



# CIO/CMIO Peer Group

**THURSDAY, MAY 25, 2023**

**11AM-12PM**



[Recording Link](#)

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Bi-Monthly CIO/CMIO Peer Group Meeting

# Agenda

Time	Topic	Lead(s)
7 min	<b>Welcome &amp; Introductions</b>	Zoe So David Lown
25 min	<b>Member Presentation: Contra Costa Health Services</b>	Duane Eikleberry
25 min	<b>Discussion</b>	All Facilitator: Ash Amarnath
3 min	<b>Wrap-Up</b>	Zoe

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# Introductions

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**Member Presentation:**  
**Tech-based Approaches to  
Outreach and Engagement**

**Duane Eikleberry**, Business Intelligence Developer  
Contra Costa Health Services



[cchealth.org](https://cchealth.org)

# Tech-Based Approaches to Outreach and Engagement

Duane Eikleberry  
Nooshin Abtahi  
Grace Dwyer

5/23/2023

## CCHS Overview

- Contra Costa County Medical Center comprised of Contra Costa Regional Medical Center (CCRMC) and ten ambulatory health centers which is the training ground for our family practice residency program.
- CCRMC is a 167-bed general acute care safety-net hospital that has an average of over 8,000 admissions per year.
- CCRMC and HCs have over 140,000 Empaneled patients
- Additionally, the Psychiatric Emergency Services Unit provides wide range of services and has an average of 10,000 visits per year.

## CCHS Overview

- We are integrated with our health plan which means we receive claims for non-CCHS care
- This helps with having a more complete picture of care gaps
- In turn this *usually* helps with QIP numerators, too
- For orgs not integrated with health plans, perhaps seek out other data sources via interop tools of EMR such as Epic's Care Everywhere when possible

## Past Challenges/ Prior State

### Excel-Based Outreach Lists – Created by BI Team SQL Queries

- Multiple/duplicative versions of one search floating around
- Quickly out of date, distributed by email

### Epic Reporting Workbench – Registry Searches

- At least in EMR for easy patient encounter creation
- Extremely slow to run, upwards of an hour for 1 run
- Not maintained by BI team

### Televox/Automated Messaging

- Mix of SQL-based queries that could become outdated without anyone realizing



## Past Challenges/ Prior State

### Outcome Success Reporting

- Very limited in scope

### Each Campaign Not Holistic

- Each campaign had no awareness of other messaging going out
- Could get text messages for breast and cervical cancer screenings minutes apart
- Each campaign's exclusion criteria was different
- "Do not call" lists not used
- Standardization of workflow and training not in place

## Beginnings of New Outreach Lists

### QIP Tobacco Measure Denominator Growth

- Tobacco denominator population had many visits missing screenings
- Knew we needed to contact many patients, could use previous methods, or...

### New Epic Reporting Workbench Option – SQL-Based Queries

- In EMR for easy patient encounter creation
- But also extremely fast to run!
- Looking for a pilot to try this tool out

### Transitioning from Televox to Well/Artera and Luma

- A chance to revisit old logic

## Step 1 – Creating Patient Base

- We already had QIP measure-specific tables updating nightly
- Patients to call: In Denominator, not in numerator

Tobacco Measure

PAT_ID	Numerator
Z123	N
Z124	Y

Diabetes A1c Measure

PAT_ID	Numerator
Z124	N
Z125	Y



QIP Outreach List

PAT_ID	Tobacco Screening	Diabetes A1c
Z123	Denom	
Z124	Denom+Num	Denom
Z125		Denom+Num

## Step 2 – Complications with Using QIP Data Alone

- Certain measures might not have patients in denominator today, but would on 12/31

Ages

Report the rate for the measurement year.  
3–21 years as of December 31 of the measurement year. Report the total rate.

### Idea 1

- Pretend it is a future date like 4 months ahead
- Run QIP measure code (e.g. on 5/23/23, measurement year is 9/23/22 – 9/22/23)
- So a child 2 years old today is 3 by 9/22/23

### Idea 2

- Use Health Maintenance EMR data
- Much more common, but this data sometimes is less complete (e.g. not considering claims) so we can use QIP numerator status as an exclusion

## Step 3 – Add in Columns for Various Populations

- Similar to QIP measure-specific tables, we have population-specific tables
- Some like "covered for the past year" are safe enough to assume the patient will also be covered as of 12/31
- Some (especially W15) need dummy populations like “all patients with a PCP currently assigned and failing future date denominator”

```
SELECT PAT_ID,
       QIP_MY_CONT_ENROL,           -- Continuous Cvg Past Year
       PCP,                         -- Has PCP assigned currently
       QIP_TOBACCO_RATE1,          -- Tobacco Screening num/denom
       QIP_CDC_HBA1C,              -- A1c num/denom
       QIP_WELLCHILD_VISIT_30MONTHS_RATE1 -- W15 num/denom
FROM Dashboard.dbo.QIP_GAPS_IN_CARE
```

PAT_ID	QIP_MY_CONT_ENROL	PCP	QIP_TOBACCO_RATE1	QIP_CDC_HBA1C	QIP_WELLCHILD_VISIT_30MONTHS_RATE1
1	1	1	Y	Y	NULL
1	1	1	N	NULL	NULL
NULL	NULL	1	NULL	NULL	N

### Step 4 – Add in Other Columns for Filtering or Display in Epic’s Front-End Tool

- Last primary care appointment date
- Has future primary care appointment scheduled
- Reason failing Diabetes A1c (High or Missing A1c)
- Has active A1c order
- Last FIT Kit mail date
- Race/Ethnicity

## Step 5 – Create Front End

- For non-Epic groups: this is just an EMR-side activity capable of running a SQL query and handing the patient IDs off to the client as if it's a native report

Report Settings - QIP Outreach Report - Antioch [2034379]

Criteria Display Appearance Summary Print Layout Toolbar Override

Find Patients

Find Criteria Enter a search term, or click the search icon to browse

### Failing Measures

Breast Cancer Screening OR

Cervical Cancer Screening OR

Child and Adolescent Well-Care Visits OR

Child Immunization (Combo 10) OR

Colorectal Cancer Screening OR

8 more values ...

### In Population

QIP Proactive Measures OR

QIP 12 months of Continuous Enrollment as of 13th birthday OR

QIP 12 months of Continuous Enrollment as of 2nd birthday OR

QIP 27 Month Continuous Enrollment OR

QIP Continuous Enrollment from 15 months to 30 months OR

3 more values ...

Clinic

Antioch

Use Appointment Filter

Yes

Use Flowsheet Filter

Yes

Require PCP and Pt Eligibility PCP

Yes

Report Logic AND

## Front End Example

- Big benefit is this provides access to EMR tools (Pt Outreach encounter, MyChart msg, letters, etc.)

QIP Outreach Report - Bay Point [60957429] as of Mon 5/1/2023 1:32 PM

Chart Pt Outreach Generate Letters Place Orders Track Pt Outreach Send Patients Message

Filter Re-run Report

MRN	Patient	Language	Phone	QIP Failed Measures	Last Visit	Age	Outreach Due Status	Prior Outreach Date	PCP
		Spanish		Child and Adolescent Well-Care Visits; Influenza Immunization	01/19/2023	18-year old	Due for Second Call	04/10/2023	Ballesteros, Karla, FNP
		Spanish		Immunizations for Adolescents	01/31/2023	12-year old	Due for First Call		Perez, Greta, MD
		Spanish		Colorectal Cancer Screening; Depression Screening and Follow-up; Influenza Immunization; Tobacco Use: Cessation	05/18/2022	71-year old	Due for Second Call	03/02/2023	Ballesteros, Karla, FNP
		Spanish		Controlling Blood Pressure	04/18/2023	47-year old	Due for First Call		Ballesteros, Karla, FNP
		English		Breast Cancer Screening;	10/13/2022	52-year old	Due for First Call		Perez, Greta, MD

Focused Outreach Snapshot

**Focused Care Gaps**  
This patient has no relevant Health Maintenance data.

**Overdue Health Maintenance** Full History

- Hepatitis C Screening Adults (Once) Overdue - never done
- HIV Screening (Once) Overdue - never done

**Patient Demographics**

Address Phone (Home) \*Preferred\* (Mobile)

**Recent Outpatient Visits**

Date	Provider	Department	Visit Type	Primary Dx
04/10/2023	Ponce, Vanessa E, CMA	Pittsburg Nursing	Patient Outreach	



## Front End Example

- All failed measures could be addressed with 1 call, and data is not in Excel

QIP Outreach Report - Bay Point [60957429] as of Mon 5/1/2023 1:32 PM

Chart Pt Outreach Generate Letters Place Orders Track Pt Outreach Send Patients Message Sort by F

Filter Re-run Report

MRN	Patient	Language	Phone	QIP Failed Measures	Last Visit	Age	Outreach Due Status	Prior Outreach Date	PCP
		Spanish		Child and Adolescent Well-Care Visits; Influenza Immunization	01/19/2023	18-year old	Due for Second Call	04/10/2023	Ballesteros, Karla, FNP
		Spanish		Immunizations for Adolescents	01/31/2023	12-year old	Due for First Call		Perez, Greta, MD
		Spanish		Colorectal Cancer Screening; Depression Screening and Follow-up; Influenza Immunization; Tobacco Use: Cessation	05/18/2022	71-year old	Due for Second Call	03/02/2023	Ballesteros, Karla, FNP
		Spanish		Controlling Blood Pressure	04/18/2023	47-year old	Due for First Call		Ballesteros, Karla, FNP
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Focused Outreach Snapshot

**Focused Care Gaps**  
This patient has no relevant Health Maintenance data.

**Overdue Health Maintenance** Full History

- Hepatitis C Screening Adults (Once) 1 Overdue - never done
- HIV Screening (Once) 2 Overdue - never done

**Patient Demographics**

Address Phone (Home) \*Preferred\* (Mobile)

**Recent Outpatient Visits**

Date	Provider	Department	Visit Type	Primary Dx
04/10/2023	Ponce, Vanessa E. CMA	Pittsburg Nursing	Patient Outreach	

- Once inside Patient Outreach encounter, 2 flowsheets are critical to this style of outreach's functioning:

### Outreach Tracking Flowsheet

- Dictates how long a patient falls off the report to avoid re-calling the same patient
- This filter is optional at run time

Response	Return to Outreach Report After
First call – patient not reached – call again in future	1 week
Second call – patient not reached – remove from list	2 months
Patient reached and advised - remove from list	2 months
Incorrect/Inactive phone number – remove from list	6 months
Patient moved/deceased/requests no calls – permanently remove from call list	Never return

## Multi-Step Outreach Workflow Example

- Run **HbA1c Order Needed**, generate letter and place order
- 2 weeks later they'll appear on **Overdue A1c Phone Outreach**

Report Settings - QIP Outreach Report - Diabetes HbA1c Order Needed [2086128]

Criteria Display Appearance Summary Print Layout Tools

Find Criteria Enter a search term, or click the search icon

**Failing Measures**  
Diabetes Poor HBA1c Control

**In Population**  
PCP Primary Care Population **OR**  
QIP Continuous Enrollment in MY

**Due for A1c Order**  
Yes



Report Settings - QIP Outreach Report - Diabetes Overdue A1c Phone Outreach [2106128]

Criteria Display Appearance Summary Print Layout Tools

Find Criteria Enter a search term, or click the search icon

**Failing Measures**  
Diabetes Poor HBA1c Control

**In Population**  
QIP Continuous Enrollment in MY

**Use Flowsheet Filter**  
Yes

**Exclude Patients w/ Missing A1c Letter On or After**  
W-2 (4/21/2023)

**A1c Fail Type**  
Missing

**Has Active A1c Order**  
Yes

### Goals

- Have simple data model storing all outreach
- Help us get closer to a true picture of all outreach happening per patient
- Support basic self service reporting via dashboard

## Step 6 – Create Outreach Table

- First main campaign was QIP-based staff calls – presence of the flowsheet on Patient Outreach encounter identifies these
- Also pull in all known automated calls/texts happening (Televox, Well/Artera, Luma)
- Automated patient portal (MyChart) health maintenance reminders
- Very recently implemented Epic Campaigns functionality for Birthday Letters and FIT Mailings
- Merging 5+ outreach systems requires merging some lists (e.g. prevent “SMS” and “Text” appearing as two different contact methods)

Outreach ID	Patient	Campaign ID	Outreach Time	User	Department	Reasons	Contact Method	Reached	Opt Out
1	Z123	1	1/2/22 08:33	Nurse A	PHC Nursing	Immunization; Well Child	Phone	Y	N
2	Z124	2	1/2/22 09:00			Influenza	Text	Y	Y
3	Z125	3	1/2/22 13:11			Mammogram	Text	N	

## Step 7 – Define Formal Campaigns and Create Campaign Table

- Aids in keeping track of basic documentation like a start/end date, description, etc.
- Also keep the outcome determination dynamic (red columns)

Campaign ID	Campaign Name	Topic	Start Date	End Date	Description	Success Measure	Balancing Measure	Needs PCP Appt in 14 Days	Needs Flu Shot 30 Days	Needs COVID Vacc 14 Days
1	QIP Staff Calls	QIP	1/1/21		Contacting patients failing a variety of QIP...	An appointment created within 14 days of...	Canceled or No Show appointment...	Y		
2	Televox Flu	QIP	10/1/21	10/1/21	Robocall or text message notifying patients....	Completed flu shot within 30 days	N/A		Y	
3	COVID-19 Physician MyChart Messages	COVID	12/7/21	12/10/21	MyChart message from physician notifying unvaccinated...	Completed COVID vaccine within 14 days	Vaccine appointment that became Canceled or No Show			Y

## Full Campaign List

COVID Campaigns
COVID-19 Antiviral Treatment - CCRMC
COVID-19 Antiviral Treatment - Community
COVID-19 Vaccine - Booster Incentive Research - Message
COVID-19 Vaccine - Booster Incentive Research - Message + Financial
COVID-19 Vaccine - Booster Incentive Research - No Message
COVID-19 Vaccine - Booster Texts
COVID-19 Vaccine - CCHP 6 month-5 year olds
COVID-19 Vaccine - Missing 2nd dose (CCHS)
COVID-19 Vaccine - Missing 2nd dose (non-CCHS)
COVID-19: Behavioral Health Booster Outreach
COVID-19: Elderly Postcard Campaign
COVID-19: Immunocompromised Booster MyChart messages
COVID-19: Physician MyChart messages
COVID-19: Unvaccinated Phone Calls

QIP Topic-Related Campaigns
Adult Well Visit Reminder
Annual Cervical Cancer Campaign
Annual Colon Cancer Campaign
Annual Flu Shot Campaign
Automated Overdue Health Maintenance Alerts
Birthday Letter
Blood Pressure Reminder
Cervical Cancer Reminder
Colon Cancer Screening Reminder
Flu Shot MyChart Messaging
Flu Shot Reminder
Mailed FIT Kit
Mammogram No Show
Mammogram Reminder
Pediatric Immunization & Well Child Reminder
QIP - Staff Calls
Unreturned FIT Kit Reminder
Well Child Visit - Incentive Research - Gift Card Offered
Well Child Visit - Incentive Research - No Message

Other Campaigns
MPX Vaccine Scheduling
MPX Vaccine 2nd Dose



### Step 8 – Calculate Outcomes

- Using Outreach and definitions in Campaigns table, compute Outcomes table
- We originally had these columns in the Outreach table, but a need arose to track multiple outcomes (COVID Vacc and/or Resource Nurse Call)

Outreach ID	Line	Outcome Time	Outcome	Success	Additional Details
1	1	1/15/21 18:13	No Show Appt	N	OFFICE VISIT on 1/25/21 in PHC FAMILY PRACTICE
2	1	1/14/21 15:49	Completed Appt	Y	TELEHEALTH AUDIO on 2/5/21 in NRC FAMILY PRACTICE
3	1	7/17/22 13:11	Advice Nurse Call	Y	Nurse: JACKSON, RONDA
4	1	3/10/23 12:00	FIT Lab Collected	1	Results: NEGATIVE

Step 9 – Create Dashboard

Outreach Dashboard

Date Range: 1/1/2021 - 4/25/2023

Topic

Campaign

Was Patient Reached?

Outreach  
1,249,848

Outcome Success  
116,670

Outcome Success %  
9.3%

Balancing Measure %  
3.2%

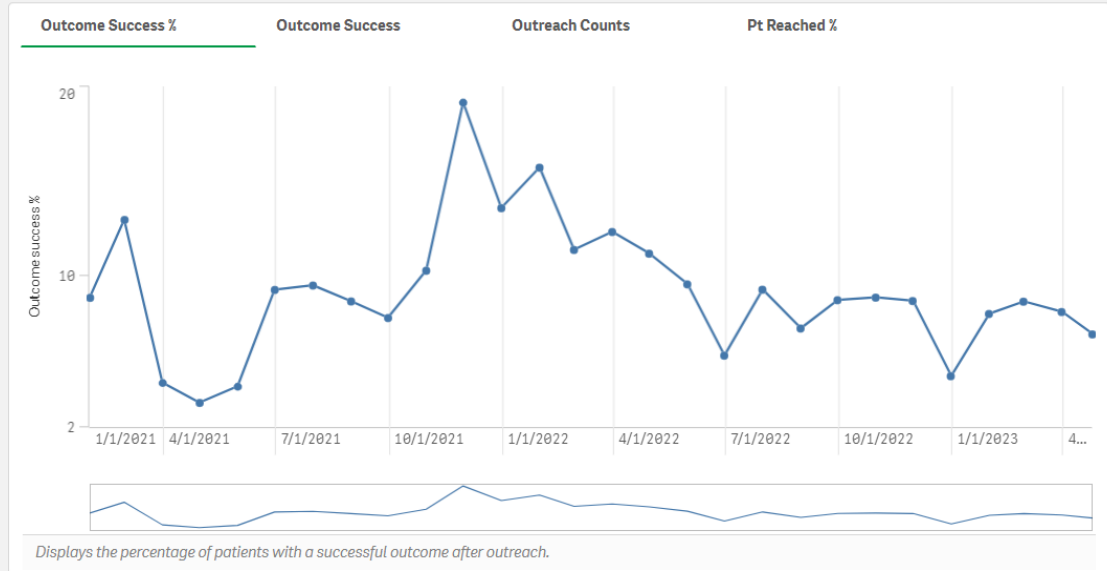
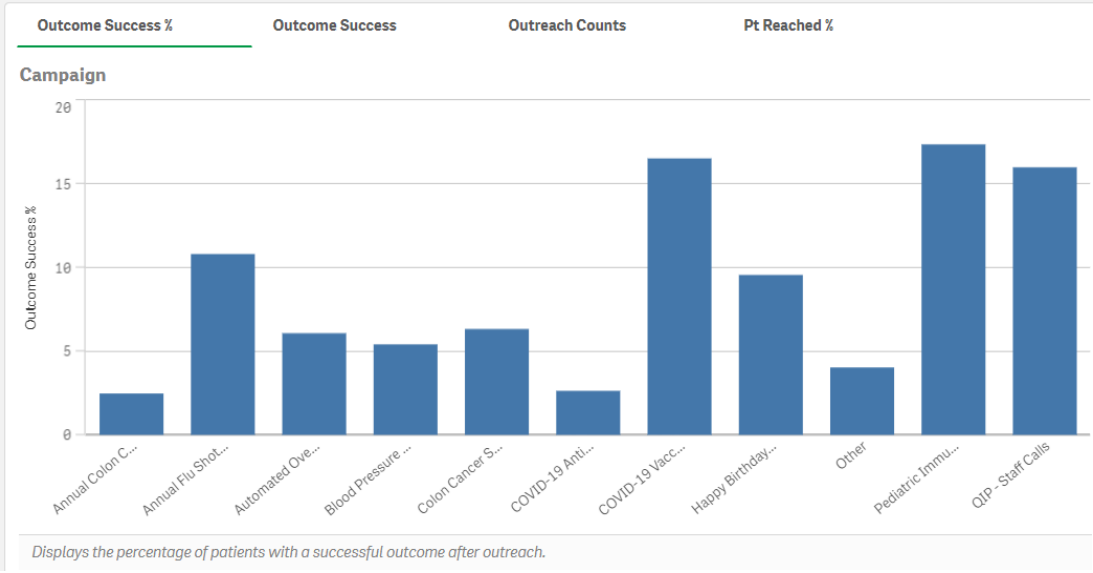
Opt Out %  
0.2%

Campaign:  
Campaign Start Date:  
Campaign End Date:  
Description:  
Success Measure:  
Balancing Measure:

Campaign	All Outreach	All Outreach %	Total Patients	Reached	Reached %	Not Reached	Outcome Success	Outcome Success %	Balancing Measure	Balancing Measure %	Opt Out	Opt Out %
Totals	1,249,848	100.0%	350,370	552,312	44.2%	277,353	116,670	9.3%	40,351	3.2%	2,537	0.2%
Annual Colon Cancer Campaign	38,821	3.1%	37,999	0	0.0%	0	959	2.5%	0	0.0%	0	0.0%
Annual Flu Shot Campaign	170,157	13.6%	131,405	100,141	58.9%	11,485	18,380	10.8%	0	0.0%	248	0.1%
Automated Overdue Health Maintenance Alerts	181,709	14.5%	83,961	62,345	34.3%	119,364	11,031	6.1%	8,233	4.5%	0	0.0%
Blood Pressure Reminder	60,267	4.8%	18,482	19,106	31.7%	2,057	3,257	5.4%	2,029	3.4%	29	0.0%
Colon Cancer Screening Reminder	39,796	3.2%	19,807	0	0.0%	0	2,516	6.3%	0	0.0%	0	0.0%
COVID-19 Antiviral Treatment - Community	43,363	3.5%	36,077	35,536	82.0%	7,827	1,140	2.6%	0	0.0%	184	0.4%
COVID-19 Vaccine - Booster texts	131,120	10.5%	101,817	103,428	78.9%	27,692	21,653	16.5%	1,577	1.2%	6	0.0%
Happy Birthday Letter FIT Kit	52,360	4.2%	34,477	0	0.0%	0	5,002	9.6%	0	0.0%	0	0.0%
Other	286,434	22.9%	163,179	172,898	60.4%	43,754	11,531	4.0%	7,361	2.6%	214	0.1%
Pediatric Immunization & Well Child Reminder	139,715	11.2%	46,007	24,175	17.3%	3,215	24,244	17.4%	6,149	4.4%	95	0.1%

Select dimension

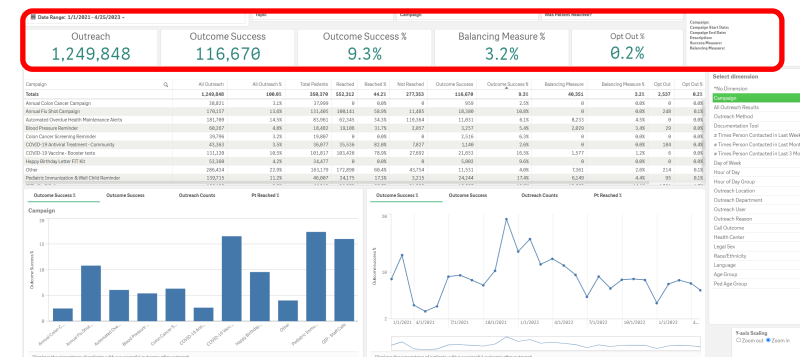
- \*No Dimension
- Campaign
- All Outreach Results
- Outreach Method
- Documentation Tool
- # Times Person Contacted in Last Week
- # Times Person Contacted in Last Month
- # Times Person Contacted in Last 3 Months
- Day of Week
- Hour of Day
- Hour of Day Group
- Outreach Location
- Outreach Department
- Outreach User
- Outreach Reason
- Call Outcome
- Health Center
- Legal Sex
- Race/Ethnicity
- Language
- Age Group
- Ped Age Group



Y-axis Scaling

☐ Zoom out ☒ Zoom in

- Main filters
- KPIs
- Campaign info (shows if 1 campaign selected)



📅 Date Range: 1/1/2021 - 4/25/2023 ▾

Topic

Campaign

**Was Patient Reached?**

Outreach  
10,916

Outcome Success

440

Outcome Success %

4.0%

Balancing Measure %  
0.0%

Opt Out %  
0.0%

**Campaign:** Mailed FIT Kit  
**Campaign Start Date:** 2/22/2023  
**Campaign End Date:** Ongoing  
**Description:** Patients who were mailed a kit due to being overdue for a screening.  
**Success Measure:** A resulted FIT test within 60 days.  
**Balancing Measure:** N/A



## Executive Summary Sheet

- Dimension selector, stratifies table/charts by this

### Select dimension

\*No Dimension

Campaign

All Outreach Results

Outreach Method

Documentation Tool

# Times Person Contacted in Last Week

# Times Person Contacted in Last Month

# Times Person Contacted in Last 3 Months

Day of Week

Hour of Day

Hour of Day Group

Outreach Location

Outreach Department

Outreach User

Outreach Reason

Call Outcome

Health Center

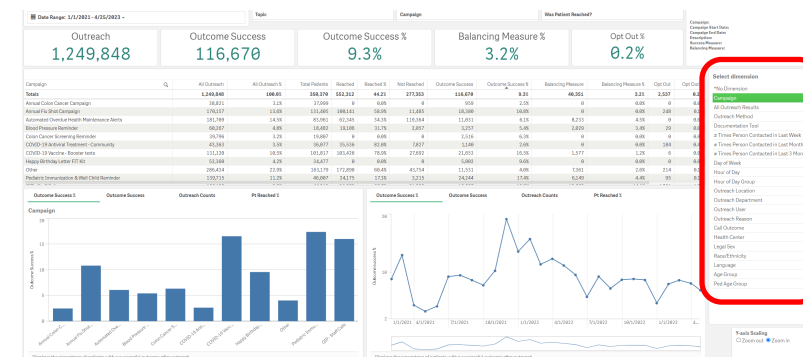
Legal Sex

Race/Ethnicity

Language

Age Group

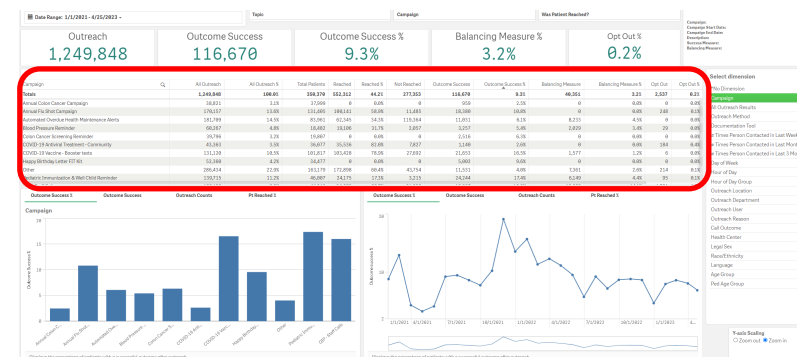
Ped Age Group





## Executive Summary Sheet

- Main summary table
- Example here shows comparing COVID/Well Child outreach when incentives are offered

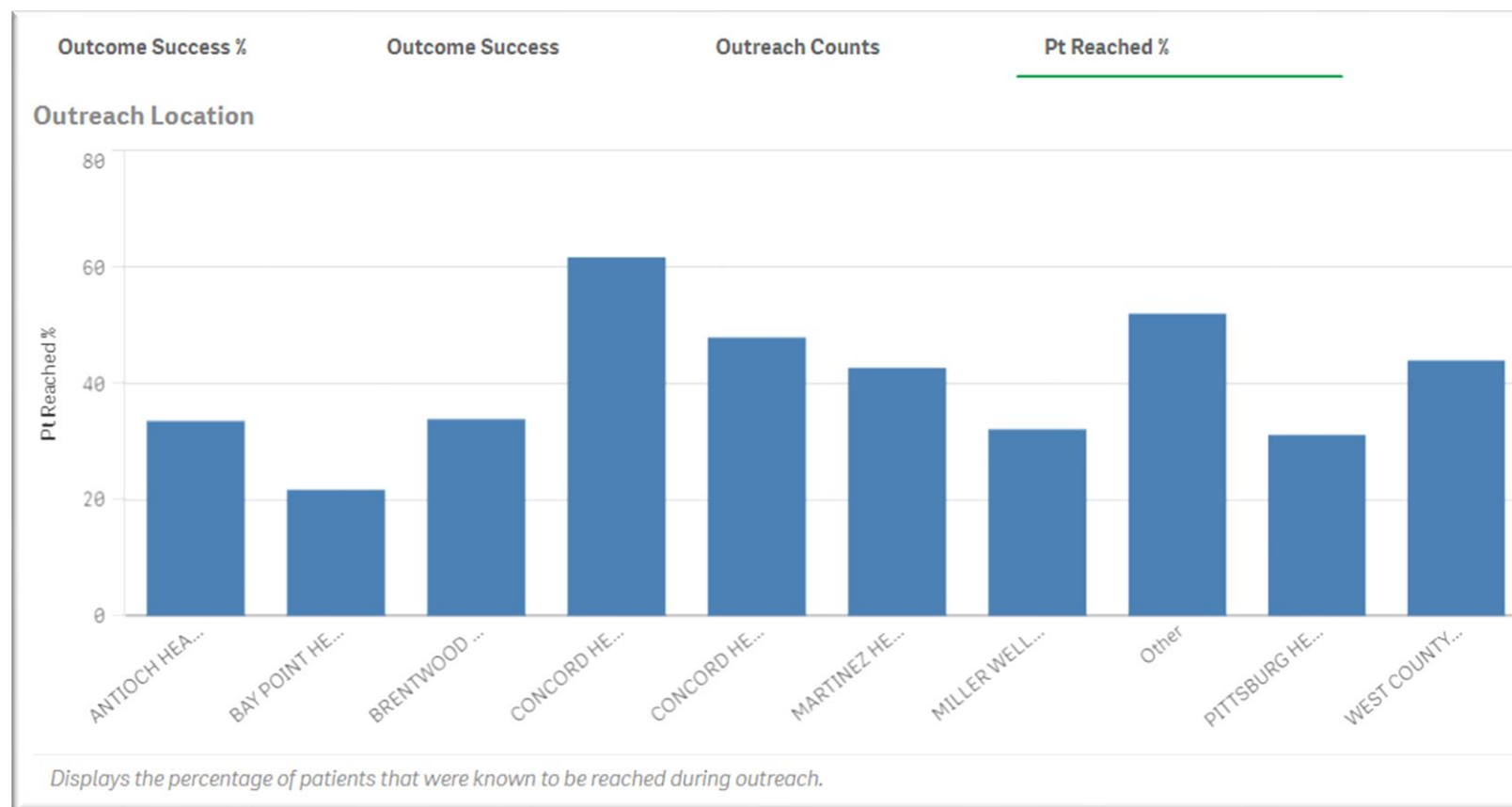
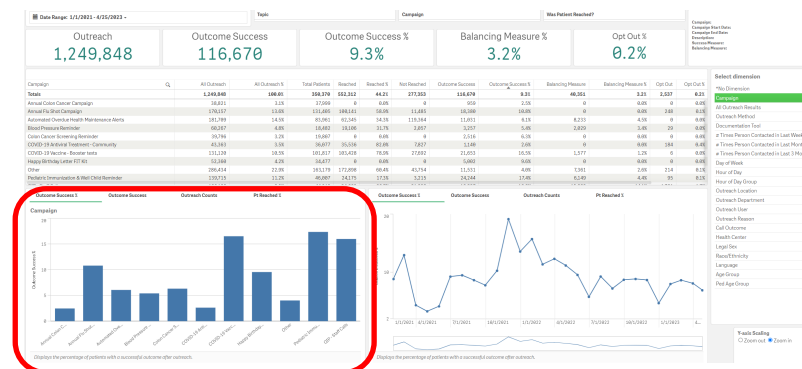


Campaign	All Outreach	All Outreach %	Total Patients	Reached	Reached %	Not Reached	Outcome Success	Outcome Success %	Balancing Measure	Balancing Measure %	Opt Out	Opt Out %
<b>Totals</b>	<b>61,377</b>	<b>100.0%</b>	<b>61,374</b>	<b>36,306</b>	<b>59.2%</b>	<b>25,071</b>	<b>1,938</b>	<b>3.2%</b>	<b>3,033</b>	<b>4.9%</b>	<b>0</b>	<b>0.0%</b>
COVID-19 Vaccine - Booster Incentive Research - Message	19,307	31.5%	19,304	17,721	91.8%	1,586	642	3.3%	958	5.0%	0	0.0%
COVID-19 Vaccine - Booster Incentive Research - Message + Financial	19,287	31.4%	19,287	17,719	91.9%	1,568	634	3.3%	946	4.9%	0	0.0%
COVID-19 Vaccine - Booster Incentive Research - No Message	19,291	31.4%	19,291	0	0.0%	19,291	488	2.5%	1,015	5.3%	0	0.0%
Well Child Visit - Incentive Research - Gift Card Offered	999	1.6%	999	866	86.7%	133	51	5.1%	38	3.8%	0	0.0%
Well Child Visit - Incentive Research - No Message	2,493	4.1%	2,493	0	0.0%	2,493	123	4.9%	76	3.0%	0	0.0%



## Executive Summary Sheet

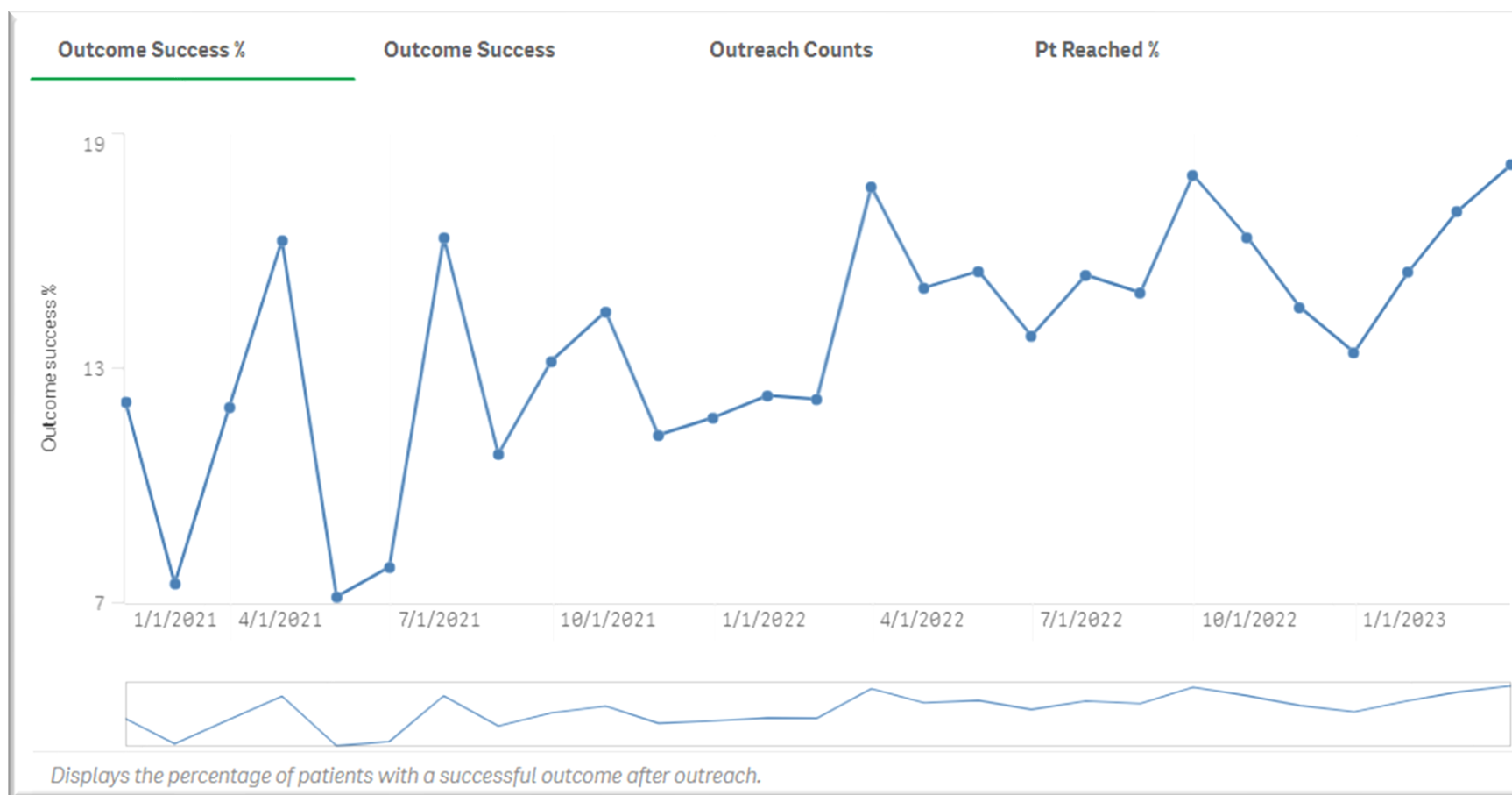
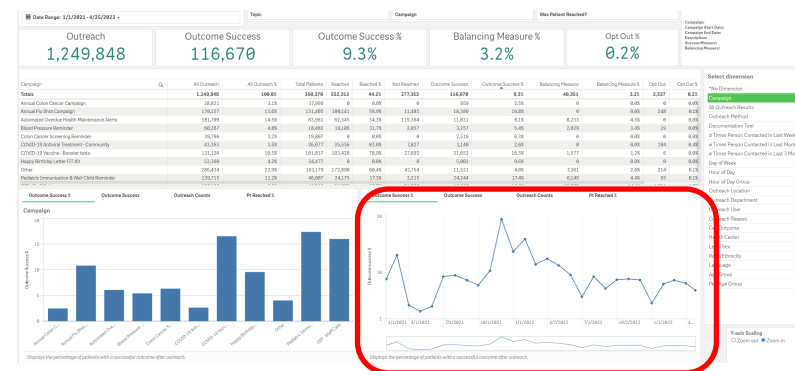
- Grand total bar charts stratified by selected dimension
- Outcome Success %, Outcome Success (count), Outreach Count, and Pt Reached %





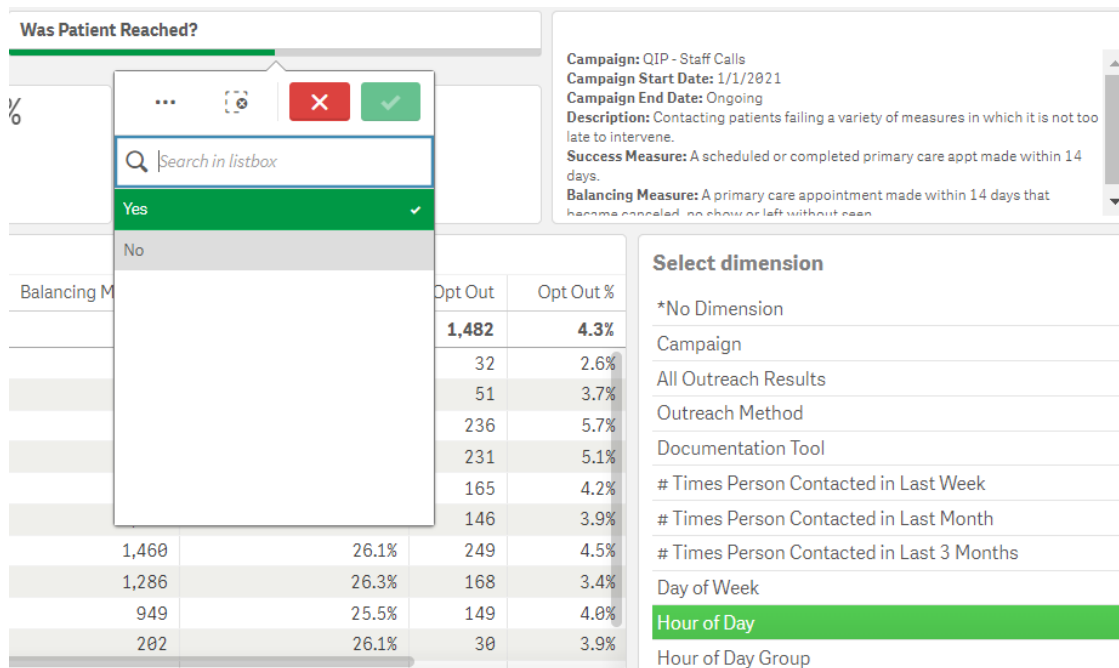
## Executive Summary Sheet

- Over time counts/rates



## Example A – What is best time of day to make calls?

- Filter on *Reached = Yes* and *Campaign = QIP Staff Calls*
- Change Dimension to *Hour of the Day*





## Example B – How does automated messaging compare to human-made calls?

- Filter on *Campaign* = *QIP Staff Calls* or *Automated HM Alerts*
- Change Dimension to *Campaign*

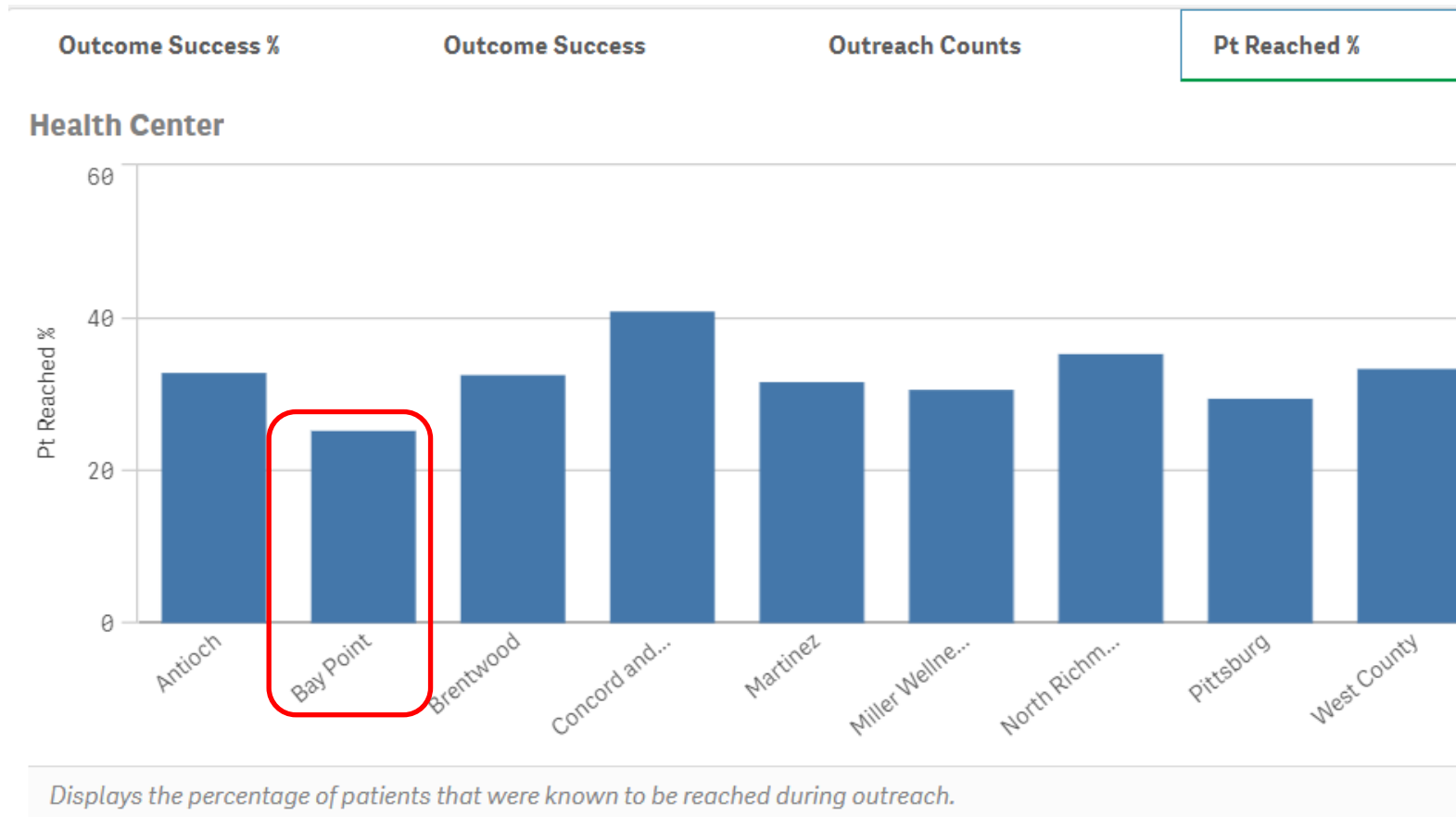
Campaign	All Outreach	All Outreach %	Total Patients	Reached	Reached %	Not Reached	Outcome Success	Outcome Success %	Balancing Measure	Balancing Measure %	Opt Out	Opt Out %
<b>Totals</b>	<b>115,852</b>	<b>100.0%</b>	<b>68,821</b>	<b>42,561</b>	<b>36.7%</b>	<b>72,489</b>	<b>10,473</b>	<b>9.0%</b>	<b>5,808</b>	<b>5.0%</b>	<b>309</b>	<b>0.3%</b>
Automated Overdue Health Maintenance Alerts	95,189	82.2%	61,724	35,643	37.4%	59,546	6,877	7.2%	3,162	3.3%	0	0.0%
QIP - Staff Calls	20,663	17.8%	13,398	6,918	33.5%	12,943	3,596	17.4%	2,646	12.8%	309	1.5%

- Add Filter on *Reached* = *Yes*

Campaign	All Outreach	All Outreach %	Total Patients	Reached	Reached %	Not Reached	Outcome Success	Outcome Success %	Balancing Measure	Balancing Measure %	Opt Out	Opt Out %
<b>Totals</b>	<b>42,561</b>	<b>100.0%</b>	<b>30,961</b>	<b>42,561</b>	<b>100.0%</b>	<b>0</b>	<b>6,427</b>	<b>15.1%</b>	<b>3,594</b>	<b>8.4%</b>	<b>266</b>	<b>0.6%</b>
Automated Overdue Health Maintenance Alerts	35,643	83.7%	25,764	35,643	100.0%	0	4,136	11.6%	1,820	5.1%	0	0.0%
QIP - Staff Calls	6,918	16.3%	6,443	6,918	100.0%	0	2,291	33.1%	1,774	25.6%	266	3.8%

## Example C – Why are Bay Point patients hardest to reach using staff calls?

- Step 1: Filter on *Campaign = QIP Staff Calls*



## Example C – Why are Bay Point patients hardest to reach?

- Step 2: Experiment with various dimensions on all clinics to see hard to reach groups, first tried Age Group
- Step 3: Add Bay Point filter and see if those groups have higher proportion

☐

Health Center
 

Confirm selection

Totals	
Antioch	
Bay Point	
Brentwood	

Age Group	All Outreach	All Outreach %	Total Patients	Reached	Reached %
	110,629	100.0%	45,406	36,297	32.8%
0-12	33,551	30.3%	15,293	12,757	38.0%
13-17	12,190	11.0%	5,642	4,239	34.8%
18-29	17,514	15.8%	6,662	4,852	27.7%
30-39	8,033	7.3%	3,093	2,485	30.9%
40-49	7,516	6.8%	3,006	2,303	30.6%
50-59	13,807	12.5%	5,374	4,191	30.4%
60-69	13,357	12.1%	5,490	3,994	29.9%
70-79	4,243	3.8%	1,972	1,311	30.9%
80-89	385	0.3%	232	147	38.2%

Age Group	All Outreach	All Outreach %	Total Patients	Reached	Reached %
	1,669	100.0%	624	420	25.2%
0-12	150	9.0%	75	54	36.0%
13-17	125	7.5%	59	38	30.4%
18-29	296	17.7%	112	76	25.7%
30-39	167	10.0%	44	46	27.5%
40-49	166	9.9%	56	36	21.7%
50-59	408	24.4%	146	84	20.6%
60-69	255	15.3%	98	58	22.7%
70-79	97	5.8%	44	26	26.8%
80-89	5	0.3%	4	2	40.0%

- Step 4: Try language dimension without Bay Point filter
- Step 5: Re-add Bay Point filter to see if those groups have higher proportion

Language	All Outreach	All Outreach %	Total Patients	Reached	Reached %
Totals	110,629	100.0%	45,406	36,297	32.8%
Arabic	622	0.6%	273	213	34.2%
Dari	1,090	1.0%	604	572	52.5%
English	77,483	70.0%	30,250	24,253	31.3%
Mandarin (Spoken Only)	354	0.3%	176	118	33.3%
Other	2,330	2.1%	1,121	733	31.5%
Pashto	299	0.3%	143	123	41.1%
Portuguese	415	0.4%	197	148	35.7%
Punjabi	871	0.8%	339	237	27.2%
Spanish	25,668	23.2%	11,653	9,494	37.0%

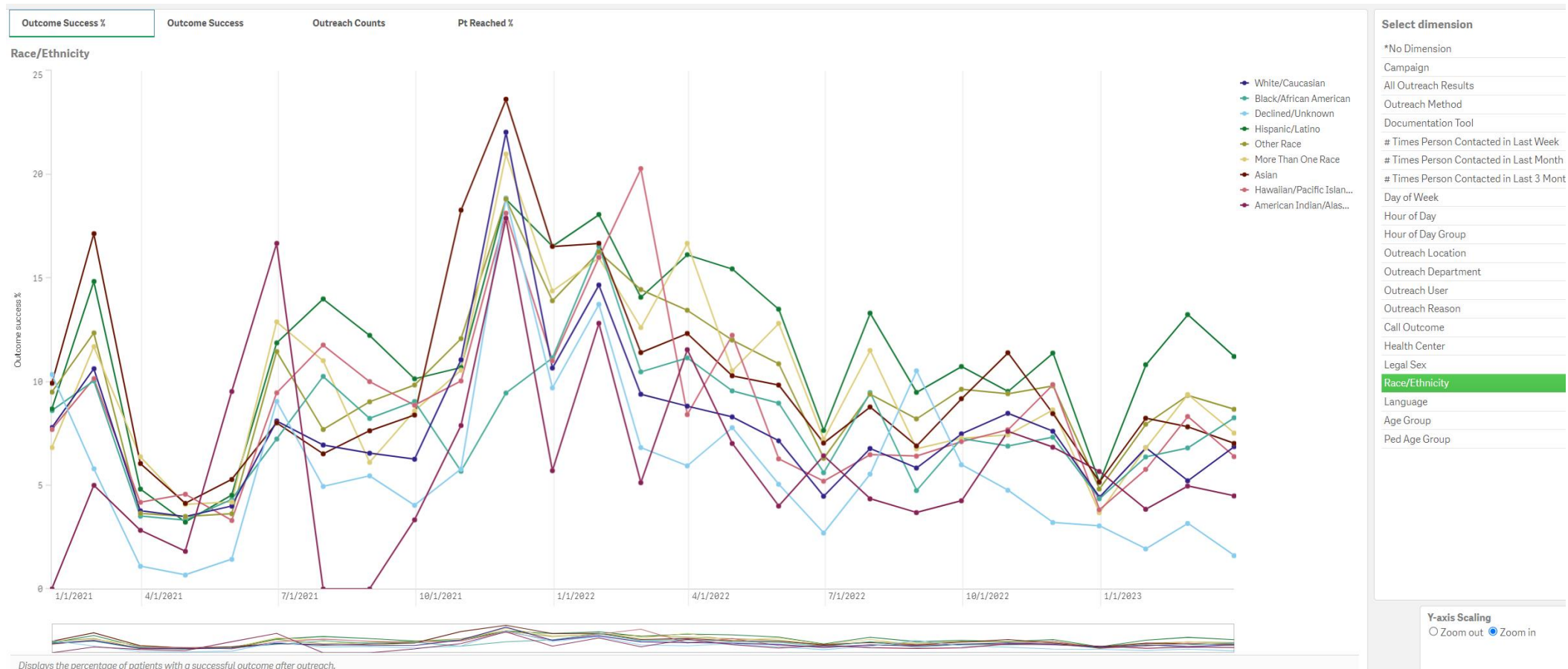
Language	All Outreach	All Outreach %	Total Patients	Reached	Reached %
Totals	1,669	100.0%	624	420	25.2%
Arabic	5	0.3%	2	0	0.0%
Arabic - Yemeni	2	0.1%	1	2	100.0%
Dari	10	0.6%	3	3	30.0%
English	830	49.7%	285	194	23.4%
Laotian	1	0.1%	1	0	0.0%
Mandarin (Spoken Only)	1	0.1%	1	0	0.0%
Punjabi	20	1.2%	8	9	45.0%
Spanish	785	47.0%	316	210	26.8%
Taqalog	13	0.8%	5	2	15.4%

### Example C – Why are Bay Point patients hardest to reach?

- Sometimes no clear explanation can be found as to the “why”
- But one solution could be allocating more time to making Bay Point calls

## Outreach Over Time Sheet

- Larger version of over time charts





## Patient Detail

- Patient details with column selector control

CONTRA COSTA HEALTH SERVICES

Patient Detail

Date Range: 01/01/2021 - 03/31/2023 -

Topic Campaign Was Patient Reached?

Outreach Count: 1,205,547, Reached Count: 534,882, Successful Outcomes: 115,770

MRN	Patient Name	Campaign	Outreach Method	Outreach Date	Outreach User	Outreach Department	Outreach Reason	Pt Reached	Opt Out
		Blood Pressure Reminder	Text Message	2/24/2023	-	-	Blood Pressure Control	Yes	No
		QIP - Staff Calls	Mail	2/24/2023	BHANDAL, GURDEET [GBHANDAL]	-	Diabetes Control	Unknown	Unknown
		Annual Cervical Cancer Campaign	Text Message	5/25/2021	-	-	Cervical Cancer Screening	Unknown	Unknown
		Colon Cancer Screening Reminder	Text Message	12/29/2022	-	-	FIT Test	Unknown	Unknown
		Colon Cancer Screening Reminder	Text Message	12/15/2022	-	-	FIT Test	Unknown	Unknown
		COVID-19 Vaccine - Booster texts	Text Message	12/13/2021	-	-	COVID-19	Yes	No
		COVID-19 Vaccine - Missing 2nd dose (non-OCHS)	Text Message	12/13/2021	-	-	COVID-19	Yes	No
		Happy Birthday Letter FIT Kit	Mail	12/8/2022	PHUN, KATHIE [KPHUN]	CCHP QUALITY MANAGEMENT	FIT Test	Unknown	Unknown
		MPX Vaccine Scheduling	Text Message	8/29/2022	-	-	Monkeypox	Yes	No
		QIP - Staff Calls	Mail	4/29/2022	MENDOZA-SMITH, E. DIDI R. [EMENDOZA]	-	Diabetes Control	Unknown	Unknown
		Annual Flu Shot Campaign	Text Message	10/1/2021	-	-	Immunization	Unknown	Unknown
		Automated Overdue Health Maintenance Alerts	Patient Portal Message	3/29/2023	MYCLINK ADMIN BG [MYCHARTG]	-	Diabetes Control	No	Unknown
		Automated Overdue Health Maintenance Alerts	Patient Portal Message	2/8/2023	MYCLINK ADMIN BG [MYCHARTG]	-	Diabetes Control;Hepatitis B Screening;Immunization;Urine Microalbumin	No	Unknown
		Automated Overdue Health Maintenance Alerts	Patient Portal Message	9/28/2022	MYCLINK ADMIN BG [MYCHARTG]	-	Blood Pressure Check;COVID-19;Diabetes Control;Influenza Vaccine eligible for High Dose	No	Unknown
		Blood Pressure Reminder	Text Message	2/17/2023	-	-	Blood Pressure Control	Yes	No
		COVID-19 Vaccine - Booster texts	Text Message	1/5/2022	-	-	COVID-19	Yes	No
		COVID-19 Vaccine - Booster texts	Text Message	11/29/2021	-	-	COVID-19	Yes	No
		MPX Vaccine Scheduling	Text Message	8/29/2022	-	-	Monkeypox	Yes	No
		Annual Cervical Cancer Campaign	Text Message	5/25/2021	-	-	Cervical Cancer Screening	Unknown	Unknown
		Annual Flu Shot Campaign	Text Message	10/5/2022	-	-	Influenza Vaccine	No	Unknown
		Annual Flu Shot Campaign	Text Message	10/1/2021	-	-	Immunization	Unknown	Unknown
		Colon Cancer Screening Reminder	Robocall	3/30/2022	-	-	FIT Test	Unknown	Unknown
		Colon Cancer Screening Reminder	Robocall	3/16/2022	-	-	FIT Test	Unknown	Unknown
		COVID-19 Vaccine - Missing 2nd dose (non-OCHS)	Text Message	1/3/2022	-	-	COVID-19	Yes	No
		Annual Colon Cancer Campaign	Text Message	3/23/2021	-	-	FIT Test	Unknown	Unknown
		COVID-19 Antiviral Treatment - Community	Text Message	5/31/2022	-	-	COVID-19	Yes	No
		COVID-19: Unvaccinated Phone Calls	Telephone	10/28/2021	VILLEGAS, LUZ P [PFELIX]	Call Center	COVID-19	Unknown	Unknown
		Happy Birthday Letter FIT Kit	Mail	12/8/2022	PHUN, KATHIE [KPHUN]	CCHP QUALITY MANAGEMENT	FIT Test	Unknown	Unknown
		Happy Birthday Letter FIT Kit	Mail	12/20/2021	PHUN, KATHIE [KPHUN]	CCHP QUALITY MANAGEMENT	FIT Test	Unknown	Unknown
		Annual Flu Shot Campaign	Text Message	10/5/2022	-	-	Influenza Vaccine	Yes	No
		Automated Overdue Health Maintenance Alerts	Patient Portal Message	3/1/2023	MYCLINK ADMIN BG [MYCHARTG]	-	Cervical Cancer Screening	Yes	Unknown
		Automated Overdue Health Maintenance Alerts	Patient Portal Message	11/9/2022	MYCLINK ADMIN BG [MYCHARTG]	-	Diabetes Control	No	Unknown

Column Selection

- Age at Outreach
- Legal Sex
- Race/Ethnicity
- Clinic
- Provider
- Insurance
- Outreach ID
- Campaign
- Outreach Method
- Documentation Tool
- Outreach Date
- Outreach Time
- Outreach User
- Outreach Department
- Outreach Reason
- Pt Reached
- Opt Out
- Contact Relation
- Call Type
- Call Outcome
- Comm. Comment
- Follow Up Topic
- Outreach Tracking Flowsheet
- Outreach Reason Flowsheet
- Outcome Date
- Outcome Time
- All Outreach Results
- Outcome Success
- Outcome Additional Details
- # Times Person Contacted in Last Week
- # Times Person Contacted in Last Month
- # Times Person Contacted in Last 3 Months



- Getting started is daunting but having a unified outreach/outcome data model helps report at the patient's perspective
- Now adding a new campaign is as simple as defining it in the Campaign table and adding as little as 1 line of code associating existing outreach with new campaign
- Standardizing outreach workflow in EMR brought complaints (e.g. "I think patients should fall off for 3 months not 2")
- EMR reporting tool can display stale results if 2 users working same list at same time
- Create user-facing documentation for outreach criteria





### Outreach List Changes

- Incorporating more data sources than allowed by QIP, e.g. exclude A1c failing patients if only reason in QIP denominator is a medication and diabetes isn't on problem list
- Adding Race/Ethnicity filter and display column allows targeted outreach
- Filter that excluded patients with a future scheduled primary care appointment was broken

## Future Enhancements

- Appointments still in the future are called "Success" (many will flip to No Show/Canceled)
- Implement score system for who should be reached first, i.e. first messaging could come from automated methods, then only those still with care gap could get staff call
- Still thinking about ways to improve correlation between outreach and outcomes



[cchealth.org](http://cchealth.org)

# Questions?

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# Discussion

## Discussion Questions

- How are you using data to measure the effectiveness of outreach, and what have you learned about its impact?
- Do you employ data stratification, for example by age, language, or race/ethnicity, to tailor outreach for specific populations?

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# Announcements

## Announcements

- Next CIO/CMIO meeting: Thursday, July 27, 11am-12pm