Program implementation practices among the 2010-2014 OAH Teen Pregnancy Prevention Program cohort: Case Study Findings

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Presentation Objectives

Upon completion of the presentation, participants will…

• Describe theoretical and applied domains of the Consolidated Framework for Implementation Science (CFIR) and Office of Adolescent Health (OAH) Implementation Performance Measures

• Compare implementation performance measures across the 2010-2014 OAH Replication (Tier I) and Innovation (Tier II) Teen Pregnancy Prevention (TPP) program models

• Discuss implications for theory, research, and practice to improve adolescent sexual health and TPP program planning and implementation
Background: Teen Pregnancy Prevention Programs

2007
- Kirby (2007) landmark *Emerging Answers* report is released

2009
- The Office of Adolescent Health (OAH) TPP program appropriated $75 million for replication of programs shown to be effective through rigorous evaluation (Tier 1) and $25 million for research and demonstration to develop and test innovative new programs (Tier 2)

2010
- OAH initiates the Teen Pregnancy Prevention (TPP) Program
- CDC Community-Wide Initiatives
- FYSB State Personal Responsibility Education Program (PREP)

2015
- OAH TPP cohort I ends funding period
- Re-commitment by OAH for second funding period from 2015-2019

2017
- OAH’s TPP Program funding cut by current administration
Office of Adolescent Health (OAH) allocated funding which supported organizations and community-based groups to implement rigorously evaluated evidence-based and innovative TPP programs.

The Teen Pregnancy Prevention (TPP) Program appropriated $75 million for replication of programs shown to be effective through rigorous evaluation (Tier 1) and $25 million for research and demonstration to develop and test innovative new programs (Tier 2) in community and school settings.

2010-2014 OAH provided grant support to the 1st TPP cohort:
- 102 grantees, for a 5-year period to implement evidence-based and evidence-informed TPP programs across 39 states and Washington D.C.
- Tier I (Replication of EBI) funded 19 evaluations
- Tier II (Demonstration/Innovation) funded 22 evaluations
Background:
Teen Pregnancy Prevention Programs

In 2010, an independent, systematic review was conducted to identify programs which demonstrated effectiveness at reducing teen pregnancy or sexual risk behaviors associated with teen pregnancy (Goesling, Lugo-Gil, Lee, Novak, & Mathematica Policy Research, 2015).

Program models included a variety of approaches—abstinence education, sexual health education, youth development, and programs for clinical setting and specific populations.

| OAH 37 Evidence-Based Interventions Effective at Reducing Teen Pregnancy and Sexual Risk Behaviors¹ |
|---|---|
| [aCuidate] | Project IMAGE |
| [aBan Aya Youth Project] | Project TALC |
| [aAdult Identity Mentoring (Project AIM)] | Promoting Health Among Teens! Abstinence-Only Intervention |
| [aAll4You] | Promoting Health Among Teens! Comprehensive Abstinence and Safer Sex Intervention |
| [aAssisting in Rehabilitating Kids (ARK)] | Raising Healthy Children (formerly known as the Seattle Social Development Project) |
| [aBe Proud! Be Responsible!] | Reducing the Risk |
| [aBe Proud! Be Responsible! Be Protective!] | Respeto/Protector |
| [aBecoming a Responsible Teen (BART)] | Rikers Health Advocacy Program (RHAP) |
| [aChildren's Aid Society (CAS)-Carrera Program] | Safer Choices |
| [aDraw the Line/Respect the Line] | Safer Sex |
| [aFamilies Talking Together (FTT)] | Sexual Health and Adolescent Risk Prevention (SHARP) (formerly known as HIV Risk Reduction Among Detained Adolescents) |
| [aFOCUS] | SiHLE |
| [aGet Real] | Sisters Saving Sisters |
| [aHealth Improvement Project for Teens (HIP Teens)] | STRIVE |
| [aHeritage Keepers Abstinence] | Teen Health Project |
| [aHORIZONS] | Teen Outreach Program (TOP) |
| [It's Your Game: Keep It Real (IYG)] | Seventeen Days |
| [aMaking a Difference!] | |
| [aMaking Proud Choices!] | |
| [aPrime Time] | |

Implementation Science

- Implementation science, as an independent discipline, systematically investigates and strives to increase the uptake of evidence-based research findings into widely adopted community contexts (Teitelman, Bohinski, & Boente, 2009)

- Applies rigorous research methodologies and theoretical frameworks to address current gaps in translating scientific discovery into action (Durlak & DuPre, 2008)

- Within public health, it allows individuals and communities to deconstruct the complex process of implementation to improve programs aimed at increasing health outcomes (Fixsen et al., 2005)

- Popular theories and models include:
  - Stages of Implementation Completion (SC) (Saladana et al., 2012)
  - Getting to Outcomes (GTO) (Rand, 2016)
  - Interactive Systems Framework (ISF) (Wandersman et al., 2008)
  - Theory of Organizational Readiness for Change (Weiner, 2009)
Implementation Science

Figure 2. Hypothesized relationship among teen pregnancy prevention program implementation theory, research, and practice.
Damschroder et al. (2009) proposed the **Consolidated Framework for Implementation Research (CFIR)** which provides an overarching typology to promote implementation theory development and verification about what implementation practices work within various contexts.
Study Questions & Research Design

- **Research Questions:**
  
  To what extent does the *Implementation Science Consolidated Framework for Implementation Research (CFIR)* describe the implementation practices among the 2010-2014 Office of Adolescent Health Teen Pregnancy Prevention Program cohort?

  To what extent are results from the implementation performance measures (i.e., Adherence, Quality, and Context) similar or different across the 2010 - 2014 OAH TPP program case reports?

- **Design:**
  
  Conduct a qualitative multiple case study investigating how the CFIR model and OAH implementation performance measures applied to a sample of Tier I and II TPP programs.
Study Methods

• **Sample Characteristics**
  – 2010-2014 OAH TPP evaluation case reports, publically available
  – \( n = 29 \) cases
  – Tier I: Replication Program Models (\( n = 15 \))
  – Tier II: Demonstration/Innovation Program Models (\( n = 14 \))

• **Multiple Case Study**
  – Cross-Case Comparison

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Study Methods

• Coding Procedures
  – ATLAS.ti computer-assisted software
  – Deductive, Confirmatory Coding Scheme (Denzin & Lincoln, 1994)
    ▪ Consolidated Framework for Implementation Research Framework (CFIR)
    ▪ OAH TPP Implementation Performance Measures (Adherence, Quality, Counterfactual, Context)
  – Inductive, Exploratory Coding Scheme (Denzin & Lincoln, 1994)
    ▪ Codes and categories
    ▪ Themes I - IV

• Inter-rater Code Audit
  – Trained research assistants (n = 4)
  – Reviewer & Data Triangulation (Denzin & Lincoln, 1994)
Study Results

**Tier I Results**

Level of Intervention:
Tier I Replication TPP Programs

- Intrapersonal (n=8)
- Interpersonal (n=7)
- Community/Org (n=0)
- Policy (n=0)

Implementation Setting: Tier I Replication Programs

- Clinic (n=1): 6%
- Online (n=1): 6%
- Community (n=9): 60%
- School (N=4): 27%

**Tier II Results**

Level of Intervention: Tier II Demonstration/Innovative TPP Programs

- Intrapersonal (n=12)
- Interpersonal (n=2)
- Community/Org (n=0)
- Policy (n=0)

Implementation Setting: Tier II Demonstration/Innovative TPP Programs

- Online (n=2): 14%
- Community/Org (n=1): 7%
- School (n=11): 79%
Study Results

The 5 CFIR domains aligned to all TPP case reports (Intervention, Community, Organization, Facilitator, & Process); however, only 20 sub-constructs aligned to the TPP implementation evidence

51% of the CFIR model accurately described data from the 2010-2014 OAH TPP program implementation cases

Tier I Insights:
- Domain 2 Community, sub-constructs 2.1 (Needs Assessment) and 2.4 (External Policy & Incentives); Domain 3 Organization, sub-construct 3.5.2 (Available Resources); and Domain 5 Process, sub-construct 5.3 (Execute)
- Heavy alignment to Domain 2 (Community) and Domain 3 (Organization)
- 80% of cases contained data describing Domain 4 Facilitator, sub-construct 4.1 (Knowledge & Beliefs)

Tier II Insights:
- Domain 2 Community, sub-constructs 2.1 (Needs Assessment) and 2.4 (External Policy & Incentives); and Domain 5 Process, sub-construct 5.3 (Execute)
- Nine (64%) of the Tier II program case reports included data which aligned Domain 1, sub-construct 1.4 (Adaptability)
- Only four program (29%) presented data in the evaluation case report detailing sub-construct 3.2 (Organization Communications) when describing implementation practices
- Nine case reports (64%) recorded reflection (Domain 5, sub-construct 5.4) about what worked and didn’t work during the implementation period
## Tier I CFIR Results

**Table 1. Consolidated Framework for Implementation Research (CFIR) Reporting Results.**

<table>
<thead>
<tr>
<th>Tier</th>
<th>Program Title</th>
<th>Intervention</th>
<th>Community</th>
<th>Organization</th>
<th>Facilitator</th>
<th>Process</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>1.1 1.2 1.3 1.4</td>
<td>2.1 2.2 2.3 2.4</td>
<td>3.1 3.2 3.5 3.5.2</td>
<td>4.1 4.2 4.3 4.4 4.5</td>
<td>5.2.4 5.3 5.4</td>
</tr>
<tr>
<td>I</td>
<td>Becoming a Responsible Teen (BART), Louisiana Public Health Institute; New Orleans, Louisiana</td>
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<tr>
<td></td>
<td>Children’s Aid Society/Carrera Adolescent Pregnancy Prevention Program (CAS), Morehouse School of Medicine; Atlanta, Georgia</td>
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<tr>
<td></td>
<td>Children’s Aid Society/Carrera Adolescent Pregnancy Prevention Program (CAS), Children’s Home &amp; Aid Society of Illinois; Chicago, Illinois</td>
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<td></td>
<td>It’s Your Game: Keep it Real (IYG), University of Texas Health Science Center at Houston; Houston, Texas</td>
<td>• • • •</td>
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<td></td>
<td>It’s Your Game: Keep it Real (IYG), South Carolina Campaign To Prevent Teen Pregnancy, Columbia, South Carolina</td>
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<td></td>
<td>Promoting Health Among Teens! Abstinence-Only, Program Reach, Inc.; Yonkers, New York</td>
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<td>Teen Outreach Program (TOP); Chicago Public Schools; Chicago, Illinois</td>
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<tr>
<td></td>
<td>Teen Outreach Program (TOP); City of Rochester Bureau of Youth Services; Rochester, New York</td>
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<tr>
<td></td>
<td>Teen Outreach Program (TOP); Florida Department of Health; Tallahassee, Florida</td>
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<tr>
<td></td>
<td>Teen Outreach Program (TOP); Hennepin County Human Services and Public Health Department; Minneapolis, Minnesota</td>
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<td></td>
<td>Teen Outreach Program (TOP); Louisiana DHHS Office of Public Health; New Orleans, Louisiana</td>
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<td></td>
<td>Teen Outreach Program (TOP); Planned Parenthood of the Great Northwest; Seattle, Washington</td>
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<td></td>
<td>Teen Outreach Program (TOP); The Women’s Clinic of Kansas City; Independence, Missouri</td>
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<td></td>
<td>Safer Sex; Louisiana Public Health Institute; New Orleans, Louisiana</td>
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<td></td>
<td>Seventeen Days, Carnegie Mellon University; Pittsburgh, Pennsylvania</td>
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## Tier II CFIR Results

<table>
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<tr>
<th>Tier</th>
<th>Program Title</th>
<th>CFIR Domains</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>Intervention</td>
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<tr>
<td></td>
<td></td>
<td>1.1</td>
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<tr>
<td>II</td>
<td>Alaska Promoting Health Among Teens, Comprehensive Abstinence and Safer Sex Practices (AKPHAT Comp), State of Alaska, Department of Health and Social Services; Anchorage, Alaska</td>
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<tr>
<td></td>
<td>Be Your/Se Tu Mismo, George Washington University; Washington, DC</td>
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<td></td>
<td>Crossroads, Arlington Independent School District; Arlington, Texas</td>
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<td></td>
<td>Haitian American Responsible Teens (HART), Boston Medical Center; Boston, Massachusetts</td>
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<td>Healthy Futures, Black Ministerial Alliance of Greater Boston; Boston, Massachusetts</td>
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<td>Multimedia Circle of Life (mCOL), University of Colorado Denver; Denver, Colorado</td>
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<td>Need to Know (N2K), University of Texas Health Science Center at San Antonio; San Antonio, Texas</td>
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<td>Pono Choices, University of Hawaii; Honolulu, Hawaii</td>
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<td>Positive Prevention PLUS, San Bernardino Country Superintendent of Schools; San Bernardino, California</td>
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<td>Will Power/Won’t Power, Volunteers of America, Greater Los Angeles; Los Angeles, California</td>
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<td>Reducing the Risk and Love Notes, University of Louisville; Louisville, Kentucky</td>
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<td></td>
<td>Teen Outreach Program Plus Youth All Engaged (text messaging); Denver Health and Hospital Authority; Denver, Colorado</td>
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<td></td>
<td>Web of Life, National Indian Youth Leadership Project; Gallup, New Mexico</td>
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</tbody>
</table>
OAH Implementation
Performance Measures:
Adherence, Quality, Counterfactual, & Context

- OAH provided Evaluation Report Templates to Tier I and Tier II TPP programs
- 13 questions total across adherence, quality, counterfactual, & context
- Produced data for fidelity, dosage, reach and retention, partnerships, training, and dissemination of the Tier I and II TPP programs
- Did not include data from Counterfactual performance measure

**Type**
- Lesson Fidelity Monitoring Logs (FML)
- Attendance Records
- Facilitator Self-Report Surveys
- Youth Self-Report Surveys
- District Records Data
- Meeting notes from face-to-face planning or TA

**Frequency**
- Following each program session
- Systematic Sampling, 10% of sessions
- Weekly conference meetings/calls
- Post intervention (3, 6, 12 months follow-up)
- Annual Reports

**Methods**
- OAH Program Observation Form
- Program Observation Form for TPP Grantees
- OAH Quality Rating Form
- Formal and Informal Interviews with Key Informants

**Party Responsible**
- TPP Program Facilitator
- Community-Based Organizations
- Program Evaluators or Research Assistants
- Program Directors

Study Results
Study Results

- OAH Implementation Element: **Adherence**
  1. How often were sessions offered? How many were offered? (Q1)
  2. What and how much was received? (Q2)
  3. What content was delivered to youth? (Q3)
  4. Who delivered material to youth? (Q4)

- All 29 cases met the OAH minimum requirement (at least 75% of program content was delivered) for Adherence (Q1)

- All 29 cases used facilitators who received training prior to full TPP program implementation (Q4)

- 60% of Tier I cases (n=9) reported ALL participants were present and received full program content (Q2)

- 64% of Tier II cases (n=11) reported ALL participants were present and received full program content (Q2)

- Schwinn et al. (2015) who evaluated Tier II program, Be Yourself/Se Tu Mismo, reported challenges with participant retention and less than half of the youth received 75% of program content (Q3)

- Vyas, Wood, Landry, Douglass & Fallon (2015) who evaluated Tier II program, Multi Circle of Life (mCOL), described only 45% of youth participants completed the online curriculum as intended (Q3)
Study Results

OAH Implementation Element: Quality
1. Quality of Staff-Participant Interaction (Q1)
2. Quality of Youth Engagement with Program (Q2)

Tier I Results

- Average staff (i.e., facilitator) rating was 4.75/5.0 for quality of interaction with participants (among 15 Tier I cases)

- Staff-participant interaction scored as 5.0/5.0 ranged from 53% in the Tucker & Associates (2015) Children’s Aid Society/Carrera Adolescent (CAS) Pregnancy Prevention Program, Atlanta, GA to 95% reported by Philiber & Philiber (2016) who evaluated the Teen Outreach Program (TOP®), The Women’s Clinic of Kansas City, Missouri program

- Overall, adolescents were highly engaged in program content and activities during traditional, face-to-face implementation. Results from Philiber, Philiber, & Brown (2015) who evaluated the Teen Outreach Program (TOP®) of the Great Northwest, rated youth engagement in participatory activities very high (to a great extent) in 97% of the sessions

Tier II Results

- Average range for staff-participant interaction scores was between 4.0/5.0 to 5.0/5.0 (among 14 Tier II cases)

- Case observation results from Slater & Mitschke (2015) who evaluated the Crossroads Teen Pregnancy Prevention in Arlington, Texas noted ALL facilitators scored a 4.0/5.0 or higher, demonstrating “excellent” levels of rapport and communication between staff and youth

- Youth engagement in all 14 Tier II programs was recorded as ‘high’ according to facilitator feedback logs and external observer reports
OAH Implementation Element:

Context

1. Other TPP programming available or offered to study participants (both intervention & control) (Q1)

2. External events affecting implementation (Q2)

3. Substantial unplanned adaptation(s) (Q3)

- 80% (n=12) of Tier I program case reports described treatment or control **youth received or were exposed to other TPP programming** (e.g., school-based condom programs, instruction during sexuality education courses)

- 42% (n=6) of the Tier II program cases reported **no additional TPP programs were offered** or influenced the treatment and/or control youth during the OAH implementation period

- External events affected implementation in both Tier I and II program cases

- **Most common barriers included:**
  - School district policy limiting TPP program content or implementation timeframe, staff/facilitator turn over, technology issues, parental hesitation, and difficulty facilitating service learning program components (TOP)

- **No Tier I case reports** described unplanned adaptations to the program during the implementation period

- Unplanned adaptations to the TPP program were reported in **36% (n=5) of the Tier II cases reports** via staff records and described insufficient time to complete lessons lead to shortening or omitting program content
Study Results

- Open axis coding identified 46 original codes
- Inter-code reliability audits and data triangulation
  - Major Themes I through IV
  - 17 categories (i.e., sub-themes)
Case results from exploratory coding described the **practitioner voice and perspective** which was key to implementation methods among TPP program staff/facilitators.
Study Results

Summary of Key Findings

- Systematic application of CFIR identified Outer Setting (2), Inner Setting (3), and Facilitator (4) as key domains to understanding implementation practices among TPP programs.

- Tier I and II programs experience barriers to implementing programs; however, overall high program adherence and fidelity.

- Training on TPP program content, measurement tools, and reporting strategies was a need for program staff and facilitators as evident in major themes.

Limitations

- Results are not generalizable to every TPP program and setting.

- The research team was limited by the type and amount of data reported in the OAH TPP grantee evaluation reports.

- Researcher bias and positionality within the critical realism paradigm.
Implications for adolescent sexual health and teen pregnancy prevention

**Theory**
- Apply Implementation Science Consolidated Framework or Implementation Research (CFIR) to evaluate TPP program implementation
- Inform future TPP program theory building and testing to improve research to practice translation

**Research**
- Contribute to existing gaps in knowledge about TPP program implementation theory, steps, and evidence
- Highlights qualitative case study methodology as appropriate for understanding program implementation practices
- Future studies testing CFIR and other implementation theories (Stages of Implementation Completion, Getting to Outcomes) can enhance implementation research questions, designs, and data collection strategies

**Practice**
- Describe domains affecting implementation (CFIR) which can be leveraged to enhance program planning and delivery
- Present useful evidence describing barriers and facilitators to TPP program implementation across diverse target audiences and settings
- TPP professionals can use OAH quality and context findings, environmental barriers, and facilitator training procedure evidence to scaffold pre-implementation planning and scaling with organization and school/community partners
Thank you!

Questions and Comments

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