# Provincial Initiative Applying Evidence and Innovation to Improve the Delivery of High Quality and Better Value Acute Pediatric Mental Health Care

A Partnership for Research and Innovation in the Health System (PRIHS) funded initiative

Team Representatives

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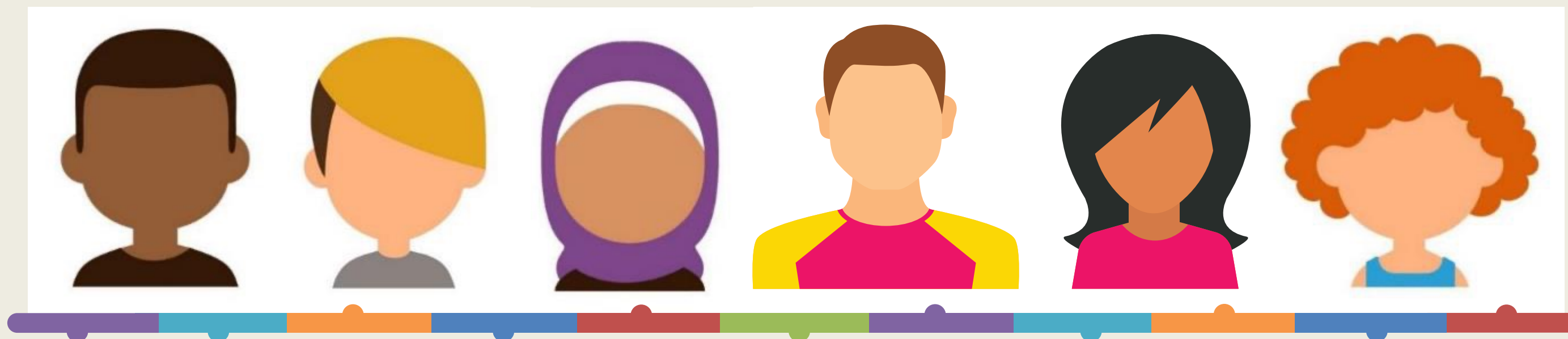
Why change care?

The need to improve ED care

- 2016 SCN project – Helping Kids & Youth in Times of Emotional Crisis
    - Feedback from youth and caregivers regarding unmet needs
    - Significant variation in care received in EDs

The PRIHS innovation and context

- Innovation involves use of clinical tools (ASQ and HEADS-ED) and systems (Choice appointments) in the context of existing resources
    - Innovation is integrated into the health care system
    - Partnerships: SCH and ACH EDs, clinical and operational leads, and several SCNs
- Major components
    - Quality improvement and safety (QIS)
    - Research

PRIHS Initiative Goals

1. Improve patient outcomes and experiences

- We do not routinely use PROMs/PREMs across services

- Use of a learning health system approach integrating data in real-time
    - Improve care delivery
    - Improve patient outcomes
    - Improve patient experiences

2. Provide better value mental health care

- Right care, Right time (and for the Right amount of time), Right people

- Provide choice and introduce shared decision-making

PRIHS Initiative Goals

3. Improve the use of clinical evidence and front-line learning

- Monitor the impacts of changes and learn from them using quality improvement methods

- Develop quality improvement infrastructure

4. Invest in clinicians and learners

- Clinicians: training with clinical tools, audit-and-feedback, professional development (e.g., courses, conferences)

- Graduate students and fellows: multi-disciplinary, applied clinical research experiences and training

Screening for Suicide Risk with Ask Suicide-Screening Questions (ASQ)

- ED accreditation standard for mental health patients

- When done at triage, informs safety measures during ED visit (e.g., in waiting room, bed assignment)

- ASQ has most robust evidence base of all tools for ED and hospital use

ASQ questions

Ask the patient:

1. **In the past few weeks, have you wished you were dead?** ⚪ Yes ⚪ No

2. **In the past few weeks, have you felt that you or your family would be better off if you were dead?** ⚪ Yes ⚪ No

3. **In the past week, have you been having thoughts about killing yourself?** ⚪ Yes ⚪ No

4. **Have you ever tried to kill yourself?** ⚪ Yes ⚪ No
   If yes, how? _____
   _____
   _____
   When? _____
   _____

If the patient answers Yes to any of the above, ask the following acuity question:

5. **Are you having thoughts of killing yourself right now?** ⚪ Yes ⚪ No
   If yes, please describe: _____

ASQ administered to all patients $\geq$ 8 years old

"No" to questions 1-4

- Considered a negative screen

"Yes" to questions 1-4 or refuses to answer

- Considered a positive screen

- Question 5 is asked to assess acuity:

  - "Yes": acute positive screen (**imminent** risk identified)

  - "No": non-acute positive screen (potential risk identified)

HEADS-ED

* The HEADS-ED is a screening tool and is not intended to replace clinical judgment. Please read the terms and conditions of use.

Age

Language — No preference

Gender — --

Autism spectrum / Developmental disability — --

Prenatal exposure to alcohol / FASD — --

	0 No action needed	**1** Needs action but not immediate / moderate functional impairment	**2** Needs immediate action / severe functional impairment	
Home sample questions	Supportive	Conflicts	Chaotic / Dysfunctional	Notes

How does your family get along with each other?
Optional probes: Child Protection Issues, Family Violence

Notes

Education, employment sample questions	On track	Grades dropping / or absenteeism	Failing / not attending	Notes
Activities and peers sample questions	No change	Reduction in activities / increased peer conflicts	Increasingly to fully withdrawn / significant peer conflicts	Notes
Drugs and alcohol sample questions	No or infrequent	Occasional	Frequent / daily	Notes
Suicidality sample questions	No thoughts	Ideation	Plan or gesture	Notes
Emotions, behaviours, thought disturbance sample questions	Mildly anxious / sad / acting out	Moderately anxious / sad / acting out	Significantly distressed / unable to function / out of control / bizarre thoughts / significant change in functioning	Notes
Discharge or current resources sample questions	Ongoing / well connected	Some / not meeting needs	None / on wait list / non-compliant	Notes

www.heads-ed.com

- Well studied, valid and reliable tool

- Clinician organizes assessment by domain

- No prescriptive questions (but there are suggestions)

- Clinician assigns a score/action level to each domain

- Scores are summed to generate a total score (0-14)

- Scores are used to:

  - Guide communication on priority issues

  - Facilitate clinical decision-making

  - Guide resource use at disposition
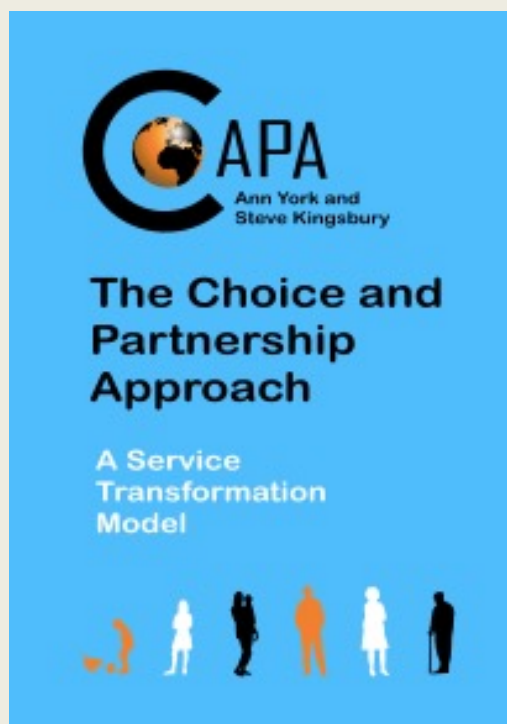
Choice Appointment

Part of the Choice and Partnership Approach (CAPA), a model used in Canada, the UK, Australia and New Zealand to guide mental health services delivery.

Choice Appointments are being offered:

1. To children/youth who screen negative on the ASQ (who may not see mental health provider in ED)

2. At ED discharge to connect children/youth who do not have sufficient mental health resources and/or have urgent needs that need addressing

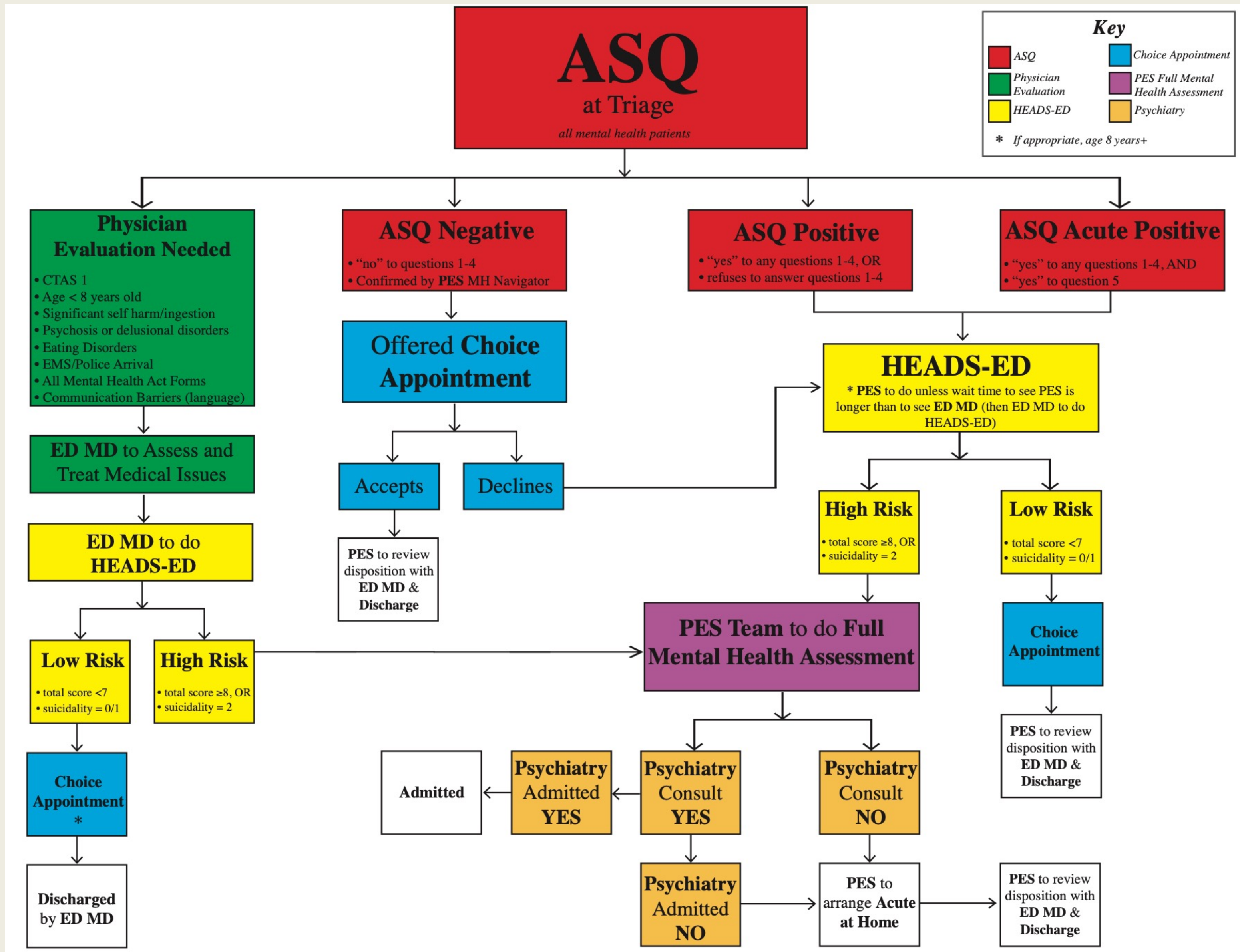| Snapshot of family wait times to Choice to date	
< 24 hours	30%
24-48 hours	30%
48-96 hours	24%
> 96 hours	16%

Bundle Implementation

ACH and SCH Workflows

- Created in partnership with clinical and operational leads

- Modified using feedback from health care providers and families, and quality improvement data
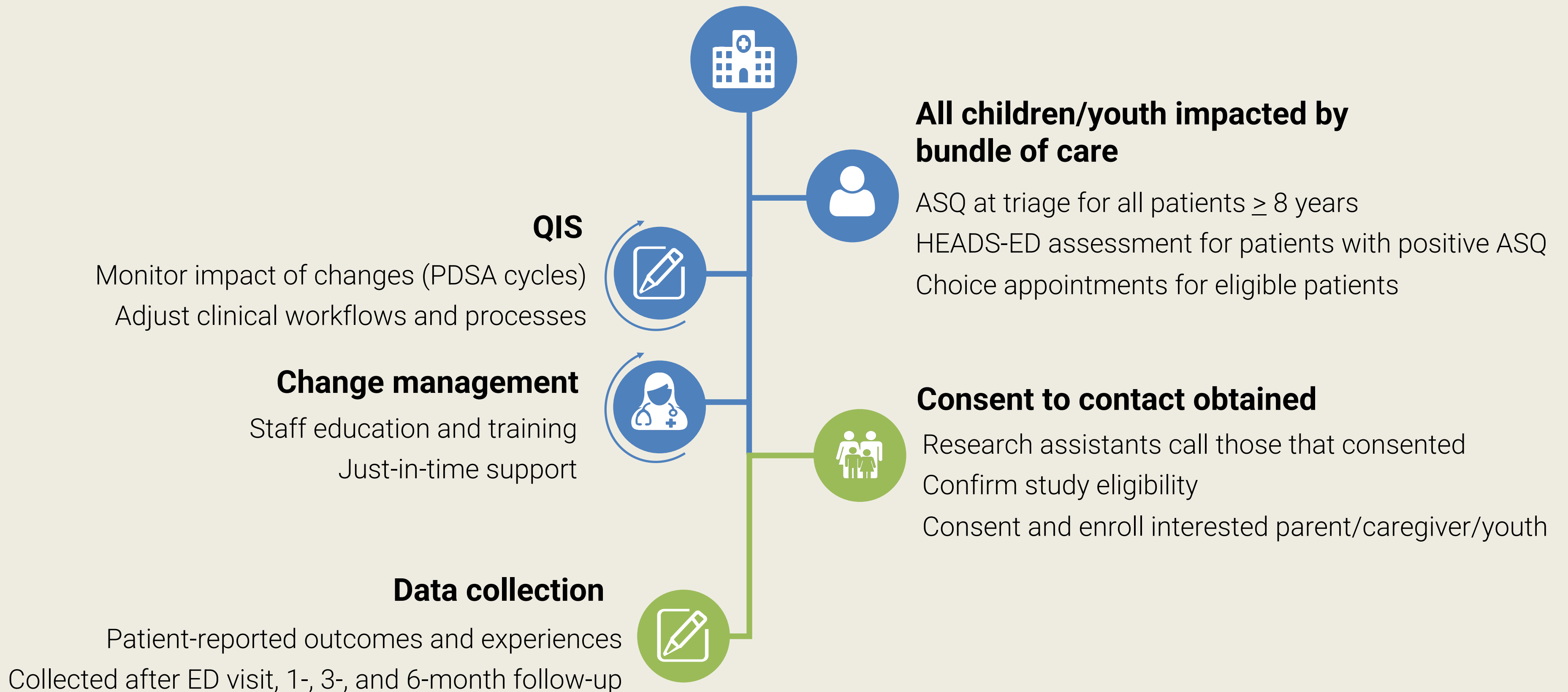
Connect Care

- ASQ and HEADS-ED

- Choice appointment booking system

ACH Workflow

ASQ
at Triage
all mental health patients

Key

ASQ		Choice Appointment	
Physician Evaluation		PES Full Mental Health Assessment	
HEADS-ED		Psychiatry	

* *If appropriate, age 8 years+*

Physician Evaluation Needed
- CTAS 1
- Age < 8 years old
- Significant self harm/ingestion
- Psychosis or delusional disorders
- Eating Disorders
- EMS/Police Arrival
- All Mental Health Act Forms
- Communication Barriers (language)

ASQ Negative
- "no" to questions 1-4
- Confirmed by **PES** MH Navigator

ASQ Positive
- "yes" to any questions 1-4, OR
- refuses to answer questions 1-4

ASQ Acute Positive
- "yes" to any questions 1-4, AND
- "yes" to question 5

ED MD to Assess and Treat Medical Issues

Offered Choice Appointment

HEADS-ED
* PES to do unless wait time to see PES is longer than to see **ED MD** (then ED MD to do HEADS-ED)

ED MD to do HEADS-ED

Accepts

Declines

High Risk
- total score ≥8, OR
- suicidality = 2

Low Risk
- total score <7
- suicidality = 0/1

PES to review disposition with **ED MD & Discharge**

Low Risk
- total score <7
- suicidality = 0/1

High Risk
- total score ≥8, OR
- suicidality = 2

PES Team to do Full Mental Health Assessment

Choice Appointment

Choice Appointment *

PES to review disposition with **ED MD & Discharge**

Discharged by ED MD

Admitted

Psychiatry Admitted YES

Psychiatry Consult YES

Psychiatry Consult NO

Psychiatry Admitted NO

PES to arrange Acute at Home

PES to review disposition with **ED MD & Discharge**

Overview of QIS and Research Flows

ED visit for mental health care

All children/youth impacted by bundle of care

ASQ at triage for all patients $\geq$ 8 years

HEADS-ED assessment for patients with positive ASQ

Choice appointments for eligible patients

QIS

Monitor impact of changes (PDSA cycles)

Adjust clinical workflows and processes

Change management

Staff education and training

Just-in-time support

Consent to contact obtained

Research assistants call those that consented

Confirm study eligibility

Consent and enroll interested parent/caregiver/youth

Data collection

Patient-reported outcomes and experiences

Collected after ED visit, 1-, 3-, and 6-month follow-up

Quality Improvement and Safety (QIS)

- Address implementation issues

- Ensure involvement of AHS leadership

- Allocate time and resources to monitor progress and support changes in care

Approach: Driver diagrams, PDSA cycles + change management strategies (ADKAR) reviewed with clinical and operational leads
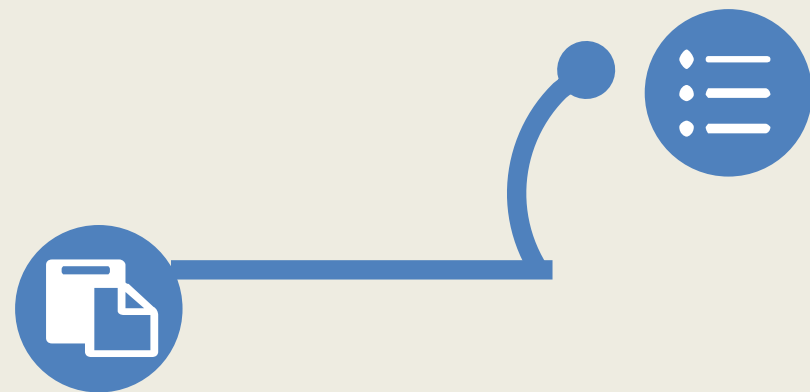
Leadership: Jennifer Thull-Freedman

Core QIS Team: Postdoctoral fellow in QIS, ACH and SCH QIS consultants, ACH ED RNs

Example of QIS Process in EDs

Clinical Care Target: 80% of children/youth presenting with a mental health complaint will be screened for suicide risk at triage with the ASQ

QIS Consultant reviews medical records of patients with an ED mental health visit

PDSA Cycle	Stollery Children's Hospital		Alberta Children's Hospital		Balancing measure
	% patients who received ASQ	% change	% patients who received ASQ	% change	No. LWBS patients with ASQ acute positive screen
May 17 – May 20, 2021	75% (21/28)	--	79% (30/38)	--	0
May 21 – May 28, 2021	84% (43/51)	+9%	67% (50/75)	-12%	2
May 29 – June 3, 2021	66% (29/44)	-18%	75% (43/56)	+8%	1

QIS Consultant:

1) Root cause analysis (e.g., specific visit types missed? redeployed triage nurses unaware?)
2) Just in time support at triage desk for ASQ use

Unit Manager:

1) ASQ reminders during huddle

Patient Care Manager:

1) Discussion with legal regarding documentation needed for LWBS

Team:

1) Track monthly numbers of LWBS, discuss how to potentially reduce LWBS

Research Study

**Purpose:** To evaluate impact of bundle on children, families, and the health care system

Design: Prospective, pragmatic, 29-month interventional quasi-experimental study with interrupted time-series analysis

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Primary Outcome: Child/youth wellbeing 1-month after the ED visit

Secondary Outcomes:
- Family functioning
- Child/youth wellbeing at 3- and 6-months
- Satisfaction with ED care
- Health system outcomes: hospital admissions, length of ED stays, ED re-visits, costs

Timeline
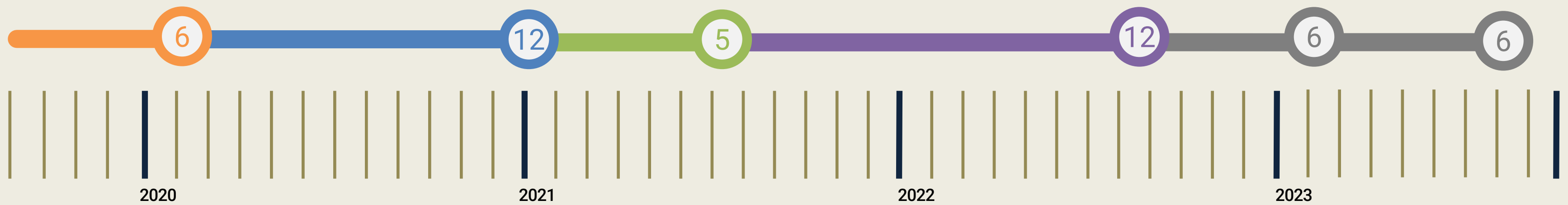
○ **TIME (MONTHS)**

■ **PREPARATION (CLINICAL WORKFLOWS, TRAINING, QIS PLAN, STUDY MANUALS)**

■ **PRE-IMPLEMENTATION (BASELINE DATA COLLECTION)**

■ **IMPLEMENTATION (BUNDLE INTRODUCTION WITH QIS AND CHANGE MANAGEMENT)**
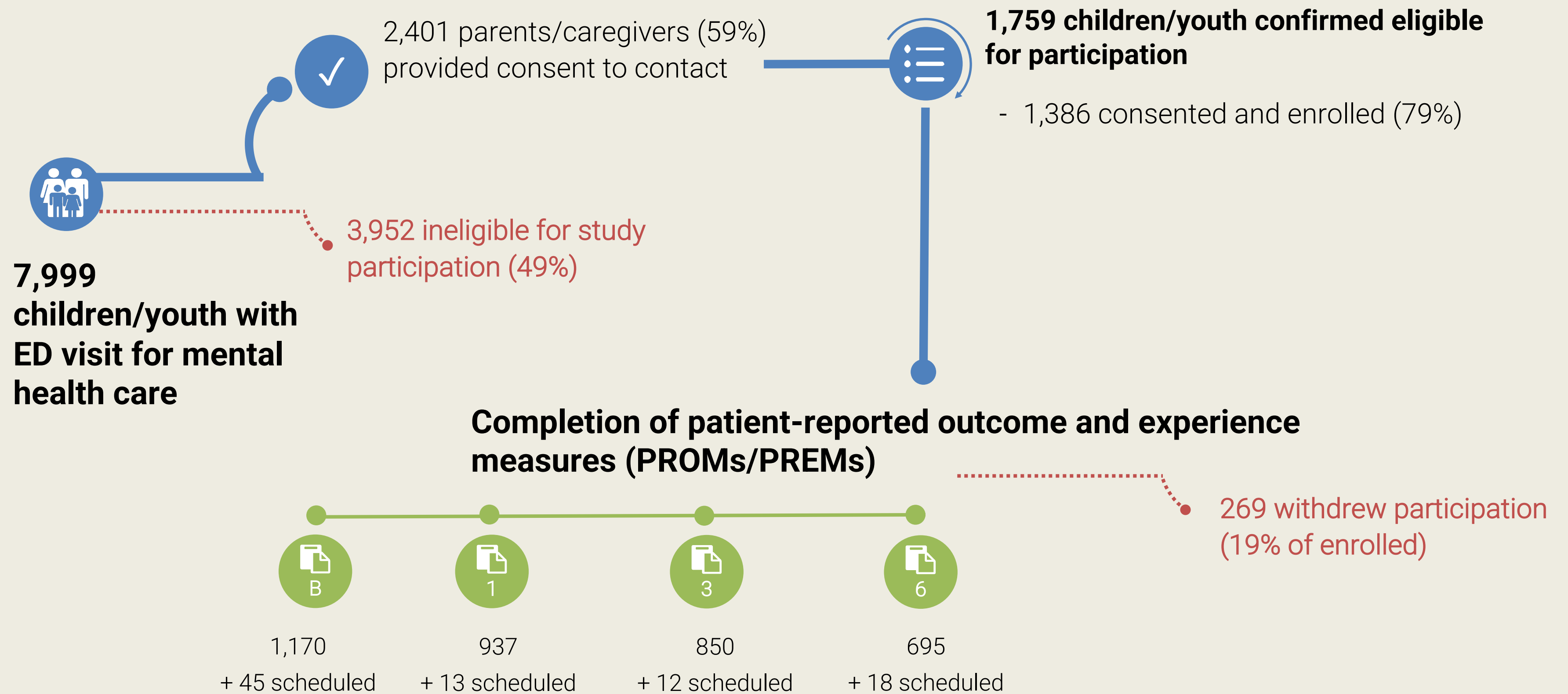
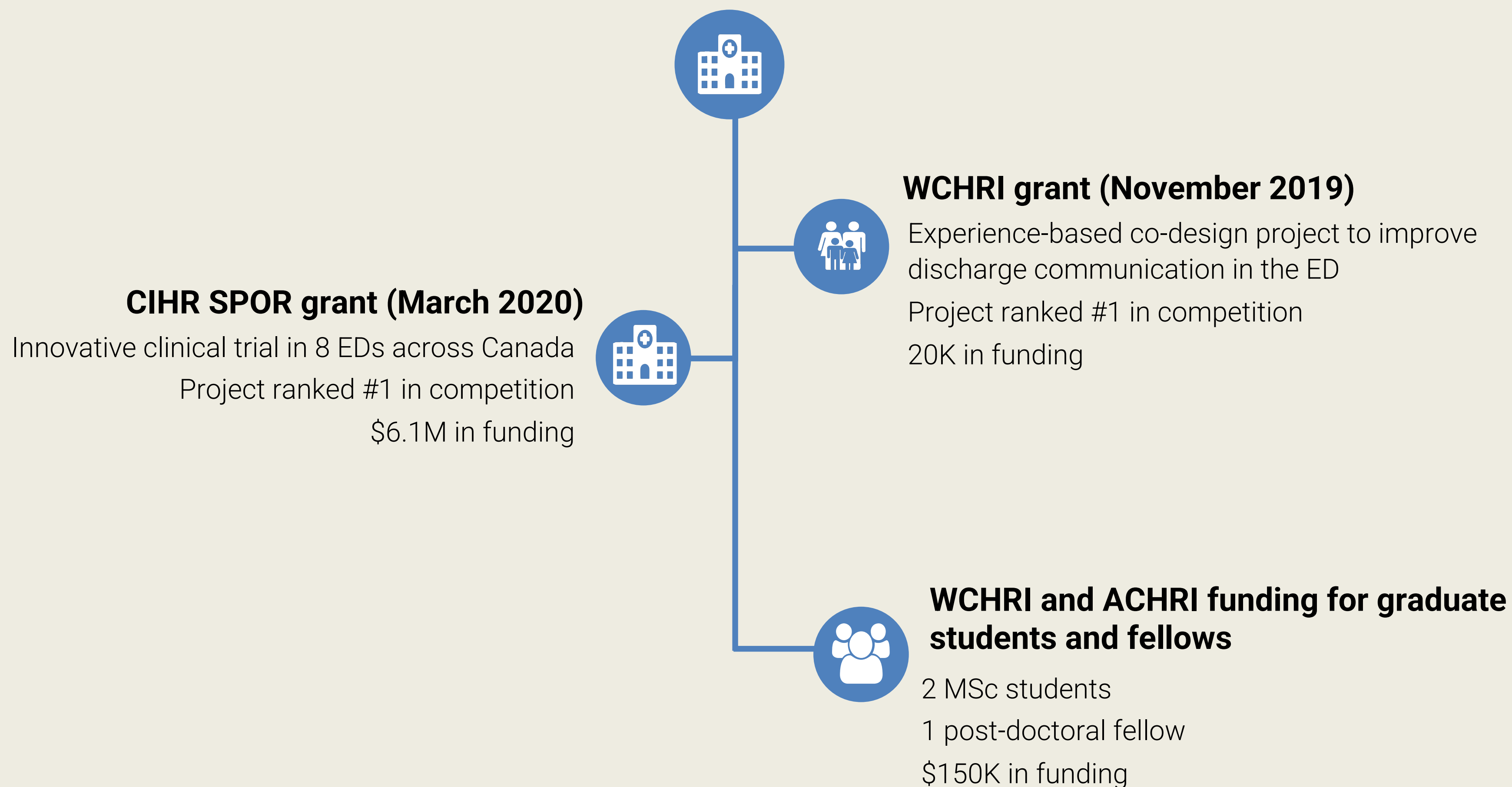■ **POST-IMPLEMENTATION PERIOD (POST-BUNDLE DATA COLLECTION)**

■ **FOLLOW-UP DATA COLLECTION (6 MONTH OUTCOMES), DATA ANALYSIS & KT**

Study Enrolment (as of October 12ᵗʰ)

7,999 children/youth with ED visit for mental health care

2,401 parents/caregivers (59%) provided consent to contact

3,952 ineligible for study participation (49%)

1,759 children/youth confirmed eligible for participation

- 1,386 consented and enrolled (79%)

Completion of patient-reported outcome and experience measures (PROMs/PREMs)

269 withdrew participation (19% of enrolled)

B	1	3	6
1,170	937	850	695
+ 45 scheduled	+ 13 scheduled	+ 12 scheduled	+ 18 scheduled

Impacts Beyond PRIHS

PRIHS initiative launched February 2020
at Alberta and Stollery Children's Hospitals

WCHRI grant (November 2019)

Experience-based co-design project to improve discharge communication in the ED

Project ranked #1 in competition

20K in funding

CIHR SPOR grant (March 2020)

Innovative clinical trial in 8 EDs across Canada

Project ranked #1 in competition

$6.1M in funding

WCHRI and ACHRI funding for graduate students and fellows

2 MSc students

1 post-doctoral fellow

$150K in funding

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Project Clinical and Operational Leadership

From Edmonton Zone

- **Bruce Wright**, pediatric emergency physician (and past Chief), Stollery Emergency Department

- **Angela Coulombe**, Program Manager, Community Mental Health Services, Children, Youth, and Families, Addiction and Mental Health

- **Karen Bozocea**, Program Manager, Addiction and Mental Health

- **Teresa Lightbody**, Quality Improvement, Evaluation and Decision Support, Child and Adolescent Mental Health

- **Kaitlyn Hill**, Care Manager, Children, Youth, and Families, Addiction and Mental Health

- **Amanda DeGuerre**, Care Manager, Community Assertive Services & Mental Health Crisis Team

- **Stephanie McConnell**, Clinical Nurse Educator, Children, Youth, and Families, Addiction and Mental Health

- **Matthew Morrissette**, Child and Adolescent Psychiatrist, Stollery Children's Hospital

- **Jennifer Woods**, Patient Care Manager, UAH Emergency & Stollery Emergency Departments

- **Shelley Groves-Johnston**, Unit Manager, UAH Emergency & Stollery Emergency Departments

- **Geri St. Jean**, Clinical Nurse Educator, Emergency

- **Tracy Palmquist**, Director, Children, Youth & Families, Addiction & Mental Health at Alberta Health Services

From Calgary Zone

- **Carol Coventry**, Care Manager, Unit 23 Child and Adolescent Mental Health

- **Jennifer Thull-Freedman**, pediatric emergency physician (and past Quality Improvement Lead), Alberta Children's Hospital Emergency Department

- **Antonia Stang**, Chief of Pediatric Emergency Medicine, Alberta Children's Hospital Emergency Department

- **Jacinda Larson**, Project Lead, Department of Pediatrics, University of Calgary

- **Ashley McFetridge**, Quality Improvement & Safety Nursing Lead, Alberta Children's Hospital Emergency Department

- **Jennifer Tweed**, Patient Care Manager, Emergency, PCCTT, Trauma Services

- **Kristi Frost**, Manager, Psychiatric Emergency Services, Alberta Children's Hospital

- **Erin Lalande**, Unit Manager, Emergency Department, Alberta Children's Hospital

- **Michael Stubbs**, Child and Adolescent Psychiatrist, Alberta Children's Hospital

- **Abdul Rahman**, Section Head, Pediatric Psychiatry, Alberta Children's Hospital

- **Andrea Perri**, Director, Inpatient and Daytreatment Services, Child and Adolescent Addictions and Mental Health Program

With past involvement from:

Linda Anderson, Priscilla Asamoah, Laurene Black, Sharon Drury, Trish Dubyk, Angelo Mikrogianakis, Christine Mummery, Erin Pols, Mark Stime, and Lindy VanRiper.

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