



Mapping of Critical Care EHR Flowsheet data to OMOP CDM via SSSOM

A Simple Standard for Sharing Ontology Mappings

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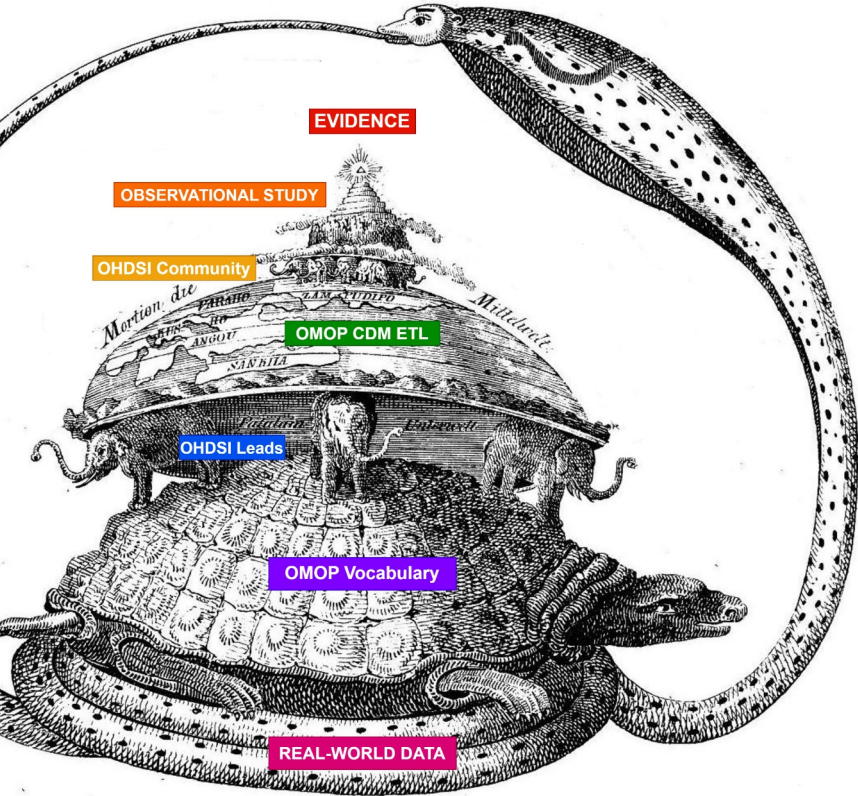
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WE STAY



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Challenge [1]

Various Types of Critical / Intensive Care EHR Flowsheets

- Vital Signs
- Neurological Assessment
- Respiratory Assessment
- Cardiac Assessment
- Renal Assessment
- Intake and Output
- Gastrointestinal Assessment
- Nutritional Assessment
- Wound Care
- Pain Assessment
- Nursing

Semantic Domains

Measurements
Observations
Procedures
Conditions
Drugs
Devices





Challenge [2]

Health Data Mappings:

- Costly & use-case specific
- Essential for algorithm development and analytics
- Requires training & healthcare expertise

Open-Source Mappings:

- Lacking documentation & metadata
- Can lead to data inconsistencies

Adoption Challenges:

- Complicated by varied data sharing approaches





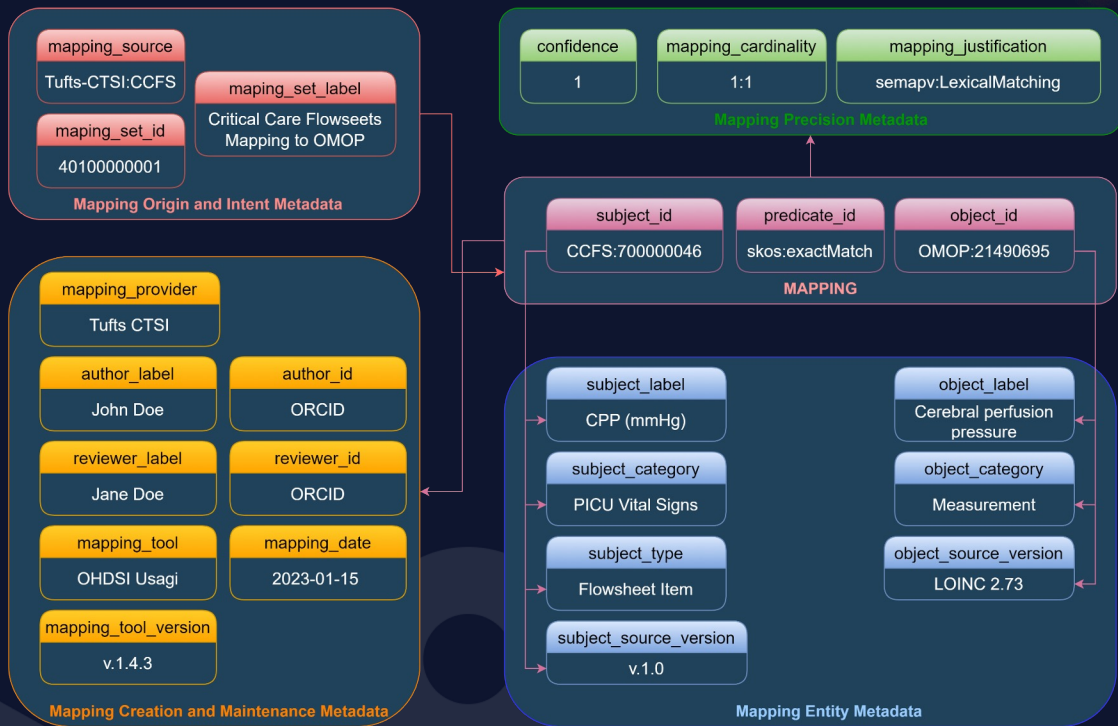
Challenge [3]

The OMOP Vocabularies, akin to a living organism, thrive with diligent care and stands to benefit from enhancements in areas such as:

- maintenance
- provenance
- precision
- mapping justification



Solution [1]: Generate SSSOM Metadata



Solution [2]: Use MAPPING_METADATA table

CDM Field	Datatype	Required
mapping_concept_id	integer	Yes
confidence	float	Yes
predicate_id	varchar	Yes
mapping_justification	varchar	Yes
mapping_provider	varchar	Yes
author_id	int	Yes
author_label	int	Yes
reviewer_id	int	Yes
reviewer_label	int	Yes
mapping_tool	varchar	No
mapping_tool_version	varchar	No
subject_category	varchar	No
subject_type	varchar	No



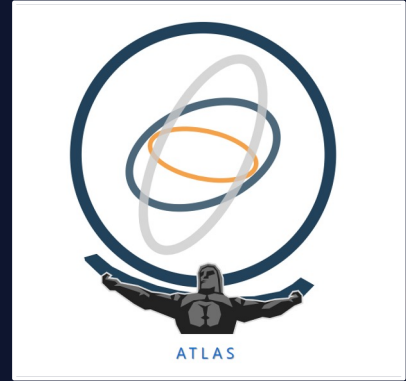
Solution [3]: Automation



Needs [1]: Integration with OHDSI tools



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Needs [2]: Community Contribution



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SIMPLE STANDARD FOR SHARING
ONTOLOGY MAPPINGS