Using an Implementation Framework to Evaluate Person-Centered Recovery Planning in Mental Health Organizations

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Laura Kaufman, M.A.
Amy C. Lodge, Ph.D.
Pamela Daggett, M.R.A.
Stacey Stevens Manser, Ph.D.

Texas Institute for Excellence in Mental Health
School of Social Work
University of Texas at Austin
1717 West 6th Street, Suite 335
Austin, Texas 78703
Phone: (512) 232-0616
Fax: (512) 232-0617
http://sites.utexas.edu/mental-health-institute/

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Introduction

In order to successfully implement and sustain a new practice in the field, implementers must be able to identify individual, organizational, and systemic implementation barriers and facilitators.[1] The Consolidated Framework for Implementation Research (CFIR) is a meta-theory that consolidates concepts and domains from existing implementation science frameworks to guide the implementation and sustainability of evidence-based practices.[1] This paper uses CFIR domains and evaluation findings to identify tools, resources, and strategies that implementers can use to guide person-centered recovery planning (PCRP) implementation.

PCRP is a foundational element of a recovery-oriented system of care.[2,3,4] It has been defined as "a collaborative process between the person and his or her supporters (including the clinical practitioner) that results in the development and implementation of an action plan to assist the person in achieving his or her unique, personal goals along the journey of recovery."[3(p.411)] PCRP provides a framework for individuals to partner with providers to select services that meet their needs in moving toward a life goal. PCRP not only focuses on the plan, but also the processes used to engage individuals in services and on the collaborative relationships that are necessary to achieve positive outcomes. It responds to critiques of the system, particularly that people are expected to fit passively into existing services with no role in the organization or planning of their treatment services.[5,6]

Person-centered care is one of the six aims of healthcare quality established by the Institute of Medicine and is defined as "providing care that is respectful of and responsive to individual patient preferences, needs, and values and ensuring that patient values guide all clinical decisions."[7(p.6)] Person-centered planning has been successfully employed in the disability fields for over 25 years[8] with newer evidence demonstrating that PCRP is also effective in the mental health field.[9] Across disciplines, research links person-centered planning to better outcomes for individuals.[2,9,10,11,12,13,14,15,16] and greater individual engagement and lower health care delivery costs.[17,18,19] Evidence from studies in primary care[20] and mental health[21] also suggests that greater involvement in care through shared decision-making leads to more effective self-management, adherence and retention in treatment, and satisfaction with care. Indeed, PCRP may be the answer to activating individuals in their care as research indicates that many fail to engage in services because treatment does not meet their needs, there is lack of trust or poor alliance with providers, they do not feel listened to, and they are not able to make their own decisions about their care or collaborate in their treatment.[20]

In 2012, the Texas Department of State Health Services (DSHS) contracted with researchers at the Texas Institute for Excellence in Mental Health (TIEMH) to evaluate a PCRP initiative funded by DSHS and implemented by Via Hope, Texas Mental Health Resource.[22] In the first year, the initiative included one state hospital and one community mental health center. In 2013, two additional community mental health centers began participating resulting in a total of four participating organizations. Initially, Via Hope was funded by the state to provide training and coaching on the process and development of person-centered recovery plans and consultation with leadership on the implementation of person-centered care. In the final two years of the initiative, Via Hope added a "train the trainer" and "coach the coach" model for trainers, supervisors and other organizational champions to develop models that would sustain the practice of PCRP within these organizations. Through the evaluation results, TIEMH researchers recommended an implementation framework to both design and evaluate the initiative. Via Hope was not funded to fully utilize an implementation framework to design their PCRP initiative, thus the TIEMH researchers did not evaluate all aspects of implementation. This paper provides an overview of how to evaluate PCRP using an implementation framework.

The Consolidated Framework for Implementation Research

CFIR is comprised of five major domains: 1) characteristics of the intervention; 2) the inner setting; 3) the outer setting; 4) characteristics of the individuals involved in the intervention; and, 5) characteristics of the implementation process.[1] Each domain incorporates a number of constructs and subconstructs. This paper identifies instruments and resources within each construct and subconstruct that may be used to assess PCRP implementation.

It is often not practical to assess all constructs and subconstructs, so evaluations may focus on a subset within each domain. Further, it is important to note that some overlap exists between the domains and constructs as they are conceptually interrelated. A brief description of CFIR domains, constructs, and subconstructs is provided in Table 1.

The CFIR Research Team created a technical assistance website to provide information to organizations that are interested in implementing a new practice.[23] Among other resources, the website includes a comprehensive table describing each of the constructs and subconstructs.

Table 1. CFIR domains, constructs, and subconstructs

Domain	Description	Constructs and Subconstructs
Intervention Characteristics	Complex, multi-faceted attributes of the intervention including both rigid and adaptable elements	Intervention Source
		Evidence Strength and Quality
		Relative Advantage
		Adaptability
		Trialability
		Complexity
		Design Quality and Packaging
		Cost
Inner Setting	Structural, political, and cultural context through which the implementation process will proceed	Structural Characteristics
		Networks and Communications
		Culture
		Implementation Climate Tension for Change Compatibility Organizational Incentives and Rewards Goals and Feedback Learning Climate
		Readiness for Implementation Leadership Engagement Available Resources Access to Knowledge and Information
Outer Setting	Economic, political, and social context within which an organization resides	Patient Needs and Resources
		Cosmopolitanism
		Peer Pressure
		External Policy and Incentives
Characteristics of Individuals	Characteristics of individuals who are involved in the intervention and/or implementation process	Knowledge and Beliefs about the Implementation
		Self-efficacy
		Individual Stage of Change
		Individual Identification with Organization
Process	Active change process aimed to utilize the intervention as designed (at an individual and/or organizational level)	Planning
		Engaging Opinion Leaders Formally Appointed Internal Implementation Leaders Champions External Change Agents
		Executing
		Reflecting & Evaluating

The following 3 instruments are highlighted throughout this paper and may be utilized to examine many or all of the CFIR constructs:

1. **Organizational Readiness to Change Assessment (ORCA).**[24] The ORCA is comprised of 74 items and 3 subscales (Evidence Assessment, Context Assessment, and Facilitation Assessment). Response options are presented on a 5-point likert scale from "strongly disagree" to "strongly agree." Respondents may also select "Don't know/Not applicable" for each item. Items have been mapped to CFIR constructs. The ORCA was developed by the Veteran's Administration to examine overall site readiness and identify barriers to implementing a practice.
2. **Organizational Change Manager (OCM).**[25] The OCM is a 60-item instrument that is comprised of 15 factors and 4 phases (Project Start, Problem Exploration, Solution Development, and Implementation and Testing).

The response options are “Yes” or “No” for all 60 items. Items have been mapped to CFIR constructs. The OCM was developed to predict organizational success of implementing an intervention or practice.

3. **CFIR Interview Guide Tool.**[23] The CFIR Interview Guide is an online tool developed by the CFIR Research Team that assists evaluators in developing a customized interview guide to administer to organizational staff involved in the implementation of an evidence-based practice. To build an interview, users select the constructs they would like to examine and applicable questions within those constructs. The CFIR Research Team encourages users to modify, adapt, and reorder the questions as necessary to make an interview that is tailored to the intervention and the setting in which the intervention is being implemented.

In addition to ORCA, OCM, and CFIR Interview Guide, select tools are discussed throughout the paper where relevant and a full list of tools is presented in the appendix.

Intervention Characteristics

The first of the five CFIR domains, intervention characteristics, examines various components of an intervention including the rigid core components that define the intervention as well as the adaptable components that may be tailored to meet the needs of the organization. This domain includes the following constructs: intervention source, strength and quality of evidence supporting the intervention, advantages compared to other similar interventions, adaptability, trialability, complexity, quality and packaging of the design, and cost. This domain primarily examines stakeholders’ perceptions of the characteristics of the intervention and not necessarily the objective characteristics of the intervention. Without a close examination of the various intervention characteristics, including stakeholders’ perceptions, an intervention may fail before implementation begins if its components do not align with the organization and its staff.

Intervention Source

Intervention source is defined by Greenhalgh and colleagues[26] as “the perception of key stakeholders about whether the intervention is externally or internally developed.”[1(p.6)] An intervention introduced by an outside researcher, organization, or by state contract would be considered externally developed. An intervention that is developed within the organization is considered internally developed. If an externally developed intervention does not have internal buy-in, implementation may be negatively impacted.

In Texas, PCRP was both externally and internally developed. DSHS and Via Hope identified the PCRP intervention as being a practice that could be particularly useful for Texas organizations and contracted with national subject matter experts on PCRP. Initially, the subject matter experts provided intensive training, coaching, and technical assistance to staff at provider organizations. Over the course of a few years of implementation, the training, coaching and technical assistance responsibilities were transferred to a staff member from Via Hope and then to internal staff members at provider organizations, who modified PCRP practices and principles to the needs and culture of the organization. While the implementation model utilized was the same across the four participating organizations, stakeholder perspectives were never formally assessed to determine whether PCRP was regarded as internally or externally developed. The CFIR Interview Tool Guide provides two questions to assess stakeholder perspective of this construct. Intervention source is an important construct that should be measured regularly throughout the implementation process in order for PCRP to be successfully implemented at the organizational level.

Evidence Strength and Quality

Evidence strength and quality refers to “stakeholders’ perceptions of the quality and validity of evidence supporting the belief that the intervention will have desired outcomes.”[1(p.6)] Throughout PCRP implementation in Texas, evaluators and implementers occasionally encountered skepticism from organizational staff members. In particular, psychiatrists would request evidence and research supporting PCRP in the mental health field. On the other hand, in a survey of staff members at organizations implementing PCRP, 17% of respondents indicated one of the best parts of the process was seeing better outcomes amongst people in services.[27] Via Hope provided staff members a number of peer-reviewed journal articles and other resources at the beginning of implementation to enhance the perceptions of evidence strength and quality, yet stakeholders’ perceptions of the evidence supporting PCRP varied across disciplines and organizations.

To assess organizational readiness, it is important to determine the anticipated outcomes of implementing PCRP and then to assess stakeholders’ perceptions about the strength and quality of evidence on the ability of PCRP to

produce desired outcomes. Once an organization has begun the implementation process, it is important to revisit stakeholders' perceptions and ensure that desired outcomes are being achieved and stakeholder expectations are being met. Nine ORCA items and two OCM items align with the evidence strength and quality construct. The language on the ORCA and OCM items can be modified to assess stakeholders' perspectives of evidence strength and quality with regard to PCRP.

Relative Advantage

The relative advantage construct is defined as "stakeholders' perception of the advantage of implementing the intervention versus an alternative solution."[1(p.6)] For an intervention to be successfully implemented, stakeholders must be able to weigh the benefits and risks of one intervention against other interventions and perceive the intervention to be implemented as the best possible solution for their organization. Similar to the evidence strength and quality construct, implementers should determine the anticipated outcomes of the intervention prior to implementation to assess the relative advantage of PCRP compared to other interventions. Participating organizations were not provided an alternative solution to PCRP, nor were stakeholder perceptions assessed. If stakeholders believe that another practice will be more beneficial to their organization relative to PCRP, they will resist the implementation process at the beginning and potentially throughout the entire implementation cycle. The ORCA instrument includes one item and the OCM includes three items to measure relative advantage, which can be modified to assess the relative advantage of implementing PCRP compared to similar interventions.

Adaptability

Damschroder and colleagues define adaptability as "the degree to which an intervention can be adapted, tailored, refined, or reinvented to meet local needs."[1(p.6)] PCRP is incredibly adaptable. In Texas, it has been implemented in both community mental health centers as well as state psychiatric hospitals, and within participating organizations it has been modified to meet the needs of a number of populations and settings including rural, urban, and suburban areas; forensic populations; child and adolescent populations; individuals with acute needs (in crisis settings and on Mobile Crisis Outreach Teams); and individuals in less intensive service settings (e.g., individuals receiving medication management). The highly flexible nature of PCRP does not come without challenges. For example, certain aspects of the intervention should remain "firm" to ensure fidelity standards are being met, while other aspects of the intervention should be flexible to meet the needs of the organization, setting, or population being served.[1,26] The OCM includes four items to assess the adaptability of PCRP.

Trialability

Trialability is "the ability to test the intervention on a small scale in the organization, and to be able to reverse course (undo implementation) if warranted."[1(p.6)] This construct aligns with the plan-do-study-act (PDSA) cycle in which implementers develop strategies related to how an intervention will be implemented and determine objectives of the intervention (plan), the plan is then carried out (do), outcomes of the intervention are examined and summarized (study), and decisions are made on whether to continue carrying out the intervention, abandon it, or modify it (act). In Texas, each organization that participated in the PCRP initiative selected one unit or clinic in which to pilot the intervention. The implementation process was evaluated and iterative and incremental changes were made as necessary. After one year, organizations disseminated the intervention to additional units. While this strategy aligns with implementation best practices and the PDSA model, organizations were not provided much guidance on how to select pilot units. All three of the community mental health centers in Texas selected the clinic where the organization was headquartered. Tools should be developed to assist organizations in assessing the best unit or clinic for a given intervention. For PCRP, consideration should be given to units or clinics that are recovery-oriented, supportive of person-centered practices and that have successfully implemented other interventions in the past. The Institute for Healthcare Improvement developed a Spread Planner Tool,[28] which has been adapted to PCRP by implementers, subject matter experts, and evaluators in Texas and may be useful to organizational leadership selecting new units or clinics to implement PCRP in after a successful pilot phase.

Complexity

The construct complexity is the "perceived difficulty of implementation, reflected by duration, scope, radicalness, disruptiveness, centrality, and intricacy and number of steps required to implement."[1(p.6)] PCRP is an extremely complex intervention to implement. Not only does PCRP require a paradigm shift for mental health providers who have traditionally been rooted in the medical model of care, but it also entails a new way of interacting with people in services, developing care plans, planning for services, providing services, and measuring recovery outcomes at

the individual level. The organizations participating in the initiative in Texas all modified the structure and format of the electronic health record (EHR) to align with PCRP. While participating organizations provided anecdotal evidence on the complexity of PCRP implementation, stakeholder perception of the difficulty of implementation was never formally assessed. Future efforts should regularly check in with stakeholders to inquire about their perceptions of the duration, scope, radicalness, disruptiveness, centrality, intricacy, and number of steps required to implement PCRP.

Design Quality and Packaging

Design quality and packaging refers to the "perceived excellence in how the intervention is bundled, presented, and assembled."[1(p.7)] Texas does not currently have a standardized PCRP training manual. Rather, trainings were carefully tailored to the needs and expectations of each participating organization. While it is important for an intervention to be somewhat flexible and adaptable across different organizations and populations, the flexibility and adaptability must be balanced with some level of standardization in order to measure the degree to which an intervention is being carried out as intended. Other states have recognized the importance of developing an intervention that is presented in a standardized package. For example, in a randomized controlled trial of person-centered care planning, sites were provided a provider training manual as well as a toolkit for people in services.[9] In New York, a comprehensive toolkit was developed to provide information, exercises, and resources for implementing PCRP.[29] Implementers in Texas are currently developing an online PCRP training curriculum. It is anticipated that feedback will be obtained from stakeholders on the presentation of materials and online training modules will be tailored as necessary.

Cost

The cost construct takes into account "the costs of the intervention and costs associated with implementing that intervention, including investment, supply, and opportunity costs."[1(p.7)] In Texas, the intervention was offered to organizations free of financial costs. Organizations did, however, contribute a significant amount of staff time to training, coaching, and technical assistance over the course of the implementation process. Throughout the implementation process, organizations received a number of trainings including an introduction to PCRP, skills training, supervisor's training, coach training, training for trainers, and follow-up trainings. In addition, staff participated in bi-monthly plan-based technical assistance calls, monthly calls with leadership teams, general technical assistance site visits, technical assistance for specific disciplines such as peer specialists and psychiatrists and monthly calls with DSHS. In short, the implementation process was intensive, requiring organizations to dedicate many hours of staff time to the initiative. Evaluators did not conduct a cost-benefits analysis of the entire initiative, but this is a strategy that could be used in future PCRP implementation efforts so that funders are able to see how money is being spent and organizations know what to expect in terms of commitment and cost before participating in the initiative.

Table 2 presents a brief review of the CFIR Domain *Intervention Characteristics* and a list of tools that may be used to evaluate constructs of this domain with regard to PCRP implementation. A full list of tools for PCRP implementation by CFIR domains and constructs are provided in the appendix.

Table 2. Potential Tools to Evaluate CFIR Domain Construct: Intervention Characteristics

Domain	Domain Description
Intervention Characteristics	Complex, multi-faceted attributes of the intervention including both rigid and adaptable elements
Construct	Tools/Resources to Evaluate Construct
Intervention Source	No additional tools/resources known
Evidence Strength & Quality	Provide packet of relevant peer-reviewed journal articles and/or other resources to highlight outcomes and evidence of PCRP to stakeholders
Relative Advantage	No additional tools/resources known
Adaptability	No additional tools/resources known
Trialability	IHI Spread Planner Tool modified for use with PCRP[28] AHRQ PDSA Worksheet[30]
Complexity	No additional tools/resources known
Design Quality & Packaging	New York Person Centered Planning Practice and Resources[29] Minnesota's Manual for Person-Centered Planning Facilitators[31] Via Hope Online Learning Modules on Recovery-Oriented Practice and Person-Centered Recovery Planning[32]
Cost	Cost-benefits analysis

Inner Setting

Characteristics of the inner setting CFIR domain – defined as the features of the structural, political, and cultural contexts through which the implementation process will proceed – are key for PCRP implementation success. A qualitative analysis of barriers to PCRP implementation in the public mental health system in Texas revealed that half of the twelve barriers that emerged fell within the inner setting domain – that is, barriers within the organization.[33] Further, the ORCA, OCM, and Interview Tool Guide include a total of 99 items to assess this domain. This suggests the importance of implementation efforts that are adaptable and flexible to characteristics of the organizational context and culture. The following are key aspects of the inner setting that should be considered in the PCRP implementation process.

Structural Characteristics

Prior to implementing PCRP, structural characteristics of an organization – including the social architecture, age, maturity, and size – need to be assessed to determine how they may impact implementation success. According to Damschroder and colleagues, an organization's social architecture refers to "how large numbers of people are clustered into smaller groups and differentiated, and how the independent actions of these differentiated groups are coordinated to produce a holistic product or service."[1(p.7)]

In Texas, evaluators provided individualized technical assistance to one organization to develop supervision process maps that touched on areas of team structure, hiring and staff selection processes, training, coaching and supervision, and performance assessment. An interview was conducted with each team lead and a process map was created to inform PCRP diffusion efforts across the organization. Because supervisors are generally responsible for managing and supporting the practitioners who are working directly with individuals receiving services, this exercise can assist organizations in examining internal structural characteristics and gaining a better understanding of how supervision structures at different clinics may impact PCRP implementation.

In a study on barriers to PCRP implementation in the public mental health system in Texas, Lodge and colleagues found that dissemination – both across service providers and different populations of people in services – was a key barrier to successfully implementing PCRP.[33] In particular, staff described the following dissemination-related barriers: PCRP is not prioritized across disciplines, intake forms do not align with PCRP, dissemination varies across caseworkers, dissemination across hospital shifts is difficult, the difficultly of involving direct care staff in the PCRP process and providing PCRP information to direct care staff, the difficulty of translating recovery concepts to the ground floor, the difficulty of implementing PCRP in Level of Care 1, the difficulty of maintaining continuity of care, and dissemination is difficult and time-consuming. Part of the difficulty in disseminating PCRP may stem from the

high turnover rates that plague the public mental health system – research suggests that the more stable that team members are the more likely that implementation efforts will be successful.[34] Organizations should therefore explore solutions that address the high rates of staff turnover as well as explore how other features of their social architecture might influence implementation efforts.

Networks and Communications

As part of the PCRP implementation process, it is also important to examine the nature and quality of webs of social networks and formal and informal communications within organizations. In a study on PCRP implementation in public mental health organizations in Texas, Lodge and colleagues found that a key implementation barrier was that the structure of the EHR had been not adapted to PCRP in a user-friendly way.[33] In particular, staff reported that EHR software made it difficult to access treatment plan information, to conduct revisions and reviews, to see which objective progress notes link to, and that drop-down menus prevented practitioners from individualizing strengths. Thus, it is important that practitioners involved in treatment planning be involved directly in the process of adapting an organization's EHR to PCRP.

Research also suggests that another key barrier to PCRP implementation in the public mental health system is that treatment planning is often non-collaborative.[33] Specifically, staff reported that people in services are often not involved in the planning process and a lack of rapport negatively impacts collaboration between staff and people in services. Collaboration and cooperation among staff members was also reported as a barrier to successful PCRP implementation — specifically across disciplines. In particular, some staff reported that peer specialists are often not invited to participate in the planning process in meaningful ways. Organizations should, therefore, focus on implementing team-building and consensus-building activities, including open discussions among staff and between staff and people in services that allow all parties to voice their concerns and offer solutions. Research suggests that when staff are able to participate in open discussions about challenges they face, they are more likely to support person-centered care.[35]

Culture

Another key aspect of the inner setting is cultural norms, values, and basic assumptions of an organization. Before implementing PCRP, organizations should assess the extent to which their services and providers are recovery oriented — that is the extent to which services and providers are person-centered and build on the strengths and resiliencies of individuals to achieve health and wellness.[36] Several barriers related to culture emerged in research on barriers to PCRP in the public mental health system in Texas including: the difficulty of maintaining a sustained vision over time; the historical dominance of a punitive, command-and-control model in mental health care; a culture of autonomy among physicians; and the difficulty of moving away from a medical model. This suggests the importance of frequently assessing how recovery oriented an organization is and subsequently taking steps to alter the culture to support a recovery orientation.[33]

The Recovery Self-Assessment (RSA) is one tool to measure the extent to which an organization's culture is recovery-oriented.[37] Organizations should administer both the provider and people in services versions of the RSA, given that it is important to assess recovery orientation from the perspective of staff and people in services. A second tool that should be used to assess the extent to which an organization's culture is recovery-oriented is the Recovery-Oriented System Indicators (ROSI) self-report survey, which is a 42-item tool administered to people in services by trained individuals.[38] A third assessment tool is the Person-Centered Care Questionnaire (PCCQ), which measures the extent to which an organization's services are person-centered.[39] Similar to the RSA, organizations should administer both staff and people in services versions of the PCCQ.

Implementation Climate

Another key aspect of the inner setting is an organization's implementation climate which refers to "the absorptive capacity for change, shared receptivity of involved individuals to an intervention, and the extent to which use of that intervention will be rewarded, supported, and expected within their organization."[1(p.8)] Key aspects of an organization's implementation climate include tension for change or the extent to which stakeholders view the current situation as acceptable or in need of change; compatibility between the meanings and values attached to the intervention; involved individuals' values and needs, and existing workflows; relative priority — that is perceptions of the importance of the intervention within an organization; organizational incentives and rewards attached to the intervention; the extent to which implementation goals are communicated clearly, acted upon, and align with feedback for staff; and characteristics of the learning climate, including whether or not leaders express

their shortcomings and need for staff to provide input in the implementation process, staff members view themselves as integral members of the implementation process, individuals feel safe to try new things, and there is space and time for reflecting on the implementation process.[1]

Several tools have been developed to assess implementation climate and organizations should administer at least one of these tools prior to and during the PCRP implementation process. For example, the Implementation Climate Scale (ICS) is an 18-item scale that measures six dimensions of the organizational climate that research suggests are important for the success of implementing evidence-based practices (EBP) in mental health setting including: focus on EBP, educational support for EBP, recognition for EBP, rewards for EBP, selection for EBP, and selection for openness.[40]

The Climate for Service Scales can also be used to measure implementation climate, although they were developed working with organizations in the private sector.[41] These scales include four service climate scales (global service climate, customer orientation, managerial practices scale, and customer feedback scale) and two scales measuring the underlying drivers of service climate (interdepartmental service and work facilitation).

Finally, the Organizational Climate Measure consists of 17 scales that are divided into four quadrants: human relations (which taps into staff autonomy, integration, involvement, supervisory support, and training and welfare), internal process (which taps into formalization and tradition), open systems (which taps into innovation and flexibility, outward focus, and reflexivity), and rational goal (which taps into clarity of organizational goals, efficiency, effort, performance feedback, pressure to produce, and quality).[42]

Readiness for Implementation

The final dimension of the inner setting is organizational readiness for implementation, which includes tangible and immediate indicators of organizational commitment to its decision to implement an intervention.[1] This dimension includes leadership engagement, available resources, and access to knowledge and information about how to incorporate the implementation into existing work tasks.

Leadership engagement, including the level of commitment, involvement, and accountability of organizational leadership is key for PCRP implementation success. Research on PCRP implementation in the public mental health system revealed several leadership-related barriers including leadership overestimate the extent to which an organization is actually person-centered; leadership overcomplicate PCRP; leadership fail to hold staff accountable to being person-centered; lack of support from leadership; leadership overemphasize the importance of the person-centered plan as an indicator of being person-centered; and direct care staff receive conflicting messages about their role in the implementation process from leadership.[33] Therefore, it is important to check in frequently with leadership to assess how the implementation process is proceeding and how supportive leaders are of the implementation process.

The level of resources dedicated for PCRP implementation, including money, training, education, physical space, and time is another key aspect for implementation success. Research on PCRP implementation in the public mental health system in Texas revealed that a lack of resources was a key barrier to successful PCRP implementation.[33] Namely, organizational staff reported the following resource-related barriers: a lack of time; difficulty coordinating treatment team members' schedules for planning; high caseloads/workloads; lack of resources to implement plan interventions; turnover and having to retrain staff; a lack of PCRP coaches; fatigue; vacant key positions; competing initiatives; and the perception that PCRP is time-consuming.

One tool organizations may consider administering is the Organizational Functioning and Readiness for Change scale (ORC), which assesses the motivation and personality of program leaders and staff, institutional resources, and organizational climate.[43] The ORCA can also be used to measure the organization's capacity for internal facilitation to support change.[24] Finally, organizations may benefit from allowing implementers and evaluators to conduct a walk-through to observe the environment, culture, and day-to-day business processes.

Table 3 presents a brief review of the CFIR Domain *Inner Setting* and a list of tools that may be used to evaluate constructs of this domain with regard to PCRP implementation.

Table 3. Potential Tools to Evaluate CFIR Domain Construct: Inner Setting

Domain	Domain Description
Inner Setting	Structural, political, and cultural context through which the implementation process will proceed
Construct	**Tools/Resources to Evaluate Construct**
Structural Characteristics	PCRP Supervision Process Mapping Questions and Template[44]
Networks and Communications	EHR templates that align with person-centered recovery planning IHI Network Theory[45]
Culture	Recovery Self-Assessment (RSA)[37] Recovery-Oriented System Indicators (ROSI)[38] Person-Centered Care Questionnaire (PCCQ)[39]
Implementation Climate	Implementation Climate Scale (ICS)[40] Climate for Services Scale[41] Organizational Climate Measure[42]
Readiness for Implementation	Organizational Functioning and Readiness for Change scale (ORC)[43] Walk through of organization to observe environment, culture, and business processes ADKAR Assessment[46]

Outer Setting

This domain is focused on how the social, political, and economic context outside of the organization shapes implementation efforts. There is evidence supporting four separate constructs within this domain. Every organization attempting to implement PCRP should consider how the constructs within this domain impact those efforts.

Patient Needs & Resources

This construct refers to "the extent to which patient needs, as well as barriers and facilitators to meet those needs, are accurately known and prioritized by the organization."[1(p.7)]

Two of the six elements of the Practical, Robust Implementation and Sustainability Model (PRISM) can help guide evaluation of the extent to which patients are at the center of organizational processes and decisions.[47] The PRISM elements are: organizational perspective of the program; patient perspective of the program; external environment; implementation and sustainability infrastructure; organizational characteristics; and patient characteristics. With regard to the perspective of people in services, evaluators should examine overall person centeredness of the program, whether people in services are provided choices, the ability of the program to address individual barriers, the seamlessness of transitions between program elements, services and access to services, the burden of the program, and feedback from people in services. The PRISM model also suggests that evaluators examine the characteristics of the people in services, which include demographics, disease burden, competing demands, and knowledge and beliefs of the people in services. In addition, the ORCA provides three items and the CFIR Interview Tool Guide provides seven items to assess patient needs and resources with regard to PCRP implementation.

Cosmopolitanism

Cosmopolitanism is the degree to which an organization works collaboratively with other organizations, and supports staff to promote interactions with external organizations.[1] The quality and the extent of relationships between organizations, and the collective networks of relationships of individuals in an organization are described as the organizations' social capital.[48]

This aspect of the system has not been measured by TIEMH. The CFIR Interview Tool Guide includes three questions that may be modified to assess cosmopolitanism across organizations implementing PCRP.[23] Further, organizations can easily assess the amount of social capital they have amassed by reviewing the extent to which they have externally networked with other organizations. In conducting this assessment, organizations should consider the degree to which they support active participation with professional group(s), keeping up with professional literature and research findings, updating skills, and providing opportunities for external training for their staff.[49] Organizations with high social capital are more likely to quickly implement new practices.[50]

Peer Pressure

Peer pressure is the degree to which organizations feel pressure to implement an intervention because other peer organizations have already implemented it. Peers in this context can refer to any entity outside an organization with which it feels some peer relationship or competition (e.g., Local Mental Health Authorities to one another, other providers of similar services in the market, hospitals within a network, etc.). This same pressure can exert influence within a large organization. As some units implement an intervention, people in other units may feel pressure to implement the practice as well.[26] There is strong direct evidence that the pressure to adopt an intervention — independent of perception of whether their patients need it or in response to a perceived problem — influences organizational adoption and implementation, particularly in highly cosmopolitan organizations. In highly competitive markets, organizations may be more likely to implement new interventions.[51] The pressure to implement can be particularly strong for late-adopting organizations.[52]

TIEMH did not measure this construct in recent evaluations. However, a degree of peer pressure existed among organizations during the implementation process. Workgroup calls were conducted on a regular basis with affinity groups (program managers, peer specialists, organizational leadership) across the project sites. A portion of each call was dedicated to reporting recent progress and each participant appeared enthusiastic to have something to report.

Mental health provider organizations could use peer pressure to promote implementation through a variety of strategies, many of which are neither burdensome nor costly, such as recognizing early implementers and other successes. This would be done most effectively in front of peers (e.g., on regularly scheduled calls with the Texas Council of Community Centers or at their annual conference). Peer pressure is a well-documented, naturally occurring phenomenon that can be used strategically to promote PCRP implementation or other best practices.

External Policy and Incentives

This construct includes policies and regulations that impact implementation. It can also include any other external strategies such as incentives or disincentives, guidelines, public performance reporting or other external mandates.[1,53]

One barrier identified in focus groups related to PCRP implementation was "*Medicaid does not reimburse for PCRP*" and that partnering with the person in services to develop a PCRP took more time.[54] In Texas, the development of a treatment plan is not allowed as a billable activity and is included in administrative costs. PCRP is not simply putting together a treatment plan. Several billable rehab services are usually provided to prepare the person in services to prepare for and actively participate in the development of the recovery plan (e.g. identifying life and treatment goals and developing skills to advocate for service needs).[55] Further, since it is required in contract that the treatment plan be completed before services can be billed, this limits the ability to bill for those pre-planning rehab services.

There were other state level policies identified by communities that limited PCRP implementation. As the state moves toward implementing person-centered care, it will be important to meet with stakeholders to inventory these barriers and identify remedies to policies, programs, or contracts that might limit full implementation of PCRP.

Table 4 presents a brief review of the CFIR Domain *Outer Setting* and a list of tools that may be used to evaluate constructs of this domain with regard to PCRP implementation.

Table 4. Potential Tools to Evaluate CFIR Domain Construct: Outer Setting

Domain	Domain Description
Outer Setting	Economic, political, and social context within which an organization resides
Construct	**Tools/Resources to Evaluate Construct**
Patient Needs and Resources	Practical, Robust Implementation and Sustainability Model (PRISM)[47]
Cosmopolitanism	*No known tools/resources*
Peer Pressure	Networking calls with leadership at all organizations implementing a practice
External Policy and Incentives	PCRP training for state leadership and policy makers State Administrative Code[55]

Characteristics of Individuals

Assessing the characteristics of individuals involved in the implementation process is another key aspect of successful PCRP implementation. Research on barriers to PCRP implementation in the public mental health system in Texas found that one-quarter of all barriers fell within this domain which suggests the importance of assessing the impact of staff and people in services on implementation success (Lodge et al., 2016). The following are key aspects of individual characteristics that should be considered in the PCRP implementation process.

Knowledge and Beliefs

Individuals' attitudes toward and value placed on PCRP as well as knowledge about PCRP principles are key for PCRP implementation success. Evaluation of PCRP implementation in the public mental health system in Texas found that skepticism of people in services as well as a lack of staff buy-in were key barriers to successful PCRP implementation.[54] In terms of skepticism of people in services, staff reported that people in services may be stunted, not ready to open up, or not invested in PCRP because of negative experiences in the traditional mental health system. In terms of a lack of staff buy-in, staff reported that some staff were resentful about training and coaching, resistant to change, apathetic, and disrespectful to people in services

One way to assess staff knowledge and beliefs is to administer the top ten concerns that staff have raised in implementing PCRP in mental health systems.[3] These concerns are based on misunderstandings of PCRP and need to be assessed and then addressed for successful PCRP implementation. Another instrument that can be administered to assess staff attitudes towards PCRP implementation is the 15-item Evidence-Based Practices Attitude Survey that examines attitudes toward the use of new practices.[56]

Self-Efficacy

Self-efficacy — defined as individuals' belief in their own capabilities to execute a course of action to achieve implementation goals — is also key for PCRP implementation success. Although most research has focused on low levels of engagement amongst people in services in the traditional mental health system,[9] self-efficacy levels among staff members is also key to implementation success. One of the most widely used tools to measure self-efficacy of people in services is the Patient Activation Measure (PAM) which draws on a developmental model of activation with four stages: 1) believing the patient role is important, 2) having the confidence and knowledge necessary to take action, 3) actually taking action to maintain and improve one's health, and 4) staying the course even under stress.[57] This tool can and should be used to assess levels of self-efficacy throughout the PCRP implementation process. If levels of self-efficacy of people in services increase throughout the implementation process, this may be evidence of organizational success. To assess self-efficacy levels among staff members involved in PCRP implementation, evaluators may consider developing a tailored scale using Bandura's "Guide for Constructing Self-Efficacy Scales" as perceived self-efficacy is not a universal measure, but is linked to a specific pursuit, activity, or role.[58] At the present time, a self-efficacy scale for PCRP practitioners working directly with individuals receiving mental health services has not been developed.

Individual Stage of Change

A third important characteristic of individuals is individual stage of change which refers to the phase an individual is in, as he or she progresses toward skilled, enthusiastic, and sustained use of the intervention.[1] Assessing the stage of change of people in services (and including it in person-centered recovery plans) as well as clinicians and

organizational stage of change in terms of their readiness to adopt PCRP are key for PCRP implementation success. The Transtheoretical Model (TTM) is one way to assess stage of change; this model posits that behavioral change progresses through six stages: contemplation, preparation, action, maintenance, and termination.[59] Using the TTM, organizations can assess the stage of change of staff and people in services in regard to PCRP implementation.

Individual Identification with Organization

A fourth aspect of characteristics of individuals refers to how individuals perceive the organization, and their relationship and degree of commitment to the organization.[1] The Organizational Social Context (OSC) measure can be used to assess this dimension; the OSC is a 105-item scale that measures the cultures and climates of child welfare and mental health organizations.[60] More specifically, this scale measures organizational culture as defined as behavioral expectations of staff within an organization, including perceptions of organizational priorities[61] as well as psychological climate as defined as individual employee perceptions of their work environment on their functioning and well-being, including perceived stress levels.[62]

The Agency for Healthcare Research and Quality (AHRQ) has published a guide for organizational decision makers to determine if a particular implementation will be successful or a good fit for their organization.[63] This guide includes questions about individual perceptions about whether they think that the organization is doing a good job, if they think work is done efficiently, and whether inequalities are barriers to implementation as well references to several tools that measure other aspects of the inner setting and individual characteristics.

Table 5 presents a brief review of the CFIR Domain *Characteristics of Individuals* and a list of tools that may be used to evaluate constructs of this domain with regard to PCRP implementation.

Table 5. Potential Tools to Evaluate CFIR Domain Construct: Characteristics of Individuals

Domain	Domain Description
Characteristics of Individuals	Characteristics of individuals who are involved in the interviews and/or implementation process
Construct	**Tools/Resources to Evaluate Construct**
Knowledge and Beliefs	Top 10 Concerns about Person-Centered Care Planning in Mental Health Systems[3] Evidence-Based Practice Attitude Scale (EBPAS)[56]
Self-Efficacy	Patient Activation Measure (PAM)[57] Guide for constructing self-efficacy scales[58]
Individual Stage of Change	Transtheoretical Model of Health Behavior Change[59]
Individual Identification with Organization	Organizational Social Context (OSC)[60] Agency for Healthcare Research and Quality's (AHRQ) "Will it Work Here?" Guide[63]

Process

The fifth and final domain of CFIR is the implementation process and it is one of the most difficult domains to define and evaluate. The implementation process domain includes four constructs and is closely linked to the well-known quality improvement paradigm, Plan-Do-Study-Act cycle (PDSA cycle). In Texas, Via Hope staff, subject matter experts, and organizational staff were regularly experimenting with incremental changes in the PRCP implementation strategy, monitoring for effectiveness, and modifying strategies to address barriers or provide approaches tailored to the organization or clinic.

Planning

The first of the four constructs of the implementation process domain is planning, which is "the degree to which a scheme or method of behavior and tasks for implementing an intervention are developed in advance and the quality of those schemes or methods."[1(p.10)] Via Hope staff, subject matter experts, and evaluators spent many hours planning and developing training, coaching, and technical assistance activities for organizations participating in the initiative. Site visits were conducted to understand each organization's current systems and practices and leadership teams from each site were also brought into the planning process every month for approximately an hour. Throughout the process, plans were developed and modified based on organizational needs. However, more planning could be conducted with organizations before implementation is initiated. In particular, Via Hope staff

could discuss most (if not all) of the constructs within the intervention characteristics domain. The underlying theories and rationale for PCRP, implementation models and strategies, and stakeholders' needs and perspectives should be discussed. After discussion and planning has occurred, it is imperative to develop an implementation plan to guide how PCRP will be incorporated into the organization and ensure that certain milestones are reached.

The ORCA includes ten characteristics that should be included in implementation and/or evaluation plans. These include 1) identification of specific roles and responsibilities; 2) description of tasks and timelines; 3) appropriate provider/patient education; 4) acknowledgement of staff input and opinions; 5) an evaluation protocol; 6) periodic outcome measurements; 7) staff participation/satisfaction survey; 8) patient satisfaction survey; 9) dissemination plan for performance measures; and, 10) a review of results by clinical leadership. In Texas, Via Hope was not funded to fully implement PCRP but did incorporate five of the ten items (numbers 3, 5, 7, 8, and 10) into the implementation and/or evaluation plans for the PCRP initiative. Future efforts should include all ten of the items.

Engaging

The second construct of the implementation process domain is engaging, which is defined by Damschroder and colleagues as "attracting and involving appropriate individuals in the implementation and use of the intervention through combined strategy of social marketing, education, role modeling, training, and other similar activities."[1(p.11)] The appropriate individuals refer to opinion leaders, formally appointed internal implementation leaders, champions, and external change agents.

Opinion leaders are "individuals in an organization who have formal or informal influence on the attitudes and beliefs of their colleagues with respect to implementing the intervention." [1(p.11)] Champions are "individuals who dedicate themselves to supporting, marketing, and 'driving through' an implementation, overcoming indifference or resistance that the intervention may provide in an organization."[23] In general, the organizations participating in the PCRP initiative in Texas were engaged throughout the process. Each organization was required to create a leadership team to guide the organization through the implementation process with the help of Via Hope staff. Leadership team members served as both opinion leaders and champions, although these roles were not clearly distinguishable at the participating organizations.

Formally appointed internal implementation leaders are "individuals from within the organization who have been formally appointed with responsibility for implementing an intervention as coordinator, project manager, team leader, or other similar role."[1(p.11)] Only one organization, the state psychiatric hospital, created a position for a formally appointed implementation leader who was tasked with overseeing PCRP implementation at the organization. The three community mental health centers appointed a team of people to share the duties in addition to their daily job responsibilities. In many ways, having one individual formally appointed to lead implementation efforts was beneficial. Organizations interested in participating in the PCRP initiative in the future should consider appointing at least one full-time staff person to facilitate the intervention. Further, a list of selection criteria should be developed and offered to organizations as a resource for selecting an individual well-qualified for this role.

Finally, external change agents are "individuals who are affiliated with an outside entity who formally influence or facilitate intervention decisions in a desirable direction."[1(p.11)] In Texas, Via Hope staff represent the external change agents with regard to PCRP. Via Hope staff provided all the training, coaching, and technical assistance either by themselves or though national subject matter experts. To date, evaluation efforts have focused on assessing the work of Via Hope and offering recommendations for programmatic quality improvement. Future evaluation efforts should explore the work of Via Hope in the context of efforts occurring at the organizational level in order to collect data on outcomes of the individuals being served in the public mental health system.

Executing

The executing construct refers to "carrying out or accomplishing the implementation according to plan." [1(p.11)] A concrete, structured implementation plan or guide was never developed for the PCRP initiative in Texas, which limits the ability of the evaluators to assess the degree to which the intervention was carried out according to plan. A guide or toolkit for implementing PCRP would also facilitate evaluation.

Reflecting and Evaluating

Lastly, in order for an intervention to be successfully implemented and to have a long standing tenure at an organization, implementers must reflect on and evaluate various aspects of the process by collecting "qualitative

and quantitative feedback about the progress and quality of implementation with regular personal and team debriefing about progress and experience."[1(p.11)] Throughout the PCRP initiative, DSHS contracted with researchers from the TIEMH to evaluate the program. The evaluation team provided implementation and quality improvement support to Via Hope, administered several surveys to staff and people in services, conducted focus groups with each organization, administered satisfaction surveys at each training and technical assistance event, collected data on the plan-based technical assistance calls, and reviewed more than 700 person-centered recovery plans. Future evaluation efforts should examine outcomes of people in services to begin providing evidence for the positive effects of PCRP in the mental health field.

Several tools were developed in Texas to examine the reflecting and evaluating construct. First, a plan review tool was created to document and provide feedback on technical assistance calls. For each bimonthly call, a person-centered recovery plan was submitted by a practitioner and feedback on the person-centered process and the plan was provided by a national consultant, Via Hope staff, or a coach internal to the organization. If the internal coach was facilitating the call, a national consultant or Via Hope staff member would provide feedback on the content and delivery of the coaching to the coach using the coach feedback form. Other tools developed in Texas include a Train-the-Trainer feedback form for individuals who train organization staff on person-centered recovery planning; a coordinator and consultant feedback form to assess various aspects of implementation at each organization from the perspective of the national consultants and Via Hope staff; and a chart to assess best practices being implemented at the organization according to Fixsen's Implementation Driver model.

It is important to provide regular feedback to clinical management on progress of project activities and resource needs and to clinics on the effects of practice changes on patient care/outcomes. In addition, project progress should be measured by feedback from people in services and staff regarding proposed and implemented changes, the development and distribution of regular performance measures to clinical staff, and the provision of a forum for presentation/discussion of results and implications for continued improvements.[64]

Table 6 presents a brief review of the CFIR Domain *Process* and a list of tools that may be used to evaluate the constructs of this domain with regard to PCRP implementation.

Table 6. Potential Tools to Evaluate CFIR Domain Construct: Process

Domain	Domain Description
Process	Active change process aimed to utilize the intervention as designed (at an individual and/or organizational level)
Construct	Tools/Resources to Evaluate Construct
Planning	PCRP Project Plan Template Self-Assessment/Planning Tool for Implementing Recovery-Oriented Mental Health Services[65]
Engaging	No additional tools/resources known
Executing	DSHS PCRP QI Review Tool Intervention Tip Sheet Advancing Effective Communication, Cultural Competence, and Patient- and Family-Centered Care: A Roadmap for Hospitals[66]
Reflecting and Evaluating	Plan Review Tool for Technical Assistance Calls Coach Feedback Form Train-the-Trainer Rating Form Coordinator and Consultant Rating Form NIRN's Best Practices modified for use with PCRP[67]

Summary

Organizations interested in implementing and sustaining a new practice or intervention should examine a number of key elements that may hinder or facilitate implementation. CFIR provides a comprehensive framework of constructs that have been extensively researched and recognized by other theoretical implementation science models. CFIR's flexible and comprehensive nature allows implementers and evaluators to design implementation strategies around complex interventions, such as the implementation of PCRP in mental health organizations. This paper presented

the domains, constructs, and subconstructs of CFIR and highlighted how to translate these concepts to PCRP implementation and evaluation. Tools and resources have been identified throughout to evaluate PCRP implementation. Three tools that may be particularly useful are ORCA, OCM, and the Interview Tool Guide as they span several CFIR constructs and can all be tailored to a specific practice, such as PCRP. Research findings in Texas have shown that the inner setting domain might be particularly salient to PCRP implementation and organizations may want to focus on constructs such as implementation climate and readiness for implementation, especially early in the implementation process. However, characteristics of the PCRP intervention — including core components, flexible components, and stakeholder perceptions of PCRP — must be examined prior to and throughout implementation to ensure it aligns with organizational expectations and culture.

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