Population health management strategies to improve cardiovascular and diabetic health outcomes.

Community Clinic Association of Los Angeles County

March 23, 2021

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**WHAT WERE WE TRYING TO ACCOMPLISH?**

### Problem Statement

Member clinics underperforming on Centers for Medicare & Medicaid Services (CMMS) chronic disease management measures related to Diabetes (Baseline: 32.7%) and Hypertension (Baseline: 60.9%).

### Aim Statement

<table>
<thead>
<tr>
<th>Health Center Name</th>
<th>Project Aim*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Watts Healthcare Corporation</td>
<td>Decrease by 5% from 2018 baseline of 38% to 33% the number of Diabetic patients with HbA1c&gt;9 by utilizing a clinical pharmacist by March 31, 2021.</td>
</tr>
<tr>
<td>ParkTree Community Health Center</td>
<td>By March 2021, Lower Average HbA1c by 1% for 25% Uncontrolled Diabetic patients at our Archibald site via enrollment into Diabetes Clinic.</td>
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<tr>
<td>East Valley Community Health Center</td>
<td>Improve the health of our hypertensive patients by increasing controlled blood pressure measures from 62% to 72% by the end of January 2021.</td>
</tr>
<tr>
<td>South Central Family Health Center (SCFHC)</td>
<td>Improve the health of our patients by increasing the percent of hypertensive patients with controlled blood pressure from baseline: 64% to 70% by June 2021.</td>
</tr>
<tr>
<td>The Children's Clinic (TCC Family Health)</td>
<td>Improve on HbA1c scores for diabetic patients for our provider at one of our school-based clinics.</td>
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</table>

*Aims of the project were modified for the 5 HC’s due to COVID-19 in 2020.*
CCALAC worked with 5-member health centers to develop their focus areas by:

- Administering clinic assessments to identify key drivers
- Defining project charters, including aims and drivers
  - Refining charter and driver diagrams as the program progressed
- Defining processes to shadow on-site visits
- Understanding the current state of clinical processes through staff shadowing
WHAT CHANGES DID WE MAKE THAT RESULTED IN IMPROVEMENT?

Our Theories for Change: How We Learned About Our Process

Organizational Driver Diagram: East Valley Community Health Center

**Primary Drivers**
- Team-Based Care
- Data Systems
- Patient Self-Management

**Secondary Drivers**
- Diet/Weight Management
- Stress Management (Behavioral Health)
- System Alerts regarding Care Gaps
- Appointment &/or Medication Reminder
- Self Monitor Blood Pressure (SMBP)
- Case Management

**Change Ideas**
- Educational Messages
- Workflows

**WHAT CHANGES DID WE MAKE THAT RESULTED IN IMPROVEMENT?**

Will improve the health of our hypertensive patients by increasing controlled blood pressure control from 62% to 72% by the end of January 2021.
WHAT CHANGES DID WE MAKE THAT RESULTED IN IMPROVEMENT?

Our Theories for Change: How We Learned About Our Process

Organizational Driver Diagram: South Central Family Health Center

Driver Diagram Template

Primary Drivers

- Training / Consistent BP measure

Secondary Drivers

- Train back office staff on proper BP techniques based on AHA Guidelines
- Develop standardized workflow to support and reinforce training
- Assure appropriate equipment is provided to staff
- Identify department champions to lead Health education efforts for HTN patients
- Have a diverse approach to the health education curriculum
- Virtual access to health education materials
- Set up meetings to address concerns
- Keep key project team members & champions involved in the decision-making process of the project
- Keep team members informed of the efforts reflected on the data

AIM

South Central Family Health Center will improve the health of its patients by increasing the % of hypertensive patients with controlled blood pressure from 66% [baseline] to 70% [goal] by February 2021.

Health Education

Project Management
**Patient Care Navigator (PCN) / QI Dept**

- SMBP Pilot Project Process Map

**Start**

1. **PCN** schedules patient for Blood Pressure (BP) Check with SMBP Trainer "TC3 BP Check" (Mon-Fri before 3 PM).
2. **PCN** will inform (1) WC Back Office Lead (Cyndy) or PO Admin Assistant (Gaby) & (2) SMBP Trainers of TC3 BP Appointments for iPad reservation.
3. **SMBP Trainer** shows patient video on how to SMBP (3m 45s).
4. **SMBP Trainer** (RN) calls patient to triage room.
5. **PCN** marks BP Check Appt as KEPT.

**End**

- **QI Dept** will analyze results.
- **QI** will provide results to patients' Care team.

**SMBP Trainer (RN)**

- SMBP Trainer will pick up iPad on TC3 BP Check days from WC Back Office Lead (Cyndy) or PO Admin Assistant (Gaby).
- SMBP Trainer calls patient to triage room.
- SMBP Trainer starts timing visit with patient.
- SMBP Trainer gives overview of TC3 & SMBP.
- SMBP Trainer shows patient how to record BP on log.
- SMBP Trainer instructs patient to measure BP 2x in the morning and evening for 7 days. Inform PCN if patient to collect BP numbers.
- SMBP Trainer overviews what is in the packet *Highlight blue SMBP guide.*
- SMBP Trainer instructs patient to measure BP 2x in the morning and evening for 7 days. Inform PCN if patient to collect BP numbers.
- SMBP Trainer stops time for patient visit and records on bottom right-hand corner of Patient Agreement Form.
- SMBP Trainer performs Accuracy test (refer to handout).
- SMBP Trainer gives patient TC3 packet and SMBP device.
- SMBP Trainer takes patient's Blood Pressure (BP) with clinic BP monitor. SMBP Trainer performs Accuracy test (refer to handout).
- SMBP Trainer gives patient AHA contact info if they have any questions while they're taking their BP at home.
- SMBP Trainer records patient's BP on Patient Agreement form.
- SMBP Trainer records patient's BP on Patient Agreement form.
- **Follow TC3 SMBP Nurse Visit Documentaion Guidelines**

**Patient**

- Patient records their blood pressure on "Control Your Blood Pressure" (colorful) handout.
- Patient asks questions.
- Patient leaves clinic.

**Front Desk**

- Front desk marks BP Check Appt as KEPT.
- Patient checks back to SMBP trainer to gauge understanding.

**Process Flow Map: East Valley Community Health Center – SMBP Pilot Project**
WHAT CHANGES DID WE MAKE THAT RESULTED IN IMPROVEMENT?

Process Flow Map: ParkTree Community Health Center - Diabetes Clinic Workflow

High Level workflow for Diabetes Clinic:
1. Identify patients through 121 tracks
2. Care Coordinator (CC) will contact patients to enroll
3. CC will see patient for initial visit
4. CC will make apt with provider
5. Provider evaluation
6. Care Coordinator visit
7. CC will refer and schedule other services
8. Phone call follow ups with CC
9. Follow up with provider if necessary
10. Graduation

Team based approach at the Diabetes Clinic:
- Provider
- Behavioral Health
- Dental
- Health Educator
- Care Coordinator
WHAT CHANGES DID WE MAKE THAT RESULTED IN IMPROVEMENT?

Process for Selecting Test Ideas

How We Engaged the Patient
“Voice of the Customer”

- **East Valley Community Health Center:**
  - Administered post-PDSA survey for our SMBP training
    - “Todos fueron amables conmigo” (Translation: “Everyone was nice to me”)
  - Contacted two patients over the phone before we started our hypertensive text messaging campaign to get their feedback (ex. How do they feel about a text messaging program?; What kind of content would they be interested in reading?)
  - Allowed patients to respond via text messages
  - We contacted patients over the phone after our SMBP pilot and provided a hypertensive text message campaign to get patient feedback

How We Engaged Leaders, Providers, and Staff at our 5 Health Centers

- **Initial Phase:** Administered clinic assessments to identify key drivers • Defined charters, including aims and drivers • Defined processes to shadow on-site visits • Built our learning community • Shared best practices • Understood current state of clinical processes though shadowing

- Created a CMO/Clinical champion work group for the TC3 program

- Held Bi-weekly and/or Monthly check-ins with health center leads to discuss project updates

- Shared best practice examples at the 2020 Quality Improvement Summit
## WHAT CHANGES DID WE MAKE THAT RESULTED IN IMPROVEMENT?

### Changes We Tested

<table>
<thead>
<tr>
<th>Org Change Idea Tested</th>
<th>Summary of PDSAs</th>
<th>Adopted, Adapted, Abandon?</th>
</tr>
</thead>
</table>
| Watts Healthcare Corporation - Clinical Pharmacist for Out-of-Control Diabetics | Decrease by 5% from 2018 baseline of 38% to 33% the number of Diabetic patients with HbA1c>9 by utilizing a clinical pharmacist by March 31, 2021.  
  - Discharge Nurse calling out-of-control diabetic patients post in person visits  
  - Clinical Pharmacist reached out to uncontrolled diabetics                                                                 | Abandon Adopted            |
| ParkTree Community Health Center - Diabetes Clinic | By March 2021, Lower average HbA1c by 1% for 25% of uncontrolled diabetic patients at our Archibald site via enrollment into Diabetes Clinic.  
  - Evaluation and medication management by Diabetes lead provider  
  - Provided case management by Care Coordinator in-between visits                                                                 | Adopted                     |
| East Valley Community Health Center - SMBP Training for Patients |  
  - Trained 7 RNs on how to train patients to take their own blood pressure  
  - Recruited 27 patients to be a part of the SMBP cohort  
  - Patients were trained by RNs and learned how to take their blood pressure  
  - Patients were given a blood pressure monitors to take home and use to record values  
  - Patients were asked to monitor their blood pressure 2 times in the morning and 2 times in the evening for 7 days                                                                 | Would like to adopt but do not have capacity yet |
| South Central Family Health Center - SMBP Training for Patients | Improve the health of its patients by increasing the percent of hypertensive patients with controlled blood pressure from 64% [baseline] to 70% [goal] by June 2021.  
  - Contact 4-5 patients that have an uncontrolled BP and provide them with a BP machine. Patients will be trained on how to properly use it. For this PDSA we chose one specific provider to test this method.                                                                 | Adapted                     |
| TCC Family Health - Out-of-Control Diabetics - Patient Outreach and Diabetic Health Education | QI Coordinator generated non-compliant patient lists to conduct reminder calls with call center staff. Efforts were not sustainable and were not making an impact on the outcome measure.  
  Health education staff member tried to conduct 1:1 health education to diabetic patients from non-compliant lists. Most patients were not interested in attending and of those who showed interest most did not end up attending the scheduled sessions.                                                                 | Abandon                     |
**How Did We Know the Changes Were An Improvement?**

### What We Measured

#### Measures Set

<table>
<thead>
<tr>
<th>Measure Type/Name</th>
<th>Description/ Specifications</th>
<th>Baseline %</th>
<th>Target %</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Outcome (Directly related to the aim):</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control BP (SCFHC, East Valley)</td>
<td>% of patients with controlled BP</td>
<td>60.9%</td>
<td>3-5% increase</td>
</tr>
<tr>
<td>Control HbA1c (TCC, Watts, ParkTree)</td>
<td>% of Patients with their HbA1c &gt;9</td>
<td>32.7%</td>
<td>1-3 % decrease/increase</td>
</tr>
<tr>
<td><strong>Process (Steps to achieve outcome):</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CCALAC: # of trainings and best practice-sharing meetings facilitated by CCALAC</td>
<td>Convene events/trainings to support and share evidence-based practices and outcomes with cohort clinics</td>
<td>0% (0 Health Centers)</td>
<td>100% (5 Health Centers)</td>
</tr>
<tr>
<td>East Valley Community Health Center: # of patients who received SMBP training</td>
<td>The number of patients who scheduled an appt with an SMBP trainer, showed up to the appt, and received SMBP training &amp; blood pressure monitor</td>
<td>0 patients</td>
<td>20 patients</td>
</tr>
<tr>
<td>East Valley Community Health Center: # of patients who provided blood pressure readings</td>
<td>The number of patients who received SMBP training and a blood pressure monitor and reported at least 12 BP data points within a one-week timeframe to EVCHC</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Balancing (Unintended impact/consequence):</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>East Valley Community Health Center: SMBP Effectiveness Rating</td>
<td>SMBP staff Survey: Overall, how would you rate the effectiveness of the Self-Measured Blood Pressure Program for patients? (very negative, somewhat negative, neither negative nor positive, somewhat positive, very positive)</td>
<td>0% (since we didn’t have an SMBP Training Program)</td>
<td>100% (Very Positive rating)</td>
</tr>
</tbody>
</table>
How Did We Know the Changes Were An Improvement?

Results: HbA1c in poor control (>9%)

Fig. 14. How are sites performing on A1c in poor control (>9%) over time? This is also looking at the performance compared to the underlying population.
How Did We Know the Changes Were An Improvement?

Results: BP Control for Those with Hypertension

Fig. 6. How are sites performing on BP in control for those with hypertension over time? This is also looking at the performance compared to the underlying population.

<table>
<thead>
<tr>
<th>Site</th>
<th>2019 Q2</th>
<th>2019 Q3</th>
<th>2019 Q4</th>
<th>2020 Q1</th>
<th>2020 Q2</th>
<th>2020 Q3</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Valley CHC</td>
<td>61%</td>
<td>63%</td>
<td>66%</td>
<td>68%</td>
<td>67%</td>
<td>64%</td>
</tr>
<tr>
<td>Parktree</td>
<td>52%</td>
<td>57%</td>
<td>56%</td>
<td>54%</td>
<td>56%</td>
<td>54%</td>
</tr>
<tr>
<td>SCFHC</td>
<td>65%</td>
<td>65%</td>
<td>65%</td>
<td>67%</td>
<td>65%</td>
<td>60%</td>
</tr>
<tr>
<td>TCC</td>
<td>59%</td>
<td>63%</td>
<td>61%</td>
<td>58%</td>
<td>54%</td>
<td>52%</td>
</tr>
<tr>
<td>Watts HCC</td>
<td>62%</td>
<td>64%</td>
<td>65%</td>
<td>61%</td>
<td>59%</td>
<td>56%</td>
</tr>
</tbody>
</table>
CCALAC convened 10 meetings between August 2019 and March 2021 to share evidence-based practices, train staff from all 5 participating health centers on data and programs related to Hypertension management for the TC3 program.
How Did We Know the Changes Were An Improvement?

Results: Run Charts

Process: East Valley Community Health Center

Process Measure #1
Number of Patients who received SMBP Training

<table>
<thead>
<tr>
<th>Week</th>
<th>Goal</th>
<th>Week 1</th>
<th>Week 2</th>
<th>Week 3</th>
<th>Week 4</th>
<th>Week 5</th>
<th>Week 6</th>
<th>Week 7</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>3</td>
<td>4</td>
<td>7</td>
<td>16</td>
<td>20</td>
<td>24</td>
<td>27</td>
</tr>
</tbody>
</table>

Process Measure #2
85% (23/27) of patients provided blood pressure readings
SMBP Effectiveness Rating (Staff):

Overall, how would you rate the effectiveness of the Self-Measured Blood Pressure Program for patients?

2 Responses:
• Very Positive
• Neither Negative nor Positive
CCALAC:
• Distribution of SMBP devices (Blood Pressure machines and Glucometers/Strips) to the participating health centers.
• Implementation of structured reports for data collection and reporting through i2i Population Health Management tool at 4 of 5 participating health centers.
• Resilience of health center staff to pivot and change projects during the COVID-19 pandemic.

Participating Health Centers Comments:
• Providers and staff are more open to change and utilizing technology for patient outreach and remote patient monitoring for controlling chronic conditions was a good by-product of the TC3 program and during the COVID-19 pandemic.
• Improvement in other measures like podiatry and optometry for out-of-control diabetic patients.
• Rapid PDSA cycles are hard to facilitate but can provide a lot of information to help us improve our internal processes.
• Our team is very patient-centered. We are so grateful that our Patient Care Navigator and RNs makes invaluable connections with our patients.
• We generated new workflows related to SMBP implementation at our clinic sites.
### How Did We Know the Changes Were An Improvement?

#### Here’s What We Learned

#### The Challenge of the COVID-19 Pandemic

- Participating health centers experienced moderate to severe workforce issues.
- Participants had to quickly adapt and change to providing services via telehealth.
- All organizations had to review and revise operational policies and procedures.
- CCALAC had to adapt its in-person coaching services to virtual formats.

#### Overall Challenges

<table>
<thead>
<tr>
<th>Challenge</th>
<th>How We Overcame/Resolution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinic Staff Layoffs</td>
<td>Responded to initial challenges of pandemic – now clinics are re-evaluating workforce needs.</td>
</tr>
<tr>
<td>Limited Staff Capacity</td>
<td>Staff had to adjust to working from home and their need to provide child and family care - now clinics are adapting to more use of telehealth services.</td>
</tr>
<tr>
<td>Staff Burnout</td>
<td>Issuing workforce guided policies and procedures.</td>
</tr>
<tr>
<td>COVID-19 Fall 2020 Surge</td>
<td>We all had to ride the wave and adjust week to week.</td>
</tr>
<tr>
<td>Increase in No-Show rates for in person appointments</td>
<td>Outreach staff worked to have patients with chronic conditions scheduled as needed through telehealth appointments and on-site.</td>
</tr>
<tr>
<td>Pilot Site Closure</td>
<td>Re-evaluating options.</td>
</tr>
</tbody>
</table>
What’s Next for PHASE/TC3?

Here’s How We Will Continue the Work

SPREAD

CCALAC:
• Work across 64 health centers in our consortia to provide support on improved Quality Metrics
• Share best practices related to SMBP and use of Remote Patient Monitoring tools at the Quality Improvement peer network groups and with Chief Medical Officers
• Document and share workflows that organizations can use for services related to Telehealth and RPM implementation

SUSTAINABILITY

CCALAC:
• Advocate for telehealth reimbursement
• Advocate for reimbursement for remote patient monitoring tools and devices
• Assist health centers in building more infrastructure and providing technical assistance and resources

THE DESIRED FUTURE

By December 31, 2022, we will improve the health of patients in our member organizations as evidenced by:

1) Increasing controlled hypertension from 64% to 70%
2) Decreasing uncontrolled HbA1c>9 from 37% to 32%