

# SHORTAGE IMPACT ANALYSIS IN AUTOMATED COMPOUNDING DEVICES FOR PARENTERAL NUTRITION: A THREE-YEAR EXPERIENCE IN A TERTIARY HOSPITAL

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## BACKGROUND AND IMPORTANCE

- ▶ In **PARENTERAL NUTRITION (PN)**, precision and continuity are essential.
- ▶ **SHORTAGES** could have an immediate **clinical impact**.
- ▶ **AUTOMATED COMPOUNDING DEVICES (ACDs)** ensure **safety** and **traceability**, but are **less flexible**, increasing the **risk of disruptions**.



## AIM AND OBJECTIVES

Analyze operational and therapeutic **decision-making** during **PN SHORTAGES** in **ACDs**

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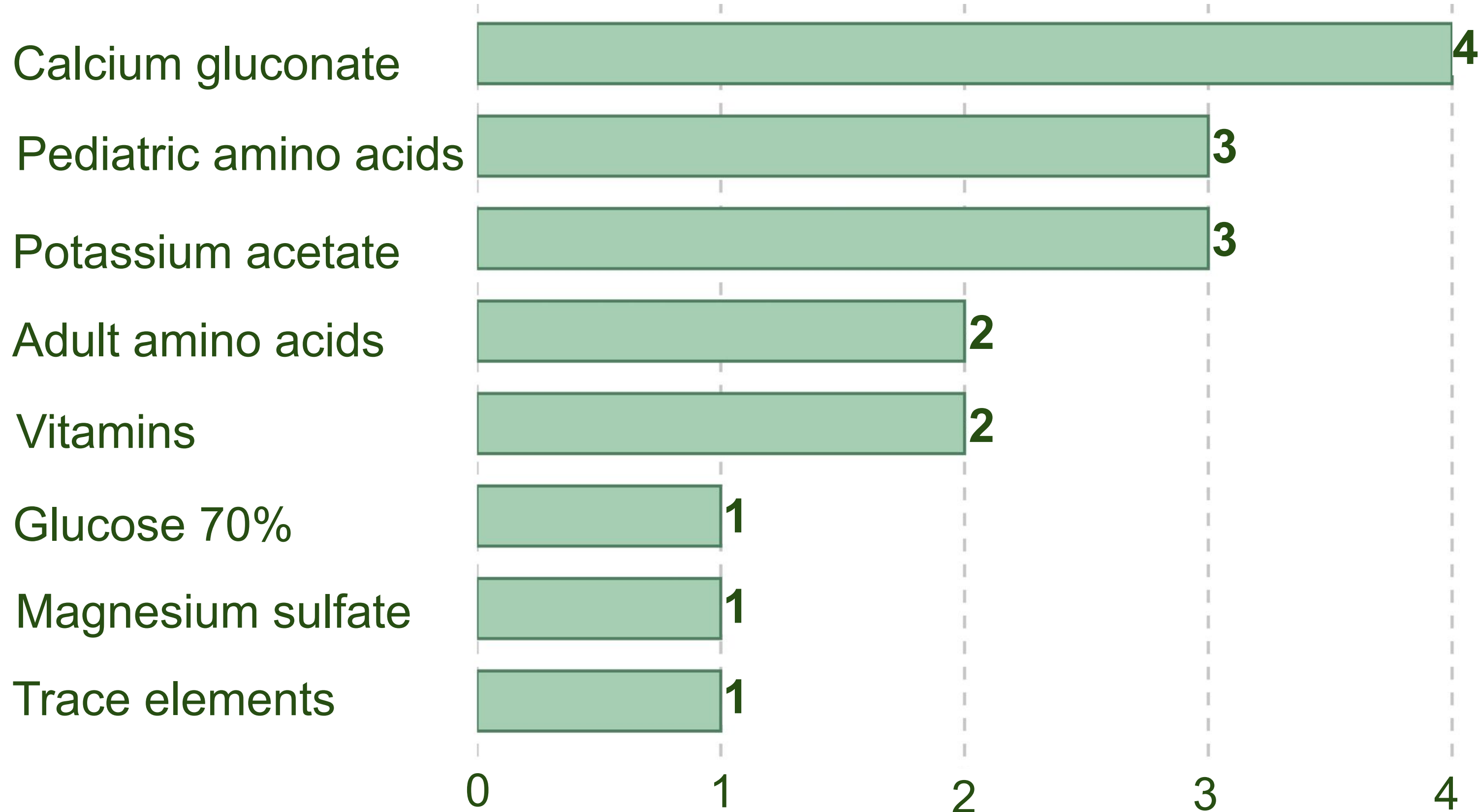
To support future proactive and **efficient strategies**

## MATERIAL AND METHODS



## RESULTS

Figure 1. Shortage incidents by PN ingredient



17 Shortages  
8 medications

Figure 3. Applied decision flow chart

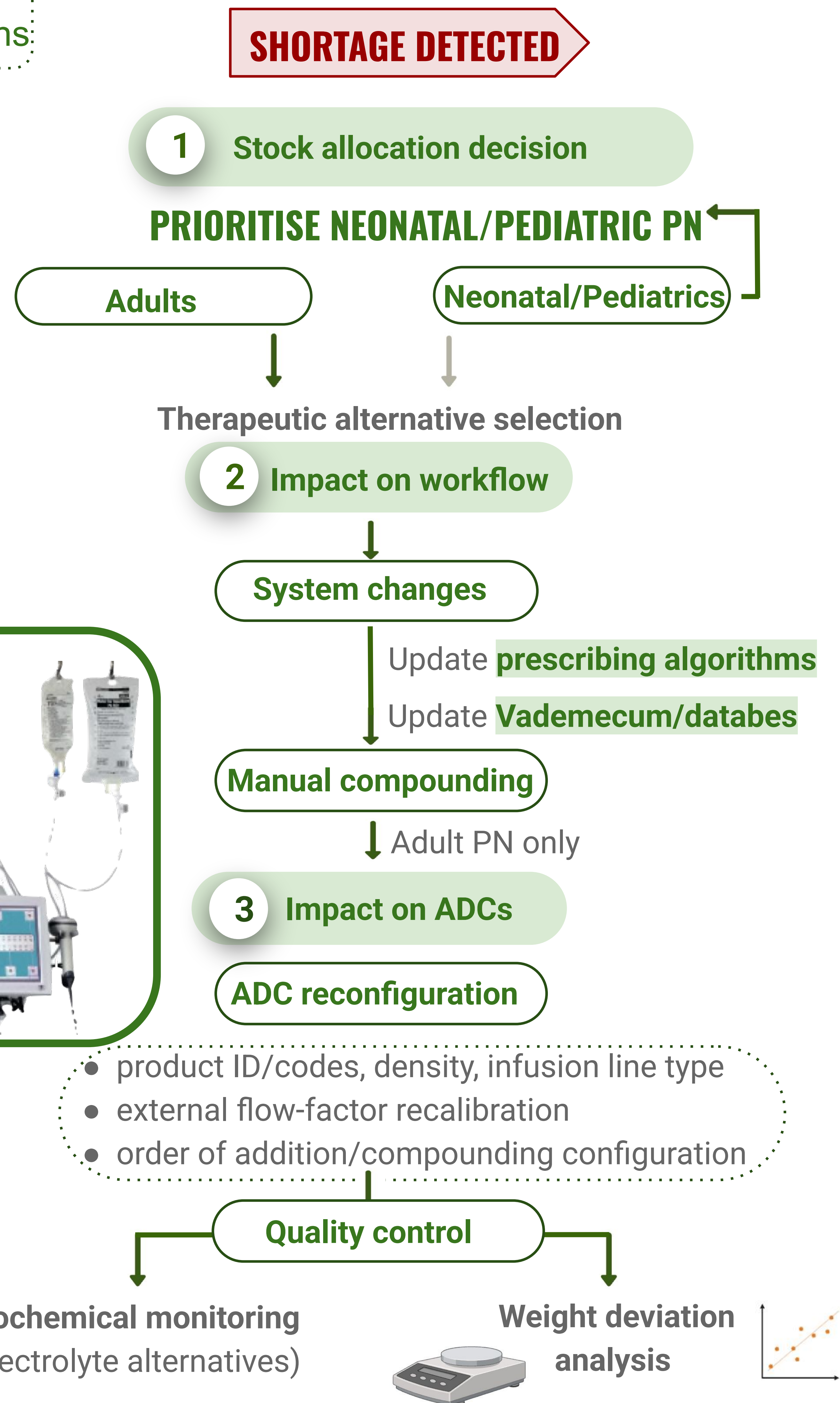
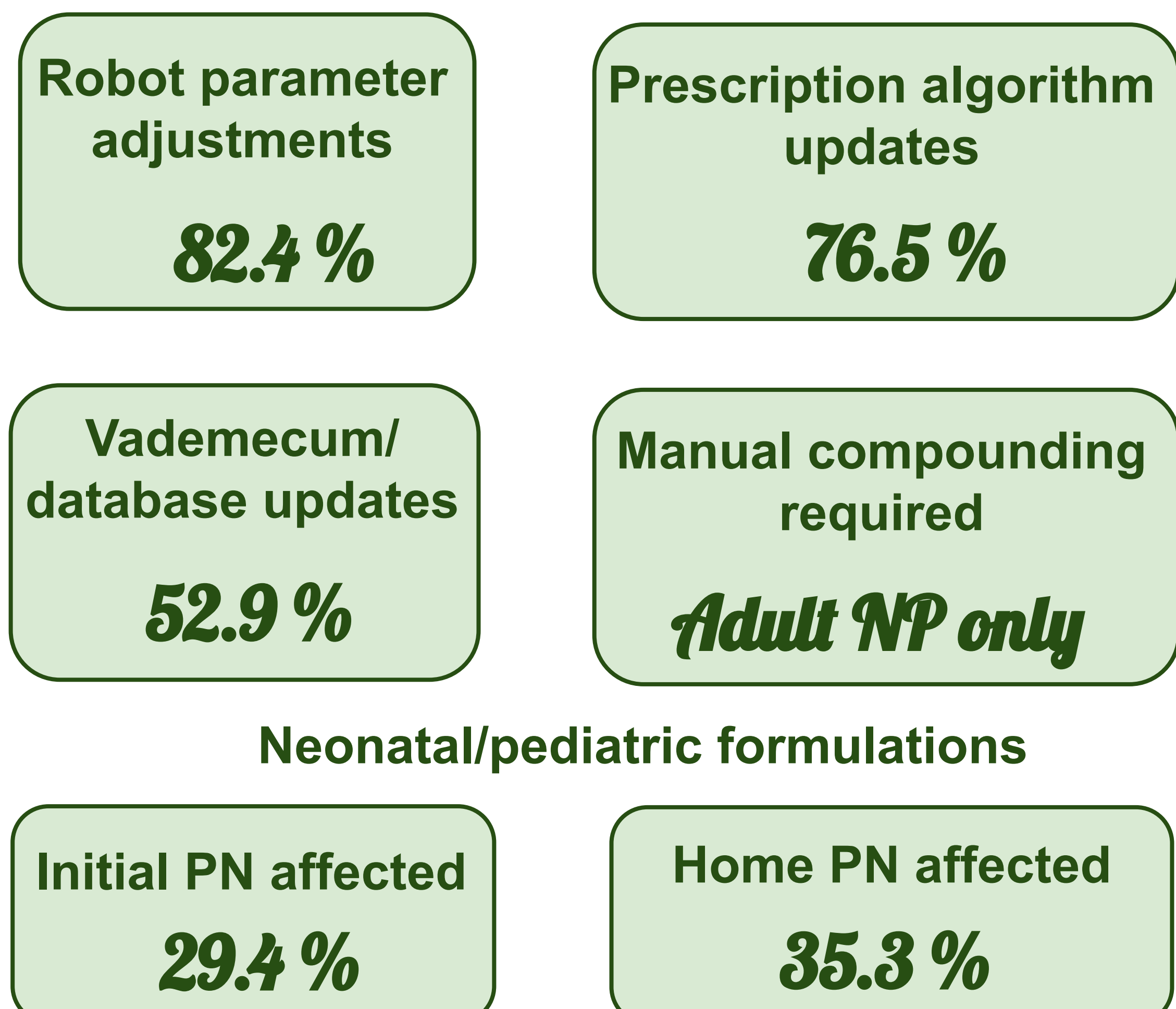


Figure 2. Operational impact per shortage event



## CONCLUSIONS

- **PN shortages** → major impact on **ACDs** → requiring **pharmacist interventio** → ensure **continuity** and **safety**.
- Our experience highlights the automation paradox: while it improves traceability and safety, it reduces adaptability, making **PN services more vulnerable to supply disruptions**.

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