

# Review of “The updated Consolidated Framework for Implementation Research Based on User Feedback”

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## One-Minute Summary

- The Consolidated Framework for Implementation Research (CFIR) gives structure to contextual factors that influence implementation. CFIR includes five core domains: the individual characteristics, the inner setting, the outer setting, the implementation process, and the innovation itself.<sup>1</sup> A comprehensive matrix of constructs and associated outcomes is available to support application of CFIR.<sup>1</sup>
- CFIR is used to inform real-world implementation, considering the multi-level factors that impact implementation. Implementation in controlled settings (i.e., RCT) differs from real-world or pragmatic implementation in many ways, including complex barriers and facilitators. CFIR’s aim is to predict or explain barriers and facilitators (determinants) to implementation effectiveness (the outcome) to guide design and implementation of innovations (interventions, programs, etc.).
- CFIR was created in 2009 and updated in 2022 based on 1) a literature review informed by systematic search strategy and, 2) a survey of authors who used the CFIR in a published study. As part of the 2022 update, an outcomes addendum was published to describe conceptual distinctions between implementation and innovation outcomes and their potential determinants.<sup>2</sup> The updated CFIR addresses critiques of the domains and constructs with the addition, removal, or reorganization of constructs. The main changes included centering innovation recipients and adding determinants of equity in implementation. While not identified as part of the literature or survey, the critical incidents domain was also added to account for COVID-19 and other large scale events that might influence the implementation process.
- Centering innovation recipients resulted in the reorganization of the *Individuals* domain and addition of sub-domains (e.g., *Roles* and *Characteristics*). Users are encouraged to combine CFIR with other behaviour level theories (e.g., theoretical domains framework) to align individual level characteristics with constructs.
- Equity as a key element in implementation underwent significant revision in the 2022 update including new constructs to better assess equity determinants in implementation. CFIR is recommended for use in combination with other equity, justice, or anti-oppressive theories and lenses, such as Critical Race Theory<sup>3,4</sup>, and equity-focused frameworks (i.e., Health Equity Implementation Framework<sup>5</sup>).

## Additional Information

- CFIR is derived from the implementation science evidence base. Implementation science includes theory-driven and practical approaches for successful implementation which is used by, and benefits researchers and practitioners.<sup>6,7</sup> CFIR offers a buildable evidence base for informing the implementation of innovations applicable across settings. Through the use of constructs and domains, barriers and facilitators can be identified and addressed in design and implementation efforts.
- The systematic search for literature identified 376 articles that contained the CFIR in the title and/or abstracts published by 334 distinct authors. Of the 376 articles, 59 included feedback on the CFIR. Of the 334 authors that cited CFIR, forty percent (n = 134/334) also completed a survey to elicit in-depth feedback about experiences using CFIR. Data were combined to identify themes to inform the update.
- Articles (primary studies, reviews and evaluations) with feedback on the CFIR were distributed across settings, including mostly healthcare settings; 27% (n = 16) in non-healthcare settings (e.g., educational, agricultural, or community settings), and 8% (n = 5) in low- and/or middle income countries (LMICs). User feedback that informed CFIR updates was based solely on published authors who used the CFIR, and do not necessarily reflect or incorporate all values or perspectives (e.g., equity considerations from community voices).<sup>8,9</sup> Applying results from a limited audience limits the applicability of the lessons learned and incorporated into the CFIR update.
- The 2020 survey of published authors who cited CFIR elicited feedback about their experience using the framework (number of projects, setting, stage of project informed by CFIR, etc.). Respondents also rated CFIR and provided open-ended feedback. Survey responses were analyzed using descriptive statistics and authors' feedback was organized into matrices at the framework, domain, and construct levels.
- The literature search strategies, terms, and search databases were not guided or informed by anti-racist and anti-colonial perspectives, the research captured may not be representative of diverse perspectives. Gaps remain when it comes to combining considerations for justice, anti-racist / oppressive theories with CFIR and experts, community partners and members should be consulted to understand structural determinants of health in services and outcomes.<sup>8</sup> Without an immediate plan or timeline to update the CFIR, researchers and framework users should remain critical, reflexive and adapt where needed to prioritize focus on equity and justice.
- Authors acknowledged their lived experience and positionality limit the centring equity considerations within the CFIR. Deliberate consult and consideration from those with these expertise and with groups and individuals facing marginalization could greatly strengthen the equity-centeredness of the intervention delivery and innovation.
- Users rated the (2009) CFIR both applicable and useful. Changes made to updated (2022) CFIR constructs to address user feedback captured in the published literature and user surveys are described in detail in [supplementary file 6](#).<sup>7</sup> For more information on how the updated CFIR maps back to the original 2009 publication see [supplemental file 4](#).<sup>7</sup> Authors plan to publish a practical application guide for users in the future.

## PHO Reviewer's Comments

- While there are a number of other evidence based implementation frameworks, theories and models to inform design and evaluation, CFIR is frequently cited in the implementation literature and offers one of the most comprehensive approaches to prioritize and define implementation outcomes, determinants, and strategies.<sup>10</sup> Beyond its applicability across contexts, a benefit of CFIR includes

developed and freely available data analytics tools (e.g., coding templates and data matrices) which enhances alignment of concepts within implementation evidence and informs processes and strategies.<sup>10</sup>

- Determinant frameworks such as CFIR are important for identifying the targets of implementation efforts to produce actionable findings to improve implementation across contexts and settings.<sup>10,11</sup> Incorporating tools to guide implementation has demonstrated benefits for achieving and evaluating clinical, implementation and economic outcomes.<sup>12,13</sup> Authors note that CFIR is used most in the post-implementation (evaluation) phase; however, more intentional use of tools (e.g., CFIR) in design and planning could impact uptake and amplify success of a program.
- Due to its comprehensiveness, CFIR is complex to apply and operationalize in varied contexts; specifically, how to differentiate between specific constructs, which authors aimed to address in the updated version. Another challenge is assessing the “degree to which” each construct captures elements and is based on a combination of subjective judgements and objective facts. For example, identifying and categorizing elements in the outer versus inner setting when applying the framework.
- Using CFIR to inform reporting of implementation studies would address specific challenges in reporting implementation evidence including poor (or absent) descriptions of conceptual frameworks underpinning the research, inadequate description of context, and incomplete information about how the intervention was promoted and implemented in a specific setting.<sup>12</sup>
- Frameworks including CFIR must (and can) evolve alongside implementation efforts to advance the science. Future research should continue to build on the learnings applied thus far, as was done in the 2022 update.

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