

# A Strong, Sustainable Data Foundation for Health and Human Services

## The Teradata Health and Human Services Logical Data Model

Economic pressures, rising unemployment, aging populations, multiple chronic conditions, and continued healthcare inflation have placed government health-care and human services programs under enormous pressure. Health and human services (HHS) agencies must simultaneously reduce costs, combat fraud, coordinate care to improve patient outcomes, and increase administrative and clinical efficiency. Many are looking to advances in information technology to play a major role in fostering these improvements.

The hope is that HHS organizations will be able to transform their ever-growing mountains of patient, provider, payer, clinical, and pharmaceutical data into actionable insights that drive real change. Such change becomes possible when you can quickly gather and integrate all of your data and organize it to support the most timely and relevant insights.

Enter the Teradata® Health and Human Services Logical Data Model (HHS LDM), a uniquely intelligent data foundation that provides essential support for technology implementations designed to manage programs, enhance services, optimize funding, and improve cost control.

The Teradata HHS LDM uses a strong, flexible structure to organize and make accessible the program, claims, and clinical data in an enterprise data warehouse (EDW). The innovative design saves you time and effort in creating and implementing a

robust data strategy for your current and future analytic, decision support, and reporting needs.

More importantly, once in place you'll have a clear, 360-degree view of an individual across the many programs provided across government agencies. For the first time, you'll open a window on how individuals use – and providers deliver – services across multiple health and social services programs. Such a window will help you realize entirely new levels of efficiency, which can result in significant savings – multiples of what is invested. By its own calculations, the state of Michigan realizes \$1 million (US) each business day in financial benefits, in part through the innovative integration, sharing, and comprehensive analyses of data contained within its EDW from Teradata.

### Getting to the Answers You Need

Many government leaders have long understood the value of data warehouses for controlling fraud, but the benefits don't have to stop with fraud identification. The Teradata HHS LDM provides a roadmap to a wealth of additional benefits.

Based on the Teradata Healthcare LDM, which has already proven its value in numerous customer settings, the HHS LDM integrates claims and clinical data for individuals with data from relevant health and human services programs including healthcare, long-term care,



welfare, and specialty programs for children and the elderly. The Teradata HHS LDM supports:

- > A full range of cost and expenditure analyses.
- > Utilization analyses, including those necessary for pay-for-performance metrics.
- > Early identification of programs in trouble.
- > A unified view of individuals across all programs and providers.
- > What-if modeling of potential agreements or program modifications.
- > The data from Health Information Exchanges.

These capabilities enable your organization to answer nearly any relevant question in time to make a difference and improve how you:

- > Predict, identify, and reduce fraud and abuse.
- > Predict and model financial, care quality, and disease trends.
- > Manage providers, as well as your agency's workforce.

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- > Meet regulatory and reporting demands.
- > Communicate with and identify individuals in need of care.
- > Manage the care of government healthcare beneficiaries.

## Smooth System Integration

Realizing these capabilities is made considerably easier because the Teradata HHS LDM is application neutral, business-based, and can save weeks or months of valuable data warehouse development time, as well as considerable human and financial resources. It supports industry standards and is flexible enough to support new industry requirements as they emerge. Among those we've already incorporated:

- > Health Level 7 (HL7)
- > Accredited Standards Committee (ANSI ASC X12)
- > Health Insurance Portability and Accountability Act (HIPAA)
- > Healthcare Effectiveness Data and Information Set (HEDIS)
- > Joint Commission on the Accreditation of Healthcare Organization (JCAHO)
- > National Uniform Billing Committee (NUBC)
- > National Council for Prescription Drug Programs (NCPDP)

## What is a Logical Data Model?

**A logical data model is a blueprint that visually communicates how information is organized in your enterprise, facilitating communication about and a clear, common understanding of important functional concepts. As such, it serves as the information framework for business intelligence and decision support, providing discipline and structure to the complexities inherent in data management and enabling you to grow your data warehouse for different uses over time without having to re-architect the entire operation.**

## Expanding Benefits

The bottom line is that data within government agencies can contribute enormous value in terms of effectiveness, efficiency, and policy-setting, but only if decision makers can access the data across programs when needed and at the level of detail needed. That is exactly what the Teradata HHS LDM enables.

You can economically store massive data sets, and integrate and analyze them for improved insight and better decisions. By accessing cross-program information, you will save public funds and increase program effectiveness through:

- > Identifying fraud, waste, and abuse.
- > Improving administrative and clinical efficiencies.
- > Improving provider management, including the ability to better align incentives for efficient, quality outcomes.

- > Improving care coordination that ensures needed services and programs are being delivered to the right population at the right time, while avoiding repetitive services, claims, and payouts.
- > Formulating smarter policies and revisions that draw on the ability to precisely highlight and identify areas of risk and opportunity across each program's different and complex eligibility requirements.

Moreover, you'll save time and effort creating and implementing a data strategy that is flexible enough to meet current and future analytic needs. This improves the time-to-value of your information technology investment and, when combined with early successes, facilitates a self-funding model for data warehouse expansion and extension to other state programs.

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## Key Facts for Systems Integrators

The Teradata HHS LDM is released and supported on the Computer Associates ERwin Data Modeler 7.3.10 and later data modeling platform and is a comprehensive healthcare model that includes:

- > 13 major subject areas, including party, campaign, insurance product, agreement, program, event, services, geography, financial management, claims, features, and human capital
- > 89 subject areas
- > 1,729 entities
- > 7,712 attributes
- > 63 MITA-level subject areas (for U.S. states)

## About Teradata

Teradata is the world's largest company focused on integrated data warehousing, big data analytics, and business applications. Our powerful solutions portfolio and database are the foundation on which we've built our leadership position in business intelligence and are designed to address any business or technology need for companies of all sizes. Only Teradata gives you the ability to integrate your organization's data, optimize your business processes, and accelerate new insights like never before. The power unleashed from your data brings confidence to your organization and inspires leaders to think boldly and act decisively for the best decisions possible.

## For More Information

To find out more about how the Teradata Health and Human Services Logical Data Model can help you meet the need for improved value including optimized funding, lower costs, better outcomes, and greater efficiency in the delivery of healthcare and other social services, contact your Teradata representative, or visit [Teradata.com](http://Teradata.com).

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