



CHAPTER

Characterization of Health by OHDSI AP chapter to identify Temporal Effect of the Pandemic

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Background

- The impact of COVID-19 on the healthcare system is substantial
- Resilience of healthcare system would vary across systems, regions, and countries.
- The COVID-19 pandemic can increase or decrease certain healthcare uses or conditions, but the effect would vary across time points.
- Systematic assessment of temporal pattern of healthcare use for diverse conditions is required.



Aims

- Identification of the temporal change in healthcare use across the pre- and post-COVID-19 era including:
 - The incidence of certain conditions (e.g. hypertension)
 - The prevalence of certain conditions (e.g. hypertension)
 - Use of certain care/services (e.g. prescribing antihypertensive drugs)
- Identification of temporal causality between COVID-19 and epidemiological changes of target diseases
 - Does COVID-19 change the incidence, prevalence of certain conditions or treatment pattern of diseases?
 - If so, would it have an impact on future burden of healthcare system?



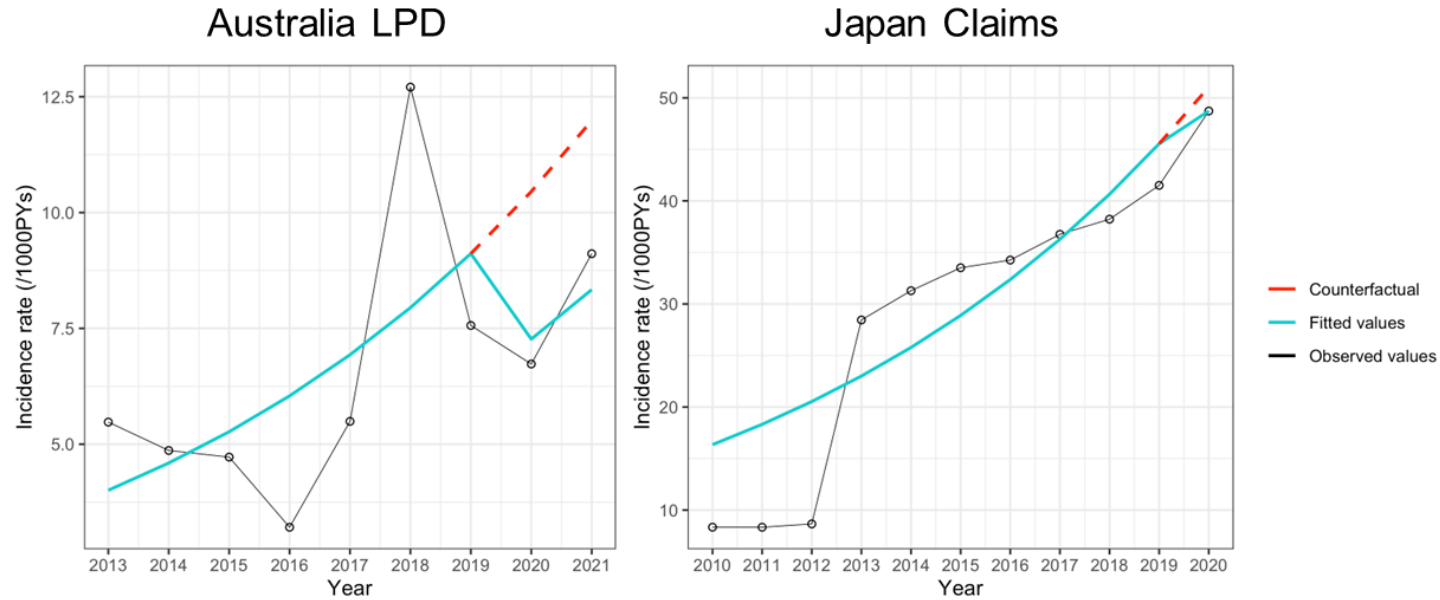
Analytic Plan

- The number of incidence, prevalence, and the counts will be aggregated for digital phenotypes (aka. Cohort) monthly before and after COVID-19
- Later, the temporal pattern can be analyzed by using statistical methods such as interrupted times series regression



The results from the pilot study: CHAPTER-DM

led by Singaporean team (Yizhi Dong, Mornin Feng Mengling)

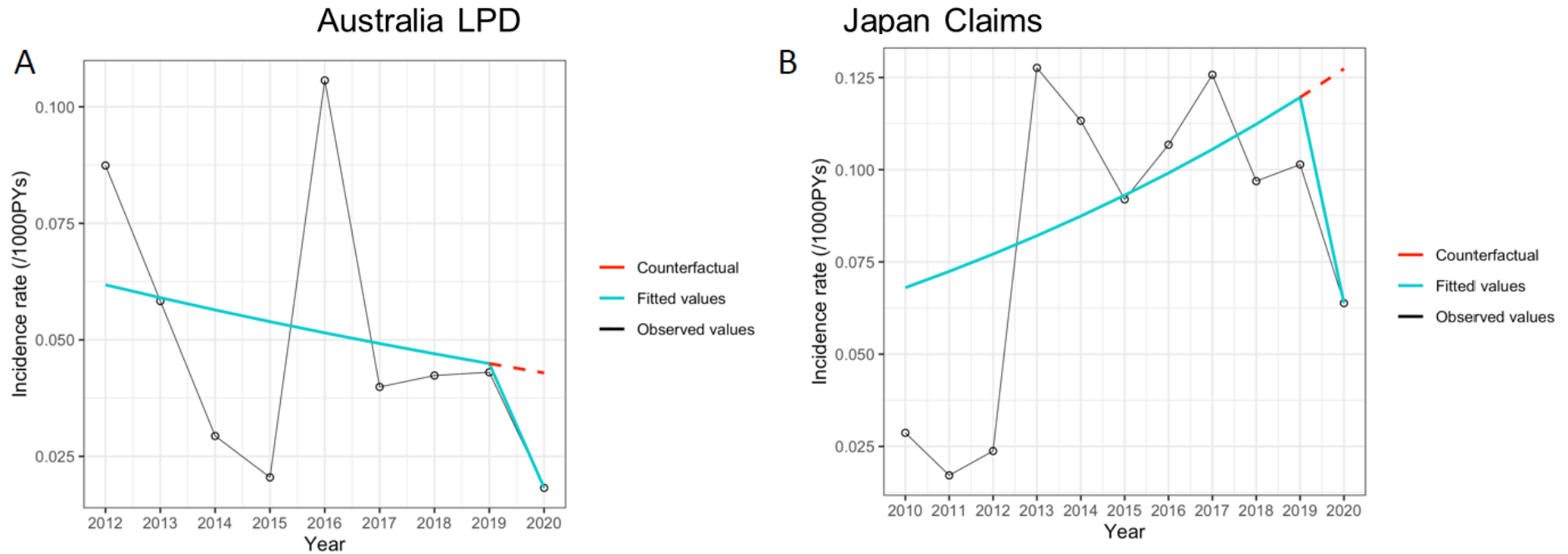


- Sharp decline in the incidence of **DM** in the Australia LPD in 2020
 - Less evident in the Japan claims
- Rebound of **DM** incidence in 2021 in the Australia LPD



The results from the pilot study: CHAPTER-Hematology

led by Japanese team (Eri Matsuki)

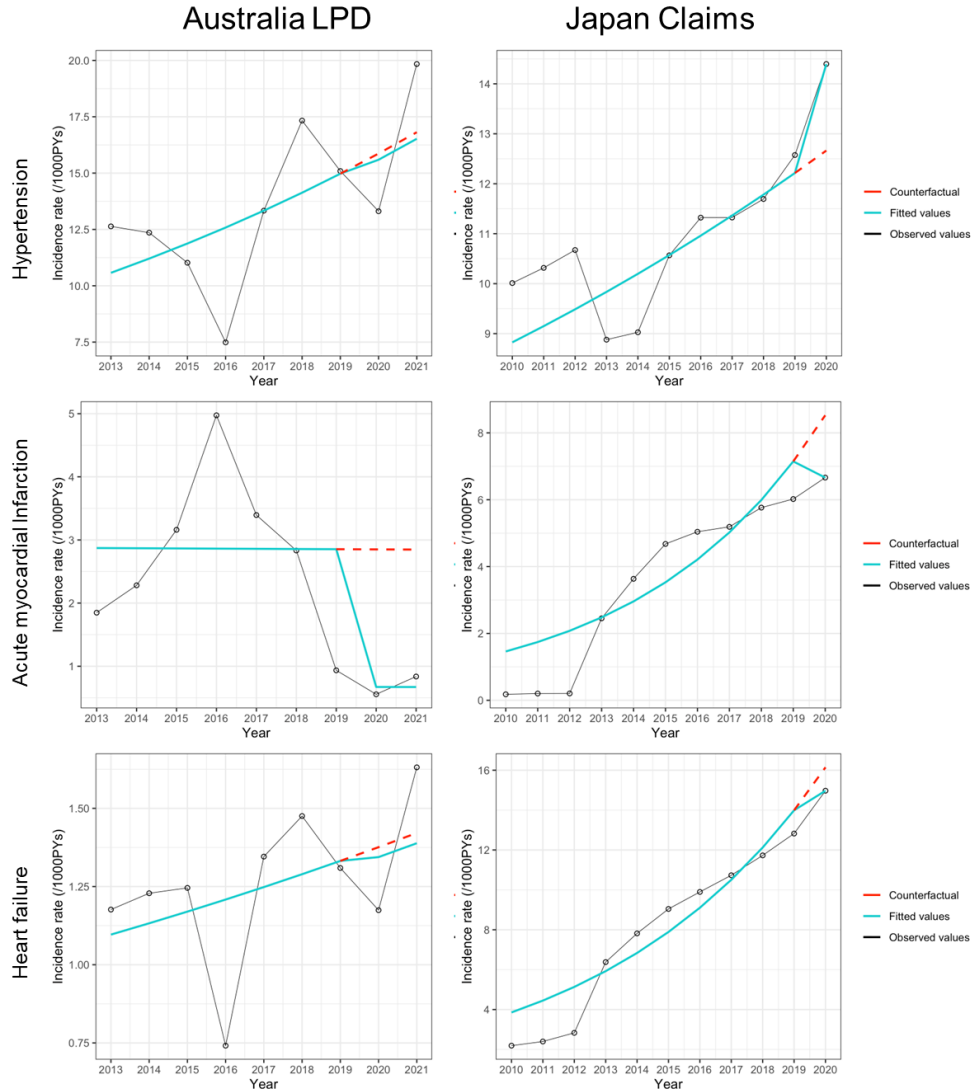


- Sharp decline in the incidence of **multiple myeloma** in both Australia and Japan



The results from the pilot study: CHAPTER-CVD

led by Korean team (Seng Chan You)



- Sharp decline in the incidence of **hypertension, AMI, and HF** in the Australia LPD in 2020
 - This trend is less evident in the Japan claims
- Rebound of incidence of cardiovascular diseases in 2021 in the Australia LPD



Cohort definitions of SubStudies

- DM (Singapore; Yizhi and Mornin)
- Hematologic disease (Japan; Eri)
- CVD (Korea; Chan)
- Allergy / Asthma in children (Korea; Subin)
- Residential Nursing home care (Australia)



Progress until now

- Target databases
 - Korean nationwide DB: HIRA (applied)
- Environment
 - Docker image was built
- Study Package
 - Still under the hood

The screenshot shows a GitHub repository page for 'dr-you-group / CHAPTER' (Public), which is a fork of 'ohdsi-studies/CHAPTER'. The page is dark-themed and displays the following information:

- Repository name: dr-you-group / CHAPTER (Public)
- Source: forked from ohdsi-studies/CHAPTER
- Navigation: Code, Pull requests, Actions, Projects, Security, Insights
- Current branch: develop (4 branches, 0 tags)
- Status: This branch is 6 commits ahead of ohdsi-studies:master.
- Commit history by yongyonglee (84ffe8a, 8 days ago, 9 commits):
 - Docker: add CohortDiagnostics (15 days ago)
 - R: add CohortDiagnostics (15 days ago)
 - extras: add CohortDiagnostics (15 days ago)
 - inst: add CohortDiagnostics (15 days ago)
 - man: add CohortDiagnostics (15 days ago)
 - renv: adding renv lockfile (8 days ago)
 - .Rprofile: adding renv lockfile (8 days ago)



*Thank
You*
for your time