

# ORACLE HEALTHCARE ANALYTICS DATA INTEGRATION

## SPEED IMPLEMENTATION AND REDUCE RISK

### KEY FEATURES

- A key component of Oracle's Enterprise Healthcare Analytics suite
- Product-based solution for healthcare data integration, warehousing, and analytics
- Loads reliable, integrated, high quality data into Oracle's Healthcare Data Warehouse foundation
- Includes 961 ETL workflows out of the box
- Receives and manages data from heterogeneous source systems with diverse semantics, structures, and technologies interface tables
- Contains a rules framework to keep data up to date and complete
- Supports data security preventing the proliferation of errors

### KEY BENEFITS

- Significantly reduces risk of implementing an analytics solution
- Substantially lowers the cost of implementing and managing a data warehouse
- Enables better decisions with comprehensive, cross system insights

*The cost effective way to load reliable, integrated, high quality data into Oracle Healthcare Data Warehouse Foundation*

### Challenges

Hospitals often have hundreds of source systems making analytics initiatives risky and expensive. To gain meaningful insights hospitals must do analysis across these systems which requires integrated, high quality data.

### The Solution

Oracle Healthcare Analytics Data Integration (OHA DI) consolidates, integrates, validates and loads source data from clinical, financial, administrative and research data into Oracle Healthcare Data Warehouse Foundation cost effectively. OHA DI significantly reduces the complexity, risks, and resources required for data integration and management – a step that accounts for 80% or more of the work in healthcare business intelligence and data warehousing.

Oracle's Enterprise Healthcare Analytics suite enables healthcare organizations to leverage prebuilt business intelligence, analytic and performance management applications to make informed decisions that improve outcomes of care delivery while lowering costs and improving operational efficiency. By integrating heterogeneous data types including supply chain, operating room, biomarker and EMR, Oracle's Enterprise Analytics suite of products enables better clinical and business insights by providing an enterprise view across all provider data.

Key components of this solution are:

Oracle Healthcare Data Warehouse Foundation (OHDWF) is a comprehensive, logical and physical data model for deploying pre-built business intelligence, analytic, data mining, and performance management applications from Oracle and partners. OHDWF also supports the use of a variety of tools to build custom applications. The model includes an expanding list of more than 1000 entities and 12,000 attributes spanning the clinical, financial, operational, and research domains.

Analytics Applications provided by Oracle partners provide a range of functionality. These applications include hospital acquired infection analytics, medication-related adverse event analysis, care quality reporting, patient registries, revenue cycle and cost allocation analytics, and cohort and biomarker identification applications.

Oracle Healthcare Analytics Data Integration (OHADI) is a powerful tool to minimize total cost of ownership in the implementation of a healthcare analytics solution. OHADI facilitates the warehousing of high data quality and optimizes analytic application development. Oracle Healthcare Analytics Data Integration – in combination with the HDWF - provides a productized solution that

addresses the multiple challenges involved in the integration of data from disparate sources.

### Moving Data Reliably

Moving data from sources into the data warehouse along with system validation and integration are the most costly, time consuming, and riskiest aspects of any data warehousing and analytics solution. Oracle Healthcare Analytics Data Integration ensures high quality data is uploaded and stored in the warehouse.

The HDWF Interface Tables receives data from the source systems and holds it for as long as required – months, years, indefinitely. The Interface Tables work across source systems and are vendor agnostic. The data in the Interface Tables are validated by applying your business rules. Invalid data are moved to the OHADI Exception Handling system for further processing. Once corrected this data can be resubmitted to the Interface Tables and re-validated. Validated, integrated data are then loaded into the HDWF for use by analytic applications.

### Lower Risk, Lower Cost

Mapping data from source systems is complex and costly. Yet, it is also a critical step to deliver quality data. Oracle Healthcare Analytics Data Integration receives and manages data “as is” from heterogeneous source systems across the enterprise. These source systems may contain data of varying and uncertain lineage, schemas, structures and data quality.

#### We Do the Mapping for You

Comprehensive out of the box ETLs include mappings for all tables and columns delivered in Oracle Healthcare Analytics Integration 1.0:

ETL Workflow Support	
Following are the number of ETL workflows supported out of the box	
HDWF Transaction Tables Workflows	446
HDWF Transaction Tables Workflows (Incremental)	446
Master Data Management Workflows (Code Repository, ETL Config Tables)	17
Alternate Workflows for Party Role Tables	26
Alternate Workflows for Party Role Tables (Incremental)	26
<b>Total:</b>	<b>961</b>

Interface Tables receive data into the OHADI environment via source system agnostic data structures. These data structures facilitate easy loading and managing of semantics, relationships and business rules as well as loading the data along with associated metadata into HDWF for use by targeted downstream applications.

Master Data Management Structures in OHADI support a robust set of data management features along with a collaborative user experience to maximize adoption. OHADI finds and eliminates duplicate data while ensuring correct data attribute survivorship to create a “single source of truth.” A continual data cleansing function keeps the master data up-to-date, consistent and complete.

Rules Framework and Out-of-the-box Rule Samples in OHADI offer an advanced rules framework for business rule validations, bi-temporal versioning, and late-arriving data. Rules samples instantiated as ETL code provide innovative and easy-to-use patterns for validation across entities, data

dependency / referential integrity rules, exception management rules and data cleansing/standardization rules.

Seeded Master Data warehouse-standard terminology is supported - both configurable and customer defined, ie. ICD-10.

Data Security enables you to control data access, monitor data access, update rights, maintain change history and prevent new errors from entering the system. The creation of a single platform to manage all master data objects prevents the proliferation of new silos and minimizes fragmentation.

Scalability is provided through HDWF's high availability and scalable platform for mission critical data access under heavy workloads.

### Summary

Oracle Healthcare Analytics Data Integration improves patient outcomes while lowering costs by reliably moving high quality data into the Oracle Healthcare Data Warehouse Foundation. With high quality, integrated data, clinicians and administrators across the organization make better decisions that improve patient care as well as operations.

Oracle Healthcare Analytics Data Integration, in combination with Oracle Healthcare Data Warehouse Foundation, provides a productized solution to reduce the cost and risk of implementing an analytics solution that supports heterogeneous source systems. Oracle's Enterprise Healthcare Analytics solution provides the analytical insights to drive rapid organizational response leading to evidenced base care and improved patient outcomes.

Oracle built many of the world's largest enterprise class data warehouses and clinical data repositories holding vast numbers of patient records. This experience, combined with the domain expertise of physicians, nurses, and healthcare informaticists enabled Oracle to create the Enterprise Healthcare Analytics solution. Providers can focus their energies on transforming healthcare instead of building IT infrastructure – dramatically reducing development costs and overall project risks, as well as providing the shortest path to realizing full value from analytics.

### Contact Us

For more information about OHA DI, visit [www.oracle.com/healthsciences](http://www.oracle.com/healthsciences) or call +1.800.ORACLE1 to speak to an Oracle representative.



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