206) 555-1212	Current
Robert Osler MD	Cardiology	(206) 231-3125	(206) 231-3126	Current
Sarah Jung PHD	Psychology	(206) 782-2342	(206) 782-2343	Current

ED Care Guidelines from Henry Medical Center

Last Updated: Wed March 17 10:35:40 MDT 2016

Care Recommendation:

Patient's pain is cardiac related; please use nitroglycerin (CHF and cardiac protocols) for pain. Please do not use controlled substances in the ER unless there are new findings as patient is very sensitive to opiates.

Additional Information:

1. Please see ECG attached below for pre-existing cardiac pathology.
2. Cardiologist office responds to overnight pages.

These are guidelines and the provider should exercise clinical judgment when providing care.

Care Histories

Behavioral

03/4/2016 Wallace Memorial Hospital

- **Anxiety**

Imaging

- Last angiogram 11/12/15 due to chest pain with no new findings

Security Events

Date	Location	Type	Specifics
2/24/2016	Wallace Mem Hosp	Verbal	• Patient needed sedatives due to delusions and agitation.

Security Events (18 Mo.)	Count
Verbal	1
Total	**1**

Washington PDMP Report

Rx Risk Assessment: **High**

Rx Details (6 Mo.)

Fill Date	Drug Description	Qty.	Prescriber	CS	MED
2016-02-12	CLONAZEPAM 0.5	30	Ben Zaniello,MD	3	60.0
2016-01-28	CLONAZEPAM 0.5	30	Ben Zaniello,MD	3	60.0
2016-01-14	CLONAZEPAM 0.5	30	Ben Zaniello,MD	3	60.0
2015-12-31	CLONAZEPAM 0.5	30	Ben Zaniello,MD	3	60.0

Rx Summary (12 Mo.)	Coun
CS II-V Rx	0
CS-II Rx	0
Quantity Dispensed	120
Unique Prescribers	2
Long Acting Opioids	0

Recent Visit Summary

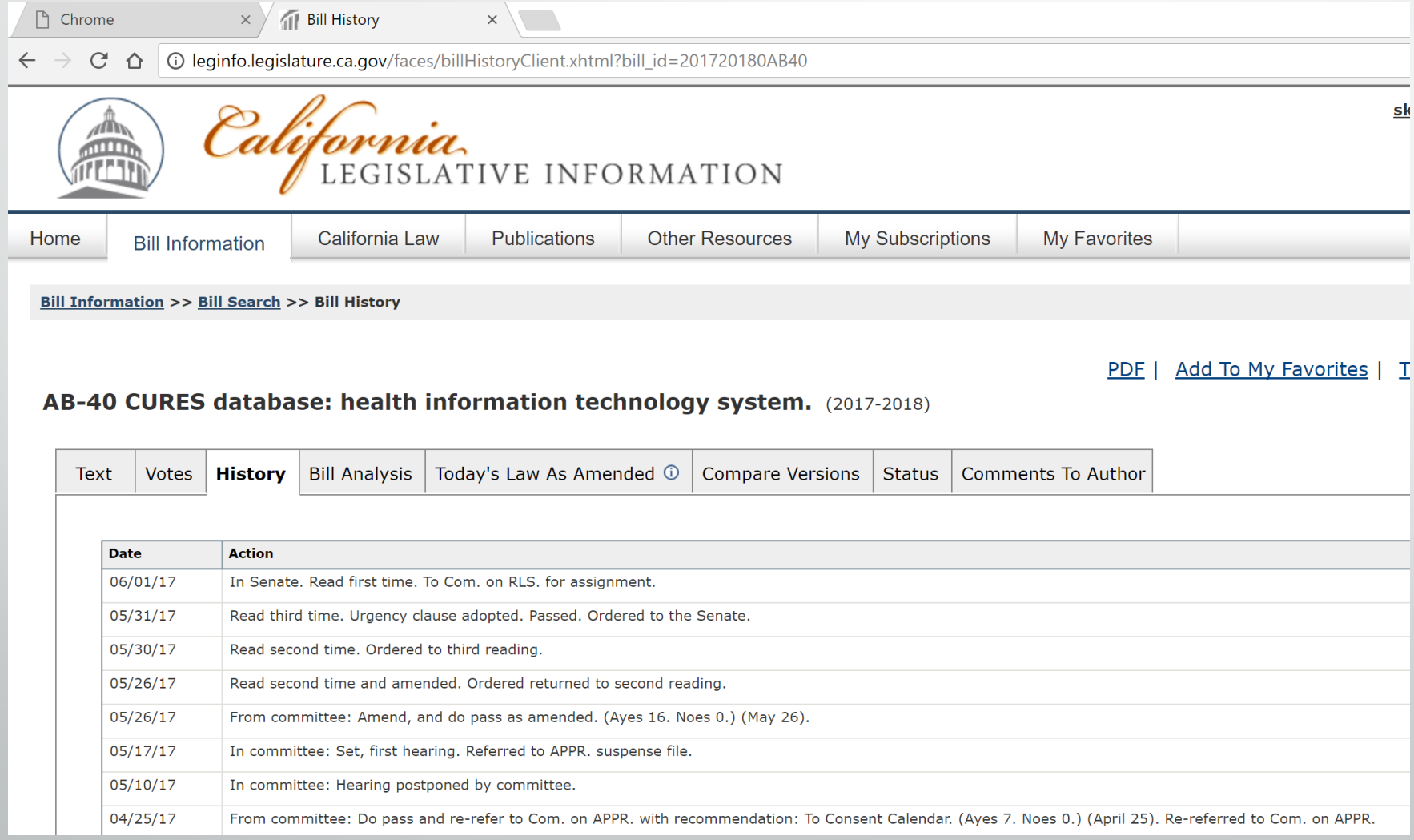
Visit Date	Location	Type	Diagnoses
03/04/2016	Wallace Memorial Hospital	Inpatient	- Anxiety, CHF
12/21/2015	St. Patrick's Hospital	Procedure	- Arrythmia

ED Visit Dates	Location	Type	Diagnoses
04/18/2016	Henry Medical Center	Emergency	- Shortness of Breath
03/04/2016	Wallace Memorial Hospital	Emergency	- Fever, unspecified
12/21/2015	St. Patrick's Hospital	Emergency	- Medication side effect - Chest Pain
03/03/2015	Sisters of Mercy Centralia Hospital	Emergency	- Shortness of Breath

E.D. Visit Count (1 Yr.)	Visits
Sisters of Mercy Centralia Hospital	4
Henry Medical Center	37
Wallace Memorial Hospital	6
Total	**47**

Note: Visits indicate total known visits.

CURES Update



How does EDIE differ from an HIE?

- Less expensive
- Data integration across a given region (city, county) and states/nation
- Can work on top of existing HIEs or other databases
  - CURES/PDMPs; Jail data; Advanced directive registries; EMS data
- Pushes notifications to providers based on risk (HIE's require a provider to look up or query data)
- Integrates into physicians native workflow (ED track board)
- Includes ED-specific care recommendations
- Tracks security risks and infectious disease risks
- Provides real-time analytics on patients specific to provider's / hospitals risk criteria
- Less data
  - Unlike HIE, does not focus on lab values, imaging results, or case notes

Implementing EDIE

- At UCSF, ED-based Health Care Navigators (HCNs) use interview tool to assess factors (medical, behavioral, social determinants) that may impact ED use.
  - Provide resources, coordinate with other providers, and do phone-based follow-up.
  - Create EDIE care plans

Optimizing use of EDIE

- Creation of Care Guidelines is critical but takes time
- Some sites who are implementing EDIE use existing staff: others hire new, dedicated EDIE staff
- UCSF has hired 2 Health Care Navigators (HCNs); ZSFG is using an existing ED social worker "champion"
- Considerations
  - Funds to hire new FTE
  - Degree to which you expect docs/other providers to be proactive

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Prioritization of EDIE Patients for intervention

Threshold: 3+ hospitalizations in a 3 month period, OR 5+ hospitalizations in 12 months

- San Francisco Health Plan members
- Patients already seen by providers in the ED
- Referrals from ED staff
- Patients on 5150s usually seen by ED social work

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UCSF Screening tool

- Structured interview used to collect data from patients on reasons for coming to the ED, medical and behavioral conditions, and social determinants of health that may be influencing health care utilization

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Data April 2017 – April 2018

- UCSF has entered 378 active care plans
  - 339 patients interviewed
  - 38 patients referred by UCSF or community providers

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ED use among **interviewed** EDIE patients

- Data from single site doesnt tell the whole story
  - Visits at UCSF: 8.4 per person/year (range 1 -119)
  - Total visits at all EDs on EDIE platform: 21.3 per person/year (range 5 – 236)

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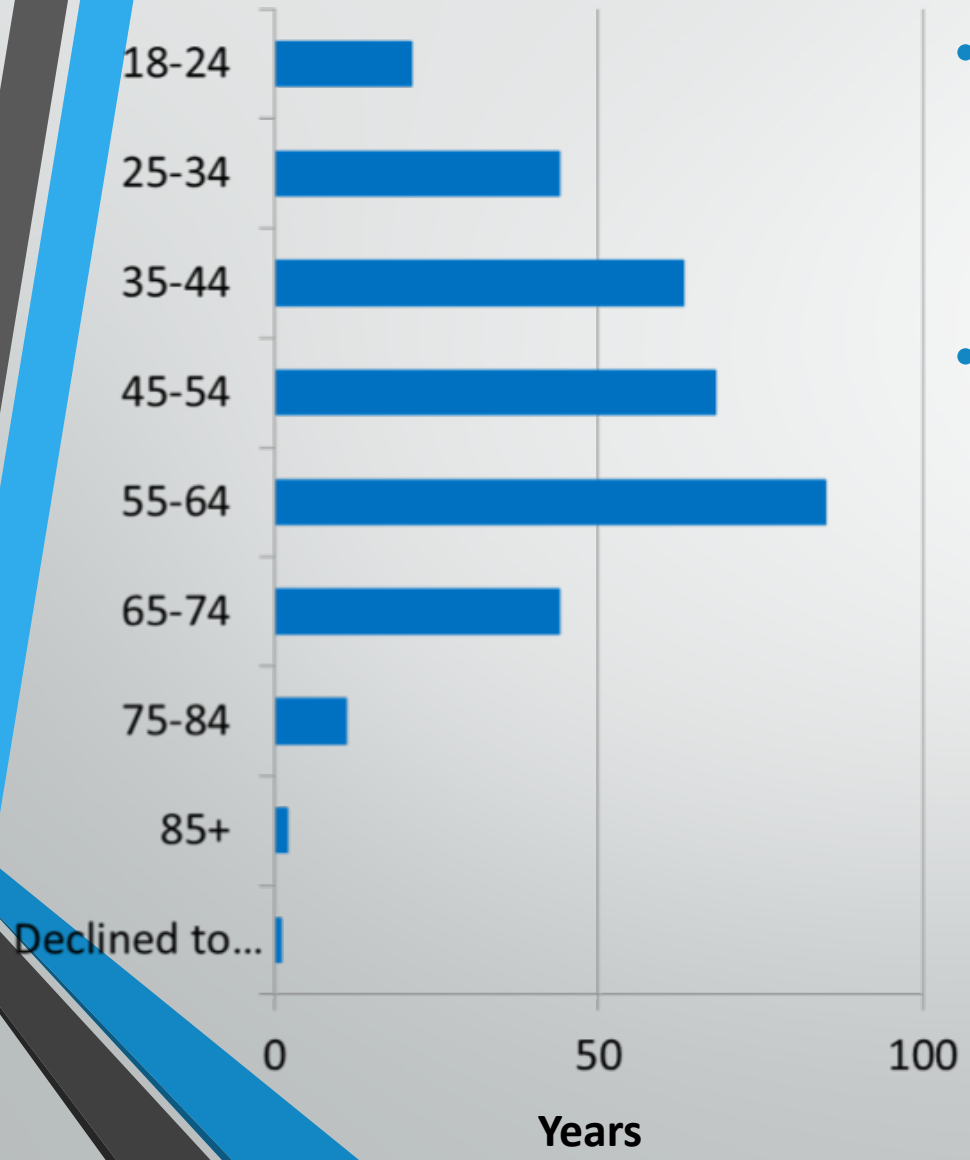
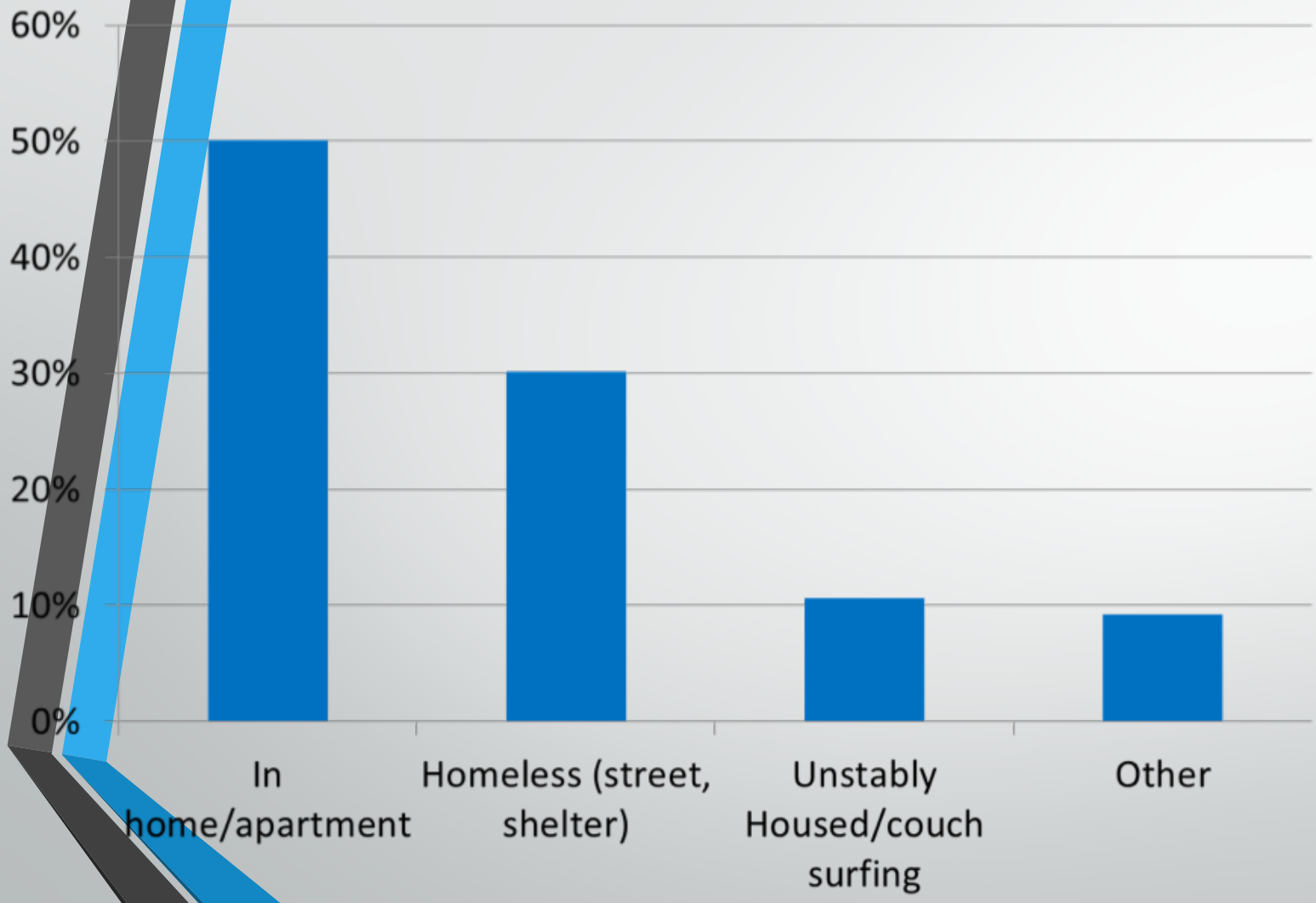
Demographics

- Age



- **Gender (self-identified)**
  - Male (52.2%)
  - Female (47.8%)
  - Transgender (0.6%)
- **Race/Ethnicity (self-identified)**
  - White (43.6%)
  - African American/Black (38.9%)
  - Hispanic/Latino (12.7%)
  - Asian (4.2%)
  - American Indian/Alaska Native (.9%)
  - Native Hawaiian/Other Pacific Islander (.3%)

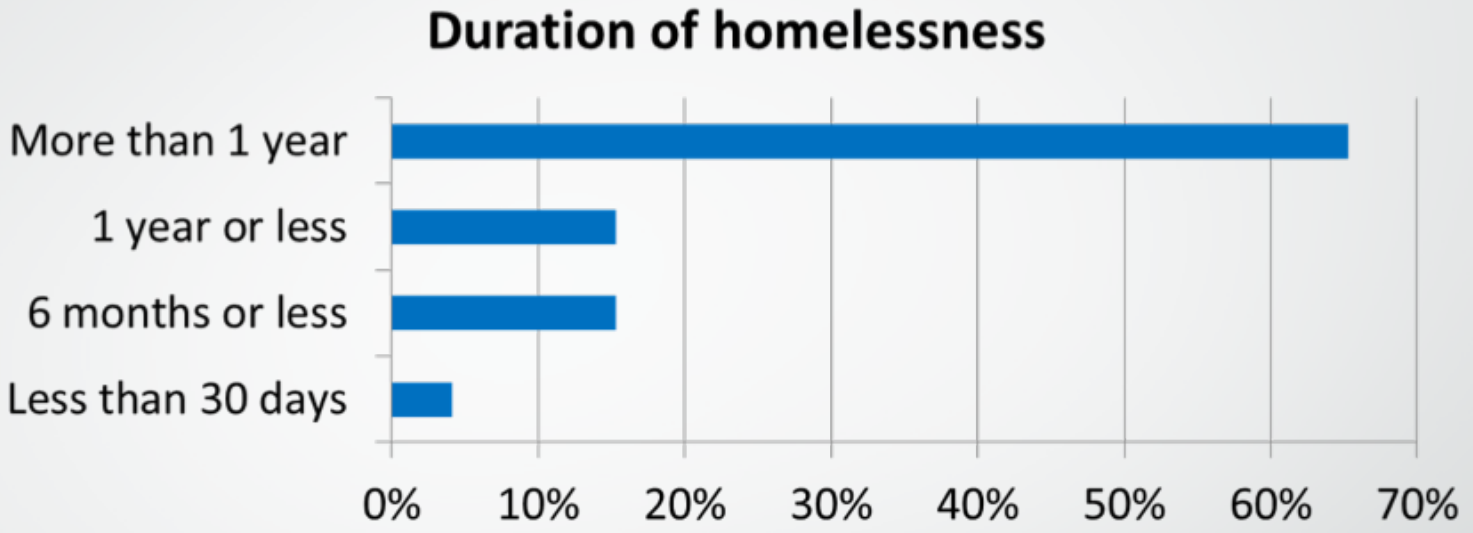
Housing Status



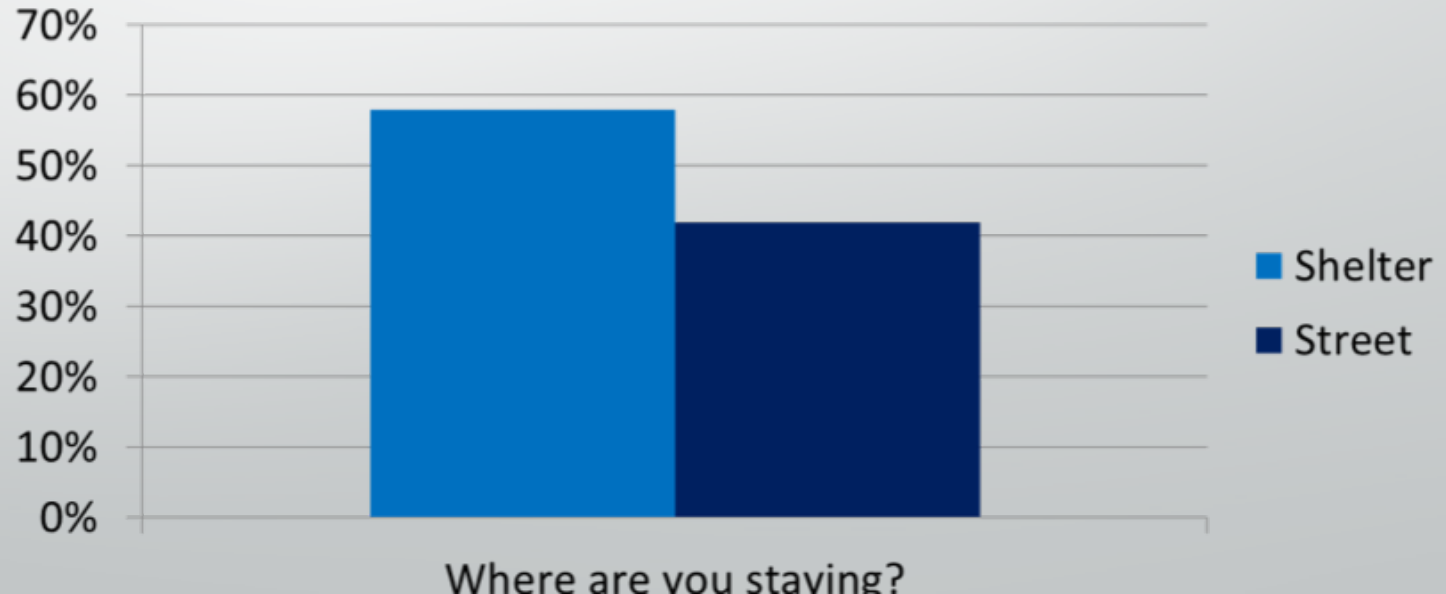
- Home or apartment (50.1%)
- Homeless (30.1%)
- Unstably housed (10.6%)
- Other (9.2%)
  - Substance treatment program, board and care, SNF, declined to answer, did not ask

Details on Homelessness

- Duration of Homelessness
  - > 1 year (65.3%)
  - 1 year or < (15.3%)
  - 6 months or < (15.3%)
  - < 30 days (4.1%)



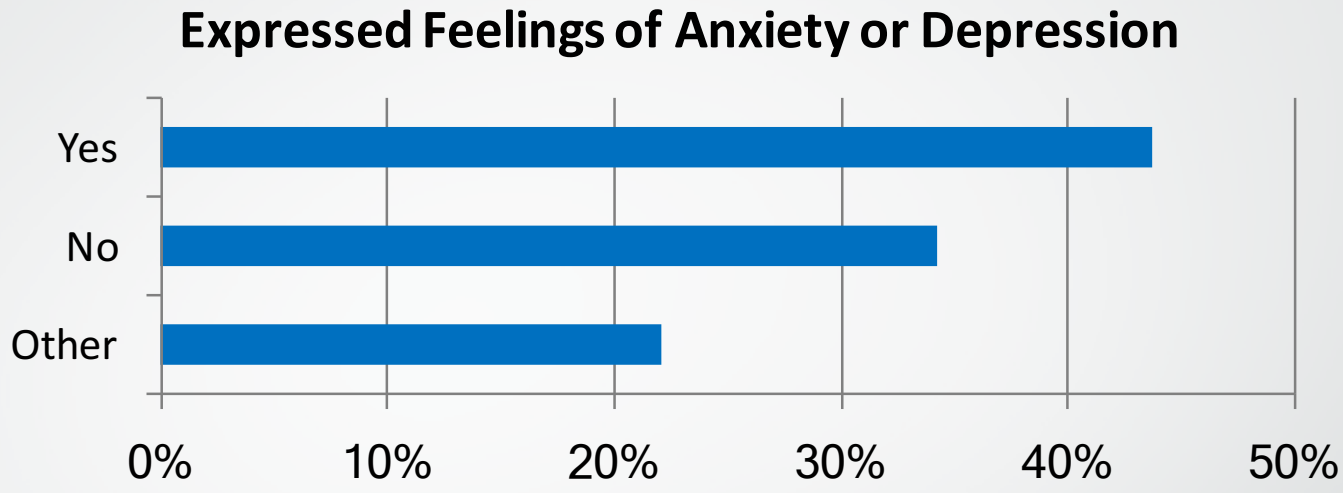
- Shelter vs. Street
  - Street (42.0%)
  - Shelter (58.0%)



Self-reported Mental Health

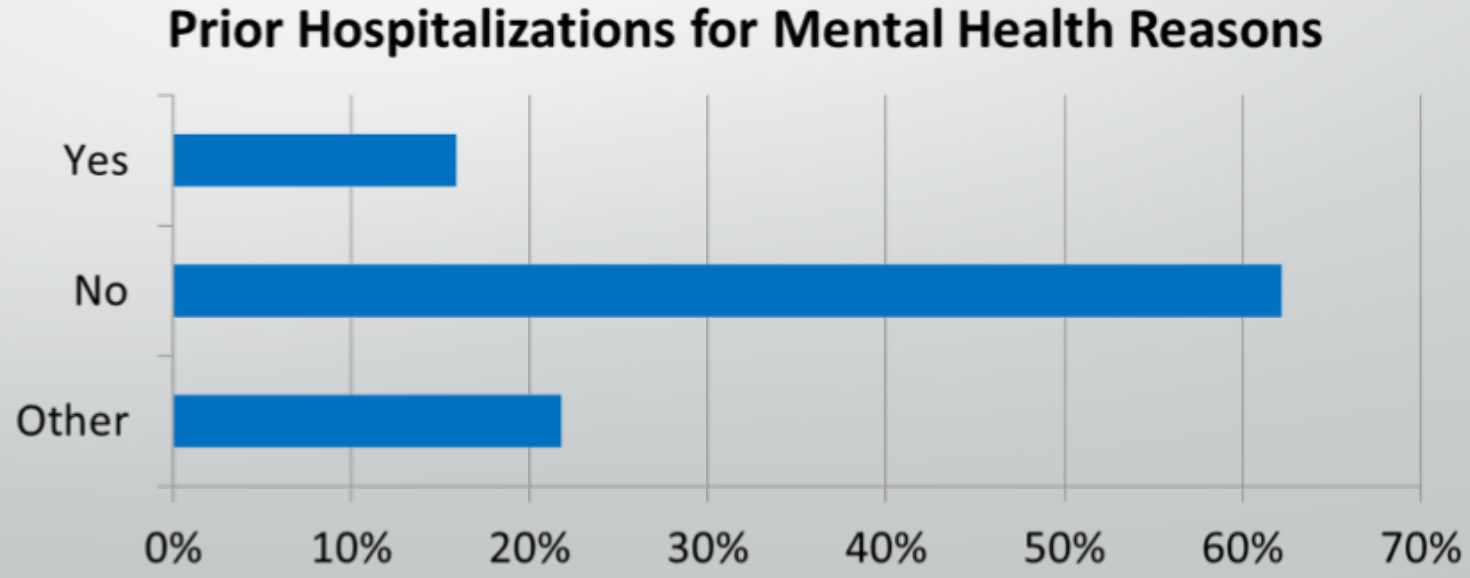
Anxiety or Depression

- Yes (43.7%)
- No (34.2%)
- Did not ask/Declined (22.1%)



Prior hospitalizations for mental health reasons

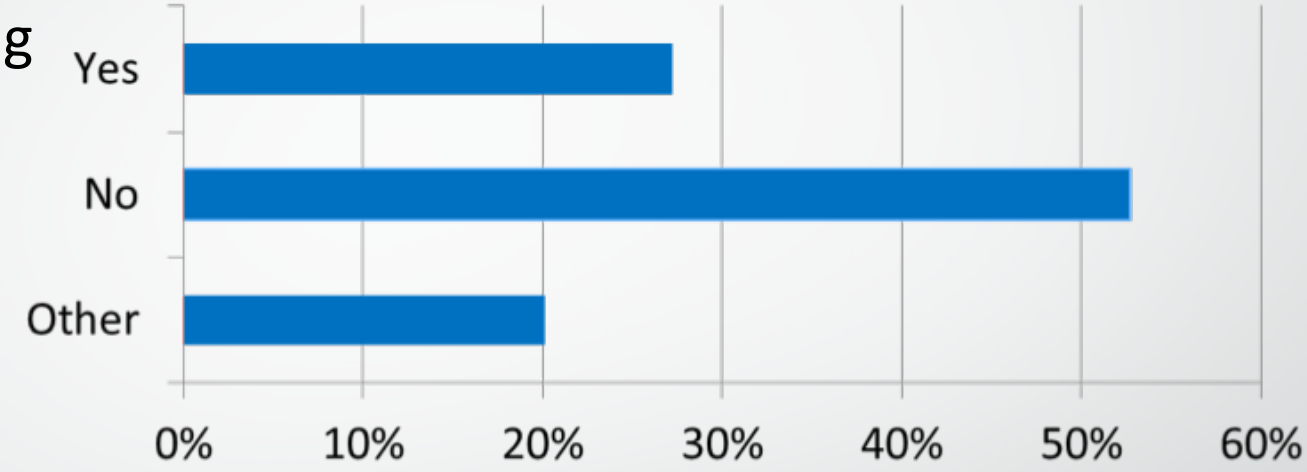
- Yes (19.3%)
- No (46.5%)
- Did not ask/Declined (34.2%)



Substance Use

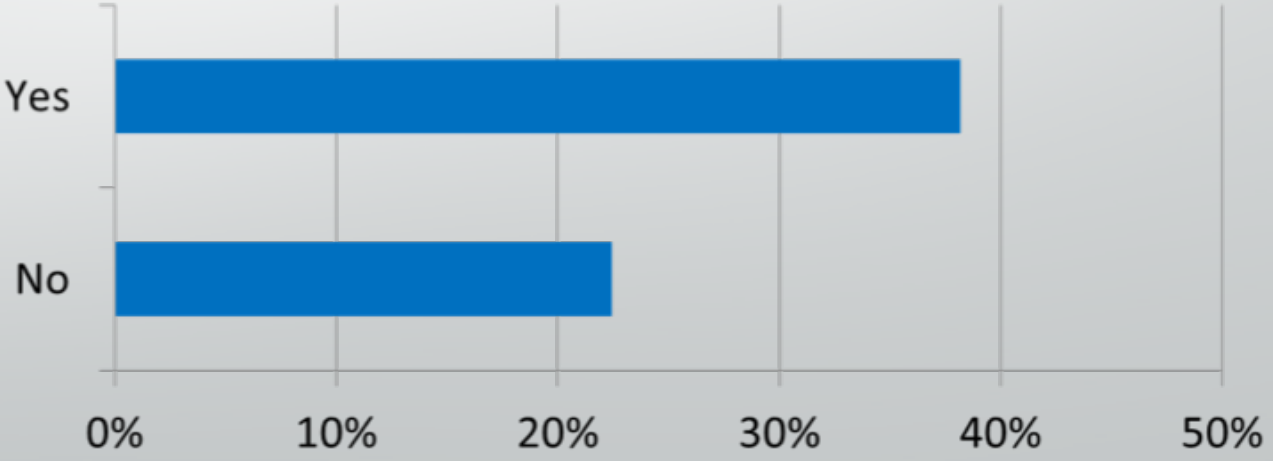
Self-reported alcohol and/or drug use

- Yes (26.8%)
- No (53.3%)
- Declined to answer/ Did not ask (19.9%)



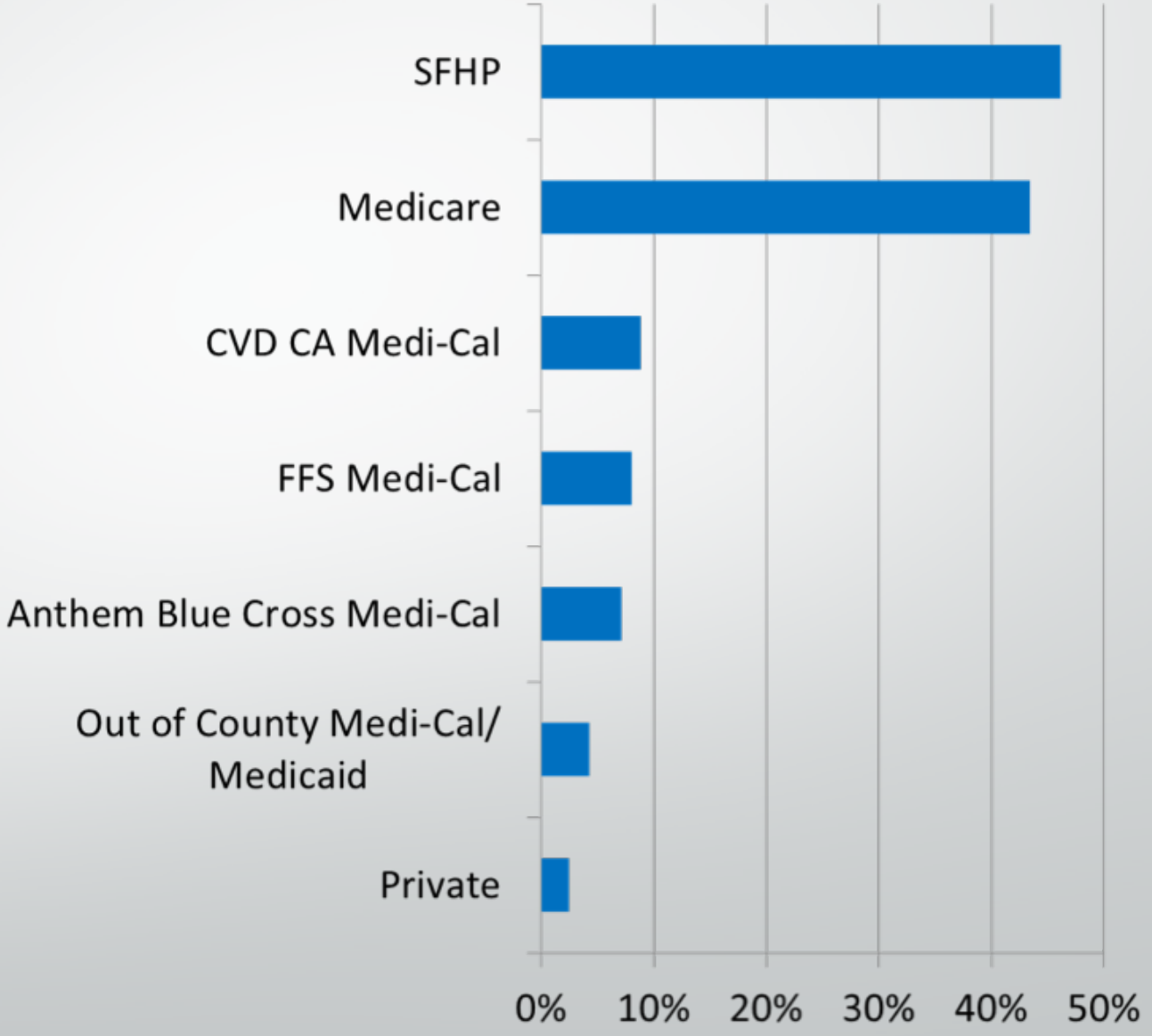
Interested in addressing alcohol and/or drug use

- Yes (60.4%)
- No (39.6%)



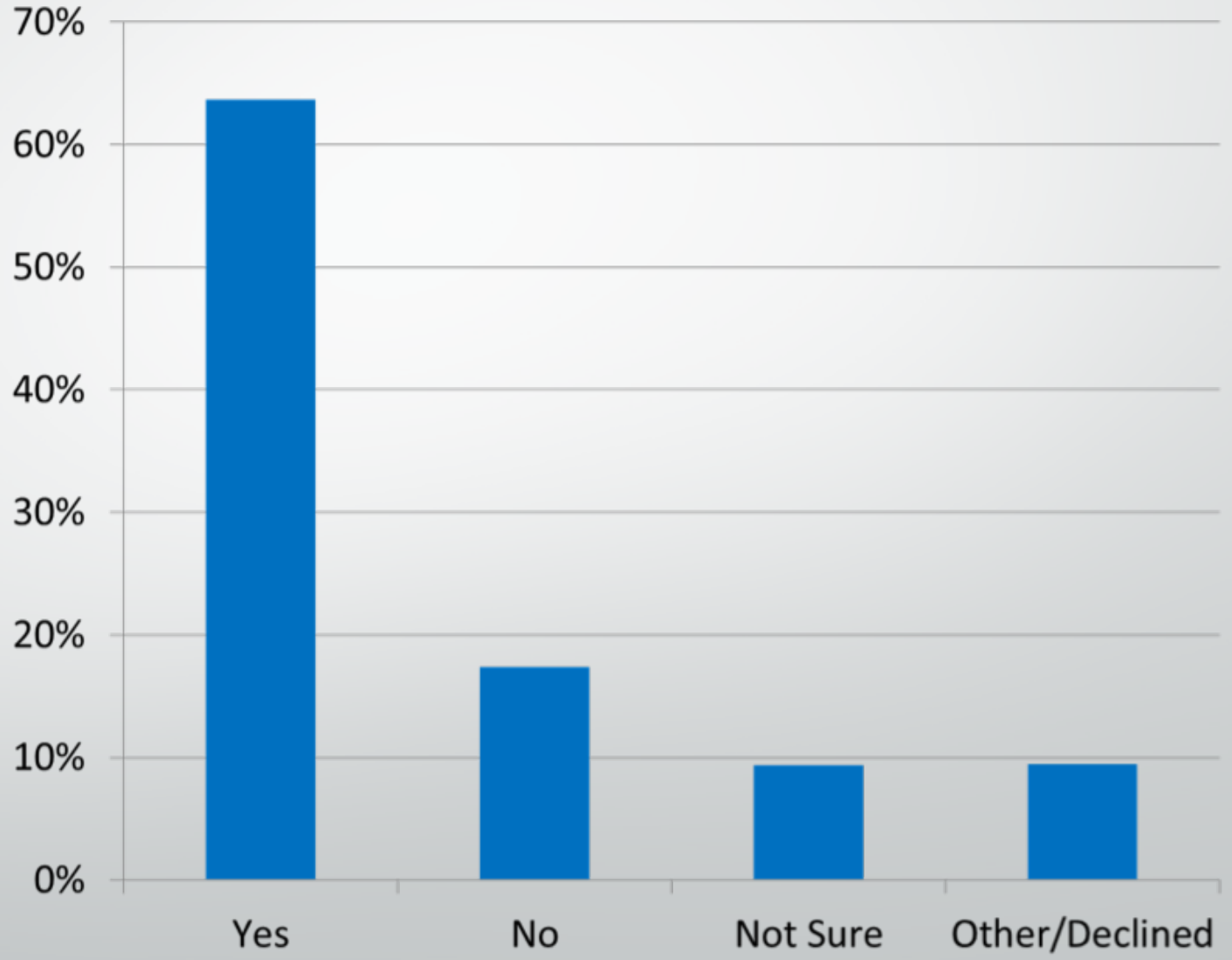
Insurance

- Primary Insurance type
  - San Francisco Health Plan Medi-Cal (46.2%)
  - Medicare (43.4%)
  - CVD CA Medi-Cal (8.9%)
  - FFS Medi-Cal (8.0%)
  - Anthem Blue Cross Medi-Cal (7.1%)
  - Out of county Medi-Cal/ Medicaid (4.3%)
  - Private insurance (2.5%)

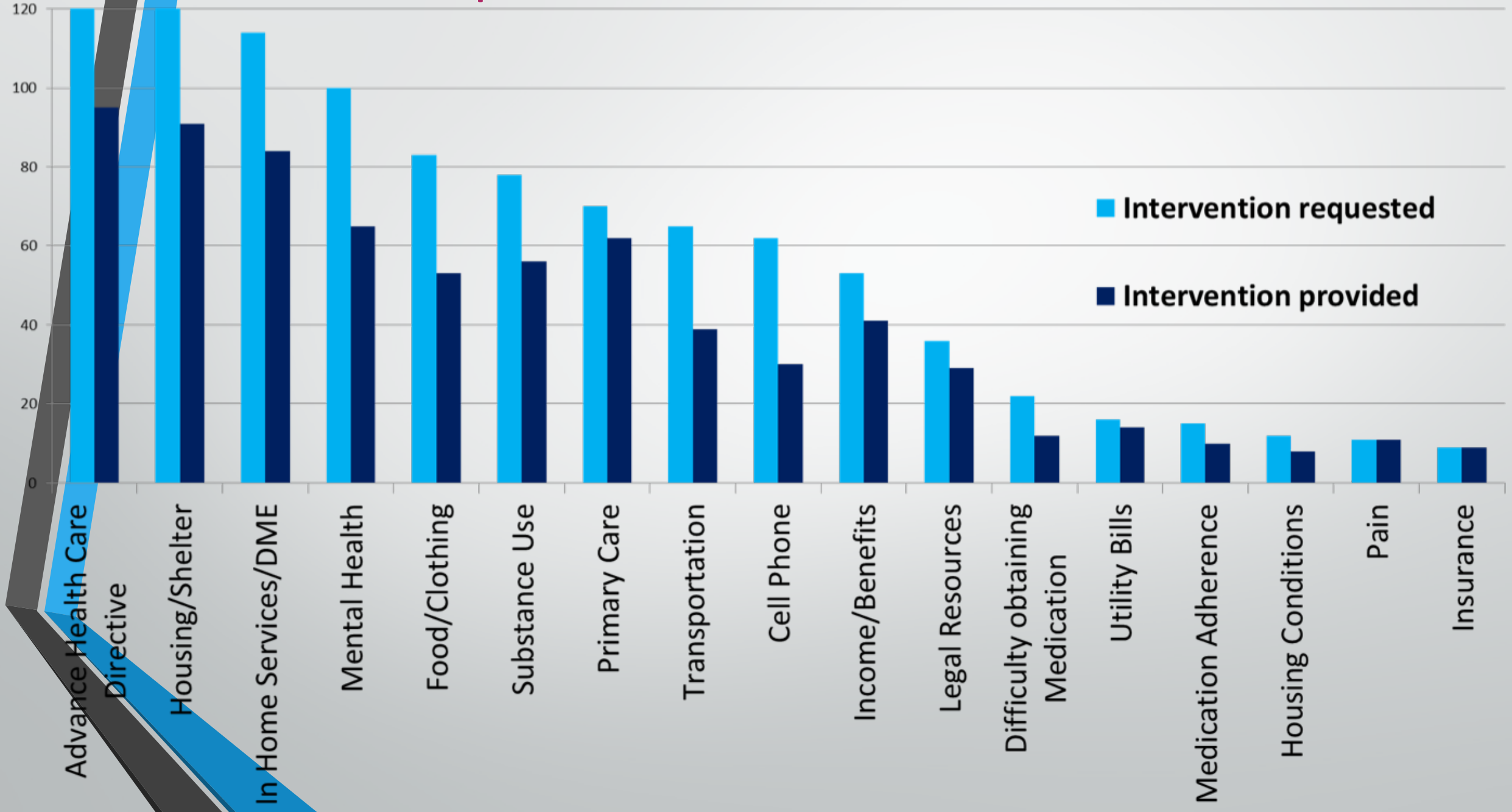


Primary Care

- Has primary care provider
  - Yes (63.7%)
  - No (17.4%)
  - Not Sure (9.4%)
  - Other/Declined (9.5%)



Patient Reported Needs and Interventions



EDIE Enables Collaboration to Improve Patient Care

- We can see other EDs patients are using, better understand their insurance coverage and eligibility, and input or receive information about other services use

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Interventions in the ED

- Setting up primary care/contacting PMD for Care Guideline input
- Obtaining a reservation on the shelter bed wait list
- Linking patients to concrete resources (free phone programs, clothing, etc.)
- Completing a benefits application
- Referring a patient to case management services
- Collaborating w/ inpatient social workers

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Interventions in the community

Examples:

- Accompaniment to PMD appointments
- Assistance w/ intake processes for case management
- Assistance w/ benefits applications

Benefit to community-based interventions:

- More time to build rapport with patients and strengthen relationship between HCN and patient
- Ensures patient follow-through with referral
- Less acute setting

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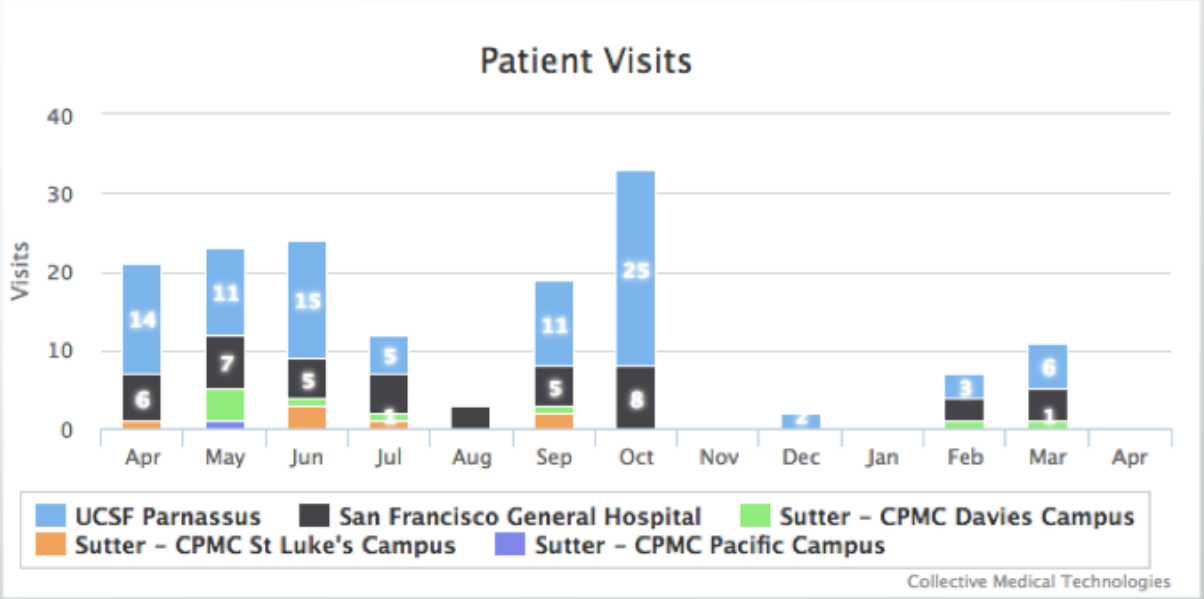
Case 1: alcohol use disorder

- 67 year old male brought into UCSF, ZSFG and other EDs almost daily for alcohol intoxication, homeless
- Often discharged, occasional admissions for alcohol withdrawal
- Concern about ability to care for himself, increasing ED visits with injuries or suicidal behavior
- Case conference with psychiatry, sobering center case management→led to 5150→5250→more in depth cognitive testing→inpatient visits by and planning involving his community based case manager



Case 2: security

- 40 y/o M
- Recent move from LA visible on platform
- 95 ED visits since move to SF in January 2018
- Case conference with ZSFG staff: felt may be danger to others
- Security warning placed in EDIE

Case 3: Real-time housing coordination

- 56 y/o male with 192 ED visits in past year
- Prior brain tumor resection, seizure disorder
- Through EDIE and interviews with HCNs, able to collaborate on his care with SF Homeless Outreach Team and Street Medicine team in real time: prioritized for navigation center bed by holding patient in ED

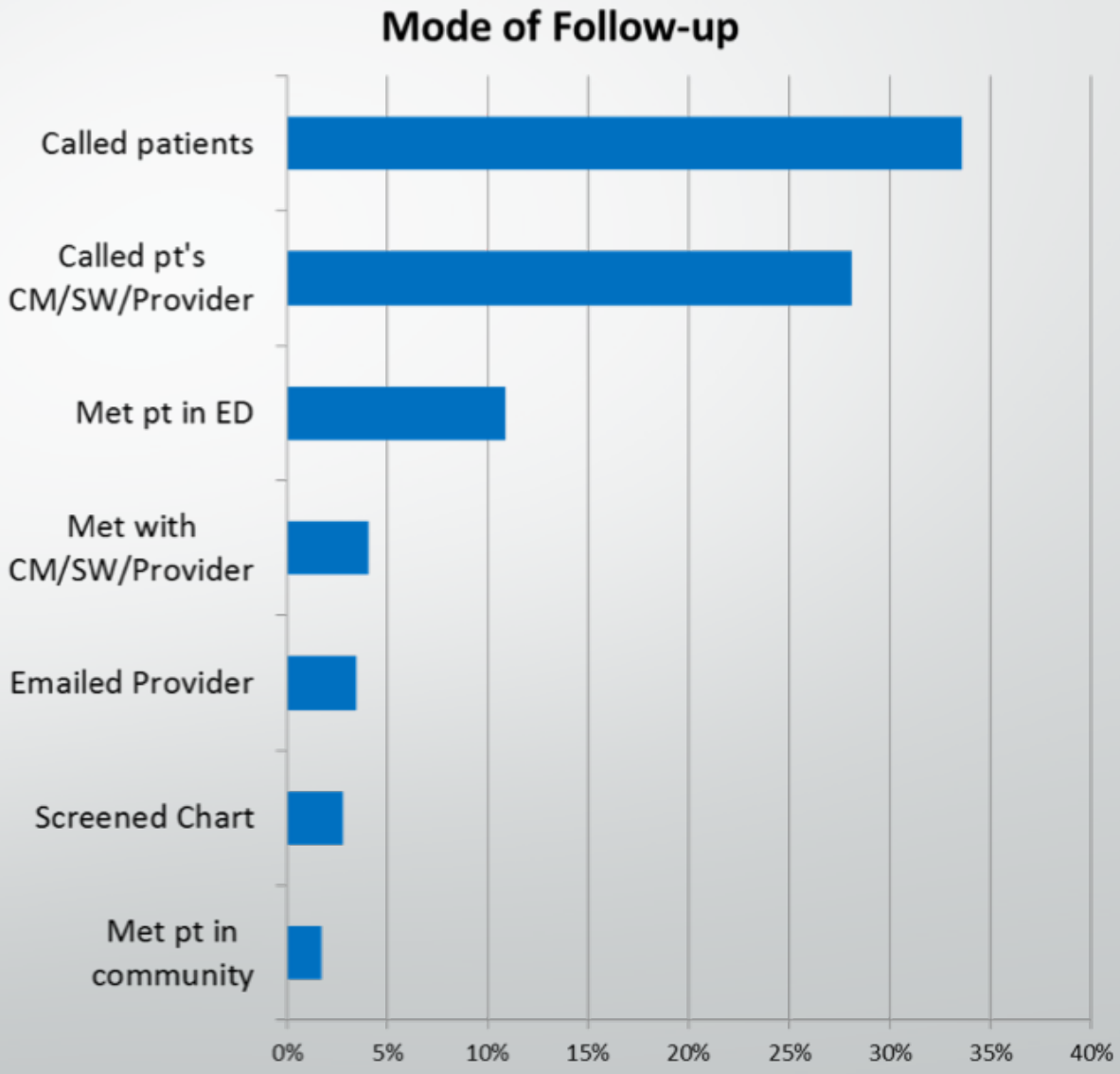
Thank you

- maria.raven@ucsf.edu

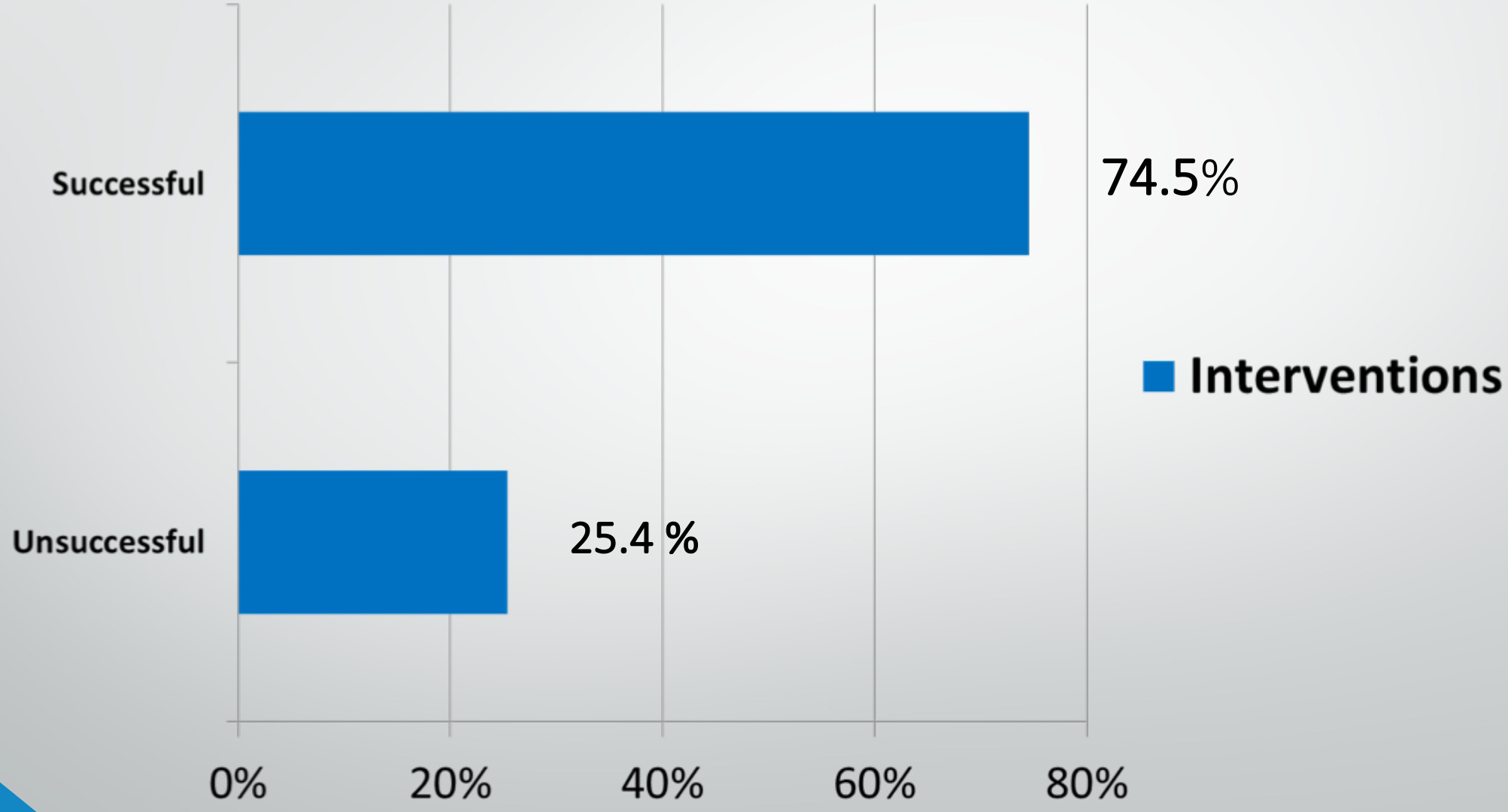
Follow-up Data (in progress)

- Follow-up attempt information collected for 319 of 339 patients
- HCNs have attempted follow-up for 223 of the 339 patients (65.8%)
- 96 of the 339 patients (28.3%) require no additional follow-up or have no access to a phone
- Follow-up attempts range from 1-10 per patient
  - Total follow-up attempts made = 537

- Mode of Follow-up Attempts
  - Called patient (33.6%)
  - Called patient's CM/SW/Provider (28.1%)
  - Met patient in ED (10.9%)
  - Met with CM/SW/Provider in person (4.1%)
  - Emailed Provider (3.5%)
  - Screened Medical Chart (2.8%)
  - Met patient in community (1.7%)



Outcome of Follow-up Attempts



Interventions Addressed During Follow-up