



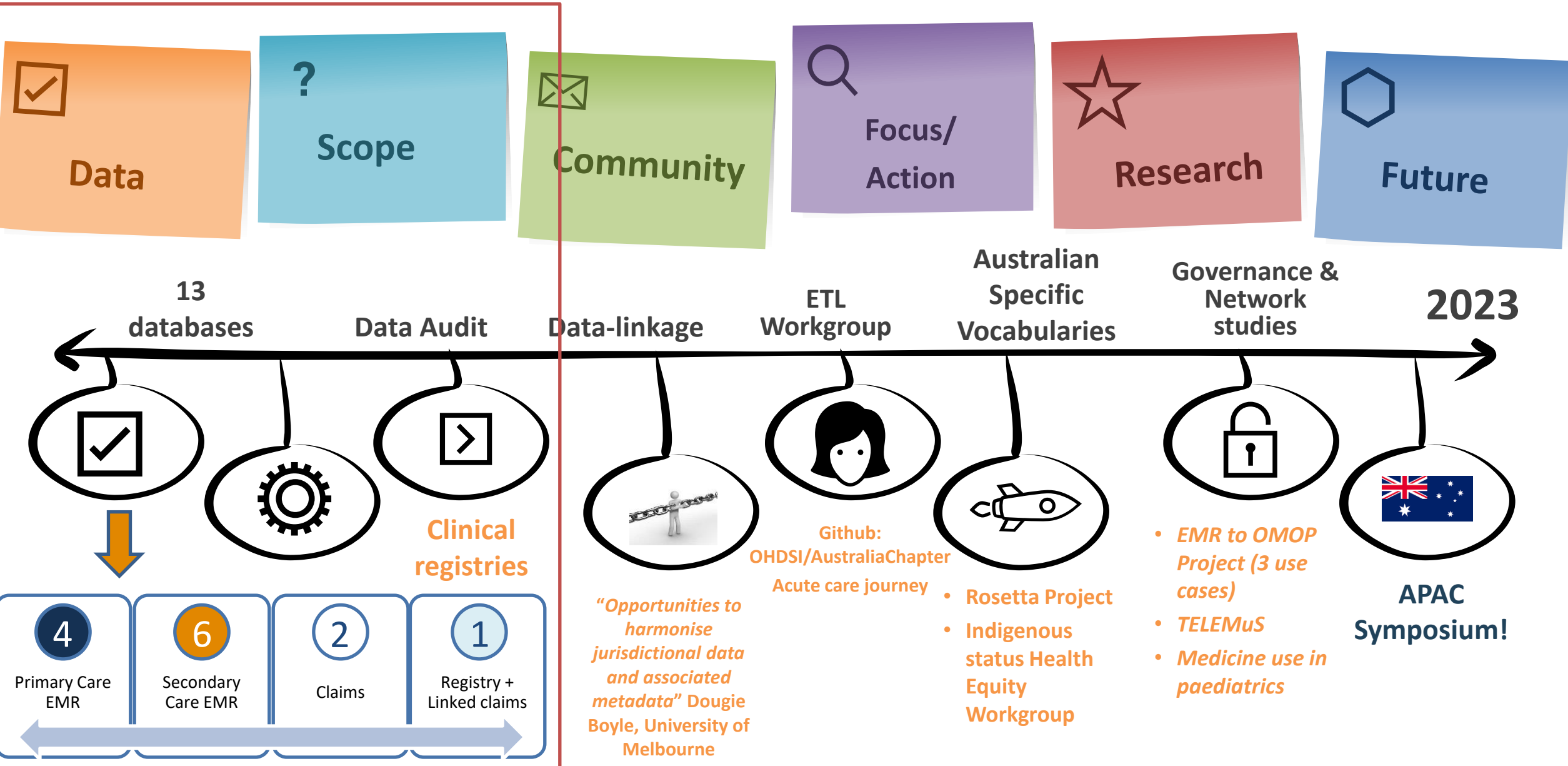
OHDSI Australia



Nicole Pratt

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data sources mapped to OMOP



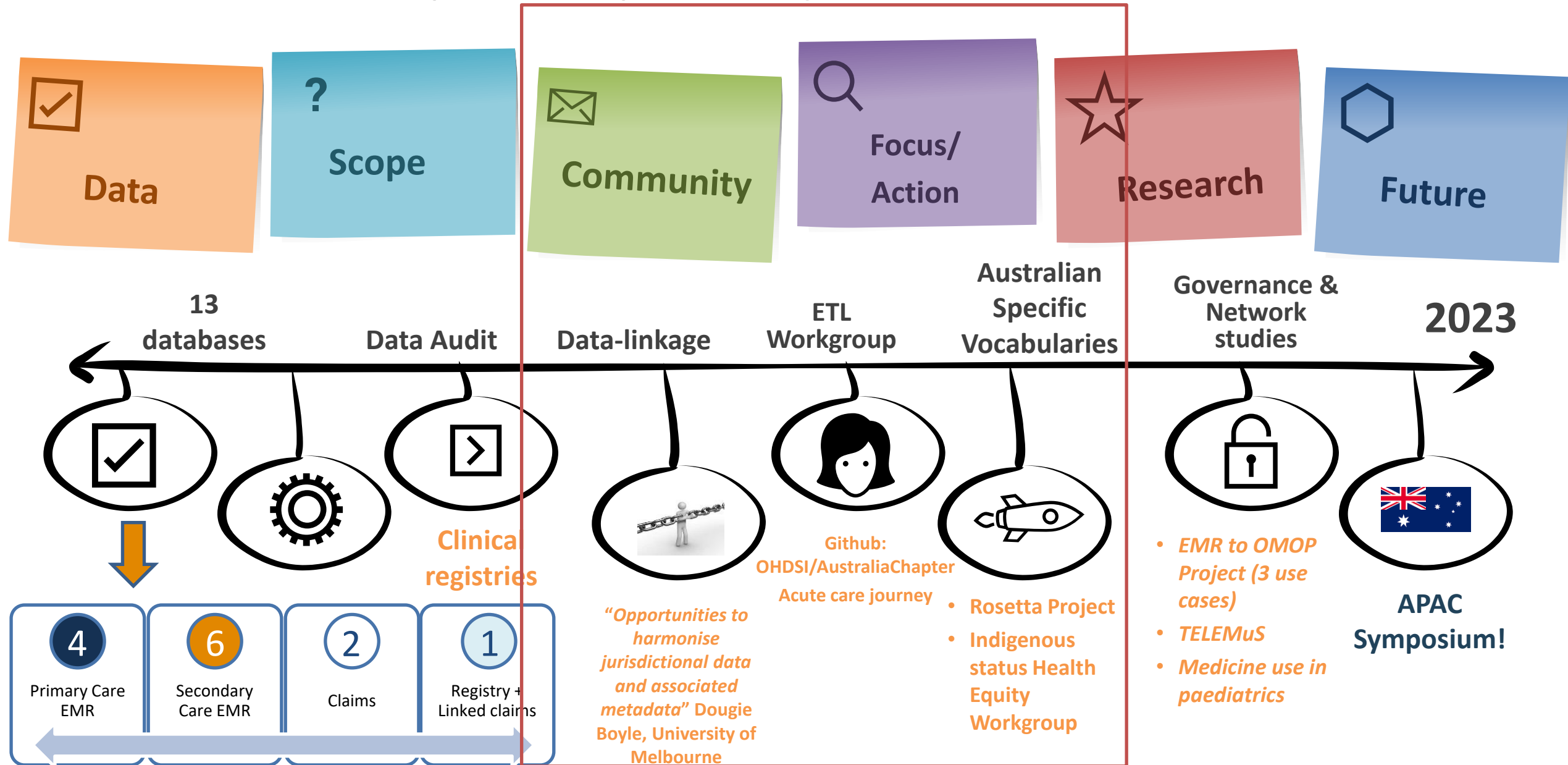
The European Health Data & Evidence Network Portal

The European Health Data & Evidence Network (EHDEN) project aspires to be the trusted observational research ecosystem to enable better health decisions, outcomes and care. Its mission is to provide a new paradigm for the discovery and analysis of health data in Europe, by building a large-scale, federated network of data sources standardized to the OMOP common data model.



Data Partner	Type of Data	Number of unique Patient	Provenance	Progress	Data Platform	Contact
Pharmaceutical Benefits Scheme 10% extract	Administrative Claims	2.5M	National	Complete	PostgreSQL	Nicole Pratt
Primary Care GP data (Patron)	Primary care EMR	2.2M	Victoria	Complete	MSSQL	Dougie Boyle
AU-ePBRN (Australian Electronic practice based research network)	Primary care EHR	1.1M	New South Wales	Complete	SQL Server	Jittendra Jonnagaddala
Sydney Local Health District (LHD)	Hospital EHR	1M	New South Wales	Complete	PostgreSQL	Angus Ritchie
Royal Melbourne Hospital and Western Health. Hospital Admissions	Hospital EMR	685k	Victoria	In progress (First draft complete)	MSSQL	Dougie Boyle
NPS MedicineWise	Primary care EMR	1.2M	National	In progress	Postgres	Rachel Hayhurst
University of Queensland - Queensland Health	Hospital EHR (Cerner)	>5M	Queensland	In progress	MSSQL	Roger Ward
Austin Health	Hospital EHR (Cerner)	500k (approx.)	Victoria	In progress (early)	MSSQL	Roger Ward
Department of Veterans Affairs	Administrative Claims	>180,000 (current population)	National	In progress	PostgreSQL	Nicole Pratt
South Western Sydney LHD	Cancer EMR	80,000 (current population)	NSW	In progress. New sites being onboarded 2023.	PostgreSQL	Georgie Kennedy
AOA National Joint Replacement Registry	Registry	1.15M	National	In progress	PostgreSQL	Nicole Pratt
Sydney Childrens Hospital	Hospital EHR	TBA	NSW	Planning		
Melbourne Childrens Hospital	Hospital EHR	TBA	Victoria	Planning		

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<https://ohdsi-australia.org/events.html>



PLOS ONE



*ETL Framework for
the Conversion of
Health Databases
to OMOP*

RESEARCH ARTICLE

Extract, transform, load framework for the conversion of health databases to OMOP

Juan C. Quiroz^{1*}, Tim Chard¹, Zhisheng Sa¹, Angus Ritchie^{2,3}, Louisa Jorm¹, Blanca Gallego¹

¹ Centre for Big Data Research in Health, UNSW, Sydney, Australia, ² Concord Clinical School, University of Sydney, Sydney, Australia, ³ Health Informatics Unit, Sydney Local Health District, Camperdown, Australia

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•Published: April 11, 2022

•<https://doi.org/10.1371/journal.pone.0266911>

“We propose an extract, transform, load (ETL) framework that is metadata-driven and generic across source datasets. The ETL framework uses a new data manipulation language (DML) that organizes SQL snippets in YAML. Our framework includes a compiler that converts YAML files with mapping logic into an ETL script”



OHDSI Australia Focus 2022

ETL Workgroup Meeting May 2022

- Communication between groups working in the area
 - New GitHub site for sharing and attribution of work
 - Create OHDSI Australia Forum

<https://github.com/OHDSI/AustraliaChapter>

- Coordinated sharing of mappings
 - Australian Specific Mapping (Terminology)
 - Australian Classification of Health Interventions (ACHI) codes
 - Medicare Benefits Schedule (MBS) service codes
 - PBS > AMT > RxNorm

Licensing Issues

- Hospital EMR Platforms
 - CERNER to OMOP
 - EPIC to OMOP

discussions with
Singapore



OHDSI Australia Focus 2023



OHDSI
Australia

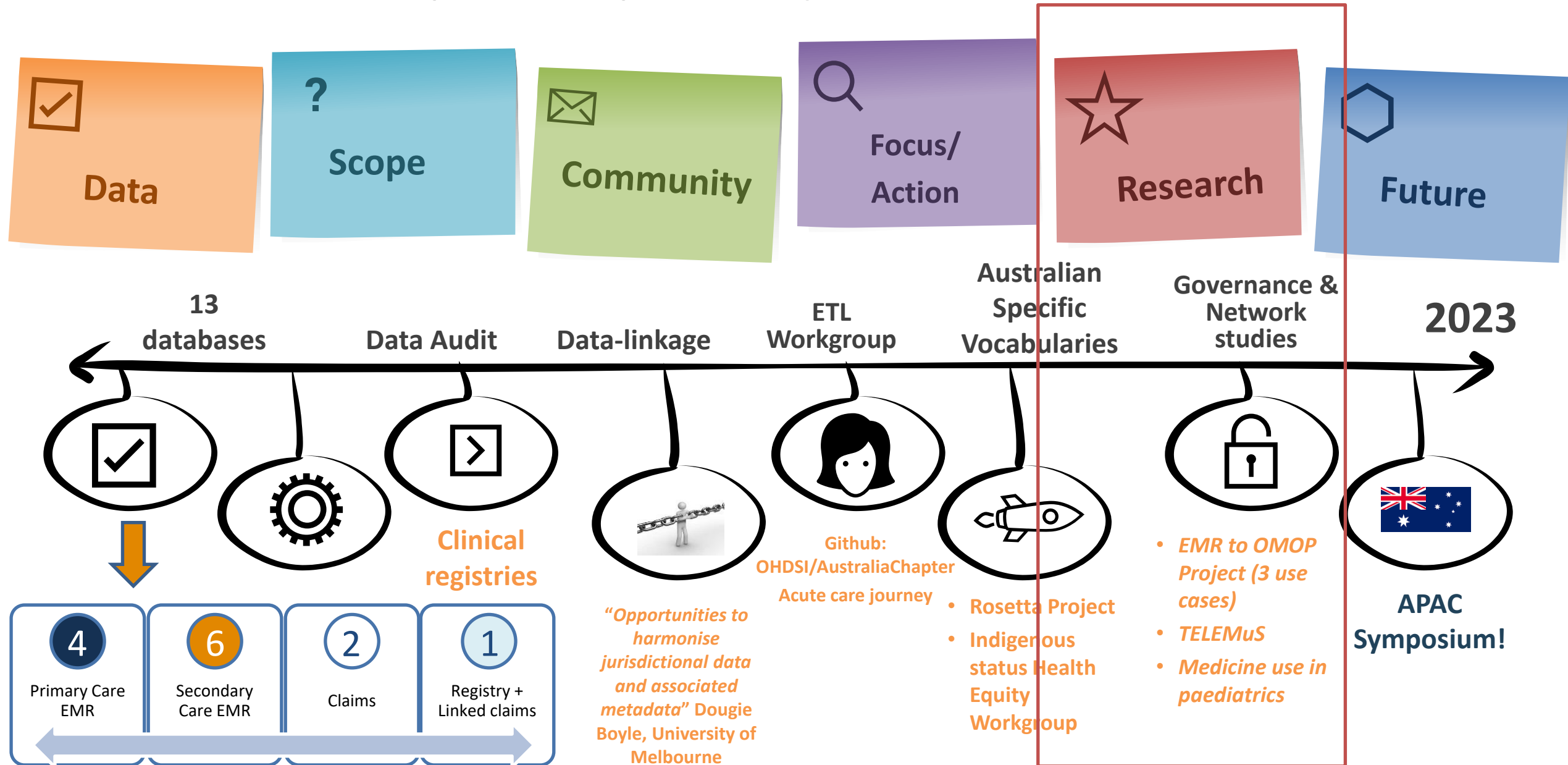
Tuesday
18th Oct
2022
@12pm
AEST

Roger Ward
& Christine Hallinan



*A Research
Governance
Model for OMOP
Datasets*

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[AsPEN Symposium: Rising Investigator Asian-Pacific Regions]

Exploration into Commonly Used Drugs in Pediatric Populations and the Risk of Asthma with Antibiotics: A Multi-site, Population-based Descriptive and Cohort Study

Chin-Yao Shen, Eunsun Lim, Han Eol Jeong, Jun Ni Ho, Zixuan Wang

Mentors: Nam-Kyong Choi, Nicole Pratt



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香港大學
THE UNIVERSITY OF HONG KONG

Methods



- **Study Design**

- Retrospective descriptive, cross-sectional study

- **Updated Analysis of a Previous Study**

- January 2009 - December 2013

- **Study Population**

- Pediatric patients of age <19 years
- Grouped into 3 age groups (<2, 2 – 11, 12 – 19 years)

- **Study Period**

- Start date: latest of 1 Jan 2008 or start of observation
- End date: earliest of 31 Dec 2019, end of observation, or date child turned 19 years of age




- **Exposure**

- Analgesics, antimicrobial agents/anti-infectives, adrenergic agents, anticlotting/antifibrinolytic agents, cardiovascular medicines, diuretics, dermatological medicines, gastrointestinal medicines, ear, nose and throat medicines, antihistamines, mucolytics, antitussives, corticosteroids, medicines for diabetes, medicines for endocrine disorders, immunomodulators and antineoplastics, medicines for mental and behavioral disorders, psychotherapeutic agents, central nervous system stimulants, anticonvulsants/antiepileptics, contraceptives

Open access

Original research

BMJ Open Application of a Common Data Model (CDM) to rank the paediatric user and prescription prevalence of 15 different drug classes in South Korea, Hong Kong, Taiwan, Japan and Australia: an observational, descriptive study

Ruth Brauer ¹, Ian Chi Kei Wong,^{1,2} Kenneth KC Man ^{1,2}, Nicole L Pratt,³ Rae Woong Park,⁴ Soo-Yeon Cho,⁴ Yu-Chuan (Jack) Li,^{5,6,7,8} Usman Iqbal,^{6,9,10} Phung-Anh Alex Nguyen,⁶ Martijn Schuemie ^{11,12}

2020

Results from Previous Study

Highest prevalence in the first year of life



Korea

Hong Kong

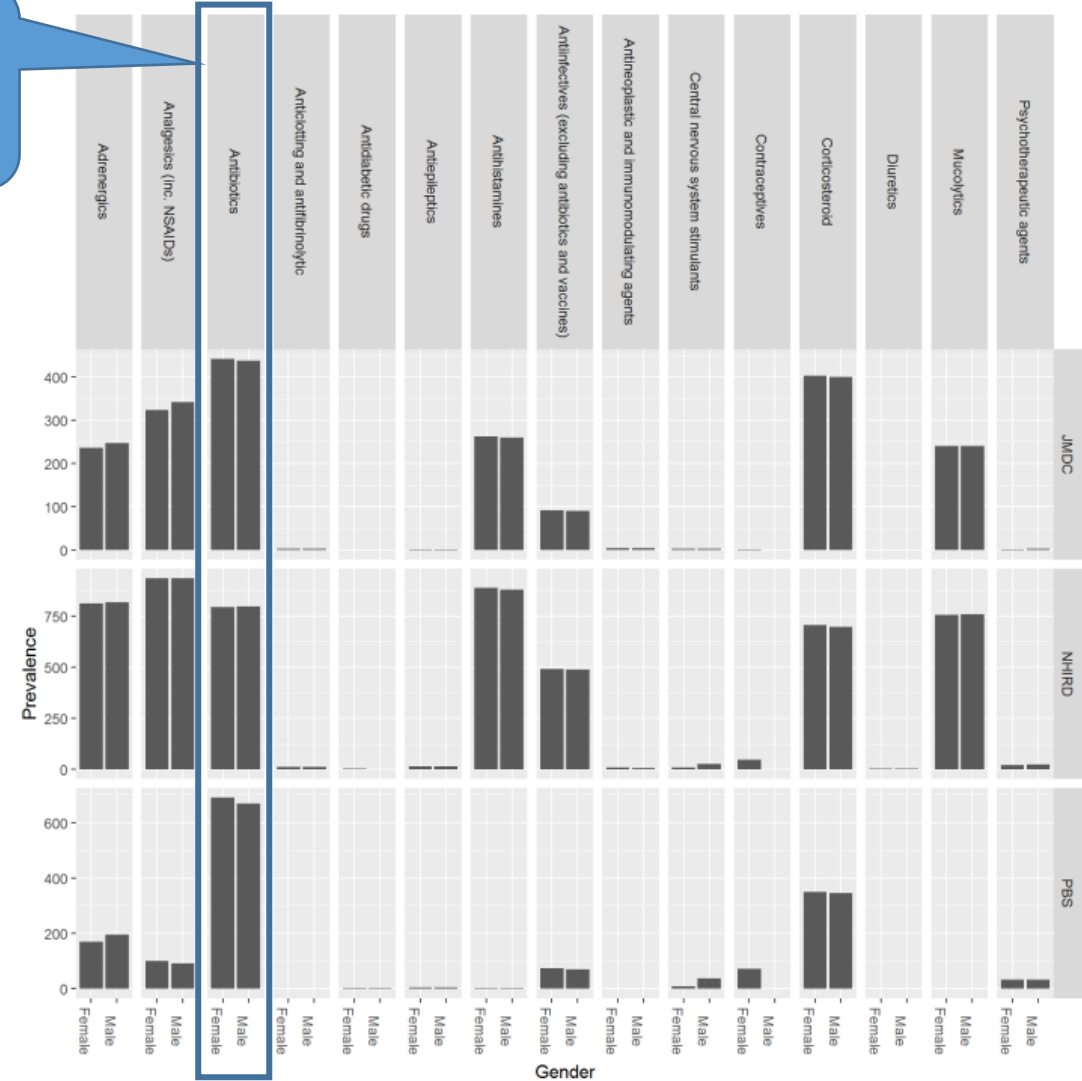
Japan

Taiwan

Figure 1 User prevalence by therapeutic level (prevalence per 1000 persons) and age in an inpatient setting. NSAID, non-steroidal anti-inflammatory drug.

Results from Previous Study

Prevalence 50-75%,
 but not much difference
 between genders



Japan

Taiwan

Australia

Figure 2 User prevalence by therapeutic level (prevalence per 1000 persons) and gender in an ambulatory setting. NSAID, non-steroidal anti-inflammatory drug.

Results from Previous Study



Table 4 Most commonly used drugs per custom-defined drug class, per country, in an inpatient setting

Drug class	Korea (AUSOM)		Hong Kong (CDARS)		Japan (JMDC)		Taiwan (NHIRD)	
	Drug name	Number per 1000 users	Drug name	Number per 1000 users	Drug name	Number per 1000 users	Drug name	Number per 1000 users
Antibiotics	Ceftriaxone	27.02	Amoxicillin	34.08	Cefazolin	10.09	Cefazolin	15.17
	Roxithromycin	19.03	Gentamicin sulfate	18.09	Ampicillin	9.2	Amoxicillin	10.9
	Cefotaxime	17.11	Penicillin G	14.33	Sulbactam	5.56	Gentamicin Sulfate	8.79
	Ofloxacin	16.84	Cefuroxime	12.72	Clarithromycin	5.25	Ampicillin	7
	Clarithromycin	10.9	Ampicillin	12.4	Cefcapene	4.61	Cephalexin	6.64

prevalence varies across countries/ regions and the type of antibiotic used

Table 5 Most commonly used drugs per custom-defined drug class, per country, in an ambulatory setting

Drug class	Japan (JMDC)		Taiwan (NHIRD)		Australia (PBS)	
	Drug name	Number per 1000 users	Drug name	Number per 1000 users	Drug name	Number per 1000 users
Antibiotics	Clarithromycin	112.34	Amoxicillin	443.86	Amoxicillin	506.88
	Gentamicin	109.87	Cephalexin	276.72	Cephalexin	279.23
	Cefcapene	84.12	Sulfamethoxazole	217.87	Chloramphenicol	148.45
	Gentamicin sulfate	73.38	Erythromycin	170.63	Erythromycin	147.04
	Ofloxacin	72.45	Clindamycin	168.23	Cefaclor	116.35

Study 2: Analytic Cohort Study

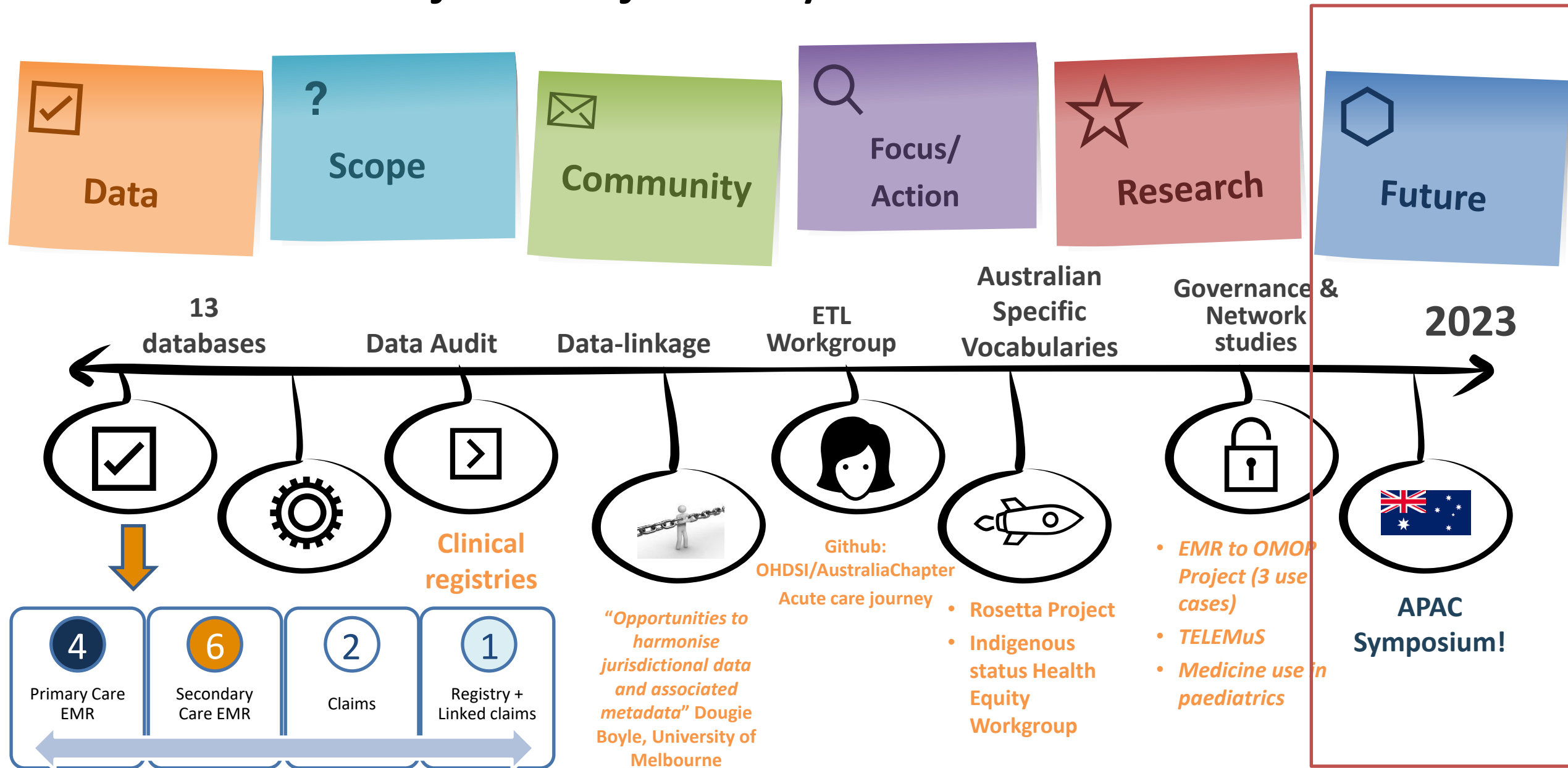
Antibiotics Exposure and Risk of Childhood Asthma

Is there an association between the duration of antibiotic exposure in the first year of life and the development of asthma in children prior to age 6?

Expected Outcomes

- **Provide recent, real-world evidence on commonly used medications, with particular focus on antibiotics, during childhood across Asian and Caucasian populations.**
- **Provide data on the use of antibiotics during early childhood and the possible subsequent risk of developing childhood conditions such as asthma.**
 - This study may serve as an example for investigating into other childhood onset diseases based on medicine exposures in the first year of life
- **Help clinicians and guideline writers in their decision-making to guide a safer and appropriate use of antibiotics during a period that warrants careful attention in this patient population.**

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OHDSI APAC Symposium 2023

Save the date!

AIDH PRESENTS MEDINFO 23 REGISTER CALL FOR SPEAKERS PARTNER INFO

The Australasian Institute of Digital Health is proud to welcome you to The Land Down Under for

MEDINFO 23

8 – 12 July 2023 | Sydney, Australia

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Our event theme – **THE FUTURE IS ACCESSIBLE** – aims to inspire us to lead the conversation and implement actions where we collectively are building a health sector that is accessible, where data is not locked in silos and where both clinicians and consumers can work together in true partnership towards healthier lives, digitally enabled.

This prestigious international event brings together hundreds of digital health leaders and practitioners at the forefront of healthcare and is considered a **landmark event on the global calendar**. Bringing together an international and national audience, this is your opportunity to network, share, and highlight the latest achievements, advancements, research and innovation in digital health and health informatics.

Plan

Tutorial (TBD: 13th July)

Symposium (TBD: 14th July)

Parallel Session (14th July)
Oncology Workgroup Meeting
Georgina.kennedy@unsw.edu.au

Email nicole.pratt@unisa.edu.au



Thank you!

www.ohdsi-australia.org
