Pilot test of the Wraparound Fidelity Index, Brief version (WFI-EZ)

April Sather, MPH; Eric J. Bruns, Ph.D.; Spencer Hensley, B.A.
University of Washington, Wraparound Evaluation and Research Team

June 2012

Abstract: The Wraparound Evaluation and Research Team (WERT) is currently developing a brief, self-report version of the Wraparound Fidelity Index. The goal is to create a reliable and valid measure of integrity to the wraparound principles that is less burdensome and time consuming than the full Wraparound Fidelity Index (WFI) interview protocol. We are currently referring to the new instrument as the WFI-EZ. This article describes the need for the WFI-EZ, as well as its development and pilot testing.

Wraparound is an intensive, team-based method of engaging with individuals with complex needs (most typically children, youth, and their families) so that they can live in their homes and communities. Wraparound's history spans several decades; however, it has only recently been defined and implemented with consistency. Part of this process of better specifying the wraparound practice model has been the development of measures of integrity to the process. Such measures have included the Wraparound Observation Form (WOF; Epstein et al., 1996) and, more recently, the measures of the Wraparound Fidelity Assessment System (WFAS), initially developed by the Wraparound Evaluation and Research Team (WERT) at the University of Vermont (Bruns et al., 2004) and now located at the University of Washington in Seattle.

The WFAS comprises four measures that are intended to evaluate a wraparound initiative's adherence to the 10 principles of wraparound and the basic activities of wraparound that span the four phases of work, including engagement, planning, implementation, and transition. Among the measures is the Wraparound Fidelity Index (WFI), originally developed by John D. Burchard, Ph.D., at the University of Vermont. The Wraparound Fidelity Index 4.0 (WFI-4) is a set of four interviews that measures the integrity of the wraparound process that an individual family receives. The WFI-4 is completed through brief, confidential telephone or face-to-face interviews with four types of respondents: caregivers, youth (11 years of age or older), wraparound facilitators, and team members.

The WFI-4 interviews are organized by the four phases of the wraparound process (Engagement and Team Preparation, Initial Planning, Implementation, and Transition). In addition, the 40 items of the WFI interview are keyed to the 10 principles of the wraparound process, with four items dedicated to each principle. In this way, the WFI-4 interviews are intended to assess both integrity to the wraparound practice model as well as adherence to the principles of wraparound in service delivery.

Over the years, the WFI has been found to be reliable and valid, and to correlate with outcomes at a system and an individual level. The WFI is now used in over 100 wraparound initiatives nationally. However, our research team has also found significant limitations and/or areas for potential improvement of the WFI:

- Scores on the WFI have been rising nationally, probably as a result of better understanding of the basic practice model, and workforce development supports that aim to ensure the model is implemented with integrity. This may be good for the field but it is bad for our measurement model – in essence, the WFI is showing a serious "ceiling effect" whereby only a few items now show good variance across families and sites. This reduces the interview's usefulness as an evaluation or quality improvement tool.

- Forms for the four informants (caregiver, youth, facilitator, and team member) are not completely parallel to one another. This makes it difficult to interpret differences in scores across informants and to combine scores into a total score.
- The WFI requires trained interviewers to administer. This yields more rich information about what families are experiencing, but creates an administrative burden to users.
- Interviews can take 45-60 minutes to administer, especially to parents/caregivers. Again, this results in an administrative burden.
- Interviews are resource intensive to schedule and conduct. If a parent or youth is not available at a scheduled time, does not have a phone, or lives in a remote area, completing interviews can require multiple reschedules or not get done at all.

To overcome these issues, and with support from the Child, Adolescent, and Families Branch at SAMHSA, WERT is currently developing a brief, self-report version of the Wraparound Fidelity Index. The goal is to create a reliable and valid measure of integrity to the wraparound principles that is less burdensome and time consuming than the full WFI interview protocol. We are currently referring to this instrument as the WFI-EZ.

The WFI-EZ will be less burdensome in three main ways:

- The WFI-EZ will have only 25-30 items, organized in a way that allows the respondent to skip items that are not applicable (further reducing burden).
- The WFI-EZ will be completed by self-report (i.e., using pencil and paper or by web survey), rather than via an interview.
- Items on the caregiver, youth, and facilitator versions of the WFI-EZ will be parallel to one another. This will promote more straightforward scoring and interpretation of the data.

Though we want to create a version of the WFI that is quicker for families to complete and more feasible for sites to administer, the WFI-EZ must still be reliable and valid. It must also tap into the same constructs as the full WFI interview, results from which have been found to be associated with youth and family outcomes. To achieve these goals, WERT is in the midst of a rigorous process of development and testing of this brief version of the WFI. Below, we summarize progress to date:

Development of an item pool and expert review
Initial steps of WFI-EZ development took place in 2011 and involved construction of an item pool of 50 potential items from the existing WFI and other sources. Eighteen wraparound experts then rated the appropriateness and wording of these items and gave feedback on additional items to add to the pool. Based on these results, a second pool of 61 items was submitted to the same experts. Fifteen of the original 18 gave feedback again, and proposed wording changes. From this process, we developed a pool of 39 items for an initial pilot test. Examples of items that received high ratings from experts and low ratings are presented in Table 1.

Development of pilot WFI-EZ
Based on expert review, an initial pilot test version of the WFI-EZ was created in late 2011. Paper- and web-based (Survey Monkey) versions were created to facilitate ease of data collection. Only a caregiver/parent version was created for the pilot test. The pilot test version of the WFI-EZ included six sections:
1. **Demographics and youth/family information:** ID number, Age, Race, Gender, Caregiver relationship to child.

2. **Basic information about wraparound:** Three "non-negotiable" items about the family's wraparound process: Is there a team; does it meet regularly; is there a plan of care.
3. **Your experiences in wraparound:** The main section of the WFI-EZ, this includes 39 items developed through expert review and feedback (See Table 1). Respondents rate their agreement with the items on a five point scale (from Strongly Agree to Strongly Disagree).
4. **Team meetings:** Based on expert suggestion, we also included a section asking the parent/caregiver to indicate "how often things happen during team meetings," such as celebrate success, review/discuss strengths, and discuss progress toward meeting needs. Respondents provide a rating on a 5-point scale from "Always" to "Never."
5. **Outcomes and satisfaction:** Eight items asking about satisfaction with wraparound, the child's progress, and brief checks on core outcomes such as school success and placement out of the community.
6. **Survey satisfaction:** For the pilot version only, we included 4 items asking the respondent how easy the survey was to complete, whether the items were easily understandable, and whether they were relevant to their family's wraparound.

Pilot testing the WFI-EZ
In December 2011, we asked the National Wraparound Initiative community for volunteer sites to pilot test the WFI-EZ. We were primarily interested in current WFI-4 user sites, so we could compare scores from the WFI-EZ to the results of WFI-4 interviews for the same families. Many sites volunteered to be part of the pilot test; to date, 15 have participated. We are tremendously grateful for their participation!

Summary of Results So Far

Sample
With the help of the 15 participating sites, each of which contributed between 3 and 41 forms, we have thus far been able to compile data from 154 caregivers. For 42 of these parents, we have both a Pilot WFI-EZ and a WFI-4 interview. The sample of N=154 is largely representative of the overall WFI-4 database we have compiled at WERT: 63% male, mean age 13, 59% white, 21% Hispanic, 19% black, 2% American Indian. Youths were enrolled in wraparound for a mean of 14 months at the time of the administration (though this was skewed by several youths who had been enrolled for over 3 years). Sixty-one percent of caregivers were birth parents, 14% adoptive parents, 15% grandparents, and 5% foster parents.

Basic wraparound information
Results showed that 97% of parents reported that they were part of a team, that they had a written plan, and that the team meets regularly. This confirms that these items will largely be endorsed in "true" wraparound programs. If a parent reports that any of these are not true, their service experience is likely not a full wraparound process.

Fidelity items
Mean scores (N=154) for the 39 fidelity items ranged from 2.75 ("Our wraparound team includes a friend, neighbor, extended family member, or other natural support") to 3.74 ("Our wraparound team's decisions are based on input from me and my family"). On the five-point scale (possible range = 0-4), 15 items had a mean score below 3.2 and 11 items had standard deviations above 1.0. This provides hope that we can use these preliminary data to construct a first version of the WFI-EZ that includes 15-20 items with good variance.

Team meeting items
Among the 11 items about frequency of events at team meetings, less variance was observed. For almost all items, over 70% of respondents reported that the events "Always" happened in team meetings, and for many of the items, over 90% of respondents reported they always or usually happened. Most frequently reported events included "reviewed the plan" and "reviewed/discussed strengths" (95% "usually or always" happened) while less frequently reported events included "changing members when necessary" (50% "usually or always") and "reported progress toward family vision" (64%). More analyses will be necessary to determine the usefulness of including these items. For example, do they contribute unique variance to overall fidelity scores? Do they correspond to outcomes?

Satisfaction and outcomes
Not surprisingly, parents reported high levels of satisfaction with the process (97% "Yes") and with the youth's progress (90%). The lowest endorsement was for "I feel more confident about my ability to care for my child at home" (89% yes). These results suggest that, to increase variance, in our next version we should provide a range of more response options for satisfaction items.

More surprising, we found that these caregivers reported a relatively high incidence of negative outcomes since the start of wraparound, including placement in an institution (29%), treatment in an ER (29%), negative contact with police (29%), and suspension from school (36%). These results suggest that these highly disruptive events may be worth including on the WFI-EZ due to their relatively high incidence and importance to achieving the core wraparound outcomes of "at home, in school, and out of trouble."

Satisfaction with the survey
Despite the length of the pilot version of the WFI-EZ survey, we were pleased to find that caregivers reported:
- "The survey was easy to complete" (93% said strongly or mostly agree)
- "I understood all items on the survey" (90%)
- "The questions were relevant to our experiences in wraparound" (89%)

Reliability
The Cronbach alpha coefficient was found to be .957 for the 39 main fidelity items and .892 for the 11 items in the Team meetings activity section. This provides evidence of reliability in that the items are well-related to one another. This result also suggests that many items can probably be deleted without compromising the internal consistency of these two scales.

Validity
A critical component of this pilot study is to determine the correspondence between a brief, self-report version of the WFI with scores from the original interview version (WFI-4). Correlation of total scale score from the 39 WFI-EZ fidelity items with total scores from WFI-4 interviews was found to be $r(42) = .548$, significant at $p=.001$. Correlation of a total score from the 11 team meeting event items with WFI-4 total scores was found to be $r(42) = .483$ ($p<.01$).

Implications and Next steps

Although data collection is ongoing, preliminary results of this pilot test are encouraging. The WFI-EZ pilot form shows promise in many ways: Items were shaped and then endorsed by experts in wraparound, the first version of the scales demonstrate internal consistency, and caregivers who completed the survey responded positively to the ease of use and comprehension and relevance of the items, even though this version is longer than the ultimate version of the WFI-EZ will be. Most important, the WFI-EZ correlates strongly with scores for WFI-4 interviews for the same caregivers.

In the coming months, we will continue to collect data from our collaborating sites, so we can reach our goal of N=300 WFI-EZ surveys. This number of surveys will allow us to conduct an Item-Response Theory (IRT) analysis that provides a sophisticated way to reduce a total item pool based on the behavior of individual items. We will also conduct a factor analysis, to inform final item selection and possible construction of subscales. Ultimately, our interest is in finalizing a first version of the WFI-EZ (WFI-EZ-1) that is brief, reliable, valid, and ready for further testing in the "real world" with wraparound initiatives nationally by September, 2012.

If your wraparound initiative is interested in being part of the current or future testing of the WFI-EZ, please contact April Sather, Research Coordinator of WERT, at sathea@uw.edu.

We would like to thank all the current collaborating wraparound programs that have contributed data to the pilot test of the WFI-EZ thus far:

- AWARE, Inc., Kalispell, Montana
- Monmouth Cares, West Long Branch, New Jersey
- McMan Youth, Calgary, Alberta, Canada
- Indiana University, Indiana's Intensive Community Based Services Team and CHOICES
- Mason-Thurston County Wraparound Initiative, Washington
- Partnership for Children of Essex County, New Jersey
- EMQ Families First, Los Angeles, California
- Help Group, Van Nuys, California
- Wings for Children and Families, Bangor, Maine
- Contra Costa County Wraparound, California
- Hudson County Partnership for Children, New Jersey
- Kids Oneida, Utica, New York
- Madison CARES, Rexburg, Idaho
- Victor Services, Stockton, California
- Three Rivers Wraparound, Benton and Franklin Counties, Washington
- BJC – Behavioral Health, St. Louis, Missouri
- Sweetser, Brunswick, Maine

Table 1. Examples of high and low scoring potential WFI-EZ items from expert reviews

High scoring items from Round 1	Low scoring items (*with reasons*) from Round 1
• Important decisions are always made with input from my family and me • Our wraparound team changes the plan whenever something is not working • My family and I helped create a written plan that fully explains how the wraparound process will meet my child and family's needs • Wraparound has helped my child and family form and build relationships with people who will support us when wraparound is finished • My family and I have the most say in designing the wraparound plan	• The wraparound process has helped my child develop friendships with other youth who will have a positive influence *(not individualized)* • The members of our wraparound team work for me and my family *(confusing)* • Our wraparound team almost always finds ways to make good ideas happen *(confusing)* • Our team has gotten my child involved with at least 2 activities he or she likes and does well *(not individualized)*
High scoring items from Round 2	**Low scoring items (*with reasons*) from Round 2**
• I feel like my family's culture is respected • My family's values and beliefs were incorporated into the wraparound process • My team never meets without me and my family present • Our team includes people that are not paid to be there • My wraparound team listens to me and my family • Wraparound has helped my child and family build strong relationships with people who support us	• There is a way to contact program staff 24/7, and they respond as needed *(not a clear component of the model)* • Wraparound helps get an immediate response to stabilize crises *(wording unclear)* • I could lead my wraparound team if I wanted to do so *(not a clear component of the model)* • Our team has a clear plan and timeline for when the wraparound process will end *(not reasonable to expect at all points of the process)*