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**Impact of COVID-19 on hospitalisation for diverse conditions in European countries**

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**Background:**

The COVID-19 pandemic has had an unprecedented impact on Europe. Health systems came under strain, with non-urgent treatments postponed and resources reserved for treatment of COVID-19 patients. Delayed care seeking has been reported, for fear of infection with SARS-CoV2. Yet, the scale of this impact remains under researched. This study aims to compare indirect effects of the pandemic in a European cross-country study aiming to highlight the potential of Population Health Information Research Infrastructures ([www.phiri.eu](http://www.phiri.eu)).

**Methods:**

Focusing on (i) major vascular events (MVE) and (ii) elective surgery for joint replacements (ESJR) as well as (iii) serious trauma this study analyses individual level hospital data in a standardised harmonised data model. We compared pre-pandemic incidence rates (2018-2019) with rates for 2020 and 2021. Analyses are systematically contrasted with SARS CoV2 incidence rates, and policy measures taken based on the OxCGRT index.

**Results:**

A drop in hospital discharge rates was observed during the pandemic in all countries but differing by condition and

month. Socio-economic differences also varied by condition. Our evidence suggests that periods of more severe policy measures also correlated with more dramatic drops in regular hospital activities.

**Conclusions:**

Our findings provide new insights on the dramatic level of de-prioritisation of essential services faced by non-COVID-19 patients in Europe. From a public health perspective, hospital escalation plans should be developed early on to avoid negative mid and long-term health and financial consequences of indirect effects. The study demonstrates the tremendous potential in exploiting health information systems in a systematic way across countries and the value of the PHIRI system. Further research should investigate policy trade-offs involved in severe lockdown measures during a pandemic and variations in health service resilience for future pandemic preparedness.