

# CVD Preventive Med Use Down During COVID-19 Pandemic

Dawn Elliott Knapp, PA-C

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*Editor's note: Find the latest COVID-19 news and guidance in Medscape's [Coronavirus Resource Center](#).*

*The [study](#) covered in this summary was published in [medRxiv.org](#) as a preprint and has not yet been peer-reviewed.*

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## Key Takeaways

- Medication prescribing and dispensing in the United Kingdom were hampered during the COVID-19 pandemic and have not recovered to prepandemic levels as expected.
- Analysis of cardiovascular disease (CVD) medications dispensed to 15.8 million individuals aged 18+ years in England, Scotland, and Wales showed that more than 400,000 fewer individuals initiated antihypertensive treatment during 2020-2021 than would have been expected compared with 2019.
- The use of lipid-lowering medicines decreased by an average of 14,000 per month in early 2021 compared with the equivalent months in 2019. However, the use of medications for [type 2 diabetes](#) (T2DM) increased by ~1600 patients per month.

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## Why This Matters

- As CVD is the most common cause of mortality and morbidity worldwide, understanding the impact of the COVID-19 pandemic on CVD and its risk factors is crucial.
- If individuals remain untreated, it is estimated that missed medication could result in >13,000 additional CVD events, including >2000 additional myocardial infarctions and >3000 additional strokes.
- This study shows that reduction in the control of CVD risk factors due to the pandemic can be accurately quantified by analysis of medication utilization.

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## Study Design

- Anonymous individual-level population-scale data was used from England, Scotland, and Wales, accessed through the respective national Trusted Research Environments (TREs): NHS Digital's TRE for England, the Scottish National Safe Haven, and the SAIL Databank. The TRE partnership allows access to the electronic health record data of the three nations to support research into the impacts of CVD on COVID-19, and vice versa.
- Drugs under review were those used to treat the major CVD risk factors: [hypertension](#), [atrial fibrillation](#), LDL-cholesterol, and diabetes.
- Interrupted time series regression analysis was used to model population-level changes in prescribing trends from 2018 to 2021 by individual CVD subgroup.
- The analysis took into account change in annual rate of dispense for the medicines of interest, plus whether the variation in dispensing of medications was associated with age, sex, region, or ethnicity.
- The numbers of CVD events expected with and without hypertensive treatment were calculated, including stratification by stable and [unstable angina](#), [myocardial infarction](#), [transient ischemic attack](#), [cerebrovascular accident](#), and [heart failure](#).
- Outcomes measured were monthly counts; percent annual change and annual rates of medicines dispensed by CVD/CVD risk factor; and prevalent and incident use.

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## Key Results

- The authors observed a downward trend in the annual percent change in CVD medicines dispensed in 2020-2021, suggesting a decline in the active management of CVD in the population.
- However, the use of incident medicines to treat T2DM increased in the first half of 2021, which could reflect an increase in new-onset T2DM as a result of 2020-2021 events, including an increase in CVD risk factors such as increased body mass index, reduced physical activity, and increased alcohol consumption.
- Medication data can be used to estimate the magnitude of the healthcare issues brought about by the COVID-19 pandemic.

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## Limitations

- Estimated future CVD events assume that patients' conditions go untreated for the rest of their lives.
- Outcomes were based primarily on study of hypertension as a CVD risk factor; all CVD categories should be included to provide more accurate analysis.
- Healthcare planning for future pandemics should ensure that adequate provisions are made across provider networks to support patients with chronic disease.

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## Study Disclosures

- Coauthor Amitava Banerjee received grant funding from AstraZeneca, NIHR, UKRI, the European Union, and the British Medical Association. The other authors have not declared any relevant financial relationships.

*This is a summary of a preprint research study, "The adverse impact of COVID-19 pandemic on cardiovascular disease prevention and management in England, Scotland and Wales: A population-scale analysis of trends in medication data," by Caroline E. Dale, from the Institute of Health Informatics Research, University College London, and colleagues, on medRxiv, provided to you by Medscape. This study has not yet been peer-reviewed. The full text of the study can be found on Medrxiv.org.*

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