Black Infant Health Model Fidelity

Framework and Methods

Model Fidelity Defined

- How completely an intervention is implemented in comparison with the original program design (O'Donnell CL, 2008).
- Black Infant Health (BIH) Framework includes four mutually-reinforcing fidelity *dimensions*
  - Adherence
  - Quality of Service Delivery
  - Dose
  - Program Engagement

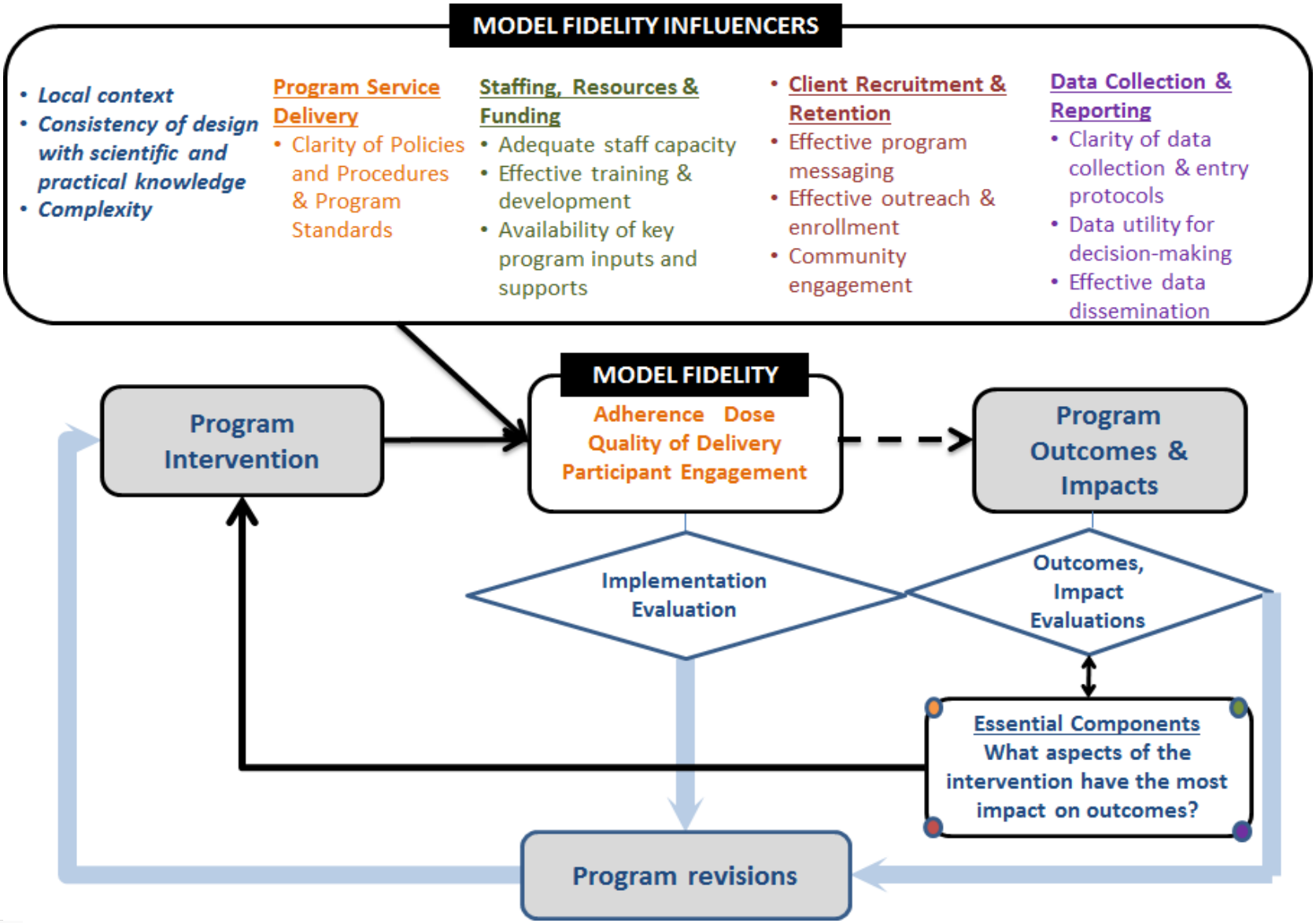
BIH Model Fidelity Dimensions, Working Definitions, and Indicators

Dimension	Working definition	Indicator
Adherence	Whether all components are being delivered as intended in the program design	Level of adherence to written program requirements specified in the BIH Policies & Procedures Manual or Scope of Work (AKA "Musts")
Quality of program delivery	The level and consistency with which program staff (e.g., group facilitators, FHAs) use the recommended skills, messages, and techniques included in staff training and materials when implementing the program	Level of agreement between the way in which group participation and case management are delivered and 'best practices' defined by the CA BIH program (AKA "Shoulds")
Dose	The frequency and duration of program participants' exposure to intervention components	Number of group sessions and case management components provided to participant (AKA "Dose Delivered")
Participant engagement	The level of participant engagement with program content	The degree to which participants complete group sessions/series, engage in life planning, use program skills, and perceive the intervention as helpful in improving those skills (AKA "Dose Received" or "Uptake")

Contextual Influences on BIH Model Fidelity

- Program elements or strategies identified as important to successful implementation
- Organized into four implementation *domains*
  - Staffing, Resources, and Funding
  - Recruitment and Retention
  - Program Service Delivery
  - Data Collection and Reporting

BIH Model Fidelity Framework Overview



Adapted from: Carroll C, Patterson M, Wood S, Booth A, Rick J and Balain S. "A conceptual framework for implementation fidelity" *Implementation Science* 2007, 2:40

Overview of BIH Model Fidelity Reporting Methods

1. Focus of Analyses (What are we monitoring?)
2. Local BIH Program Site Inclusion Criteria (Which sites are included?)
3. Defining the analytic dataset (Which women are included, and for what time period?)
4. Assessing Fidelity Performance
   - Measures and indicators
   - Fidelity Performance Scoring
   - Fidelity Ratings
5. Levels of Fidelity Assessment (Assessing performance in context)
6. Program-wide Assessment (Pulling it all together)

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BIH Model Fidelity - Focus of Analyses

Implementation Phases of BIH Sites in Fiscal Years 2015-2017

Implementation Phase	Evaluation Focus	Implementation Stage(s)	Milestones
Pre-Implementation (Planning)	Formative	• Engagement • Readiness planning	• Interest and feasibility assessed; costs and funding reviewed. • Scope(s) of Work (SOW) signed; staff hiring timeline established; referral and recruitment planning; group schedule calendaring established; facilities identified.
Early Implementation	Process: improvement-oriented	• Initial operational capacity building and outreach • Initial process monitoring	• Staff hired and trained; participant recruitment and enrollment begun; site teleconferencing and site visits with MCAH begun; data entry and tracking begun. • Routine fidelity and data quality benchmarking begun.
Mid-Implementation	Process: assessment-oriented	• Operational capacity building	• Staffing requirements met; adherence to SOW established; **adherence and dosage fidelity** standards and data quality standards met.

Local BIH Program Site Inclusion Criteria

- To be included in model fidelity monitoring reports, local BIH program sites must meet two main criteria:
  1. *Minimum phase of Program Maturity*. The program site must have met key milestones for the Early Implementation phase of program maturity

Local BIH Program Site Inclusion Criteria

- To be included in model fidelity monitoring reports, local BIH program sites must meet two main criteria:
  2. *Minimum data entry requirements*. At least 66% of all enrolled participant records have: (a) a designated local BIH staff assignment; (b) a Rights, Responsibilities, and Consent signature date; and (c) a group series assignment.

Defining the Analysis Dataset

Preliminary BIH Model Fidelity Assessment

- Cohorts defined based on timing of recruitment
  - e.g., the *2015 Q1-Q2 Cohort* includes women who were recruited from 7/1/15 through 12/31/15
- Analysis dataset includes information on cohort activities (e.g., group sessions attended, assessments administered) entered into the BIH data collection and reporting system *before* every cohort member could have completed six months of program participation
  - Provides preliminary indicators of dose and adherence
  - Dose measured relative to expectations for participant's length of time in program at cohort end-date
    - e.g., 1 to 30 days, 30 to 60 days, >60 days

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Defining the Analysis Dataset
Final BIH Model Fidelity Assessment

- Cohorts defined based on timing of recruitment
  - e.g., the *2015 Q1-Q2 Cohort* includes women who were recruited from 7/1/15 through 12/31/15
- Analysis dataset includes information on cohort activities (e.g., group sessions attended, assessments administered) entered into ETO *after* every cohort member could have completed six months of program participation
  - Provides sufficient time for each woman in cohort to have participated in all aspects of prenatal program
  - Dose measured relative to expectations for complete prenatal program participation

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Assessing BIH Model Fidelity Performance

- Each fidelity dimension is reflected by a set of **measures** that represent program elements or strategies identified as important to successful implementation
- For each measure, **indicators** representing different aspects of performance can be tracked systematically in the BIH data collection and reporting system
- Fidelity performance is assessed at the level of each individual site and for the overall program
- Preliminary fidelity performance will be limited to assessing adherence and dose for **prenatal program components**

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Assessing BIH Model Fidelity Performance

- Adherence (3 measures and 10 indicators)
  - Adherence to orientation and enrollment standards (indicators A1a-A1d)
  - Coordination of service provision (indicator A2a)
  - Adherence to group program delivery standards (indicators A3a-A3e)
- Dose (2 measures and 3 indicators)
  - Level of participation in the prenatal group component (indicators D1a and D1b)
  - Level of participation in the Life Planning group component (indicator D2a)

Reference: *BIH Fidelity Indicator Listing* (rev. 11/16/2015)

BIH Model Fidelity Performance Scoring

1. **Indicator**-Level: Program-level and site-specific percentage *scores* calculated for each indicator (a score of 100% indicates complete fidelity)
2. **Measure**-Level: Indicator scores used to calculate summary performance scores for each measure (across all corresponding indicators)
3. **Dimension**-Level: Summary performance scores calculated across measures for each dimension , taking the number of indicators for each measure into account

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BIH Fidelity Ratings for Adherence and Dose

Fidelity rating	Fidelity Dimension	
	Adherence	**Dose**
High	Average score (across indicators) equal to or greater than 80%	Scores of 80% or higher on both the group and life planning indicators
Intermediate	Average score (across indicators) between 50% and 79%	Scores of 80% or higher on group indicator and lower than 80% on life planning indicator
Low	Average score (across indicators) lower than 50%	Score of lower than 80% on group indicator, regardless of performance on life planning indicator

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Levels of BIH Model Fidelity Assessment

Performance and Contextual – Level Analysis	Source(s) of Information
Level 1. Review of fidelity performance scores	
Fidelity performance ratings at the program-wide and site-specific levels - Overall fidelity - Strengths and weaknesses within each measure/indicator - Review of supplemental indicators	Participant- and series-level data entered into the BIH data collection and reporting system (ETO)
Level 2. Review of contextual information	

- Outreach and messaging
- Local staffing levels
- Training
- Activities, Challenges, Strategies, and Successes reported in the areas of:
  - Recruitment, enrollment and retention
  - Services to participants through Life Planning and group sessions
  - Coordination of information-sharing to support participants, primarily by the Family Health Advocate and Group Facilitator (if different)
	•Quarterly Reports
	•Site Visits summaries
	•Technical Assistance Calls summaries

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Program-Wide BIH Model Fidelity Assessment

Synthesis of Performance and Contextual Information

1. Program-wide (pooled) scores
2. Range of scores across included sites (minimum and maximum)
3. Number of included sites with performance data indicating High, Intermediate, and Low levels of fidelity
4. Similarities and differences in staffing, resources, and other contextual factors (a) among sites at each performance level and (b) across performance levels

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