Creation and Implementation of a Standardized, Comprehensive Backup Plan in Case of Pump Failure

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Background

- Insulin pump failure is a common occurrence in people with diabetes. When this happens, patients call for last minute guidance.
- At our Academic Medical Center Endocrinology Practice, no standardized workflow was available to provide a formal written backup plan for temporary transition to a subcutaneous insulin regimen.
- When patients called the office after pump failure, the triage RN would attempt to seek recommendations from the managing provider. This reactive approach would lead to delays in care and placed an added burden on the on-call provider especially after clinic hours.
- At baseline in June of 2025, we had 0 patients with a documented backup plan in case of pump failure

Purpose

- To develop a comprehensive backup plan at the time of the initial pump training with ongoing documentation and reinforcement at each visit
- We aimed to increase from 0% of patients to at least 25% of patients at six months after project commencement

Methods

- We utilized a series of Plan-Do-Study-Act cycles between June of 2025 and May of 2026 to implement interventions to improve backup plan documentation

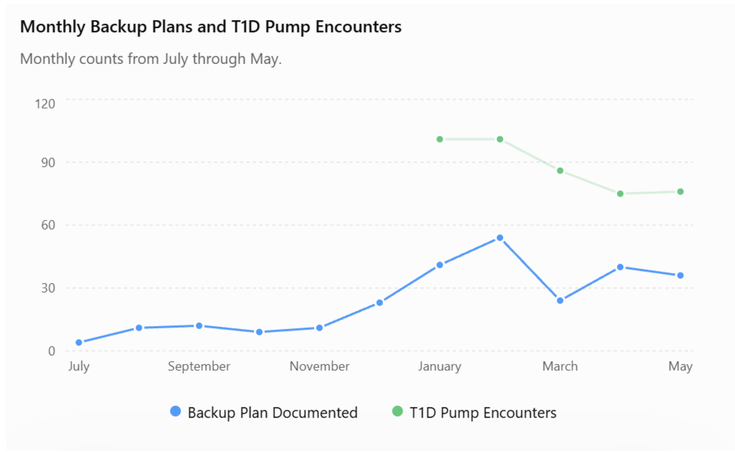
Interventions

- Survey of providers and review of literature to determine best practices for backup plan recommendations and required backup supplies
- Creation of a pump onboarding guidebook that included a handwritten formal backup plan and corresponding documentation in the electronic medical record
- Host “Lunch and Learn” session with RN team for insulin pump education
- Development of a streamlined order set to reduce time needed to order relevant backup supplies
- Development of SmartPhrases in the electronic medical record to documents the updated backup plan (based on most insulin dose requirements)
- Dissemination of targeted reminder communications to providers to encourage routine use of SmartPhrases and order set

Results

- In the first month after the SmartPhrases were shared there were 4 documented backup plans
- At six months there were 41 documented backup plans
- From Jan 2026-May 2026 a total of 195 out of 439 patients (44.4%) using an insulin pump and seen for a clinic visit had a documented backup plan

Figure



Line chart demonstrating the number of individuals with diabetes on an insulin pump with a documented backup plan in their chart (blue line) as compared to the total number of individuals with diabetes on an insulin pump seen in a given month (green line)

Conclusions

- The documentation of a backup plan in the event of pump failure has substantially increased and has become part of standardized workflow at our institution during clinical visits.
- Future efforts will evaluate the impact of this work on patient self-confidence in managing a pump failure event as well as effect on after-hours clinic calls.