Clinical Improvement Lifecycle

What is a learning healthcare organization?

A Learning Healthcare System is a system in which, "science, informatics, incentives, and culture are aligned for continuous improvement and innovation, with best practices seamlessly embedded in the delivery process and new knowledge captured as an integral by-product of the delivery experience."

Learning healthcare organizations demonstrate both an ability to use 'external evidence' (arising from the study of populations other than one's own) and an ability to use 'internal evidence' (about what works best in one's own context). They use this evidence to generate hypotheses, strategically apply change to clinical and operational practices and evaluate the impact of the change on outcomes and behaviours.

Connect Care in-system reporting and analytics tools will provide AHS staff with the ability to create and use real time data about patients, populations and the health system as a whole. This data can then be transformed into information that guides evidence-informed decisions in service of continuous clinical improvement.

What are the characteristics of a Health System that can learn?

➢ Every patient's characteristics and experience are available for study
➢ Best practice knowledge is immediately available to support decisions
➢ Improvement is continuous through ongoing study (closed loop)
➢ Inquiry happens routinely and economically
➢ Curiosity and inquiry is valued and embedded in organizational culture

## How does the 5A Improvement Cycle relate to Connect Care?

Clinical improvement methodologies follow general continuous quality improvement lifecycles. Today's internal and external evidence generates tomorrow's ideas which are then critically examined to evaluate the impact of the change and stimulate ideas for further clinical improvement.

1. **Assess**
   - Purposeful awareness of day-to-day, patient, provider and organizational experiences stimulates curiosity and recognition of opportunities for improvement.
   - In order to gain experience with clinical information system (CIS) supports for clinical improvement, pre and post-launch data collection will serve assessment of meaningful CIS use.

2. **Ask**
   - The best clinical improvement questions are grounded in issues that we care deeply about where change can be measured. Well-structured questions include specifics about the populations, interventions, comparators and outcomes of interest. They turn improvement hunches into testable hypotheses.

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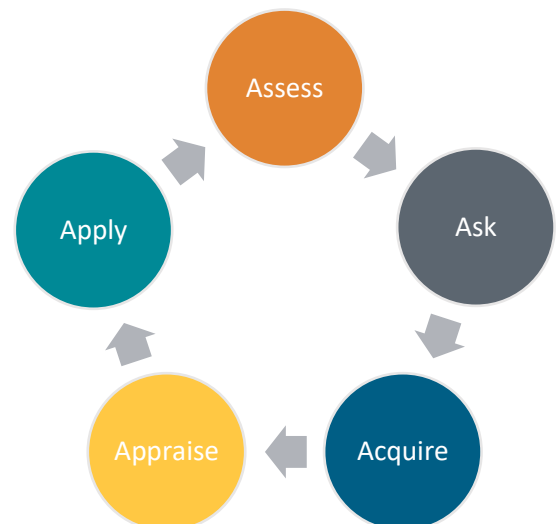
- Examples of good clinical improvement questions include:
  - Does introducing osteoporosis screening paired with rapid-access treatment in a high-risk population decrease the 5-year incidence of hip fractures?
  - Does centralizing a referral triage process improve patient access to services within defined next-available appointment parameters?
  - Does peer-to-peer provider education decrease the frequency of inappropriate antibiotic ordering in acute care settings?
  - Do active Beers Criteria (evidence-based inappropriate medication guidelines) alerts presented at the time of outpatient medication review increase de-prescribing of high-risk medications among persons over 75 years of age?

3. Acquire

- Evidence based clinical improvement relies upon the availability of pre and post measurements of intervention compliance, process satisfaction and outcome attainment.
- Data should be measured the same way using the same assessment methodologies while controlling for the effect of extraneous influences. For example, if a program was to change both of their triage processes and offer an additional clinic site at the same time, it would be impossible to attribute a change in patient access satisfaction to one variable or the other.

4. Appraise

- Internal evidence (process, satisfaction, outcome, efficiency or performance measures) are critically assessed to determine if changes are attributable, believable, important and applicable to similar organizational contexts.
- Do we believe the change measure? Is the impact clinically important? Is the change attributable to our efforts and applicable to our future?

5. Apply

- The final stage of the Clinical Improvement Lifecycle extends valid, important and applicable learnings to similar patients, practitioners, settings and contexts while identifying further opportunities for adjustment or improvement.

Connect Care Area Councils will play a pivotal role supporting and advancing areas of clinical and operational improvement. They will oversee CIS-facilitated system changes that can transform workflows, documentation, decision supports, and effective use of inquiry-support tools. The Connect Care 'special sauce' is workflow-friendly and workflow-embedded inquiry support.

Connect Care Clinical Inquiry Support Unit

Connect Care Area Councils and Specialty Workgroups already depend upon support units for essential clinical system design. These leverage collaboration among knowledge translators, CIS builders, innovators, data analysts, information technology staff and clinical informaticians. A Connect Care Clinical Inquiry Support Unit will extend such knowledge and skill marshalling post-implementation. A CISU will work closely with the Area Councils and Connect Care governance to ensure that in-system inquiry needs keep pace with clinical and operational developments, are clinically driven, and contribute to the support of evidence-informed improvement.