

Delabeling Penicillin Allergy in Patients Successfully Challenged to Penicillin in the St. Joseph's Hospital Allergy Clinic



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By April 2025, for patients with a penicillin allergy on their Cerner EMR who successfully tolerate penicillin challenge at the SJHC allergy clinic, increase the proportion of patients delabelled by 50%.

PROBLEM DEFINITION

- Not every patient who successfully undergoes a challenge to penicillin in the St. Joseph's Hospital allergy clinic is delabelled of their allergy
- Unverified penicillin allergy has well known negative health implications for the patient and healthcare system

ROOT CAUSE ANALYSIS

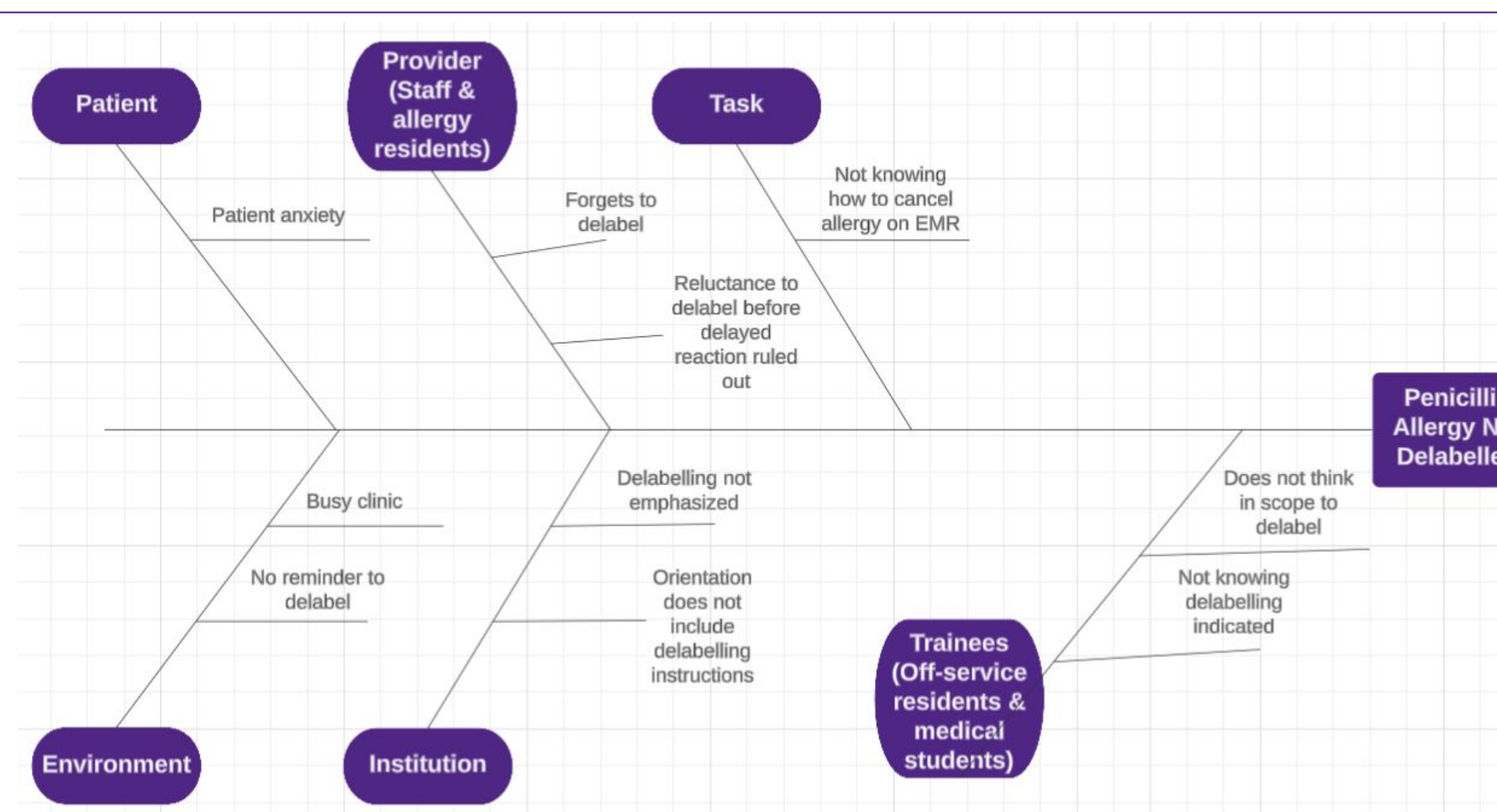


Fig. 1: Cause & Effect diagram

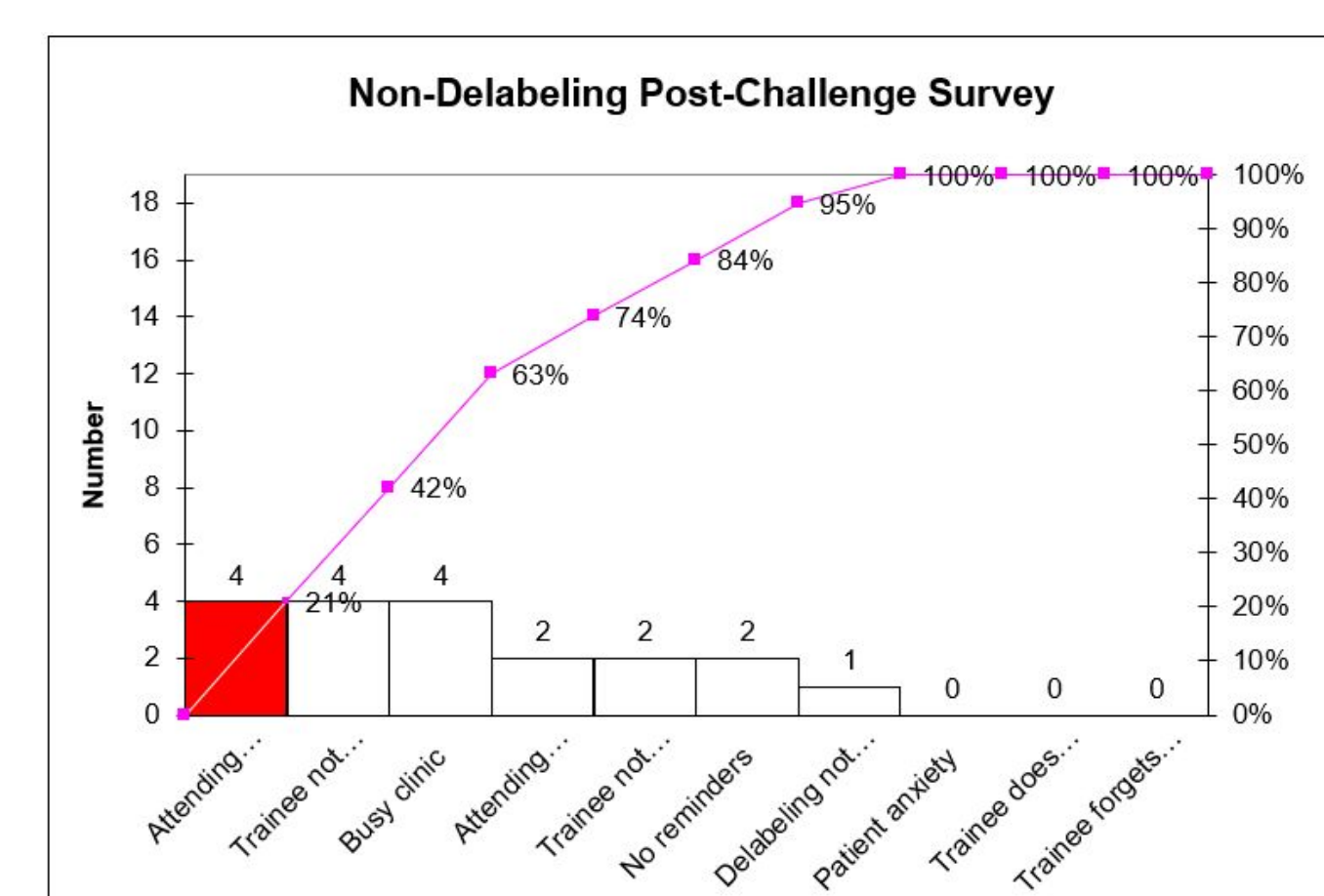


Fig 2. Pareto chart

- Key stakeholders interviewed include staff allergists, subspecialty residents, offservice residents, medical students, clinic nursing staff
- Allergy staff and subspecialty residents forget to delabel, but rotating residents and medical students do not know that they should or how to delabel on the electronic medical record

Clinicians at different levels of training had individualized barriers for delabelling penicillin allergy

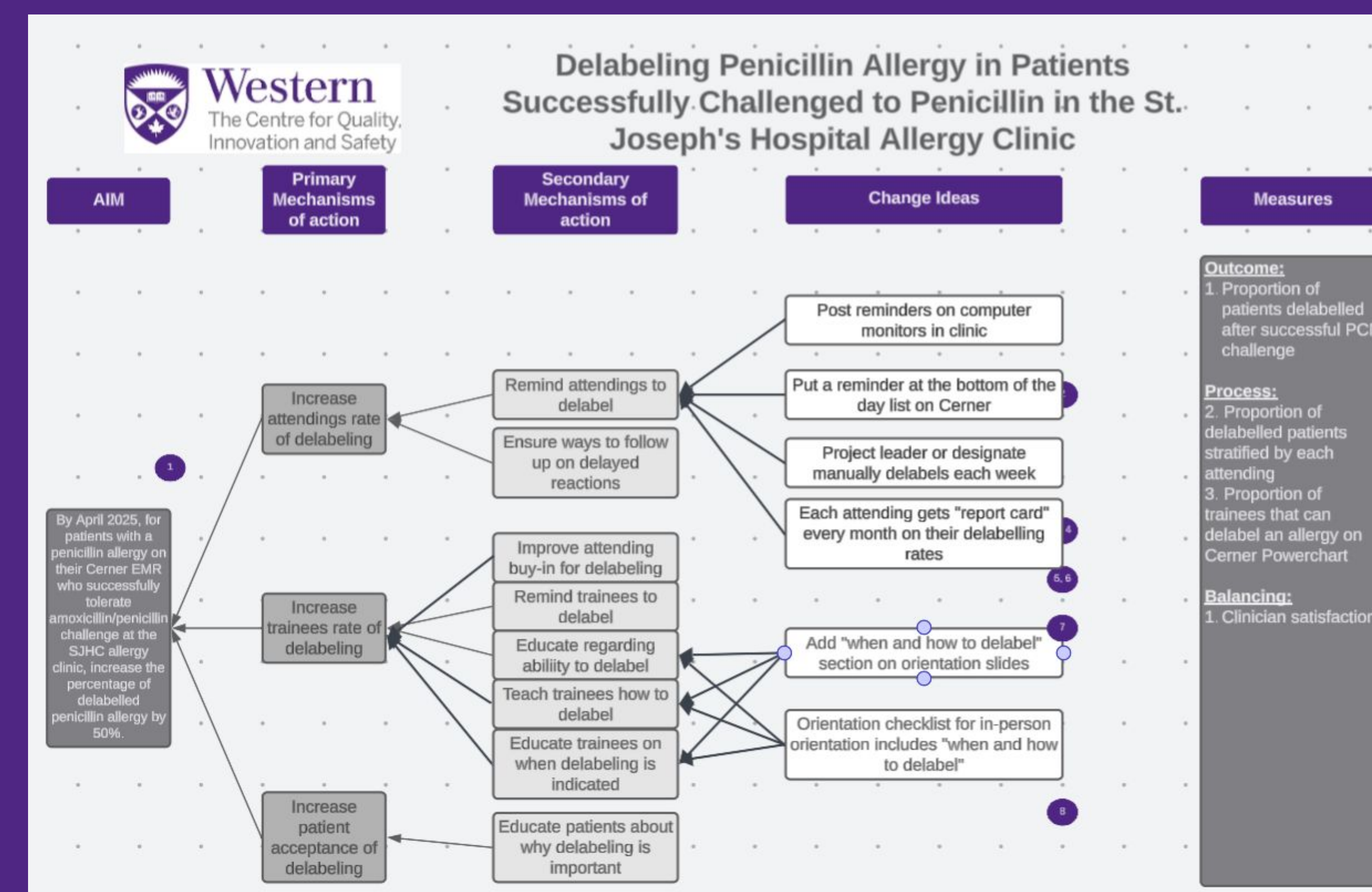


Fig 3. Driver Diagram identifying root causes and possible change ideas. Areas to focus on include reminders for allergy staff (who know why and how to delabel but forget) and education for residents and medical students (who do not know when, why, or how to delabel)



IMPLEMENTATION

PDSA cycle #1: Teaching off-service residents and medical students when and how to delabel allergies on Cerner
-Most trainees did not know the procedure prior to our intervention

PDSA cycle #2: Motivate allergy staff physicians to delabel by providing a report card of their delabelling rate
-The data collection process is relatively onerous

MEASUREMENT & RESULTS

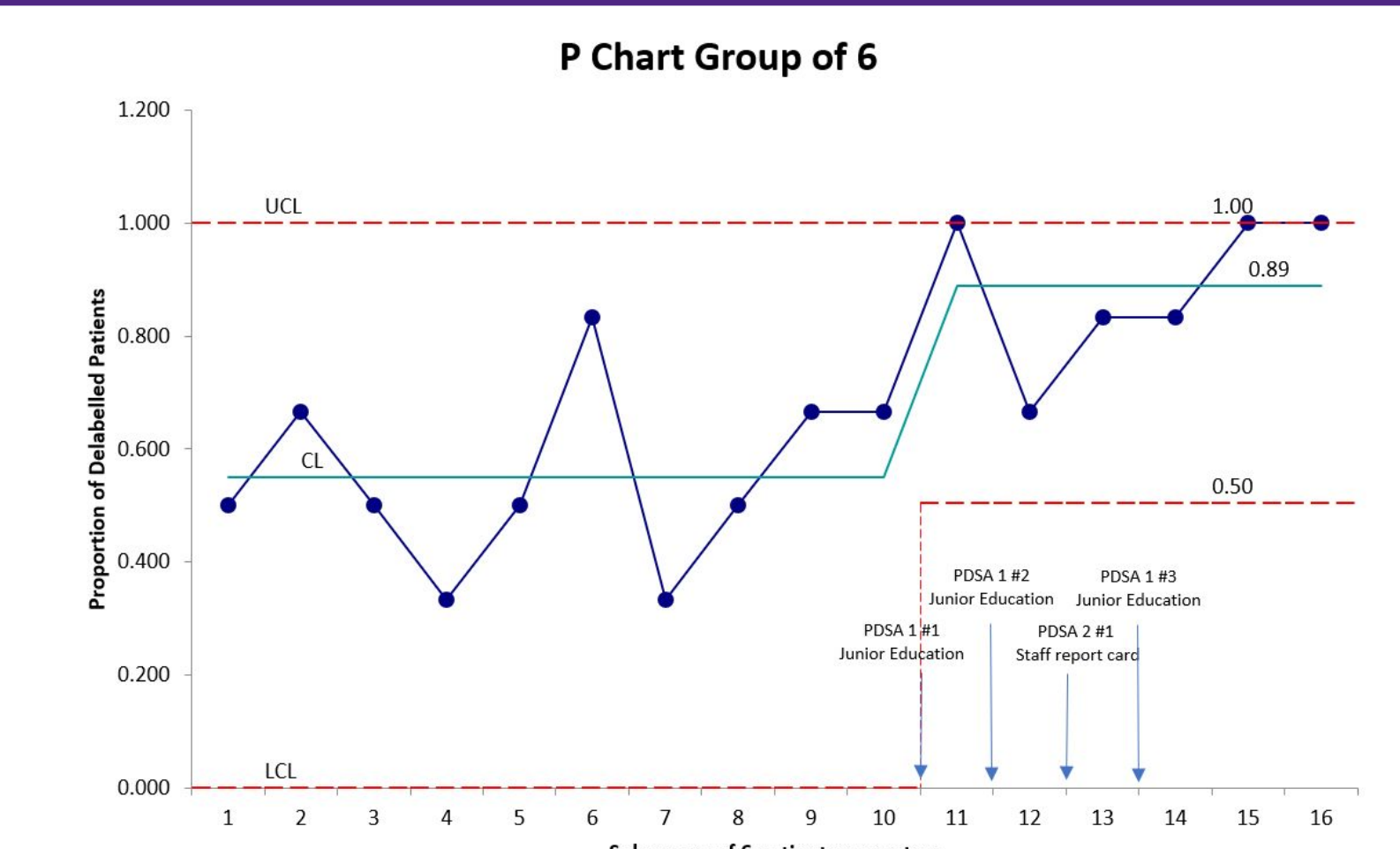


Fig 3. SPC chart demonstrating astronomical point immediately after intervention, with sustained improvement
Process measure: Proportion of patients delabelled
Balancing measure: Patients that were delabelled who do have a delayed reaction several days later
Most patients seem to be challenged by trainees compared to attendings, which leads to a larger impact when interventions target them specifically

SUSTAINABILITY

Process owner: Myself and possibly an allergy subspecialty resident will monitor delabelling rates over time

Documentation of new standard will be placed in the trainee orientation manual

Monitoring plan: Decision Support at SJHC to create a bimonthly report card of delabelling rates