

## Big Data Analysis during Pandemic: Malaysia Health Data Warehouse Experience

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Malaysia has reported more than 1.5 million COVID-19 cases since the beginning of the pandemic. Planning and executing an effective public health intervention and policy require a large amount of data from various sources to be analysed on a daily basis. In response to the data request, Malaysia Health Data Warehouse (MyHDW) utilizes its ability to collect, aggregate, analyse and visualize big data. This presentation explores the experience of Malaysia Health Data Warehouse leveraging big data analysis during the pandemic.

Various health data has been collected by healthcare personnel at healthcare facilities. This data will be uploaded to MyHDW through several data source systems where afterward, all this data underwent ETL (Extract, Transform, Loading) process prior to loading onto the data warehouse.

Most data requests concern healthcare utilisation or specific disease trends. Using data interoperability, intended data were extracted from the database. Afterward, data will be cleaned, analysed, and visualised either in the form of table, operational dashboard, interactive maps or incorporated in press statements or policy documentation.

Several outputs have been produced by MyHDW during the pandemic, such as spatial analysis of COVID-19 data, cardiovascular mortality trends during the pandemic, impact analysis of hospital utilisation during the pandemic, and excess mortality. Big data analysis through Malaysia Health Data Warehouse is an asset to the country in coordinating effective responses during the pandemic.

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