Hyperglycemia Management in Critical Care
Baylor Scott & White Medical Center-Marble Falls

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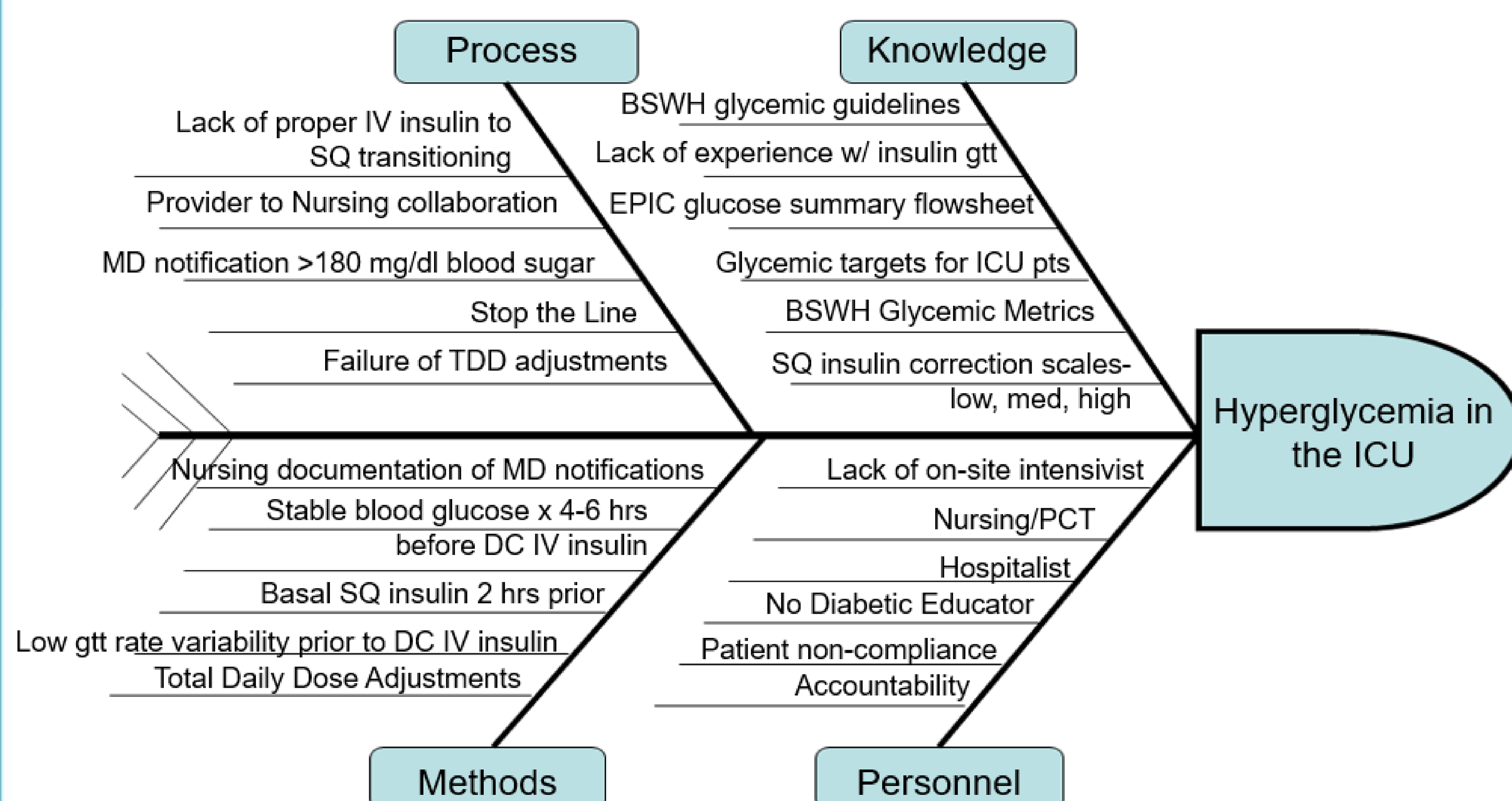
1. Background

Marble Falls Medical Center opened in August 2015 with an 8-bed critical care unit. Due to limited specialties the ICU had a slow progression in utilization of beds for critical care patients. As more critical patients were seen it was identified that there was a trend and failure to meet hyperglycemic metrics. This trend reflected a high rate of hyperglycemic events (for 2 consecutive days or more), and rebound hyperglycemia post IV insulin drip, which led to increased length of stay.

2. Problem Statement

Between July 2017-June 2020 the system measurement of hyperglycemia (which is measured by blood glucose occurrences greater than 300 mg/dl for 2 consecutive days) consistently failed to meet target set by the system.

3. Understand The Problem

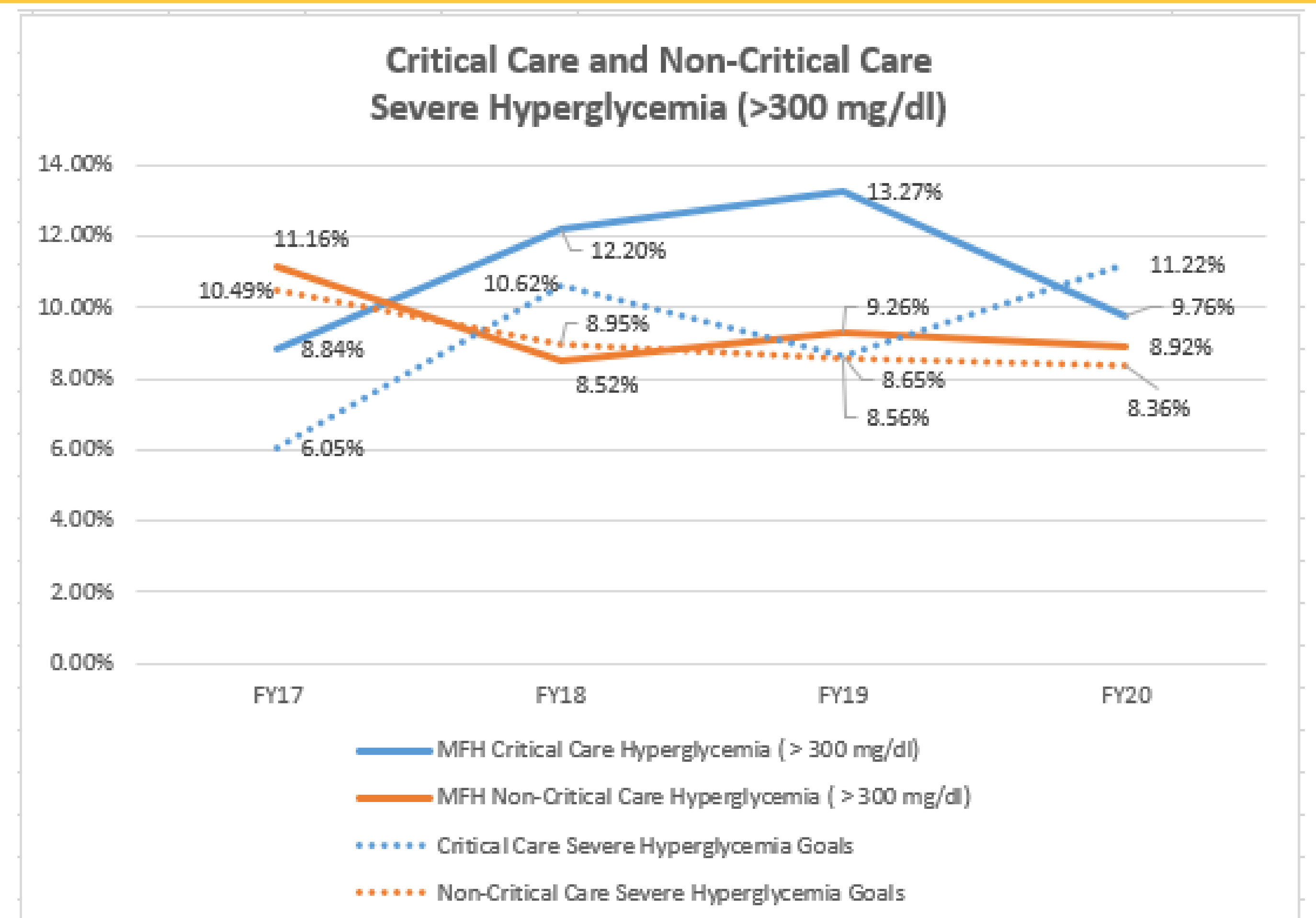


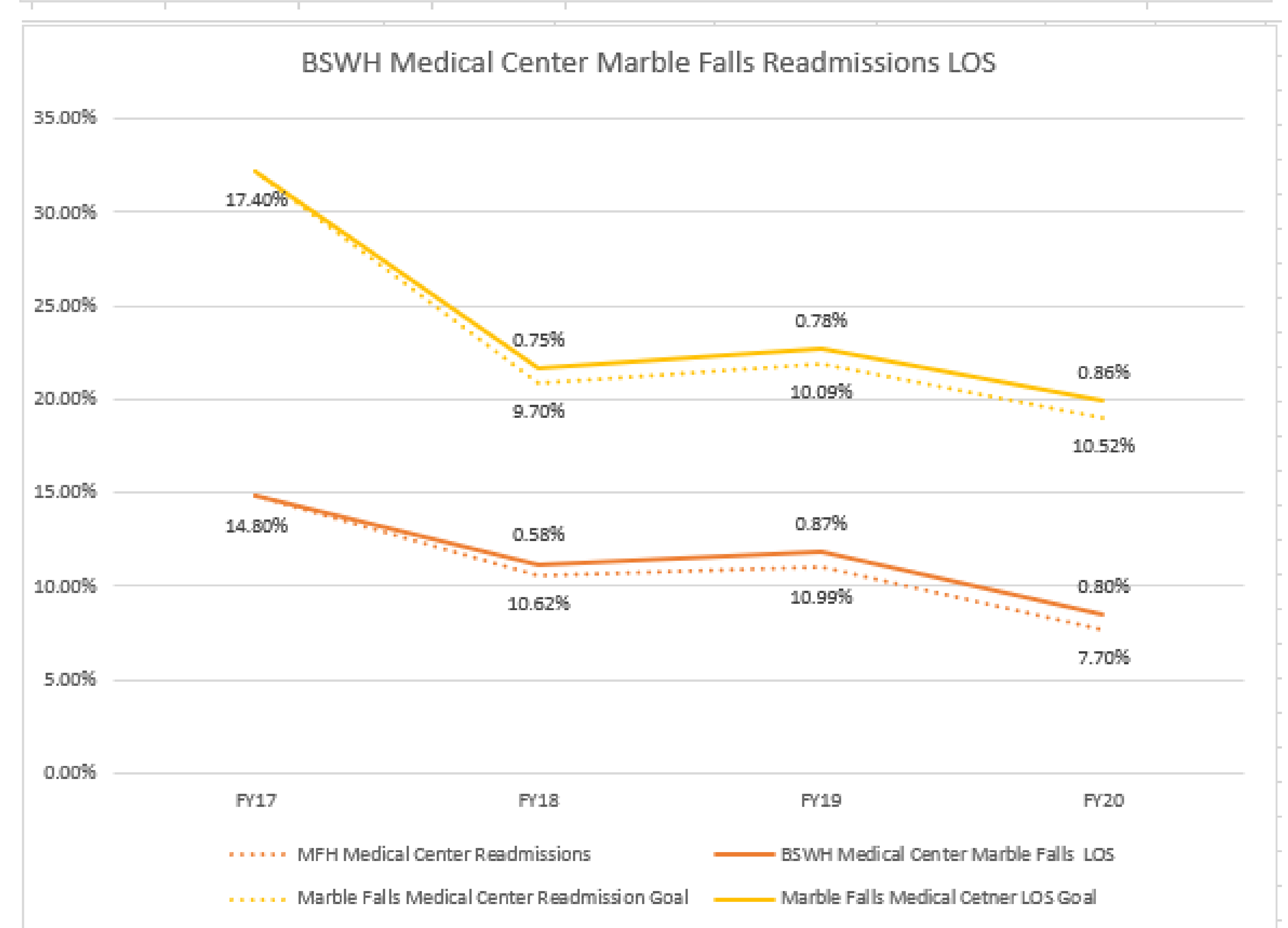
4. Implemented Change

- Action items that we focused on to address our failures in hyperglycemic management include:

1) Educated hospitalist providers regarding glycemic guidelines; primarily discontinuation of insulin gtts/transition from IV to SQ, monitor and notify fall-outs
2) Initiated BSW Marble Falls Glycemic Control Work Group in ICU; were responsible for staff education of guidelines, 100% audit all hyperglycemic events and all insulin gtts discontinued in MF ICU; later included Med-Surg team members
3) Educated staff via emails, staff meetings, provided handouts/signage re: tips for discontinuing insulin gtts, following guidelines, including an EPIC glucose summary flowsheet tip sheet
4) DKA/HHS guidelines for DC insulin gtt audit form (yellow sheet) initiated.

5. Calculate & Demonstrate The Success





- The actions we implemented made a significant impact in ICU and showed improvement in Med-surg hyperglycemia metrics.
- As you can see, our improvements in critical care and non-critical care played a factor in improving both readmission and LOS rates.

6. Lessons Learned

- Continuing to hardwire new processes to ensure hyperglycemic metric targets continue to be met, as well as reduce patient harm, readmissions, and length of stay.
- Increased awareness on blood sugars >180 mg/dl to escalate to provider so they are notified of upward glucose trends in order to make TDD adjustments (includes nursing documentation of provider notification).
- Implement glycemic management as a component to new-hire orientation.
- Future improvement efforts:
  - Identify and monitor trends in rebound hyperglycemia patients post insulin gtt discontinuation, to identify root cause(s).
  - Narrow the focus for patients on insulin gtt greater than 24 hours by monitoring the utilization of BSWH glycemic management guidelines for IV to SQ insulin transition.

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