
ProHerz FHIR Implementierungsleitfaden

Leitfaden zur Nutzung des FHIR Datenexports der
ProHerz App

ProCurement GmbH

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1 Einleitung

Dieses Dokument beschreibt wie der im Daten-Export enthaltene FHIR-Datensatz aufgebaut ist, welche Daten darin enthalten sind und wie diese kodiert sind.

Der Implementierungsleitfaden soll Anwendern helfen, die in der ProHerz App erfassten Daten in FHIR kompatible Systeme zu übernehmen und dort weiterzuverarbeiten.

2 FHIR Ressourcen

Die FHIR Ressourcen werden entsprechend der vom KBV herausgegebenen Spezifikation zur [Patientenkurzübersicht](#) abgebildet.

2.1 Bundle

Die vom Patienten erfassten Daten werden gebündelt als [Bundle-Resource](#) entsprechend dem vom KBV bereitgestellten Profil [KBV_PR_MIO_PS_Bundle](#) exportiert.

Das Bundle beinhaltet folgende Einträge.

- [Patientenkurzübersicht](#)
- [Patientenstammdaten](#)
- [Vitalparameter](#):
 - [Blutdruck](#)
 - [Gewicht](#)
 - [Herzfrequenz](#)
 - [Sauerstoffsättigung](#)
 - [Temperatur](#)
- [Medikamente](#)
- [Medikamenteneinnahmen](#)
- [Allergien](#)
- [Diagnosen](#)

Die genaue Spezifikation der genannten Einträge findet sich in den nachfolgenden Kapiteln.

2.2 Patientenkurzübersicht

Die Patientenkurzübersicht wird als **Composition-Resource** nach dem vom KBV bereitgestellten Profil **KBV_PR_MIO_PS_Composition** exportiert. Folgende Sektionen sind enthalten:

- Medikationsübersicht (Medikationsplan)
- Probleme (Diagnosen)
- Allergien und Unverträglichkeiten

Die Einträge sind als Referenzen auf die im Bundle enthaltenen Ressourcen hinterlegt.

Beispiel:

```
1  {
2    "fullUrl": "urn:token:123",
3    "resource": {
4      "resourceType": "Composition",
5      "id": "123",
6      "meta": {
7        "profile": [
8          "https://fhir.kbv.de/StructureDefinition/KBV_PR_MIO_PS_Composition|1.0.0"
9        ]
10     },
11     "language": "de",
12     "_language": {
13       "extension": [
14         {
15           "url": "https://fhir.kbv.de/StructureDefinition/KBV_EX_Base_Terminology_German",
16           "extension": [
17             {
18               "url": "content",
19               "valueString": "Deutsch"
20             }
21           ]
22         }
23       ]
24     },
25     "extension": [
26       {
27         "url": "https://fhir.kbv.de/StructureDefinition/KBV_EX_MIO_PS_Creation_Date",
28         "valueDateTime": "2021-11-06T14:27:49+01:00"
29       }
30     ],
31     "status": "final",
32     "type": {
33       "coding": [
34         {
35           "system": "http://snomed.info/sct",
36           "version": "http://snomed.info/sct/90000000000207008/version/20210131",
37           "code": "816080008",
38           "display": "International Patient Summary (foundation metadata concept)"
39         }
40       ]
41     },
42     "section": [
43       {
44         "title": "Allergien und Unverträglichkeiten",
45         "entry": [
46           {
47             "reference": "urn:biometric_profile_allergy:494281355.1"
48           },
49           {
50             "reference": "urn:biometric_profile_allergy:494281355.2"
51           }
52         ],
53         "code": {
54           "coding": [
55             {
56               "system": "http://snomed.info/sct",
57               "version": "http://snomed.info/sct/90000000000207008/version/20210131",
58               "code": "722446000",
59               "display": "Allergy record (record artifact)"
60             }
61           ]
62         },
63         "author": [
```

```
64     {
65       "reference": "urn:organisation:cc6732e8-b51c-4c9f-8e3f-c80143e5b39b"
66     }
67   ],
68 },
69 {
70   "title": "Medikationsübersicht",
71   "entry": [
72     {
73       "reference": "urn:medication_statement:1.1635915600"
74     },
75     {
76       "reference": "urn:medication_statement:2.1636002000"
77     }
78   ],
79   "code": {
80     "coding": [
81       {
82         "system": "http://snomed.info/sct",
83         "version": "http://snomed.info/sct/900000000000207008/version/20210131",
84         "code": "736378000",
85         "display": "Medication management plan (record artifact)"
86       }
87     ]
88   },
89   "author": [
90     {
91       "reference": "urn:organisation:cc6732e8-b51c-4c9f-8e3f-c80143e5b39b"
92     }
93   ],
94 },
95 {
96   "title": "Probleme",
97   "code": {
98     "coding": [
99       {
100        "system": "http://loinc.org",
101        "version": "2.69",
102        "code": "57852-6",
103        "display": "Problem list Narrative - Reported"
104      }
105    ]
106  },
107  "author": [
108    {
109      "reference": "urn:organisation:cc6732e8-b51c-4c9f-8e3f-c80143e5b39b"
110    }
111  ],
112  "entry": [
113    {
114      "reference": "urn:episode_of_care:1"
115    }
116  ]
117 },
118 ],
119 "subject": {
120   "reference": "urn:patient:2d931510-d99f-494a-8c67-87feb05e1594"
121 },
122 "date": "2021-11-06T14:27:49+01:00",
123 "author": [
124   {
125     "reference": "urn:organisation:cc6732e8-b51c-4c9f-8e3f-c80143e5b39b"
126   }
127 ],
128 "title": "Patientenkurzübersicht"
129 }
130 }
```

2.3 Patientenstammdaten

Die Patientenstammdaten werden als [Patient-Resource](#) entsprechend dem KBV Profil [KBV_PR_MIO_PS_Patient](#) exportiert.

Beispiel:

```
1 {
2   "resourceType": "Patient",
3   "id": "2d931510-d99f-494a-8c67-87feb05e1594",
```

```
4  "meta": {
5    "profile": [
6      "https://fhir.kbv.de/StructureDefinition/KBV_PR_MIO_PS_Patient|1.0.0"
7    ]
8  },
9  "extension": [
10   {
11     "url": "https://fhir.kbv.de/StructureDefinition/KBV_EX_MIO_PS_Insurance_State",
12     "valueCodeableConcept": {
13       "coding": [
14         {
15           "system": "urn:iso:std:iso:3166",
16           "version": "202004",
17           "code": "DEU",
18           "display": "Germany"
19         }
20       ],
21       "text": "Deutschland"
22     }
23   }
24 ],
25 "identifier": [
26   {
27     "use": "usual",
28     "type": {
29       "coding": [
30         {
31           "system": "http://terminology.hl7.org/CodeSystem/v2-0203",
32           "code": "MR"
33         }
34       ]
35     },
36     "value": "demo_patient@email.com",
37     "system": "https://procurement.com/NamingSystem/patient-identifier"
38   }
39 ],
40 "name": [
41   {
42     "use": "official",
43     "text": "Max Mustermann",
44     "family": "Mustermann",
45     "_family": {
46       "extension": [
47         {
48           "url": "http://hl7.org/fhir/StructureDefinition/humanname-own-name",
49           "valueString": "Mustermann"
50         }
51       ]
52     },
53     "given": [
54       "Max"
55     ]
56   }
57 ],
58 "telecom": [
59   {
60     "system": "phone",
61     "value": "0123456789"
62   },
63   {
64     "system": "phone",
65     "value": "987654321"
66   },
67   {
68     "value": "demo_patient@email.com",
69     "system": "email"
70   }
71 ],
72 "gender": "male",
73 "birthDate": "1996-11-05",
74 "address": [
75   {
76     "type": "both",
77     "line": [
78       "Nürnberger Straße 45"
79     ],
80     "city": "München",
81     "postalCode": "12345"
82   }
83 ],
84 "communication": [
85   {
86     "language": {
87       "coding": [
88         {
89           "system": "urn:ISO:639-3",
90           "version": "4.0.1",
```

```
91     "code": "deu",
92     "display": "German",
93     "_display": {
94       "extension": [
95         {
96           "url": "https://fhir.kbv.de/StructureDefinition/KBV_EX_Base_Terminology_German",
97           "extension": [
98             {
99               "url": "content",
100              "valueString": "deutsch"
101            }
102          ]
103        }
104      ]
105    },
106  ],
107  "text": "deutsch"
108},
109 "preferred": true
110 }
111 ]
112 }
113 }
```

2.4 Vitalparameter

Die Vitalparameter werden als [Observation-Resource](#) exportiert. Dabei sind die entsprechenden Vitalparameter typen wie folgt spezifiziert.

2.4.1 Blutdruck

Profil: [KBV_PR_MIO_PS_Observation_Blood_Pressure](#)

Einheit: mmHg

Beispiel:

```
1  {
2    "resourceType": "Observation",
3    "status": "final",
4    "id": "655",
5    "meta": {
6      "profile": [
7        "https://fhir.kbv.de/StructureDefinition/KBV_PR_MIO_PS_Observation_Blood_Pressure|1.0.0"
8      ]
9    },
10   "subject": {
11     "reference": "urn:patient:2d931510-d99f-494a-8c67-87feb05e1594"
12   },
13   "category": [
14     {
15       "coding": [
16         {
17           "system": "http://terminology.hl7.org/CodeSystem/observation-category",
18           "version": "4.0.1",
19           "code": "vital-signs",
20           "display": "Vital Signs"
21         }
22       ]
23     }
24   ],
25   "code": {
26     "coding": [
27       {
28         "system": "http://loinc.org",
29         "version": "2.69",
```

```
30     "code": "85354-9",
31     "display": "Blood pressure panel with all children optional",
32     "_display": {
33       "extension": [
34         {
35           "url": "https://fhir.kbv.de/StructureDefinition/KBV_EX_Base_Terminology_German",
36           "extension": [
37             {
38               "url": "content",
39               "valueString": "Blutdruck"
40             }
41           ]
42         }
43       ]
44     },
45   },
46   {
47     "system": "http://snomed.info/sct",
48     "version": "http://snomed.info/sct/900000000000207008/version/20200131",
49     "code": "75367002",
50     "display": "Blood pressure (observable entity)",
51     "_display": {
52       "extension": [
53         {
54           "url": "https://fhir.kbv.de/StructureDefinition/KBV_EX_Base_Terminology_German",
55           "extension": [
56             {
57               "url": "content",
58               "valueString": "Blutdruck"
59             }
60           ]
61         }
62       ]
63     }
64   }
65 ]
66 },
67 "effectiveDateTime": "2020-11-04T15:40:06+01:00",
68 "component": [
69   {
70     "code": {
71       "text": "systolisch",
72       "coding": [
73         {
74           "system": "http://loinc.org",
75           "version": "2.69",
76           "code": "8480-6",
77           "display": "Systolic blood pressure",
78           "_display": {
79             "extension": [
80               {
81                 "url": "https://fhir.kbv.de/StructureDefinition/KBV_EX_Base_Terminology_German",
82                 "extension": [
83                   {
84                     "url": "content",
85                     "valueString": "systolischer Blutdruck"
86                   }
87                 ]
88               }
89             ]
90           }
91         }
92       ],
93       "system": "http://snomed.info/sct",
94       "version": "http://snomed.info/sct/900000000000207008/version/20200131",
95       "code": "271649006",
96       "display": "Systolic blood pressure (observable entity)",
97       "_display": {
98         "extension": [
99           {
100             "url": "https://fhir.kbv.de/StructureDefinition/KBV_EX_Base_Terminology_German",
101             "extension": [
102               {
103                 "url": "content",
104                 "valueString": "systolischer Blutdruck"
105               }
106             ]
107           }
108         ]
109       }
110     }
111   ]
112 },
113 "valueQuantity": {
114   "value": 111,
115   "unit": "mm Hg",
116   "system": "http://unitsofmeasure.org",
```

```
117     "code": "mm[Hg]"
118   }
119 },
120 {
121   "code": {
122     "coding": [
123       {
124         "system": "http://loinc.org",
125         "version": "2.69",
126         "code": "8462-4",
127         "display": "Diastolic blood pressure",
128         "_display": {
129           "extension": [
130             {
131               "url": "https://fhir.kbv.de/StructureDefinition/KBV_EX_Base_Terminology_German",
132               "extension": [
133                 {
134                   "url": "content",
135                   "valueString": "diastolischer Blutdruck"
136                 }
137               ]
138             }
139           ]
140         }
141       }
142     ],
143     "system": "http://snomed.info/sct",
144     "version": "http://snomed.info/sct/900000000000207008/version/20200131",
145     "code": "271650006",
146     "display": "Diastolic blood pressure (observable entity)",
147     "_display": {
148       "extension": [
149         {
150           "url": "https://fhir.kbv.de/StructureDefinition/KBV_EX_Base_Terminology_German",
151           "extension": [
152             {
153               "url": "content",
154               "valueString": "diastolischer Blutdruck"
155             }
156           ]
157         }
158       ]
159     }
160   },
161   "text": "diastolisch"
162 },
163 "valueQuantity": {
164   "value": 100,
165   "unit": "mm Hg",
166   "system": "http://unitsofmeasure.org",
167   "code": "mm[Hg]"
168 }
169 }
170 ]
171 ]
172 }
```

2.4.2 Gewicht

Profil: [KBV_PR_MIO_PS_Observation_Body_Weight](#)

Einheit: kg

Beispiel:

```
1 {
2   "resourceType": "Observation",
3   "id": "934",
4   "meta": {
5     "profile": [
6       "https://fhir.kbv.de/StructureDefinition/KBV_PR_MIO_PS_Observation_Body_Weight|1.0.0"
7     ]
8   },
```



```
9   "status": "final",
10  "code": {
11    "coding": [
12      {
13        "system": "http://snomed.info/sct",
14        "version": "http://snomed.info/sct/900000000000207008/version/20200131",
15        "code": "27113001",
16        "display": "Body weight (observable entity)",
17        "_display": {
18          "extension": [
19            {
20              "url": "https://fhir.kbv.de/StructureDefinition/KBV_EX_Base_Terminology_German",
21              "extension": [
22                {
23                  "url": "content",
24                  "valueString": "Körpergewicht"
25                }
26              ]
27            }
28          ]
29        }
30      },
31      {
32        "system": "http://loinc.org",
33        "version": "2.69",
34        "code": "29463-7",
35        "display": "Body weight",
36        "_display": {
37          "extension": [
38            {
39              "url": "https://fhir.kbv.de/StructureDefinition/KBV_EX_Base_Terminology_German",
40              "extension": [
41                {
42                  "url": "content",
43                  "valueString": "Körpergewicht"
44                }
45              ]
46            }
47          ]
48        }
49      }
50    ]
51  },
52  "subject": {
53    "reference": "urn:patient:2d931510-d99f-494a-8c67-87feb05e1594"
54  },
55  "effectiveDateTime": "2021-11-05T09:00:00+01:00",
56  "valueQuantity": {
57    "value": 80,
58    "unit": "kg",
59    "system": "http://unitsofmeasure.org",
60    "code": "kg"
61  },
62  "bodySite": {
63    "coding": [
64      {
65        "system": "http://snomed.info/sct",
66        "version": "http://snomed.info/sct/900000000000207008/version/20200731",
67        "code": "38266002",
68        "display": "Entire body as a whole (body structure)",
69        "_display": {
70          "extension": [
71            {
72              "url": "https://fhir.kbv.de/StructureDefinition/KBV_EX_Base_Terminology_German",
73              "extension": [
74                {
75                  "url": "content",
76                  "valueString": "Gesamtkörper"
77                }
78              ]
79            }
80          ]
81        }
82      }
83    ]
84  }
85 }
```

2.4.3 Herzfrequenz

Profil: [KBV_PR_MIO_PS_Observation_Heart_Rate](#)

Einheit: /min

Beispiel:

```
1  {
2    "resourceType": "Observation",
3    "id": "851",
4    "meta": {
5      "profile": [
6        "https://fhir.kbv.de/StructureDefinition/KBV_PR_MIO_PS_Observation_Heart_Rate|1.0.0"
7      ]
8    },
9    "status": "final",
10   "category": [
11     {
12       "coding": [
13         {
14           "system": "http://terminology.hl7.org/CodeSystem/observation-category",
15           "version": "4.0.1",
16           "code": "vital-signs",
17           "display": "Vital Signs"
18         }
19       ]
20     }
21   ],
22   "code": {
23     "coding": [
24       {
25         "system": "http://loinc.org",
26         "version": "2.69",
27         "code": "8867-4",
28         "display": "Heart rate",
29         "_display": {
30           "extension": [
31             {
32               "url": "https://fhir.kbv.de/StructureDefinition/KBV_EX_Base_Terminology_German",
33               "extension": [
34                 {
35                   "url": "content",
36                   "valueString": "Herzfrequenz"
37                 }
38               ]
39             }
40           ]
41         }
42       }
43     ],
44     {
45       "system": "http://snomed.info/sct",
46       "version": "http://snomed.info/sct/900000000000207008/version/20200131",
47       "code": "364075005",
48       "display": "Heart rate (observable entity)",
49       "_display": {
50         "extension": [
51           {
52             "url": "https://fhir.kbv.de/StructureDefinition/KBV_EX_Base_Terminology_German",
53             "extension": [
54               {
55                 "url": "content",
56                 "valueString": "Herzfrequenz"
57               }
58             ]
59           }
60         ]
61       }
62     }
63   ],
64   "subject": {
65     "reference": "urn:patient:2d931510-d99f-494a-8c67-87feb05e1594"
66   },
67   "effectiveDateTime": "2020-11-05T11:36:45+01:00",
68   "valueQuantity": {
69     "value": 100,
70     "unit": "/min",
71     "system": "http://unitsofmeasure.org",
72     "code": "/min"
73   }
74 }
```

2.4.4 Sauerstoffsättigung

Profil: [KBV_PR_MIO_PS_Observation_Peripheral_Oxygen_Saturation](#)

Einheit: %

Beispiel:

```
1  {
2    "resourceType": "Observation",
3    "id": "851",
4    "meta": {
5      "profile": [
6        "https://fhir.kbv.de/StructureDefinition/KBV_PR_MIO_PS_Observation_Heart_Rate|1.0.0"
7      ]
8    },
9    "status": "final",
10   "category": [
11     {
12       "coding": [
13         {
14           "system": "http://terminology.hl7.org/CodeSystem/observation-category",
15           "version": "4.0.1",
16           "code": "vital-signs",
17           "display": "Vital Signs"
18         }
19       ]
20     }
21   ],
22   "code": {
23     "coding": [
24       {
25         "system": "http://loinc.org",
26         "version": "2.69",
27         "code": "8867-4",
28         "display": "Heart rate",
29         "_display": {
30           "extension": [
31             {
32               "url": "https://fhir.kbv.de/StructureDefinition/KBV_EX_Base_Terminology_German",
33               "extension": [
34                 {
35                   "url": "content",
36                   "valueString": "Herzfrequenz"
37                 }
38               ]
39             }
40           ]
41         }
42       }
43     ],
44     {
45       "system": "http://snomed.info/sct",
46       "version": "http://snomed.info/sct/900000000000207008/version/20200131",
47       "code": "364075005",
48       "display": "Heart rate (observable entity)",
49       "_display": {
50         "extension": [
51           {
52             "url": "https://fhir.kbv.de/StructureDefinition/KBV_EX_Base_Terminology_German",
53             "extension": [
54               {
55                 "url": "content",
56                 "valueString": "Herzfrequenz"
57               }
58             ]
59           }
60         ]
61       }
62     }
63   ],
64   "subject": {
65     "reference": "urn:patient:2d931510-d99f-494a-8c67-87feb05e1594"
66   },
67   "effectiveDateTime": "2020-11-05T11:36:45+01:00",
68   "valueQuantity": {
69     "value": 100,
```

```
70   "unit": "/min",
71   "system": "http://unitsofmeasure.org",
72   "code": "/min"
73 }
74 }
```

2.4.5 Temperatur

Profil: [KBV_PR_MIO_PS_Observation_Body_Temperature](#)

Einheit: Cel (Celsius)

Beispiel:

```
1  {
2    "resourceType": "Observation",
3    "id": "3598",
4    "meta": {
5      "profile": [
6        "https://fhir.kbv.de/StructureDefinition/KBV_PR_MIO_PS_Observation_Body_Temperature|1.0.0"
7      ]
8    },
9    "status": "final",
10   "category": [
11     {
12       "coding": [
13         {
14           "system": "http://terminology.hl7.org/CodeSystem/observation-category",
15           "version": "4.0.1",
16           "code": "vital-signs",
17           "display": "Vital Signs"
18         }
19       ]
20     }
21   ],
22   "code": {
23     "coding": [
24       {
25         "system": "http://loinc.org",
26         "version": "2.69",
27         "code": "8310-5",
28         "display": "Body temperature",
29         "_display": {
30           "extension": [
31             {
32               "url": "https://fhir.kbv.de/StructureDefinition/KBV_EX_Base_Terminology_German",
33               "extension": [
34                 {
35                   "url": "content",
36                   "valueString": "Körpertemperatur"
37                 }
38               ]
39             }
40           ]
41         }
42       }
43     ],
44     {
45       "system": "http://snomed.info/sct",
46       "version": "http://snomed.info/sct/900000000000207008/version/20210131",
47       "code": "386725007",
48       "display": "Body temperature (observable entity)",
49       "_display": {
50         "extension": [
51           {
52             "url": "https://fhir.kbv.de/StructureDefinition/KBV_EX_Base_Terminology_German",
53             "extension": [
54               {
55                 "url": "content",
56                 "valueString": "Körpertemperatur"
57               }
58             ]
59           }
60         ]
61       }
62     }
63   ]
64 }
```

```

60     }
61   }
62 ]
63 },
64 "subject": {
65   "reference": "urn:patient:2d931510-d99f-494a-8c67-87feb05e1594"
66 },
67 "effectiveDateTime": "2021-11-05T12:38:13+01:00",
68 "valueQuantity": {
69   "value": 37,
70   "unit": "Cel",
71   "_unit": {
72     "extension": [
73       {
74         "url": "https://fhir.kbv.de/StructureDefinition/KBV_EX_Base_Terminology_German",
75         "extension": [
76           {
77             "url": "content",
78             "valueString": "Grad Celcius"
79           }
80         ]
81       }
82     ]
83   },
84   "system": "http://unitsofmeasure.org",
85   "code": "Cel"
86 }
87 }

```

2.5 Medikationsplan und Medikamenteneinnahmen

2.5.1 Medikamente

Profil:	KBV_PR_MIO_PS_Medication_Free
Code:	Enthält Freitext mit Produktname und Dosis + Einheit
Form:	mögliche Codes: TAB, ILL, KAP, LOE, CRE, TRO, SPR
Ingredient:	Enthält Wirkstoff als Freitext

Beispiel:

```

1  {
2    "fullUrl": "urn:medication:1.1635829200",
3    "resource": {
4      "resourceType": "Medication",
5      "id": "1.1635829200",
6      "meta": {
7        "profile": [
8          "https://fhir.kbv.de/StructureDefinition/KBV_PR_MIO_PS_Medication_Free|1.0.0"
9        ]
10     },
11     "code": {
12       "text": "PRODUKTNAME, 2 g"
13     },
14     "form": {
15       "coding": [
16         {
17           "system": "https://fhir.kbv.de/CodeSystem/KBV_CS_SFHIR_KBV_DARREICHUNGSFORM",
18           "version": "1.08",
19           "code": "TAB",
20           "display": "Tabletten"
21         }
22       ],
23       "text": "Tabletten"
24     },
25     "ingredient": [
26     {

```

```
27     "itemCodeableConcept": {
28       "text": "WIRKSTOFF"
29     }
30   ]
31 }
32 }
33 }
```

2.5.2 Medikationsplan

Profil: [KBV_PR_MIO_PS_Medication_Statement_Administration_Instruction](#)

Dosage->Route: System: <http://snomed.info/sct>, Unterstützte Codes: 26643006(oral), 6064005(topical), 47625008(intravenous), 47625008(injection), 34206005(subcutaneous), 447694001(inhalation)

Dosage->Text: Enthält Einnahmeplan als Freitext, siehe Beispiel.

Beispiel:

```
1  {
2    "fullUrl": "urn:medication_statement:1.1635829200",
3    "resource": {
4      "resourceType": "MedicationStatement",
5      "id": "1.1635829200",
6      "meta": {
7        "profile": [
8          "https://fhir.kbv.de/StructureDefinition/KBV_PR_MIO_PS_Medication_Statement_Administration_Instruction|1.0.0"
9        ]
10     },
11     "status": "active",
12     "medicationReference": {
13       "reference": "urn:medication:1.1635829200"
14     },
15     "subject": {
16       "reference": "urn:patient:2d931510-d99f-494a-8c67-87feb05e1594"
17     },
18     "effectivePeriod": {
19       "start": "2021-11-02T06:00:00+01:00"
20     },
21     "dosage": [
22       {
23         "route": {
24           "coding": [
25             {
26               "system": "http://snomed.info/sct",
27               "version": "http://snomed.info/sct/900000000000207008/version/20210131",
28               "code": "26643006",
29               "display": "Oral route (qualifier value)",
30               "_display": {
31                 "extension": [
32                   {
33                     "url": "https://fhir.kbv.de/StructureDefinition/KBV_EX_Base_Terminology_German",
34                     "extension": [
35                       {
36                         "url": "content",
37                         "valueString": "oral"
38                       }
39                     ]
40                   }
41                 ]
42               }
43             }
44           ],
45           "text": "oral"
46         }
47       },
48       {
49         "text": "Taglich Morgens: 1, Mittags: 0, Abends: 1, Nachts: 0"
```

```
50     }
51   ]
52 }
53 }
```

2.5.3 Medikamenteneinnahmen

Profil: [KBV_PR_MIO_PS_Medication_Statement_Administration_Instruction](#)

Dosage->Route: System: <http://snomed.info/sct> Unterstützte Codes:26643006 (oral), 6064005 (topical), 47625008 (intravenous), 47625008 (injection), 34206005 (subcutaneous), 447694001 (inhalation)

Dosage->Text: Enthält Einnahme Zeitpunkt als Freitext.

Beispiel:

```
1  {
2  "resourceType": "MedicationStatement",
3  "id": "5",
4  "meta": {
5    "profile": [
6      "https://fhir.kbv.de/StructureDefinition/KBV_PR_MIO_PS_Medication_Statement_Administration_Instruction|1.0.0"
7    ]
8  },
9  "status": "active",
10 "medicationReference": {
11   "reference": "urn:medication:1.1635829200"
12 },
13 "subject": {
14   "reference": "urn:patient:2d931510-d99f-494a-8c67-87feb05e1594"
15 },
16 "effectivePeriod": {
17   "start": "2021-11-05",
18   "end": "2021-11-05"
19 },
20 "dosage": [
21   {
22     "route": {
23       "coding": [
24         {
25           "system": "http://snomed.info/sct",
26           "version": "http://snomed.info/sct/900000000000207008/version/20210131",
27           "code": "26643006",
28           "display": "Oral route (qualifier value)",
29           "_display": {
30             "extension": [
31               {
32                 "url": "https://fhir.kbv.de/StructureDefinition/KBV_EX_Base_Terminology_German",
33                 "extension": [
34                   {
35                     "url": "content",
36                     "valueString": "oral"
37                   }
38                 ]
39               }
40             ]
41           }
42         }
43       ]
44     },
45     "text": "oral"
46   },
47   {
48     "text": "Morgens: 1"
49   }
50 ]
51 }
```

2.6 Allergien

Die vom Patienten eingegebenen Allergien werden als [AllergyIntolerance-Resource](#) entsprechend dem Profil [KBV_PR_MIO_PS_Allergy_Intolerance_Free](#) abgelegt. Die Allergien werden dabei nur durch Freitext beschrieben und enthalten keinen Code.

Beispiel:

```
1  [
2  {
3    "resourceType": "AllergyIntolerance",
4    "id": "494281355.1",
5    "meta": {
6      "profile": [
7        "https://fhir.kbv.de/StructureDefinition/KBV_PR_MIO_PS_Allergy_Intolerance_Free|1.0.0"
8      ]
9    },
10   "clinicalStatus": {
11     "coding": [
12       {
13         "system": "http://terminology.hl7.org/CodeSystem/allergyintolerance-clinical",
14         "version": "4.0.1",
15         "code": "active",
16         "display": "Active",
17         "_display": {
18           "extension": [
19             {
20               "url": "https://fhir.kbv.de/StructureDefinition/KBV_EX_Base_Terminology_German",
21               "extension": [
22                 {
23                   "url": "content",
24                   "valueString": "Test"
25                 }
26               ]
27             }
28           ]
29         }
30       }
31     ]
32   },
33   "code": {
34     "text": "Allergie gegen Cashewnüsse"
35   },
36   "patient": {
37     "reference": "urn:patient:2d931510-d99f-494a-8c67-87feb05e1594"
38   }
39 }
40 ]
```

2.7 Diagnosen

Die vom Patienten eingegebenen Diagnosen werden als [Condition-Resource](#) entsprechend dem Profil [KBV_PR_MIO_PS_Condition_Problem_ICD10](#) abgelegt. Die Diagnosen werden dabei durch den ICD-Code nach dem Code-System <http://fhir.de/CodeSystem/dimdi/icd-10-gm> beschrieben sowie durch einen Freitext.

Beispiel:

```
1  {
2    "resourceType": "Condition",
3    "id": "8",
4    "meta": {
5      "profile": [
6        "https://fhir.kbv.de/StructureDefinition/KBV_PR_MIO_PS_Condition_Problem_ICD10|1.0.0"
7      ]
8    },
9    "clinicalStatus": {
10     "coding": [
```



```
11     {
12       "system": "http://terminology.hl7.org/CodeSystem/condition-clinical",
13       "version": "4.0.1",
14       "code": "active",
15       "display": "Active",
16       "_display": {
17         "extension": [
18           {
19             "url": "https://fhir.kbv.de/StructureDefinition/KBV_EX_Base_Terminology_German",
20             "extension": [
21               {
22                 "url": "content",
23                 "valueString": "Aktiv"
24               }
25             ]
26           }
27         ]
28       }
29     },
30   ],
31   "category": [
32     {
33       "coding": [
34         {
35           "system": "http://snomed.info/sct",
36           "version": "http://snomed.info/sct/900000000000207008/version/20210131",
37           "code": "282291009",
38           "display": "Diagnosis interpretation (observable entity)",
39           "_display": {
40             "extension": [
41               {
42                 "url": "https://fhir.kbv.de/StructureDefinition/KBV_EX_Base_Terminology_German",
43                 "extension": [
44                   {
45                     "url": "content",
46                     "valueString": "Diagnose"
47                   }
48                 ]
49               }
50             ]
51           }
52         }
53       ]
54     }
55   ],
56   "code": {
57     "coding": [
58       {
59         "system": "http://fhir.de/CodeSystem/dimdi/icd-10-gm",
60         "version": "2020",
61         "code": "I50",
62         "display": "Herzschwäche"
63       }
64     ],
65     "text": "Die Aufgabe des Herzens ist die Pumpfunktion. Sauerstoff- und nährstoffreiches Blut muss zu allen Organen, um deren Funktionen zu gewährleisten. Dabei pumpt die linke Herzkammer das Blut in den Körperkreislauf hinein. Ist die wichtige Pumpfunktion des Herzens beeinträchtigt, liegt eine Herzinsuffizienz oder Herzschwäche vor."
66   },
67   "subject": {
68     "reference": "urn:patient:bad85eb9-0713-4da7-8d36-07a8e4b00eab"
69   }
70 }
71 }
```