Population Health Technology in Action
Thursday, February 7, 2019

Healthcare is in amidst a transformation that will improve our ability to avert unexpected health and improve our quality of life. This starts by having the right engagement, outreach, and follow up. In this effort, we need strong nursing informatics to devise care to a wider population approach.

Amy M. Sitapati, MD

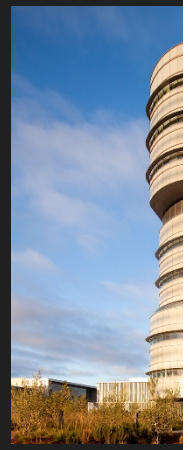
Clinical Professor, Dept. of Medicine & Biomedical Informatics

Chief Medical Information Officer, Population Health

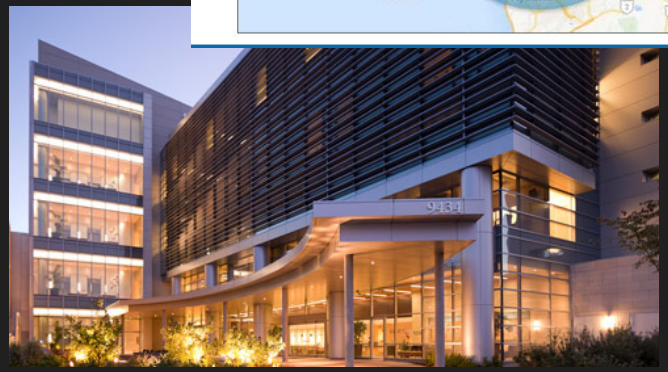
Investigator, UCSD, All of Us (NIH)

UCSD PI, California Integrated Vital Records System

UC San
Center



Jacobs



Sulpizio Cardiovascular Center

Becker's Hospital Review
100 Great Hospitals in America | 2017

Truven Health Analytics | IBM Watson Health
100 TOP HOSPITALS

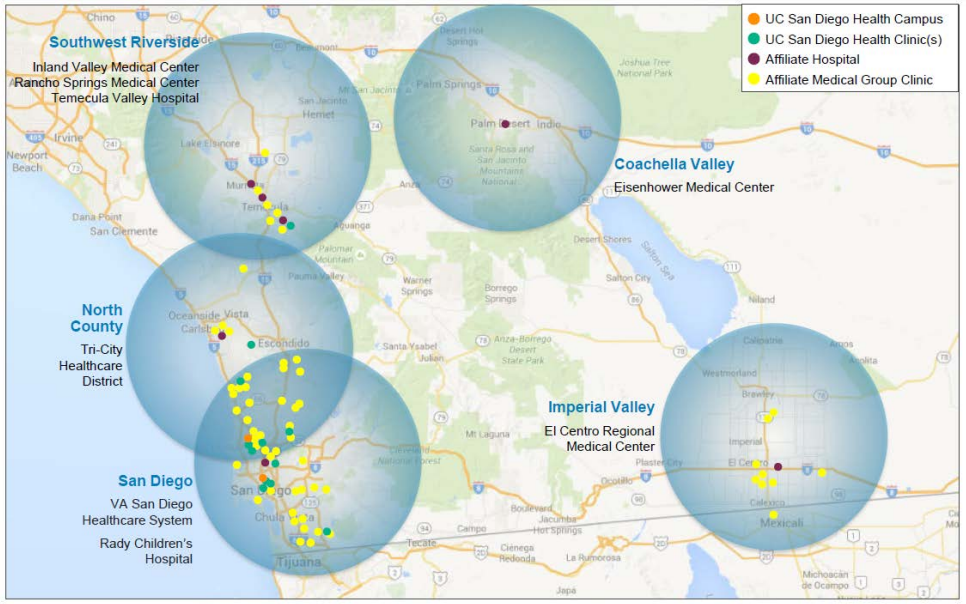
DISTINGUISHED HOSPITAL
CLINICAL EXCELLENCE™
2017
★★★★★
healthgrades

LEADER IN LGBTQ HEALTHCARE EQUALITY
HUMAN RIGHTS CAMPAIGN FOUNDATION
2017
HEALTHCARE EQUALITY INDEX™

MAGNET RECOGNIZED
AMERICAN NURSES CREDENTIALING CENTER

THELEAPFROGGROUP
TOP HOSPITAL 2017

Our Affiliates!



UC San Diego Health

Affiliated with the School of Medicine,
School of Pharmacy. Active complex teams for quality across programs including P4P IHI, MSSP ACO, CMS Waiver PRIME, and more.

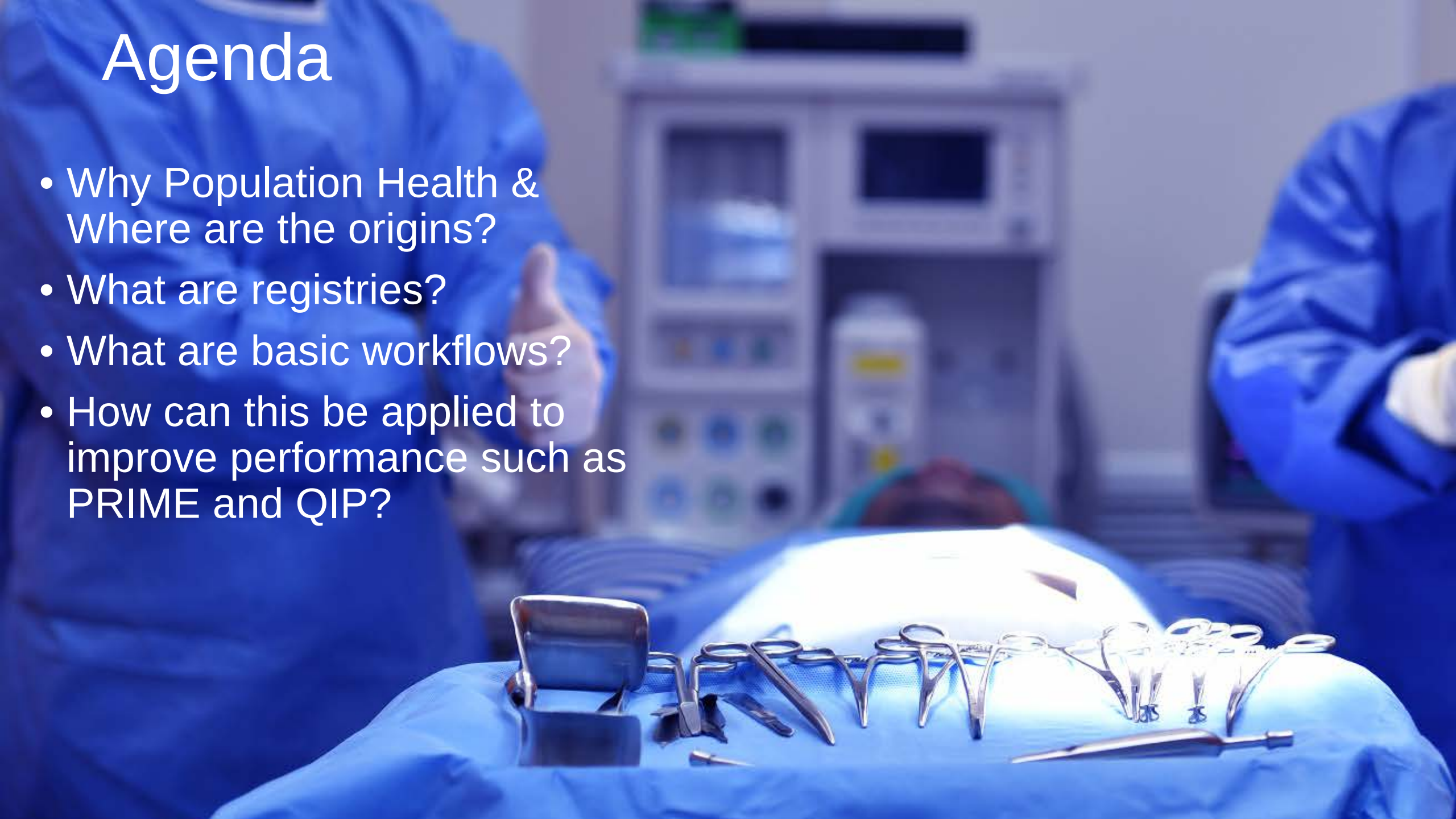
800+ Bed Health System

750,000+ Annual Ambulatory Visits

UC San Diego Health
OFFICIAL HEALTH CARE PROVIDER OF THE PADRES

Agenda

- Why Population Health & Where are the origins?
- What are registries?
- What are basic workflows?
- How can this be applied to improve performance such as PRIME and QIP?



The Triple Aim: Care, Health, and Costs, *Health Affairs*, 2008
From Triple to Quadruple Aim, *Family Medicine*, 2014

My origins of Population Health Thinking…. Commenced with the First routinized HIV screening in the nation- visited by First Lady, Laura Bush

https://georgewbushwhitehouse.archives.gov/news/releases/2007/06

2012

YouTube: InCare+ Campaign

https://www.youtube.com/watch?v=yKUAty1ozKI

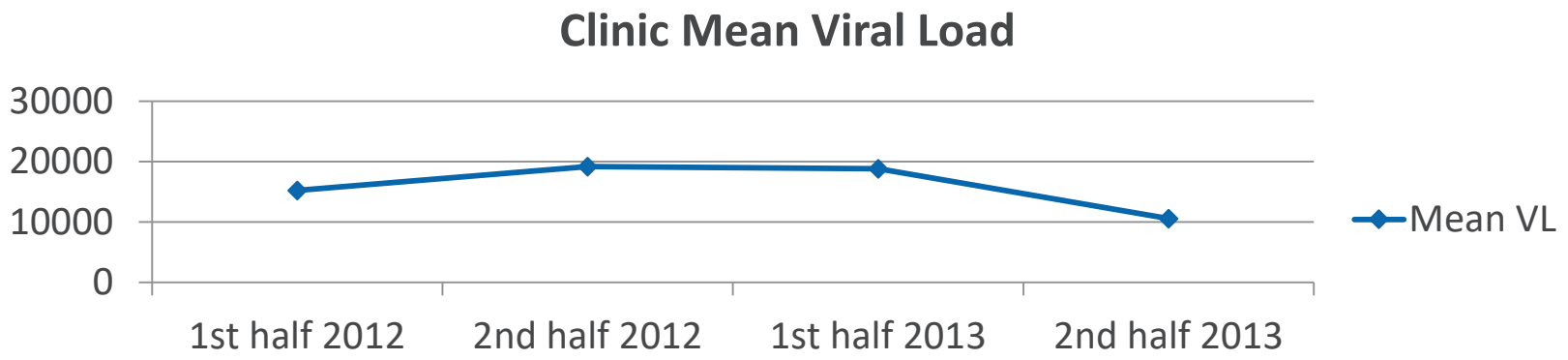
MediCare
medical & health presentation

Determined to make a difference, each life have a better opportunity to save – through outreach & intervention

+about the campaign

http://www.incarecampaign.org/about-the-campaign/

Interventional Population Health: 44% reduction in Clinic Mean Viral Load



	1st half 2012	2nd half 2012	1st half 2013	2nd half 2013
Number of Patients	2905	2778	2992	2829
Mean VL	15204	19182	18793	10552
Sum	44166190	53288908	56227823	29852201
Change in Mean VL Year on Year	-	26%	-2%	-44%

Sitapati, Berkovich: By the end of 2013 the mean viral load was reduced by 44% compared to end of 2012. Calculations were done as per CDC specifications.

http://www.ct.gov/dph/lib/dph/aids_and_chronic/surveillance/statewide/community_viralload_guidance.pdf

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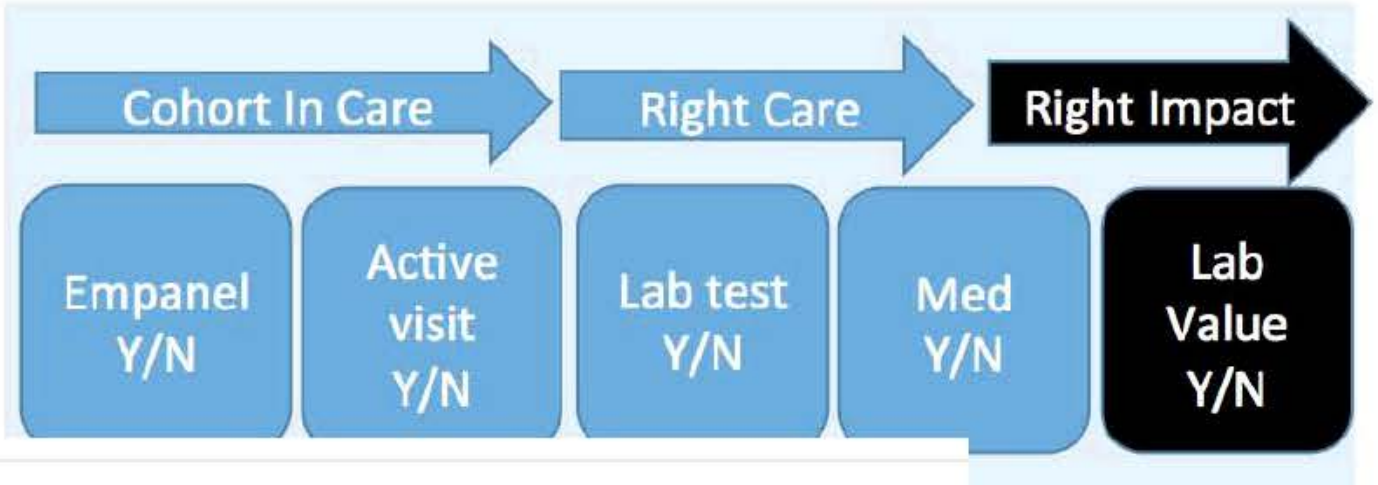
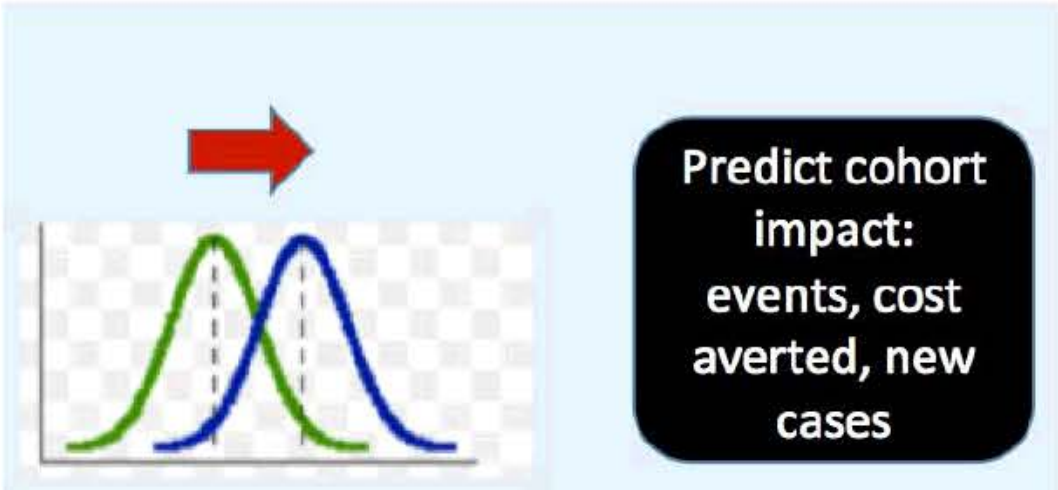
What is the model to drive improved outcomes?

Process Drives Outcomes: Learning Healthcare System

Individual Patient Level
Process Measure
- Drive patient by patient

Population Level Average
Outcome Measure
- Move the mean or median





Governance

- PRIME/QIP; Quality, IS Analytics & Pop Health +

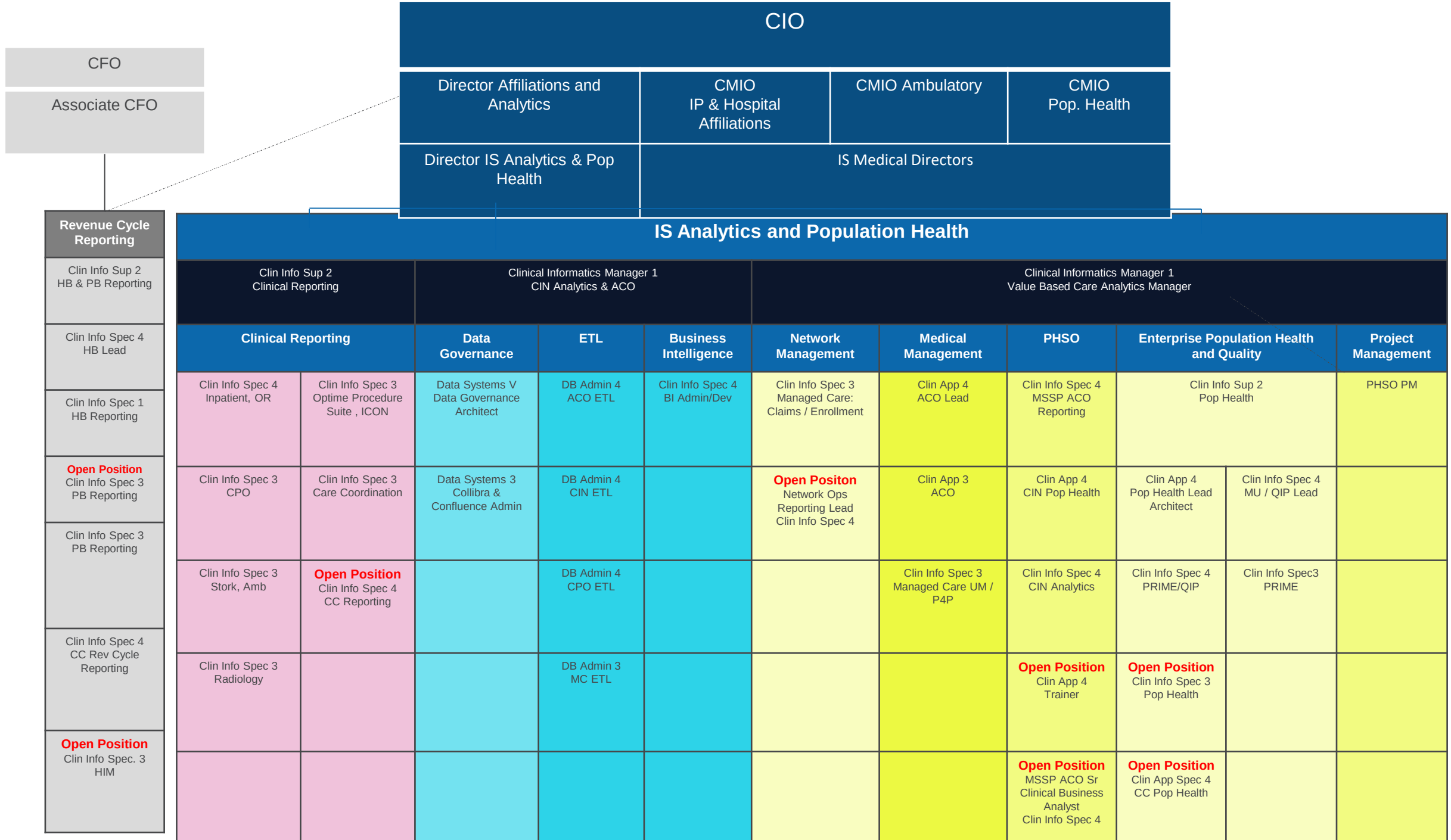
IS Infrastructure

- Business Intelligence, EMR Applications, +

Quality

- Clinical Led Teams

How do you apply people, process and technology?


CIO
CFO
Associate CFO
Director Affiliations and Analytics
CMIO IP & Hospital Affiliations
CMIO Ambulatory
CMIO Pop. Health
Director IS Analytics & Pop Health
IS Medical Directors
IS Analytics and Population Health
Revenue Cycle Reporting
Clin Info Sup 2 HB & PB Reporting
Clin Info Spec 4 HB Lead
Clin Info Spec 1 HB Reporting
Open Position Clin Info Spec 3 PB Reporting
Clin Info Spec 3 PB Reporting
Clin Info Spec 4 CC Rev Cycle Reporting
Open Position Clin Info Spec. 3 HIM
Clin Info Sup 2 Clinical Reporting
Clinical Informatics Manager 1 CIN Analytics & ACO
Clinical Informatics Manager 1 Value Based Care Analytics Manager
Clinical Reporting
Data Governance
ETL
Business Intelligence
Network Management
Medical Management
PHSO
Enterprise Population Health and Quality
Project Management
Clin Info Spec 4 Inpatient, OR
Clin Info Spec 3 Optime Procedure Suite , ICON
Data Systems V Data Governance Architect
DB Admin 4 ACO ETL
Clin Info Spec 4 BI Admin/Dev
Clin Info Spec 3 Managed Care: Claims / Enrollment
Clin App 4 ACO Lead
Clin Info Spec 4 MSSP ACO Reporting
Clin Info Sup 2 Pop Health
PHSO PM
Clin Info Spec 3 CPO
Clin Info Spec 3 Care Coordination
Data Systems 3 Collibra & Confluence Admin
DB Admin 4 CIN ETL
Open Positon Network Ops Reporting Lead Clin Info Spec 4
Clin App 3 ACO
Clin App 4 CIN Pop Health
Clin App 4 Pop Health Lead Architect
Clin Info Spec 4 MU / QIP Lead
Clin Info Spec 3 Stork, Amb
Open Position Clin Info Spec 4 CC Reporting
DB Admin 4 CPO ETL
Clin Info Spec 3 Managed Care UM / P4P
Clin Info Spec 4 CIN Analytics
Clin Info Spec 4 PRIME/QIP
Clin Info Spec3 PRIME
Clin Info Spec 3 Radiology
DB Admin 3 MC ETL
Open Position Clin App 4 Trainer
Open Position Clin Info Spec 3 Pop Health
Open Position MSSP ACO Sr Clinical Business Analyst Clin Info Spec 4
Open Position Clin App Spec 4 CC Pop Health

Overview of Quality Domains

Inpatient & Procedural
Reduce Surgical Site Infection, DVT prevention, CVC use, unplanned re-operation, and CT Head overuse [Ramamoorthy, Jenkins, Lee, Handwerker]

Wellness/Primary Prevention
Create standardized people, process and technology that result in improvements in care quality. [Nguyen, Wastila, Rosenblum]

Specialty
Stroke care [Hemmen], Create organized approach for referrals, econsult. [Rosenblum]

Palliative Care
Improving documentation of patient wishes, assessment for palliative needs, and hospice [Mitchell & Edmonds]

Cardiovascular
Create organized robust identification and treatment of HTN, IVD, HF, CAD, Arrhythmia, and tobacco [Lunde & Raisinghani]

Diabetes
Devise systems and people that enhance targeted and standard services for A1C, Eye, BP, LDL, ASA [Kulasa & Morn]

Diabetes & Asthma
Devise systems and people that enhance targeted and standard services for A1C, Eye, BP, LDL, ASA [Kulasa & Morn] Asthma [TBD]

Mental and Behavioral Health
Develop clinical quality programs for the screening and treatment of depression and substance use. [Perry & Folsum]

Perinatal Care
Develop best in class perinatal care, Baby Friendly, OB hemorrhage avoidance [Stellwagen & Tarsa].

Transition of Care and Care Mgt
Reduce re-admissions, improve post dc follow up and med rec, transmit care documents early [Beifus, VanDenBerg, El-Kareh, Clay, Haley]

Diversity
Develop training and tools to support care to our diverse race, ethnicity, language, sexual orientation and gender identity [Sitapati]

Patient Satisfaction
Foster an environment that improves patient satisfaction [Savides & Beifus]

High Cost Meds & Antibiotics
Reduce unnecessary medication utilization, opioid, & Abx exposure [Abeles, Torriani, Daniels, Clark, Wallace, El-Kareh]

What is Population Health?

"Population health can mean different things to different people but fundamentally it always includes four distinct components (1) patients, (2) clinicians, (3) care managers, and (4) analytics. These four can be used then to drive high-value population health delivery through ..."

Rydell, MBA, FACHE, LFHIMSS, Editor, R., Landa, MD, Associate Editor, H. **Sitapati** and Longhurst, Chapter 10: Analytics and Population Health The CMIO Survival Guide. New York: Productivity Press (2018), p 99-109

(1) Patients (2) Clinicians (3) Care Managers (4) Analytics

Engagement

Primary Care

Specialty Care

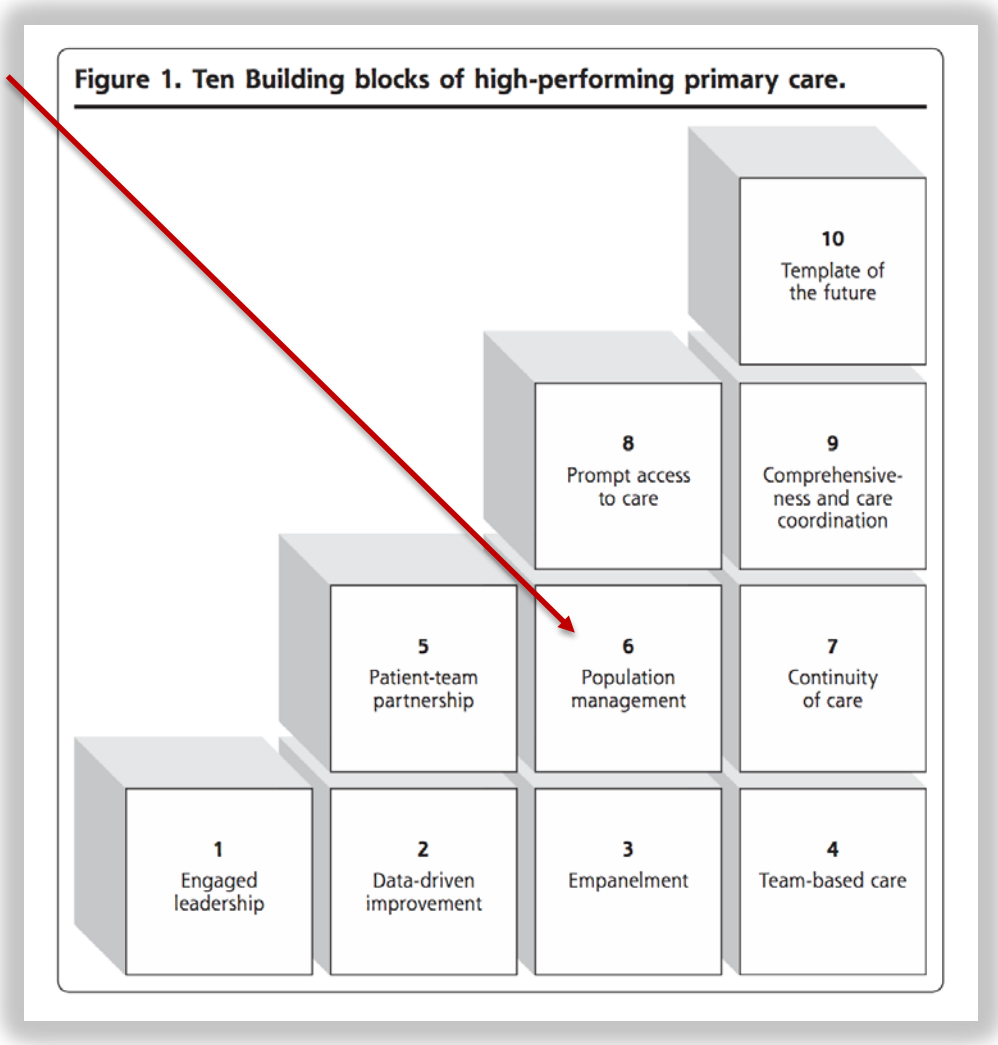
Outreach

Transition of Care

Complex Care Management

Building Blocks in Primary Care – that relay on 10 building blocks including population health

Three population-based functions provide major opportunities for sharing the care: panel management, health coaching, and complex care management. Panel management involves a staff member, usually a medical assistant or nurse, periodically checking the practice registry to identify patients who are due for routine services



Annals of Family Med Vol12:2; March/April 2014

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Panel Management

Table 3. Performance on Quality Measures Among Eligible Patients in the 3 Study Arms During the Study Period

Quality Measure	Study Arm, No. (%) of Patients: Control	EMR Reminder	EMR Reminder + Panel Manager
Health care proxy designation	114/1741 (6.5)	104/1181 (8.8)	246/1251 (19.7)
Initial bone density screening	103/583 (17.7)	78/396 (19.7)	116/380 (30.5)
Influenza vaccination	903/1930 (46.8)	755/1336 (56.5)	832/1394 (59.7)
Pneumococcal vaccination	170/1301 (13.1)	182/935 (19.5)	254/991 (25.6)

Abbreviation: EMR, electronic medical record.

Table 4. Comparison of Performance on Quality Measures Across Arms From Logistic Regression Models Using Generalized Estimating Equations Methods[a]

Quality Measure	OR (95% CI): Unadjusted Model	Adjusted Model[b]
Health care proxy designation		
EMR reminder	1.45 (0.95-2.22)	1.55 (1.00-2.41)
EMR reminder + panel manager	3.40 (2.33-4.97)	3.69 (2.48-5.48)
P value[c]	.002	<.001
Initial bone density screening		
EMR reminder	1.10 (0.70-1.72)	1.43 (0.94-2.17)
EMR reminder + panel manager	1.97 (1.28-3.04)	2.31 (1.55-3.43)
P value[c]	.02	.006
Influenza vaccination		
EMR reminder	1.44 (1.18-1.76)	1.53 (1.23-1.91)
EMR reminder + panel manager	1.68 (1.34-2.10)	1.87 (1.46-2.38)
P value[c]	.002	.008
Pneumococcal vaccination		
EMR reminder	1.47 (1.02-2.11)	2.01 (1.30-3.11)
EMR reminder + panel manager	2.05 (1.31-3.23)	3.20 (1.82-5.64)
P value[c]	.02	.006

Control

EMR Reminder

EMR Reminder + Panel Manager

- "Our results support the concept that team-based care using electronic registries and work lists is more likely to success- fully deliver recommended care than individual PCPs working on their own. "
- Timothy S. Loo, MD, Beth Israel Deaconess Medical Center, Boston

Arch Intern Med Vol171(17); Sept 26, 2011S

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EMR Building Blocks for Population Health

Registries: Finding Data & Cohorts

Distillation of “Good Little Data” Ready and Accessible

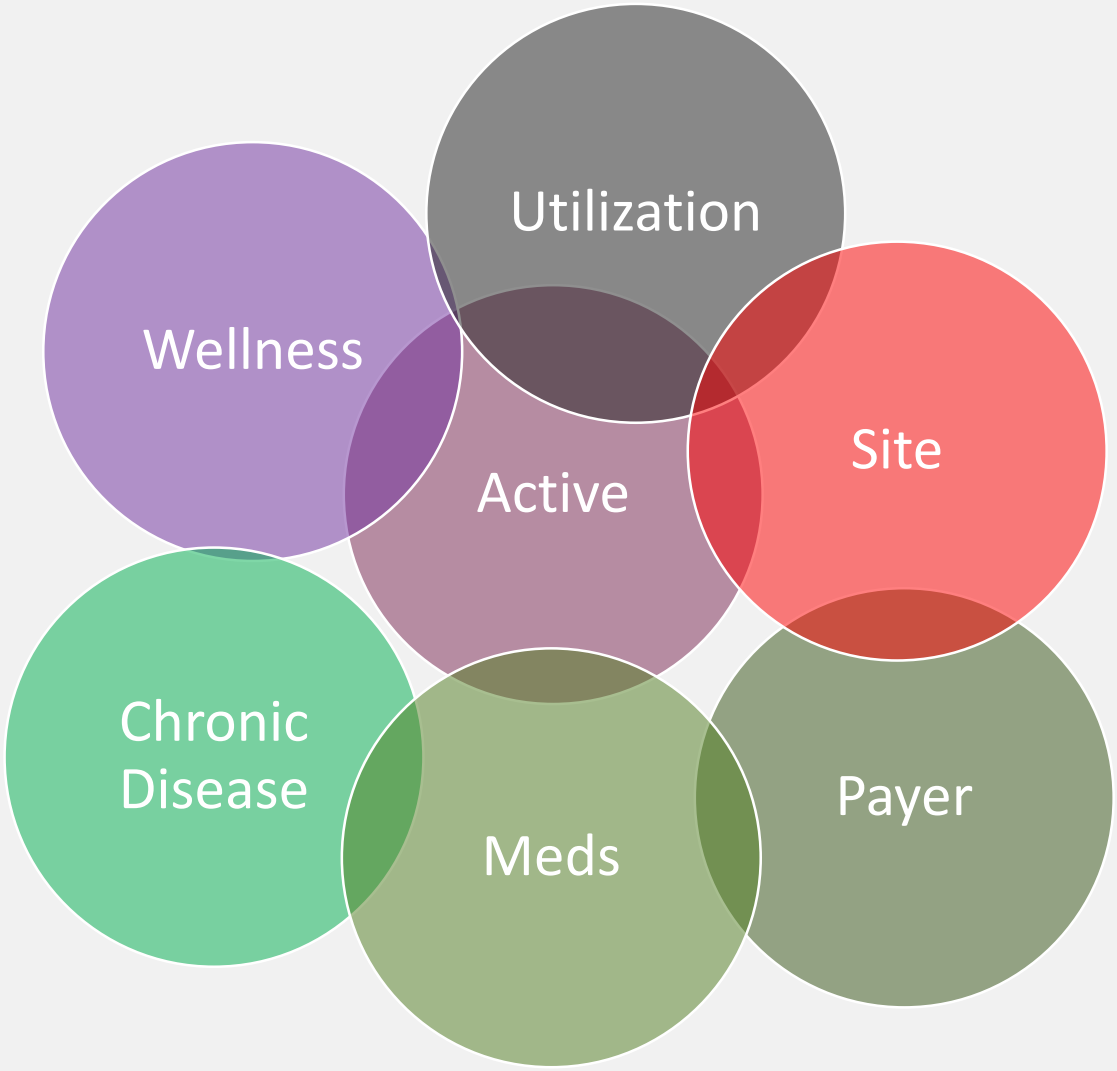
The ideal process for Registry value sets

Distillation

Active Electronic Medical Record Based Patient Registries:

Wellness by age
Primary Care

(Chronic Disease)
Cardiovascular
Chronic Kidney
Chronic Liver
Hep B, Hep C, Cirrhosis
Diabetes
Heart Failure
Hypertension
HIV
Obesity
Pre-Diabetes
Sleep Apnea
Tobacco
Hospice



(Event Based)
Emergency
Inpatient
Total Joint

(Payor Based)
Medicare Advantage
PRIME (CMS)
Anthem
HealthNet
Molina, etc.

Anticoagulation
Outpatient Parenteral Antibiotics

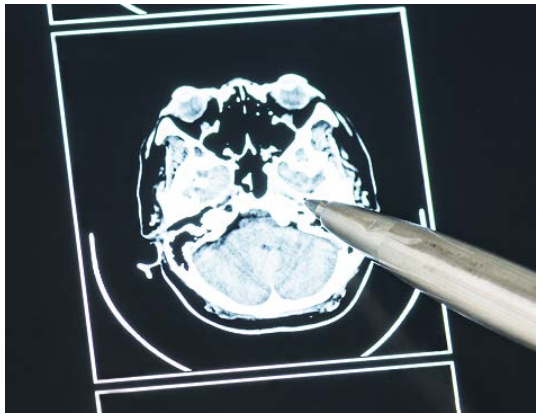
Key Topics: Roster management, **Registries**, Patient Portal, Risk Scores, Care Management, External Claims, Ad hoc Reporting

What types of Information are included in Registries?

Registry Metric Design

Diagnoses

Lab Values



Procedure

Co-Morbidity

Risk Score

Utilization

Updated PRIME DY14 Rates - Green

UC San Diego Health

PRIME Measure Overview

Metric Name: (All)

High Risk Measures: (All)

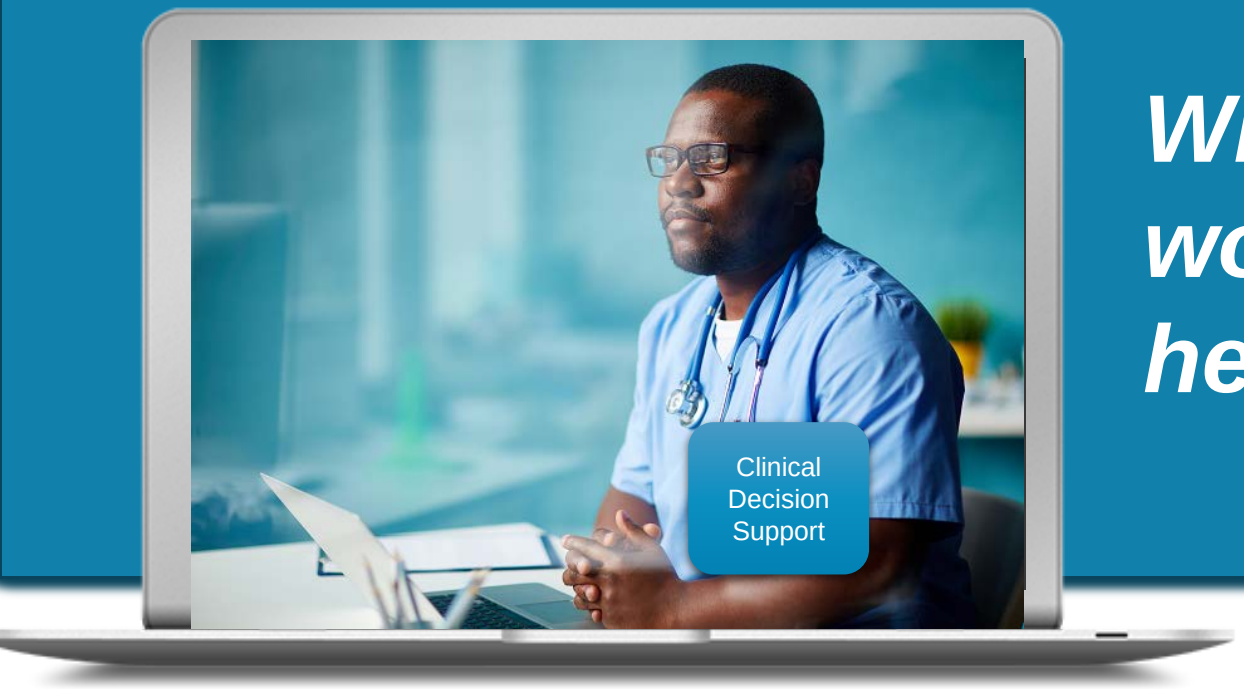
Performance Indicator Legend: Better than PRIME Steering Target

Current Data For DYR as of January 29, 2019

Click on Measure Name to be able to drill-down to view of measure overtime

Metric Name	Improv. Direction	PRIME Threshold	PRIME Target	Denominator	Numerator	
1.1.5 - Screening for Clinical Depression and follow-up	H	51.05%	55.00%	27,201	17,298	63.59%
1.1.7a - Depression Remission/Response for Adolescents/Adults - Follow-up	H	0.00%	30.00%	1,488	695	46.71%
1.1.7b - Depression Remission/Response for Adolescents/Adults - Remission	H	5.37%	7.00%	1,488	129	8.67%
1.1.7c - Depression Remission/Response for Adolescents/Adults - Response	H	9.98%	15.00%	1,488	242	16.26%
1.2.3 - Colorectal Cancer Screening	H	65.71%	78.00%	19,159	15,562	81.23%
1.2.11 - REAL24data completeness	H	40.00%	45.00%	39,294	36,968	94.08%
1.2.13 - SO/GI24data completeness	H	10.00%	15.00%	38,415	20,115	52.36%
1.3.7 - Tobacco Assessment and Counseling	H	96.19%	98.00%	25,059	24,764	98.82%
2.1.6a - Prenatal Care	H	91.00%	95.00%	1,869	1,864	99.73%
2.1.6b - Postpartum Care	H	73.61%	75.00%	1,869	1,433	76.67%
2.2.3 - Medication Reconciliation: 30 days	H	71.10%	80.00%	3,713	3,206	86.35%
2.2.4 - Reconciled Medication List Received by Discharged Patients	H	99.00%	99.00%	3,243	3,232	99.66%
2.2.5 - Timely Transmission of Transition Record	H	85.58%	89.00%	4,611	4,357	94.49%
2.3.2 - Medication Reconciliation – 30 days	H	78.13%	85.00%	197	178	90.36%
2.3.4 - Timely Transmission of Transition Record	H	87.16%	90.00%	235	224	95.32%
2.7.1 - Advance Care Plan	H	52.26%	55.00%	15,185	8,654	56.99%
3.1.1 - Avoidance of antibiotic treatment in adults with acute bronchitis	H	38.70%	45.00%	142	92	64.79%
3.3.3b - High-cost pharmaceuticals ordering protocols (6 Meds)	H	0.00%	10.00%	323	53	16.41%
3.3.4a - Medication Reconciliation of High-cost pharmaceuticals (3 Meds)	H	0.00%	83.00%	1,838	1,670	90.86%
3.3.4b - Medication Reconciliation of High-cost pharmaceuticals (6 Meds)	H	0.00%	75.00%	8,772	8,028	91.52%
3.3.4c - Medication Reconciliation of High-cost pharmaceuticals (9 Meds)	H	0.00%	75.00%	26,639	24,336	91.35%

Me medical



What are the typical workflows in population health?

Engagement

Activate care when patients are due.

Primary Care

Ensure patients are empaneled to a PCP.

Outreach

Reach out when care is needed between visits to address care gaps.

Complex Care Management

Paneled high risk patients.

Specialist

Coordinated expertise.

Transition of Care

Coordination between care settings and social disruption.

Patient Portal | Empanelment (who) | Standards of Care (what) | At Risk of Not Receiving the Standard of Care | Bulk Actions | Highest Clinical Risk | Care Coordination | Standards of Care (what) | Highest Clinical Risk | Care Coordination

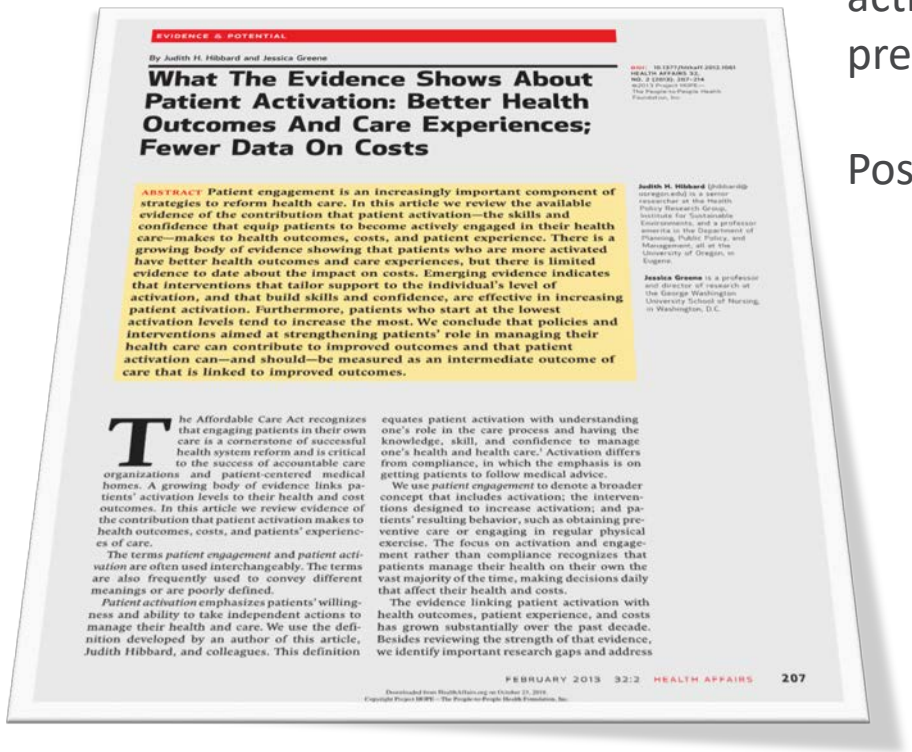
Patient activation

DEFN: Patient activation emphasizes **patients' willingness and ability** to take independent actions to manage their health and care.

DEFN: Patient engagement to denote a **broader concept** that includes activation; the interventions designed to increase activation; and patients' resulting behavior, such as obtaining preventive care or engaging in regular physical exercise.

Positive Patient activation via PAM is associated with:

- 3 times more likely met medical needs
- 2 times on time medical care
- Improved health literacy, preparation for visit
- Normal biometrics: BMI, A1C, BP, lipid



EVIDENCE & POTENTIAL

By Judith H. Hibbard and Jessica Greene

What The Evidence Shows About Patient Activation: Better Health Outcomes And Care Experiences; Fewer Data On Costs

ABSTRACT Patient engagement is an increasingly important component of strategies to reform health care. In this article we review the available evidence of the contribution that patient activation—the skills and confidence that equip patients to become actively engaged in their health care—makes to health outcomes, costs, and patient experience. There is a growing body of evidence showing that patients who are more activated have better health outcomes and care experiences, but there is limited evidence to date about the impact on costs. Emerging evidence indicates that interventions that tailor support to the individual's level of activation, and that build skills and confidence, are effective in increasing patient activation. Furthermore, patients who start at the lowest activation levels tend to increase the most. We conclude that policies and interventions aimed at strengthening patients' role in managing their health care can contribute to improved outcomes and that patient activation can—and should—be measured as an intermediate outcome of care that is linked to improved outcomes.

The Affordable Care Act recognizes that engaging patients in their own care is a cornerstone of successful health system reform and is critical to the success of accountable care organizations and patient-centered medical homes. A growing body of evidence links patients' activation levels to their health and cost outcomes. In this article we review evidence of the contribution that patient activation makes to health outcomes, costs, and patients' experiences of care.

The terms *patient engagement* and *patient activation* are often used interchangeably. The terms are also frequently used to convey different meanings or are poorly defined.

Patient activation emphasizes patients' willingness and ability to take independent actions to manage their health and care. We use the definition developed by an author of this article, Judith Hibbard, and colleagues. This definition equates patient activation with understanding one's role in the care process and having the knowledge, skill, and confidence to manage one's health and health care.[1] Activation differs from compliance, in which the emphasis is on getting patients to follow medical advice.

We use *patient engagement* to denote a broader concept that includes activation; the interventions designed to increase activation; and patients' resulting behavior, such as obtaining preventive care or engaging in regular physical exercise. The focus on activation and engagement rather than compliance recognizes that patients manage their health on their own the vast majority of the time, making decisions daily that affect their health and costs.

The evidence linking patient activation with health outcomes, patient experience, and costs has grown substantially over the past decade. Besides reviewing the strength of that evidence, we identify important research gaps and address

Hibbard and Greene, Health Affairs, Feb 2013

> The emerging evidence suggests a potentially new quality goal: increasing patient activation as an intermediate outcome of care that is measurable and linked with improved outcomes. Quality improvement efforts that systematically work to expand the patient's (and the family's) ability to participate in care are a pathway toward improving outcomes. Such an approach is both necessary and achievable. ■

Patient Portal

Engagement

Patient Engagement in the Patient Web Portal

Patients can now enter their sexual orientation, gender identity, race, ethnicity, language and preferred name, in the electronic medical record via the Patient Web-portal including electronic check-in.

They can also complete their questionnaires for depression, drug, and alcohol screening and social determinants via **PHQ, DAST, CRAAFT, AUDIT, and the IOM's social determinant tool**. This serves case management, Medicare Annual Wellness, and collaborative care.

Patient Entered

Using the EMR Patient Portal

Nurse Entered in a Visit

As part of Standard Work

Clinician Entered

Within or between encounters

Population Health Team

Targeted high risk outreach

Strategies – Sexual Orientation and Gender Identity

Epic Build

- Build to capture SO/GI data and pt name preference through dynamic flowsheet that populates discrete Epic fields
- Inclusion of LGTB leaders from UCSD campus and UCOP to advise in language used for data capture

MyChart

- Ability for patient to update SO/GI data via their MyChart

Training

- Learning Center Mass Employee Training
- Individualized small group training
- 3691 registered at a 37% completion rate (1 mo was 17%)

Patient Portal

Patient Entered Information into the Patient Web Portal

New/Return Patient Check in:

I prefer to opt out: Yes | No

What is your preferred name? Marc

What is your gender?

Female | Male | Transgender female | Transgender male

Other | Chose not to disclose | Genderqueer | Non-binary

What is your sexual orientation?

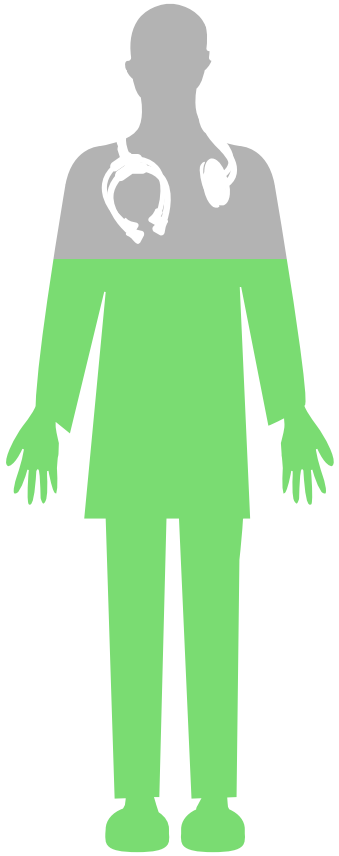
Lesbian or Gay | Straight | Bisexual | Something else | Don’t know

Choose not to disclose

Continue

*photo image is an actor

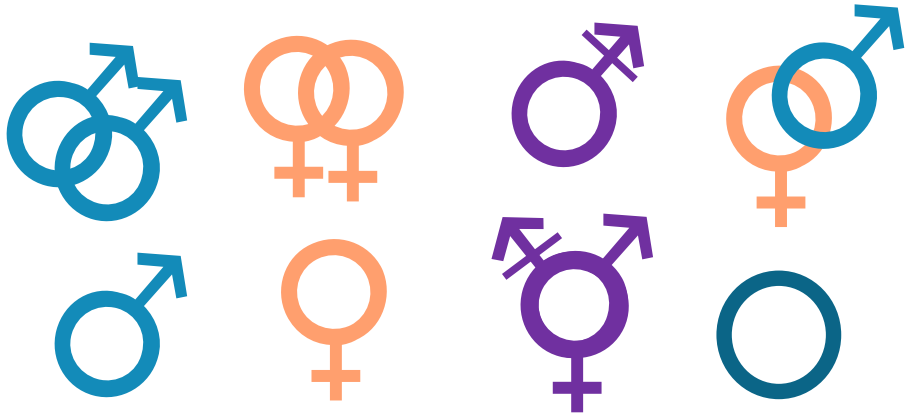
SEXUAL ORIENTATION & GENDER IDENTITY



SO/GI

3490 Healthcare Providers

Completed SO/GI Training in the past year



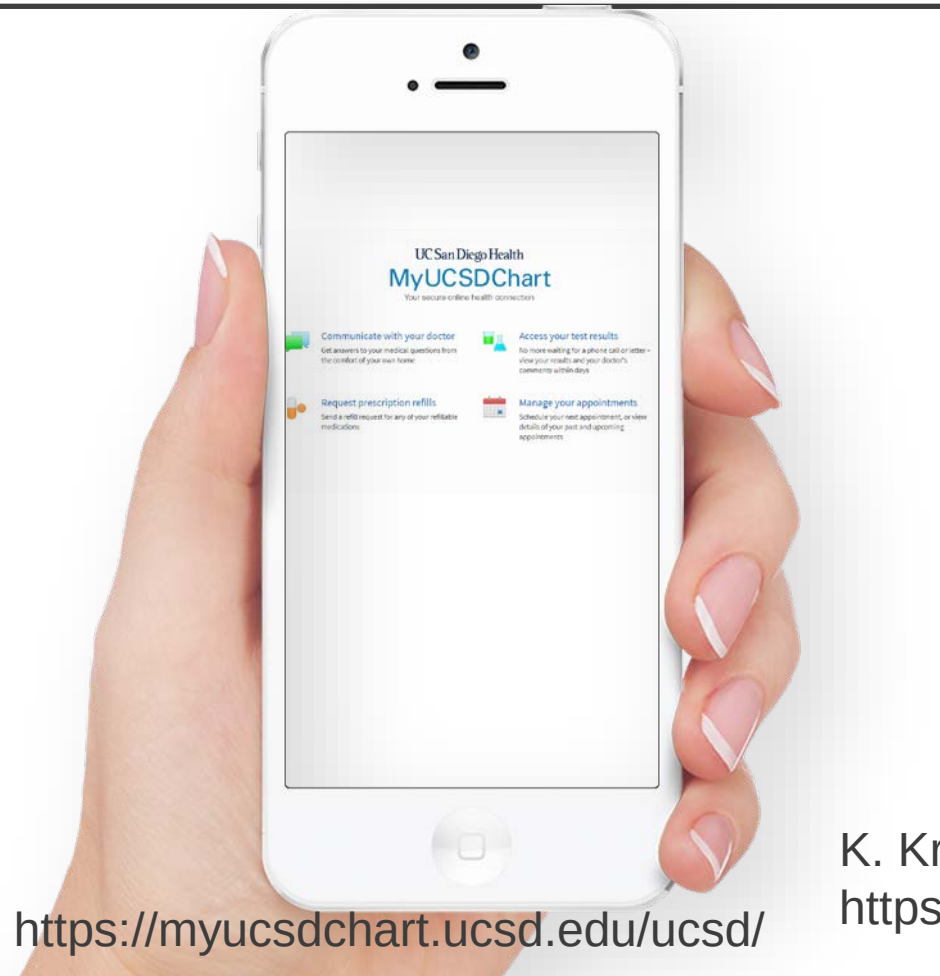
51%

Patients with documented SO/GI Status

MediCare
medical & health presentation

Depression Screen with PHQ 9

Mental Health Screening in e-Checkin



Name _____ Date _____

Over the *last 2 weeks*, how often have you been bothered by any of the following problems?	Not at all	Several days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed, or hopeless	0	1	2	3
3. Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself—or that you are a failure or have let yourself or your family down	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed? Or the opposite—being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3
9. Thoughts that you would be better off dead or of hurting yourself in some way	0	1	2	3

(For office coding: Total Score ____ = ____ + ____ + ____)

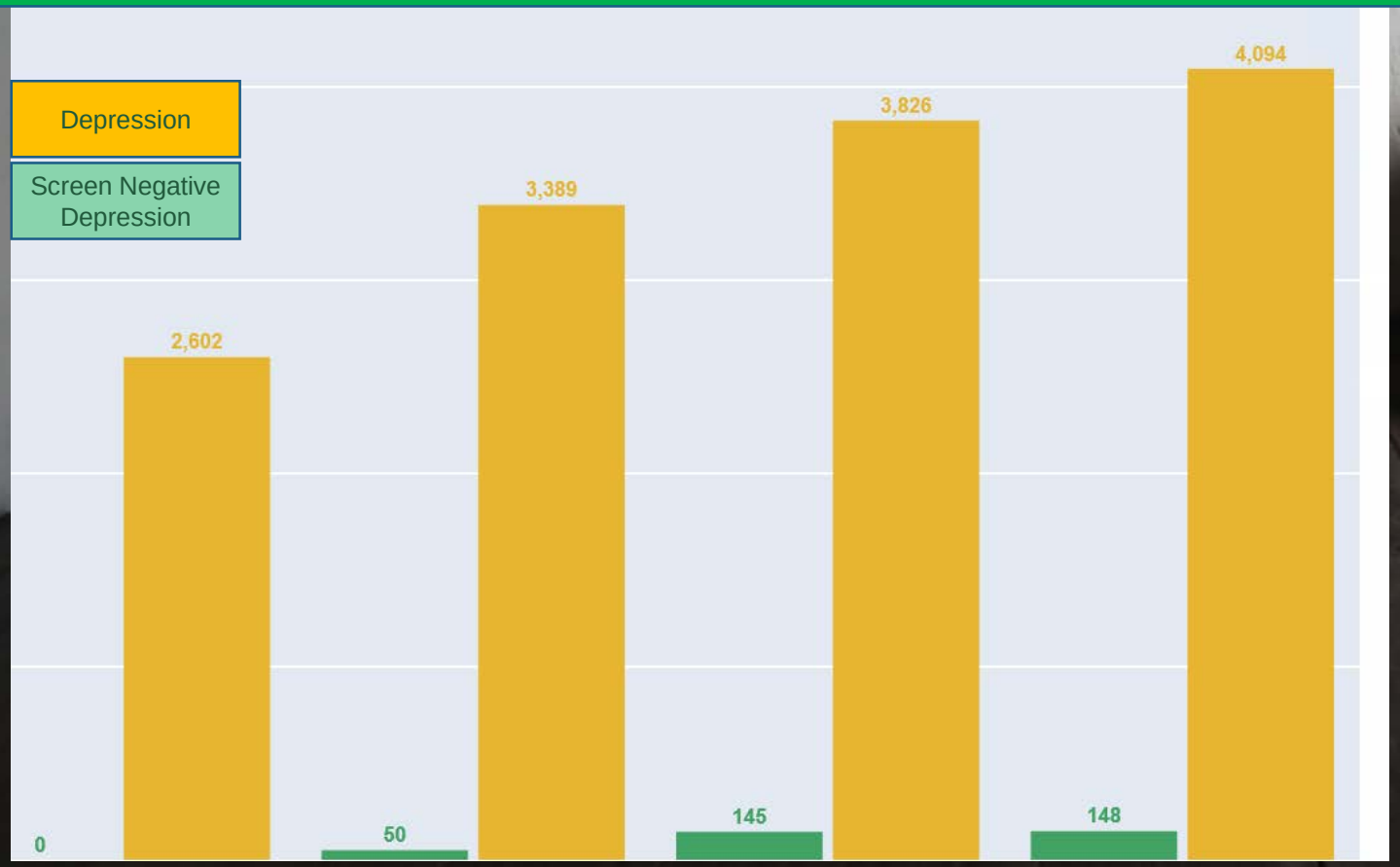
K. Kroenke, et.al. J Gen Intern Med 2001
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1495268/

MediCare
medical & health presentation

https://myucsdchart.ucsd.edu/ucsd/

Improved Screening: DEPRESSION, ALCOHOL, & DRUG

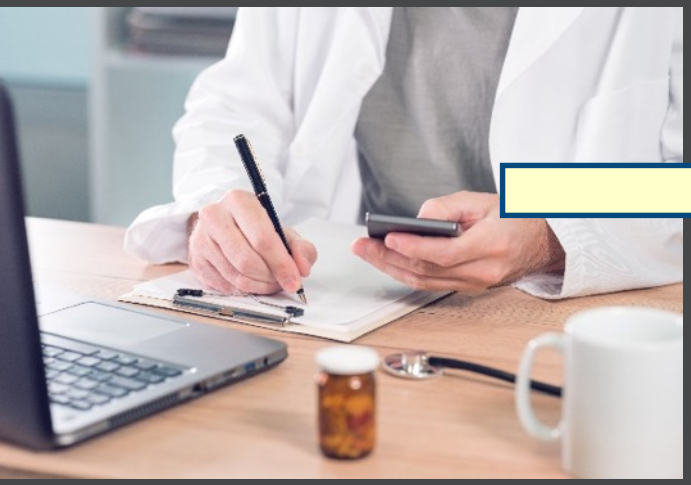
39% increase in Diagnosed Depression last quarter comparison over prior year encounter coding



9512
Last quarter Screening AUDIT, DAST, PHQ

Empanelment (who)

Standards of Care (what)



Clinicians individualize decisions for their patient – supports personalized medicine

Clinicians can now enter details about their patients and easily import into their note.

Physicians should be given options to personalize medicine with key health decisions using personalized timing and applicability. Clinical decision support should be easy in the workflow.

Dashboards of performance should provide transparency, an opportunity for outreach, and reconciliation with accuracy of the reports.

Patient Entered

Using the Epic MyChart

Nurse Entered in a Visit

Using the Epic Rooming Tab

Clinician Entered

Using the Navigator

Population Health Team

Using dashboard and outreach

Set up a Individual Patient Pivot
Use Health Concept Timer (Health Maintenance)

Standards of Care (what)

Individualize the pivot for exclusion and frequency of testing

Default best practice (USPTF, etc.)

>

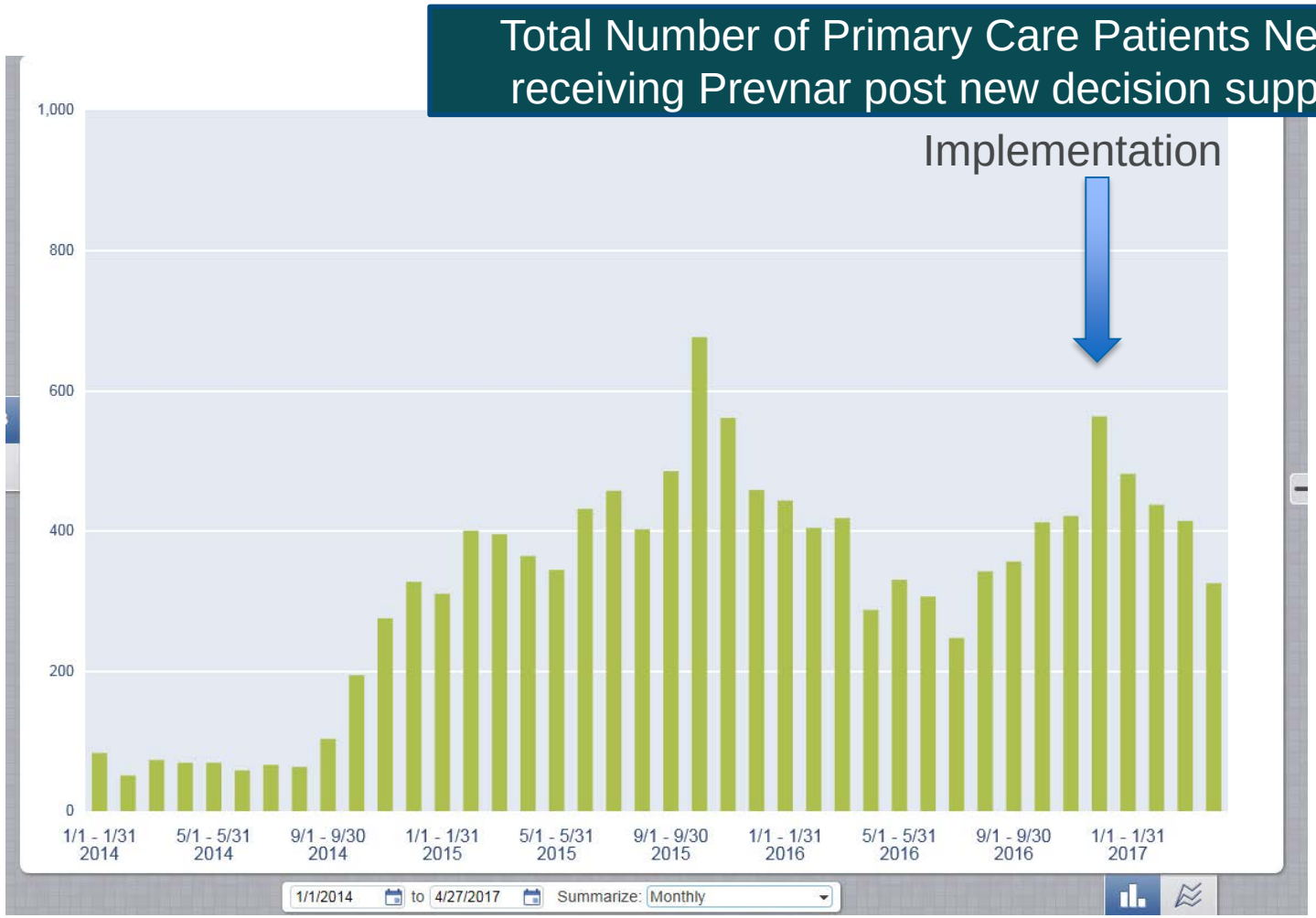
Individual patient Needs in a metric

What

Custom DATE EXCLUSION or RISK FACTOR

Does Decision Support Make a Difference?
Primary Care "UCSD Panel" Registry: PanelMetrics

Prevnar: Health Maintenance Implemented 11/27/2016



Spike in Volume of Administration December 2016 Which had still seasonal variation but spike week post implementation.

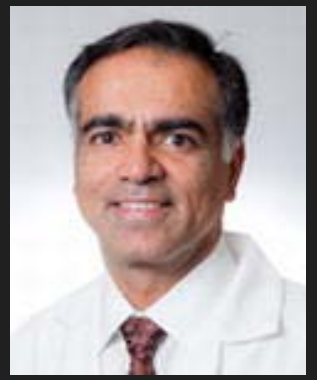
PRIME Workgroups

PRIME Workgroup Members

Cardiovascular Team

Ottar Lunde

Clinical Lead



Ajit Raisinghani

Clinical Lead

Coordinate the team, design approach, define the strategy and deliver training/implementation

Jejo Koola

IS Informatics Partner

Devise an informatics approach for system wide roll out

Larry Friedman

Executive Sponsor

Provide leadership, connections, and facilitation

Project 1.2 Ambulatory Care Redesign: Primary Care														**FY18 Target**	
1.2.5	Controlling Blood Pressure	6911	9461	73.05%	6781	9363	72.42%	6965	9473	73.52%	6827	9388	72.72%	120	Maintain ≥ 70.41%	P4P - Maintain ≥ 74%
1.2.7	Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antithrombotic	3222	3624	88.91%	3284	3677	89.31%	3211	3587	89.52%	3414	3674	92.92%	Exceeding Target!!	Increase ≥ 88.94%	P4P - Increase ≥ 92%
1.2.14	Tobacco Assessment and Counseling	36203	37500	96.54%	36746	38084	96.49%	35977	37255	96.57%	36902	38265	96.44%	598	Maintain ≥ 96.19%	P4P - Increase ≥ 98%
Project 1.3 Ambulatory Care Redesign: Specialty Care														**FY18 Target**	
1.3.7	Tobacco Assessment and Counseling	24036	24611	97.66%	24274	24850	97.68%	23854	24449	97.57%	24300	24882	97.66%	84	Maintain ≥ 96.19%	P4P - Increase ≥ 98%
Project 1.5 Million Hearts Initiative														**FY18 Target**	
1.5.1	Controlling Blood Pressure	6911	9461	73.05%	6781	9363	72.42%	6965	9473	73.52%	6827	9388	72.72%	120	Maintain ≥ 70.41%	P4P - Maintain ≥ 74%
1.5.2	Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antithrombotic	3222	3624	88.91%	3284	3677	89.31%	3211	3587	89.52%	3414	3674	92.92%	Exceeding Target!!	Increase ≥ 88.94%	P4P - Increase ≥ 92%
1.5.3	PQRS # 317 Preventative Care and Screening: Screening HBP & Follow-Up Doc	9743	21491	45.34%	9743	21491	45.34%	17160	21302	80.56%	17645	22050	80.02%	Exceeding Target!!	Increase ≥ 48.80%	P4P - Increase ≥ 52%
1.5.4	Tobacco Assessment and Counseling	36203	37500	96.54%	36746	38084	96.49%	35977	37255	96.57%	36902	38265	96.44%	598	Maintain ≥ 96.19%	P4P - Increase ≥ 98%

Build the Registry with clinical terms:

Groupers		REL	
VCG	102254	12/29/2017	UC EDG ICD IVD REGISTRY NQF0068
VCG	102243		UC EDG ICD CORONARY ARTERY DISEASE NO MI
VCG			AMI Acute Myocardial Infarction Registry
VCG	102244		UC EDG ICD ISCHEMIC STROKE
VCG	102245		UC EDG ICD ATHEROSCLOROSIS AND PERIPHERAL ARTERIAL DIS
Metric Inclusion Rules			
CER	251855	12/29/2017	DM Inclusion Ischemic Vascular Disease (IVD)
CER	251857		DM Inclusion Coronary Artery Disease (CAD)
CER			AMI Acute Myocardial Infarction Registry
CER	251846		DM Inclusion Ischemic Stroke
CER	251853		DM Inclusion Peripheral Vascular Disease
HCM			VCG 102254 UC EDG ICD IVD REGISTRY NQF0068
HCM			VCG 102243 UC EDG ICD CORONARY ARTERY DISEASE NO MI
HCM			AMI Acute Myocardial Infarction Registry
HCM			VCG 102244 UC EDG ICD ISCHEMIC STROKE
HCM			VCG 102245 UC EDG ICD ATHEROSCLOROSIS AND PERIPHERAL A
HCM			CER 251855 DM Inclusion Ischemic Vascular Disease (IVD)
HCM			CER 251857 DM Inclusion Coronary Artery Disease (CAD)
HCM			DM Inclusion AMI Acute Myocardial Infarction Registry
HCM			CER 251846 DM Inclusion Ischemic Stroke
HCM			CER 251853 DM Inclusion Peripheral Vascular Disease
HCM			HFR 100247 ISCHEMIC VASCULAR DISEASE (IVD)
HCM			HFR 82006 CORONARY ARTERY DISEASE REGISTRY
HCM			HFR AMI Acute Myocardial Infarction Registry
HCM			HFR 100248 ISCHEMIC STROKE
HCM			HFR 100249 PERIPHERAL VASCULAR DISEASE
HFR	100247	12/29/2017	ISCHEMIC VASCULAR DISEASE (IVD)
HFR	82006		CAD CORONARY ARTERY DISEASE REGISTRY
HFR			AMI Acute Myocardial Infarction Registry

Abdominal aortic atherosclerosis (CMS-HCC)	I70.723		300,	I20.8	300,I20.8	305,ICD
Abdominal aortic embolism (CMS-HCC)	I70.738		300,	I20.9	300,I20.9	305,ICD
Aborted myocardial infarction (CMS-HCC)	I70.519		300,	I24.0	300,I24.0	305,ICD
Ac cerebral infarction assoc w/ CSVT (CMS-HCC)	I70.519		300,	I24.1	300,I24.1	305,ICD
Ac cerebral infarction w/ ischemia (CMS-HCC)	I25.812		300,	I24.8	300,I24.8	305,ICD
Ac isch multi vasc territories stroke (CMS-HCC)	I25.812		300,	I24.9	300,I24.9	305,ICD
Ac isch multifocal ant circ stroke (CMS-HCC)	I25.82		300,	I25.10	300,I25.10	305,ICD
Ac isch multifocal ant circ stroke, left (CMS-HCC)	I25.82		300,	I25.110	300,I25.110	305,ICD
Ac isch multifocal ant circ stroke, right (CMS-HCC)	I25.82		300,	I25.111	300,I25.111	305,ICD
Ac isch multifocal ant circ stroke, unspecified laterality (CMS-HCC)	I25.110		300,	I25.118	300,I25.118	305,ICD
Ac ischemic VBA cerebellar stroke (CMS-HCC)	I25.110		300,	I25.119	300,I25.119	305,ICD
ACC/AHA stage B congestive heart failure due to ischemic cardiomyopathy (CMS-HCC)	I25.812		300,	I25.5	300,I25.5	305,ICD
ACC/AHA stage B systolic heart failure due to ischemic cardiomyopathy (CMS-HCC)	I25.110		300,	I25.6	300,I25.6	305,ICD
ACC/AHA stage C congestive heart failure due to ischemic cardiomyopathy (CMS-HCC)	I25.812		300,	I25.700	300,I25.700	305,ICD
ACC/AHA stage C systolic heart failure due to ischemic cardiomyopathy (CMS-HCC)	I25.110		300,	I25.701	300,I25.701	305,ICD
Accelerated coronary artery disease in transplanted heart	I25.110		300,	I25.708	300,I25.708	305,ICD
Accelerating angina (CMS-HCC)	I25.110		300,	I25.709	300,I25.709	305,ICD
Acquired cardiovascular disorders during pregnancy, childbirth and the puerperium	I25.110		300,	I25.710	300,I25.710	305,ICD
Acquired renal artery stenosis (CMS-HCC)	I25.110		300,	I25.711	300,I25.711	305,ICD
ACS (acute coronary syndrome) (CMS-HCC)	I25.110		300,	I25.718	300,I25.718	305,ICD
Acute and subacute ischemic heart disease (CMS-HCC)	I25.110		300,	I25.719	300,I25.719	305,ICD
Acute angina (CMS-HCC)	I70.519		300,	I25.720	300,I25.720	305,ICD
Acute arterial ischemic stroke, multifocal, anterior circulation (CMS-HCC)	I70.723		300,	I25.721	300,I25.721	305,ICD
Acute arterial ischemic stroke, multifocal, anterior circulation, left (CMS-HCC)	I70.738		300,	I25.728	300,I25.728	305,ICD
Acute arterial ischemic stroke, multifocal, anterior circulation, right (CMS-HCC)	I70.738		300,	I25.729	300,I25.729	305,ICD
Acute arterial ischemic stroke, multifocal, anterior circulation, unspecified laterality (CMS-HCC)	I70.519		300,	I25.730	300,I25.730	305,ICD
Acute arterial ischemic stroke, multifocal, mult vascular territories (CMS-HCC)	I25.82		300,	I25.731	300,I25.731	305,ICD
Acute arterial ischemic stroke, multifocal, multiple vascular territories (CMS-HCC)	I25.812		300,	I25.738	300,I25.738	305,ICD
Acute arterial ischemic stroke, multifocal, posterior circulation (CMS-HCC)	I25.82		300,	I25.739	300,I25.739	305,ICD

Ischemic Vascular Disease Health Maintenance and developed EXCLUSION REGISTRIES

Patients with known ischemic vascular disease or recent may be at risk for coronary artery bypass graft or percutaneous coronary intervention significant ischemic events. A new suite of registries has been leveraged to drive health maintenance to help you identify patients who may be eligible to receive aspirin or an antiplatelet medication and reduce events:

- The "Ischemic Vascular Disease Assessment Tx" health maintenance topic was introduced in January 2018.

Who?

- Patient is on IVD Ischemic Vascular Disease Registr
- Patient is on CABG Coronary Artery Bypass Graft Registry
- Patient is on PCI Percutaneous Coronary Interventio Registry

But not:

- Patient is on Hospice Registry
- Patient is on Hemorrhage Registry
- Patient has Health Maintenance Modifier

Set up Ischemic Vascular Disease
Use Health Concept Timer (Health Maintenance)

Standards of Care (what)

Patients in IVD, CABG, or PCI Registry should be on aspirin, an anti-platelet, or an anticoagulant

>

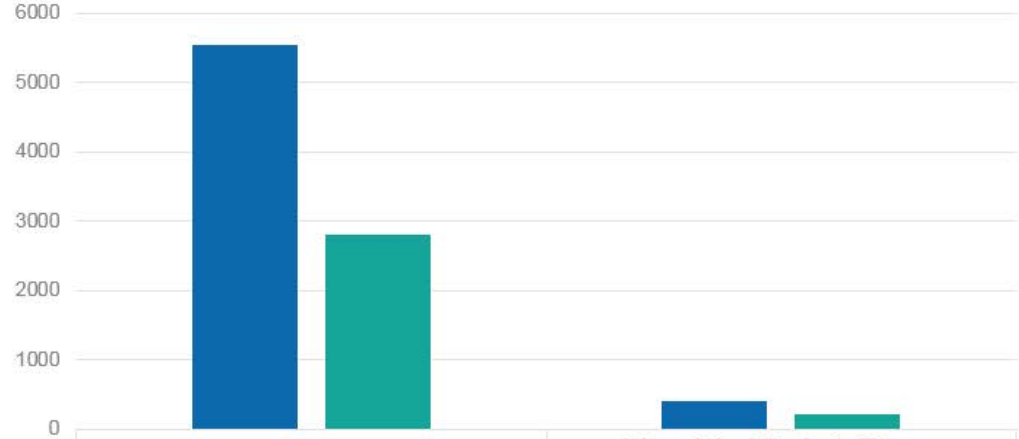
Individual patient Needs in a metric

Risk Outweighs Benefit

Hospice Registry
Or Hemorrhage Registry
Exclusion

Ischemic Vascular Disease: nearly ½ the care gaps completed in 47 days!

Ischemic Vascular Disease (Aspirin) Health Maintenance Due



	Health Maint Due-ALL	Health Maint Due-PRIME
1/31/2018	5551	400
3/19/2018	2798	223

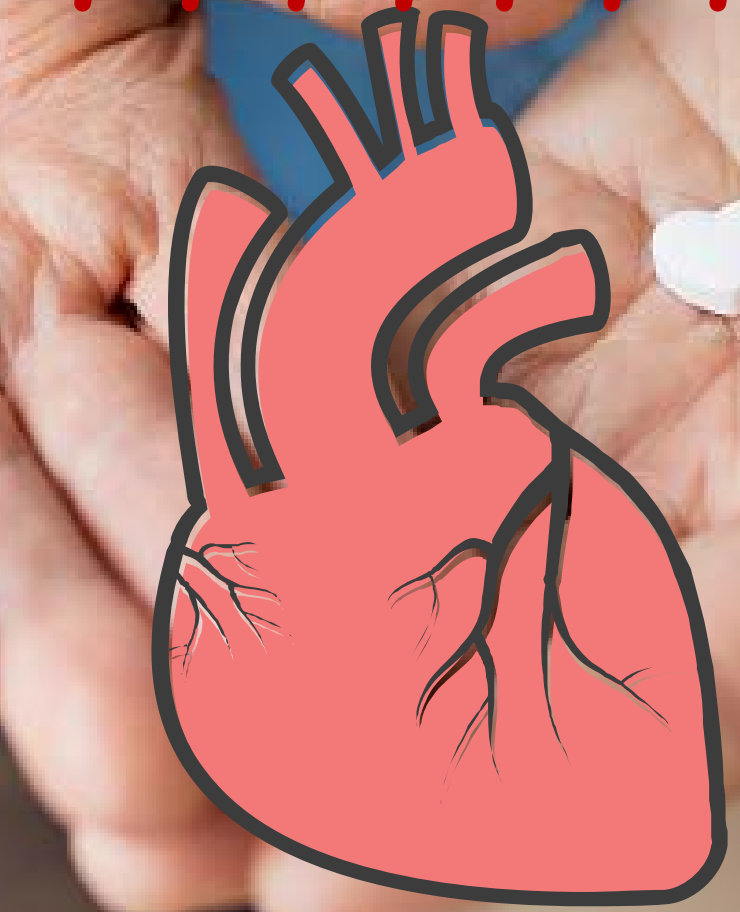
47 elapsed days 59 gaps/day 4 gaps/day

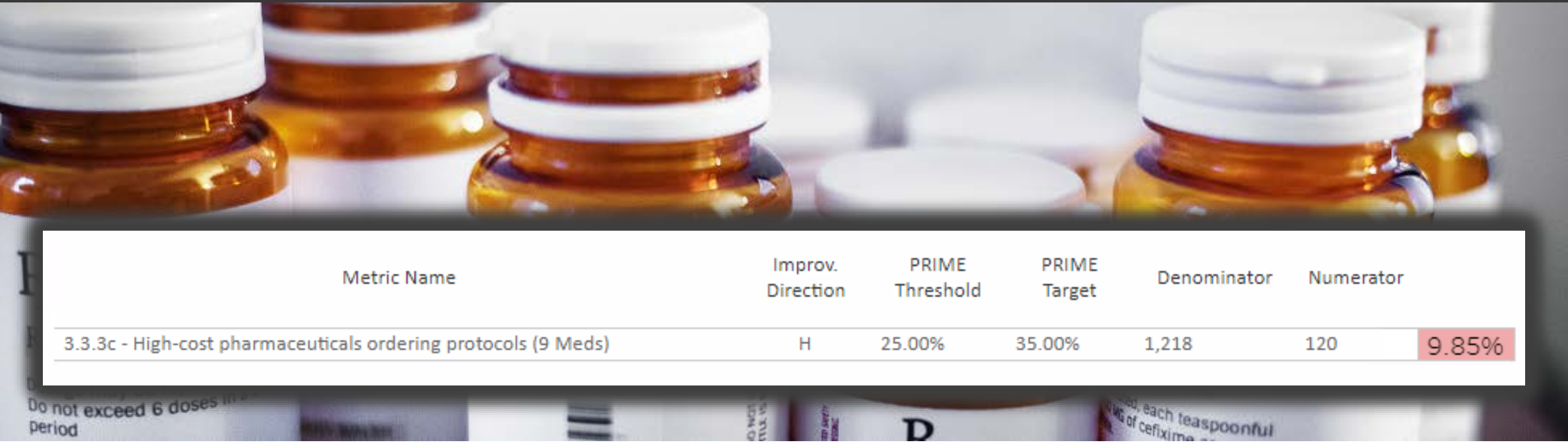
UC San Diego Health

ISCHEMIC VASCULAR DISEASE

More patients in past year on Anticoagulant for IVD

410





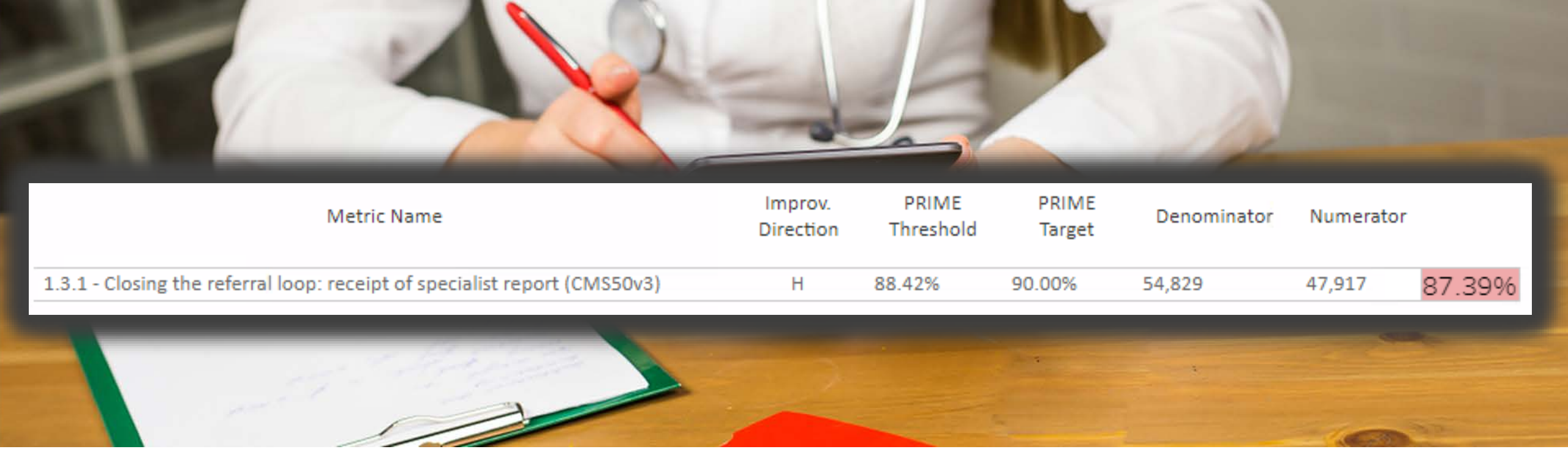
Metric Name	Improv. Direction	PRIME Threshold	PRIME Target	Denominator	Numerator	
3.3.3c - High-cost pharmaceuticals ordering protocols (9 Meds)	H	25.00%	35.00%	1,218	120	9.85%

High Risk PRIME Measures

High-cost pharmaceutical protocols

- Qualified Staff of Doctors
- 24x7 Emergency Services
- Easy and Affordable Billing
- Feel like you are at Home Services
- Save your Money and Time with us
- A Right and Good Medicine

MediCare
medical & health presentation



Metric Name	Improv. Direction	PRIME Threshold	PRIME Target	Denominator	Numerator	
1.3.1 - Closing the referral loop: receipt of specialist report (CMS50v3)	H	88.42%	90.00%	54,829	47,917	87.39%

High Risk PRIME Measures

Close the Loop Referrals “Auto-Communication” from Specialist

- Beginning February 1, 2019, progress notes in office visits in specialty ambulatory departments will be automatically sent to the PCP and referring provider upon the closing signature of the ambulatory encounter.

1. **Reducing clicks for the specialist** by removing the need to manually find the names of PCP and referring providers to send them referral communication.
2. **Improved referring provider and PCP experience** by being “in the loop.”
3. **Improved patient experience** by improving communication between the specialist and referring providers/PCP.
4. **Reduced risk for patient harm** through improved communication of up to date recommendations for patient medication and treatment.
5. **Improved quality** by helping to achieve improved quality metrics and patient care.

MediCare
medical & health presentation

Foster between visit care

The Population Health clinical team can manage between visit care gaps with campaigns, outreach, bulk activity.

High risk patients can receive targeted services with care management, social services, pharmacy, and mental health support.

Patient Entered

Using the Epic MyChart

Nurse Entered in a Visit

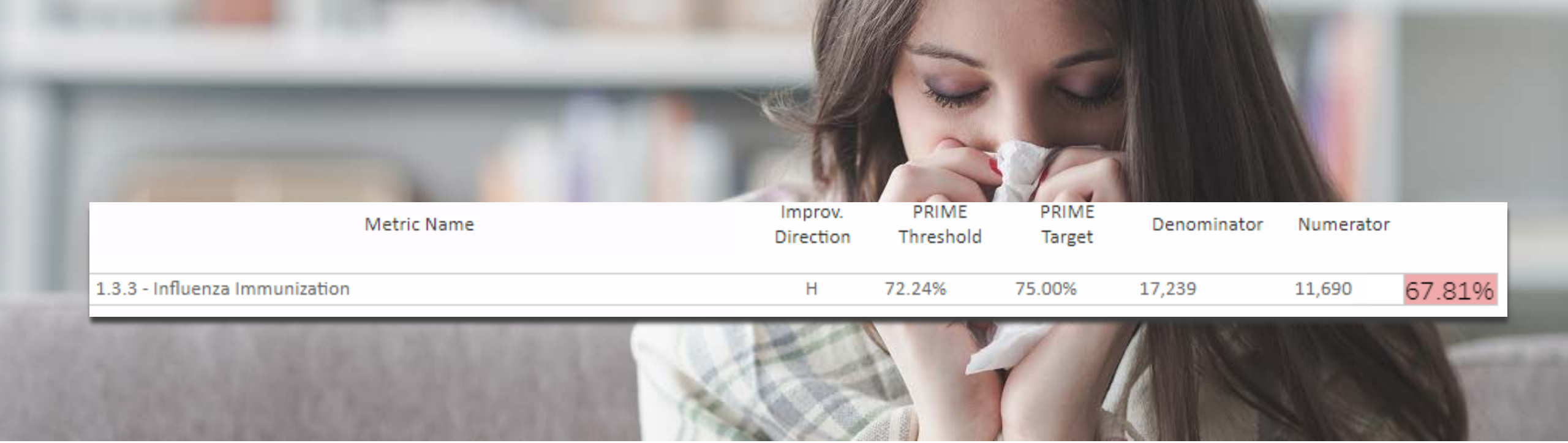
Using the Epic Rooming Tab

Clinician Entered

Using the Navigator

Population Health Team

Using dashboard and outreach



Metric Name	Improv. Direction	PRIME Threshold	PRIME Target	Denominator	Numerator	
1.3.3 - Influenza Immunization	H	72.24%	75.00%	17,239	11,690	67.81%

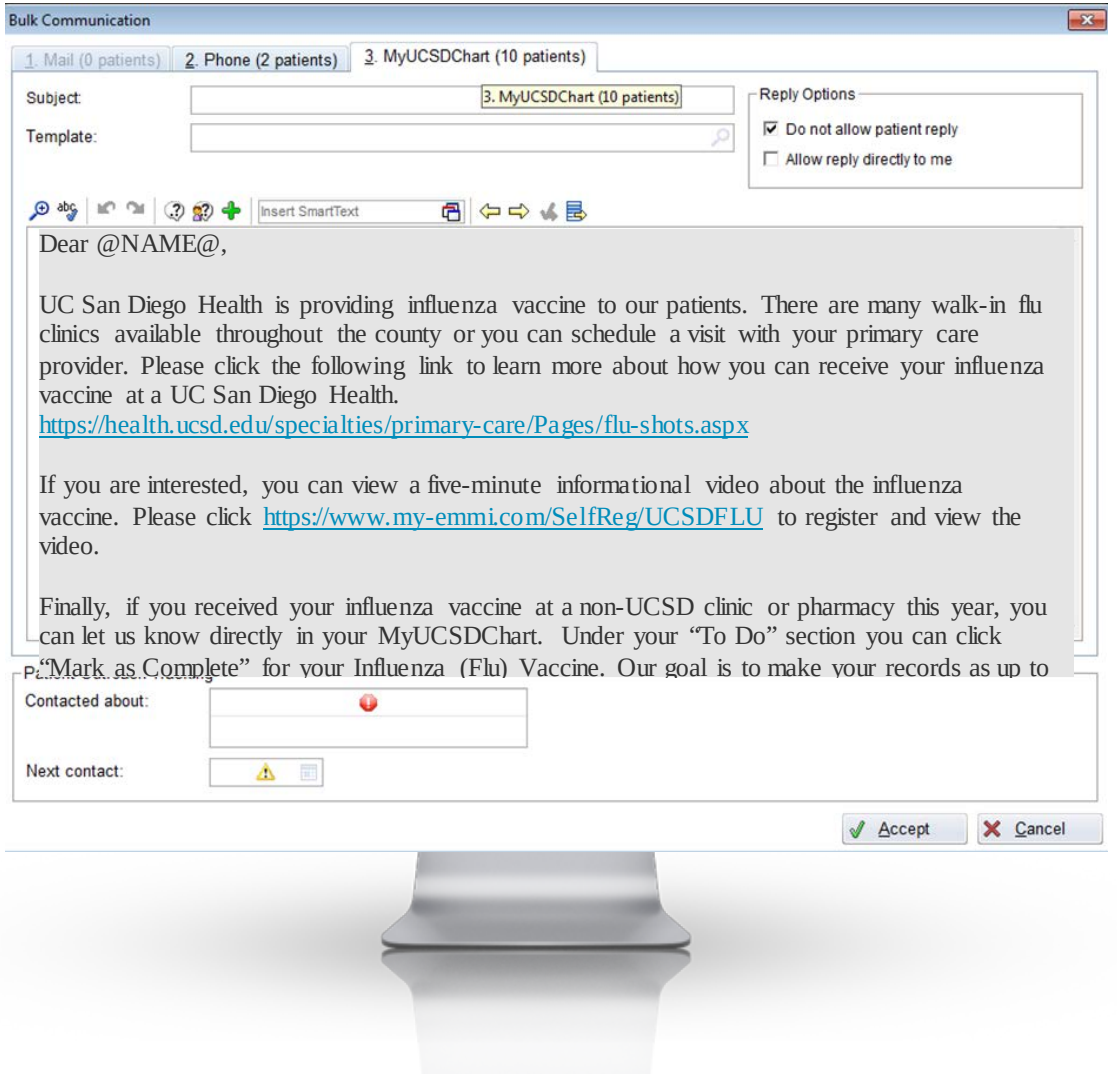
Influenza PRIME measure

Influenza immunization

- Bulk message patients who are deficient
- Increase frequency of employee health ingested data & data review
- Operations including specialty to offer and update HM in standard work

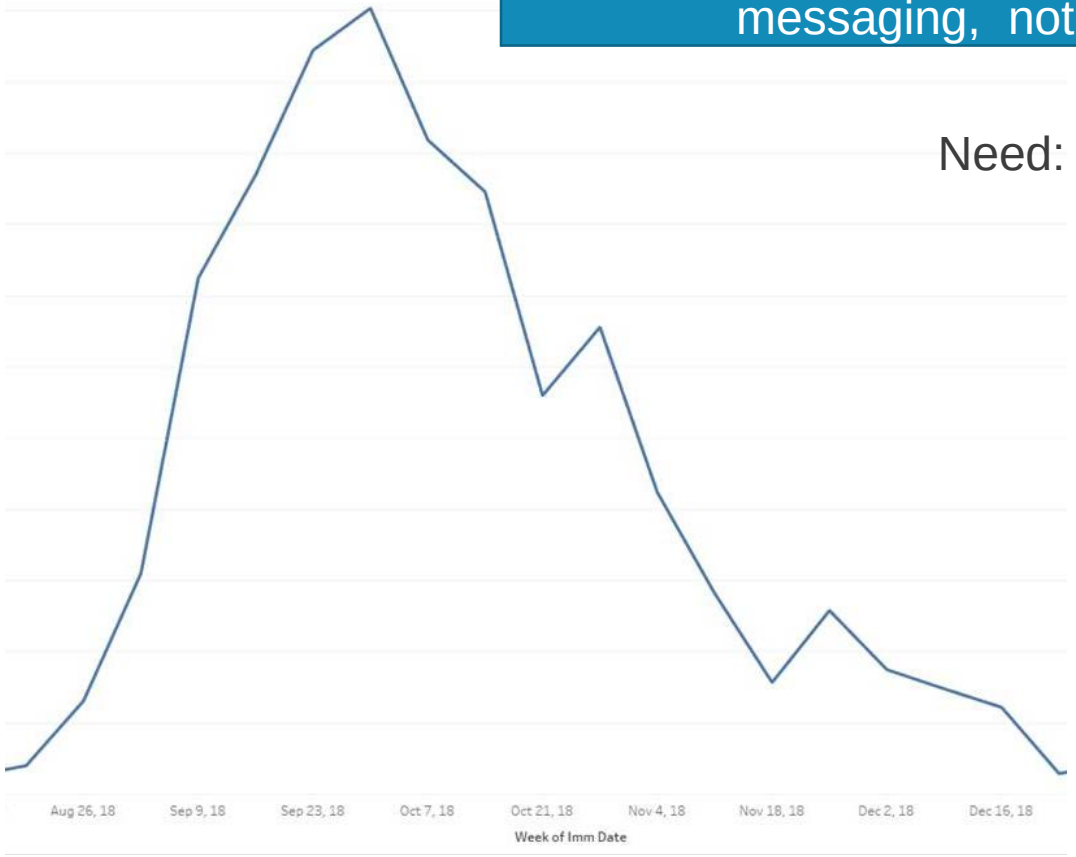
Clinical Quality Leads: Betsy Rosenblum
Key partner: Dean Pham (IS for bulk messaging); Carlos Ramirez (IS code review)

Bulk intervention



Current tactics for select measures

Influenza: DXR outside record, bulk messaging, not enough



Need: more activation influenza vaccine

Bulk Messaging Overview

Does not include Health Maintenance or Non Clinical Communications messages

12,183	5,755	164
Total Messages	Patient Count	Providers

Year: • 2016

Quarter: • 2

Follow-up Type

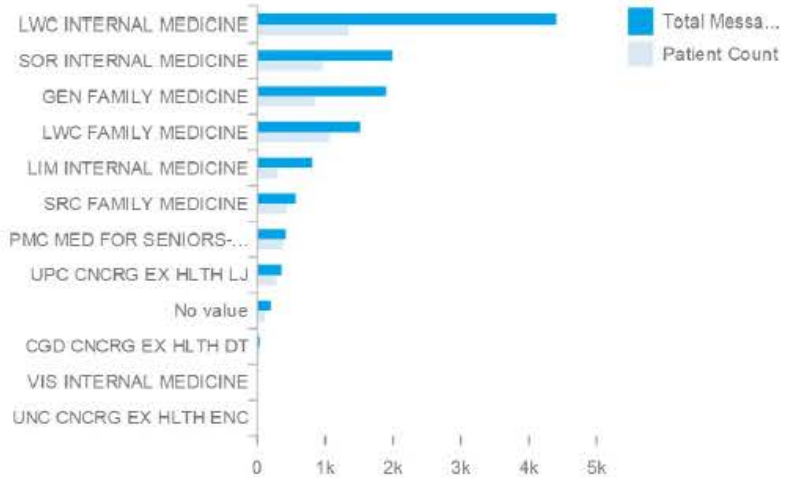
Department

Provider

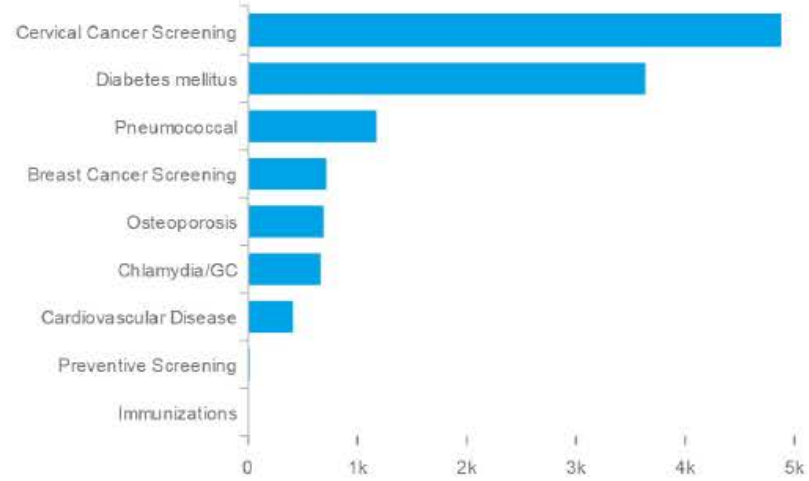
Top 5

Provider	Measures: Total Messages	Measures: Patient Count
HUANG, YUN-SAN A.	955	320
HILL, DEANNA L	674	204
BAJWA-DULAI, SONIA T.	658	301
LUNDE, OTTAR VIKER	601	201
DECONDE, JENNIFER B.	503	250

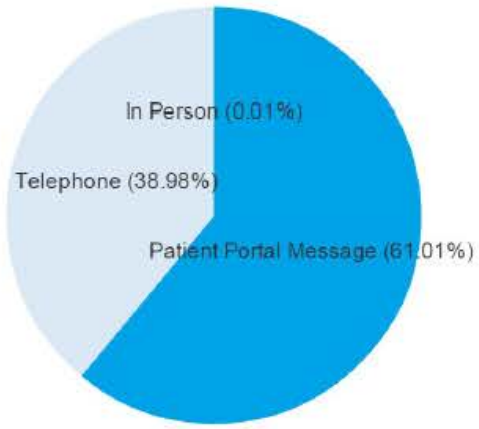
Department



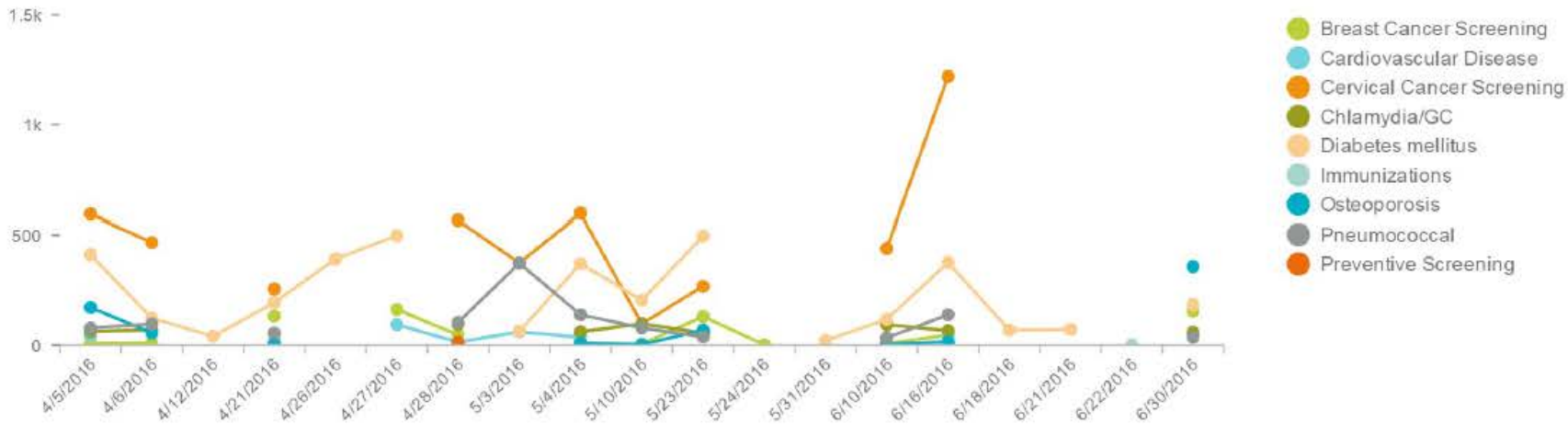
Follow-up Type



Communication Method



Message Volume by Date



Improved Routine Order Efficiency through “BULK” saves $39,900 for 30,000 pts = $1 PMPY

Invisible COSTS

OLD ORDERING:
30,000 Diabetics need q 6 mo labs that take 2 minutes to order

30,000 pt x 2 minutes = 60,000 minutes / 60 = 1,000 hrs

If $20/hour = $20,000
If twice in the year is **$40,000**
Or 1 FTE!!

NEW ORDERING:
30,000 Diabetics need quarterly
Labs to be ordered using nurse protocol with higher scope in nurse to place a single BULK order

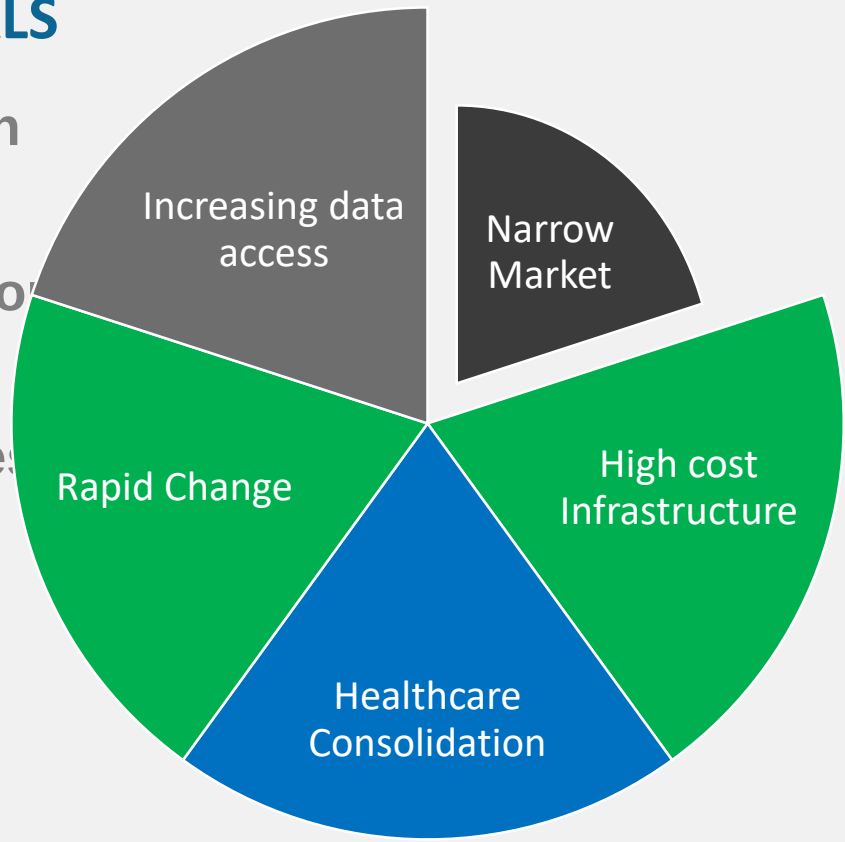
30,000 pt (as “1” order) x 30 minutes (careful with msg)

If $50/hour = $25/quarter
If place quarterly = **$100**

ORGANIZATIONAL GOALS

- ↑ Patient Satisfaction i.e. survey, +
- ↑ Provider Satisfaction i.e. survey +
- ↑ Quality & Outcomes i.e. Scores

Cost & Utilization I.e. (maybe)



PRIME Workgroup Members

Clinical Leads

Kyle Edmonds

Bill Mitchell

Executive Sponsor

Julie Croner

Clinical Informatics

Teresa Helsten

Palliative care team led 2.7.1 Advance Care Plan

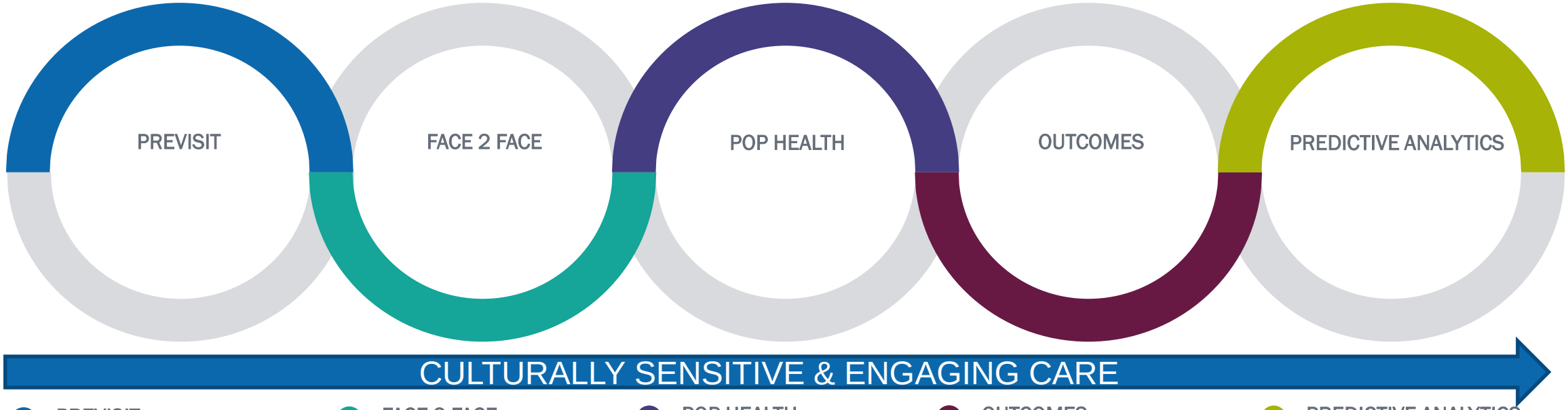
(1) Population Health Clinical outreach to patients failing the Advance Care Plan with social work

(2) Mychart questionnaire outreach to failing patient

Strategies – 2.7.1 Advanced Care Planning

Patient Engagement	• Bulk messaging needs lead sign off. • Managed care continue to do outreach. Scripts are approved, need workflows • **MyChart Landing page link to questionnaire**
Health Maintenance	• HM needs the addition of flowsheets and also smartphrase. • Need to capture pt. refusal to complete ACP.
Clinical Pop Health Team	• **Temp Social Worker 45 days with outreach** • Review of smart phrases and flowsheets to count appropriate ACP. • With addition of smart phrases, team predicts meeting State target.
Data Check – Chart Review	• **Review of smart phrases and flowsheets they are populating to understand appropriate ACP to count as compliant.** • With addition of smart phrases, team predicts meeting State target.

Tobacco Disparities Design In Black/African American



PREVISIT

Visit every 2 years (Recall) – reduce churn! Increase engagement

FACE 2 FACE

Daily Huddle: GAP

Assess Tobacco: Rooming

Positive: Council, No Butts

POP HEALTH

Bulk engage (> 24 months)

Bulk order: EMMI, ? No Butts

Target high risk patients smoking

OUTCOMES

Tobacco assessment and cessation measure

New unique quits

New tobacco relapses

Comparative re-admission

New Events: IVD, CVD, HTN

PREDICTIVE ANALYTICS

Cost variance tobacco vs. non-tobacco predicted based on new quits

97% of Black/African Americans

Screened for Tobacco Use & Referred if Active (Elimination of disparity)

Level 1 Race, Ethnicity,
And Language for 96.84%
SOGI data for 43.12%
**Source: November 2018, PRIME*

Source: PRIME July 17-June 18 & SlicerDicer

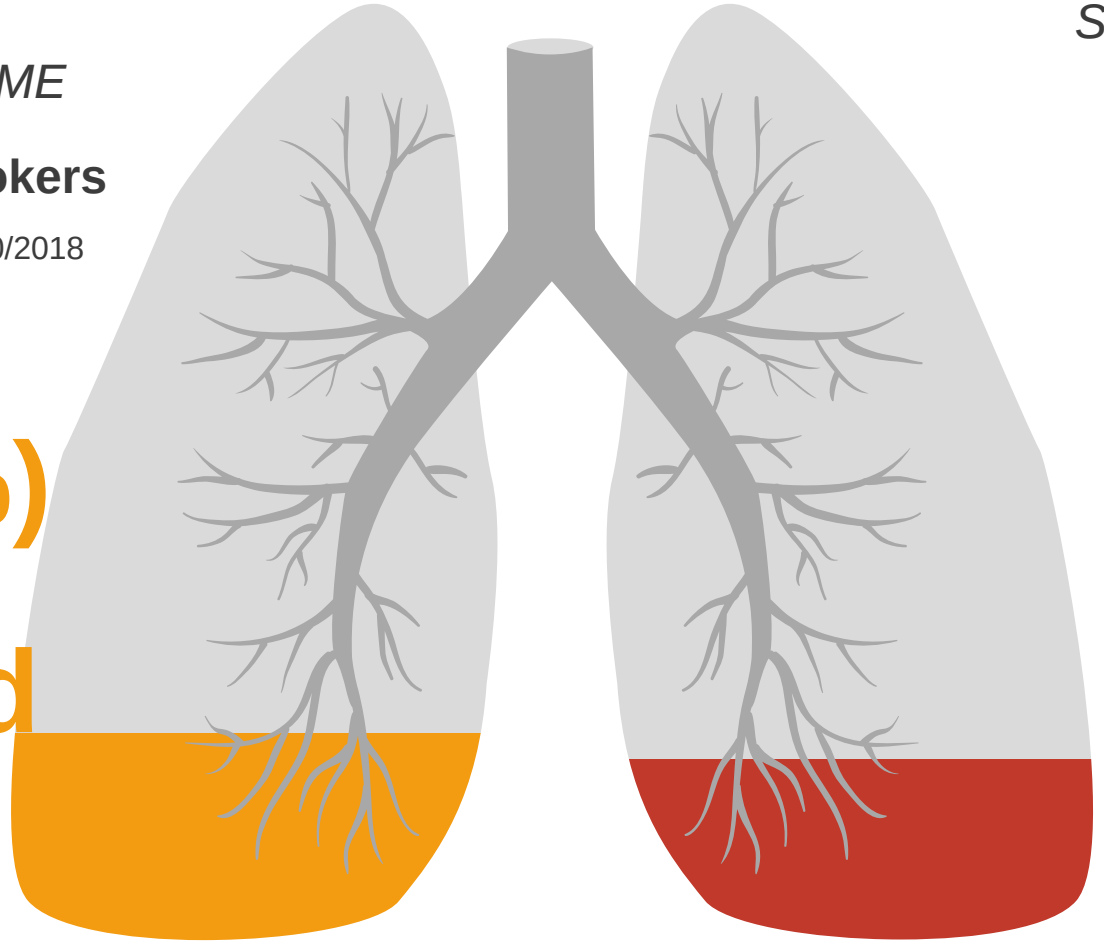
Active Smokers

7/1/17-6/30/2018

3,212 (13.6%)

143 Referred

- TOBACCO SMOKING CESSATION
  - PB SMOKING CESSATION CLASS
  - PB SMOKING CESSATION TREATMENT
  - REFERRAL TO SMOKERS HELPLINE
  - SMOKING CESSATION - QUIT LINE
  - SMOKING CESSATION EDUCATION
  - SMOKING CESSATION STUDY



Former Smokers

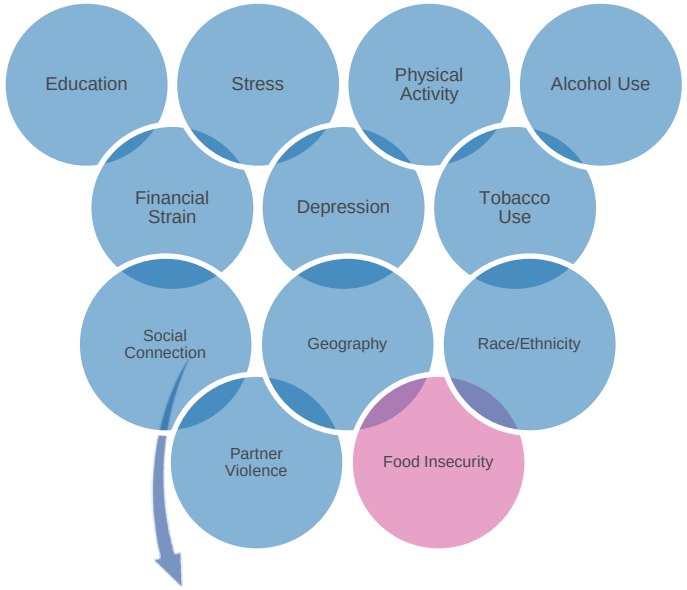
7/1/17-6/30/2018

3,012 (12.7%)

23,644 Total

Population Health Social Determinants in the EMR to support care

Social Determinants of Health



Clinical Note and Documentation

Clinical Decision Support

Risk Stratification and Predictive Analytics

High-Risk Case Management & Social Work Streams

Highest Clinical Risk

Display Key Care Gaps in the a Plan of Care

At Risk of Not Receiving the Standard of Care

Patient driven workflows

1) **Medicare Wellness visit**
2) **Patient Entry of Surveys**

Patient Portal

This is to assist clinicians in assessing their patient's potential risk based on their access to social and economic opportunities;
the resources and support available in the home, neighborhood, and community;
the availability of food and water; and the nature of our social interactions and relationships.

POPULATION HEALTH SOCIAL FRAMEWORK FLOWCHART

Train your Healthcare Team

Institute training that further Enhances cultural competency

Measure Disparities

Create a culture that acknowledges health disparities and includes in strategic planning

Outreach

Identify targeted outreach And prioritization of resources

Celebrate

Identify progress & successes that further address disparities

Demographic

Standardize your workflows to acknowledge race, ethnicity, language, sexual orientation and gender identity

Community Partnership

Foster new collaborations That will further strengthen services

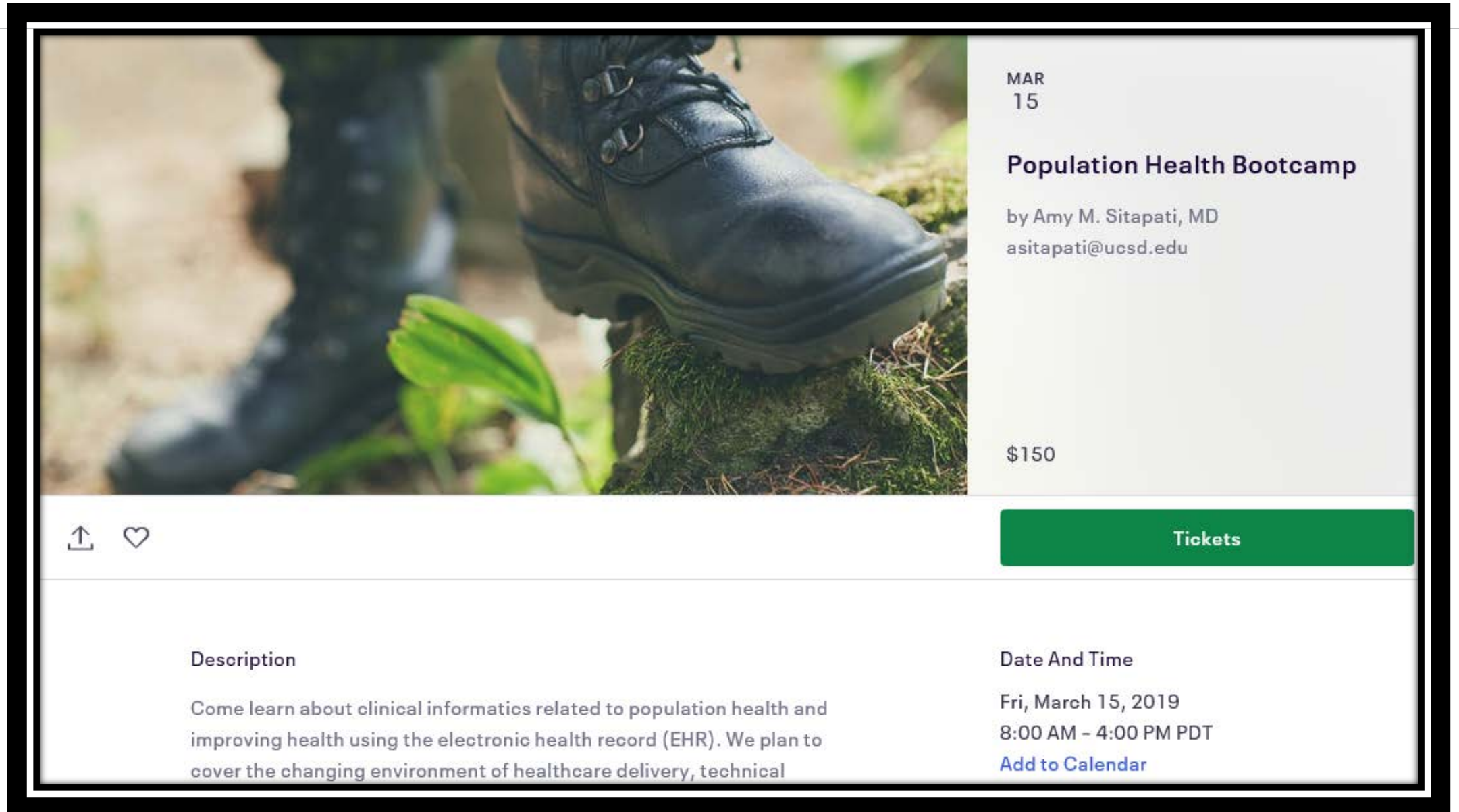
Social Determinants

Strengthen available approach To address underlying social determinants of health

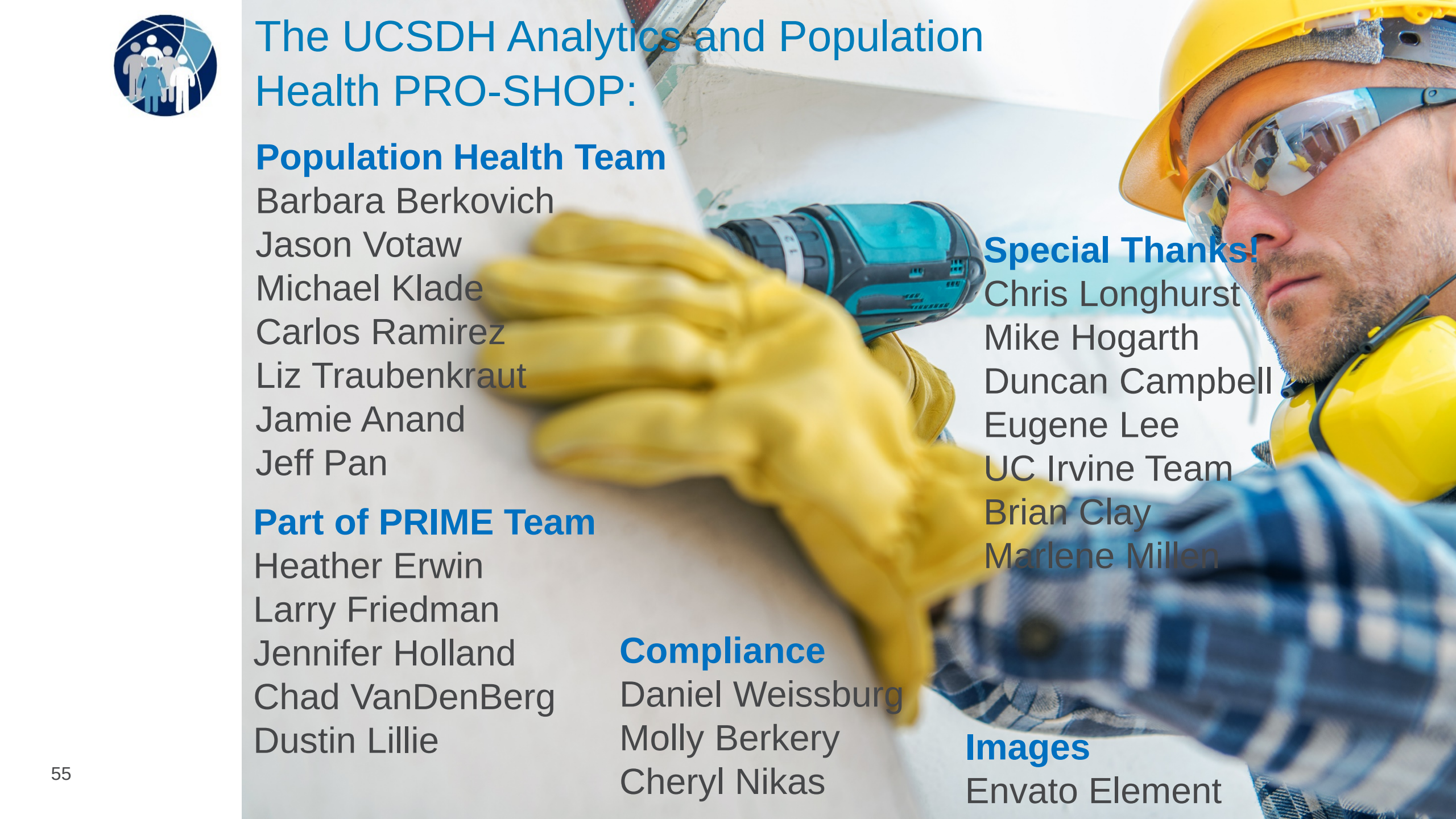
Each of us can make a difference, to bring HEALTH to the world.

Population Health Bootcamp: March 15, 2019

https://www.eventbrite.com/e/population-health-bootcamp-tickets-55052372127



The UCSDH Analytics and Population Health PRO-SHOP:



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