

What do we need to change in order to get us there?



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*The System Awakens:
Building a Learning Health
System in Canada*

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Training the next generation of learning health system researchers...

- **Learning Health System:** *“A system in which science, informatics, incentives, and culture are aligned for continuous improvement and innovation, with best practices seamlessly embedded in the care process, patients and families active participants in all elements, and new knowledge captured as an integral by-product of the care experience” (Institute of Medicine, Best care at lower cost, 2012).*
- **Learning Health System Researcher:** *Professional who conducts research in routine health care settings that generates new evidence that health systems can rapidly implement to improve quality of care and patient outcomes (inclusive of health, care experience, and costs).*

Learning implies the use of evidence in decision making...

- Evidence-based medicine (EBM) is a set of principles and methods intended to ensure that to the greatest extent possible, clinical practice guidelines and medical decisions are consistent with evidence of efficacy, effectiveness, and benefit.

Evidence-Informed Decision Making

- What supports do health system organizations have in place to facilitate evidence-informed decision making? (Ellen et al., 2013)
- Decisions regarding the structure & process of care are often made without the input of timely and reliable evidence
- 57 interviews conducted in 25 organizations in Ontario & Quebec

What Was Learned...

Organizational efforts that can increase the use of evidence in decision making:

- Facilitate roles that actively promote research use within the organization;
- Establish ties to researchers & opinion leaders outside the organization;
- Support a technical infrastructure that provides access to research evidence (e.g., databases)
- Provision and participation in training programs to enhance staff's capacity building

Need for a Health System that Learns

We require a sustainable system

- That gets the right care to the right person at the right time

and then

- Captures the results for making improvements and
- Knowing what works.

21st Century Health Care

Information-rich, patient-focused enterprises

Evidence is continually refined as a by-product of care delivery



Information and evidence transform interactions from reactive to proactive (benefits and harms)

Actionable information available – to clinicians AND patients – “just in time”

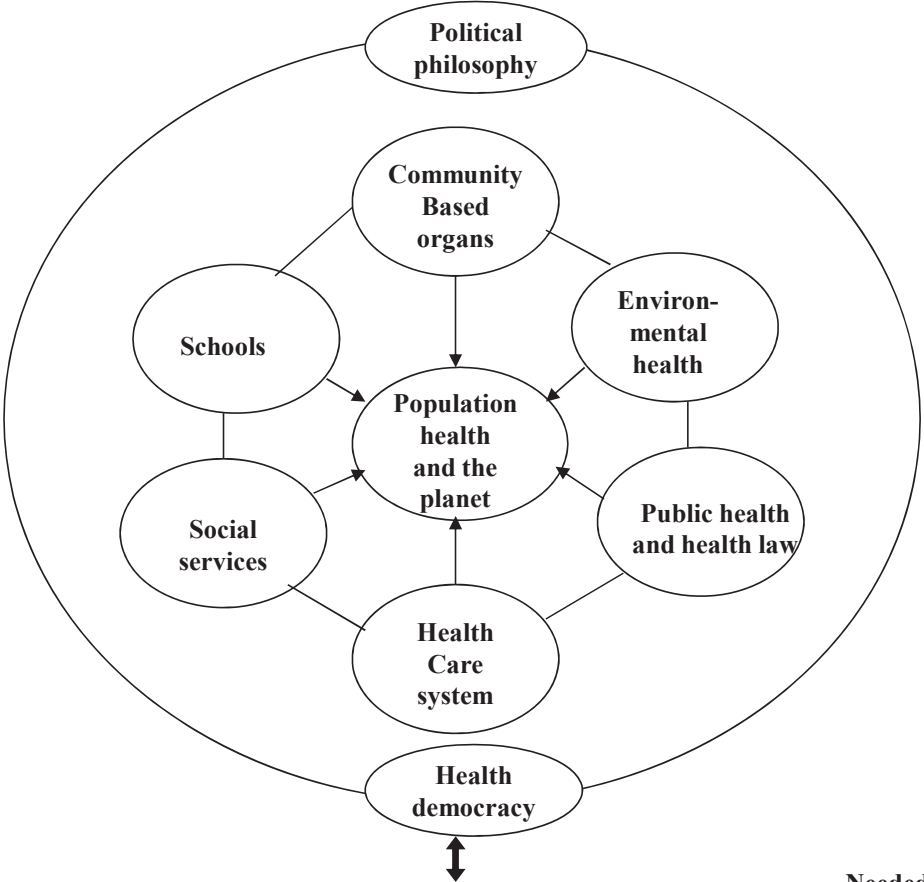
Building Blocks: Rx for State-of-the-Art Learning System



What We Do Know

- Healthcare organizations have an obligation to learn
- We need to transform into a *self-learning* health system
 - Internal capacity
 - External capacity

Virtuous Health Model



Triple Aim

- Better health
- Better care
- Lower cost

Value

Needed

- Regulatory relief
- Cross sector coordination
- Payment reform
- Policy change



Taking It to Scale

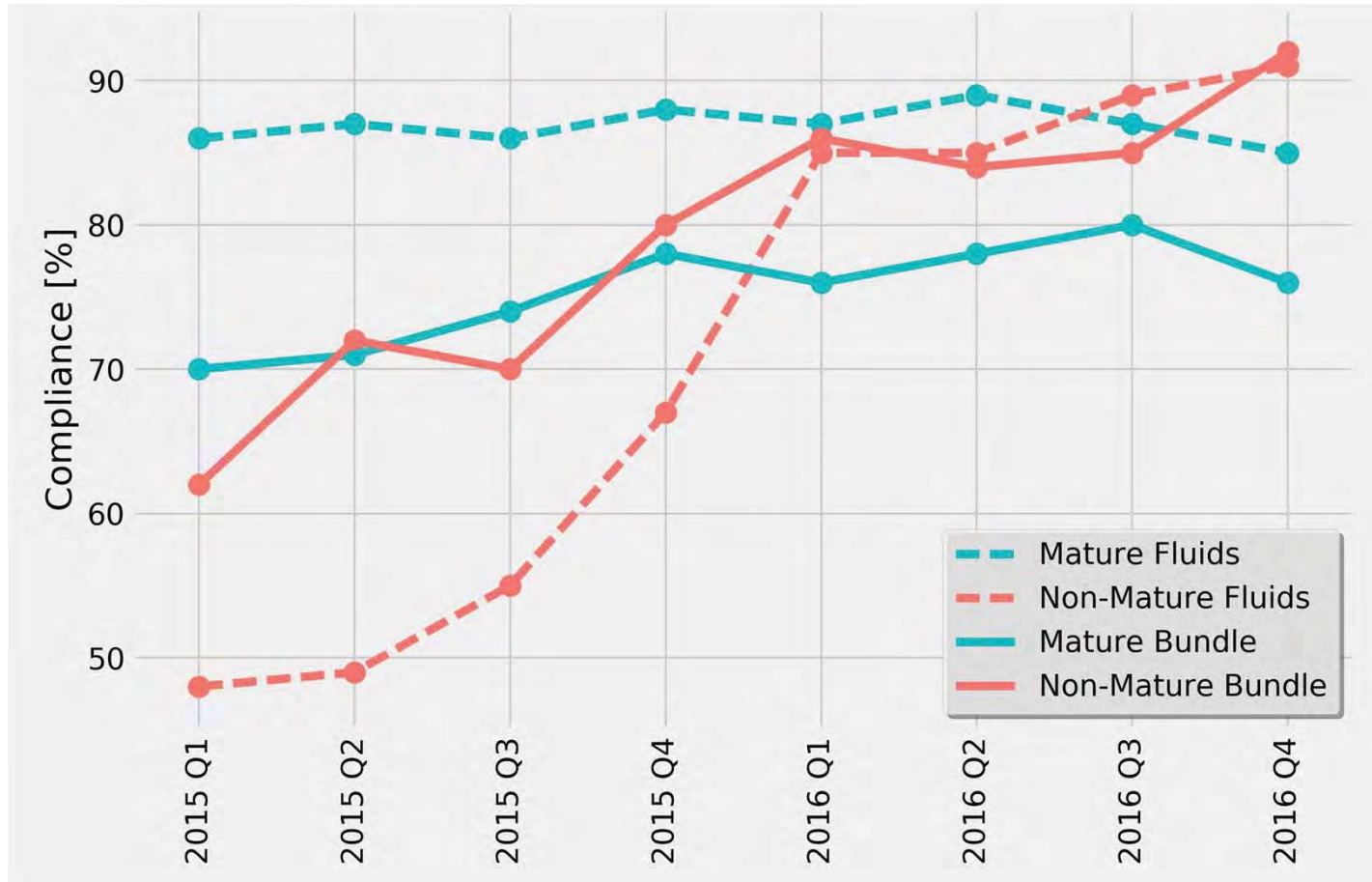




Sepsis Bundle Dissemination & Implementation

Selected Results

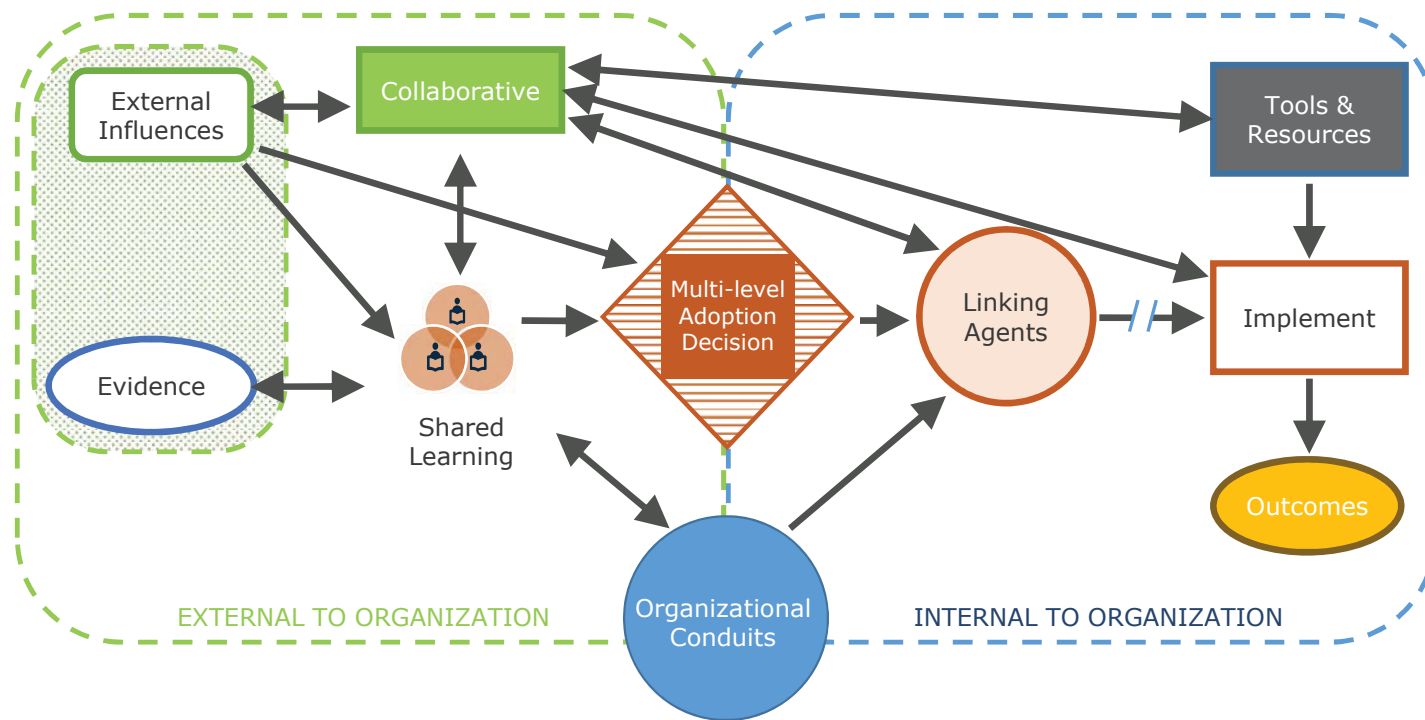
The HVHC Effect – Accelerated Learning from Friends



Sepsis Qualitative Results

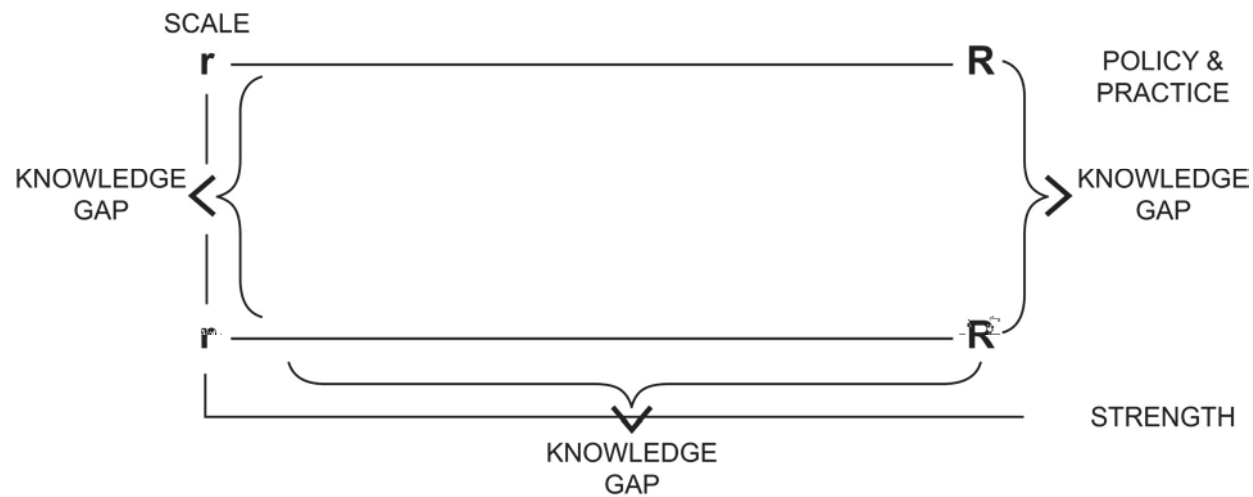
- Overall, a mixed methods approach
 - Two Rounds of Qualitative Site Visits
 - Years 1 and 2
- Learning evaluation applications (round 1)
 - Concerns with SEP-1 measure
 - CHR / RF patients and fluid bolus
 - Create a multi-disciplinary TEP to review the evidence
- Drilling down on data discrepancy (round 2)

Framework for Accelerated Dissemination & Implementation



Considering Knowledge Gaps

& Balancing When Are the Data “Good Enough”



Thank you!

Time for Q&A