



Petaluma HealthCenter





HIMSS Davies Case Presentation

July 20, 2017

Petaluma Health Center works to ensure access to high quality, prevention-focused health care for residents of Southern Sonoma County



Welcome & Agenda

Time	Topic	Presenter
8:00am – 8:20am	Welcome & Introductions	Danielle Oryn DO MPH <i>Chief Medical Informatics Officer</i> Kathie Powell <i>Chief Executive Officer</i> Erick Ratliff <i>Director of IT</i>
8:20am – 9:20am	Case Study # 1 – Hypertension	Nurit Licht MD <i>Chief Medical Officer</i> Danielle Oryn DO MPH <i>Chief Medical Informatics Officer</i> Shaun Nelson MPH <i>Senior Data Analyst</i> Brian Burns <i>Chief Financial Officer</i>
9:20am – 10:20am	Case Study # 2 – Hepatitis C	Nurit Licht MD <i>Chief Medical Officer</i> Claire Feldman MPH <i>Director of Wellness</i> Danielle Oryn DO MPH <i>Chief Medical Informatics Officer</i> Shaun Nelson MPH <i>Senior Data Analyst</i> Brian Burns <i>Chief Financial Officer</i>
10:20am – 11:00am	Davies Committee Debrief	

About Petaluma Health Center

Founded in 1996

Became a Federally Qualified Health Center in 2000

Currently caring for 29,000 patients via 150,000 annual visits

Sites:

Petaluma Health Center

Rohnert Park Health Center

Mary Isaak Center – *Homeless Shelter*

San Antonio High School – *School Based Health Center*

Casa Grande High School - *School Based Health Center*

Santa Rosa Junior College Petaluma - *School Based Health Center*

Petaluma Health Center Services

Full spectrum family centered primary medical care for children and adults

Adult and pediatric dental care

Women's health including pregnancy care and gynecology consultation

Integrated behavioral health and psychiatry consultation

Wellness services:

- Acupuncture
- Chiropractic care
- Integrative Medicine consultation
- Nutrition
- Shared medical visits
- Community exercise programs

Specialty Care:

- Ophthalmology and Optometry
- Podiatry
- Endocrinology
- Rheumatology (telehealth)



About Petaluma Health Center

Recognition

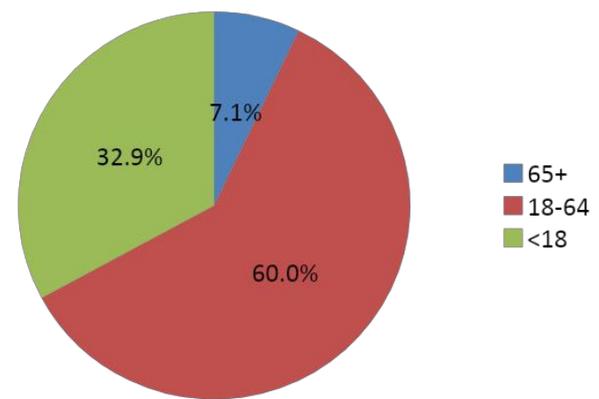
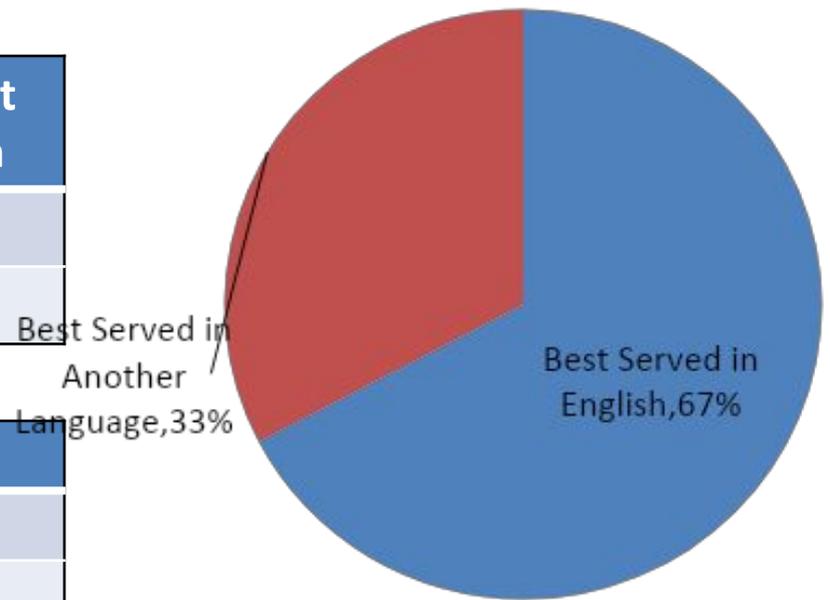
- NCQA Patient Centered Medical Home recognition, 2013 – present
- Joint Commission accreditation for Ambulatory Care with Primary Care Medical Home, 2015 - present
- HRSA Health Center Quality Leaders – 2016
- HRSA National Quality Leaders - 2016
- CDC Million Hearts Champion - 2015

HIT Values

- Culture of innovation
- Tech-equity
- Maximize the value of the technology tools we have

	% of Patient Population
At or below 200% of poverty	75.2%
At or below 100% of poverty	27.6%

Patients by Race and Ethnicity	
Non-Hispanic White	45.6%
Racial and/or Ethnic Minority	50.6%
Hispanic/Latino Ethnicity	44.7%
Black/African American	1.8%
Asian	2.5%
American Indian/Alaska Native	0.3%
More than one race	0.4%



Change Request Management

- Access Control
- Change Management
- Software Access Protocols
- Role Based Access
- eHR Access Logging
- Robust eHR Security
- File Share Monitoring



Employee Change Request Form

Do not use this form if this is a support request, please email helpdesk@healthcenter.org Thank!

Employee Info

Requester:

Name of the person requesting this change.

Subject:

Description:

Please describe what you're requesting.

Employee Name:

Account Type:

Submit Request

Employee Info

- Employee Info
- Building and Network Access
- Phone or Mobile Device Programming
- Equipment Requested
- Software Requested
- Roles

smartconnect

eCW Proposed Security Roles & Attributes

Name	Owner	Last Update
eCW Auditor Role v1.2	Rachel Nicksie 5820517	
eCW Administrative Role v1.2	Rachel Nicksie 5820517	
eCW Billing Role v1.2	Rachel Nicksie 5820517	
eCW Roles with Appointment Role v1.2	Rachel Nicksie 5820517	
eCW Invoice Case Coordinator Role v1.2	Rachel Nicksie 5820517	
eCW Billing Hub & Response Role v1.2	Rachel Nicksie 5820517	
eCW Billing Message Role v1.2	Rachel Nicksie 5820517	
eCW Invoice Case Coordinator/Response Role v1.2	Rachel Nicksie 5820517	
eCW Accounting & Admin Role v1.2	Rachel Nicksie 5820517	
eCW Compliance Role v1.2	Rachel Nicksie 5820517	
eCW Supplier Role v1.2	Rachel Nicksie 5820517	
eCW Proposed Security Roles & Attributes		
FCW Test Script (7)		

eCW Roles with Appointment Role v1.2

Security Attribute	Value
Access Method/Access From Patient Hub	
Access Patient Codes	
Access Security	
Action Name Management	
Allow Access to FR Files	
Allow Access to HL7 In/Outgoing	
Allow access to Specialty Forms	
Allow appointment creation outside working hours	

Backups and Archive

- On-Site and Cloud Backups
- SQL Backup
- File System Backup
- Backup Restore
- Validation Testing
- Monthly Archive
- IT Systems Review
- Disaster Recovery
- Business Continuity



A screenshot of the Backup and Restore console. The 'Jobs' tab is active, displaying a list of backup jobs. The table below shows the details of these jobs.

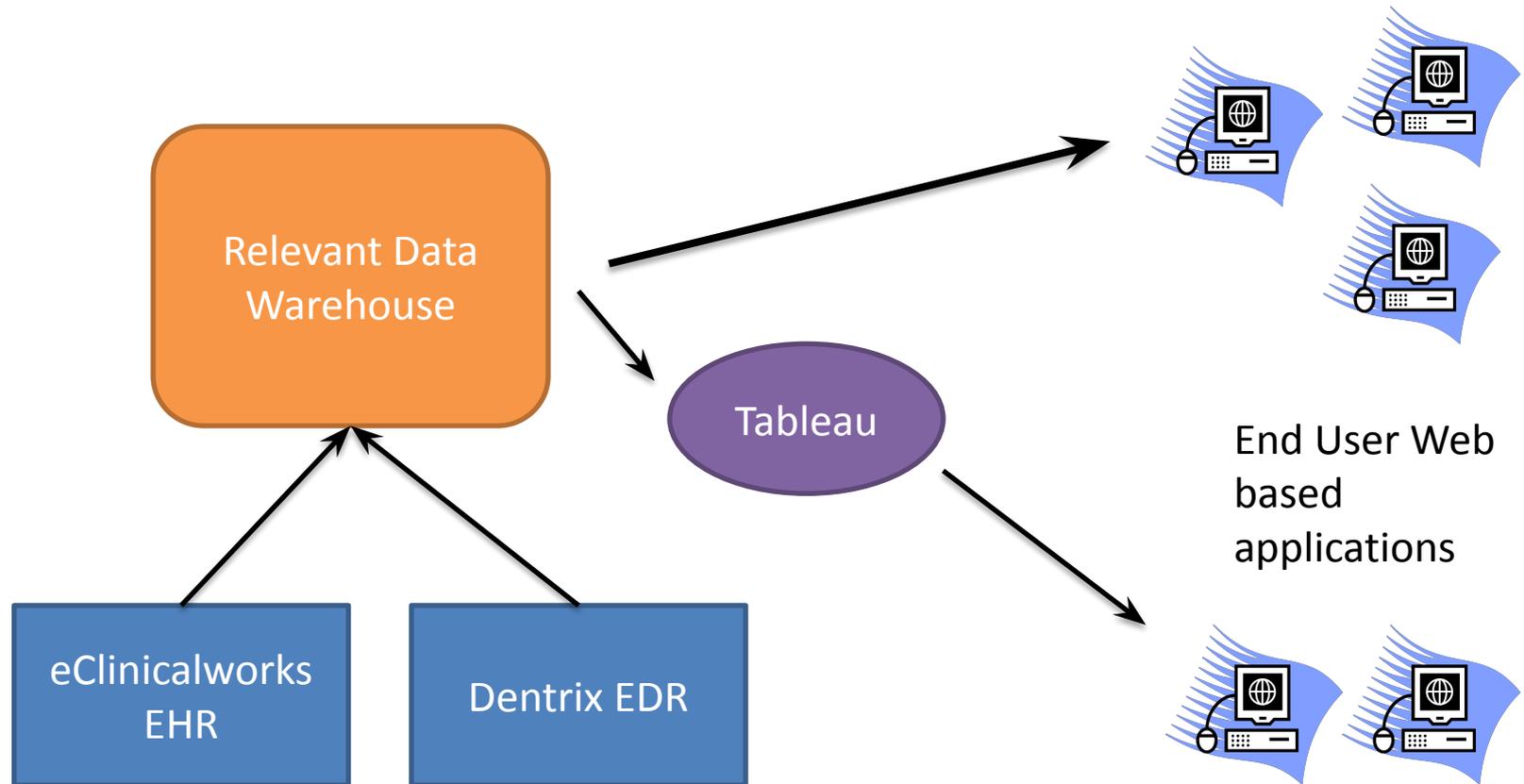
Server	Storage	Job Type	State	Job Status
PHC-SRV-01	PHC-DRIVE-FULL	PHC-DRIVES	Full Backup	Scheduled
PHC-SRV-02	PHC-DRIVES-INCR	PHC-DRIVES	Incremental Backup	Scheduled
PHC-SRV-03	PHC-DRIVES-SCHED	PHC-DRIVES	Test Run	Completed

Server	Storage	Job Type	Job Status	Percent Complete	Start Time
PHC-SRV-00-418 Backup	PHC-SRV-01	Backup	Successful	100%	7/17/2011
PHC-SRV-01 Backup	PHC-DRIVES	Backup	Successful	100%	7/17/2011
PHC-SRV-02 Backup	PHC-DRIVES	Backup	Successful	100%	7/16/2011
PHC-SRV-03 Backup	PHC-SRV-01	Backup	Successful	100%	7/17/2011
PHC-SRV-04 Backup	PHC-SRV-01	Backup	Successful	100%	7/16/2011
PHC-SRV-05 Backup	PHC-SRV-01	Backup	Successful	100%	7/16/2011
PHC-SRV-06 Backup	PHC-SRV-01	Backup	Successful	100%	7/16/2011
PHC-SRV-07 Backup	PHC-SRV-01	Backup	Successful	100%	7/15/2011
PHC-SRV-08 Backup	PHC-SRV-01	Backup	Successful	100%	7/15/2011
PHC-SRV-09 Backup	PHC-SRV-01	Backup	Successful	100%	7/15/2011

A screenshot of the Compliance Tracking Log. The table below shows the results of various compliance checks performed on different dates.

Compliance Date	Name	Daily Antivirus Check - Endpoint Protection	Daily Backup Check - Backup...	Daily Emerge... Schedule PDF Check	Daily Antivirus Check - Viper	Daily Backup Check - Veeam
06/05/17 8:44 AM	Adam	✓	✓	✓	✓	✓
06/05/17 12:17 PM	Bobby	✓	✓	✓	✓	✓
06/06/17 12:50 PM	Bobby	✓	✓	✓	✓	✓
06/07/17 11:10 AM	Bobby	✓	✓	✓	✓	✓
06/08/17 7:37 AM	Adam	✓	✓	✓	✓	✓
06/08/17 6:45 PM	Sean	✓	✓	✓	✓	✓
06/09/17 11:26 AM	Bobby	✓	✓	✓	✓	✓
06/09/17 5:12 PM	Sean	✓	✓	✓	✓	✓
06/09/17 6:45 PM	Sean	✓	✓	✓	✓	✓

IT Analytics Infrastructure





CASE 1: HYPERTENSION CONTROL



Case 1: Hypertension Control

- Heart disease and stroke account for 25% of deaths in Sonoma County (2013)
- 7% of adults in Sonoma County have heart disease – compared with a state average of 5.9% (Sonoma Health Action)
- The percentage of patients with heart disease has increased from 2011 to 2014 (Sonoma Health Action)
- The prevalence of high blood pressure in Sonoma County is higher than both state and national prevalence levels

Better control of blood pressure reduces heart attacks and strokes.



Case 1: Hypertension Control

Name	Benchmark	Source	Detail
CA FQHC	64.6%	UDS (2015)	
USA FQHC	63.8%	UDS (2015)	
National Private Ins	72%	HEDIS	90 th percentile
National Medicaid	69%	HEDIS	90 th percentile

Goal: Decrease heart attacks and strokes in our patient population by improving hypertension control.

Case 1: Hypertension Control

- Many successive initiatives have improved hypertension control
- No new technology was implemented
- eClinicalworks EHR was customized for each initiative



Case 1: Hypertension Control

1. PHC's internal quality improvement committee made a decision that hypertension was a priority
2. A work plan was formed based on the perceived needs from the quality improvement committee
3. Care teams chose a priority area to focus that team's improvement efforts on
 - Petaluma Team 2 chose to focus on hypertension
4. That team completed a number of rapid improvement cycles using the Plan-Do-Study-Act methodology
 - The informatics team was engaged in these cycles to customize the EHR and analytics software to support that work
5. Successes were brought back to the QI committee and operations group to be spread throughout the organization
 - The informatics team was engaged to train users on any EHR changes made
 - Feedback on EHR and analytics customization is accepted via email from all users and at in-person meetings

Case 1: Hypertension Control

Pre-visit

Standard care team huddle identifies patients with uncontrolled hypertension

Team Based Population Health

1. Care teams monitor performance using Relevant (Included in QI plan and provider incentive program)
2. Care teams make individual treatment plans for patients with uncontrolled hypertension during “team time”

Office Visit

Standard BP measurement and data collection process used by Medical Assistant

PCP or RN co-visit uses:

- *Standard guideline for treatment
- *Standard template
- *Standard Order Set

Outside of Visit

Standard Patient Recall Protocols:

1. Patients who have a last BP reading over 140/90
2. Patients with hypertension diagnosis who have not had a visit in 6 months.

Case 1: Hypertension Control

Pre-visit

Standard care team huddle identifies patients with uncontrolled hypertension

Early changes to our process included using the hypertension alert during care team huddle.

Systematic review of charts to anticipate needs of patients including:

1. Clinical review
2. Alert review
3. Merge templates
4. Anticipate needs from ancillary team members or services

Case 1: Hypertension Control

Office Visit

Standard BP measurement and data collection process used by Medical Assistant
PCP or RN co-visit uses:

- *Standard guideline for treatment
- *Standard template
- *Standard Order Set

Started work on hypertension control on one care team:

- Standard BP measurement and repeat measurement
- Standardized data collection process in the EHR

PHC adopted a hypertension control guideline with our health center coalition

- Meetings and trainings held for providers and nurses that improved buy-in from both groups

Standard documentation templates and order sets were implemented to be used in provider and nurse-provider co-visits.

Standard BP Data Collection

Progress Notes Scribe Orders

Positive for: red eye. **CARDIOVASCULAR** Negative
incontinence. **GU** Negative for:urinary incontinence

Objective:

Vitals:

BP 130/70, HT 60, Repeat BP 150/100

Past Results:

Examination:

General Exam

Vitals (Test, Patient - 07/17/2017 08:30 AM, OV)

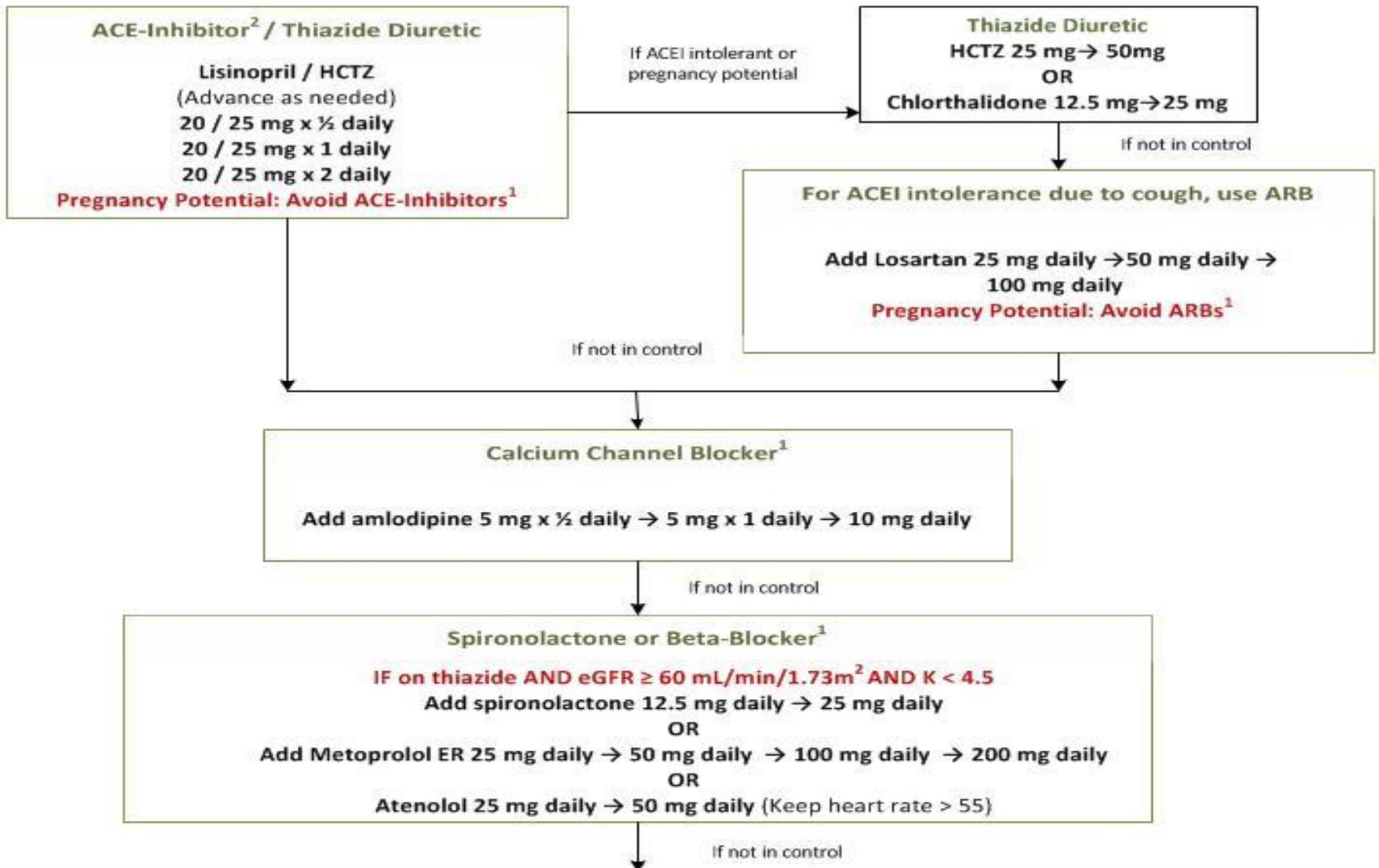
Pt. Info Encounter Physical Hub

Date	HR(/min)	BP(mm Hg)	RR(/min)	Temp(F)	Ht(in)	Wt(lbs)	BMI(Index)
07/17/2017		130/70			60		
06/19/2017							
06/08/2017							
05/20/2017					60		
04/03/2017							

Abnormal values in red

Management of
ADULT HYPERTENSION
 BLOOD PRESSURE (BP) GOALS

<140/90 mm Hg – for age 18-59 & age 60 and over with Chronic Kidney Disease (CKD)³ or Diabetes
 Optional for other patients at high risk of cardiovascular events²
 <150/90 mm Hg – for age 60 and over in the absence of Chronic Kidney Disease (CKD)³ or Diabetes



Hypertension Documentation Template

Subjective:

Chief Complaint(s):

HPI: ▼

Cardiac Risk Assessment

EXERCISE _____.

DIET: _____.

Cardiovascular

HYPERTENSION _____.

HOME BP MONITORING _____.

MEDICATION ADHERANCE _____.

ASSOCIATED SYMPTOMS _____.

DENIES _____.

Self-Management

LAST SELF MANAGEMENT GOAL: see last note for details.

SELF MANAGEMENT GOAL: Documented in Preventive Medicine.

Hypertension Goal for 18 - 59 and / or CKD or DM: <140/90

Hypertension Goal > 60 without CKD or DM: <150/90.

Hypertension Order Set – Part 1

Order Sets

Search for Order Sets

ORDER SET: Hypertension RCHC Select All Order MEASURE: 363-B QUICK ORDER SET: NO

DIAGNOSES (TRIGGER):
DIAGNOSES (LINKED): (SAME AS TRIGGER)
AGE (TRIGGER): 18Y 0M To 90Y 0M
GENDER (TRIGGER): Unknown

MESSAGE
 REFERRAL REQUIREMENTS: Referral not indicated BEST PRACTICES: STEP 1 - Consider starting a combination ACE-inhibitor and HCTZ as first line treatment. If not tolerant to ACE start diuretic. IF NOT CONTROLLED STEP 2 is add a CCB (Amlodipine), IF NOT CONTROLLED STEP 3 ADD Spironolactone or a BB. ALL MEDICATIONS BELOW Covered by PHP & 4\$ drug programs except Amlodipine and losartan which are both less than 10\$ at pharmacy. PLEASE SEE KAISER INTERNATIONAL HTN GUIDELINES BELOW.

Benign hypertension Others

Rx Order Browse

	Name	Strength	Take	Freq	Duration	Refills	Route	Formulation	Dispense	Date	Status
<input type="checkbox"/>	Amlodipine Besylate	5 MG	1 tablet	Once a day	30 day(s)	11	Orally	Tablet	30 Tablet	-	Other Actions
<input type="checkbox"/>	Hydrochlorothiazide	25 MG	1 tablet	Once a day	30 day(s)	11	Orally	Tablet	30 Tablet	09/16/2016	Other Actions
<input type="checkbox"/>	Lisinopril	10 MG	1 tab	once a day	30 days	11	Orally	Tablet	30 Tablet	02/12/2010	Other Actions
<input type="checkbox"/>	Losartan Potassium	50 MG	1 tablet	Once a day	30 day(s)	11	Orally	Tablet	30 Tablet	-	Other Actions
<input type="checkbox"/>	Spironolactone	25 MG	1/2 tablet	once a day	90 days	3	Orally	Tablet	45 Tablet	-	Other Actions
<input type="checkbox"/>	Lisinopril-Hydrochlorothiazide	20-25 MG	1/2 tablet	Once a day	90 days	3	Orally	Tablet	45	-	Other Actions
<input type="checkbox"/>	Metoprolol Succinate ER	25 MG	1 tablet	Once a day	30 day(s)	11	Orally	Tablet Extended Release 24 Hour	30 Tablet	-	Other Actions
<input type="checkbox"/>	Blood Pressure Cuff	NA	Use as directed	daily	30 days	0	topically	Miscellaneous	1 Kits	-	Other Actions

Labs AssignedTo: Martin MA, Sara Order Browse

Description	Lab Company	Frequency	Duration	Date	Status
LIPID PROFILE FP *PHC	Quest,Quest_OLD	-	-	08/28/2010	Other Actions
COMPREHENSIVE METABOLIC PANEL *PHC	Quest,Quest_OLD	-	-	05/12/2017	Other Actions
MICROALBUMIN/CREATININE, RANDOM URINE *PHC	Quest,Quest_OLD	-	-	-	Other Actions

Diagnostic Imaging AssignedTo: Martin MA, Sara Order Browse

Description	DI Company	Frequency	Duration	Date	Status
EKG WITH INTERPRETATION	-	-	-	-	Other Actions

Hypertension Order Set – Part 2

<input type="checkbox"/>		Nutrition Appointment	-	-	01/18/2010	Other Actions	
<input type="checkbox"/>		Blood Pressure MANUAL Recheck	-	-	02/20/2015	Other Actions	
<input type="checkbox"/>		SMV METABOLIC (English) - Thurs 5:30PM [P]	-	-	-	Other Actions	
<input type="checkbox"/>		SMV TAKING CONTROL OF YOUR HEALTH - 1st/3rd Tu 1:30PM [P]	-	-	-	Other Actions	

Immunizations				Order	Smart Forms			
<input type="checkbox"/>	Name	Dose	Date	Status	Name			
Therapeutic Injections								
Appointments					Referrals			
<input type="checkbox"/>		Follow-Up In:	3W		Order			
Physician Education					Patient Education			
PDF					PDF			
	Kaiser - Hypertension Guidelines - 2013				<input type="checkbox"/>		Blood Pressure Chart	
	RCHC - HTN Guidelines - 2016				<input type="checkbox"/>		Home Blood Pressure Log	
WEB REFERENCE					<input type="checkbox"/>		Balanced Plate - English & Spanish	
					<input type="checkbox"/>		AAFP Hypertension - English	
					<input type="checkbox"/>		AAFP Hypertension - Spanish	
					<input type="checkbox"/>		Hypertension Lifestyle Plan - English & Spanish	
					WEB REFERENCE			
					Order			
Notes								Apply

Case 1: Hypertension Control

Outside of Visit

Standard Patient Recall Protocols:

1. Patients who have a last BP reading over 140/90
2. Patients with hypertension diagnosis who have not had a visit in 6 months.

With direction from our internal quality improvement committee, informatics team implemented technology-based recall systems (improved from letters)

- Automated voice messages
- Text messages
- E-mail
- Patient portal app notification

Recall Protocols – email, portal, text, phone message

1. Patients with last BP uncontrolled
2. Patients with controlled BP but no visit in 6 months

Hypertension Recall

1 Define Senders 2 Define Recipients 3 Preview Messages 4 Confirm

Define recipients of this campaign

Gender
This campaign will be sent out to this gender type(s) and is not configurable.
 Male Female

Age Group
This campaign should be sent to the patients with the age group:
18 To 85

Repeat on *Repeat on selected day(s):*
 S M T W T F S

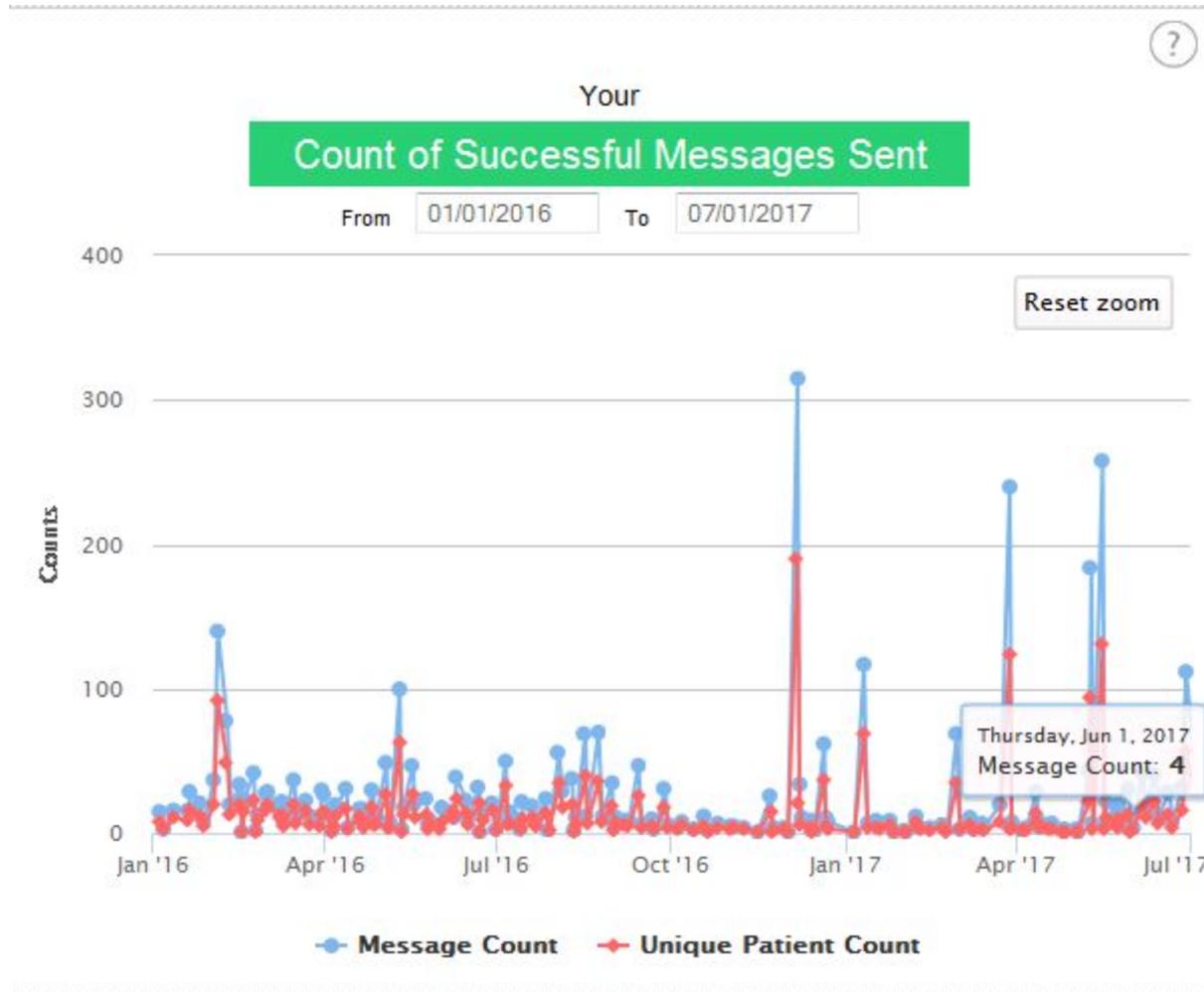
Follow up time
Every 3 Months

Batch size *Number of patients to reach out daily:*
 Notify all patients
Batch Size 200

Active patients
Check for the encounters within last
1 year(s) and 0 month(s)

Blood Pressure Threshold
Systolic 140
Diastolic 90

Uncontrolled BP Recall Messages Sent



Case 1: Hypertension Control

Team Based Population Health

1. Care teams monitor performance using Relevant (Included in QI plan and provider incentive program)
2. Care teams make individual treatment plans for patients with uncontrolled hypertension during “team time”

Care teams began using one team meeting a month to review uncontrolled hypertension cases and make individual plans for patients.

Relevant – our web-based analytics platform was implemented Spring 2016

The new web-based system became available for teams to track progress and identify patients for intervention.

INCENTIVE - Hypertension Control ?

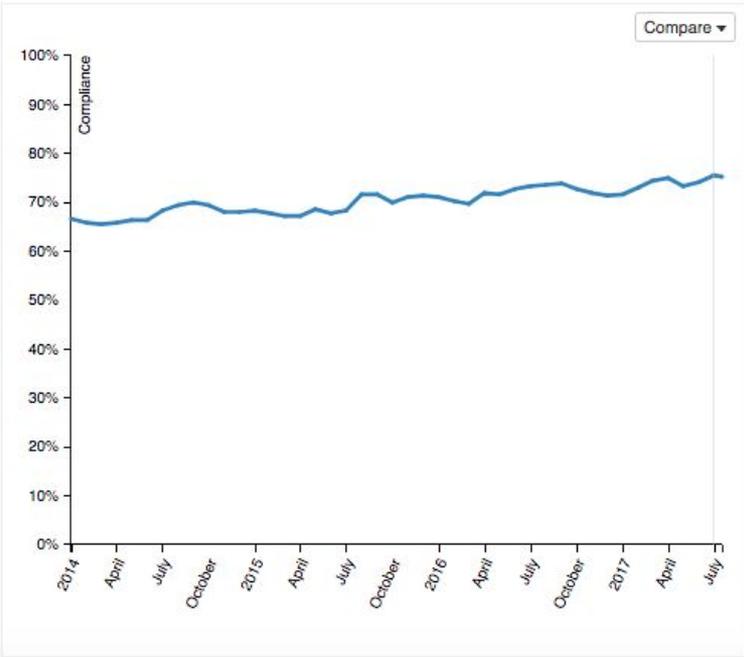
Measurement period: July 1, 2016—June 30, 2017



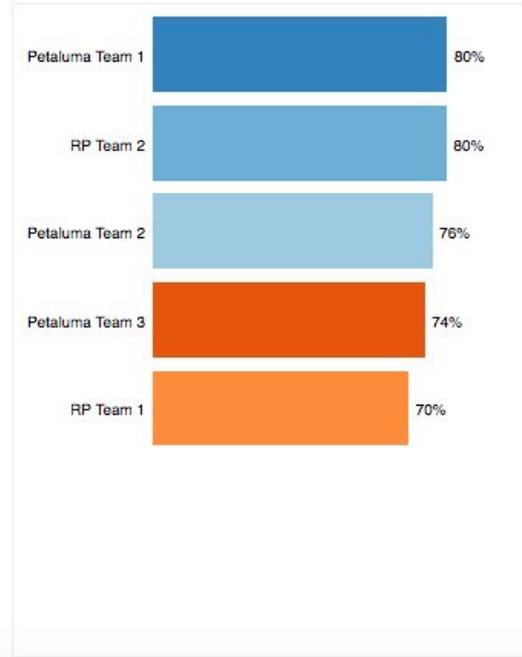
FILTERS

- Locations ▾ All
- Providers ▾ All
- Provider Teams ▾ All
- Payers ▾ All
- Payer Groups ▾ All
- Genders ▾ All
- Races ▾ All
- Ethnicities ▾ All

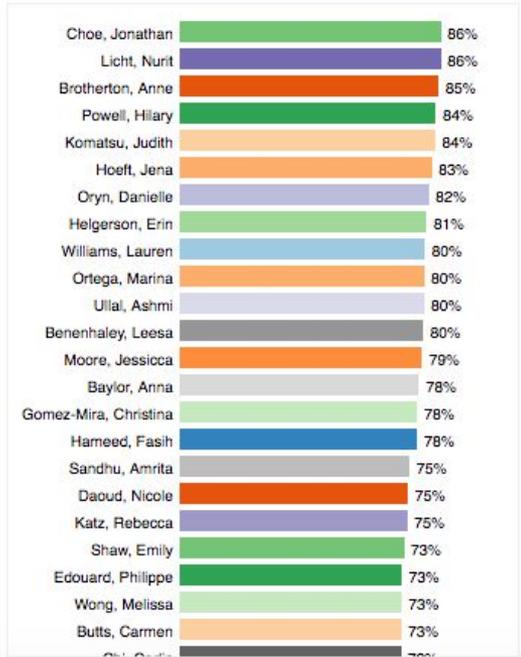
Compliance trend



Compliance by Provider Team



Compliance by Provider



INCENTIVE - Hypertension Control ?

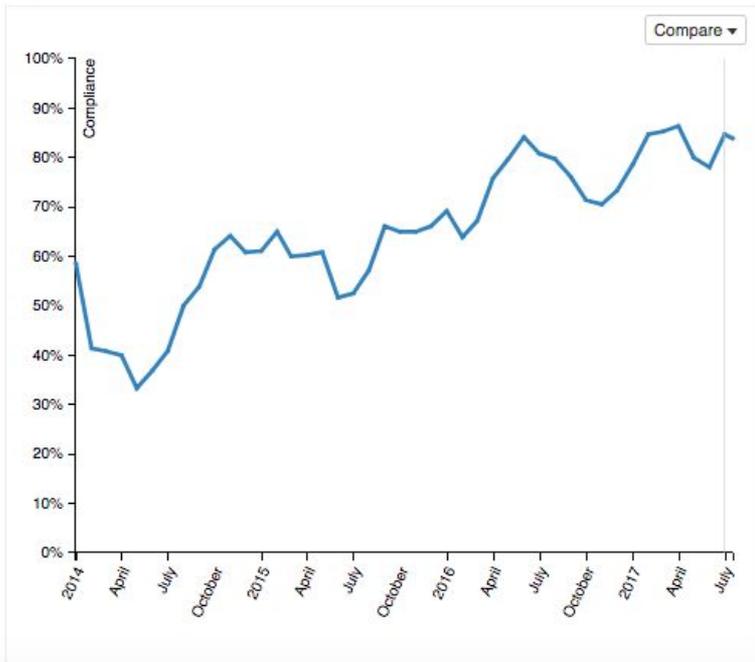
Measurement period: July 1, 2016—June 30, 2017



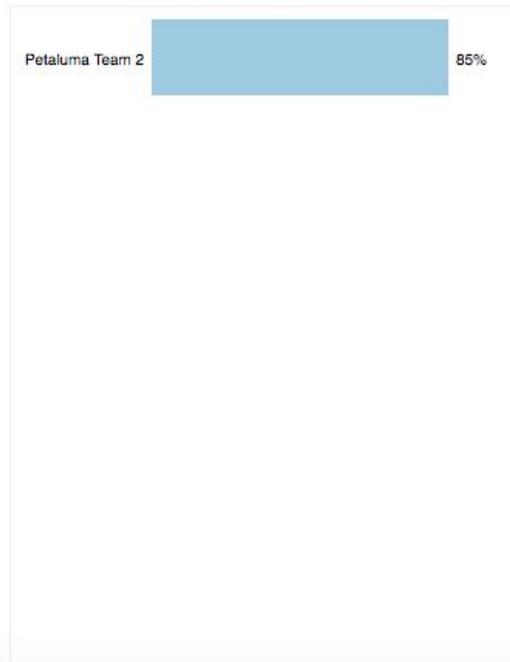
FILTERS

- Locations ▾ All
- Payer Groups ▾ All
- Providers ▾ Brotherton, Anne
- Genders ▾ All
- Provider Teams ▾ All
- Races ▾ All
- Payers ▾ All
- Ethnicities ▾ All

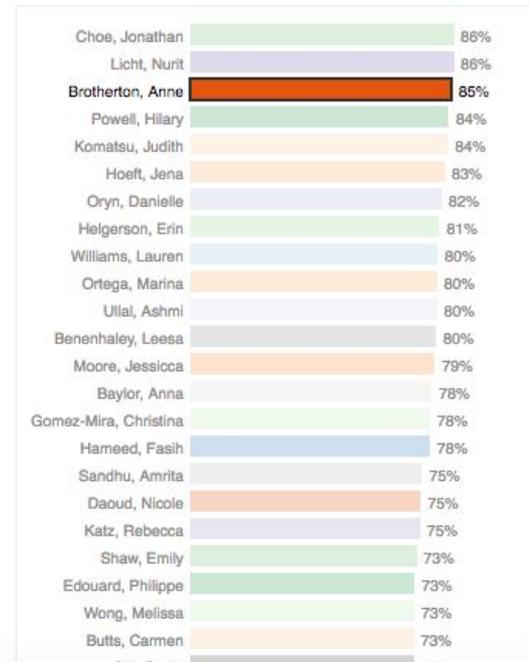
Compliance trend



Compliance by Provider Team



Compliance by Provider



Uncontrolled BP List by Provider/Team

Measure Results

Displaying 10 of 11 results

Export ▾

Search

Measure ↓	Start Date	End Date	Patient Name	MRN	Risk Score	DOB	Provider Name	Location	Msrmt Value	Numerator
HTN_CTRL	07/17/2016	07/16/2017	Teresa Leonardo Jr	116116	2.0	1984-08-08	Brotherton, Anne	Petaluma Health Center	145/66	N
HTN_CTRL	07/17/2016	07/16/2017	Nancy Martin	116116	0.5	1960-08-08	Brotherton, Anne	Petaluma Health Center	140/90	N
HTN_CTRL	07/17/2016	07/16/2017	Paul Wiley	116116	1.5	1960-08-08	Brotherton, Anne	Petaluma Health Center	141/90	N
HTN_CTRL	07/17/2016	07/16/2017	Anthony Carr	116116	3.0	1960-08-08	Brotherton, Anne	Petaluma Health Center	150/98	N
HTN_CTRL	07/17/2016	07/16/2017	Katherine Adams, Mairilia	116116	1.5	1979-08-08	Brotherton, Anne	Petaluma Health Center	156/96	N
HTN_CTRL	07/17/2016	07/16/2017	Cynthia Adams	116116	1.5	1988-08-08	Brotherton, Anne	Petaluma Health Center	146/77	N
HTN_CTRL	07/17/2016	07/16/2017	Nancy Martin	116116	5.0	1960-08-08	Brotherton, Anne	Petaluma Health Center	144/72	N
HTN_CTRL	07/17/2016	07/16/2017	Linda Ann	116116	4.5	1960-08-08	Brotherton, Anne	Petaluma Health Center	152/82	N
HTN_CTRL	07/17/2016	07/16/2017	Gary Ann	116116	2.0	1947-08-08	Brotherton, Anne	Petaluma Health Center	143/92	N
HTN_CTRL	07/17/2016	07/16/2017	Paul Wiley	116116	0.5	1960-08-08	Brotherton, Anne	Petaluma Health Center	142/60	N

NURSING - PHASE Patients on Appropriate Medications

Percentage of PHASE-Eligible Patients on an Aspirin Med, an ACE/ARB AND a Statin



Measure Results

- All Patients
- Compliant Patients
- Non-Compliant Patients
- Excluded Patients

Displaying 10 of 609 results Export

Measure	Start Date	End Date	Patient Name	MRN	Risk Score	DOB	Provider Name	Location	Msrmt Value	Numerator
msr_61	07/17/2016	07/16/2017	Gomez-Mira, Christina	111111	3.5	1988-08-28	Gomez-Mira, Christina	Petaluma Health Center	Aspirin: Aspirin, ACE_ARB: Lisinopril, Statins: None	N
msr_61	07/17/2016	07/16/2017	Pendleton, John	111111	4.0	1959-05-12	Pendleton, John	Rohnert Park Health Center	Aspirin: Eliquis, ACE_ARB: None, Statins: Simvastatin	N
msr_61	07/17/2016	07/16/2017	Sandhu, Amrita	111111	2.0	1982-02-08	Sandhu, Amrita	Petaluma Health Center	Aspirin: Aspirin, ACE_ARB: None, Statins: None	N
msr_61	07/17/2016	07/16/2017	Ortega, Marina	111111	1.0	1988-05-18	Ortega, Marina	Petaluma Health Center	Aspirin: None, ACE_ARB: None, Statins: None	N
msr_61	07/17/2016	07/16/2017	Nicol, Annie	111111	8.5	1964-07-18	Nicol, Annie	Petaluma Health Center	Aspirin: None, ACE_ARB: Lisinopril, Statins: None	N
msr_61	07/17/2016	07/16/2017	Upton, Sean	111111	7.5	1982-02-28	Upton, Sean	Petaluma Health Center	Aspirin: None, ACE_ARB: None, Statins: None	N
msr_61	07/17/2016	07/16/2017	Romero, Whitney	111111	1.5	1985-07-28	Romero, Whitney	Petaluma Health Center	Aspirin: Aspir-81, ACE_ARB: None, Statins: Atorvastatin Calcium	N
msr_61	07/17/2016	07/16/2017	Khalsa, Dalbir	111111	1.5	1989-08-28	Khalsa, Dalbir	Petaluma Health Center	Aspirin: Aspirin Low Dose, ACE_ARB: Lisinopril, Statins: None	N
msr_61	07/17/2016	07/16/2017	Ullal, Ashmi	111111	1.5	1988-05-28	Ullal, Ashmi	Rohnert Park Health Center	Aspirin: Aspirin, ACE_ARB: None, Statins: Simvastatin	N

INCENTIVE - Hypertension Control ?

COMPLIANCE



 **2167**
2867
0 exclusions

TARGET

1 Compliance is 1 percentage points above the organization's target of 75%.

Locations ▾

All

Payer Groups ▾

All

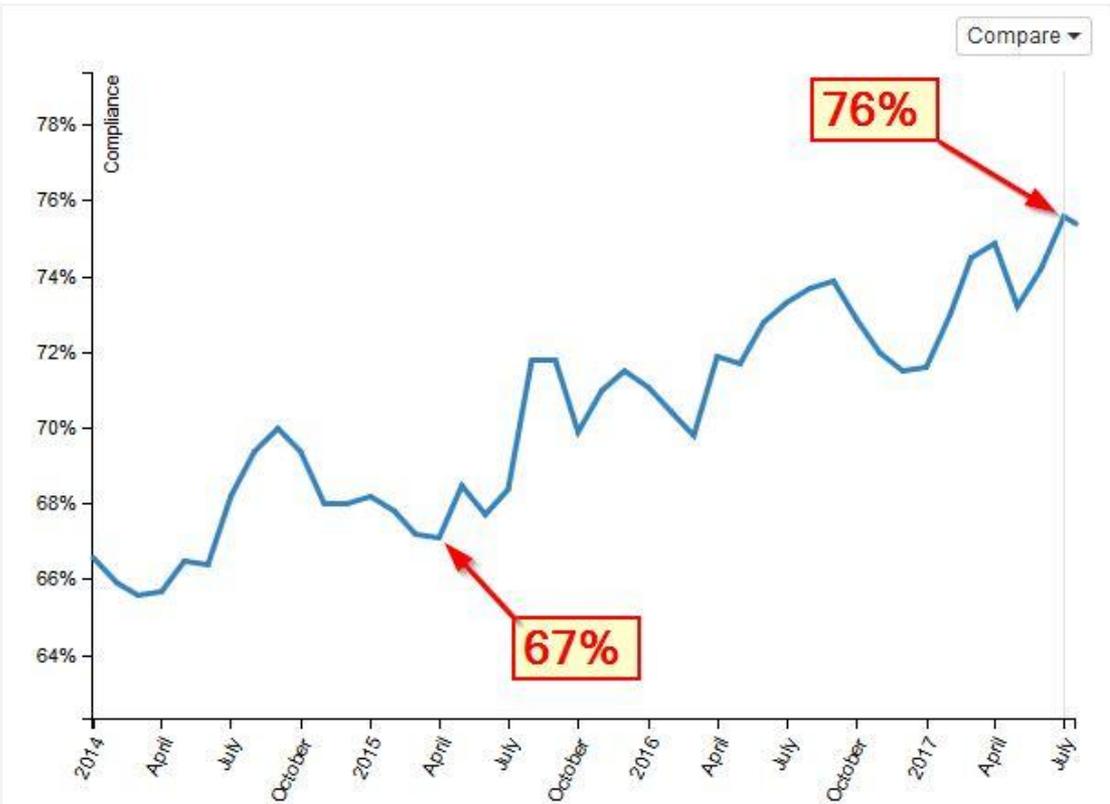
Provider

All

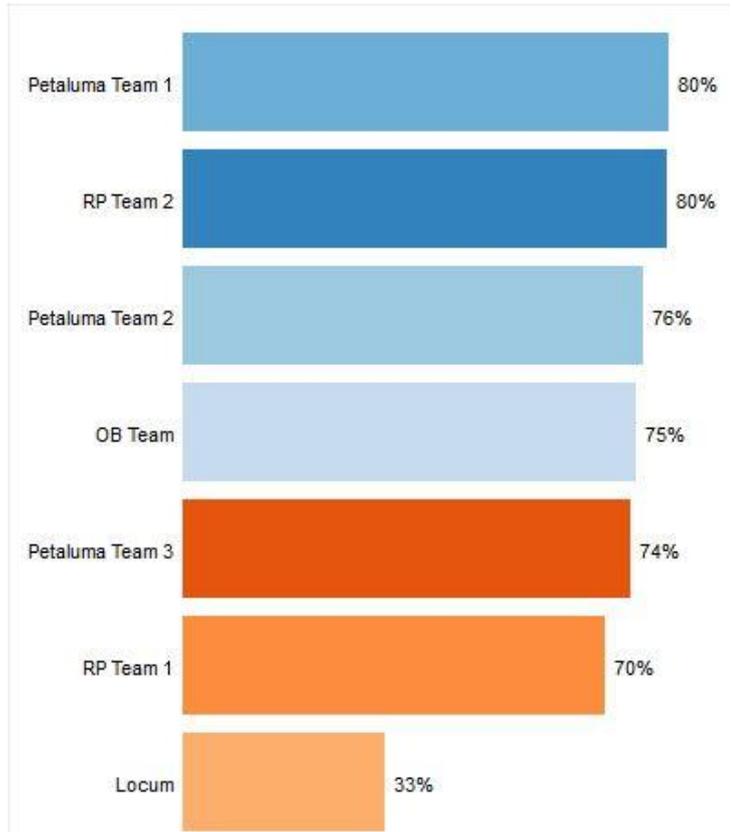
Genders

All

Compliance trend



Compliance by Provider Team



Case 1: Hypertension Control

Financial Benefit	April 2015 – March 2017
Partnership Health Plan's Quality Improvement Plan (QIP) funds related to accomplishing our goal for control of hypertension	\$60,000
HRSA Quality Improvement awards related to performance on hypertension control	\$20,000
Funding for Preventing Heart Attacks and Strokes Everyday (PHASE) program.	\$33,000
Total Financial Benefit	\$113,000

Case 1: Hypertension Control

Other Outcomes and Lessons Learned

Improved satisfaction of providers and nurses with co-management of patients

Patients have given positive feedback:

- Improved ability to get an appointment by having follow up appointments with nurses
- Reminders to come in for follow up

Medical assistants are more engaged in working with patients:

- Talking to patients about blood pressure
- Educating people on control ranges
- Setting self-management goals with patients

We have learned the importance and benefit of clinical standardization

Spreading initiatives that work on one care team to others was a challenge

Providing real-time, usable data and time to use that data to manage the population resulted in the largest improvement!



CASE 2: HEPATITIS C TREATMENT

Case 2: Hepatitis C Treatment

- Hepatitis C causes significant health problems for those infected with the virus
- Patients with chronic hepatitis C are at risk for liver failure and liver cancer
- Sonoma County's HCV rate among females is 16% higher than the state average*
- Sonoma County HCV rate among adults 20-30 has nearly tripled from 2011 to 2015*
- From 2011 - 2015 HCV rates for both women and men in Sonoma County have risen over 175% and 220%, respectively*
 - Improved screening and/or increased HCV transmission?

*. https://archive.cdph.ca.gov/programs/Documents/Sonoma_HCV.pdf

Case 2: Hepatitis C Treatment

- HCV treatment has become more tolerable for patients
 - able to treat more types of Hepatitis C and treatment is more available
 - The CDC estimates that 1% of the population has chronic HCV
 - 50% of those with the virus are not diagnosed
 - FQHC patients may be at higher risk than other populations in the community
 - PHC decided to begin to offer treatment for Hepatitis C in primary care.

Case 2: Hepatitis C Treatment

1. Providers at PHC with expertise in providing Hepatitis C treatment in primary care proposed to our internal quality improvement committee a new program to begin treatment groups at PHC
2. The Wellness team began work on creating workflows for the treatment groups using their existing shared medical visit model
3. Providers were recruited based on interest and expertise to facilitate the shared visits
4. A staff member of the wellness team was trained to be the case manager for the program
5. Guidelines for treatment were adopted from Partnership Health Plan
6. Informatics team was engaged to provide EHR customization, clinical decision support and analytics customization for the new program

Workflows – Treatment in Shared Medical Visit Model

- Up to 8 pts per session
- 1-2x/month
- RN education
- GI-FNP reviews cases with MA prior to visit
- Provider meets 1:1 with patient & MA
- Orders labs, imaging, screening if eligible/ready for treatment

Pre- treatment

Initiating Treatment

- 1-2x/month
- provider chart prep/review w/ HCV coordinator
- Education & RX in group setting
- Face to face time is conducted in front of entire group, unless 1:1 time needed
- Vaccines administered
- Lifestyle & global liver health reviewed
- Referred to CERES PROJECT for nutrition/cooking

- Up to 10 per group
- 1-2 x/month
- Each cohort starts together regardless of stage of treatment
- Check in, group sharing, discussion of side effects
- Nutritionist, Cooking Demos, Ongoing holistic lifestyle education
- 1:1 if necessary
- Labs ordered & reviewed
- Support, engagement, education

Treatment Maintenance

Case 2: Hepatitis C Treatment

- No new technology was implemented
- eClinicalworks EHR was customized for each initiative
- Implemented new workflows to support pathway to treatment via shared medical visits.



Case 2: Hepatitis C Treatment

- Up to 8 pts per session
- 1-2x/month
- RN education
- GI-FNP reviews cases with MA prior to visit
- Provider meets 1:1 with patient & MA
- Orders labs, imaging, screening if eligible/ready for treatment
- Nutritionist, Cooking Demos, Ongoing holistic lifestyle education

Pre- treatment

Health IT Support for Pre-Treatment Process:

- Created reports using our analytics systems to generate lists of patients who could be invited to treatment
- Customized the EHR to create a pathway for referral to the groups
- Created an order set to provide decision support for workup of Hepatitis C
- Created a huddle alert to improve the rate of population-based screening for Hepatitis C
- Created a documentation template to make the group visit documentation more efficient

APRI/FIB4 Report

Acct #	DOB	Age	PCP	AST Value	ALT Value	Plt Count	FIB-4	APRI	Primary Insurance
116376		42	Butts	127	104	35	14.94	9.07	PHP Medical
40380.1		62	Nicol	175	139	103	8.93	4.25	Medicare NGS
45968.1		58	Brotherton	111	162	67	7.55	4.14	
164612		63	Sandhu	85	66	60	10.99	3.54	PHP Medical
50512.1		52	Powell	188	178	139	5.27	3.38	PHP Medical
4450.1		59	Ashcroft	106	78	81	8.74	3.27	Meritage Medical Network
117074		59	Butts	90	35	72	12.47	3.13	PHP Medical
162687		62	Nicol	153	97	123	7.83	3.11	PHP Medical
35822.1		63	Choe	126	161	122	5.13	2.58	PHP Medical
157721		49	Upton	67	30	68	8.81	2.46	PHP Medical
175846		56	Sandhu	131	242	133	3.55	2.46	PHP Medical
19957.1		62	Upton	126	137	129	5.17	2.44	PHP Medical

Case 2: Hepatitis C Treatment

Referral (Outgoing)

Patient: test, danielle (126722) [Sel] [Info] [Hub]

Insurance: Medicare PHC [Sel] [Pt Ins] POS: 11

Ref From: Oryn, Danielle [...]

Facility From: Petaluma Health Center [...]

Auth Code: []

Start Date: 07/19/2017

Referral Date: 07/19/2017

Open Cases: [] [N]

Appt Date: 07/19/2017

Received Date: 07/19/2017

Priority: Routine

Ref To:

Provider: [] [Pref] [Clear]

Specialty: Liver Health Group [] Send to eHX

Facility To: [] [Clear]

Auth Type: []

End Date: 07/19/2018

Assigned To: Salamanca, Ana []

Unit Type: V (VISIT)

Status: Open Consult Pending Addressed

Diagnosis / Reason | Visit Details | Notes | Structured Data

Reason [Add] [Browse] [Remove]

Sl. No	Description
1	eval and treat

Diagnosis [Previous Dx] [Add] [Remove]

Code	Name
K73.9	Chronic hepatitis

Procedures [Add] [Remove]

Code	Name
------	------

[Scan] [Attachments (1)] [Logs] [Save] [Cancel] [Send Referral]

- The way that providers can refer patients for treatment
- Creates a group or list of patients to be treated

Hepatitis C Order Set – Part 1

Order Sets

Search for Order Sets

ORDER SET: Hepatitis C Select All Order MEASURE: QUICK ORDER SET: YES

DIAGNOSES (TRIGGER):
 DIAGNOSES (LINKED): (SAME AS TRIGGER)
 AGE (TRIGGER): All Age
 GENDER (TRIGGER): Unknown

MESSAGE
 REFERRAL REQUIREMENTS: LIVER HEALTH GROUP: Initial Hep C Laboratory Workup: HCV genotype, HCV Viral RNA quant PCR, HAV Ab, HBsAg, HBsAb, HbCAb Total, HIV, CBC, CMP, PT/INR, Fibrotest. Imaging: ABD U/S (in the last year). BEST PRACTICES: Vaccinate for Hep A and B as indicated, vaccinate all patients 19-64 yrs old w a single dose of PPSV 23, counsel on diet/lifestyle including no ETOH. REFER ALL PATIENTS TO LIVER HEALTH GROUP. Tx contraindications - Uncontrolled depression, autoimmune hepatitis, transplant, severe concurrent dz, pregnancy. ONLY LIVER HEALTH TREATMENT PROVIDERS SHOULD PRESCRIBE TREATMENT.

Rx

	Name	Strength	Take	Freq	Duration	Refills	Route	Formulation	Dispense	Date	Status
<input type="checkbox"/>	Harvoni	90mg/400mg	1 Tablet	Daily	28 days	2	By Mouth	Tablet	28	-	Other Actions
<input type="checkbox"/>	Sovaldi	400 MG	1 tablet	Once a day	28 days	2	Orally	Tablet	28 Tablet	-	Other Actions
<input type="checkbox"/>	Viekira Pak	12.5mg/75mg/50mg and 250mg	As directed	As directed	28 days	2	By Mouth	Tablets	1 Pack	-	Other Actions
<input type="checkbox"/>	Ribavirin	200 MG	3 Tabs	Twice a day	28 days	5	Orally	Tablet	168 Tablet	-	Other Actions
<input type="checkbox"/>	Technivie	12.5/75/50mg	2 tabs	Daily	28 Days	2	Orally	Tablet	56	-	Other Actions
<input type="checkbox"/>	Daclatasvir	60mg	One Tablet	Daily	28 Days	2	By Mouth	Tablet	28	-	Other Actions
<input type="checkbox"/>	Ribavirin	600 MG	1 tablet	Twice a day	28 days	2	Orally	Tablet	56 Tablet	-	Other Actions
<input type="checkbox"/>	elbasvir-grazoprevir	50 - 100	1 Tablet	Daily	28 Days	2	Orally	Tablet	28	-	Other Actions
<input type="checkbox"/>	Sofosbuvir/velpatasvir	400mg/100mg	1 Tablet	Daily	28 days	2	By Mouth	Tablet	28	-	Other Actions

Labs

AssignedTo: Martin MA. Sara

Description	Lab Company	Frequency	Duration	Date	Status
HEPATITIS C AB W/RFX HCV RNA,QN,PCR*PHC	Quest	-	-	-	Other Actions
HEPATITIS C GENOTYPE*PHC	Quest,Quest_OLD	-	-	-	Other Actions
HEP C VIRAL RNA QUANT BY PCR *PHC	Quest,Quest_OLD	-	-	-	Other Actions
HEP A ANTIBODY-TOTAL/REFLEX IgM	Quest,Quest_OLD	-	-	-	Other Actions
HEP B SURFACE Ag W/REFLEX CONFIRM *PHC	Quest,Quest_OLD	-	-	-	Other Actions
HEPATITIS B SURFACE Ab, QUANT.	Quest,Quest_OLD	-	-	-	Other Actions
HEP B CORE TOTAL/REFLEX TO HBC IgM	Quest,Quest_OLD	-	-	-	Other Actions

Hepatitis C Order Set – Part 2

Description	DI Company	Frequency	Duration	Date	Status
<input type="checkbox"/> US ABDOMINAL	-	-	-	-	Other Actions

Procedures AssignedTo: Martin MA, Sara [Order](#) [Browse](#)

Description	Frequency	Duration	Date	Status
Immunizations Order				

Name	Dose	Date	Status
<input type="checkbox"/> Hepatitis A (adult)	1 mL	-	Other Actions
<input type="checkbox"/> Hepatitis A (adult) STATE Funded	1 mL	-	Other Actions
<input type="checkbox"/> Hepatitis B (Adult) STATE Funded	1 mL	-	Other Actions
<input checked="" type="checkbox"/> Pneumococcal PPSV 23 (ADULT)	0.5 mL	02/12/2015	Other Actions
<input type="checkbox"/> Pneumococcal PPSV23 (Adult) STATE funded	0.5 mL	-	Other Actions
<input type="checkbox"/> HEPATITIS A and HEP B = TWINRIX	1 mL	-	Other Actions
<input type="checkbox"/> Hepatitis B (Adult)	1 mL	-	Other Actions

Name
<input checked="" type="checkbox"/> PHQ2
<input checked="" type="checkbox"/> PHQ9
<input checked="" type="checkbox"/> Audit-C

Therapeutic Injections

Appointments [Order](#)

<input type="checkbox"/> Follow-Up In:	2W
<input type="checkbox"/> Follow-Up In:	4W

Referrals [Order](#)

Outgoing Referral for: Liver Health Group

Physician Education

PDF

CDPH - Pneumonia Vaccine Timing - 2016	
AASLD IDSA - HCV Guidelines - 2016	
CDC - Pneumococcal Vaccine Guidelines - 2015	

Patient Education [Order](#)

PDF

<input type="checkbox"/> AAFP - Hepatitis C - English	
<input type="checkbox"/> AAFP - Hepatitis C - Spanish	
<input type="checkbox"/> NIH - Hepatitis C - English	
<input type="checkbox"/> NIH - Hepatitis C - Spanish	

WEB REFERENCE

Hepatitis C Documentation Template

Progress Notes Scribe Orders Quick Search

HPI: ▾
Gastrointestinal
Hepatitis C flowsheet reviewed and updated.
HEPATITIS C _____
HEPATITIS C TREATMENT
TREATMENT

Current Medication:
Medical History:
Allergies/Intolerance:
ROS: ▾

Objective:
Vitals:
Past Results:
Examination: ▾
General Exam
GENERAL: NAD.

Assessment:
Assessment: ▾

- Chronic viral hepatitis C - B18.2 (Primary)
This patient was seen face to face in a shared medical visit. HIPAA confidentiality waiver has been signed and filed in patient docs. >50% of this visit was spent on counseling and care coordination for the above diagnosis.

Plan:

Case 2: Hepatitis C Treatment

- 1-2x/month
- provider chart prep/review w/ HCV coordinator
- Education & RX in group setting
- Face to face time is conducted in front of entire group, unless 1:1 time needed
- Vaccines administered
- Lifestyle & global liver health reviewed
- Referred to CERES PROJECT for nutrition / cooking

Initiating Treatment

Treatment Maintenance

- Up to 10 per group
- 1-2 x/month
- Each cohort starts together regardless of stage of treatment
- Check in, group sharing, discussion of side effects
- Nutritionist, Cooking Demos, Ongoing holistic lifestyle education
- 1:1 if necessary
- Labs ordered & reviewed
- Support, engagement, education

Health IT Support for Pre-Treatment Process:

- Created and implemented a documentation template to improve efficiency of documentation of the shared medical visits
- Launched new reports on analytics platform to track progress on screening and treatment

Hepatitis C Documentation Template

Progress Notes | Scribe | Orders | Quick Search

HPI: ▾
Gastrointestinal
Hepatitis C flowsheet reviewed and updated.
HEPATITIS C _____.
MEDICATION SIDE EFFECTS None.
MEDICATION ADHERANCE Taking medications as directed with no missed doses.

Current Medication:
Medical History:
Allergies/Intolerance:
ROS: ▾

Objective:
Vitals:
Past Results:
Examination: ▾
General Exam
GENERAL: NAD.

Assessment:
Assessment: ▾

- Chronic hepatitis C without hepatic coma - B18.2 (Primary)
This patient was seen face to face in a shared medical visit. HIPAA confidentiality waiver has been signed and filed in patient docs. >50% of this visit was spent on counseling and care coordination for the above diagnosis.

Hepatitis C Population Screening

INCENTIVE - Hepatitis C Screening 📄

Measurement period: July 18, 2016—July 17, 2017



FILTERS

Locations ▾ All

Providers ▾ All

Provider Teams ▾ All

Payers ▾ All

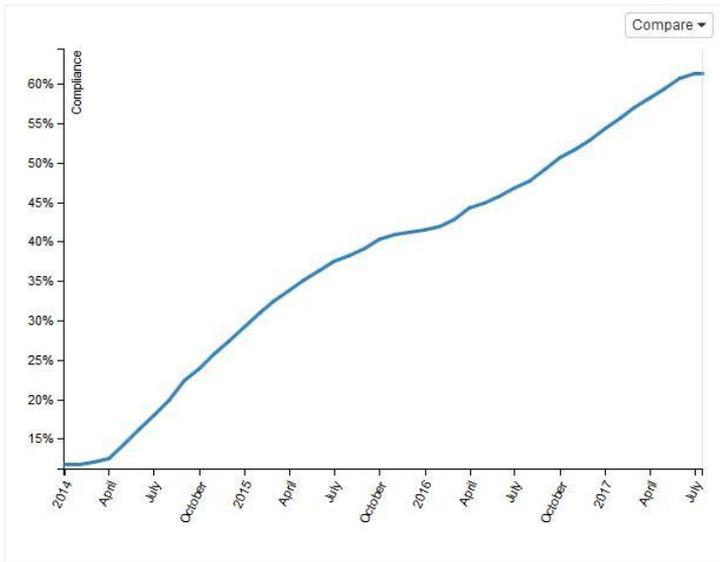
Payer Groups ▾ All

Genders ▾ All

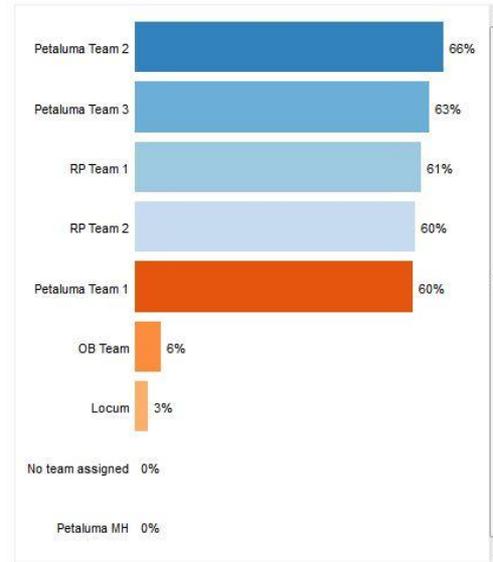
Races ▾ All

Ethnicities ▾ All

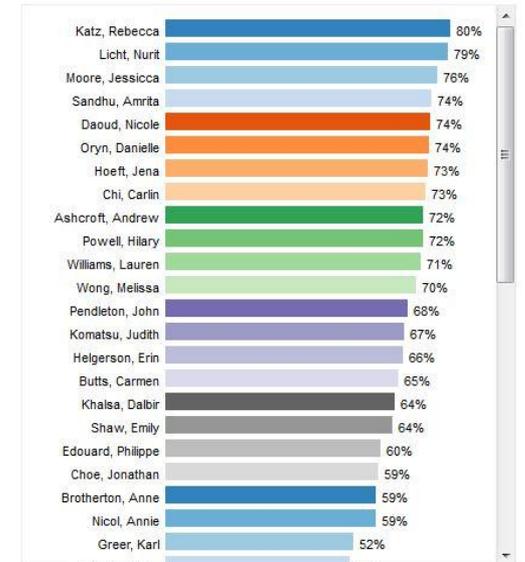
Compliance trend



Compliance by Provider Team



Compliance by Provider



Quantitative data and sustained improvement

Patients with Chronic Hepatitis C Who Have Received Treatment [i](#)

Measurement period: July 18, 2016—July 17, 2017

COMPLIANCE



100
287
0 exclusions

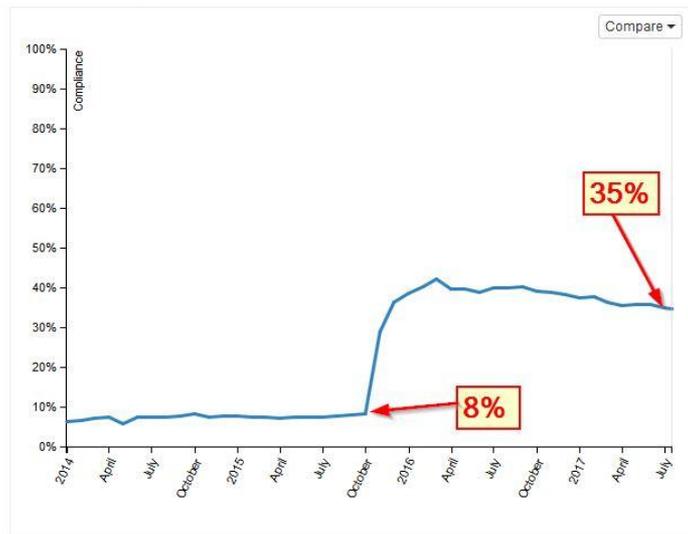
TARGET

Click here to set up a target

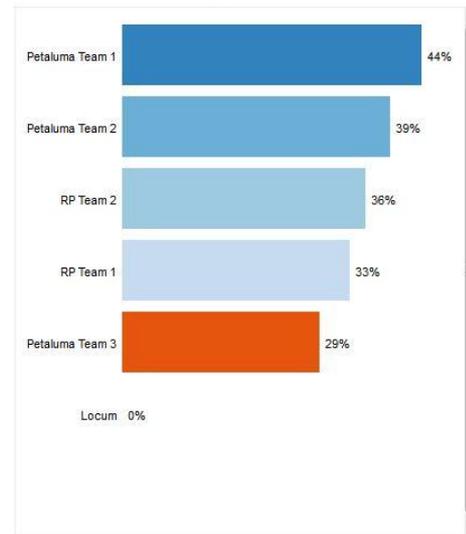
FILTERS

Locations All	Providers All	Provider Teams All	Payers All
Payer Groups All	Genders All	Races All	Ethnicities All

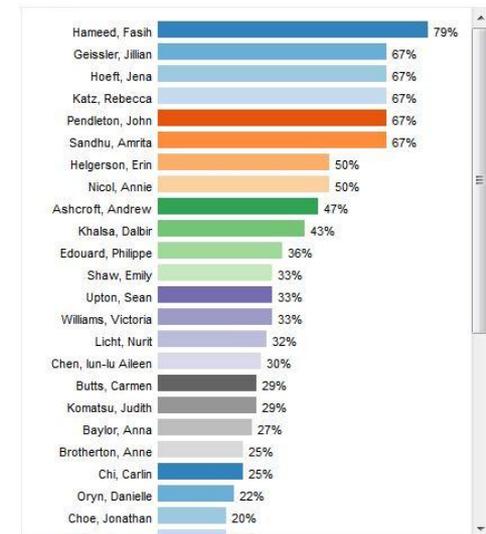
Compliance trend



Compliance by Provider Team



Compliance by Provider



Case 2: Hepatitis C Treatment

Financial Benefit	September 2015 – March 2017
530 additional office visits	\$111,000
340B pharmacy program income related to medications for hepatitis C	\$86,000
Total	\$197,000

Case 2: Hepatitis C Treatment

Other Outcomes and Lessons Learned

- Improved access to treatment for our patients and we even began accepting outside referrals from other health centers and PCPs in the area
- Patients reported that they preferred the group based treatment model to traditional treatment
- Providers and care-teams were happy that patients would be invited to treatment without needing PCP referrals.
- We found that using analytics to identify patients who qualify for treatment was more effective than previous efforts to have providers select patients for referral
- Group documentation templates helped the staff conducting the shared medical visits be more effective
- With this program's success and growth we are now planning to cross train staff in other departments in some of the case management work.

Petaluma
HealthCenter



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