KAISER PERMANENTE PHASE PREVENTING HEART ATTACKS & STROKES EVERY DAY

CCI CENTER FOR CARE INNOVATIONS

KAISER PERMANENTE TC3 TRANSFORMING CARDIOVASCULAR CARE IN OUR COMMUNITIES

Taking Cardiovascular Care HOME

March 23, 2021

Health Services LOS ANGELES COUNTY

Team Members:

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WHAT WERE WE TRYING TO ACCOMPLISH?

Problem Statement

- LAC DHS provides care to those most likely to be negatively impacted by HTN: the traditionally underserved, low income Hispanic or African American patients.
- Within LAC DHS, more than 87,000 empaneled patients have HTN, of whom more than 67,000 also have diabetes. One third of patients with HTN do not have adequate blood pressure control.
- The COVID-19 Pandemic has accelerated the need for remote care.

Aim Statement

Our aim is to fundamentally improve our approach to care for patients with HTN.

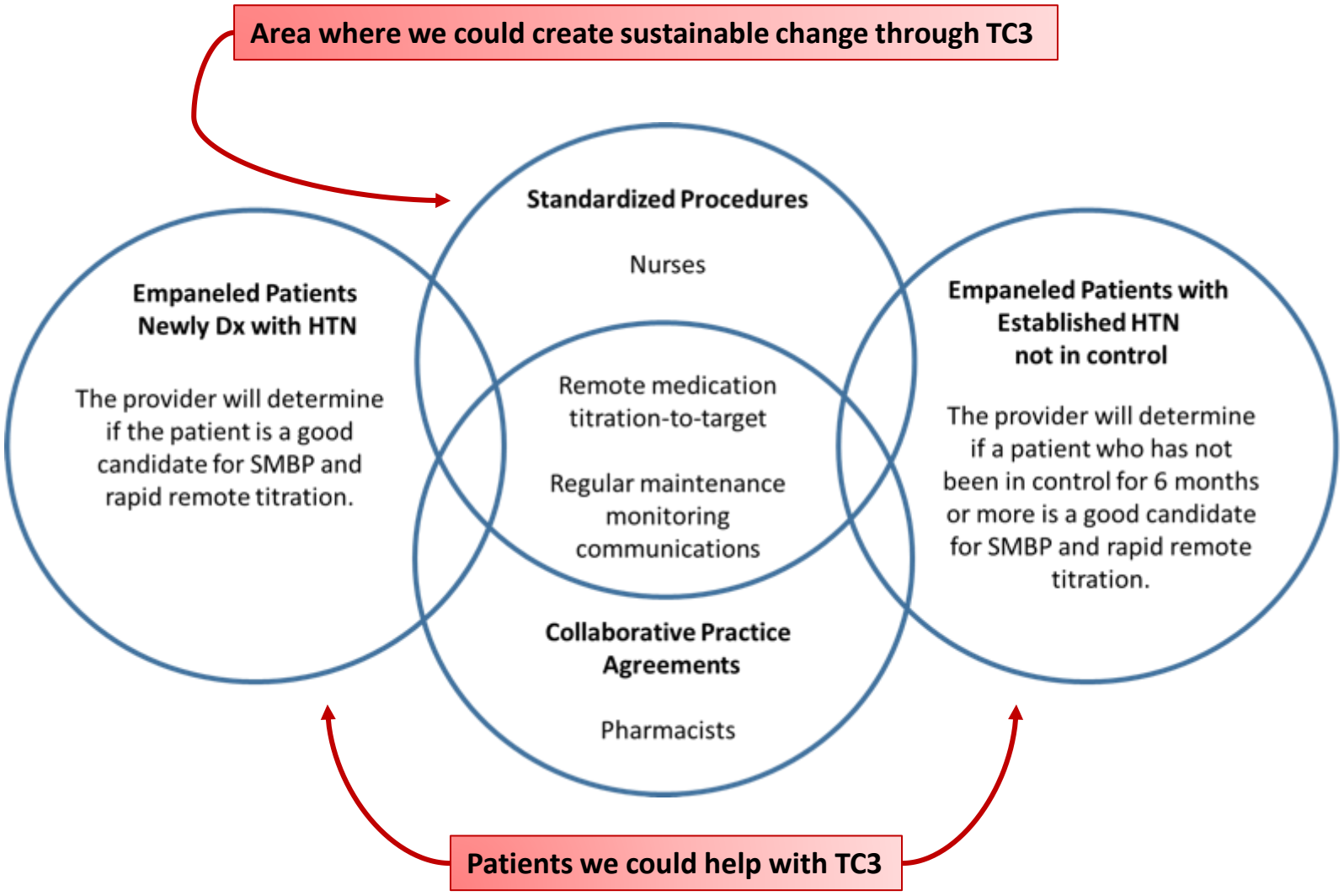
- Patients whose blood pressure is not at goal are referred to RNs specifically trained and certified to titrate HTN medication to goal via Standardized Procedures (SPs).
- Patients are given automated blood pressure cuffs. They report self measured blood pressure (SMBP) which are distinct data and display elements in our EHR.
- Nurses titrate HTN medication remotely (phone or video) or in person, utilizing SMBP and clinic-captured measures.

Nurses are empowered to work at the top of their license through team-based care, which improves care quality and timeliness.

Original Aim Statements:

- By March 31, 2021, LAC DHS will improve the health of its patients by decreasing the percentage of patients with uncontrolled HTN in intervention sites by 10% compared to pre-implementation levels.
- By March 31, 2021, LAC DHS will reduce the average time to goal by 10% for patients treated via SP compared to those who are not treated via SP compared to pre-implementation levels.

WHAT CHANGES DID WE MAKE THAT RESULTED IN IMPROVEMENT?



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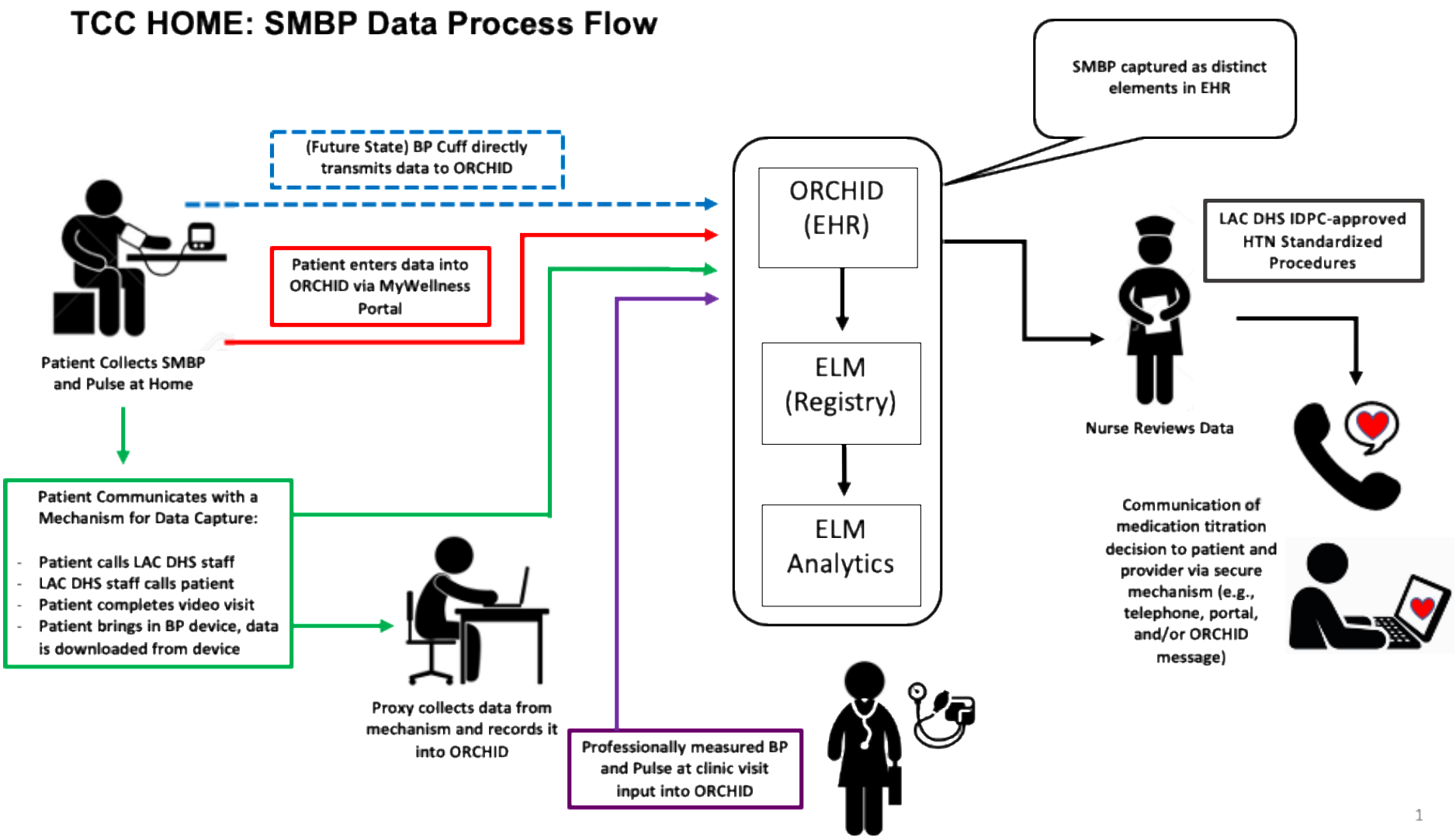
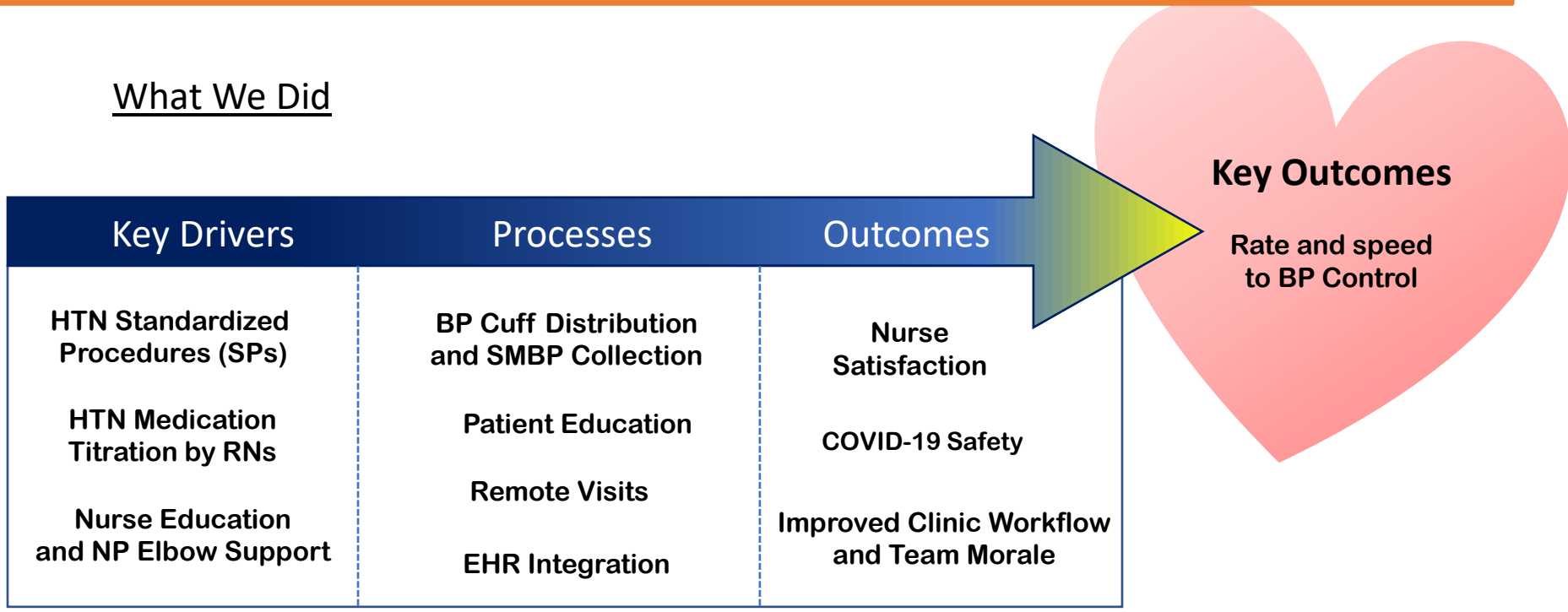


WHAT CHANGES DID WE MAKE THAT RESULTED IN IMPROVEMENT?

What We Did



How We Did It

- Dedicated staff for SP development
- Interdisciplinary Practices Committee review and approval of HTN SPs
- Nurse-driven HTN curriculum creation, review, and instruction
- BP device selection lead by front-line staff
- Virtual and in-person PDSA cycles by interdisciplinary teams prior to go-lives
- Interactive documentation and decision support tool for HTN medication titration

WHAT CHANGES DID WE MAKE THAT RESULTED IN IMPROVEMENT?

Process for Selecting Test Ideas

How We Engaged the Patient

- In-person (pre-COVID-19) observations and interviews at Nurse Directed Clinic HTN visits
- Phone interviews with patients
- Results: modifications to BP Logbook, provided patients with tote bags and folders to carry and store their TC3 items

How We Engaged Leaders, Providers, and Staff

- Regular meetings with front line staff and clinic leadership, nursing education staff and leaders, information technology leads, and research and implementation team members supported by ad hoc electronic communications
- Electronic archive of meeting notes, patient and staff education tools, and other key documents accessible to all team members
- Virtual and in-person PDSA Cycles focused on front line staff
- Inter-clinic peer support and NP lead elbow support for RNs performing titration
- Post-implementation staff surveys
- Results: increased project buy-in, staff satisfaction, and modifications to processes to meet staff/patient needs

Feedback from Patient Interviews:

Describing face-to-face visits:
"My experience was professional, [Nurse] took my BP, she discussed how it important it was to control it, what foods and drinks to avoid. She took my BP multiple times. Mentioned to record my BP everyday, [Nurse] gave me a log book and she was also very attentive and approachable.

How does your Nurse HTN visit compare with your PCP visit?
"Well, it was better for me because they see me right away. Not sure if its normal but I got called in right away and I was very satisfied. Other appointments I have to wait a long time to be seen."

How can we better support your health?
"Due to the pandemic, regular phone calls are better. I am homeless I do not have transportation so calls work for me."

Describing Phone Visits:
"Professional. Taking care of me very well and asked me many questions about health. I felt good because I thought they didn't care. But now I realized they were really caring and I was very happy about their care. Its convenient you don't need to be in traffic, spending time in waiting room, or wearing a mask. This saved me from missing my appointment and calling out of work."

On first learning about their high blood pressure:
"Ever since I had my fourth baby my blood pressure has been unstable. I don't want to take drugs every time. I am too worried. My kids are only 3 years old. They're too little."

On how patient manages high blood pressure:
"I keep taking my medications. I learned about my sodium, to reduce it. I exercise more."

Thinking about your health, what matters most to you?
"My health and my family. I want to get better for them."

WHAT CHANGES DID WE MAKE THAT RESULTED IN IMPROVEMENT?

Changes We Tested

What Worked and What Didn't Work

Change Idea Tested	Summary of PDSAs	Adopted, Adapted, Abandon?
Capture of SMBP	Frontline staff tested multiple home BP measurement devices and selected ones with "single button" ease of use, language appropriateness (English and Spanish) (adopted). BP Cuffs capable of automated direct transmission to the EHR remain an aspirational goal (staff tested several models across sites but these had poor usability or were cost prohibitive). Implementation Assistants and frontline staff designed SMBP Patient Logbook for home use with results review in-clinic. Logbook re-designed for remote visits spurred by COVID-19 collection. Patient entry of SMBP into MyWellness patient portal (IT team developed; frontline staff reviewed; IT team built; frontline staff tested).	Adopted/Aspirational Adopted/Adapted post-COVID Adopted
Use of HTN SPs	Initial SPs developed as paper tools for RN HTN medication titration; after cycles of use and feedback these were updated and integrated into our EHR. Documentation is generated automatically as a by-product of data capture.	Adopted/Adapted paper-based into electronic decision support forms with data capture
Establish Remote Nurse Directed HTN Care in Response to COVID-19	Nurse Directed HTN Care includes enrollment, education, and titration visits. At COVID-19 onset, we attempted to provide all HTN Care remotely. Nurses reported that the first enrollment and education visit were best completed face to face. HTN titration visits continued to be offered, but not required, to be remote.	Adapted
Nurse Training	Nurses developed training materials and reviewed content with clinical subject matter experts. NPs trained and provided elbow support to on-site RNs, refining training material based on end user feedback. Materials and processes were later adapted for remote education due to COVID-19.	Adopted/Adapted post-COVID

How Did We Know the Changes Were An Improvement?

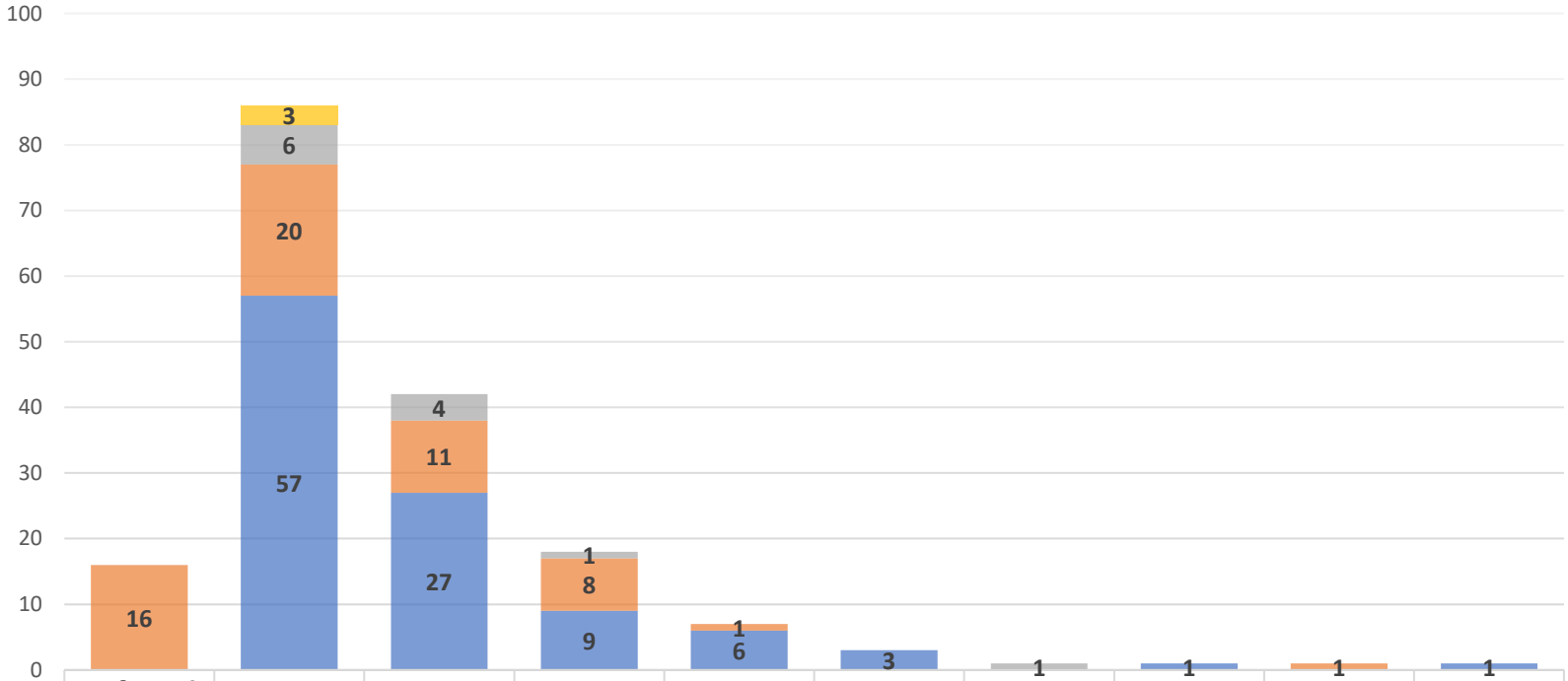
Measures Set

Measure Type/Name	Description/ Specifications	Baseline %	Target %
Outcome (Directly related to the aim):			
Percentage of patients at HTN Goal	The percentage of LAC DHS patients at blood pressure goal	Q2 2019, LAC DHS percentage of patients at HTN Goal: 65%	Q4 2020, Sites with active Nurse HTN Titration Clinics percentage of patients at HTN Goal: 70% 5% absolute improvement, 7% relative improvement, (target of 10%) compared to baseline.
Time to goal	The number of encounters needed to reach blood pressure goal for Nurse Titration patients compared to empaneled patients	We did not track number of encounters to BP control prior to this intervention for empaneled patients.	The average number of RN HTN Titration interactions for patients was 1.6. We did not track number of encounters to control prior to this intervention. Target of 10% improvement over baseline unknown.
Percentage of patients who receive Nurse HTN Titration who reach BP Goal	Percentage of patients with at least one visit to the Nurse Titration Clinic who have reached BP Goal	164 patients with at least one visit to Nurse Titration Clinic	To date, 104* (64%) patients with at least one visit to the Nurse Titration Clinic have reached BP Goal as of Dec 31, 2020. *At the point of program suspension due to COVID-19. We anticipate that a higher percentage of patients will be in control when we re-engage the program.
Process (Steps to achieve outcome):			
Patient Engagement	Percentage of patients referred for Nurse HTN medication titration with at least one visit	176 Patients referred	164 (93%) Patients have had at least one visit to Nurse Titration Clinic
Sites Live	TC3 Sites providing nurse-driven HTN medication titration	Baseline: 0 sites live	4 (50%) currently providing nurse-driven HTN medication titration. Target of 8 sites not met due to to COVID-19 re-apportionment of staff to in-patient care.
Nurses Trained	Total number of RNs trained to provide HTN medication titration via SP – This includes remote or in-person training, competency demonstration, and elbow support by an NP until competency evaluation completion	Baseline: 0 nurses trained	All designated staff at live sites were trained. 13 (50%) of nurses will be trained as the remaining sites go live.
HTN Medication Titration SPs	Creation of Standardized Procedures for HTN medication-specific titration	Baseline: 0 SPs created	10 SPs were created. Target of 9 SPs met.
Balancing (Unintended impact/consequence):			
Staff satisfaction with TC3	Staff shifted from neutral or uneasy attitudes to overwhelming positive acceptance of the TC3 project.	Qualitative data – see chart and staff quotes	

How Did We Know the Changes Were An Improvement?

Outcome

UNIQUE PATIENT STATUS AS OF DECEMBER 18, 2020*
MOST RECENT NURSE HTN TITRATION VISIT

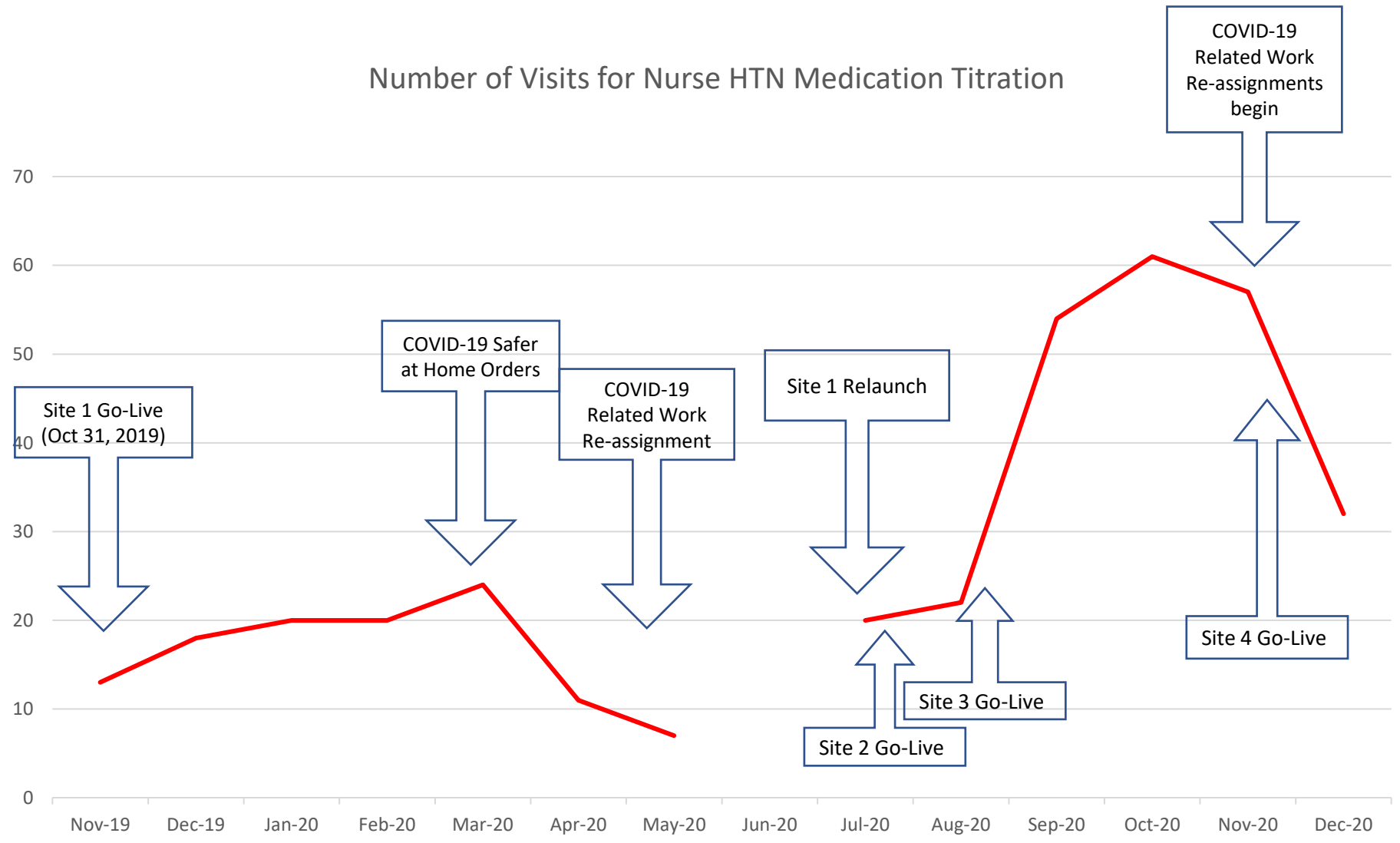


	Referred	1 Visit	2 Visits	3 Visits	4 Visits	5 Visits	6 Visits	7 Visits	8 Visits	9 Visits
Referred in Error		3								
Dropped		6	4	1			1			
In-Progress	16	20	11	8	1				1	
At Goal		57	27	9	6	3		1		1

*On Dec 18, 2020 TC3 efforts were paused so that staff could be reallocated to address the COVID-19 crisis.

How Did We Know the Changes Were An Improvement?

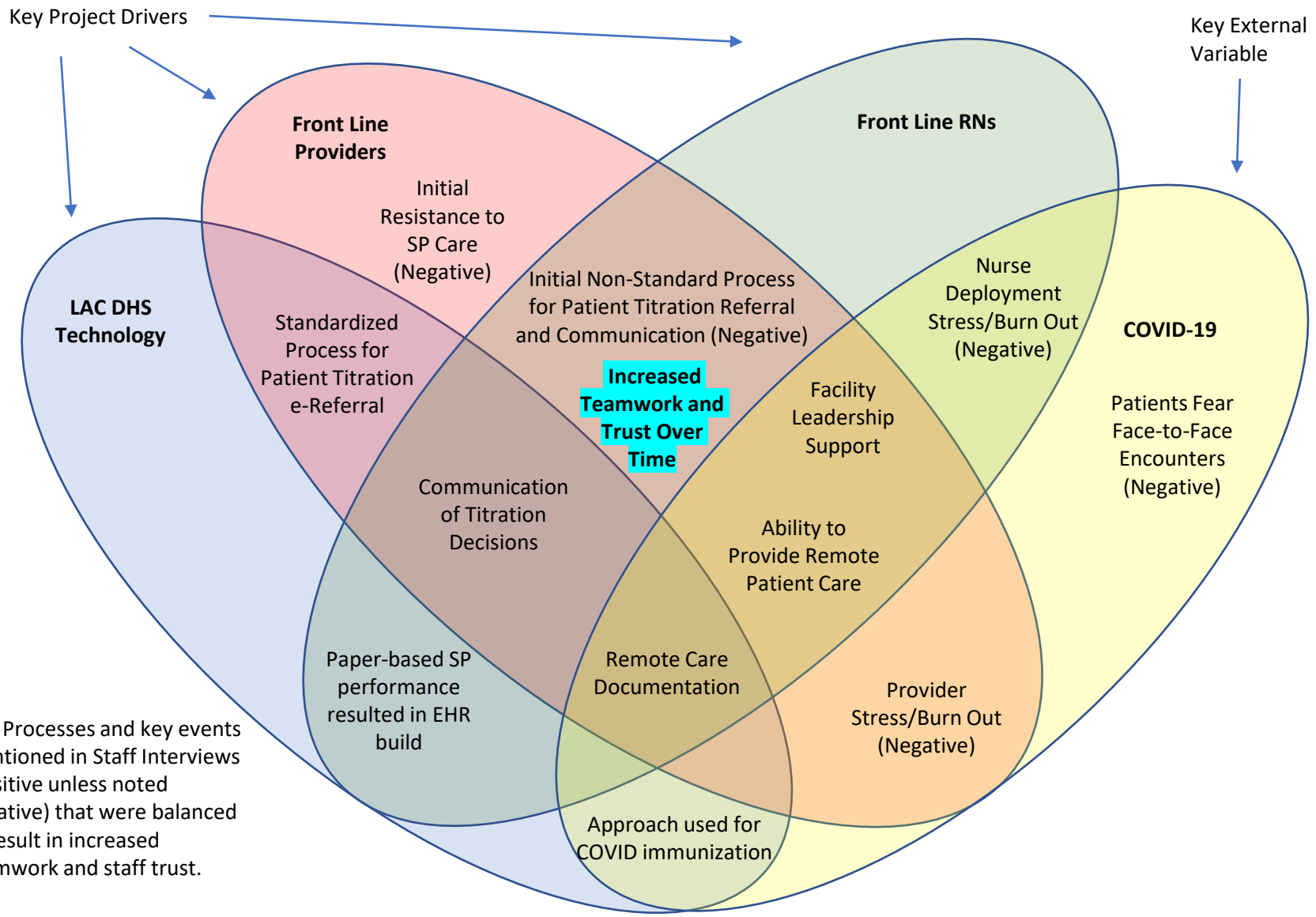
Process



This shows the number of visits for TC3 over a 13-month period with milestones and notable events indicated.

How Did We Know the Changes Were An Improvement?

Balancing



TC3 Processes and key events mentioned in Staff Interviews (positive unless noted negative) that were balanced to result in increased teamwork and staff trust.

How Did We Know the Changes Were An Improvement?

Here's What We Learned

Bright Spots/Accomplishments

- Enthusiastic Program support from leadership and medical and nursing staff
- Increased nurse engagement and confidence
- Scalable to other conditions
- Exemplar for tele-health delivery

"Nurses are developing better relationships with the patients which only can improve overall outcomes."

"I am confident that with SPs we can do great with a diabetes titration clinic too."

"This clinic reduces the burden on the limited clinic slots available for providers."

"It's great that we are acknowledging that our RNs are capable of running these clinics."

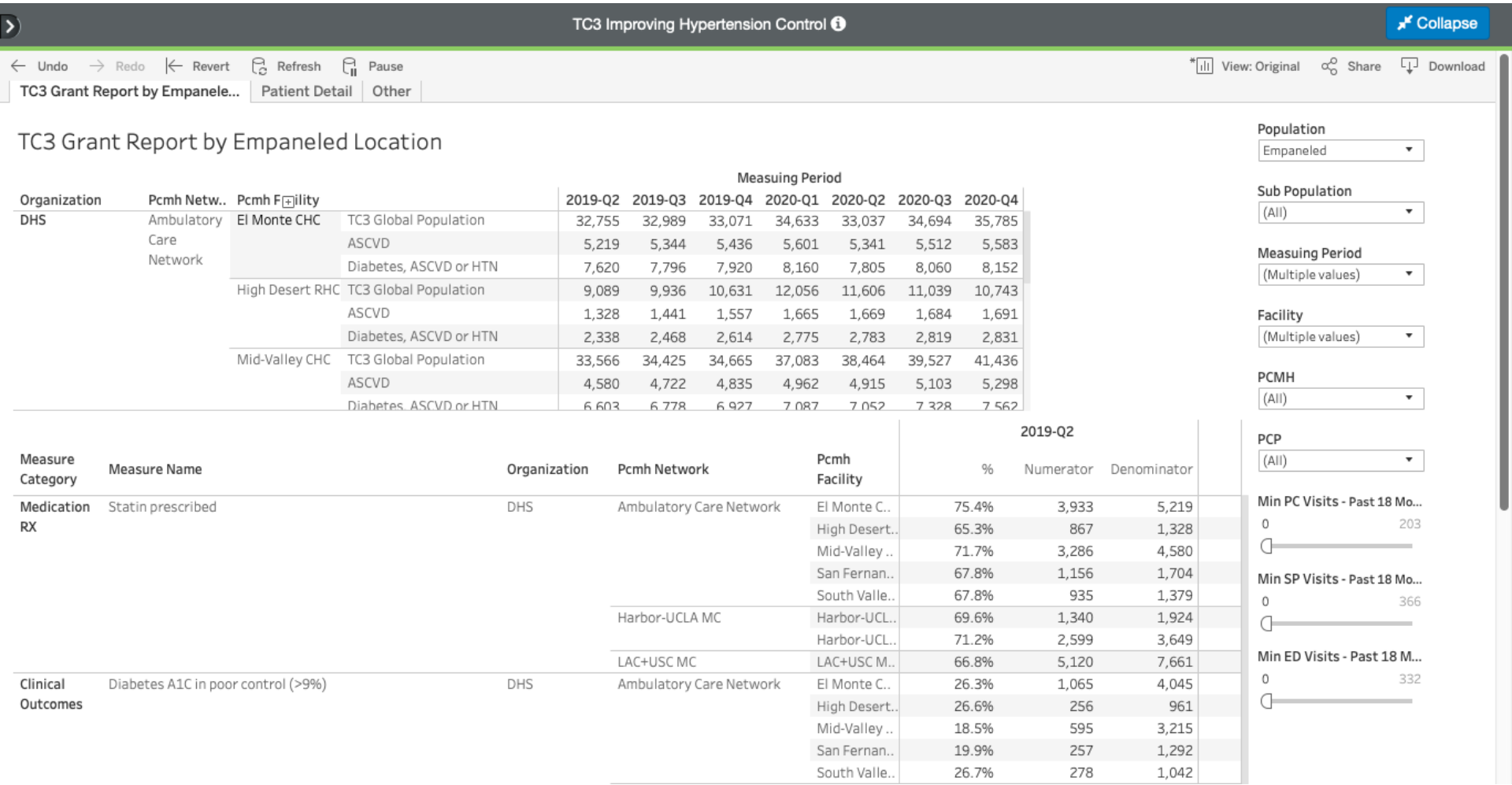
"This has been a really positive experience both for me and the nurses. The level of autonomy and confidence in the RNs has been wonderful."

"I am confident using HTN Protocols. Giving patients blood pressure machines for self monitoring is very effective. I think this is great so far for patient outcomes. "

Bright Spots/Accomplishments

Bright Spot: TC3 facilitated the creation of our TC3 Dashboard

This data infrastructure that allows us to drill down to PCP level metrics for key indicators which can be tracked over time



How Did We Know the Changes Were An Improvement?

Here's What We Learned

The Challenge of the COVID-19 Pandemic

Challenge	How We Overcame/Resolution
Patient and Staff Safety (COVID-19 related)	COVID-19 Safety related concerns impacted our staff and patients greatly. Like many health systems, we transitioned a portion of care (including Nurse HTN Titration) to remote formats (phone/video) to address concerns about face-to-face contacts.
Staff re-assigned for COVID-19 surges	In response to COVID-19 surges, LAC DHS reassigned nurses and other staff resources to hospital-based care settings. If staff providing Nurse HTN Titration were re-assigned, clinic efforts were slowed or paused until they returned from deployment.

Overall Challenges

Challenge	How We Overcame/Resolution
Patient/System-Friendly BP Device Selection	A team of frontline staff researched devices that were appropriate for our patient population and could transmit data to our EHR. Several Bluetooth enabled devices were tested but none were deemed to be patient-friendly. Instead, devices appropriate for patient use were prioritized and selected.
Patient SMBP collection and transmission	We provided face-to-face teach back patient SMBP training, bilingual educational aids, and provided BP collection devices that played bilingual instructions for step-by-step use. Staff enrolled and taught patients to enter data via MyWellness, our Patient Portal.
Capture, storage, and analysis of SMBP	Our IT team collaborated with staff to determine how to capture SMBP as a distinct data element in the EHR and store, analyze, and view SMBP in customized reports. A solution was to have patients enter their data via our patient portal which would be transmitted into our EHR. This required several months of testing and creative problem solving to allow our EHR to capture the data in non-customary ways.
Increase Nurse Knowledge of	A nurse developed and taught curriculum was used in both didactic and clinic-based

What's Next for PHASE/TC3?

Here's How We Will Continue the Work

SPREAD

LAC DHS sees value in the patient and staff outcomes from this effort. Our spread plan includes the following:

- Continue implementation at our original TC3 sites
- Coordinate with leadership and nursing education to spread to additional LAC DHS facilities
- Publish and share efforts, strategies, and outcomes, with members of our Practice Based Research Network (PBRN) and other interested entities.
    - LAC DHS is home to a PBRN that has more than 35 safety-net health focused members who provide care to more than 2 million patients in the Greater Los Angeles region. The PBRN is a learning community focused on bottom-up, provider-driven, research tested change.

SUSTAINABILITY

- Build on data infrastructure built as part of TC3 for LAC DHS facilities to monitor their progress in near-real time
- Continue updating HTN Standardized Procedures, nursing education, and patient training materials as necessary
- Continue the RN peer support and staff PDSA cycles to ensure sustainability

THE DESIRED FUTURE

- *What is the desired future for PHASE/TC3 (new Aim Statement)*
    - By Dec 2021, LAC DHS will implement our TC3 approach for nurse-driven HTN medication titration at 4 additional sites.
    - By 2023, the number of empaneled patients with controlled HTN will increase 10% compared to current rates.
- *Why it's not happening now? What isn't currently possible? (New problem statement)*
    - COVID-19 and related pauses/delays to the program have resulted in not yet reaching the self sustaining "tipping point"
        - Lost investment in nurse training and experience
        - Lost momentum in system-wide care delivery changes – the interrupted implementation needs support to ensure future continuous rollout.
        - We are concerned about impact due to lack of support on our implementation momentum.
        - Nurses selected for this program have been disproportionally promoted, requiring new nurse selection and training for titration
        - Without spread support will likely revert to "old usual care."
    - Due to COVID-19 staffing redeployment, we paused TC3 efforts. A ramp up time period will be required to return to optimum performance.
    - *What have you learned from your PHASE/TC3 focus this year that may serve you in achieving the desired future?*
    - TC3 as a model for other Standardized Procedure-driven care programs
        - Heavy front-line staff participation in development and implementation needed
        - Nurse-designed training and elbow support for roll out a must
    - Will work with all levels of staff to determine best places for SP-driven care to be used, will continue team meetings to conduct virtual and in-person PDSA cycles
- *What, specifically, do you need from your leaders to support achieving the desired future?*
    - Support for a "Global-Local" approach: Global (LAC DHS-wide) QI strategy and tools paired with local implementation driven by collaborative PDSA-cycles
    - Support to spread this model to other conditions, e.g., dyslipidemia