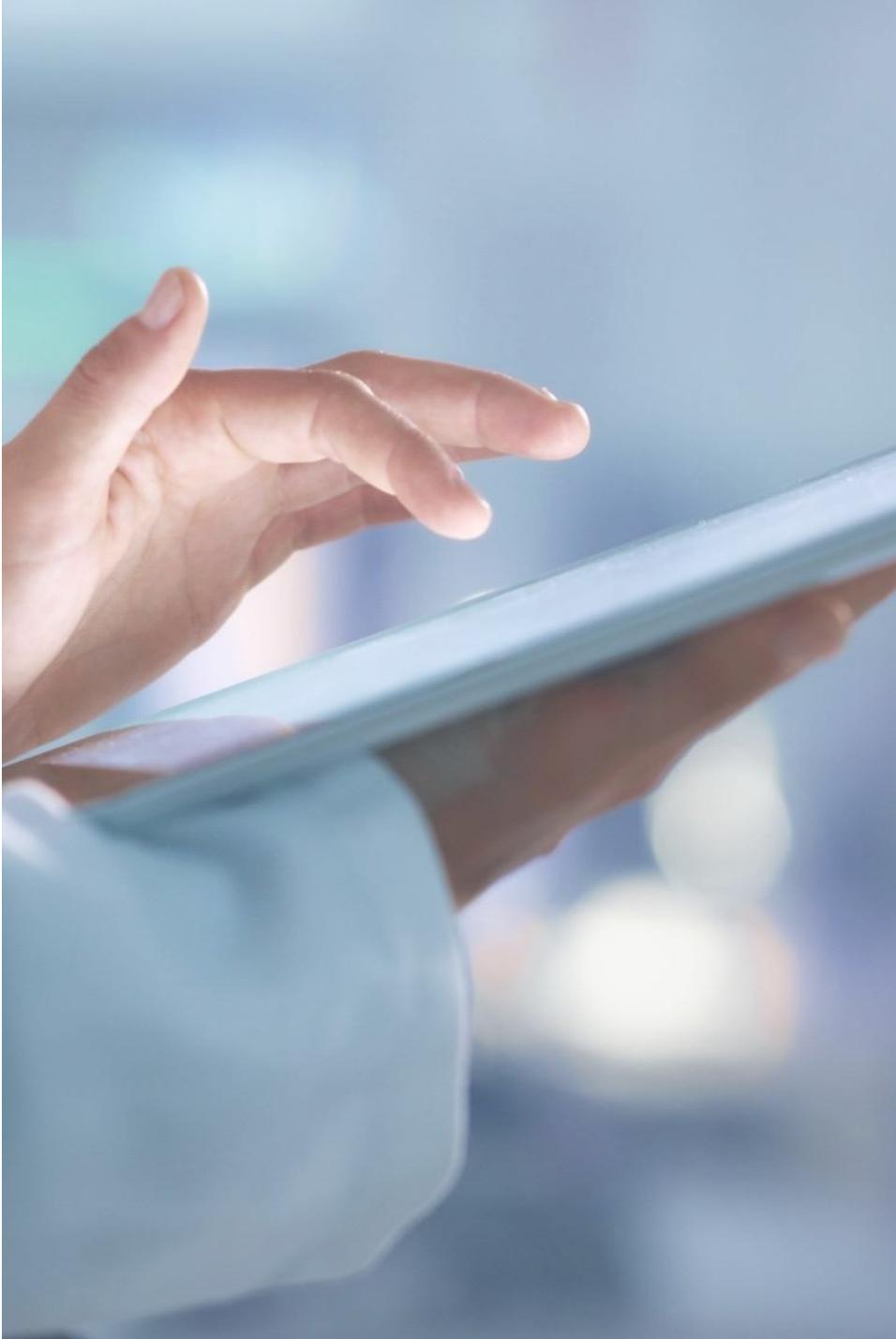


# Episode of Care

Data Model of the Episode-Oriented Medical Record according to Solon in openEHR

19.01.2026, Jean-Pierre Messerli



# Modelling Episodes in openEHR

1. Step-by-step introduction to episode-oriented medical record
2. Logical data model
3. Modelling in openEHR

# openEHR Masterclass Thesis



## Data Model of the Episode-Oriented Medical Record according to Solon in openEHR

openEHR Masterclass Thesis

Program: openEHR Masterclass by Rosaldo and freshEHR  
Author: Jean-Pierre Messerli  
Supervisor: Heidi Koikkalainen  
Client/Sponsor: JPM Consulting GmbH  
Experts: David Jobling, Joost Holslag, Dr Ian McNicoll  
Date: 10th October 2025

<https://jpm-consulting.ch/media/files/data-model-of-episode-oriented-medical-record-in-openehr.pdf>

<https://github.com/JPM-Consulting/openEHR-Masterclass-thesis>

More about EMR: <https://jpm-consulting.ch/download.php>

Platform Solutions Resources Open Source Enterprise Pricing Search or jump to... Sign in Sign up

JPM-Consulting / openEHR-Masterclass-thesis Public Notifications Fork 0 Star 3

Code Issues Pull requests Actions Projects Security Insights

main 1 Branch 0 Tags Go to file Code

JPM-Consulting Add files via upload 3384233 · 3 months ago 82 Commits

local	Delete local/openEHR-EHR-CLUSTER.eocI_relationships_...	3 months ago
Data Model of episode-oriented medical rec...	Add files via upload	3 months ago
README.md	Update README.md	3 months ago
Sample Medical Record Episodes-of Care So...	Add files via upload	3 months ago

README

### openEHR-Masterclass-thesis

Data Model of the Episode-Oriented Medical Record according to Solon in openEHR

This Masterclass thesis explores implementation options for Solon's episode-oriented medical record using the international openEHR standard, validates the approach on real cases, and centres on governance, interoperability, and computable clinical lists (J.P. Messerli 2025)

About: No description, website, or topics provided. Readme, Activity, 3 stars, 0 watching, 0 forks.

Releases: No releases published.

Packages: No packages published.

<https://jpm-consulting.ch/media/files/data-model-of-episode-oriented-medical-record-in-openehr.pdf>

<https://github.com/JPM-Consulting/openEHR-Masterclass-thesis>

# Disclosure – Potential conflicts of interest



**Jean-Pierre Messerli**

Physician and Medical  
Informatics Specialist

Professional situation	Senior Consultant and Partner at JPM Consulting GmbH
Consulting relationships	Various including Swisscom (Switzerland) AG, HCI Solutions AG, Healthbrain GmbH, Aprioris AG
Fees	Mandates according to consulting contracts
Third-Party Funding	None
Shares, Business Interests	BEKB AG, Owner JPM Consulting GmbH
Memberships	<ul style="list-style-type: none"><li>– FMH - Swiss Medical Association</li><li>– VSAO - Association of Residents and Senior Physicians</li><li>– HL7 Switzerland, Founding Member</li><li>– IHE Switzerland, Founding Member</li><li>– openEHR International and Switzerland</li><li>– FMC - Forum Managed Care</li><li>– IG eMediplan - Electronic Medication Plan</li><li>– SGMI - Swiss Society for Medical Informatics</li><li>– Co-Founder of VSFM</li></ul>

# Episode of Care – Introduction

# Mrs Emma Brown, 62-year-old



Mrs Emma Brown

# Mrs Brown is travelling by train from London to Oxford

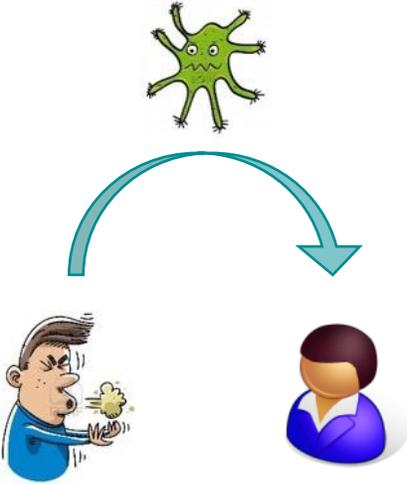


Mrs Emma Brown  
boarding the train



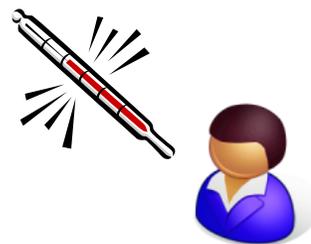
Mrs Brown meets Mr Frank Jones

# Mrs Brown catches the flu



Exposure on the train  
(nearby passenger sneezes)

# Mrs Brown falls ill



Mrs Brown falls ill

# Ms Brown visits her general practitioner (GP)

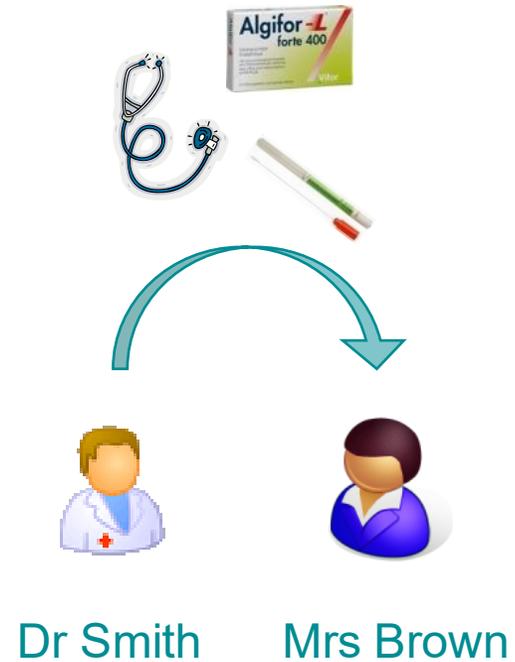


Dr Smith

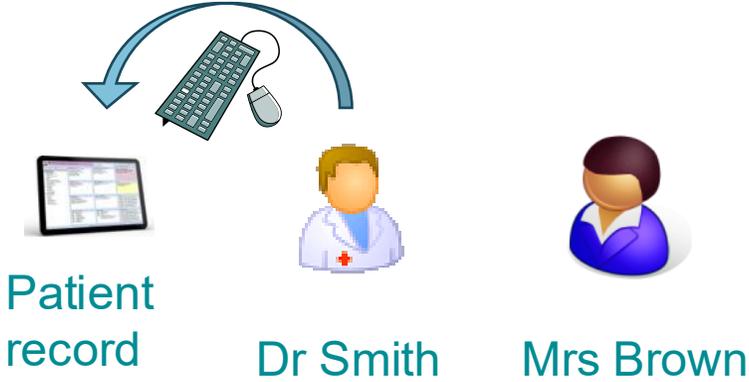


Mrs Brown

# Dr Smith takes Ms Brown's history, examines her and initiates treatment



# Dr Smith documents everything in Mrs Brown's patient record



Mrs Brown visits her GP again three days later



Dr Smith



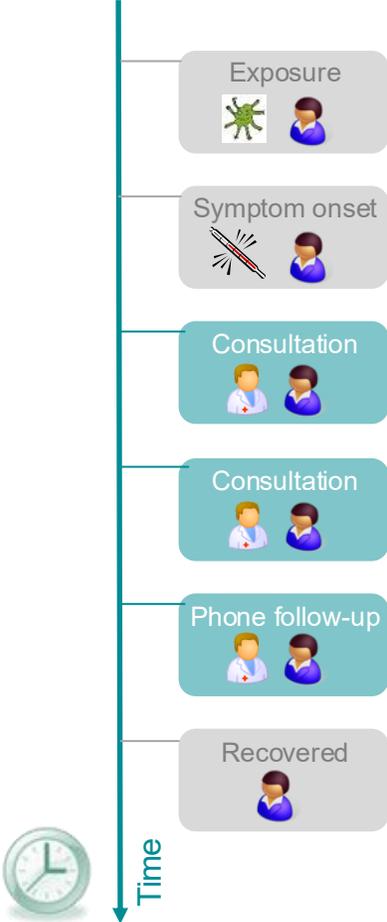
Mrs Brown

Mrs Brown reports improvement by phone and is fully recovered after 8 days



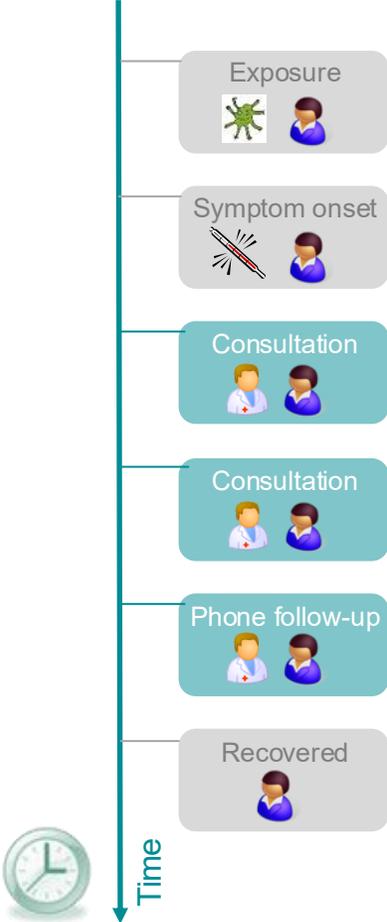
Mrs Brown

# Mrs Brown had one health problem and three care encounter with her doctor



- 1 health problem
- 2 consultations with Dr Smith
- 1 telephone follow-up with Dr Smith

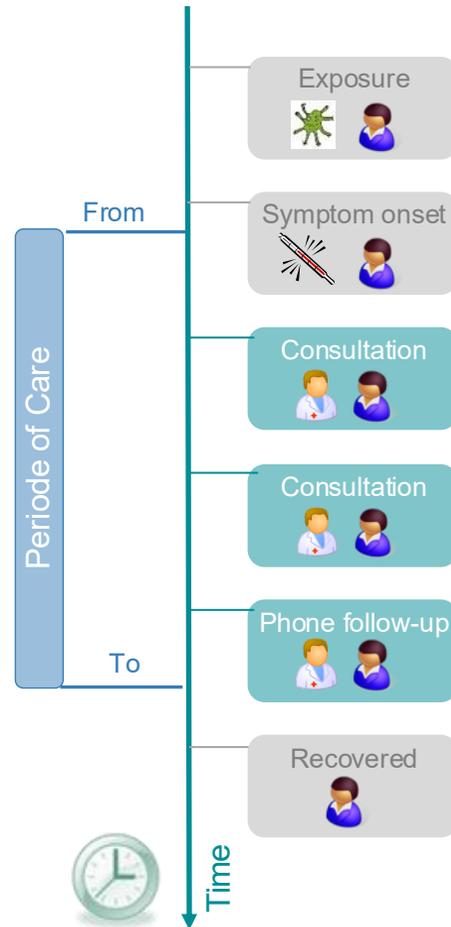
# How can this care pathway be structured?



structuring options ?



# The temporal dimension is the period of care



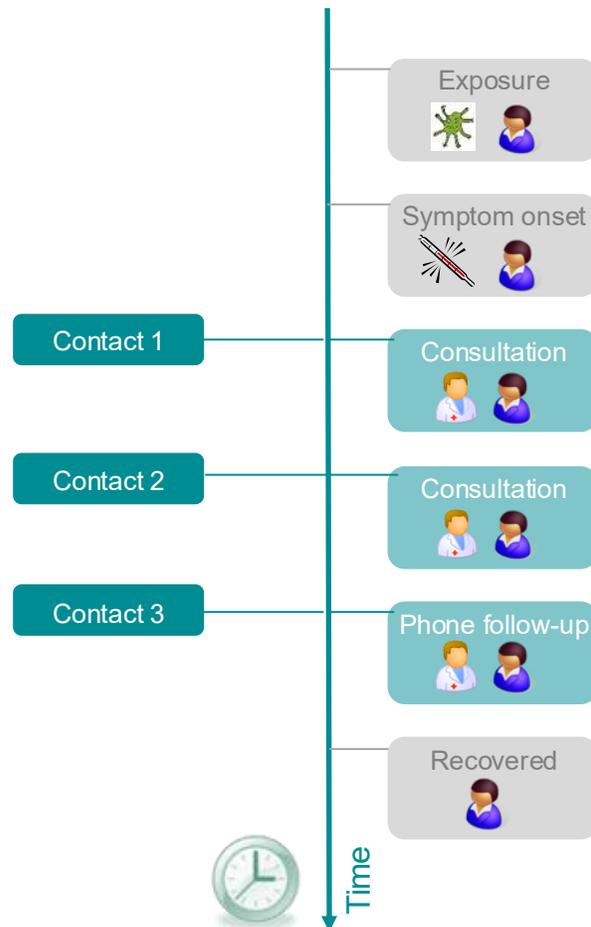
The temporal dimension of the care pathway is the **period of care**.

A period encompasses all treatments within a specific time frame.

Example

Dr Smith invoices all services rendered from 15 February 2025 to 27 February 2025.

# The organisational dimension is a contact (*care encounter*)



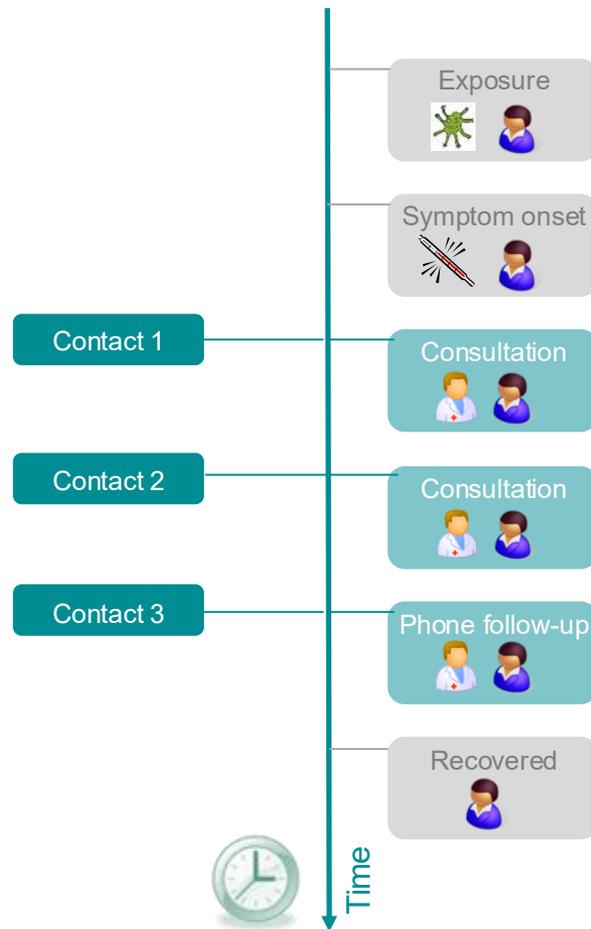
The organisational dimension of the care pathway is a **contact = care encounter**.

The patient and the healthcare professional meet at a specific location at a specific time.

Example:

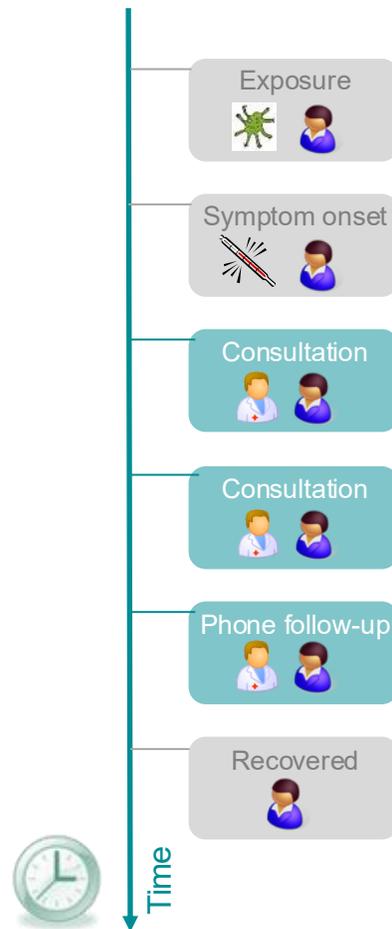
Mrs Brown and Dr Smith have an appointment for a consultation on 20 February 2025 at 8:15 a.m.

# There are different types of contact



## Types of Contact

# There are different types of contact (care encounter)

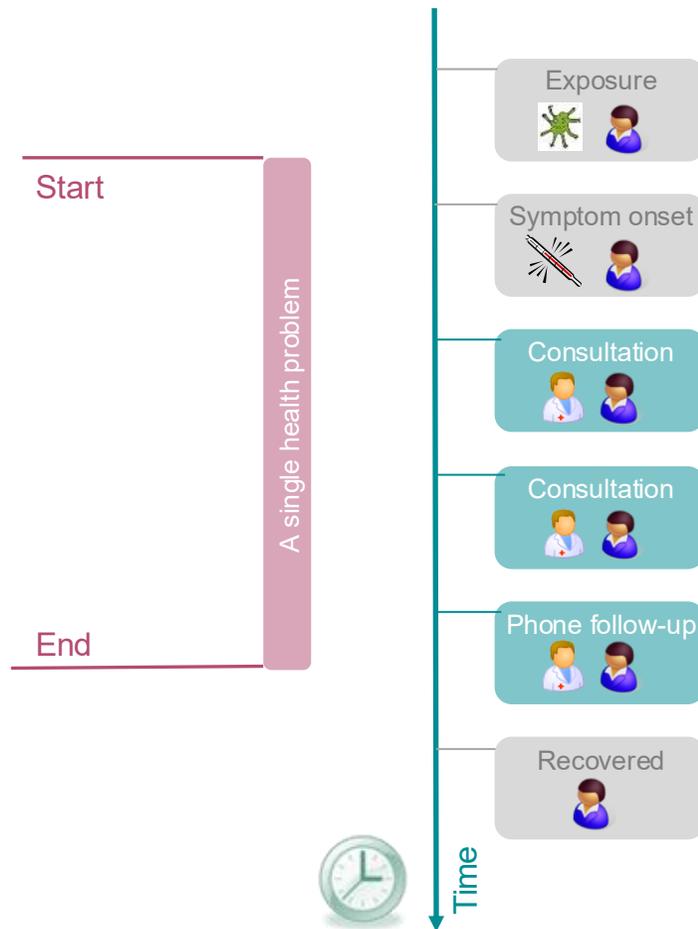


## Types of Contact

### Contact with a healthcare provider

- consultation
- home visit
- ward round
- telephone consultation
- third-party telephone information
- file review
- dispensing of medication
- documentation of diagnostic procedures
- documentation of therapeutic procedures

# The content dimension is the episode

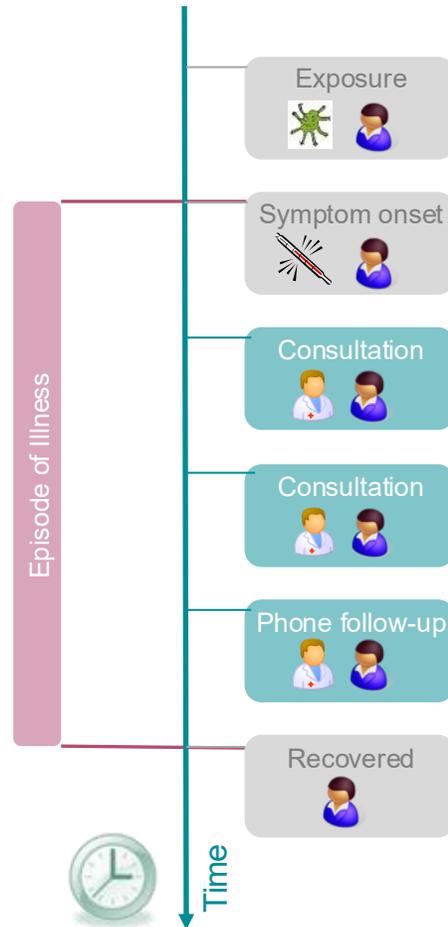


The **episode** is the content structure of the care pathway for a specific health problem of the patient with a beginning and an end.

## Example

Mrs Brown has the flu as a health problem. The flu has a beginning and an end.

# Episode of Illness – patient's perspective



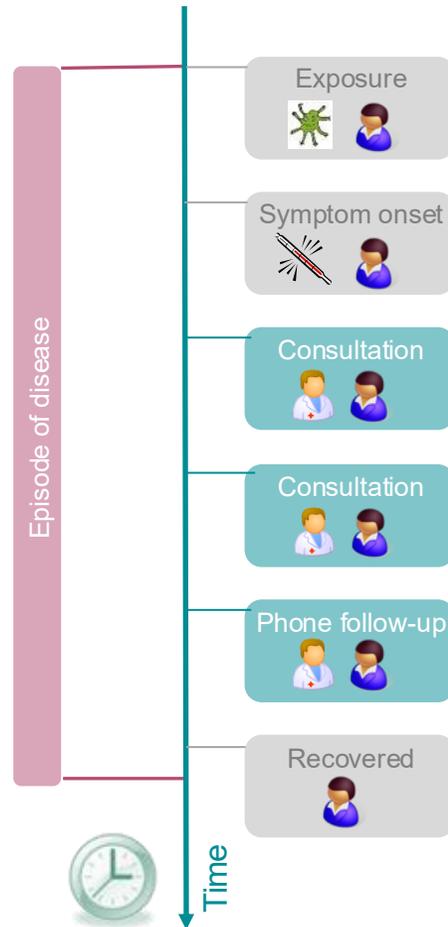
The **episode of illness** focuses on the patient's perspective and subjective feelings.

It begins with the loss of well-being and the onset of symptoms and ends with recovery, incomplete recovery or death.

## Example

Mrs. Brown feels cold and her nose starts to run. Mrs. Brown feels healthy again and goes to work.

# Episode of Disease – perspective of scientists

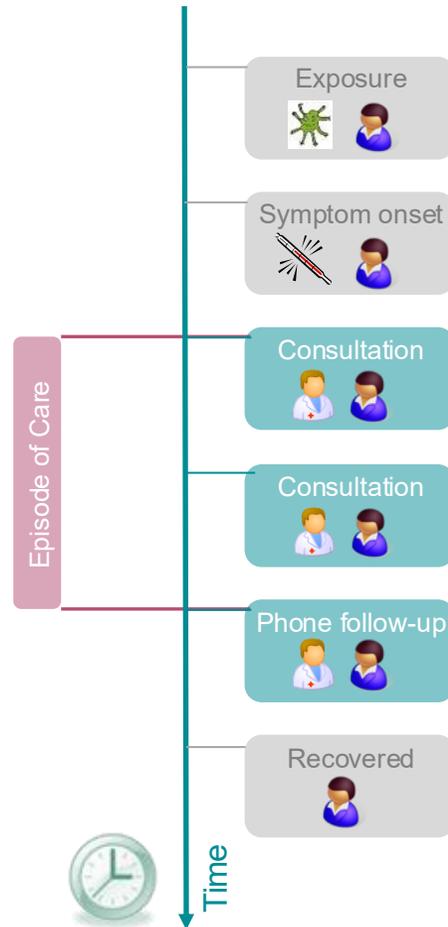


The **episode of disease** describes an episode of illness from the perspective of doctors and scientists, applying pathophysiological criteria.

## Example

Mrs Brown catches the flu virus. The incubation period is one to two days.

# Episode of Care



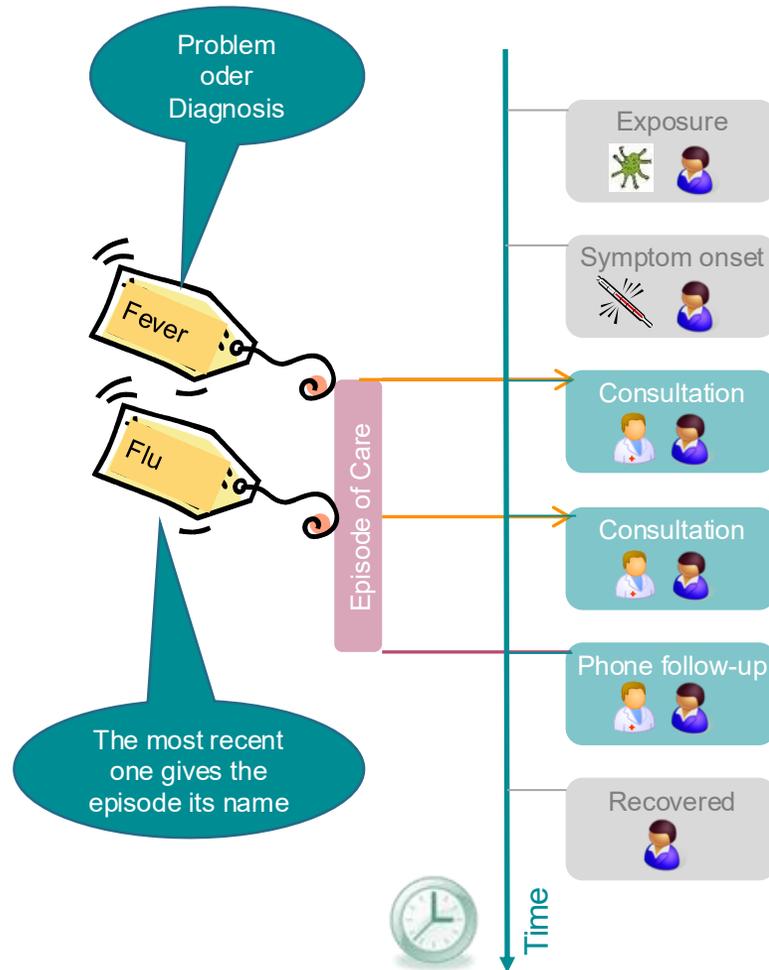
The **episode of care** includes one or more contacts with healthcare professionals for the treatment of a specific health problem.

All medical data relating to the health problem is linked to the episode.

Example

Mrs Brown has had three contacts with Dr Smith for treatment of the flu

# The name of the episode of care is the label from the most recent contact



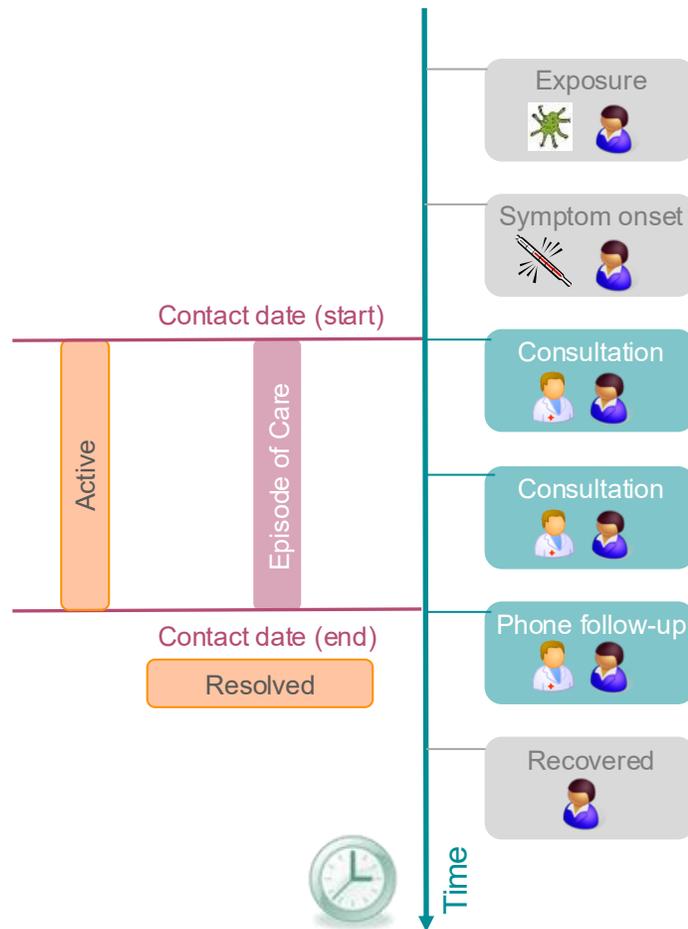
The episode is named according to the health problem with a problem description or diagnosis.

The name of the episode can be changed for each contact.

The previous name for existing contacts remains unchanged.

The name of the episode displayed is, by default, the name of the most recent contact.

# The episode has the status active, inactive or resolved

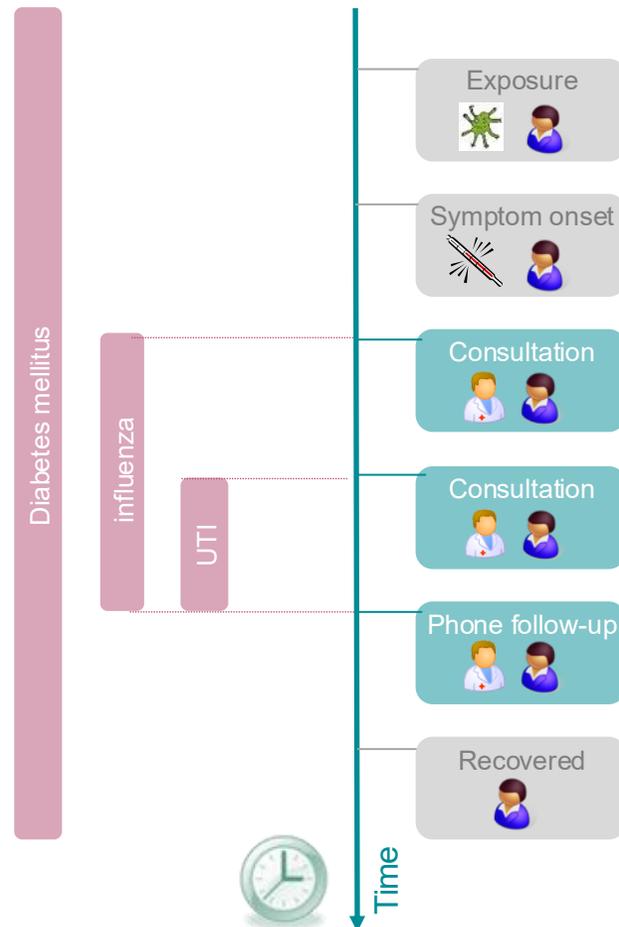


The episode begins with the date of the first contact with a healthcare provider and has the status “active”.

The episode ends with the last contact and has the status “resolved”.

Chronic episodes are never resolved.

# A patient may have several active episodes at the same time.



A patient may have several health problems at the same time.

One episode is created per health problem.

Complications of an episode are recorded as a separate episode.

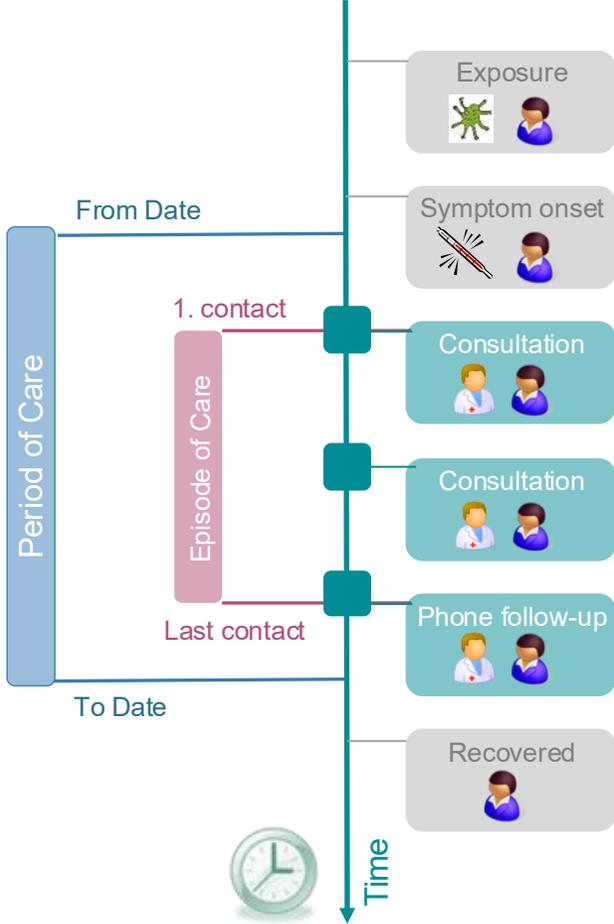
## Example

Mrs Brown suffers from diabetes mellitus, has the flu and a urinary tract infection (UTI). Each of these health problems is a separate episode of care.

# Let's summarise



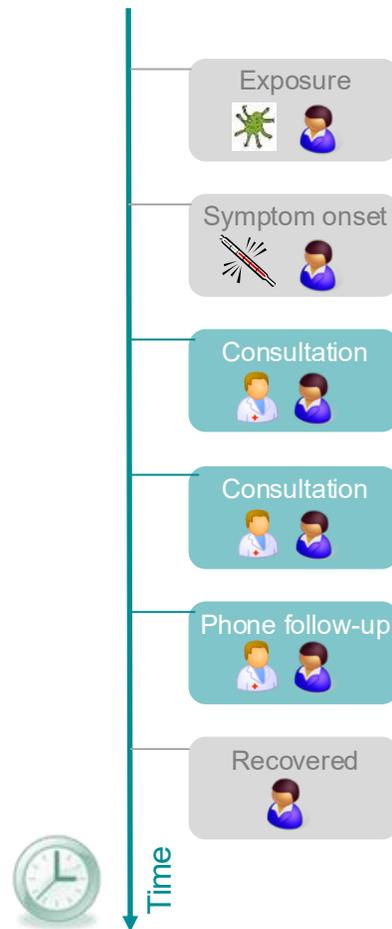
# Care pathways can be structured by organisation, time, or content



## Units of clinical documentation

Organizational	Temporal	Content
Contact (Care encounter)	Periode of Care	Episode of Care
Single interaction with healthcare professional (Consultion, Home Visit)	All treatments within a period  (day, week, month)	All contacts for treatment for the same health problem

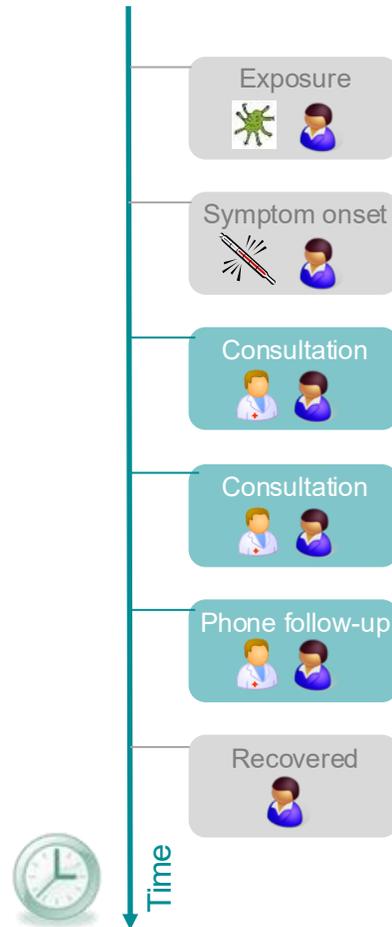
# What exactly happens at the contact?



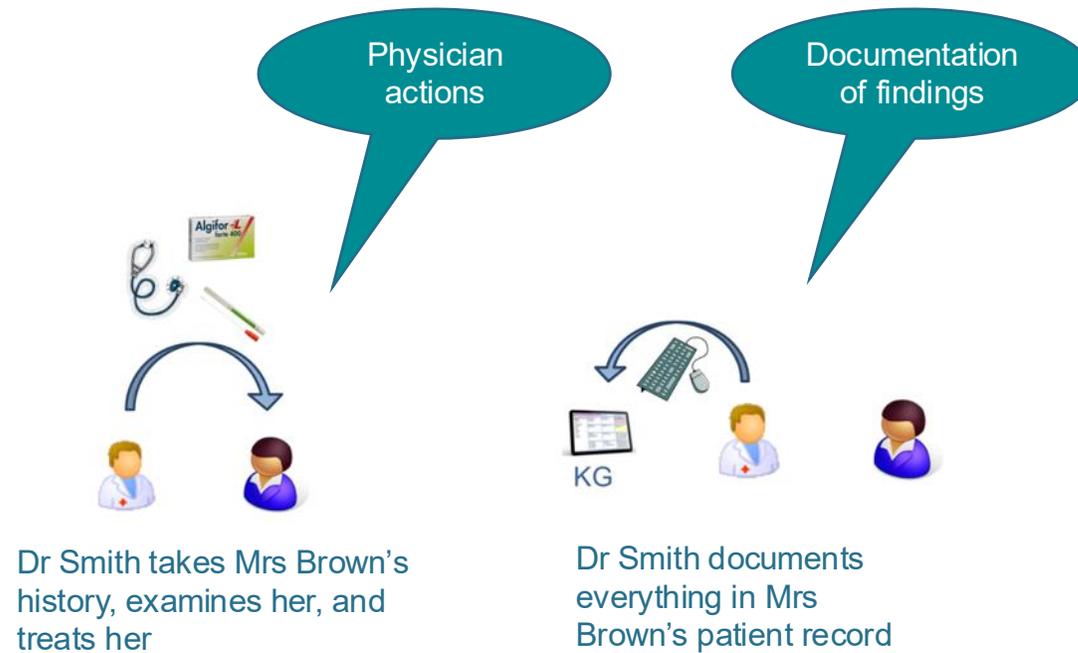
What happens during the contact, exactly?



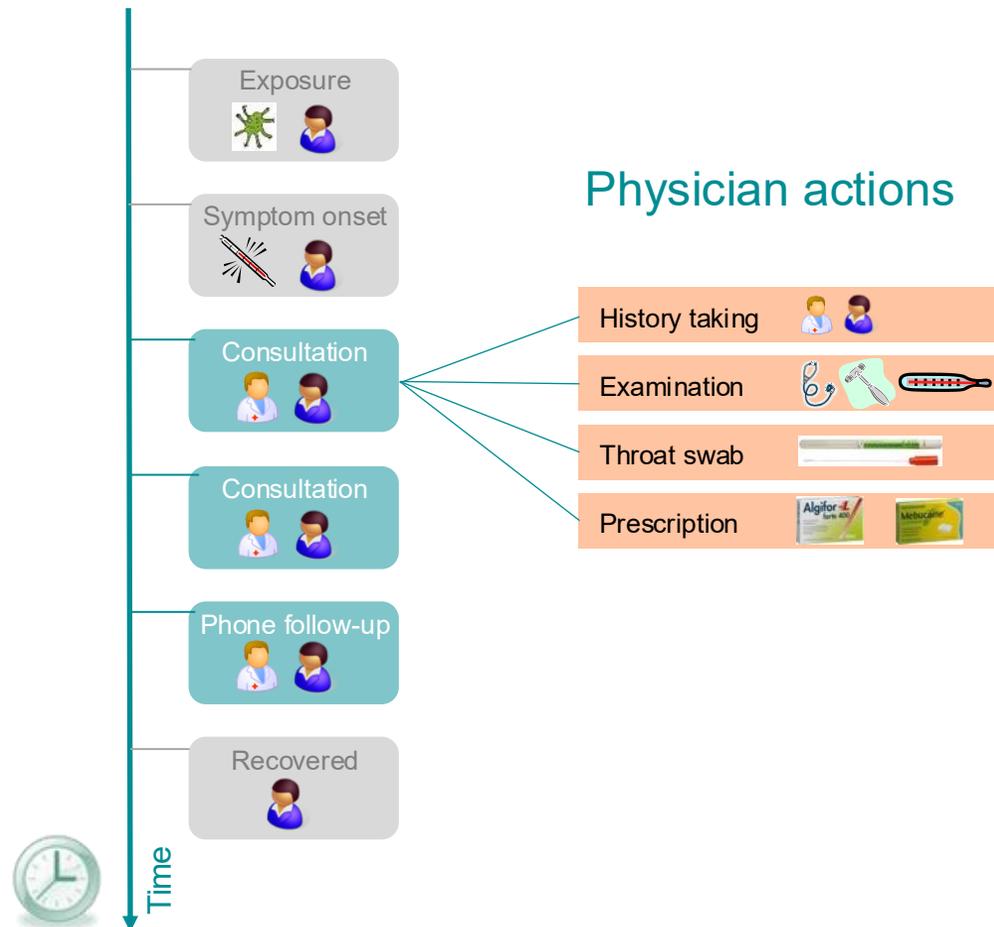
# What exactly happens at the contact?



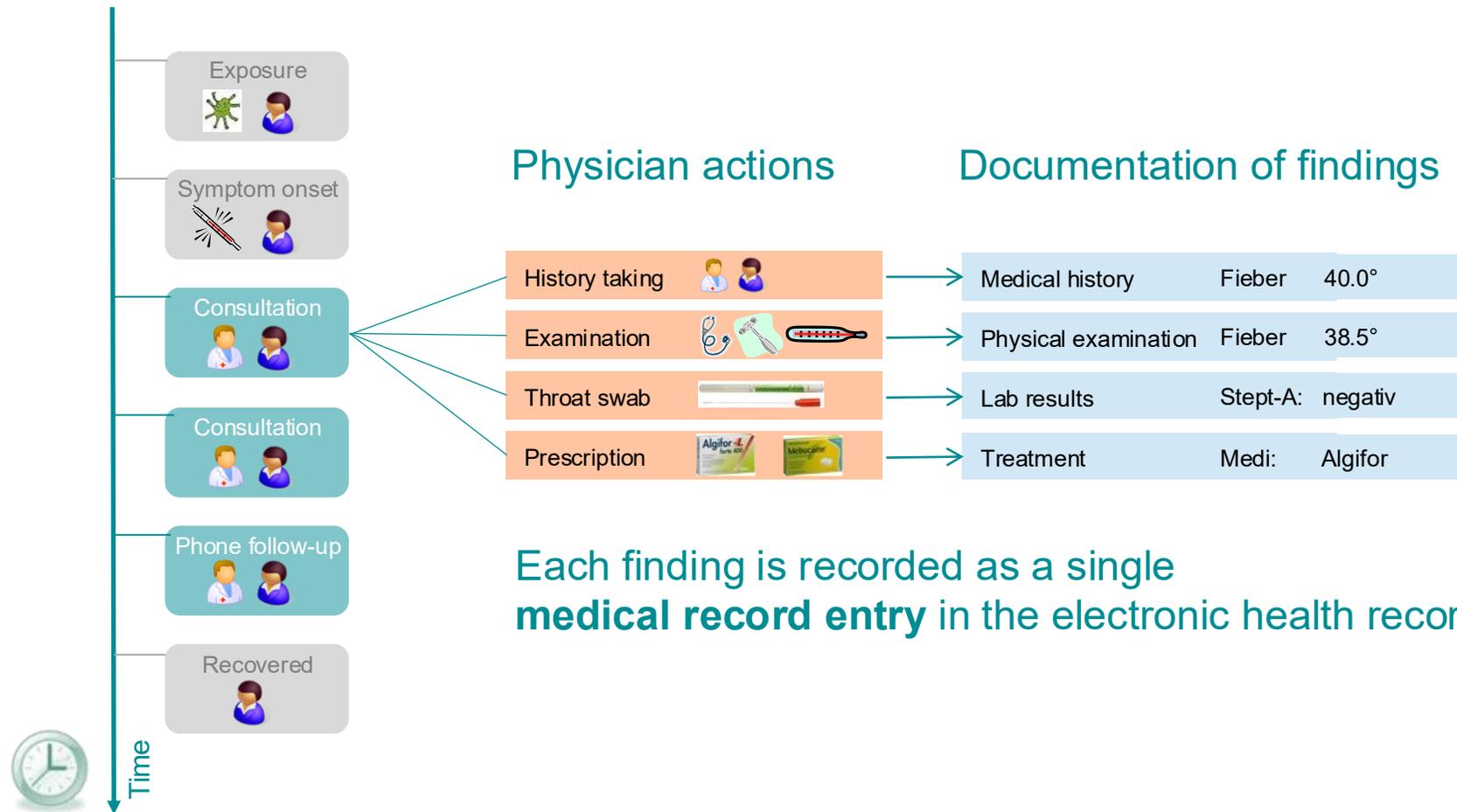
Let's remember...



# The physician performs various actions during the care encounter

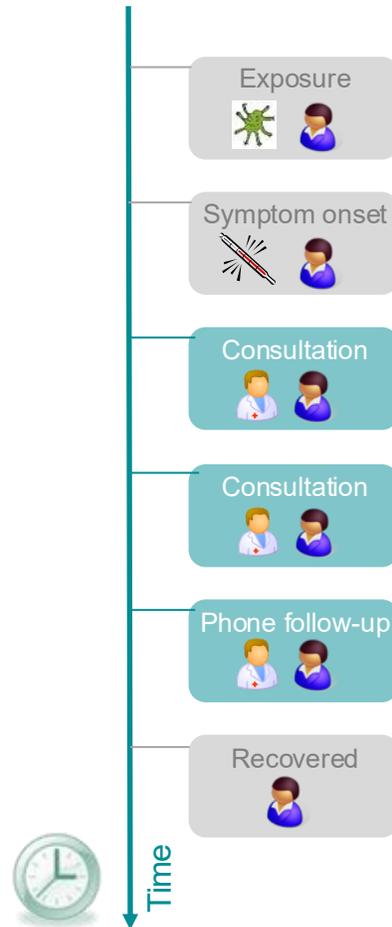


# The physician documents the findings in the electronic health record (EHR)



Each finding is recorded as a single **medical record entry** in the electronic health record (EHR)

# How can clinical documentation be grouped?

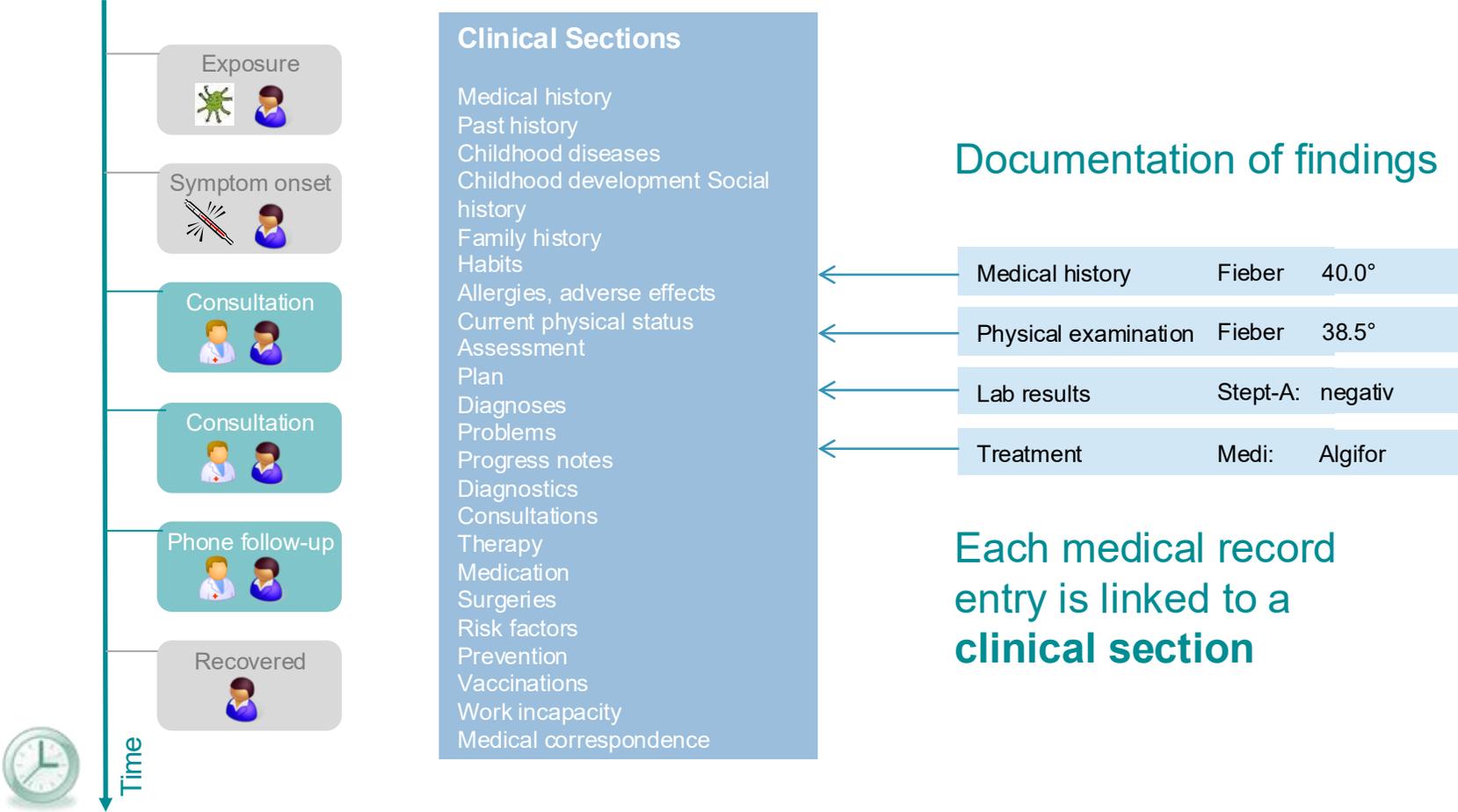


How can the medical record entries be grouped?

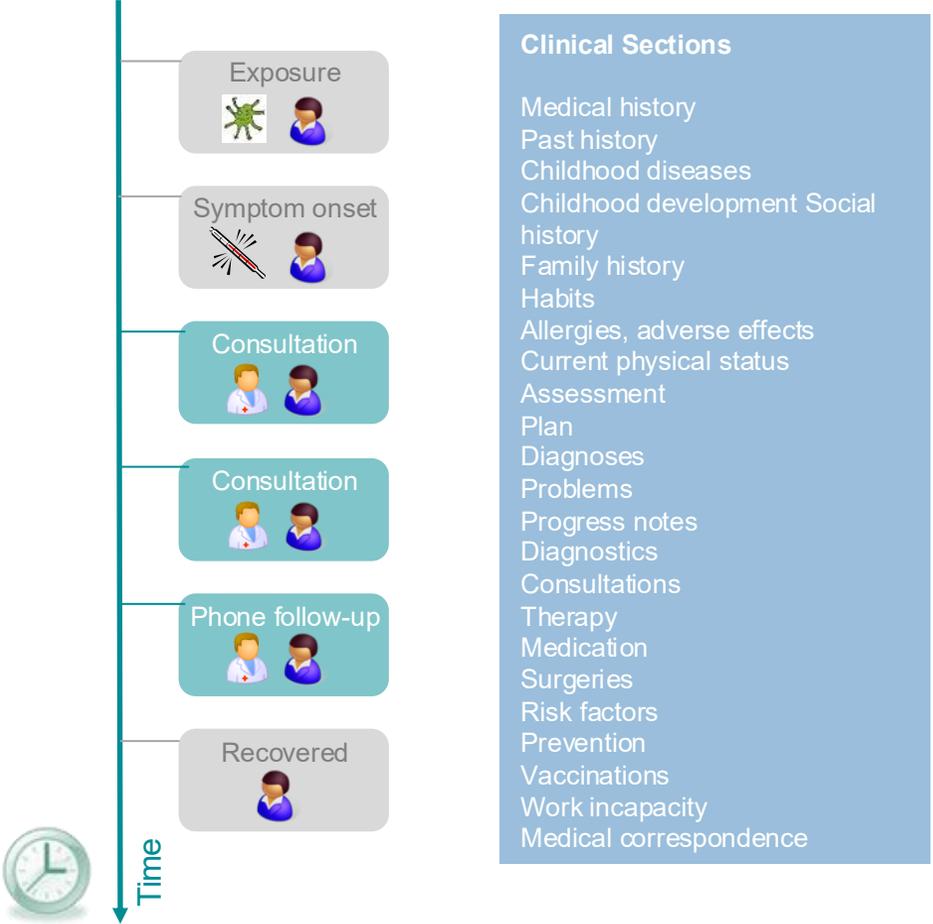
## Documentation of findings

Medical history	Fieber	40.0°
Physical examination	Fieber	38.5°
Lab results	Stept-A:	negativ
Treatment	Medi:	Algifor

# Grouping of medical documentation in clinical sections



# Grouping of medical documentation in clinical sections



Medical record entries within the same clinical section automatically form a clinically meaningful unit for structuring the patient record.

The primary structure of the medical record is a view of medical record entries grouped by clinical section.

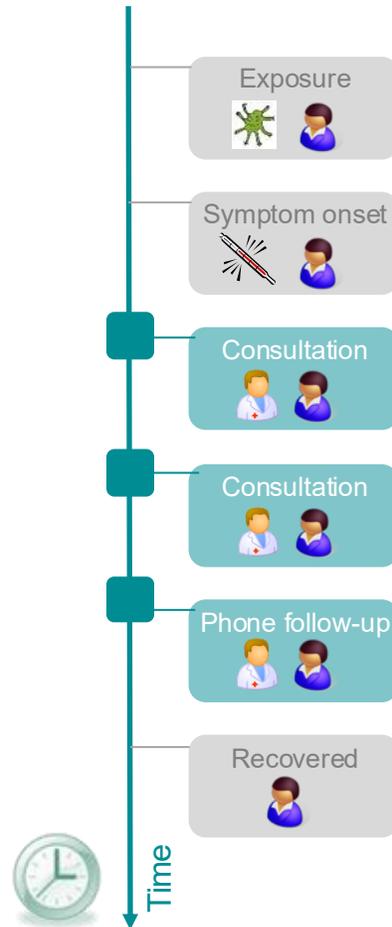
# Grouping of medical documentation in clinical sections

<p><b>Diagnosis and Problem List</b> Master ▾ +</p> <ol style="list-style-type: none"> <li>Coronary heart disease           <ul style="list-style-type: none"> <li>Arterial hypertension (Dx 2009)</li> <li>Heart failure</li> <li>S/P myocardial infarction (2015)</li> </ul> </li> <li>Diabetes mellitus type 2           <ul style="list-style-type: none"> <li>Nephropathy (Dx 2017)</li> <li>Polyneuropathy (Dx 2024)</li> <li>HbA1c 5.9% (15.01.2025)</li> </ul> </li> <li>Obesity WHO grade II           <ul style="list-style-type: none"> <li>BMI 30.5 (15.03.2025)</li> </ul> </li> <li>Husband in need of care</li> <li>Hammertoe, left foot</li> <li>S/P acute bacterial cystitis (dec 2024)</li> <li>S/P acute cholecystitis (2025)</li> <li>S/P appendectomy</li> </ol>	<p><b>Diagnosis</b> All ▾ +</p> <table border="1"> <tbody> <tr><td>Coronary heart disease</td><td>2001</td></tr> <tr><td>Arterial hypertension</td><td>2009</td></tr> <tr><td>Diabetes mellitus type 2</td><td>2007</td></tr> <tr><td>Nephropathy</td><td>2017</td></tr> <tr><td>Polyneuropathy</td><td>2024</td></tr> <tr><td>Obesity WHO grade II</td><td></td></tr> <tr><td>Heart failure</td><td></td></tr> </tbody> </table>	Coronary heart disease	2001	Arterial hypertension	2009	Diabetes mellitus type 2	2007	Nephropathy	2017	Polyneuropathy	2024	Obesity WHO grade II		Heart failure		<p><b>Medication Plan</b> All ▾ ⌵ +</p> <table border="1"> <tbody> <tr><td>ASPIRIN CARDIO Filmtabl 100 mg</td><td>1-0-0-0</td></tr> <tr><td>TORASEMID Spirig HC Tabl 5 mg</td><td>1-0-0-0</td></tr> <tr><td>VALSARTAN Sandoz Filmtabl 160 mg</td><td>1-0-0-0</td></tr> <tr><td>CRESTOR Filmtabl 20 mg</td><td>1-0-0-0</td></tr> <tr><td>METFORMIN Mepha Filmtabl 1000 mg</td><td>1-1-1-0</td></tr> <tr><td>OZEMPIC FixDose 4 mg/3ml (1 mg/Dosis)</td><td></td></tr> <tr><td>ZOLDORM Filmtabl 10 mg</td><td>0-0-0-1</td></tr> </tbody> </table>	ASPIRIN CARDIO Filmtabl 100 mg	1-0-0-0	TORASEMID Spirig HC Tabl 5 mg	1-0-0-0	VALSARTAN Sandoz Filmtabl 160 mg	1-0-0-0	CRESTOR Filmtabl 20 mg	1-0-0-0	METFORMIN Mepha Filmtabl 1000 mg	1-1-1-0	OZEMPIC FixDose 4 mg/3ml (1 mg/Dosis)		ZOLDORM Filmtabl 10 mg	0-0-0-1
Coronary heart disease	2001																													
Arterial hypertension	2009																													
Diabetes mellitus type 2	2007																													
Nephropathy	2017																													
Polyneuropathy	2024																													
Obesity WHO grade II																														
Heart failure																														
ASPIRIN CARDIO Filmtabl 100 mg	1-0-0-0																													
TORASEMID Spirig HC Tabl 5 mg	1-0-0-0																													
VALSARTAN Sandoz Filmtabl 160 mg	1-0-0-0																													
CRESTOR Filmtabl 20 mg	1-0-0-0																													
METFORMIN Mepha Filmtabl 1000 mg	1-1-1-0																													
OZEMPIC FixDose 4 mg/3ml (1 mg/Dosis)																														
ZOLDORM Filmtabl 10 mg	0-0-0-1																													
<p><b>Allergies and Adverse Drug Reaction</b> All ▾ +</p> <p>Allergic rhinitis ●</p>	<p><b>Risk Factors</b> All ▾ +</p> <p>Tobacco use: (= 36 pack-years)</p> <p>Physical activity: No regular physical exercise</p> <p>Weight / BMI: Obesity, WHO class II</p> <p>Arterial hypertension: Secondary hypertension</p> <p>Diabetes mellitus: Type 2 diabetes mellitus</p>	<p><b>Latest Diagnostics</b> All ▾ +</p> <p>15.03.2024 Chest X-ray PA/LAT (Cardiac Enlargement)</p> <p>15.03.2024 US abdomen (acute calculous cholecystitis) ●</p> <p>16.02.2021 12-Lead Resting ECG ●</p>																												
	<p><b>Latest Vital Signs</b> All ▾ +</p> <table border="1"> <tbody> <tr><td>06.02.2025 13:17</td><td>Blood Pressure</td><td>180/60 mm Hg</td></tr> <tr><td>24.01.2025 09:46</td><td>Heart Rate</td><td>80 bpm</td></tr> <tr><td>19.01.2025 09:53</td><td>Weight</td><td>80 kg</td></tr> <tr><td>19.06.2024 09:53</td><td>Height</td><td>172 cm</td></tr> </tbody> </table>	06.02.2025 13:17	Blood Pressure	180/60 mm Hg	24.01.2025 09:46	Heart Rate	80 bpm	19.01.2025 09:53	Weight	80 kg	19.06.2024 09:53	Height	172 cm	<p><b>Latest Lab Results</b> All ▾ +</p> <table border="1"> <tbody> <tr><td>07.02.2025</td><td>Hemoglobin (HGB)</td><td>125 g/L</td></tr> <tr><td>07.02.2025</td><td>Hematocrit (HCT)</td><td>0.45</td></tr> <tr><td>07.02.2025</td><td>Leukocytes (WBC)</td><td>18 10<sup>9</sup>/L ●</td></tr> <tr><td>07.02.2025</td><td>C-Reactive Protein (CRP)</td><td>93 mg/L ●</td></tr> </tbody> </table>	07.02.2025	Hemoglobin (HGB)	125 g/L	07.02.2025	Hematocrit (HCT)	0.45	07.02.2025	Leukocytes (WBC)	18 10 <sup>9</sup> /L ●	07.02.2025	C-Reactive Protein (CRP)	93 mg/L ●				
06.02.2025 13:17	Blood Pressure	180/60 mm Hg																												
24.01.2025 09:46	Heart Rate	80 bpm																												
19.01.2025 09:53	Weight	80 kg																												
19.06.2024 09:53	Height	172 cm																												
07.02.2025	Hemoglobin (HGB)	125 g/L																												
07.02.2025	Hematocrit (HCT)	0.45																												
07.02.2025	Leukocytes (WBC)	18 10 <sup>9</sup> /L ●																												
07.02.2025	C-Reactive Protein (CRP)	93 mg/L ●																												

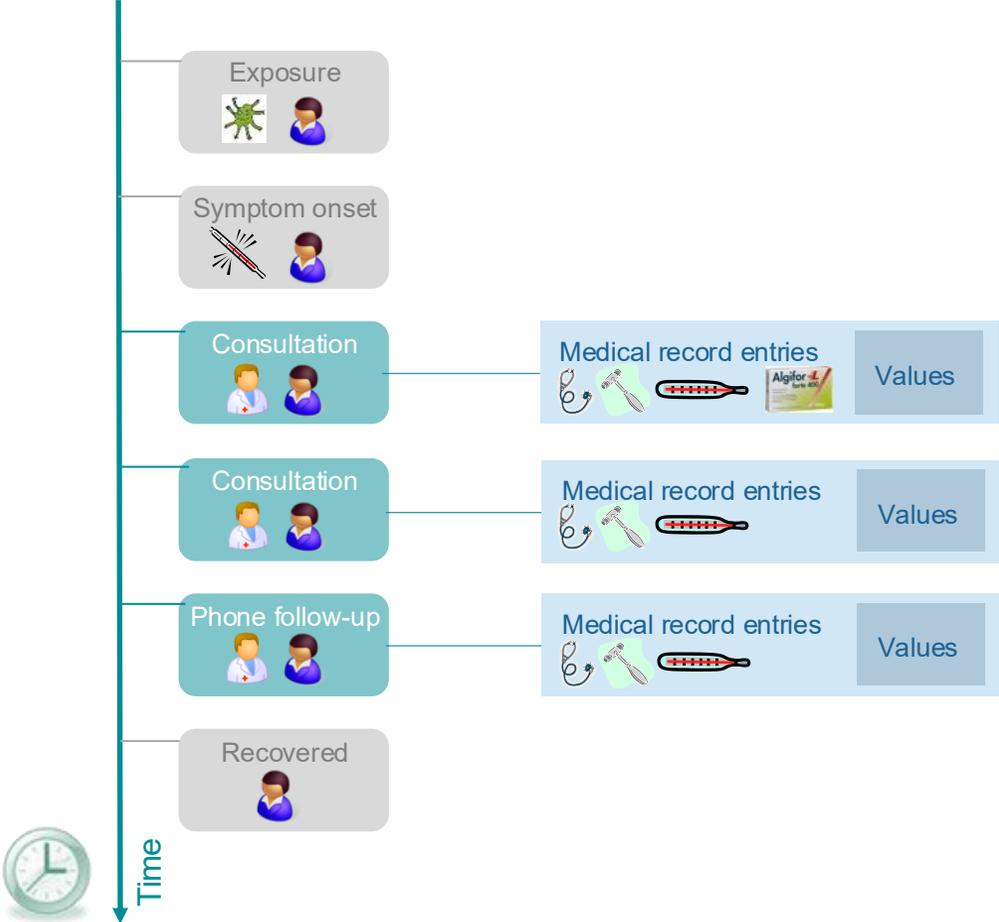
# Let's summarise



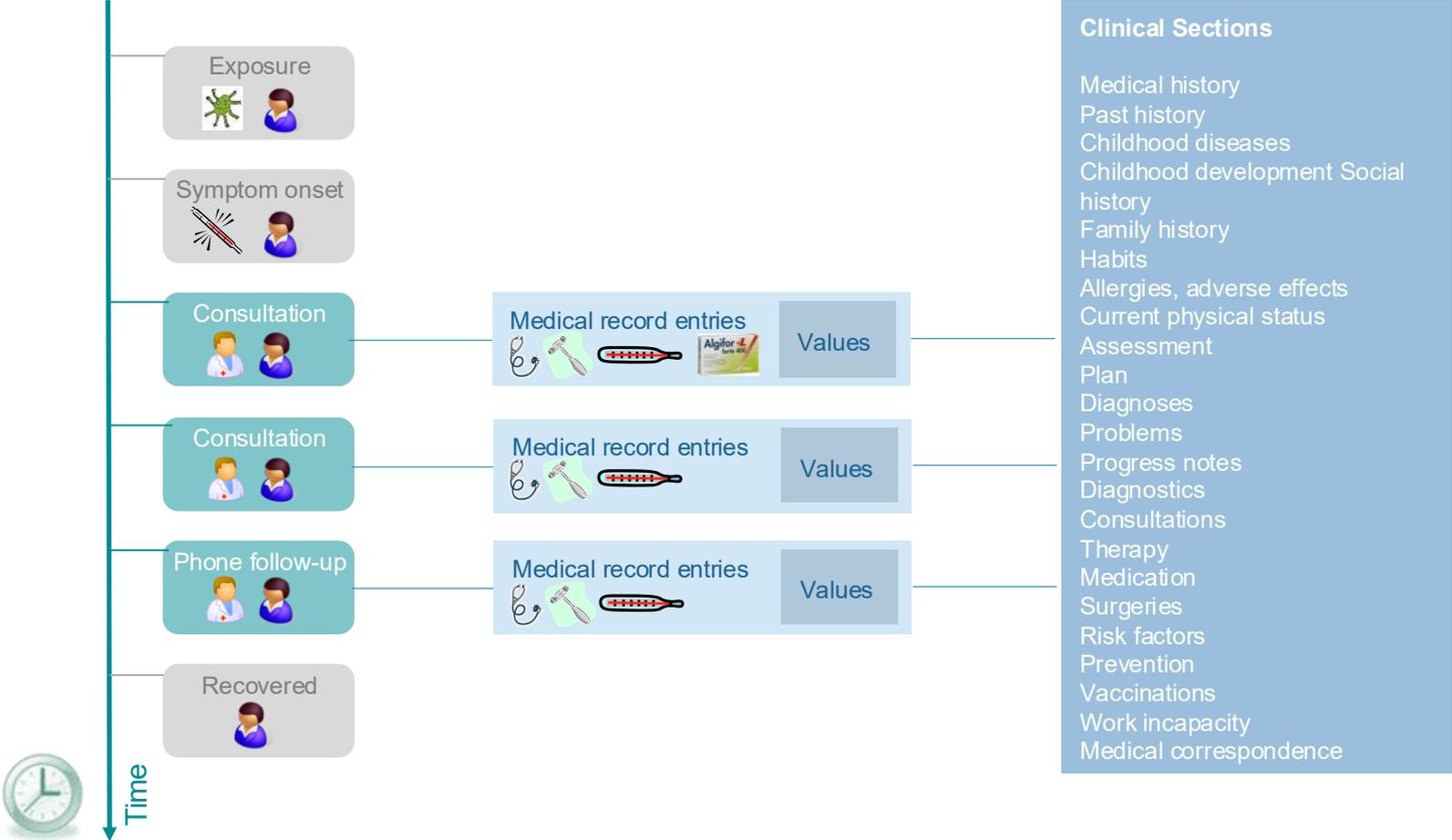
# The electronic health record (EHR) is organised into care encounters



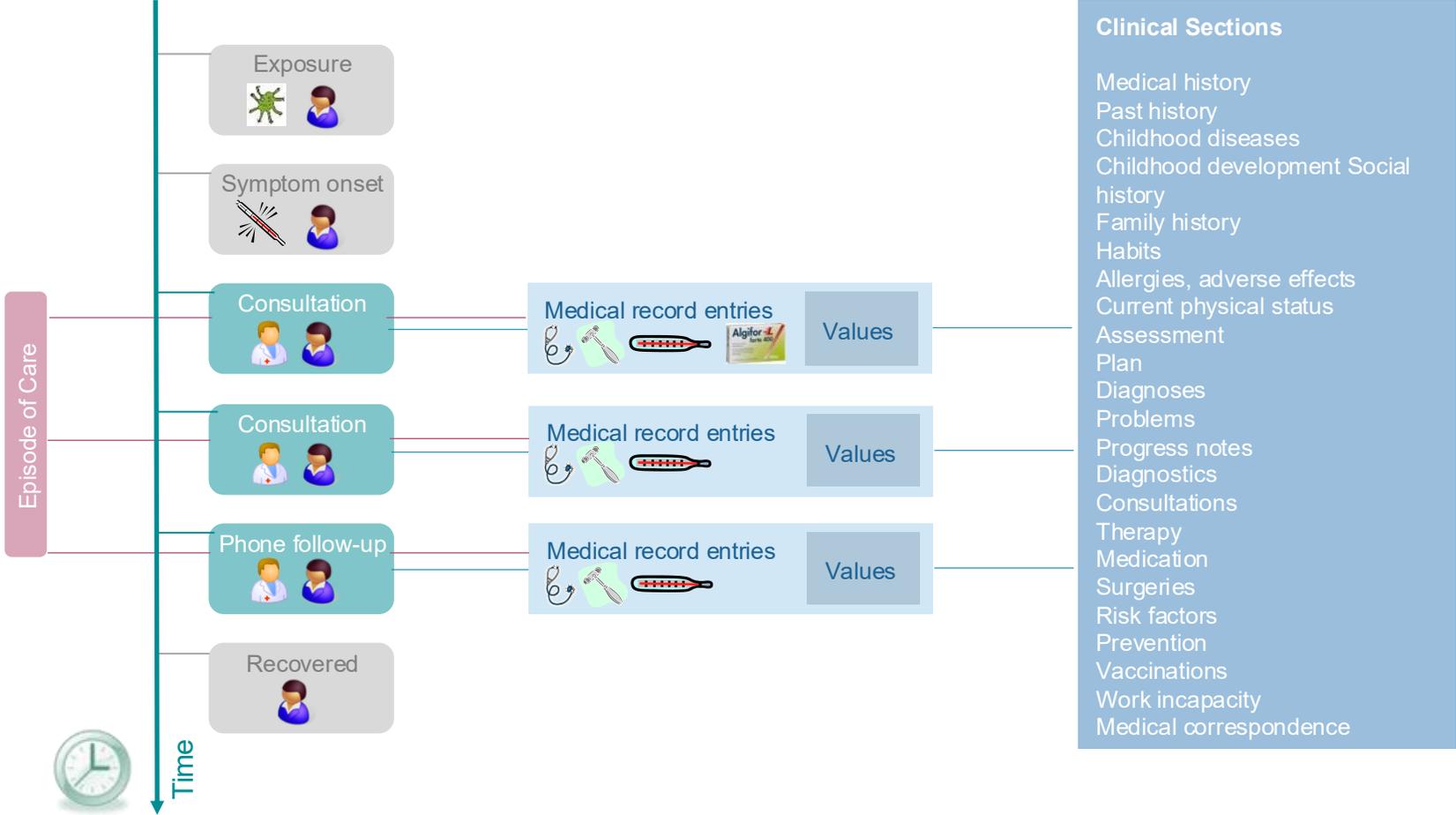
# Each medical record entry is linked to the care encounter



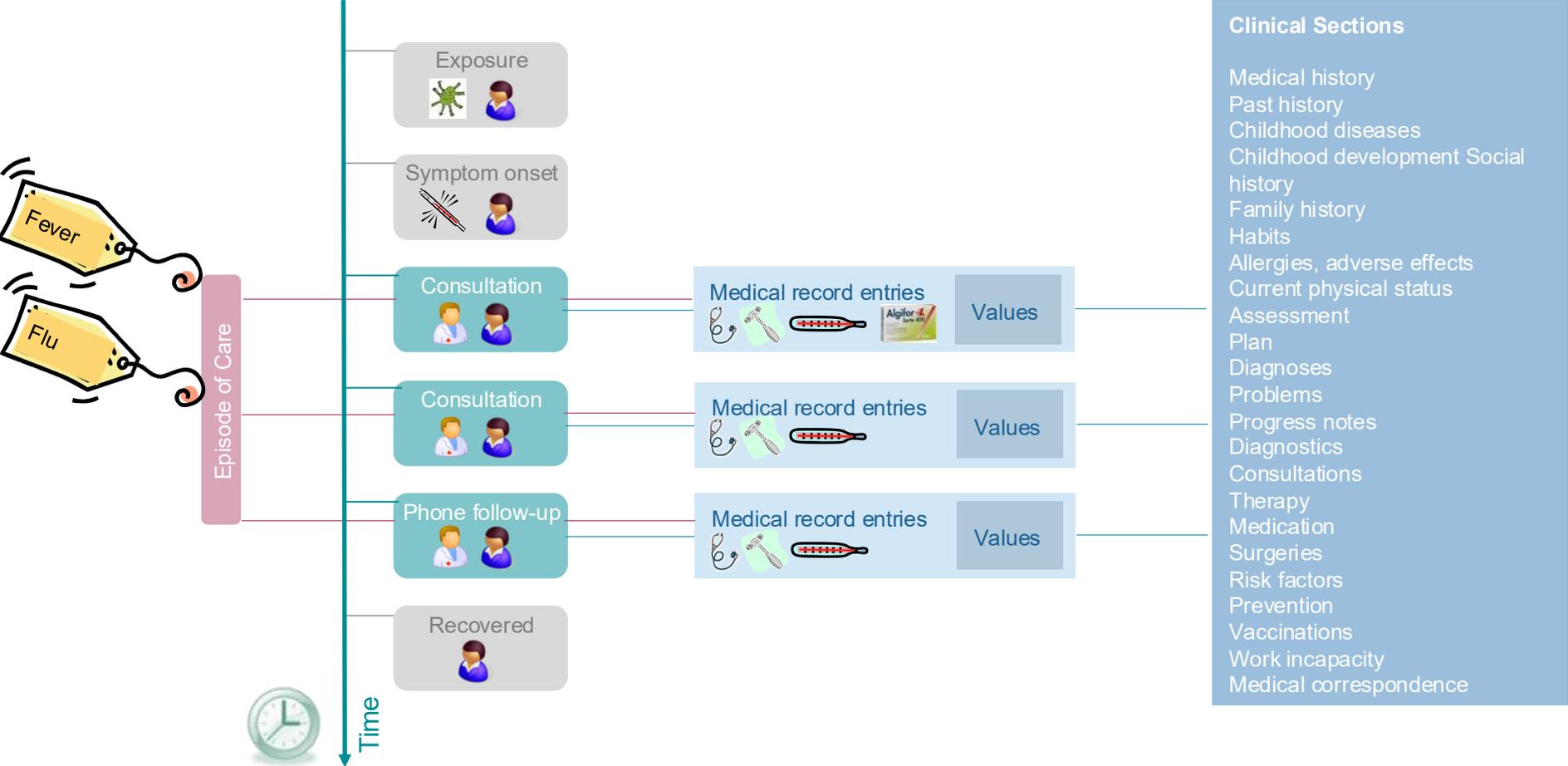
# Each medical record entry is linked to a clinical section



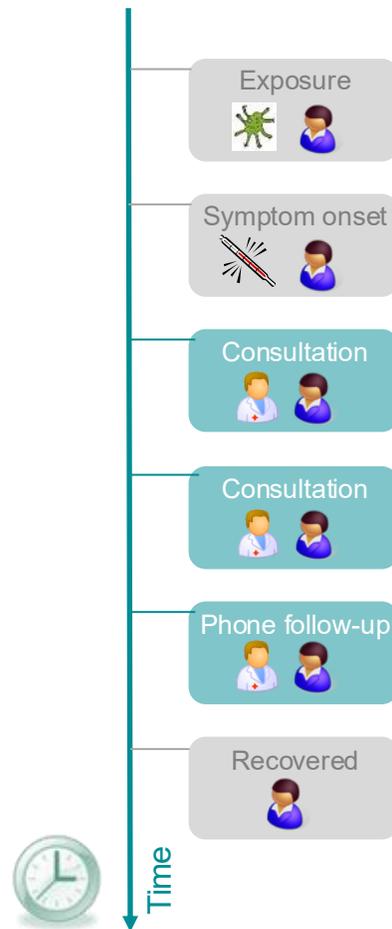
# Each medical record entry is linked to an episode of care



# Each episode takes its name from the most recent problem or diagnosis label



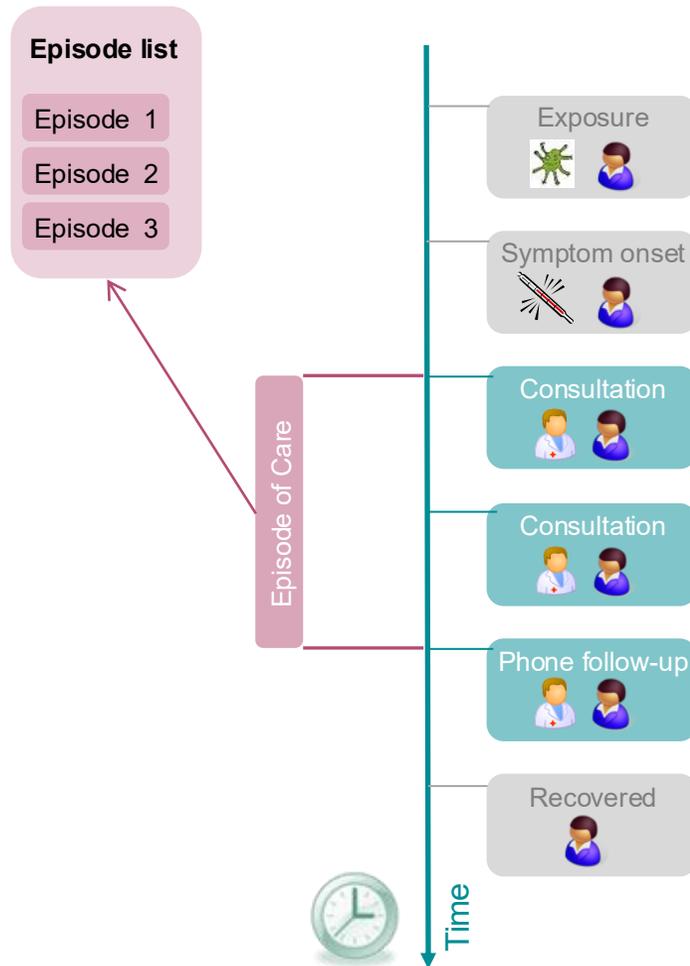
# How are the episode list and the diagnoses and problem list derived?



Episode list? Diagnosis and problem list?



# The episode list is automatically generated

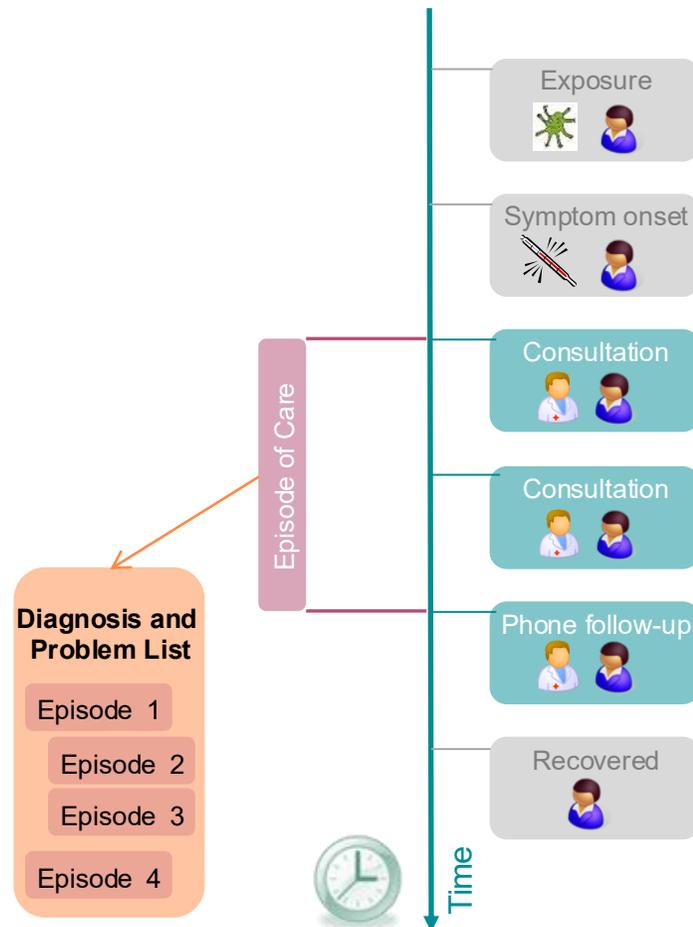


The **episode list** is a linear list of all episodes for the patient, i.e., all problems and diagnoses.

The episode list is generated automatically and displays the active episodes.

Resolved episodes can be shown using filters.

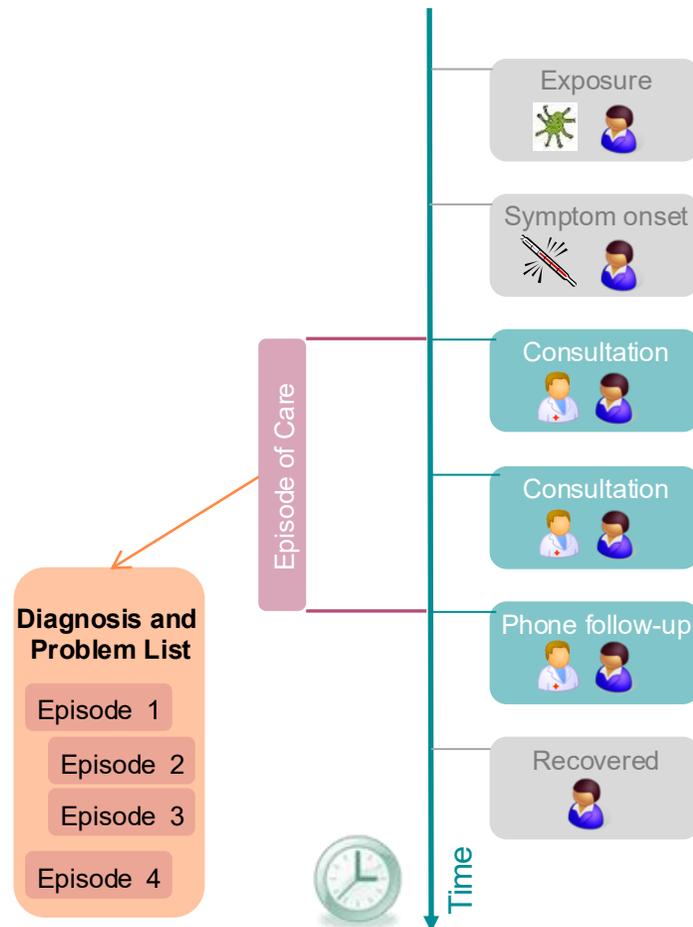
# The diagnosis and problem list is a hierarchical organisation of the episode



The **diagnosis and problem list** is a hierarchical grouping of clinically related episodes (problems or diagnoses) and medical record entries from the past history as well as allergies.

On the diagnosis and problem list, episodes are always displayed regardless of whether they are active or resolved.

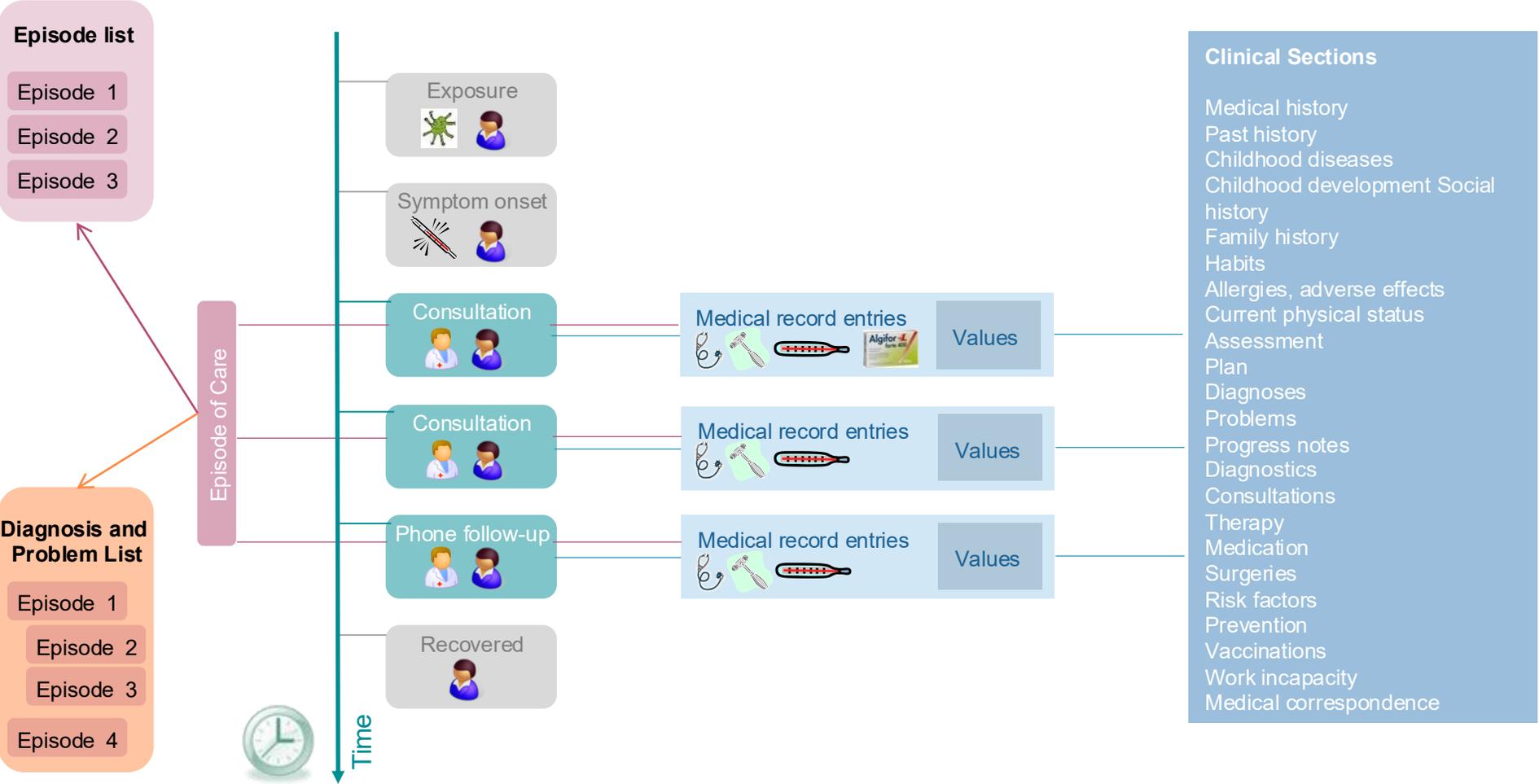
# The diagnosis and problem list is a hierarchical organisation of the episode



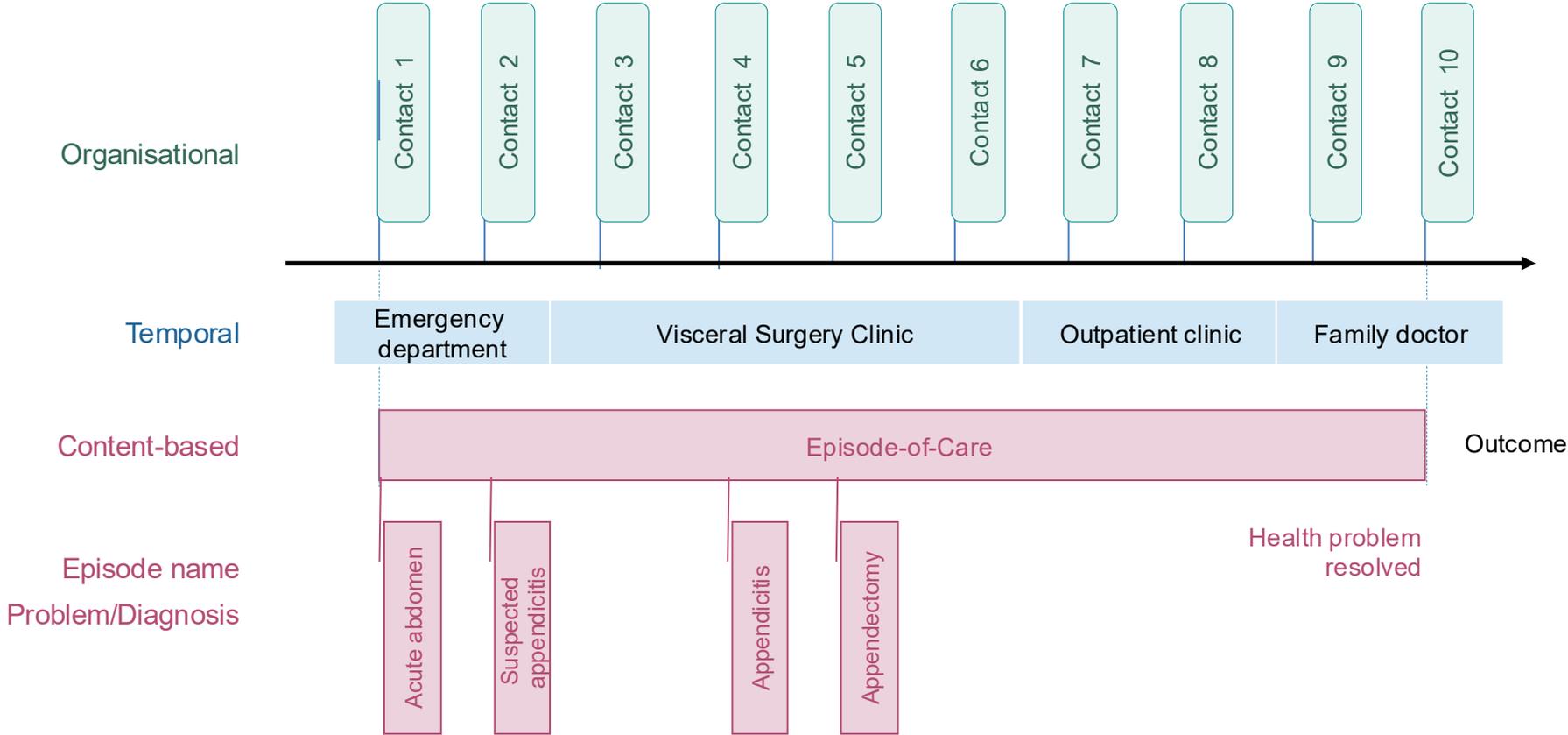
## Example diagnosis and problem list

1. Urinary tract infection (22.03.2024)
2. Coronary heart disease with/without
  - Arterial hypertension (Dx 2009)
  - Heart failure
  - History of Myocardial infarction (2015)
3. Diabetes mellitus type 2 (Dx 2007)
  - Polyneuropathy (Dx 2014)
  - Nephropathy (Dx 2017)
  - HbA1c 23.02.2024: 6.4%
4. Obesity WHO grade II
  - BMI initial 35.9 kg/m<sup>2</sup>
  - Start therapy with liraglutide 03.04.2022
  - BMI 16.05.2024: 31.3. kg/m<sup>2</sup>
5. Husband in need of care
6. Cholecystectomy (1988)
7. Appendectomy (1965)

# Basic Architecture of Solon's Episode-Oriented Electronic Health Record

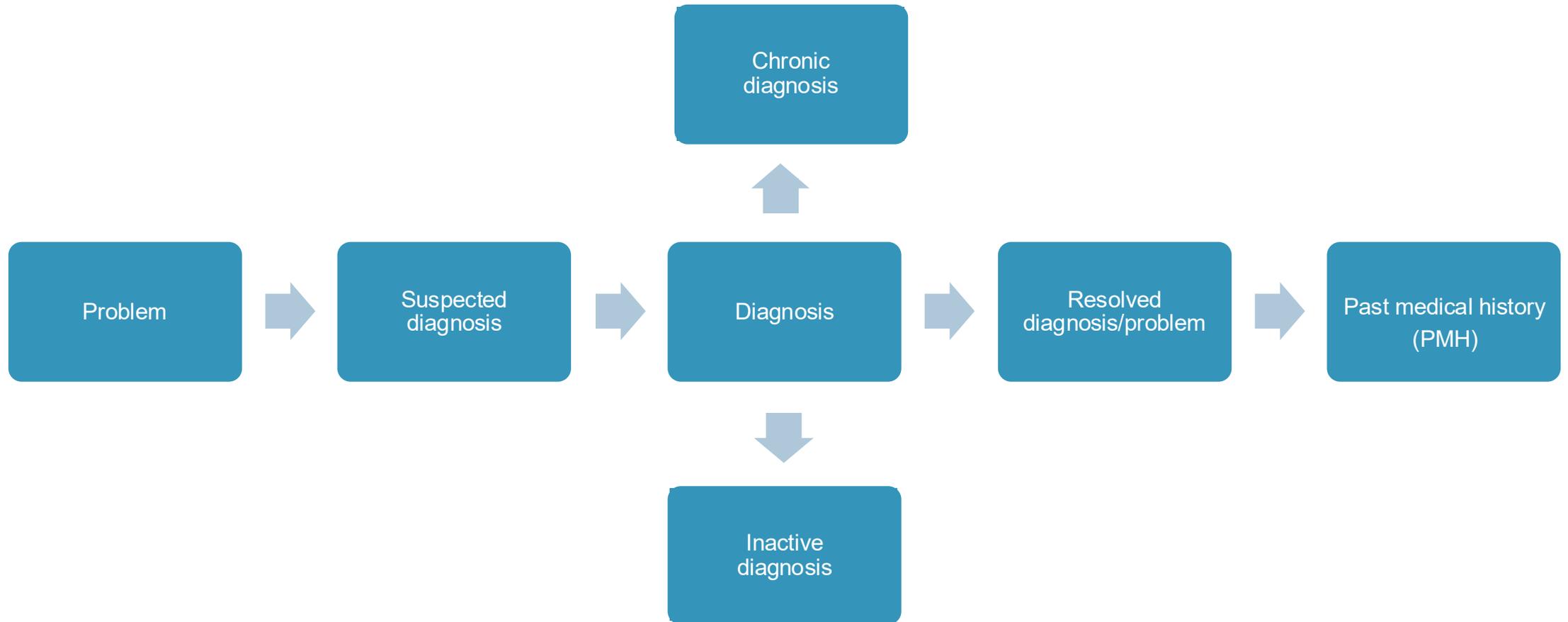


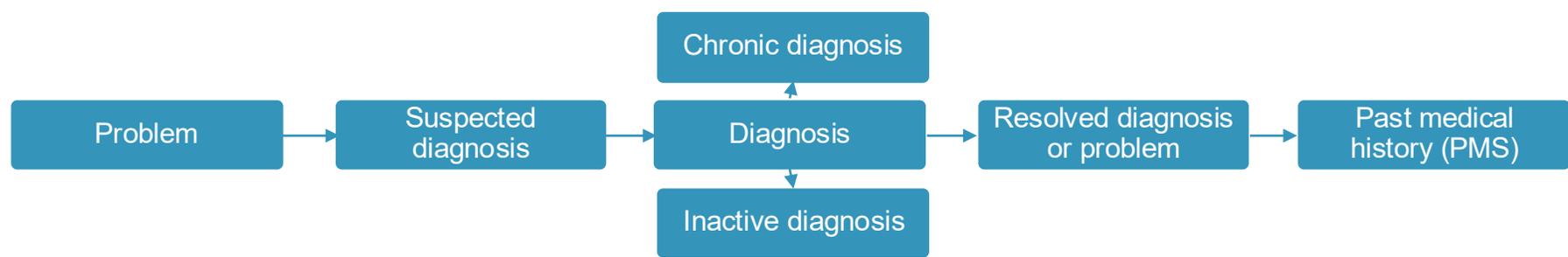
# Example clinical pathway for a patient with an acute abdomen



# The lifecycle of a health problem

## Changes in the same health problem over time

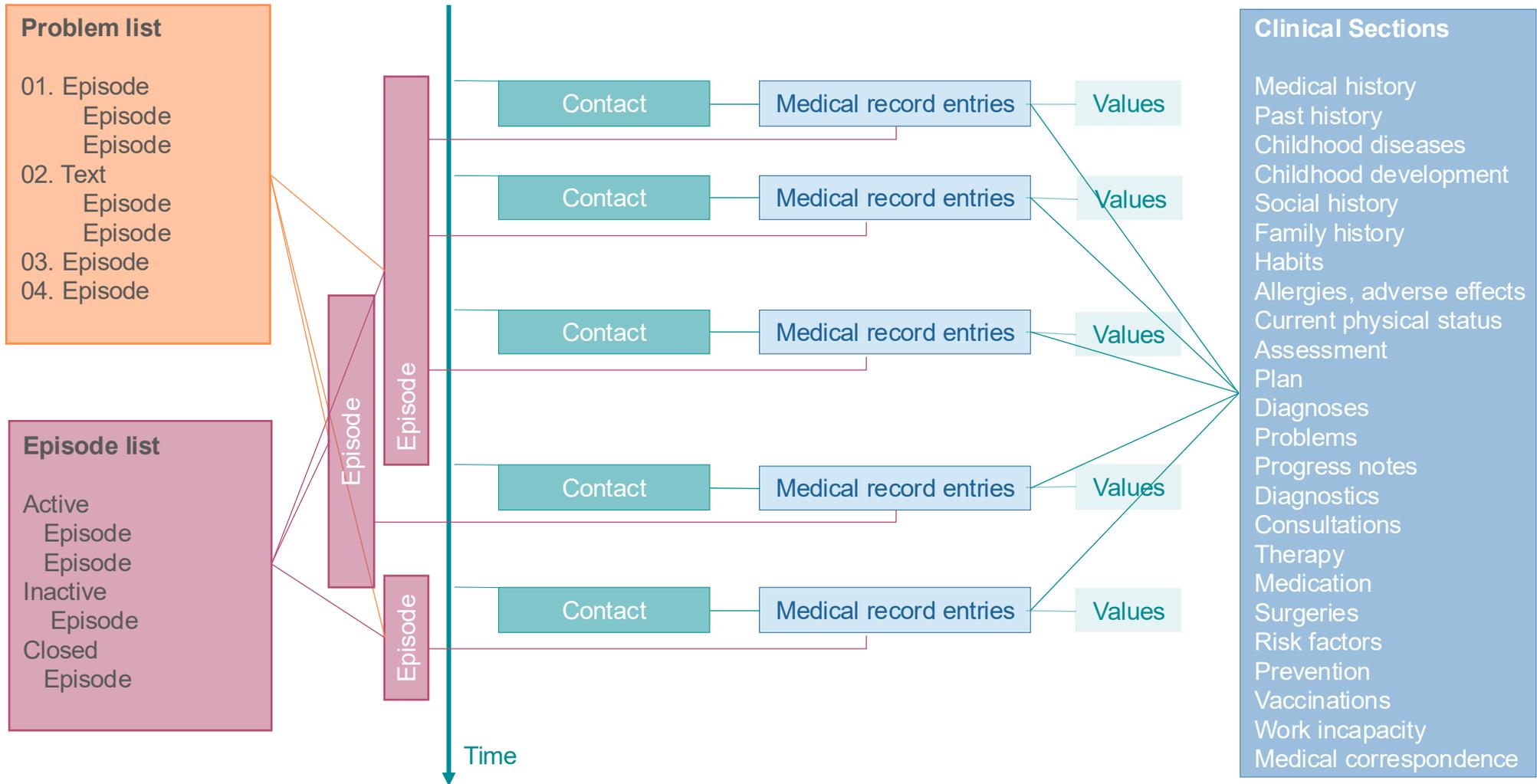




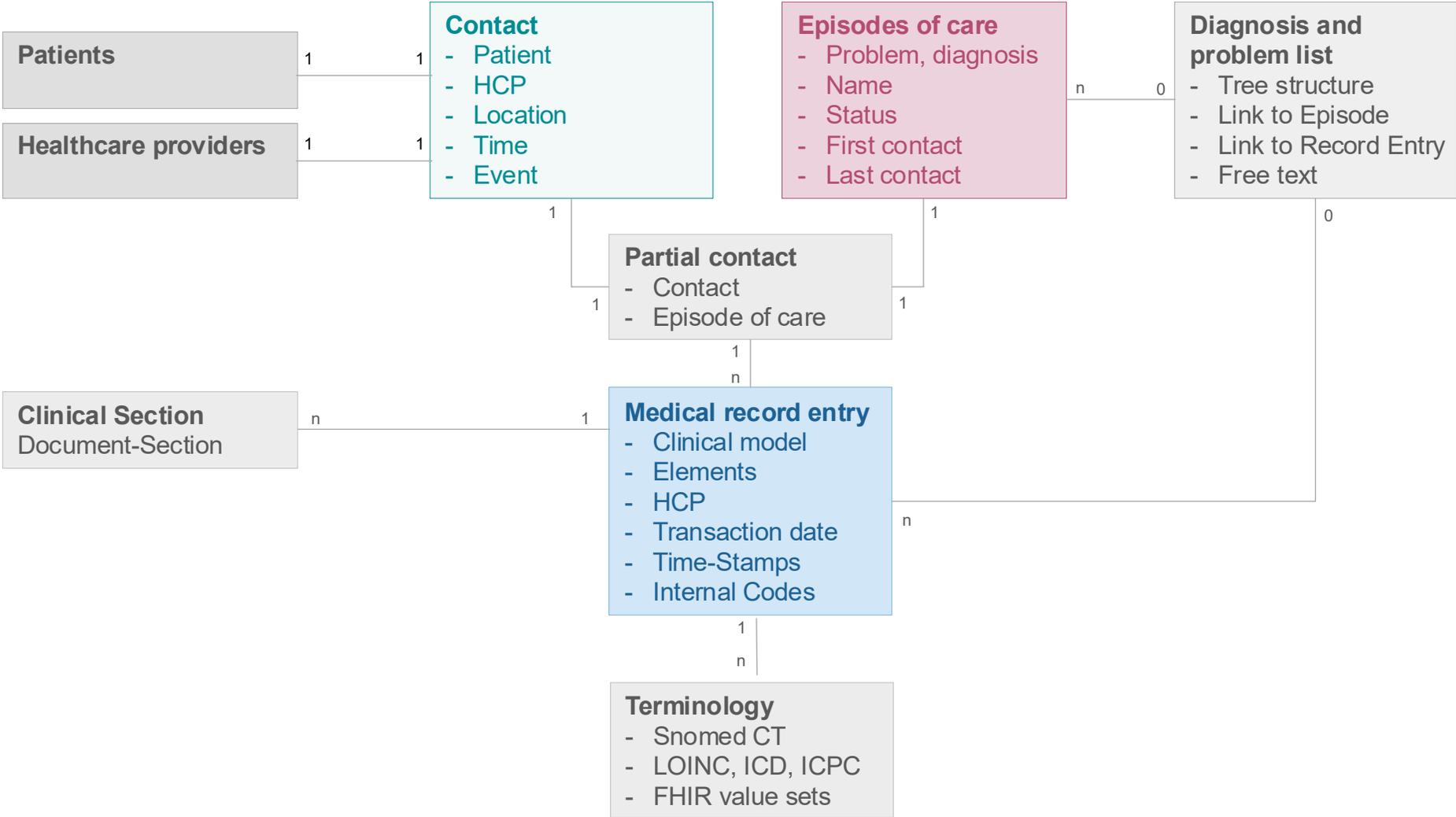
<b>Diagnostic certainty</b> <small>EVALUATION.problem_diagnosis.v1</small>	<b>Suspected</b> Probable Confirmed	Suspected <b>Probable</b> Confirmed	Suspected Probable <b>Confirmed</b>	Suspected Probable <b>Confirmed</b>	Suspected Probable <b>Confirmed</b>
<b>Diagnostic status</b> <small>CLUSTER.problem_qualifier.v2</small>	<b>Preliminary</b> Working Established Refuted Text	Preliminary <b>Working</b> Established Refuted Text	Preliminary Working <b>Established</b> <b>Refuted</b> Text	Preliminary Working <b>Established</b> <b>Refuted</b> Text	Preliminary Working Established Refuted Text
<b>Current/Past?</b> <small>CLUSTER.problem_qualifier.v2</small>	<b>Current</b> Past	<b>Current</b> Past	<b>Current</b> Past	Current <b>Past</b>	Current <b>Past</b>
<b>Active/Inactive?</b> <small>CLUSTER.problem_qualifier.v2</small>	<b>Active</b> Inactive	<b>Active</b> Inactive	<b>Active</b> <b>Inactive</b>	Active Inactive	Active Inactive
<b>Resolution phase</b> <small>CLUSTER.problem_qualifier.v2</small>	Not resolving Resolving Resolved Indeterminate Relapsed Text	Not resolving Resolving Resolved Indeterminate Relapsed Text	Not resolving Resolving Resolved Indeterminate Relapsed Text	Not resolving Resolving <b>Resolved</b> Indeterminate Relapsed Text	Not resolving Resolving <b>Resolved</b> Indeterminate Relapsed Text
<b>Course label</b> <small>CLUSTER.problem_qualifier.v2</small>	<b>Acute</b> Acute-on-chronic Chronic	<b>Acute</b> Acute-on-chronic Chronic	<b>Acute</b> <b>Acute-on-chronic</b> <b>Chronic</b>	Acute Acute-on-chronic Chronic	Acute Acute-on-chronic Chronic
<b>Date/time</b> <small>EVALUATION.problem_diagnosis.v1</small>	- Date/time of onset - Date/time of clinically recognised			Date/time of resolution	

# Logical data model

# Basic Architecture of Episode-Oriented Electronic Health Record



# Episode of care – Database Entity Relationship model

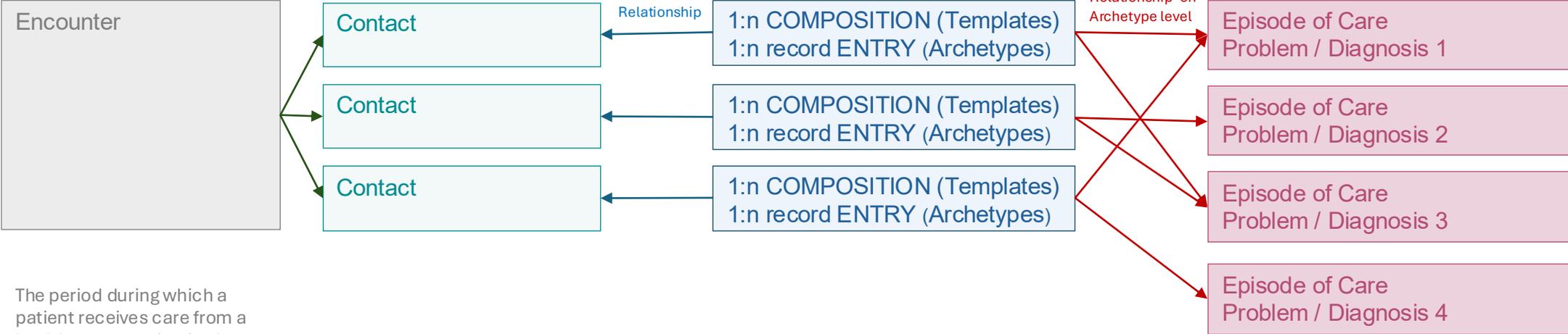


# Episode of Care – Porting to openEHR

**Encounter = Admin encounter    Contact = Care encounter**

**Medical record entry**

**Episode-of-Care = Health problem**



The period during which a patient receives care from a healthcare organisation/ service; it may span and aggregate several contacts. Represents the broader span of care that bundles those contacts into a clinically and administratively coherent unit. Some hospital visits may encompass several Encounters if units report their activity independently e.g. an initial ER Encounter followed by a Cardiology ward admission.

A single, point-in-time interaction between a patient and one (or more) care professionals that is documented as an event. Captures one discrete care encounter at a specific time and place (can be virtual).

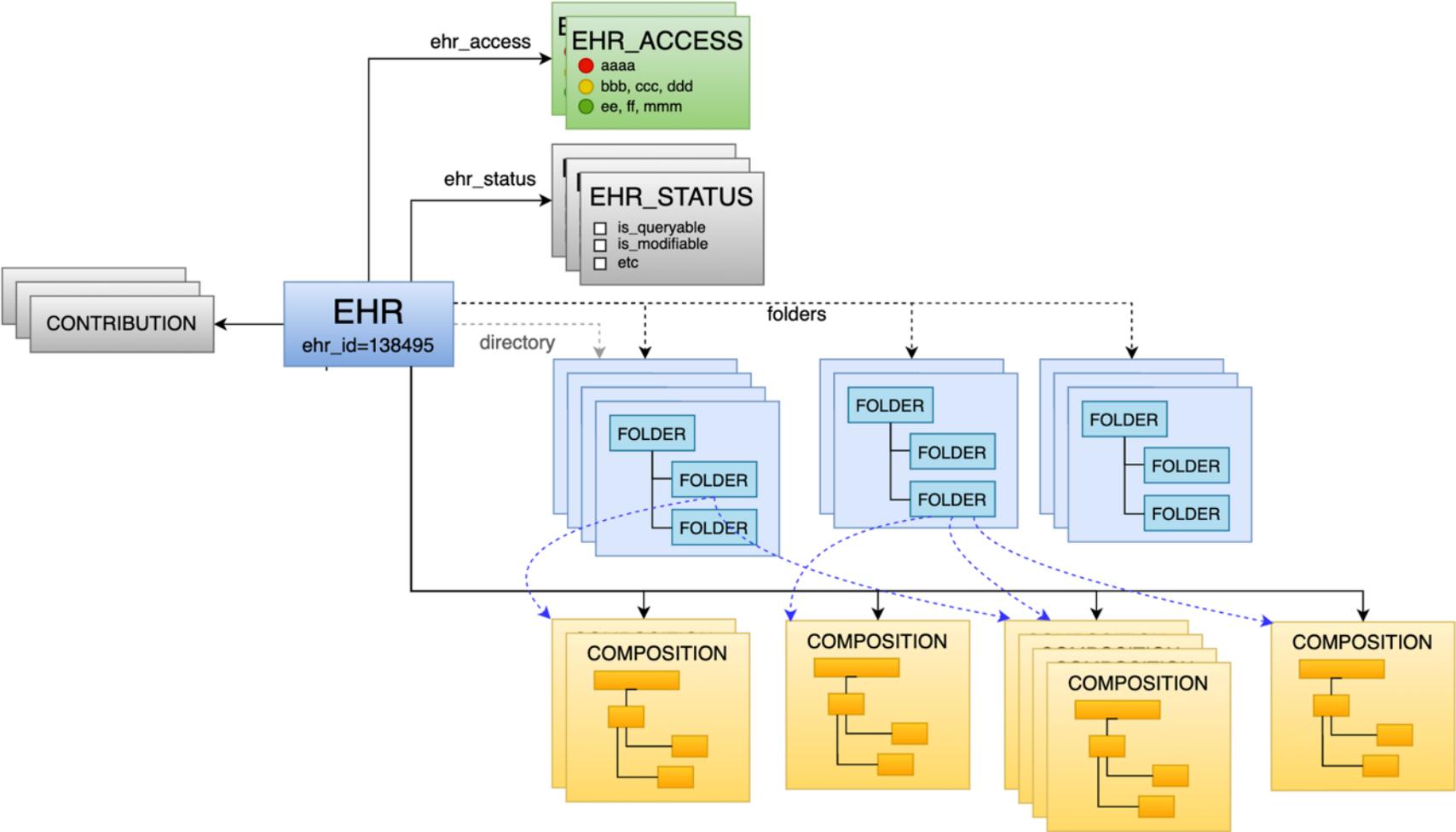
A discrete item of documentation in the medical record (e.g., blood pressure measurement, laboratory result, progress note, diagnosis, order).  
  
Roughly corresponding to the archetype level in openEHR

The overall period during which a patient receives care for a particular condition, regardless of which healthcare organisation was involved.

# Modelling in openEHR

Templates and Relationships

# openEHR Basic structure



# Template – Care encounter / contact

The screenshot shows the Archetype Designer interface. The main window displays the definition of the 'Care Encounter' archetype. The interface includes a menu bar with 'Archetype Designer', 'Repositories', 'Save', 'Export', 'Import', and 'Updates 14'. Below the menu bar, there are tabs for 'main', 'FreshEHR-JPM', and 'JPM - Contact - Care Encounter'. The current view is 'Definition', with other tabs for 'Form', 'Description', and 'Analytics'. The archetype is identified as 'Care Encounter' with the name 'NAME (from: 'Encounter')'. The definition is structured as follows:

- context
  - other\_context
    - Extension
      - XDS Metadata Δ [0..\*] to [0..1]
        - Author specialty
        - Class code
        - Document type
        - Confidentiality code
        - Health care facility type
        - Practice setting code
        - Event code
        - Document\_media
      - Context detail Δ [0..\*] to [0..1]
        - Period of care identifier
        - Departmental period of care identifier
        - Portlet Id
        - Medication order type
        - Tags
        - Document status
        - Attachment
    - content
      - Reason for encounter
        - data
          - Contact type
          - Presenting problem

COMPOSITION

openEHR-EHR-COMPOSITION.encounter.v1

ENTRY\_ARCHETYPES / CLUSTER

openEHR-EHR-CLUSTER.xds\_metadata.v0

openEHR-EHR-CLUSTER.composition\_context\_detail.v1

openEHR-EHR-EVALUATION.reason\_for\_encounter.v1

Within Care Encounter or a separate template

for Admin Encounter:

openEHR-EHR-ADMIN\_ENTRY.admin\_encounter.v1

# Template – Episode of Care

Archetype Designer    Repositories    Save    Export    Import    Updates 14

main    FreshEHR-JPM    JPM - Episode of care

JPM - Episode of care (openEHR-EHR-COMPOSITION.problem\_list.v2)

History

Definition    Form    Description    Analytics

Episode of care

Episode of care NAME (from: 'Problem list') Δ RM Attributes

- context
  - other\_context
    - Extension
      - Episode of care header Δ [0..\*] to [0..1]
- content
  - Problem/Diagnosis Δ [0..1] to [1..1]
    - data
      - Problem/Diagnosis name
      - Variant
      - Clinical description
      - Body site
      - Structured body site
      - Cause
      - Date/time of onset
      - Date/time clinically recognised
      - Severity
      - Specific details
      - Course description
      - Date/time of resolution
- Status
  - Problem/Diagnosis qualifier Δ [0..\*] to [0..1]
    - Diagnostic status
    - Current/Past?
    - Active/Inactive?
    - Level of control

## COMPOSITION

openEHR-EHR-COMPOSITION.problem\_list.v2

## ENTRY\_ARCHETYPES / CLUSTER

openEHR-EHR-EVALUATION.problem\_diagnosis.v1

openEHR-EHR-CLUSTER.problem\_qualifier.v2

openEHR-EHR-CLUSTER.clinical\_evidence.v1

# Template – Episode of Care

The screenshot shows the 'Archetype Designer' interface with the 'JPM - Episode of care' archetype selected. The main panel displays a tree view of the archetype structure:

- Episode of care NAME (from: 'Problem list') Δ RM Attributes
  - context
    - other\_context
      - Extension
        - Episode of care header Δ [0..\*] to [0..1] (highlighted with a blue arrow pointing to the right)
    - content
      - Problem/Diagnosis Δ [0..1] to [1..1]
        - data
          - Problem/Diagnosis name
          - Variant
          - Clinical description
          - Body site
          - Structured body site
          - Cause
          - Date/time of onset
          - Date/time clinically recognised
          - Severity
          - Specific details
          - Course description
          - Date/time of resolution
        - Status
          - Problem/Diagnosis qualifier Δ [0..\*] to [0..1]
            - Diagnostic status
            - Current/Past?
            - Active/Inactive?
            - Level of control

The screenshot shows the 'Archetype Designer' interface with the 'openEHR-EHR-CLUSTER.episode\_of\_care\_header.v0' archetype selected. The main panel displays a tree view of the archetype structure:

- Episode of care header
  - Episode name
  - Clinical status
  - Progression status
  - Process status
  - Classification
  - Comment
  - Extension

Episode name:

Classification:

Clinical status:

Progression status:

Process status:

Most recent label of problem/diagnosis problem, diagnosis

active, inactive, resolved

acut, chronic

referral, admission, pre-operative, post-operative, discharge

# Template – Medical record entry – SOAP progress notes

The screenshot shows the Archetype Designer interface for the 'JPM - SOAP progress note' archetype. The main panel displays a tree view of the archetype structure:

- SOAP progress note NAME (from: 'Encounter')
- context
  - other\_context
    - Extension
- content
  - SOAP headings
    - items
      - Subjective (S)
        - items
          - Progress note
            - data
              - Point in time  $\Delta [0..*]$  to  $[0..1]$  NAME (from: 'Any event')  $\Delta$  Values changed
                - data
                  - Progress Note

- Objective (O)
- items
  - Progress note
- Assessment (A)
- items
  - Progress note
- Plan (P)
- items
  - Progress note

## SOAP Progress Note – according to Weed

**Subjective:** the patient's reported symptoms, concerns, and relevant context

**Objective:** observable findings and measurements (examination, tests, monitoring)

**Assessment:** clinical interpretation and reasoning, including working hypotheses

**Plan:** intended diagnostics, treatments, counselling, follow-up, and contingencies

## COMPOSITION

openEHR-EHR-COMPOSITION.encounter.v1

## ENTRY\_ARCHETYPES / SECTION

openEHR-EHR-SECTION.soap.v0

openEHR-EHR-OBSERVATION.progress\_note.v1

# openEHR mechanisms for expressing relationships between contacts, episodes of care and medical record entries

openEHR specification provides several mechanisms for expressing relationships between contacts, episodes of care and medical record entries

## FOLDER

EHR.directory:  
Hierarchical index of  
references to  
compositions

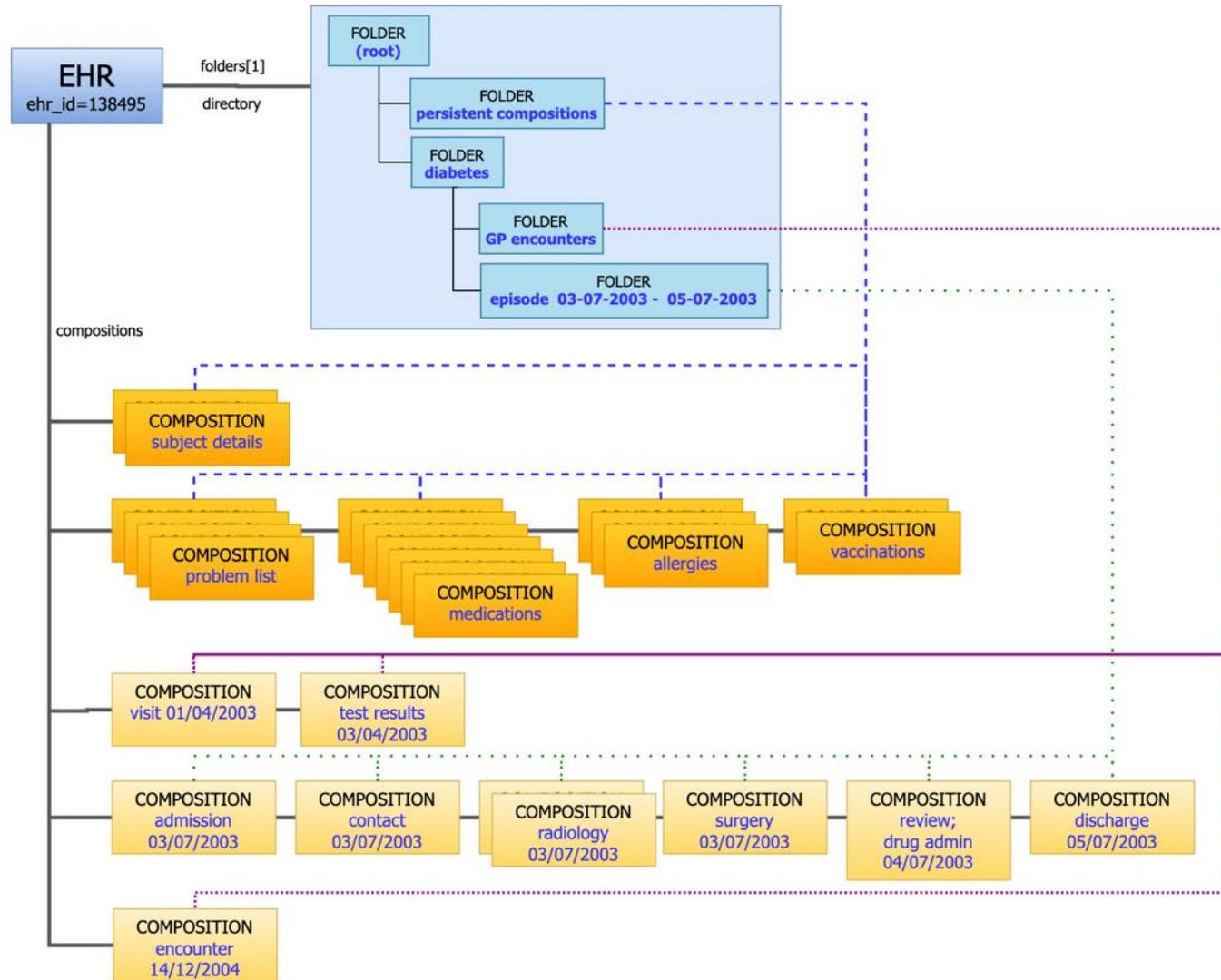
## LINK

Links between  
LOCATABLEs: Typed  
links connecting  
compositions and  
archetyped items at the  
reference model level

## CLUSTER

Link elements within  
CLUSTER archetypes:  
EHR-internal references  
as DV\_EHR\_URI  
ELEMENTs inside a  
CLUSTER

# openEHR FOLDER



# FOLDER

```
k
  "_type": "FOLDER",
  "name": { "_type": "DV_TEXT", "value": "Directory" },
  "archetype_node_id": "openEHR-EHR-FOLDER.generic.v1",
  /* Top-level 'Directory' folder (shared hierarchy) */

  "details": {
    "_type": "ITEM_TREE",
    "items": [
      { "_type": "ELEMENT", "name": { "value": "description" },
        "value": { "_type": "DV_TEXT", "value": "Root folder used by all services; domain metadata resides in child folders." } }
    ]
  },

  "folders": [

    /* ===== Fully detailed child folder ===== */
    {
      "_type": "FOLDER",
      "name": { "_type": "DV_TEXT", "value": "Folder 1" },
      "archetype_node_id": "openEHR-EHR-FOLDER.generic.v1",

      "details": {
        "_type": "ITEM_TREE",
        "items": [
          /* metadata Folder 1 */
          { "_type": "ELEMENT", "name": { "value": "purpose" },
            "value": { "_type": "DV_TEXT", "value": "Shared index for episode/contact/section-based navigation" } },

          { "_type": "ELEMENT", "name": { "value": "governance_owner" },
            "value": { "_type": "DV_TEXT", "value": "Clinical Records Governance Team" } },

          { "_type": "ELEMENT", "name": { "value": "classification_scheme" },
            "value": { "_type": "DV_CODED_TEXT", "value": "Episode/Contact/Section",
              "defining_code": { "_type": "CODE_PHRASE",
                "terminology_id": { "value": "local" }, "code_string": "sch000000000" } } },

          { "_type": "ELEMENT", "name": { "value": "status" },
            "value": { "_type": "DV_CODED_TEXT", "value": "active",
              "defining_code": { "_type": "CODE_PHRASE",
                "terminology_id": { "value": "local" }, "code_string": "active" } } },

          { "_type": "ELEMENT", "name": { "value": "description" },
            "value": { "_type": "DV_TEXT", "value": "Domain-specific folder; references and optional deep links below." } },

          /* Optional deep link to a specific ENTRY inside a COMPOSITION */
          { "_type": "ELEMENT", "name": { "value": "entry_link_example" },
            "value": { "_type": "DV_EHR_URI",
              "value": "ehr://{ehr_id}/versioned_composition/11111111-2222-3333-4444-555555555555/entry/path/to/ENTRY" } }
        ]
      },

      "items": [ /* References to VERSIONED_COMPOSITIONs (no copies) */
        { "id": { "_type": "HIER_OBJECT_ID", "value": "11111111-2222-3333-4444-555555555555" },
          "namespace": "ehr.example.org", "type": "VERSIONED_COMPOSITION" }, /* e.g., encounter document */
        { "id": { "_type": "HIER_OBJECT_ID", "value": "22222222-3333-4444-5555-666666666666" },
          "namespace": "ehr.example.org", "type": "VERSIONED_COMPOSITION" } /* e.g., vital signs */
      ],

      "folders": [ /* Optional subfolders for further classification */
        /* ... add subfolders here if needed ... */
      ]
    },

    /* ===== Minimal stub of a second child folder ===== */
    {
      "_type": "FOLDER",
      "name": { "_type": "DV_TEXT", "value": "Folder 2" },
      "archetype_node_id": "openEHR-EHR-FOLDER.generic.v1",
      /* Stub: add 'details', 'items', and 'folders' analogous to 'Folder 1' as required */
    }
  ],

  "items": [] /* The top-level Directory usually does not reference COMPOSITIONs directly */
}
```

# FOLDER

```
k
  "_type": "FOLDER",
  "name": { "_type": "DV_TEXT", "value": "Directory" },
  "archetype_node_id": "openEHR-EHR-FOLDER.generic.v1",
  "details": {
    "_type": "ITEM_TREE",
    "items": [
      {
        "_type": "ELEMENT", "name": { "value": "description" },
        "value": { "_type": "DV_TEXT", "value": "Root folder used by all services; domain metadata resides in child folders." } }
    ],
  },
  "folders": [
    /* ===== Fully detailed child folder ===== */
    {
      "_type": "FOLDER",
      "name": { "_type": "DV_TEXT", "value": "Folder 1" },
      "archetype_node_id": "openEHR-EHR-FOLDER.generic.v1",
      "details": {
        "_type": "ITEM_TREE",
        "items": [
          /* metadata Folder 1 */
          { "_type": "ELEMENT", "name": { "value": "purpose" },
            "value": { "_type": "DV_TEXT", "value": "Shared index for episode/contact/section-based navigation" } },
          { "_type": "ELEMENT", "name": { "value": "governance_owner" },
            "value": { "_type": "DV_TEXT", "value": "Clinical Records Governance Team" } },
          { "_type": "ELEMENT", "name": { "value": "classification_scheme" },
            "value": { "_type": "DV_CODED_TEXT", "value": "Episode/Contact/Section",
              "defining_code": { "_type": "CODE_PHRASE",
                "terminology_id": { "value": "local", "code_string": "schmme:RSC" } } },
          { "_type": "ELEMENT", "name": { "value": "status" },
            "value": { "_type": "DV_CODED_TEXT", "value": "active",
              "defining_code": { "_type": "CODE_PHRASE",
                "terminology_id": { "value": "local", "code_string": "active" } } },
          { "_type": "ELEMENT", "name": { "value": "description" },
            "value": { "_type": "DV_TEXT", "value": "Domain-specific folder; references and optional deep links below." } },
          /* Optional deep link to a specific ENTRY inside a COMPOSITION */
          { "_type": "ELEMENT", "name": { "value": "entry_link_example" },
            "value": { "_type": "DV_EHR_URI",
              "value": "ehr://[ehr_id]/versioned_composition/1111111-2222-3333-4444-555555555555/entry/path/to/ENTRY" } }
        ],
      },
      "items": [ /* References to VERSIONED_COMPOSITIONS (no copies) */
        { "id": { "_type": "HIER_OBJECT_ID", "value": "1111111-2222-3333-4444-555555555555" },
          "namespace": "ehr.example.org", "type": "VERSIONED_COMPOSITION" }, /* e.g., encounter document */
        { "id": { "_type": "HIER_OBJECT_ID", "value": "2222222-3333-4444-5555-666666666666" },
          "namespace": "ehr.example.org", "type": "VERSIONED_COMPOSITION" } /* e.g., vital signs */
      ],
      "folders": [ /* Optional subfolders for further classification */
        /* ... add subfolders here if needed ... */
      ],
    },
    /* ===== Minimal stub of a second child folder ===== */
    {
      "_type": "FOLDER",
      "name": { "_type": "DV_TEXT", "value": "Folder 2" },
      "archetype_node_id": "openEHR-EHR-FOLDER.generic.v1",
      /* Stub: add 'details', 'items', and 'folders' analogous to 'Folder 1' as required */
    },
  ],
  "items": [ /* The top-level Directory usually does not reference COMPOSITIONS directly */
  ]
}
```

/\* Top-level 'Directory' folder (shared hierarchy) \*/

/\* Root description elements \*/

/\* Stub: add 'details', 'items', and 'folders' analogous to 'Folder 1' as required \*/

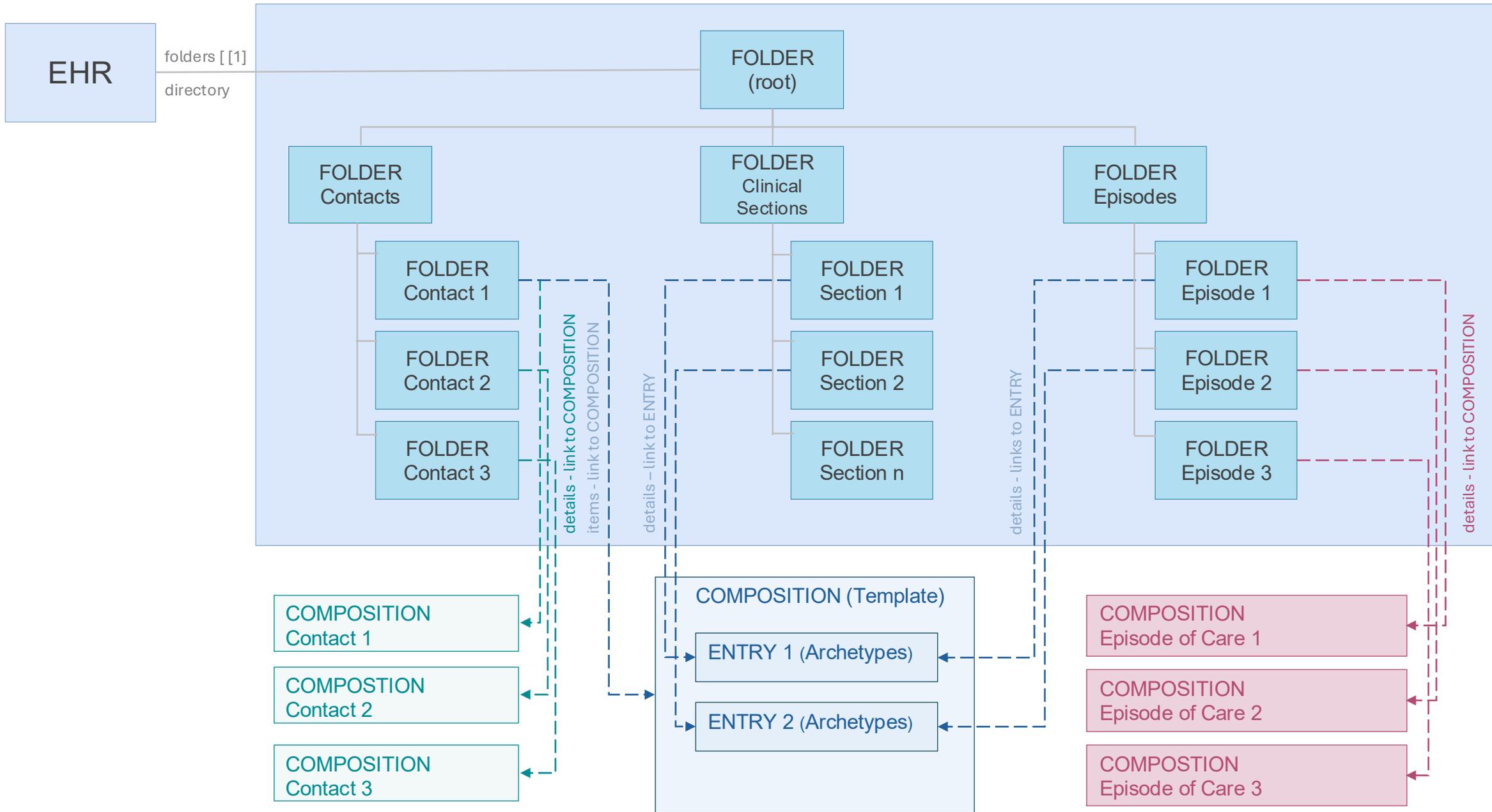
# FOLDER

```
k
  "_type": "FOLDER",
  "name": { "_type": "DV_TEXT", "value": "Directory" },
  "archetype_node_id": "openEHR-EHR-FOLDER.generic.v1",
  "details": {
    "_type": "ITEM_TREE",
    "items": [
      { "_type": "ELEMENT", "name": { "value": "description" },
        "value": { "_type": "DV_TEXT", "value": "Root folder used by all services" }
    ]
  },
  "folders": [
    /* ===== Fully detailed child folder ===== */
    {
      "_type": "FOLDER",
      "name": { "_type": "DV_TEXT", "value": "Folder 1" },
      "archetype_node_id": "openEHR-EHR-FOLDER.generic.v1",
      "details": {
        "_type": "ITEM_TREE",
        "items": [
          /* metadata Folder 1 */
          { "_type": "ELEMENT", "name": { "value": "purpose" },
            "value": { "_type": "DV_TEXT", "value": "Shared index for episode/contact/section-based navigation" } },
          { "_type": "ELEMENT", "name": { "value": "governance_owner" },
            "value": { "_type": "DV_TEXT", "value": "Clinical Records Governance Team" } },
          { "_type": "ELEMENT", "name": { "value": "classification_scheme" },
            "value": { "_type": "DV_CODED_TEXT", "value": "Episode/Contact/Section",
              "defining_code": { "_type": "CODE_PHRASE",
                "terminology_id": { "value": "local", "code_string": "scheme-ecs" } } } },
          { "_type": "ELEMENT", "name": { "value": "status" },
            "value": { "_type": "DV_CODED_TEXT", "value": "active",
              "defining_code": { "_type": "CODE_PHRASE",
                "terminology_id": { "value": "local", "code_string": "active" } } } },
          { "_type": "ELEMENT", "name": { "value": "description" },
            "value": { "_type": "DV_TEXT", "value": "Domain-specific folder; references and optional deep links below." } },
          /* Optional deep link to a specific ENTRY inside a COMPOSITION */
          { "_type": "ELEMENT", "name": { "value": "entry_link_example" },
            "value": { "_type": "DV_EHR_URI",
              "value": "ehr://{ehr_id}/versioned_composition/11111111-2222-3333-4444-555555555555/entry/path/to/ENTRY" } }
        ]
      },
      "items": [ /* References to VERSIONED_COMPOSITIONs (no copies) */
        { "id": { "_type": "HIER_OBJECT_ID", "value": "11111111-2222-3333-4444-555555555555",
          "namespace": "ehr.example.org", "type": "VERSIONED_COMPOSITION" }, /* e.g., encounter document */
        { "id": { "_type": "HIER_OBJECT_ID", "value": "22222222-3333-4444-5555-666666666666",
          "namespace": "ehr.example.org", "type": "VERSIONED_COMPOSITION" } /* e.g., vital signs */
      ],
      "folders": [ /* Optional subfolders for further classification */
        /* ... add subfolders here if needed ... */
      ],
      /* ===== Minimal stub of a second child folder ===== */
      {
        "_type": "FOLDER",
        "name": { "_type": "DV_TEXT", "value": "Folder 2" },
        "archetype_node_id": "openEHR-EHR-FOLDER.generic.v1",
        /* Stub: add 'details', 'items', and 'folders' analogous to 'Folder 1' as
      },
    ],
  },
  "items": [ /* The top-level Directory usually does not reference COMPOSITIONs directly */

```

```
/* ===== Fully detailed child folder ===== */
{
  "_type": "FOLDER",
  "name": { "_type": "DV_TEXT", "value": "Folder 1" },
  "archetype_node_id": "openEHR-EHR-FOLDER.generic.v1",
  "details": {
    "_type": "ITEM_TREE",
    "items": [
      /* metadata Folder 1 */
      { "_type": "ELEMENT", "name": { "value": "purpose" },
        "value": { "_type": "DV_TEXT", "value": "Shared index for episode/contact/section-based navigation" } },
      { "_type": "ELEMENT", "name": { "value": "governance_owner" },
        "value": { "_type": "DV_TEXT", "value": "Clinical Records Governance Team" } },
      { "_type": "ELEMENT", "name": { "value": "classification_scheme" },
        "value": { "_type": "DV_CODED_TEXT", "value": "Episode/Contact/Section",
          "defining_code": { "_type": "CODE_PHRASE",
            "terminology_id": { "value": "local", "code_string": "scheme-ecs" } } } },
      { "_type": "ELEMENT", "name": { "value": "status" },
        "value": { "_type": "DV_CODED_TEXT", "value": "active",
          "defining_code": { "_type": "CODE_PHRASE",
            "terminology_id": { "value": "local", "code_string": "active" } } } },
      { "_type": "ELEMENT", "name": { "value": "description" },
        "value": { "_type": "DV_TEXT", "value": "Domain-specific folder; references and optional deep links below." } },
      /* Optional deep link to a specific ENTRY inside a COMPOSITION */
      { "_type": "ELEMENT", "name": { "value": "entry_link_example" },
        "value": { "_type": "DV_EHR_URI",
          "value": "ehr://{ehr_id}/versioned_composition/11111111-2222-3333-4444-555555555555/entry/path/to/ENTRY" } }
    ]
  },
  "items": [ /* References to VERSIONED_COMPOSITIONs (no copies) */
    { "id": { "_type": "HIER_OBJECT_ID", "value": "11111111-2222-3333-4444-555555555555",
      "namespace": "ehr.example.org", "type": "VERSIONED_COMPOSITION" }, /* e.g., encounter document */
    { "id": { "_type": "HIER_OBJECT_ID", "value": "22222222-3333-4444-5555-666666666666",
      "namespace": "ehr.example.org", "type": "VERSIONED_COMPOSITION" } /* e.g., vital signs */
  ],
  "folders": [ /* Optional subfolders for further classification */
    /* ... add subfolders here if needed ... */
  ],
  "items": [ /* The top-level Directory usually does not reference COMPOSITIONs directly */

```



# LINKS

Minimal full COMPOSITION skeleton (RAW) with links

```
{
  "_type": "COMPOSITION",
  "archetype_node_id": "openEHR-EHR-COMPOSITION.encounter.v1",
  "name": { "_type": "DV_TEXT", "value": "Progress note" },
  "language": { "_type": "CODE_PHRASE", "terminology_id": { "value": "ISO_639-1" }, "code_string": "en" },
  "territory": { "_type": "CODE_PHRASE", "terminology_id": { "value": "ISO_3166-1" }, "code_string": "US" },
  "category": {
    "_type": "DV_CODED_TEXT",
    "value": "event",
    "defining_code": { "_type": "CODE_PHRASE", "terminology_id": { "value": "openehr" }, "code_string": "433" }
  },
  "composer": { "_type": "PARTY_IDENTIFIED", "name": "Dr. Example" },
  "context": { "_type": "EVENT_CONTEXT", "start_time": { "_type": "DV_DATE_TIME", "value": "2025-09-01T10:30:00Z" } },

  "links": [
    {
      "_type": "LINK",
      "meaning": { "_type": "DV_TEXT", "value": "primary association to episode" },
      "type": { "_type": "DV_TEXT", "value": "episode_of_care" },
      "target": {
        "_type": "DV_EHR_URI",
        "value": "ehr://{ehr_uuid}/composition/{episode_object_uid}"
      }
    }
  ],

  "content": [
    /* your ENTRY instances here */
  ]
}
```

Link:

- Meaning (ISO-derived value set)
- Type: no normative value-set
- Target: DV\_EHR\_URI

# LINKS

## 1. Link to Container/HEAD of the COMPOSITION

```
"links": [
  {
    "_type": "LINK",
    "meaning": { "_type": "DV_TEXT", "value": "primary association to episode" },
    "type": { "_type": "DV_TEXT", "value": "episode_of_care" },
    "target": {
      "_type": "DV_EHR_URI",
      "value": "ehr://{ehr_uuid}/composition/{episode_object_uid}"
    }
  }
]
```

Link to COMPOSITION

## 2. Link to as Specific version of the COMPOSITION:

```
"links": [
  {
    "_type": "LINK",
    "meaning": { "_type": "DV_TEXT", "value": "primary association to episode" },
    "type": { "_type": "DV_TEXT", "value": "episode_of_care" },
    "target": {
      "_type": "DV_EHR_URI",
      "value": "ehr://{ehr_uuid}/composition/{episode_object_uid}::{system_id}::{version_number}"
    }
  }
]
```

Link to specific version of  
COMPOSITION

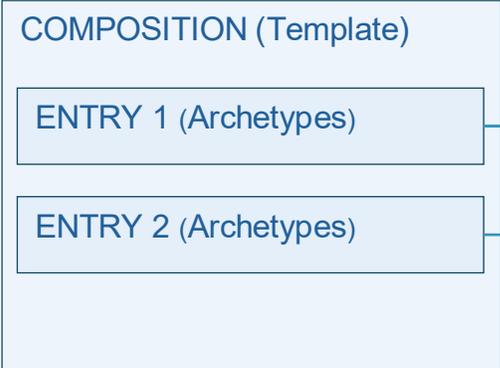
## 3. Link directly to an ENTRY inside that episode COMPOSITION (use an openEHR path):

```
"links": [
  {
    "_type": "LINK",
    "meaning": { "_type": "DV_TEXT", "value": "supports episode diagnosis" },
    "type": { "_type": "DV_TEXT", "value": "diagnosis" },
    "target": {
      "_type": "DV_EHR_URI",
      "value": "ehr://{ehr_uuid}/composition/{episode_object_uid}/content[openEHR-EHR-EVALUATION.problem_diagnosis.v1]"
    }
  }
]
```

Link to an ENTRY inside of  
a COMPOSITION

# LINKS – Bidirectional

## Medical record entry

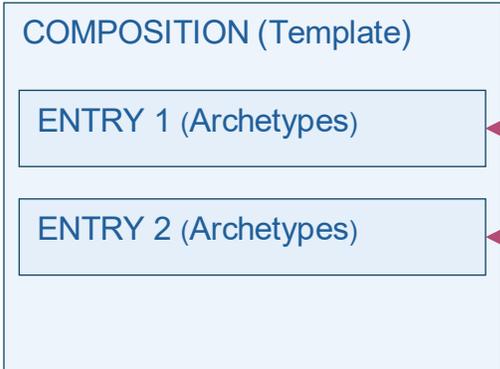
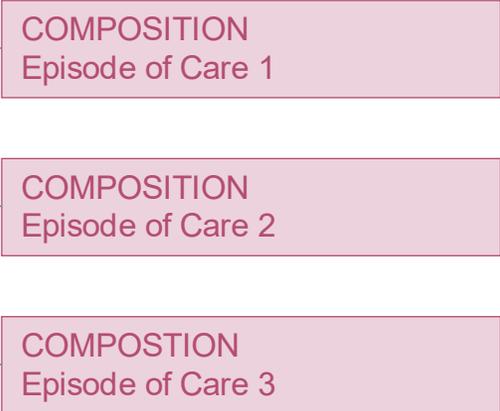


meaning = is related to the same episode (LINK-DO)  
 type = episode-of-care-primary  
 target = episode of care COMPOSITION

meaning = is related to the same episode (LINK-DO)  
 type = episode-of-care-subordinate  
 target = episode of care COMPOSITION

meaning = is related to the same episode (LINK-DO)  
 type = episode-of-care-primary  
 target = episode of care COMPOSITION

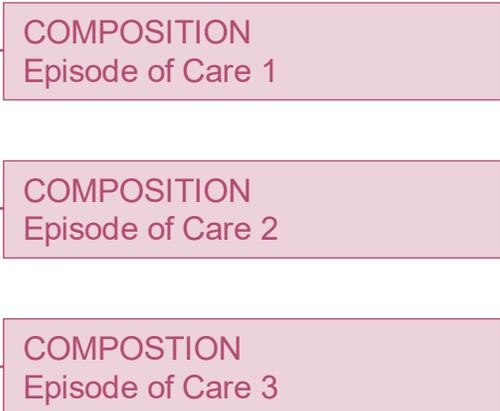
## Episode-of-Care = Health problem



meaning = is related to the same episode (LINK-DO)  
 type = episode-of-care-primary  
 target = ENTRY path of COMPOSITION

meaning = is related to the same episode (LINK-DO)  
 type = episode-of-care-subordinate  
 target = ENTRY path of COMPOSITION

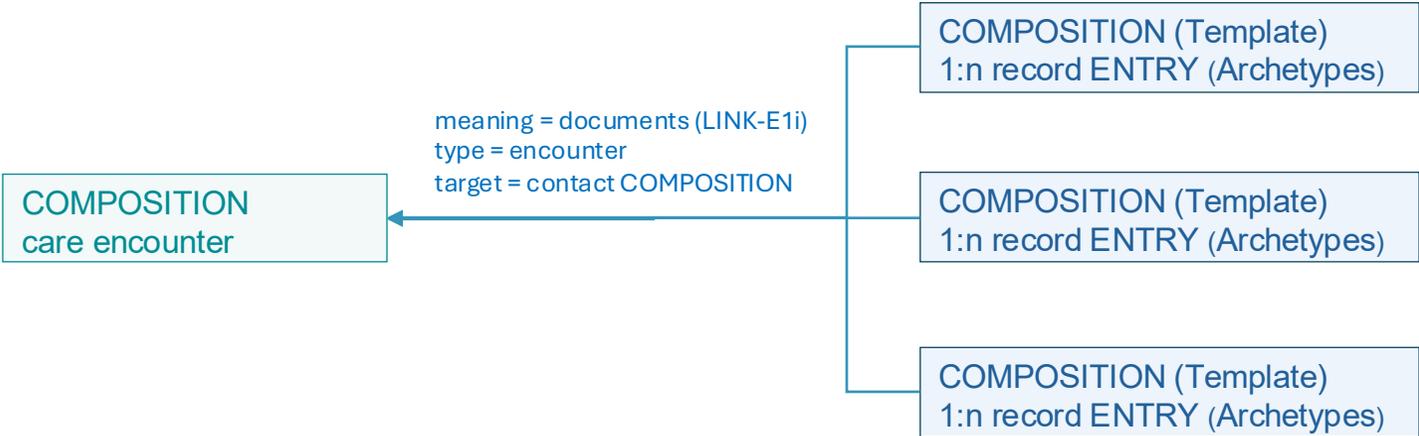
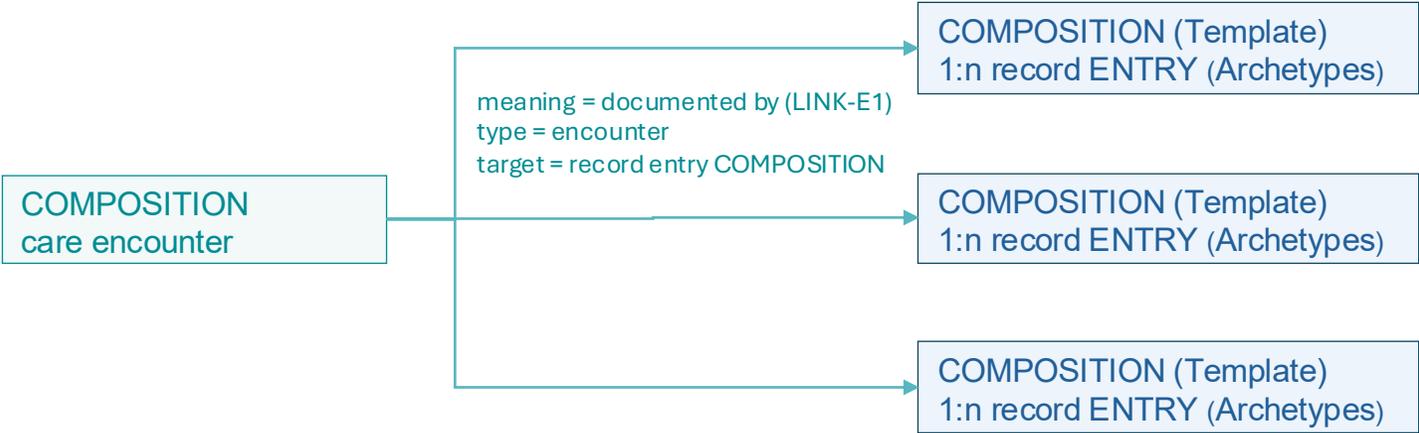
meaning = is related to the same episode (LINK-DO)  
 type = episode-of-care-primary  
 target = ENTRY path of COMPOSITION



# LINKS – Bidirectional

Contact = Care encounter

Medical record entry



# CLUSTER within a care encounter COMPOSITION

The screenshot displays the Archetype Designer interface. At the top, the title bar reads "Archetype Designer" and includes menu items: "Repositories", "Save", "Export", "Import", and "Updates 4". The user profile "jean-pierre.messerli@jpm-consulting.ch" is visible on the right. Below the title bar, there are three tabs: "main openEHR-Masterclass-thesis", "JPM - Episode of care", and "openEHR-EHR-CLUSTER.eoc\_relationships\_care\_encounter.v0". The active tab is "openEHR-EHR-CLUSTER.eoc\_relationships\_care\_encounter.v0", with "Specialize" and "en" buttons to its right. A "git History" bar shows the latest commit "6a1f85f by JPM-Consulting on 4 Oct, 2025".

The main workspace is divided into a left sidebar and a right panel. The sidebar, titled "EoC Relationships care encounter", contains a tree view with the following structure:

- EoC Relationships care encounter
  - Clinical composition references
    - Link
  - Admin encounter reference
    - Link
    - Comment
    - Extension

The right panel has tabs for "Constraints", "Details", "Annotations", and "Rm Attributes". The "Details" tab is active, showing a "Description" field with the text: "CLUSTER within a care encounter COMPOSITION with associations for an episode-oriented medical record." Below this is a "Comment" field with the text: "Placed under COMPOSTION.context.other\_context." At the bottom of the right panel is a "Bindings" section.

A blue-bordered box in the center of the workspace contains the text "LINKs to" followed by a bulleted list:

- Clinical Compositions
- Optional: Admin encounter

# CLUSTER within a clinical COMPOSITION on ENTRY level

The screenshot displays the Archetype Designer interface. The top navigation bar includes 'Archetype Designer', 'Repositories', 'Save', 'Export', 'Import', and 'Updates 4'. The user profile 'jean-pierre.messerli@jpm-consulting.ch' is visible in the top right. The main workspace shows the 'openEHR-EHR-CLUSTER.eoc\_relationships\_entry.v0' archetype. The left sidebar contains a tree view of the archetype structure, including 'EoC Relationships entry', 'Contact reference', 'Episode references', and 'Assignments'. The right sidebar shows the 'Description' and 'Comment' fields. A blue box highlights the 'LINKs to' section, listing 'Contact (Care encounter)', 'Episode of Care', and 'Clinical Section'.

Archetype Designer Repositories Save Export Import Updates 4 jean-pierre.messerli@jpm-consulting.ch

main openEHR-Masterclass-thesis JPM - Episode of care openEHR-EHR-CLUSTER.eoc\_relationships\_care\_encounter.v0 openEHR-EHR-CLUSTER.eoc\_relationships\_entry.v0

openEHR-EHR-CLUSTER.eoc\_relationships\_entry.v0 Specialize en

git History Latest commit 7658be1 by JPM-Consulting on 4 Oct, 2025

Tree Mindmap Tabbed ADL Terminology Analytics

EoC Relationships entry

T EoC Relationships entry

- Contact reference
  - Link
- Episode references
  - Link
  - Role
- Assignments
  - Clinical Section
  - SOAP
  - Comment
  - Extension

LINKs to

- Contact (Care encounter)
- Episode of Care
- Clinical Section

Description

CLUSTER within a clinical COMPOSITION on ENTRY level (OBSERVATION, EVALUATION, INSTRUCTION, ACTION) with associations for an episode-oriented medical record.

Comment

Placed unter ENTRY.protocol.

Bindings

# CLUSTER within an episode-of-care COMPOSITION

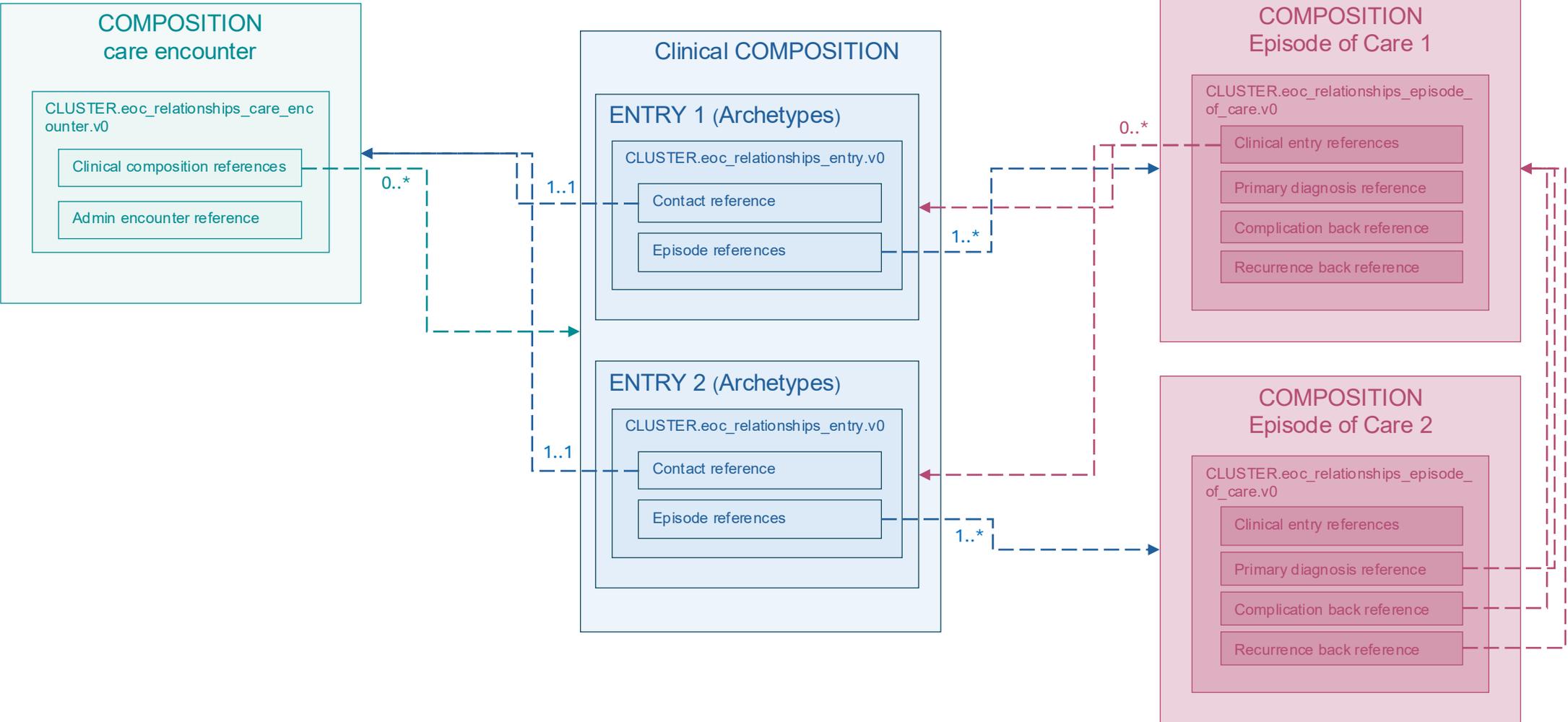
The screenshot displays the Archetype Designer interface. At the top, the title bar reads 'Archetype Designer' and includes menu items: 'Repositories', 'Save', 'Export', 'Import', and 'Updates 4'. The user profile 'jean-pierre.messerli@jpm-consulting.ch' is visible on the right. Below the title bar, several tabs are open, including 'main openEHR-Masterclass-thesis', 'JPM - Episode of care', and 'openEHR-EHR-CLUSTER.eoc\_relationships\_episode\_of\_care.v0'. The main workspace shows the selected archetype 'openEHR-EHR-CLUSTER.eoc\_relationships\_episode\_of\_care.v0' with 'Specialize' and 'en' buttons. A 'git History' bar indicates the latest commit 'c0d7b12 by JPM-Consulting on 4 Oct, 2025'. The left sidebar contains a 'Tree' view with options for 'Mindmap', 'Tabbed', 'ADL', 'Terminology', and 'Analytics'. The 'EoC Relationships episode of care' tree shows a hierarchy: '(Clinical composition references)', 'Primary diagnosis reference', 'Complication back reference', 'Recurrence back reference', 'Comments', and 'Extension'. A callout box points to the 'Extension' node with the text 'LINKs to Clinical Compositions'. The right sidebar has tabs for 'Constraints', 'Details', 'Annotations', and 'Rm Attributes'. The 'Description' field contains the text: 'CLUSTER within an episode of care COMPOSITION with associations for an episode-oriented medical record.' The 'Comment' field contains: 'Placed under COMPOSTION.context.other\_context'. The 'Bindings' section is currently empty.

# CLUSTERS

Contact = Care encounter

Medical record entry

Episode-of-Care = Health problem



# Evaluation framework for comparing different approaches 1/2

| Topic                | Short Explanation   | Values/Options  |
|----------------------|---|---|
| Standard compliance  | Is the approach part of the official openEHR specifications?                  | Yes, no   |
| CDR versioning       | Does the CDR automatically create a new version on update with this approach? | Yes, no   |
| Template effort      | Effort required to author templates for this approach                         | High (per archetype),<br>Medium,<br>Low (centralized) |
| Maintainability      | Ease of maintenance - duplicates vs single source of truth                    | Low,<br>Medium (duplicates),<br>High (single source)  |
| Tool ecosystem       | Modelling tools that support this approach out of the box                     | Archetype Designer,<br>CKM,<br>Other                  |
| Programmatic support | Can it be managed via APIs or SDKs?   | Yes, no   |
| Archetype maturity   | Required archetype management level   | Proprietary, CKM v0 (draft),<br>CKM v1+ (published)   |
| Terminology scope    | Level of terminology support required   | None (proprietary), National,<br>International        |
| Query options        | Available query interfaces  | AQL, REST-API only, Both                              |

# Evaluation framework for comparing different approaches 2/2

|  |  |   |
|--|--|---|
| Single-statement AQL                   | Can all relevant data be retrieved in one AQL statement?   | Yes<br>No (multi-step/pseudo-join)        |
| Multiple use                           | Supports multiple use (e.g. multiple RM LINKs per COMPOSITION; COMPOSITION referenced by multiple folders) | Yes, no                                   |
| Cross-CDR interoperability             | Suitability across different CDR repositories and system boundaries.                                       | Yes, no                                   |
| Flexibility                            | Adaptability to new requirements   | Low, Medium, High, Very High              |
| Runtime performance impact             | Expected effect on system performance  | Low (negligible), Medium, High, Very High |
| Governance effort                      | Governance level needed for sustainable maintenance  | Archetype-level, RM-level                 |
| Suitability for multi-vendor ecosystem | Suitability for uniform implementation across different vendors  | Easy, medium, difficult                   |
| Implementation complexity              | Overall complexity to implement  | Low, Medium, High, Very High              |
| Implementation guide                   | Availability of implementation guidance  | Exists, to be developed                   |

# Take home messages

- The **Episode of Care** is the appropriate concept for current and future requirements in clinical documentation.
- An Episode of Care represents one health problem or diagnosis and is the CDR's single **source of truth** for it.
- The **Care Encounter / Contact** the smallest meaningful unit of clinical documentation - enabling clinically useful views of the patient record.
- Episode of Care enables **comparisons of cost and quality** and provides the foundation for **value-based healthcare**.
- All together turns EHR data into **actionable knowledge**.

# Contact information



**Jean-Pierre Messerli**

Physician and Medical Informatics Specialist

eMail: [jean-pierre.messerli@jpm-consulting.ch](mailto:jean-pierre.messerli@jpm-consulting.ch)

Mobile: +41 79 945 12 13

Website: [www.jpm-consulting.ch](http://www.jpm-consulting.ch)

 [www.linkedin.com/in/messerlispiez](https://www.linkedin.com/in/messerlispiez)

