

אפיון FHIR API עבור פרויקט מחקרי הריון ומיילדותי

CMV CGM

של

"המרכז הירושלמי לרפואה חישובית מותאמת אישית"



The Jerusalem Center for
Personalized Computational
Medicine

FHIR-4.01 API

גרסת המסמך 4.0 חלק 3 - לידה

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Encounter – Delivery 1.1

פרופיל זה, המבוסס משאב Encounter מתאר את התנועות של יולדת בתוך בית החולים במהלך אירוע מסוג "לידה" מהגעתה לבית החולים ועד השחרור. פרופיל זה מאפשר קבלת המידע על זמן ומיקום של האירועים הקליניים באמצעות references ממשאבים אחרים למשאב זה. (לדוגמה: מדידות לחץ דם שבוצעו במהלך הגעת יולדת למיון מיילדותי). חשוב להדגיש שהפרופיל זה מתאר אך ורק התהליך האדמיניסטרטיבי כשהסתיימה בלידה.

Element path	Cardinality	Type	Value	Notes
resourceType	1..1	string	fixed: "Encounter"	Encounter resource providing information entire patient (Mother) workflow from admission in Obstetric ER to discharge from the hospital. One instance per delivery
id	1..1	string	The logical ID of the resource	Unique Logical ID per organization (Prefix + ID)
status	1..1	string	finished	fixed value
statusHistory	0..*	Object	Binding ValueSet:	List of past encounter statuses

			http://fhir.outburn.co.il/ValueSet/jcpm-encounter-status (required)	
statusHistory[n].status	1..1	string	arrived in-progress triaged onleave finished	Example: 1. Patient arrived to the Obstetric ER 2. Patient triaged into the Delivery room 3. Patient discharged from the hospital
statusHistory[n].period	1..1	Object		
statusHistory[n].start	0..1		YYYY-DD-MMThh:mm:ss+zz:zz	The start time that the episode was in the specified status
statusHistory[n].end	0..1		YYYY-DD-MMThh:mm:ss+zz:zz	The end time that the episode was in the specified status
class	1..1	Object	Binding ValueSet: http://fhir.outburn.co.il/ValueSet/jcpm-encounter-class (required)	Classification of last patient encounter
class.system	1..1	string	http://terminology.hl7.org/CodeSystem/v3-ActCode	
class.code	1..1	string	IMP EMER AMB	Encounter classification code. EMER for patients leaving the hospital with no transfer to delivery room.
class.display	1..1	string	inpatient encounter emergency ambulatory	
classHistory	0..*	Object	Binding ValueSet: http://fhir.outburn.co.il/ValueSet/jcpm-encounter-class (required)	List of past encounter classes. (total duration per class)
classHistory[n].class	1..1	Object		

classHistory[n].class.system	1..1	string	http://terminology.hl7.org/CodeSystem/v3-ActCode	
classHistory[n].class.code	1..1	string	IMP EMER AMB	Historical Patient encounter classification code
classHistory[n].class.display	1..1	string	inpatient encounter emergency ambulatory	
classHistory[n].class.period	1..1	Object		
classHistory[n].class.period.start	0..1	string	YYYY-DD-MMThh:mm:ss+zz:zz	The start time that the episode was in the specified class
classHistory[n].class.period.end	0..1	string	YYYY-DD-MMThh:mm:ss+zz:zz	The end time that the episode was in the specified class
period	0..1	Object		The start and end time of the encounter (from admission to discharge)
period.start	0..1	string	YYYY-DD-MMThh:mm:ss+zz:zz	
period.end	0..1	string	YYYY-DD-MMThh:mm:ss+zz:zz	
reasonReference	1..*	Object		Pregnancy admission identifier aggregating all PATIENT visits to the hospital during the pregnancy
reasonReference[0].identiifer	1..1	Object		This object is relevant only and only for encounters having explicitly documented "visit reason": Pregnancy
reasonReference[0].identiifer.system	1..1	String	http://fhir.hadassah.org.il/identifier/pregnancy-identifier http://fhir.szmc.org.il/identifier/pregnancy-identifier	fixed value
reasonReference[0].identiifer.value	1..1	String	1342931	fixed value
reasonReference.display	1..1	String	הריון	
reasonReference.type	1..1	String	Condition	fixed value

type	0..*	Object		Specific type of encounter (e.g.:Delivery procedure)
type[0].coding	0..*	Object		
type[0].coding[0].system	1..1	string	http://snomed.info/sct	fixed value
type[0].coding[0].code	1..1	string	236973005	fixed value
type[0].coding[0].display	1..1	string	Delivery procedure	fixed value
serviceType	0..*	Object		
serviceType[0].coding	0..*	Object		
serviceType[0].coding[0].system	1..1	string	http://terminology.hl7.org/CodeSystem/service-type	fixed value
serviceType[0].coding[0].code	1..1	string	fixed:263	fixed value
serviceType[0].coding[0].display	1..1	string	fixed: Birth	fixed value
subject	1..1	Object		
subject.reference	1..1	string	Patient/[Patient_Mother_ID]	Refence to Patient logical ID
hospitalization	0..1	Object		
hospitalization.admitSource	0..1	Object	Binding ValueSet: http://fhir.outburn.co.il/ValueSet/jcpm-encounter-admit-source (required)	From where patient was admitted (transfer from Obstetric ER)
hospitalization.admitSource.coding[0]	0..*	Object		
hospitalization.admitSource.coding[0].system	1..1	string	http://terminology.hl7.org/CodeSystem/admit-source	fixed value
hospitalization.admitSource.coding[0].code	1..1	string	emd outp hosp-trans other	Code of admin source (Emergency , Ambulatory, Another Hospital, Other (if origin = vehicle, home,ambulance))
hospitalization.admitSource.coding[0].display	1..1	string	From accident/emergency department Transferred from other hospital	

			From outpatient department Other	
hospitalization.origin	0..1	Object		The reference is created just if the origin is vehicle ,ambulance or home
hospitalization.origin.reference	0..1	string	<u>Location/vehicle</u> <u>Location/home</u> <u>Location/ambulance</u>	
location	0..*	Object		List of locations where the patient has been
location[0].location	1..1	Object		Location the encounter takes place
location[0].location.identifier	1..1	Object		
location[0].location.identifier.system	1..1	string	http://fhir.hadassah.org.il/identifier/locations	Hadassah locations (departments, wards) URI
location[0].location.identifier.value	1..1	string	1549941 15059534 15059526	Example only
location[0].location.display	0..1	string	מיון מיילדותי חדר לידה יולדות ב	Example only
location[0].status	0..1	string	completed	fixed value
location[0].period	0..1	Object		Time period during which the patient was present at the location
location[0].period.start	0..1	string	YYYY-DD-MMThh:mm:ss+zz:zz	The start time that the patient was present at the location
location[0].period.end	0..1	string	YYYY-DD-MMThh:mm:ss+zz:zz	The end time that the patient was present at the location
serviceProvider	0..1	Object		Hadassah Hospital (Ein Karem or Mount Scopes)
serviceProvider.identifier	1..1	string		
serviceProvider.identifier.system	1..1	string	http://fhir.hadassah.org.il/identifier/organization http://fhir.szmc.org.il/identifier/organization	Organizational locations (departments,wards) URI
serviceProvider.identifier.value	1..1	string	235 236	Example only
serviceProvider.display	0..1	string	עין כרם הר הצופים	

Example:

```
{
  "resourceType": "Encounter",
  "id": "EM13363750",
  "status": "finished",
  "statusHistory": [
    {
      "status": "in-progress",
      "period": {
        "start": "2021-04-25T20:30:00+00:00",
        "end": "2021-04-25T22:40:00+00:00"
      }
    },
    {
      "status": "onleave",
      "period": {
        "start": "2021-04-25T22:40:00+00:00",
        "end": "2021-04-25T22:44:00+00:00"
      }
    },
    {
      "status": "triaged",
      "period": {
        "start": "2021-04-25T22:44:00+00:00",
        "end": "2021-04-25T22:44:00+00:00"
      }
    },
    {
      "status": "in-progress",
      "period": {
        "start": "2021-04-25T22:44:00+00:00",
        "end": "2021-04-25T23:55:00+00:00"
      }
    },
    {
      "status": "onleave",
      "period": {
        "start": "2021-04-25T22:40:00+00:00",
        "end": "2021-04-25T23:55:00+00:00"
      }
    }
  ],
}
```

```

{
  "status": "in-progress",
  "period": {
    "start": "2021-04-25T23:56:00+00:00",
    "end": "2021-04-26T02:30:00+00:00"
  }
},
{
  "status": "onleave",
  "period": {
    "start": "2021-04-26T02:30:00+00:00",
    "end": "2021-04-26T02:30:00+00:00"
  }
},
{
  "status": "triaged",
  "period": {
    "start": "2021-04-26T02:30:00+00:00",
    "end": "2021-04-26T02:30:00+00:00"
  }
},
{
  "status": "in-progress",
  "period": {
    "start": "2021-04-26T02:30:00+00:00",
    "end": "2021-04-27T14:04:00+00:00"
  }
},
{
  "status": "finished",
  "period": {
    "start": "2021-04-27T14:04:00+00:00",
    "end": "2021-04-27T14:04:00+00:00"
  }
},
],
"class": {
  "system": "http://terminology.hl7.org/CodeSystem/v3-ActCode",
  "code": "IMP",
  "display": "inpatient encounter"
},
"classHistory": [

```



```

{
  "class": {
    "system": "http://terminology.hl7.org/CodeSystem/v3-ActCode",
    "code": "EMER",
    "display": "emergency"
  },
  "period": {
    "start": "2021-04-25T20:30:00+00:00",
    "end": "2021-04-25T22:44:00+00:00"
  }
},
{
  "class": {
    "system": "http://terminology.hl7.org/CodeSystem/v3-ActCode",
    "code": "IMP",
    "display": "inpatient encounter"
  },
  "period": {
    "start": "2021-04-25T22:44:00+00:00",
    "end": "2021-04-27T14:04:00+00:00"
  }
}
],
"subject": {
  "reference": "Patient/mother_barzel_number"
},
"period": {
  "start": "2021-04-25T20:30:00+00:00",
  "end": "2021-04-27T14:04:00+00:00"
},
"type": [
{
  "coding": [
    {
      "system": "http://snomed.info/sct",
      "code": "236973005",
      "display": "Delivery procedure"
    }
  ]
}
]

```

```

}
],
"serviceType": [
{
"coding": [
{
"system": "http://terminology.hl7.org/CodeSystem/service-type",
"code": "263",
"display": "Birth"
}
]
}
],
"hospitalization": {
"admitSource": {
"coding": [
{
"system": "http://terminology.hl7.org/CodeSystem/admit-source",
"code": "emd",
"display": "From accident/emergency department"
}
]
}
},
"location": [
{
"location": {
"identifier": {
"system": "http://fhir.hadassah.org.il/identifier/locations",
"value": "1549941"
}
},
"display": "מיון מיילדותי"
},
"status": "completed",
"period": {
"start": "2021-04-25T20:30:00+00:00",
"end": "2021-04-25T22:44:00+00:00"
}
},
{
"location": {
"identifier": {
"system": "http://fhir.hadassah.org.il/identifier/locations",

```

```

      "value": "15059534"
    },
    "display": "הריון בסיכון גבוה בנשים"
  },
  "status": "completed",
  "period": {
    "start": "2021-04-25T22:44:00+00:00",
    "end": "2021-04-25T23:55:00+00:00"
  }
},
{
  "location": {
    "identifier": {
      "system": "http://fhir.hadassah.org.il/identifier/locations",
      "value": "1499201"
    }
  },
  "display": "חדר לידה"
},
  "status": "completed",
  "period": {
    "start": "2021-04-25T23:56:00+00:00",
    "end": "2021-04-26T02:30:00+00:00"
  }
},
{
  "location": {
    "identifier": {
      "system": "http://fhir.hadassah.org.il/identifier/locations",
      "value": "15059526"
    }
  },
  "display": "ילדות ב"
},
  "status": "completed",
  "period": {
    "start": "2021-04-26T02:30:00+00:00",
    "end": "2021-04-27T14:04:00+00:00"
  }
},
},
"serviceProvider": {
  "identifier": {
    "system": "http://fhir.hadassah.org.il/identifier/organization",
    "value": "235"
  }
}

```

```

    },
    "display": "עין כרם"
  },
  "reasonReference": [
    {
      "identifier": {
        "system": "http://fhir.hadassah.org.il/identifier/pregnancy-
identifier",
        "value": "abc123"
      },
      "display": "הריון",
      "type": "Condition"
    }
  ]
}

```

Procedure- Delivery 1.2

פרופיל זה, המבוסס משאב Procedure מתאר את התהליך הלידה ברמה של Patient Mother ללא פירוט של פעולות שבוצעו במהלך הלידה. כל המשאבים מסוג Procedure המתארים את פעולות מילדותיות וההתערבויות מקושרים למשאב זה על ידי קישור מסוג partOf

Element path	Cardinality	Type	Value	Notes
resourceType	1..1	string	Procedure	Procedure Resource describing Delivery Procedure. Multiple instances per Patient
id	1..1	string	The logical ID of the resource	"Prefix"+ Primary Key (string)
status	1..1	string	completed	fixed value
category	1..1	Object		
category.coding	1..*	Object		Classification of the procedure
category.coding.system	1..1	string	http://snomed.info/sct	fixed value
category.coding.code	1..1	string	236973005	fixed value
category.coding.display	1..1	string	Delivery procedure	fixed value

category.text	0..1	string	לידה	
code	1..1	Object		
code.coding	1..*	Object		
code.coding.system	1..1	string	http://snomed.info/sct	fixed value
code.coding.code	1..1	string	236973005	fixed value
code.coding.display	1..1	string	Delivery procedure	fixed value
code.text	0..1	string	לידה	
subject	1..1	Object		
subject.reference	1..1	string	Patient/[Patient_Mother_ID]	Refence to Patient logical ID
encounter	1..1	Object		
encounter.reference	1..1	string	Encounter/[Encounter_Delivery_ID]	Reference to Encounter Delivery
performedPeriod	1..1	Object		
performedPeriod.start	0..1	string	YYYY-DD-MMThh:mm:ss+zz:zz	The start time of the delivery
performedPeriod.end	0..1	string	YYYY-DD-MMThh:mm:ss+zz:zz	The end time of the delivery

Example:

```
{
  "resourceType": "Procedure",
  "id": "procedure-delivery-id",
  "status": "completed",
  "category": {
    "coding": [
      {
        "system": "http://snomed.info/sct",
        "code": "236973005",
        "display": "Delivery procedure"
      }
    ]
  }
}
```

```

    }
  ],
  "text": "לידה",
  },
  "code": {
    "coding": [
      {
        "system": "http://snomed.info/sct",
        "code": "236973005",
        "display": "Delivery procedure"
      }
    ]
  },
  "text": "לידה",
  },
  "subject": {
    "reference": "Patient/[Patient_Mother_ID]"
  },
  "encounter": {
    "reference":
"Encounter/[Encounter_Delivery_ID]"
  },
  "performedPeriod": {
    "start": "2020-01-01",
    "end": "2020-09-01"
  }
}

```

Observation – Delivery 1.3

פרופיל זה, המבוסס משאב Observation מתאר את ממצאים בלידה.

Element path	Cardinality	Type	Value	Notes
resourceType	1..1	string	fixed: "Observation"	Observation resource providing delivery observation array.
id	1..1	string	The logical ID of the resource	Unique Logical ID per organization (Prefix + ID)
status	1..1	string	final	fixed value

category	0..*	Object	Binding ValueSet: http://fhir.outburn.co.il/ValueSet/jcpm-resource-category (extensible)	
category.coding	0..*	Object		
category.coding.system	1..1	string	http://fhir.outburn.co.il/CodeSystem/jcpm-resource-category	fixed value
category.coding.code	1..1	string	example: placenta-obs	Clinical category code
category.coding.display	0..1	string	example: מבנה שליה	Clinical category description
code	1..1	Object	Binding ValueSet: http://fhir.outburn.co.il/ValueSet/jcpm-delivery-obs-code (extensible)	
code.coding	1..*	Object		
code.coding.system	1..1	string	http://snomed.info/ct	fixed value
code.coding.code	1..1	string	118215003	fixed value
code.coding.display	0..1	string	Delivery finding	fixed value
code.text	0..1	string		
subject	1..1	Object		
subject.reference	1..1	string	Patient/[Patient_Mother_ID]	Reference to Patient logical ID
encounter	1..1	Object		
encounter.reference	1..1	string	Encounter/[Encounter_Delivery_ID]	Reference to Encounter Delivery
effectivePeriod	0..1	Object		
effectivePeriod.start	0..1	string	YYYY-DD-MMThh:mm:ss+zz:zz	Start Time

effectivePeriod.end	0..1	string	YYYY-DD-MMThh:mm:ss+zz:zz	End Time
component[0]	1..*			Component cardinality
component[0].code	1..1	Object		
component[0].code.coding	1..*	Object		
component[0].code.coding.system	1..1	string	http://snomed.info/ct	fixed value
component[0].code.coding.code	1..1	string	<snomed code>	Delivery Observation Code
component[0].code.coding.display	0..1	string	<snomed display>	Delivery Observation Description
component[0].code.text	0..1	string	<source system original value>	
component[0].valueCodeableConcept	1..1	Object	Binding ValueSet: http://fhir.outburn.co.il/ValueSet/observation-clinical-findings-yes-sus (required)	
component[0].valueCodeableConcept.coding	0..*	Object		
component[0].valueCodeableConcept.coding.system	0..1	string	http://snomed.info/ct	fixed value
component[0].valueCodeableConcept.coding.code	0..1	string	373066001 415684004	
component[0].valueCodeableConcept.coding.display	0..1	string	Yes Suspected	
component[0].valueCodeableConcept.text	0..1	string	כן חשד	
component[0]interpretation	0..*	Object	Binding ValueSet: http://fhir.outburn.co.il/ValueSet/jcpm-observation-interpretation (required)	
component[0]interpretation.coding	0..*	Object		
component[0]interpretation.coding.system	1..1	string	http://terminology.hl7.org/CodeSystem/v3-	fixed value

			ObservationInterpretation	
component[0]interpretation.coding.value	1..1	string	N A	Normal, Abnormal
component[0]interpretation.coding.display	1..1	string	Normal Abnormal	
component[0]interpretation.text	0..1	string	תקין לא תקין	
component[0]interpretation.coding	0..*	Object		

Example:

```
{
  "resourceType": "Observation",
  "id": "observation-pregnancy-id",
  "status": "final",
  "category": {
    "coding": [
      {
        "system": "http://fhir.outburn.co.il/CodeSystem/jcpm-resource-category",
        "code": "placenta-obs",
        "display": "סימבנה שליה"
      }
    ]
  },
  "code": {
    "coding": [
      {
        "system": "http://loinc.org",
        "code": "118215003",
        "display": "Delivery finding"
      }
    ]
  },
  "subject": {
    "reference": "Patient/[Patient_Mother_ID]"
  },
  "encounter": {
    "reference": "Encounter/[Encounter_Delivery_ID]"
  },
  "effectivePeriod": {
```

```

"start": "2021-04-25T22:44:00+00:00",
"end": "2021-04-26T22:44:00+00:00"
},
"component": [
{
"code": {
"coding": [
{
"system": "http://snomed.info/sct",
"code": "109895008",
"display": "Retained placental fragment"
}
],
"text": "חשד לשליה לא שלמה"
},
"valueCodeableConcept": {
"coding": [
{
"system": "http://snomed.info/sct",
"code": "373066001",
"display": "Yes"
}
],
"text": "כן"
},
"interpretation": [
{
"coding": [
{
"system": "http://terminology.hl7.org/CodeSystem/v3-
ObservationInterpretation",
"code": "A",
"display": "Abnormal"
}
],
"text": "לא תקין"
}
]
}
]
}

```

Condition – Delivery Diagnoses 1.4

פרופיל זה, המבוסס משאב Condition מתאר את סיבוכים בלידה.

Element path	Cardinality	Type	Value	Notes
resourceType	1..1	string	fixed: "Condition"	Delivery Related Conditions / Problems / Diagnoses, One instance per condition
id	1..1	string	The logical ID of the resource	Unique Logical ID per organization (Prefix + ID)
clinicalStatus	1..1	Object	Binding ValueSet: http://fhir.outburn.co.il/ValueSet/jcpm-condition-clinical-status (required)	
clinicalStatus.coding	1..*	Object		
clinicalStatus.coding.system	1..1	string	http://terminology.hl7.org/CodeSystem/condition-clinical	fixed value
clinicalStatus.coding.code	1..1	string	active inactive	The clinical status of the condition
clinicalStatus.coding.display	0..1	string	Active Inactive	
verificationStatus	0..1	Object	Binding ValueSet: http://fhir.outburn.co.il/ValueSet/jcpm-condition-verification-status (required)	
verificationStatus.coding	1..1	Object		
verificationStatus.coding.system	1..1	string	http://terminology.hl7.org/CodeSystem	

			m/condition-ver-status	
verificationStatus.coding.code	1..1	string	confirmed unconfirmed	verification status
verificationStatus.coding.display	1..1	string	Confirmed Unconfirmed	
category	1..*	Object		
category[0].coding	1..*	Object	Binding ValueSet: http://hl7.org/fhir/ValueSet/condition-category (required)	
category[0].coding.system	1..1	string	http://terminology.hl7.org/CodeSystem/condition-category	fixed value
category[0].coding.code	1..1	string	encounter-diagnosis	fixed value
category[0].coding.display	0..1	string	Encounter Diagnosis	fixed value
category[1].coding	1..*	Object	Binding ValueSet: http://fhir.outburn.co.il/ValueSet/jcpm-resource-category (extensible)	Binding is valid for category[1].coding.code
category[1].coding.system	1..1	string	http://fhir.outburn.co.il/CodeSystem/jcpm-resource-category	fixed value
category[1].coding.code	1..1	string	example: 2nd-del	Clinical category code
category[1].coding.display	0..1	string	example: לידה-שלב שני	Clinical category description
code	1..1	Object	Binding ValueSet: http://fhir.outburn.co.il/ValueSet/jcpm-delivery-diagnoses (extensible)	

code.coding	1..*	Object		
code.coding.system	1..1	string	http://snomed.info/sct	fixed value
code.coding.code	1..1	string	<snomed code>	Delivery Condition Code
code.coding.display	1..1	string	<snomed display>	Delivery Condition Description
code.text	0..1	string	<source system original value>	
subject	1..1	string		
subject.reference	1..1	string	Patient/[Patient_Mother_ID]	
encounter	1..1	Object		
encounter.reference	1..1	string	Encounter/[Encounter_Delivery_ID]	Reference to Encounter Delivery
onsetDateTime	0..1	string	YYYY-DD-MMThh:mm:ss+zz:z	
note	0..*	string		
note.text	1..1	string		Diagnosis / Problem / Condition Notes

Example:

```
{
  "resourceType": "Condition",
  "id": "condition-delivery-id",
  "clinicalStatus": {
    "coding": [
      {
        "system": "http://terminology.hl7.org/CodeSystem/condition-clinical",
        "code": "active",
        "display": "Active"
      }
    ]
  },
  "verificationStatus": {
    "coding": [
      {
        "system": "http://terminology.hl7.org/CodeSystem/condition-verification-status",

```

```

    "code": "confirmed",
    "display": "Confirmed"
  }
]
},
"category": [
  {
    "coding": [
      {
        "system": "http://terminology.hl7.org/CodeSystem/condition-
category",
        "code": "encounter-diagnosis",
        "display": "Encounter Diagnosis"
      },
      {
        "system": "http://fhir.outburn.co.il/CodeSystem/jcpm-resource-
category",
        "code": "2nd-del",
        "display": "לידה-שלב שני"
      }
    ]
  },
  {
    "coding": [
      {
        "system": "http://snomed.info/sct",
        "code": "77259008",
        "display": "Prolonged second stage of labor"
      }
    ],
    "text": "Prolonged Second Stage "
  },
  "subject": {
    "reference": "Patient/[Patient_Mother_ID]"
  },
  "encounter": {
    "reference": "Encounter/[Encounter_Delivery_ID]"
  },
  "onsetDateTime": "2012-05-24",
  "note": [
    {

```

```
"text": "Clinical Comment."
}
]
}
```

Condition – Umbilical Cord Complications 1.5

פרופיל זה, המבוסס משאב Condition מתאר את סבוכים חבל הטבור לאחר הלידה עבור כל אחד מהילודים במידה ומדבור על לידה רב-עוברית.

Element path	Cardinality	Type	Value	Notes
resourceType	1..1	string	fixed: "Condition"	Umbilical Cord Related Conditions One instance per Condition and the NewBorn
id	1..1	string	The logical ID of the resource	Unique Logical ID per organization (Prefix + ID)
clinicalStatus	1..1	Object	Binding ValueSet: http://fhir.outburn.co.il/ValueSet/jcpm-condition-clinical-status (required)	
clinicalStatus.coding	1..*	Object		
clinicalStatus.coding.system	1..1	string	http://terminology.hl7.org/CodeSystem/condition-clinical	fixed value
clinicalStatus.coding.code	1..1	string	active inactive	The clinical status of the condition
clinicalStatus.coding.display	0..1	string	Active Inactive	
verificationStatus	0..1	Object	Binding ValueSet: http://fhir.outburn.co.il/ValueSet/jcpm-condition-verification-status (required)	
verificationStatus.coding	1..1	Object		

verificationStatus.coding.system	1..1	string	http://terminology.hl7.org/CodeSystem/condition-ver-status	
verificationStatus.coding.code	1..1	string	confirmed unconfirmed	verification status
verificationStatus.coding.display	1..1	string	Confirmed Unconfirmed	
category	1..*	Object		
category[0].coding	1..*	Object	Binding ValueSet: http://hl7.org/fhir/ValueSet/condition-category (required)	Binding is valid for category[0].coding.code
category[0].coding.system	1..1	string	http://terminology.hl7.org/CodeSystem/condition-category	fixed value
category[0].coding.code	1..1	string	encounter-diagnosis	fixed value
category[0].coding.display	0..1	string	Encounter Diagnosis	fixed value
category[1].coding	1..*	Object	Binding ValueSet: http://fhir.outburn.co.il/ValueSet/jcpm-resource-category (extensible)	Binding is valid for category[1].coding.code
category[1].coding.system	1..1	string	http://fhir.outburn.co.il/CodeSystem/jcpm-resource-category	fixed value
category[1].coding.code	1..1	string	example: umbilical-compl	
category[1].coding.display	0..1	string	example: סיבוכי חבל טבור	Clinical category code
code	1..1	Object	Binding ValueSet: http://fhir.outburn.co.il/ValueSet/condition-umbilical-cord-complications (extensible)	Clinical category description

code.coding	1..*	Object		
code.coding.system	1..1	string	http://snomed.info/sct	
code.coding.code	1..1	string	<snomed code>	Umbilical Cord Condition code
code.coding.display	1..1	string	<snomed display>	Umbilical Cord Condition description
code.text	0..1	string	<source system original value>	
subject	1..1	string		
subject.reference	1..1	string	Patient/[Patient_Child_ID]	Reference to Patient logical ID
encounter	1..1	Object		
encounter.reference	1..1	string	Encounter/[Encounter_Birth_ID]	Reference to Encounter Birth
onsetDateTime	0..1	string	YYYY-DD-MMThh:mm:ss+zz:zz	
note	0..*	string		
note.text	1..1	string		Diagnosis / Problem / Condition Notes

Example:

```
{
  "resourceType": "Condition",
  "id": "condition-umbilical-cord-id",
  "clinicalStatus": {
    "coding": [
      {
        "system": "http://terminology.hl7.org/CodeSystem/condition-clinical",
        "code": "active",
        "display": "Active"
      }
    ]
  },
  "verificationStatus": {
    "coding": [
      {
        "system": "http://terminology.hl7.org/CodeSystem/condition-ver-status",
        "code": "confirmed",

```

```

      "display": "Confirmed"
    }
  ]
},
"category": [
  {
    "coding": [
      {
        "system": "http://terminology.hl7.org/CodeSystem/condition-
category",
        "code": "encounter-diagnosis",
        "display": "Encounter Diagnosis"
      },
      {
        "system": "http://fhir.outburn.co.il/CodeSystem/jcpm-resource-
category",
        "code": "umbilical-compl",
        "display": "ליסיבוכי חבל טבור"
      }
    ]
  }
],
"code": {
  "coding": [
    {
      "system": "http://snomed.info/sct",
      "code": "270500004",
      "display": "Prolapsed cord"
    }
  ],
  "text": "Cord Prolapse"
},
"subject": {
  "reference": "Patient/[Patient_Child_ID]"
},
"encounter": {
  "reference": "Encounter/[Encounter_Birth_ID]"
},
"onsetDateTime": "2012-05-24",
"note": [
  {
    "text": "Clinical Comment."
  }
]

```

```
}
]
}
```

Observation-Umbilical Cord 1.6

פרופיל זה, המבוסס משאב Observation מתאר את ממצאי בדיקת חבל הטבור לאחר הלידה עבור כל אחד מהילודים במידה ומדבור על לידה רב-עוברית.

Element path	Cardinality	Type	Value	Notes
resourceType	1..1	string	fixed: "Observation"	Observation resource providing UmbilicalCord observation array. One instance per NewBorn
id	1..1	string	The logical ID of the resource	Unique Logical ID per organization (Prefix + ID)
status	1..1	string	final	fixed value
category	0..*	Object	Binding ValueSet: http://fhir.outburn.co.il/ValueSet/jcpm-resource-category (extensible)	
category.coding	0..*	Object		
category.coding.system	1..1	string	http://fhir.outburn.co.il/CodeSystem/jcpm-resource-category	fixed value
category.coding.code	1..1	string	example: umbilical-obs	Clinical category code
category.coding.display	0..1	string	example: מבנה חבל טבור	Clinical category description
code	1..1	Object	Binding ValueSet: http://fhir.outburn.co.il/ValueSet/jcpm-	

			umbilical-cord-obs-code (extensible)	
code.coding	1..*	Object		
code.coding.system	1..1	string	http://loinc.org	fixed value
code.coding.code	1..1	string	89492-3	fixed value
code.coding.display	0..1	string	Umbilical cord exam findings	
code.coding.text	0..1	string		
subject	1..1	Object		
subject.reference	1..1	string	Patient/[Patient_Child_ID]	Reference to Patient logical ID
encounter	1..1	Object		
encounter.reference	1..1	string	Encounter/[Encounter_Birth_ID]	Reference to Encounter Birth
effectivePeriod	0..1	Object		
effectivePeriod.start	0..1	string	YYYY-DD-MMThh:mm:ss+zz:zz	Start Time
effectivePeriod.end	0..1	string	YYYY-DD-MMThh:mm:ss+zz:zz	End Time
component[0]	1..*			Component cardinality
component[0].code	1..1	Object	Binding: value_set ()	
component[0].code.coding	1..*	Object		
component[0].code.coding.system	1..1	string	http://snomed.info/sct	fixed value
component[0].code.coding.code	1..1	string	<snomed code>	Umbilical Cord Observation Code
component[0].code.coding.display	0..1	string	<snomed display>	Umbilical Cord Observation Description
component[0].code.text	0..1	string	<source system original value>	
component[0].valueCodeableConcept	1..1	Object	Binding ValueSet:	

			http://fhir.outburn.co.il/ValueSet/observation-clinical-findings-yes-sus (required)	
component[0].valueCodeableConcept.coding	0..*	Object		
component[0].valueCodeableConcept.coding.system	0..1	string	http://snomed.info/sct	fixed value
component[0].valueCodeableConcept.coding.code	0..1	string	373066001 415684004	
component[0].valueCodeableConcept.coding.display	0..1	string	Yes Suspected	
component[0].valueCodeableConcept.text	0..1	string	כן חשד	
component[0]interpretation	0..*	Object	Binding ValueSet: http://fhir.outburn.co.il/ValueSet/jcpm-observation-interpretation (required)	
component[0]interpretation.coding	0..*	Object		
component[0]interpretation.coding.system	1..1	string	http://terminology.hl7.org/CodeSystem/v3-ObservationInterpretation	fixed value
component[0]interpretation.coding.value	1..1	string	N A	Normal, Abnormal
component[0]interpretation.coding.display	1..1	string	Normal Abnormal	
component[0]interpretation.text	0..1	string		

Example:

```
{
  "resourceType": "Observation",
  "id": "observation-umbilicalcord-id",
  "status": "final",
  "category": {
    "coding": [
      {
        "system": "http://fhir.outburn.co.il/CodeSystem/jcpm-resource-category",
```

```

"code": "umbilical-obs",
"display": "סמבנה חבל טבור"
}
],
},
"code": {
"coding": [
{
"system": "http://loinc.org",
"code": "89492-3",
"display": "Umbilical cord exam findings"
}
]
},
"subject": {
"reference": "PPatient/[Patient_Child_ID]"
},
"encounter": {
"reference": "Encounter/[Encounter_Birth_ID]"
},
"effectivePeriod": {
"start": "2021-04-25T22:44:00+00:00",
"end": "2021-04-26T22:44:00+00:00"
},
"component": [
{
"code": {
"coding": [
{
"system": "http://snomed.info/sct",
"code": "86256001",
"display": "Hematoma of cord"
}
]
},
"text": "Hematoma in Cord"
},
"valueCodeableConcept": {
"coding": [
{
"system": "http://snomed.info/sct",
"code": "373066001",
"display": "Yes"
}
]
}
}

```

```

    ],
    "text": "כן"
  },
  "interpretation": [
    {
      "coding": [
        {
          "system": "http://terminology.hl7.org/CodeSystem/v3-
ObservationInterpretation",
          "code": "A",
          "display": "Abnormal"
        }
      ],
      "text": "לא תקין"
    }
  ]
}
]
}
}

```

Procedure –Delivery Procedures 1.7

פרופיל זה, המבוסס משאב Procedure מתאר את טיפולים ופרוצדורות שנתנו במסגרת לידה, לרבות פעולות זירוז ואחרים. (מלבד טיפול בסיבוכי הלידה). משאב זה כולל רשימת הסיבוכים מסוגים שונים וטיפול התרופתי תומך שסופק. משאב זה מחזיק את קישורים למשאבים המחזיקים את אבחנות בהריון ובלידה. משאב זה מקושר למשאב של הלידה Procedure Delivery בקשר מסוג partOf

Element path	Cardinality	Type	Value	Notes
resourceType	1..1	string	Procedure	Procedure Resource describing Delivery Procedures. Multiple instances per Patient
id	1..1	string	The logical ID of the resource	Unique Logical ID per organization (Prefix + ID)
partOf	1..1	Object		
partOf.reference	1..1	string	Procedure/[Procedure_Delivery]	Reference to Procedure Delivery Procedures
status	1..1	string	completed	fixed value

category	1..1	Object	Binding ValueSet: http://fhir.outburn.co.il/ValueSet/jcpm-resource-category (extensible)	Binding is valid for category.coding[1].code
category.coding	1..*	Object		Classification of the procedure
category.coding[0].system	1..1	string	http://snomed.info/sct	fixed value
category.coding[0].code	1..1	string	177128002	fixed value
category.coding[0].display	1..1	string	Induction and delivery procedures	fixed value
category.coding[1].system	1..1	string	http://fhir.outburn.co.il/CodeSystem/jcpm-resource-category	fixed value
category.coding[1].code	1..1	string	example:1st-del	Clinical category code
category.coding[1].display	1..1	string	example: לידה-שלב ראשון	Clinical category description
category.text	0..1	string	הליכי זירוז ופרוצדורות בלידה	
code	1..1	Object	Binding ValueSet: http://fhir.outburn.co.il/ValueSet/jcpm-delivery-procedures (extensible)	
code.coding	1..*	Object		
code.coding.system	1..1	string	http://snomed.info/sct	fixed value
code.coding.code	1..1	string	<snomed code>	Delivery Procedure Code
code.coding.display	1..1	string	<snomed display>	Delivery Procedure Description

code.text	0..1	string	>ערך ממערכת <מקור	
reasonReference	1..*	Object		
reasonReference[0].reference	0..*	string	Condition/[Condition_Pregnancy Diagnoses]	Reference to Condition Pregnancy Diagnoses
reasonReference[1].reference	1..1	string	Observation/[Observation_Delivery]	Reference to Observation Delivery
subject	1..1	Object		
subject.reference	1..1	string	Patient/[Patient_Mother_ID]	Reference to Patient logical ID
encounter	1..1	Object		
encounter.reference	1..1	string	Encounter/[Encounter_Delivery_ID]	Reference to Encounter Delivery
performedPeriod	1..1	Object		
performedPeriod.start	0..1	string	YYYY-DD-MMThh:mm:ss+zz:zz	The start time of the delivery
performedPeriod.end	0..1	string	YYYY-DD-MMThh:mm:ss+zz:zz	The end time of the delivery
complicationDetail	0..*	Object		
complicationDetail.reference	0..*	string	Condition/[Condition_Delivery Diagnoses]	Reference to Condition Delivery Diagnoses
usedCode	0..*	Object	Binding ValueSet: http://fhir.outburn.co.il/ValueSet/jc-pm-delivery-medications (extensible)	
usedCode.coding	0..*	Object		
usedCode.coding.system	1..1	string	http://snomed.info/sct	fixed value
usedCode.coding.code	1..1	string	<snomed code>	The Full List of medication used for Procedure DeliveryProcedure excluding medication

				used in frame of the Procedure Complication profile
usedCode.coding.display	1..1	string	<snomed display>	
userCode.text		string	<ערך ממערכת <מקור	

Example:

```
{
  "resourceType": "Procedure",
  "id": "procedure-delivery-procedure-id",
  "partOf": {
    "reference": "Procedure/[Procedure_Delivery]"
  },
  "status": "completed",
  "category": {
    "coding": [
      {
        "system": "http://snomed.info/sct",
        "code": "177128002",

        "display": "Induction and delivery procedures"
      },
      {
        "system": "http://fhir.outburn.co.il/CodeSystem/jcpm-resource-
category",
        "code": "1st-del",
        "display": "לידה-שלב ראשון"
      }
    ],
    "text": "לידה"
  },
  "code": {
    "coding": [
      {
        "system": "http://snomed.info/sct",
        "code": "236966000",
        "display": "Cervical ripening with Prostaglandin E2"
      }
    ],
    "text": "השראת לידה Propess"
  },
}
```

```

"reasonReference": [
  {
    "reference": "Condition/[Condition_Pregnancy_Diagnoses1]"
  },
  {
    "reference": "Condition/[Condition_Pregnancy_Diagnoses2]"
  },
  {
    "reference": "Obsevation/[Observation_Delivery]"
  }
],
"subject": {
  "reference": "Patient/[Patient_Mother_ID]"
},
"encounter": {
  "reference": "Encounter/[Encounter_Delivery_ID]"
},
"performedPeriod": {
  "start": "2020-01-01",
  "end": "2020-09-01"
},
"complicationDetail": [
  {
    "reference": "Condition/[Condition_Delivery1]"
  },
  {
    "reference": "Condition/[Condition_Delivery1]"
  }
],
"usedCode": [
  {
    "coding": [
      {
        "system": "http://snomed.info/sct",
        "code": "775812003",
        "display": "Ergonovine only product"
      }
    ],
    "text": "IM-methergin"
  }
]
}

```

Procedure-Complication Treatment 1.8

פרופיל זה, המבוסס משאב Procedure מתאר את פרוצדורות ההתערבויות בסיבוכי הלידה, כולל טיפול תרופתי עבור כל פרוצדורה שבוצעה. משאב זה מחזיק את קישורים למשאבים המחזיקים את אבחנות בלידה המסווגים כסיבוכים. (Condition – Umbilical Cord | Condtion – Delivery Diagnoses).
 (Complications) משאב זה מקושר למשאב של הלידה Procedure Delivery בקשר מסוג partOf

Element path	Cardinality	Type	Value	Notes
resourceType	1..1	string	fixed: Procedure	Procedure Resource describing Delivery ComplicationTreatment Procedure. One instance per one treatment. Multiple instances per one delivery
id	1..1	string	The logical ID of the resource	"Prefix"+ Primary Key (string)
partOf	1..1	Object		
partOf.reference	1..1	string	Procedure/[Procedure_Delivery]	Reference to Procedure Delivery Procedures
status	1..1	string	completed	fixed value
category	1..1	Object	Binding ValueSet: http://fhir.outburn.co.il/ValueSet/jcpm-resource-category (extensible)	Binding is valid for category.coding[1].code
category.coding	1..*	Object		Classification of the procedure
category.coding[0].system	1..1	string	http://snomed.info/sct	fixed value
category.coding[0].code	1..1	string	386637004	fixed value
category.coding[0].display	1..1	string	Obstetric procedure	fixed value
category.coding[1].system	1..1	string	http://fhir.outburn.co.il/CodeSystem/jcpm-resource-category	fixed value

category.coding[1].code	1..1	string	example:episiotomy	Clinical category code
category.coding[1].display	1..1	string	example: הפיזיוטומיה וקרעים בתעלת הלידה	Clinical category description
category.text	0..1	string	פרוצדורה מיילדותית	
code	1..1	Object	Binding ValueSet: http://fhir.outburn.co.il/ValueSet/jcpm-delivery-complication-treatment-procedures (extensible)	
code.coding	1..*	Object		
code.coding.system	1..1	string	http://snomed.info/sct	
code.coding.code	1..1	string	<snomed code>	Complication Treatment Procedure Code
code.coding.display	1..1	string	<snomed display>	Complication Treatment Procedure Description
code.text	0..1	string	<ערך ממערכת מקור>	
subject	1..1	Object		
subject.reference	1..1	string	Patient/[Patient_M other_ID]	Reference to Patient logical ID
encounter	1..1	Object		
encounter.reference	1..1	string	Encounter/[Encounter_Delivery_ID]	Reference to Encounter Delivery
reasonReference	0..*	Object		
reasonReference[0].reference	0..*	string	Condition/[Condition_Delivery_Diagnoses]	Reference to Complication codes defined in Condition Delivery Diagnoses.

reasonReference[1].reference	0..*	string	Condition/[Condition_UmbilicalCord_Complications]	Reference to Complication codes defined in Condition Umbilical Cord Complications
performedPeriod	1..1	Object		
performedPeriod.start	0..1	string	YYYY-DD-MMThh:mm:ss+zz:z	The start time of the procedure
performedPeriod.end	0..1	string	YYYY-DD-MMThh:mm:ss+zz:z	The end time of the procedure
usedCode	0..*	Object	Binding ValueSet: http://fhir.outburn.co.il/ValueSet/jcpm-delivery-complication-treatment-medications (extensible)	
usedCode.coding	0..*	Object		
usedCode.coding.system	1..1	string	http://snomed.info/sct	
usedCode.coding.code	1..1	string	<snomed code>	The Full List of medication used for complication procedure treatment.
usedCode.coding.display	1..1	string	<snomed display>	
userCode.text		string	<ערך ממערכת מקור>	
usedCode	0..*	Object		

Example:

```
{
  "resourceType": "Procedure",
  "id": "procedure-complication-treatment-id",
  "partOf":{
    "reference":"Procedure/[Procedure_Delivery]"
  },
}
```

```

"status": "completed",
"category": {
  "coding": [
    {
      "system": "http://snomed.info/sct",
      "code": "386637004",
      "display": "Obstetric procedure"
    },
    {
      "system": "http://fhir.outburn.co.il/CodeSystem/jcpm-resource-
category",
      "code": "episiotomy",
      "display": "אפיזיוטומיה וקרעים בתעלת הלידה"
    }
  ],
  "text": "פרוצדורה מיילדותית"
},
"code": {
  "coding": [
    {
      "system": "http://snomed.info/sct",
      "code": "112925006",
      "display": "Repair of obstetric laceration of vulva"
    }
  ],
  "text": "Repair of Vulvar Tear"
},
"subject": {
  "reference": "Patient/[Patient_Mother_ID]"
},
"encounter": {
  "reference": "Encounter/[Encounter_Delivery_ID]"
},
"reasonReference": [
  {
    "reference": "Condition/[Condition_Delivery_Diagnoses1]"
  },
  {
    "reference": "Condition/[Condition_Delivery_Diagnoses2]"
  },
  {
    "reference": "Condition/[Condition_UmbilicalCord_Complications1]"
  }
]

```

```

    ],
    "performedPeriod": {
      "start": "2020-01-01",
      "end": "2020-09-01"
    },
    "usedCode": [
      {
        "coding": [
          {
            "system": "http://snomed.info/sct",
            "code": "777037006",
            "display": "Oxytocin only product"
          }
        ],
        "text": "Uterotonics - Oxytocin/Methergin"
      }
    ]
  }
}

```

Procedure-Birth 1.9

פרופיל זה, המבוסס משאב Procedure מתאר את צורת הלידה עבור כל ילוד. משאב זה מקושר לילוד על ידי קישור מסוג (subject) ולמשאב Procedure Delivery המתאר את תהליך הלידה בקשר מסוג .partOf ממצאים ואבחנות של חבר הטבור מקושרים למשאב זה עבור כל אחד מהילודים.

Element path	Cardinality	Type	Value	Notes
resourceType	1..1	string	Procedure	Procedure Resource describing Birth Procedure related to the NewBorn - One instance per NewBorn. The procedure code is defining the Delivery Method
id	1..1	string	The logical ID of the resource	"Prefix"+ Primary Key (string)
partOf	1..1	Object		

partOf.reference	1..1	string	Procedure/[Procedure_Delivery]	Reference to Delivery Procedure
status	1..1	string	completed	fixed value
category	1..1	Object	Binding ValueSet: http://fhir.outburn.co.il/ValueSet/jcpm-method-of-delivery-category (extensible)	
category.coding	1..*	Object		Classification of the procedure
category.coding[0].system	1..1	string	http://snomed.info/sct	fixed value
category.coding[0].code	1..1	string	236973005	fixed value
category.coding[0].display	1..1	string	Delivery procedure	fixed value
category.coding[1].system	1..1	string	http://snomed.info/sct	fixed value
category.coding[1].code	1..1	string	700000006 11466000	Clinical category code
category.coding[1].display	1..1	string	Vaginal delivery of fetus Cesarean section	Clinical category description
category.text	0..1	string	צורת לידה	
code	1..1	Object	Binding ValueSet: http://fhir.outburn.co.il/ValueSet/jcpm-method-of-delivery (extensible)	
code.coding	1..*	Object		
code.coding.system	1..1	string	http://snomed.info/sct	fixed value
code.coding.code	1..1	string	<snomed code>	Delivery Method Code

code.coding.display	1..1	string	<snomed display>	Delivery Method Description
code.text	0..1	string	<ערך ממערכת <מקור>	
reasonReference	1..*	Object		
reasonReference.reference	1..*	string	Obsevation/[Observation_Umbilicalcord]	Reference to Observation Umbilical Cord
subject	1..1	Object		
subject.reference	1..1	string	Patient/[Patient_Child_ID]	Refence to Patient logical ID
complicationDetail	0..*	Object		
complicationDetail.reference	0..*	string	Condition/[Condition_Umbilicalcord_Complications]	Reference to Condition Umbilical cord Complications
performedPeriod	1..1	Object		
performedPeriod.start	0..1	string	YYYY-DD-MMThh:mm:ss+z z:zz	The start time of the delivery
performedPeriod.end	0..1	string	YYYY-DD-MMThh:mm:ss+z z:zz	The end time of the delivery

Example:

```
{
  "resourceType": "Procedure",
  "id": "procedure-birth-id",
  "partOf":{
    "reference":"Procedure/[Procedure_Delivery]"
  },
  "status": "completed",
  "category": {
    "coding": [
      {
        "system": "http://snomed.info/sct",
        "code": "236973005",
        "display": "Delivery procedure"
      }
    ],
    {
      "system": "http://snomed.info/sct",
```

```

    "code": "700000006",
    "display": "Vaginal delivery of fetus "
  }
],
"text": "צורת לידה"
},
"code": {
  "coding": [
    {
      "system": "http://snomed.info/sct",
      "code": "177184002",
      "display": "Normal delivery procedure"
    }
  ],
  "text": "לידה ספונטנית"
},
"reasonReference": [
  {
    "reference":
"Obsevation/[Observation_Umbilicalcord]"
  }
],
"subject": {
  "reference": "Patient/[Patient_Child_ID]"
},
"performedPeriod": {
  "start": "2020-01-01",
  "end": "2020-09-01"
},
"complicationDetail": [
  {
    "reference":
"Condition/[Condition_Umbilicalcord_Complications]"
  }
]
}

```