Using AI to Increase Compliance with Perioperative Glucose Testing

A Prospective Observational Study

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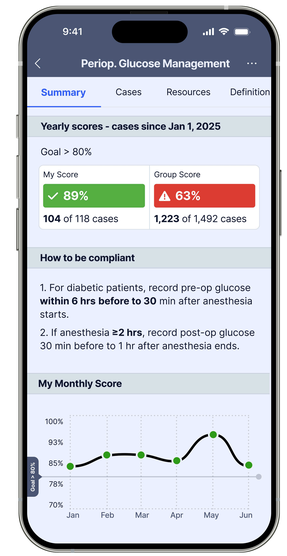

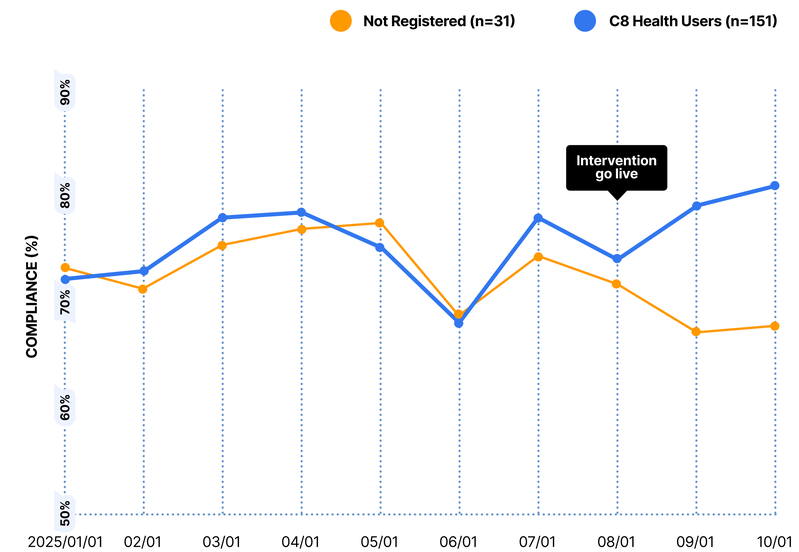

Background

Sustained compliance with evidence-based processes is challenging despite known patient and financial benefits.

Clinicians lack timely personal performance visibility & actionable point-of-care guidance.

Leadership lacks tools to scale adherence.

Aim

Test whether an AI-enabled platform (C8 Health) improves perioperative glucose-testing compliance.

Methods

Design: Prospective 3-month observational study at an academic health system

Intervention: AI-enabled performance-feedback within C8 Health platform (Dashboard, Monthly Summaries, Twice-weekly notifications).

Primary outcome: Between-group difference in perioperative glucose-testing compliance.

Secondary outcome: Change from baseline in overall department glucose-testing compliance.

Analysis: Two-proportion z-tests; cost impact estimated from absolute compliance change.

Results

N=182 clinicians:
151 (83%) C8 Health users;
31 (17%) non-C8 users.

Primary:
C8 Health users 80.74%
vs non-C8 Health 67.4%
(Δ = 13.34 pp; p=0.012).

Secondary:
~+9.1% absolute improvement over baseline → ~$773k estimated savings (FY25→FY26 to date).

Conculsions

- An AI-powered performance-feedback platform was associated with a **significant increase in perioperative glucose-testing compliance.**
- Findings support **targeted, automated quality interventions at scale** to improve metric adherence with **meaningful cost impacts.**