

Effect Of Reducing CDS Alert Burden On Alert Override Rates

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Overview

- Vanderbilt University Medical Center (VUMC) is an academic, tertiary care medical center in Nashville, TN
- 1000-bed general medical and surgical facility with nearly 2,000,000 patient visits annually
- Implemented medication alerting (e.g., drug-allergy, drug-drug, and drug-dose alerts) using a 3rd party vendor with many alerts customized and filtered by severity ratings
- In 2018, VUMC created a Medication Alerts Working Group to improve medication safety and reduce alert burden.

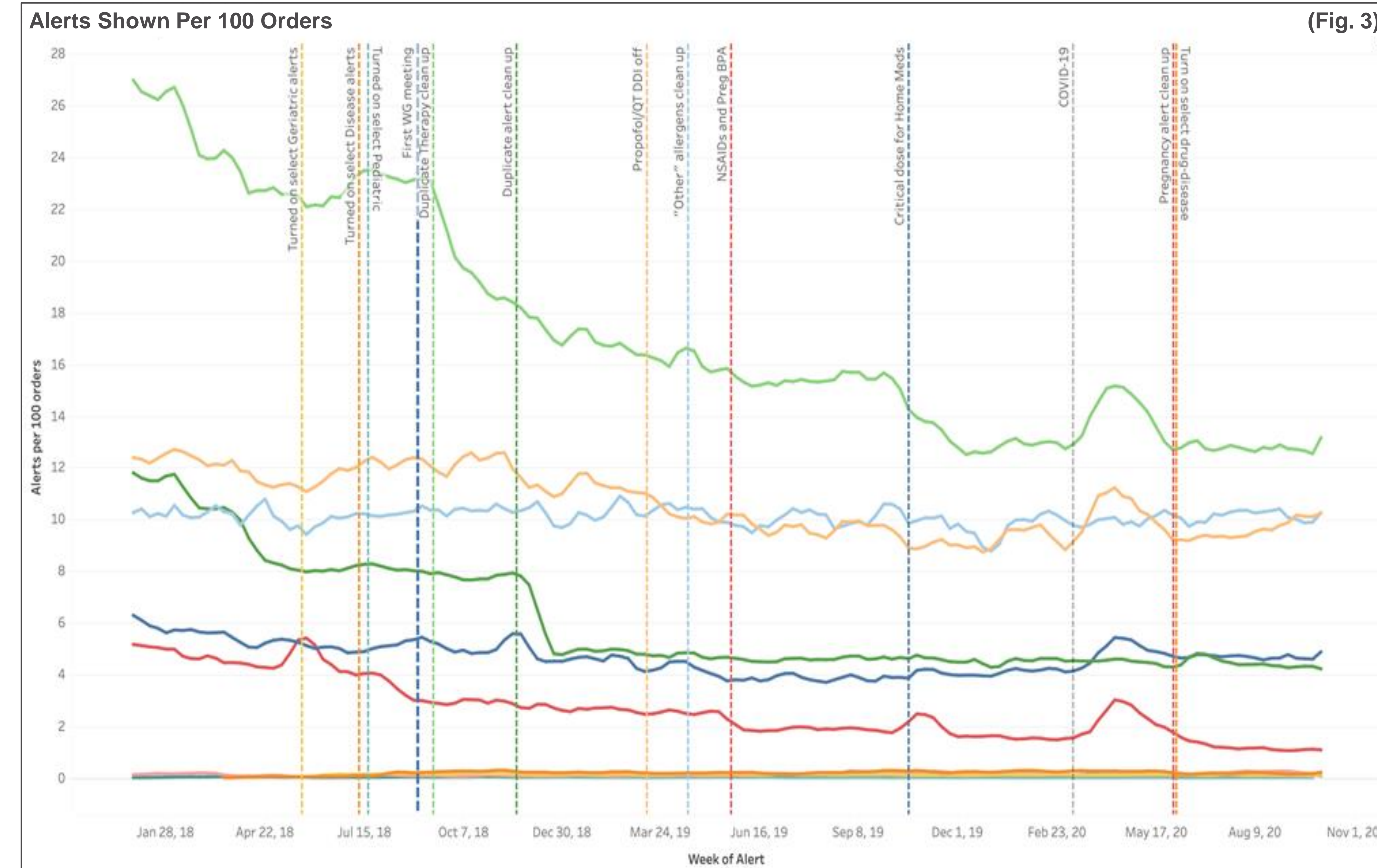
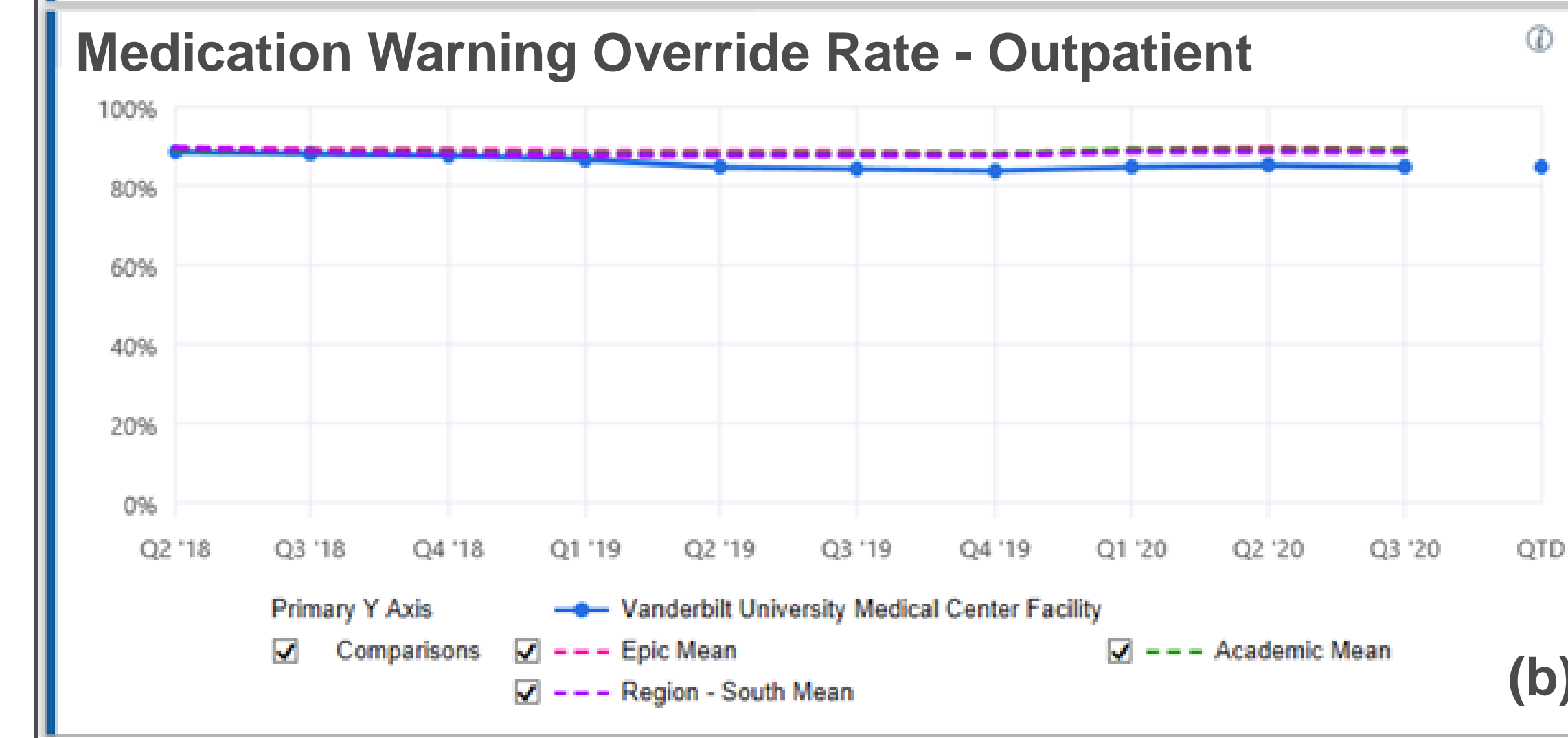
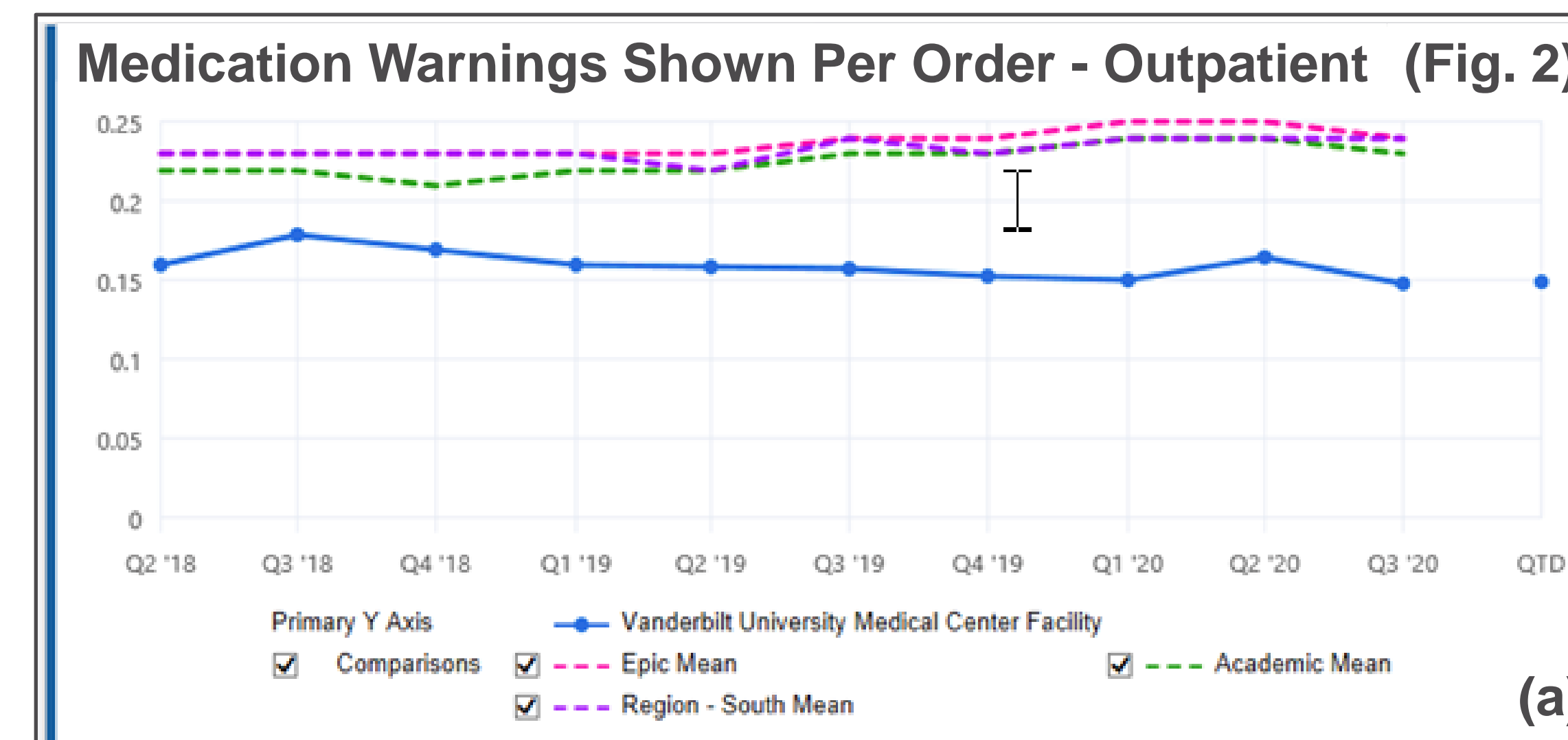
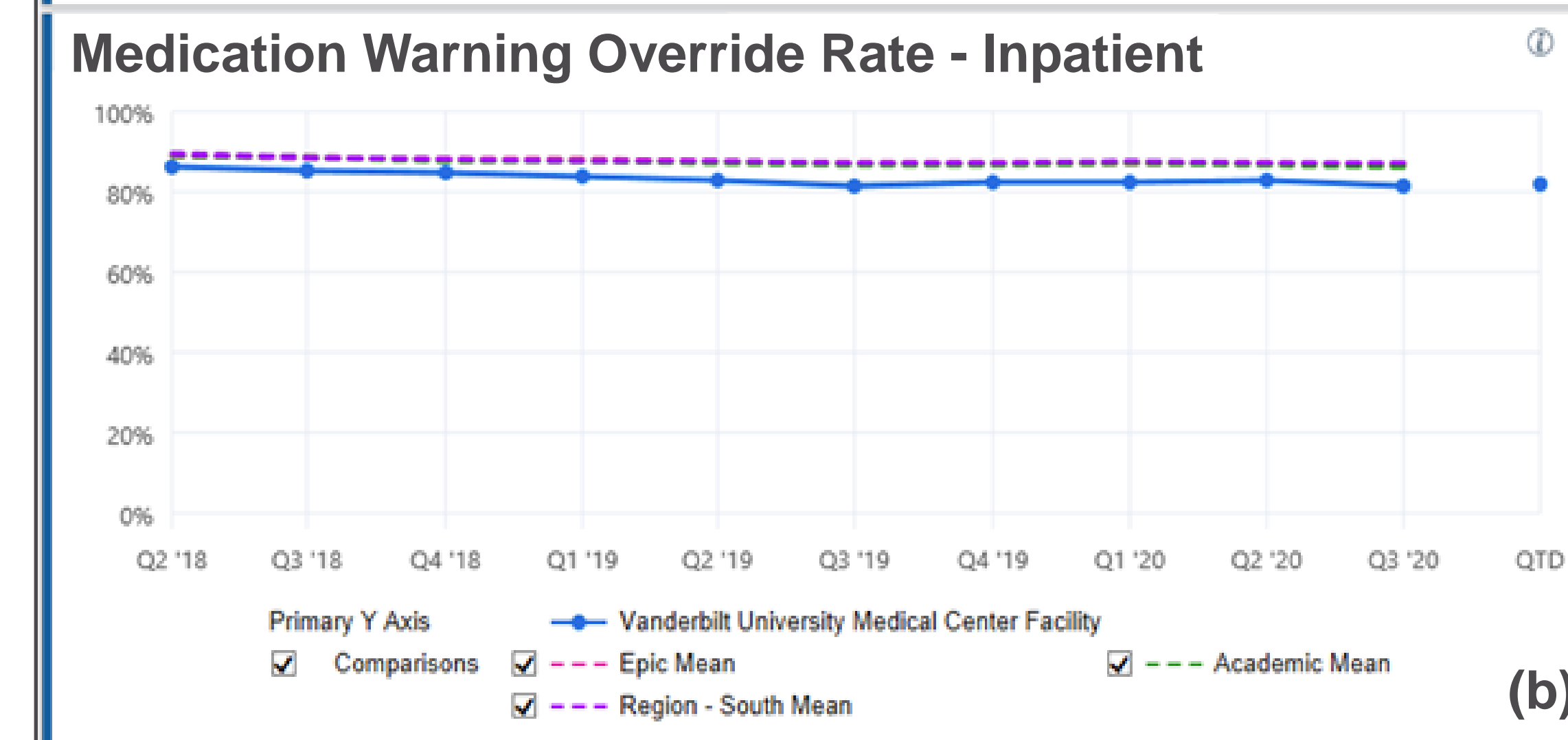
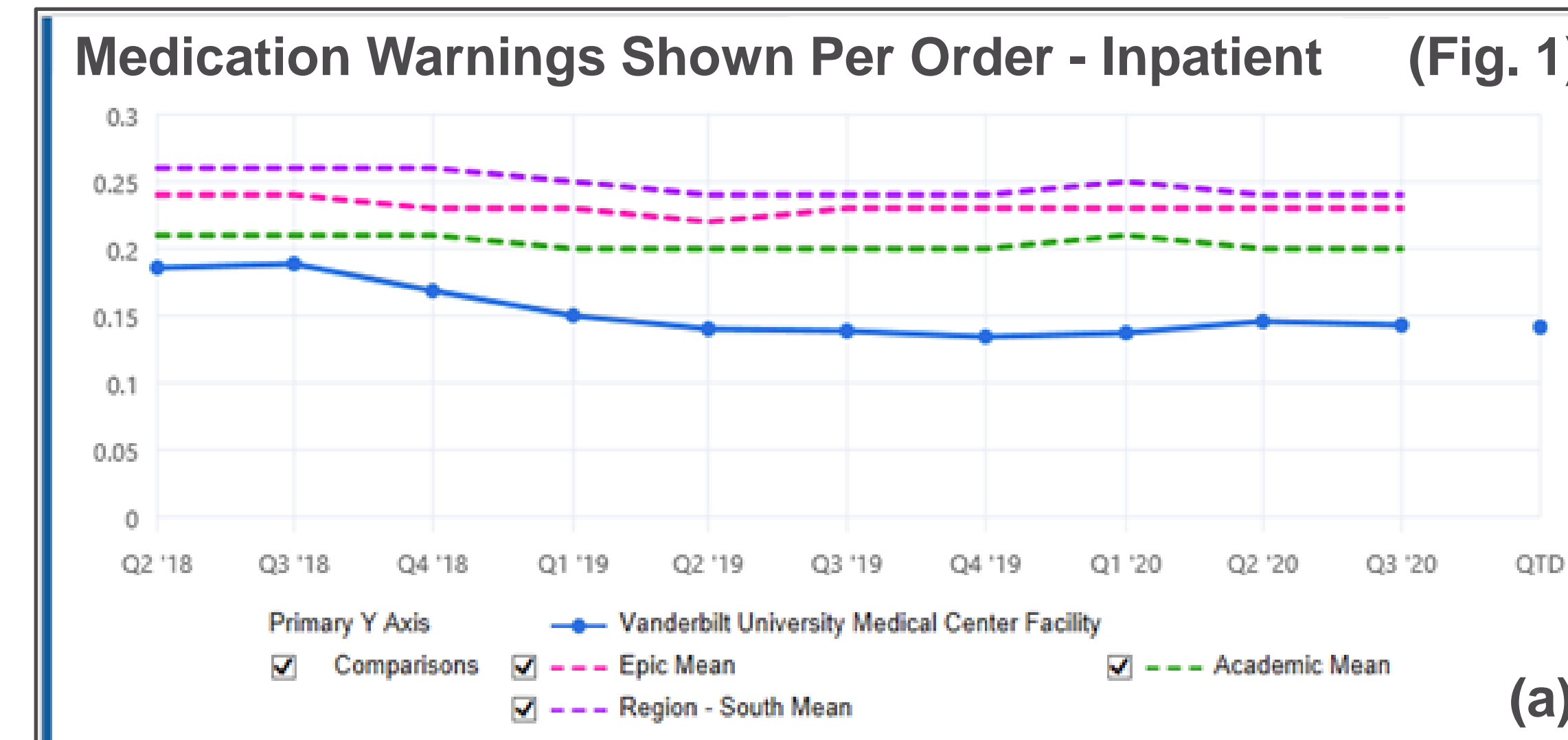
Introduction

- Medication alerting systems have been implemented within electronic health records (EHRs) in order to reduce medication errors and adverse drug events.¹
- Medication-related alerts are significant contributors to the number of interruptive alerts encountered by prescribers, and most are overridden.²
- Resulting cognitive overload and desensitization to alerts produces alert fatigue, which could lead to burnout, overlooked significant alerts, and missed opportunities to provide best patient care.³
- Our objective is to:
 - 1) evaluate the impact of the Medication Alerts Working Group on the number of alerts seen per 100 orders, and
 - 2) evaluate how those changes have affected alert override rates.

Methods

- Retrieve EHR logs of all alerts displayed to users since January of 2018, including alert type, alert date/time, alert triggers, and provider response.
- Perform statistical and descriptive analysis to identify relationships between provider alert burden and alert override rate.
- Evaluate data using quality control charts for pre- and post-intervention alert rates, as well as a Poisson regression model for statistical significance.

Preliminary Results



Key (Fig. 3)

- Med Alert Type
- Duplicate Therapy
- Drug-Drug
- Drug-Allergy (Active ...)
- Duplicate Medication ...
- Dose
- Pregnancy
- Drug-Disease
- Geriatric
- TPN
- Lactation
- Pediatric

Conclusions

- The VUMC Medication Alerts Working Group impacted provider alert burden.
 - The override rate of interruptive medication alerts remains high.
- Lessons learned can be applied to further decrease alert burden and alert fatigue.

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References

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