

Exploring Pregnancy-Related Coding Practices in Administrative Claims Data: Insights for Health Outcomes Researchers

EPH172

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INTRODUCTION

- Some studies requiring time-sensitive data (e.g., seasonality, new product launch) and known pregnancy status at index
- Existing pregnancy identification algorithms may not be suitable as enough time may not have elapsed for an end-of-pregnancy outcome to occur

OBJECTIVES

This research explored the use of codes indicative of pregnancy using weeks gestational age in a real-world claims database.

METHODS

Study design and data source

- Retrospective cohort study
- HealthVerity Closed Medical Claims Database

Study population

- Females aged 12 - 55 years in 2023
- People were excluded if there were conflicts in reported sex or year of birth.

Study outcomes

- Weeks of gestations ICD-10-CM Z3A.XX codes
- Trimester-specific indicators
- Discrepancies between codes indicating gestational age were examined.

RESULTS

Table 1. Cohort attrition

Criteria	N
All people with medical enrollment in 2023 within HealthVerity closed claims databases	22,528,281
Female patients	11,862,149
Aged 12 - 55 years in 2023	7,788,584
Those with a Z3A or trimester code	435,971
Z3A & trimester code on the same day	350,218
At least one Z3A code	393,580
At least one trimester code	415,228

RESULTS

Among **435,971 people**, patterns of codes were examined during the weeks of pregnancy.

Z3A and trimester codes occurring within ± 2 weeks conflicted in 28% of pregnancies.

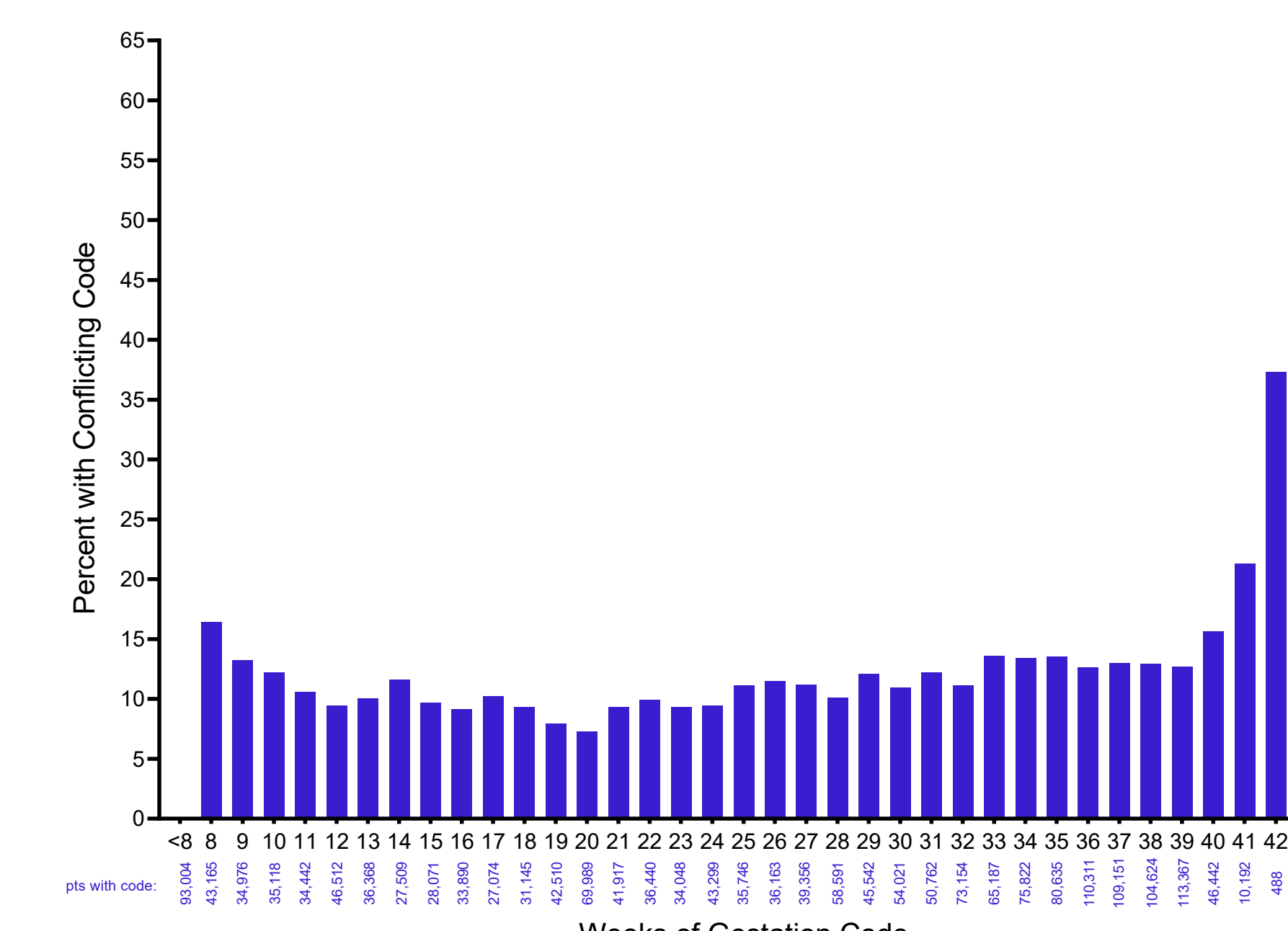
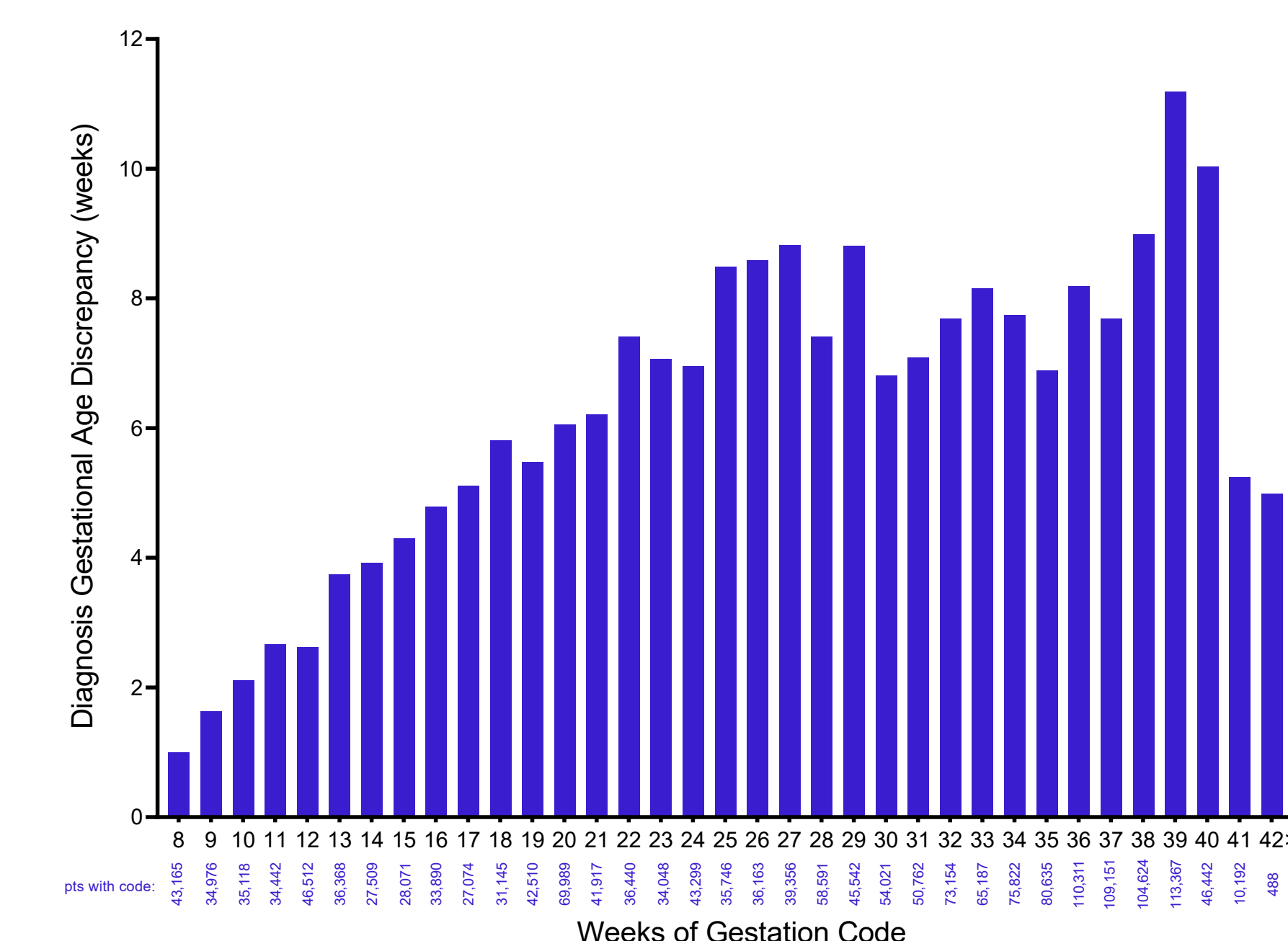
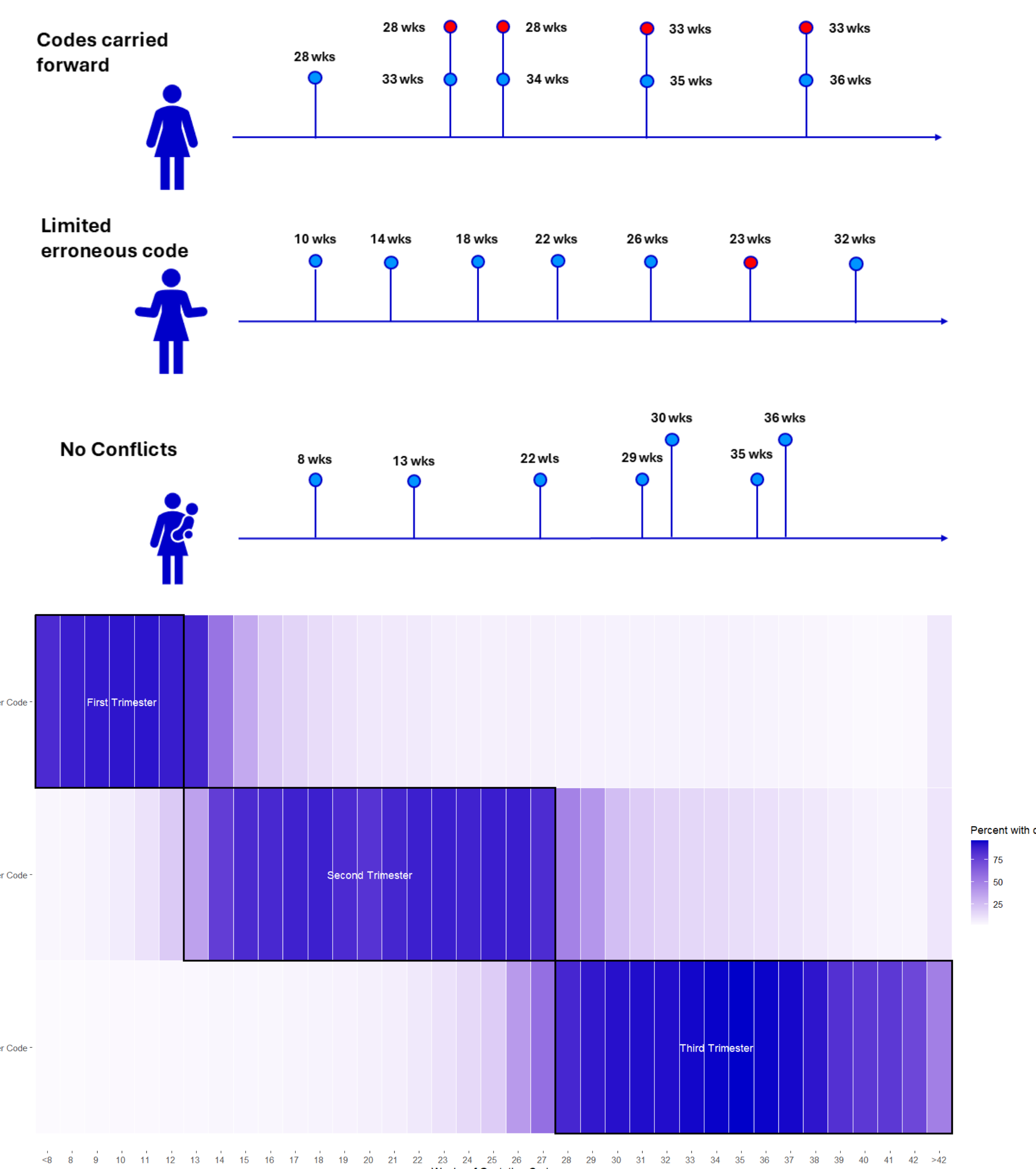
- First trimester: most codes <8 weeks (n=93,004)
- Second trimester at 20 weeks (n=69,989)
- Third trimester at 39 weeks (n=113,367)

Among pregnancies with Z3A weeks of gestation codes, 26% had at least one conflicting temporal association.

- Discrepancies occurred most often prior to 15 weeks (9-16% of persons, average length 3 weeks) and then again after 25 weeks (10-61%, 8 weeks).
- The highest percentage of discrepancies were observed at 41 to greater than 42 weeks, in part driven by the limited number of patients with these Z3A codes

Average weeks of discrepant trimester values increased with each trimester.

- First trimester: 1.00 to 2.62
- Second trimester: 3.74 to 8.82
- Third trimester: peaking ~11 during weeks 39 and 43+



CONCLUSION

- The majority of pregnancies in 2023 in this US-based claims dataset were enumerated with ICD-10-CM Z3A.XX codes rather than trimester-specific indicators.
- Disagreements within a pregnancy on weeks of gestation were common, and most extreme towards the end of pregnancy.

Further work is needed to develop & validate an algorithm to identify pregnancies that does not rely on end of pregnancy events.

LIMITATIONS

- Multiple pregnancies may be misclassified as discrepancies (e.g., a pregnancy that ends in the early part of year and the start of subsequent pregnancy in the later part of the year).
- Additional capture of other pregnancy outcomes, such as miscarriage and still birth may also be misclassified as discrepancies.
- Closed claims data from the United States may not generalize to ex-US healthcare settings.

Disclosures

- AZS, AS, AZ, and SB are employees of Genesis Research Group which received funding from Pfizer to conduct this study.
- KMA is an employee of Pfizer Inc. and may hold stock or stock options.

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