



Leveraging a Province-wide Clinical Information System to Integrate Prevention into Routine Healthcare in Alberta: Policy and Practical Implications

Dr. Kamala Adhikari, PhD

Presenting on behalf of our IPiC-Health Team



ABOUT

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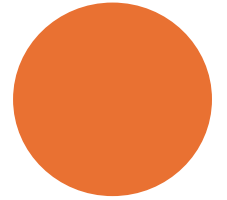
AWARDS

- Vanier, PhD, CIHR
- Graduate studentship, PhD, Alberta Innovates
- Graduate scholarship, MSc, exchange program, Norway
- Graduate research scholarship, MSc, exchange program, Norway
- Undergrad excellence- Academic gold medalist

ABOUT

Senior Scientist AHS,
PHEI, PPPH

Adjunct Assistant
Professor, Department
of Community Health
Sciences, U of C



Equal treatment

Equitable treatment

Removing the systemic barrier



Interaction Institute for Social Change. Artist: Angus Maguire

—
ABOUT

Research Career Aspiration

What enables us to live a
“good life”?



Professional Aspiration







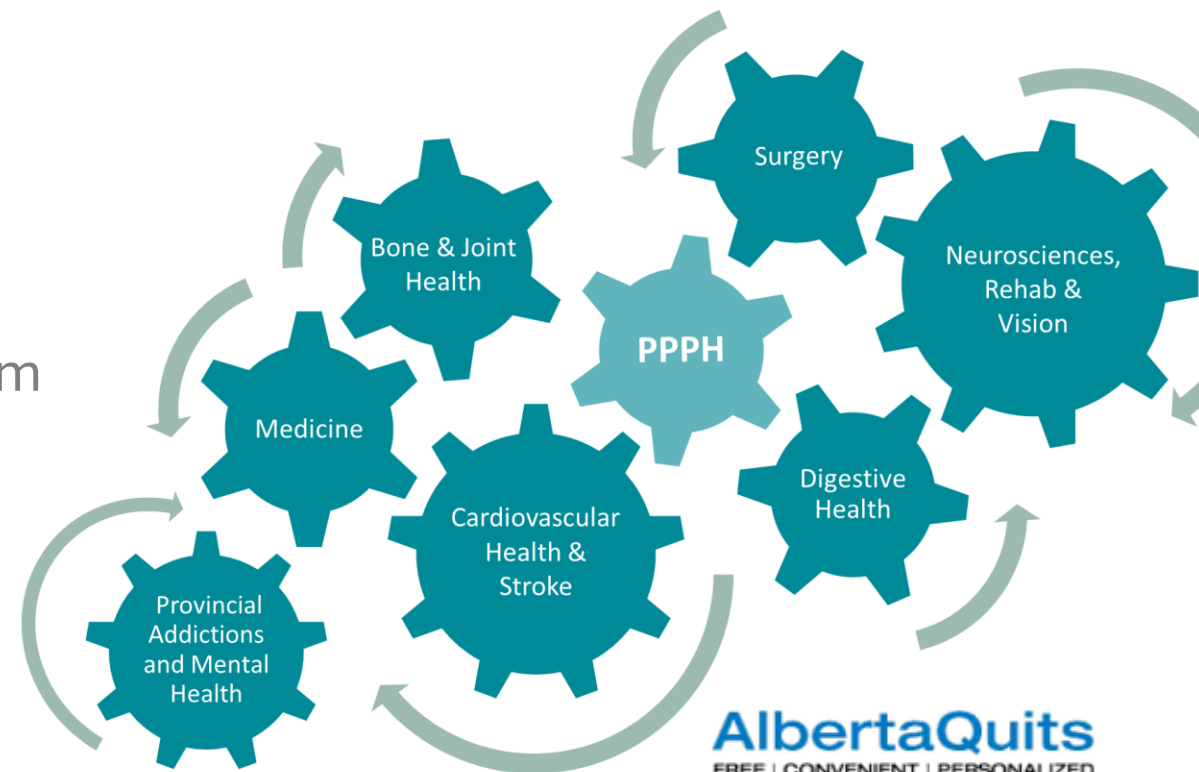
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I would like to thank...

- Provincial Population and Public Health
- Partnering SCNs (former)
- Tobacco, Vaping & Cannabis Program
- Provincial Addictions and Mental Health Program
- Patient Advisors
- Current participating clinics/units:
 - FMC – Unit 44, Trauma/Surgery
 - Richmond Road- Rheumatology
 - Richmond Road- General Internal Medicine
 - South Health Campus
 - Kaye Clinic
 - Glenrose Geriatric Hospital
- Cancer Prevention and Screening Innovation, IPiC-Health Team



ALBERTA INNOVATES



UNIVERSITY OF
CALGARY

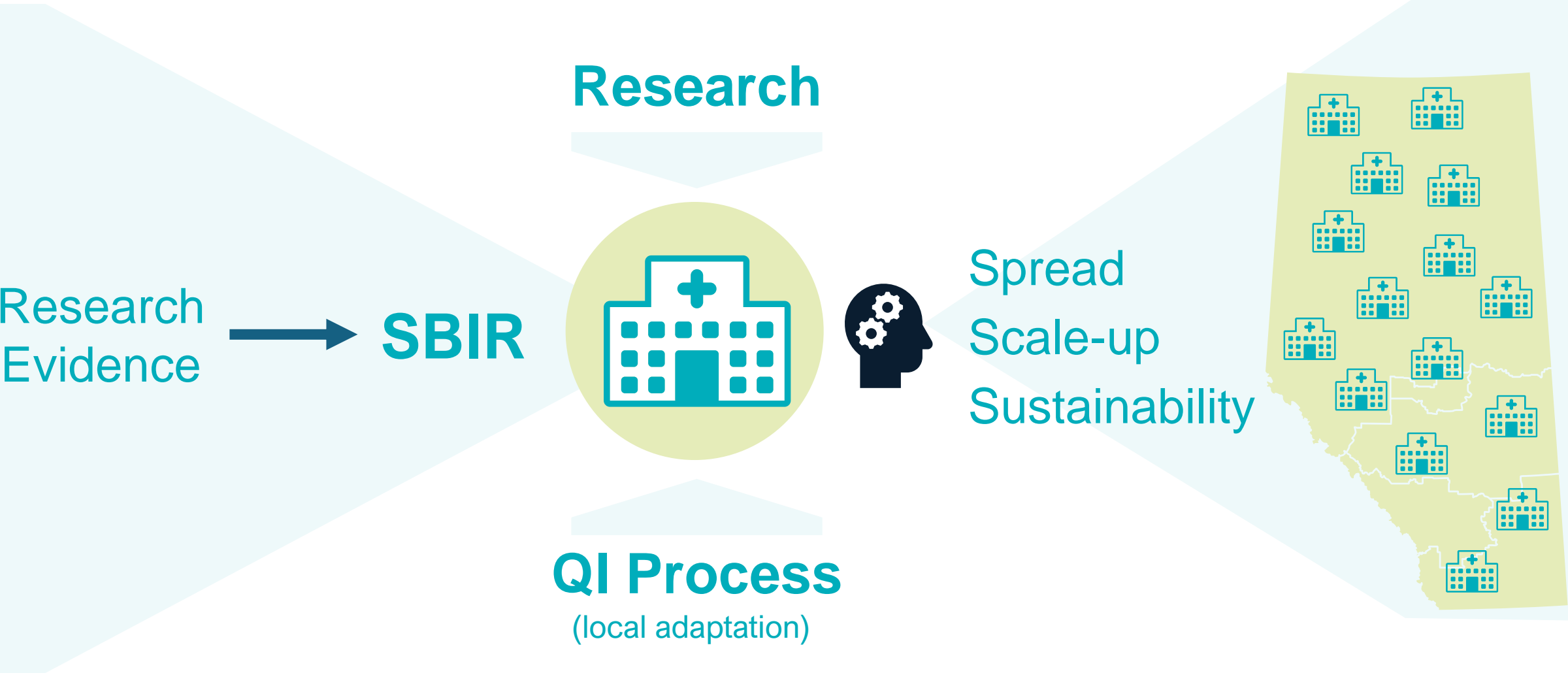


Alberta Health
Services

Integrating Prevention into Connect Care (IPiC-Health) - Objectives

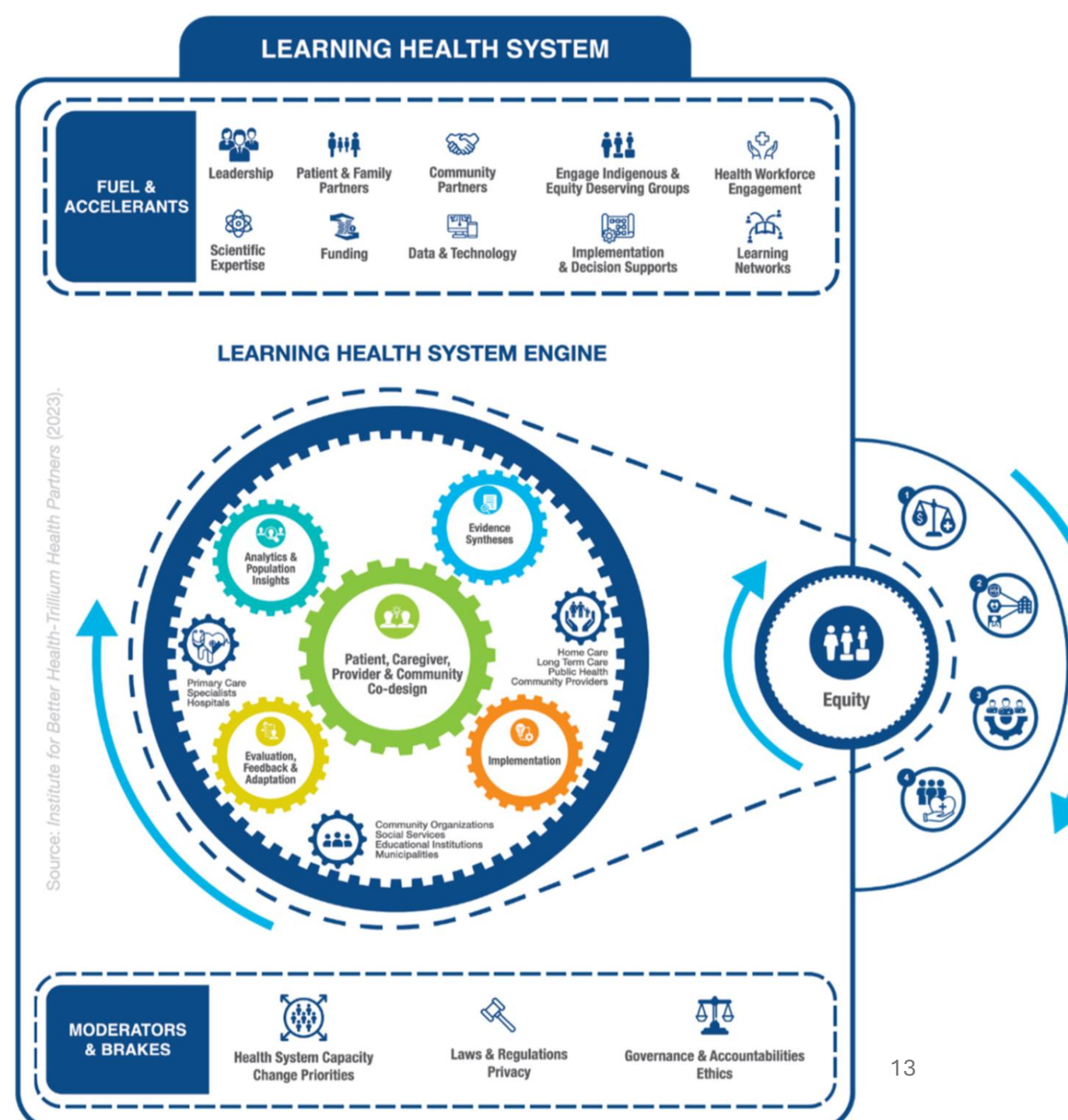
- To integrate Screening, Brief Intervention and Referral (SBIR) within Connect Care-facilitated workflows to identify and address tobacco use, alcohol misuse, and physical inactivity
- To demonstrate the feasibility, acceptability, and impact of SBIR within Connect Care-facilitated workflows

IPiC- Health - Knowledge Mobilization



Learning Health System (LHS)

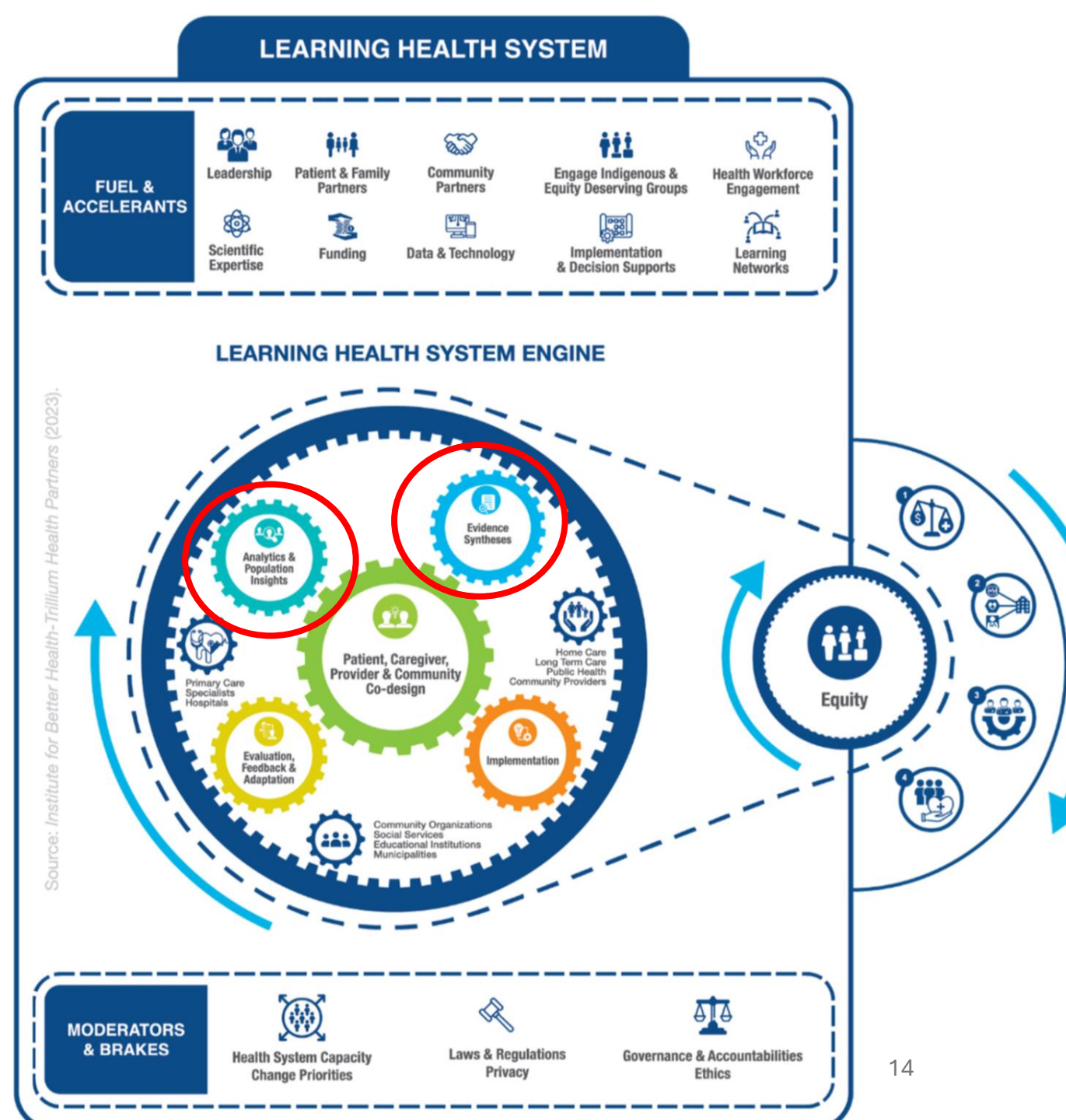
- A framework for practically integrating research into health systems
- Rapid cycle change
- Advance population health and health equity.



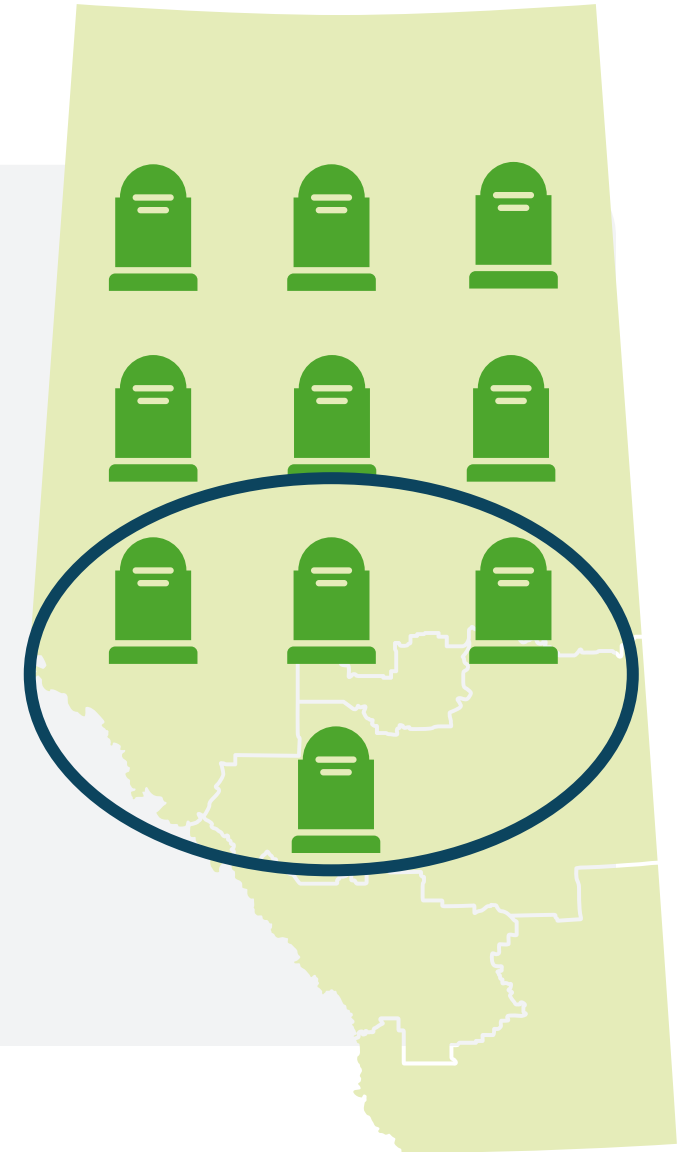
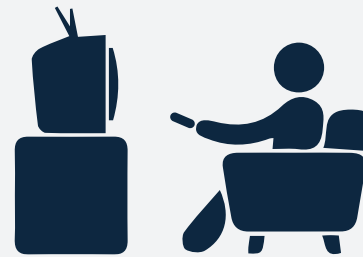
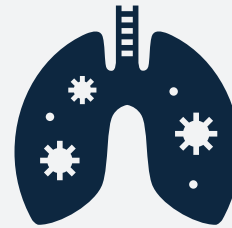
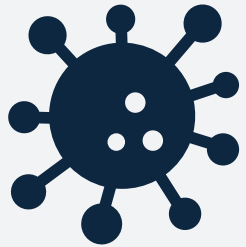
Health System Gaps and Solutions

Analytics and Population Insights gear

Evidence Synthesis gear



Health Burden

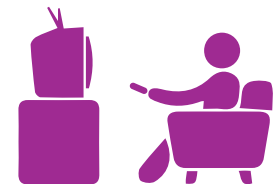




Health Care Cost

Alberta, 2017
> \$1.6 B

Nearly **20%**
of total costs

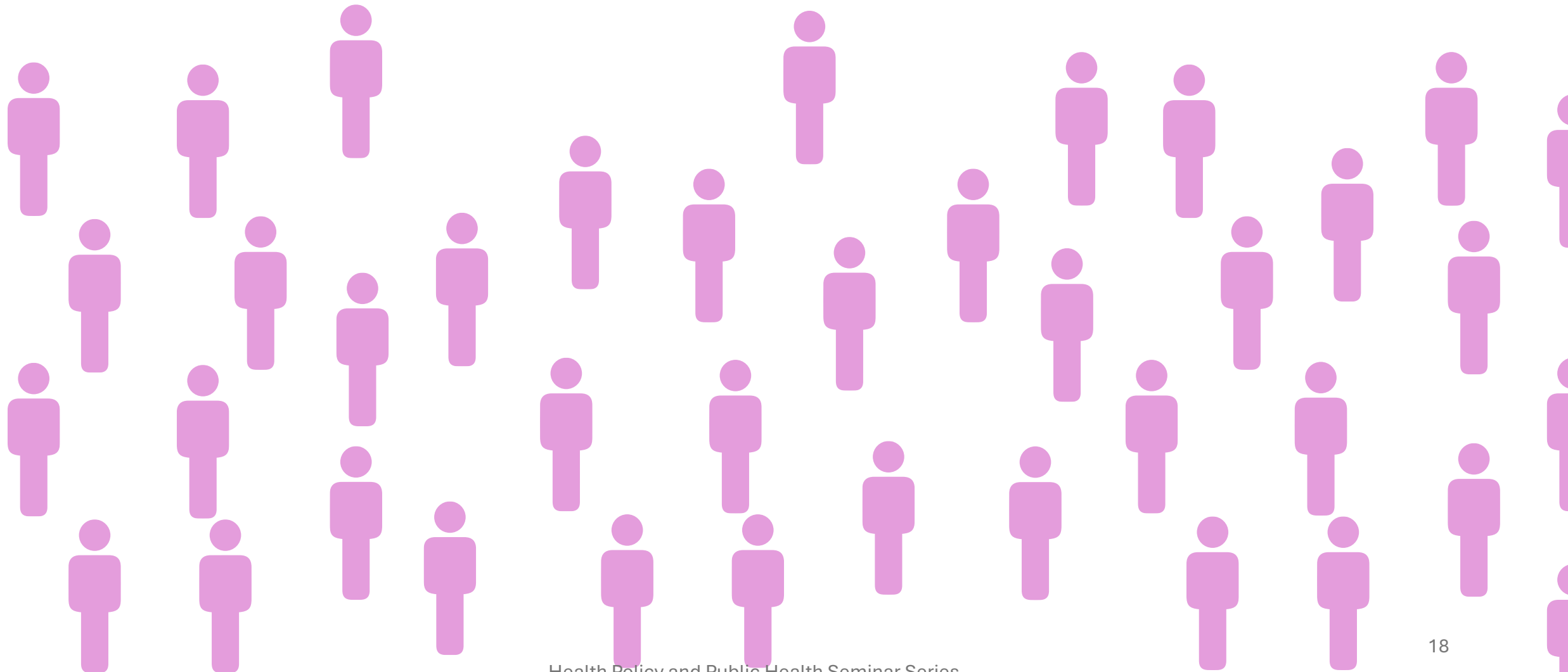


Health Equity

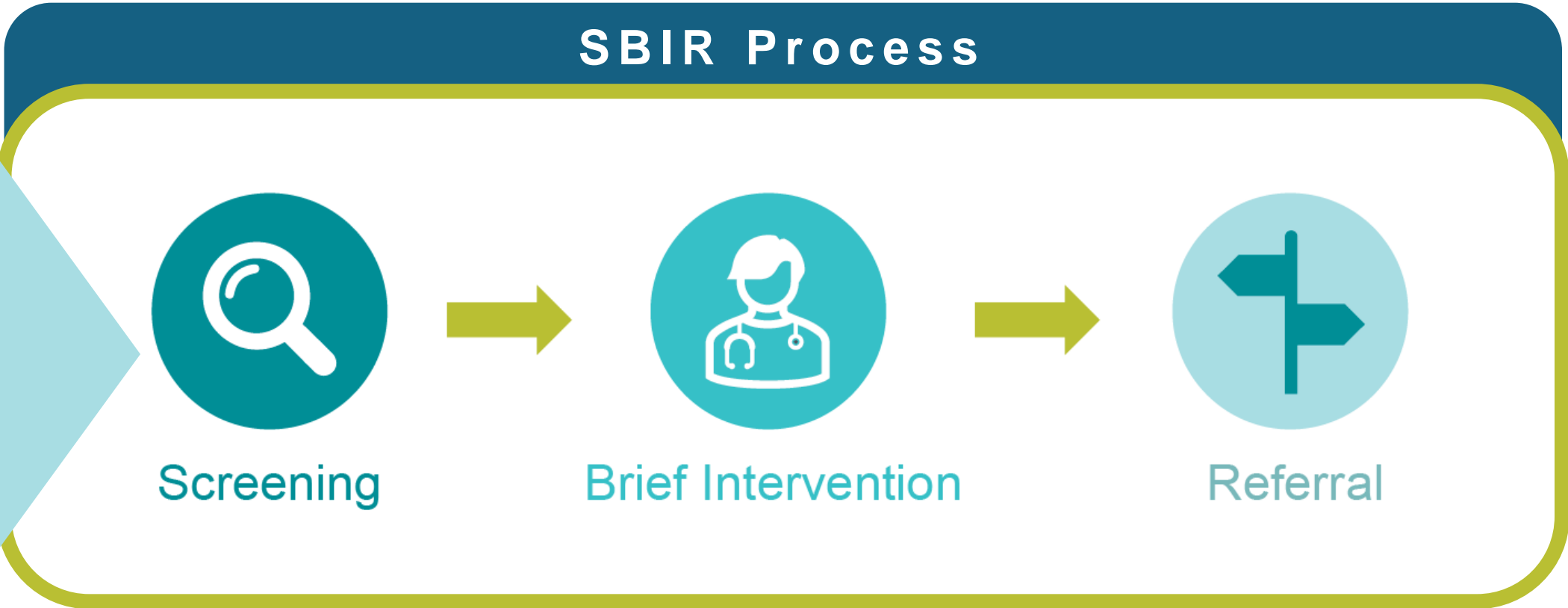
Risk factors disproportionately impact groups that experience health inequities



Opportunity: Integrating Prevention



Screening, Brief Intervention and Referral



Screening

Brief Intervention

Referral

Effective

Feasible

Acceptable

Value

Our Screening, Brief Intervention and Referral Pilot in Alberta

Implementation

90%
Screening

70%
Brief advice

30%
Referral

Acceptability

80%

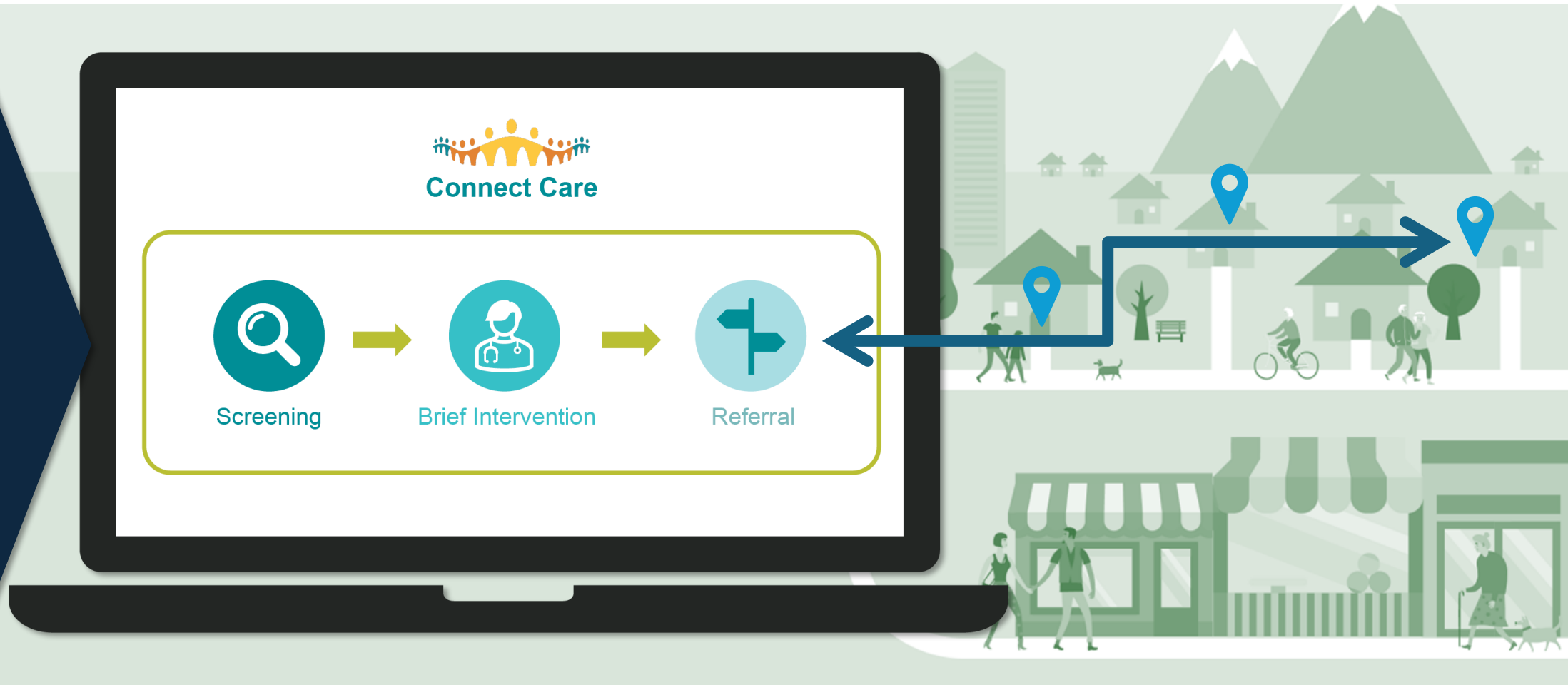
Patients agreed that
the screening
was acceptable

Effectiveness

Knowledge

**Behaviour
change**

Screening, Brief Intervention and Referral in **Connect Care**

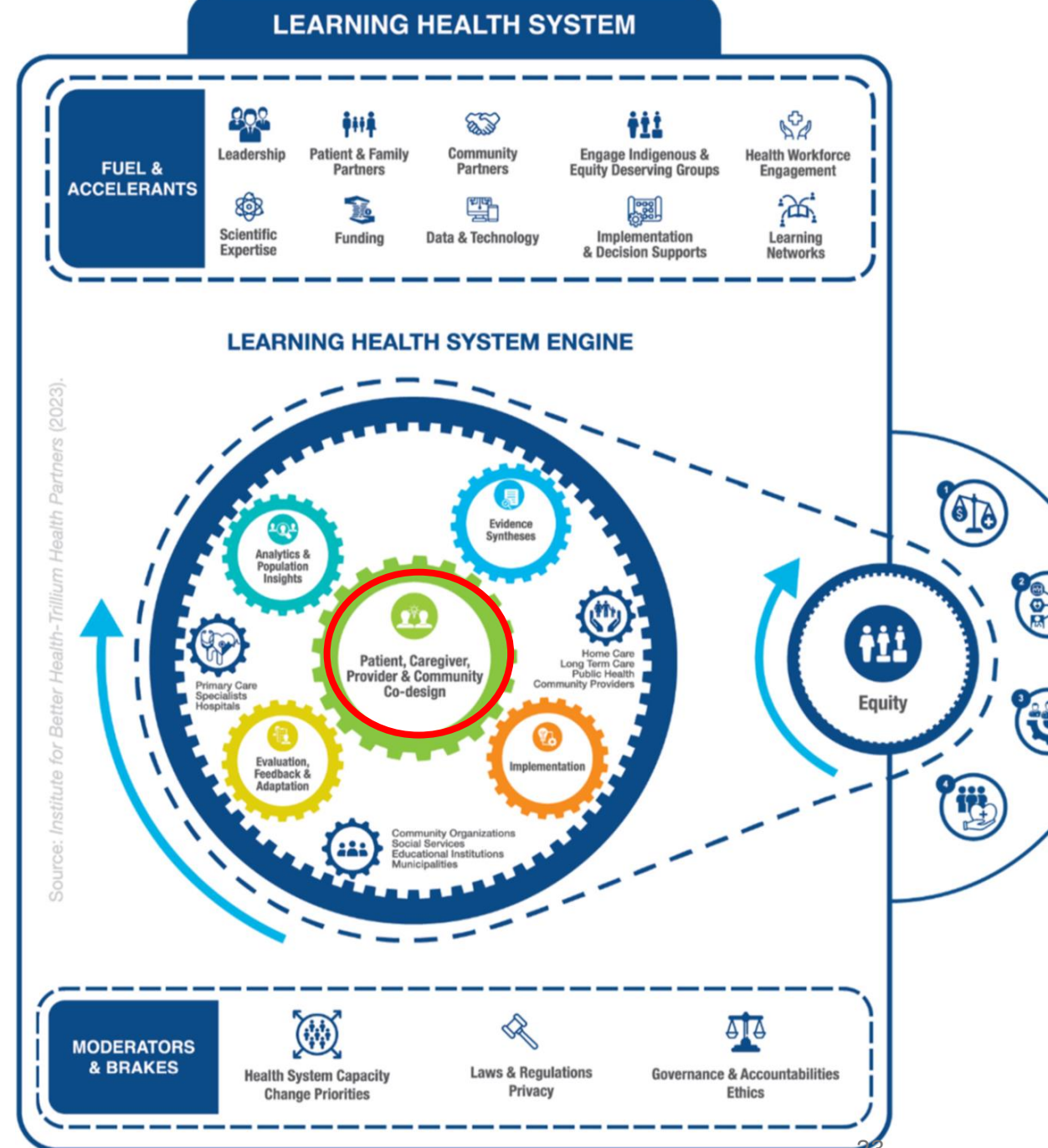


IPiC-Health Builds on Previous Work

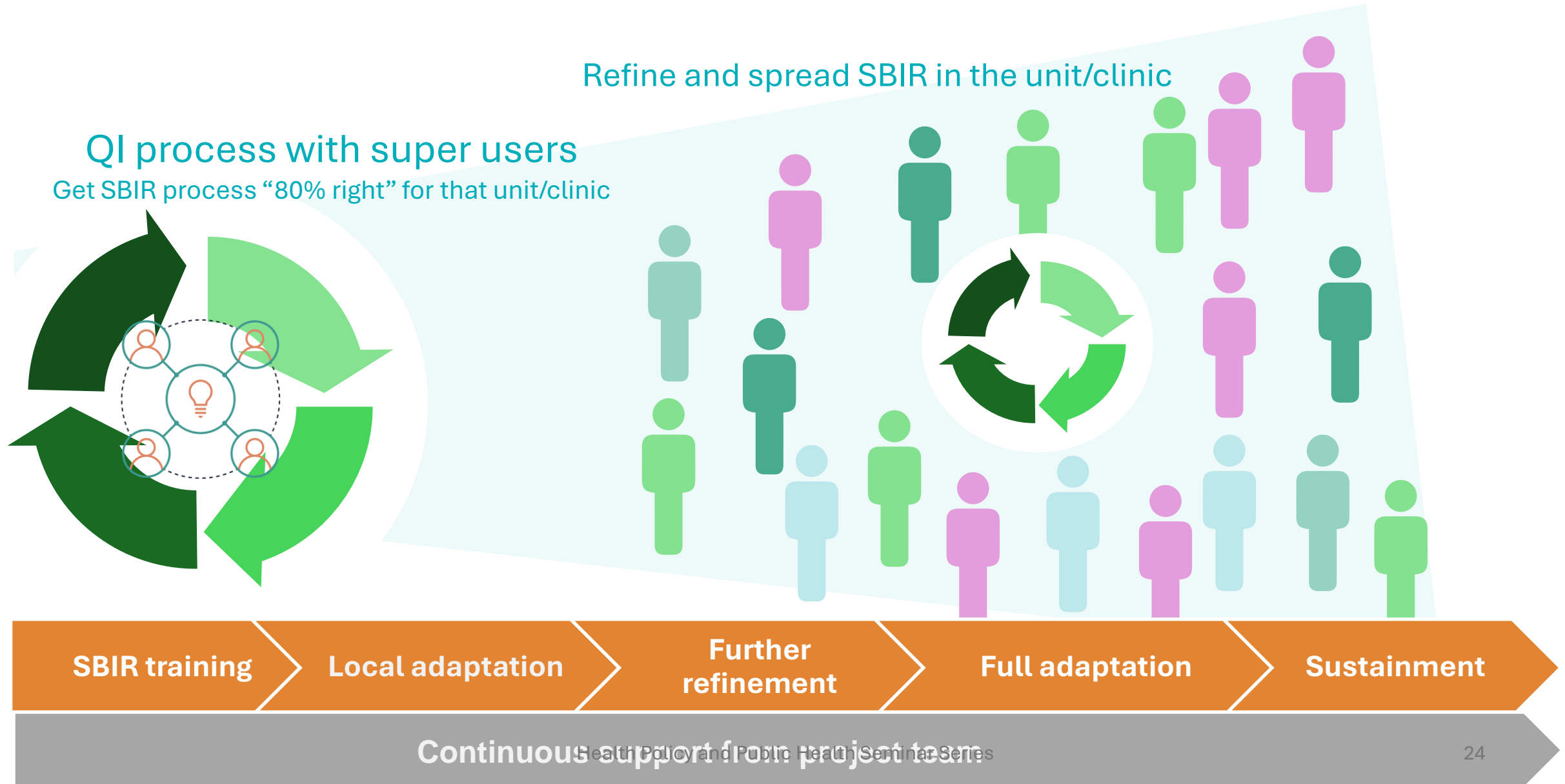


Co-design with those who are and will be influenced

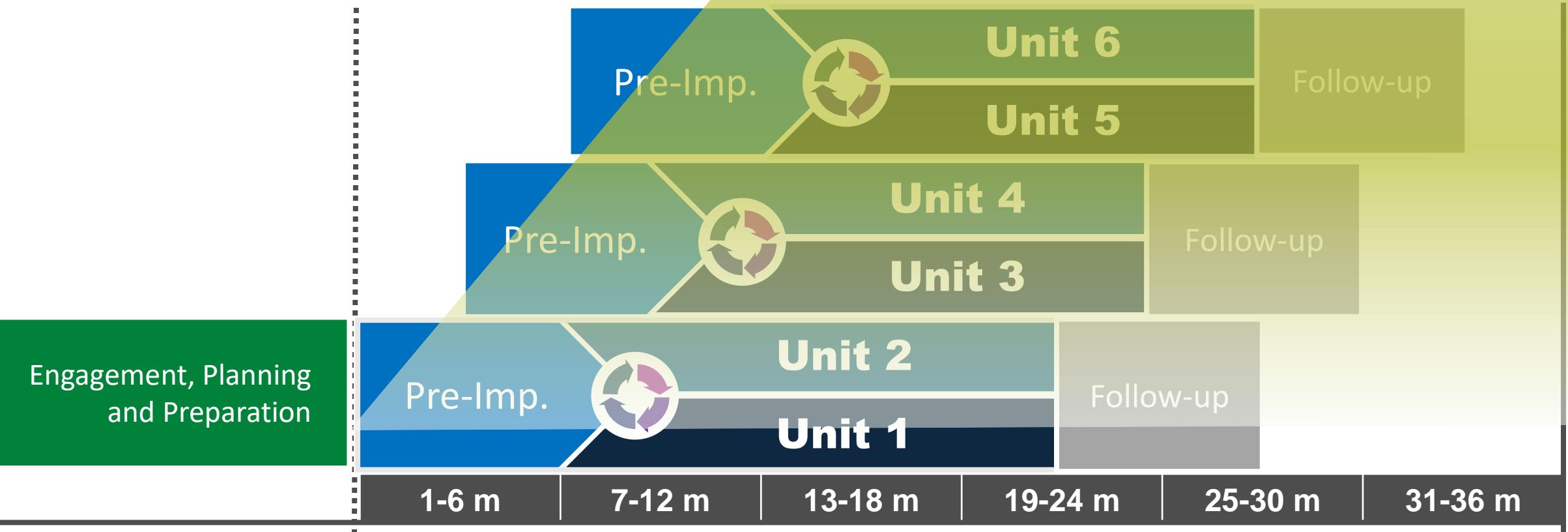
- Clinical, scientific, and operational leaders (SCNs +)
- Patient partners
- Unit leaders, managers, providers
- Program partners within AHS
- Connect Care leadership



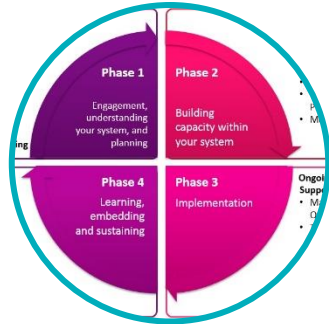
Codesign: Super User Approach



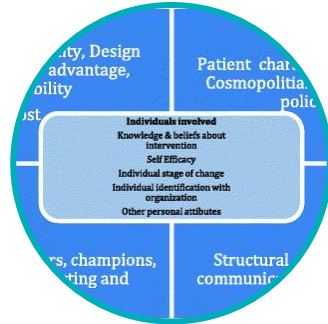
Implementation Process



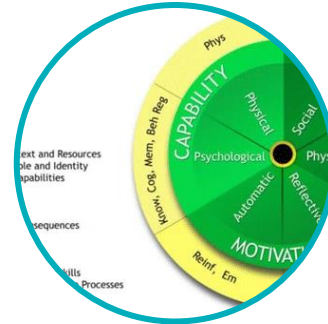
Implementation Science Frameworks



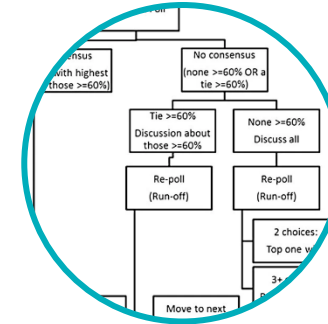
The Quality Implementation Framework (QIF)



The Consolidated Framework for Implementation Research (CFIR)



The Theoretical Domains Framework (TDF)



Expert Recommendations for Implementing Change (ERIC)



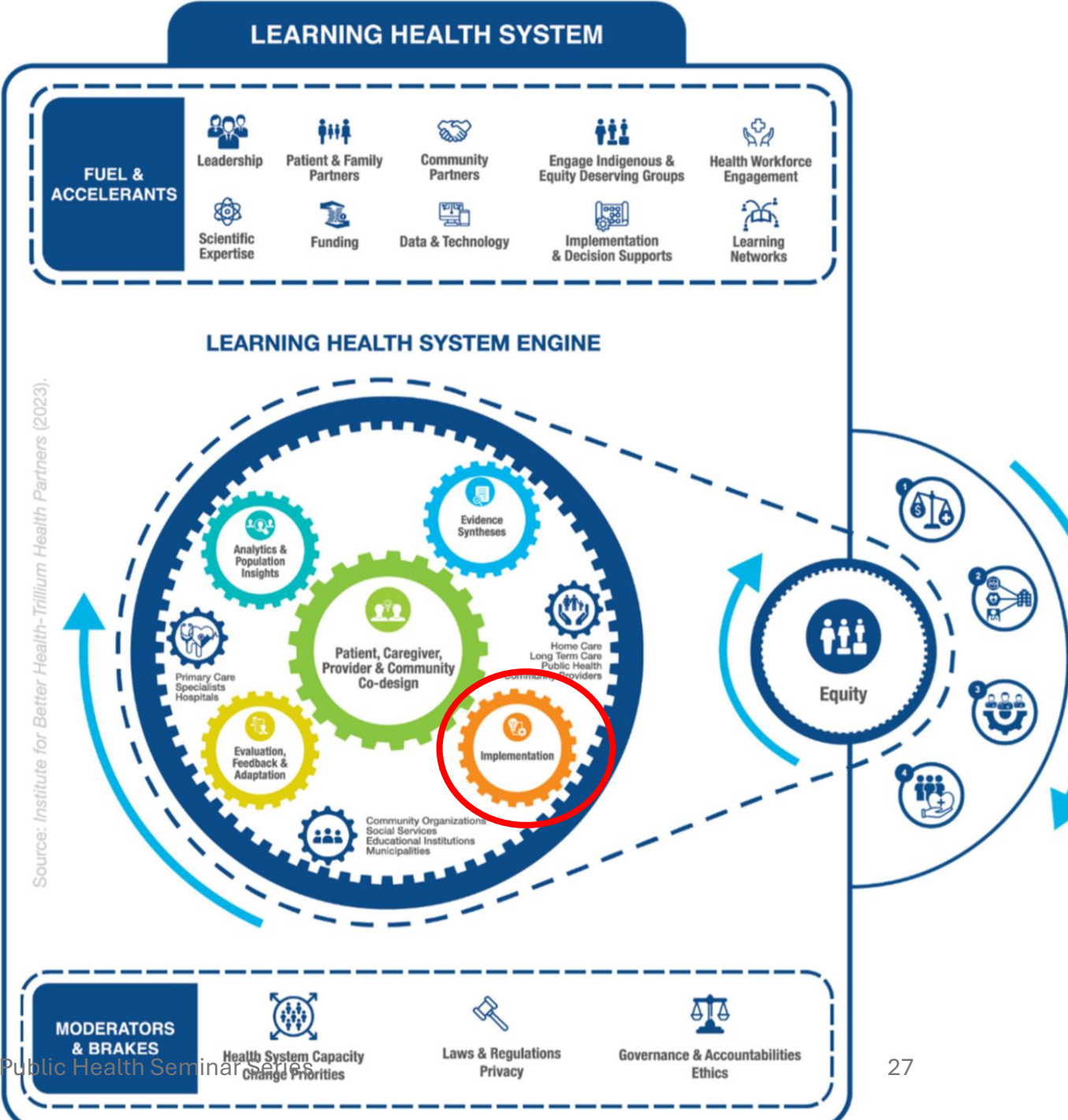
The Behaviour Change Wheel framework (BCW)



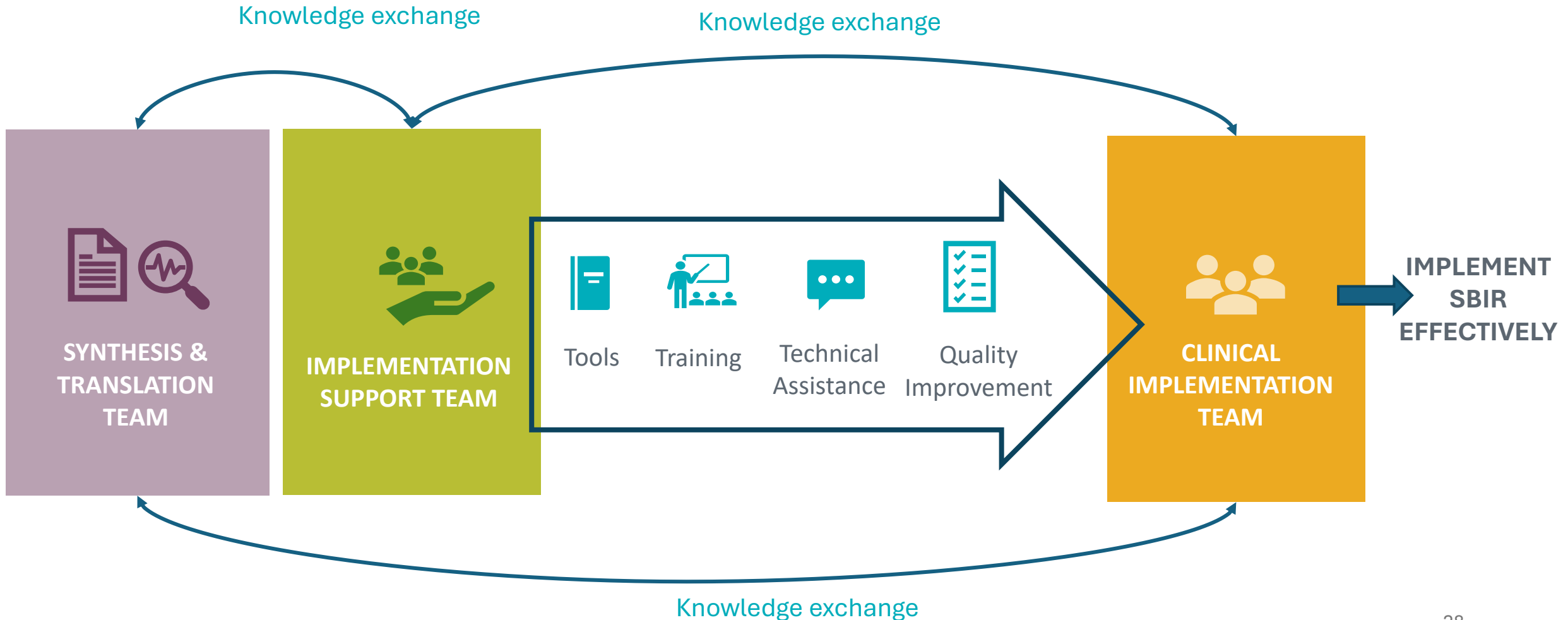
Implementation and Reach Gear

Use of implementation science methods to design implementation

- Successful uptake and reach
- Effectiveness of the intervention



Model for Implementation Support



Implementation Support: Tools



Engagement

- Increase Awareness, Desire, Knowledge of staff
- Brief presentations and interactions with staff



Printed Intervention Implementation Resources

- Implementation guide
- 1 page information sheets, brochures and “cheat” sheets



Implementation Context Assessments

- Understand clinic context, implementation readiness; SBIR training and implementation; and improve readiness,

Implementation Support: Training

Participant Recruitment *

- Recruitment and informed consent
- Risk factor assessment
- Cheat sheet

SBIR Intervention Training **

- Why and how to complete and document SBIR
- Practice sessions
- Patient scenarios
- SBIR Connect Care Set-up guide
- Cheat sheets

* Primarily for our local research coordinators

** adapted to clinic needs*

Implementation Support: Technical Assistance



Designated project staff “point person” for each clinic/unit



Research coordinator undertakes research activities and facilitates implementation



Ongoing communication for implementation, adaptation and sustainability

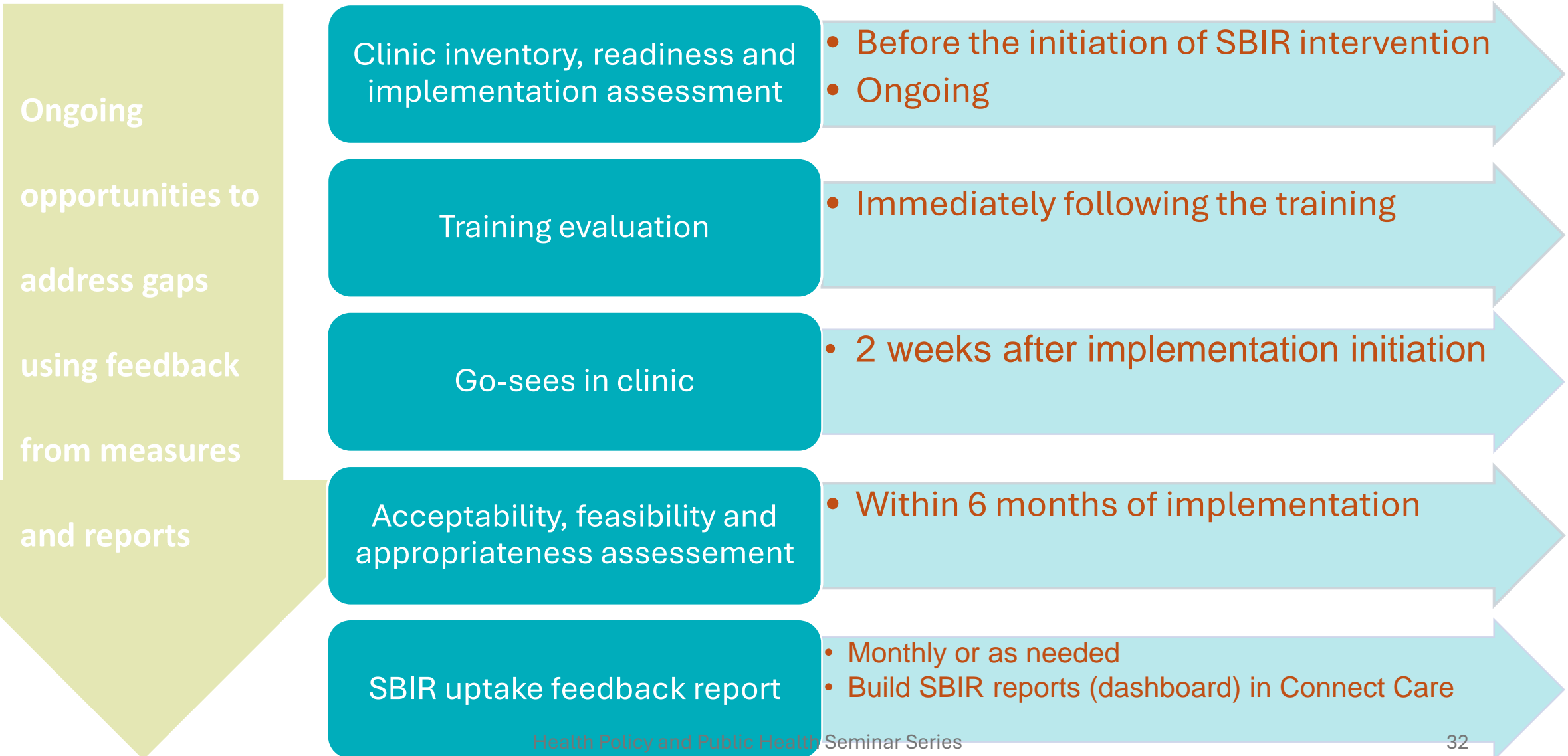


Superusers and clinic champions also supports their colleagues



Touchbase calls for troubleshooting and problem-solving

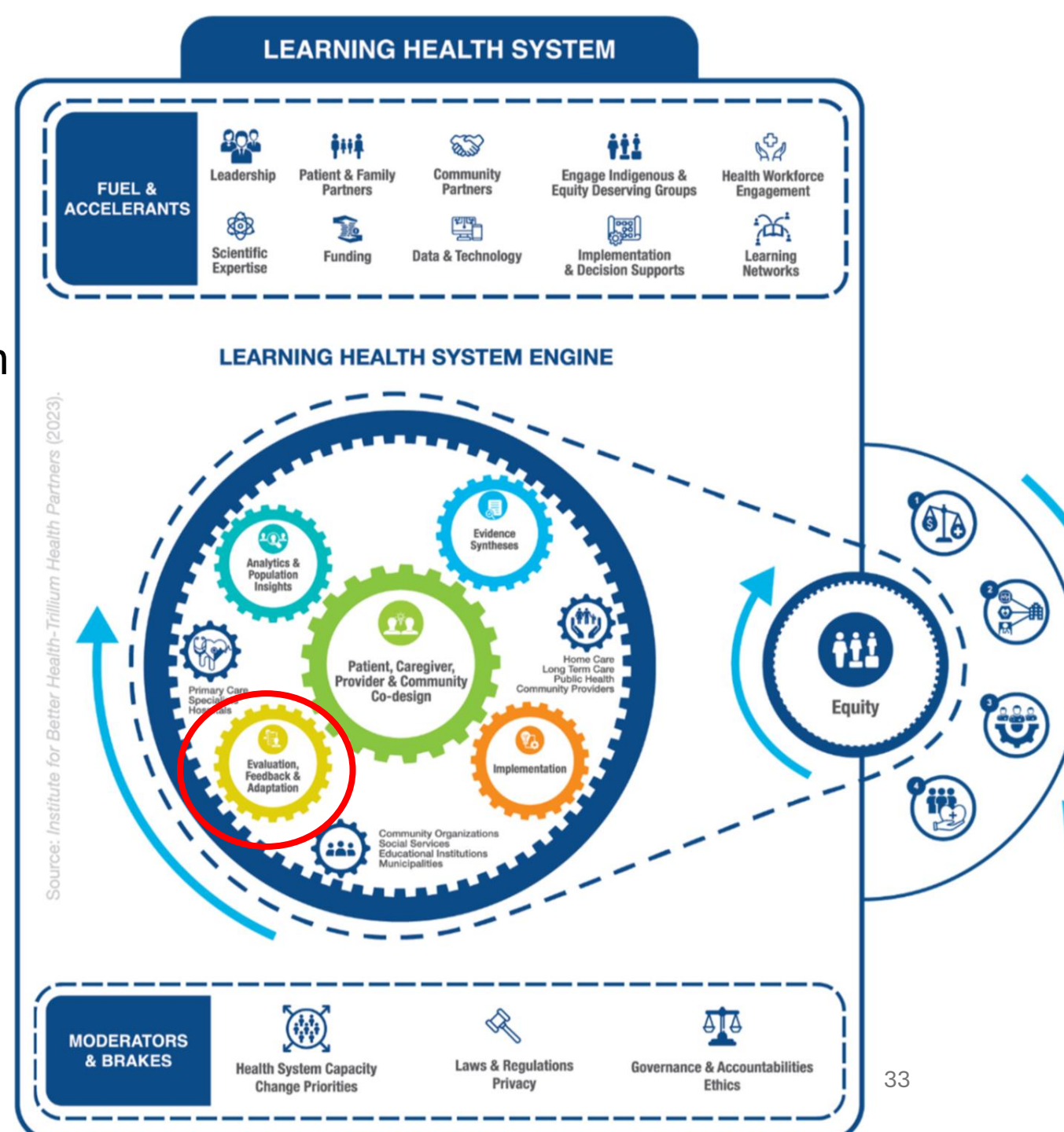
Implementation Support: Quality Improvement



Evaluation, Feedback and Adaption Gear

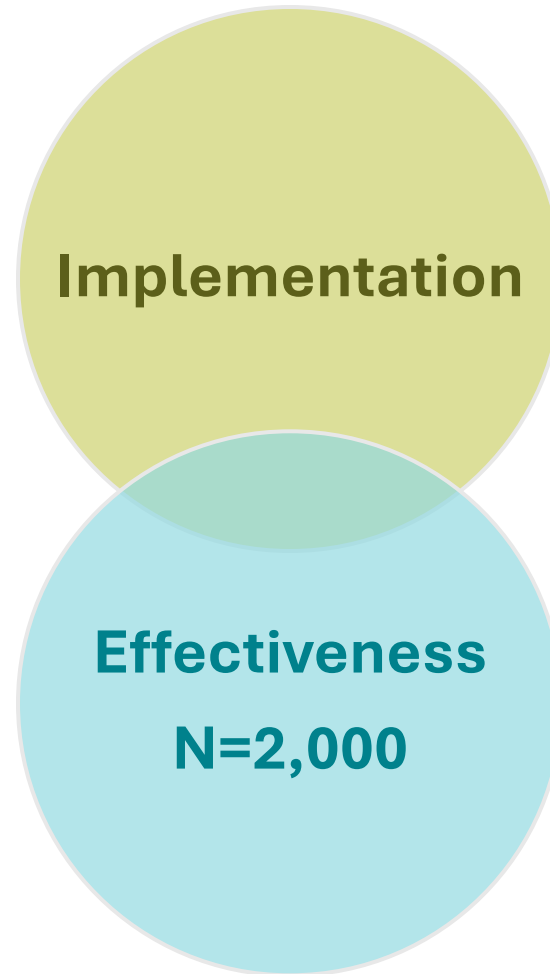
Implementation & Effectiveness Research

- Pragmatic Trial
- Mixed Methods
- Multiple data sources



Research Plan – Primary Outcomes

- Screening & brief intervention delivery
- Implementation barriers/facilitators
- Patient and provider experience



- Patient behavior change on risk factors
- Health care use
- Cost avoidance

Implementation & Effectiveness Research

Increased and sustained risk factor screening and interventions for patients?

Study design:
interrupted time series

Improved patient behaviors pertaining to the 3 risk factors?

Study design:
before and after study with control group

Reduced hospital readmissions and emergency visits among those with these risk factors?

Study design:
before and after study with control group

Explore patients' and providers' experience with SBIR implementation process, barriers and facilitators, and behavior change

- Qualitative and quantitative research methods
- Implementation science approach

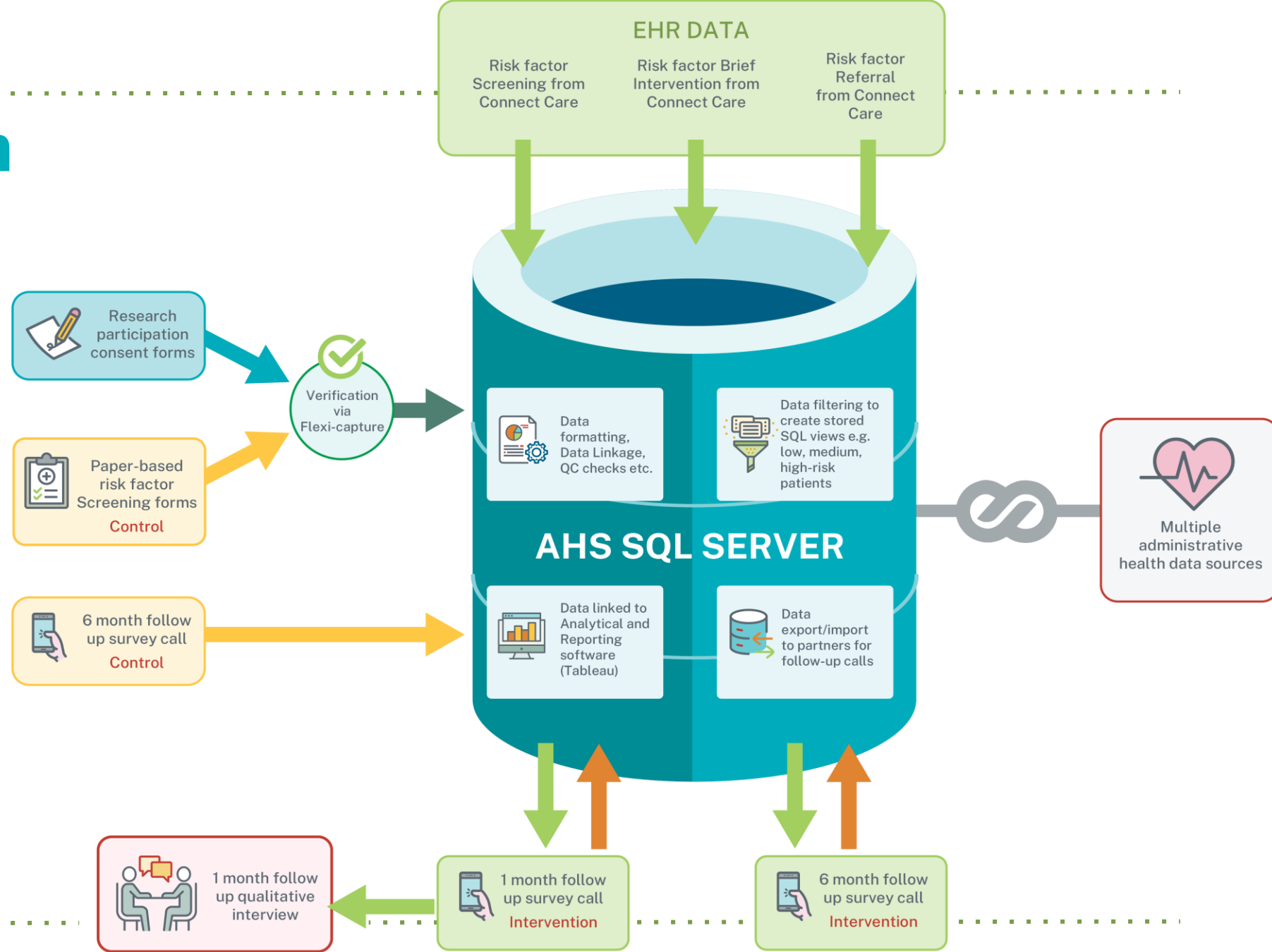
Research Plan – Primary Outcomes



Research Plan

Seamless real-time data management

Fostering rapid learning health system



Progress to Date - Implementation Site and Phase (ongoing)



- Calgary
- Edmonton

Acute Care Sites=3

Trauma, surgery/oncology, geriatric



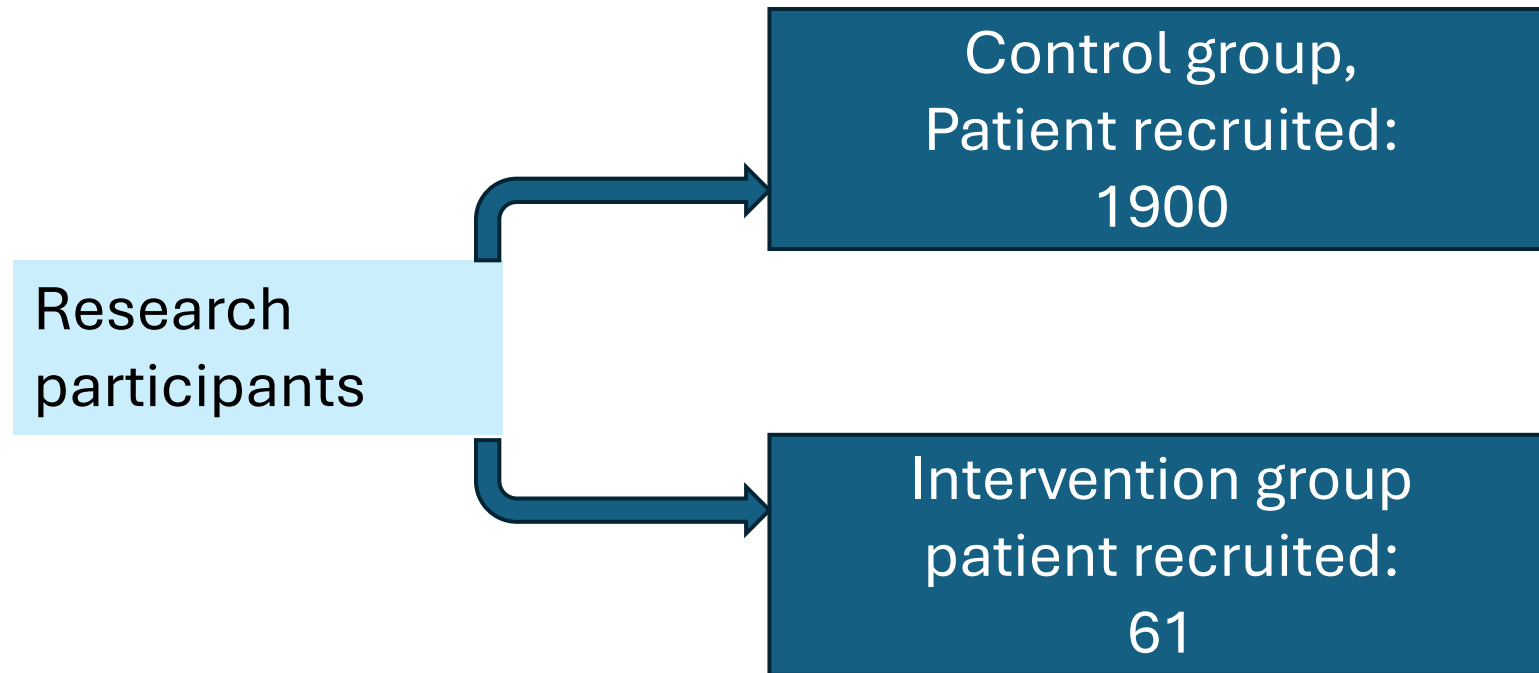
Ambulatory Care Sites=4

General internal medicine, rheumatology

Progress to Date: SBIR intervention uptake

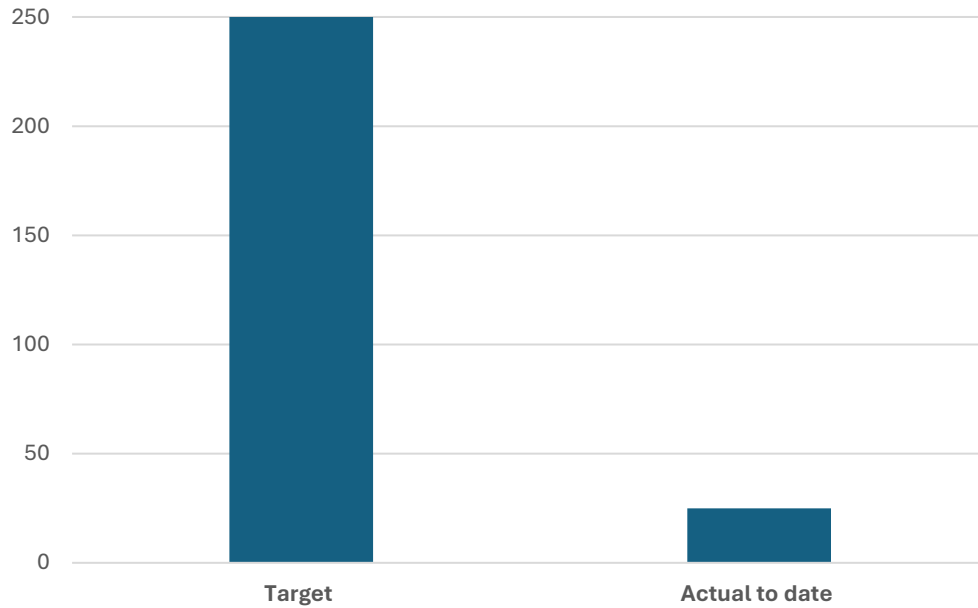
Clinics/units	Screening	Medium/ High Risk	Brief Advice
General Internal Medicine, RRDTTC, Calgary	1141	512	103
Rheumatology Clinic, RRDTTC, Calgary	1542	574	95
FMC 102, Calgary	576	262	57
Kaye Rheumatology Clinic, Edmonton	82	42	35
Rheumatology Clinic, South Health Campus, Calgary	365	220	21
Total	3706	1610	311

Progress to Date - Research Participants Recruitment (ongoing)

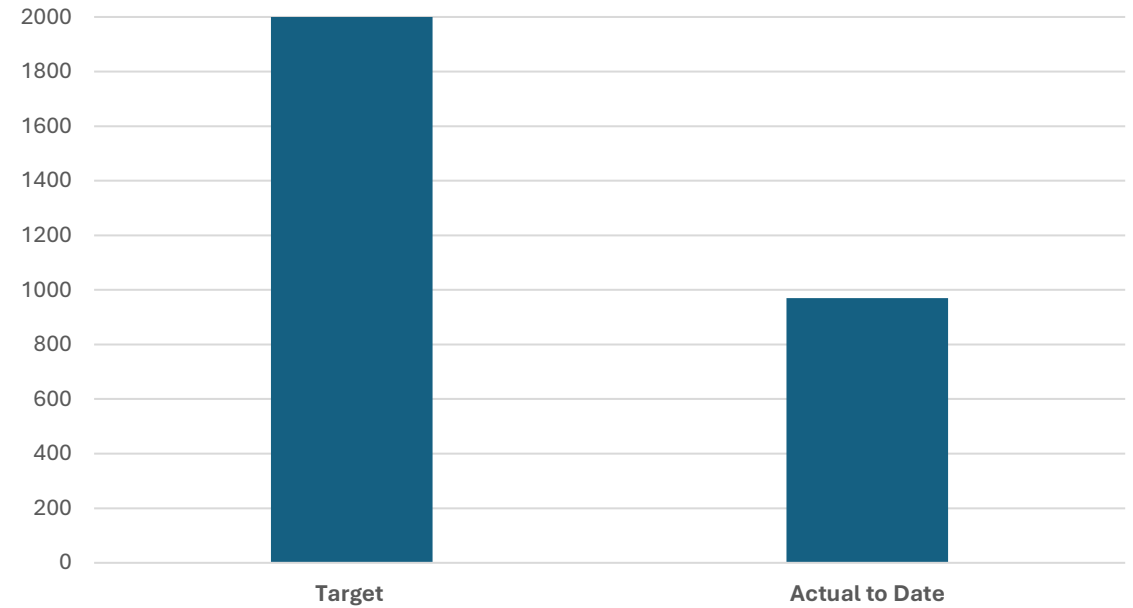


Progress to Date - Research Participant Recruitment (ongoing)

One month patient follow up survey calls

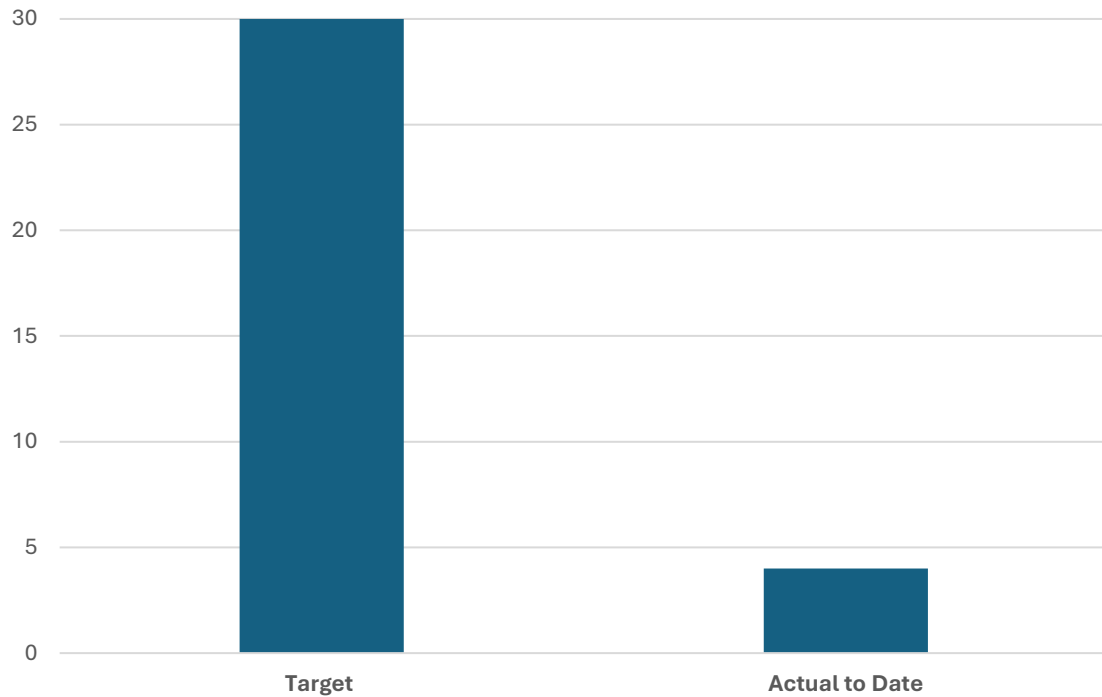


6 months patient follow up survey calls

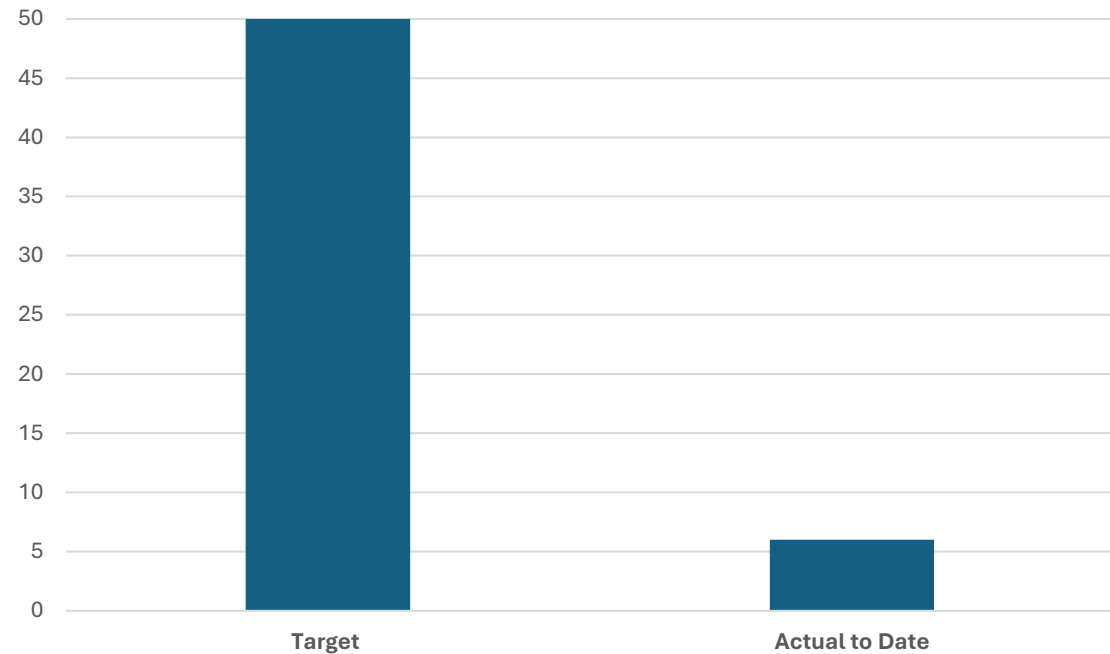


Progress to Date - Research Participant Recruitment (ongoing)

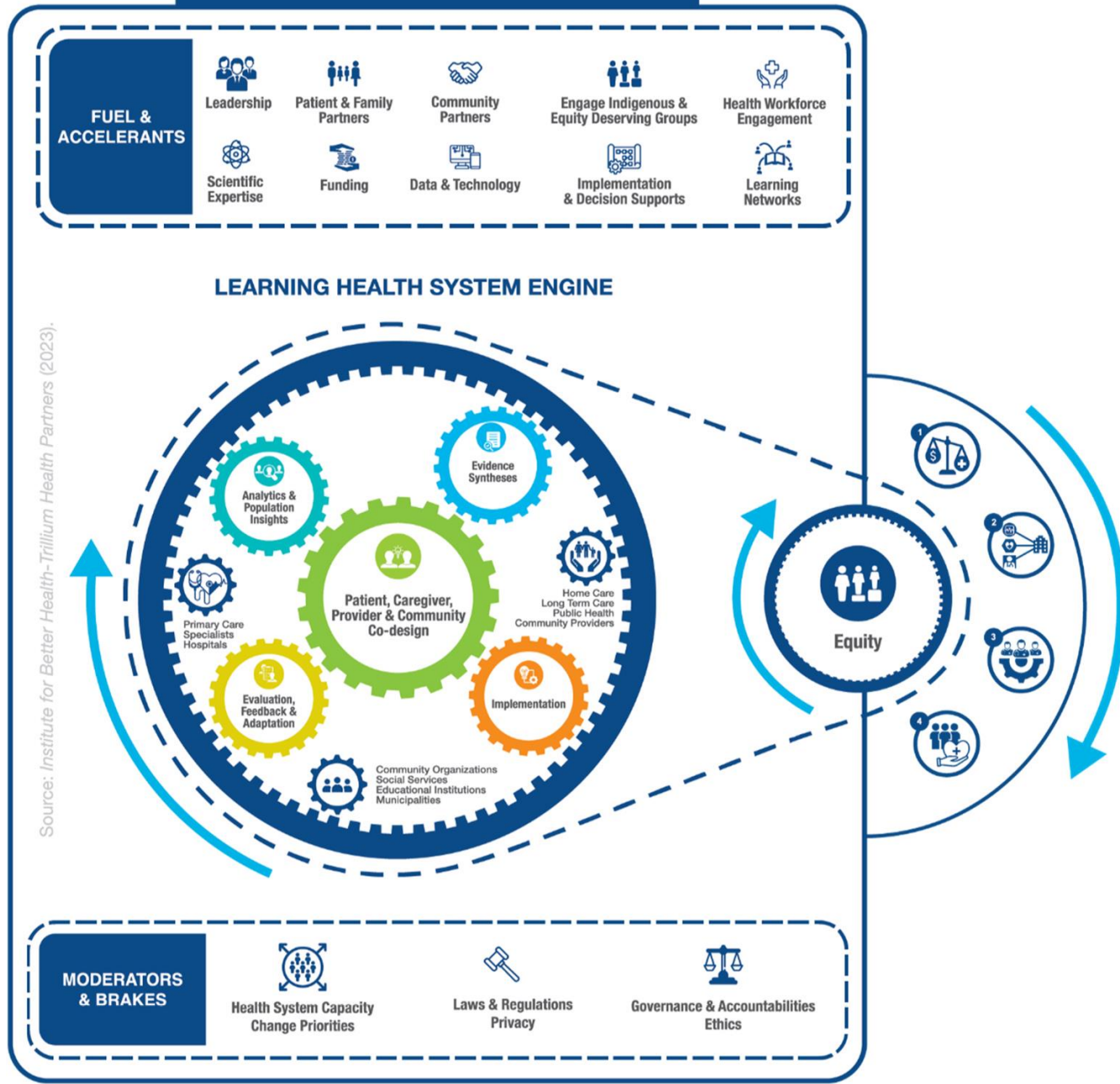
Qualitative in-depth provider interviews



Qualitative in-depth patient interviews



Lesson Learned and a Way Forward



Fuel and Accelerants - Enablers



- Multidisciplinary teams
- Scientific expertise
- Embedded project staff
- Leadership support
- Clinical champions, patients
- Funding for preventive care

Fuel and Accelerants - Enablers

- Implementation process
 - Engagement and relationships
 - Super user approach
 - Training/coaching, tools/resources
 - Rapid assessment, feedback, adaptation
- Data and Technology – multiple data sources including EHR
- Regular project meetings, systematically convert learnings into actions

Lesson Learned - Issues/Barriers

**Implementation
climate and
readiness**

**Low uptake of brief
intervention
component
Slow recruitment**

**Referral programs
not built into the
EHR**

**Documentation
and data issues in
EHR**

**Severity and
urgency of health
conditions**

**EHR System
Updates**

- Delays in IT support
- Delays in reporting back

Next Steps

Engagement and relationships

Continuous learning and finding solutions to mitigate barriers, adaptation

Adapt research participant recruitment strategy

- Data collection and analysis
- Evidence generation and practical implementation guidance
- Inform decision making

Practice and Policy Implications

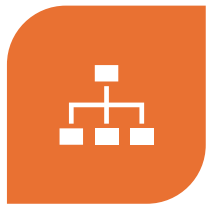
Governance

Priority Setting
Opportunities

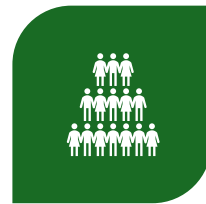
Health System
Learning
Capacity

Practice and Policy Implications- Governance

For prevention-oriented research and innovation and patient care



Set of structures & processes for steering institutional activities



Organizational/senior leaders/health services leaders' commitment



Organizational/senior leaders/health services leaders' influence on front line healthcare providers



Setting expectations for healthcare professionals and healthcare settings



Funding

Practice and Policy Implications - Priority Setting Opportunities

Mechanisms to establish joint learning priorities for such work

Setting indicators/targets
and research and
innovation priorities

Establishing network of
practice for learning

Practice and Policy Implications – Health System Learning Capacity

Investment on healthcare professionals' and leaders' skills and capacity

Clinical environment for continuous learning and quality improvement

- Optimization of use/function of Connect Care for health promotion
- Professional network
- Community resources

Overall, IPiC-Health Project Fosters Learning Health System!



Practical integration of research into health system



Rapid cycle of change to normalize health promotion and disease prevention as routine patient care



Development of evidence and practical guidance to support spread and scale up, and scale out to other social determinants



Advance population health and health equity.

**“An ounce of prevention
can avoid many pounds of
cure.”**

- IPiC Health

A group of people with their hands stacked in a circle, symbolizing teamwork and unity. The image is overlaid with a semi-transparent green filter.

Together,
we do amazing things
every day.

Thank you!