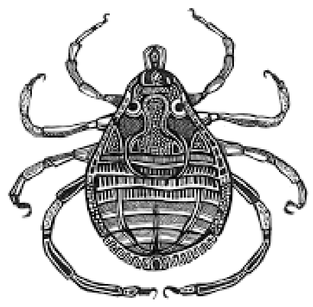
EVOLUTION OF LYME BORRELIOSIS EPIDEMIOLOGY IN PRIMARY CARE AND HOSPITAL SETTINGS IN FRANCE DURING THE COVID-19 PANDEMIC (2020-2021)



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Introduction

'Stay at home' restrictions during the COVID-19 pandemic temporarily modified outdoor recreational activities habits and access to healthcare services was restrained during this period.

This may have impacted the risk of developing a primary or disseminated form of Lyme borreliosis (LB).

This study analysed incidence rates of LB by age and region in primary care and hospital settings in 2020 and 2021 in France and compared them to previous years.

Methods

Incidence rates of LB in primary care were estimated using data from the national sentinel network (SN) and electronic medical records (EMR) of a network of general practitioners independent of the SN.

Hospitalization rates were calculated from the national hospital discharge database (PMSI). Hospitalized cases were identified using an algorithm combining three LB-specific ICD10 codes (A69.2, M01.2 and L90.4) and compatible codes for disseminated forms.

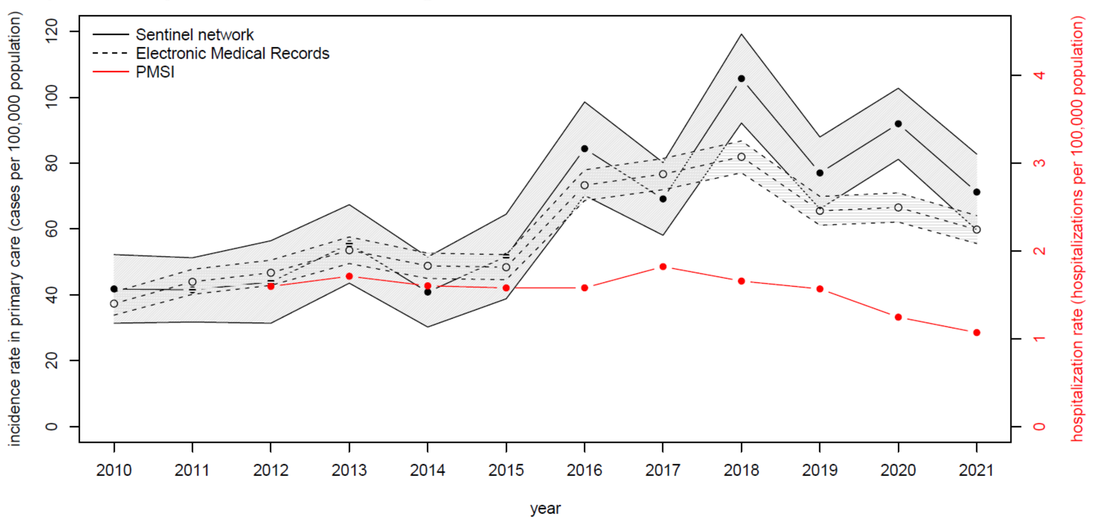
Average annual rates were calculated to smooth annual variability.

Results

Evolution of incidence rate

Incidence rates in primary care decreased slightly between 2017-2019 and 2020-2021, from 83 cases/100,000 population to 81/100,000 for the SN and 75/100,000 to 63/100,000 for the EMR.

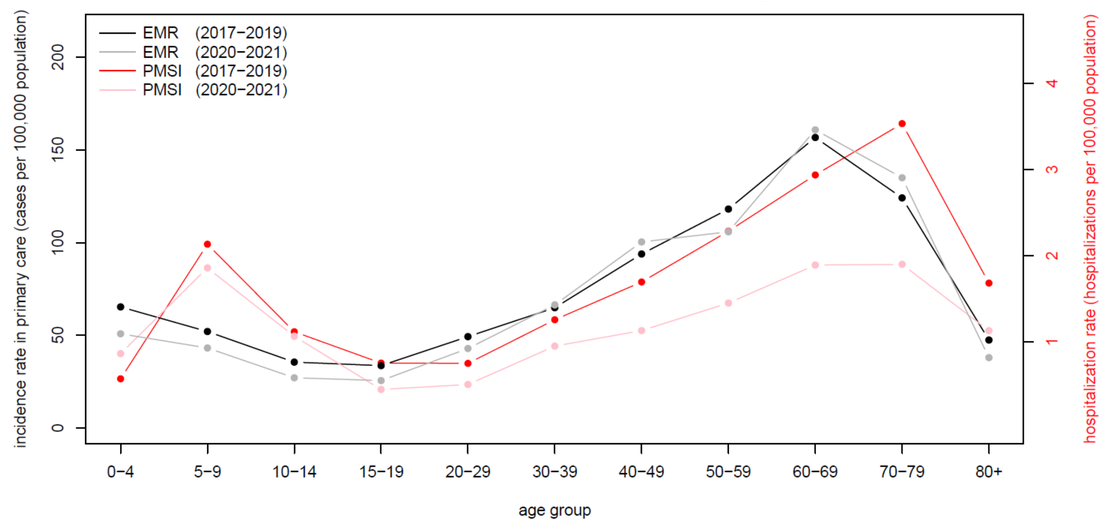
The hospitalization rate significantly decreased, from 1.68 to 1.16 hospitalizations/100,000 population in 2017-2019 and 2020-2021 respectively. The decreasing trend started in 2018.



Average incidence rate by age group

The age distribution in primary care in 2020-2021 was similar to 2017-2019.

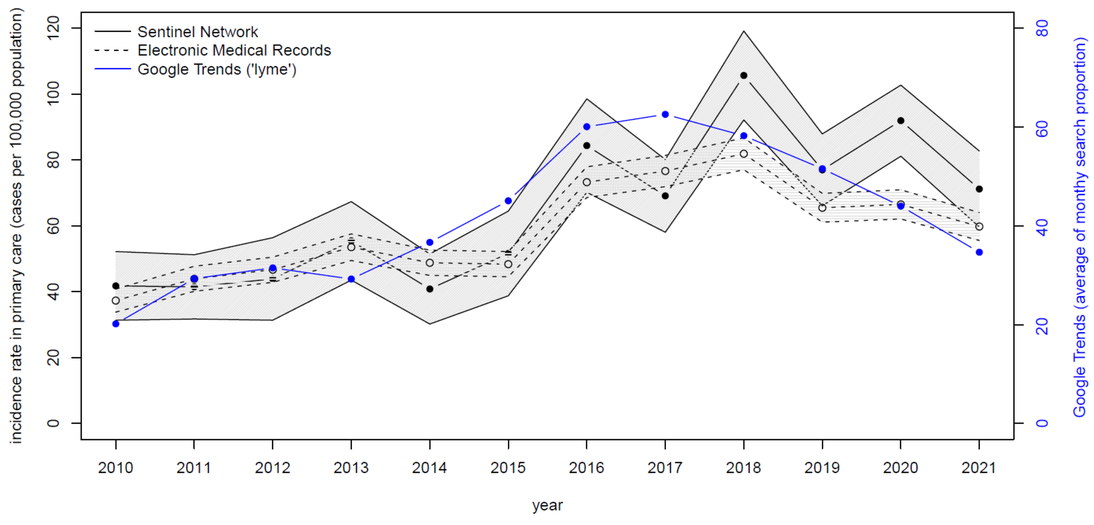
Hospitalization rates remained stable in children 0-4, 5-9 and 10-14 years of age (1.23/100,000 to 1.21/100,000 in 0-14 years) while they decreased in older age groups, from 1.78/100,000 in 2017-2019 to 1.15/100,000 in 2020-2021 in those 15 years of age and older.



Evolution of Google Trends search volume

Google Trends analysis of search volume for the keyword "Lyme" during the same time period indicated a trend similar to the evolution of incidence rates in primary care but preceded by approximately one year.

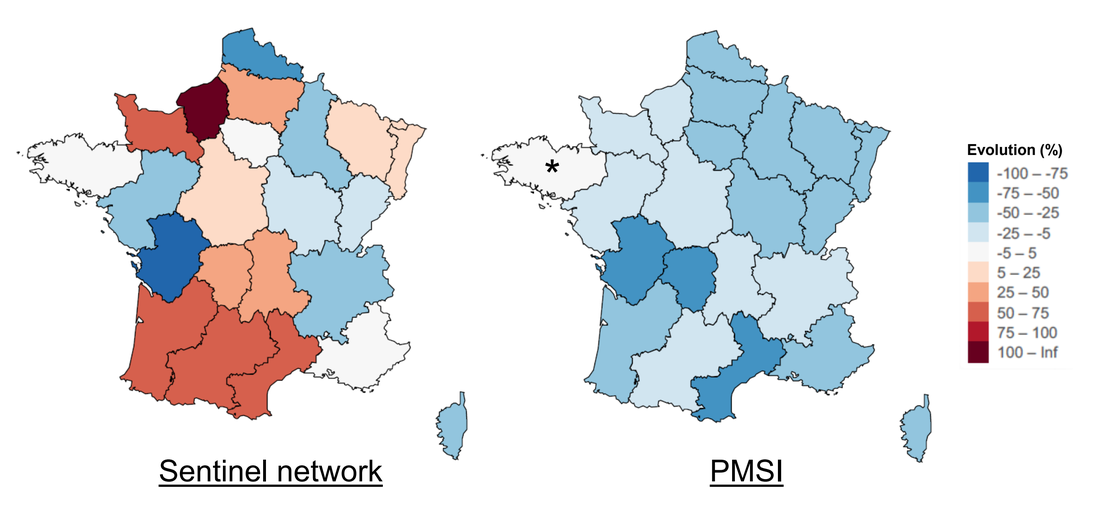
The incidence rates in primary care reached a maximum in 2018 whereas the search volume for "Lyme" peaked in 2017.



Evolution of incidence rate by region

Between 2017-2019 and 2020-2021, incidence rates increased for 11 regions according to the SN and 5 according to the EMR, on a total of 22 regions.

Hospitalization rates decreased in all regions between the two study periods, except in Bretagne (*).



Conclusion

Incidence rates in primary care and hospital settings decreased in 2020-2021 compared to 2017-2019.

The decreasing trend started before the COVID-19 era and wasn't amplified in 2020-2021. Also, incidence rates in primary care increased in some regions despite similar restrictions nationwide.

Further analyses will be conducted to explain the evolution of LB epidemiology in 2020-2021.

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