OHDSI Psychiatry working group

End of 2022 update

OHDSI main areas of work

- Standards
- Methods and Tools
- Studies

Standards: Vocabulary development – initial phase, done not systematically

Initial set of around 280 scales added to the OMOP vocabulary

- Concepts discovered in a workgroup members patient data; no authoritative source of the terminology used
- No update mechanism
- Standards weren't aligned with the core terminology systems (SNOMED and LOINC), we just checked whether concepts exist, and if not, we added them to the OMOP vocabulary
- Primitive hierarchy: connection between group of scales by disease (depression scale), scale and subscale and the

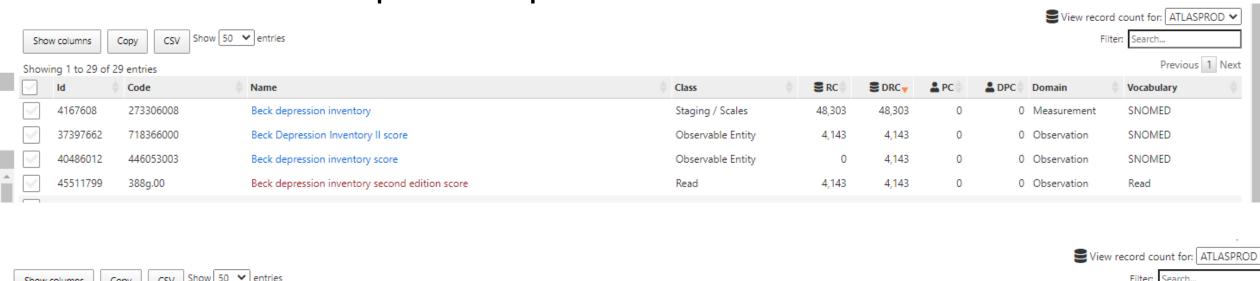
Standards: Vocabulary development – second phase: comprehensive and systematic approach

- Usage of reliable and comprehensive literature, patient data used to check the coverage
- Work not only with the new concepts but with existing SNOMED and LOINC ones to create unified semantic field
- Allow updates and detection of new scales that need to be added to the vocabulary
- Creation of the ontology: comprehensive hierarchy that starts from Observable entity of symptom or construct
- Conciliate different standards of the OMOP questionary data (LOINC, SNOMED, PPI, UK biobank, OMOP Extension

Standards: explore questionaries in a RW data

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$\overline{}$	ld	Code	Name $\qquad \qquad \qquad$	Class	≅ RC∳	■ DRC _▼	≗ PC∜	≗ DPC∜	Domain 🔷	Vocabulary 🔷	
_	3044486	44249-1	PHQ-9 quick depression assessment panel [Reported.PHQ]	Survey	742,589	8,640,927	0	0	Observation	LOINC	
	21491096	79540-1	HEDIS 2016-2018 Value Set - PHQ-9 Total Score	Lab Test	4,172,878	4,172,878	0	0	Measurement	LOINC	
	37395717	715252007	Depression screening using PHQ-9 (Patient Health Questionnaire 9) score	Procedure	2,003,004	2,005,491	0	0	Measurement	SNOMED	
~	44804610	758711000000105	PHQ-9 - Patient health questionnaire 9	Staging / Scales	1,863,910	1,863,910	0	0	Measurement	SNOMED	
~	40757766	54635-8	Resident mood interview (PHQ-9) [Reported PHQ-9 CMS]	Survey	0	1,668,563	0	0	Observation	LOINC	
$\overline{}$	36304380	86843-0	Resident mood interview (PHQ-9) - symptom presence in the last 2 weeks [CMS Assessment]	Survey	0	1,646,591	0	0	Observation	LOINC	
	45478657	388f.00	Patient health questionnaire (PHQ-9) score	Read	1,320,360	1,320,360	0	0	Observation	Read	
•	40757788	54657-2	Staff assessment of resident mood (PHQ-9-OV) [Observed PHQ-9 CMS]	Survey	0	1,160,988	0	0	Observation	LOINC	
~	36304113	86833-1	Staff assessment of resident mood (PHQ-9-OV) - symptom presence in the last 2 weeks [CMS Assessment]	Survey	0	1,157,657	0	0	Observation	LOINC	
~	40757769	54638-2	Feeling down, depressed or hopeless in last 2 weeks.presence [Reported PHQ-9 CMS]	Survey	923,739	923,739	0	0	Observation	LOINC	
~	40757789	54658-0	Little interest or pleasure in doing things in last 2 weeks, presence [Observed PHQ-9 CMS]	Survey	475,156	475,156	0	0	Observation	LOINC	
~ /	40757791	54660-6	Feeling or appearing down, depressed or hopeless in last 2 weeks, presence [Observed PHQ-9 CMS]	Survey	432,180	432,180	0	0	Observation	LOINC	
~	40757767	54636-6	Little interest or pleasure in doing things in last 2 weeks.presence [Reported PHQ-9 CMS]	Survey	418,502	418,502	0	0	Observation	LOINC	
~ /	40757783	54652-3	Thoughts that you would be better off dead, or of hurting yourself in some way in last 2 weeks.presence [Reported PHQ-9 CMS]	Survey	239,705	239,705	0	0	Observation	LOINC	
~	40757795	54664-8	Feeling tired or having little energy in last 2 weeks.presence [Observed PHQ-9 CMS]	Survey	86,929	86,929	0	0	Observation	LOINC	
~	43021839	112001000119100	Positive screening for depression on PHQ-9 (Patient Health Questionnaire 9)	Clinical Finding	61,339	61,339	0	0	Condition	SNOMED	
~	40757797	54666-3	Poor appetite or overeating in last 2 weeks.presence [Observed PHQ-9 CMS]	Survey	57,184	57,184	0	0	Observation	LOINC	
~	40757799	54668-9	Indicating that (s)he feels bad about self, is a failure, or has let self or family down in last 2 weeks.presence [Observed PHQ-9 CMS]	Survey	47,672	47,672	0	0	Observation	LOINC	
<u>~</u>	40757803	54672-1	Moving or speaking so slowly that other people have noticed. Or the opposite - being so fidgety or restless that (s)he has been moving around a lot more than usual in last 2 weeks.presence [Observed PHQ-9 CMS]	Survey	38,024	38,024	0	0	Observation	LOINC	
•	3042932	44261-6	Patient Health Questionnaire 9 item (PHQ-9) total score [Reported]	Survey	32,766	32,766	0	0	Observation	LOINC	
~	40757773	54642-4	Feeling tired or having little energy in last 2 weeks.presence [Reported PHQ-9 CMS]	Survey	31,975	31,975	0	0	Observation	LOINC	
~	36304124	86844-8	Resident mood interview (PHQ-9) - symptom frequency in the last 2 weeks [CMS Assessment]	Survey	0	21,972	0	0	Observation	LOINC	
~	40757777	54646-5	Feeling bad about yourself - or that you are a failure or have let yourself or your family down in last 2 weeks,presence [Reported PHQ-9 CMS]	Survey	21,673	21,673	0	0	Observation	LOINC	

Standards: explore questionaries in a RW data



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~	40772159	69737-5	Generalized anxiety disorder 7 item (GAD-7)	Survey	102,541	384,526	0	0	Observation	LOINC			
~	40484262	445598007	Assessment using generalized anxiety disorder 7 item score	Procedure	349,747	349,747	0	0) Procedure	SNOMED			
~	40483769	445455005	Generalized anxiety disorder 7 item score	Observable Entity	132,687	132,687	0	0	Observation	SNOMED			
	42868746	70274-6	Generalized anxiety disorder 7 item (GAD-7) total score [Reported.PHQ]	Survey	200	200	0	0	Observation	LOINC			

Standards: explore questionaries in a RW data

- Asses how neuropsychiatric scales are used in OMOP data sources,
- Evaluate research questions that can be better answered when this level of the data, i.e., stratify patients by severity of certain symptoms
- Bring new data sources if needed.

Ongoing Study

 Predicting Adverse Drug Events during Methylphenidate Treatment in ADHD: International Collaborative Network Study

Data partners from China and Israel are involved, and UK CPRD data is going to be approved

Previously run studies

- The risk of schizophrenia in ACE inhibitor users compared with users of other antihypertensives
- Covid-19 pandEmic impacts on mental health Related conditions Via multi-database nEtwork: a Longitutinal Observational study (CERVELLO)