

**Comprehensive
Multiaxial Hierarchy
of Psychiatric and
Neurological
Assessment Tools in
OMOP CDM**

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INTRO:

- Scales and questionnaires are the only way to measure the psychiatric illness severity (there are no lab tests or physical measurements);
- At this moment scales are represented inconsistently in the OMOP vocabulary;
- Data harmonization is increasingly important for better data quality, quicker analyses, and the facilitation of much needed standardization of mental health measurements

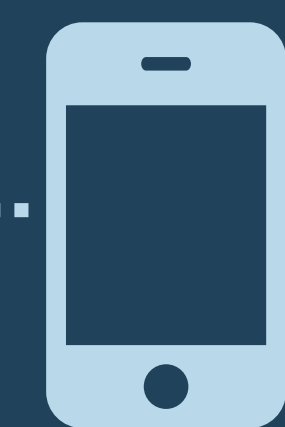
METHODS

1. Collect scales from real patient data. Map them to OMOP concepts. Identify those not having equivalents in OMOP;
2. Classify the scales based on the psychic function or syndrome they evaluate.
3. Add psychiatric or neurologic assessment instruments and their categories as new OMOP Extension concepts and build the hierarchy.

RESULTS

- 19 categories added: "Memory assessment scale", "Mania assessment scale" etc.;
- 14 compound scales added (with subscales): MMPI-2, WAIS-Iv etc.;
- 170 scales per se (exact Variables with result stored as number).

We added 203 psychiatric scale concepts to OMOP vocabulary linked to the psychic function or syndrome they evaluate



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Wechsler Adult Intelligence Scale 4th revision

WAIS-IV	Verbal Comprehension Index (VCI)	Similarities
		Vocabulary
	Perceptual Reasoning Index (PRI)	Information
		Comprehension
		Block Design
		Matrix Reasoning
		Visual Puzzles
		Picture Completion [Supplemental]
	Working Memory Index (WMI)	Figure Weights [Supplemental]
		Digit span
Arithmetic		
Processing Speed Index (PSI)	Letter-Number Sequencing [Supplemental]	
	Symbol Search	
	Coding	
Full Scale IQ (FSIQ)		Cancellation [Supplemental]
General Ability Index (GAI)		

Concepts' attributes

1. Vocabulary_id = 'OMOP Extension'
2. Domain_id = 'Measurement'
3. Concept_class_id = 'Assessment Scale'

Next steps

1. Keep collecting scales used in patient data;
2. Increase the number of scale categories;
3. Connect scales existing in core OMOP vocabularies (SNOMED, LOINC) to mentioned above categories;
4. Standardize scales mapping them to the syndrome or psych function measured and level, i.e. "BDI (Beck Depression inventory) score 14-19" Maps to "Depression assessment scale" + "Mild" (more examples in the presentation)

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