

# Hypoglycemia and Glucagon Utilization in Children with Type 1 Diabetes

Category: Quality Health Care, Patient Safety & Best Practices; Poster Presentation

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[Supplemental Video](#)

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**Background:** Hypoglycemia is one of the most severe and life threatening complications of insulin therapy for patients with diabetes. The risk of severe hypoglycemia is higher in children with type 1 diabetes (T1DM) when compared to the general diabetes patients. Glucagon is usually distributed as “Emergency Kits” and often stored in patients’ homes and schools to be used in case of severe hypoglycemic episodes.

## Methods:

1. To evaluate the experience of the patients with diabetes and their caregivers of utilizing the glucagon emergency kit by filling out or completing a one page survey
2. To use this survey as a reminder for patients to ask about the glucagon emergency kit availability, refills, and explore any educational needs regarding its utilization.

**Results:** In this pilot study, thirty-four patients and their families have participated. Of the thirty-four patients, thirty families (88%) had at least one kit of Glucagon rescue medication. Only four patients (12%) have used it in the past. Upon verification, nine families (26%) realized that the medication had an expired shelf life and a renewal of the prescription was submitted. Eight families (24%) expressed a need to review the demonstration of its use.

**Conclusions:** Hypoglycemia risk reduction depends on patient education and self-empowerment. If the patient’s hypoglycemic episode is not severe, utilizing simple glucose intake orally is often done without any need to use the emergency kit. Thus, the emergency kit may expire in shelf life, get lost, or not be properly utilized when needed due to lack of experience of the patient or care-givers in using it.

## Learning Objectives

- 1) Identify the forms of glucagon available for utilization as a rescue therapy in the setting of severe hypoglycemic episodes.
- 2) Discuss the discrepancy between patients’ and their families’ awareness of glucagon versus their knowledge on how to administer the medication.

## References and Resources

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