

## Using the CSR Fidelity Index<sup>®</sup> to Measure Effective Program Implementation

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One of the key hurdles in studying implementation during a process evaluation is how to empirically measure an implementer's fidelity to the vision and design of the program intervention. CSR has developed a tool, the CSR Fidelity Index<sup>®</sup> (CFI), to quantitatively assess how well program implementation adheres to the intended design of a program intervention. The CFI is a composite index that combines discrete components of a program model into a single, quantitative indicator. Each component is weighted so that the index produces a score between 0 and 100. In a process evaluation or implementation study, the CFI helps quantitatively assess whether and to what extent program implementers work with the desired program model design. The CFI can also be used in outcome studies to ascertain whether fidelity to a program's design elements is related to achievement of specific programmatic outcomes and results.

What value does the CFI add to evaluation studies? The goal of evaluation is to determine if a particular program intervention produces the types of desired outcomes the program's planners projected. Programs can fail to produce desired results for two basic reasons:

1. The first, and most obvious, is that the program's underlying theory is flawed. The program planner's hypothesis about causal relationships between the program's activities and the desired outcomes do not exist in the real world. This is a conceptual or theoretical flaw in the program.
2. The second reason for program failure is related to how a program is implemented. If program operators fail to implement the program

the way program planners intend, the program is unlikely to achieve its desired outcomes. For example, if a patient has contracted a disease and is told to take a particular medication 3 times per day for 10 days but instead takes the medication every other day or only once a day, it is quite possible that he or she will not recover. Does this mean the medication does not work? Possibly! But it is just as likely that the reason for failure was the patient's inability or unwillingness to follow the prescribed regimen. The failure to achieve the desired outcomes, in this instance, is an implementation failure rather than a conceptual flaw.

Obviously, a program can have both conceptual flaws and implementation problems.

A central concern of most process evaluations is how well the target program was actually implemented. During a process evaluation, program evaluators generally conduct implementation studies to determine the following:

- ▶ Did the program deliver the services as the program planner intended?
- ▶ Did its implementers modify or adapt features of the program to meet unique conditions among program participants?
- ▶ Did the implementers fail to deliver important components of the program?
- ▶ How did modifications, adaptations, and failure to implement all components affect program delivery?

Most implementation studies primarily use qualitative methods to answer these questions. The CFI provides data-driven support for qualitative

judgments on program implementation that are usually the core of most implementation studies. Stated differently, the CFI complements qualitative methods by adding a quantitative metric to help value the scale and importance of differences between the planner's vision for a program and the program's implementation in the real world.

CSR has applied the CFI in several different contexts. One example is a 5-year evaluation that CSR recently completed for the National Cancer Institute's (NCI) Community Networks Program to Reduce Cancer Health Disparities (CNP).<sup>1</sup> CSR used the CFI as part of its process evaluation and as a predictor in its outcome evaluation of the program. NCI wanted the evaluation to test whether community-based participatory research (CBPR) was an effective intervention for reducing racial, ethnic, gender, and socioeconomic cancer health disparities at the community level. NCI hypothesized that CBPR could be used to increase beneficial cancer health interventions among communities with cancer health disparities. To test the hypothesis, NCI implemented a national demonstration through its Center to Reduce Cancer Health Disparities (CRCHD) and funded 25 program sites around the country. The key to testing this hypothesis was ascertaining how well each of the CNP demonstration sites adhered to the CBPR model advocated by NCI, as specified in the NCI Request for Funding Application.<sup>2</sup> The challenge was how to quantify NCI's CBPR model.

Based on work done with other research projects, CSR customized the CFI to quantitatively measure adherence to the prescribed requirements of the CNP model. The result was a customized CNP fidelity index, which was used in an empirical

analysis of how well each CNP site implemented NCI's vision of CBPR. The CNP fidelity index was also used as a predictor in the CNP outcome evaluation.

Currently, CSR is customizing the CFI to be used in two other evaluation projects. The Michigan-based Mott Foundation has funded CSR to examine how to successfully replicate sector employment projects. This is an evidence-based strategy for moving low-wage, underemployed, and unemployed workers into occupations with family-supporting wages and opportunities for career progression. The CFI will be used to assess which components of the sector employment model can be empirically shown to be most vital to successful implementation and replication. CSR is also partnering with Walter R. McDonald and Associates, Inc. (WRMA) to evaluate the Patient-Centered Medical Home (PCMH) Program for the Health Resources and Services Administration (HRSA). As part of this evaluation, CSR will customize the CFI to assess program implementers' fidelity to the National Committee for Quality Assurance (NCQA) PCMH recognition program model. The CFI will help evaluate the role that fidelity plays in achieving the program's desired outcomes in patient health, satisfaction, and healthcare delivery costs.

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<sup>1</sup><http://crchd.cancer.gov/cnp/overview.html>

<sup>2</sup>See RFA no: RFA-CA-09-032 on <http://grants.nih.gov/grants/guide/rfa-files/rfa-ca-09-032.html>



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