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The Effects of Daylight Saving Time Clock Changes on Health Outcomes in Primary and Secondary Care in England

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Objectives

The effects of daylight saving time (DST) transitions on health are the subject of intense debate, with the current literature fairly mixed. We aimed to explore the effects of the DST transitions on a range of health outcomes in a large dataset of linked English primary and secondary care records.

did not find evidence that the DST transitions have a negative impact on population health.

Method

We used CPRD Gold primary care records linked to hospital admissions and A&E visits. Patients were included if they had a code for acute cardiovascular disease, depression, road traffic injury, anxiety, self-harm, eating disorder or sleep disorder in their primary or secondary care record, or a code for a psychiatric condition in A&E, in the 8-week period surrounding the clock changes (2008-2019). Negative binomial regressions, adjusted for day of the week and region (and Easter weekend in Spring), compared event rates in the week after the clock changes to the control period (4 weeks before transitions and weeks 2-4 after).

Results

In total, 683,809 patients and 1,564,532 events were included in the study. In Spring we found no differences in the number of mental and physical health events in the week after the clock change compared to the control period. In the week after the Autumn transition we found a decrease in acute cardiovascular disease (IRR 0.98, 95% CI 0.96-0.999), depression (IRR 0.96, 95% CI 0.95-0.97), anxiety (IRR 0.97, 95% CI 0.95-0.98), psychiatric conditions (IRR: 0.94, 95% CI 0.90-0.98) and sleep disorders (IRR 0.92, 95% CI 0.87-0.97).

Conclusion

The Autumn transition (when the clocks go back an hour) was associated with a reduction in acute cardiovascular disease, sleep disorders and some mental health conditions. We

