Interrogating Your Theory of Practice Improvement

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### Improvement Core Concept

#### **Theory of Knowledge**

- Can we articulate what we believe about why things are the way they are?
- Can we describe what changes we think will make the difference toward the outcome we desire?

#### **Testing our Theory**

• Do we have a method to learn whether our change ideas delivery in practice?

### It all starts with...

#### **Setting Aims**

- <u>Aim statement</u>: A written statement of the accomplishments expected from an improvement teams effort
- It seeks to answer: What are trying to accomplish?
  - What is expected to happen (the outcome of interest)
  - Timeframe (by when is improvement desired)
  - The system to be improved (local boundaries)
  - The setting or sub-population addressed (for whom)

"...the goal (aim) is the direction-setter of the system, the definer of discrepancies that require action, the indicator of...failure, or success..."

Donella

Meadows, 2008

### A conceptual driver diagram



Improvement Science Consulting

Bennett and Provost 2015

"The...goal of all theory is to make the...basic elements as simple and as few as possible without having to surrender the adequate representation of...experience."

Albert Einstein, 1934

# Systems Thinking Core Concept

#### Hierarchy

- In the process of creating new structures and increasing complexity, self-organizing systems often generate subsystems
- Systems relationships *within* each subsystem are denser and stronger than relationships *between* subsystems
- Helps us understand why we illustrate some connections on driver diagrams while leaving others out. Not designed to be comprehensive, rather strategic in terms of identifying high-leverage places to act.

### Key insights for building and using driver diagrams



- Theory should reflect *hierarchy and experience*
- Drivers should be *direction-free*
- Specificity is crucial in theory building, especially at the secondary driver and change idea levels

# Complexity in theory building

- Sometimes our subsystems are complicated and/or so dense as to require their own focus for improvement
- This can happen when we take on very ambitious outcomes (i.e., reducing poverty, increasing college going enrollment rates, decreasing bed days, etc.)
- The result can be driver diagrams that are so involved they lose their utility (drivers lose specificity, ideas become vague, we are unsure if it might not be better to add tertiary or quaternary drivers to increase specificity)

# Nested Driver Diagrams

- Sometimes referred to as parent/child driver diagrams
- The overarching driver diagram explicates the aim and primary drivers (often complicated subsystems) for the improvement journey
- Each primary driver (subsystem) is then fitted with its own aim and a full driver diagram (primary, secondary and change ideas) This is produced to achieve the specificity needed to work toward the outcomes of interest.

# Nested Driver Diagrams

#### When to make them?

- When we examine our theory and are tempted to add tertiary, or more, levels to our drivers
- When we can identify subsystems as primary drivers that are distinct from each other (weak ties) and clear improvement aims for these are apparent

#### When not to make them?

- When we have poorly specified drivers at the primary and secondary levels, and so think we need further levels to achieve actionable moments in our system of interest
- When the above criteria are not met



Policy and Advocacy



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- Specificity is crucial in theory building, especially at the secondary driver and change idea levels
- Nest only if primary drivers indicate distinct subsystems

#### **Measurement Tree**



# Inform and Inspire

#### Measurement

- Outcome measure(s) can be linked directly to the aim statement
- Process measures can be linked to primary and secondary drivers
  - Issues of leading and lagging measures can be discussed
- Change ideas may have evolving measures
  - Anecdotal
  - Qualitative
  - Quantitative

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- Drivers should be *direction-free*
- Specificity is crucial in theory building, especially at the secondary driver and change idea levels
- Nest only if primary drivers indicate distinct subsystems
- Inform and inspire measurement

# Using Driver Diagrams

Theory informs testing and in turn testing refines theory



## Recommended Minimums

- Team meetings focused on improvement, 1/week
  - Not less than 1 hour for team interaction
  - Does not include time necessary to accomplish the Do of the PDSA
- Frequency of use of PDSA: 1/week, especially in the early stages
- Revision of driver diagram after a decision is reached on each change idea (adopt, adopt an adaptation, or abandon)

## The long term goal

- Move ourselves from a weak theory at the start to a strong theory, delivering results at the finish
- Add to the body of knowledge about how to address/solve the problem of practice we face
- Provide a starting place for others to build upon and to take further

# "If I have seen further it is by standing on the shoulders of giants."

Sir Isaac Newton

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- Specificity is crucial in theory building, especially at the secondary driver and change idea levels
- *Nest* only if primary drivers indicate distinct subsystems
- Inform and inspire *measurement*
- *Consolidate learning* continuously

# Thank you

