

The Challenge of T2 Translation

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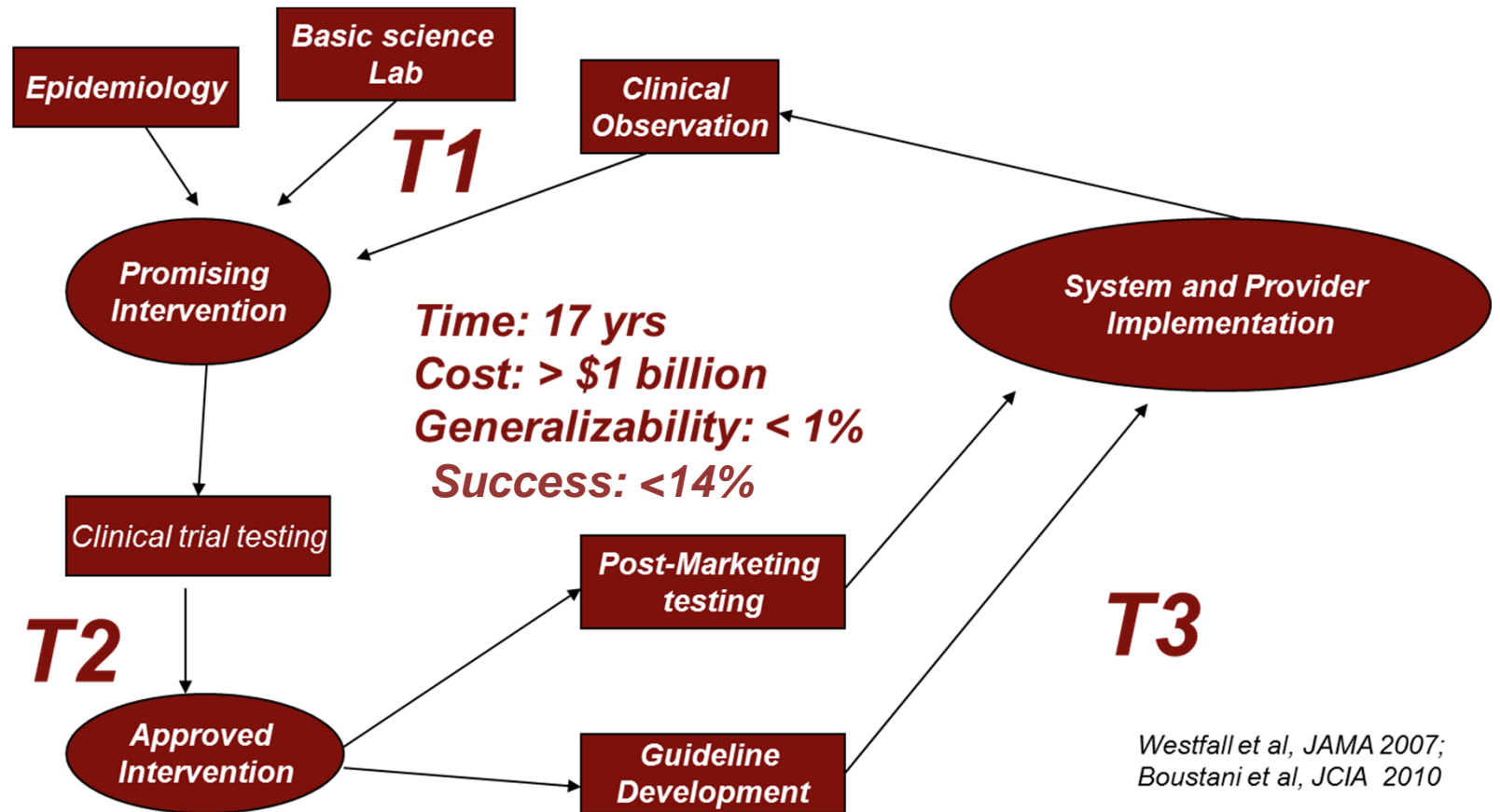
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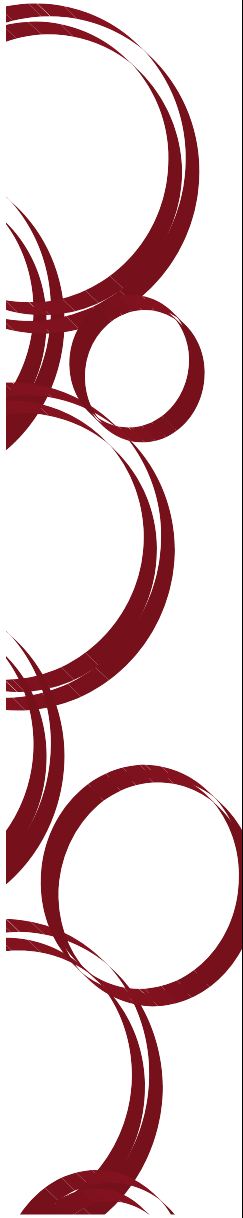
Objectives

- Discuss Implementation Science as a framework for rapid translation of delirium research discovery into effective delirium care delivery by describing
 - The Complex Adaptive System Theory
 - The Reflective Adaptive Process

Translational Cycle: From Discovery To Delivery

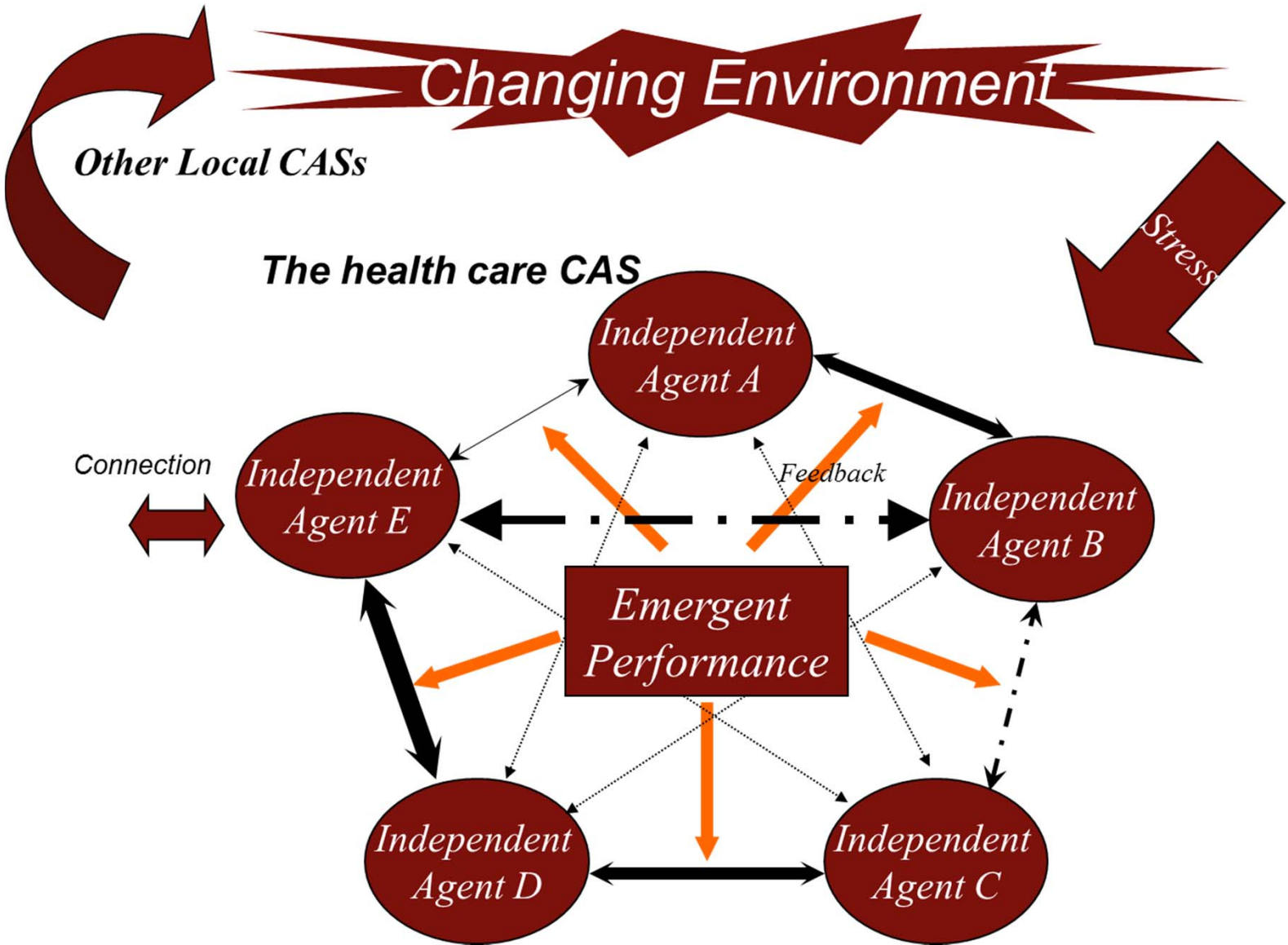
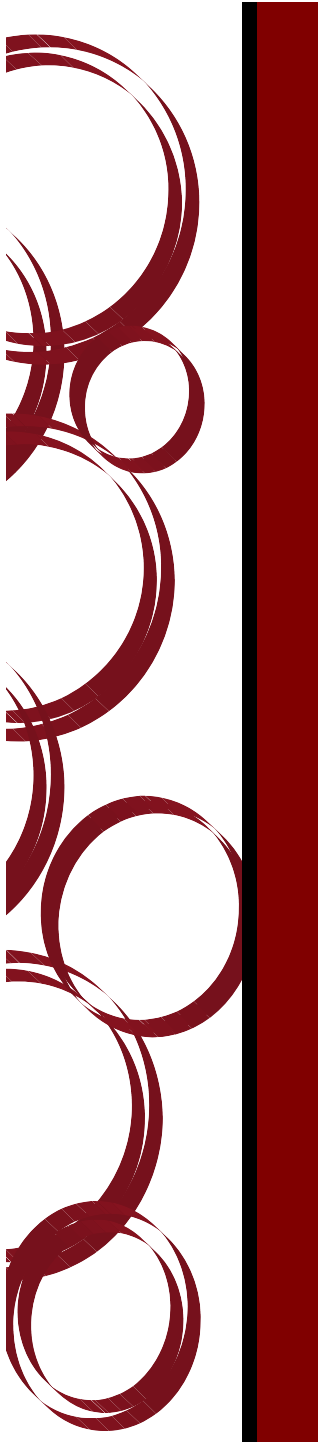


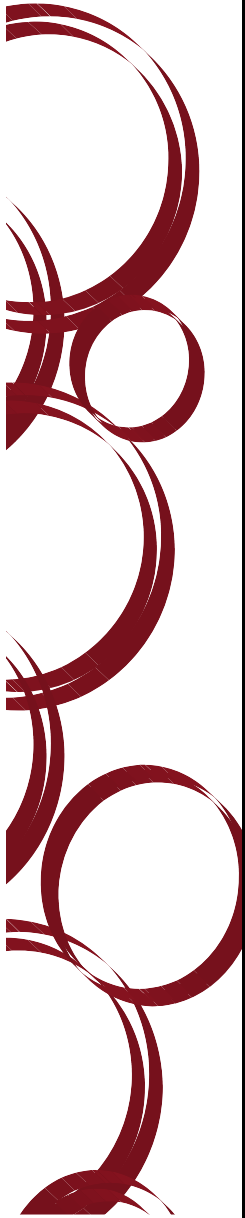
Westfall et al, JAMA 2007;
Boustani et al, JCI 2010



Shortening the Translational Cycle

- Use the tools of Implementation Science
 - Complex Adaptive System theory
 - The Reflective Adaptive Process (RAP)
- Create local social research implementation networks
- Standardized data collection to serve
 - The clinic mission first
 - The research mission second
- Use information technology to support
 - Clinical decisions & needs
 - Research decisions & needs
- Innovate in limited resource environment





Complex Adaptive Health Care System

- *An open, dynamic, flexible, adaptive, and complex network*
- ***Complex*** due to
 - *Numerous interconnected, semi-autonomous, competing, and collaborating members*
- ***Adaptive*** due to
 - *Its capability of learning from its prior experience*
 - *Its flexibility to change its members connecting patterns to fit better with its surrounding environment*

Complex Adaptive Health Care System

- ***Emergent behaviors***
 - ***NOT** predetermined ones*
- ***Self-organized controls***
 - ***NOT** central controls*

Selecting a change in a complex adaptive health care delivery system

- A. Selecting an overall content that is based on a systematic evidence review of past research or guidelines.**
- B. Develop a Reflective Adaptive Process implementation team to**
 - Localize the content
 - Localize and or invent the delivery process
 - Monitor the delivery process
 - Monitor the system's members interactions
 - Detect emergent behaviors
 - Evaluate the impact of the selected change
 - Provide immediate performance feedback

Reflective Adaptive Process

- *Build a local “think tank: the RAP Team” responsible of introducing an acceptable, locally matched, flexible and effective change in its CAS.*
- *External or internal facilitators who encourage the RAP Team to select, adopt or create local processes to*
 - *solve the CAS problem*
 - *enhance the CAS performance*
 - *guide the CAS respond to its surrounding environment*
- *RAP is the second generation of CQI*

The Reflective Adaptive Process of Implementation Science

- *Supportive leadership*
- *Vision, mission, target expenditure, and shared values (Standardized Minimum Care)*
- *Diverse improvement teams*
- *Time and space for learning and reflection (\$\$\$)*
- *Tension and discomfort are essential*
- *Timely Feedback*

Shortening the Translational Cycle for Delirium Discovery

- Create a local brain discovery implementation network
 - Build a local coalition of brain research centers, a local brain disease advocacy group, local brain clinical services (Psychiatry, Neurology, Geriatrics, neuropsychology), local hospitalists and critical care providers, local surgical services, and business developers.
 - Provide a bimonthly meeting for group based problem solving.
 - Provide online shared resources.
 - Provide ongoing network management support

Shortening the Translational Cycle for Delirium Discovery

- Create a brain care service line across the hospital and ambulatory services
 - A division within the neuroscience service line or a clinical coalition between geriatrics, psychiatry, and neurology.
 - Standardized data collection with emphasize on capturing delirium cases
 - Take advantage of your ICD-9 or ICD-10 coding.
 - Take advantage of your eMR.
 - Educate your clinical providers on the appropriate coding for delirium.
 - Consider using standardized delirium assessment that is clinically feasible (RASS, CAM-ICU, CAM).
 - The data collection need to serve the clinical operation, quality, and safety mission first then research second.

Shortening the Translational Cycle for Delirium Discovery

- Use information technology to support
 - Data collection directly from clinical services
 - Data collection directly from patient portal
 - Work with Chief Medical Informatics Officer on developing delirium specific decision support tools
 - Use interruptive alert
 - Partner with local pharmacy services to deliver human based decision support
 - Get familiar with your local clinical data warehouse & Business developer to support your research need.

Shortening the Translational Cycle for Delirium Discovery

- Innovate in limited resource environment
 - Include future payment of your solution in your development equation.
 - Think about the value of your solution within a population health management payment model
 - Per Member Per month payment (PMPM)
 - Bundle Payment
 - No fee for services
 - Imagine that 70% of future health services will be provided in the community outside the current acute, ambulatory, and long-term care settings.
 - Think about drug repurposing (ideally generic)



Indiana University Examples

- Implementing the RASS and CAM-ICU.
- Implementing the ABCDE bundle
- Implementing the Critical Care Recovery Clinic.

Questions?

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