Real World Data Availability and Quality in Asia Pacific. Assessment and implications for research and healthcare decision-making

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OBJECTIVES: To gain a deep understanding of the nature and likely future evolution of the Real-World Data (RWD) landscape by

- identifying, characterising and describing existing healthcare databases
- identifying researchers and institutions with expertise in collecting and applying identified RWD sources and
- outlining in which countries RWD is accepted for healthcare decision making

METHODS: 21 therapy areas and 7 Countries were included: Australia, Hong Kong, India, Singapore, South Korea, Taiwan and Thailand. To identify and characterise RWD sources three steps were undertaken. Firstly, comprehensive desk research using a variety of sources including literature and websites was conducted. Shortlisted sources were triaged, and an initial quality assessment was conducted with further data extraction was performed on sources meeting quality thresholds. Finally, an algorithm was applied to assess utility of RWD sources for study types. Qualitative, in-depth interviews were conducted with experts familiar with pricing and reimbursement decision-making in order to assess payer preferences for RWE in each Country.

RESULTS: 104 high quality data sources were identified, and the three main types include claims, electronic medical records and administrative data. There are also several sources that enable access to data across multiple countries. The RWD landscape in AP varies greatly with each country having its own unique attributes. Gaps and barriers to RWE use in the majority of countries are the absence of disease specific sources routinely collecting information on patient reported outcomes (PRO's) and access to data sources to stakeholders other than government and academics. Payers across most markets indicated positive perceptions of RWE. Where Countries were found to be similar, they were "grouped" for the purposes of presenting results

CONCLUSION: Opportunities to improve the quality of RWD sources include centralization of existing data sources, expanded presence of Electronic Medical Records (EMR) and increased collection of PROs and National level representative data. Regulatory frameworks to protect personal data should be built in a way that enables research by a wide range.

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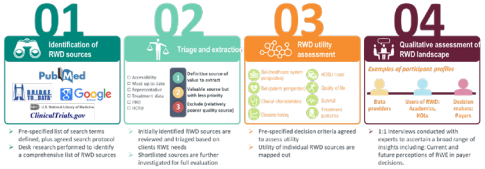
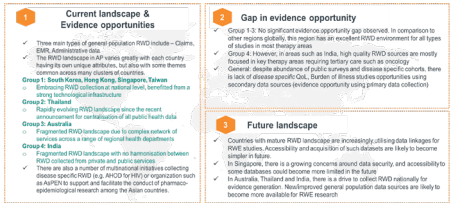
The availability and quality of Real World Data (RWD) varies considerably across markets in the Asia Pacific region.

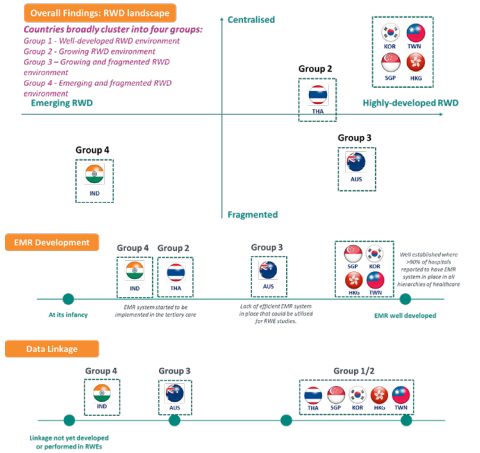
Only a handful of markets have data that is readily available for research and sufficient for robust healthcare decision-making.

METHODS: Comprehensive desk research **(Step 1-3)**, was followed by a series of in-depth discussions with appropriate local experts **(Step 4)**

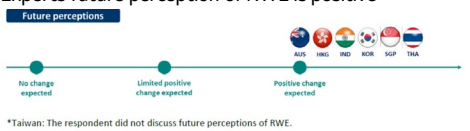


OVERALL FINDINGS: Korea, Taiwan, Singapore and Hong Kong have highly developed, centralized RWD sources, well developed EMR and accurate linkage but access is at times restricted, limiting the ability for research to be conducted.





Experts future perception of RWE is positive



*Taiwan: The respondent did not discuss future perceptions of RWE.

RECOMMENDATIONS: To enable robust research, changes are required both at the environmental level and for individual datasets

Source assessments

- Strive for National Level Collection of electronic data that is harmonised and able to be linked across multiple sources
- Strengthen IT Infrastructure and security
- Address issues of data quality and timeliness

Access

- Create Governance structures and processes that ensure appropriate oversight
- Facilitate access and research by a variety of stakeholders
- Encourage publication of research

Shaping the future of RWD

- understand health system evolution and digitalization
- Link data from the Health care system to other sources to allow evaluation of existing clinical practices and technologies for broader range of outcomes
- Adopt cloud based technology for rapid analytics
- Seek opportunities to develop cross-country datasets
- Generate evidence and share insights to inform a broad range of healthcare decisions