



# UMC IDMP API: Publication of IDMP identifiers

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2025-12-04

# Agenda

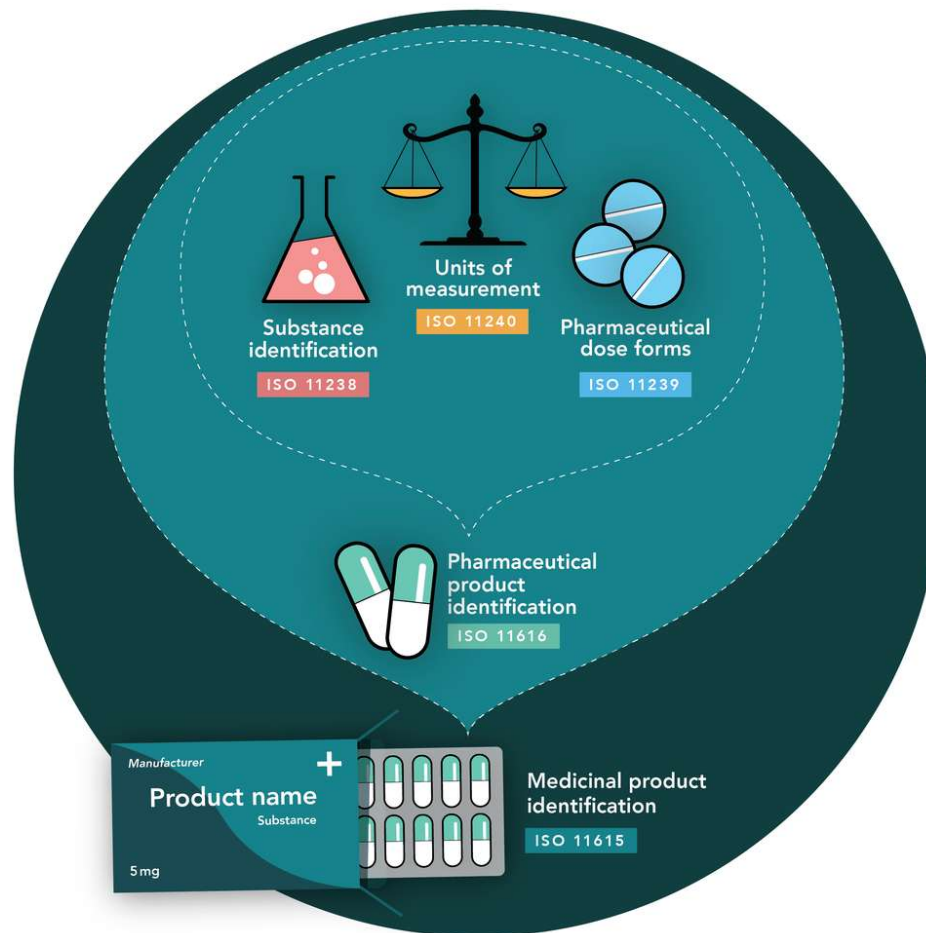
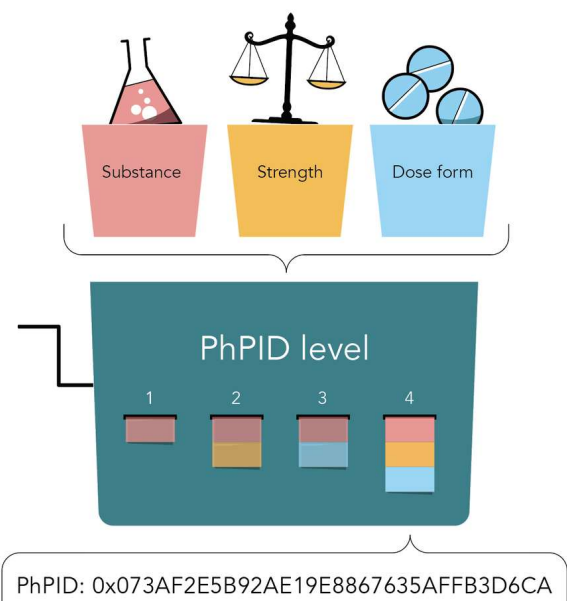
- Introduction UMC
- IDMP and GIDWG
- Introduction to UMC's IDMP API
- UMC's planned development

# THIS IS UMC

- **Independent, self-funded, non-profit foundation** (est. 1978) dedicated to safer use of medicines and vaccines.
- **Through an agreement** between the Government of Sweden and the World Health Organization (WHO), UMC operates the Programme for International Drug Monitoring
- **Supports over 180 member countries** and regions in strengthening safety surveillance, and maintains VigiBase, the WHO global database of adverse event reports.
- **Provides international standards** and related digital solutions for secure exchange of pharmacovigilance data, including a global medicine and vaccine terminology for identification of medicinal products.
- **Advances the science of pharmacovigilance** and transforms its practice through technological innovation.



# IDMP - ISO identification of medicinal products



# Global IDMP Working Group

- **Launched in 2021** — outcome of the 2019 WHO IDMP Workshop (Geneva)
- **Why?**  
A global body demonstrating real-world IDMP implementation was needed.
- **The Focus:**
  - Deliver projects aiming for implementation of IDMP to support **global use cases (pharmacovigilance, cross-border prescriptions, drug shortages)**
  - Build a practical framework: business rules, best practices, and operating model



# GIDWG – Who are we?



EUROPEAN MEDICINES AGENCY  
SCIENCE MEDICINES HEALTH



Health  
Canada

Santé  
Canada



Observer



独立行政法人 医薬品医療機器総合機構  
Pharmaceuticals and Medical Devices Agency



MINISTERIO DE  
SALUD



Additional SMEs from WHO-PVG, EDQM, WHO-INN, USP, HL7, HMA-SVG, US-NIH, ISO/CEN, CHTADEL

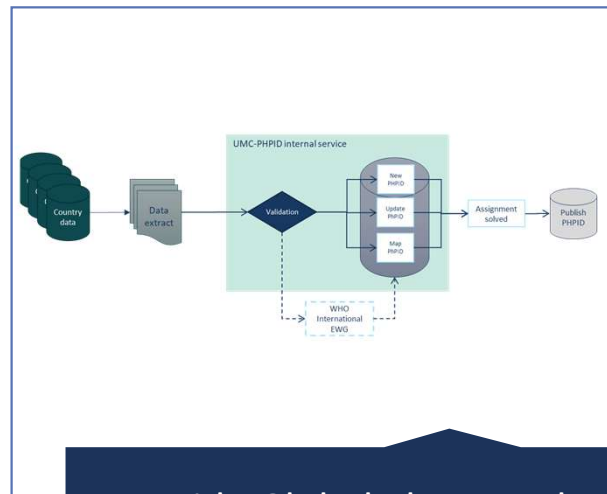
More information?  
Contact:  
[idmp@who-umc.org](mailto:idmp@who-umc.org)



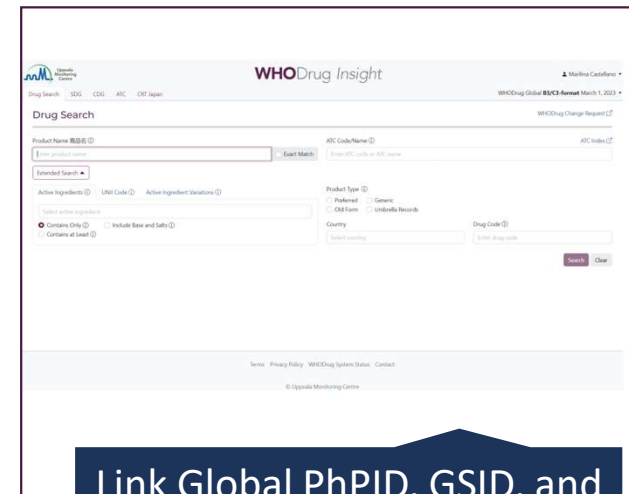
# UMC's role



Act as ambassador and collaborator



Provide Global PhPID and GSID

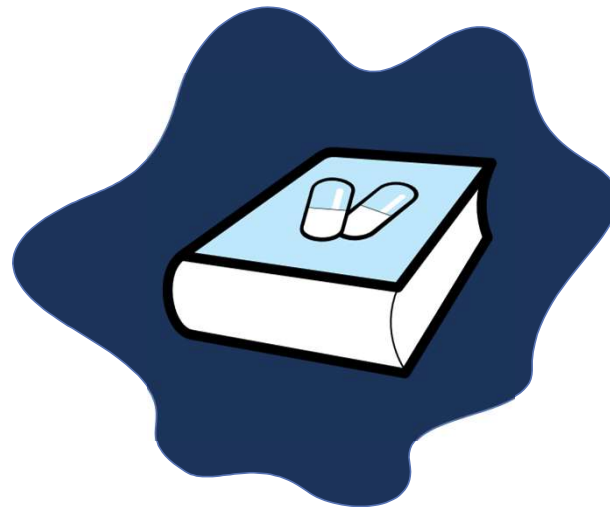


Link Global PhPID, GSID, and medicinal products via WHODrug Global



# WHODrug Global – What?

- A global and standardised terminology for medicines and vaccines.
- Developed, maintained and distributed by Uppsala Monitoring Centre.
- From March 2026, also including global PhPIDs.



# Global PhPID and connection to medicinal products

## Pharmaceutical products

## Medicinal products

Tozinameran

30 ug/ml  
Tozinameran

Solution\*  
Tozinameran

Solution\*  
30 ug/ml  
Tozinameran

GSID from  
UMC-SRS

Substance

Substance

Substance

Substance

Strength

Dose form

Strength

Substance

Dose form

Strength

MAH

Trade name

Country of Sales



PhPID level 1

PhPID level 2

PhPID level 3

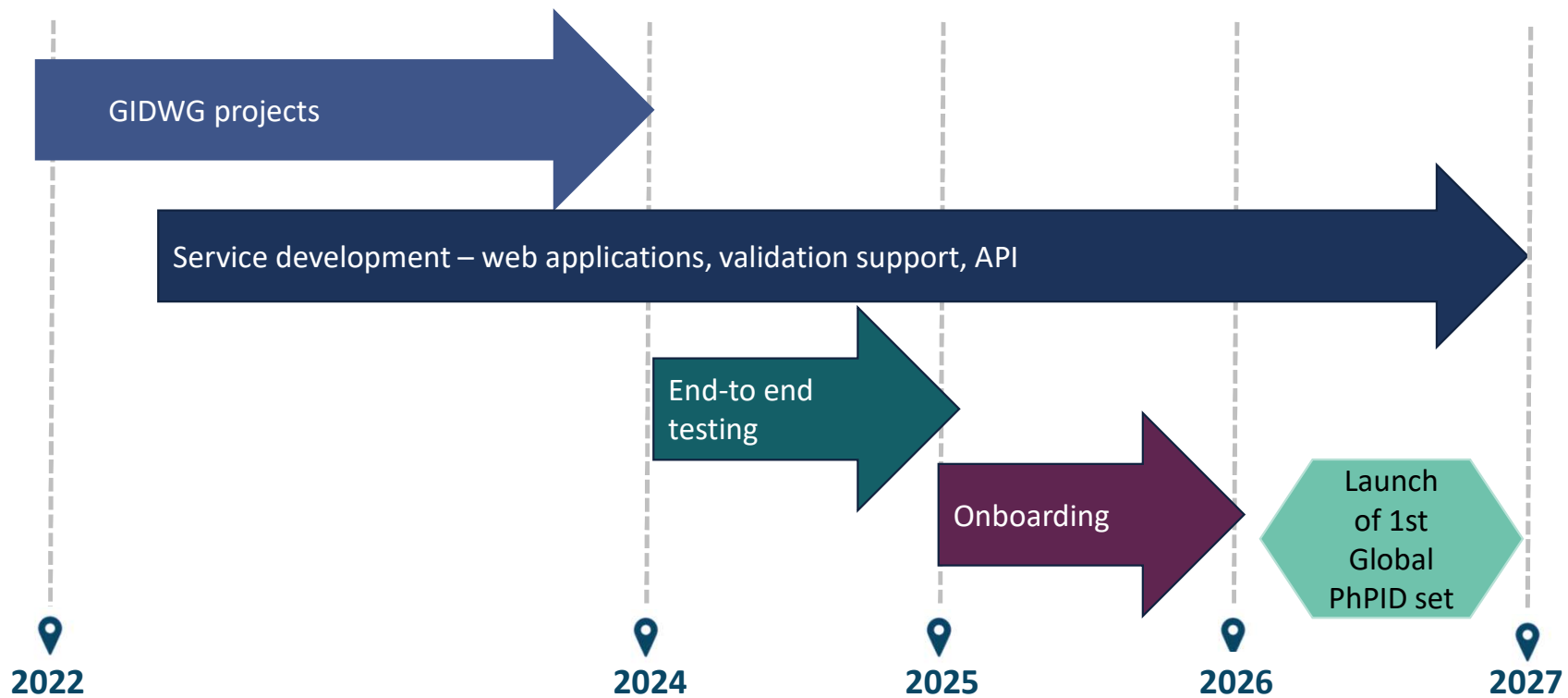
PhPID level 4

WHODrug

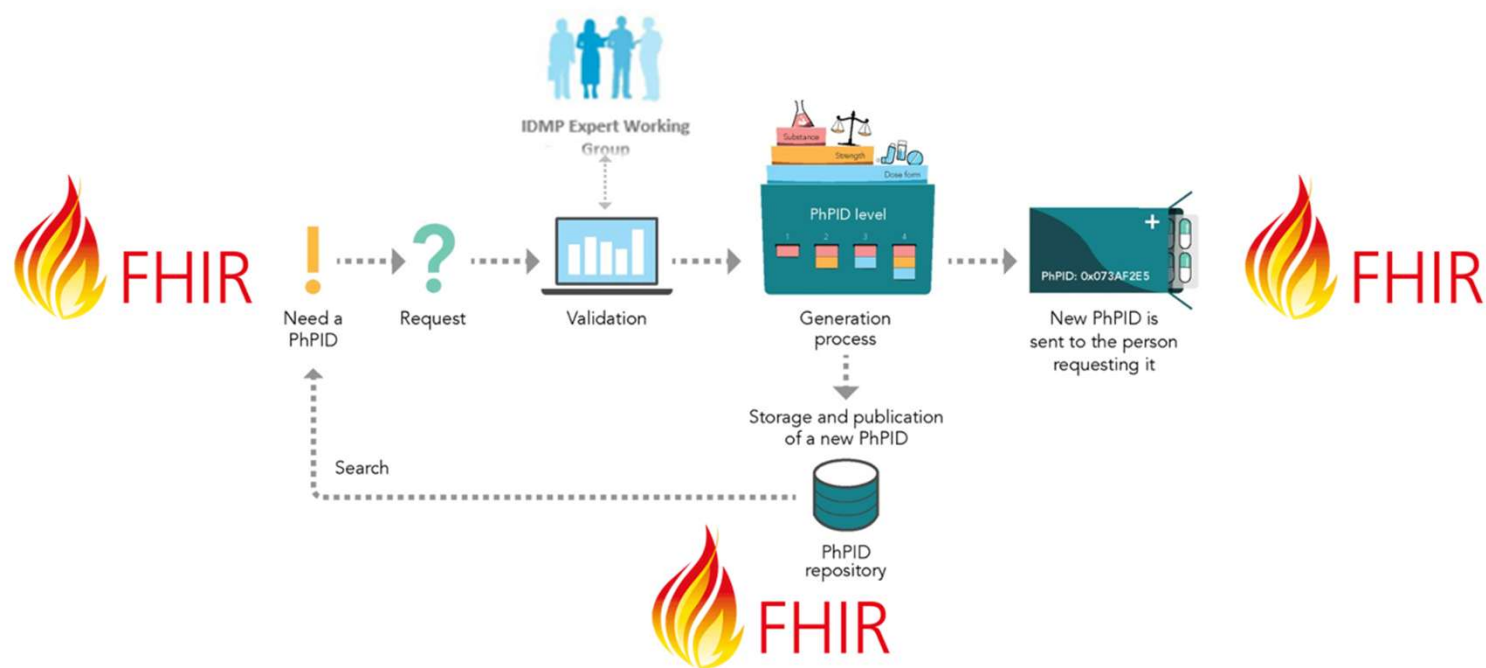
National MPID  
Eg NDC, PMS  
code

\*Dose form characteristics: Solution, Injection, Parenteral, Conventional

# Timeline IDMP project



# PhPID Operating Model



# Technical readiness - IDMP API

## IDMP API request

- Possible to request Global PhPIDs by sending medicinal product information as FHIR **Tasks**
- Possible to receive **AdministrableProductDefinition** representing PhPID as a task response

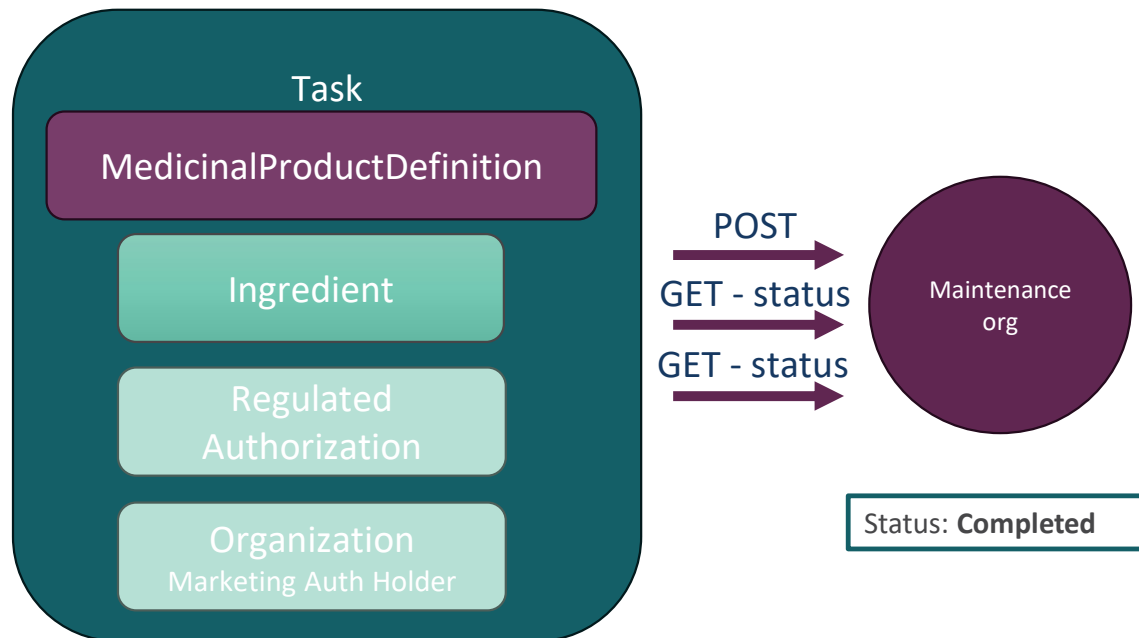
## IDMP API publish

- Possible to GET all **AdministrableProductDefinition** resources (PhPIDs) that are published
- Possible to GET all **SubstanceDefinition** resources (GSIDs) that are published
- Possible to GET all **MedicinalProductDefinition** resources that are published

2026

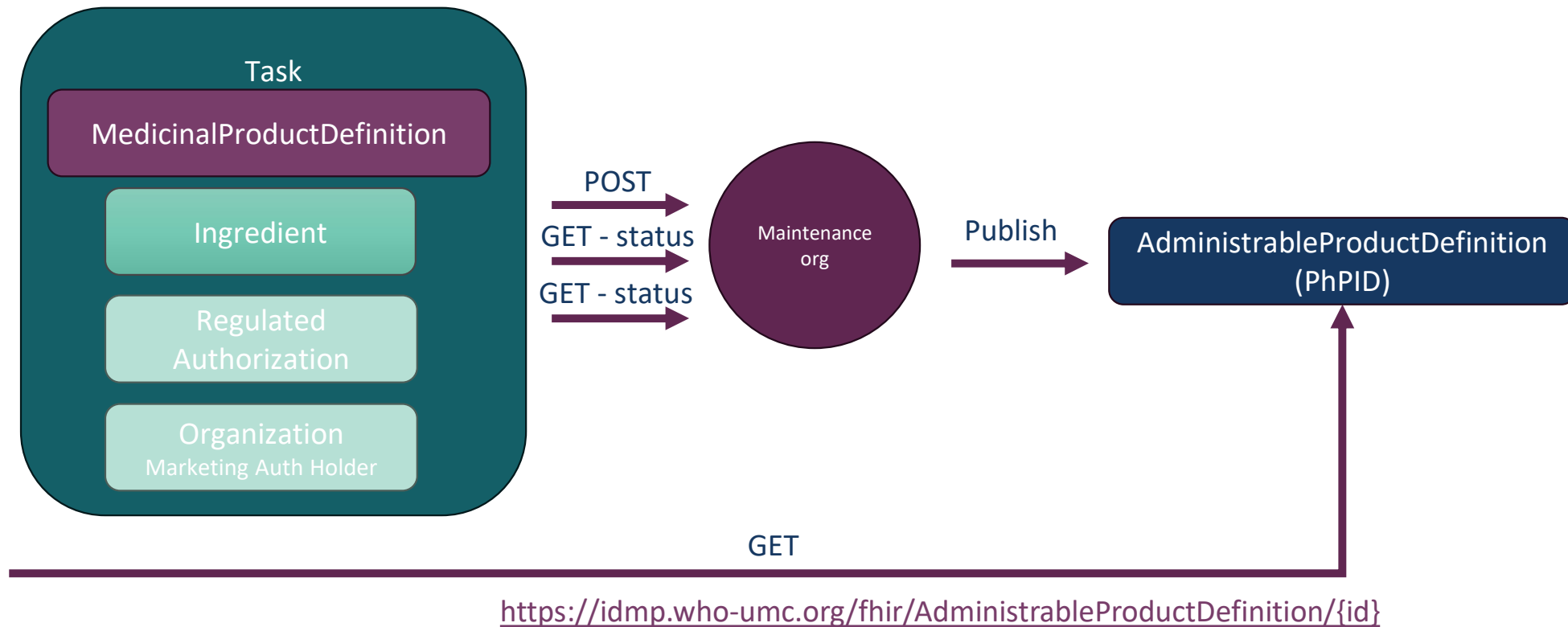


# PhPID Request process



<https://idmp.who-umc.org/fhir/Task/{id}>

# PhPID Request process



# IDMP Publish API – Available endpoints and Resources

/AdministrableProductDefinition/ - GET  
/AdministrableProductDefinition/{phpid} - GET

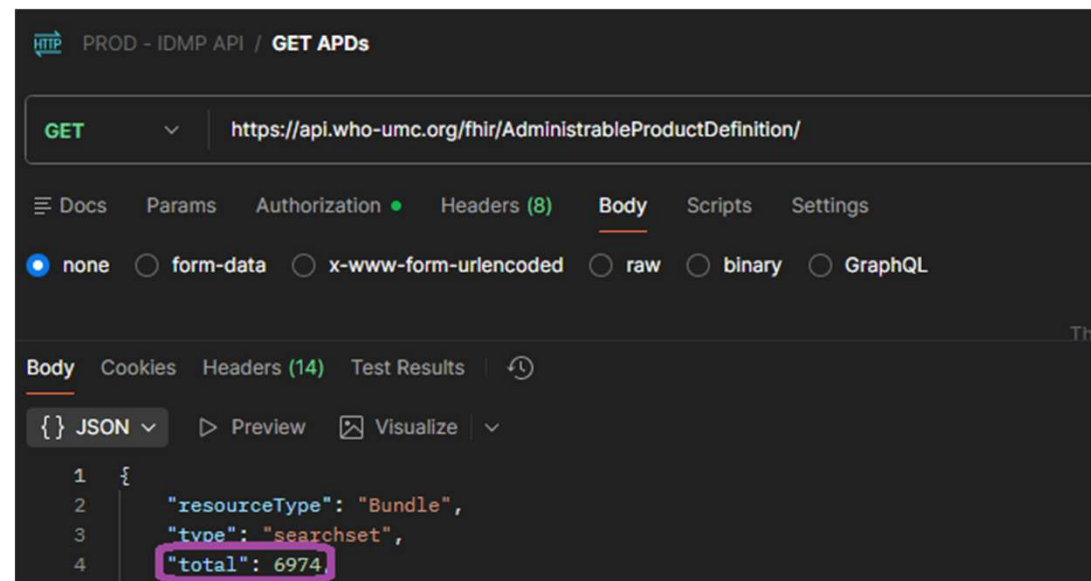
/SubstanceDefinition/ - GET  
/SubstanceDefinition/{gsid} - GET

/MedicinalProductDefinition/ - GET  
/MedicinalProductDefinition/{productid} - GET



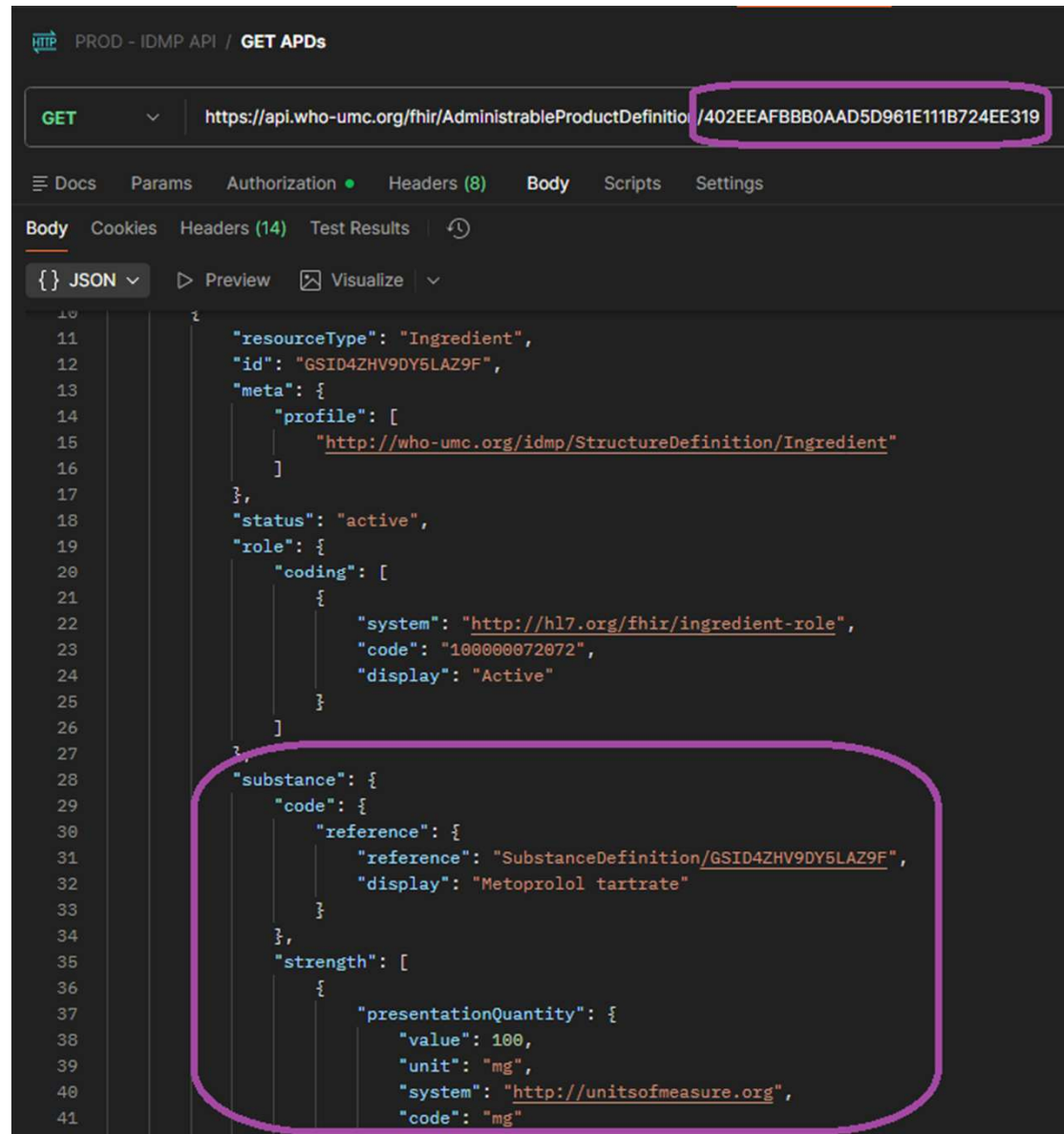
# AdministrableProductDefinition (PhPIDs)

Available published PhPIDs today: ~7000



# PhPID level 4

- Substance and strength



```
HTTP PROD - IDMP API / GET APDs

GET https://api.who-umc.org/fhir/AdministrableProductDefinition/402EEAFBBB0AAD5D961E111B724EE319

Docs Params Authorization Headers (8) Body Scripts Settings

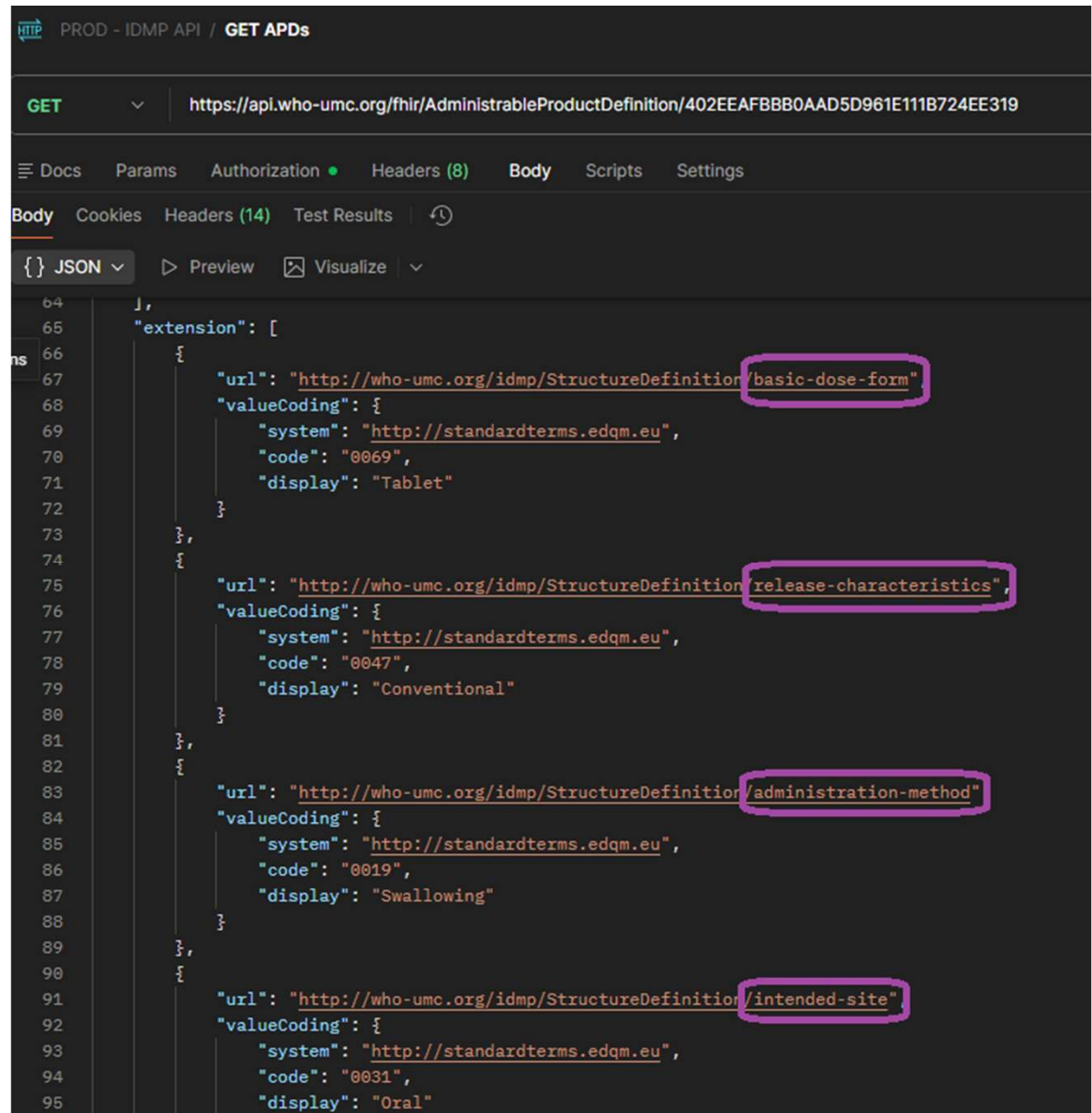
Body Cookies Headers (14) Test Results

JSON Preview Visualize

{
  "resourceType": "Ingredient",
  "id": "GSID4ZHV9DY5LAZ9F",
  "meta": {
    "profile": [
      "http://who-umc.org/idmp/StructureDefinition/Ingredient"
    ]
  },
  "status": "active",
  "role": {
    "coding": [
      {
        "system": "http://hl7.org/fhir/ingredient-role",
        "code": "100000072072",
        "display": "Active"
      }
    ]
  },
  "substance": {
    "code": {
      "reference": {
        "reference": "SubstanceDefinition/GSID4ZHV9DY5LAZ9F",
        "display": "Metoprolol tartrate"
      }
    }
  },
  "strength": [
    {
      "presentationQuantity": {
        "value": 100,
        "unit": "mg",
        "system": "http://unitsofmeasure.org",
        "code": "mg"
      }
    }
  ]
}
```

# PhPID level 4

- Substance and strength
- Dose form



```
HTTP PROD - IDMP API / GET APDs

GET https://api.who-umc.org/fhir/AdministrableProductDefinition/402EEAFBBB0AAD5D961E11B724EE319

Body Cookies Headers (14) Test Results

JSON Preview Visualize

64 J,
65 "extension": [
66   {
67     "url": "http://who-umc.org/idmp/StructureDefinition/basic-dose-form",
68     "valueCoding": {
69       "system": "http://standardterms.edqm.eu",
70       "code": "0069",
71       "display": "Tablet"
72     }
73   },
74   {
75     "url": "http://who-umc.org/idmp/StructureDefinition/release-characteristics",
76     "valueCoding": {
77       "system": "http://standardterms.edqm.eu",
78       "code": "0047",
79       "display": "Conventional"
80     }
81   },
82   {
83     "url": "http://who-umc.org/idmp/StructureDefinition/administration-method",
84     "valueCoding": {
85       "system": "http://standardterms.edqm.eu",
86       "code": "0019",
87       "display": "Swallowing"
88     }
89   },
90   {
91     "url": "http://who-umc.org/idmp/StructureDefinition/intended-site",
92     "valueCoding": {
93       "system": "http://standardterms.edqm.eu",
94       "code": "0031",
95       "display": "Oral"
96     }
97   }
98 ]
```

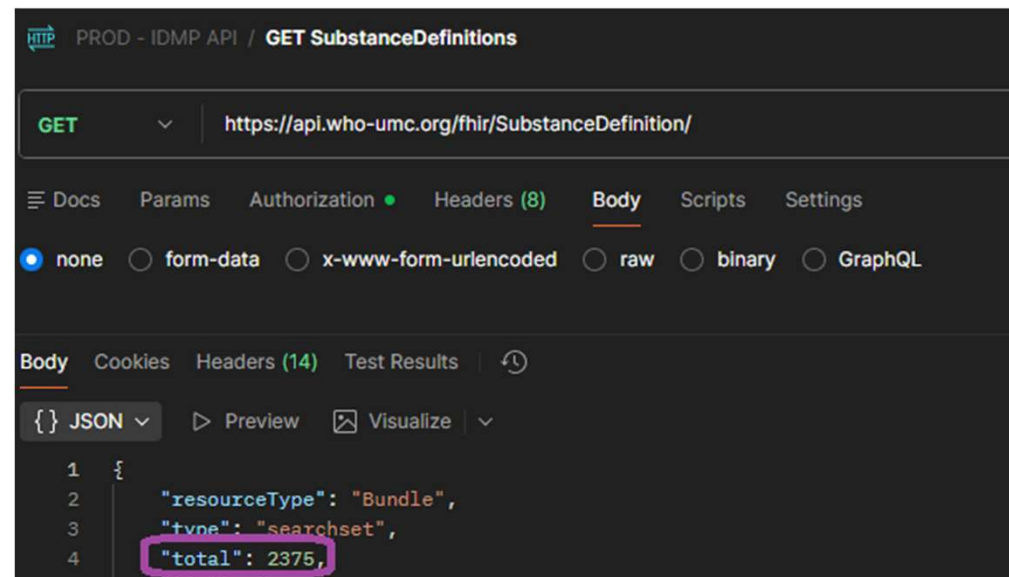
# PhPID level 4

- Substance and strength
- Dose form
- PhPID level 1-3

```
{
  "url": "http://who-umc.org/idmp/StructureDefinition/parent-phpid",
  "valueReference": {
    "reference": "AdministrableProductDefinition/0AE75F034C206DBB8CB8CF82A230A7DBE",
    "identifier": {
      "type": {
        "coding": [
          {
            "system": "http://who-umc.org/idmp/CodeSystem/php-level",
            "code": "PhPIDLevel1"
          }
        ]
      },
      "system": "http://who-umc.org/idmp/phpid",
      "value": "0AE75F034C206DBB8CB8CF82A230A7DBE"
    }
  }
}
```

# SubstanceDefinition (GSIDs)

Available published GSIDs today: ~2400



# GSID

- Substance name

HTTP PROD - IDMP API / GET SubstanceDefinitions

GET <https://api.who-umc.org/fhir/SubstanceDefinition/GSID4ZHV9DY5LAZ9F>

Docs Params Authorization Headers (8) Body Scripts Settings

Body Cookies Headers (14) Test Results

{ } JSON Preview Visualize

```
77 {
78   "name": "Metoprolol tartrate",
79   "status": {
80     "coding": [
81       {
82         "system": "http://hl7.org/fhir/publication-status",
83         "code": "active"
84       }
85     ],
86     "text": "Active"
87   },
88   "preferred": false,
89   "language": [
90     {
91       "coding": [
92         {
93           "system": "urn:ietf:bcp:47",
94           "code": "en"
95         }
96       ]
97     }
98   ],
99   "official": [
100     {
101       "authority": {
102         "coding": [
103           {
104             "system": "http://hl7.org/fhir/substance-name-authority",
105             "code": "UMC-SRS"
106           }
107         ],
108         "text": "UMC-SRS"
```

# GSID

- Substance name
- Reference to other codes
  - SMS-ID will be available!

```

43  },
44  "code": [
45    {
46      "code": {
47        "coding": [
48          {
49            "system": "https://open.fda.gov/data/unii",
50            "code": "W5S57Y3A5L"
51          }
52        ]
53      }
54    },
55    {
56      "code": {
57        "coding": [
58          {
59            "system": "https://open.fda.gov/data/usan",
60            "code": "1000000090389"
61          }
62        ]
63      }
64    },
65    {
66      "code": {
67        "coding": [
68          {
69            "system": "http://terminology.hl7.org/CodeSystem/CAS",
70            "code": "56392-17-7"
71          }
72        ]
73      }
74    }
  ]

```

# GSID

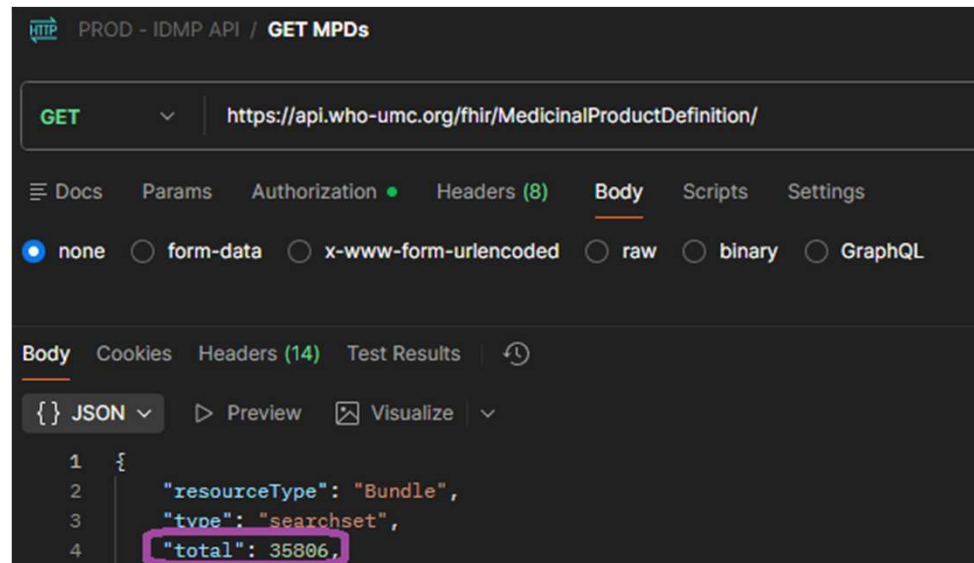
- Substance name and structure
- Reference to other codes
  - SMS-ID will be available!
- Reference to base substance if salt

```
"relationship": [  
  {  
    "type": {  
      "coding": [  
        {  
          "system": "http://hl7.org/fhir/substance-relationship-type",  
          "code": "Salt"  
        }  
      ],  
      "text": "Salt to parent"  
    },  
    "source": [  
      {  
        "reference": "SubstanceDefinition/GSID1MLV0V233D96L",  
        "system": "https://gupri-idmp.who-umc.org/data/substance",  
        "value": "GSID1MLV0V233D96L"  
      }  
    ]  
  }  
]
```



# MedicinalProductDefinition (link between PhPID and product)

Available published MPDs today: ~36000



```
HTTP PROD - IDMP API / GET MPDs

GET https://api.who-umc.org/fhir/MedicinalProductDefinition/

Docs Params Authorization Headers (8) Body Scripts Settings
none form-data x-www-form-urlencoded raw binary GraphQL

Body Cookies Headers (14) Test Results
{} JSON Preview Visualize

1 {
2   "resourceType": "Bundle",
3   "type": "searchset",
4   "total": 35806,
```

# MPD

- UMC Product ID
  - Local/national/regional MPID will be available!

```
"entry": [  
  {  
    "fullUrl": "https://idmp.who-umc.org/fhir/MedicinalProductDefinition/UMCPIDDEU390YM8S5EBZ94",  
    "resource": {  
      "resourceType": "MedicinalProductDefinition",  
      "id": "UMCPIDDEU390YM8S5EBZ94",  
      "identifier": [  
        {  
          "system": "http://who-umc.org/idmp/CodeSystem/whodrugid",  
          "value": "UMCPIDDEU390YM8S5EBZ94"  
        }  
      ],  
      "type": {  
        "coding": [  
          {  
            "system": "http://hl7.org/fhir/medicinal-product-type",  
            "code": "MedicinalProduct"  
          }  
        ]  
      },  
      "domain": {  
        "coding": [  
          {  
            "system": "http://hl7.org/fhir/medicinal-product-domain",  
            "code": "Human"  
          }  
        ]  
      },  
      "text": "Human use"  
    }  
  }  
]
```

# MPD

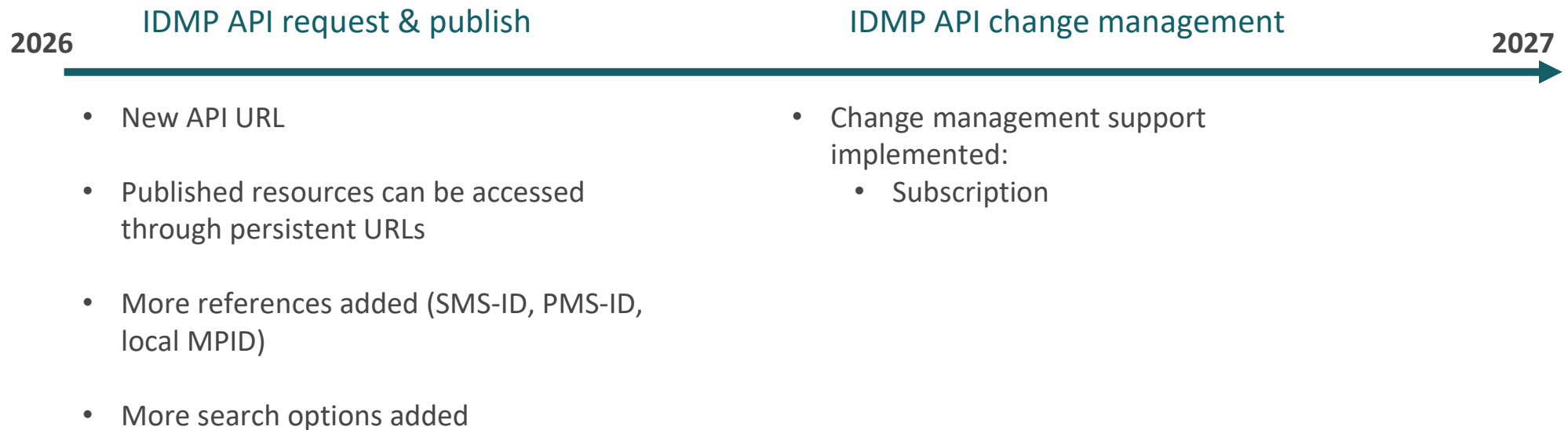
- UMC Product ID
  - Local/national/regional MPID will be available!
- Link to PhPID level 4
- Product name

```
"classification": [  
  {  
    "coding": [  
      {  
        "system": "http://who-umc.org/idmp/level4-phpid",  
        "code": "77F1DEF6B00B59B69882E3A8D6E0E11D"  
      }  
    ]  
  }  
],  
"name": [  
  {  
    "productName": "Perfalgan"  
  }  
]
```

# IDMP API Go Live in production - March 2026

- PhPID Request API
- IDMP Publish API - APD (PhPID), SD (GSID) and MPD resources
- Already today – available in pre-production  
Try it out in the Proof of Concept API!  
<https://api.umcterminologies.org/idmp/>

# Planned development



# Planned development: Change Management

- Subscription
  - Notification regarding own tasks
  - Notification regarding changed data



- The **Subscription resource** is used to request notifications for a specific client about a specific topic (as defined by a SubscriptionTopic).
- Conceptually, a subscription specifies:
  - a topic (SubscriptionTopic)
  - the notification channel (e.g., REST, websockets, email)
  - the notification payload (e.g., amount of detail, etc.)

# Key take aways



PHPID GO-LIVE IN MARCH 2026



PUBLISHED PHPIDS AND GSIDS  
SUPPORT GLOBAL USE CASES



MORE GLOBAL IDS AND API  
FUNCTIONALITY DURING 2026

# Contact

[asa.parnaste@who-umc.org](mailto:asa.parnaste@who-umc.org)

[olof.lagerlund@who-umc.org](mailto:olof.lagerlund@who-umc.org)

[idmp@who-umc.org](mailto:idmp@who-umc.org)


<https://who-umc.org/>

<https://gidwg.org/>




# IDMP API Implementation Guide

<https://build.fhir.org/ig/Uppsala-Monitoring-Centre/WHO-UMC-IDMP-Service/branches/main/index.html>



UMC IDMP Request and Publish API  
0.1.0 - CI Build



IG HomeBackgroundRequesting PhPsPublishingChange managementAuthenticationTable of ContentsArtifact IndexSupport

Table of Contents > UMC IDMP Request and Publish API

UMC IDMP Request and Publish API, published by Uppsala Monitoring Centre. This guide is not an authorized publication; it is the continuous build for version 0.1.0 built by the FHIR (HL7® FHIR® Standard) CI Build. This version is based on the current content of <https://github.com/Uppsala-Monitoring-Centre/WHO-UMC-IDMP-Service/> and changes regularly. See the [Directory of published versions](#).

1 UMC IDMP Request and Publish API

Official URL: <a href="http://who-umc.org/idmp/ImplementationGuide/idmp.who-umc.org.fhir">http://who-umc.org/idmp/ImplementationGuide/idmp.who-umc.org.fhir</a>	Version: 0.1.0
Active as of 2025-06-18	Computable Name: UmcIDMPManagement

1.1 Scope

The scope of this Implementation Guide is to document the UMC IDMP API FHIR service, by describing the context in which the API can be used as well as the technical overview for using the API.

1.2 Introduction

This Implementation Guide has a target audience of system integrators to the UMC IDMP API. The API is based on the HL7 FHIR standard and this guide describes supported FHIR resources.

The Implementation Guide describes how FHIR standard is used to exchange data for ISO IDMP standards for global PhPIDs and GSIDs. For information about ISO IDMP, see the [Background](#) section in this guide.

The main resources maintained by the service are the Pharmaceutical Product IDs, PhPIDs, (manifested through the [AdministrableProductDefinition](#) resource) and the Global Substance IDs, GSIDs, (manifested through the [SubstanceDefinition](#) resource). However, the [MedicinalProductDefinition](#) resource is also vital since it serves as input for PhPID generation. The Implementation Guide describes how new global PhPIDs and GSIDs are requested using asynchronous FHIR requests, and how they are delivered through FHIR.

1.2.1 Access to the UMC IDMP FHIR server

1.2.1.1 Production

The production FHIR server can be reached at <https://idmp.who-umc.org/fhir>. To get access to the production server, please contact [asa.parnaste \[at\] who-umc.org](mailto:asa.parnaste@who-umc.org).

1.2.1.2 Preview

The preview FHIR server can be reached at <https://preview-idmp.who-umc.org/fhir>. To get access to the preview server, please contact [asa.parnaste \[at\] who-umc.org](mailto:asa.parnaste@who-umc.org).

1.2.1.3 Proof of Concept

The PoC FHIR server can be reached at <https://poc-idmp.who-umc.org/fhir>. A tutorial with examples is found at <https://poc-idmp.who-umc.org/>.

- Scope
- Introduction
- Dependencies
- Cross Version Analysis
- Global Profiles
- IP statements
- Authors and Contributors

<https://idmpinfo.who-umc.org/training/index.html#/>



#### THEORY

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- ☐ 1. Why do we need global identifiers?
- ☐ 2. What is the purpose of ISO Identification of Medicinal Product standards?
- ☐ 3. How will pharmaceutical product identification link medicines globally?
- ☐ 4. How are the ISO standards used for generation of pharmaceutical product identifiers?
- ☐ 5. How will pharmaceutical product identifiers be generated?
- ☐ 6. What steps does one need to consider when implementing these standards?
- ☐ 7. Summary

#### FREQUENTLY ASKED QUESTIONS

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- ☐ FAQs

