

Leverage Past Contributions to Evaluation

Using the CFIR to Produce Actionable Evaluation Results

Rebecca Butcher, MS, MPH

Karen Schifferdecker, PhD, MPH

American Evaluation Association
Annual Meeting
Nov. 15, 2019





Our Session



Challenges to Implementation



**The Consolidated Framework for
Implementation Research (CFIR)**



Example Use of CFIR



Demonstration & Discussion



Implementation Challenges

Complex, fragmented systems

Shifting policy & practice landscape

Multi-levels

Variability







Implementation science

The scientific study of methods to promote the systematic uptake of research findings and other EBPs into routine practice, and, hence, to improve the quality and effectiveness of health services.

Baue et al. An introduction to implementation science for the non-specialist. [BMC Psychol](#). 2015; 3(1): 32



Why Use Implementation Frameworks

Identify potential determinants of success

Clarify constructs to be measured

Guide implementation strategies

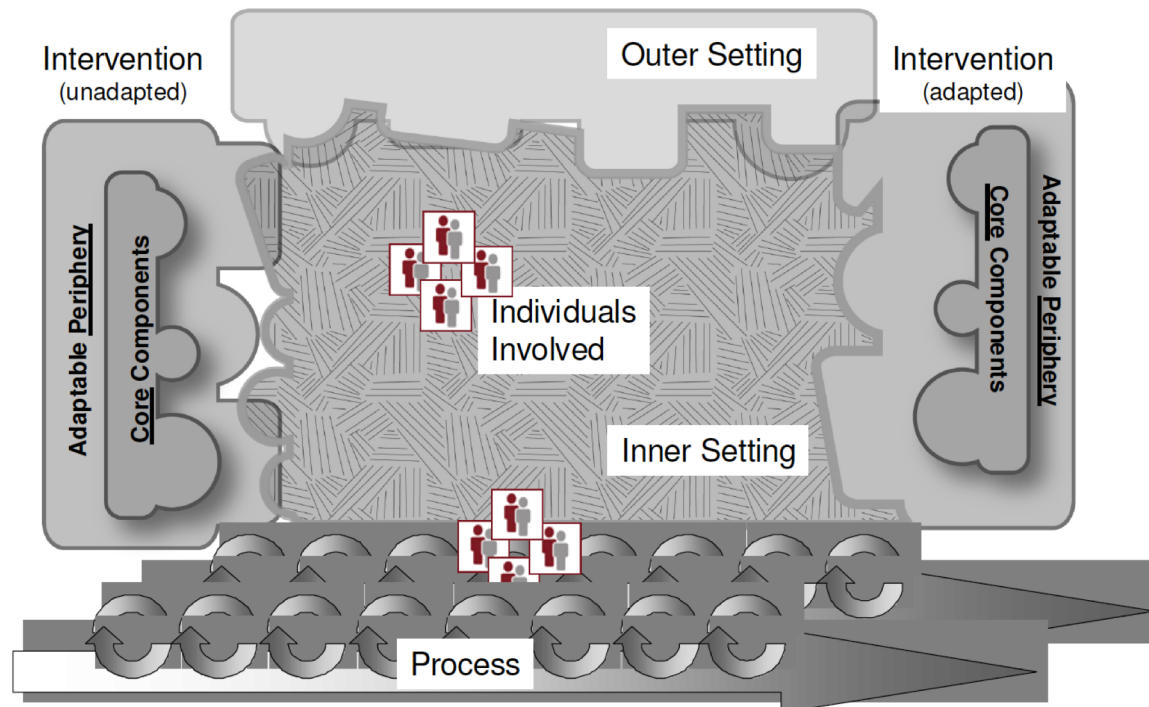
Compare results across different interventions

Inform future efforts

Contribute to implementation science



The Consolidated Framework for Implementation Research (CFIR)



Damschroder LJ, Aron DC, Keith RE, Kirsh SR, Alexander JA, Lowery JC. Fostering implementation of health services research findings into practice: A consolidated framework for advancing implementation science. *Implementation Science* 2009, 4:50 doi:10.1186/1748-5908-4-5



Five CFIR Domains



Characteristics of the Intervention



Characteristics of Individuals



Implementation Process



Outer Setting



Inner Setting



Characteristics of the Intervention

Intervention source

Evidence strength & quality

Relative advantage

Trialability

Complexity

Adaptability

Design quality & package

Cost



Roger's
Diffusion of
Innovations

A large right-facing curly bracket groups the characteristics from 'Relative advantage' down to 'Adaptability'. To the right of the bracket, the text 'Roger's Diffusion of Innovations' is displayed.



Characteristics of Individuals

Knowledge & beliefs about the intervention

Self-efficacy

Individual stage of change

Identification with organization

Other personal attributes, e.g., values, motivations, competence

Health Belief Model

Bandura's Social
Cognitive Theory

Theory of Planned
Behavior



Implementation Process

Planning

Engagement

- Opinion leaders

- Appointed internal project leaders

- Champions

- External change agents

Executing

Evaluating & Reflecting



Outer Setting

Needs & resources of those served

Networking/collaboration with external agencies (“cosmopolitanism”)

Peer pressure

External policy & incentives



Inner Setting

Structural characteristics

Networks and communication

Culture

Implementation Climate

- Tension for change

- Compatibility

- Relative priority

- Organizational incentives & rewards

- Goals & feedback

- Learning climate

Readiness

- Leader engagement,

- Available resources

- Access to knowledge & information, e.g., trainings



Small Group Discussion

How could the CFIR be helpful when designing the implementation of a complex project?

How could the CFIR be useful for designing the evaluation?



Our Use of the CFIR



Photo by Anna Earl on [Unsplash](#)



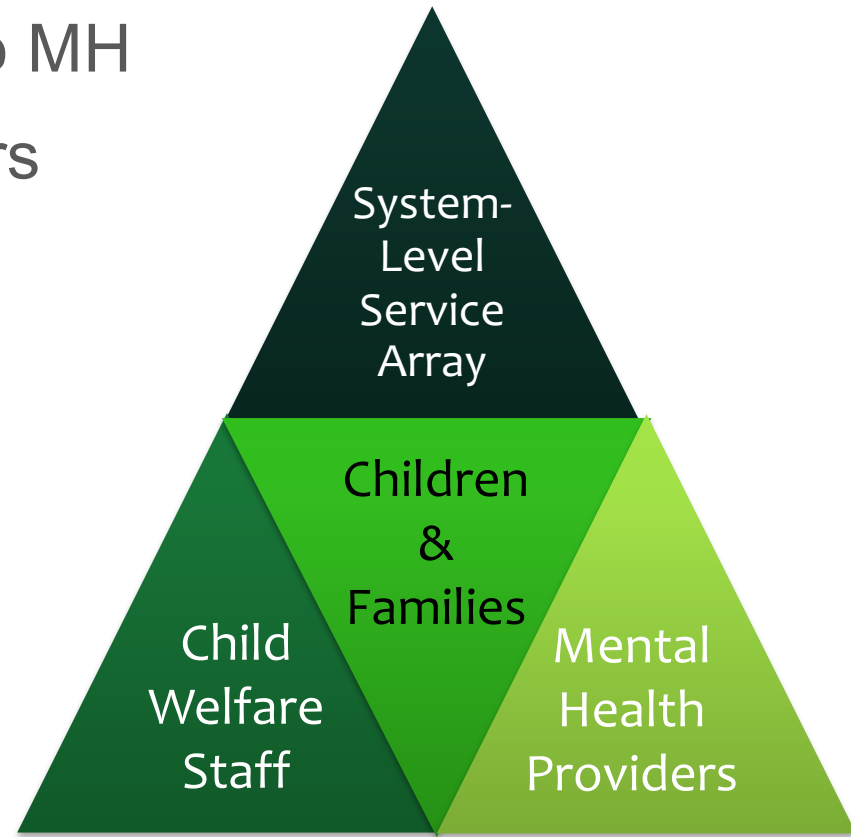
Partners for Change Project

Aim: Install Trauma-Informed practices

- New Trauma & MH screening tool in CW
- Case planning & referrals to MH
- EBP training to MH providers

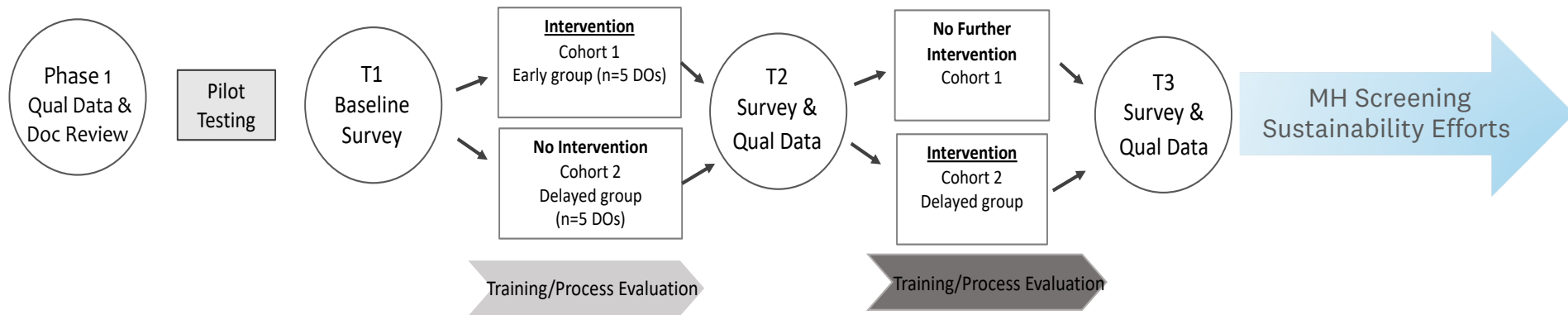
Statewide implementation

2 Cohorts





Project Design & Timeline



Context Evaluation (Inner & Outer Settings; Policies; Workforce Data; Funding)

2013-14	Summer 2014	Fall 2014	Winter 2014-Summer 2015	Fall 2015	Winter 2015-Summer 2016	Fall 2016	Winter 2016-Summer 2017	Fall 2017
---------	-------------	-----------	-------------------------	-----------	-------------------------	-----------	-------------------------	-----------



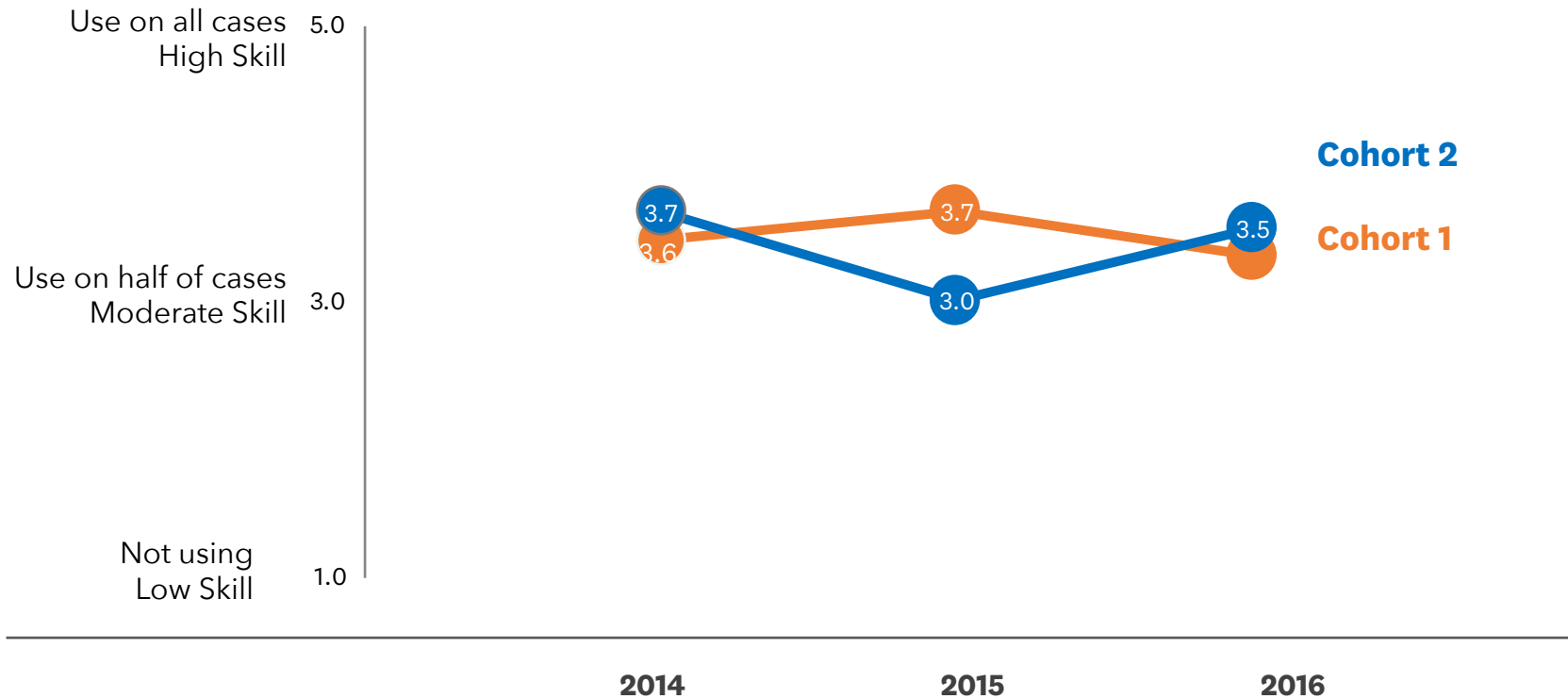
Project Outcomes

	MAIN OUTCOMES
System-level	New policies & practices installed System gains in Trauma-Informed care Service array reconfiguration?
Workforce level	Gains in knowledge & skills Use of new screening tools Attitudes & commitment to new practices Coordination between CW & MH
Child & Family level	Number of youth screened → referred to MH Trauma & well-being scores; # of Exposures Family satisfaction & use of supports

However, results quite mixed...



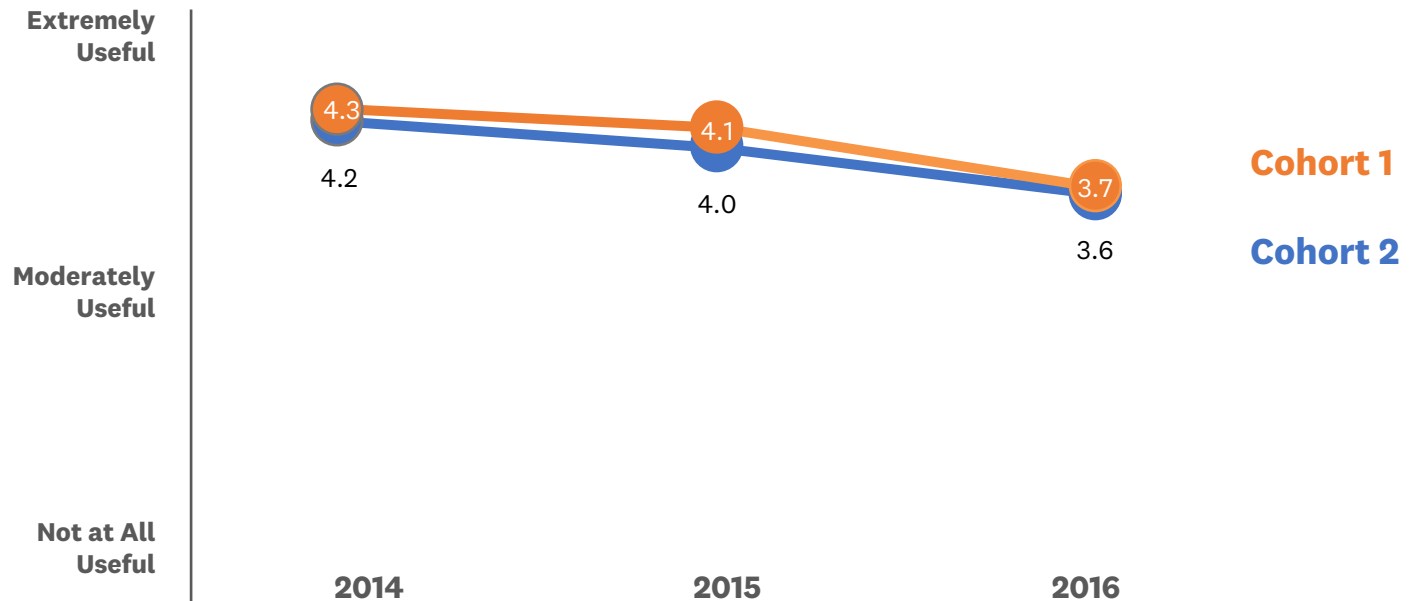
DCYF Staff Trauma Screening Practices



Self-reported **frequency and proficiency with trauma screening** increased *immediately following* each cohort's implementation (training) phase, but generally stayed at modest levels for duration of project.



DCYF Staff Ratings of Screening Usefulness



Over time, average ratings of the **perceived value or usefulness of trauma practices** declined among staff in both cohorts.



Motivation for our CFIR Analysis

Explain our mixed results

Identify factors most influential to implementation

Guide future initiatives in the state



Photo by [David Travis](#) on [Unsplash](#)



CFIR Methods

Step 1:

Inventory our available data

How well did we capture CFIR domains & main constructs?

CFIR Domain & Construct	Definition	Evidence for Construct: Data Source; Participants*	Timing (PFC Year)			
			Ph1	T1	T2	T3
Characteristics of Intervention						
A. Intervention Source	Perception whether intervention is internally or externally developed	Interviews: S, Sup, L, MHP	X			
B. Evidence Strength & Quality	Perceptions of evidence that intervention will achieve desired results	Interviews: S, Sup, L, MHP Survey (useful items): S, Sup, MHP	X	X	X	X
C. Relative Advantage	Perception of advantage of selected intervention(s) over alternative solutions	Interviews: S, Sup, L, MHP Survey (useful items): S, Sup, MHP	X	X	X	X
D. Adaptability	Degree to which intervention can be adapted, refined, adjusted to meet local needs	Interviews: Project Leaders Implementation design (document review)	X X		X X	
E. Trialability	Ability to test intervention on small scale	Pilot phase in study design	X			
F. Complexity	Perceived difficulty of intervention, e.g., duration, scope, radicalness, complexity, disruptiveness	Interviews: S, Sup, L, MHP Focus Groups: S	X		X X	X
G. Design Quality & Packaging	Perceived excellence in how intervention is bundled, presented, and assembled	Interviews: S, Sup, L, MHP Focus Groups: S	X		X X	X
H. Cost	Costs of intervention; costs of implementation and maintenance	Time Study Survey Cost Study		X	X	X



CFIR Methods (cont.)

Step 2:

Rated findings at two time points – early and late implementation

3-point scale applied to each construct

- 1 negative influence

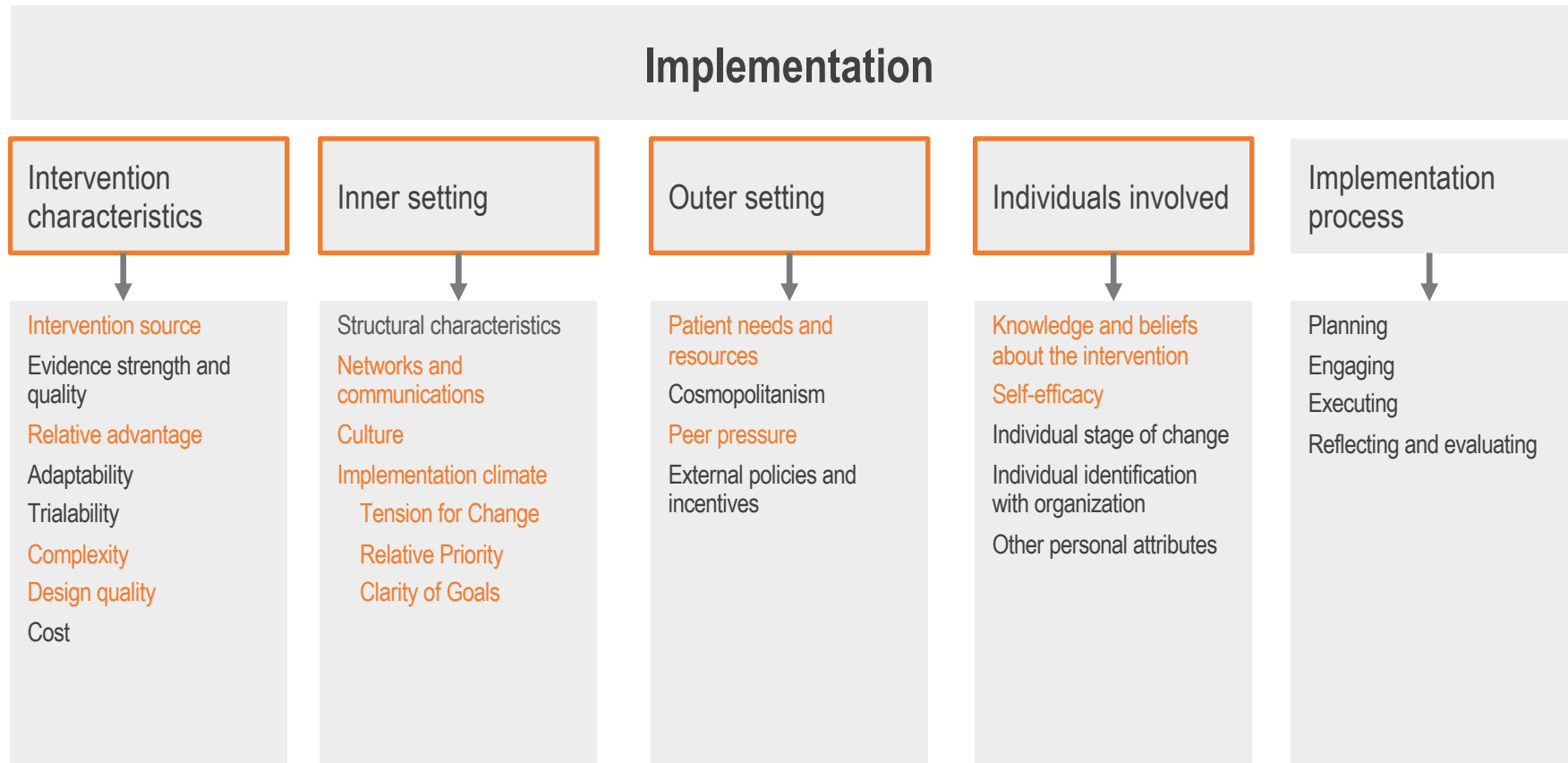
- 0 neutral or mixed

- +1 positive influence

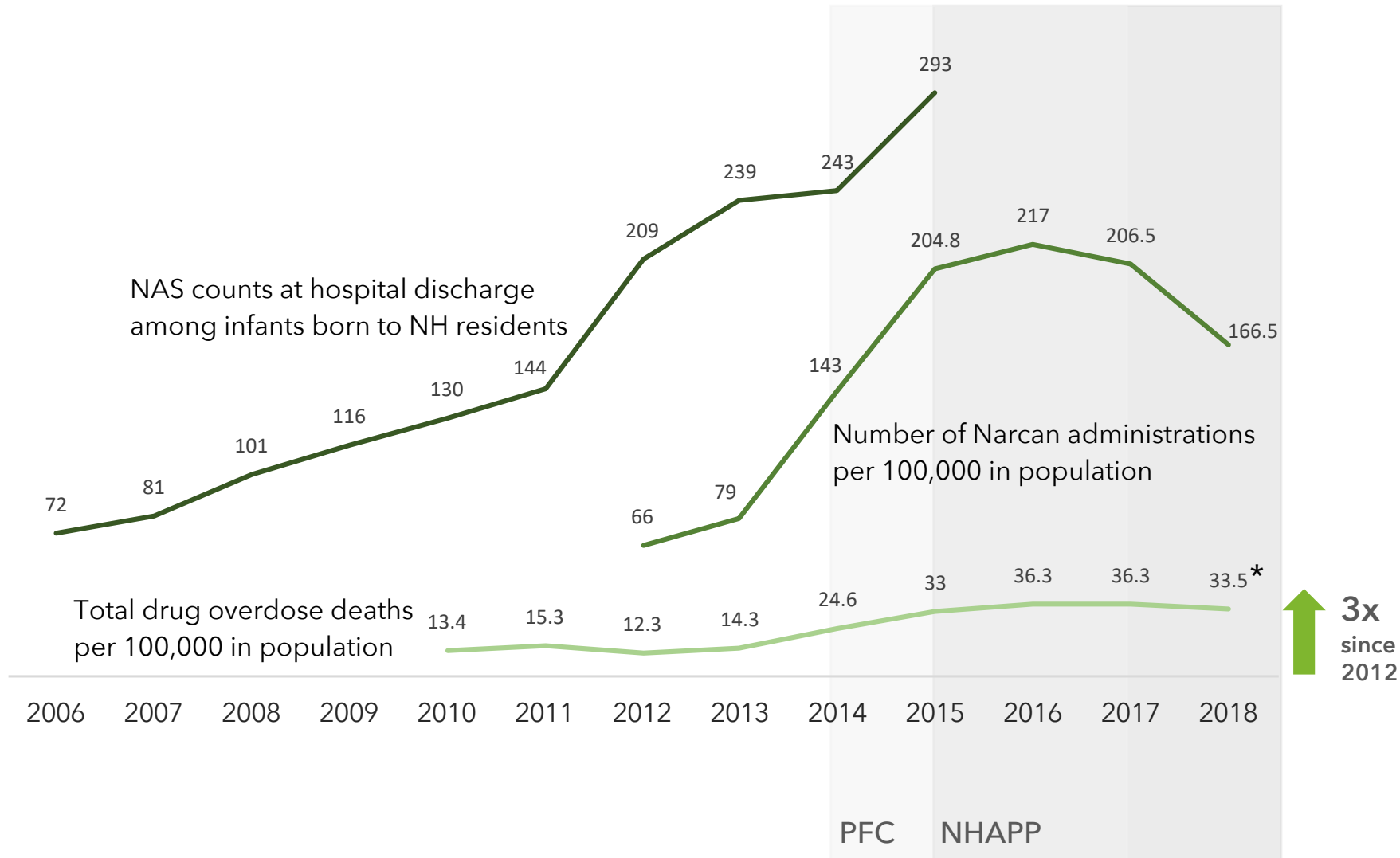
Domain Totals	Rating	Early	Late
Intervention Characteristics (8 constructs)	Positive Neutral Negative	+2 4 -2	+1 2 -5
Individuals (5 constructs)	Positive Neutral Negative <i>Missing</i>	+3 1 0 <i>1 Missing</i>	0 4 -1
Outer Setting (4 constructs)		+3 1 0	0 3 -1
Inner Setting (12 constructs)		+8 3 -1	0 3 -9
Implementation Process (7 constructs)		+4 3 0	+2 5 0
TOTALS	Positive Neutral Negative	+ 20 12 - 3	+ 3 17 - 16



Main Sources of Our Mixed Results



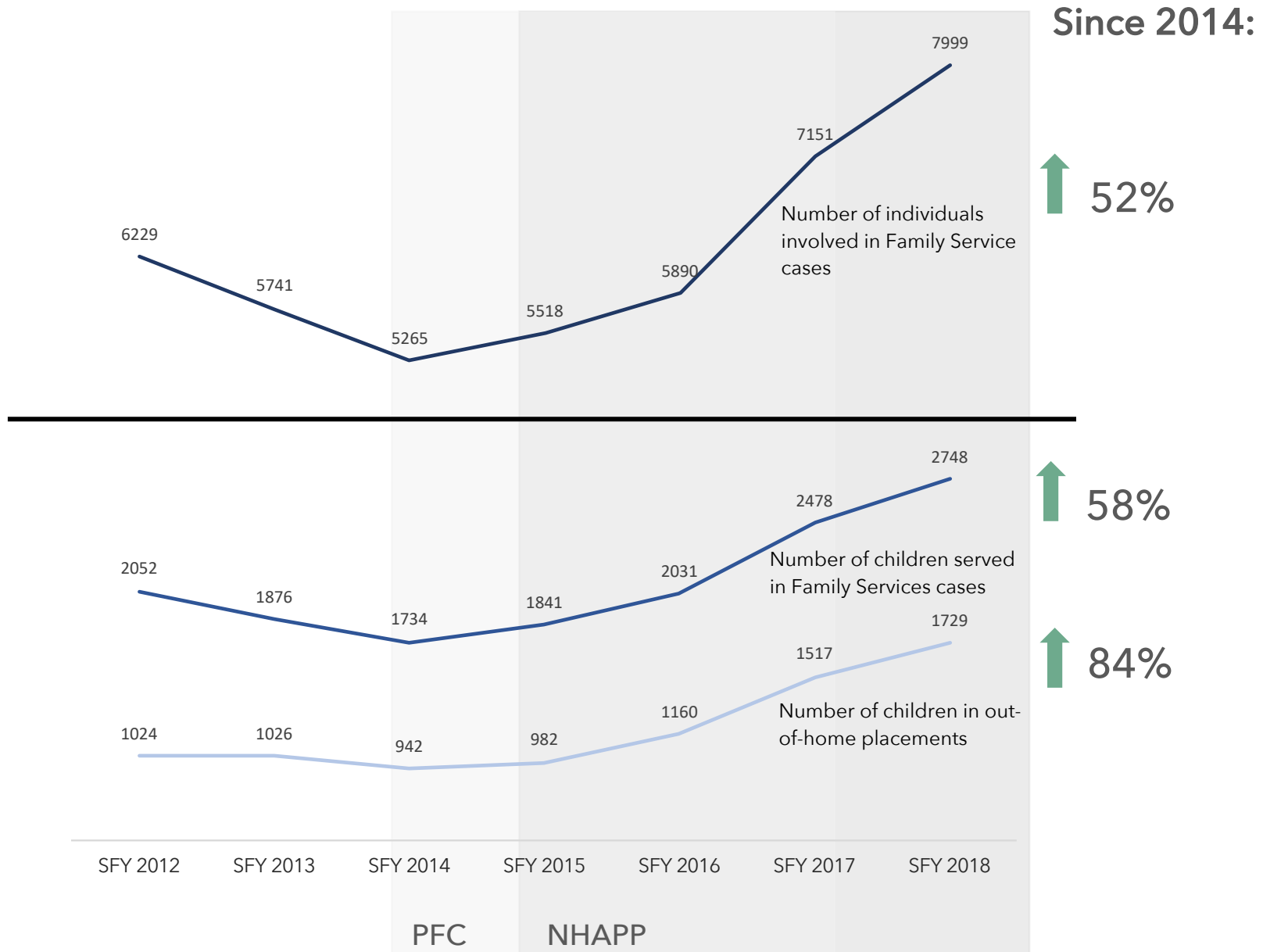
Outer Setting: NH's Opioid Crisis



Data Sources: New Hampshire Drug Monitoring Initiative, December 2018; NH Bureau of EMS, 2016; Hospital discharge data. * Projected 2018 overdose death rate



Inner Setting: Pressures on DCYF Workforce





Characteristics of Intervention

Screening tool always felt “external”

Unable to show relative advantage of new tool

- Half of cases already receiving MH services at time of screening

Screener in separate documentation platform

- Separate login – difficult access in field
- Screening data not easy to access and use



Practice Activity

Partner with 3-4 others

Think about an initiative you've worked on or are implementing now

Pick a few CFIR constructs – see handout

Think about methods/data you've used or could use to evaluate the construct

If you have data on the construct, rate whether the data revealed a net positive influence, net negative influence, or was mixed



Group Discussion

Observations & insights in trying to apply CFIR?

How did it work to identify key implementation factors?

Questions that arose?

Opportunities for improvement or alternative approach?

Anything missing?



Lessons Learned about using CFIR

DARTMOUTH



Prospectively and retrospectively

Useful for both implementation planning and evaluation design

Shows promise for cross-project or cross-site investigation



Considerable resources required

Lack of specificity & difficult 'fit' with some constructs – especially Outer Setting

Have to consider how to link to outcomes

Aarons, G.A., Hurlburt, M., Horwitz, S.M. (2004). Advancing a Conceptual Model of Evidence-Based Practice Implementation in Public Service Sectors. DOI 10.1007/s10488-010-0327-7

<https://cfirguide.org/> for a range of resources and tools

Clinton-McHarg, T., Yoong, S. L., Tzelepis, F., Regan, T., Fielding, A., Skelton, E., ... Wolfenden, L. (2016). Psychometric properties of implementation measures for public health and community settings and mapping of constructs against the Consolidated Framework for Implementation Research: A systematic review. <http://doi.org/10.1186/s13012-016-0512-5>

Damschroder, L. J., Aron, D. C., Keith, R. E., Kirsh, S. R., Alexander, J. A., & Lowery, J. C. (2009). Fostering implementation of health services research findings into practice: A consolidated framework for advancing implementation science. <http://doi.org/10.1186/1748-5908-4-50>

Damschroder, L. J., & Hagedorn, H. J. (2011). A guiding framework and approach for implementation research in substance use disorders treatment. <http://doi.org/10.1037/a0022284>

Damschroder, L. J., & Lowery, J. C. (2013). Evaluation of a large-scale weight management program using the Consolidated Framework for Implementation Research (CFIR). <http://doi.org/10.1186/1748-5908-8-51>

Damschroder, L. J., Reardon, C. M., Sperber, N., Robinson, C. H., Fickel, J. J., & Oddone, E. Z. (2017). Implementation evaluation of the Telephone Lifestyle Coaching (TLC) program: organizational factors associated with successful implementation. <http://doi.org/10.1007/s13142-016-0424-6>

Keith, R. E., Crosson, J. C., O'Malley, A. S., Crompton, D. A., & Taylor, E. F. (2017). Using the Consolidated Framework for Implementation Research (CFIR) to produce actionable findings: A rapid-cycle evaluation approach to improving implementation. <http://doi.org/10.1186/s13012-017-0550-7>

Sorensen, J. L., & Kosten, T. (2011). Developing the tools of implementation science in substance use disorders treatment: Applications of the Consolidated Framework for Implementation Research. <http://doi.org/10.1037/a0022765>



Acknowledgements

ACF Funding: # 90C01099 and # 90CO1115

Dartmouth Project Team

Dartmouth Trauma Intervention Research Center: Drs. Kay Jankowski & Erin Barnett

Project Coordinators: Becky Parton, MSW & Cassie Yackley, DPsy

Data Support: Jeremy Huckins, PhD

Evaluation team members: Beth Boucher, MPH; Laura Pickrell, MPH; Erin Knight, PhD

NH DCYF Leaders & Data Specialists

NH DCYF staff and supervisors

Community Mental Health Providers and Directors



Questions?

Rebecca.Butcher@Dartmouth.edu

[Karen.E.Schifferdecker@](mailto:Karen.E.Schifferdecker@Dartmouth.edu)

Dartmouth.edu



Center for Program
Design & Evaluation
CPDE | Dartmouth