

# 2de pijplijn

woensdag 13 november 2024

11:01

Igor, Joost, Sebastiaan, Gertjan, Prabash, Keetje

Uitgangspunten:

- Alleen internationale archetypes gebruiken.
- Eerst dataset Amsterdam UMC, later andere set.
- ZIB Patient
- ZIB Probleem
- ZIB Verrichting
- ZIB Labuitslag

Taak 1 – OpenEHR naar OMOP via AQL (engine voor mappings) Joost, Sebastiaan

Taak 2 – Amsterdam UMC naar OpenEHR

Taak 3 - OpenEHR naar FHIR

Taken:

- ☒ Igor - Plaatje maken incl dataset MUMC als in put en extra output FHIR vanuit OpenEHR.
- Sebastiaan: Omop definities Probleem opzoeken
- ☒ Keetje: Amsterdam resources bekijken. Eerst diagnosenaam uit Condition.
- ☒ Joost – werkend krijgen pipeline met EHRdb
- ☒ Igor – plaatje aanpassen: oranje OMOP moet FHIR dashboard zijn. Deze moet ook toegevoegd worden aan de input zijde, die is dan gelijk voor de input voor pijplijn 1 en 2
- ☒ Joost: Templates in OpenEHR maken t.b.v BGZ.
- ☒ Keetje: mapping van FHIR naar template OpenEHR
- ☒ Prabash / SebastianCode24: dashboard op Open EHR?
- ☒ Prabash: dashboard op OMOP: uit eerdere PoC?
- ☒ Gertjan – werkend krijgen Engine Code24
- ☒ Gertjan – mapping omzetten in rulemapper xml.
- ☒ Joost – werkend krijgen pipeline met Code24 db
- ☐ Joost: Composition persists in OpenEHR/EOS?
- ☐ Keetje: mapping van Brian EMC (white rabbit) naast onze Excel houden.
- ☐ Sebastiaan: Issue indienen.
- ☐ Sebastiaan: beoordelen mapping in EOS.
- ☐ René: FHIR viewer van andere groepje hergebruiken? FHIRpath?
- ☐ Pseudonimiseren toevoegen?
- ☒ Recap PPT maken.

gd aan de

- ? Kunnen we de vocabularies updaten op een running db van OMOP?
- ? Bij het inladen van Labuitslag in EOS naar Measurement is de mapping niet logisch en transparant. Het mapping tool lijkt niet de best-practice hier te gebruiken?
- ? Hoe werken de 'dubbele concepten' als bodysite (lateraliteit, localisatie) en severity van een concept?
- ? Hangt een definitie van een concept-id aan een studie/vraag/verwerkingsdoel/registratiedoel?
- ? Hoe kun je een deel van de data updaten/toevoegen?
- ? OMOP kan niet een json lezen als input? Moet een flatfile zijn?
- ? Er is niet echt een standaard tool om van de 'visuele' mapping inlezen van dat proces in OMOP?

Enkele Resource - [Condition eThGliQntMi8VsXM8xNfDnA3.json](#)

## Bundle - Condition 1020353.json

Bevindingen:

- [Observation Period] nodig voor OMOP mist in BGZ. Ook niet af te leiden want (bijv) g encounters.
- Event\_context class in openehr relevant as source for metadata (how in FHIR – support OMOP representation)
- Attributes of problem/diagnosis like bodysite and severity are not readily transformed basic representation of such attributes in OMOP would be in the (standard = SNOMED conditions) concept. Such standard concepts are not always available.
- See [athena.ohdsi.org](http://athena.ohdsi.org) for a view on all (source and standard) vocabularies / OMOP ont
- Je hebt een terminologie server OpenEHR (of een lookuplijstje) nodig voor concepten LOINC SNomed. Etx.
- Een data-element dat niet gekoppeld wordt in OMOP raakt niet verloren maar het is d gemapt naar een concept-id bv. Concept-id = 0 dan maar dan moet je dat denk ik wel de fallbackoptie dan 0 is?

Links:

[Github.com/SevKohler/EOS](https://github.com/SevKohler/EOS)

<https://ohdsi.github.io/CommonDataModel/cdm54.html>

Used omocl mappings:

- [https://github.com/SevKohler/OMOCL/blob/cbf6778d9df563ba9158cee2686b1e74b10f2c00/ical\\_data/evaluation/Problem diagnosis v1.yml](https://github.com/SevKohler/OMOCL/blob/cbf6778d9df563ba9158cee2686b1e74b10f2c00/ical_data/evaluation/Problem%20diagnosis%20v1.yml)
- [https://github.com/SevKohler/OMOCL/blob/cbf6778d9df563ba9158cee2686b1e74b10f2c00/ical\\_data/action/Procedure v1.yml](https://github.com/SevKohler/OMOCL/blob/cbf6778d9df563ba9158cee2686b1e74b10f2c00/ical_data/action/Procedure_v1.yml)
- [https://github.com/SevKohler/OMOCL/blob/cbf6778d9df563ba9158cee2686b1e74b10f2c00/ical\\_data/observation/Laboratory test result v1.yml](https://github.com/SevKohler/OMOCL/blob/cbf6778d9df563ba9158cee2686b1e74b10f2c00/ical_data/observation/Laboratory_test_result_v1.yml)
- [https://github.com/SevKohler/OMOCL/blob/cbf6778d9df563ba9158cee2686b1e74b10f2c00/ical\\_data/cluster/Laboratory test analyte v1.yml](https://github.com/SevKohler/OMOCL/blob/cbf6778d9df563ba9158cee2686b1e74b10f2c00/ical_data/cluster/Laboratory_test_analyte_v1.yml)

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- [https://github.com/SevKohler/OMOCL/blob/cbf6778d9df563ba9158cee2686b1e74b1on\\_data/person\\_data\\_v0.yml](https://github.com/SevKohler/OMOCL/blob/cbf6778d9df563ba9158cee2686b1e74b1on_data/person_data_v0.yml)
- 

```
1  {
2    "q": "SELECT c/content[openEHR-EHR-EVALUATION.problem_diagnosis]
        EHR e CONTAINS COMPOSITION c[openEHR-EHR-COMPOSITION.problem_diagnosis]
3  }
```

Body Cookies Headers (9) Test Results

Pretty Raw Preview Visualize JSON 

```
11  "rows": [
12    [
13      "Broken",
14      {
15        "value": "f89897b5-953b-42c4-80fe-d3b095ef"
16      }
17    ],
18    [
19      "Diabetes 2",
20      {
21        "value": "f89897b5-953b-42c4-80fe-d3b095ef"
22      }
23    ],
24    [
25      null
```

[d142f9/pers](#)

```
agnosis.v1]/data[at0001]/items[at0002]/value/value, e/ehr_id.value FROM  
report.v1] "
```

200 OK

• 445 ms

• 828 B



Save Response



b6fa"

b6fa"

```

25 | null,
26 | {
27 |   "value": "865567e3-ab39-4e60-a90c-de541598

```

Openehr ehr id for our test patient

7a835f14-8f70-4650-be0d-c40b1a17605b

Person id omop

58 (please check)

- Seb:

One question is where i can find (in the code) the overall logic of the conversion/map the tool follow the result commened order of archetypes/target tables etc.). Further understand some assumptions that you perhaps made about what openEHR items are populated. Thirdly, the omocl seems to have a couple of mechanisms / operations to the mapping (preferred mapping, conditional mapping)? Do you somehow also look codes/concept\_id's? Or could this be done in the future?

- Severin Kohler:

1. <https://github.com/SevKohler/Eos/tree/main/src/main/java/org/bih/eos/c>
2. everything thats displayable in omop and does not require fact rel (except f linked to lab), since they are rarely used and their super messy.
3. <https://github.com/SevKohler/OMOCL/wiki/Syntax-and-grammar>

Still some tables missing ...

I just go the altenratives from top down and take the one thats first there, like

About conditional mappings can you make an example/(Edited)

I currently have another omop and openEHR expert add the rest of the mappings and small rework so we can finish it.

After that everything in opneEHR (international models) is OMOP convertible using l

in general most of the stuff is in this paper:

<https://www.sciencedirect.com/science/article/pii/S1532046423001582>

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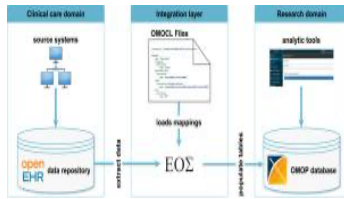
d make a

Eos.(Edited)



Just take a read it should describe everything and the decisions i made and why.

Looking forward to your input.



[Eos and OMOCL: Towards a seamless integration of openEHR records into the OMOP Data Model](#)  
[sciencedirect.com](https://www.sciencedirect.com)

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- Thanks! I'll have a closer look first and then come back to you, ok? I will then a example

	person_id	condition	condition_concept_id
0	58	709044004	46271022
1	6	Broken	0
2	6	Diabetes 2	0
3	7	Chronic Asthma	0
4	7	Acute exacerbation of asthma	0
...	...	...	...
63	56	44054006	0
64	56	44054006	0
65	56	44054006	201826
66	56	44054006	201826
67	58	44054006	201826

68 rows x 3 columns

- 
- Condition OpenEHR/OMOP

	patient_id	open_ehr_condition_code	omop_condition_concept_id
0	f89897b5-953b-42c4-80fe-d3b095efb6fa	Broken	NaN
1	f89897b5-953b-42c4-80fe-d3b095efb6fa	Diabetes 2	NaN
2	865567e3-ab39-4e60-a90c-de541598860b	None	NaN
3	4a117827-0162-484f-aa59-8eff6e7fa2f7	None	NaN
4	4a117827-0162-484f-aa59-8eff6e7fa2f7	Diabetes Mellitus Type 2	NaN
5	4a117827-0162-484f-aa59-8eff6e7fa2f7	Diabetes Mellitus Type 2	NaN
6	4a117827-0162-484f-aa59-8eff6e7fa2f7	Diabetes Mellitus Type 2	NaN
7	4a117827-0162-484f-aa59-8eff6e7fa2f7	Diabetes Mellitus Type 2	NaN
8	4a117827-0162-484f-aa59-8eff6e7fa2f7	Diabetes Mellitus Type 2	NaN
9	4a117827-0162-484f-aa59-8eff6e7fa2f7	Diabetes Mellitus Type 2	NaN
10	cefc040b-2db1-4d9d-b5c6-a8815ae8a161	None	NaN
11	7a835f14-8f70-4650-be0d-c40b1a17605b	Diabetes Mellitus Type 2	NaN

Common

Also give some

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	ROW #68
123 condition_occurrence_id	68
123 person_id	58
123 condition_concept_id	201.826
condition_start_date	2024-11-15
condition_start_datetime	2024-11-15 12:52:22.000
condition_end_date	[NULL]
condition_end_datetime	[NULL]
123 condition_type_concept_id	32.817
123 condition_status_concept_id	32.893
ABC stop_reason	[NULL]
123 provider_id	[NULL]
123 visit_occurrence_id	300
123 visit_detail_id	[NULL]
ABC condition_source_value	44054006
123 condition_source_concept_id	201.826
ABC condition_status_source_value	32893

- s of (interoperable what could be) conditional mappings.

	person_id	condition_code	condition_display	condition_concept_id
0	58	709044004	Diabetes Mellitus Type 2	46271022
1	58	44054006	Broken	201826



