Mid-initiative evaluation report

August 2018

Background and project description

History of PHASE

Driven by its mission to improve health, in 2003, Kaiser Permanente Northern California developed PHASE (Preventing Heart Attacks and Strokes Everyday), an evidenced based, population management approach for patients most at risk for heart attacks and strokes. PHASE focuses on preventing cardiac and cerebrovascular events with proven medications and aggressive risk factor management. A study published in 2009, showed that Kaiser Permanente reduced heart attacks and stroke-related hospital admissions among its own members by 60 percent by implementing PHASE.[1]

Recognizing the potential public health benefits of making PHASE available to other organizations, Kaiser Permanente Northern California Region Community Health Programs began providing grant support and technical assistance to safety net organizations to implement, spread, and sustain PHASE. From 2006 to 2016, Kaiser Permanente provided eight grants to northern California regional consortia and public hospitals. In 2015, Kaiser Permanente Northern California also funded health centers in Sacramento and the Central Valley—areas where PHASE hadn't previously been implemented—to participate in learning collaboratives to prepare them to participate in PHASE.

PHASE initiative goals

The goal of PHASE is to prevent heart attacks and strokes in high-risk patient populations served by the safety net. Kaiser Permanente Northern California's aspiration is to eliminate preventable cardiovascular disease from its communities so that all people in its communities have controlled blood pressure, controlled Hemoglobin A1c levels, and are tobacco-free.

In this round of PHASE (2017-2019), Kaiser Permanente Northern California supported 18 safety net partners (grantees) so that they will be nationally recognized for their excellence in providing cardiovascular disease care, as measured by their performance against nationally established benchmarks. All grantees are implementing the evidence-based PHASE medication protocol, adopting population health management practices to reinforce the protocol and improve hypertension control rates, and supporting the work through other quality improvement interventions.

[1] Dudl RJ, Wang MC, Wong M, Bellows J. Preventing myocardial infarction and stroke with a simplified bundle of cardioprotective medications. Am J Manag Care. 2009 Oct 1;15(10):e88–94.

Participating grantees

There are 18 grantees participating in the current PHASE initiative across the Kaiser Permanente Northern California region, including 4 regional clinic consortia, 5 public hospital systems, and 9 community health centers (see below). The specific hospital clinic sites and health center organizations participating as part of their consortium's grant are listed in **Appendix A**.

Type	Grantee	County(ies)	# of PHASE clinic sites	PHASE patient population
Consortia	Community Health Center Network (CHCN)	Alameda	8 health center orgs; 32 clinic sites	36,553
Consortia	Community Health Partnership (CHP)	San Mateo Santa Clara	8 health center orgs; 20 clinic sites	14,954
Consortia	Redwood Community Health Coalition (RCHC)	Marin, Napa, Sonoma, Yolo	8 health center orgs; 22 clinic sites	24,918
Consortia	San Francisco Community Clinic Consortium (SFCCC)	San Francisco	5 health center orgs; 20 clinic sites	14,053
Health center	Camarena Health	Madera	3	5,905
Health center	Chapa-De Indian Health	Placer, Nevada	2	2,619
Health center	Community Medical Centers	San Joaquin, Solano, Yolo	16	15,046
Health center	Elica Health Centers	Sacramento, Yolo	8	2,501
Health center	Golden Valley Health Centers[2]	Merced, Stanislaus	30	18,556
Health center	Livingston Community Health	Merced	6	3,542
Health center	One Community Health	Sacramento	1	1,984
Health center	Sacramento Native American Health Center, Inc (SNAHC)	Sacramento	1	1,442
Health center	Valley Health Team (VHT)	Fresno	7	4,883
Public hospital	Alameda Health System (AHS)	Alameda	4	9,570
Public hospital	San Francisco Health Network (SFHN)	San Francisco	12	20,678
Public hospital	San Joaquin General Hospital (SJGH)	San Joaquin	2	4,919
Public hospital	San Mateo Medical Center (SMMC)	San Mateo	6	7,496
Public hospital	Santa Clara Valley Medical Center (SCVMC)	Santa Clara	8	14,508

[2] Due to a delay in reporting, for this grantee, Q1 data are used as a proxy for Q2

Technical assistance model and support structure

The PHASE Support Team was established in 2015 to coordinate the PHASE initiative and support grantees. The Support Team is led by the Center for Care Innovations (CCI) and includes members from Kaiser Permanente Northern California Community Health and the evaluation team from the Center for Community Health and Evaluation (CCHE). The Support Team meets monthly and has quarterly in-person summits to review progress and plan for next steps.

CCI leads the technical assistance and support provided to the PHASE grantees. In the 2017-2019 PHASE initiative, CCI introduced a Charter for Improvement (CFI) to understand grantee goals and support needs. The CFI provided a roadmap for how grantees were working to achieve their annual PHASE goals and objectives—what they hoped to achieve, the work they needed to do, and the technical assistance needed to meet their goals.

The technical assistance (TA) and support uses a variety of modalities to meet the needs of grantees. Based on the TA needs and opportunities identified, CCI provides:

- Grantee convenings that focus on learning from experts and peers
- Virtual training opportunities (e.g., "Wireside chats" on clinical topics, skill-building webinars)
- Connection to external trainings available through Kaiser Permanente, the Center for Excellence in Primary Care (CEPC), and the Institute for Healthcare Improvement (IHI)
- Responsive assistance to individual grantees (e.g., providing clinical and QI resources; electronic health record (EHR)-specific PHASE reporting resources and connections)
- Communications and updates via the PHASE monthly newsletter and program website

In planning and delivering TA, CCI leveraged the expertise of Kaiser Permanente through The Permanente Medical Group (TPMG), Regional Health Education, and Quality and Operations Support (QOS).

In addition to the core support offered to all grantees, CCI provided more intensive support to the health center grantees, who were new to participating in PHASE. The support was aimed at accelerating their efforts to achieve the targeted outcomes. In the first half of the initiative, the health center grantees received monthly, structured coaching to operationalize their CFI, connect them to resources, such as the CDC's Hypertension Control Change Package,[3] and provide additional opportunities for discussing challenges they were facing.

Grantee feedback about TA is collected through CCHE's evaluation and co-design sessions facilitated by CCI. Ongoing feedback from both the evaluation and co-design sessions informs subsequent TA, training and support that is offered.

[3] https://millionhearts.hhs.gov/files/HTN_Change_Package.pdf

Evaluation of PHASE

The goal of the evaluation is to understand the impact of PHASE and to provide formative and summative feedback for program improvement. The evaluation is guided by evaluation questions related to: clinics' implementation of the medication protocol, clinical quality and system outcomes, and implementation of the overall initiative (including the effectiveness of the PHASE Support Team). See **Appendix B** for more details on the evaluation plan and Appendix C for the program logic model.

Report overview

Purpose

This report provides a synthesis of progress made during the first half of the PHASE initiative (January 1, 2017 – June 30, 2018). It brings together data from multiple data sources, including clinical quality data, grantee surveys, PHASE Building Blocks Assessment, and in-depth qualitative data from interviews and site visits. The report focuses on answering the key evaluation questions and highlighting initiative-level progress. For key outcomes, specific grantee examples are included to illustrate the impact on a specific grantee or clinic and describe how PHASE is contributing to changes in outcomes. The report also strives to highlight any opportunities for further focus or improvement during the second half of the initiative.

This report is meant to facilitate a conversation about the initiative's progress to-date and what information is useful to share more broadly.

Audience

For Kaiser Permanente Northern California Community Benefit this report provides an opportunity to understand the impact of your investment in the community and identify potential opportunities for further dissemination to share what PHASE has accomplished.

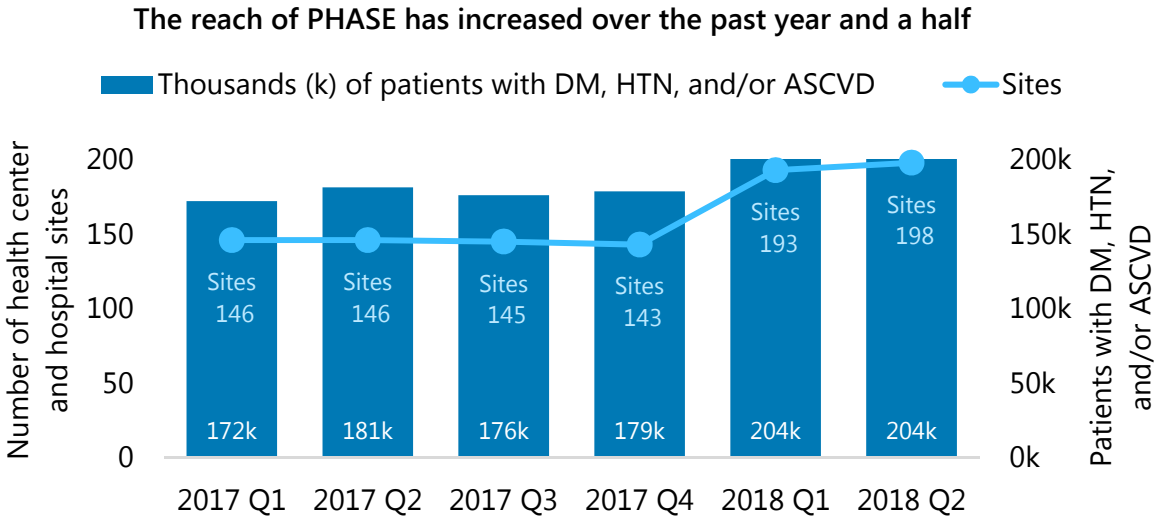
For Center for Care Innovations and technical assistance partners this report will give an initiative-wide view of progress as well as information about where grantees are excelling and where they may be struggling. This information could be used to inform TA and promising practices/bright spots.

For PHASE grantees this initiative-wide report can put your experience, successes, and challenges into perspective of the larger initiative. It may help provide insights as to where you can request additional support, learn from other grantees, and/or share what's working for you.

Evaluation findings: implementation

The reach of PHASE increased as grantees spread within their organizations and networks

Almost 200 clinic sites are involved in PHASE, representing 43 health center organizations and hospitals, and reaching over 200,000 patients that are at high risk for a cardiovascular event—including patients with diagnoses of diabetes (ages 18-75), hypertension (ages 18-85), and Clinical Atherosclerotic Cardiovascular Disease (ASCVD, any age).[4]



Source: clinical data report

Through their PHASE participation, grantees have often started small, tested and refined processes and workflows and then spread these practices to other clinic sites and/or care teams across their organization. At the start of this grant period, six of the new grantees were implementing and reporting data for PHASE at only a subset of their clinic sites. At the time of this report, five of those six grantees have now spread the PHASE protocol or processes to their entire organization and report data for all their sites. The sixth grantee plans to expand their PHASE reach and reporting across their organization in the coming year. Because most grantees will have spread PHASE across their organization, the reach of PHASE during the second half of the initiative is expected to remain relatively stable.

[4] One grantee did not submit Q2 data, but their reach is represented by carrying over their reach numbers from Q1.

Grantees increased prescription rates as part of the PHASE medication protocol implementation

The PHASE medication protocol ("PHASE on a Page") is an important aspect of PHASE implementation for all grantees. While the medication protocol is complex, for the purposes of the evaluation, the following prescription measures were tracked:

- % of patients with diabetes who have been prescribed both a statin and an ACE/ARB (grantees also reported prescriptions for both medications separately, which is not shown)
- % of patients with hypertension who have been prescribed an oral anti-hypertensive.

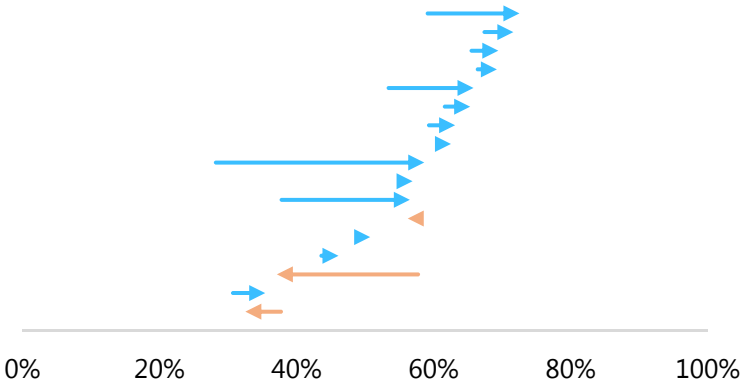
As shown in the figures below, most grantees who reported data have improved prescription rates for both these measures. At an initiative level, the prescription rate of both a statin and an ACE/ARB for patients with diabetes increased from 50.3% to 59.8%. The prescription rate of an oral anti-hypertensive for patients with hypertension increased from 72.5% to 88.6%.

Legend
◀ Decrease
❍ No change
▶ Increase

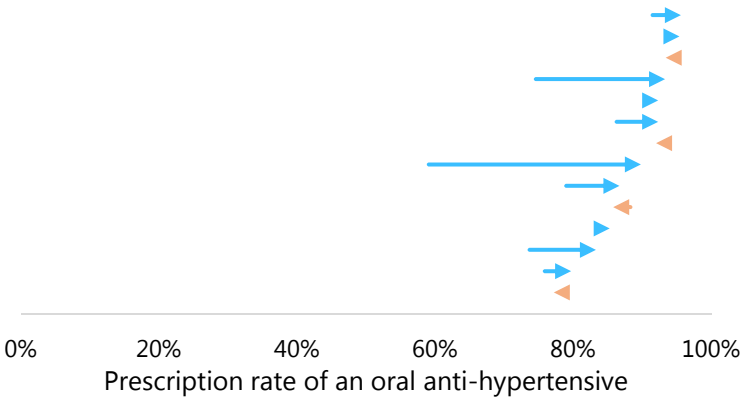
Length of arrow represents amount of change over time

Each arrow represents one grantee

Change in prescription rate of both a statin and an ACE/ARB for those with diabetes from baseline to Q2 2018



Change in prescription rate of oral anti-hypertensive for those with hypertension from baseline to Q2 2018



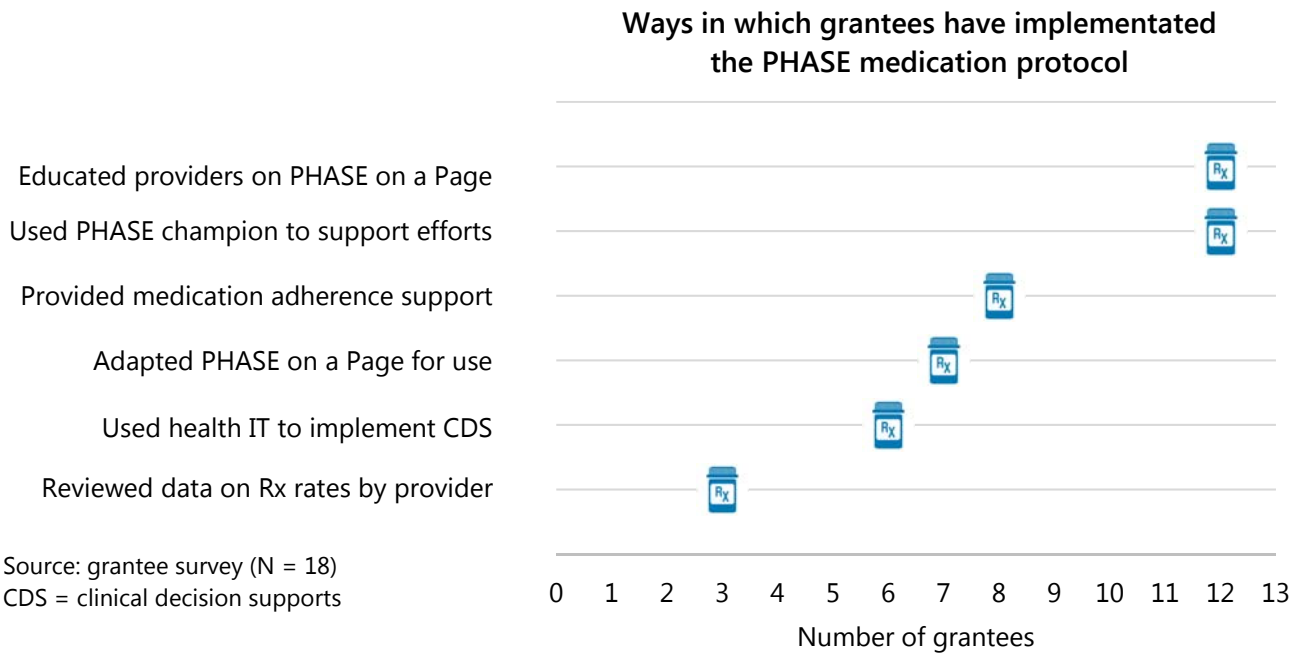
The two most common ways grantees implemented the medication protocol were:

- Educating providers on clinical guidelines, including PHASE on a Page, was a key strategy for all grantees. The goal of the education was to increase understanding and overcome provider resistance. Grantees identified key accomplishments as a result of these education effort, such as: having their organization formally approve and adopt the protocol, converting providers who were initially resistant into clinical champions, and implementing the protocol through alternative visits with nurses or pharmacists who managed medication titration.

"PHASE on a Page is a great tool. We gave it to all the providers, [who] have it up on the wall."

- Using a PHASE champion to support implementation efforts was reported by most grantees as critical to their success. The PHASE champion(s) played an important role in supporting implementation and underscored the importance of clinical leadership to motivate other providers. Across the grantees, different types of staff served as the PHASE champion. For hospitals and health centers, the PHASE champion tended to be clinical staff (e.g., provider, nurse). For consortia, the PHASE champion was typically a provider or the QI lead. Health centers were less likely than hospitals and consortia to report having a clearly defined PHASE champion. This could be because many health centers experienced turnover in their champions during the first half of the initiative.

Other strategies that grantees commonly used to implement the medication protocol are listed in the figure below.



Source: grantee survey (N = 18)
CDS = clinical decision supports

Most grantees reported that their confidence in implementating the medication protocol increased slightly during the first half of the initiative. Five grantees indicated that their confidence in PHASE stayed the same or decreased. Of these five grantees, one of these grantees explained that they were lacking physician leadership to implement the protocol and four did not have a PHASE champion to facilitate implementation of the protocol.

South of Market Health Center (member of San Francisco Community Clinic Consortium) was among the most improved grantees for the prescription rate of oral anti-hypertensives. Their strategies included:

Evidence-based practice

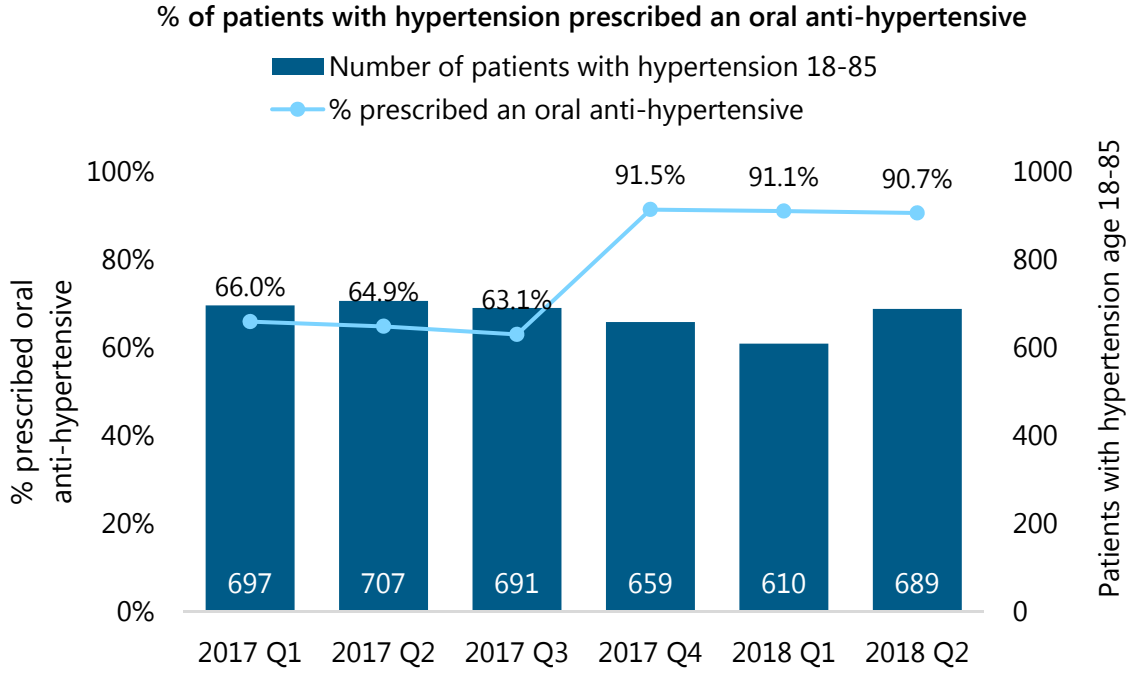
- Reviewed hypertensive guidelines with providers
- Implemented guidelines in their EHR (NextGen)

Quality improvement

- Used PDSAs to check accuracy of BP readings
- Regularly reviewed data

Team-based care

- Nurse care managers reconciled medications
- Started nurse visits focusing on medication review
- Trained medical assistants (MAs) and providers in accurate BP measurement



Source: clinical data report

Grantees used a multifaceted approach to improving blood pressure control for patients with diabetes and/or hypertension

As mentioned above, PHASE aims to prevent heart attacks and strokes in high-risk patient populations served by the safety net. Given that high blood pressure (BP) is a key risk factor for heart attacks and strokes, all grantees were asked to focus on improving BP control for patients with diabetes and/or hypertension. All 18 grantees implemented multiple processes to achieve their goals for BP control. On average, grantees refined seven care processes from the list[5] below. The most common processes included: building leadership and staff commitment to improving BP control, training and assessing specific staff skills (e.g., repeat BP measurements), and training staff in motivational interviewing and/or health coaching. The least common processes related to patient empowerment and follow-up/coordination after and between visits. Grantees have indicated that those processes are more challenging due to limited staff capacity for outreach and panel management.

	Number of grantees using each process:
Leadership, clinicians and staff are committed to improving BP control	**17**
Staff are trained and assessed on specific target-related skills (e.g. taking/recording/rechecking blood pressure measurements)	**16**
Staff are trained in motivational interviewing and/or health coaching	**15**
Pre-visit planning tools informed by data are used to help care teams identify key actions for the visit	**13**
EHR & HIT systems can generate reports to identify care gaps and drive action to close them	**13**
Patient engagement/education tools are used that help patients understand their condition	**12**
MAs gather key data from patients (e.g., take BP per protocol, explore care plan adherence and obstacles, etc.) for productive provider encounter to meet PHASE goals and patient needs	**11**
EHR is configured with order sets, documentation templates, etc. to help with making and implementing clinical decisions	**10**
Protocols are used to ensure patient and staff follow-up after a visit as planned	**8**
Staff follows up on BP and other key parameters updated between provider visits (e.g., via nurse-only visit or response to out-of-range patient home BP readings) and responds per protocol as appropriate	**8**
Patients are empowered with tools such as texting, apps, or hand-outs, that support actions needed to execute their care plans	**4**

[5] These activities are a drawn from TMIT Consulting LLC's tool for analyzing and re-engineering care processes to improve outcomes. Please contact Jerry Osheroff, TMIT Consulting at josheroff@tmitconsulting.com, for further information about this resource.

PHASE's success was bolstered by alignment with grantee priorities

When discussing factors that drive success, almost all grantees mentioned alignment between PHASE and other organizational priorities. Alignment between PHASE and other efforts helped to secure leadership buy-in and dedicate staff time to implementation activities, while minimizing the extent to which PHASE was perceived as a short-term grant funded QI project. While all grantees discussed alignment, it differed by type of organization:

- **Consortia** and **health centers** discussed alignment with Pay-for-Performance (P4P) initiatives, a strategic focus on diabetes and/or hypertension, and a focus on implementing evidence-based medicine.
- **Hospital systems** focused primarily on alignment with the Public Hospital Redesign and Incentives in Medi-Cal (PRIME) program.[6]

"Maximizing the local Pay for Performance initiatives for A1c control and hypertension blood pressure control as the overarching 'big local win' is still our primary organizational driver for PHASE. It continues to be because of the number of PHASE metrics that crosswalk with the P4P measures."

PHASE's sustainability was promoted through institutionalization and application of processes and principles

Many grantees mentioned that a key part of PHASE was building infrastructure for institutionalizing and monitoring PHASE processes and principles. Examples include:

- Developing alternative visit protocols and standing orders for MAs, nurses, and pharmacists
- Creating an auditing process to monitor the use of standing orders
- Developing workflows and materials to support self-measured blood pressure monitoring (SMBP) [7]
- Implementing A1c point-of-care testing for improved diabetes management

"This thinking from PHASE goes into other programs, like our opioid prevention program. It's another secondary prevention program, targeting specific individuals: creating a registry, using the same population health management principles."

Some of the practice changes being made for PHASE were also benefiting care delivery and operations across departments and organizations. For example, through PHASE, grantees have:

- Standardized care team roles and improved team-based care
- Integrated data discussions into standing meetings and improved data analytics capacity

While grantees expressed confidence that the work they have done as part of PHASE will be sustained, they also noted that staff and leadership turnover has impacted their ability to successfully institutionalize changes.

[6] http://www.dhcs.ca.gov/provgovpart/Pages/PRIME.aspx
[7] https://millionhearts.hhs.gov/tools-protocols/smbp.html

Evaluation findings: capacity

Grantees reported improvement in all the PHASE Building Blocks

During the first half of the initiative, grantees reported slight improvements at the initiative-level in all five Building Blocks domains.[8] [9] In past evaluations of PHASE, these five Building Blocks have been identified as being critical to successful implementation and participation.

	Building Block domain	2017	2018
	Leadership	7.8	8.1
	Quality improvement	8.2	8.4
	Data-based decision making	7.8	8.2
	Team-based care	7.8	8.2
	Panel/ population management	8.1	8.5
	Overall capacity	**7.9**	**8.3**

In their Charters for Improvement for the first half of the initiative, grantees most commonly identified priorities related to team-based care (14/18) and data-based decision making (12/18), two of the domains where slightly more improvement was made.

When asked about PHASE's contribution to their capacity in these domains, all grantees reported that PHASE contributed to their confidence in data-based decision making, and nearly all reported increases in confidence in the other four domains (15/18 for leadership; 16/18 for the other three domains—quality improvement, team-based care, and panel/population management). The following sections summarize results for the five domains individually.

[8] The PHASE Building Blocks Assessment was administered at baseline (winter 2017) and mid-point of the initiative (spring 2018). The assessment questions are organized into 5 domains: leadership and culture (Q1-Q8), quality improvement infrastructure (Q9-Q13), data-based decision making (Q14- Q21), team-based care (Q22- Q27), and panel/population management (Q28-Q35). Respondents rated each question on a scale from 1 to 12 with the higher value indicating a higher level of capacity or implementation. The scale is divided into four levels: A (rated 10-12), B (rated 7-9), C (4-6), and D (1-3). The assessment tool is based on Bodenheimer's 10 Building Blocks of High-Performing Care, CCI's Safety Net Analytics Program assessment, and the Institute for High Quality Care's Building Clinic Capacity for Quality assessment. See Appendix B for more information about evaluation methods.

[9] Data are reported for 17/18 PHASE grantees. At the time of this report, one grantee had not yet submitted responses to the assessment.

Executive and clinical leadership buy-in was essential for success

PHASE grantees recognized that having leadership support was critical to their success—both from operational (e.g., CEO, COO) and clinical/provider leadership. Most grantees (15/18) indicated that PHASE contributed to some increased confidence in engaging clinic leadership. PHASE teams actively promoted leader engagement by ensuring regular communication about PHASE and related QI initiatives. For example, grantees made progress in this domain by:

- Aligning PHASE with organizational priorities and communicating how it aligns with other existing work that the organization is already doing
- Developing a leadership engagement strategy for PHASE and QI efforts more broadly. The engagement strategies built relationships, showcased PHASE work, and listened to what is most important to leaders

The PHASE Building Blocks Assessment showed a **slight improvement in the domain score for Leadership & Culture** from baseline to mid-initiative.[10]

Domain score for the **cohort increased from 7.8 to 8.1** during the first half of the initiative

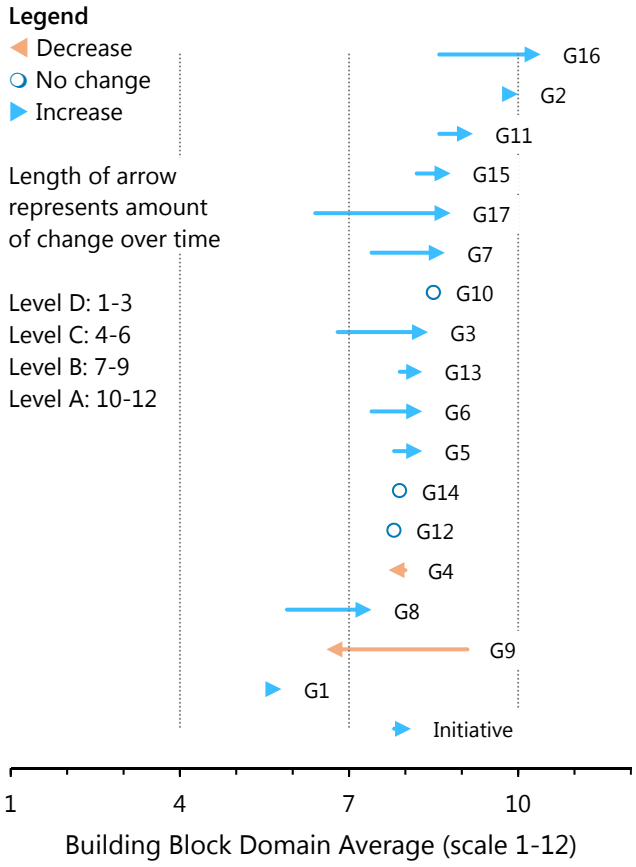
13 of 17 grantees had a higher domain score at mid-initiative than at baseline

Strength *(highest rated question across the cohort):* clinical leaders consistently champion and engage clinical teams in improving experience and outcomes

Opportunities for improvement *(lowest rated questions across the cohort):* senior leadership communication being systematic & engaging all departments in initiatives' planning and execution

Source: Building Block Assessment (N = 17)

Change in leadership domain average by grantee and for initiative



[10] Domain score is the average of the ratings for the 8 questions in this domain.

As discussed above, having a provider champion/clinical leadership was identified as essential to implementing the medication protocol and promoting other clinical changes. As one grantee noted: *"Some say "the best thing you can do for hypertension control is get the doctor out of the way," but I think you need them involved."*

Leadership turnover was a frequently reported challenge, especially for health center grantees. In some cases, leadership turnover had a positive impact because new leadership was motivated and engaged. For example, one grantee (G17, see figure on page 13) has a new clinical champion, they noted *"he is very motivated by this and will be an advocate for us, the fact he is a provider he will motivate other providers."* Whereas, another grantee (G9, , see figure on page 13) experienced significant turnover across their organization. As they explained, *"We've had huge turnover, not just in staff but in leadership. Right now, we're trying to figure out what work has been done and what our current state is. We're trying to reset."*

Quality improvement (QI) infrastructure both supported and was strengthened by PHASE implementation

Like leadership, clinics' QI capacity and infrastructure were considered critical for PHASE implementation. The clinics' quality staff typically played a large role in the implementation of PHASE and the extent to which a clinic had adequate "QI resources" and consistent staffing were identified as key differentiators between high and low performing clinics. Grantees discussed how PHASE built on and supported ongoing QI practices.

Almost all (16/18) grantees reported that PHASE contributed to some increase in their confidence related to QI. Health centers discussed improvements in their QI capacity. For example, grantees made progress in this domain by:

- Using QI tools, like PDSAs, to monitor and track improvement related to BP control (e.g., formalizing BP training, competency checks, ensuring proper documentation).
- Developing new infrastructure: one health center grantee (G3, see figure on page 15) noted that PHASE helped develop a new Quality Committee, which provided a structured path to follow and improve their system.
- Holding more regular QI meetings: Consortia and public hospitals noted that QI capacity varied across their clinic network. They supported capacity-building across their clinics by holding regular QI meetings with clinics, used "bright spots" from successful clinics to inspire others, empowered clinic staff to more easily engage in QI activities, and regularly discussed PHASE data and performance.

"The most valuable thing we have gleaned from participation in PHASE is to develop our brand-new Quality Committee using PHASE as a jump-start. That step has led to this group setting the PHASE goals and working through the process improvement steps to reach them."

The PHASE Building Blocks Assessment showed a **slight improvement in the domain score for QI Infrastructure** from baseline to mid-initiative.[11]

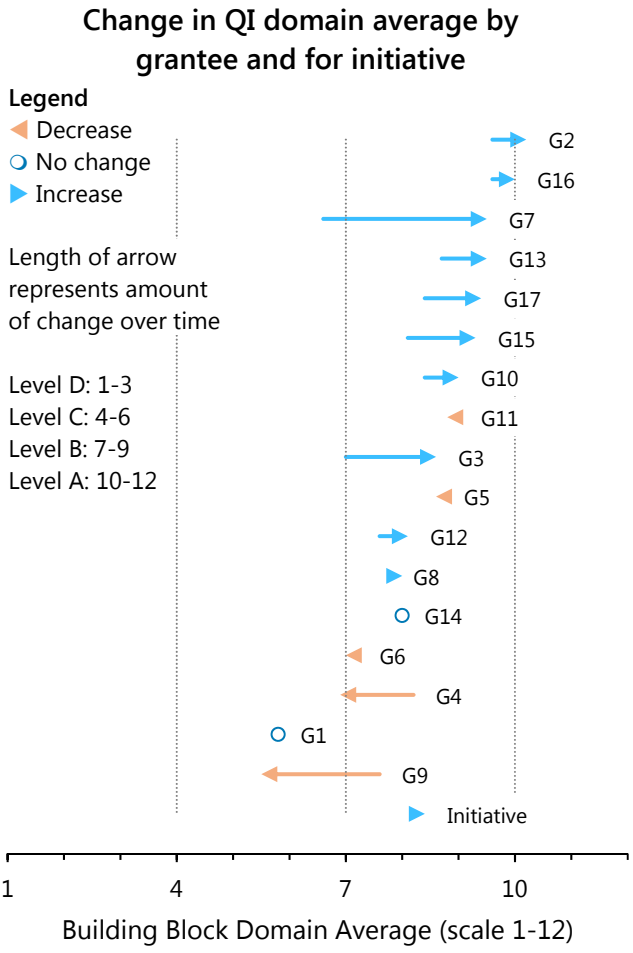
Domain score for the **cohort increased from 8.2 to 8.4** during the first half of the initiative

10 of 17 grantees had a higher domain score at mid-initiative than at baseline

Strength *(highest rated question across the cohort):* grantees have worked on many quality and process improvement initiatives

Opportunity for improvement *(lowest rated question across the cohort):* QI activities are often led by a centralized department or topic specific committees, rather than being integrated into all practice teams and supported by QI infrastructure

Source: Building Block Assessment (N = 17)



[11] Domain score is the average of the ratings for the 5 questions in this domain.

PHASE contributed to improving grantee data systems and advancing data-driven practices

Most of the PHASE grantees (12/18) focused on some aspect of improving data capacity. All 18 grantees reported that PHASE contributed to some increase in their confidence related to data-based decision making. Grantees focused on getting timely, reliable, accurate, and actionable data that could be used to identify patient care gaps and make improvements in quality measures. Grantees' strategies included:

- Building data infrastructure and systems by adopting new analytic systems, creating data warehouses, improving data governance, and creating data-focused workgroups. Where new analytics systems were put in place, grantees also trained users on the new systems.
- Ensuring data quality by working to guarantee accurate data capture (at point of care), engaging key stakeholders in data mapping and validation to ensure that it is accurate, and increasing data transparency so that staff and providers have confidence in their data. One grantee (G14, see figure on page 17) shares data at every meeting to involve all team members, particularly in the quality assurance process as they transitioned to a new data warehouse system.
- Improved data visualization and transparency by improving staff and provider access to data and improving data reports to make them more user-friendly. One grantee explained, *"The provider-specific report is provided based on only patients that that provider has seen. At first, when we did the scorecards, providers saw where there was poor performance and asked us to pull info on specific patients to show them. Once they got used to seeing that, they began trusting the data more."*

> "We recently formed an internal stewardship committee that continuously analyzes discrepancies within our data and addresses data entry errors… This helps build integrity with our providers and provides them with actionable insight to adjust care or care processes as needed to achieve optimal results…."

Grantees reported that increased communication, visibility of data, and having an improvement mindset has contributed to their progress in becoming more data-driven. These efforts increased staff and provider confidence in the data and their wiliness to use the data to inform care delivery.

Despite progress on improving efficiencies and making data more user-friendly and readily available, grantees continued to report data challenges. The primary challenges were limited staff time and capacity for data analytics, and high rates of turnover. Some grantees have not yet been able to optimize their data systems and get the data and reports they need. Additionally, consortia continued to struggle with having inconsistent access to health center data given the different systems used at their member health centers.

The PHASE Building Blocks Assessment showed a **slight improvement in the domain score for data-based decision making** from baseline to mid-initiative.[12]

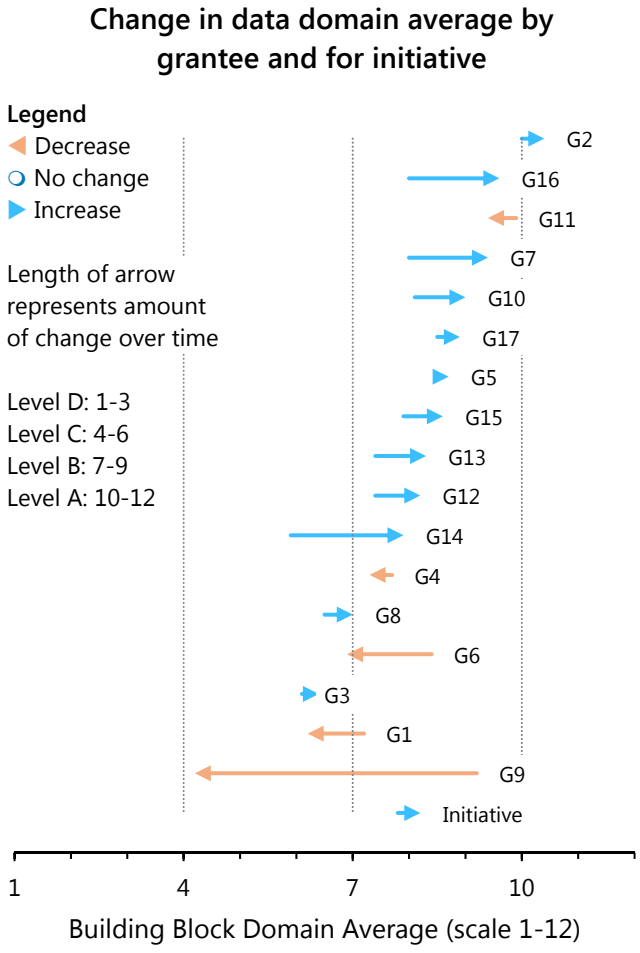
Domain score for the **cohort increased from 7.8 to 8.2** during the first half of the initiative

11 of 17 grantees had a higher domain score at mid-initiative than at baseline

Strengths *(highest rated questions across the cohort):* grantees have identified performance measures that are comprehensive & grantees are using meaningful-use certified EHRs to support population management

Opportunities for improvement *(lowest rated questions across the cohort):* clinics have insufficient staffing in IT and data services to fully optimize their analytic systems & reports on care processes/outcomes are not routinely provided to teams

Source: Building Block Assessment (N = 17)



Opportunities for peer sharing *(questions with high variability in responses across grantees)*: variable use of registries for pre-visit planning and patient outreach & staffing models, structure, and capacity of IT support and data services.

[12] Domain score is the average of the ratings for the 8 questions in this domain.

Grantees made substantial progress in strengthening team-based care by adding care team members and expanding roles

Most grantees (14/18) prioritized some aspect of team-based care (TBC) as part of PHASE implementation, and almost all (16/17) reported that PHASE contributed to some increase in their confidence related to TBC. Grantees focused on enhancing TBC through skill building, incorporating new team members, and using staff and providers in new ways. Grantees' strategies included:

- Expanding team member roles and responsibilities by adding new team members (e.g., new job descriptions and new hires) and clarifying and codifying care team member roles through standing orders, protocols, standard work, and collaborative practice agreements (e.g., nurse protocols for medication titration). Several grantees implemented alternative visits with nurses, pharmacists, and/or MAs.
- Invested in training to build skills and confidence in new areas of responsibility (e.g., motivational interviewing, health coaching, communication skills, data systems and analytics, blood pressure checks, etc.). The consortia invested in train-the-trainer models and developed onboarding toolkits to meet the ongoing training needs at their member health centers.

One health center grantee (G16, see figure on page 19) highlighted several successes related to both expanding roles and training: They hired a Licensed Vocational Nurse to serve as their PHASE Champion and to manage a panel of patients with hypertension, focusing on medication management and implemented training for their MAs around correct BP checks. They have challenges limited primary care provider capacity, but they reported that their TBC efforts have helped to more effectively manage their population of patients.

Several grantees identified progress in TBC as the key driver for improvements to blood pressure control rates. One grantee articulated the importance of their TBC efforts by saying:

> *"The work we have done to help empower frontline staff to take an active role in improving care for patients with PHASE diagnoses will have the greatest impact on blood pressure control. We know clinicians have limited time and sometimes must focus on acute care during a visit. MAs, Nurses, Nutritionists, Case Managers, Community Health Workers, and other staff can have a tremendous impact on patient care and outcomes. These staff can spend more time with patients on activities such as health coaching, assessing barriers to medication adherence and behavior change, and they can develop trusted relationships with patients. In addition, empowering frontline staff with clear workflows and standing orders to support PHASE-related care can increase their confidence and job satisfaction."*

Like in the other domains, the key challenges identified for further advancing TBC were turnover and limited staff/provider capacity. Grantees noted that providers' capacity is limited, and thus

successful population health management requires TBC. Yet they also shared concerns that shifting work to other care team members (especially MAs) may place too much of a burden on them, which can increase an already high rate of turnover. Another challenge grantees noted is that the extent to which team members are empowered differs at every clinic site and across care teams, making it difficult to implement standard work. A few grantees continued to experience provider resistance to TBC (i.e., not trusting that other staff will "do it right").

The PHASE Building Blocks Assessment showed a **slight improvement in the domain score for TBC** from baseline to mid-initiative.[13]

Domain score for the **cohort increased from 7.8 to 8.2** during the first half of the initiative

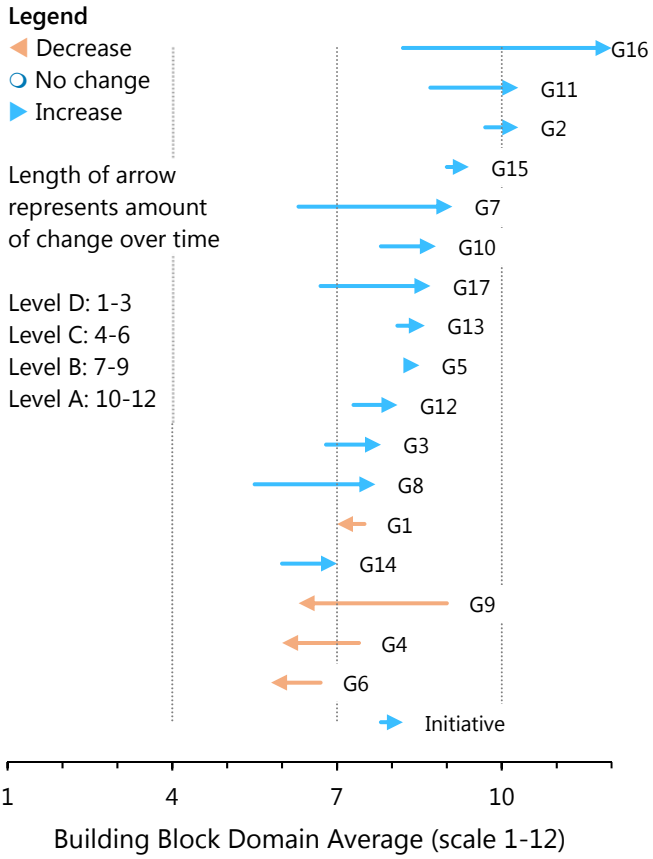
12 of 17 grantees had a higher domain score at mid-initiative than at baseline

Strengths *(highest rated questions across the cohort):* providers and staff consistently work with the same person(s) every day & non-physician team members perform key clinical service roles

Opportunities for improvement *(lowest rated questions across the cohort):* practices do not routinely assess training needs & the organization's hiring and training processes do not consistently support and sustain improvements in care

Source: Building Block Assessment (N = 17)

Change in TBC domain average by grantee and for initiative



Opportunities for peer sharing *(questions with high variability in responses across grantees):* staff training for roles and responsibilities as part of TBC & organizational hiring and training processes supporting TBC for panel and population management.

[13] Domain score is the average of the ratings for the 6 questions in this domain.

PHASE strengthened grantees' approach to empanelment and population health management

PHASE is a population health management program designed to help clinics better manage a population or panel of patients at risk for CVD. Implementation of PHASE requires clinics to identify patients at risk for CVD and proactively manage that population of patients. PHASE provides an opportunity for clinics to strengthen this capacity. Almost all grantees reported that PHASE contributed to some increase in their confidence related to panel and population management. Grantees identified several ways PHASE contributed to panel and population health management. For example, grantees:

- Developed and used targeted lists of patients for in-reach and outreach to patients who need follow up care. Two hospital grantees (G14 and G15, see figure on page 21) began using patients lists: one (G14) began stratifying their patients to identify patients with out of control or previously undiagnosed hypertension and is using those patient lists for in-reach and outreach; the other (G15) developed a more systematic process for producing patient lists for providers— "an in-reach and outreach engine"— rather than providers needing to make ad-hoc requests, these lists are now automated and standard across the clinics.
- Expanded the use of huddles and pre-visit planning tools to identify care gaps and "opportunities for action." One health center grantee (G17, see figure on page 21) implemented huddles at all clinic sites and provided care teams with daily patient visit summaries for each patient with a chronic condition. They reported that the huddles and pre-visit planning have increased awareness of patient needs and improved patient care.
- Began stratifying patients by age, diagnosis, race and ethnicity to better understand care gaps. For example, one health center grantee (G8, see figure on page 21) is using provider dashboards, stratified by age and diagnosis, to monitor performance on management of blood pressure for high risk patients.
- Made improvements to accuracy of provider panels by increasing staffing for panel management and improving how panels are captured in the EHR.

Like work in other domains, the primary challenges to effective panel and population health management were turnover and limited staff capacity. Additionally, many hospital and health center grantees reported ongoing challenges with empanelment, and noted that without accurate panels there were limitations to their ability to create and use meaningful provider-level reports to prompt changes and improvements.

The PHASE Building Blocks Assessment showed a **slight improvement in the domain score for panel and population health management** from baseline to mid-initiative.[14]

Domain score for the **cohort increased from 8.1 to 8.5** during the first half of the initiative

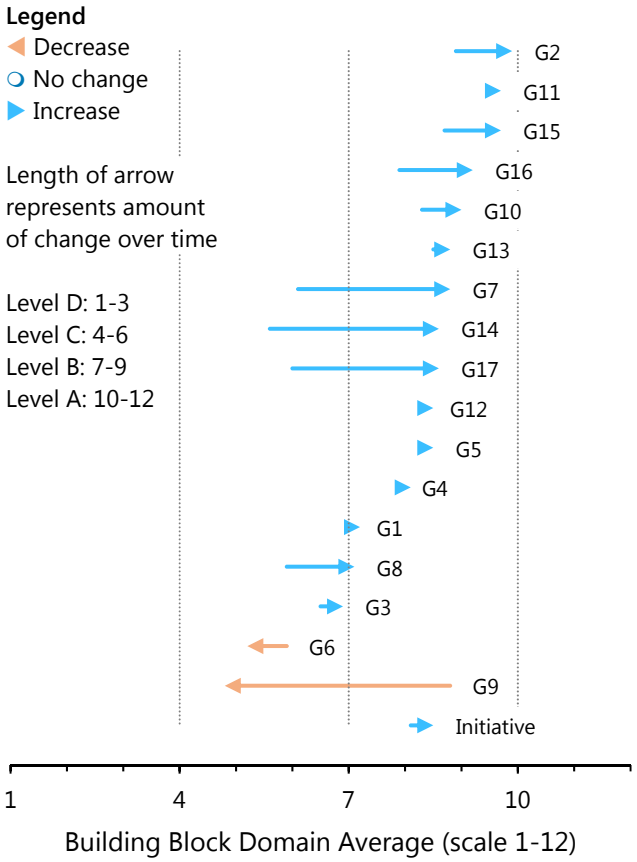
14 of 17 grantees had a higher domain score at mid-initiative than at baseline

Strength *(highest rated question across the cohort):* conducing in-reach for both preventive and chronic care

Opportunities for improvement *(lowest rated questions across the cohort):* need for more systemic and integrated provision of self-management support and care management

Source: Building Block Assessment (N = 17)

Change in panel and pop. mgmt. domain average by grantee and for initiative



Opportunity for peer sharing *(question with high variability in responses across grantees):* clinical care management that addresses both acute and planned care needs as part of panel and population management

[14] Domain score is the average of the ratings for the 8 questions in this domain

Evaluation findings: clinical quality measures

As mentioned earlier, the aspirational goal of PHASE is to eliminate preventable cardiovascular disease so that all people in our communities have controlled BP, controlled Hemoglobin A1c levels, and are tobacco-free.[15] In addition, the evaluation is also tracking process measures that relate to reducing risk of CVD and managing chronic conditions, including screening and follow-up for tobacco use, BMI and depression.[16] See Appendix D for a complete list of measures.

Grantees have made incremental improvements in BP control for patients with hypertension and diabetes

High BP increases the risk for heart disease and stroke. Nationally, research has shown that less than half of those with high BP are controlled.[17] As a result, a key outcome measure for PHASE was improving BP control rates for high risk patients. Overall, PHASE grantees showed a **slight increase in BP control for both patients with hypertension and patients with diabetes** during the first half of the program, and **exceeded the 2017 HEDIS 75th percentiles** for both (see figures on page 23). As of June 2018:

- Over **101,000 patients with hypertension (70.6%) have controlled blood pressure**
- Almost **68,000 patients with diabetes (73.9%) have controlled blood pressure**

As discussed in the implementation section of this report, grantees used multiple strategies to improve BP control, commonly used strategies related to team-based care, quality improvement, data, population health management, and evidence based practice. For example:

- Establishing nurse and pharmacist visits using standard orders and protocols
- Conducting BP check training for MAs and instituted competency checks
- Shared team and provider level data to drive improvement
- Cleaned data to improve integrity and rust
- Adopted and provided training on guidelines/protocols, including PHASE on a Page

Grantees' capacity related to the PHASE Building Blocks was positively related to their BP control rates (i.e., the higher the grantees' overall capacity score, the higher their BP control rate).[18] Additionally, clinics with a larger population of patients with hypertension or diabetes also had higher rates of BP control. This could also be an indication that larger health centers have higher capacity and therefore better rates of BP control.[19]

[15] Data on tobacco use is not currently collected.
[16] At the time of this report, data were only available for 17 of the 18 grantees
[17] Merai R, Siegel C, Rakotz M, Basch P, Wright J, Wong B; DHSc., Thorpe P. CDC Grand Rounds: A Public Health Approach to Detect and Control Hypertension. MMWR Morb Mortal Wkly Rep. 2016 Nov 18;65(45):1261-1264
[18] This relationship is not statistically significant.
[19] Positive relationship between size of hypertension patients and BP control is statistically significant. Relationship between size of diabetes population and BP control is not statistically significant.

15 of 17 grantees have **increased their BP control rate** for patients with HTN; one grantees' improvement was statistically significant

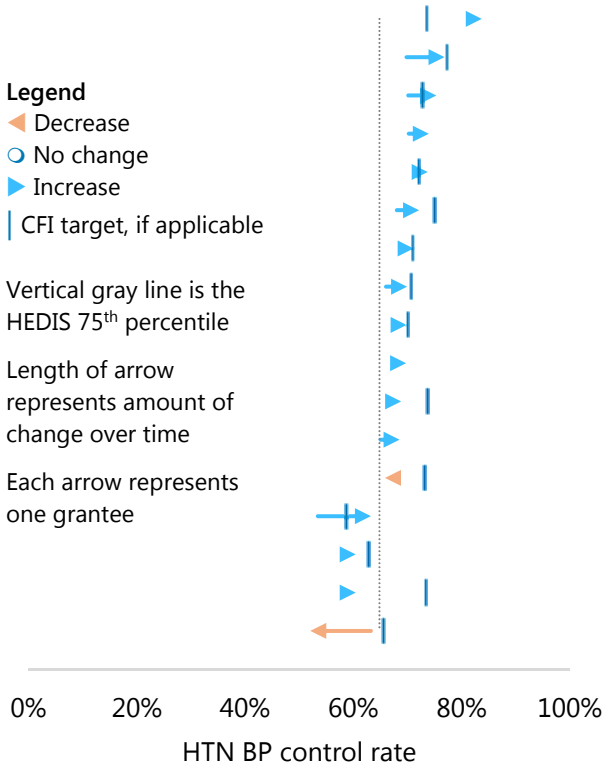
14 grantees prioritized this measure in their Charter for Improvement; of those, 12 grantees improved and five met their individual improvement goals

13 of 17 grantees are **meeting the HEDIS 75th percentile** for Medicaid (64.79%) and six grantees are meeting the HEDIS 90th percentile (71.69%)

PHASE grantees' **rate of change** (3.3%) **exceeded the rate of change in the HEDIS** 75th percentiles from 2016 to 2017 (1.6%)

Source: Clinical data report (N = 17)

Change in HTN BP control from baseline to Q2 2018



12 of 17 grantees **increased their BP control rate** for patients with DM; for two grantees, the improvement was statistically significant

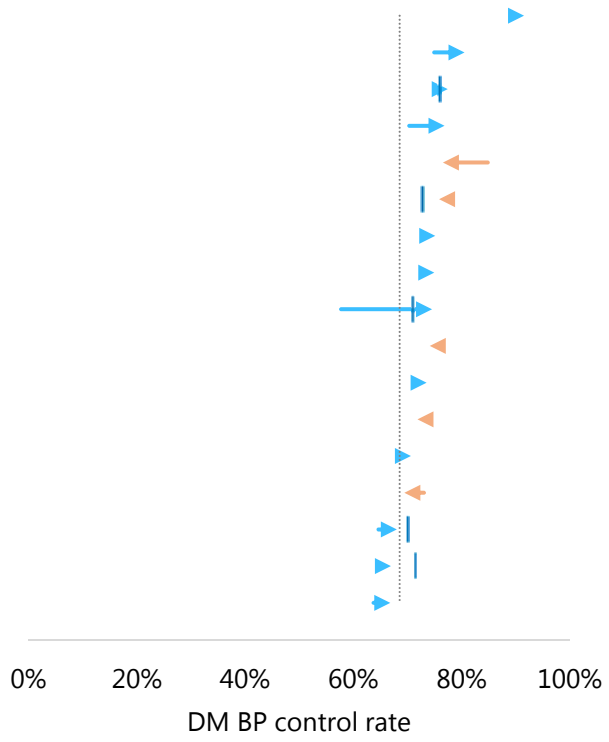
5 grantees prioritized this measure in their CFI; three met their individual improvement goal. Those that focused on this measure had a higher rate of change than those who didn't

14 of 17 grantees are **meeting the HEDIS 75th percentile** for Medicaid (68.52%) and five grantees are meeting the HEDIS 90th percentile (75.91%)

There is a statistically significant **relationship between clinics' prescription rate for the medications (statin & ACE/ARB) and BP control** for those with diabetes.

Source: Clinical data report (N = 17)

Change in DM BP control from baseline to Q2 2018

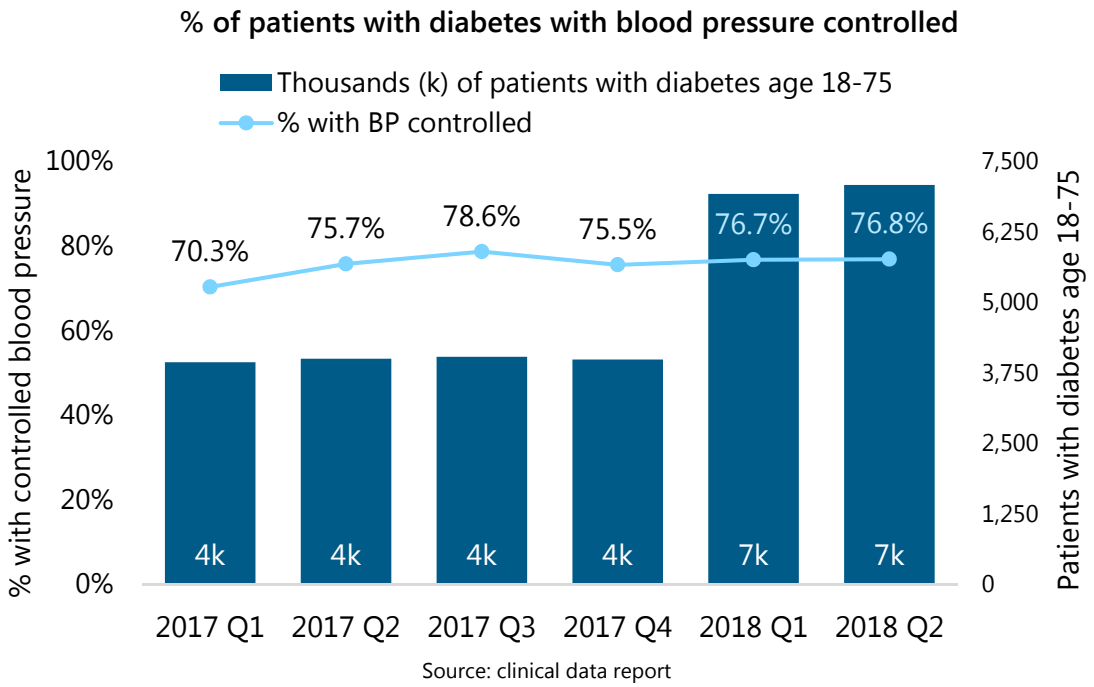


Community Medical Centers improved BP control among their patients with diabetes. They were among the most improved grantees anda top performer across the initiative. Some of the strategies they used included:

Data quality and reporting:

- Improved data mapping of PHASE measures for accurate reporting
- Created i2i toolkit to support population management. Toolkit included protocols, report set-ups, mapping instructions, and data element definitions for PHASE measures

They also enhanced their team-based care and quality processes through adding new team members (e.g. physician diabetes clinical champion), establishing work flows for BP rechecks, and conducting BP training and competency checks.



Source: clinical data report

Grantees reported a decline in A1c control rates, which mirrors the national trend

Hemoglobin A1c (blood sugar) control for patients with diabetes is not directly related to cardiovascular disease. However, patients with diabetes are a target population for PHASE because they are at higher risk for CVD. Given PHASE's focus on population health management for patients with diabetes, the evaluation monitored A1c control—a key metric for control of a patient's diabetes—across the cohort.

As of June 2018, almost **64,000 patients with diabetes (69.4%) had their A1c in control** across participating PHASE clinics. During the first half of the initiative, there was a slight decline in A1c control rates across the initiative, with nine grantees having lower A1c control rates at mid-point than at baseline. While the initiative trend shows a slight decline, the national benchmark also declined from 2016 to 2017. PHASE grantee **performance remains above the HEDIS 75th percentile from 2017 and close to the 90th percentile**. Grantees addressed A1c control among patients with diabetes through team-based care—by developing nurse protocols, hiring chronic care managers to manage complex patients, adding pharmacists to care teams to help manage these patients—and quality improvement, such as performing PDSA cycles for A1c testing.

8 of 17 grantees have **increased their A1c control rate** for patients with diabetes

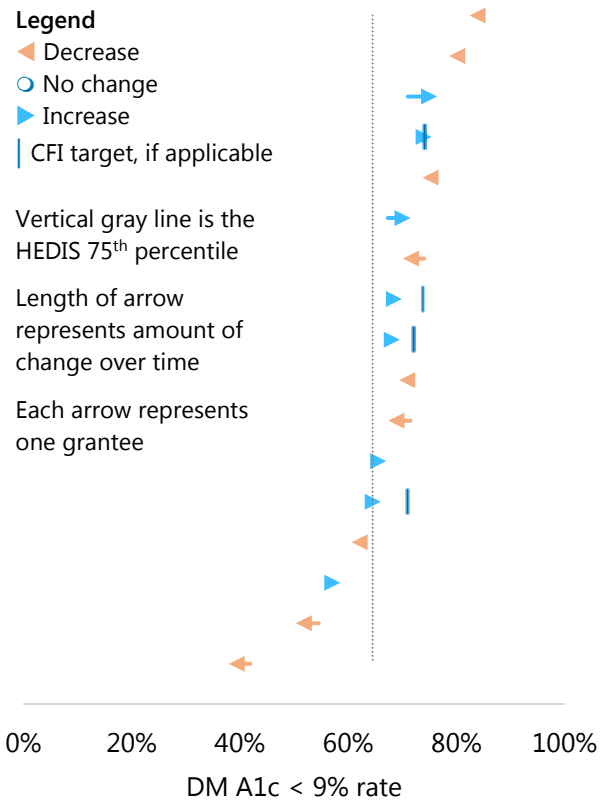
4 grantees prioritized this measure in their CFI, of which 1 met their individual improvement goal. Those that focused on this measure had a higher rate of change (1.8%) compared to those who didn't identify this as a focus (–1.5%)

13 of 17 grantees are **meeting the HEDIS 75th percentile** for Medicaid (64.48%) and six grantees are meeting the HEDIS 90th percentile (70.93%)

PHASE grantees' **rate of change** (–0.7%) **exceeded the rate of change in the HEDIS** 75th percentiles from 2016 to 2017 (–5.9%)

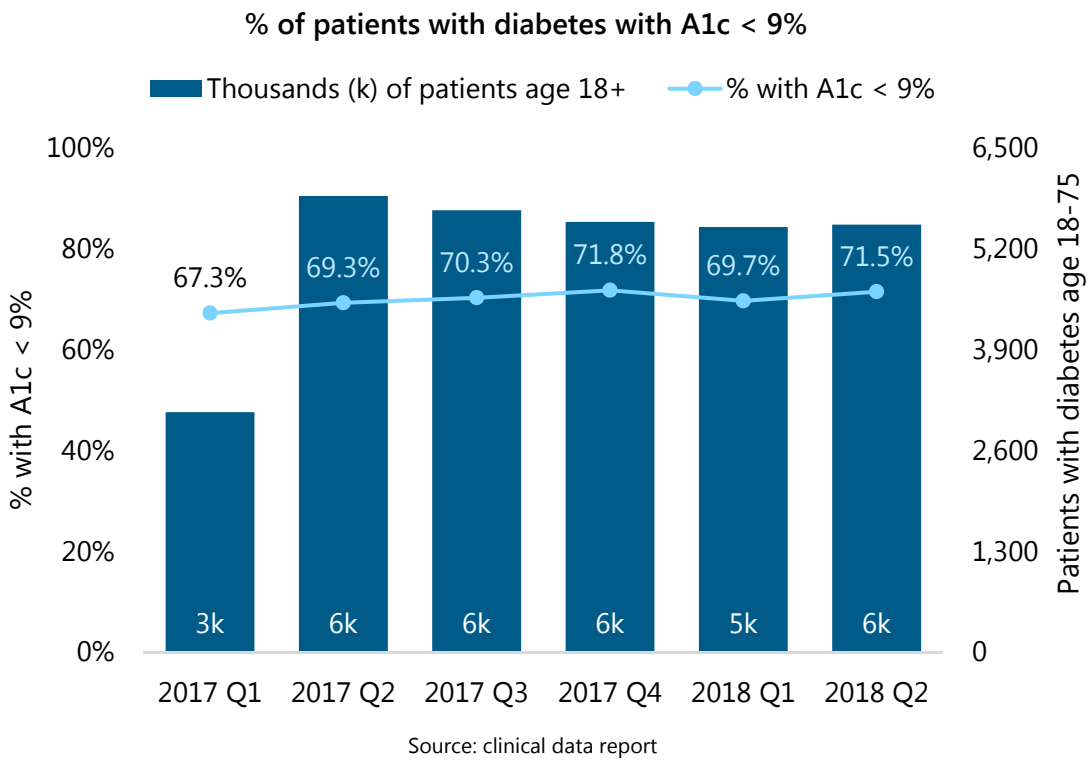
Source: Clinical data report (N = 17)

Change in DM A1c < 9% from baseline to Q2 2018



Alameda Health System improved their A1c control for patients with diabetes. They were among the most improved grantees in this measure. Their improvements were made through enhancing their team-based care. Some of the strategies they used included:

- Standardizing scheduling templates for multi-disciplinary chronic care teams, including pharmacists at all sites
- Using a chronic care manager model to support patients with diabetes
- Establishing nurse protocols for diabetes management



Source: clinical data report

PHASE grantees have achieved high levels of screening for tobacco use with follow-up when needed

Tobacco use is a significant risk factor for cardiac events. While tobacco use is not directly measured in PHASE, the measure that is tracked captures both whether a patient is screened for tobacco use, and if they are a current tobacco user, that they've received some sort of follow-up (such as brief interventions, counseling, or pharmacological interventions).

Over 90% of adults (aged 18+) who receive care at participating clinics have been screened for tobacco use and received follow-up if they use tobacco. These data are for all adult patients seen by the participating clinics, not only the patients at high risk for CVD. This means that almost **400,000 patients** were screened for tobacco use. Since baseline, the PHASE initiative had a **statistically significant improvement** over time, and the initiative has **surpassed the 2016 UDS average**.

Grantees mostly focused on data improvements to better capture the clinical work that was happening, such as retraining MAs on workflows for documentation, improving data mapping and validation, and implementing clinical decision support alerts in the EHR. Some grantees trained care teams on motivational interviewing to talk to patients about behavior change.

9 of 16 grantees have **increased their rate of screening (with follow-up when needed)** for patients aged 18+. Five had statistically significant increases. 1 grantee was unable to report this measure

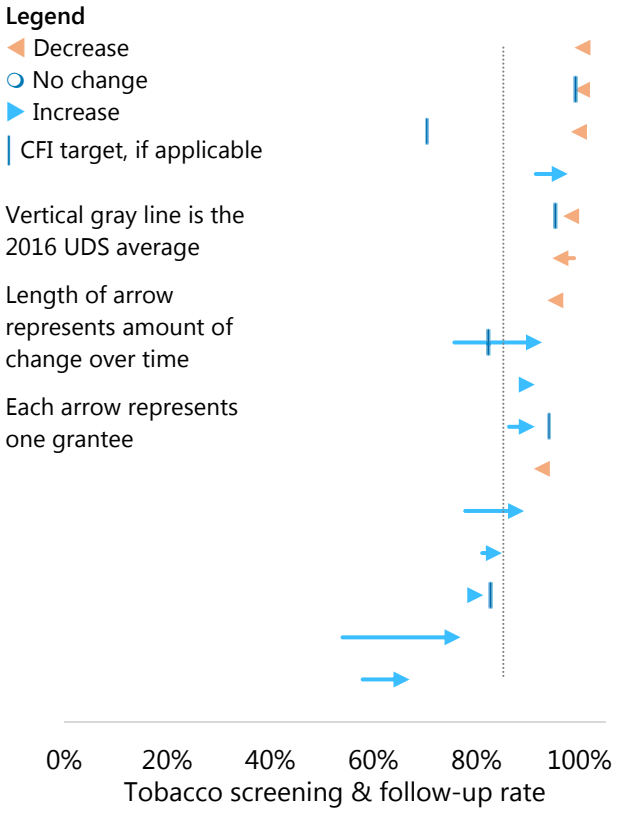
6 grantees prioritized this measure in their CFI; 3 met their individual improvement goals for this measure

12 of 16 grantees are **meeting the UDS average** (82.8%)

PHASE grantees' **rate of change** (6.7%) **exceeded the rate of change in the UDS** averages from 2015 to 2016 (2.9%)

Source: Clinical data report (N = 16)

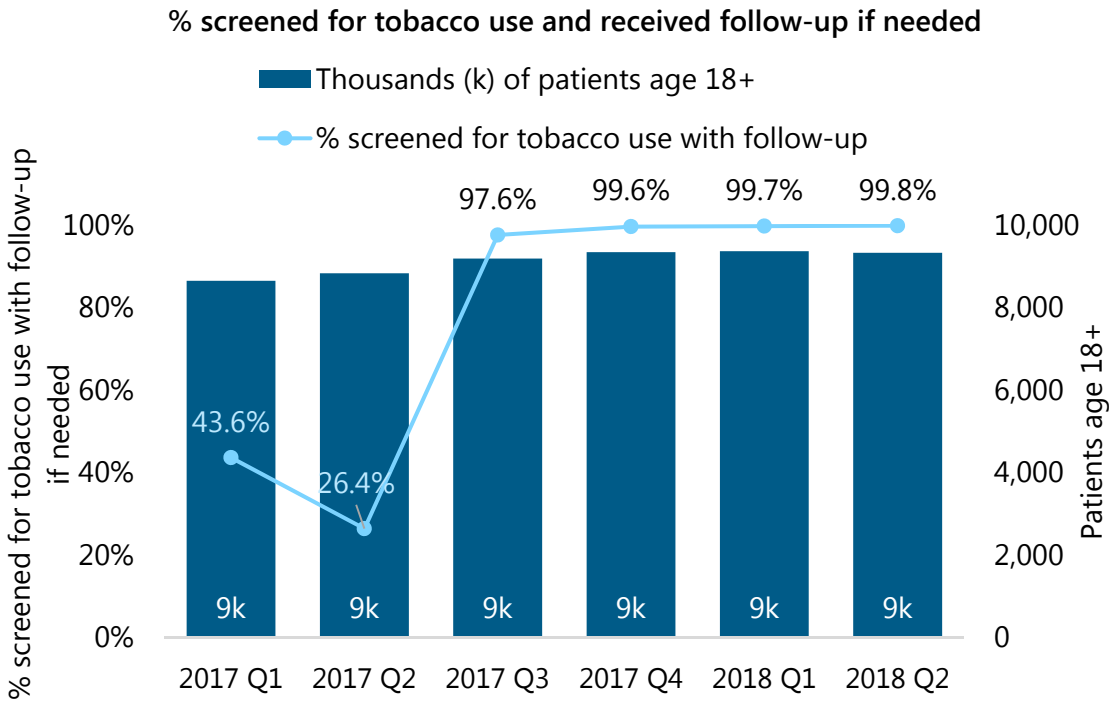
Change in tobacco screening & follow-up from baseline to Q2 2018



Axis Community Health (part of the Community Health Center Network) improved their rates of tobacco screening and follow up. They achieved their improvements through improved data capture and quality, including:

- **Data:** MA-specific data reports were provided to hold staff accountable to the work flow
- **Quality improvement:** Used a data audit tool to ensure staff were using the structured fields in EHR instead of free text boxes, and instituted compliance checks

They also improved follow-up support for patients by retraining MAs in motivational interviewing and brief interventions.



Source: clinical data report

Grantees improved accuracy of data for BMI screening & follow-up

High BMI is a risk factor for CVD, so the evaluation monitored grantee performance related to BMI calculation and whether follow-up was provided if BMI was outside of normal parameters.

Across PHASE participating clinics, **60.8% of adult patients had their BMI calculated and received follow-up if BMI was outside of normal parameters**. Like with tobacco screening the reach for BMI screening applies to all adult patients seen by the participating clinics, which means that **304,900 adult patients** received screening and follow-up support related to BMI.

Since baseline, the PHASE initiative had a **statistically significant improvement** over time for BMI calculation with follow-up when needed. However, the initiative average is still falling just below the national benchmark of the 2016 UDS average.

Grantees improved BMI calculation and follow-up mostly through data improvements. The most common data improvements were: improving data capture by creating click boxes versus free text; developing standard workflows for relevant team members; and regularly reviewing data with all staff to ensure data visibility and accountability.

9 of 16 grantees have **increased their rate of screening (with follow-up when needed)** for patients aged 18+. Two had statistically significant increases. 1 grantee was unable to report this measure

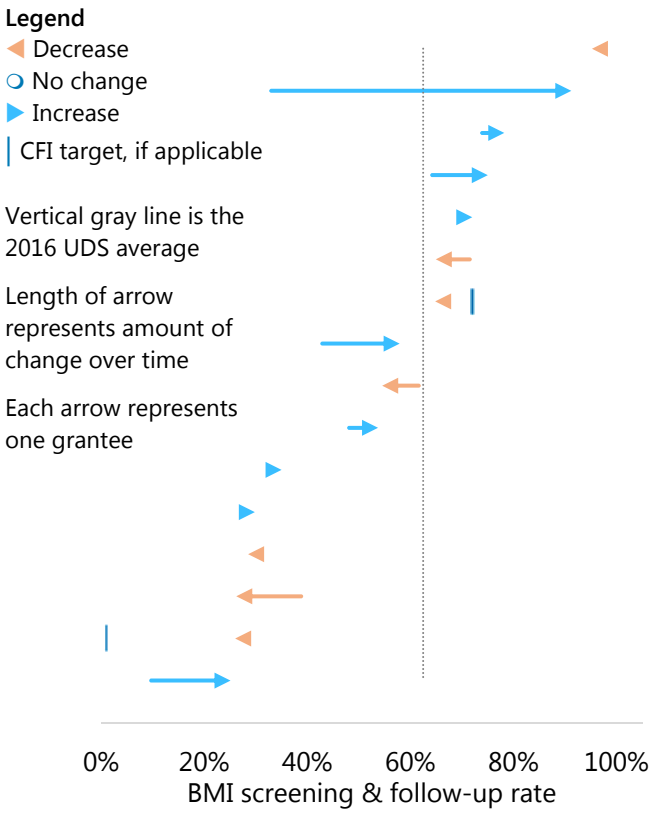
2 grantees prioritized this measure in their CFI; 1 met their individual improvement goal for this measure

7 of 16 grantees are **meeting the UDS average** (62.5%)

PHASE grantees' **rate of change** (22.4%) **exceeded the rate of change in the UDS** averages from 2015 to 2016 (5.2%)

Source: Clinical data report (N = 16)

Change in BMI screening & follow-up from baseline to Q2 2018



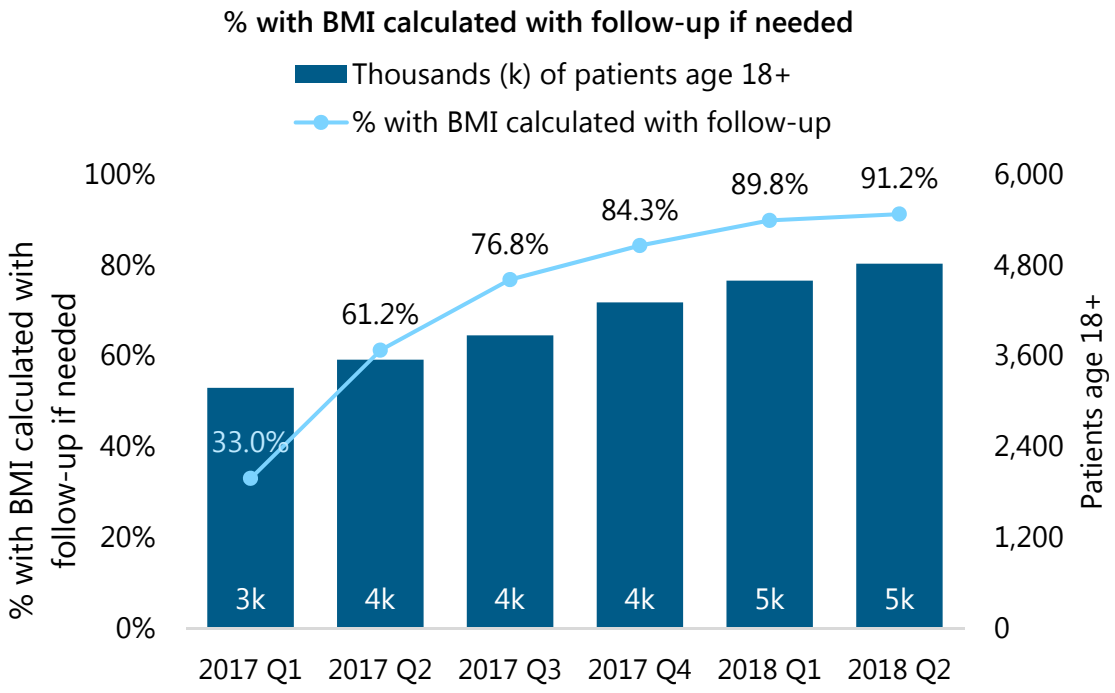
Sacramento Native American Health Center demonstrated significant improvements in their BMI screening and follow-up. They improved very low baseline rates to become one of the top performers across the initiative. They improved data capture and quality through:

Quality improvement:

- Identified errors in staff and provider documentation of measures and addressed issues through training

Data mapping and capture:

- Focused on getting all PHASE measures mapped correctly to build trust in data
- Built automations into their EHR (Next Gen) to improve data capture



Source: clinical data report

Grantees dramatically improved depression screening & follow-up

Many individuals with chronic conditions also experience depression. Because of these co-occurring conditions, it is important to the management of these populations to also screen for and manage depression care, when needed. As a result, the evaluation monitored grantee performance on depression screening and follow-up.

Across the PHASE initiative, **59% of patients aged 12+ were screened for depression and received follow-up if they screened positive**. Like tobacco and BMI, the reach for this measure is all patients of a certain age that receive care at participating health centers. The PHASE initiative had a **statistically significant improvement** over time; it was the most significant improvement across all measures during the first half of the initiative. However, like BMI, the initiative average was still below the national benchmark of the 2016 UDS average.

Grantees made substantial progress in this measure primarily through:

- **Screening:** Screening was rolled out through standing orders and MA training
- **Evidence-based practice:** Several grantees were focused on behavioral health integration efforts, including workflow improvements for warm hand-offs

Data improvements also contributed to grantees' progress. Grantees standardized data capture with structured fields in the EHR and improved data mapping from the EHR to reporting tools.

13 of 16 grantees have **increased their rate of screening (with follow-up when needed)** for patients aged 12+. Five had statistically significant increases. 1 grantee was unable to report this measure.

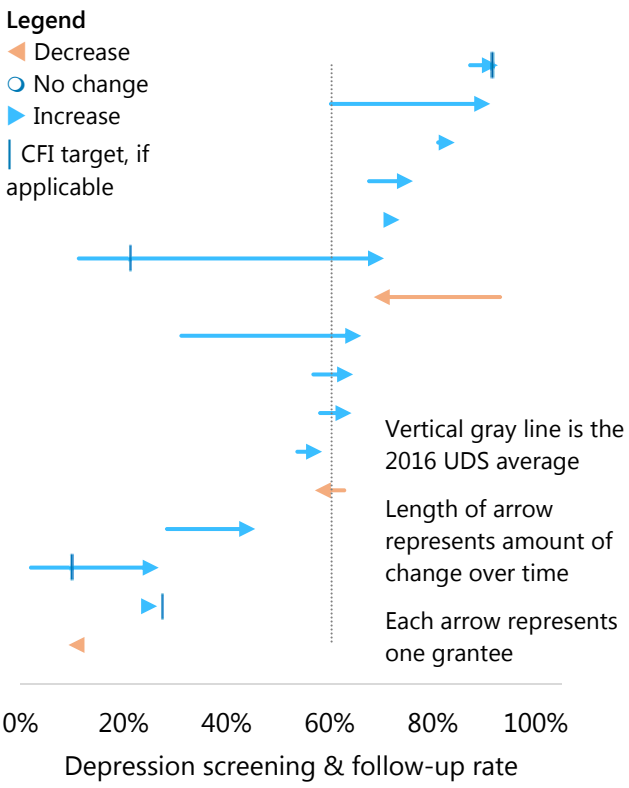
4 grantees prioritized this measure in their Charter for Improvement; 3 met their individual improvement goals

10 of 16 grantees are **meeting the UDS average** (62.5%)

PHASE grantees' **rate of change** (124.9%) **significantly exceeded the rate of change in the UDS** averages from 2015 to 2016 (19.3%)

Source: Clinical data report (N = 17)

Change in depression screening & follow-up from baseline to Q2 2018



Alameda Health System leveraged PHASE and PRIME alignment to improve depression screening and follow-up. They are one of the grantees that have demonstrated the most improvement in this measure. In the first reporting period (2017 Q1) they were unable to report this measure, and by 2018 Q2, they achieved a rate of 70.5%. They achieved their improvements through:

Evidence-based practice:

- Piloted workflow for universal BH screening; developed standard work; expanded universal BH screening to all sites

Quality improvement:

- Developed process measures to audit and provide feedback to care teams on screening rates and follow-up

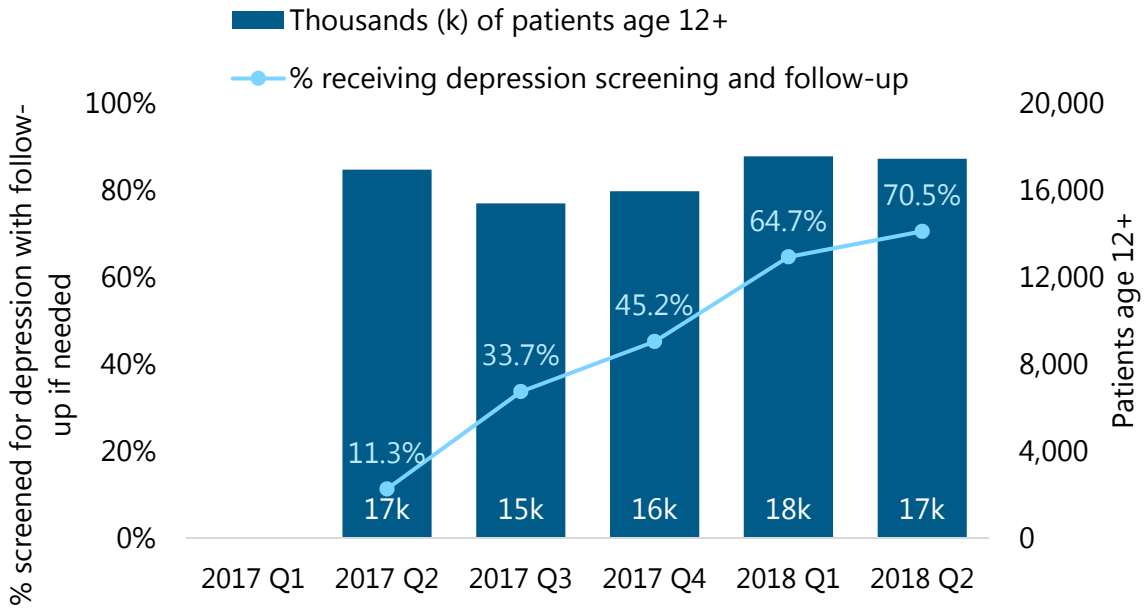
Data:

- Used real-time data to measure fidelity to behavioral health screening standard work at clinic site, provider, and MA levels
- Held monthly meetings with leadership to review performance, share best practices, and problem-solve

Quality improvement:

- Identified and resolved errors in staff and provider documentation of measures

% screened for depression and received follow-up if needed



Source: clinical data report

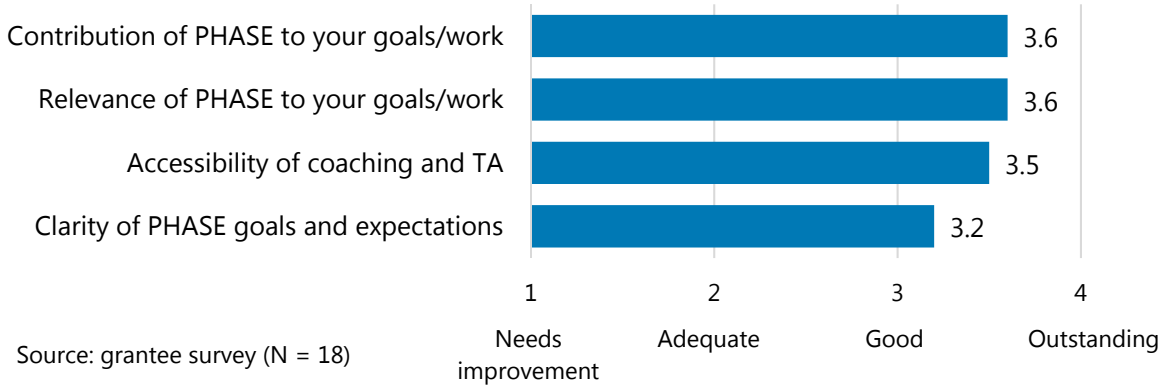
Evaluation findings: technical assistance and support

PHASE is viewed highly by participants; at mid-point, teams were engaged and on track to meet their goals

Overall, grantees were satisfied with their participation in PHASE.[20] They indicated that it contributed to improving cardiovascular health in their community, and that it was relevant to and contributed to their organization's goals and work. They also had a favorable rating of the accessibility of PHASE coaching and TA and the clarity of the program goals and expectations (see figure below).

"PHASE has given us a lot of opportunities to think about how we work with the clinics, the patients, and how to work on improving patient health."

Grantees rating of contribution, relevance, accessibility and clarity:



Source: grantee survey (N = 18)

In addition to providing high level feedback about the program, PHASE grantees were asked to comment on their team's participation in PHASE.

Team engagement was high across almost all grantees—12 of 18 grantees indicated that their entire team is actively engaged. Those that reported challenges with engagement cited: turnover; competing organizational priorities, such as EHR transitions; and need to build capacity related to data mapping and reporting. Only one team reported that they are not at all actively engaged. The Support Team has been working with them to ensure leadership involvement to build internal support for PHASE to help facilitate successful participation.

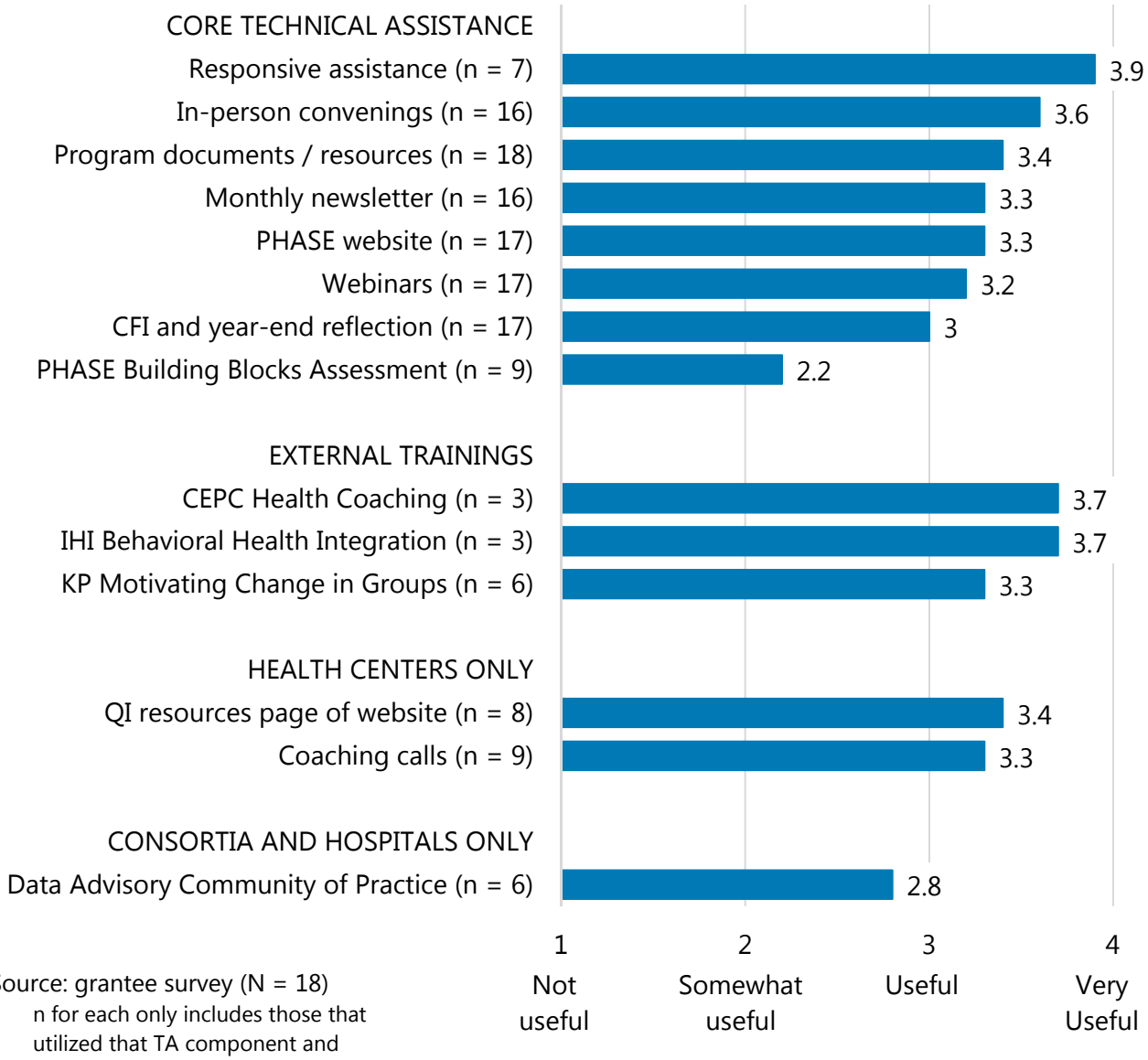
All grantees are on track to meet goals at this point in the initiative. However, most (12/18) said that they needed ongoing support to meet their goals.

"I think the program is great! PHASE has really provided structure and tools needed to achieve [our goals]."

[20] Satisfaction had an average 3.7 on scale of 1-4 ("not satisfied", "somewhat satisfied", "satisfied", and "very satisfied."

Grantees reported that PHASE technical assistance and support were useful and contributed to their progress

As discussed above in the TA model and support structure section, the PHASE Support Team, led by CCI, provides technical assistance and support to grantees through a variety of modalities. Some of the support is provided to all grantees as a core part of the program, and other support is optional, responsive, or focused on a subset of grantees (e.g., health centers). Grantees rated the responsive assistance and in-person convenings as the most useful components of the technical assistance program. This section provides more detailed feedback on the major components of the TA model.



Source: grantee survey (N = 18)
n for each only includes those that utilized that TA component and responded to question in the survey

Responsive assistance was rated very highly in the grantee survey (average of 3.9) among those who have taken advantage of this offering. However, only about half of the grantees (8/18) requested and received responsive assistance. These eight grantees submitted a total of 29 responsive assistance requests (23 of which came from just three grantees). CCI has responded to and met the needs for 83% of the requests submitted. Those that have not submitted a responsive assistance request also rated it as useful (average of 3.3; not shown). This suggests that grantees like that it's available but may not know how to best utilize available resources.

Convenings were rated as very useful, which was underscored by very high satisfaction in post-convening surveys (more than 80% of respondents rating the convenings as good or excellent) and consistent grantee feedback during interviews and site visits that the convenings are one of the most valuable aspects of PHASE support.

Grantees particularly appreciated the opportunities at the convening to network and learn from others. After each convening, grantees responded with a high level of agreement with the statement, "I made connections to help strengthen my team's PHASE work."

The convenings were also useful in providing information and tools that grantees could apply to their PHASE efforts. When asked in interviews, most grantees were able to provide concrete examples of something they took back from a convening and applied to their work.

"During our last PHASE convening we were able to network and learn what strategies other health centers have implemented during their PHASE work. … We now plan to utilize some of those ideas at our health centers to further our PHASE target measures."

"The most beneficial part [of PHASE] is hearing from other systems – what's worked, what hasn't worked. They're in the trenches dealing with operational issues."

Webinars were rated as "useful" (average usefulness hovering around 3.1). All grantees participated in at least two of the ten content-specific webinars that CCI offered. Eight grantees had attendees at more than eight of these opportunities. The webinars with the highest attendance included: the two "Wireside Chat" webinars, the first webinar in the Nurse-Run Care series, and the data analytics webinar on using run charts.

The "Wireside Chat" webinar on the new hypertension guidelines (Dr. Mike Rakotz) was rated as the most useful. Grantees reported that webinars are the most useful when they provide practical tools—as one grantee stated, *"when things get into operational details and example protocols, workflows, or algorithms."*

Program-specific resources, the monthly newsletter, and the PHASE website were all rated between useful and very useful (see figure on page 34). The health centers, on average, rated the program documents more highly than the public hospitals and consortia did (3.7 vs 3.2 average usefulness). This may be because of a connection between the program documents and the coaching that the health centers received (discussed more below).

Monthly newsletter: The average open-rate of newsletters was 32.5% and was highest just prior to convenings, reach just over 40%.

Website: The website has 3,400 unique page views, out of 5,900 total page views. The top most viewed pages were the homepage, June 2018 convening page, general resources page, the Nurse-Run Hypertension Care page, and the Actionable PHASE Tools i2i Tracks page.

Charter for Improvement: On average, the Charter for Improvement (CFI) was rated as useful (average of 3). The health center grantees rated the CFI as more useful (3.1) than the public hospitals and consortia did (2.9). The consortia saw the CFI as a challenge because they don't have much control over the specific goals that their member health center organizations set.

PHASE Building Blocks assessment: The Building Blocks assessment was rated as only somewhat useful. At the time of completing the survey, grantees had completed the assessment a year and a half earlier (they had not yet completed the mid-initiative assessment), which could have influenced the lower rating.

External trainings offered included trainings by Institute for High Quality Care (IHI), health coach trainings by Center for Excellence in Primary Care (CEPC), and "motivating change" trainings by Kaiser Permanente. Across these categories, there were 18 external trainings offered. Twelve grantees have taken advantage of these external trainings, with a few grantees using the offerings more than others. There were three high utilizers, with attendees at between 6 and 13 of these optional trainings. Two of these high utilizers were also the high utilizers of the responsive assistance. Those that took advantage of these opportunities, rated them between useful and very useful (see figure on page 34).

Coaching for health center grantees was viewed as highly valuable. Health center grantees indicated that the coaching they received, and the connection to QI tools on the program website, were both useful. This is consistent with feedback that they provided on a quarterly "pulse" survey and with feedback from interviews, where most grantees identified the one-on-one coaching as one of the most valuable components of the program.

"The monthly coaching calls with the CCI team members and [our coach] Dr. Jerry Osheroff have helped immensely to keep focus on advancing progress each month and have also created opportunities to explore tools such as the *HRSA Hypertension Change Packet*, the *CDS-QI Worksheet*, and the *PHASE on a Page Medication Algorithm*."

Grantees appreciated the ongoing support, motivation and accountability provided during coaching calls. All health center grantees (n=9) reported that the coach made at least some contribution to their progress, and that they learned from the coach's extensive experience and the tools that were provided. The two main areas of

contribution were: 1) providing tools and resources that they otherwise could not have accessed; and 2) guiding the focus and sequence of their work.

Grantees reported a few minor challenges with coaching early in the initiative. Challenges were related to ensuring clear expectations about participation on the calls and tailoring the frequency of the calls. This feedback was provided in real time and addressed by CCI and the coach during the first half of the initiative.

The Data Advisory Community of Practice (CoP) was viewed as somewhat useful among the consortia and public hospital grantees who participated. The Data Advisory CoP was created to discuss and trouble-shoot common data challenges facing the public hospital and consortia grantees, and to identify areas of needed collaboration. The agendas varied from quarter-to-quarter based on common questions and challenges, and topics may not always be relevant or of interest to all grantees. Because the health center grantees had one-on-one coaching, they were not included in this quarterly meeting.

Summary and considerations

PHASE's aspiration is to eliminate preventable cardiovascular disease in Northern California communities. Participation in PHASE continued to increase during the first half of the 2017-2019 initiative—almost 200 clinic sites are providing evidence-based care to over 200,000 patients at high risk for cardiovascular disease. Grantees demonstrated incremental improvements and a high level of performance on all key clinical quality metrics—meeting or exceeding HEDIS and UDS national benchmarks for most metrics. Grantees leveraged PHASE to build capacity for population health management, team based care, quality improvement, and data analytics. Grantees reported high levels of confidence that their PHASE work would be sustained because it aligns with organizational priorities and many processes and principles are being institutionalized. Overall, grantees were very satisfied with initiative participation and indicated that PHASE is contributing to the cardiovascular health of their communities.

In looking forward to the second half of the initiative, we offer the following considerations for technical assistance and support to maximize the impact of PHASE on the community.

Provide focused assistance to grantees on achieving their goals/targets identified in the Charter for Improvement. At the beginning of the initiative, grantees selected priority metrics and identified individual improvement goals in their Charter for Improvement. At the time of this report, most grantees improved their performance on key metrics and were meeting or exceeding national benchmarks. However, grantees met only 18 out of the 43 of improvement targets that were set across all measures and grantees. This could be because the goals set were unrealistic, weren't well aligned with their work, or that more focused effort is needed to further accelerate progress. Grantees will all continue to focus on improving BP control, which provides an opportunity to identify and share strategies that are working to improve control rates. The Charter for Improvement could also be used to facilitate grantee reflection on progress towards their goals and identify promising strategies and challenges. For the most part, the improvement targets identified for the second half of the initiative were less ambitious, and potentially more realistic, than those set at the beginning.

Prompt reflection and help grantees make connections between PHASE and other organizational and strategic imperatives. The success of PHASE implementation was bolstered by its alignment with grantees' organizational priorities (e.g., PRIME, Pay-for-Performance, organizational dashboards, etc.). The Support Team should continue to prompt grantees to identify current and potential areas for alignment, and ways that PHASE could be leveraged to advance other priorities.

Continue to explore ways to help grantees mitigate the impact of turnover. The most common challenge that grantees face is high rates of turnover in both staff and leadership positions. Turnover makes it more challenging to implement and institutionalize PHASE processes and principles. CCI has been developing an onboarding playbook to provide

resources to grantees to use as they orient new staff to the initiative. The Support Team should monitor the use and value of the playbook and explore other ways to help grantees manage and mitigating the negative impacts of staff turnover.

Continue to facilitate opportunities for peer learning. Grantees consistently report that one of the most valuable and useful aspects of participation is in-person convenings and the opportunity to networking with and learning from their peers. Most grantees can provide concrete examples of how they have applied learnings from other grantees to their own work. The Support Team should continue to highlight Bright Spots and help facilitate peer learning.

Explore opportunities for responsive assistance with non-utilizers. Grantees provided positive feedback about CCI's responsiveness and the customized support that it provides. Responsive assistance was rated as very useful by those that had received it. However, only about half of the grantees have submitted requests for responsive assistance. Interestingly, several grantees who had not used responsive assistance, also indicated that they found it useful. If there is a desire to increase utilization of responsive assistance, the Support Team should follow-up with grantees who haven't submitted any requests, particularly those who indicated that responsive assistance was useful.

Explore ways for technical assistance to respond to emerging areas of interest among the PHASE grantees. Grantees continued to innovate, leverage, and build on their PHASE efforts. As such, new areas of focus emerge. The PHASE Support Team should consider ways to respond to and facilitate dialogue about topics that are of interest to the grantees and aligned with the goals of the initiative. Some emerging areas of interest include:

Self-measured blood pressure monitoring (SMBP): The workshop on SMBP offered during the November 2017 convening was rated very highly, and this is a strategy that is of interest to many grantees.

Health equity: Grantees are beginning to look at health equity and racial/ethnic disparities in cardiovascular health. For example, many of the hospitals are focusing on disparities in hypertension control as part of PRIME.

Social determinants of health (SDOH): Several grantees have expressed interest in assessing SDOH to try to further improve their population health management efforts.

Changing clinical guidelines: Over the course of the first half of the grant, national hypertension guidelines became more stringent and new studies are frequently published on improving BP control. Grantees have requested ongoing support in helping to translate new evidence into practice and in understanding implications of new studies.

Appendix A: Participating clinics/health centers within the public hospitals and consortia

Consortia	Health centers participating	Publ. hosp.	Clinics participating
Community Health Center Network (CHCN)	Asian Health Services Axis Community Health La Clinica de la Raza Lifelong Medical Center Native American Health Center Tiburcio-Vasquez Health Center Tri-City Health Center West Oakland Health Center	Alameda Health System (AHS)	Eastmont Wellness Hayward Wellness Highland Wellness Newark Wellness
Community Health Partnership (CHP)	Asian Americans for Community Involvement Gardner Family Health Network Indian Health Center of Santa Clara Valley MayView Community Health Center North East Medical Services Planned Parenthood Mar Monte Ravenswood Family Health Center School Health Clinics of Santa Clara County	San Francisco Health Network (SFHN)	Castro Mission Health Center Chinatown Public Health Center Curry Senior Center Family Health Center Maxine Hall Health Center Ocean Park Health Center Positive Health Program Potrero Hill Health Center Richard Fine People's Clinic Silver Avenue Family Health Center Southeast Health Center Tom Waddell Urban Health Center
Redwood Community Health Coalition (RCHC)	Alliance Medical Center Coastal Health Alliance Communicare Health Centers Marin Community Clinics Petaluma Health Center Santa Rosa Community Health Centers Sonoma County Indian Health Project West County Health Centers	San Joaquin General Hospital (SJGH)	Primary Medicine Clinic Family Medicine Clinic
San Francisco Community Clinic Consortium (SFCCC)	HealthRight 360 Mission Neighborhood Health Center North East Medical Services St. Anthony Medical Center South of Market Health Center Native American Health Center	San Mateo Medical Center (SMMC)	Coastside Clinic Innovative Care Clinic Fair Oaks Health Center Adult South San Francisco Adult Ron Robinson Senior Care Clinic Daly City Clinic
		Santa Clara Valley Medical Center (SCVMC)	Valley Health Center Downtown Valley Health Center East Valley Valley Health Center Gilroy Valley Health Center Milpitas Valley Health Center Moorpark Valley Health Center Sunnyvale Valley Health Center Tully Geriatrics

Appendix B: Evaluation approach and methods

Kaiser Permanente Northern California Community Benefit Programs engaged the Center for Community Health and Evaluation (CCHE) to conduct the initiative evaluation of PHASE, which runs from January 2017 to December 2019.

The goals of the evaluation of PHASE were to understand the impact of the program, drive program improvement, and inform the field. The evaluation was guided by an initiative logic model (**Appendix C**) and the following evaluation questions:

I. PHASE clinic implementation of the medication protocol

1. To what extent has the reach of PHASE increased in the safety net?
2. To what extent has PHASE been successfully implemented in clinics?
3. To what extent have practice changes been sustained and spread?

II. PHASE clinic quality and system outcomes

4. Has PHASE influenced clinics' ability to engage in population health and chronic care management? If so, how?
5. Has PHASE improved clinics' performance on clinical quality measures? If so, how?

III. PHASE support team technical assistance/training

6. To what extent did grantees engage/participate in coaching, training, technical assistance?
7. Has the training, technical assistance and support been successfully implemented?
    a. To what extent did technical assistance and training contribute to improving grantee/clinics capacity?
    b. *[Consortia/Public Hospital only]* How effective was the PHASE support team at building capacity of the consortia/public hospital systems to support their member clinics?
    c. What was the relative contribution of different methods of TA for improving capacity and sustainability? (e.g., coaching, webinars, convenings, resources)
    d. What have been the benefits and challenges of participation for grantees?

IV. Overall program

8. What are the readiness factors for grantees, health centers and clinics to effectively engage in the initiative?
9. What improvements could be made to the initiative to increase scale and impact?

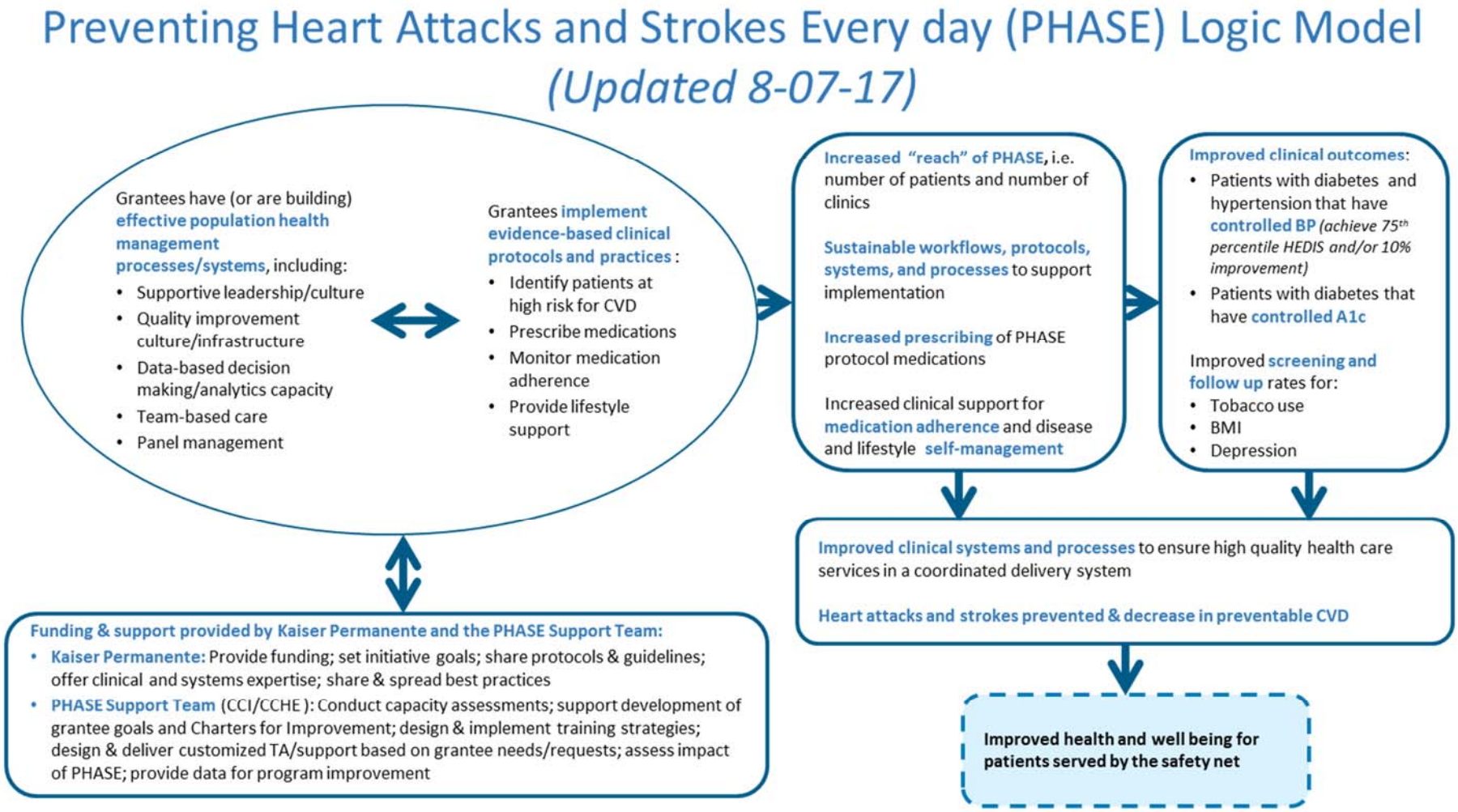
CCHE used a mixed methods approach to answer these questions, with the data collection methods outlined below.

Data collection method	Purpose/Use of data	Analysis	Sample
Site visits	Conducted annually with the consortia and public hospitals to learn about teams' progress & experiences with program participation,	Thematic analysis of interview notes, using a-priori codes based on evaluation and interview questions.	n=9 Grantees decide which team members to involve
Reflective calls	Conducted bi-annually (starting in 2018) with the health center teams to learn about teams' experiences with program participation, including progress, challenges, and contribution of and need for further technical assistance.	Thematic analysis of interview notes, using a-priori codes based on evaluation and interview questions.	n=9 Grantees decide which team members to involve
Quarterly clinical data reports	Reports on a set of metrics for assessing progress on clinical measures, including: reach, prescription rates, and select HEDIS and UDS measures. Grantees reported quarterly on these metrics. See Appendix D for the list of metrics.	Analyze trends at the cohort, grantee and health center/clinic levels. Compare most recent report to program-wide targets. Grantee-level reports produced and provided back to grantees.	n=18 reports for 6 quarters
Quarterly grantee check-in calls	To check in with all grantees about their data and get progress updates. Health center grantee calls took place concurrently with existing coaching calls.	Case level analysis to update internally-facing grantee profiles.	n=18 calls per quarter (no calls Q4 2017 for hospitals & consortia) 2-4 core PHASE team members participate
PHASE Building Blocks Assessment[21]	Conducted at beginning, middle and end of the initiative to: 1) assess changes in clinic capacity; 2) inform technical assistance offerings; 3) promote dialogue within the clinic/health center to identify strengths and opportunities for improvement. Consortia and hospitals were asked to administer the assessment to participating clinics.	Baseline and midpoint analysis to determine average domain scores, as well as question averages. Grantee-level reports produced and provided back to grantees.	n=69 sites (baseline) n=62 sites (midpoint) Only sites that had both baseline and midpoint assessments were included in analyses

[21] If you would like a copy of the PHASE Building Blocks assessment, please contact Jennie Schoeppe at jennie.a.schoeppe@kp.org

Data collection method	Purpose/Use of data	Analysis	Sample
Post-convening satisfaction surveys	Conducted in-person surveys after each convening to get feedback from participants regarding their satisfaction with the content and structure of the convening, and suggested improvements. Feedback was shared with the TA provider after each event, to help them understand uptake of content and incorporate substantive feedback into future convenings.	Descriptive statistics Theme qualitative responses	3 surveys, n=54-63 per survey excluding Kaiser Permanente staff and support team members 72%+ response rates to each survey
Quarterly pulse survey	Conducted online survey to ask health center grantees for feedback on working with the coach and their experience with the program.	Descriptive statistics Theme qualitative responses	3 surveys, n=9 grantees; n=11-17 responses per survey Annual survey replaced pulse survey in Apr. 2018 2 most involved team members from each grantee were chosen
Annual grantee survey	Conducted online survey to ask grantees for feedback on participating in the program and contribution TA made to their capacity for population health management.	Descriptive statistics Theme qualitative responses	n=18 grantees; 26 individuals. Apr. 2018. Responses analyzed at grantee level 2 most involved team members from each grantee were chosen
Review of Charters for Improvement (CFI)	Understand grantee goals and strategies at a high level	Theme qualitative data and input information about goals into clinical data reports	n=18 CFIs (May 2017) n=18 CFI year-end reflection (Dec 2017) n=18 mid-initiative update (July 2018)
Review of other technical assistance materials	Review TA logs and evaluations done of TA offerings.	Review of materials and extraction of data, as appropriate, to answer key evaluation questions	N/A

Appendix C: Logic model



Appendix D: Definitions of clinical measures

Patient population measures

Patient population measures	Definition
Organization-level involvement	Hospital & health center grantees: this should be 1 for each site Consortium grantees: this is the number of sites participating in PHASE within a participating health center.
The number of patients with a diagnosis of diabetes (type 1 or type 2) who are aged 18-75	ICD 10 codes: E10, E11, E13, O24.0, O24.1 , O24.3 , O24.8 Patients aged 18-75 with at least two outpatient visits, observation visits, ED visits or non-acute inpatient on different dates of service, with a diagnosis of diabetes during the measurement year or year prior ***--OR--*** With at least one acute inpatient encounter with a diagnosis of diabetes during the measurement year or year prior **Exclusions (optional):** - Patients who did not have a diagnosis of diabetes, in any setting, during the measurement year or the year prior to the measurement year, and who had a diagnosis of gestational diabetes or steroid-induced diabetes, in any setting, during the measurement year or the year prior to the measurement year.
The number of patients with a diagnosis of Clinical ASCVD, any age	MI ICD 10 codes: I21, I22, I23, I25.2 CABG: Procedure codes 0210-0213 (Z95.1 for CHCs) PCI: Procedure codes 0270-0273 (Z98.61 for CHCs) IVD ICD 10 codes: I20, I24, I25.1, I25.5, I25.6, 125.7, 125.8, 125.9, I63, I65, I66, 167.2, I70 Other revascularization: [no ICD10 codes] CPT codes 37220, 37221, 3722-27231
The number of patients with a diagnosis of hypertension who are aged 18-85	ICD 10 codes: I10 Patients aged 18-85 with an outpatient diagnosis of hypertension during the first 6-month period of the measurement year **Exclusions (optional):** - Patients with evidence of end-stage renal disease - Patients with a kidney transplant on or prior to the last day of the measurement year. - Patients who are pregnant during the measurement year. - Patients who had a non-acute inpatient admission during the measurement year.
Unduplicated patients	See above ICD codes; If a patient has one or more of the relevant diagnoses, only count them once.

Prescription measures

Measures	Definition
% of diabetic patients aged 55-75 prescribed a statin	**Numerator:** # of diabetic patients* aged 55-75 who have been prescribed a statin, where the medication order is current during the measurement year **Denominator:** # of diabetic patients* aged 55-75 * Same event/diagnosis criteria apply as in the Patient Population Measures section, except age.
% of diabetic patients aged 55-75 prescribed an ACE or an ARB	**Numerator:** # of diabetic patients* aged 55-75 who have been prescribed an ACE or ARB, where the medication order is current during the measurement year **Denominator:** # of diabetic patients* aged 55-75 * Same event/diagnosis criteria apply as in the Patient Population Measures section, except age.
% of diabetic patients aged 55-75 prescribed both a statin and an ACE or ARB	**Numerator:** # of diabetic patients* aged 55-75 who have been prescribed a statin and an ACE or ARB, where the medication order is current during the measurement year **Denominator:** # of diabetic patients* aged 55-75 * Same event/diagnosis criteria apply as in the Patient Population Measures section, except age.
% of hypertensive patients aged 18-85 who have been prescribed an oral drug in the anti-hypertensive class	**Numerator:** # of patients with hypertension aged 18-85 with an outpatient diagnosis of hypertension during the first 6-month period of the measurement year who have been prescribed an oral drug in the anti-hypertensive class, where the medication order is current during the measurement year **Denominator:** # of hypertensive patients* aged 18-85 * Same event/diagnosis/exclusion criteria apply as in the Patient Population Measures

Screening & follow-up measures

Measures*	Definition * Grantees can decide to use either the UDS or PRIME measure definitions.
Tobacco screening & follow-up: PRIME	**Numerator:** The number of patients aged 18 years and older who were screened for tobacco use at least once within 24 months AND who received tobacco cessation intervention if identified as a tobacco user. - Cessation intervention is documentation of providing cessation materials or counseling or prescribing cessation pharmacotherapy **Denominator:** All patients aged 18 years and older seen for at least two visits OR at least one preventive visit during the measurement period. **Exclusions:** **-** Documentation of medical reason(s) for not screening for tobacco use (e.g., limited life expectancy, other medical reason)
BMI screening & follow-up: PRIME	**Numerator:** The number of patients aged 18 years and older with BMI calculated within the past six months or during the current visit and a follow-up plan documented if the BMI is outside of normal parameters. Normal parameters are: - If aged 18-64: 18.5 ≤ BMI < 25 - If aged 65+: 23 ≤ BMI < 30 Follow-up is defined as documentation of at least one of the following: - Documentation of education - Pharmacology - Dietary supplements or consultation - Exercise and/or nutrition counseling - Referral to surgery or specialists **Denominator:** All patients aged 18 years and older on the date of the encounter with at least one eligible encounter during the measurement **Exclusions:** **-** Patients who are pregnant - encounters where the patient is receiving palliative care, refuses measurement of height and/or weight, the patient is in an urgent or emergent medical situation where time is of the essence and to delay treatment would jeopardize the patient's health status - There is any other reason documented in the medical record by the provider explaining why BMI measurement was not appropriate.

Measures*	Definition * Grantees can decide to use either the UDS or PRIME measure definitions.
Depression screening & follow-up: PRIME	**Numerator:** The number of patients aged 18 years and older who were screened for clinical depression on the date of the encounter using an age appropriate standardized tool and, if positive, a follow-up plan is documented on the date of the positive screen. Follow-up is defined as documentation of at least one of the following: - Additional evaluation for depression - Suicide Risk Assessment - Referral to a practitioner who is qualified to diagnose and treat depression - Pharmacological interventions - Other interventions or follow-up for the diagnosis or treatment of depression **Denominator:** All patients aged 12 years and older. **Exclusions:** - Patients with an active diagnosis for Depression or a diagnosis of Bipolar Disorder - Patient refuses to participate - Patient is in an urgent or emergent situation where time is of the essence and to delay treatment would jeopardize the patient's health status - Situations where the patient's functional capacity or motivation to improve may impact the accuracy of results of standardized depression assessment tools.
Tobacco screening & follow-up: UDS	**Numerator:** Patients who were screened for tobacco use at least once within 24 months of the most recent visit and who received tobacco cessation intervention if identified as a tobacco user. - Cessation intervention is documentation of providing cessation services or prescribing smoking cessation medication or use of smoking cessation agent. **Denominator:** Patients aged 18 years and older seen for at least two visits in the measurement year or at least one preventive visit during the measurement period. **Exclusions:** - Patient records with documentation of medical reason(s) for not screening for tobacco use (e.g., limited life expectancy, other medical reason)

Measures*	Definition * Grantees can decide to use either the UDS or PRIME measure definitions.
BMI screening & follow-up: UDS	**Numerator:** Patients aged 18 years and older with a documented BMI (not just height and weight) during their most recent visit or during the previous six months of the most recent visit, and when the BMI is outside of normal parameters, a follow-up plan is documented during the visit or during the previous six months of the current visit. Normal parameters are: - If aged 18-64: 18.5 ≤ BMI < 25 - If aged 65+: 23 ≤ BMI < 30 **Denominator:** Patients who were 18 years of age or older with a medical visit during the measurement year **Exclusions:** - Patients who are pregnant - Visits where the patient is receiving palliative care, refuses measurement of height and/or weight, is in an urgent or emergent medical situation where time is of the essence and to delay treatment would jeopardize the patient's health status - There is any other reason documented in the medical record by the provider explaining why BMI measurement was not appropriate
Depression screening & follow-up: UDS	**Numerator:** Patients aged 12 years and older screened for clinical depression on the date of the visit using an age-appropriate standardized tool and, if screened positive for depression, for whom a follow-up plan is documented on the date of the positive screen. **Denominator:** Patients aged 12 years and older with at least one medical visit during the measurement period. **Exclusions:** - Patients who refuse to participate, who are in urgent or emergent situations - Patients whose functional capacity or motivation to improve affects the accuracy of results - Patients with an active diagnosis for depression or a diagnosis of bipolar disorder - Patients who are already participating in ongoing treatment for depression

Clinical quality measures

Measure	Definition (HEDIS)
Controlled blood pressure for diabetes aged 18-75	**Numerator:** # of diabetic patients* aged 18-75 who have a blood pressure of < 140/90 mm Hg during the past measurement year **Denominator:** # of diabetic patients* aged 18-75 * Same event/diagnosis criteria as in the Patient Population Measures section apply. Note: if a patient does not have a blood pressure reading during the measurement year or the reading is incomplete, they are part of the denominator but not the numerator.
Controlled hemoglobin A1c for diabetes aged 18-75	**Numerator:** # of diabetic patients* aged 18-75 who have a hemoglobin A1c of < 9% during the past measurement year **Denominator:** # of diabetic patients* aged 18-75 * Same event/diagnosis criteria as in the Patient Population Measures section apply. Note: if a patient does not have a HbA1c test during the measurement year or the test is incomplete, they are part of the denominator but not the numerator.
Controlled blood pressure for hypertensives aged 18-85	**Numerator:** hypertensive patients age 18–85 with an outpatient diagnosis of hypertension during the first 6-month period of the measurement year whose last blood pressure reading during the past measurement year was less than or equal to the following thresholds: - if < 60 years, BP ≤ 139/89; - if ≥ 60 years and has Diabetes, BP ≤ 139/89; - if ≥ 60 years and does not have Diabetes, BP ≤ 149/89 **Denominator:** # of hypertensive patients age 18–85 with an outpatient diagnosis of hypertension during the first 6-month period of the measurement year Note: if a patient does not have a blood pressure reading during the measurement year or the reading is incomplete, they are part of the denominator but not the numerator.