**Participatory Systems Dynamics CFIR Codebook Draft 2**

General Coding Rules:

1. Code complete sentences being critical to include the entire thought as expressed by the participant, but limiting extraneous information.
2. When two codes are in question for a passage, consider the primary meaning of the passage to assign code; consider what the participant is truly saying.
   1. You may selectively double code a passage when you cannot “tip the scale” one way or the other between two codes.
3. If, after careful consideration, you are unsure of how to code a passage, code as “OTHER IMPORTANT AD CONSTRUCT” as those passages will be reviewed collectively.
4. Every passage/statement in the transcript need not be coded. You must discern between passages that provide relevant information about implementation as defined by this codebook and those that are extraneous to the scope of this evaluation.
5. For your reference: <http://cfirguide.org/>
6. Overiding goal of evaluating the narrative passages is to place a better bet on change by evaluating a plan before implementation. We want an iteratively developed partnership that allows us to scale the PROCESS and provides us with a rigorous way of thinking about how we have arrived here to enhance our learning.

We are coding only for a portion of the specified constructs from the 4 CFIR domains (each domain encompasses one or more constructs):

1. INTERVENTION CHARACTERISTICS [Constructs: E. Trialability, F. Complexity]
2. OUTER SETTING [Constructs = D. External Policy and Incentives]
3. INNER SETTING [Constucts= D1:Tension for Change, D2: Compatibility D3: Relative Priority,D6: Learning Climate, E2: Available Resources, E3: Access to Knowledge and Information ]
4. CHARACTERISTICS OF INDIVDUALS [We are not coding any of these constructs]
5. PROCESS [Constructs: A. Planning, B. Engaging, B4: External Change Agents, D. Reflecting and Evaluating]

In addition to the specific CFIR constructs, we will code for the following

1. xxxx
2. xxxx
3. xxxx
4. xxxx

NB: in table that follows, the “Related Interview Questions” is not an exclusive list. That is, you may find passages related to other questions that are appropriate to code to a given domain/construct.

Brief overview of codes:

|  |  |  |  |
| --- | --- | --- | --- |
| **Domain** | **Construct (Sub-Construct)** | **Code Reference** | **Code** |
| Intervention Characteristics | Trialability | I.E | Trialability |
|  | Complexity | I.F | Complexity |
| Outer Setting | External Policy & Incentives | II.D | Networks-Communication |
|  |  |  |  |
| Inner Setting |  |  |  |
|  | Implementation Climate | III.D | Implementation Climate (IC) |
|  | Tension for Change | III.D.1 | IC:Tension for Change |
|  | Compatibility  Relative Priority  Learning Climate | III.D.2  III.D.3  III.D.6 | IC:Compatibility  IC: Relative Priority  IC: Learning Climate |
|  | Readiness for Implementation |  |  |
|  | Available Resources | II.E.2 | RI:Available Resources |
|  | Access to Knowledge & Information | II.E.3 | RI:Access Knowledge-Info |
| Process | Planning  Engaging | IV.A  IV.B | Planning  Engaging (ENG) |
|  | Opinion Leaders | IV.B.1 | ENG:Opinion Leaders |
|  | Reflecting & Evaluating | IV.D | Reflecting-Evaluating |
|  |  |  |  |

1. **INTERVENTION CHARACTERISTICS** [Constructs: E. Trialability, F. Complexity]

E. Trialability:

|  |
| --- |
| Definition: The ability to test the innovation on a small scale in the organization, and to be able to reverse course (undo implementation) if warranted.  Inclusion Criteria: Include statements related to whether the site piloted the innovation in the past or has plans to in the future, and comments about whether they believe it is (im)possible to conduct a pilot.  Exclusion Criteria: Exclude or double code descriptions of use of results from local or regional pilots to [Evidence Strength & Quality](http://cfirwiki.net/wiki/index.php?title=Evidence_Strength_%26_Quality). |

F. Complexity:

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Definition: Perceived difficulty of the innovation, reflected by duration, scope, radicalness, disruptiveness, centrality, and intricacy and number of steps required to implement.

Inclusion Criteria: Code statements regarding the complexity of the innovation itself.

Exclusion Criteria: Exclude statements regarding the complexity of implementation and code to the appropriate CFIR code, e.g., difficulties related to space are coded to Available Resources and difficulties related to engaging participants in a new program are coded to [Engaging](http://cfirwiki.net/wiki/index.php?title=Engaging): Innovation Participants.

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1. **OUTER SETTING** [Constructs = D. External Policy and Incentives]

D. External Policy and Incentives:

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Definition: A broad construct that includes external strategies to spread innovations including policy and regulations (governmental or other central entity), external mandates, recommendations and guidelines, pay-for-performance, collaboratives, and public or benchmark reporting.

Inclusion Criteria: Include descriptions of external performance measures from the system.

Exclusion Criteria: Not listed in the online version.

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1. **INNER SETTING** [Constucts= D1:Tension for Change, D2: Compatibility D3: Relative Priority,D6: Learning Climate, E2: Available Resources, E3: Access to Knowledge and Information ]

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| --- | --- |
| 1. Implementation Climate | Definition: The absorptive capacity for change, shared receptivity of involved individuals to an innovation, and the extent to which use of that innovation will be rewarded, supported, and expected within their organization.  Inclusion Criteria: Include statements regarding the general level of receptivity to implementing the innovation.  Exclusion Criteria: Exclude statements regarding the general level of receptivity that are captured in the sub-codes. |

D1: Tension for Change

Definition: The degree to which stakeholders perceive the current situation as intolerable or needing change.

Inclusion Criteria: Include statements that (do not) demonstrate a strong need for the innovation and/or that the current situation is untenable, e.g., statements that the innovation is absolutely necessary or that the innovation is redundant with other programs. Note: If a participant states that the innovation is redundant with a preferred existing program, (double) code lack of [Relative Advantage](http://cfirwiki.net/wiki/index.php?title=Relative_Advantage), see exclusion criteria below.

Exclusion Criteria: Exclude statements regarding specific needs of individuals that demonstrate a need for the innovation, but do not necessarily represent a strong need or an untenable status quo, and code to [Needs and Resources of Those Served by the Organization.](http://cfirwiki.net/wiki/index.php?title=Patient_Needs_%26_Resources)  Exclude statements that demonstrate the innovation is better (or worse) than existing programs and code to [Relative Advantage](http://cfirwiki.net/wiki/index.php?title=Relative_Advantage)

D2: Compatibility

Definition: The degree of tangible fit between meaning and values attached to the innovation by involved individuals, how those align with individuals’ own norms, values, and perceived risks and needs, and how the innovation fits with existing workflows and systems.

Inclusion Criteria: Include statements that demonstrate the level of compatibility the innovation has with organizational values and work processes. Include statements that the innovation did or did not need to be adapted as evidence of compatibility or lack of compatibility.

Exclusion Criteria: Exclude or double code statements regarding the priority of the innovation based on compatibility with organizational values to [Relative Priority](http://cfirwiki.net/wiki/index.php?title=Relative_Priority), e.g., if an innovation is not prioritized because it is not compatible with organizational values.

D3: Relative Priority

Definition: Individuals’ shared perception of the importance of the implementation within the organization.

Inclusion Criteria: Include statements that reflect the relative priority of the innovation, e.g., statements related to change fatigue in the organization due to implementation of many other programs.

Exclusion Criteria: Exclude or double code statements regarding the priority of the innovation based on compatibility with organizational values to [Compatibility](http://cfirwiki.net/wiki/index.php?title=Compatibility), e.g., if an innovation is not prioritized because it is not compatible with organizational values.

D6: Learning Climate

Definition: A climate in which: 1. Leaders express their own fallibility and need for team members’ assistance and input; 2. Team members feel that they are essential, valued, and knowledgeable partners in the change process; 3. Individuals feel psychologically safe to try new methods; and 4. There is sufficient time and space for reflective thinking and evaluation.

Inclusion Criteria: Include statements that support (or refute) the degree to which key components of an organization exhibit a “learning climate.”

Exclusion Criteria: None stated in online CFIR codebook.

|  |  |
| --- | --- |
| 1. Readiness for Implementation | Definition: Tangible and immediate indicators of organizational commitment to its decision to implement an innovation.  Inclusion Criteria: Include statements regarding the general level of readiness for implementation.  Exclusion Criteria: Exclude statements regarding the general level of readiness for implementation that are captured in the sub-codes. |

E2: Available Resouces

Definition: The level of resources organizational dedicated for implementation and on-going operations including physical space and time.

Inclusion Criteria: Include statements related to the presence or absence of resources specific to the innovation that is being implemented.

Exclusion Criteria: Exclude statements related to training and education and code to [Access to Knowledge & Information](http://cfirwiki.net/wiki/index.php?title=Access_to_Knowledge_%26_Information). Exclude statements related to the quality of materials and code to [Design Quality & Packaging](http://cfirwiki.net/wiki/index.php?title=Design_Quality_%26_Packaging).In a research study, exclude statements related to resources needed for conducting the research components (e.g., time to complete research tasks, such as IRB applications, consenting patients).

E3: Access to Knowledge and Information

Definition: Ease of access to digestible information and knowledge about the innovation and how to incorporate it into work tasks.

Inclusion Criteria: Include statements related to implementation leaders' and users' access to knowledge and information regarding use of the program, i.e., training on the mechanics of the program.

Exclusion Criteria: Exclude statements related to engagement strategies and outcomes, e.g., how key stakeholders became engaged with the innovation and what their role is in implementation, and code to [Engaging](http://cfirwiki.net/wiki/index.php?title=Engaging): Key Stakeholders. Exclude statements about general networking, communication, and relationships in the organization, such as descriptions of meetings, email groups, or other methods of keeping people connected and informed, and statements related to team formation, quality, and functioning, and code to [Networks & Communications](http://cfirwiki.net/wiki/index.php?title=Networks_%26_Communications).

1. CHARACTERISTICS OF INDIVIDUALS [We are not coding any of these constructs]

Not applicable at this time.

1. **PROCESS** [Constructs: A. Planning, B. Engaging, B4: External Change Agents, D. Reflecting and Evaluating]

A. Planning:

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Definition: The degree to which a scheme or method of behavior and tasks for implementing an innovation are developed in advance, and the quality of those schemes or methods.

Inclusion Criteria: Include evidence of pre-implementation diagnostic assessments and planning, as well as refinements to the plan.

Exclusion Criteria:

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B. Engaging:

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Definition: Attracting and involving appropriate individuals in the implementation and use of the innovation through a combined strategy of social marketing, education, role modeling, training, and other similar activities.

Inclusion Criteria: Include statements related to engagement strategies and outcomes, i.e., if and how staff and innovation participants became engaged with the innovation and what their role is in implementation. Note: Although both strategies and outcomes are coded here, the outcome of engagement efforts determines the rating, i.e., if there are repeated attempts to engage staff that are unsuccessful, or if a role is vacant, the construct receives a negative rating. In addition, you may also want to code the "quality" of staff - their capabilities, motivation, and skills, i.e., how good they are at their job, and this data affects the rating as well.

Exclusion Criteria: Exclude statements related to specific sub constructs, e.g., [Champions](http://cfirwiki.net/wiki/index.php?title=Champions) or [Opinion Leaders](http://cfirwiki.net/wiki/index.php?title=Opinion_Leaders).

Exclude or double code statements related to who participated in the decision process to implement the innovation to [Innovation Source](http://cfirwiki.net/wiki/index.php?title=Intervention_Source), as an indicator of internal or external innovation source

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B4: External Change Agents:

Definition: Individuals who are affiliated with an outside entity who formally influence or facilitate innovation decisions in a desirable direction. Inclusion Criteria: Include statements related to engagement strategies and outcomes, e.g., how the external change agent (entities outside the organization that facilitate change) became engaged with the innovation and what their role is in implementation, e.g., how they supported implementation efforts. Note: Although both strategies and outcomes are coded here, the outcome of efforts to engage staff determines the rating, i.e., if there are repeated attempts to engage an external change agent that are unsuccessful, or if the external change agent leaves their organization and this role is vacant, the construct receives a negative rating. In addition, you may also want to code the "quality" of the external change agent here - their capabilities, motivation, and skills, i.e., how good they are at their job, and this data affects the rating as well.

Exclusion Criteria: Note: It is important to clearly define what roles are external and internal to the organization. Exclude statements regarding facilitating activities, such as training in the mechanics of the program, and code to [Access to Knowledge & Information](http://cfirwiki.net/wiki/index.php?title=Access_to_Knowledge_%26_Information) *if* the change agent is considered internal to the study, e.g., a staff member at the national office. If the study considers this staff member internal to the organization, it should be coded to [Access to Knowledge & Information](http://cfirwiki.net/wiki/index.php?title=Access_to_Knowledge_%26_Information), even though their support may overlap with what would be expected from an External Change Agent.

D: Reflecting and Evaluating:

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Definition: Quantitative and qualitative feedback about the progress and quality of implementation accompanied with regular personal and team debriefing about progress and experience.

Inclusion Criteria: Include statements that refer to the implementation team’s (lack of) assessment of the progress toward and impact of implementation, as well as the interpretation of outcomes related to implementation. Reflecting and Evaluating is part of the implementation process; it likely ends when implementation activities end. It does not require goals be explicitly articulated; it can focus on descriptions of the current state with real-time judgment, though there may be an implied goal (e.g., we need to implement the innovation) when the implementation team discusses feedback in terms of adjustments needed to complete implementation.

Exclusion Criteria: Exclude statements related to the (lack of) alignment of implementation and innovation goals with larger organizational goals, as well as feedback to staff regarding those goals, e.g., regular audit and feedback showing any gaps between the current organizational status and the goal, and code to [Goals & Feedback](http://cfirwiki.net/wiki/index.php?title=Goals_%26_Feedback). Goals and Feedback include organizational processes and supporting structures independent of the implementation process. Evidence of the integration of evaluation components used as part of “Reflecting and Evaluating” into **on-going or sustained** organizational structures and processes may be (double) coded to Goals and Feedback. Exclude statements that capture reflecting and evaluating that participants may do during the interview, for example, related to the success of the implementation, and code to [Knowledge & Beliefs about the Innovation](http://cfirwiki.net/wiki/index.php?title=Knowledge_%26_Beliefs_about_the_Intervention).

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**General Rating Rules:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Ratings** | | | | | | |
| M | -2 | -1 | E | 0 | +1 | +2 |

Ratings are determined based on two factors: 1) valence and 2) strength.

**Valence: positive or negative influence on implementation**

*Rating component: M, E, 0, +, -*

How to rate constructs as they relate to implementation of the AD program (this is the “gestalt” across all coded excerpts):

(M) too much missing data to discern a pattern

(E) comments are equally positive and negative

(0) comments related to the construct where unable to distinguish between a high and low impact on implementation

(-) pattern of negative comments

(+) pattern of positive comments

The valence component of a rating is determined by the influence the coded data has on the implementation process, i.e., contextual factors that facilitate or hinder implementation.

|  |  |  |  |
| --- | --- | --- | --- |
| **Participatory System Dynamics embeds a sustainable Quality Improvement Process and tool in the local setting** | | | |
| **Implementation Capacity** | **Scientific Model** | **Problem** | **Description of why quality problems persist.** |
| **General** | **Subjective** | Learning | Stakeholders cannot or do not learn and adapt to their situation. |
| Coordination | Conflict or lack of stakeholder consensus. |
| **EBP-Specific** | **Objective** | Analysis | Policies are inconsistent with the real system constraints. |
| Restructuring | The underlying structure of the system prevents workable solutions. |

**Hovmand, Peter (2014). *Community-Based System Dynamics.* Springer.**

**QUALITY IMPROVEMENT ACTIVITY TRACKING – “Attributes”**

**SITE NAME:**

**Name of person completing sheet:**

**Role of person completing sheet:**

**Event**

1 = prep time

2 = one-on-one

3 = group

4 = site visit

5 = other

**Mode**

1 = phone

2 = email

3 = V-Tel

4 = in-person

5 = other

6 = not

applicable

(e.g., prep time

**Personnel**

1 = Provider / Case Manager

2 = Leadership - service level

3 = Leadership - facility level

4 = Leadership - VISN level

5 = Leadership - national level

6 = External facilitator

7 = Internal facilitator

8 = Clerk or admin support

9 = Peer Specialist(s)

10 = Peer Supervisor(s)

11 = Other

**Activity**

1 = Assessment

2 = Preparation/planning

3 = Stakeholder engagement

4 = Education

5 = Ongoing process monitoring

6 = Program adaptation

7 = Problem identification and problem solving

8 = Data audit/feedback and evaluation of

implementation outcomes

9 = Program marketing

10 = Network development

11 = Other

**Time**

Hour

Minute

**NOTES**

***Source –* VA Team-Based Behavioral Health QUERI Program: Behavioral Health Interdisciplinary Program (BHIP) Enhancement Project**

*Adapted from -* Bauer M. S., Miller C. J., Kim B., Lew R., Weaver K., Coldwell C., Henderson K., Holmes S. K., Nealon-Seibert M., Stolzmann K.,

Elwy A. R., & Kirchner J. (2015). Partnering with health system operations leadership to develop a controlled implementation trial.

*Implementation Science, 11*, 1-11.

*See also -* Bauer et al., Quantifying Facilitation in Implementation Trials: Time-Motion Analysis Strategies. Panel presentation at the

AcademyHealth Annual Research Meeting 2017, New Orleans LA, June 26, 2017.