A Systematic Review of Tools and Measures to
Support Patient Engagement in Safety Net Settings

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Executive Summary

Approaches to improving "patient engagement" in health care have become popular as delivery system transformation and payment reform are implemented in response to health reform incentives. Specific strategies for improving patient engagement, however, remain nebulous to health care leaders, clinicians, and patients, so routine adoption of patient engagement strategies remains low. Patient engagement has several dimensions, including "patient activation" which is a patient's knowledge, skills, ability, and willingness to manage his or her own health and health care. Patient engagement also includes involving patients and family in treatment decision-making as well as involving patients as partners in the design and delivery of health care services. Safety net health care systems unique challenges as they aim to engage socioeconomically vulnerable patients who often have limited skills, knowledge, and capacity for actively engaging in their own health and health care. To clarify the adoption and use of patient engagement strategies applicable to safety net populations, we conducted a systematic review of the peer-reviewed literature (2000-2015) focused on patient engagement measures and tools used in adult primary care populations. In our screening of 205 peer-reviewed articles that used patient-reported measures of patient engagement, 57 studies met our inclusion criteria and only 6 research studies explicitly patient-reported engagement data in "real time" to aid in tailoring treatment and to engage patients in shared decision-making.

Key informant interviews of 26 operational leaders of California safety net health systems and leaders of organizations that provide technical assistance to these systems. Despite significant interest from key informants in the routine collection of patient-reported engagement data to help tailor individual patient care, the burden of data collection on frontline staff is perceived to be high and the ability and willingness of patients to routinely report these data is perceived to be low. Key informants and findings from peer-reviewed research emphasized the central role of interdisciplinary primary care teams in the effective implementation of patient engagement and strategies. Cultural competence was considered important to engaging patients in their own care, but only two empirical studies examined the role of cultural competence in supporting patient engagement. Moreover, few strategies to tailor patient engagement interventions for specific vulnerable populations were identified by key informants. Innovations such as text-based reports of patient engagement [1], use of electronic patient portals to routinely collect patient-reported data, the development of short, actionable, and publically-available survey measures of patient engagement, and computer and phone texting literacy training for patients were perceived as necessary for reducing the current barriers to the meaningful use of patient engagement data and for routine implementation of patient engagement strategies among safety net patients.

Introduction

<u>Defining Patient Engagement</u>

Patient engagement encompasses a range of concepts and strategies, including "patient activation" which refers to a patient's knowledge, skills, ability, and willingness to manage his or her own health and care[2,3]. Patient engagement also includes involving patients and family in health decision-making and involving patients as partners in the design and delivery of health care services[4]. Shared decision-making and collaboration with patients on care plans, in particular, are considered top organizational strategies to improve quality, reduce costs, and engage patients in their own health and health care[5].

<u>Patient Engagement and Patient-Reported Measures</u>

Poor clinician-patient communication coupled with low patient engagement can result in patients feeling hopeless, frustrated, and angry[6-8]. Patient engagement innovations, such as shared decision-making (SDM), patient activation tools, motivational interviewing and group appointments, are advocated as tools that can equip patients to more effectively navigate treatment decisions, improve health behaviors, and focus on optimizing the outcomes that matter most to an individual patient. Patient-reported measures, including patient engagement measures, have the potential to better inform patients and clinicians about relevant outcomes and readiness for behavioral change. Although systems are striving to adopt both patient engagement strategies and patient-reported measures, implementation nationwide remains low.[9] Two issues deserve consideration as barriers to integrating patient engagement innovations into routine care settings. First, many patient engagement innovations cut against the traditional culture of medicine by requiring both clinicians and patients to adopt new ways of interacting. Second, patient engagement often requires changes to practice workflows [10,11].

A systematic review of patient engagement research indicates that the involvement of patients are more likely to be successfully when organizational initiatives involve interdisciplinary care teams to engage patients, are driven by patients' perspectives, promote behavioral change, accompanied by intensive efforts to place patients and at the center of health care decision-making.[12] As safety net clinics continue to expand to meet the needs of newly insured patients, there is great need for guidance on how to effectively make patients and families active participants of the care team[4].

Some national tools and guidance are now being tested.[13-15] Our review assesses patient engagement strategies and measures relevant to low-income patients and their families. The purpose of this report is to present findings of the evidence review strategies and measures used to engage patients and families. Facilitators and barriers of using tools and measures to assess and intervene on patient engagement among low-income and vulnerable patient populations are highlighted.

Systematic Review Methods

   To clarify the adoption and use of patient engagement strategies in safety net clinic settings in California, we conducted a systematic review of the peer-reviewed literature focused on patient engagement measures and tools in adult primary care settings. We also conducted 26 key interviews of operational leaders of safety net health systems and organizations which provide technical assistance to these systems.

   The research team established inclusion and exclusion criteria in order to develop a protocol for identifying studies that qualified for this literature review. Studies were included in the sample if they 1) were published in or after 1990; 2) were reporting original data analyses (i.e., were not opinion pieces or letters); 3) included the use of a patient activation, engagement, participation, or self-efficacy tool or measure; 4) were limited to adult populations; 5) were conducted in primary care or ambulatory care settings; and 6) was assessing an intervention, as opposed to solely collecting patient data to describe a population or to validate a questionnaire. Studies were excluded from the review sample if they were feasibility trials that did not include any patient-reported outcomes or clinical outcomes data. Studies that solely collected patient activation, engagement, participation, or self-efficacy data through observation were also excluded, as this review of the literature was intended to consider studies using measures and tools that capture patient reports of their activation, engagement, participation, or self-efficacy.

   We attempted to include all relevant peer-reviewed articles searching the EMBASE online database and using the following query: *'patient participation' or 'patient activation' or 'patient engagement' or 'patient motivation' or 'self-efficacy' and ('general practice' or 'primary care') and ([article]/lim or [article in press]/lim or [review]/lim) and [english]/lim and ([embase]/lim or [medline]/lim) and [1990-*
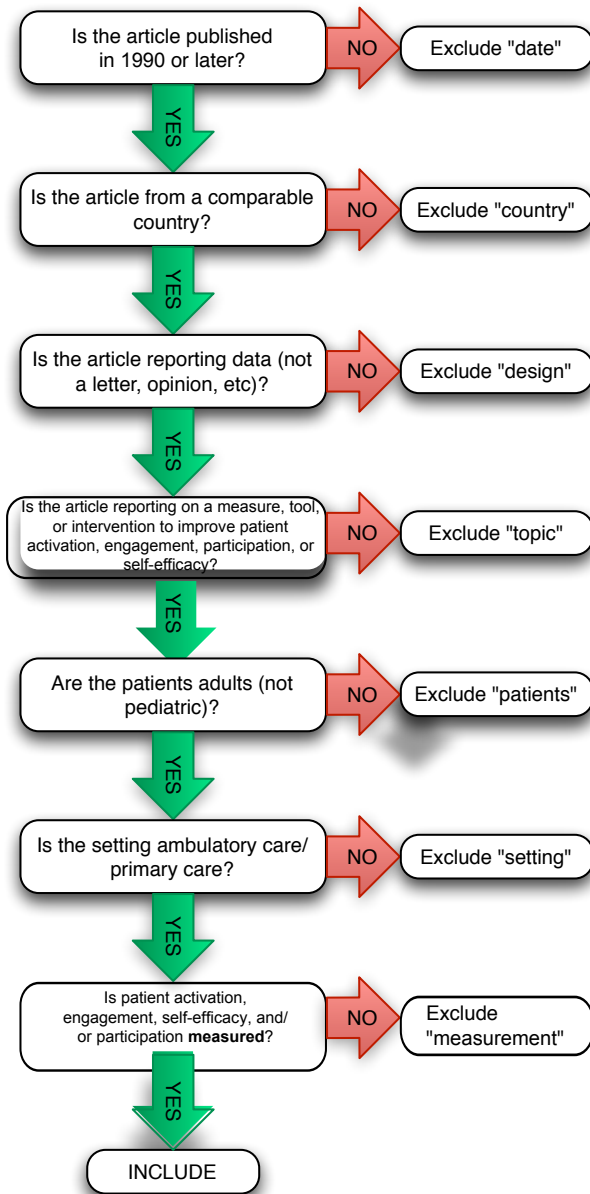

Figure 1. Systematic Review Initial Screening Criteria

2015]/py and adult and [humans]/lim not cancer not rehabilitation not epilepsy not disab* not 'inpatient' not 'hiv' not 'congenital' not 'hospital. This search yielded 590 articles. For each of these initially identified studies, we extracted abstracts to preliminarily assess whether the study met the inclusion criteria. One hundred and four articles met the abstract screening criteria, and were reviewed in full by the research team. All 64 remaining articles were reviewed in-depth for study design, target population, types of patient activation, engagement, participation, or self-efficacy tools or measures used, how the measures were administered, how the information from the tool was used, and the overall quality of the study (see article abstraction tool in the appendix for a complete list of questions included in the full review). An additional 5 articles were deemed ineligible during the full review, resulting in a total of 59 articles that are included in the final analysis.

At each stage of the selection and review process, members of the research team independently assessed article eligibility for this study. To ensure consistent review across team members, every member of the research team reviewed approximately 10% of the articles and discussed any issues or discrepancies that arose at the beginning of abstract screening and full review stages. Any discrepancies that remained unresolved were discussed in a broader team meeting with the study's principal investigator and additional protocols were established to minimize future inconsistencies between reviewers.

Systematic Review Findings

As is evidenced by the relatively small number of articles included in this study's sample, many peer-reviewed articles considered patient engagement, but few met the inclusion criteria. Of the 204 studies screened, only 59 articles were included in the full review. The vast majority (72%) of these research articles were published in the past decade, and 31 articles (53%) were conducted in the United States. The remaining studies were conducted in the UK (n=9), the Netherlands (n=9), Germany (n=3), other European countries (n=4), Australia (n=1), and South Africa (n=1).

Type of Engagement Measured.

The review included articles measuring dimensions of patient participation, patient activation, patient engagement, patient motivation, or self-efficacy through patient reports, as many of these constructs overlap.

Self-efficacy was measured in 51of the 59 articles and was the most frequently used patient engagement measure among the reviewed articles. Self-efficacy measures ranged from a general single question assessing patients' confidence in managing

Measured Domain

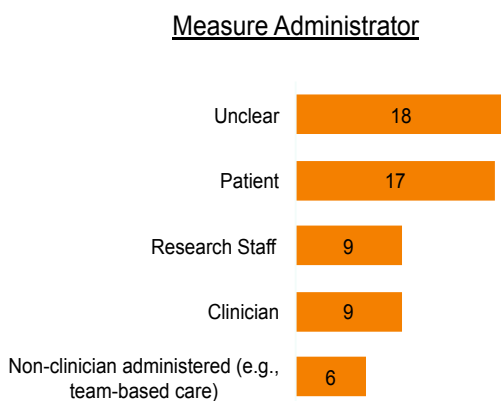| Domain	Value
Self-efficacy	40
Other	9
Patient activation	8
Patient Participation	2
Patient engagement	2
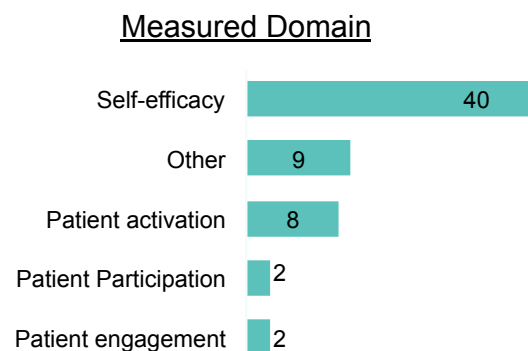
their health to disease- and condition-specific questionnaires assessing respondents' ability and motivation to meet their treatment goals. Disease and condition-specific measures of self-efficacy were the most common measures in patient engagement studies, representing 58% (n=34) of studies in the sample, and exercise/physical education self-efficacy was the most common specific measure. With the exception of the proprietary Patient Activation Measure (PAM), few patient-reported measures of patient activation and/or engagement have been validated or implemented in the context of real-time goal setting or shared decision-making with patients. New patient engagement measures, however, have recently been developed.

Cultural competency was referenced and cultural adaptation was used in only 2 studies. The first study examined a culturally adapted version of the CDSMP [16], a self-management program developed at Stanford University and based on Bandura's theoretical model of self-efficacy [17]. Culturally adapted the self-efficacy scales using forward and back translations with professional and lay bilingual panels. The second study [18], patient engagement study materials were written at less than an eighth grade reading level and designed to be ethnically relevant by portraying African American women, highlighting foods and recipes more common among African Americans women in the south using inexpensive ingredients, and including barriers and benefits commonly cited by African American women.

Study Design

The methods used to evaluate the studied interventions and care practices were rigorous and consistently well documented. Thirty-eight articles (64%) included control groups, most of which (n=35) were randomly assigned, and 57 studies (96%) followed their subjects longitudinally.   Yet, clear descriptions of the patient engagement tools used and the modes of questionnaire administration were not always clearly documented, making it difficult to identify the questions used in the measurement of patient engagement, to know the validity of the measures used, and to clearly understand the level of patient involvement in the assessment of their engagement.

Measure Administrator

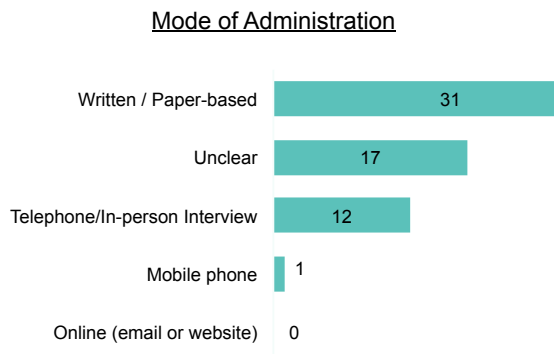| Category	Value
Unclear	18
Patient	17
Research Staff	9
Clinician	9
Non-clinician administered (e.g., team-based care)	6

Among the 41 studies (84%) with available information, patient engagement measures were most commonly captured via paper-based questionnaires that patients completed themselves. All studies included in this sample used patient engagement measures in the ambulatory or primary care setting; however, only six studies measured patient engagement in order to inform patients' care. Instead most of the patient-reported data were collected and analyzed for research purposes, well after the care encounter. The six studies[19-24] and measures

used are summarized in Figure 2.

Article Title	Authors	Year	Country	Desription of Patient Engagement Strategy/Measure
Reducing Obesity Indicators Through Brief Physical Activity Counseling (PACE) in Italian Primary Care Settings	Bolognesi M., Nigg C.R., Massarini M., Lippke S.	2006	Italy	Three items regarding how confident patients perceive themselves to be in regularly adopting and maintaining their physical activity. These were scored on a Likert-type scale from 1 (total lack of confidence) to 2 (some degree of confi- dence) to 3 (very confident).
Exploring the interaction of patient activation and message design variables: message frame and presentation mode influence on the walking behavior of patients with type 2 diabetes.	Ledford C.J.	2011	USA	Physicians assigned to various message frames based on interviews conducted during message development, attempting to match the intervention message to the physician's natural presentation, to improve patient activation.
Effect on motivation, perceived competence, and activation after participation in the "ready to Act: programme for people with screen-detected dysglycaemia: A 1-year randomised controlled trial, Addition-DK	Helle Terkildsen Maindel, Annelli Sandaek, Marit Kirkvold, and Torsten Lauritzen	2011	Denmark	This measure is concerned with the motivation behind the choices people make and focuses on the degree to which an action is self-motivated (intrinsic).
The importance of self-efficacy in cardiovascular riskfactor change	Eivind Meland1, John Gunnar Masland, and Even Lasrum	1999	Norway	Self-efficacy in three behavioural domains (diet, physical exercise and smoking). Within each domain, the questions pertained to behavioral changes of varying difficulty.The respondent was asked to indicate with what he/she felt each behaviour change could be accomplished. The three efficacy scales were(with Cronbach's alpha): (i) smoking cessation (0.90);(ii) exercise (0.78), and (iii) changing eating habits(0.88)
Impact of a Wellness Portal on the Delivery ofPatient-Centered Preventive Care	Zsolt Nagykaldi, PhD, Cheryl B. Aspy, PhD, Ann Chou, PhD, MPH, MA, and, James W. Mold	2012	USA	Patient activation was assessed using an adapted Patient Activation Measure (PAM) questionnaire. The shorter form of the PAM instrument included items in 3 subscales, measuring patient knowledge, confidence, and skills that demonstrate self-efficacy. These measures classifies patients within the four stages of activation identified by the PAM instrument.
Randomized Controlled Trial Evaluation of a Tailored Leaflet and SMS Text Message Self-help Intervention for Pregnant Smokers (MiQuit)	Felix Naughton, Ph.D., Toby Prevost, Ph.D., Hazel Gilbert, Ph.D., & Stephen Sutton, Ph.D	2012	UK	Four items were combined to generate an overall self-efficacy scale , three regarding the individual's confidence in avoiding smoking in three domains: emotional (when anxious/stressed), social (when around other smokers), and habitual , and one regarding their confidence in quitting for the remainder of their pregnancy

Figure 2. Six Studies that Use Patient-Reported Engagement Data to Tailor Treatment

Mode of Administration

Written / Paper-based	31
Unclear	17
Telephone/In-person Interview	12
Mobile phone	1
Online (email or website)	0

Few articles referenced the theoretical foundations for the patient engagement measure selected. Information about the mode of survey administration or the person completing the measure were not always clear. Among the studies with available information, patient engagement measures were most commonly captured via questionnaires that patients completed themselves. Most questionnaires were completed on paper.

Methods for Key Informant Interviews

In order to investigate the practical implementation of patient engagement measures in safety net settings, a multi-stakeholder interview study of operational and technical assistance key informants was conducted. For the purpose of this study, we classified researchers as technical assistance informants. A purposive sample of twenty-six experts were identified by

Blue Shield Foundation of California leadership. Between March-July 2016, sixteen key informants were interviewed (62%). The semi-structured interviews lasted between 30 to 60 minutes and interview questions assessed current adoption of patient engagement strategies, the role of the care team, and ways to improve the usability and spread of patient engagement practices. Interviews were recorded, partially transcribed, coded, and analyzed to elucidate common themes encountered when implementing patient engagement strategies.

Stakeholder Interviews Themes

Need to be Specific about Goals of Patient Engagement

From our stakeholder interviews, it was became clear that the term "patient engagement" should always be contextualized. When asked about their experiences implementing patient engagement strategies, stakeholders spoke about initiatives ranging from motivational interviewing training to initiatives focused on improving patient experience scores on the Clinician Group Consumer Assessment of Health Care Providers and Systems (CG-CAHPS). We learned that the term patient engagement is an umbrella term that encompasses activating patients to become more engaged in their own health and health care, as well as engaging patients to improve the delivery of healthcare such as through participation in governance and quality improvement teams.

Quote: "The challenge that the field is facing is there aren't any good measures out there right now that are looking at engagement as a partnership and part of the reason is because that's really hard to measure. We have started to first even define what patient engagement means and really identify those processes that are related to engagement and then identify the outcomes that would result from those processes"

Collecting Patient-Reported Engagement Data Considered Burdensome

A major theme in our interviews was the stark dichotomy between interest in measuring patient engagement and actions to measure engagement. All stakeholders expressed high interest in routine measurement of patient engagement at the individual level, however only two stakeholders were routinely collecting patient engagement measures and they both used the PAM tool. A larger number of operational stakeholders reported efforts around patient self-management goal setting and two clinic systems had established workflows to document this data in the electronic health record (EHR). Most stakeholders were able to describe the benefits of collecting this data, such as getting an accurate picture of the whole patient, and one stakeholder who was not yet collecting this data already could see the potential utility of patient engagement data during team huddles to get team members on the same page. Despite the clear benefits of measuring patient engagement, interviewers discussed many drawbacks to routine collection of this data with time being the biggest concern. There is very limited time in the primary care visit for a clinician to be able to perform a full assessment of patient engagement using existing tools. Many stakeholders expressed difficulty in having other staff collect this data

during the primary care workflow as a significant amount of data collection is done by staff in the pre-visit stage and many clinics are working to reduce cycle time. Some stakeholders also expressed fatigue with data collection for both clinicians and patients. Another significant barrier to collecting patient engagement measures is the current abundance of information already being collected but not being used in any actionable way. One clinic systems mentioned they do not have the technical capacity to make use of the data that is collected. Some technical assistance/research stakeholders also mentioned concern about the reliability of measuring patient activation and engagement as a potential barrier to its practical implementation. There may be difficulty in detecting whether a change in patient engagement or activation is a "true" change or just "noise" from random variation.

Data Collection Modalities

Health information technology has potential to aid in collecting patient-reported data and engage patients in care can reduce disparities in health care quality [25,26]. One of the main areas of interest for our interviewers was how patient engagement and activation data is collected for routine primary care patients. Since many of the stakeholders interviewed had not yet implemented a data collection system for patient engagement measures, there was no commonly agreed upon data collection modality. Despite the lack of practical experience, stakeholders were able to articulate their opinions on how this data should be collected based on previous experience collecting other types of data in primary care. There was some disagreement between operational and technical assistance stakeholders as to how to best collect this data. All operational leaders agreed that patient engagement data should not be collected during the clinic workflow due to the limited time in the primary care visit and because of the potential to disrupt existing workflows.   In contrast, technical assistance and research stakeholders generally thought that patient engagement data needed to be collected at the point of care in order to be meaningful and actionable. Both operational and technical assistance stakeholders expressed interest in using technology in the future to capture patient engagement measures, including text-based responses. Several clinic systems included in the sample were already partnering with a technology company that offers a variety of text messaging programs to engage patients in self-management of chronic disease. Another key finding related to routine collection of patient engagement data was the need for data collection responsibilities to be tied to a trusted team member, such as a nurse or community health worker, who is responsible for ensuring these data are collected and documented correctly.

The Importance of Clinician and Team Engagement

There was resounding agreement from all key informants that team-based care is necessary to deliver high-quality, patient-centered primary care in the current healthcare landscape. All the operational informants indicated that implementing a team-based care is a high priority for how they deliver care to adult patients. Most clinics informants indicated using registered nurses to assist with self-management support and one clinic system began to integrate

pharmacists onto the care team as well. There is also widespread use of non-licensed personnel who serve as patient navigators, health coaches, and health educators, and were perceived to serve an important role in engaging patients in their own care.

Although use of team-based primary care was being used by all clinics to support patient engagement, oftentimes the team members performing self-management or patient activation responsibilities functioned separately from the core primary care team. For example, medical assistant health coaches are not the same individuals who are rooming patients during the visit. Moreover, the activities of motivation and behavior change happen outside of the primary care visit. Without routine structured communication, this was thought to create challenges, as goals discussed with patients are not necessarily discussed with the core primary care team[27]. Another issue that impedes team-based care in regards to patient activation and engagement is the team members who work with patients on goal setting, motivation and behavior change are sometimes funded through temporary sources of revenue such as foundation or federal grants.

Key informants emphasized a need for more clinician buy-in about incorporating patient activation and engagement into practice. Multiple researchers stated clinicians need more guidance and training on the various measures they are being asked to collect on patients. Clinicians are trained to change a care plan when a clinical value exceeds a certain threshold, but since the area of patient activation and engagement is relatively new, many clinicians do not know how to respond to a certain PAM score. The last major finding for team-based care is the need for patients to have an active role on the team. A majority of patients still view the provider as the sole source of trustworthy information and do not yet completely trust the care team. One clinic system reported that this was the reason for their high no-show rate for nurse visits.

- Quote: "We're moving toward a team-based approach to health care delivery and we haven't really shared that with patients. When we explain it, they're like 'oh I can see a pharmacist, that's great!' and they can see the value in it…but before they develop relationships with other care team members, that introduction needs to happen through the provider."

Improving the Usability of Patient Engagement Data for Treatment Planning
Efficiently engaging patients in their own care requires an extensive data infrastructure[28]. Many operational leaders suggested ideas on how to incorporate patient engagement data for better individual treatment planning. However, since these data are not routinely collected, they could not generally speak from their personal experiences. There was a lot of interest in a short, free way to collect direct patient feedback to tailor care, similar to how many clinic systems have implemented a small subset of questions after the patient visit to gauge patient experience as opposed to the longer CAHPS surveys that have a general lag. While shorter questionnaires are preferred, one researcher expressed concern over the potential low reliability of a questionnaire with few questions. Many stakeholders also suggested the need for a better link between patient engagement measures and data on the social determinants of health. For example, homelessness

and food insecurity could be assessed along with patient activation and engagement measures. One drawback to this idea is data on the social determinant is also not routinely collected.

- Quote :"Maybe rather than focusing on the tools, [we should focus on the social determinants of health] because whether a patient is activated to take responsibility for their health is clearly influenced by their ability to do that and other challenges in their life"

Based on the interview findings, the schematic for use of patient engagement data as part of routine clinical care is outlined in Figure 3. The figure provides guidance on potential timing, modality, and frequency of assessments.

When Measured	Object of Measurement				Assessment (Measure)	Modality	Frequency
Pre-Encounter	Patient	Health	Activation/Empowerment and Health Behaviors		**Patient Activation/Empowerment and Patient-Reported Mental Health and Health Behavior Assessment**	Portal-delivered questionnaire or text message, or paper/web completion in the waiting room	Prior to every routine (non-urgent) visit
	Staff				Review and summarize problem areas for clinician to review with patient.		
	System				Provides time/ staff resources to assist patients with completion of pre-visit patient-reported data, when needed.		
Encounter	Conversation	Goal Setting Process			**Shared Goals for Self-Management and/or Behavior Change**	Electronic Health Record / Registry Capture by Clinician/Staff	Every routine visit (document and/or monitor)
		Demands on the System			Encounter duration and resource requirements		
Post-Encounter	Patient	Health	Clinical	Intermediate Outcomes	HbA1c, LDL-C, blood pressure control		
				Events	Stroke, acute myocardial infarction		
			Patient-Reported Outcomes of Care		**PRO measures of physical, social, and emotional functioning**	Portal-delivered questionnaire or text message	2-3 weeks after all routine visit
			Patients' Experiences of Care		**Patient-Reported Experiences of Engagement and Care**	Captured anonymously by third party vendor (mail, phone follow up)	2-3 weeks after the visit rolled up quarterly by care site.
		Self-Monitoring of Goals			Patient-Reported Goal Monitoring		
	Clinician				Professional/work satisfaction, burnout		
	System				Cost and Utilization		

Figure 3. The Role of Patient Engagement and Other Patient-Reported Measures in Routine Primary Care

The Challenge of Culturally Tailored Patient Enagement

      One area that Blue Shield of California Foundation had a particular interest in was the role of cultural competence in patient engagement. Cultural competence was perceived to be a very important consideration in patient engagement, however, key informants had few examples of how patient engagement strategies would differ for different ethnic / linguistic subgroups. One rationale for this disconnect is the fact that community health centers have cultural competence

ingrained in their mission and values and the providers and staff at these health centers speak the same language and have the same cultural background as their patients. Another reason for the lack of targeted efforts on cultural competence is many of these clinics serve one or two majority groups. The one key informant who had made significant efforts towards cultural competence serves 11 different ethnic groups at their clinic. There was also some concern whether or not all patients have the same values and interest in engaging in their own health care.

<u>Dissemination of Patient Engagement Strategies</u>

Our last finding focuses on successful strategies to disseminate patient engagement efforts across a system. Visible leadership support is crucial to the dissemination of patient engagement strategies on both an individual and clinic level. Some operational leaders discussed the use of practice improvement teams to pilot and spread strategies. There was also alignment on the need for training entire staff, especially providers, on the value of patient engagement.

Summary/Implications of Interviews

<u>Implications for funders of patient engagement work</u>

There is a need for greater specificity in future programming regarding the focus of patient engagement, for example, whether in policy development vs. organizational performance improvement vs. individual's care. This is important so that clinicians, patients and policymakers understand the intended outcomes of initiatives to improve patient engagement. Another implication for funders of patient engagement work is to develop initiatives that support advancement of patient goal-setting efforts, as policy supports are already in place for practices to focus on this work and to prioritize EHR customization to track patient goals longitudinally. One area to address for patient goal setting is the standardization of EHR fields for goals (goal type, target value, etc.), where possible. "Patient goals" need to be patient-centered, so EHRs will need to be able to track very broad range of goals (social, physical health, mental / behavioral health).

<u>Implications for Researchers</u>

Despite great interest from operational leaders and front-line staff in better understanding the impact of incorporating patient engagement measurement into clinical care, there is a dearth of practice-based patient engagement research in ambulatory and primary care settings. Future research should consider validating and using patient engagement domains that are incorporated into care planning, and span beyond patient efficacy to include a broader range of patient engagement domains such as patient activation, patient motivation, and patient participation. Future research should also clearly document how data collection, analysis and incorporation into care impacts the patient, provider, and staff experience, from a workflow and a survey/data fatigue perspective.

<u>Implications for operational leaders and front-line staff</u>

Operational leaders should continue allowing their practices to serve as testing grounds for new models of care. While many clinics have been successful in using non-clinician team members to for motivational interviewing and patient activation, clinics should pilot models that integrate patient engagement roles and responsibilities onto core primary care team members' duties to better inform interventions and incentives for using a team-based approach to patient engagement. New methods of educating patients about team-based care should also be tested such as using warm handoffs from the clinician. Future testing of patient activation and engagement measures would need to include the most brief, most actionable questions possible, and potentially bundled with routine behavioral and mental health assessments (Figure 3).

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