



A Case Study: The Use of EndoTool in Obstetrics

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Tampa General Hospital

- 1018 Beds
- Private, Not for Profit
- University of South Florida College of Medicine
- Level 1 Trauma, Level IV NICU, Burn, Stroke, Transplant, etc.

TGH and EndoTool Through The Years

Trial
MICU/SICU

• 2007

Cardiac OR

• 2010

ED

• 2016

Expansion to
all Adult ICU

• 2008

OB/PACU

• 2015

Defining The Problem

- The International Federation of Gynecology and Obstetrics (FIGO)

**FIGO recommends that hyperglycemia/
Gestational Diabetes Mellitus (GDM) be
considered a global health priority**



Hyperglycemia
is one of the
most common
medical
conditions
women encounter
during pregnancy



1 in 6 live births occur to women with
some form of hyperglycemia

84% of which are due to GDM



HYPERGLYCEMIA/GDM IS ASSOCIATED WITH:

- Leading causes of **maternal mortality**
- Higher incidence of **maternal morbidity**
- Higher incidence of **perinatal and neonatal morbidity**
- **Later long term consequences** for both mother and child



Labor & Delivery DKA/HHS Challenges

- Pregnancy is a ketogenic state
 - Risk for DKA at lower BG than in the nonpregnant patient
 - 36% may have BG less than 200 mg/dL
- Presentation of DKA is similar in pregnant and nonpregnant pt
- Maternal hyperglycemia leads to fetal hyperglycemia
- Maternal acidemia decreases uterine blood flow
 - Leads to decreased oxygen delivery to fetus

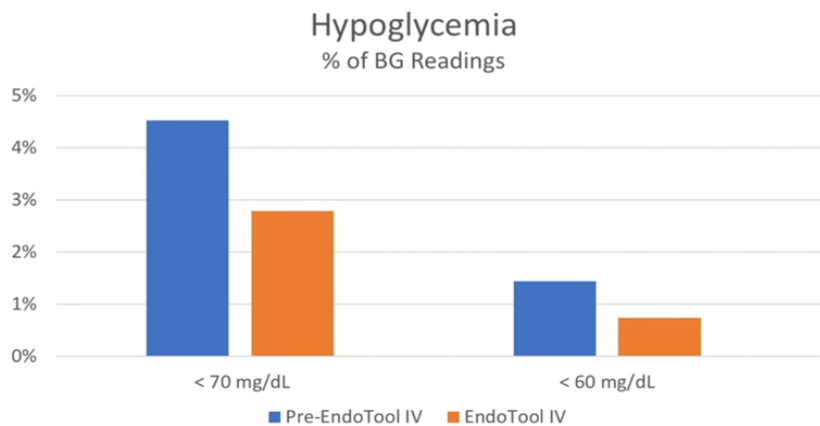
Labor & Delivery Pre-EndoTool Workflow

- Indications for insulin infusion
 - Type 1 diabetic patient in labor
 - Pregnant pt in DKA
- Insulin infusion initiated at weight based dose
- Nurse called OB resident with each BG result
 - Delays in insulin administration
- OB resident gave orders to adjust insulin infusion
 - Lack of standardization of insulin dosing
 - Inefficient process

Labor & Delivery EndoTool Workflow

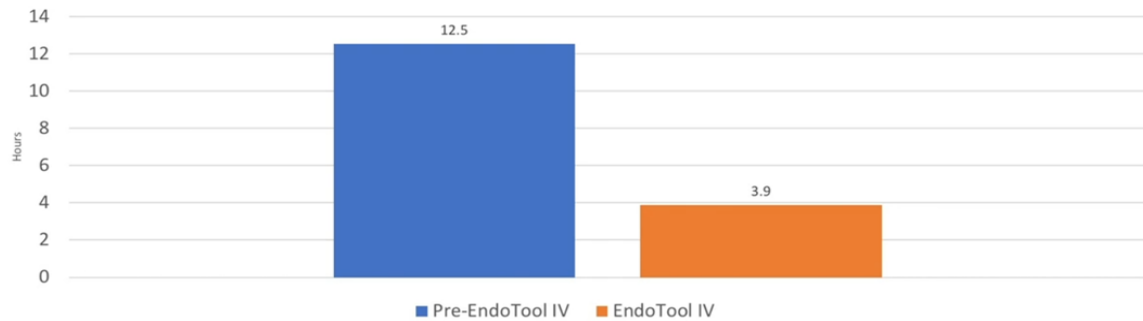
- Indications for insulin infusion
 - Type 1 diabetic patient in labor
 - Pregnant pt in DKA
- Provider orders insulin infusion via EndoTool OB Order Set
- Nurse enters pt info and BG values into EndoTool software
- Nurse adjusts insulin infusion according to EndoTool IV recommendation
 - More timely insulin dose adjustments
 - Software provides personalized dosing

Labor & Delivery Outcomes



Labor & Delivery Outcomes

Average Time to Goal (70-100 mg/dL)



Labor & Delivery Outcomes

% BG in Goal Range (70-100 mg/dL)

