A Dynamic Approach to Sustainability and Adaptation

David Chambers, DPhil

Deputy Director for Implementation Science,

Division of Cancer Control & Population Sciences (DCCPS)

Defining Sustainability (and related terms)

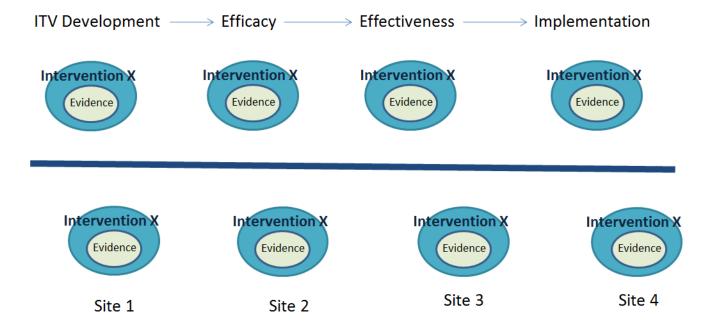
Table 1 Definitions of key terms used in this paper

Term	Definition
Implementation	The process of putting to use or integrating evidence-based interventions within a setting [9].
Sustainability	To what extent an evidence-based intervention can deliver its intended benefits over an extended period of time after external support from the donor agency is terminated [9].
Sustainment	The continued use of an intervention within practice [10].
Voltage drop	The phenomenon in which interventions are expected to yield lower benefits as they move from efficacy to effectiveness and into real world use (adapted from [11]).
Program drift	The phenomenon whereby deviation from manualized protocols in real-world delivery of interventions is expected to yield decreasing benefit for patients (adapted from [12]).

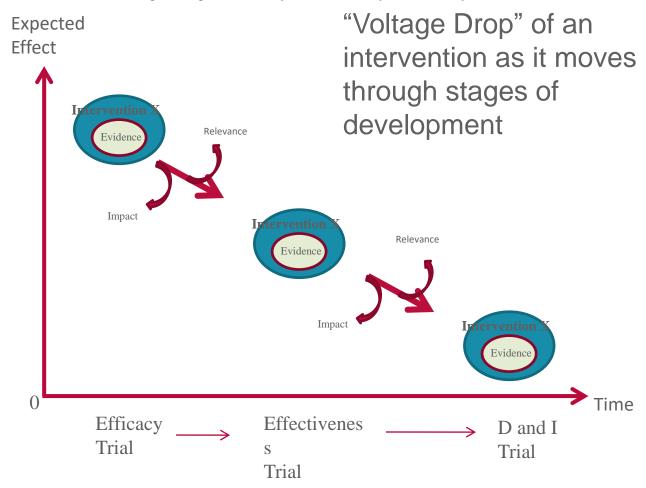
Traditional Assumptions

- EBPs are static
- System is static
- Implementation proceeds one practice or test at a time
- Consumers/Patients are homogeneous
- Choosing to not implement is irrational

Valuing Consistency



Chambers, Glasgow, Stange (2013), The Dynamic Sustainability Framework. Implementation Science



"Program Drift" of a fielded intervention (ITV) over time, with expected decrease of ITV effect Effect Optimal Effect Evidenc Evidenc Program Drift Intervention Expected Effect Evidenc I 1 Time

Chambers, Glasgow, Stange (2013), The Dynamic Sustainability Framework. Implementation Science

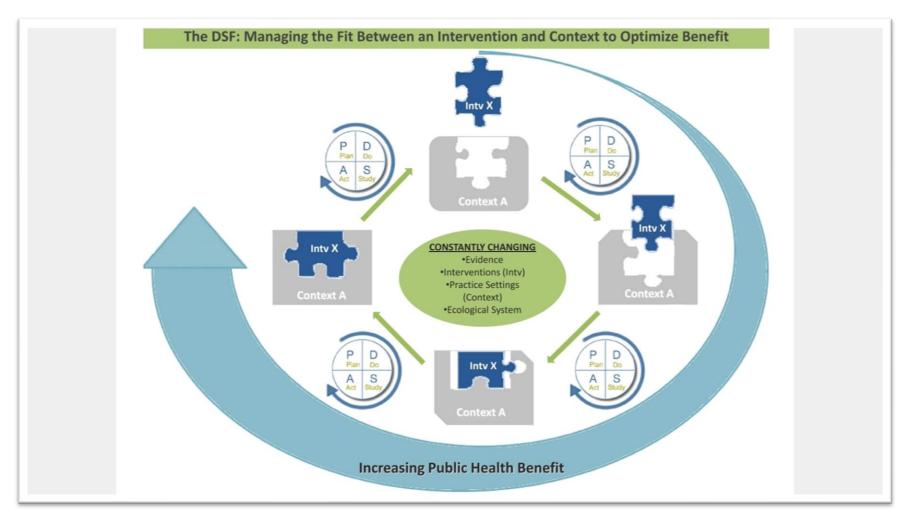
Sustainability or Evolution?



- IF EVIDENCE CONTINUES TO EVOLVE, SHOULD EXISTING INTERVENTIONS BE SUSTAINED IN THE SAME FORM THAT WE'VE CREATED THEM?
- HOW DOES THE SYSTEM COPE WITH A DYNAMIC FIELD THAT IS CONSTANTLY CHANGING?
- WHERE DO WE GO FROM HERE?

http://www.thestrut.com/2012/12/19/the-evolution-of-the-beatles-hair/

A Dynamic Approach to Sustainability...



Chambers, Stange, & Glasgow, *Implementation Science*, 2013



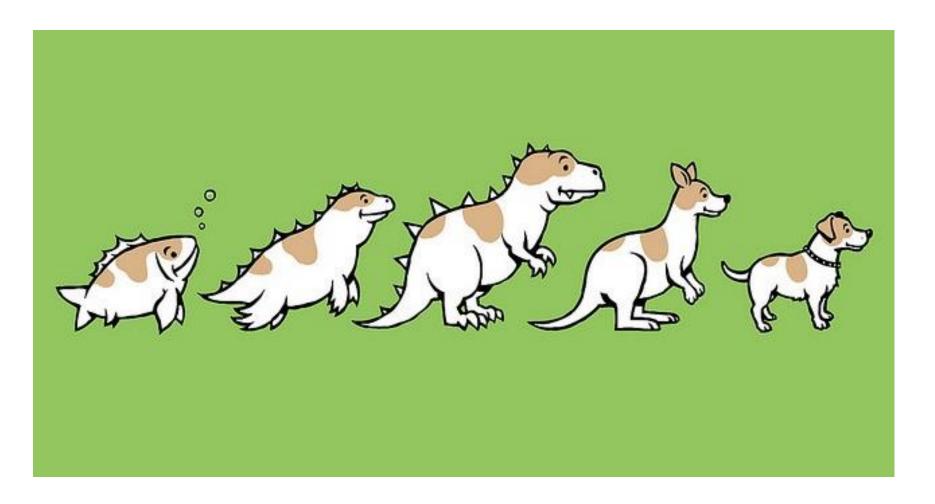
Exercise 1: Time to Chat!

- What is the intervention that you are planning to sustain?
- What is the timeframe for sustainability?
- What strategies are needed to sustain?
- What is likely to change during this phase:
 - Intervention?
 - Context?
 - Needs?
 - Evidence?
 - Policy?

Questions, Discussion, group think



What about Adaptation...?



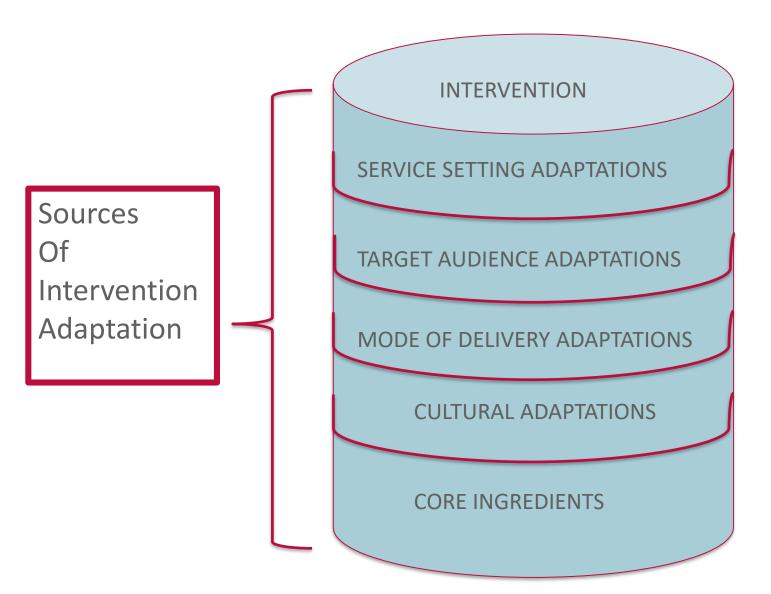
http://kinooze.com/the-constant-change-adaptation/

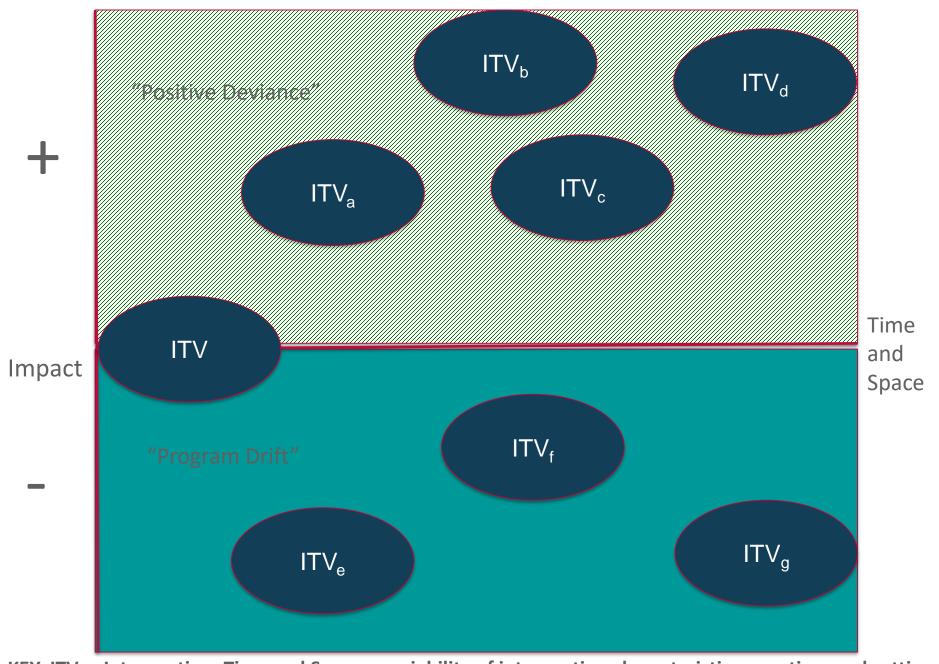
Fidelity vs Adaptation?





Variable use for variable populations, settings, and purposes...





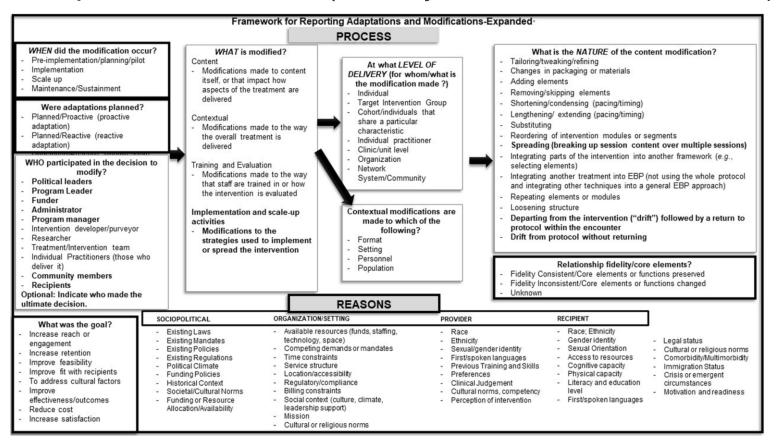
KEY: ITV = Intervention, Time and Space = variability of intervention characteristics over time and setting

NIH) NATIONAL CANCER INSTITUTE

Chambers & Norton, 2016

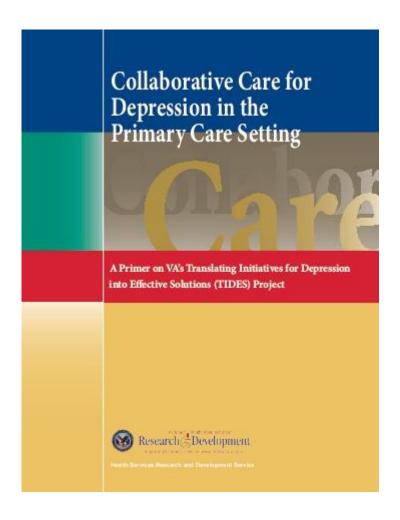


The Expanded 'FRAME' (Wiltsey-Stirman et al, IS, 2019)



The Framework for Reporting Adaptations and Modifications-Expanded (FRAME). New elements are outlined in black lines, while the original aspects of the 2013 framework are outlined in gray. Additions and refinements within categories included in the 2013 framework are italicized. Recommended elements of reporting were as follows: (1) when and how in the implementation process the modification was made, (2) whether the modification was planned/proactive (i.e., an adaptation) or unplanned/reactive, (3) who determined that the modification should be made, (4) what is modified, (5) at what level of delivery the modification is made, (6) type or nature of context or content-level modifications, (7) the extent to which the modification is fidelity-consistent, and (8) the reasons for the modification, including (a) the intent or goal of the modification (e.g., cultural adaptations, to reduce costs, etc.) and (b) contextual factors that influenced the decision. Adapted from (Baumann A, Cabassa LJ & Stirman SW, 2017; Stirman SW, Miller CJ, Toder K & Calloway A, 2013)

Exercise 2: Considering Adaptation



- What kinds of adaptations do you expect to happen over a 5 year period?
- What would you want to measure?
- How can we build a common set of lessons from these experiences?
- What designs might you use?

Questions, Discussion, group think





dchamber@mail.nih.gov 240-276-5090 @NCIDAChambers



