Navigating cardiovascular risk management during a pandemic: Lessons learned from the safety net response in California

Center for Community Health and Evaluation

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Executive summary

PHASE (Preventing Heart Attacks and Strokes Everyday) and TC3 (Transforming Cardiovascular Care in our Communities) were funded by Kaiser Permanente Northern and Southern California Community Health, respectively. These two programs supported safety net organizations in providing care for their patients at risk of cardiovascular disease (CVD) and cardiovascular events. When the COVID-19 pandemic hit California in March 2020, PHASE and TC3 grantees needed to quickly pivot and innovate how to deliver care in a vastly different environment. The implementation of COVID-19 safety protocols had immediate effects on organizations’ ability to do chronic disease management generally and CVD risk management specifically because patients were not able to come in for office visits.

The Center for Community Health and Evaluation led a mixed methods evaluation of the two programs focused on how organizations were virtually managing patient populations at high risk of cardiovascular events, how existing capacity supported the pivots in care, and how the learning collaborative contributed to their success.

Key findings

In response to the pandemic, organizations transitioned to providing telehealth for patients at risk of CVD, including exploring self-measured blood pressure monitoring and other strategies.

The use of telemedicine, particularly phone visits, increased dramatically. This rapid switch required organizations to create new workflows to standardize and improve processes for telephone and video visits. The pandemic elevated the need for self-management, and remote monitoring (such as self-measured blood pressure) allowed clinics to provide care without having to physically see patients.

As organizations pivoted care during the pandemic, they focused on understanding and addressing disparities in access and outcomes.

Reimbursement policy changed during the pandemic to allow for telehealth services to be billable, which incentivized organizations to provide a high proportion of their visits via telehealth. Longer term, organizations recognized that routinely offering virtual care has the potential to reduce barriers associated with in-person visits, such as lack of transportation and time off from work. While telehealth options were perceived to provide increased access, not all populations had equal access to the needed technology or the technology literacy to effectively use telehealth services.
Organizations leveraged existing practices and infrastructure for high performing primary care to support the pivots they made during the pandemic.

Quality improvement and data infrastructure supported organizations’ ability to understand, respond, and adapt to emerging patient needs. Organizations leveraged multi-disciplinary teams and collaboration across departments to support the pivot to telemedicine and provide care for patients with hypertension and diabetes. Population health management capacity helped organizations quickly identify patients to prioritize for outreach and ways to stratify patients to provide tailored care.

Organizations were committed to the sustainability of telehealth services beyond the pandemic.

Organizations saw telehealth as an important component of patient care because of its potential to increase convenience and decrease barriers to access. They reported that they would continue to provide telehealth in some capacity moving forward.

Technical assistance contributed to organizations’ ability to respond to the pandemic, rapidly test new ideas, and make needed adjustments.

The pandemic meant that technical assistance had to be delivered entirely virtually and be responsive to a rapidly changing environment. Organizations found individual coaching and online resources to be the most useful. Additionally, they appreciated learning from other organizations who were experiencing similar issues.

Implications

Due to the pandemic, 2020 presented unique challenges to manage and participate in a learning collaborative. PHASE and TC3 successfully kept participating teams engaged and were able to modify expectations and goals to support the pivots organizations were making. Reflecting on learnings from this year, the following lessons may have implications for future investments in the health care safety net to support innovation and high quality, proactive care delivery.

1. Supportive policies are critical in advancing or deterring health care innovation. Without a change in reimbursement policy, organizations would have found telehealth difficult to implement.

2. Organizations’ understanding of disparities and work to advance equity in access and outcomes will require longer term support.

3. Strong clinic infrastructure and capacity for quality improvement, data analytics, team-based care, and population management helped organizations successfully pivot.

4. The learning collaborative benefited from a focus on CVD risk reduction because organizations were working on similar projects, and thus could share more specific improvement strategies.

5. Funding alone would not have yielded as much progress for the teams; the learning collaborative was critical to their success.
Background

PHASE (Preventing Heart Attacks and Strokes Everyday) and TC3 (Transforming Cardiovascular Care in our Communities) were funded by Kaiser Permanente Northern and Southern California Community Health, respectively. These two programs supported safety net organizations in providing care for their patients at risk of cardiovascular disease (CVD) and cardiovascular events. PHASE funded 14 safety net organizations in Northern California (four public hospitals, four regional clinic consortia, and six community health centers) and TC3 funded three organizations in Southern California (two public hospitals and one regional clinic consortium). The Center for Care Innovations (CCI) provided technical assistance for both programs. See Appendix A for a list of participating organizations.

When the COVID-19 pandemic hit California in March 2020, PHASE and TC3 grantees needed to quickly pivot and innovate how to deliver care in a vastly different environment. The implementation of COVID-19 safety protocols had immediate effects on organizations’ ability to do chronic disease management generally and CVD risk management specifically because patients were not able to come in for office visits. As a result, organizations saw their performance on key quality measures (e.g., HEDIS, UDS) decline because they were unable to do routine measurement and screening typically done in person.

This report describes how the safety net organizations participating in PHASE and TC3 programs pivoted care for patients at risk of CVD as a result of the pandemic — their challenges and successes, and the ways in which PHASE and TC3 supported organizations in their efforts.

Methods

The Center for Community Health and Evaluation (CCHE) led a mixed-methods evaluation of PHASE and TC3. In March 2020, the scope of the evaluation was refined to focus on the extent to which grantees were able to make progress on their CVD goals, how they were managing patient populations at high risk of cardiovascular events virtually, how existing capacity/infrastructure supported the pivots grantees were making, and how the learning collaborative contributed. CCHE leveraged existing forums and program documents wherever possible. Data informing this report included:

- Observation of monthly coaching calls and quarterly small group coaching calls for the 17 organizations across the two programs (Mar. 2020 – Feb. 2021)
- Document review of program documents and deliverables (e.g., organizations’ project charters and updates)
- Brief interviews with all organizations to gather program feedback (Jun. 2020 – Sep. 2020)
- Survey of all participating organizations to gather information on telehealth strategies, including self-measured blood pressure programs (Oct. 2020)
- Final interviews with each organization about program participation and impact (Mar. 2021)
- Final survey of all organizations about their telehealth strategies, capacities built within the program, contribution of the program, and overall program feedback (Mar. 2021)

Based on these data, the evaluation has identified five key takeaways. These findings were derived from qualitative and quantitative analyses of each data source and triangulation across the methods.

This icon is used throughout the report to call attention to relevant resources. Please see Appendix B for a full list of the resources as well as additional resources.
In response to the pandemic, organizations transitioned to providing telehealth for patients at risk of CVD, including exploring self-measured blood pressure monitoring and other strategies. The use of telemedicine, particularly phone visits, increased dramatically.

Organizations had to quickly establish telehealth services in order to care for their patients while keeping them safe from COVID-19 exposure. In some cases, the pandemic was the first time that organizations provided phone or video visits; for others, it was the first time that in-person visits made up the smaller proportion of total visits. Seven months into the pandemic, most organizations conducted more than half of their phone and video visits remotely, ranging from 20% to 85%. see Figure 1).

Figure 1. Percentage of organizations’ visits that were telehealth in October 2020 (n=19 organizations)

While many visit types were able to be successfully transferred to telehealth, organizations reported that more intensive in-person programs such as group visits and health coaching were often put on pause or delayed at some point during the past year.

The rapid switch to telehealth required organizations to create new workflows to standardize and improve processes for telephone and video visits, including:

- Determining which patients could be seen via telehealth and which visits needed to be in person

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1 The survey was sent to participating organizations, as well as to member health centers within participating consortia, so the N is larger than the number of participating organizations.
- Ensuring consistent and clear communications across departments and with patients related to scheduling telehealth visits

- Ways to replicate in-person protocols during telehealth visits (e.g., how to do warm hand-offs between medical assistants and providers)

- Building out templates in the EHR to support and capture information relevant to telehealth visits

Creation and implementation of telehealth workflows were impacted by:

- Staffing shortages due to deployments for COVID-19 testing and vaccination, layoffs and vacancies, and COVID-19 related absences COVID-19 (e.g., illness, caring for a loved one, required quarantine).

- Staff working remotely, which required clinics to reimagine how to work as care team when all members were not co-located/physically in the facility.

- Patients not being able to or being comfortable with coming into the clinic. Several organizations used text messaging to connect with patients for outreach, health education, appointment reminders, or other clinic-wide announcements.

- Changing reimbursement structures, most notably to reimburse telephone visits and to allow biometrics captured via telephone to count towards compliance of population health measures (e.g., blood pressure readings taken by the patient at home).

Throughout the pandemic, phone visits were more common than video visits. While implementing telephone visits could happen quickly with existing technology, organizations did not always have the infrastructure needed to launch video visits early in the pandemic. They needed to acquire video equipment, address internet bandwidth challenges, and find a platform and/or vendor for video visits. A number of organizations found that the built-in video visit capability within their EHR was not user-friendly or sufficient for their needs, and many turned to other platforms, like Doximity or Zoom. In addition to the clinic-level challenges, video visits also presented challenges for patients; for example, some patients did not have reliable internet service or did not have sufficient comfort with technology to do video visits.

“We created a standardized telehealth tool within Epic; now all of us are using that tool to make sure we’re capturing all the components of a virtual visit.” (Hospital)

Find examples of telehealth workflows

“Clinics are doing more patient visits over the telephone. I say telephone, because the majority didn't have access to video equipment earlier on [in the pandemic].” (Consortium)
Self-measured blood pressure programs were used as a tool to support patient care during the pandemic.

The pandemic elevated the need for self-management. Remote monitoring, such as self-measured blood pressure (SMBP), allowed clinics to provide care without having to physically see patients. At the start of the pandemic, organizations prioritized getting blood pressure (BP) cuffs to patients so they could manage their blood pressure without having to come into the clinic. Some organizations partnered with philanthropic organizations or health plans to procure BP cuffs. In a handful of cases, organizations had an existing SMBP infrastructure in place that helped them pivot to telehealth or to expand their SMBP work. As organizations worked to create standardized workflows for SMBP, three key considerations arose: obtaining cuffs, training patients how to use the cuffs, and capturing information from remote monitoring.

- **Obtaining cuffs:** There was an increased demand for BP cuffs at the start of the pandemic and inadequate supply. This led to backorders and delays in patients receiving cuffs. Once backorders were filled, funding for cuffs remained an issue. Health plans became key partners in this work by supporting insured patients in paying for BP cuffs. While there was desire for Bluetooth-enabled devices, organizations found them difficult to use, because instructions were not user-friendly, and they did not integrate with the EHR.

- **Training patients how to use the cuff:** In addition to figuring out the workflows of how SMBP would fit within a telehealth visit, there needed to be workflows created to teach the patients how to use the BP cuffs. This was particularly challenging when neither video nor in-person encounters were possible, since staff were unable to verify whether patients were demonstrating best practices. Some passive trainings included patient education brochures, a YouTube how-to video created by a health center, and adding education into after visit summaries that were sent to the patient. Organizations that felt more confident in the effectiveness of their trainings required that the first visit of the SMBP program be in person.

“SMBP came out of a necessity. In the diabetes and hypertension realm we weren’t asking people to come in for routine screening for a period of time. We needed something attainable that we could add back in for our patients.”  
*(Hospital)*

“The SMBP program has been a pretty heavy lift from the beginning. Getting our hands on the devices was our initial challenge. Then, we had enough [devices] to pilot, and then realized to really be successful, the program needs dedicated staffing.”  
*(Consortium)*

“Find information on SMBP
Find examples of standardized workflows for SMBP
Find a patient resource on how to use BP cuff

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Capturing the patient’s BP in the EHR: Organizations needed to capture BP measurements to effectively monitor and help manage their patients’ cardiovascular risk. At the start of the pandemic, national reporting entities did not allow for telephonic transmission of remotely taken BP measurements or patient-entered measurements to count towards incentive programs. While the guidelines for measurement and incentives evolved during the pandemic, organizations remained challenged by the impaired ability to capture self-measured BP data in the EHR. In many cases, the BP measurements could not be entered into the same place as BP measurements taken at in-office encounters, and so new discrete fields needed to be created in the EHR. Successfully overcoming this challenge took collaboration with IT departments and clinical staff.

An additional consideration for workflows to capture remote measurements was the multiple ways an organization could receive that information. In a survey in October 2020, the 11 organizations doing SMBP collected remote measurements in a variety of ways (see Figure 2). More than half used more than one method to capture the patient BP readings.

“Getting the SMBP entered into the EHR is a couple of distinct data elements: diastolic and systolic blood pressure, self-measured diastolic, self-measured systolic, self-measured pulse...There were many iterative cycles working with the IT team and the nursing staff to get those data elements to a place where they could be easily entered by the patient [through the portal].” (Hospital)

Figure 2. Number of organizations using each modality of obtaining remote BP readings in October 2020 (Organizations could select multiple options; n=11 organizations)

- Patient self-reports via telephone: 10
- Patient self-reports via video: 6
- Patient reports in-person: 6
- Patient reports via patient portal: 2
- Wireless transmission (e.g., via Bluetooth): 1
When in-person care was required during the pandemic, organizations tried to reduce patient exposure by offering drive-through clinics for preventive and chronic care needs.

Drive-through clinics provided organizations with the ability to provide another option of care for patients, especially for conditions requiring labs. The successful efforts to conduct drive-through COVID-19 testing gave some organizations the idea to also perform common primary care services in this way. In drive-through visits, patients made an appointment, drove up to a designated area in a parking lot, and alerted the care team, which then provided the service while patients were in their vehicles. In PHASE and TC3, A1c testing was the most common service that organizations included in drive-throughs because monitoring the extent to which patients have their diabetes under control requires patients to come into the clinic to have this lab test. Organizations also mentioned wrapping multiple services together via drive-throughs like COVID-19 testing and vaccinations, blood pressure checks, depression screening, and on-site pharmacy refills.

Key facilitators of successful drive-through visits included quality improvement capacity to do rapid testing using Plan-Do-Study-Act (PDSA) cycles, leadership support to implement drive-through clinics, and point-of-care A1c machines. Organizations that were successful in combining services via drive-throughs incorporated the following into their workflows:

- An outreach plan for which types of patients to focus on for drive-through visits
- Reminders to patients ahead of the visit that included instructions on how to locate the testing site within the parking lot
- Chart scrubbing prior to the visit to identify opportunities for proactive care
- Supplies on hand to respond to emergent needs, such as A1c point-of-care machine, flu shots, BP cuffs, COVID tests, depression screening forms, FIT kits, and patient education materials
- Multiple staff/members of the care team to support the visit
Spotlight on the role of the regional clinic consortia

The Regional Associations of California (RACs)—also referred to as clinic consortia—are clinic networks that represent and support community health centers at the county or regional level across California. Five consortia were funded to participate in PHASE and TC3 to support their member health centers in reducing CVD risk.

The work of the participating clinic consortia also pivoted because of the pandemic. The support that consortia provided to their member health centers during 2020 shifted in structure (i.e., more virtual) and content (e.g., telehealth and remote patient monitoring) to respond to the emerging needs during the pandemic.

In many cases, the consortia partnered with external organizations to support telehealth and to procure BP cuffs through obtaining funding or in-kind donations. They leveraged and improved upon existing structures of cross-organization meetings to support the creation of relevant workflows and make connections across organizations. As one consortium leader said, “Before [the pandemic], the idea of going to another health center to have a meeting with another group of clinicians was hard. But when you could bring everybody together on Zoom, you cut down the travel time and it’s easier to cross-fertilize.”

A challenge during the pandemic was that COVID-related work took priority over chronic disease management and it was more difficult for consortia staff to connect with key staff at health centers due to competing priorities: “There were a couple months where it was hard to reestablish our relationships [with clinics] in a virtual way and to get their attention. We had to put in extra work to talk to all the clinics individually.”

Additionally, some of the virtual meetings took more time to plan than in-person meetings in order to make them engaging, and the number of necessary individual check-ins with health centers increased. Consortia leveraged tools like Zoom in order to continue providing support and facilitating peer learning during the pandemic. One consortium even adapted clinic site visits to an online environment, hosting virtual quality tours of health centers to continue facilitating cross-site learning.
As organizations pivoted care during the pandemic, they focused on understanding and addressing disparities in access and outcomes.

While both initiatives had an overarching aim focused on health equity, the organizations involved in PHASE were required to have their own specific goal on reducing disparities. At the start of 2020, the 14 PHASE organizations were asked to focus on a project to reduce disparities in cardiovascular health outcomes. Most chose to focus on BP outcomes among subsets of patients with hypertension. From the start of the pandemic, it became apparent that without targeted efforts, disparities could increase. And so as organizations pivoted in response to the pandemic, they focused on re-engaging patients within their population of focus and targeted their outreach efforts and projects (e.g., SMBP program) on these patients.

Telehealth can be an opportunity to increase access, though not all patients have equal access to technology.

Reimbursement policy changed during the pandemic to allow for telehealth services to be billable, which incentivized organizations to provide a high proportion of their visits via telehealth. Longer term, organizations recognized that routinely offering virtual care can reduce barriers associated with in-person visits, such as lack of transportation and needing to take time off from work.

Remote monitoring can be an opportunity to intentionally focus on high-risk populations, such as patients who were uninsured or populations for whom there were disparities in health outcomes (e.g., Black, Native American).

While telehealth options were perceived to provide increased access, not all populations had equal access to the needed technology or the technology literacy to use telehealth services. For example, an organization in San Joaquin County mentioned that agricultural workers sometimes share phones and lodging and thus were unable to find private spaces in which to speak with their health care team. As discussed earlier, technology concerns were seen as the greatest barriers to patients’ access to video visits (see Figure 3).
Figure 3. Project leads’ perceived rank of patient barriers to accessing telehealth in October 2020 (Number one barrier given a rank of 5; n=20 project leads)

2.1 Concerns about quality of virtual care
2.9 Preference to see providers in-person
3.0 Limited internet access
3.2 Lack of access to technology (e.g., mobile device)
4.2 Lack of familiarity or comfort with using telehealth technology

Spotlight on the role of the clinic consortia

Consortia supported health centers in identifying and capturing health disparity data and expanding health equity work. This was often tied to consortia efforts to support quality improvement (QI) at the health centers, including coaching them to use data to choose populations of focus, monitor progress over time, and modify workflows to specifically address the needs of their population of focus. For some consortia, this was part of their broader effort to strengthen their own data reporting infrastructure at the consortium itself. The facilitators of this work included the data infrastructure to be able to access, report on, and analyze data within or across health centers, and health center engagement with data for improvement purposes (including with executive leaders).

“One of the things that stood out this past year was that we actually were able to make a little progress on our equity goals. We focused our QI coaching on two clinics, and for both of those clinics, with their equity goal there was a decrease in the disparities we didn’t see at the other clinics, so it showed us that doing this in-depth coaching can still work.” (Consortium)
Organizations leveraged existing practices and infrastructure for high performing primary care to support the pivots they made during the pandemic.

Both the PHASE and TC3 programs used the Building Blocks of High-Performing Primary Care as a framework for supporting organizations in caring for patients at risk for cardiovascular disease. In particular, the programs have focused on engaged leadership, quality improvement culture, data-driven decision making, team-based care, and population health management. The prior work that organizations did in these areas was highly relevant to their ability to pivot and provide high quality care for their patients during the pandemic.

Quality improvement (QI) and data infrastructure supported organizations’ ability to understand, respond, and adapt to emerging patient needs.

As organizations pivoted to provide care in a more remote setting, their existing QI and data infrastructure helped facilitate the shifts. A critical part of effectively responding to patient needs during the pandemic was the ability to test new solutions quickly, learn from the experience, and adapt accordingly. Organizations who had a strong QI infrastructure and comfort using QI tools, such as PDSA cycles, were able to be agile in their response. Additionally, clinics needed access to reliable data to inform their decisions and needed to adjust how data were captured in virtual care encounters (e.g., how to record SMBP readings). For example, some of the innovations required collaboration with the organization’s IT department to modify EHR templates, which was easier if organizations had a history of effective collaboration between QI, IT, and care delivery.

Organizations that were successful in targeting subpopulations during the pandemic had the ability to segment the data to understand disparities in access or outcomes and leverage those data to prioritize efforts to outreach to specific subpopulations.

Leadership provided support for telehealth in a variety of ways.

For many organizations, the initial week following California’s stay-at-home orders was intense as they began to figure out how to implement telehealth during a pandemic. Thus began a year of needing to manage change fatigue, reduced staff capacity, diminished capacity to do preventive care, low levels of staff well-being, and the challenges related to infrastructure built only for office visits.

“The whole year was a challenge. We were short staffed. Everybody was scared. We had people working overtime, double overtime, working two or three positions at the same time.” (Health center)

View video series on data-driven culture and quality improvement.

“The data infrastructure we had was already built to help inform some of these rapid cycles; we could pull data reports or combine different reports that we already had to find information that we were looking for.” (Health center)

As organizations pivoted to respond to the pandemic and provide telehealth services, an important facilitator was having leaders build a shared understanding of the need to make changes and a dedication to continue providing care for patients. Supportive leaders helped break down silos across departments and actively prioritized work to advance telehealth practice. In the few situations where there weren’t operational leaders supportive of telehealth, the organizations expanded care options much more slowly.

Other supportive infrastructure included team-based care and population health management.

Organizations leveraged multi-disciplinary teams and collaboration across departments to support the pivot to telemedicine and provide care for patients with hypertension and diabetes. For example, the skillsets of registered nurses and pharmacists were useful to support BP check visits, SMBP programs, and hypertension medication titration. Existing team-based care infrastructure — such as defining roles within a care team, strong connection between care teams with front office and call center staff, and chronic care teams that were already multidisciplinary — provided known steps and structures for how to work across departments and disciplines.

Population health management capacity helped organizations quickly identify patients to prioritize for outreach and ways to stratify patients to provide tailored care. Key capacities and infrastructure included: registries of patients with different conditions that could be used to get lists of high-risk patients, risk stratification beyond the registries, and empanelment of patients to specific providers so that care teams had clear guidelines on whom they should reach out to.

Find examples of standard procedures for RN-led visits

“We have chronic care clinics at each of our primary care sites; they are a multidisciplinary team of pharmacists, nurses, dietitians and medical assistants. We had these existing teams doing mostly diabetes and hypertension and hyperlipidemia work, which provided organization, processes, and clearly defined steps to make it easier for them to do SMBP.” (Hospital)

“If we hadn’t been spending all these years building our capabilities to isolate populations to find people with specific diagnoses, and used registries and all the things that go into good population health management, we wouldn’t have been able to target the groups we wanted the way we did.” (Health center)
Organizations were committed to the sustainability of telehealth services beyond the pandemic.

Organizations saw telehealth as an important component of patient care because of its potential to increase convenience and decrease barriers to access. They reported that they would continue to provide telehealth in some capacity moving forward. When asked what the ideal mix might look like in the future, organizations emphasized that there was not a “one size fits all” model and the approach needed to be based on patient needs and preferences. They noted that the ability to be reimbursed for telehealth services and other regulatory changes would be important factors in the amount of telehealth services that they are able to offer post-pandemic.

Organizations that were doing SMBP programs hoped to be able to continue these programs, and others that had not yet started were interested in doing so. Some already had or were building the infrastructure to support their SMBP programs prior to the pandemic. The ability to obtain SMBP cuffs was an important factor in whether SMBP programs are continued and to what extent.

Additionally, for the few organizations that implemented drive-through clinics during the pandemic, there was interest in continuing those processes, though at reduced scale.

“We don't think we'll be going back to 100 percent face-to-face care, because our patients like virtual visits because they don't have to take seven buses to get here.” (Hospital)

“I think the telemedicine question will have to do with regulation. The ability to bill for telephone visits was allowed during the pandemic, which made it feasible. If that changes back, that is going to have a negative impact on our ability to offer phone visits.” (Health center)

“We’re trying to figure out the most sustainable way to make sure our patients have access to cuffs, whether it’s our clinic’s quality improvement (QI) funds, grant funding sources, or the statewide pharmacy plans.” (Hospital)
Technical assistance contributed to organizations’ ability to respond to the pandemic, rapidly test new ideas, and make needed adjustments.

In early 2020, PHASE had just begun a new grant cycle and TC3 was beginning the second half of the two-year program. The Center for Care Innovation (CCI), which was the technical assistance (TA) provider, originally had planned to conduct webinars, in-person convenings, site visits to high-performing clinics, monthly coaching calls, and one on-site coaching visit between February 2020 and March 2021. The pandemic meant that TA had to be delivered entirely virtually and be responsive to a rapidly changing environment, including content on:

- Population management of chronic conditions during the pandemic
- Navigating the shift back to in-person care
- SMBP best practices
- Empathic communication for telemedicine
- Caring for patients with CVD against the backdrop of COVID-19 and systemic racism

During the pandemic, the monthly coaching calls continued as planned, while the number of webinars increased, and small group coaching was added. The programs provided many tools and resources online. Each type of TA was overall seen as useful, with individual coaching calls and online resources and tools receiving the greatest proportions of ‘useful’ or ‘very useful’ ratings (Figure 4).

Figure 4. Perceived usefulness of TA (n=30 project leads; March 2021)

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<thead>
<tr>
<th></th>
<th>Very useful</th>
<th>Useful</th>
<th>Somewhat useful</th>
<th>Not useful</th>
<th>N/A or don’t know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual coaching calls</td>
<td>64%</td>
<td>20%</td>
<td>13%</td>
<td></td>
<td></td>
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<tr>
<td>Online resources and tools</td>
<td>33%</td>
<td>54%</td>
<td>13%</td>
<td></td>
<td></td>
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<tr>
<td>Small group coaching calls</td>
<td>23%</td>
<td>51%</td>
<td>10%</td>
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<tr>
<td>Share and Learn webinars with presentations from fellow grantees</td>
<td>23%</td>
<td>57%</td>
<td>17%</td>
<td></td>
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<tr>
<td>Content webinars with presentations from experts in the field</td>
<td>16%</td>
<td>50%</td>
<td>27%</td>
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<tr>
<td>Monthly newsletter</td>
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<td>43%</td>
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Peer sharing was key to organizations’ ability to learn and innovate. Organizations appreciated learning from and connecting with other organizations who were experiencing similar issues during the pandemic. The programs convened organizations through webinars, where various participants were spotlighted and shared practical tools and
practices, and small group coaching, during which organizations could ask their peers for ideas on specific challenges they were facing.

Organizations built their skills in quality improvement (QI) as a result of the programs, which helped their work to move forward.

All organizations reported that their participation contributed to a culture of QI in their organization and that lessons learned from the programs have been used to inform other QI efforts. Their QI capacity was built through individual coaching, small group coaching, online resources like the CCI Academy’s ABCs of QI, and other QI tools and templates that were shared. Multiple organizations used these resources with their QI staff to reinforce the foundations of QI. The monthly individual coaching sessions helped grantees advance their projects as well as incorporate patient voice as part of improvement efforts. Additionally, individual coaching support helped teams navigate and effectively use the provided tools such as driver diagrams and PDSAs.

“When we were going through our iterative processes about what the patient experience was going to be like sending their [blood pressure] data through our patient portal, it was helpful to hear [our coach’s] suggestions on how to think about getting at the solution, how to ask certain questions of patients, how to do some testing cycles.” (Hospital)
Conclusion

The COVID-19 pandemic required health care organizations to be nimble and innovative. Through a multi-program, mixed-methods evaluation, we saw that safety net providers in California successfully pivoted their primary care services to telehealth, some for the first time. Remote monitoring of patients at risk of cardiovascular disease, especially given their increased risk of complications due to COVID-19, was an important tool that organizations used to care for patients during a time when they could not come into the office for face-to-face visits. Organizations successfully piloted new modalities of care, such as drive-through clinics that mirrored or added onto existing testing or vaccination practices, to address chronic and preventive care (e.g., A1c lab testing for patients with diabetes).

Discussions of equity permeated this work. The pandemic itself had exacerbated health disparities, and changed the way safety net organizations provided care. The shift to offering care via telehealth, particularly phone visits, provided patients with another care option and helped reduce barriers to accessing care such as transportation, missing work, and COVID-19 safety concerns. Phone visits also provided patients who had difficulty accessing video visits the ability to engage in care remotely. Organizations raised concerns about an increased digital divide if their work turned to 100 percent telehealth, with some patients not having access to reliable phone and internet service.

Organizations relied on existing capacities of data analytics and reporting, quality improvement culture, strong leadership, team-based care, and population health management to support their work during the pandemic. PHASE and TC3 focused on building these capacities, as well as provided technical assistance around how to leverage existing capabilities to support the pivots in care during the pandemic. Organizations found that individual coaching, peer learning, and access to resources were useful in helping them shift to new models of care delivery.

Organizations reported that while the year from March 2020 through March 2021 was one of the hardest that they had experienced, they were proud of the work that their teams did and the resilience that they showed. They discussed a future beyond the pandemic that integrates face-to-face care and telehealth to best meet patient needs and emphasized the need for a reimbursement structure to support that model.

Implications

Due to the pandemic, 2020 presented unique challenges to manage and participate in a learning collaborative. PHASE and TC3 successfully kept participating teams engaged and were able to modify expectations and goals to support the pivots organizations were making. Reflecting on learnings from this year, the following lessons may have implications for future investments in the health care safety net to support innovation and high quality, proactive care delivery.

1. **Supportive policies are critical in advancing or deterring innovation.** While the role of policy in the health care environment is well understood, this past year we saw how rapid changes in

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reimbursement, primarily to allow for equal reimbursement for phone visits, allowed clinics to shift and continue to meet patient needs remotely. Post-pandemic, reimbursement structures will drive what is feasible long term for providing telehealth service. In the PHASE and TC3 programs, there was concern among grantees that more restrictive reimbursement policies for phone visits will increase disparities in access for patients who prefer to be seen remotely but do not have access to the technology and internet bandwidth needed to access video visits.

2. **Organizations’ understanding of disparities and work to advance equity in access and outcomes will require longer term support.** This year, PHASE grantees began to deepen their understanding of disparities and began planning for ways to start reducing those disparities. At the end of these programs, this work was still in early stages of understanding and exploring potential strategies to address existing disparities the pandemic brought to light. Clinics would benefit from additional support and incentives to continue to prioritize understanding and addressing disparities for their patient populations.

3. **Strong clinic infrastructure and capacity for QI, data analytics, team-based care, and population management helped organizations successfully pivot.** Organizations leveraged existing capacity in the foundational building blocks of high-performing primary care to support the pivots they made during the pandemic. For example, having strong practices around QI and data analytics allowed them to rapidly test new practices, monitor results, and make adjustments. In addition, established team-based care and population health management structures gave teams a solid foundation on which to build telehealth workflows. For PHASE grantees, clinics benefited from long-term funding from Kaiser Permanente, which helped them strengthen their infrastructure and capacity and made them more agile in responding to changes in the external environment.

4. **Learning collaborative benefited from a focus on CVD risk reduction.** A design consideration for learning collaboratives is how prescriptive to be about focus areas. PHASE and TC3 aimed to strike a balance between focusing on CVD risk reduction while allowing organizations flexibility to determine their specific strategies and targets under that umbrella. In these initiatives, focusing on a narrow and related set of health outcomes was an effective way to build broader capacity, especially related to establishing a QI culture, while also creating opportunities for robust peer learning because organizations were working on similar strategies.

5. **Funding alone would not have yielded as much progress.** Coupled with funding, the learning collaborative component of PHASE and TC3 was critical at helping teams make progress over the past year. The learning collaborative provided organizations with focus and accountability to move forward their goals related to CVD while most of the organization’s time and resources were focused on COVID response. The learning collaborative also provided teams with access to expert consultation, coaching, and peer learning, which exposed them to new ideas and ways of responding to challenges. The combination of funding and technical assistance, via the learning collaborative, contributed to greater progress than either would have alone.
Appendix A: Participating organizations

Technical assistance provided by:

Funded by:
Appendix B: Resources

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**How to build patient trust virtually.** This collection of resources provides ideas for building trust with patients during virtual encounters and communicating the changes in care so that patients are comfortable in the transition to virtual care.  
https://www.careinnovations.org/virtualcare/resources/establishing-provide-patient-trust-in-telemedicine/

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**Examples of telehealth workflows.** This collection of resources provides telemedicine workflow examples from community health centers that help staff understand their roles and new procedures for providing virtual visits to patients. Also included in this collection are toolkits for building and growing telemedicine programs.  
https://www.careinnovations.org/virtualcare/resources/health-care-team-workflows-for-telemedicine/

**The latest on Self-Measured Blood Pressure (SMBP).** In this webinar, the American Medical Association discusses the latest thinking on SMBP and how clinical care teams can use SMBP with their patients. They review changes regarding reimbursement for SMBP-related services during the COVID-19 pandemic, national quality metrics, and resources to help providers choose a validated home blood pressure measurement device.  

**Examples of standardized workflows for SMBP.** In this webinar, Alameda Health System and the Los Angeles County Department of Health Services give an inside look at their early wins, obstacles, and innovative practices in self-measured blood pressure. The webinar offers examples from these organizations of process maps, use of EHR, trainings for patients and staff, and more. On the webpage, you’ll also find additional resources on team roles for the SMBP process.  
https://www.careinnovations.org/resources/self-measured-blood-pressure-monitoring-voices-from-the-field/

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**Patient resource on how to use BP cuffs.** This toolkit provides resources for patients in English, Spanish and Chinese languages. These resources include home blood pressure cuff instructions for self-measure blood pressure (SMBP), logs, worksheets, action plans, healthy food information and more.  

**Extra: Patient-facing infographic.** This infographic demonstrates steps to perform self-measured blood pressure (SMBP) monitoring correctly, which includes preparation, positioning, and measurement.  

**Extra: Patient-facing video.** This short educational video helps train care teams and patients on how to properly conduct self-measured blood pressure (SMBP). There is an English and Spanish version.  
https://targetbp.org/tools_downloads/self-measured-blood-pressure-video/
Extra: SMBP Implementation Toolkit. This toolkit from The Million Hearts program and the National Association of Community Health Centers is designed to help organizations implement self-measured blood pressure monitoring (SMBP) successfully into their care processes and workflows. https://www.nachc.org/wp-content/uploads/2020/12/SMBP-Toolkit_FINAL.pdf

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Example of a drive-through protocol. During the COVID-19 pandemic, Chapa-De Indian Health created a drive-thru protocol to serve patients who were diabetic that required an HA1C test. The protocol includes procedural steps and a workflow. The document also details these steps and a workflow for drive-thru phlebotomy testing. https://www.careinnovations.org/wp-content/uploads/Chapa-De_COVID19_HA1C-Testing-Phlebotomy-Drive-Thru-Protocols.pdf

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Information on health equity and telemedicine. This toolkit provides information and concrete guidance relevant to safety-net healthcare systems looking to initiate, expand, or improve their telemedicine programs (remote clinical services such as phone and video visits, remote patient monitoring, patient portals, and mobile health). https://www.careinnovations.org/virtualcare/virtual-care/toolkits-telemedicine-for-health-equity/

Extra: Caring for Cardiovascular Patients Against the Backdrop of COVID-19 and Systemic Racism. Recognizing the impact of systemic and institutional racism, how might we provide equitable care for patients with chronic conditions, such as hypertension and diabetes? How might we move toward a care delivery model that is “trauma-informed,” acknowledging racism both as trauma and a risk factor for cardiovascular disease? Hear from health care leaders from Kaiser Permanente and California safety net organizations on how their work to improve health equity and eliminate disparities has evolved in the wake of the COVID-19 pandemic and systemic racism. https://www.careinnovations.org/resources/caring-for-cardiovascular-patients-against-the-backdrop-of-covid-19-and-systemic-racism/

Extras: Article: Tackling Bias, Fear, Inequality, and Disrespect: Tosan Boyo’s Blueprint for a Successful Equity Journey in Healthcare. In this article, Tosan Boyo (former Chief Operating Officer at Zuckerberg San Francisco General Hospital who now serves as senior vice president of hospital operations at John Muir Health) shares his story about exploring patient and staff inequities at the organization through medical and survey data. Podcast: An Inclusive Environment for Everyone to Belong and Thrive. Tosan Boyo shares practical next steps for organizations of any size and at any stage of their equity journey. Boyo asks: “Are we providing the tools and resources for staff to do equity work? Then we are creating an inclusive environment for everyone to belong and to thrive?”

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Create a free account or log in to the Center for Care Innovations’ Academy to access all course videos and materials.

Building a Data Driven Culture Video Series Course. This course offers practice in concepts, techniques & tools to help you be strategic and reap value from the technology systems you've invested in. https://academy.careinnovations.org/courses/building-a-data-driven-culture/
**ABCs of Quality Improvement Video Series Course.** Improve how your team problem solves with Quality Improvement. QI is an evidence-based methodology that provides a step-by-step approach to improving performance through brief videos, interactive activities, and peer sharing. [https://academy.careinnovations.org/courses/abcs-of-quality-improvement/](https://academy.careinnovations.org/courses/abcs-of-quality-improvement/)

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