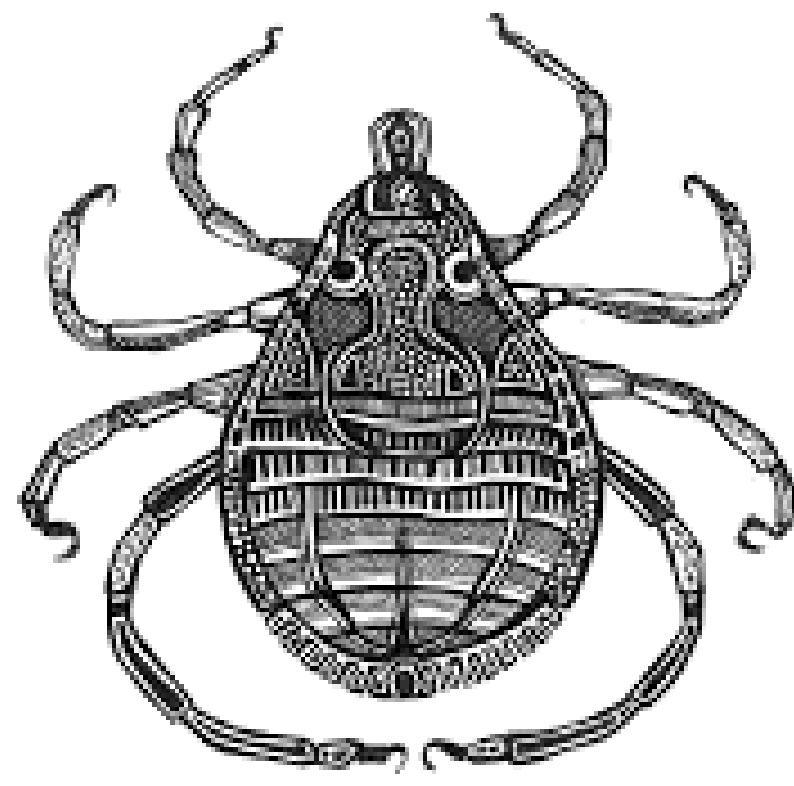




Epidemiology of Lyme borreliosis in France in primary care and hospital settings, 2010 to 2019



Charles Nuttens¹, Stéphanie Duret², Antoine Bessou², Jozica Skufca³, Emmanuelle Blanc¹, Andreas Pilz⁴, Bradford D. Gessner⁵, Jean-François Faucher⁶, James Stark⁵

1. Pfizer, Paris, France ; 2. IQVIA, Courbevoie, France ; 3. P95, Leuven, Belgium ; 4. Pfizer, Vienna, Austria ; 5. Pfizer, Collegeville, USA ; 6. CHU de Limoges, Limoges, France

Introduction

In France, Lyme borreliosis (LB) incidence is mainly derived from the national Sentinel network and the national hospital discharge database (PMSI) to describe the epidemiology in primary care and hospital settings respectively. Data up to 2016 were analysed and published.

Our study compared incidence rates of LB by sex, age and region in primary care and hospital settings between 2010 and 2019, using for the first time an additional source of data in primary care.

Methods

Incidence rates of LB in primary care were estimated between 2010 and 2019 using data from the [Sentinel network](#) and [electronic medical records \(EMR\)](#) of a network of general practitioners independent of the Sentinel network.

Hospitalization rates were calculated between 2012 and 2019 from the [national hospital discharge database](#) (i.e. Programme de Médicalisation des Systèmes d'Information - [PMSI](#)). Hospitalized cases were identified using an algorithm combining 3 LB specific ICD10 codes (A69.2, M01.2 and L90.4) and compatible codes for disseminated forms.

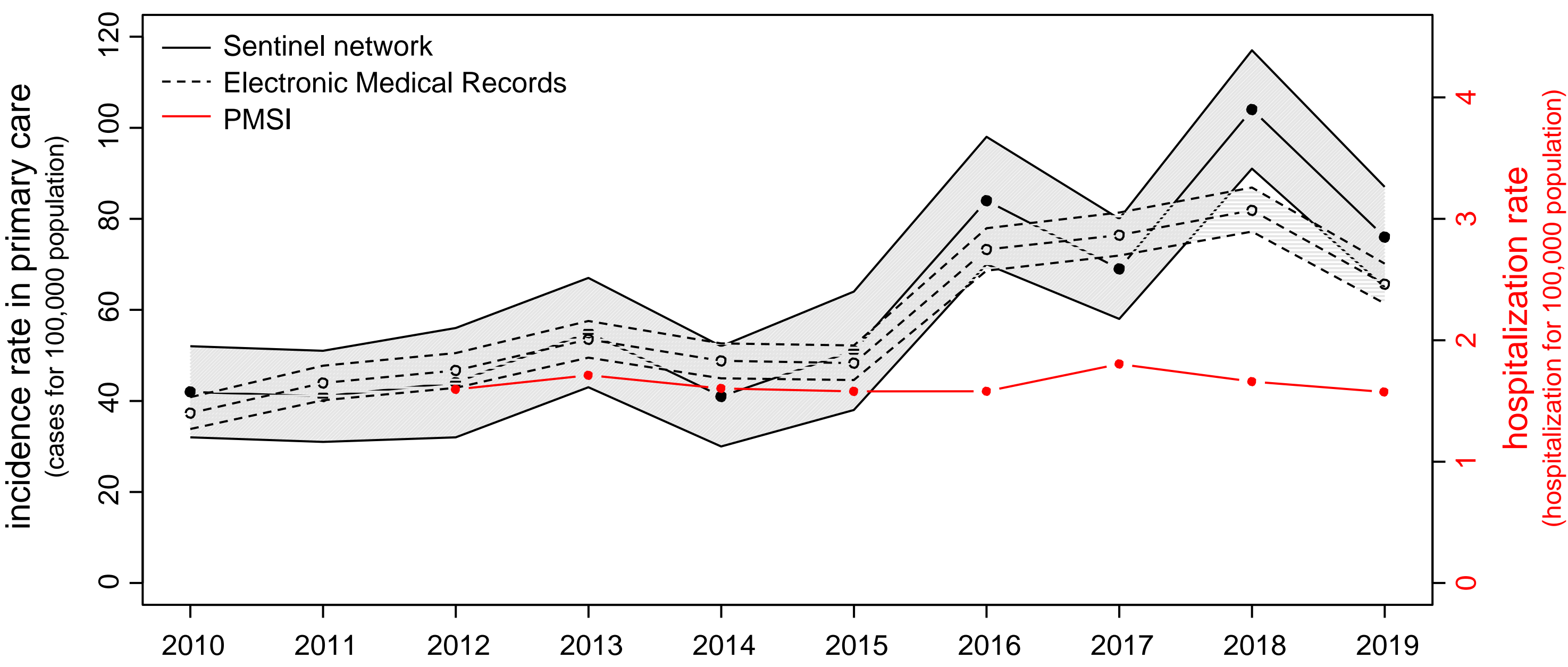
Average annual incidence rates were calculated for 2010-2012 and 2017-2019 to smooth annual variability.

Results

Evolution of incidence rate (2010-2019)

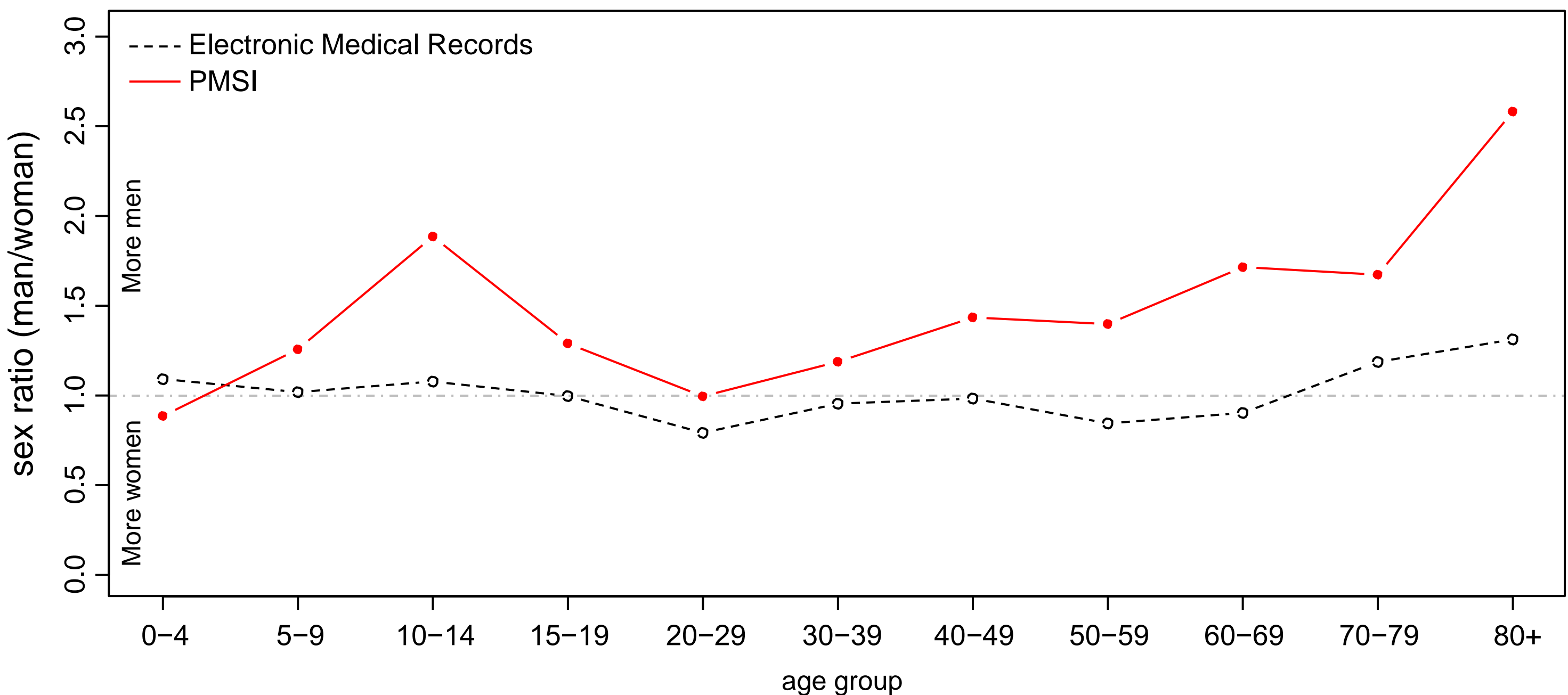
Incidence rates in primary care increased from 42 cases/100,000 population from 2010-2012 to **83/100,000 in 2017-2019 for the Sentinel network** and from 43/100,000 to **75/100,000 for the EMR**.

The hospitalization rate remained stable during the study period, fluctuating between **1.6 and 1.80 admission/100,000 population**.



Average sex ratio by age group (2010-2019)

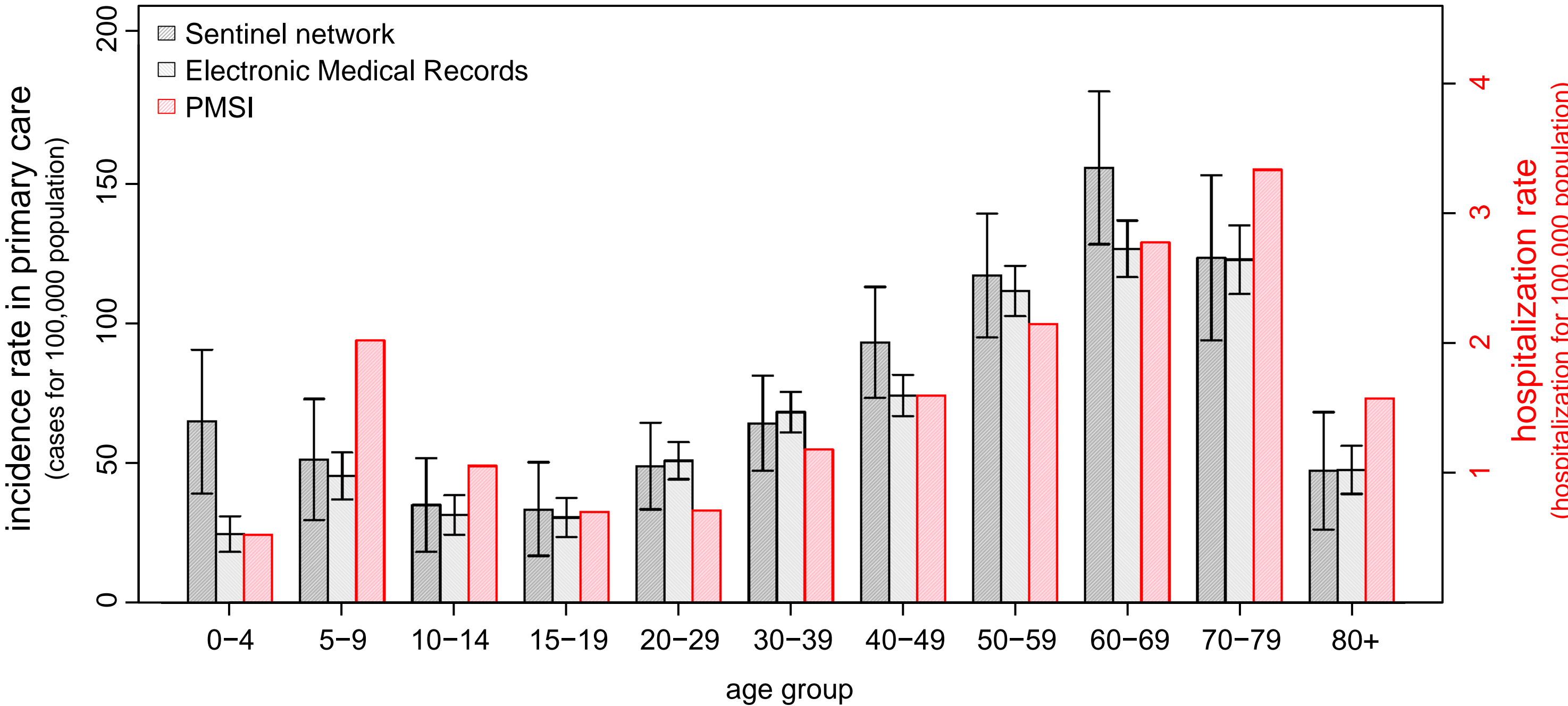
Women were slightly predominant in primary care (1.1 women/1 man). **Men were predominant among hospitalizations (1.4 man/1 woman)**, mainly in adolescents aged 10-14 years (1.9 boys/1 girl) and in adults with a maximum in 80 years of age and older (2.6 men/1 woman).



Average incidence rate by age group (2017-2019)

From 2017-2019, the age distribution was bimodal with the **first peak in children** aged 0-4 years for the Sentinel network (65/100,000) and 5-9 years for the EMR (46/100,000) and a **second peak in individuals 60-69 years of age** (**Sentinel network:156/100,000 ; EMR:127/100,000**).

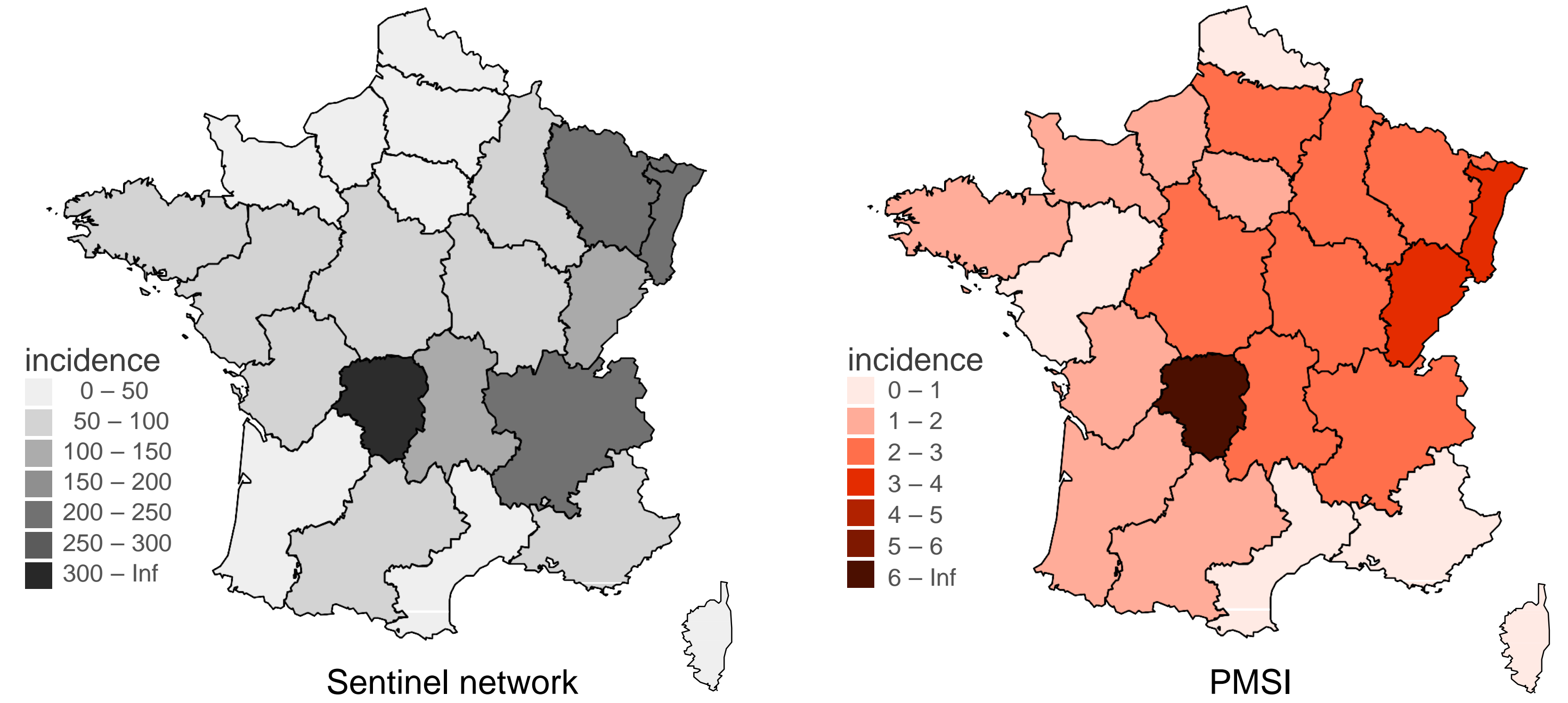
The age distribution of hospitalization was also bimodal with a **peak in children aged 5-9 years** (2.0/100,000) **and adults aged 70-79 years** (3.4/100,000).



Average incidence rate by region (2017-2019)

The regional incidence rate in primary care was highest in **Limousin** (**Sentinel network: 330/100,000 ; EMR: 356/100,000**) and **Alsace** (**Sentinel network: 244/100,000 ; EMR:162/100,000**).

Similarly, incidence rates in the hospital setting were the highest in **Limousin** (8.2/100,000) and **Alsace** (3.4/100,000).



Conclusion

Incidence rates of LB were high in specific age groups and regions which may inform public health prevention initiatives.

Comparing for the first time 3 independent data sources highlighted disparities in incidence evolution, sex ratios and predominant age groups between cases seen in primary care and hospital settings.

References

- Septfons A *et al*, Euro Surveill. 2019;24(11):pii=1800134
- Réseau Sentinelles, INSERM/Sorbonne Université, sentiweb.fr

Charles Nuttens, PhD

Medical Development, Scientific and Clinical Affairs - Pfizer
23-25 avenue du Docteur Lannelongue, 75014 Paris, France
charles.nuttens@pfizer.com - 0000-0001-6288-8023



Scan the QR code
to download the PDF
version of the poster

