

Actions to Decrease Disparities in Risk and Engage in Shared Support for Blood Pressure Control (ADDRESS-BP) Practice Facilitation Protocol

INTERNAL PROTOCOL

Section 1: ABP Practice Facilitation Protocol Overview

Purpose

To use **Practice facilitation** **And** social **determinants** of health support utilizing **CHWs (PATCH)**, a tailored practice facilitation (PF) + community health worker (CHW) implementation strategy, as a practical and sustainable implementation strategy. PATCH will be utilized to support the implementation and evaluation of three multi-level evidence-based interventions (EBIs) [remote blood pressure (BP) monitoring (RBPM) + intensive nurse case management (NCM) + social determinants of health (SDOH) support], delivered as an integrated community-clinic linkage model [Practice support And Community Engagement (PACE). PACE will address patient-, physician-, practice-, and community-level barriers to hypertension (HTN) control in Blacks across 20 primary care practices within NYU Langone Health in New York City (NYC).

Goal

To use this protocol to coach Practice Facilitators (PFs) through training and exercises in best practices regarding hypertension management through the application of quality improvement (QI) methods.

Implementation Strategy

The tailored PF implementation strategy activities are essential for adoption of EBIs into routine practice. First, conducting ongoing data reviews and chart audits to identify missed opportunities and generate ideas for improvement (e.g., participation in daily huddles or practice site meetings, present data to sites). This should be coupled with onsite booster trainings when gaps are identified. To create ownership of the EBI among practice staff and providers, it is essential to engage a practice champion or team who leads ongoing Plan-Do-Study-Act (PDSA) cycles and develops shared goals for implementing the EBI. It is also important for the facilitator to shadow clinic staff and patients to understand bottlenecks in the workflow. Finally, collaboration with the medical center IT is essential to refine the EHR-integrated workflows based on site feedback. Based on lessons learned from previous work, we will stagger implementation, provide hands-on training close to go-live dates, and engage practice leadership in the development of solutions to implementation challenges for increased sustainability.

Sustainability of the PATCH implementation strategy and our evidence-based intervention, PACE, is facilitated in several ways. First, PF strategies are designed to leverage and enhance practice capacity and infrastructure to embed system changes that are tailored to the practice context. Second, components of PACE (NCM, RBPM, and SDOH support) are reimbursable services, and the proposed assessment of their cost-effectiveness will inform reimbursement strategies and models. Third, we have engaged a major Medicaid-Managed Care Payor in New York (HealthFirst) as an integral partner from the planning through the implementation phase; that has a demonstrated track record of sustaining community-clinical linkage efforts in their network of practices. Finally, we have engaged NYU's health system leadership, who are deeply vested in incorporating PACE into its delivery system and is committed to scaling components that show high adoption and effectiveness across its expansive healthcare system.

Program Model and Implementation Strategies to be Delivered

This protocol will guide the PFs work based on meeting primary care practices where they are. This means that PFs will conduct an environmental scan (See Appendix 1) to gauge practice readiness, to interview/discuss particular areas of interest for interventions and adoption, and understand practice workflows.

The ERIC Framework was used to identify a total of 4 implementation strategies for practice facilitators and CHWs (*see Table 1*).

Levels: Practice facilitators address the practice site- and nurse- levels, while CHW address the patient-level.

Practice Facilitator (practice- and nurse-level):

1. Facilitation: A process of interactive problem solving and support that occurs in a context of a recognized need for improvement and a supportive interpersonal relationship

Rationale: Nurse-led interventions that use structured algorithms and telephone outreach are effective in reducing BP in patients with HTN⁹¹

Community Health Worker (patient-level):

1. Prepare patients to be active participants: Prepare patients to be active in their care, to ask questions, and specifically to inquire about care guidelines, the evidence behind clinical decisions, or about available evidence-supported treatments

2. Conduct educational meetings: Hold meetings targeted toward different stakeholder groups (e.g., providers, administrators, other organizational stakeholders, and community, patient and family stakeholders) to teach them about the clinical innovation

3. Support patients to enhance uptake and adherence: Develop strategies with patients to encourage and problem solve around adherence to the clinical innovation

Rationale: 1) Evidence of CHWs helping to bridge the digital divide and improve digital literacy to engage in RBPM⁹²; 2) Coaching as an implementation strategy is effective for BP control.⁹³

Implementation Engagement Strategies

Our implementation engagement strategies for PACE include developing the Steering Committee comprised of practice leadership and staff who will serve as project champions, peer-to-peer learning collaboratives, usability testing, and debriefing. The goal of these strategies is to provide a community in which practices can share challenges, lessons learned, and best practices. Clinical and nonclinical staff from the practices will attend the quarterly collaborative calls to share their knowledge and learning with one another.

Process Measures

Our secondary outcome measure is implementation fidelity. We will use a mixed methods approach to assess the five core domains of implementation fidelity defined by Proctor's IOF: (1) adherence to the program protocol; (2) dose of the program delivered; (3) quality of program delivery; (4) participant responsiveness; and (5) program differentiation.

Table 2 details evaluation goals for each domain, and the method and timing of assessment for PACE.

Table 3 details evaluation goals for each domain, and the method and timing of assessment for PATCH (implementation strategy).

Table 1: Implementation Strategies based on Expert Recommendations for Implementing Change (ERIC) Framework

Domain	Strategy: Facilitation: A process of interactive problem solving and support that occurs in a context of a recognized need for improvement and a supportive interpersonal relationship	Strategy: Prepare patients/ consumers to be active participants: Prepare patients/consumers to be active in their care, to ask questions, and specifically to inquire about care guidelines, the evidence behind clinical decisions, or about available evidence-supported treatments	Strategy: Conduct educational meetings: Hold meetings targeted toward different stakeholder groups (e.g., providers, administrators, other organizational stakeholders, and community, patient/consumer, and family stakeholders) to teach them about the clinical innovation	Strategy: Support patients/consumers to enhance uptake and adherence: Develop strategies with patients to encourage and problem solve around adherence
Actor(s)	Practice Facilitators	CHWs	CHWs	CHWs
Action(s)	<ol style="list-style-type: none"> 1. Site visits (i.e. workflow assessments) to help set performance goals and coaching on how to implement PACE-related practice changes 2. Training staff on QI strategies for practice redesign 3. Consulting on methods to identify and track patients via EHR 4. Assisting teams in testing system changes and interpreting outcomes based on the PDSA cycle 5. Audit and feedback of chart review data 6. Creating learning collaboratives across sites to share best practices for integrating PACE 7. Reinforcing NCM counseling and use of EHR templates to provide patients support in community settings 	<p>Through 1-on-1 or group-based interactions (remotely or in-person) with patients, CHWs will support each of the components of PACE:</p> <ol style="list-style-type: none"> 1. NCM – preparing for upcoming primary care visits 2. RBPM – Troubleshooting technology-related barriers to remote BP monitoring <p>SDOH – eg. discussions and strategies to enhance self-efficacy and healthcare efficacy in clinical encounters with primary care team include engaging patients in coaching sessions that prepare them to understand and ask physicians about their blood pressure readings; ask questions about medication changes); CHWs also help patients to address unmet</p>	<p>Through 1-on-1 or group-based interactions (remotely or in-person) with patients, CHWs will support each of the components of PACE:</p> <ol style="list-style-type: none"> 1. NCM – CHWs support the adoption of NCM health educational and counseling by addressing barriers / providing strategies to improve adherence to counseling recommendations related to patient’s lived experiences (eg sharing resources on where to find healthy foods in their neighborhoods to support NCM healthy eating counseling) 2. RBPM – eg. emphasizing importance of continual monitoring to support adoption and fidelity; educating patients on why RBPM is effective 	<p>Through 1-on-1 or group-based interactions (remotely or in-person) with patients, CHWs will support each of the components of PACE:</p> <ol style="list-style-type: none"> 1. NCM – CHWs will support patients to enhance uptake and adherence to NCM counseling/health education recommendations 2. RBPM – eg. trouble shooting technology-related barriers to RBPM and emphasizing importance of continual monitoring 3. SDOH – CHWs will support patients to “connect the dots” once referral information is shared by NCM; this may include addressing literacy issues, accessing referral locations, navigating to referral locations,

		social needs such as transportation and other logistical barriers to care; so they feel self-efficacious to attend their healthcare visits	3. SDOH – eg. discussions and strategies for health behavior change that are tied to context of lived experience	completing applications, and facilitating direct contact with referral locations in target communities
Target(s) of the action	Centralized Nurses	Patients	Patients	Patients
Temporality	At month 0	At month 0, CHW will contact patient	Months 1-12	Months 1-12
Dose	Ongoing; weekly site visits for 6 months; monthly for 6 months	Frequency: Minimum of 1x and maximum of 15x 1-on-1 interactions or group sessions Duration: Minimum 40 min to 1.5 hours each time	Frequency: Minimum of 1x and maximum of 15x 1-on-1 interactions or group sessions Duration: Minimum 40 min to 1.5 hours each time	Frequency: Minimum of 1x and maximum of 15x 1-on-1 interactions or group sessions Duration: Minimum 40 min to 1.5 hours each time
Implementation outcome(s) affected	Centralized Nurse: Adoption of EHR RBPM and SDOH Smartsets Level of implementation fidelity of PACE intervention (adherence, dose, quality, responsiveness) Sustainability of the intervention	Adoption of the NCM-RBPM-SDOH intervention (PACE) Fidelity Sustainability of the intervention	Adoption of the NCM-RBPM-SDOH intervention (PACE). Fidelity Sustainability of the intervention	Adoption of the NCM-RBPM-SDOH intervention (PACE) Fidelity Sustainability of the intervention
Justification	Nurse-led interventions that use structured algorithms and telephone outreach are effective in reducing BP in patients with HTN ⁹¹	Evidence of CHWs helping to bridge the digital divide and improve digital literacy ⁹²	Coaching as an implementation strategy is effective for BP control ⁹³ CHWs demonstrated in literature to more effectively provide culturally and contextually appropriate coaching /education to improve behavior change as a result of lived experience with the community they serve	Coaching as an implementation strategy is effective for BP control ⁹³ CHWs demonstrated in literature to more effectively provide culturally and contextually appropriate coaching /education to improve behavior change as a result of lived experience with the community they serve

Domain	Component Conduct Remote Blood Pressure Monitoring (RBPM): Use of valid automated remote blood pressure monitor devices (OMRON) with telemonitoring capability to remotely monitor patient BP through wireless transfer of BP readings.	Component Intensive Nurse Case Management (NCM): NCMs conduct behavioral counseling and medical regimen recommendations, based on patient RBPM readings, with patients enrolled in the intervention	Component Social determinants of health [SDOH] support: Patient will receive culturally/contextually tailored, patient-centered health information, technology support, and community referrals to address SDOH-related barriers to hypertension management
Actor(s)	NCMs / PF	NCMs / PF	NCMs / PF
Action(s)	<p><i>Patient-level</i> Through individual actions:</p> <ol style="list-style-type: none"> 1. Centralized Nurses initiate treatment and administer RBPMs 2. Patient takes BP remotely 3. BP readings are wirelessly transferred to patient EHR 4. NCM continually monitors patient BP 5. Patient self-monitors BP <p><i>Nurse-level</i> PFs provide nurse trainings on the intervention:</p> <ol style="list-style-type: none"> 1. Accurate BP measurements 2. American Heart Association guidelines for best practices in remote BP monitoring 3. Team-based communication 	<p><i>Patient-level</i> Through individual phone and 1-on-1 interactions:</p> <ol style="list-style-type: none"> 1. Behavioral counseling sessions (address barriers to medication adherence and adoption of recommended lifestyle behaviors) 2. Medical regimen recommendations in partnership with pharmacist (adapt patient medication regimen per RBPM readings and counseling sessions) <p><i>Nurse-level</i> PFs provide nurse trainings on the intervention:</p> <ol style="list-style-type: none"> 1. Health coaching and self-management support for HTN 2. Motivational interviewing 	<p><i>Patient-level</i></p> <ol style="list-style-type: none"> 1. <u>Addressing Technology Barriers:</u> Troubleshooting technology-related barriers to remote BP monitoring, including providing technical assistance activating patient portal and with RBPM set up 2. <u>Screen for SDOH and provide culturally and contextually tailored health information:</u> NCM-led goal-setting is reinforced with the provision of culturally and contextually tailored health education materials/information based on screening results 3. <u>Community Referral:</u> CHWs will assist NCMs by following up with patients after sessions to support activities that address patients' social needs and provide community referral. Specifically, during phone calls and 1v1 visits CHWs will facilitate linkages between the clinics and the community using EHR-embedded tools <p><i>Nurse-level</i> PFs provide nurse trainings on the intervention:</p> <ol style="list-style-type: none"> 1. Screening for SDOH using the EHR Tool 2. Best practices for patient communication about SDOH 3. Best practices for community referrals and review of the resource guide
Target(s) of the action	Patients / Centralized Nurses	Patients / Centralized Nurses	Patients / Centralized Nurses
Temporality	At month 0	At month 0	At month 0
Dose	Patient readings: Twice per day (morning and late afternoon), four to five days a week, every week, for at least 16 days of data readings per month	Counseling: Once per month Medical regimen recommendations: As needed per patient (ongoing)	Addressing Technology Barriers: Quarterly or with a change in patient risk profile Health information: Quarterly or with a change in patient risk profile

	NCM review: Ongoing/reach out to patients when values suggest a very high or low BP reading		Community referrals: Quarterly or with a change in patient risk profile
Intervention outcome(s) affected	BP control Sustainability	BP control Sustainability	BP control Sustainability
Justification	Evidence that RBPM leads to improved BP control ^{10,66-68,75,76}	Evidence that NCM leads to improved BP control ⁷⁹	Evidence that SDOH support leads to improved BP control ^{30,31,40,41}

Table 2 details evaluation goals for each domain, and the method and timing of assessment for PACE.

Table 2. Domains of Implementation Fidelity, Methods and Timing of Assessment for PACE (intervention)		
DOMAIN	GOAL	METHOD AND TIMING OF ASSESSMENT
Adherence	To measure the extent to which PACE has been implemented, as per protocol	<p>Monthly Practice Facilitator narrative reports and checklists that will provide a cumulative overview of all intervention activities including which components of PACE (i.e.: RBPM + NCM+ SDOH support) were implemented, what did and didn't work cost analysis and approaches to adaptation of components to the practice context.</p> <p>Utilization patterns of NCM/case notes about RBPM data sent to and accessed by physician.</p> <p>NCM use of EHR-embedded health coaching templates for self-management support for HTN sessions.</p> <p>NCM completion of SDOH screener to evaluate and address patient's social needs</p> <p>Use of each intervention component (RBPM, NCM coaching and SDOH support) will be rated on a 3-point scale: 1=The component was not implemented, as per protocol; 2=The component was partially implemented; and 3=The component was fully implemented and/or modified with permission, as per protocol. We will calculate adherence as the number of components fully implemented (ratings of 3) divided by the total number of possible components (N=3). Practices will be considered adherent to the protocol if components were implemented completely and/or they were completed with an adaption that did not affect the programs core components and was approved by the study team (Score range: 3-9).</p>
Dose	To measure the extent to which patients were exposed to PACE	Data will be extracted from the EHR on a weekly basis to document the number, frequency and duration of sessions with the NCM. This information is collected as part of the NCM templates built into the EHR and will be logged in a REDCap form by the Practice Facilitator.
Quality	To measure the skillfulness of the staff delivering the program components. This includes qualities related to skills communication and technical abilities	<p>Bimonthly review of attendance logs that document registration and attendance of care teams (e.g., PCPs, RN) at the collaborative calls, kick off sessions, and expert consultations by the Practice Facilitators. Attendance logs of NCMs at staff meetings. Exposure to trainings in key intervention content will be tracked through an online learning management system that tracks completion of online trainings and change in knowledge through a post assessment.</p> <p>Trained study staff will evaluate a random sample of 10% of audiotaped sessions/calls with NCMs using our previously developed Health Coaching Evaluation Checklist. A fidelity score will be calculated as the percentage of topics completed and how well they were delivered (1: poor skill performance, 2: adequate skill performance, 3: exemplary skill performance).</p> <p>Structured data collection tool embedded in the EHR that will be used to rate the quality of data entry in RBPM, health coaching, and SDOH screening templates (e.g., documentation of patient goal and action plan using SMART framework, # of screening items completed and referrals for social needs made)</p>
Responsiveness	To measure the level of patient and staff engagement with and acceptance of PACE	<p>Self-administered survey at 12-months to assess patient and clinic staff (e.g., RN, PCP) satisfaction with PACE and acceptability of the practice changes. The staff survey will be adapted from the 28-item practice redesign satisfaction survey developed by Lewis et al. ($\alpha = .87$). The patient survey will be assessed with the well-validated Experience of Care and Health Outcomes (ECHO) survey measures. We will also include items specific to PACE to these surveys.</p> <p>Semi-structured interviews at 12 months with a random sample of 30 staff and 30 patients across that will inquire about topics such as: satisfaction with PACE, challenges with using/receiving care in the PACE model, and factors that affected their ability to engage with the different components of PACE (e.g., availability of NCMs/ at pre and post-visit time points)</p>
Differentiation	To measure the unique features of PACE that are distinguishable from other programs at the sites	Web-based software tool (RedCap) that Practice Facilitators will use to document all the initiatives that are occurring at the practices during the study, the goals of the initiatives, the specific components and related activities of each initiative, the staff involved, and the target patient populations

Table 3 details evaluation goals for each domain, and the method and timing of assessment for PATCH (implementation strategy).

Table 3. Domains of Implementation Fidelity, Methods and Timing of Assessment for PATCH		
DOMAIN	GOAL	METHOD AND TIMING OF ASSESSMENT
Adherence	To measure the extent to which PATCH has been implemented, as per protocol	Ongoing monitoring by Practice Facilitator and CHWs using the FACITS and FRAME-IS tool in REDCap that will provide a cumulative overview of all implementation activities including which implementation strategies were used at each site, what did and didn't work and approaches to adaptation of the strategies to the practice context.
Dose	To measure the extent to which practice facilitators and CHWs engaged with sites and interventionists using PATCH strategies	Web-based software tool (RedCap) that Practice Facilitators and CHWs will use to document, on a weekly basis, the number, frequency and duration of sessions with practice staff and NCM to support implementation of the intervention.

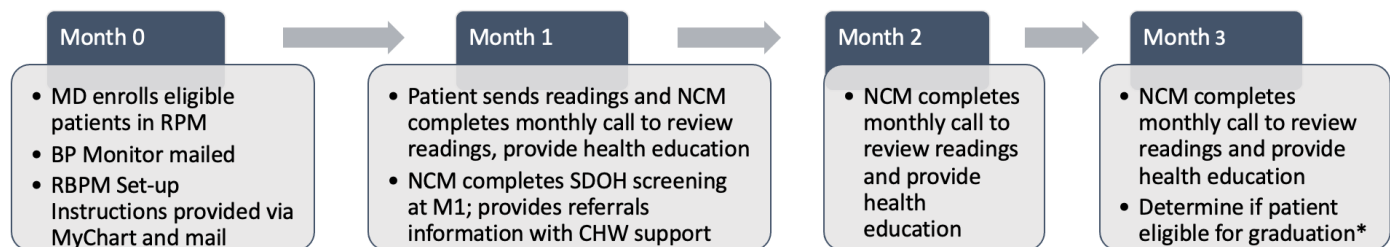
Quality	To measure the skillfulness of the staff supporting the implementation of PACE.	Practice facilitators and CHWs will engage in ongoing training in quality improvement practice, practice facilitation, and person-centered communication skills to support their work with sites, NCM and patients. Quality will be evaluated through group-based modeling and feedback by the study team.
Responsiveness	To measure practice facilitators and CHWs acceptance of PATCH implementation strategies	Semi-structured interviews with Practice Facilitators and CHWs at the end of the trial to learn about their experiences working with sites and NCMs to implement PACE, suggested modifications for sustainability of PACE once the PATCH implementation strategies have ended, and overall satisfaction with the work. Semi-structured interviews at 12 months with a random sample of 30 staff and 30 patients across that will inquire about topics such as: satisfaction with PACE, challenges with using/receiving care in the PACE model, and factors that affected their ability to engage with the different components of PACE (e.g., availability of PF and CHWs at pre and post-visit time points)
Differentiation	To measure the unique features of PATCH that are distinguishable from other programs at the sites	Web-based software tool (FACITS) that Facilitators and CHWs will use to document implementation strategies that are used by sites to support HTN management that are independent of the role and work of the Practice Facilitators and CHWs. This will be used to quantify the degree of overlap between the PATCH strategies used to support HTN management and those independently employed by sites (0: no overlap, 1: some overlap], 2: significant overlap) as well as isolate the unique features of PATCH that distinguish it from those initiatives.

Practice Facilitator Duties:

Please see Figure 1 below for PF timeline.

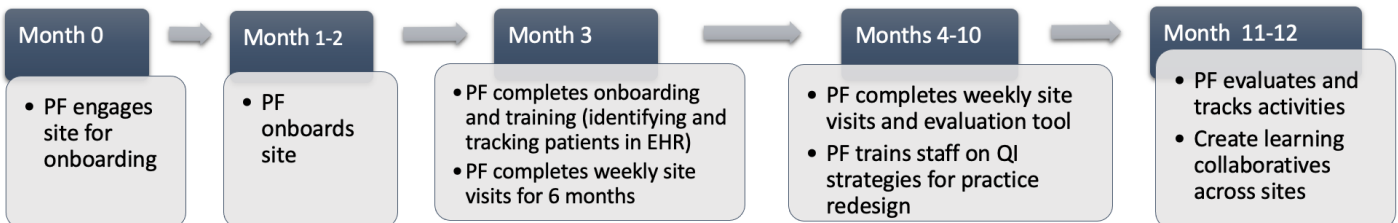
ADDRESS-BP Full Trial: PATCH Phase

PACE Intervention: NCM + RBPM + SDOH Referrals



**If patient has stable BP control for at least two months, with no recent medication changes at next monthly visit, the NCM consults with the provider to graduate patient from RBPM.*

Practice Facilitator Implementation Strategy: Facilitation



**Since the dose for PF strategy is ongoing and enrollment of sites happen in cohorts, month 1-3 will always include the onboarding period in which PFs will familiarize sites with program, complete environmental scans, and train sites on program workflow. These will occur at different points (ongoing) for each site given capacity and readiness. After month 4, all PF strategies will continue on an ongoing basis (i.e. PDSA cycles, audit and feedback of chart review data, reinforcing NCM counseling and EHR templates, etc)*

Onboarding Period (OP)

We have planned a 3-month period for the “Onboarding Period” (OP), during which we will begin engaging with site leadership, conducting introductory site visits, and attending staff meetings. This is because it may not be feasible to onboard all primary care practice sites (N= 5 per wave) at the same time; the time is needed to onboard and engage practices. During this period, we will also collect our baseline data including the EHR data extraction and conducting the observational environmental scan. During this time, facilitators will onboard practices (onboarding phase) and utilize qualitative interviews, validated surveys, and environmental scans to conduct a practice capacity assessment at each practice. To conduct the interviews, facilitators will use a CFIR-guided semi-structured quality improvement (QI)

interview protocol to help identify barriers and facilitators to the implementation of PACE. This QI data will facilitate the creation of tools and training needed to support the implementation of PACE at the sites. In accordance with CFIR, the interview guide will explore the: 1) inner practice setting (e.g., leadership support, organizational capacity); 2) external environment (e.g., patient needs and resources, external resources and incentives), 3) staff characteristics (e.g., self-efficacy, knowledge and beliefs about patient-centered counseling), and 4) intervention characteristics (e.g., complexity). [See Appendix 1]

Onboarding Phase:

At this initial phase, the expectation is that the Practice Facilitator will reach out to practices to participate in the OP for a period of 3 months for the adoption of PACE. System leaders, or in most cases, medical/site directors at the practices will need to consider their organization's interest and readiness in participating in the intervention. PFs will have a standard package to deliver at their *pitch* meeting, which will include items, such as Practice Readiness Assessment (PRA) [See Figure 12.2], brochure and postcard about the program, educational resources, and more. It will be up to the PF to decide which materials to distribute, but at the very minimum, she/he will need to deliver the PRA and brochure, postcard, etc.

Task 1: Conduct outreach activities (i.e. initial email including brochure, postcard, etc)

Task 2: Schedule *introductory* meeting (30 minutes)

- Introductory meetings include meeting with site leadership (i.e. site director) to provide an overview of the program. The overview includes briefly describing intervention components, workflows, next steps, and addressing any questions, concerns, or feedback.
- Practice Readiness Assessment (see Figure 12.2 below)
- Verbal agreement from practice to participate in the program

Task 3: Schedule follow-up meeting (1 hour)

- Follow-up meetings include meeting with site leadership and clinical management teams (i.e. nurse/MA managers, supervising physicians, administrative managers, etc.) to provide an in-depth overview of the program. This overview includes all items addressed during introductory meeting, as well as providing visuals that with aid in future training (i.e. BPA screenshots, etc.), addressing any remaining questions, and establishing a timeline for implementation.

Task 4: Set deadline for completion of baseline REDCap surveys.

- During the follow-up meeting, PF will notify site leadership of REDCap survey goals and collect site staff email addresses for REDCAP survey distribution tool

Figure 12.2. Checklist for assessing practice readiness

- ☐ Practice or organizational leadership is interested in specific or general improvement as evidenced by request for assistance or receptivity to receiving facilitation to support improvement.
- ☐ Practice or organizational leadership is willing to participate in ongoing communication with the practice facilitator and participate on the quality improvement team.
- ☐ Practice or organization is willing and able to identify an “improvement” champion who will be the practice facilitator’s point person.
- ☐ Leadership is willing to provide protected time for key staff to engage in improvement work.
- ☐ Team members are willing to meet regularly as a quality improvement team, and members follow through with this plan.
- ☐ Team members are willing to gather and report data on practice performance on key metrics.
- ☐ Practice has sufficient organizational and financial stability to avoid becoming too distracted or overwhelmed by competing demands or financial concerns.
- ☐ Practice is not engaged in other large-scale improvement projects and does not have other demanding competing priorities.

Environmental Scan Phase: [See Appendix 1]

During this phase, the PF will conduct an environmental scan or practice evaluation to assist in collecting and analyzing data during the pre-implementation phase. This data (i.e. baseline needs assessment, etc) will allow the PF to explore barriers and facilitators to the implementation of PACE at the practices as well as refine the PF strategy collaboratively with the practices. In this phase, the PF will have the opportunity to engage leaders and clinical staff at the practice. Based on this outcome, the PF can facilitate discussion regarding next steps and may help them organize priorities based on supplemental data (i.e. performance reports). As part of this phase, the PF will work with the site to “identify areas of change.” Using the Chronic Care Model as a guide.

Training as Usual Phase:

The next 9-month period will comprise the TAU phase and include the clinic-wide trainings in proper BP measurement, overview of our PACE model, quality improvement techniques, and team-based care among others identified in our pilot. At the end of this 9-month period, sites will transition to the implementation phase, at which point the tailored PF + CHW condition, PATCH, will be introduced in the sites to support the adoption and implementation fidelity of PACE. Each sequence will begin the implementation phase 3 months after the prior sequence.

During this period, the study team will hold a Kick-off Event at the practices. The study team will also schedule didactic and interactive training sessions on topics such as: the PACE model components; best

practices for implementing team-based models of care; defining roles and responsibilities in interdisciplinary care teams; developing effective interdisciplinary and patient-centered communication skills; and a discussion of the quality improvement methods. All clinical and non-clinical staff as well as site leadership will be encouraged to attend the Kick-off Event and trainings. Trainings will be available in-person, via Webex, and/or via NYU's online learning management system, FOCUS. This will be based on sites capacity and preference. The trainings will target all practice staff as well as the NCMs who will deliver PACE. Practices will not receive the PATCH implementation strategy during this period.

Task 1: Host Kick-off meeting

Task 2: Set goals with QI team and identify Champion

Task 3: Complete FOCUS based or in-person trainings [See Table 4 below]

- *Please see Care Team Protocol Appendix 1 and 2 for specific tip sheets utilized during in-person/virtual trainings*
- *Please see Care Team Protocol Appendix 3 and 4 for specific FOCUS trainings completed by medical assistants, nurses, etc.*

Table 4: Implementation and Intervention Activity Protocol

Implementation Strategy	Actions	Activities	Audience	Estimated Length/Timeline	Major Content
Facilitation: A process of interactive problem solving and support that occurs in a context of a recognized need for improvement and a supportive interpersonal relationship	Site visits (i.e. workflow assessments) to help set performance goals and coaching on how to implement PACE-related practice changes	1. CFIR Guided Observational Tool (In-Person/Virtual) 2. Workflow Analysis Interview Guide (In-Person/Virtual) 3. PACE Key Drivers Hands-on Training (FOCUS training) 4. Evaluation Tool	MAs, RNs, NCMs	1. 15 min 2. 15 min 3. 30 min Timeline: 1-2 months before go-live date; ongoing	<ul style="list-style-type: none"> Reviewing practice assessment findings and developing practice specific strategies to implementation Understanding the system-level factors that can affect implementation effectiveness Assess practice readiness to implement PACE and tailor program to practice needs Learn how PACE can enhance hypertension care in primary care Review steps to identify and track/refer patients via EHR to PACE program
	Training staff on QI strategies for practice redesign	Quality Improvement (FOCUS training)	PACE QI internal team (i.e.: Nurse managers, MAs, RNs) at the practices	20 min Timeline: Assign 1 week after the go-live date and allow 1 week to complete module	<ul style="list-style-type: none"> Review the key principles and model of quality improvement
	Consulting on methods to identify and track patients via EHR	1. PACE Key Drivers Hands-on Training (FOCUS training) 2. SBX Epic Workflows (In-service virtual or in-person)	Front desk staff, MAs, MDs, RNs & NCMs	30-45 min Timeline: 2 weeks before the go-live date	<ul style="list-style-type: none"> Learn how PACE can enhance hypertension care in primary care Review steps to identify and track/refer patients via EHR Training on EPIC templates and reinforcing accurate use of workflows (via morning huddles, spot checking, etc)
	Assisting teams in testing system changes and interpreting outcomes based on the PDSA cycle	PDSA Worksheet & Testing for change exercise (In-Person/Virtual)	PACE QI internal team at the practices	20 min Timeline: Assign 1 week after go-live date and allow 1 week to complete module	<ul style="list-style-type: none"> Learn how to use PDSA cycles for process improvement
	Audit and feedback of chart review data	Chart Review Protocol (In-Person/Virtual)	MAs, RNs, & NCMs	20 min Timeline: Ongoing after go-live date (bi-weekly)	<ul style="list-style-type: none"> Review identified gaps in the workflow from PF treatment fidelity chart reviews and reinforce workflows/protocols

	Creating learning collaboratives across sites to share best practices for integrating PACE	Virtual meetings with site champions to discuss challenges and share best practices	Champion Team	Timeline: Quarterly	<ul style="list-style-type: none"> Attending quarterly provider meetings, lunch and learns for centralized nurses, meeting key leadership, etc to establish learning collaborative and enhance PACE
	Reinforcing NCM counseling and use of EHR templates to provide patients support in community settings	RN/NCM Role Tipsheet	RNs, NCMs	15 min Timeline: Ongoing after go-live date (as needed)	<ul style="list-style-type: none"> Review EHR templates to help manage care
Prepare patients/consumers to be active participants: Prepare patients/consumers to be active in their care, to ask questions, and specifically to inquire about care guidelines, the evidence behind clinical decisions, or about available evidence-supported treatments	Through 1-on-1 or group-based interactions (remotely or in-person) with patients, CHWs will support each of the components of PACE: NCM – preparing for upcoming primary care visits	1. Deliver virtual group educational sessions to FBO and CBO partners. 2. Record educational sessions for future dissemination.	CHWs	1. 5h 2. 6h	<ul style="list-style-type: none"> Review educational material and ease of delivery Review group management skills in a virtual setting Learn logistics of a virtual presentation
	RBPM – Troubleshooting technology-related barriers to remote BP monitoring	RBPM set up guide	CHWs	30 min	<ul style="list-style-type: none"> Learn steps on how to set up RBPM and corresponding applications
	SDOH – eg. discussions and strategies to enhance self-efficacy and healthcare efficacy in clinical encounters with primary care team (eg understanding and asking physicians about blood pressure readings; asking questions about medication changes); addressing transportation and other logistical barriers to care	1. Referrals Guide (CHW form) 2. Goal Setting Training (CHW form) 3. MI Training	CHWs	1. 60m 2. 60m 3. 2 day training	<ul style="list-style-type: none"> Review CHW forms and possible SDOH referrals needed Review CHW network of CBOs available around target neighborhoods Review motivational interviewing skills to enhance behavior change Review SMART goal setting skills
Conduct educational meetings: Hold meetings targeted toward different stakeholder groups (e.g., providers, administrators, other organizational stakeholders, and	Through 1-on-1 or group-based interactions (remotely or in-person) with patients, CHWs will support each of the components of PACE: NCM – CHWs support the adoption of NCM health educational and counseling by addressing barriers / providing	1. Referrals Guide (CHW form) 2. Goal Setting Training (CHW form) 3. Deliver virtual group educational	CHWs	1. 60m 2. 60m 3. 5h	<ul style="list-style-type: none"> Review motivational interviewing skills to enhance behavior change Review SMART goal setting skills Review CHW forms and possible SDOH referrals needed Review CHW network of CBOs available around target neighborhoods

community, patient/consumer, and family stakeholders) to teach them about the clinical innovation	strategies to improve adherence to counseling recommendations related to patient's lived experiences (eg sharing resources on where to find healthy foods in their neighborhoods to support NCM healthy eating counseling)	sessions to FBO and CBO partners			
	RBPM – eg. emphasizing importance of continual monitoring to support adoption and fidelity; educating patients on why RBPM is effective	1. RBPM set up guide 2. MI Training	CHWs	1. 30m 2. 2 day training	<ul style="list-style-type: none"> Review motivational interviewing skills to enhance behavior change Learn to identify barriers to support continual adoption
	SDOH – eg. discussions and strategies for health behavior change that are tied to context of lived experience	1. Goal Setting Training (CHW form) 2. MI Training	CHWs	1. 60m 2. 2 day training	<ul style="list-style-type: none"> Review motivational interviewing skills to enhance behavior change Review SMART goal setting skills
Support patients/consumers to enhance uptake and adherence: Develop strategies with patients to encourage and problem solve around adherence	Through 1-on-1 or group-based interactions (remotely or in-person) with patients, CHWs will support each of the components of PACE: NCM – CHWs will support patients to enhance uptake and adherence to NCM counseling/health education recommendations	1. Goal Setting Training (CHW form) 2. MI Training 3. Deliver virtual group educational sessions to FBO and CBO partners	CHWs	2. 60m 3. 2 day training 4. 5h	<ul style="list-style-type: none"> Review SMART goal setting skills Review motivational interviewing skills to enhance behavior change Review educational material and ease of delivery
	RBPM – eg. trouble shooting technology-related barriers to RBPM and emphasizing importance of continual monitoring	RBPM Set up Guide	CHWs	30m	<ul style="list-style-type: none"> Learn to identify barriers to support continual adoption Learn steps on how to set up RBPM and corresponding applications
Intervention Component	Actions	Activities	Audience	Estimated Length	Major Content
Conduct Remote Blood Pressure Monitoring (RBPM): Use of valid automated remote blood pressure monitor devices (OMRON) with telemonitoring capability to remotely	<i>Nurse-level</i> PFs provide nurse trainings on the intervention: Accurate BP measurements <i>Patient-level</i> Through individual actions:	1. Accurate Blood Pressure Measurement (FOCUS training) 2. Accurate Blood Pressure Measurement	MAs,RNs, NCMs	15 min Timeline: Assign 3 weeks before the go-live date and allow 1 week to complete module	<ul style="list-style-type: none"> Discuss the factors that influence blood pressure (BP) measurements Review the 3 key steps to office blood pressure measurement Review protocols for home blood pressure monitoring Review competency tool and nurse manager will observe staff with 3 patients and complete competency

monitor patient BP through wireless transfer of BP readings.	<ol style="list-style-type: none"> 1. Centralized Nurses initiate treatment and administer RBPMs 2. Patient takes BP remotely 3. BP readings are wirelessly transferred to patient EHR 4. NCM continually monitors patient BP 5. Patient self-monitors BP 	Competency Checklist 3. Self-Measured Blood Pressure Training (FOCUS training) 4. Self-Measured Blood Pressure Tip Sheet (Patient)			monthly for first 6 months and then bi-annually
	Nurse-level American Heart Association guidelines for best practices in remote BP monitoring	AHA Guidelines	RNs & NCMs	15 min Timeline: Assign 3 weeks before the go-live date and allow 1 week to complete module	<ul style="list-style-type: none"> • Review benefits of implementing remote blood pressure monitoring programs • Review protocol for remote blood pressure monitoring • Review competency tool and nurse manager will observe staff with 3 patients and complete competency monthly for first 6 months and then bi-annually
	Nurse-level Team-based communication	Team-based Care to Enhance Hypertension Care (FOCUS training)	MAs, RNs, NCMs	15 min Timeline: Assign 2 weeks after the go-live date and allow 1 week to complete module	<ul style="list-style-type: none"> • Review the essentials of team-based care • Discuss how team-based care will be used during the PACE implementation
Intensive Nurse Case Management (NCM): NCMs conduct behavioral counseling and medical regimen recommendations, based on patient RBP readings, with patients enrolled in the intervention	Nurse-level PFs provide nurse trainings on the intervention: Health coaching and self-management support for HTN Patient-level Through individual phone and 1-on-1 interactions: <ol style="list-style-type: none"> 1. Behavioral counseling sessions (address barriers to medication adherence and adoption of recommended lifestyle behaviors) 2. Medical regimen recommendations in partnership with Nurse 	<ol style="list-style-type: none"> 1. Health Coaching (FOCUS training) 2. The PACE Adherence Health Counseling Model 	<ol style="list-style-type: none"> 1. RNs & NCMs 2. RNs & NCMs 3. RNs & NCMs 	<ol style="list-style-type: none"> 1. Site dependent: 30 min to 4 hours 2. 15 min 3. 20 min Timeline: Assign 1 week after the go-live date and allow 1 week to complete module	<ol style="list-style-type: none"> 1. Health Coaching: <ol style="list-style-type: none"> a. Provide an overview of Health Coaching in the context of medication adherence b. Provide an overview of Health Coaching strategies for supportive behavior change 2. Adherence Health Counseling: <ol style="list-style-type: none"> a. Review the components of the PACE Medication Adherence Counseling Model b. Discuss the steps involved in implementing the PACE Adherence Counseling Model in your practice c. Practice using the PACE Structure Tool in the EMR

	Practitioner (adapt patient medication regimen per RBPM readings and counseling sessions)				
	Nurse-level Motivational interviewing	Health Coaching/MI Training Materials	RNs & NCMs	Site dependent: 30 min to 4 hours	Health Coaching: a. Provide an overview of Health Coaching in the context of medication adherence b. Provide an overview of Health Coaching strategies (i.e. motivational interviewing) for supportive behavior change
Social determinants of health [SDOH] support: Patient will receive culturally/contextually tailored, patient-centered health information, technology support, and community referrals to address SDOH-related barriers to hypertension management	Nurse-level PFs provide nurse trainings on the intervention: Screening for SDOH using the EHR Tool Patient-level 1. <u>Addressing Technology Barriers:</u> Troubleshooting technology-related barriers to remote BP monitoring, including providing technical assistance activating patient portal and with RBPM set up 2. <u>Screen for SDOH and provide culturally and contextually tailored health information:</u> NCM-led goal-setting is reinforced with the provision of culturally and contextually tailored health education materials/information based on screening results 3. <u>Community Referral:</u> CHWs will assist NCMs by following up with patients after sessions to support activities that address patients' social needs and provide community referral. Specifically, during phone calls and 1v1	SDOH Toolkit	NCMs		<ul style="list-style-type: none"> Review SDOH needs

	visits CHWs will facilitate linkages between the clinics and the community using EHR-embedded tools				
	Best practices for patient communication about SDOH	SDOH Toolkit	NCMs		<ul style="list-style-type: none"> Review SDOH toolkits and training guide
	Best practices for community referrals and review of the resource guide	Resource Guide	NCMs		<ul style="list-style-type: none"> Review resource guide

Implementation Phase

Our tailored PF+CHW implementation strategy is designed to stimulate specific, actionable steps that the practices can undertake to build an internal foundation that supports the implementation of PACE in primary care practices as routine care. This requires practice redesign with external support from the facilitators and CHWs who will work with each practice for a period of 12 months.

Following randomization to PATCH, Practice facilitators will provide: (1) facilitation support to the practices/NCMs through interactive problem solving and helping healthcare teams develop the skills needed to adapt and implement evidence-based approaches to their practice environment (e.g. by integrating models of team-based care for external NCM support). Practice facilitators will complete site visits for a period of 6 months (frequency varies by site). At each visit they will complete an evaluation tool [See Appendix 3] that assesses barriers and facilitators to implementation to enhance the program after each visit.

CHWs will support NCM efforts by engaging patients through 1-on-1 interactions or group sessions (groups will consist of patients of a single practice), either in-person or remotely, to enhance adoption of PACE. They will do this by: 1) preparing patients to be active participants in their care, to ask questions, and inquire about care guidelines/evidence/treatments; 2) conducting educational meetings to teach patients about the clinical innovation (NCM counseling visits, RBPM) and encourage adoption; and 3) supporting patients to enhance adherence to RBPM and NCM counseling visits and developing strategies to encourage and problem-solve around challenges to uptake. NCMs will inform patients that CHW support is available.

Nurses will evaluate patients' BP control status on a regular basis. Patients who exhibit adequate BP control (BP<130/80mmHg) will receive standard HTN care by their primary care provider. Additional details on implementation strategies employed, actors, actions, targets of actions, temporality, dose, implementation outcomes affected, and justification are included in Table 1 above.^{93,96}

By this phase, the Practice Facilitator should have established a working relationship with those whom were assigned roles to work toward implementation efforts, or will at least begin to work with the Champion/QI team. This will be the bulk of implementation efforts. This is when most of the trials and goal resetting occur. This can also become demanding for the PF as most sites will become dependent on guidance and assistance. [Please refer to the Chart Review protocol for more information]

Task 1: Schedule and conduct ongoing technical assistance with site

Task 2: Ensure workflow and protocols are being followed and assist where needed

Task 3: Work with QI team to problem-solve implementation issues

Evaluation Phase – *promote continued use of evidence-based practice [See Appendix 4]*

Finally, the Practice Facilitator will work with Champion/QI team to ensure that processes are refined and secure to ensure treatment fidelity and sustainability.

Task 1: Use of below FRAME-IS (Figure 3) and FACITS tools (Figure 4); evidence-based practice quality assurance through performance feedback loop

Task 2: Continuous supervision/championship

Task 3: Accurate documentation and billing for loaner devices

Task 4: Ensure a contingency plan is in place

Task 5: Provide/seek incentives (i.e. recognition or monetary)

Task 6: Turnover management through ongoing training

Figure 3: FRAME-IS Tools

Module 1: BRIEFLY DESCRIBE the EBP, implementation strategy, and modification(s)

The EBP being implemented is: _____

The implementation strategy being modified is: _____

The modification(s) being made is/are: _____

The reason(s) for the modification(s) is/are: _____

Module 2: WHAT is modified?

☐ **Content**
Modifications made to content of the implementation strategy itself, or that impact how aspects of the implementation strategy are delivered

☐ **Evaluation**
Modifications made to the way that the implementation strategy is evaluated

☐ **Training**
Modifications to the ways that implementers are trained

☐ **Context**
Modifications made to the way the overall implementation strategy is delivered. For Context modifications, specify which of the following was modified:

- ☐ **Format** (e.g. group vs. individual format for delivering the implementation strategy)
- ☐ **Setting** (e.g. delivering the implementation strategy in a new clinical or training setting than was originally planned)
- ☐ **Personnel** (e.g. having the implementation strategy be delivered by a systems engineer rather than a clinician facilitator)
- ☐ **Population** (e.g. delivering the implementation strategy to middle managers instead of frontline clinicians)
- ☐ **Other** context modification: write in here: _____

Module 3: What is the NATURE of the content, evaluation, or training modification?

- ☐ Tailoring/tweaking/refining
- ☐ Changes in packaging or materials
- ☐ Adding elements
- ☐ Removing/skipping elements
- ☐ Shortening/condensing (pacing/timing)
- ☐ Lengthening/ extending (pacing/timing)
- ☐ Substituting
- ☐ Reordering of implementation modules or segments
- ☐ Spreading (breaking up implementation content over multiple sessions)
- ☐ Integrating parts of the implementation strategy into another strategy (e.g., selecting elements)
- ☐ Integrating another strategy into the implementation strategy in primary use (e.g. adding an audit/feedback component to an implementation facilitation strategy that did not originally include audit/feedback)
- ☐ Repeating elements or modules of the implementation strategy
- ☐ Loosening structure
- ☐ Departing from the implementation strategy ("drift") followed by a return to strategy within the implementation encounter
- ☐ Drift from the implementation strategy without returning (e.g., stopped providing consultation, stopped sending feedback reports)
- ☐ Other (write in here): _____

**Module 3, OPTIONAL Component:
Relationship to fidelity/core elements?**

- ☐ Fidelity Consistent/Core elements or functions preserved
- ☐ Fidelity Inconsistent/Core elements or functions changed
- ☐ Unknown

Module 4, Part 1: What is the GOAL?

- ☐ Increase reach of the EBP (i.e. the number of patients receiving the EBP)
- ☐ Increase the clinical effectiveness of the EBP (i.e. the clinical outcomes of the patients or others receiving the EBP)
- ☐ Increase adoption of the EBP (i.e. the number of clinicians or teachers using the EBP)
- ☐ Increase the acceptability, appropriateness, or feasibility of the implementation effort (i.e. improve the fit between the implementation effort and the needs of those delivering the EBP)
- ☐ Decrease costs of the implementation effort
- ☐ Improve fidelity to the EBP (i.e. improve the extent to which the EBP is delivered as intended)
- ☐ Improve sustainability of the EBP (i.e. increase the chances that the EBP remains in practice after the implementation effort ends)
- ☐ Increase health equity or decrease disparities in EBP delivery
- ☐ Other (write in here): _____

Module 4, Part 2: What is the LEVEL of the rationale for modification?

- ☐ Sociopolitical level (i.e. existing national mandates)
- ☐ Organizational level (i.e. available staffing or materials)
- ☐ Implementer level (i.e. those charged with leading the implementation effort)
- ☐ Clinician or Teacher level (i.e. those implementing the EBP)
- ☐ Patient or Other Recipient level (i.e. those who will ideally benefit from the EBP)
- ☐ Other (write in here): _____

Figure 4: FACITS Tool

PACE Interventions	Definition
1. PIC conducts environmental scan	Staff surveys to gain attitude on site and intervention
2. PIC conducts workflow mapping	Documents roles and responsibilities related to hypertension of staff
3. PIC Engaged clinic leader for feedback	Bi-directional communication between clinic leader and facilitator
4. PIC Educates practice on QI topics	Topics include goal setting, data tracking over time, transparency
5. PIC Reviews data with practice for performance monitoring	data outcomes shared with practice
6. PACE team collaborates to modify EHR	Integrates PACE into Epic
7. PIC organizes meeting	Arrangement of date, time, place and attendees
8. Training for accurate blood pressure measurement	Instruction on measuring blood pressure technique following AHA guidelines
9. Train Self-measured blood pressure	Instructions for training patients to self-measure blood pressure
10. Train Model for Improvement (PDSA or other QI)	Instruction on rapid cycle model, pilot testing, data tracking
11. Train Motivational Interviewing education	Skills-based model of interactive communication strategies to elicit change
12. Health Coaching Training	Includes shared decision-making tools, Patient action plans
13. Train EHR optimization	Educate staff on EHR modifications
14. Practice Implements Team-based care	Model in which two or more individuals work collaboratively to provide care
15. Practice utilizes Model for Improvement such as PDSA, LEAN	Instruction on rapid cycle model, pilot testing, data tracking
16. PIC engaged practice	Distributes monthly newsletters and incentives activities
17. PIC conducts interviews with staff (PSA, MAs, RNs, MDs)	1:1 interview with staff to gain perspectives
18. Collaborates with leadership to form pilot Team	Pilot team or champion team to serve as liaison between staff and implementation team.
19. Collaborate with site for training strategy	Developed tailored strategy with site leadership to train sites and support efforts
20. Developed competency for sustainability	Competency checklist created to support training and ensure standardization
21. Facilitator meet bi-weekly with QI team to review performance metrics	
22. Development of feedback-driven job aids to address training gaps (e.g., RN Checklist, MA Checklist, PCP handout)	Job aids created to ensure
23. Ongoing chart audits to check performance and identify areas for improvement	
Collaborate with IT to refine the Epic workflows based on site feedback	

Resources

This toolkit will dive deeply into the Practice Facilitation Action Plan and offer tools and resources to support each component. The Appendix of this document contains a variety of tools the Practice Facilitator can use.

PF should keep in mind that these Change Concepts/Ideas do not need to be necessarily completed in order. Also note, based on completed NA, the site may already have some of these areas successfully implemented. If this is the case, PF should move onto the next evidence-based practice or task.

On a weekly and daily basis, PFs should expect to complete the following:

Weekly practice:

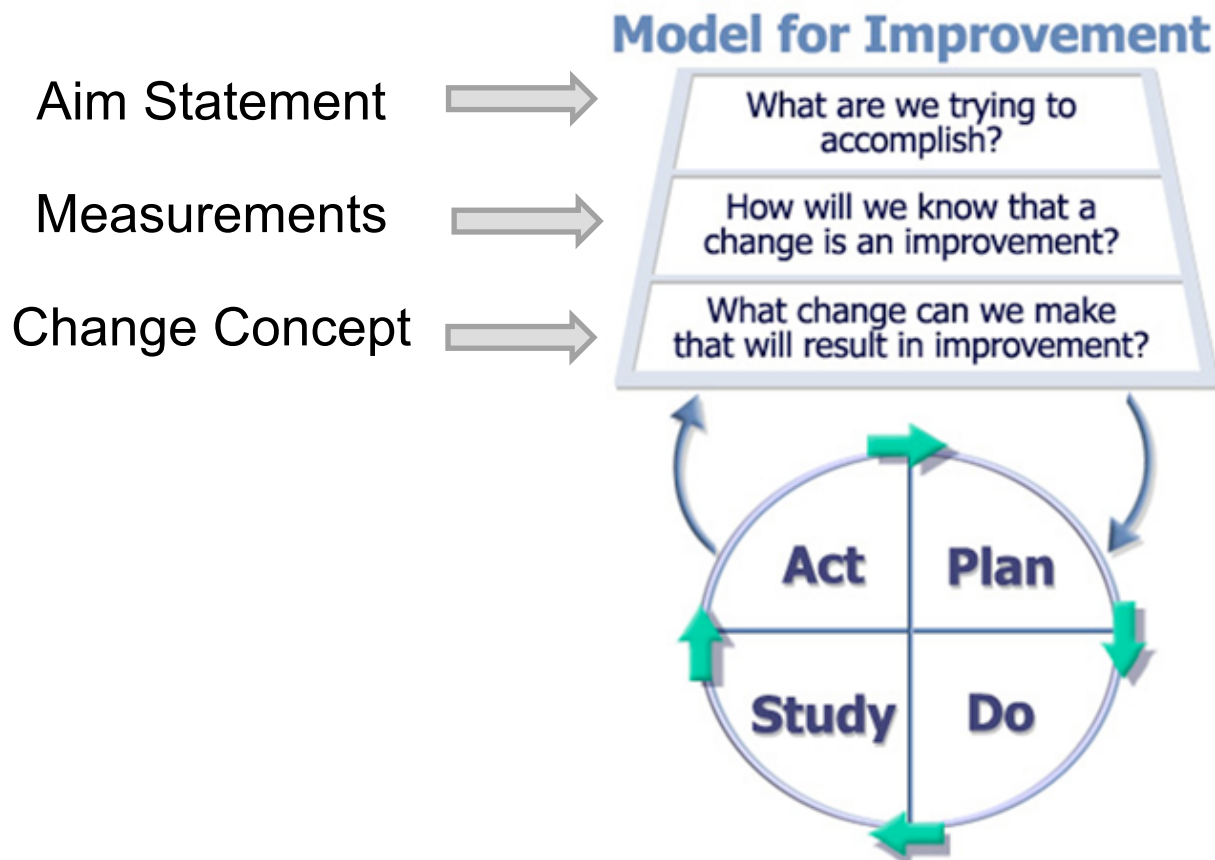
1. Allow at least 1 day of administrative follow-up, planning, and resourcing
2. Visit at least 3-4 locations per week, 5 visits are ideal.
3. Plan time for travel and onsite documentation and problem-solving
4. Plan and update scheduling for the week, send reminders to sites and agenda items for the week.

Daily practice:

1. PF Documentation: ensure accurate and concise descriptions of events and tracking practice performance and participation.

The Model for Improvement (MFI) (Figure 5) helps us define and track the direction of our QI work. The MFI encompasses three basic questions that identify the aim, the measurement, and the change, which lead us to PDSA cycles. Our goal is to continue these cycles until the team determines it successful for spread—meaning replicating the change system-wide. This will take time and should be done in smaller scale at first.

Figure 5. Model for Improvement



So, when we ask, “what is it that we are trying to accomplish?” This is defined by prioritizing and deciding on which area of improvement the practice will be interested in engaging. Again, this is decided based on informed decision-making (i.e. the Needs Assessment, organizational capacity, and interest).

Then we move onto asking ourselves “How will we know that a change is an improvement?” This will be determined by QI team (and/or Key Champion)—they will deduce what processes and outcomes can be measured.

Assignment 1: Set goals with QI team and identify Champion

When the organization determines what changes they want to make, the Practice Facilitator will work with them to create an Aim Statement.

Step 1: Aim Statement (S.M.A.R.T.)

1. Specific: specify area of improvement and patient population
2. Measurable: select measure(s) to track change
3. Assignable: consider the individuals held accountable
4. Realistic: understand resources and change concept
5. Timely: By when

Assignment 2: Select and define metrics and benchmarks

After determining the Aim Statement, we ask, “what change can we make that will result in improvement?”

The second question MFI asks us to answer, “how will we know that a change is an improvement?” This will be partially answered by our aim statement. Look back to the SMART outline and you can see that the M in SMART defines the measure. In the example, it states “tobacco dependence treatments offered.” How can we tell whether there is a percentage change in our intervention/PDSA cycle?

In this instance, we will need to clarify and define which treatments (or any).

Step 2: Determine change concept and decide how it will be measured

The measure will be determined by the team or in conjunction with the key champion. Note that there can be multiple measures to test for change for a single intervention.

A typical PF Workflow process may look something like this:

- Confirm agenda for each practice (include any follow-up items)
- Verify/update schedule for the week
- Visit practice (may vary)
- Meet with key players and follow-up with tasks
- While onsite/online with team, be sure to assist in problem solving (walkthrough)
- Schedule the following meeting

The role of the PF during Implementation includes the following:

- Scheduling
- Fact finding or research
- Printing
- Calls to local partners
- Drafting
- Training
- Planning and problem-solving
- Presenting

- Data interpretation
- Coordinating tasks with QI team/Champion
- Etc.

Assignment 3: Update or adopt workflow regarding hypertension management strategies

Workflow Mapping

Workflow mapping is a process to illustrate visual representation of a process(es).

- Help assess processes as they exist in the present
- Communicate roles and responsibilities
- Used to plan and prepare for new processes, or revise them

High-Level

- ✓ Shows major steps in a process
- ✓ Good for seeing the bigger picture

Detail-oriented

- ✓ Involves all steps in a process, including decision points
- ✓ Good for identifying problem areas or efficiencies

Workflows function as a communication tool, they can also function as an assessment tool to either see how things are or how they should be. When working with a practice, you will want to use workflow mapping when trying to identify the roles and responsibilities involved in making a change to a system's process(es). Workflow mapping can ultimately help implement a new or more effective process for tobacco dependence treatment.

There are a few different ways to format a workflow diagram including a high-level flowchart and a detailed flowchart.

A **high-level flow chart**, also known as a first level or top down flow chart, shows the major steps of the process. The major steps being the beginning, end, and a few steps in between. This is the most basic flowchart to create and is good at providing a bird's eye view of the process. This type of flowchart is not meant to show all the little details of a chart but to help visualize the entire process with the most important steps. This type of flowchart should be limited to 5 boxes.

Another type of flowchart is the **detailed flow chart** which provides a detailed picture of the process and maps out all the steps or activities that occur in a process. This type of flowchart includes decision points, delays, tasks that must be redone and feedback loops. This type of flowchart looks at the process in much more detail than the high level one. This type of flowchart is most useful when trying to identify inefficiency and waste in the process.

Whether you choose to use a high-level flowchart or a detailed one, be sure to indicate who performs each step of the process.

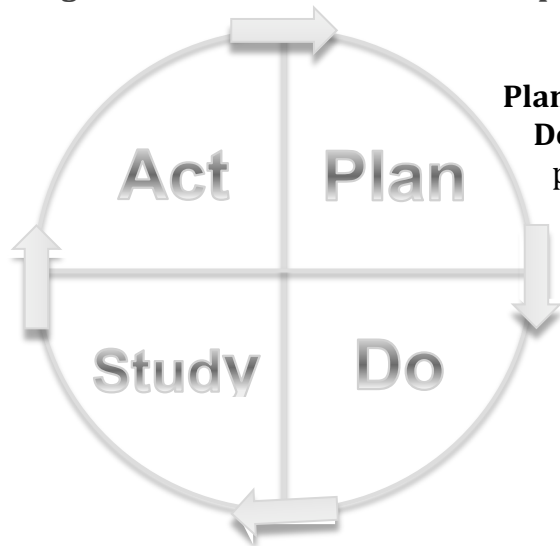
Assignment 4: Schedule and conduct clinician and staff trainings regarding hypertension management

The PF should work with the organization to ensure that staff are trained on any new policies and workflows. There are many ways to ensure staff are being trained.

Ways to Train Staff

- Required Onboarding Training for New Staff
- Annual Training
- Modules
- Case Study Sessions

Assignment 5: PDSA evidence-based practices



Plan: Who? What? When? Where? What data collected?

Do: Carry out the test on a small scale, identify problems/outcomes.

Study: Interpret data results.

Act: Determine modifications and plan for the next cycle.

In order to implement these different change ideas and concepts, PFs will use PDSA cycles.

In a PDSA cycle, the PF will begin with the planning of the change concept/idea, including what to measure. Next you will move onto testing the intervention—the “do” portion of the cycle. Then you move onto the Study portion which compiles and analyzes data to make informed decision in the next portion of the phase, which is the Act. In the Act section you will determine what modifications need to be made for the next PDSA cycle for improvement.

Number of cycles vary depending on the practice and other external factors outside of their control—be prepared for anything.

Example: Based on analysis and recommendation of the Needs Assessment, and your clinic team’s interest, the organization decides to focus their attention on screening patients for tobacco use. The PDSA helps us track each cycle of test that will eventually lead to spread, if successful. Once the improvement is decided upon (EVP), we conduct a PDSA.

Plan: The key champion or QI team decides on how this will be implemented—which may require workflow re/design (more on this later).

Do: Test the practice.

Study: Analyze the results from the data we gathered from testing the practice.

Act: Decide what our next steps should be based on the results of the test.

Example: Based on the practice facilitator observations, the clinic team and patients found the BPA screener language difficult to understand. Using the PDSA cycle, we refined the wording to make it clearer for clinic staff to ask questions and for patients to respond with confidence.

Plan: The practice facilitator, in collaboration with the clinic team, identifies specific BPA screener questions that are unclear to staff and patients. The team revises the wording to improve clarity, shifting from first-person to third person phrasing and ensuring consistent formatting.

Do: Medical assistants and clinic staff pilot the revised BPA screener during patient intake, using the updated language to assess its effectiveness in real-time interactions.

Study: Gather feedback from clinic staff and patients on the revised screener's clarity and ease of use. Analyze response accuracy, staff confidence in asking questions, and patient understanding.

Act: Based on the feedback, make further refinements if necessary. Once the improved screener is validated, implement it clinic-wide and incorporate it into staff training.

Example: To increase enrollment in the program, the need for an acceptability data report to assess clinic staff interaction with the BPA screener tool. Initial findings indicated that some staff were either unaware of the screener's role in patient workflow or found it difficult to understand language. Ensuring consistent use required identifying barriers and optimizing engagement strategies.

Plan: The practice facilitator, in collaboration with clinic leadership, reviews data on BPA screener interactions to identify gaps in staff engagement. The PF schedules targeted onsite visits to determine how specific clinic staff are interacting with BPA screener and assesses any confusion regarding its purpose. A targeted training intervention is developed to improve awareness and integration.

Do: Medical assistants and providers receive training on the importance of the BPA screener and its role in patient care. The team pilot's workflow adjustments, such as making changes to the screener within the EHR for better visibility.

Study: Collect feedback from clinic staff regarding the ease of accessing and using the BPA screener. Compare pre- and post-training engagement data to evaluate improvements in screener interaction. Assess whether specific roles or shifts require additional support and/or training.

Act: Based on findings, refine training materials and adjust EHR settings if needed. Provide targeted coaching for staff who continue to experience challenges. Once engagement is consistent, integrate BPA screener training into new staff onboarding and ongoing workflow optimization efforts.

The cycle then starts over again and we test another cycle doing something slightly different. Key consideration is that we always want to start off small, test on a smaller scale in order to decide whether it is worth spreading/disseminating the change across the practice.

See Appendix 2 for an example of a PDSA Cycle Worksheet the PF can complete with the organization.

"Do"

These resources include screening tools, EHR intervention prompts and scripts, workflows, and more.

"Study": Analyzing Process and Outcome Measures

Data driven change is the process of collecting, analyzing, using data to make informed decisions. There are two types of data we are interested in collecting: clinical process and outcome data.

Process Measure

Defined by an action(s) (i.e. foot exam, referrals, patient education, screened for hypertension)

Clinical Outcome Measure

Specific values based on a health outcome (i.e. lab values of HA1c, or LDL, or self-reported hypertension)

After a measure is defined, the PF will want to consider the following:

- Understand how data is being collected (i.e. CPT codes)
- Scan for existing TC-related reports (i.e. start with HRSA)
- Ensure each intervention is reasonably measurable and reportable
- Ensure continuous stream accurate and live data collection (i.e. producing registry reports)

In collecting data, the PF should anticipate challenges. The PF should work with the organization to plan, anticipate challenges, and engage with the organization to problem-solve.

Facilitators can use a range of strategies to help practices perform data-driven QI when performance data are inaccurate, incomplete, or missing. Support is necessary to help practices, particularly those with EHR data challenges, build their capacity for conducting data-driven QI, required of them for participating in practice transformation and performance-based payment programs. It is questionable how practices with data challenges will perform in programs without this kind of support.¹

Benchmarking

While there is no single definition on how a clinic decides to measure their change, there are common definitions in the healthcare community for insurance reported measures, including government agency reports.

As it relates to PF work, benchmarking is an opportunity to set goals for healthcare organizations to set goals for themselves based on the national or local average. If they are higher performers, then it is up to the organization to decide what goals they would like to set for themselves to achieve.

Presenting on Collected Data

When presenting on collected data, the PF should focus on the following:

- Understanding/explaining the purpose of report
- Validate data prior to presenting through sampling (audit)
- Legible reports should include: title, total counts (numerator/denominator), percentages, timeframe, measurement name and definitions, and benchmark
- Make dashboards/reports easily accessible
- Review with team at staff meetings
- Learn who needs to view the report (i.e. patients, staff, providers)

Assignment 6: Work with QI team to problem-solve implementation issues

Often, problems will arise when implementing systems changes. The role of the Practice Facilitator is to collaborate with the QI team to problem-solve. Conducting a Root Cause Analysis is a systematic process for identifying the cause of a problem. There are two tools that can help us understand the root cause of a problem: a Fishbone Diagram and the 5-Whys.

Fishbone Diagram: examines possible causes of a problem

The process for completing a fishbone diagram involves the following 5 steps:

1. Identify the problem
2. Brainstorm major factors involved in the problem

¹ J Am Board Fam Med. "Practice Facilitator Strategies for Addressing Electronic Health Record Data Challenges for Quality Improvement: EvidenceNOW" 31(3): 398–409. 2018. DOI:10.3122/jabfm.2018.03.170274.
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5972525/pdf/nihms968502.pdf>

3. List possible causes under each factor
4. Analyze the diagram
5. Agree on probable cause

In this diagram you will see the head of the fishbone, which is defined by the problem statement. The spine connects contributing factors to the head of the fishbone. Here you will also see that under each major factor is a list of sub-factors. By determining what the different factors and causes are of a problem, the PF and organization can determine potential areas to intervene.

5-Whys: uncovers underlying causes

The 5-Whys is a technique to uncover the underlying cause of a problem. The first step is to define a problem statement, and then the next step is to simply ask why? You keep asking why until you get to the underlying cause of a problem.

For example, the 5-Whys were used to uncover an ongoing problem at the Washington Monument. The Washington Monument was deteriorating at an alarming rate. There was enough concern to warrant a deeper dive into the issue. So their team began to use the 5-Whys.

Why #1: Why is the monument deteriorating at a high rate?

- Harsh chemicals are frequently used to clean the monument.

Why #2: Why are harsh chemicals being used?

- To clean the large amount of bird droppings on the monument.

Why #3: Why are there large amount of bird droppings?

- The large population of spiders are a food source to the birds.

Why #4: Why are there large population of spiders?

- There are vast swarms of insects that spiders feed on at dusk.

Why #5: Why are swarms of insects drawn to the monument at dusk?

- The lighting of the monument in the evening attracts the local insects

By understanding that the root cause of this problem was the lighting, the potential solution to this problem is to change how the monument is illuminated in the evening to prevent attracting insects. By turning the lights on 30 minutes after dusk, less bugs will be attracted to the monument.²

Finally, the Practice Facilitator will work with Champion/QI team to ensure treatment fidelity and increase sustainability.

Assignment 7: Evidence-based practice quality assurance through performance feedback loop

The PF should work with the QI team to ensure that they have a plan in place for regular quality assurance by examining a performance feedback loop. In addition to examining quality assurance, it is critical for the PF to create a plan disseminate performance feedback. Providing feedback will help providers improve.

Assignment 8: Continuous supervision/championship

The PF should maintain a relationship with their main contacts and/or champion to see how things are going. Examining regular data and checking in on the implementation of projects can help determine

² Eureka Institute State of California. *Root Cause Analysis: The 5 Why's*. California Government Operations Agency, California Lean Academy. <https://www.calhr.ca.gov/Documents/Root-Cause-Analysis.pdf>

whether there are any areas that the PF can continue to support the organization in their tobacco dependence treatment policy implementation.

Assignment 9: Accurate documentation and billing

The PF should work with the QI team to regularly check in and ensure that documentation and billing is being properly conducted. The PF should work with the QI team to discuss how to regularly assess documentation and billing.

Assignment 10: Ensure a contingency plan is in place

There will be times where projects do not go as planned. It is critical for the PF to consider alternative solutions and be flexible while working with organizations. Creating a contingency plan for issues like staff turnover is a critical way to ensure that a systems change is sustainable.

Assignment 11: Provide/seek incentives (i.e. recognition or monetary)

One way to encourage clinical staff to continue to implement systems changes is to provide incentives for clinicians who effectively implement changes. For example, when pulling data from the hypertension registry, recognizing clinicians who screen over 80% of their patients, they could get an award, recognition at a team meeting, or even a monetary incentive.

The PF can work with the QI team to discuss potential incentives for high performers.

Assignment 12: Turnover management through ongoing training

Turnover at healthcare organizations is high, so the PF should work with the QI team to make sure that regular trainings are in place during onboarding and additional refreshers is critical in order to make sure all new staff are trained.

Appendix 1: PACE Environmental Scan Toolkit

About this Toolkit

This toolkit was designed by the NYU ADDRESS-BP research team to help Practice Improvement Coordinators (PICs) conduct a practice evaluation (e.g., workflow analysis, environmental scan) during the pre-implementation phase. This environmental scan toolkit provides a step-by-step guide and procedures to assist PICs in collecting and analyzing data during the pre-implementation phase to explore barriers and facilitators to the implementation of PACE at the practices as well as to refine the practice facilitation (PF) + community health worker (CHW) implementation strategy collaboratively with the practices.

Prior to implementation of PACE, all practices will participate in the pre-implementation phase for a period of 6 months. During the first 3 months, PICs will utilize the environmental scan toolkit to conduct a practice capacity assessment in each practice, based on the Consolidated Framework for Implementation Research. The environmental scan will serve the dual purpose of: (1) developing a practice assessment to guide the refinement of the PF strategies that will be tested in the implementation phase and (2) giving the PICs an opportunity to form relationships with practice staff and develop a shared understanding of project roles and responsibilities.

Why conduct an Environmental Scan?

An environmental scan is a structured needs assessment that combines observational and survey data collection methodologies to develop a robust understanding of the internal conditions and external factors that affect an organization. In this study, the environmental scan will serve the dual purpose of: (1) developing a practice assessment to guide the refinement of PATCH that will be tested in the implementation phase and (2) giving the PFs and CHWs an opportunity to form relationships with practice staff and develop a shared understanding of project roles and responsibilities. To conduct the scan, facilitators will combine the CFIR observational tool with a structured workflow analysis and survey questions that assess staffs' perceptions about the practice culture, beliefs about organizational change, and self-efficacy to conduct health coaching sessions. Together, these data will be used to develop a robust understanding of the facilitators and barriers to implementation of PACE at the practices. The facilitators will use a CFIR observational tool at the practices to conduct joint observations at four practices to establish inter-rater reliability. Once the facilitators achieve an acceptable level of agreement (Krippendorff's alpha >0.80), they will independently complete the observational tool at the remaining practices. Observations can be completed virtually, as possible and permitted by the practices, to accommodate practice needs, pandemics (i.e COVID 19, etc.), or any other circumstances.

The study team will synthesize data collected from the QI interviews and environmental scan and present the findings to the SC. The Committee, in partnership with the study team, will use this data to develop a refined PF+CHW strategy tailored to the practice context and designed to overcome the challenges to implementation of PACE into routine practice in the implementation phase.

Stage	Pre-Implementation Activities	PICs Milestone Checklist To demonstrate measurable movement along the PACE Implementation Process <i>(Indicate the date when each milestone is completed)</i>	Timeline						Tools	
Pre-Implementation Phase. Stage 1: Planning	<ul style="list-style-type: none"> Assess Clinic Readiness to Implement PACE <ul style="list-style-type: none"> Recommended environmental scan data collection tools <ul style="list-style-type: none"> CFIR semi-structured interviews CFIR-guided Survey <ul style="list-style-type: none"> Counselor Self-Efficacy Scale (Part 1 & 2 only for RNs) Practice Culture Assessment Data analysis Assist practice in building an effective PACE implementation team to lead practice changes <ul style="list-style-type: none"> Assist practice in identifying an PACE champion Assess current HTN workflow <ul style="list-style-type: none"> Identify workflow changes necessary to maximize results 	Start/End Date	Milestone	Month						<ul style="list-style-type: none"> Tool 1. PACE CFIR-guided Semi-structured Interview Tool 2. PACE CFIR-Guided Self-Administered Questionnaire Tool 3. Counselor Self-efficacy Scale Tool 4. Practice Cultural Assessment: Tool 5. Workflow Analysis Interview (Medical Assistant) Tool 6. Workflow Analysis Interview (Nurses) Tool 7: PACE Qualitative Data Mapped to the CFIR Constructs Tool 8. Potential Barriers and Recommendations to Overcome Them
				1	2	3	4	5	6	
			Collect the CFIR surveys							
			Complete the CFIR-guided semi-structure interviews with staff							
			Complete the observational tool onsite or virtually using the CFIR semi-structured interview guide							
			Complete transcription and analysis of qualitative/quantitative data							
			Complete barrier and facilitator worksheet							
			Assess current HTN workflow process with practice staff							
			Establish PACE team to lead practice changes							
			Decide on implementation roll out plan with practice staff							

Stage	Pre-Implementation Activities	PICs Milestone Checklist To demonstrate measurable movement along the PACE Implementation Process <i>(Indicate the date when each milestone is completed)</i>		Timeline						Tools
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				1	2	3	4	5	6	
			Collect the CFIR surveys							
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			Complete the observational tool onsite or virtually using the CFIR semi-structured interview guide							
			Complete transcription and analysis of qualitative/quantitative data							
			Complete barrier and facilitator worksheet							
			Assess current HTN workflow process with practice staff							
			Establish PACE team to lead practice changes							
			Decide on implementation roll out plan with practice staff							

Theoretical Framework that Informs the Environmental Scan

The observational and guided semi-structure interview tools are structured around the Consolidated Framework for Implementation Research (CFIR) model. The CFIR is a conceptual model that provides a comprehensive overview of system-level factors that can affect implementation effectiveness. CFIR consists of 39 constructs under five domains: (1) intervention characteristics, (2) outer setting, (3) inner setting, (4) individual characteristics, and (5) process. Table 2 includes the five CFIR domain as well as description of each of the constructs. Structuring the PACE data collection tools around the CFIR constructs will allow us to assess practice readiness to implement PACE on factors related to the intervention and on factors specific to the practice characteristics (inner, outer setting, staff characteristics). In addition, by identifying the level of practice readiness prior to implementation, we will be able to understand how the practice is best equipped to implement PACE and develop an effective implementation plan that is tailored to the practice needs.

Table 2. CFIR Domains and Constructs

Domains	Constructs
Intervention Characteristics: The PACE program	<u>Intervention Source:</u> Perception of key stakeholders about whether PACE is externally or internally developed <u>Evidence Strength and Quality:</u> Perceived quality of evidence supporting the belief that PACE will have desired outcomes <u>Relative advantage:</u> Perceived advantage of implementing PACE vs an alternative solution <u>Adaptability:</u> The degree to which PACE can be adapted to meet practice needs <u>Trialability:</u> Perceived feasibility of piloting PACE prior to full-scale implementation <u>Complexity:</u> Perceived difficulty of implementing PACE, reflected by duration, scope and number of steps required to implement PACE <u>Design Quality and Packaging:</u> Perceived excellence in how PACE is designed, presented and assembled
Outer Setting: Characteristics of patients who will be impacted by PACE and external factors affecting implementation	<u>Patient Needs and Resources:</u> The extent to which patients with hypertension (HTN) needs are being met, including understanding how well barriers and facilitators to medication adherence are known or prioritized by the practice <u>Cosmopolitanism:</u> Degree to which the organization is networked with other external organizations <u>Peer Pressure:</u> Competitive pressure to implement PACE because most or other key peer/competing organizations have already implemented a similar program <u>External Policies & Incentives:</u> External factors that may affect implementation of PACE (policy, guidelines, economic incentives)
Inner Setting: Characteristics of the practice as it relates to HTN care	<u>Structural Characteristics:</u> Types of infrastructure and staff changes needed to accommodate PACE <u>Networks and Communications:</u> Nature and quality of formal and informal communications within the practice <u>Culture:</u> Norms, values, and basic assumptions of the practice Implementation Climate <u>Tension for Change:</u> Perceived need for changing the HTN management process at the practice <u>Compatibility:</u> The fit between the PACE workflow and existing workflows, systems and values at the practice <u>Relative Priority:</u> Shared perception of the importance of implementing PACE within the practice <u>Organizational Incentives & Rewards:</u> Extrinsic incentives such as goal-sharing awards, performance reviews, promotions, and raises in salary, and less tangible incentives such as increased stature or respect <u>Goals and Feedback:</u> Degree to which goals are clearly communicated, acted upon, and fed back to staff and alignment of feedback with goals <u>Learning Climate:</u> A climate in which: a) leaders express their own fallibility and need for team members' assistance and input; b) team members feel that they are essential, valued, and knowledgeable partners in the change process; c) individuals feel safe to try new methods; and d) there is sufficient time and space for reflective thinking and evaluation Readiness for Implementation <u>Leadership Engagement:</u> Commitment of managers to implement PACE <u>Available Resources:</u> Resources available to implement PACE (e.g., physical space, equipment, education, time, and/or information technology) <u>Access to knowledge and information:</u> Ease of access to digestible information and knowledge about PACE and how to incorporate it into work tasks
Characteristics of Individuals: Characteristics of the staff involved in the implementation	<u>Knowledge and Beliefs:</u> Staffs' attitudes toward the implementation of PACE <u>Self-efficacy:</u> Staff confidence to be able to successfully implement and deliver PACE <u>Individual Stage of Change:</u> The staff's current stage of change, as s/he progresses toward a skilled, enthusiastic, and sustained user of PACE Individual Identification with Organization: <u>Individuals Identification with organization:</u> How individuals perceive the organization and their relationship with and degree of commitment to that organization

	<i>Other Personal Attributes:</i> Other personal traits of staff at the practice such as tolerance of ambiguity, personal motivation, values, competence, capacity, and learning style
Process: The process of Implementing PACE	<i>Planning:</i> The degree to which an implementation plan is developed in advanced and the quality of the plan <i>Engaging:</i> Attracting and involving appropriate individuals for the implementation of PACE <i>Executing:</i> Carrying out the implementation plan accordingly <i>Reflecting and Evaluating:</i> Quantitative and qualitative feedback about the progress and quality of implementation accompanied with regular personal and team briefing about progress experience

Environmental Scan Components

1. Procedures for conducting the CFIR-guided semi-structured interviews.

PICs will conduct semi-structured interviews with a random sample of 30 clinical/nonclinical staff across the 10 participating practices, using a convenience sampling strategy. The purpose of the semi-structured interviews is to assess key stakeholders (leadership and staff) views of the implementation of PACE, as well as to identify potential barriers and facilitators that may be associated with effective implementation.

To moderate the interviews, PICs will use a semi-structured interview guide (Tool 2), that includes CFIR constructs across four domains: 1) inner practice setting (e.g., leadership support, organizational capacity); 2) external environment (e.g., patient needs and resources, external resources and incentives), 3) staff characteristics (e.g., self-efficacy, knowledge and beliefs about patient-centered counseling), and 4) intervention characteristics (e.g., complexity).

2. Procedures for collecting self-assessment questionnaires

All self-assessment questionnaires (Tools 3-7) will be offered as web-surveys (electronic questionnaires provided through RedCap) that allows for 1) a broad involvement throughout the practice at different levels of leadership and staff, and 2) a process of obtaining insight from the practice at different points during pre-implementation. Collection of the self-assessment questionnaires by staff with different roles within the practice will provide a greater understanding of “the way things work” at each of the participating sites.

At the discretion of each practice, the self-assessment questionnaires will be offered to the entire practice or just selected staff. PICs will work with leadership to determine who will be surveyed at each practice and the best way to distribute the surveys to staff (e.g., through email, during staff meetings).

The PACE CFIR-Guided Self-Administered Questionnaire for Leadership and Staff (tool 3) will be collected with as many clinical/non clinical staff as possible across the 10 participating practices to identify potential barriers and facilitators to the implementation of PACE. For the remaining questionnaires, PICs will have the autonomy to use their judgment as to which ones are best suited for the practice they are assessing. Below is a description of the individual level self-assessments.

- **Tool 2. The PACE CFIR-Guided Self-Administered Questionnaire for Leadership and Staff** was created based on the CFIR constructs previously described to identify potential barriers and facilitators that may be associated with effective implementation of PACE. Items are scored on a 5-point Likert scale.
- **Tool 3. Counselor Self-efficacy Scale** is an adapted version of the Counselor Self-Efficacy Scale, which assesses counselor's level of confidence for performing client-centered skills and addressing client concerns. Items are score on a scale from zero to nine. Being zero not confidence, and nine complete confidence.
- **Tool 4. Practice Cultural Assessment** is a scale that assesses provider and staff perceptions of practice culture thought to be important to practice functioning and successful implementation of quality improvement projects. The three subscales are: 1) work culture (e.g., how team members collaborate to ensure high-quality care); 2) change culture (e.g., quality of collaborative problem resolution and change management); and 3) chaos (e.g., level of practice instability, disruption, and disorganization). Items are scored on a 5-point Likert scale.

4. Procedures for conducting the workflow analysis interviews

PICs will conduct workflow analysis interviews with key personnel (e.g., Nurses, MAs) to assess how the hypertension care process occurs at the practice. More specifically, the purpose of this interview is to help us identify opportunities and challenges for integrating the PACE strategy into the work of the practice by understanding the current hypertension workflow. PICs will work with leadership to determine key personnel to be interviewed at each practice. The interview will take about 30 minutes.

To moderate the interviews, PICs will use an interview guide (Tool 10-11). During the interview, the interviewees will recreate the hypertension process from beginning to end by creating a visual flowchart of the process. Upon completion of the workflow interview, PICs will transpose the steps from the workflow into a word document (Tool 12) for analysis. During this step, additional information from the interview will be populated into the word document to help us understand factors involved in the hypertension process and therefore how these factors will be affected by the implementation of PACE.

Analyzing and Reporting the Environmental Scan Findings

The last step in the needs assessment is to analyze the data collected and provide feedback to the practices related to gaps in services and infrastructure that may hinder implementation of the key drivers of PACE. During the analysis of the semi-structured interviews and observations, the major themes identified will be mapped within the domains and constructs of the CFIR framework (Tool 8). This process will allow us to draw conclusions about potential barriers to the implementation of PACE and recommend actions to overcome them, as outlined in PACE tool #10. Upon completion of the hypertension workflow analysis, we will be able to troubleshoot problems and pinpoint bottlenecks that may impede making PACE part of the practice workflow. Altogether, these findings will also inform the development of a comprehensive practice facilitation (PF) implementation plan that is based on a strong understanding of the strengths but also on the potential barriers to the implementation of the program (Tool 13). After the assessment, PICs and the PACE improvement team from each practice will meet to collaboratively determine where and how processes related to PACE can be created or enhanced through an analysis of the gaps.

The following questions will be considered as the PF plan is developed:

- What needs of HTN patients are going unmet;
- What available programs, supports, and services are designed to meet these needs;
- Are there any major problems not being addressed by a service, program, or activity;
- Are HTN patients at greatest risk for poor outcomes receiving the appropriate programs, services, and supports? If not, why not;
- Are there duplicative services, programs, and supports attempting to address the same problem? If so, which are more effective and which are less so;
- Are there documented policies and procedures for poor HTN control in high-risk patients?
- Are staff motivated and willing to implement the program? Do they think they have the power/autonomy/confidence to take on these roles, etc. Do they think it is important?

Upon completion of the interviews at a given practice, the implementation team will transcribe, and analyze the interviews to identify implementation themes as well as potential barriers/facilitators to implementation using the 39 CFIR constructs as baseline codes. The CFIR codebook will be used by the implementation team as a guide during the coding process to agree upon observed or identified constructs. In addition, the high-level flowchart will help create a plan to best integrate the PACE key drivers into the existing workflow by identifying how the current process can be transformed to adopt the PACE key drivers.

PACE ENVIRONMENTAL SCAN TOOLS

1. CFIR-Guided Instruments

- **Tool 1.** PACE CFIR-guided Semi-structured Interview

2. Self- Administered Questionnaires

- **Tool 2.** PACE CFIR-Guided Self-Administered Questionnaire for Leadership and Staff
- **Tool 3.** Counselor Self-efficacy Scale
- **Tool 4.** Practice Cultural Assessment

3. Workflow Analysis Interviews

- **Tool 5.** Workflow Analysis Interview (Medical Assistant)
- **Tool 6.** Workflow Analysis Interview (Nurses)

4. Data Analysis Tools

- **Tool 7:** PACE Qualitative Tool to Map Data to the CFIR Constructs
- **Tool 8.** Recommended Action Steps

5. Implementation Plan

- **Tool 9.** PACE Tailored Implementation Plan

PACE CFIR-Guided Observational Tool

PIC Name:

Type of Observation:

Date:

of Attendees:

PACE Observational Tool

Domains and Constructs of CFIR	Check the Construct(s) Noticed During the Observation	Write any Statement(s)/Descriptions Reflective of the Construct. Add an S (Staff) or L (Leadership) next to the statement	Rating “+,” “_” “+/_”
1. Intervention Characteristics:			
<u>Intervention Source:</u> Include statements about the source of PACE and extent to which staff view PACE as internally developed (i.e., by leadership or other members of the practice) or external to the practice	<input type="checkbox"/>		
<u>Evidence Strength and Quality:</u> Include statements regarding awareness of strength/quality of evidence supporting PACE, or a desire for different types of evidence, such as pilot results from implementing PACE in their practice instead of evidence from the literature/previous studies	<input type="checkbox"/>		
<u>Relative advantage:</u> Include statements that demonstrate that PACE is better (or worse) than existing programs	<input type="checkbox"/>		
<u>Adaptability:</u> Include statements regarding the (in)ability to adapt PACE to their context, e.g., complaints about the rigidity of the protocol	<input type="checkbox"/>		
<u>Trialability:</u> Include statements related to whether the practice would want to pilot PACE, and comments about whether they believe it is (im)possible to conduct a pilot	<input type="checkbox"/>		
<u>Complexity:</u> Include statements about the perceived difficulty of implementing PACE because of its complexity, reflected by duration, scope and number of steps required to implement PACE	<input type="checkbox"/>		
<u>Design Quality and Packaging:</u> Include statements regarding the quality of the PACE program materials	<input type="checkbox"/>		
2. Outer Setting			
<u>Patient Needs and Resources:</u> Include statements demonstrating (lack of) awareness of the needs of patients served by the practice, and whether this awareness influences implementation of PACE	<input type="checkbox"/>		
<u>Cosmopolitanism:</u> Include statements regarding the extent to which the practice encourages staff to take initiative to share ideas.	<input type="checkbox"/>		
<u>Peer Pressure:</u> Include statements about perceived pressure or motivation from other external entities/organizations/systems/policies to implement PACE	<input type="checkbox"/>		
<u>External Policies & Incentives</u> Include statements of external performance measures and/or incentives that support improving the HTN care process in the practice	<input type="checkbox"/>		
3. Inner Setting			
<u>Structural Characteristics:</u> Include statements indicating that infrastructural and staff changes can accommodate implementation of PACE	<input type="checkbox"/>	“we like the program” “	
<u>Networks and Communications:</u> Include statements about general communication and relationships in the practice (e.g., descriptions of meetings, email groups, or other methods of keeping people connected and informed, and statements related to team formation, quality, and functioning)	<input type="checkbox"/>		
<u>Culture:</u> Include statements related to the norms, values, and basic assumptions of the practice	<input type="checkbox"/>		

Domains and Constructs of CFIR	Construct(s) Noticed During Observation	Statement(s) Reflective of the Construct Please code the statement as S (Staff) or L (Leadership)	Rating “+,” “-” “+/-”
We are taking the data from the workflow analysis interviews/ nonformal observations mapped to CFIR.			
4. Implementation Climate			
<u><i>Tension for Change:</i></u> Include statements that (do not) demonstrate a strong need for PACE and/or that the current situation is untenable, e.g., statements that PACE is necessary or that PACE is redundant with other programs	<input type="checkbox"/>		
<u><i>Compatibility:</i></u> Include statements that demonstrate the level of compatibility of PACE with the practice values and work processes. Include statements that PACE may or may not need to be adapted as evidence of compatibility or lack of compatibility	<input type="checkbox"/>		
<u><i>Relative Priority:</i></u> Include statements that reflect the relative priority for PACE in the practice	<input type="checkbox"/>		
<u><i>Organizational Incentives & Rewards:</i></u> Include statements related to whether organizational incentive systems (goal-sharing awards, performance reviews, promotions, and raises in salary, and less tangible incentives such as increased stature or respect) are in place or considered to foster (or hinder) implementation of PACE	<input type="checkbox"/>		
<u><i>Goals and Feedback:</i></u> Include statements related to the (lack of) alignment of PACE goals with organizational goals, as well as feedback to staff regarding those goals	<input type="checkbox"/>		
<u><i>Learning Climate:</i></u> Include statements that support (or refute) the degree to which key leadership exhibit a “learning climate.” For example, a climate in which leaders can express their own fallibility and need for team members assistance and input. A climate where there is sufficient time and space for reflective thinking and evaluation.	<input type="checkbox"/>		
Readiness for Implementation			
<u><i>Leadership Engagement:</i></u> Include statements regarding the level of engagement of organizational leadership in support of the implementation of PACE	<input type="checkbox"/>		
<u><i>Available Resources:</i></u> Include statements related to the presence or absence of internal resources that can support the ongoing implementation of PACE (e.g., physical space, equipment, education, time, and/or information technology)	<input type="checkbox"/>		
<u><i>Access to knowledge and information:</i></u> Include statements related to implementation leaders' and users' access to knowledge and information regarding using PACE, i.e., training on the mechanics of the program	<input type="checkbox"/>		
Characteristics of Individuals			
<u><i>Knowledge and Beliefs:</i></u> Include statements regarding staffs’ attitudes toward the implementation of PACE	<input type="checkbox"/>		
<u><i>Self-efficacy:</i></u> Include statements regarding staff confidence to be able to successfully implement and deliver PACE	<input type="checkbox"/>		
<u><i>Individual Stage of Change:</i></u> Include statements that indicate the stage of change staff are in (i.e., pre-contemplation to maintenance), as they progress toward skilled, enthusiastic, and sustained use of PACE	<input type="checkbox"/>		
<u><i>Individuals Identification with organization:</i></u> Include statements regarding how staff perceive the practice and their relationship and degree of commitment with that practice	<input type="checkbox"/>		
<u><i>Other Personal Attributes:</i></u> Include statements regarding staffs’ personal traits such as tolerance of ambiguity, intellectual ability, motivation, values, capacity and learning style	<input type="checkbox"/>		

Tool 1. PACE CFIR-guided Semi-structured Interview

Hello, my name is [name of interviewer].

We will be interviewing multiple people at your practice to gain multiple perspectives. We are really interested in learning about your thoughts and beliefs about how we can carry out the implementation of the PACE program at your practice.

This project is approved by the NYU Institutional Review Board.

This interview will be audio taped so that we have an accurate record of your thoughts. Please be assured that the tapes and your transcript will be kept confidential and anonymous. Once your interview has been transcribed, the recording will be destroyed.

You may also skip any questions you wish during the interview.

Do you have any questions for me?

Are you ready to begin? I am going to start recording now.

Please indicate your position within your practice.

- ☐ Physician/LPN
- ☐ Physician Assistant
- ☐ Nurse
- ☐ Medical Assistant
- ☐ Other _____

I would like to get your thoughts on implementing new programs such as PACE in your practice.

The PACE program is an evidence-based intervention that seeks to improve hypertension care by focusing on remote blood pressure monitoring (RBPM) + nurse case management (NCM) + social determinants of health (SDOH) support through identifying, referring, coaching and monitoring hypertensive patients who are not adherent to their medication.

Note: For any questions specific to PACE, please refer to the PACE steps described below.



Q#	Construct	Short Description	PACE Qualitative PICs In-Depth Interview Question
INNER SETTING			
1.	Implementation Climate: Compatibility	The fit between the PACE workflow and existing workflows, systems and values at the practice.	<p>Does your practice have any programs or processes for high-risk hypertensive patients? For example, contacting patients who have been identified by certain criteria (e.g., uncontrolled high blood pressure) and need follow-up?</p> <p>Not collected</p> <p>PROBE</p> <ul style="list-style-type: none"> If yes, what kind of programs?

INTERVENTION			
2.	Relative Advantage	Perceived advantage of implementing PACE vs an alternative solution.	<p>PACE consists of five steps: <i>Identify, Refer, Coach, Document and Monitor</i>. What are your suggestions for integrating the PACE steps in your practice to improve the health outcomes of hypertensive patients? Similar one is being collected within the workflow analysis interviews</p> <p>PROBE</p> <ul style="list-style-type: none"> What do you think are the advantages or disadvantages of making the PACE steps (Identify, Refer, Coach, Document and Monitor) the standard for HTN care in your practice? Not Collected
CHARACTERISTICS OF INDIVIDUALS			
3.	Knowledge & Beliefs about the Intervention	Staffs' attitudes toward the implementation of PACE.	<p>After going through the PACE steps, what are your general thoughts about the plan of implementing a process like PACE in your practice?</p> <p>Not Collected</p>
INTERVENTION			
4.	Trialability	Perceived feasibility of piloting PACE prior to full-scale implementation.	<p>Before implementing the full program, practices have the opportunity to pilot PACE. What do you think about piloting PACE before it is standardized in the practice?</p> <p>Not Collected</p>
Now, I would like to ask you a few questions related to the day-to-day work in your practice.			
Q#	Construct	Short Description	PACE Qualitative PICs In-Depth Interview Question
INNER SETTING			
5.	Networks & Communications	Nature and quality of formal and informal communications within the practice.	<p>How would you describe working relationships between units/services in your practice?</p> <p>PROBE</p> <ul style="list-style-type: none"> Provide an example of how communication is exchanged and maintained for a specific project/process? <p>Not Collected</p>
6.	Implementation Climate: Goals and Feedback	The degree to which goals are clearly communicated, acted upon, and fed back to staff, and alignment of that feedback with goals.	<p>Does your practice set goals for improvement of current processes?</p> <ul style="list-style-type: none"> If yes, how are those goals for improvement communicated in your practice? <p>Not collected</p>
OUTER SETTING			
7.	Patient Needs & Resources	The extent to which HTN patient needs, including understanding of barriers and facilitators to medication adherence are known or prioritized by the practice.	<p>Considering all the health issues affecting patients in your practice, what do you think about addressing uncontrolled hypertension?</p> <p>PROBE</p> <ul style="list-style-type: none"> Has this changed over the past months? If yes, in what ways? <p>Not Collected</p>

Self- Administered Questionnaires

Tool 2. PACE CFIR-Guided Self-Administered Questionnaire for Leadership and Staff

Part 1: Site Characteristics' Survey

What are your daily responsibilities?

How long have you worked at this practice site?

Does your practice site hold daily huddles? Yes No

- If yes, what happens during huddles?

Post-survey QI training

Q#	Construct	Item	Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
Please rate your level of agreement with the following statements about your practice Post-survey QI training							
1.	Relative Priority	My coworkers and I are able to juggle competing priorities in our work.					
2.	Networks & Communications	In this practice, leadership/clinical management ask the opinion of staff regarding decisions about patient care.					
3.		In this practice, leadership/clinical management promote team building to solve clinical care problems.					
4.		In this practice, leadership/clinical management promote communication among staff.					
5.		In this practice, we maintain communication through regular meetings.					
6.	Culture	In this practice, leadership/clinical management provide staff with information on performance measures.					
7.	Culture	In this practice, staff have a sense or personal responsibility for improving patient care and outcomes.					
8.	Culture	In this practice, staff cooperate to maintain and improve effectiveness of patient care.					
9.	Culture	In this practice, staff members are accountable for achieving results.					
10.	Culture	In this practice, staff are willing to try new evidence-based protocols.					

Q#	Construct	Item	Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
Please rate your level of agreement with the following statements about your practice Post-survey QI training							
11.	Culture	In this practice, staff work cooperatively with senior leadership/clinical management to make appropriate changes.					
12.	Culture	In this practice, when there is agreement that change needs to happen, we have the necessary support in terms of staffing.					
13.	Culture	This practice embraces and uses new ideas to make improvements.					
14.	Culture and Learning Climate	In this practice, staff members are receptive to make changes in clinical processes.					
15.	Culture and Learning Climate	In this practice, Leadership/clinical management encourage and support changes in practice processes to improve patient care.					
16.	Culture and Learning Climate	In this practice, staff believe that the current practice process can be improved.					
17.	Culture and Learning Climate	This practice is willing to innovate to improve clinical procedures.					
18.		In this practice, leadership includes staff in making decisions about new programs that are implemented.					
19.	Patient needs and Resources	This practice strives for continuous improvement of patient care.					
20.		This practice get feedback from patients on their needs and preferences.					
21.		This practice seeks always to improve patient education and increase patient participation in their treatment.					
22.	Goals and Feedback	In this practice, Leadership/clinical management establish clear goals for patient care processes and outcomes.					
23.		In this practice, Leadership/clinical management provide staff with feedback on effects of clinical decisions.					
24.		In this practice, staff is involved in setting goals for improvement of current processes.					
25.	Organizational Incentives & Rewards	This practice rewards or incentivizes (e.g., special recognition, performance evaluation) staff who participate in quality improvement projects/initiatives.					

Part 2: Perceptions about PACE

PACE is a program designed to help primary care practices improve hypertension outcomes by enhancing their hypertension care process. As part of PACE, Practice Improvement Coordinators, who are external to the practice, assist practice staff on how best integrate the five steps of PACE (Identify, Refer, Coach, Monitor and Document) into the existing practice workflow. Practice Improvement Coordinators also assist practices on how best monitor the implementation efforts.

Note: For any questions specific to PACE, please refer to the PACE steps described below.



Identify patients with uncontrolled blood pressure who are not adherent to their meds and **Refer** them to a clinic Health



Health Coach discuss BP, and address barriers to adherence with



Document information from the health coaching visits in the EMR



Monitor patients' progress through completion of follow-up health coaching

Please select the response that best reflects your level of agreement with the following statements about implementing the PACE program in your practice.

Not collected and won't be able to collect during implementation as PACE has already influenced their perceptions.

Q#	Construct	Item	Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
26.	Patient needs and Resources	Implementing the PACE steps (Identify, Refer, Coach, Document and Monitor) will have a positive impact on patients with uncontrolled hypertension in this practice.					
27.		Based on experience from participation in past programs, patients served by my practice will be receptive to HTN health coaching.					
28.	Peer Pressure	Implementing the PACE steps (Identify, Refer, Coach, Document and Monitor) will be advantageous for this practice compared to other practices in the area					
29.	Adaptability	Implementing the PACE steps (Identify, Refer, Coach, Document and Monitor) to address medication non-adherence will not be applicable to a large proportion of patients in this practice					
30.	Relative Advantage	Implementing the PACE steps (Identify, Refer, Coach, Document and Monitor) will have more advantages than disadvantages for patients with uncontrolled hypertension in this practice.					
31.	Complexity	The PACE steps (Identify, Refer, Coach, Document and Monitor) will be too time-consuming to implement in this practice.					

32.		The PACE steps (Identify, Refer, Coach, Document and Monitor) will be easily incorporated into the current workflow process in this practice.					
33.	Readiness for Implementation	The leadership in this practice will provide support to help make the implementation of PACE successful.					
34.		This practice is ready to implement a process such as PACE that includes identifying, referring, coaching, documenting, and monitoring patients with uncontrolled hypertension.					
35.	Available Resources	This practice will be able to procure the resources needed (e.g., dedicated personnel time, operating resources) to implement and sustain PACE.					
36.	Access to knowledge or Information	People in this practice will be available if I have questions about PACE or its implementation					
37.	Knowledge and Beliefs About the Intervention	Implementing the PACE steps (Identify, Refer, Coach, Document and Monitor) will be effective in this practice.					
38.	Self-efficacy	I feel confident that I will be able to use the PACE steps (Identify, Refer, Coach, Document and Monitor) to deliver standardized care to patients with uncontrolled hypertension.					
39.		I feel confident that my colleagues and I will be able to implement the PACE program in this practice.					

Tool 3. Counselor Self-efficacy Scale **Not collected**

General Instructions: The following questionnaire consists of three parts. Each part asks about your beliefs about your ability to perform various counseling or health coaching behaviors or to deal with particular issues when counseling patients. Please provide your honest, candid responses that reflect your beliefs about your current capabilities, rather than how you would like to be seen or how you might look in the future. There are no right or wrong answers to the following questions.

Part I.

Instructions: Please indicate how confident you are in your ability to use each of the following helping skills effectively, over the next week, in counseling most patients.

Q#	Counseling Behaviors	Confidence									
		No Confidence			Some Confidence			Complete Confidence			
1.	Attending (orient yourself physically toward the patient)	0	1	2	3	4	5	6	7	8	9
2.	Listening (capture and understand the messages that patients communicate).	0	1	2	3	4	5	6	7	8	9
3.	Restatements (repeat or rephrase what the patient has said, in a way that is succinct, concrete, and clear).	0	1	2	3	4	5	6	7	8	9
4.	Open questions (ask questions that help patients to clarify or explore their thoughts or feelings).	0	1	2	3	4	5	6	7	8	9
5.	Reflection of feelings (repeat or rephrase the patient's statements with an emphasis on his or her feelings).	0	1	2	3	4	5	6	7	8	9
6.	Self-disclosure for exploration (reveal personal information about your history, credentials, or feelings).	0	1	2	3	4	5	6	7	8	9
7.	Intentional silence (use silence to allow patients to get in touch with their thoughts or feelings).	0	1	2	3	4	5	6	7	8	9
8.	Interpretations (make statements that go beyond what the patient has overtly stated and that gives the patient a new way of seeing his or her behavior, thoughts, or feelings).	0	1	2	3	4	5	6	7	8	9
9.	Information-giving (teach or provide the patient with data, opinions, facts, resources, or answers to questions).	0	1	2	3	4	5	6	7	8	9
10.	Direct guidance (give the patient suggestions, directives, or advice that imply actions for the patient to take).	0	1	2	3	4	5	6	7	8	9
11.	Role-play and behavior rehearsal (assist the patient to role-play or rehearse behaviors).	0	1	2	3	4	5	6	7	8	9

12.	Homework (develop and prescribe tasks for patients to try out between sessions).	0	1	2	3	4	5	6	7	8	9
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Part II.

Instructions: Please indicate how confident you are in your ability to do each of the following tasks effectively, over the next week, in counseling most patients.

Q#	Counseling Behaviors	Confidence									
		No Confidence	Some Confidence					Complete Confidence			
13.	Keep sessions "on track" and focused.	0	1	2	3	4	5	6	7	8	9
14.	Respond with the best helping skill, depending on what your patient needs at a given moment.	0	1	2	3	4	5	6	7	8	9
15.	Help your patient to explore his or her thoughts, feelings, and actions.	0	1	2	3	4	5	6	7	8	9
16.	Help your patient to talk about his or her concerns at a "deep" level.	0	1	2	3	4	5	6	7	8	9
17.	Know what to do or say next after your patient talks.	0	1	2	3	4	5	6	7	8	9
18.	Help your patient set realistic health goals.	0	1	2	3	4	5	6	7	8	9
19.	Help your patient to understand his or her thoughts, feelings, and actions.	0	1	2	3	4	5	6	7	8	9
20.	Build a clear conceptualization of your patient and his or her health issues.	0	1	2	3	4	5	6	7	8	9
21.	Remain aware of your intentions (i.e., the purposes of your interventions) during sessions.	0	1	2	3	4	5	6	7	8	9
22.	Help your patient to decide what actions to take regarding his or her problems.	0	1	2	3	4	5	6	7	8	9

Tool 4. Practice Cultural Assessment Not collected**Instructions:** Please rate how much you agree or disagree with the following statements.

Item	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
After making a change, we discuss what worked and what did not work.					
This practice puts a great deal of effort into improving the quality of care.					
This practice encourages everybody's input for making changes.					
We regularly take time to consider ways to improve how we do things.					
The practice leadership makes sure that we have the time and space necessary to discuss changes to improve care.					
This practice uses data and information to improve the work of the practice.					
Our practice encourages people to share their ideas about how to improve things.					
The leadership in this practice is available to discuss work related problems					
When we experience a problem in the practice, we make a serious effort to figure out what is really going on.					
The leadership of this practice is good at helping us to make sense of problems or difficult situations.					
Others value my opinion in this practice.					
People in this practice understand how their jobs fit into the rest of the practice.					
I can rely on the other people in this practice to do their jobs well.					
When there is conflict or tension in this practice, those involved are encouraged to talk about it.					
People in this practice are thoughtful about how they do their jobs					
People in this practice pay attention to how their actions affect others in the practice.					
Most of the people who work in our practice seem enjoy their work.					
The practice leadership promotes an environment that is an enjoyable place to work.					
This practice is almost always in chaos.					
This practice is very disorganized.					
Our practice has recently been very stable.					
Things have been changing so fast in our practice that it is hard to keep up with what is going on.					

PACE Workflow Analysis Interview Guide

Procedures for conducting the workflow analysis interviews

Practice Improvement Coordinators (PICs) will conduct one-on-one workflow analysis interviews with a random sample of 30 clinical/nonclinical staff (e.g., Nurses, MAs) across the ten participating practices using a convenience sampling strategy. The purpose of the workflow analysis interviews is to:

1. Learn how the hypertension care process occurs at the practice.
2. Assess key stakeholders' views of the implementation of PACE.
3. Help us identify opportunities and challenges for integrating the PACE strategy into the practice's current hypertension workflow.

PICs will work with leadership to identify key personnel to be interviewed at each practice. The interview will be completed virtually using WebEx or in-person, based on site preference. The interview will take approximately 15 minutes. PICs will use interview guides (Tool 1 and 2) to probe the interviewee to recreate the hypertension process at their practice from beginning to end. Upon completing the workflow interview, PICs will transpose the workflow into a word document for analysis (Tool 3). During this step, PICs will populate additional information from the interview into the word document to identify factors involved in the practice's current hypertension process that may influence or affect the implementation of PACE.

Tool 5. Workflow Analysis Interview (Medical Assistant)

Hello, my name is [name of interviewer].

The goal of the HTN initiative is to help patients at your practice improve their blood pressure control through a team-based model for hypertension care.

The purpose of this interview is to help us understand the workflows and processes for managing hypertension at your practice. The interview will take about 10 minutes. There are no right or wrong answers; we are just trying to understand how things work at this practice.

- **Briefly describe the steps for patient care when a patient arrives for a clinic visit.**

PROBE

How do you know when a patient is ready to see you?

At what point does the color change?

Does the front desk change the color dot when you receive the patient?

Do you change the color to inform the provider that the patient is ready?

Do you have assigned teams?

Are you assigned to a specific provider (if yes, weekly, daily) or do you receive any patient?

- **Briefly describe the steps for patient care when you receive a patient with hypertension**

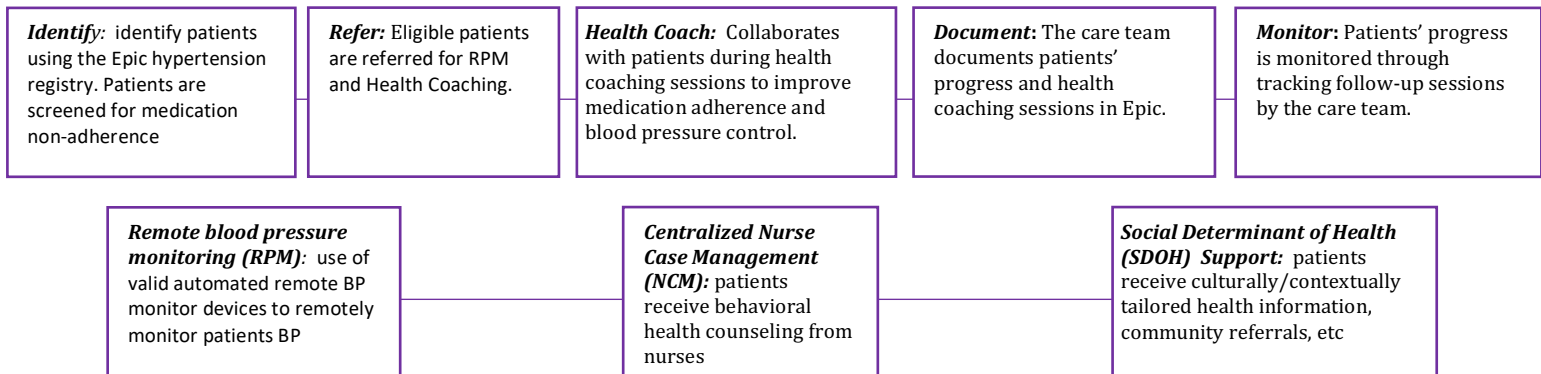
PROBE

- Do you have written workflows?
- What activities or tasks do MAs typically do with hypertensive patients?

Note to PICs: Please complete the practice workflow chart with the MA

- **What is the process for taking blood pressure? Please walk me through each of the steps.**
 - What criteria do you use to determine a patient's blood pressure is elevated?
 - What do you do if the blood pressure reading is elevated?
 - What are some examples of questions or advice you give patients after the first elevated BP reading?
 - How often do you take a second reading if the first blood pressure is elevated?
 - Can you estimate how long you wait before taking a second BP measurement? Is that the standard or does it vary?
 - How do these protocols vary amongst different staff?
 - Do you complete blood pressure readings manually or using a machine?
- **If you take multiple readings, which blood pressure reading do you document in the EHR?**
- **In some cases, a BP recheck is done after the first elevated reading. Can you tell me about this process?**
 - How do you alert the Provider a BP recheck is needed? (**Note to PICs: make sure to ask about the color-coded dot system**)
 - What are some things you tell patients when they need to see a nurse for a BP recheck?
 - How does this effect the clinic workflow? For example, how do you notify the provider that the patient is waiting for a nurse? How, if at all, does this effect clinic throughput?
- **I would like to get your thoughts on implementing the HTN initiative in your practice.**

Note: Please walk interviewee through the FGP Hypertension Initiative steps and components described below.



Does your practice have any programs or processes for hypertensive patients? For example, contacting patients who have been identified by certain criteria (e.g., uncontrolled high blood pressure) and need follow-up?

- If yes, what kind of programs?
 - Can you walk me through the different steps in onboarding/off boarding patients
- How is the agreement stored? (scanned in EMR, log folder)

Who usually prints the aftercare visit summary (AVS)?

After going through the steps, what are your general thoughts about implementing a process like this in your practice?

What are your suggestions for integrating these steps in your practice to improve the health outcomes of hypertensive patients?

PROBE:

- What do you think are the advantages or disadvantages of making these steps (Identify, Refer, Coach, Document and Monitor) the standard for HTN care in your practice?)

Tool 6. Workflow Analysis Interview (Registered Nurse)

Hello, my name is [name of interviewer].

The goal of the HTN initiative is to help patients at your practice improve their blood pressure control through a team-based model for hypertension care.

The purpose of this interview is to help us understand the workflows and processes for managing hypertension at your practice. The interview will take about 10 minutes. There are no right or wrong answers; we are just trying to understand how things work at this practice

1. Briefly describe from the nursing perspective, the steps for patient care when a patient with hypertension arrives for a clinic visit.

PROBE

- Can you describe the protocols that you follow for managing patients with uncontrolled hypertension?
- What happens when a patient has an elevated blood pressure reading during their clinic visit?
- How do you learn a BP recheck is needed?
- How does a Nurse know that a patient is ready to see her/him? (**Note to PICs: make sure to ask about the color-coded dot system**)
- **Can you walk me through the process of the BP recheck?**
 - For example, how long do you wait between readings?
 - Which reading is documented in the EHR?
 - How do you notify the physician that the patient has an elevated BP?
 - Can you estimate the patient wait times from doing the BP recheck to seeing the physician?
 - What happens after the patient sees the nurse for the BP recheck? If the provider is not ready to see the patient?

2. What activities or tasks do Nurses typically do with hypertensive patients?

PROBE

- Can you give me some examples of advice or counseling you give a patient with elevated blood pressure?
 - How do you ask about medication adherence?
 - Are patients screened/counseled for medication adherence? How is the screening/counseling done?
 - What are some strategies you discuss about taking medications as prescribed?
 - How, if at all, is this information documented in the patient's medical record? Communicated with the physician?
- Do Nurses reconcile patients' medications? If so, how is it done and when during the visit?
 - How is this information documented and communicated to the physician?
- Does your clinic have Nurse visits?
 - How many nurse visits do you typically have in one day?
 - Can you estimate the percentage of patients with hypertension you see each day?

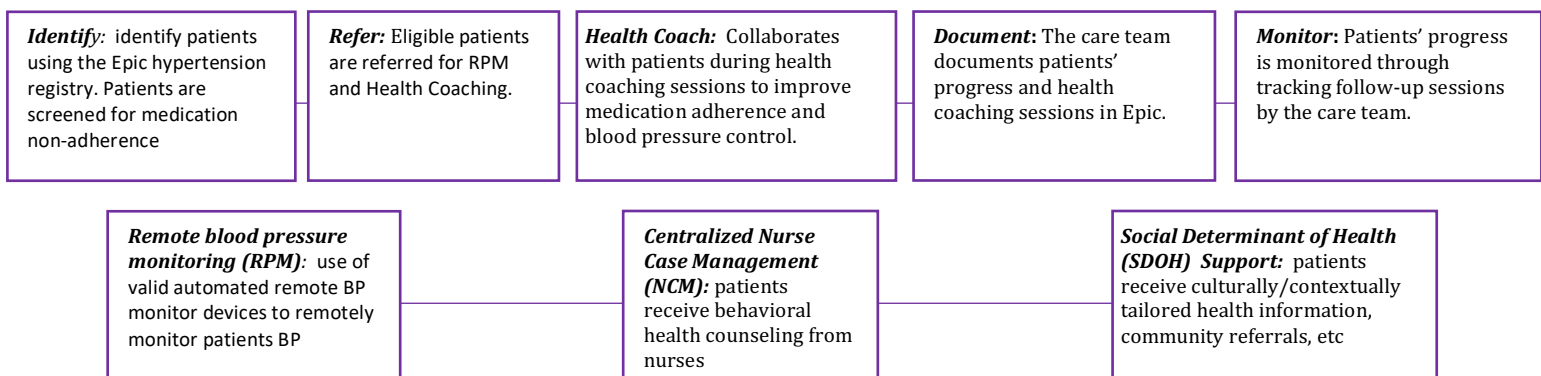
3. What support services are available for patients with hypertension in between clinic visits?

PROBE

- How, if at all, are patients with uncontrolled blood pressure monitored in between clinic visits?
- What are your thoughts about having patient's measure their blood pressure at home?

- What role, if any, do you see if monitoring patient's home blood pressure readings?
 - How would you recommend integrating this into your daily workflow? What might help you do your job better? Where would you need more support?
- What types of support and/or resource might patient's need to be able to monitor their blood pressure at home?
 - Can you estimate what percentage of patients with hypertension would be interested in monitoring their blood pressure at home, if we provided the monitor?
 - Part of home monitoring includes having the patient send the blood pressure readings to the MyChart patient portal using Bluetooth capabilities on their phone. What are your thoughts about the likelihood that patients would do this, after adequate training?
- **Which of the following guidelines is most often used at your site for treatment of your hypertensive patients?**
 - The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC 7)
 - The Eighth Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC 8)
 - Kaiser Permanente National Hypertension Guidelines
 - ACC/AHA 2017 Hypertension Guidelines for blood pressure control
- **I would like to get your thoughts on implementing the HTN initiative in your practice.**

Note: Please walk interviewee through the FGP Hypertension Initiative steps and components described below.



Does your practice have any programs or processes for hypertensive patients? For example, contacting patients who have been identified by certain criteria (e.g., uncontrolled high blood pressure) and need follow-up?

- If yes, what kind of programs?
- Can you walk me through the different steps in onboarding/off boarding patients
How is the agreement stored? (scanned in EMR, log folder)

Who usually prints the aftercare visit summary (AVS)?

After going through the steps, what are your general thoughts about implementing a process like this in your practice?

What are your suggestions for integrating these steps in your practice to improve the health outcomes of hypertensive patients?

PROBE:

- What do you think are the advantages or disadvantages of making these steps (Identify, Refer, Coach, Document and Monitor) the standard for HTN care in your practice?)

Tool 7. PACE Qualitative Tool to Map Data to the CFIR Constructs

CFIR Constructs	CFIR Rating		
	Negative (-)	Neutral/Mix (0)	Positive (+)
I. INTERVENTION CHARACTERISTICS			
Intervention Source			
Evidence Strength & Quality			
Relative Advantage			
Adaptability			
Trialability			
Complexity			
Design Quality & Packaging			
II. OUTER SETTING			
Patient Needs & Resources			
Peer Pressure			
External Policy & Incentives			
III. INNER SETTING			
Structural Characteristics			
Networks & Communications			
Culture			
Implementation Climate			
Tension for Change			
Relative Priority			
Organizational Incentives & Rewards			
Compatibility			
Goals and Feedback			
Learning Climate			
Readiness for Implementation			
Leadership Engagement			
Available Resources			
Access to knowledge and information			
III. CHARACTERISTICS OF INDIVIDUALS			
Knowledge and Beliefs about the Intervention			
Self-efficacy			
Individual Stage of Change			
Individual Identification with Organization			
Other Personal Attributes			

Rating components: The influence of the identified factors on implementation will be assessed using the aggregated finding from all sources (interviews, observations and questionnaires) with “+” (positive), “-” (negative) or “+/-” (mixed influence).

Rating	Definition
“-”	The construct has a negative influence on the practice and may impede work processes, and/or implementation efforts. Interviewees make <u>general or specific</u> statements about the construct in a negative way <i>with or without</i> concrete examples
“+”	The construct has a positive influence on the practice and may facilitate work processes, and/or implementation efforts. Interviewees make <u>general or specific</u> statements about the construct in a positive way <i>with or without</i> concrete examples
“+/-”	A coded statement does not reflect the construct to have a positive or negative influence on implementation of PACE. A neutral rating may also result from respondents contradicting each other or the construct may manifest both positively and negatively at different levels.

Valence Ratings: Does the construct reflect a FACILITATOR or BARRIER to the implementation of PACE?

FACILITATOR (Positive Rating)	BARRIER (Negative Rating)
<p>Coded statement that reflects a construct has a positive influence on the implementation of PACE.</p> <ol style="list-style-type: none"> 1. <u>Intervention Characteristics</u>. Consider if features of PACE support successful implementation at the practice. 2. <u>Outer Setting</u>. Consider if features of the environmental context support successful implementation of PACE. 3. <u>Inner Setting</u>. Consider if features of the practice (or in some cases the system with which the practice is affiliated) support successful implementation of PACE. 4. <u>Characteristics of Individuals</u>. Consider if the characteristics of individuals support successful implementation of PACE. 	<p>Coded statement that reflects a construct has a negative influence on the implementation PACE.</p> <ol style="list-style-type: none"> 1. <u>Intervention Characteristics</u>. Consider if features of PACE hinder successful implementation at the practice. 2. <u>Outer Setting</u>. Consider if features of the environmental context hinder successful implementation of PACE. 3. <u>Inner Setting</u>. Consider if features of the practice (or in some cases the system with which the practice is affiliated) hinder successful implementation of PACE. 4. <u>Characteristics of Individuals</u>. Consider if the characteristics of individuals hinder successful implementation of PACE.

Table Adapted from: Keith, R.E., Crosson, J.C., O’Malley, A.S. et al. Using the Consolidated Framework for Implementation Research (CFIR) to produce actionable findings: a rapid-cycle evaluation approach to improving implementation. *Implementation Sci* 12, 15 (2017).
<https://doi.org/10.1186/s13012-017-055>

Tool 8. Recommended Action Steps

CFIR Constructs	Influence on Implementation ("+", "-" or "+/-")	Summary with Key Domain	Recommended Action Steps
II. INTERVENTION CHARACTERISTICS			
Intervention Source			
Evidence Strength & Quality			
Relative Advantage			
Adaptability			
Trialability			
Complexity			
Design Quality & Packaging			
II. OUTER SETTING			
Patient Needs & Resources			
Peer Pressure			
External Policy & Incentives			
III. INNER SETTING			
Structural Characteristics			
Networks & Communications			
Culture			
Implementation Climate			
Tension for Change			
Relative Priority			
Organizational Incentives & Rewards			
Compatibility			
Goals and Feedback			
Learning Climate			
Readiness for Implementation			
Leadership Engagement			
Available Resources			
Access to knowledge and information			
III. CHARACTERISTICS OF INDIVIDUALS			
Knowledge and Beliefs about the Intervention			
Self-efficacy			
Individual Stage of Change			
Individual Identification with Organization			
Other Personal Attributes			

Tool 9. PACE Tailored Implementation Plan

PIC Name:

Date Created:

Participants:

Practice Name:

Table 1. Implementation Steps

Activity (e.g., staff training, Pilot testing)	Target Date	Resources Required	Lead Person	Anticipated Outcome	Progress Notes

Table 2. Performance Measures: How we will know we are implementing the PACE strategy?			
Key Driver:			
Goal:			
Short Term Indicators:	Source	Frequency	Who is responsible?
Long Term Indicators:	Source	Frequency	Who is responsible?

Appendix 2

PDSA Worksheet

Complete Page 1 of the worksheet when planning your Plan-Do-Study-Act (PDSA) cycle. Multiple PDSAs can be designed in support of a single Aim.

AIM STATEMENT (Measurable goal, with a target date)

Today's Date: _____

PDSA Cycle #: _____

PLAN

What will you try? _____

When? _____

Who will be involved?

Team: _____

Patients: _____

What do you predict will happen? _____

How will you evaluate how it went? _____

Who will collect the evaluation data? _____

What do you need to do to get ready? _____

Complete Page 2 of the worksheet during your test and its follow-up assessment.

Today's Date: _____

DO

What actually happened? _____

STUDY

What did you learn? _____

How did the results compare to your predictions? _____

ACT

How will you adapt, accept, or abandon? _____



<http://www.QualisHealthMedicare.org/PDSA>

Adapted by Qualis Health from materials developed by the Institute for Healthcare Improvement and prepared under a contract with the Centers for Medicare & Medicaid Services (CMS), an agency of the U.S. Department of Health and Human Services. The contents presented do not necessarily reflect CMS policy. ID/WA-C10-QH-916-09-12

Appendix 3

PF Evaluation Tool

Team Instructions: Please complete this debrief form after completion of focus groups and interviews. Thank you!

Date of Visit (mm/dd/yyyy):

Role ☐ Practice Improvement Coordinator (PIC)
☐ Practice Improvement Manager (PIM)

PIC/PIM Name (first, last): ☐ Aigna Barber
☐ Jessica Imafidon
☐ Nordine D'aguilar
☐ Other

PIC/PIM Name (first, last):

Cohort: ☐ 1
☐ 2
☐ 3
☐ 4
☐ 5

Site Name (Cohort 1): ☐ Rego Park- Site 11
☐ West Babylon- Site
☐ 23 Manhasset- Site
☐ 24
IMA- Site 26
Trinity- Site 5

Site name (Cohort 2): ☐ Brooklyn Heights- Site 4
☐ Bay Ridge- Site 13
☐ Lake Success- Site
21
Mineola Geriatrics- Site 25

Site name (Cohort 3): ☐ Bayside- Site 9
☐ Carle Place- Site 12
☐ Bethpage- Site 15
☐

Site name (Cohort 4)

- ☐ Cobble Hill- Site 7
- ☐ Great Neck Medical- Site
- ☐ 17 Essex Crossing- Site
- ☐ 22 Huntington- Site 3
- Men's Health- Site 8

Site name (Cohort 5)

- ☐ Women's Health- Site 16
- ☐ Island Wide Medical Associates Mineola-
- ☐ Site 18 East Patchogue, Site 19
- Garden City, Site

Stakeholder Type:

- ☐ Provider/Physician
☐ Medical Assistant
(MA) ☐ Front Desk
Staff
☐ Nurse
☐ Site Administrator/Site Manager
☐ Medical Assistant/Nurse
Supervisor ☐ Other (specify)

If other, please specify

Number of stakeholders involved:

Reason for Visit:

- ☐ Training
☐ Retraining
☐ Investigate Issue
☐ Meeting
☐ Update
☐
Observation/Shadowing
☐ Providing Resources
☐ Quality Improvement
Task ☐ Other (specify)

Quality improvement task type:

- ☐ Plan, Do, Study Act (PDSA)
Cycle ☐ Root Cause Analysis
(RCA)
☐ Other (specify)

If other, please specify

Length of time:

Length of time:

Length of time:

Length of time:

Length of time:

Length of time:

Length of time:

Length of time:

Length of time:

Please select all resources provided:

- ☐ Patient materials ☐ Training materials ☐ Incentives
☐ Equipment
☐ Other (specify)

If other, please specify

Total number of resources provided:

Total number of resources provided:

Total number of resources provided:

Total number of resources provided:

Total number of resources provided:

Issue:

Causes:

Goal for Visit:

Did you meet your goal?

☐ Yes
☐

No

If no, please select barriers to meeting your goal:

☐ MCIT related change/production date

☐ Site staff retention ☐ Competing priority ☐ Space
constraint

☐ Technical difficulty at the site ☐ Other (specify)

If other, please specify/explain barriers to meeting your goal:

Action Items:

Narrative Report (describe any important details about the visit including
challenges/facilitators to implementation, deviations to protocol, opportunities

for our project to support or leverage existing

(Note: Include specific details for each action efforts, etc.): item)

Appendix 4: Participant Enrollment Flow Diagram

