



# Using prevention science to design, implement, and evaluate prevention strategies: Lessons from Family Connections

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*\*Presentation based on experience developing and testing Family Connections*

# Acknowledgements

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# Acknowledgements

- Over 150 social work interns and over 80 faculty, staff, doctoral students, and MSW students have contributed to either the service delivery or research associated with Family Connections.
- Most importantly, 700 families and 2,211 children have received services, most of them participating in research about the efficacy of the program.



# Purpose of this Presentation

- Drawing on prevention science and implementation research, participants will walk through the steps for designing and implementing preventive interventions.
  - Lessons will be drawn from the development, implementation, and evaluation of **Family Connections**

# Definitions

- Prevention science
- Types of prevention strategies
- Risk factors
- Protective factors
- Implementation science
- Implementation fidelity
- Fidelity criteria & measures
- Logic model
- Evidence based practice

# Prevention Science

- Promotes capable and healthy youth, adults, families, and communities.
- Promotes the application and translation of intervention science into community practices to improve people's health and well-being.
- Answers questions about how preventive interventions produce outcomes.

# Types of Prevention Strategies

- *Universal* strategies designed to prevent precursors of child maltreatment in the general population.
- *Selective* strategies designed to target groups or subsets of the general population based on risk factors.
- *Indicated* strategies designed for children and families identified with maltreatment problems.

# Definition: Risk factor

- *A measurable characteristic of individuals that heightens the probability of a worse outcome in the future for groups of individuals who share the risk factor or who have more of the risk variable than a comparison group who do not have the risk factor or have less of the risk variable (Masten & Wright, 1998, p. 10).*

# Definition: Protective Factor

- *A correlate of resilience that may reflect preventive or ameliorative influences: a positive moderator of risk or adversity* (Masten & Wright, 1998, p. 10).

# Implementation Science

- Promotes research about the most effective processes for implementing policies and practices
- Promotes the systematic translation of clinical research findings and other evidence-based practices into routine policies and practices.

# Implementation Fidelity\*

- Fidelity is defined as the extent to which delivery of an intervention adheres to the protocol or program model originally developed. \*Mowbray, Holter, Teague, & Bybee (2003).

# Fidelity Criteria & Measures

- *Fidelity criteria* are necessary to ensure that the services being studied are the same across sites or that significant differences are documented (Mobray et al., 2003).
- *Fidelity measures* are tools to assess the adequacy of implementation of program models and methods for quantifying the degree to which elements of the program have been adequately implemented (Bond, Evans, Salyers, Williams, & Kim, 2000).

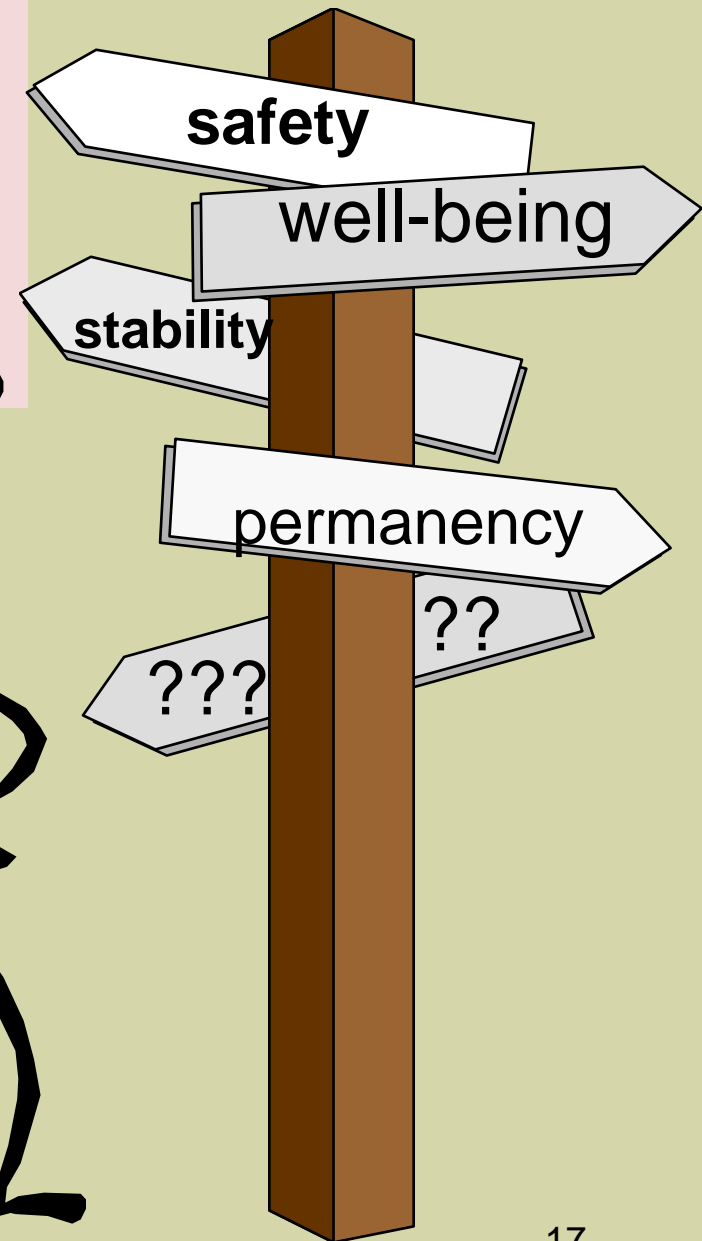
# Logic Model

- A picture of how your program works – the theory and assumptions underlying the program. It links outcomes with program activities/processes and the theoretical assumptions/principles of the program.
- Provides a roadmap of your program and how desired outcomes are achieved.
  - <http://www.wkkf.org/pubs/Pub770.pdf>

(W.K. Kellogg Foundation, 1998, p. 35).

# Why is this important important?

- If we don't know where we are going, how will we know when we get there?



# Evidence-Based Practice

- Procedures and processes that result in the integration of the best research evidence with clinical expertise and client values

# Evidence Supported Interventions

- Interventions that have the support of the “best research evidence” showing their efficacy or effectiveness

# Practice Guidelines

- A set of strategies, techniques, and treatment approaches that support or lead to a specific standard of care that guides systems, care, and professions in their relationships to consumers



*Steps for planning,  
developing, implementing,  
and evaluating a preventive  
intervention*

# Prevention Science Implementation Steps

- define and describe the problem,
- identify risk and protective factors,
- develop and test prevention strategies,
- design & conduct further efficacy studies and replication trials
- conduct large scale clinical trials
- facilitate the dissemination of results, adoption, and ongoing evaluation of community based programs.
- evolve to widespread adoption of prevention principles and strategies.

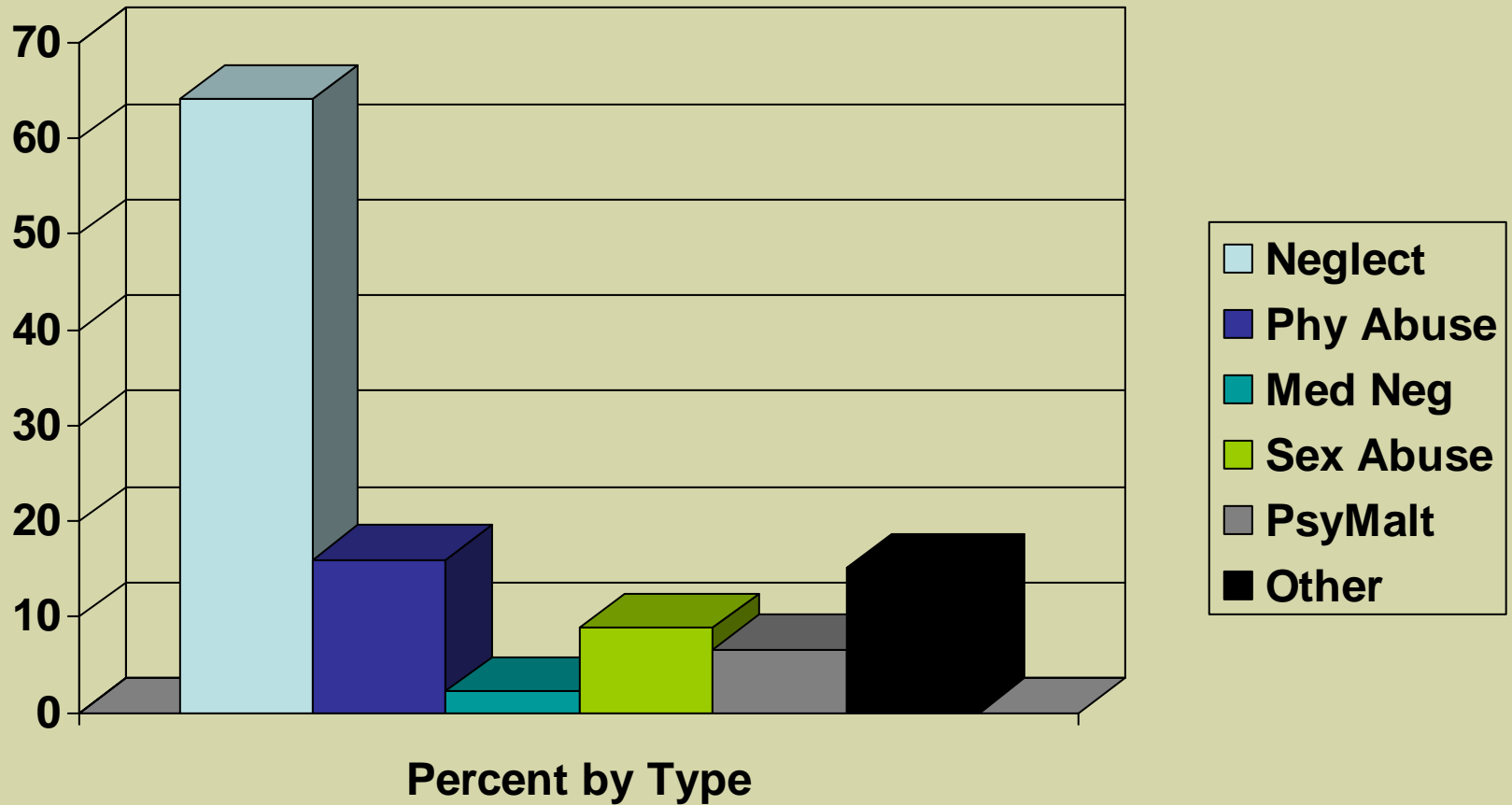
# First Step: Define the problem



- For example:
  - Develop understanding of extent, nature, effect of child maltreatment

# Child Maltreatment in the U.S. 2006

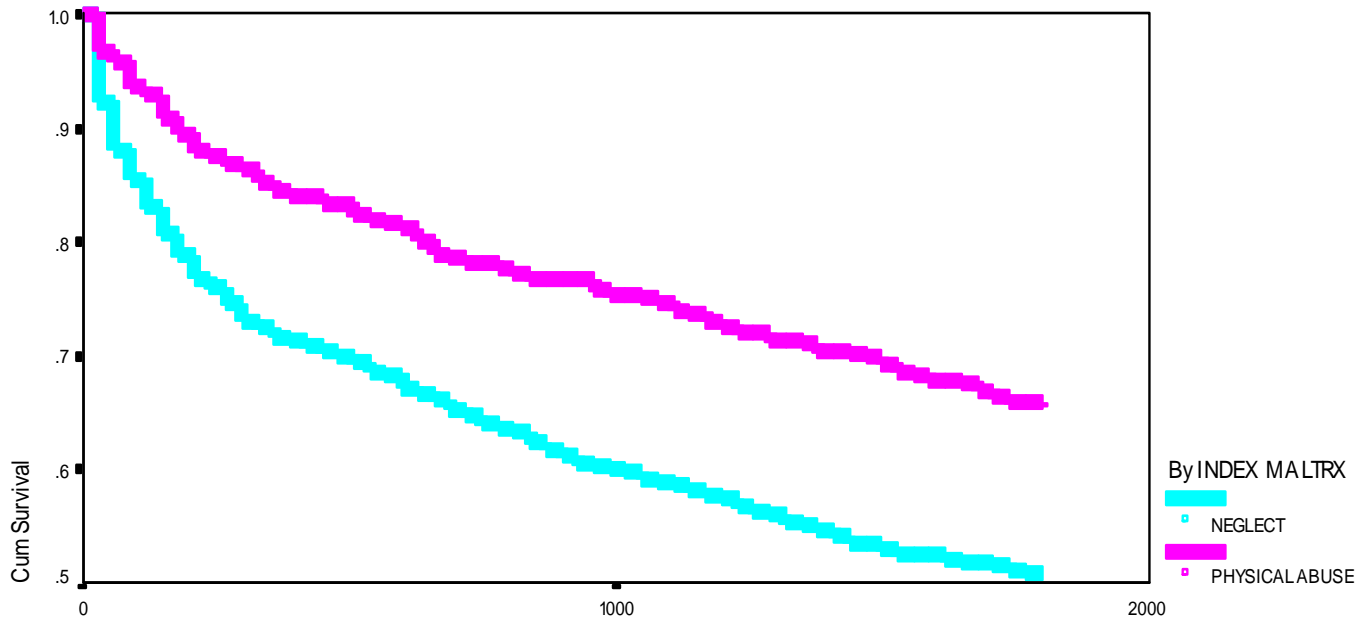
Source: U.S. Department of Health & Human Services



# Baltimore City: Comparison of recurrences over 5 years between neglect and physical abuse cases - n = 1167

Figure 17. Survival (Without Recurrence)

Over Five Years



Days Until First Recurrence

DePanfilis, D. (1995). Epidemiology of Child Maltreatment Recurrences.

Doctoral Dissertation. University of Maryland at Baltimore.



## Second Step:



- Develop knowledge about risk and protective factors related to the problem (e.g., child maltreatment)

# Sample Risk & Protective Factors

- Risk Factors
  - Everyday stress
  - Parental stress
  - Mental health problems
  - Alcohol & drug problems
  - Family conflict
- Protective Factors
  - Parenting attitudes
  - Parenting competence
  - Family functioning
  - Social support
  - Safe neighborhoods
  - Family friendly community resources

# Third Step:



- Develop and test prevention strategies geared to:
  - Enhance protective factors
  - Reduce risk factors

# Use methods to systematically review the evidence

- about what works best to enhance protective factors & decrease risk factors with your target population



# Develop an implementation plan

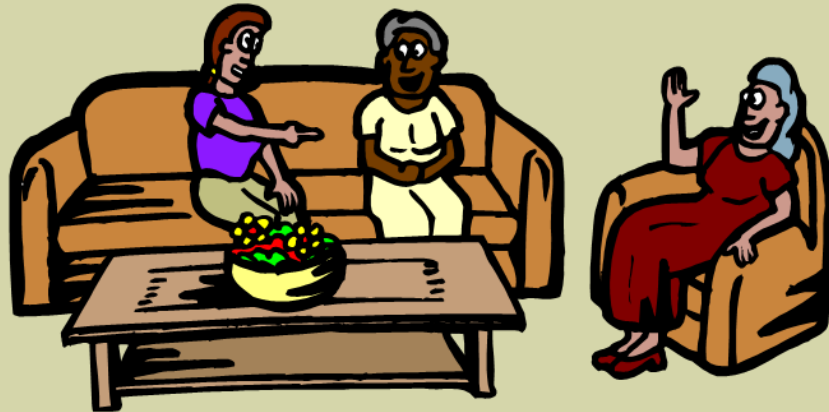
- That carefully engages all relevant stakeholders and follows the critical determinants\* of successful implementation.



# Critical Implementation Determinants\*

- Acceptability of the intervention to the worker & family
- Suitability of the intervention to the needs of the target families
- Worker motivation to apply new practice methods
- Experiences with being adequately trained in the intervention
- Extent of organizational support for implementation
- Impact of the intervention on the process and outcome of services

# Document a program model based on the best available evidence



- A well defined set of prescribed interventions and procedures. (Bond, et. al.,2000).
  - More complex to define these procedures when the intervention is home based and depends on skills of the practitioner and when multiple methods are employed.

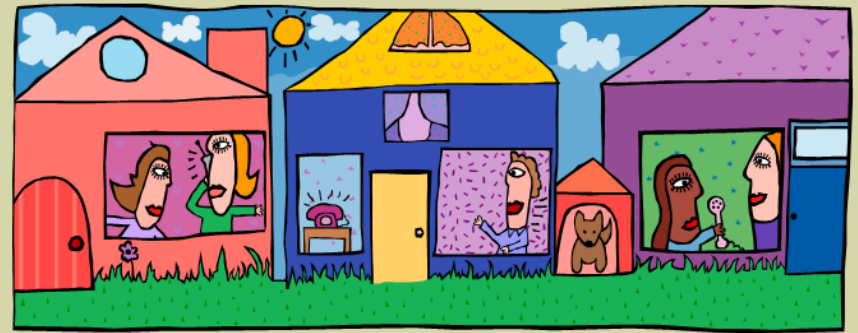
# Making Family Connections



- Family Connections was specifically designed to:
  - reduce risk factors associated with neglect and
  - enhance protective factors that may help families more adequately meet the basic needs of their children.

# Intervention

- Multi-model intervention:  
Individualized services geared to increase protective factors and decrease risk factors.
- Practitioners use an Intervention Manual to guide & tailor service delivery.



# Develop Intervention Manual



- Specifies
  - Theory
  - Practice Principles
  - Process (outreach, engagement, assessment, planning, tailored outcome driven case plans, intervention strategies, methods for evaluating change).

# Supporting families to meet the basic needs of children

- Adequate food and nutrition
- Supervision
- Health care
- Protection
- Education
- Nurturance & love
- A home



# Philosophical Principles

- Helping alliance –relationship based (child focused and family centered)
- Ecological systems framework
- Developmental and trauma informed
- Community outreach
- Family assessment and tailored interventions
- Empowerment approaches/Strengths perspective
- Cultural competence
- Outcome driven service plans

# For example: Emphasis on Empowerment



- Empowerment & strengths based
  - *Families need to acquire a sense of control over their lives. Intervention should focus on the family's existing competencies to respond to crises and stress, to meet needs, and to promote, enhance, and strengthen family functioning.*

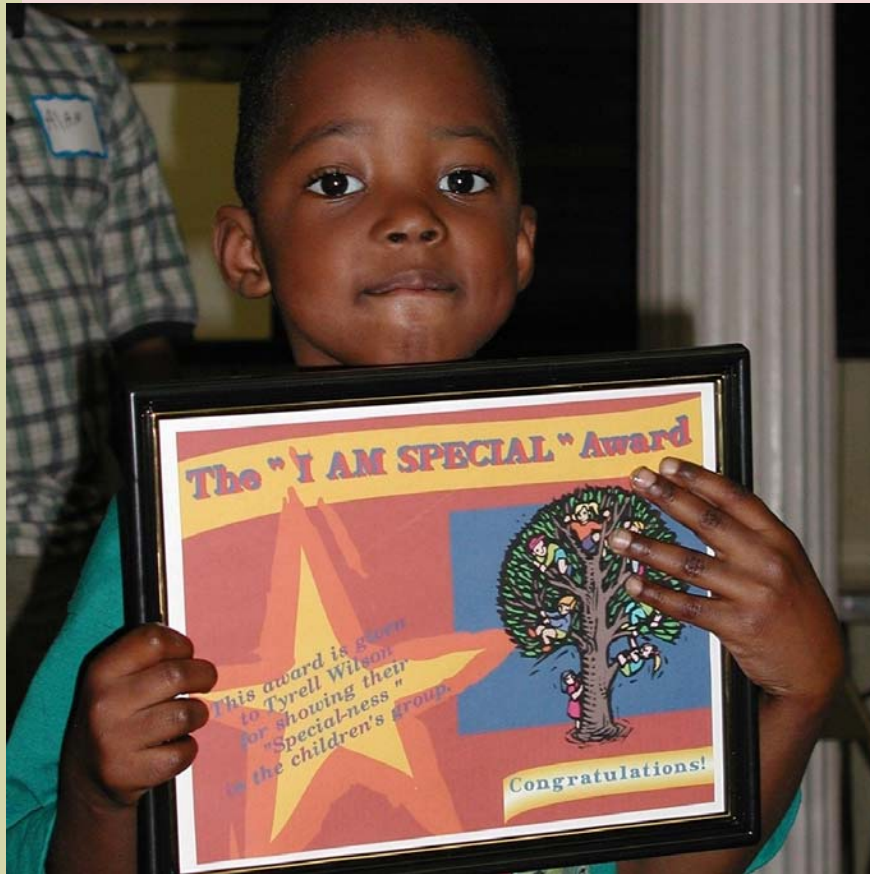
# For example: Emphasis on Culture

- Cultural competence

It is important that interventions respect an understanding that culture can play a protective role . . .and it is important that you seek from the family, *their* definition of who should be involved in particular assessments, interventions, and planning activities, rather than making assumptions about, who is “family” or who forms “community” for this child and family.



# For example: Emphasis on Outcomes



- Outcome-driven service plans
    - By reducing risk factors and strengthening protective factors, positive outcomes of safety and well-being are achieved.
- (DePanfilis, et al., 1999)

# Focus on Practitioner

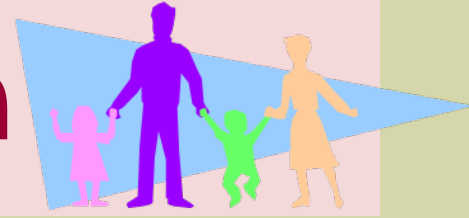
- Teaching model and skills
- Coaching and mentoring
- Individual and group supervision
- Routine in-service
- Emphasis on fidelity of implementation



# Design & Implement Test of Efficacy

- Important Step:
  - Clearly define target population with inclusion & exclusion criteria

# Target Population

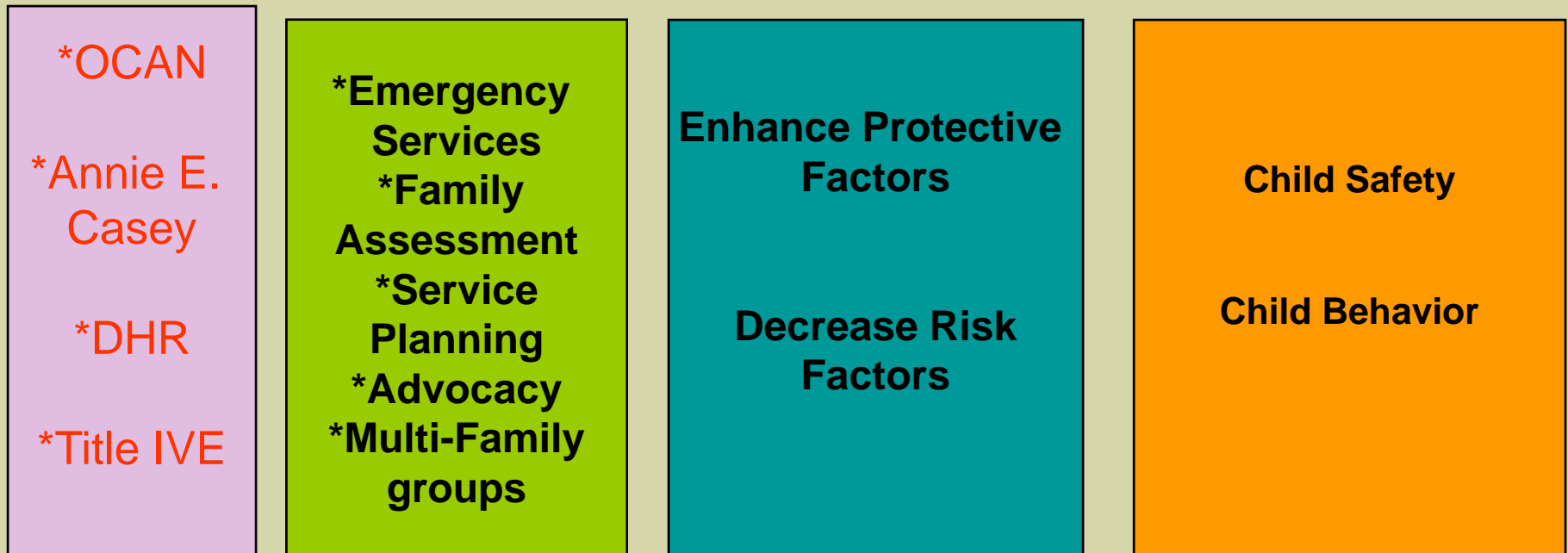
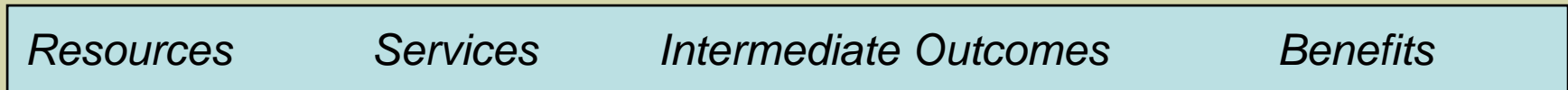


- **Geographic location**
  - The family lived in the West Baltimore Empowerment Zone
- **Family demographics**
  - Child between 5 and 11 years living in the household
- **Basic needs may have been unmet but not at a level to report to CPS for neglect**
- **Presence of at least 2 risk factors**
- **Voluntary status**
  - There was no current CPS involvement

# Design & Implement Test of Efficacy

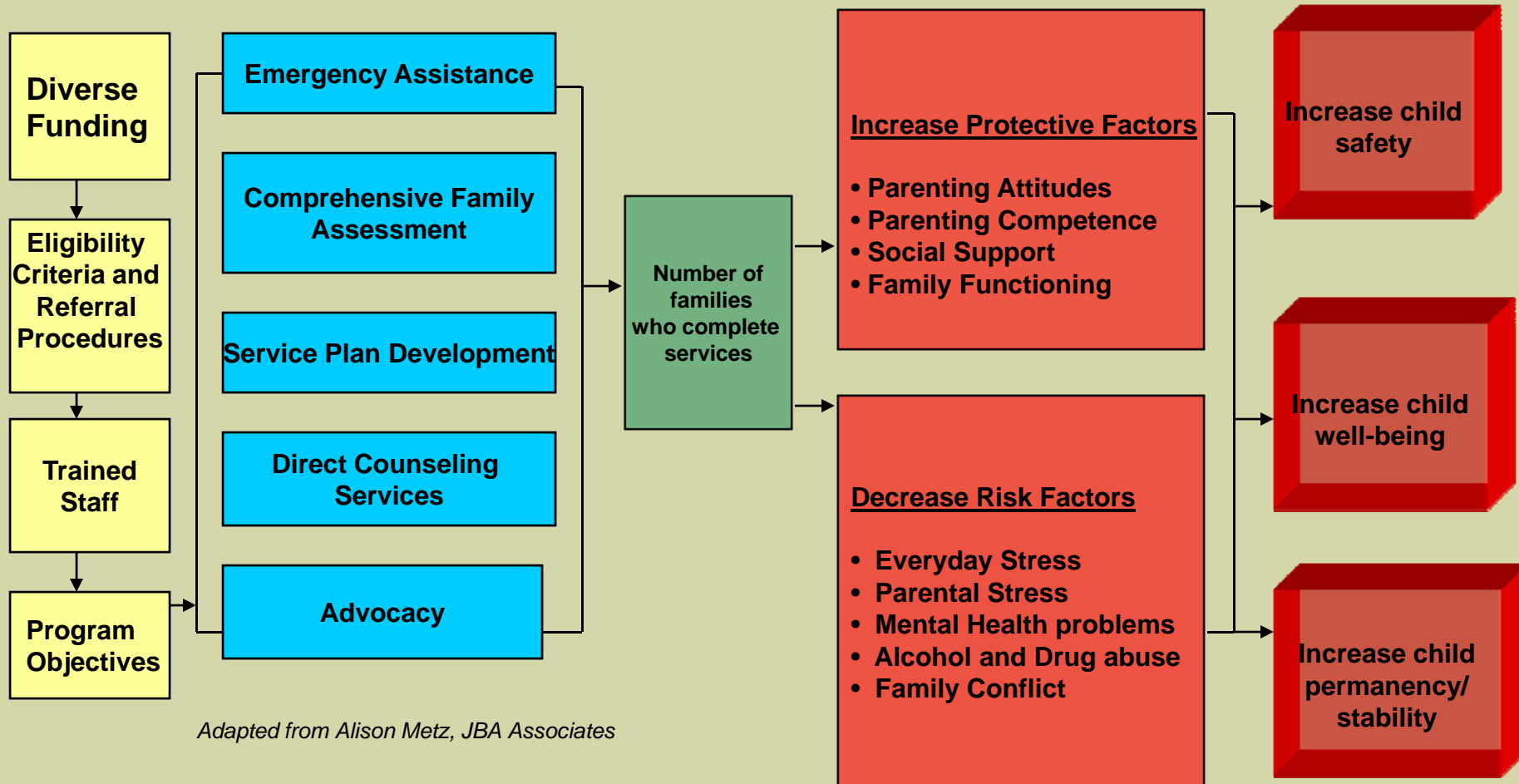
- Important Step:
  - Establish a logic model that clearly articulates the program model and how it will influence the targeted outcomes
    - A graphic representation that shows logical relationships between inputs, outputs and outcomes relative to a situation

# Sample Simple Logic Model



# Sample (more detailed) Logic Model - Family Connections

Inputs → Intermediate Outputs → Final Outputs → Short-Term/Intermediate Outcomes → Long-Term Outcomes



*Adapted from Alison Metz, JBA Associates*

# Design an Evaluation that:

- Documents the process of Implementation
- Specifies the practice including the types and amounts of services provided
- Evaluates the quality of practice (fidelity of implementation)
- Documents the costs associated with the intervention
- Assesses changes in outcomes over time

# Research

- Original demonstration (1996-2002) (DePanfilis, Dubowitz, & Glazer – Semmel)
- Dissertation - An exploration of social support and coping and the impact on caregiver well-being among African American grandmothers who provide care for their grandchildren. (Simpson, 2003)
- Published papers:
  - Child Maltreatment
  - Research on Social Work Practice
  - Child Abuse & Neglect
  - Child Welfare

# Purpose of Initial Study



- To explore the relationship between length of service and the achievement of intermediate outcomes (risk and protective factors) and final outcomes (child safety and behavior).

# Intervention: Random assignment

- 3-Month Intervention

- Emergency assistance
- Home based counseling services
  - Family Assessment
  - Outcome driven service plans
  - Service Referrals
- Service coordination and facilitation

- 9-Month Intervention

- Emergency assistance
- Home based counseling services
  - Family Assessment
  - Outcome driven service plans
  - Service Referrals
- Service coordination and facilitation

# Data Collection Methods

- **Self-directed, computer-assisted interview**
  - Standardized self-report measures administered at baseline, case closure, and six-month follow-up
- **Standardized observational measures**
  - Administered at 30 days: three and six months, and closure
  - Intern driven → integrated with intervention

# Summary Results: Risk Factors

- Comparing all caregivers baseline to 6 months post intervention, significant reduction in:
  - Risk Factors ↓
    - Caregiver depressive symptoms
    - Parenting stress
    - Life stress

# Summary Results: Protective Factors

- Comparing all families baseline to 6 months post intervention, significant increase in:

## Protective Factors ↑

- Parenting attitudes
- Parenting satisfaction
- Social support

# Summary Results: Child Safety

- Significantly Improved **Physical Care**
  - Household furnishings
  - Overcrowding
  - Household sanitation
- Significantly Improved **Psychological Care**
  - Mental health care
  - Caregiver teaching stimulation of children
- **Fewer CPS reports** & CPS indicated reports

# Summary Results: Child Behavior

- Comparing all families baseline to 6 months post intervention, significant decrease in: ↓
  - Total behavior problems
    - Internalizing behavior problems
    - Externalizing behavior problems

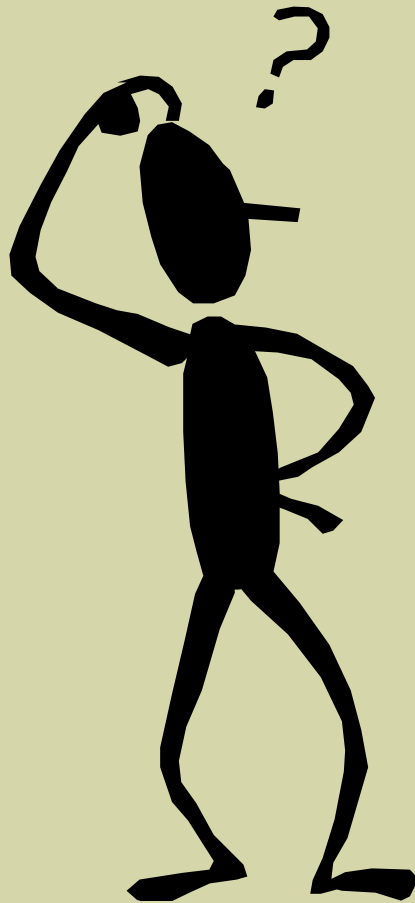
# Results: 3 vs. 9 Month Group Comparison

- 9 month intervention demonstrated greater improvement than the 3 month group in:
  - Child behavior
- No differences between groups in other domains (e.g., parenting stress, life stress, parenting attitudes, social support, household safety)

# Limitations of Initial Evaluation

- Relatively small sample
- Some questions about fidelity of intervention (despite intervention manual)
- Short follow-up (only 6 months)
- No control group

# Fourth Step:



- **Design & conduct additional efficacy studies and replication trials**

# Key Steps in Replication

- Develop and agree on fidelity criteria
- Develop mentoring agreements with each site
- Develop and implement core and specialized training
- Agree on cross-site measures
- Agree on cross-site data template
- Agree on cross-site cost recording templates
- Provide ongoing training and technical assistance

# Why is measuring fidelity important?



- Before we can measure outcomes of intervention, we need to know what intervention has been provided.

# Replication of Family Connections

- Formal replication in 8 sites in the U.S. with support from the U.S. DHHS Children's Bureau
- Cross-site evaluation of implementation process, fidelity, cost, & outcomes

# Current Research

- Replication with grandparents (2003-2009)  
(DePanfilis & Daining)
- Cross-Site evaluation of replicating sites (2005-2009) (JBA Associates)
- Testing trauma adapted Family Connections (2007-2012) (Collins, DePanfilis, Strieder, Hayward)
- Dissertation - Externalizing behaviors in a sample of children at risk for neglect: A structural equation model (Hayward – 2008-2009)

# Sixth Step:



- Facilitate the dissemination of results, adoption, and ongoing evaluation of community based programs clinical trials

# Support for Widespread Synthesis & Dissemination

- Systematic reviews of research (e.g., Campbell Collaboration)
- Development of lists of identified effective prevention programs and policies and published lists of model or exemplary programs

# Seventh Step:



- Evolve to widespread adoption of prevention principles and strategies



# Support for Widespread Implementation of Evidence Based Practices

- Governmental support for large-scale adoption and implementation of evidence-based prevention programs.

# Key Take Home Points

- Importance of pre-planning (especially with developing logic model and engaging everyone in the implementation planning process)
- Change is difficult and resistance should be anticipated
- Importance of matching the intervention to the needs of the target population
- Be careful to not “over sell” the new idea
- Work for the long term benefit, rather than the short term “fix”.



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## News & Events

- Applications being accepted for Director of Child Welfare Academy
- Family Connections named a Promising Program
- Diane DePanfilis Testifies Before Maryland Legislators
- Grandparents Graduate From a Life Skills Class
- Family Connections recognized as Promising Practice
- New Reports Released

**Check the RYC Web site for more information:**

[www.family.umaryland.edu](http://www.family.umaryland.edu)



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