

# Characterization of Health by OHDSI Asia-Pacific chapter to identify Temporal Effect of the Pandemic for Cardiovascular Diseases (CHAPTER-CVDs)

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## INTRO:

As routinely-collected data emerges, a federated network study could provide a fuller picture how healthcare system is resilient against the pandemic across the systems, regions, and countries

The OHDSI Asian Pacific regional chapter has launched the Characterization of Health by OHDSI Asia-Pacific chapter to identify Temporal Effect of the Pandemic (CHAPTER) study to describe the temporal change in incidence of diseases and healthcare pattern before and after the emergence of COVID-19.

Here, we describe the preliminary results for cardiovascular diseases (CVDs).

## METHODS

The temporal change of CVDs including **hypertension, acute myocardial infarction (AMI), and heart failure (HF)** from Australia LPD and Japan claims were assessed based on **Observational Medical Outcomes Partnership (OMOP) common data model (CDM)**

The digital phenotype definitions and the incidence rate were calculated by leveraging previous Phenotype Phebruary project initiated by the OHDSI

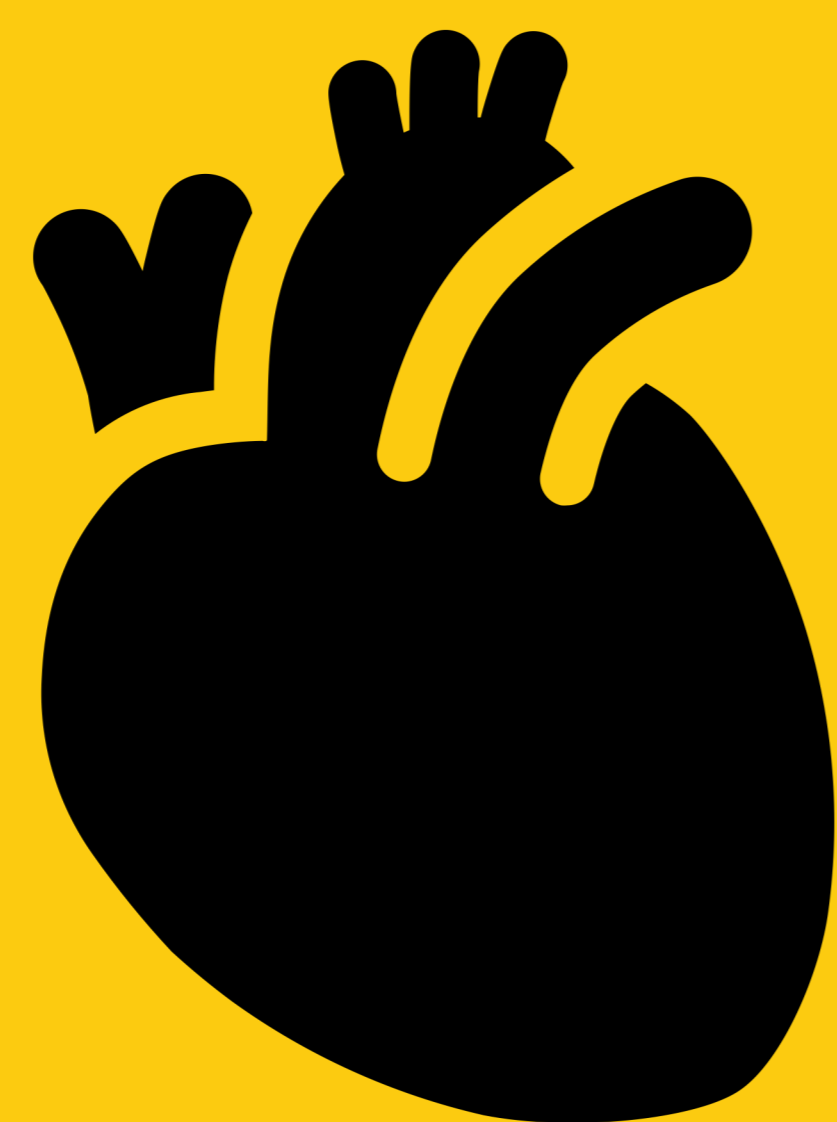
The interrupted time series analysis was used to describe the trend of incidence of three hypertension, AMI, and HF before and after the COVID-19 pandemic occurrence

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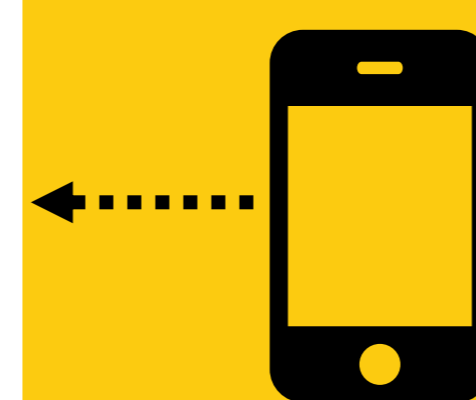


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# Potential temporal change in the diagnosis of Cardiovascular Diseases after COVID-19 pandemic occurrence in the Asia Pacific.

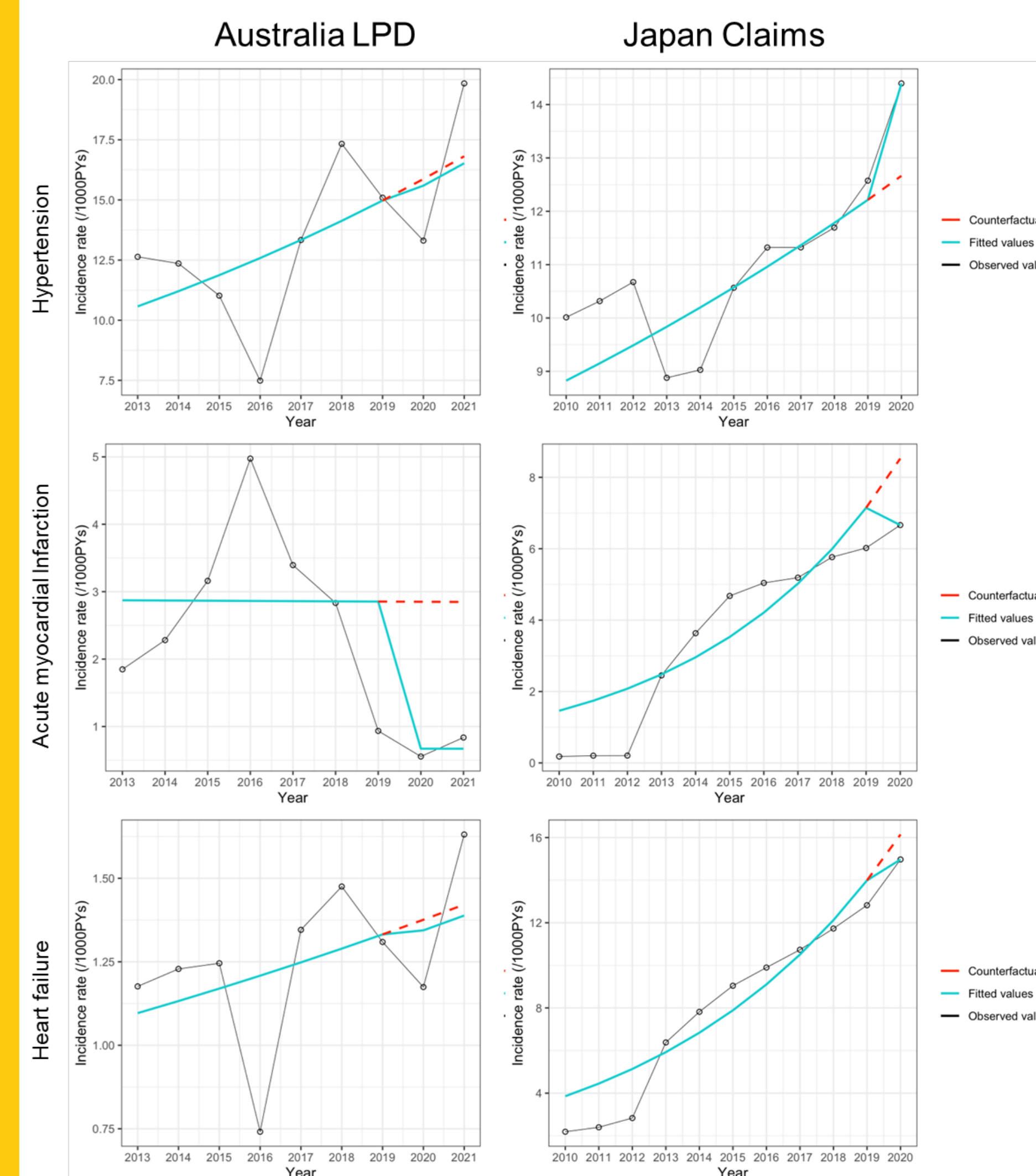


The temporal difference of CVDs will provide insights on the impact of COVID-19 and resilience in each healthcare system during the pandemic. We are recruiting the data partner to join this study.



Scan QR code link to github repository

<https://github.com/ohdsi-studies/CHAPTER>



Comparison of the periods with and without COVID-19 pandemic exposure.

The counterfactual refers the predicted values had no COVID-19 occurrence, and the fitted values are estimated based on the **Poisson regression model with adjusting time vector (years)**.

There is a **sharp decline in the incidence of hypertension, AMI, and HF in the Australia LPD in 2020**, whereas this trend is less evident in the Japan claims. There was **rebound of incidence of cardiovascular diseases in 2021 in the Australia LPD**

## RESULTS

In our preliminary result, we found the potential change in the incidence of CVDs after COVID-19 pandemic occurrence. The further investigation of CHAPTER study group will provide more scientific relevant and detailed information across the OHDSI network. **The temporal difference of CVDs will provide insights on the impact of COVID-19 and resilience in each healthcare system during the pandemic. We are recruiting the data partner to join this study.**



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