Quality Improvement (QI) in Paediatric Dermatology: Increasing rates of usage and documentation of EASI and POEM

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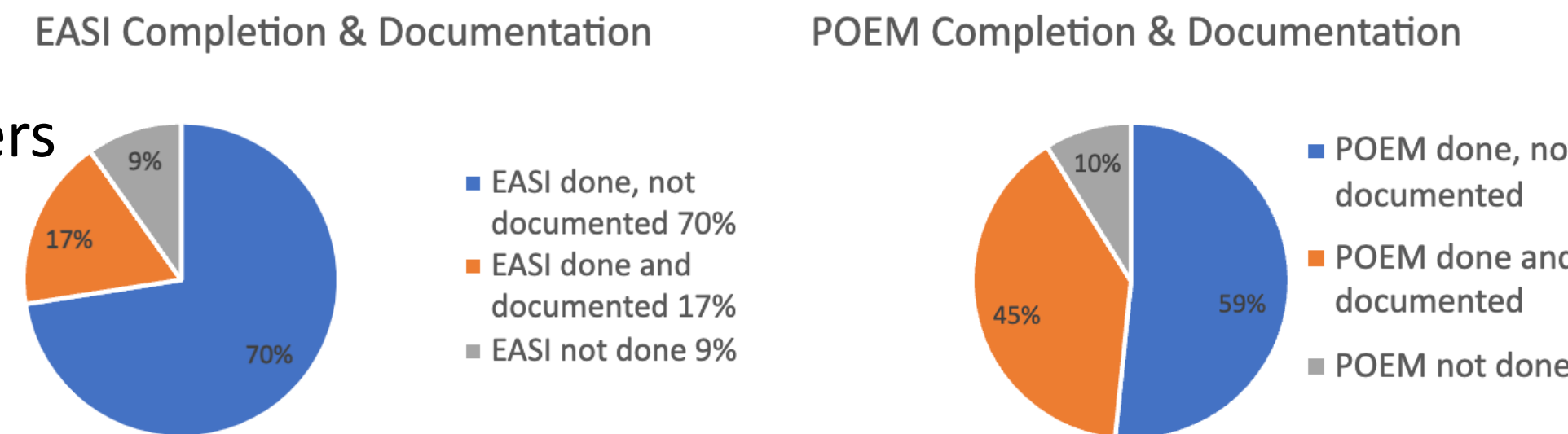Division of Paediatric Dermatology, The Hospital for Sick Children, University of Toronto

1. Background

- Atopic dermatitis (AD), is a common condition affecting up to 25% of children. [1]
- Specialty AD clinic: eczema Management and Advocacy Program (eMAP):
  - Created in 2021; 150 patients seen to date
  - 5 visits over 1 year
  - Optimize topical therapy, educate, reinforce behaviors that enhance long term success
  - Empower patients and families to manage their chronic disease
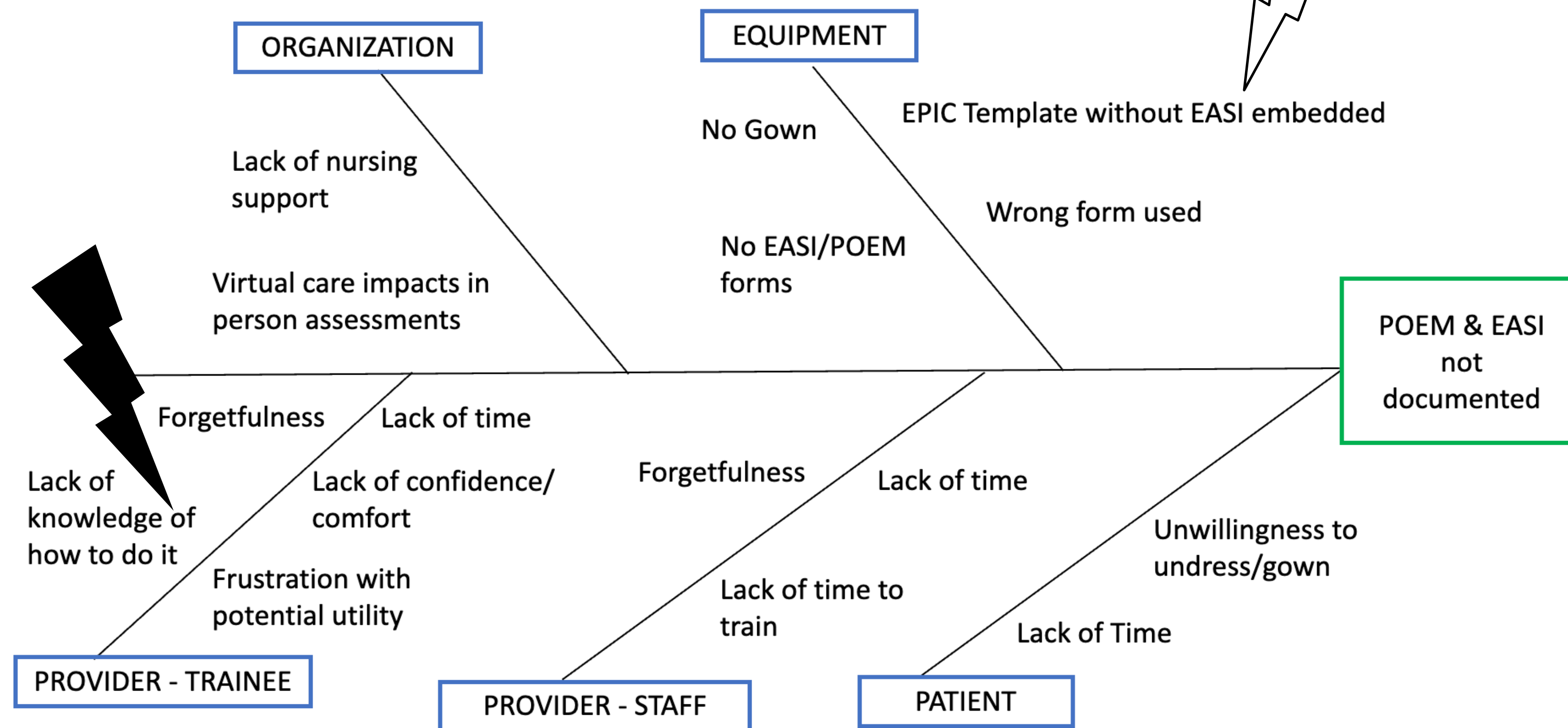
- Increasing reliance on **validated measurement tools** to assess severity and impact of AD: progress, response to therapy, need to escalate to systemics.[2]

- **Problem:** Inconsistent **use** and **documentation** of these validated tools.

Baseline Data: April – June 2022;
7 half day clinics, 53 patient encounters

EASI Completion & Documentation

- EASI done, not documented 70%
- EASI done and documented 17%
- EASI not done 9%

POEM Completion & Documentation

- POEM done, not documented 59%
- POEM done and documented 45%
- POEM not done 10%

2. Problem Characterization

Fishbone diagram: "POEM & EASI not documented"

ORGANIZATION
- Lack of nursing support
- Virtual care impacts in person assessments

EQUIPMENT
- No Gown
- No EASI/POEM forms
- Wrong form used
- EPIC Template without EASI embedded

PROVIDER - TRAINEE
- Forgetfulness
- Lack of knowledge of how to do it
- Lack of confidence/comfort
- Frustration with potential utility

PROVIDER - STAFF
- Lack of time
- Forgetfulness
- Lack of time to train

PATIENT
- Lack of time
- Lack of Time
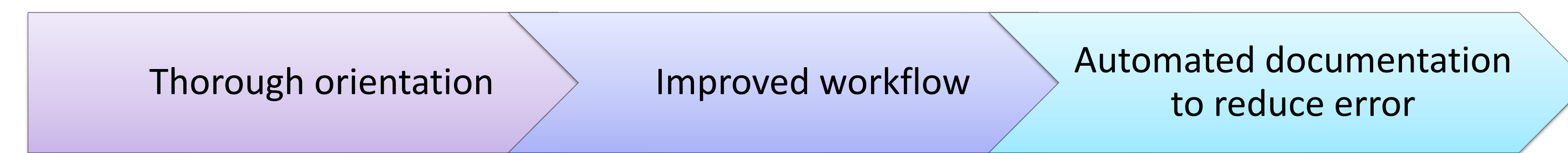- Unwillingness to undress/gown

3. Aim Statements

1. To have **90%** of patients with a primary diagnosis of AD, that are followed in the SickKids AD clinic, have the **clinician-administered validated screening measure EASI (Eczema Area and Severity Index)** documented for each appointment in their EPIC chart by October 30, 2023.

2. To have **90%** of patients with a primary diagnosis of AD, that are followed in the SickKids AD clinic have the **parent or patient-administered validated screening measure POEM (Patient Oriented Measure of Eczema)** documented for each appointment in their EPIC chart by October 30, 2023.

References:
1. Eichenfield LF, Tom WL, Chamlin SL, Feldman SR, Hanifin JM, Simpson EL, et al. Guidelines of care for the management of atopic dermatitis: section 1. Diagnosis and assessment of atopic dermatitis. J Am Acad Dermatol 2014;70: 338–51.
2. Schmitt J, Langan S, Williams HC. What are the best outcome measurements for atopic eczema? A systematic review. J Allergy Clin Immunol. 2007; 120:1389–1398.
3. Schmitt J, Spuls PI, Thomas KS, et al. The Harmonising Outcome Measures for Eczema (HOME) statement to assess clinical signs of atopic eczema in trials. J Allergy Clin Immunol. 2014;134(4):800–7.
4. Hanifin JM, Thurston M, Omoto M, Cherill R, Tofte SJ, Graeber M. The eczema area and severity index (EASI): assessment of reliability in atopic dermatitis. EASI Evaluator Group. Exp Dermatol 2001;10:11-8.
5. Charman CR, Venn AJ, Williams HC. The Patient-oriented Eczema Measure: development and initial validation of a new tool for measuring atopic eczema severity from the patients' perspective. Arch Dermatol 2004; 140:1513–9.

4. Intervention & Change Concepts

1. Changes in process in AD clinic will **improve workflow** and **efficiency**, **promote measurement-based care**.

2. By providing clear **training** on scoring and documentation expectations, we will be able to **access collected data** to **implement improved clinical care**.

3. **Streamline processes** to avoid redundant steps in documenting validated measurement tools
   - EASIs and POEMs scanned into "Media" not entered into clinical note
   - Inputting scores into EPIC clinical note is more helpful

Thorough orientation → Improved workflow → Automated documentation to reduce error

5. Stakeholder Engagement

Clinic RNs:
- No increase in workload, required for biologic medication applications/refills
- Aided with & implemented EPIC SmartPhrase changes

Admin & Clinic staff: *Potential* increase in appointment length and administrative duties

Trainees: Residents (Paediatrics, Dermatology, Family Medicine), Fellows
- Fellows: Provide orientation including EASI training for rotating residents
- Solicited feedback to modify, improve & streamline training/orientation with each PDSA

EPIC / IT Support: Plan to convert into an EPIC standardized note template
- RN and Physician created and implemented SmartPhrases as initial note template for our Spring – Fall 2023 PDSA cycles; ongoing feedback & upgrades

6. Family of Measures

Outcome: *assesses the impact of the intervention*

The percentage of AD patients, seen in the AD clinic with EASI & POEM documented in their EPIC clinical note.
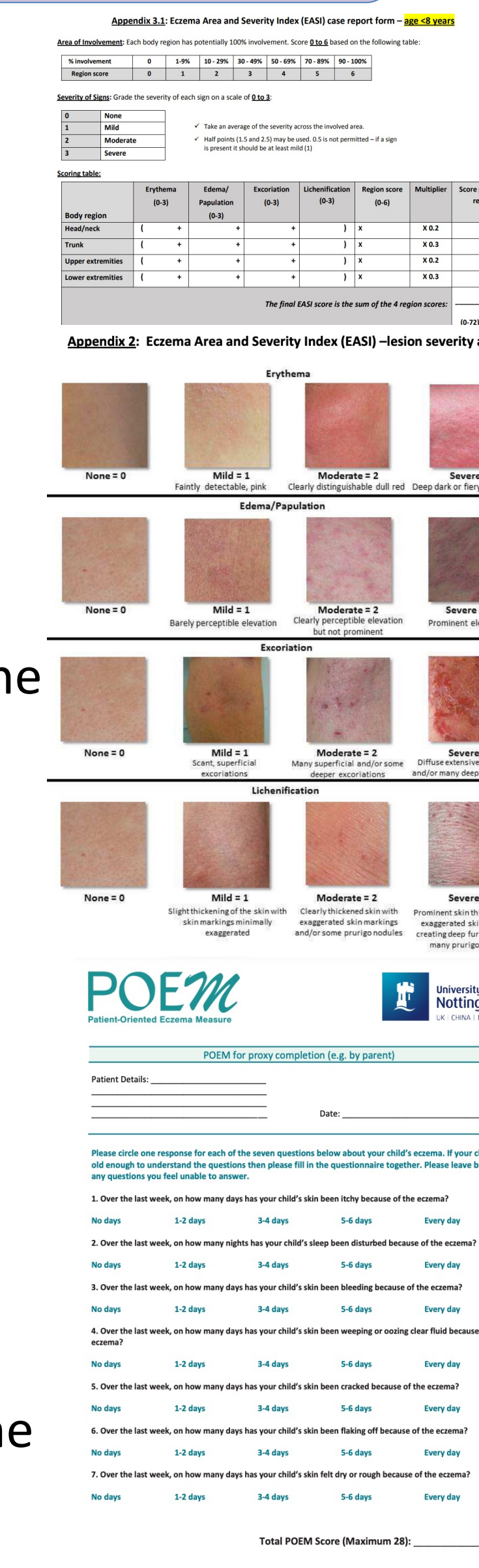
Rationale:
- Enhance collaborative care with families
- Guide clinical decision making around management

Process: *tracks successful adoption of interventions*

1. The proportion of rotating trainees educated on the EASI and POEM, how to perform and document them in EPIC, and recognizing they must be done as part of each AD clinic visit.
   - Semi-standardized orientation session of all trainees rotating at SickKids AD Clinic, including EASI training

2. The percentage of patients with an EASI completed and entered in EPIC flowsheets and clinical note.

3. The percentage of patients with a POEM form completed and entered in EPIC flowsheets and clinical note.

Balancing: *assesses and measures unintended consequences of intervention*

1. Trainees required to perform and input measurements without sufficient training - lack of knowledge and comfort with performing and inputting the measurements, increased perceived workload
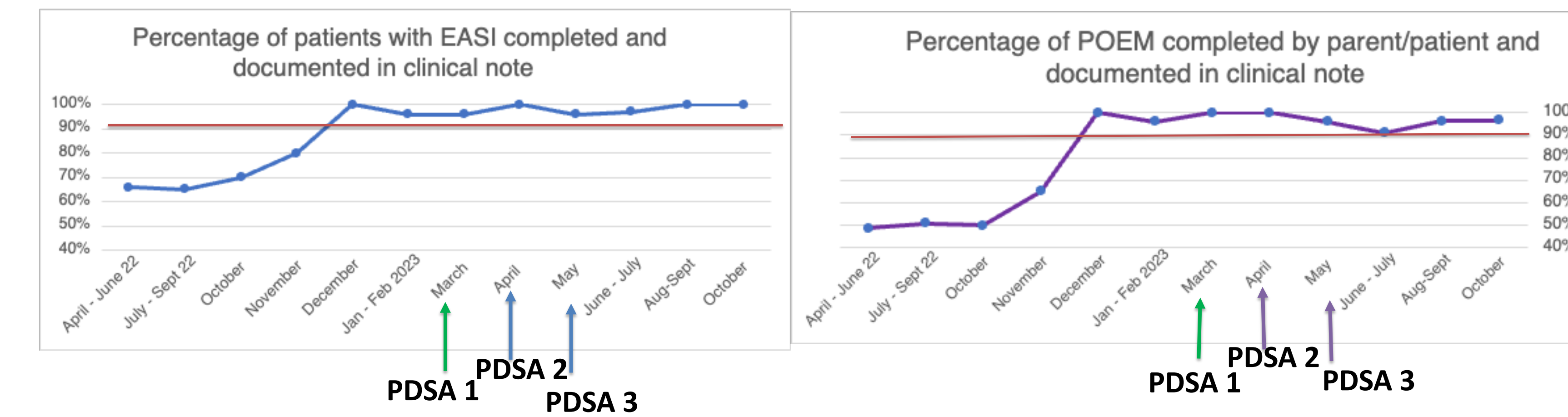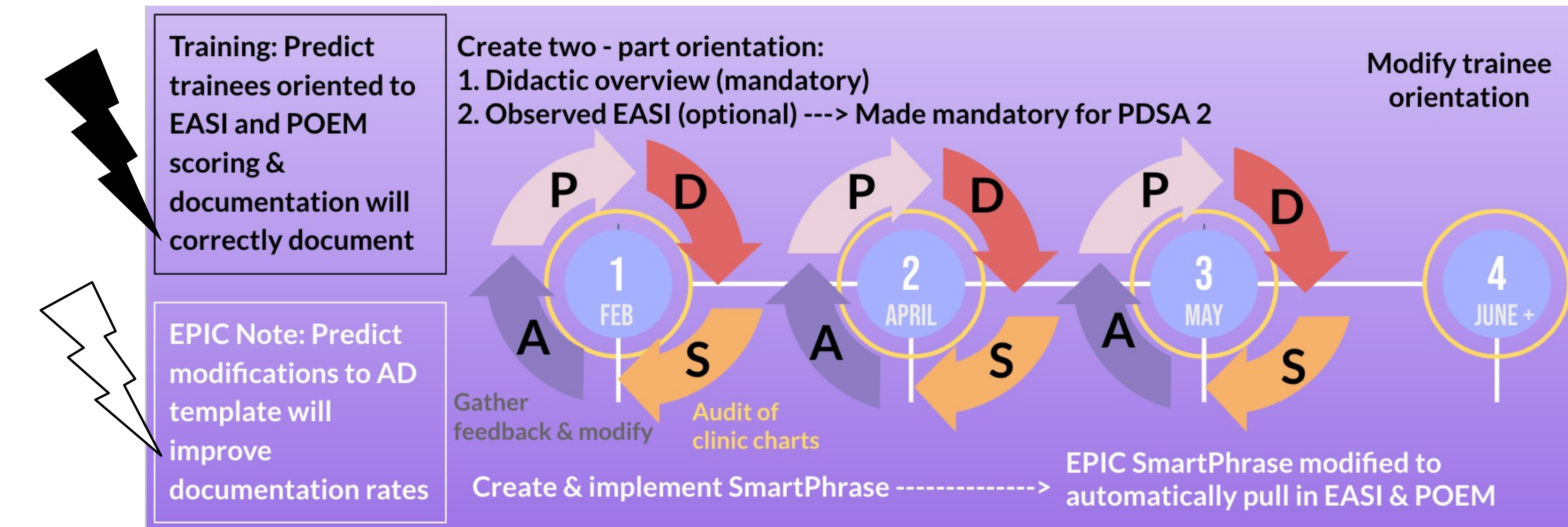
Approval for this project was granted through the SickKids Quality Improvement Project Board

7. Plan-Do-Study-Act (PDSA) Cycles & Project Results

Training: Predict trainees oriented to EASI and POEM scoring & documentation will correctly document

EPIC Note: Predict modifications to AD template will improve documentation rates

Create two - part orientation:
1. Didactic overview (mandatory)
2. Observed EASI (optional) ---> Made mandatory for PDSA 2

Modify trainee orientation

Gather feedback & modify
Audit of clinic charts
Create & implement SmartPhrase
EPIC SmartPhrase modified to automatically pull in EASI & POEM

PDSA Cycle 1 FEB, 2 APRIL, 3 MAY, 4 JUNE+

Percentage of patients with EASI completed and documented in clinical note

Percentage of POEM completed by parent/patient and documented in clinical note

PDSA 1, PDSA 2, PDSA 3

21/29 trainees completed two-part orientation over 8 months in AD clinic

8. Conclusions

EASI: Improved documentation rate from 69% to over 90% by March 2023, sustained to October 2023.

POEM: Improved documentation rate from 49% to over 90% by March 2023, sustained to October 2023.

Quality improvement initiatives in an academic paediatric dermatology clinic are feasible and have a positive impact on patient care.

9. Next Steps

1. **Analysis of patient scores** to track clinical progress and evaluate efficacy of program

2. **Expansion** of using validated measurement tools to additional SickKids dermatology clinics

3. Include **additional validated measurement tools**
   - PGA (Physician Global Assessment)
   - BSA (Body Surface Area)
   - cDLQI (Children's Dermatology Life Quality Index)

4. Further EPIC Template modifications: Table showing EASI & POEM values at each visit

5. **Sustainability:**
   - Train all new fellows to orient rotating trainees
   - Creation of standardized orientation document (PDSA 5)
   - Less ambitious targets when expanded to all clinics