

CIFellows 2020-2021

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Investigating Temporal Patterns of Glycemic Control around Holidays

Do people have worse glycemic control during holidays?

PURPOSE OF THE STUDY

Investigating the effects of winter holidays on glycemic control



537 million people worldwide are affected with diabetes



A significant fraction of people with diabetes fail to achieve recommended goals for glycemic control



Changes in person's routine during holidays may further affect glycemic control in diabetes patients

Hypothesis

People with diabetes have worse glycemic control during holidays compared to non-holidays

METHOD



14 subjects with type 1 diabetes
91 days continuous glucose monitor (CGM) data (week 46 to week 6)

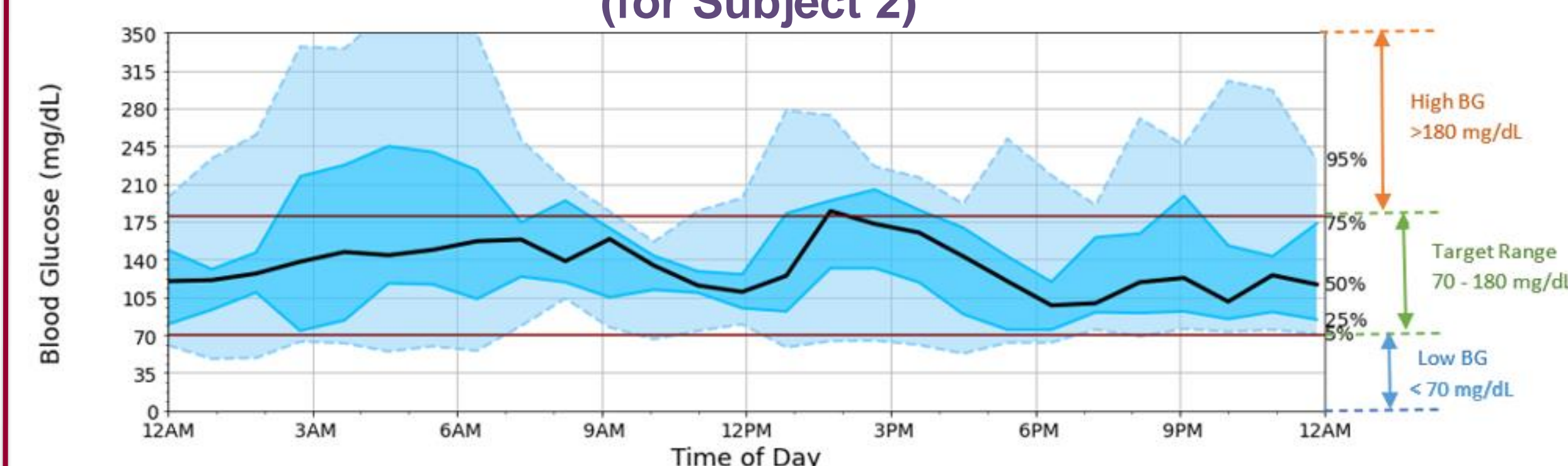


Holiday Weeks:
Week 46: Thanksgiving
Week 52: Christmas
Week 1: New Year



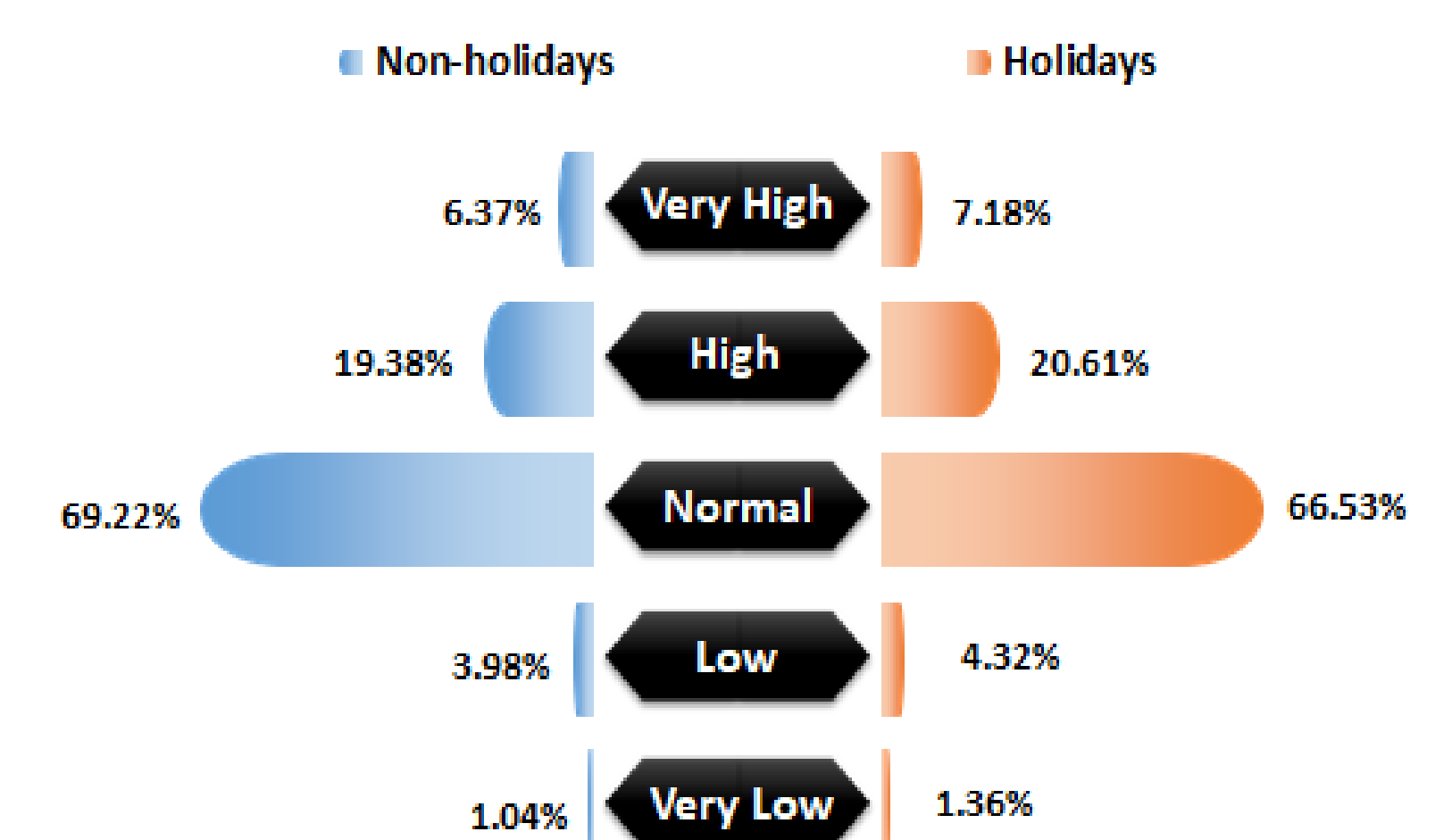
- Compared blood glucose data during holiday weeks with non-holiday weeks using clinically-validated metrics for quantifying diabetes management

One Week of CGM Data during Thanksgiving Week (for Subject 2)

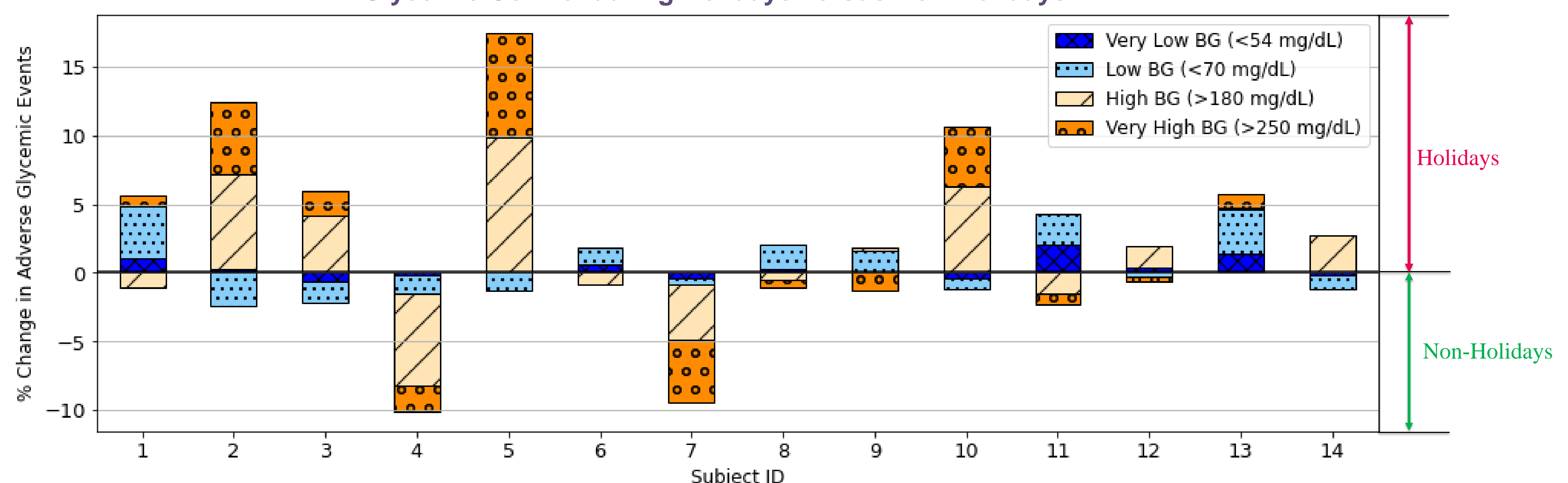


RESULTS

Blood Glucose Levels across all Subjects



Glycemic Control during Holidays versus Non-Holidays



KEY TAKEAWAYS

86%

Subjects had worse glycemic control during holiday weeks

42%

Subjects had more hypoglycemic events during holidays

References

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