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THE IMPACT OF COVID-19 ON POPULATION-LEVEL DRUG UTILISATION OF ALENDRONATE IN FIVE EUROPEAN COUNTRIES: AN INTERRUPTED TIME SERIES ANALYSIS

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COIs: This project was funded by UCB Pharma and Amgen Inc. All other conflicts of individual authors are outside the remit of this work

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Objective

To quantify the impact of the COVID-19 lockdown on the prescription of new users of alendronate [ALN] in five European countries and six independent databases.

Results

- In Jan 2018, IR of new ALN use (per 10,000 PM) ranged from 1.9 to 3.3, across databases (Figure 1).
- Pre-lockdown, IR of new ALN use was stable in all databases.
- During lockdown, significant monthly reduction of IR, ranging from 0.3 to 0.5 compared to the pre-lockdown period.
- After lifting of restrictions, IR increased at a monthly rate of 0.3 to 0.6 relative to the lockdown period.
- In older age groups, sharper decrease in the IR during the lockdown, particularly in patients >60 years, with a greater reduction in older age groups (ranging from 0.4 to 2.2) (results not shown).
- After the lifting of restrictions, in older age groups, the increasing slope in IR post-COVID-19 restrictions was smaller than the decreasing slope in IR during lockdown.

Methods

Design: Multinational real world cohort study

Setting: 6 independent databases in 5 European countries:

1. CPRD (Clinical Practice Research Datalink) GOLD and AURUM, UK
2. HSD (Health Search Database), IT
3. IPCI (Integrated Primary Care Information Project), NL
4. NDR (National Danish Registries), DK
5. SIDIAP (Sistema d'Informació per al Desenvolupament de la Investigació en Atenció Primària), ES

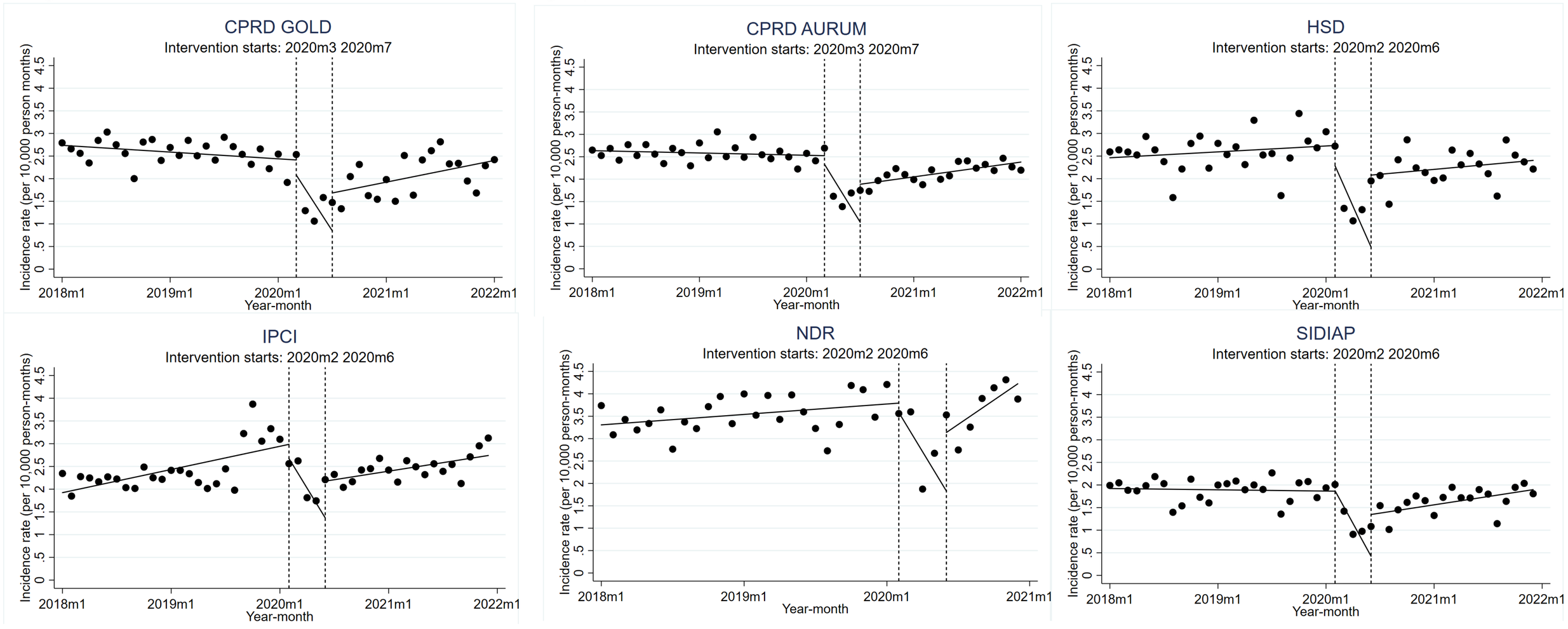
Participants: Patients aged ≥ 18 years and registered for ≥ 1 year

Dates: 01 Jan 2018 to 31 Dec 2021 (31 Dec 2020 for NDR)

Statistical analysis:

1. Monthly incidence rates (IR) = $\frac{No.of\ new\ ALN\ users\ in\ a\ calendar\ month}{Person-months\ of\ patients\ in\ the\ database,\ who\ were\ not\ users\ of\ ALN\ in\ the\ year\ before\ the\ last\ day\ of\ the\ prior\ month}$
2. Interrupted time series analysis: Changes in IR before (Jan 2018 – Feb 2020), during (Mar – May 2020), and after the first lockdown restrictions (Jun 2020 – Dec 2020/2021)

Figure 1. Incidence rate of alendronate usage per calendar month for each database



Conclusions

- **Following the COVID-19 pandemic lockdown in Europe, initiation of ALN therapy declined in the immediate months.**
- **Older patients had lower recovery of ALN treatment initiation compared to the decrease during the lockdown.**