

Directory of Healthcare Services API (Phase 2 FHIR Map)

API Management

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1 Overview

Look at how mapping the data exposed by the Service Search can be transformed into FHIR Resources

FHIR Resource : HealthcareService

<https://simplifier.net/packages/fhir.r4.ukcore.stu1/1.0.0/files/806145/~overview>

2 Basic Mapping

FHIR Field Name	Quantity	Type	Service Search Field Map	Type
id	0..1	Unique Identifier	SearchKey	String
identifier	0..*	Identifier ¹	ODSCode	String
contained	0..1	Location	Address and GeoCode Lat Long	Element group
active	0..1	boolean ²	OrganisationStatus	String (true)
providedBy	0..1	Reference ³ (Organization ⁴)	ODSCode	String
category	0..*	CodeableConcept ⁵	OrganisationType	Element group
type	0..*	CodeableConcept ⁶	Services	Element group
specialty	0..*	CodeableConcept ⁷	Not Assigned	
location	0..*	Reference ⁸ (UK Core Location ⁹)	Use reference to above contained location	Reference
name	0..1	string ¹⁰	OrganisationName	String
comment	0..1	string ¹¹	SummaryText	String
extraDetails	0..1	markdown ¹²	Not Assigned	
photo	0..1	Attachment ¹³	Not Assigned	

1 <https://simplifier.net/packages/hl7.fhir.r4.core/4.0.1/files/package/structuredefinition-identifier.json>

2 <https://simplifier.net/packages/hl7.fhir.r4.core/4.0.1/files/package/structuredefinition-boolean.json>

3 <https://simplifier.net/packages/hl7.fhir.r4.core/4.0.1/files/package/structuredefinition-reference.json>

4 <https://simplifier.net/packages/fhir.r4.ukcore.stu1/1.0.0/files/package/ukcore-organization.json>

5 <https://simplifier.net/packages/hl7.fhir.r4.core/4.0.1/files/package/structuredefinition-codeableconcept.json>

6 <https://simplifier.net/packages/hl7.fhir.r4.core/4.0.1/files/package/structuredefinition-codeableconcept.json>

7 <https://simplifier.net/packages/hl7.fhir.r4.core/4.0.1/files/package/structuredefinition-codeableconcept.json>

8 <https://simplifier.net/packages/hl7.fhir.r4.core/4.0.1/files/package/structuredefinition-reference.json>

9 <https://simplifier.net/packages/fhir.r4.ukcore.stu1/1.0.0/files/package/ukcore-location.json>

10 <https://simplifier.net/packages/hl7.fhir.r4.core/4.0.1/files/package/structuredefinition-string.json>

11 <https://simplifier.net/packages/hl7.fhir.r4.core/4.0.1/files/package/structuredefinition-string.json>

12 <https://simplifier.net/packages/hl7.fhir.r4.core/4.0.1/files/package/structuredefinition-markdown.json>

13 <https://simplifier.net/packages/hl7.fhir.r4.core/4.0.1/files/package/structuredefinition-attachment.json>

FHIR Field Name	Quantity	Type	Service Search Field Map	Type
telecom	0..*	ContactPoint ¹⁴	Contacts	Element Group
coverageArea	0..*	Reference ¹⁵ (UK Core Location ¹⁶)	Use Contained Location	Reference
serviceProvisionCode	0..*	CodeableConcept ¹⁷	Not Assigned	
eligibility	0..*	BackboneElement ¹⁸	Not Assigned	
program	0..*	CodeableConcept ¹⁹	Not Assigned	
characteristic	0..*	CodeableConcept ²⁰	Facilities	Element Group
communication	0..*	CodeableConcept ²¹	Not Assigned	
referralMethod	0..*	CodeableConcept ²²	Not Assigned	
appointmentRequired	0..1	boolean ²³	Not Assigned	
availableTime	0..*	BackboneElement ²⁴	OpeningTimes	Element Group
notAvailable	0..*	BackboneElement ²⁵	Not Assigned	

14 <https://simplifier.net/packages/hl7.fhir.r4.core/4.0.1/files/package/structureddefinition-contactpoint.json>

15 <https://simplifier.net/packages/hl7.fhir.r4.core/4.0.1/files/package/structureddefinition-reference.json>

16 <https://simplifier.net/packages/fhir.r4.ukcore.stu1/1.0.0/files/package/ukcore-location.json>

17 <https://simplifier.net/packages/hl7.fhir.r4.core/4.0.1/files/package/structureddefinition-codeableconcept.json>

18 <https://simplifier.net/packages/hl7.fhir.r4.core/4.0.1/files/package/structureddefinition-backboneelement.json>

19 <https://simplifier.net/packages/hl7.fhir.r4.core/4.0.1/files/package/structureddefinition-codeableconcept.json>

20 <https://simplifier.net/packages/hl7.fhir.r4.core/4.0.1/files/package/structureddefinition-codeableconcept.json>

21 <https://simplifier.net/packages/hl7.fhir.r4.core/4.0.1/files/package/structureddefinition-codeableconcept.json>

22 <https://simplifier.net/packages/hl7.fhir.r4.core/4.0.1/files/package/structureddefinition-codeableconcept.json>

23 <https://simplifier.net/packages/hl7.fhir.r4.core/4.0.1/files/package/structureddefinition-boolean.json>

24 <https://simplifier.net/packages/hl7.fhir.r4.core/4.0.1/files/package/structureddefinition-backboneelement.json>

25 <https://simplifier.net/packages/hl7.fhir.r4.core/4.0.1/files/package/structureddefinition-backboneelement.json>

FHIR Field Name	Quantity	Type	Service Search Field Map	Type
availabilityExceptions	0..1	string ²⁶	Not Assigned	
endpoint	0..*	Reference ²⁷ (Endpoint ²⁸)	Future links to Digital Services API Endpoints	

²⁶ <https://simplifier.net/packages/hl7.fhir.r4.core/4.0.1/files/package/structureddefinition-string.json>

²⁷ <https://simplifier.net/packages/hl7.fhir.r4.core/4.0.1/files/package/structureddefinition-reference.json>

²⁸ <https://simplifier.net/packages/hl7.fhir.r4.core/4.0.1/files/package/structureddefinition-endpoint.json>

3 Data to consider

There are several areas to consider

3.1 Location

We do not currently have a location server, so we cannot include a reference into Location. My current choice is to use a FHIR Contained element that contains the Location.

3.2 Services

The provided services currently do not map to the FHIR services coded data, it may be that we move these to the **type** element

FHIR Example

```
{
  "coding": [
    {
      "system": "http://snomed.info/sct",
      "code": "394913002",
      "display": "Psychotherapy"
    }
  ]
}
```

Service Search

```
{
  "ServiceName": "Pharmacy Service (NHS): Medication review service",
  "ServiceCode": "SRV0261",
  "ServiceDescription": null,
  "Contacts": [],
  "ServiceProvider": {
    "ODSCode": null,
    "OrganisationName": null
  },
  "Treatments": [],
  "OpeningTimes": [],
  "AgeRange": [],
  "Metrics": []
}
```

3.3 Full FHIR Result

Full FHIR Response

```
{
  "resourceType": "Bundle",
  "id": "9A05D8C6-587D-4CD7-B360-C5560961C01F",
  "type": "searchset",
  "total": 3,
  "link": [
    {
      "relation": "self",
      "url": "https://api.service.nhs.uk/service-search-api"
    }
  ],
  "entry": [
    {
      "fullUrl": "https://api.service.nhs.uk/service-search-api/X106553",
      "resource": {
        "resourceType": "HealthcareService",
        "id": "X106553",
        "contained": [
          {
            "resourceType": "Location",
            "id": "Address",
            "description": "Main Address",
            "mode": "instance",
            "address": {
              "line": [
                "Waterside",
                "Berry Pomeroy"
              ],
              "city": "Totnes",
              "district": "Devon",
              "postalCode": "TQ9 6LH",
              "use": "work",
              "type": "physical"
            },
            "position": {
              "longitude": -3.6498708724975586,
              "latitude": 50.438747406005859,
              "altitude": 0
            },
            "physicalType": {
              "coding": [
                {
                  "system": "http://terminology.hl7.org/CodeSystem/location-physical-
type",
```

```

        "code": "bu",
        "display": "Building"
      }
    ]
  }
},
"identifier": [
  {
    "system": "https://fhir.nhs.uk/Id/ods-organization-code",
    "value": "1-1434783706"
  }
],
"active": true,
"providedBy": {
  "reference": "https://fhir.nhs.uk/Id/ods-organization-code/1-1434783706",
  "display": "Lexicon Healthcare Limited"
},
"category": [
  {
    "coding": [
      {
        "system": "https://api.service.nhs.uk/service-search-api",
        "code": "TRU",
        "display": "SocialCare Trust"
      }
    ]
  }
],
"location": [
  {
    "reference": "#Address"
  }
],
"name": "Lexicon Healthcare Limited",
"coverageArea": [
  {
    "reference": "#Address"
  }
],
"telecom": [
  {
    "system": "phone",
    "value": "01803867800",
    "use": "work"
  },
  {
    "system": "url",
    "value": "www.lexiconhealthcare.co.uk",
    "use": "work"
  }
]
]

```

```

    }
  },
  {
    "fullUrl": "https://api.service.nhs.uk/service-search-api/X107012",
    "resource": {
      "resourceType": "HealthcareService",
      "id": "X107012",
      "contained": [
        {
          "resourceType": "Location",
          "id": "Address",
          "description": "Main Address",
          "mode": "instance",
          "address": {
            "line": [
              "Park Road",
              "Waterloo"
            ],
            "city": "Liverpool",
            "postalCode": "L22 3XR",
            "use": "work",
            "type": "physical"
          },
          "position": {
            "longitude": -3.02020001411438,
            "latitude": 53.476718902587891,
            "altitude": 0
          },
          "physicalType": {
            "coding": [
              {
                "system": "http://terminology.hl7.org/CodeSystem/location-physical-
type",
                "code": "bu",
                "display": "Building"
              }
            ]
          }
        }
      ]
    }
  },
  "identifier": [
    {
      "system": "https://fhir.nhs.uk/Id/ods-organization-code",
      "value": "RW451"
    }
  ],
  "active": true,
  "providedBy": {
    "reference": "https://fhir.nhs.uk/Id/ods-organization-code/RW451",
    "display": "South Sefton Neighbourhood Centre"
  },
  "category": [

```

```

{
  "coding": [
    {
      "system": "https://api.service.nhs.uk/service-search-api",
      "code": "CLI",
      "display": "Clinic"
    }
  ]
},
"location": [
  {
    "reference": "#Address"
  }
],
"name": "South Sefton Neighbourhood Centre",
"coverageArea": [
  {
    "reference": "#Address"
  }
],
"telecom": [
  {
    "system": "phone",
    "value": "0151 330 8500",
    "use": "work"
  },
  {
    "system": "url",
    "value": "https://www.merseycare.nhs.uk/our-services/our-sites/south-sefton/south-sefton-neighbourhood-centre",
    "use": "work"
  }
],
"comment": "<p>The following services are available at this location:</p>\r\n<ul>\r\n<li>Community mental health service</li>\r\n<li>Older people's inpatient services</li>\r\n<li>Learning disability community team</li>\r\n</ul>\r\n<p> </p>",
"type": [
  {
    "coding": [
      {
        "system": "https://api.service.nhs.uk/service-search-api",
        "code": "SRV0020",
        "display": "Community mental health services"
      }
    ]
  }
],
{
  "coding": [
    {
      "system": "https://api.service.nhs.uk/service-search-api",

```

```

        "code": "SRV0060",
        "display": "Memory services"
      }
    ],
  },
  {
    "coding": [
      {
        "system": "https://api.service.nhs.uk/service-search-api",
        "code": "SRV0069",
        "display": "Older people's services"
      }
    ]
  }
],
"availableTime": [
  {
    "daysOfWeek": [
      "fri"
    ],
    "availableStartTime": "09:00:00",
    "availableEndTime": "17:00:00"
  },
  {
    "daysOfWeek": [
      "mon"
    ],
    "availableStartTime": "09:00:00",
    "availableEndTime": "17:00:00"
  },
  {
    "daysOfWeek": [
      "thu"
    ],
    "availableStartTime": "09:00:00",
    "availableEndTime": "17:00:00"
  },
  {
    "daysOfWeek": [
      "tue"
    ],
    "availableStartTime": "09:00:00",
    "availableEndTime": "17:00:00"
  },
  {
    "daysOfWeek": [
      "wed"
    ],
    "availableStartTime": "09:00:00",
    "availableEndTime": "17:00:00"
  }
],

```

```
"characteristic": [  
  {  
    "coding": [  
      {  
        "display": "Disabled parking"  
      }  
    ]  
  },  
  {  
    "coding": [  
      {  
        "display": "Disabled WC"  
      }  
    ]  
  },  
  {  
    "coding": [  
      {  
        "display": "Step free access"  
      }  
    ]  
  },  
  {  
    "coding": [  
      {  
        "display": "Wheelchair access"  
      }  
    ]  
  },  
  {  
    "coding": [  
      {  
        "display": "Baby changing facility"  
      }  
    ]  
  },  
  {  
    "coding": [  
      {  
        "display": "Access to TV"  
      }  
    ]  
  },  
  {  
    "coding": [  
      {  
        "display": "Mobile phones permitted"  
      }  
    ]  
  },  
  {  
    "coding": [  

```

```

        {
          "display": "Translation services"
        }
      ]
    }
  ]
},
{
  "fullUrl": "https://api.service.nhs.uk/service-search-api/X107062",
  "resource": {
    "resourceType": "HealthcareService",
    "id": "X107062",
    "contained": [
      {
        "resourceType": "Location",
        "id": "Address",
        "description": "Main Address",
        "mode": "instance",
        "address": {
          "line": [
            "255 Church Street"
          ],
          "city": "Blackpool",
          "district": "Lancashire",
          "postalCode": "FY1 3PB",
          "use": "work",
          "type": "physical"
        },
        "position": {
          "longitude": -3.0414900779724121,
          "latitude": 53.818561553955078,
          "altitude": 0
        },
        "physicalType": {
          "coding": [
            {
              "system": "http://terminology.hl7.org/CodeSystem/location-physical-
type",
              "code": "bu",
              "display": "Building"
            }
          ]
        }
      }
    ]
  },
  "identifier": [
    {
      "system": "https://fhir.nhs.uk/Id/ods-organization-code",
      "value": "AKR05"
    }
  ],

```

```

"active": true,
"providedBy": {
  "reference": "https://fhir.nhs.uk/Id/ods-organization-code/AKR05",
  "display": "Lancashire Women - Blackpool Centre"
},
"category": [
  {
    "coding": [
      {
        "system": "https://api.service.nhs.uk/service-search-api",
        "code": "CLI",
        "display": "Clinic"
      }
    ]
  }
],
"location": [
  {
    "reference": "#Address"
  }
],
"name": "Lancashire Women - Blackpool Centre",
"coverageArea": [
  {
    "reference": "#Address"
  }
],
"telecom": [
  {
    "system": "email",
    "value": "talktous@lancashirewomen.org",
    "use": "work"
  },
  {
    "system": "phone",
    "value": "0300 330 1354",
    "use": "work"
  },
  {
    "system": "url",
    "value": "https://www.lancashirewomen.org",
    "use": "work"
  }
]
}

```