



## InterSystems OMOP

### A cloud-based FHIR to OMOP solution for real-world data

Healthcare data has become increasingly digitized in recent years, raising hopes for new and better uses of real-world data beyond the management of care – most notably, for clinical research. Too often though, electronic health record (EHR) data is inaccessible to research teams or is poorly aligned with the industry standard Observational Medical Outcomes Partnership (OMOP) Common Data Model (CDM).

InterSystems® OMOP™ offers a light-weight, cloud-based data pipeline and management solution combining the standard Fast Healthcare Interoperability Resources (FHIR®) of EHRs with InterSystems out-of-the-box transformation to the CDM and a Software as a Service OMOP repository. With this data, you can also take advantage of the Observational Health Data Sciences and Informatics (OHDSI) community and tools to further enhance your research agenda.

Picture a seamless process where real world data extraction, transformation, and loading from diverse EHRs into a managed OMOP repository becomes a catalyst for innovation and collaboration with your research partners.

### Introducing InterSystems OMOP

Built on InterSystems IRIS for Health™, a complete cloud-first data platform that makes it easier to build and deploy high-performance, AI-enabled applications that connect data and application silos. InterSystems OMOP supports large-scale clinical research and patient data management with:

- **Efficient, Scalable Access to EHR Data:** InterSystems OMOP uses the standard Bulk FHIR capabilities of your EHR(s) to update your OMOP repository with newly eligible patient records as often as daily.
- **Rapid Deployment For OHDSI Environments:** Spin up an OMOP repository and leverage the OHDSI tools, all built on InterSystems IRIS for Health, delivered in an AWS cloud environment.
- **Timely Data for Trial Recruitment:** Frequent data updates allow clinicians and researchers to identify and recruit potential trial participants more rapidly. Reaching out to candidates immediately after care may increase their willingness to participate.
- **Out-of-the-Box EHR to Research Transformation:** The no-code data pipeline provides standard mappings from FHIR to the OMOP CDM to transform EHR data into research-grade information and lower your ETL maintenance costs.
- **Continuous Data Quality Monitoring:** Data quality dashboards and summary metrics ensure that problems with data quality can be identified and corrected at the source in a timely manner.

## Key Features:

- Automatically converts and refresh EHR data into OMOP daily, without the need for complex ETL development.
- Utilize the widely adopted Bulk FHIR standard by EHR vendors.
- Quickly deploy a OHDSI environment with capacity based subscription pricing
- Ensure security and regulatory compliance by leveraging cloud vendor best practices.
- Utilize a data quality dashboard before data transformation to detect and monitor data quality.
- Enable incremental data refresh for only those patients with new data.
- Out-of-the-box availability of common terminology mapping to OMOP ontology with support for local terminology mapping
- Common FHIR resources are mapped to OMOP out of the box.
- Integrate InterSystems IRIS as a new OMOP database option for OHDSI tools as well as sending data to existing OMOP repository.
- Option to support advanced patient privacy protection.

## Out of the Box Data Mapping

FHIR is an evolving standard. Today, InterSystems OMOP delivers out of the box mappings from standard FHIR resources to OMOP CDM tables as shown in the table below.

Semantic Mapping	
FHIR Resource	OMOP Table
Patient	Person, Location, Death
Encounter	Visit_occurrence
Condition, Allergy Intolerance	Condition_occurrence, Measurement, Observation, Procedure_occurrence
Observation	Observation, Measurement, Condition_occurrence, Procedure_occurrence, Death
Location, Organization	Care_site
Practitioner	Provider, Location
Procedure	Procedure_occurrence, Condition_occurrence, Measurement, Observation
Medication Administration, Medication Request, Immunization	Drug_exposure

## Deployed as a Cloud Solution

InterSystems OMOP is a Software-as-a-Service offering delivered and managed by InterSystems. Customers of the service can create multiple deployments that are sized, managed, and accessed independently.

### Services Include:

- Inclusive platform with all necessary infrastructure resources and software for seamless operation
- Access to the InterSystems Cloud Portal, in which customers can create, manage, and monitor their OMOP deployments, and add new services
- Access to and full use of the latest versions of client libraries
- Available on Amazon Web Services
- Robust security and data protection programs
- 24/7 support, including real-time monitoring

## Customer Support

Like any solution provided by InterSystems, we provide you more than technology - you also get our acclaimed customer support.

Our best people are on the front lines 24/7. Every one of our customers gets help from somebody who really cares, immediately, without having to go through layers of people or process. To learn more about our 24/7 support resources go to <https://www.intersystems.com/support/>

