

The impact of COVID-19 pandemic on trends in the recorded incidence of Long-Term Conditions identified from routine electronic health records between 2000 and 2021 in Wales: a population data linkage study.

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Objectives

The COVID-19 pandemic has resulted in delayed diagnosis and treatment for cancer patients and increases in elective surgery waiting lists. The impact on other 'long-term' conditions (LTCs) is unclear. We examined the effects of the pandemic on the recorded incidence of 20 LTCs to inform decisions on treatment pathways and resource allocation.

Approach

We included Welsh residents diagnosed with any of 20 LTCs for the first time between 2000-2021.

Data were accessed and analysed within the Secure Anonymised Information Linkage (SAIL) Databank.

The primary aim was to assess the impact of the COVID-19 pandemic on trends in recorded incidence. Secondly we examined incidence by socio-demographic and clinical subgroups: age, sex, deprivation quintile, ethnicity, frailty score and learning disability.

Incidence were presented as monthly rates for each LTC. We performed interrupted time series analyses to estimate; the immediate and long-term change in rates following the pandemic; and the size of the undiagnosed population.

Results

We included 2,206,070 individuals diagnosed with at least one LTC.

An immediate reduction in recording of new diagnoses was observed in April 2020 across all 20 LTCs, followed by a gradual recovery towards pre-pandemic levels over the next 18 months, though at different rates across conditions. The largest difference between observed and expected (as predicted using pre-pandemic trends) incidence between January 2020 and June 2021 were in the diagnoses of COPD (-43%, 95% CI (-50%, -34%)), Asthma, Hypertension and Depression and the smallest difference was in Type 1 diabetes, dementia, stroke and TIA (-8%, 95% CI (-19%, 5%)).

Differences in the proportions of incidence by socio-demographic and clinical subgroups in the years preceding and following the pandemic have also been analysed (results to be finalised).

Conclusions

There was an abrupt reduction in the observed incidence of all 20 LTCs after March 2020 followed by a gradual recovery over consequent months towards pre-pandemic levels. Of 20 LTCs, 15 strongly indicate a reservoir of yet undiagnosed patients. The results from this study will have implications in resource allocation.

