

Case Study

Atrium Health's Use of EndoTool IV Leads to \$12 Million in Savings



The Customer

[Atrium Health Wake Forest Baptist](#), a long-standing user of EndoTool®, has further validated the clinical and operational effectiveness of the EndoTool IV unique patient-specific insulin dosing system in treatment of diabetic ketoacidosis (DKA).

This case study highlights the substantial cost savings achieved from reducing hospital length of stay (LOS) and improving patient outcomes, demonstrating ongoing success with EndoTool IV.

Challenge

Atrium Health Wake Forest Baptist sought to:

1. Further reduce hospital LOS caused by suboptimal glycemic control.
2. Lower healthcare costs associated with prolonged patient stays and hypoglycemia-related complications.
3. Enhance the overall efficiency and cost-effectiveness of their glycemic management practices.

Review

To assess the impact of EndoTool IV, Atrium Health Wake Forest Baptist conducted a retrospective [study](#) of patient data presented at the 2024 American Association of Clinical Endocrinology Annual Meeting:

Data Collection

The review analyzed data from 354 patients treated for DKA, with 53.3% treated using EndoTool IV and 46.6% receiving standard insulin infusion protocols.

Outcome Measures

The primary metrics evaluated included hospital length of stay (LOS) and hypoglycemia events, comparing the results of patients treated with EndoTool IV against those treated with standard insulin infusion protocols.

“Atrium Health Wake Forest Baptist’s continued use of EndoTool IV has not only sustained improved patient outcomes but also delivered impressive cost savings. The reduction in hospital length of stay and associated cost savings underscore the enduring value of this innovative glycemic management solution.”



Joseph A. Aloï, MD
Section Chief of Endocrinology
and Metabolism, Atrium Health
Wake Forest Baptist



Key Results



Reduced Hospital Length of Stay

Patients treated with EndoTool IV had a shorter average hospital stay (3.95 days) compared to those treated with standard insulin infusion (4.40 days).

This reduction in LOS translated in a cost difference of **\$12,000,000** between the two groups.

Enhanced Patient Safety

EndoTool IV demonstrated a significant reduction in hypoglycemia rates, with patients experiencing fewer instances of hypoglycemia (<70 mg/dL) and severe hypoglycemia (<45 mg/dL) compared to the standard insulin infusion protocol.

Hypoglycemia Incidence

Metric	EndoTool IV Group	Standard Infusion Group
Total Patients	115	162
Total Hypoglycemia Events	10	350
Severe Hypoglycemia Events	1	55

Overall, there was a **24 fold increase** in hypoglycemia and a **37 fold increase** in severe hypoglycemia with the Standard Infusion Group compared to the EndoTool IV Group.

Return on Investment Impact

The continued use of EndoTool IV at Atrium Health Wake Forest Baptist resulted in substantial financial benefits, including:

01

\$12,000,000 in Cost Savings

The reduction in LOS from 4.40 days to 3.95 days led to significant savings in hospital costs.

02

Improved Resource Allocation

Shorter hospital stays allowed for better utilization of hospital resources and increased bed availability for other patients.

03

Enhanced Operational Efficiency

The streamlined glycemic control process contributed to overall operational improvements and patient throughput.

Future Directions

Building on the ongoing success of EndoTool IV, Atrium Health Wake Forest Baptist plans to integrate continuous glucose monitoring (CGM) data into their electronic medical record system, further enhancing the precision and effectiveness of glycemic control.

References

1. M. McKnight, C. Price, C. Usoh, G. Russell, R. Bundy, J. Aloï. [Evaluation of Hospital Length of Stay in Patients with DKA Treated with EndoTool](#). Poster presented at: American Association of Clinical Endocrinology (AACE) May, 9, 2024: New Orleans, LA.



Interested in EndoTool
Patient-Specific Insulin Dosing?

Visit monarchmedtech.com today.

Monarch Medical Technologies
877-349-4582
info@monarchmedtech.com
monarchmedtech.com

