

LTCare Data Warehouse User Guide

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LTCare Data Warehouse User Guide

Table of Contents

Purpose	3
History of the LTCare Data Warehouse.....	3
Data Warehouse and Business Intelligence	3
Business Intelligence.....	3
Data Warehouse	4
Decision Support System or DSS	4
Dashboard.....	4
Query.....	5
Limited Data Set.....	5
Metadata.....	6
BusinessObjects Concepts.....	6
BusinessObjects.....	6
InfoView.....	6
Web Intelligence.....	8
Audit and Archive	8
ODS – Operational Data Store.....	9
Data Mart.....	9
Universe	9
Datamart Universe	10
Folder	11
Data Dictionary.....	12
The LTCare Data Warehouse Environment.....	15
DSS\DW – Decision Support System Data Warehouse	15
LTCare Universes available	15
Use Web Intelligence to work with the Universes	16
Limits	16
The Data in the LTCare Data Warehouse.....	17
Encounter	17
Functional Screen	17
Data Loading	19
Web Intelligence Concepts.....	22
Web Intelligence Report.....	22
Can there be a Web Intelligence Report without any data in it?	23
Why do some reports already contain data?.....	24
Why save a Web Intelligence Report without any data in it?	24
Getting Started.....	25
Log In to the Long Term Care Data Warehouse	25
Open a Report.....	27
Create a Report.....	29
Save a Report	34
Run a Report.....	35
Schedule a Report.....	35
Send a Report to Another BusinessObjects User	36
Delete a Report	40

Using Other Universes	41
Space and Performance.....	42
Reports that Complete Quickly	42
Space is a Limited Resource.....	42
Privacy and confidentiality	42
Continue to protect the privacy of clients	42
A brief review of HIPAA.....	43
HITECH enhancements to HIPAA	44
Help and Training.....	44

LTCare Data Warehouse User Guide

Purpose

This guide is a general introduction to the LTCare Data Warehouse. It covers basic concepts about business intelligence, and the distinctive qualities of the Long Term Care Data Warehouse. While it is not meant as adequate training in use of the tools provided, it does include basic instruction for creating reports. Additional training material can be found on the LTCare Data Warehouse website at <http://dhs.wisconsin.gov/datawarehouse/training.htm>

History of the LTCare Data Warehouse

Development of the LTCare Data Warehouse started in October 2005 with the intent of providing access, through the Internet, to the data in the Department of Health Services data warehouse to county and regional program administrators. Data access includes providing the business intelligence tools along with the data for analysis and decision-making.

The LTCare Data Warehouse went “live” for internal state users on April 6th, 2009. The first external business partners were granted access on October 7th, 2009.

The BusinessObjects XI is the business intelligence tool provided to users of the LTCare Data Warehouse to access the data, and BusinessObjects accesses data stored in an Oracle database. The LTCare Data Warehouse databases are designed to enable accurate and flexible queries and reports; and a security structure that meets privacy regulations while allowing external partners to use the data.

The LTCare Data Warehouse was designed to allow maximum flexibility in creating queries without knowing a user’s question ahead of time. It provides consistent information about providers and clients across data from different sources. It includes pre-defined totals and counts that are trustworthy and easy to use. The warehouse design makes it possible to create a report that includes data from different sources. It includes security provisions so that external partners, ones that are outside of the Department of Health Services local network, can use the LTCare Data Warehouse.

Data Warehouse and Business Intelligence

This section of the user guide provides general information about data warehouses and business intelligence. The information is meant as a primer to educate you about common data warehouse and business intelligence terminology.

Business Intelligence

Business Intelligence is a broad category that includes all the technology for gathering, storing, analyzing, and providing access to a data warehouse.

The goal of business intelligence is to provide users with the ability to make sound business decisions based on accurate and current information. Another way of putting it is that business intelligence extracts information from data. A business intelligence system provides a sea of data along with tools for queries, analysis, and reporting so that you can get valuable information from the data.

A more personal way of putting it is that business intelligence will enable you to make better business decisions and provide your clients with better outcomes.

Data Warehouse

A data warehouse is a repository for a significant amount of business data from diverse sources, assembled for the purpose of reporting and analysis. In some cases, the data is an unchanged copy of the files from a data acquisition system. The copy is used to investigate problems with the source system, create reports and run queries. The advantage is that both the original system and the warehouse copy can each run efficiently and independently, without causing performance problems for each other.

Typically, a data warehouse also has tables and databases designed specially for analysis and ad-hoc queries, as contrasted with the original system that is designed for data acquisition and data entry. The data warehouse tables for analysis return report data quickly, make it easy to display the meaning of data instead of obscure codes, gives users the ability to ask non-standard questions, and does not limit users to a pre-defined way of looking at the data.

Decision Support System or DSS

In general usage, a Decision Support System (DSS) is a computer program or application that analyzes business data and presents it so that users can make business decisions more easily. Decision Support Systems typically use a data warehouse.

At The Wisconsin Department of Health Services, DSS/DW is the acronym for the Decision Support System Data Warehouse, a very large data warehouse that contains data from many different sources.

The Wisconsin DSS is used primarily for analytical queries by State and EDS users. EDS (Electronic Data Systems, a division of HP) is the vendor with the contract for maintaining and developing the DSS/DW for the State of Wisconsin. The current DSS has been in operation since 1997 and was significantly modified when interChange was implemented in 2009.

Until now, the data in the DSS/DW was available only to internal Department of Health Services and EDS staff. The LTCare Data Warehouse is the first part of the DSS/DW that is available to our external business partners throughout Wisconsin.

Dashboard

An automobile dashboard presents essential information about your vehicle. In information technology, a business intelligence dashboard is similar to an

automotive dashboard. It is a screen display of information about essential aspects of your business. The idea is that a person can look at the dashboard, take in the information, and take action at the right time.

As you use WebIntelligence for queries and reports, be alert to the kinds of information that you might want to see regularly in a way that grabs your attention. WebIntelligence can display data in various formats, such as pie charts and graphs. WebIntelligence reports can be formatted so that the type face, type color or background color changes to emphasize a chosen range of values. These are called alerters, and are meant to alert you when thresholds are exceeded.

You can create and schedule these reports with alerters so that they function as a dashboard. Receiving them and viewing them will provide you with core metrics that you review and can act upon.

Query

A query is a question presented in the SQL (usually pronounced as 'sequel') programming language. You do not need to learn how to program using SQL. Business Intelligence applications allow you to create a query by dragging symbols from one area of the screen to another or by clicking icons on the screen. The business intelligence tool takes your selections and turns them into the technical programming code. When the query runs, the results of the query are displayed on the screen and can be formatted into reports.

In the source application systems that first acquire the data, all of the SQL code is also behind-the-scenes. You have set computer screens with which you interact. Pre-written queries place available data in the computer screens and pre-written queries save changes you type into the screen.

By contrast with these source system pre-written queries, the tools for use in a data warehouse enable "ad hoc" queries and reporting. You can create specific, customized queries, without the need for an in-depth knowledge of SQL, or how the data is stored.

Limited Data Set

A Limited Data Set is one that removes sensitive or restricted information. A limited data set provides a means for limiting data in order to meet legal restrictions or keep business trade secrets. A Limited Data Set also provides a means to provide as much data as possible for research, analysis, and benchmarking.

Certain data in The LTCare Data Warehouse is Protected Health Information restricted by HIPAA privacy laws. There are additional legal restrictions surrounding sensitive conditions such as mental illness, addiction, and HIV infection. A Limited Data Set allows access to peer organization information for analysis and business improvement while honoring the right to privacy by making it difficult to identify any particular person. /

Metadata

Metadata is information about data. It provides the names used for a type of data and a definition that explains the meaning of the data. When the data includes codes, it lists the code values that are valid along with the meaning of each code. It provides the lineage of the data: where the data originated, each place it is stored in the data warehouse, and notes when it has been changed or transformed in any way as it is stored or displayed. It identifies the connections between related pieces of data.

The end purpose of metadata is to provide you with confidence in the data. You know which item to choose for your report. You know its definition, where it came from, any way it changed, and any other important fact or relationship.

BusinessObjects Concepts

This section of the user guide provides information about the business intelligence tools provided for working with the LTCare Data Warehouse.

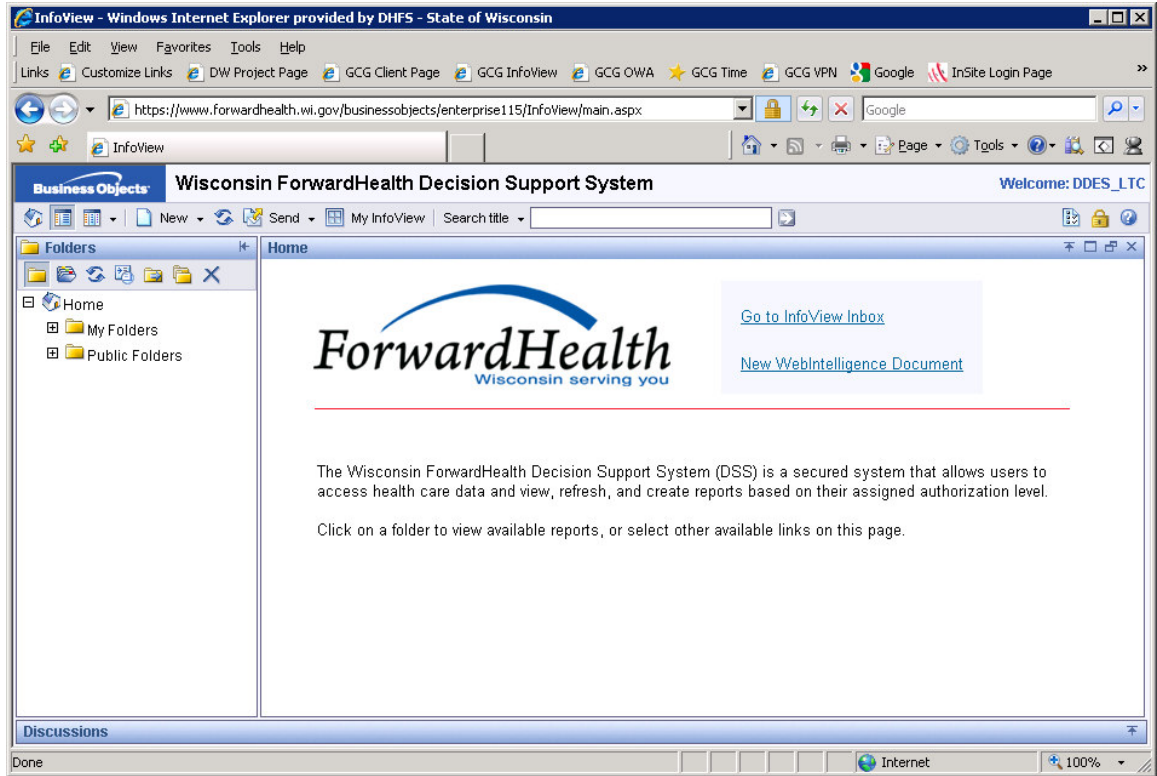
BusinessObjects

BusinessObjects is the name of the software provided to allow access to the LTCare Data Warehouse. BusinessObjects is a world leader in the area of business intelligence software.

InfoView

BusinessObjects InfoView is the portal to the data warehouse. You will use your computer web browser (usually Internet Explorer or Firefox) to log in to InfoView for easy access to business intelligence reports and the data of the LTCare Data Warehouse.

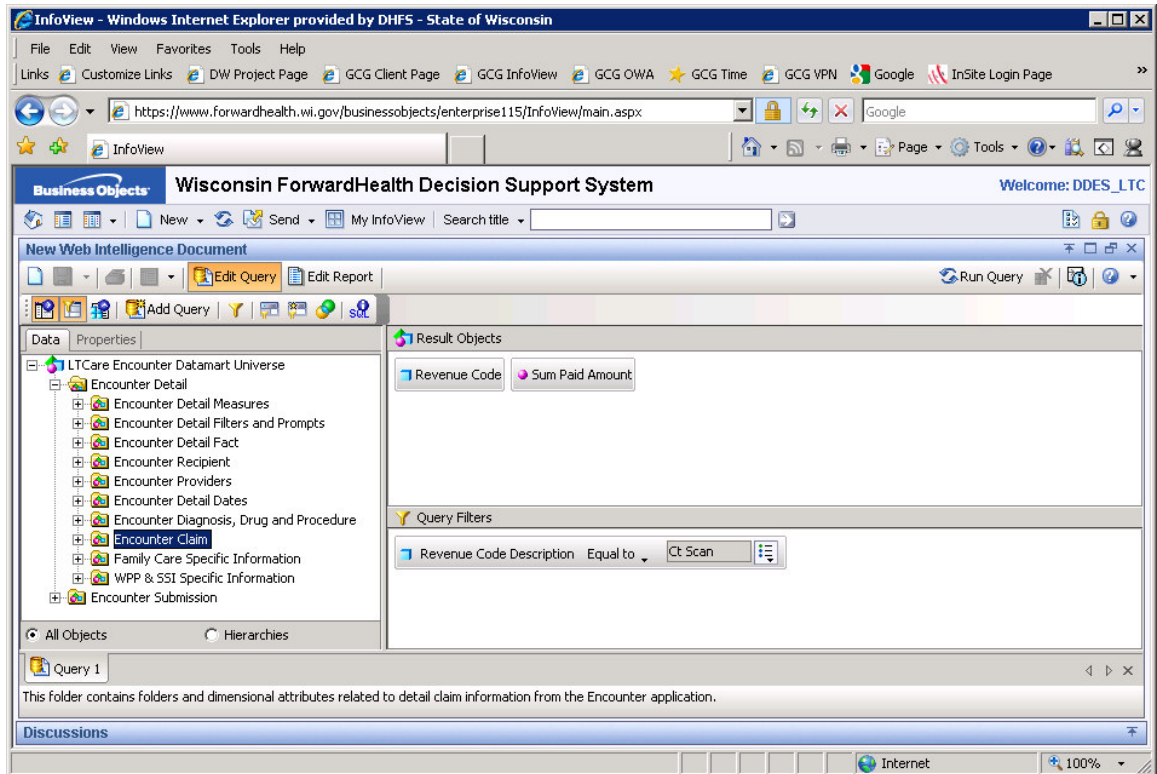
The InfoView home screen includes a large *Forward Health – Wisconsin Serving You* logo. It has a panel for the folders that contain reports. To the right of the logo, there is an area with a colored background that has a link to your personal Inbox and a link to create a new WebIntelligence document.



Web Intelligence

Web Intelligence is the ad hoc query and analysis module of the BusinessObjects product, which provides self-service access to data and to business intelligence analysis tools. Using your computer mouse, you can create a query from scratch and format the results to meet your needs.

BusinessObjects also offers a similar tool called Desktop Intelligence. If you are familiar with Desktop Intelligence, you will find the transition to WebIntelligence quite easy.



Audit and Archive

An Audit and Archive is a group of tables in a data warehouse that contains all of the data from a source application database, stored in exactly the same way as the source. If an audit and archive area in a data warehouse is presented as a Universe, it is called an audit and archive universe.

An audit and archive area in a data warehouse serves these purposes:

1. For creating reports, without slowing down the response time of the source application, because the queries are running against a copy of the data.
2. Provides an area for investigating problems with the source application. Most source application tables are usually closed for access to all except the programming code.

3. Provide a stable source when moving the data into other types of universes. The audit and archives are the persistent data staging areas for loading the data marts.

ODS – Operational Data Store

An Operational Data Store is a limited version of the Audit and Archive. The Audit and Archive has all of the data from the source. An Operational Data Store typically is limited to the most recent 13 months of data. The value of an ODS is that the most recent 13 months of data is the data most often used for creating reports or conducting investigations. Because there is a limited amount of data, the queries run much faster.

Data Mart

A data mart is a group of tables in a data warehouse that contain the data pertaining to a single business process or subject area, stored and organized from the point of view of the primary users.

The other types of data in the data warehouse store data just as it is stored for the application used to acquire that data. These other universes types include the Audit and Archives and Operational Data Stores.

The data mart is the unique data warehouse structure that supports true business intelligence. It is designed from the point of view of the users of the data. It is designed for analysis and the greatest flexibility in creating queries. The data marts also contain value-added pieces of data and/or transformations to the data. An audit and archive is an untouched copy of the source system data, but the data mart will include modifications to the untouched data to make it friendlier. For example, the encounter data collection utility that provides data to the LTCare Data Warehouse only provides codes for various national code sets, such as revenue codes and procedure codes. The audit and archive will only contain the code, which is sometimes stored without the decimals in the code. As the encounter data is moved from the audit and archive to the data marts, the code descriptions are added and an additional code field is added that includes the decimal making the data friendlier to use.

Universe

Universe is a word with special meaning as used by BusinessObjects and Web Intelligence. A Universe is a business representation of data, created as a layer between you and the database. The Universe presents the data for a business area, but shields the user from the complexities of the technical Oracle database.

The Universe uses the names for data that you already use in your business. It also provides specially created fields that automatically accomplish tasks such as counting things, summing numbers, selecting a date range, or performing a complex calculation that is a regular part of your business. Examples of the created fields include 'Total Unique IDs', 'Age at time of procedure', 'Time since last update', and 'Most recent screen'.

The Universe also contains logic that is automatically used when Web Intelligence creates code for your queries. You do not need to know a programming language. You do not need to look up and type the exact database item names, or be concerned with the way tables link together. Web Intelligence and the universe do that for you.

Datamart Universe

Datamarts are groups of data warehouse tables related to a single line of business or subject area, and are designed from the users' point of view for analysis purposes.

A Datamart Universe is the BusinessObjects presentation of a Datamart. The LTCare Datamart Universes are the ones you will most often select, as they are the friendliest to use.

Each universe presents data from one source system, such as MCO Encounters or Child Functional Screens. The design of a Datamart Universe has these qualities:

1. It allows for maximum flexibility in creating ad-hoc queries. Ask any question you want.
2. It uses the merged data about persons, and presents the same data to each Datamart Universe. Information about a person is consistent. Merged data means that information is gathered and combined from multiple systems.
3. It does the same for providers.
4. It provides definitions for coded data.
5. It automates the creation of queries. You do not need to know how to write code.
6. It provides fields with totals and counts, and objects that perform other frequently used functions. You do not need to type query code by hand.

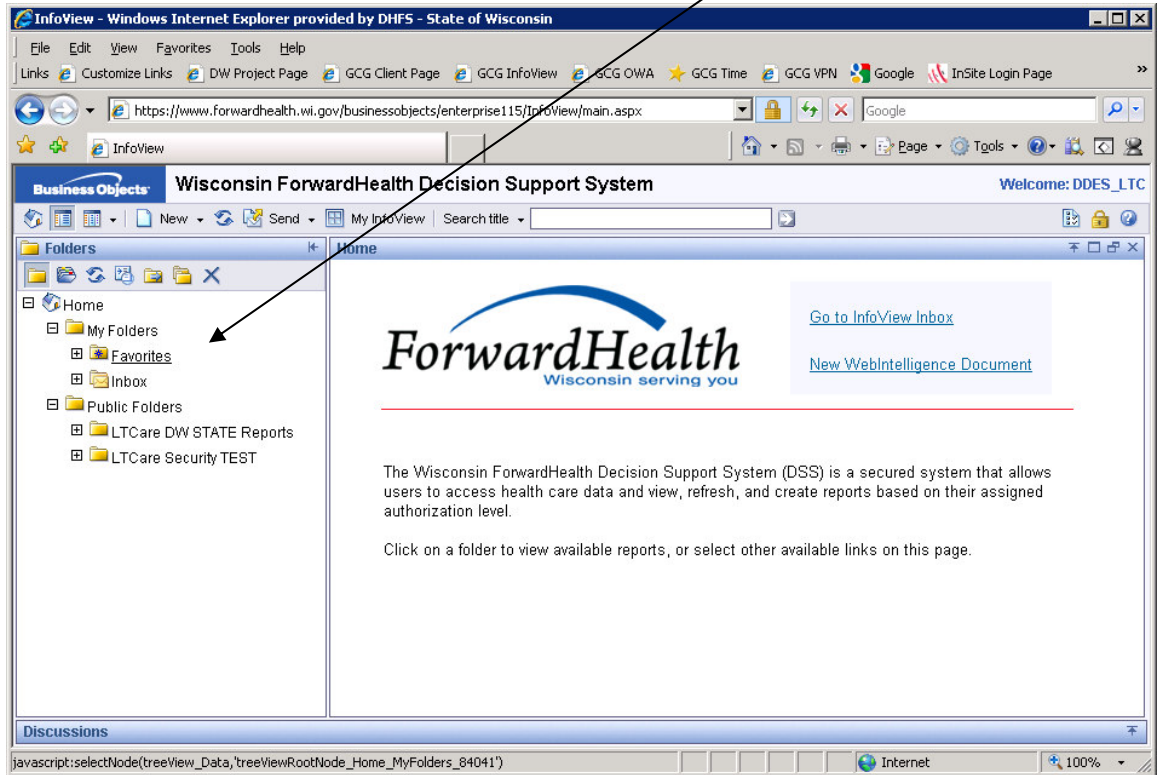
The Long Term Care **Datamart** Universes are:

LTCare Encounter Datamart Universe
LTCare Adult Functional Screen Datamart Universe
LTCare Adult Personal Care Functional Screen Datamart Universe
LTCare Child Functional Screen Datamart Universe
LTCare Mental Health Functional Screen Datamart Universe

Folder

An Infoview folder is a place for receiving, storing, and organizing reports.

When you open Infoview, you will see some folders in the left hand panel. This describes the contents and purpose of these folders.



MyFolders

The folder group listed first is MyFolders. It contains two folders, Favorites and Inbox.

Favorites

Your Favorites folder is your place to store reports. It is a list of the documents you've saved for your own personal use. You can create sub-folders under Favorites, to organize your reports, just as you can create folders in your computer directories.

Inbox

The Inbox folder contains the documents that other users have sent you.

NOTE: Please be sure to delete documents from your personal folders when you no longer need them. Each copy and historical instance takes up disk space from the overall system.

Public Folders

The second folder group is Public Folders. This folder group contains all the sub folders appropriate to your organization or job.

Here are two important things to remember about the Public Folders

- Any changes you make affect everyone

The various public folders contain reports that are shared by all users of the public folder. Be careful when in the Public Folders. If you move a report, it won't be there for others to see. If you delete a report, it is deleted for everyone. If you modify a report, it is modified for everyone.

Warning: Be especially careful about publishing reports to public folders that contain protected health information. All users that have access to the public folder will have access to the protected health information.

- Share with others

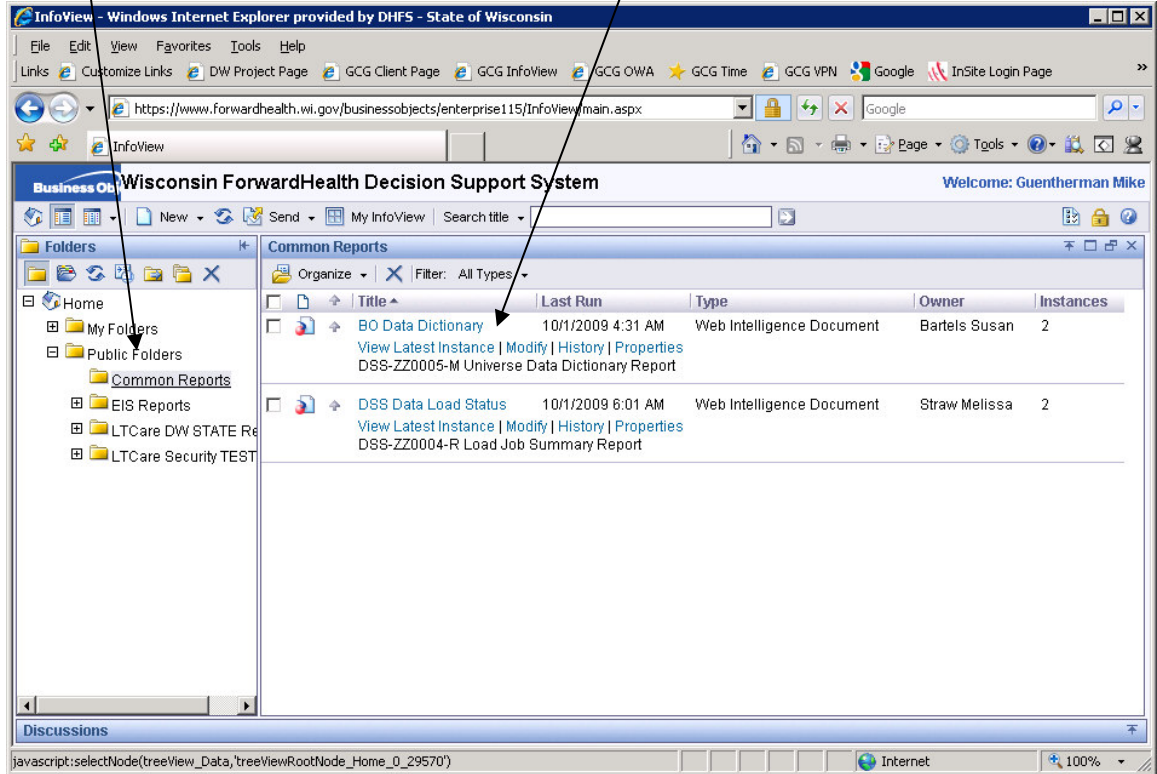
If you create a report that others want to use, it may be a candidate for placement in a public folder.

Data Dictionary

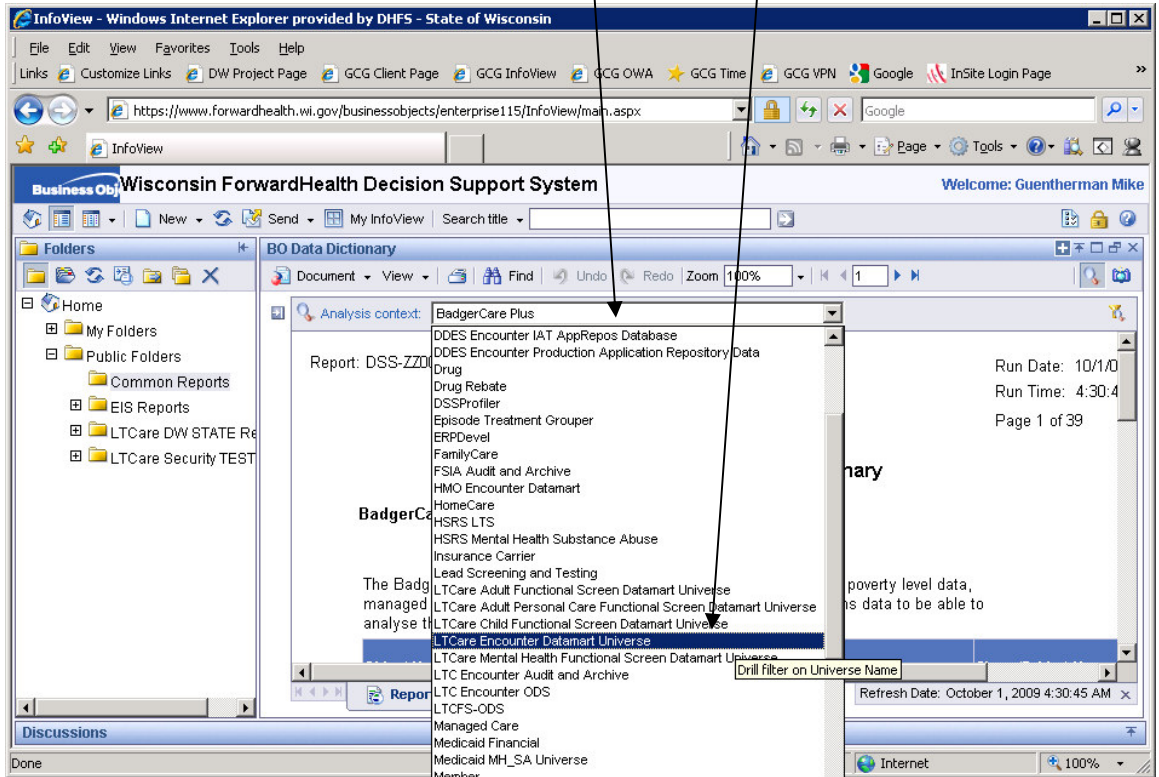
The Data Dictionary for a BusinessObjects Universe tells about the data that is in the Universe. The Dictionary gives the name used for the data, gives a definition or description of the data, and indicates all of the Universes that have that data.

Directions to find the data dictionary:

Make sure the 'Folders' panel is visible on the WebIntelligence screen. Click on the plus sign to the left of 'Public Folders'. When it expands, click on 'Common Reports' so it has a dark background. Look in the large 'Home' panel to find the report named 'BO Data Dictionary'. Under the report name, click on the words 'View Latest Instance'.



When the BO Data Dictionary Report opens, notice that along the top of the report page there is a gray row named 'Analysis Context'. Click on the down arrow to the right of the default context (Badger Care Plus) to see all the LTC/DW Universes. Choose the Universe you want displayed in the data dictionary report.



The Universes for the LTCare Data Warehouse are

- LTCare Adult Functional Screen Datamart Universe
- LTCare Adult Personal Care Functional Screen Datamart Universe
- LTCare Child Functional Screen Datamart Universe
- LTCare Encounter Datamart Universe
- LTCare Mental Health Functional Screen Datamart Universe
- LTC Encounter Audit and Archive
- LTC Encounter ODS

The report has many pages for each Universe or Context. Move through the pages using the forward and back arrows found in the row above the Context selection line. You can also type in a page number and press enter on your keyboard to go directly to a page.

You can also find other relevant reference material on the data warehouse web site at <http://dhs.wisconsin.gov/datawarehouse/index.htm>.

The LTCare Data Warehouse Environment

DSS\DW – Decision Support System Data Warehouse

DSS/DW is an acronym, for the Decision Support System Data Warehouse. The DSS/DW is the way we refer to the entire data storage system used by the Wisconsin Department of Health Services.

The DSS/DW data warehouse includes Wisconsin Department of Health Services data from :

- MMIS (Medicaid Management Information System)
- other data that relates to Medicaid
- Other departmental data from
 - Division of Health Care Access and Accountability
 - Division of Public Health
 - Division of Long Term Care
 - Division of Mental Health and Substance Abuse
 - Division of Quality Assurance
 - behavioral health programs

It also has data from Wisconsin counties, surveys, and much more.

The LTCare Data Warehouse is a subset of the entire DSS/DW. The LTCare Data Warehouse is carefully designed to provide several distinctive advantages.

The design allows security settings so that the data can be made available to people outside of DHS. Users see only the data they are authorized to see. The design enables users to create their own queries; not just run pre-defined queries, and view standard reports. The design allows users to create reports that include data from different sources, such as Encounters and the different types of Functional Screens. In addition, the design gathers information about providers and about clients. The combined information about a provider or a client is shared across all Datamarts. This means that the information is the same wherever it is viewed and that it is as complete as possible. Finally, the LTCare Data Warehouse Datamart Universes are designed so that the queries you create will return correct counts and sums, without forcing you to know about special relationships between pieces of data or making you learn to create complex code.

LTCare Universes available

Audit and Archive Universes

LTC Encounter Audit and Archive
FSIA Audit and Archive (Functional Screen Information Access)

ODS Universes

LTC Encounter ODS (Operational Data Store)

Datamart Universes

LTCare Encounter Datamart Universe
LTCare Adult Functional Screen Datamart Universe
LTCare Adult Personal Care Functional Screen Datamart Universe
LTCare Child Functional Screen Datamart Universe
LTCare Mental Health Functional Screen Datamart Universe

Use Web Intelligence to work with the Universes

The tools provided for using the LTCare Data Warehouse are BusinessObjects' InfoView and Web Intelligence. You get to them through your computer's web browser such as Internet Explorer or Firefox. This was an important consideration, because the data is being made available to users throughout Wisconsin. Advantages of a tool that is available on the Internet include: The business intelligence data is available outside our local network to our partners throughout the State; users do not need to purchase the tool; users do not need technical help to install it on a computer.

By using InfoView and WebIntelligence you are able to:

View pre-defined reports: You may receive routine scheduled reports and other users may send you reports to look at.

Run reports: You may schedule reports to run routinely, and you may run reports on demand.

Write Ad-Hoc reports: You can create queries to answer routine questions for core business management. You can also create queries to answer questions that have never been asked before, just to see what you might be able to find out. Such discoveries may lead to improvements in your business functioning and to a better life for your clients.

Limits

Timeouts

Web Intelligence will timeout after 2 hours of use. You will be required to log off and log back into the system after 2 hours. Interactive Web Intelligence reports will timeout after running for 20 minutes. If you need these reports to run, simply schedule the reports to run and they will finish. You will be automatically logged off Infoview after 60 minutes of inactivity.

Rows of output

Most users will be limited to the rows of data from a query to protect the system from runaway queries. The limit varies by universe, and is usually a very large number. If you need more data than this, please work with a DHS LTC Data Warehouse expert to find a solution that meets your needs.

Down Times

During the weekend, users should only run or schedule queries that will complete by noon on Saturday, or not start before 6 a.m. Monday morning.

DSS/DW Data warehouse maintenance may take place

after 7 p.m. on weekdays and
from noon on Saturday until 6 a.m. on Monday morning.

During these times, the DSS/DW may not be available at all, may respond intermittently, or may be very slow. If you have queries running during this period, they may be terminated. These times are set aside for important maintenance work.

The Data in the LTCare Data Warehouse

This section is an introduction to the data in the LTCare Data Warehouse. The two applications included in the first release are Encounters and Functional Screens. Data from other applications is scheduled to be added in the future.

The list of Universes available to you depends on your need for the data. If you believe you need additional universes in order to do your job, please discuss this with your local security administrator or supervisor.

Encounter

The Encounter Reporting system is used primarily by program administrators to submit claims and encounter data to the State of Wisconsin for services they provided to their members. In a sense, the Encounter Reporting system provides a method for submitting data to the State. The Encounter system is used by a growing variety of programs.

Encounter data is used today to analyze a range of topics including service costs, capitation rates, and program integrity. Today the Encounter application accepts submissions for the Family Care, Pace Partnership, SSI Managed Care and Home Based Community Waiver programs.

LTCare Data Warehouse Universes with Encounter data

- LTC Encounter Audit and Archive
- LTC Encounter ODS (Operational Data Store)
- LTCare Encounter Datamart Universe

Functional Screen

A Functional Screen is a screening procedure for determining whether or not a person has difficulties in functioning that make her or him eligible for specific services or programs. In order to be enrolled in a program, a person needs to be functionally eligible but also needs to meet other eligibility criteria such as having a financial need or being in a certain age range.

LTCare Data Warehouse Universes with Functional Screen data

- FSIA Audit and Archive (Functional Screen Information Access)
- LTCare Adult Functional Screen Datamart Universe
- LTCare Adult Personal Care Functional Screen Datamart Universe
- LTCare Child Functional Screen Datamart Universe
- LTCare Mental Health Functional Screen Datamart Universe

LTCare Adult Functional Screen Datamart Universe

The LTCare Adult Functional Screen Datamart Universe contains data collected performing functional screens of adults. These screens determine the long-term care needs of the elderly and people with physical or developmental disabilities. The application calculates functional eligibility for long-term care programs. With the development of the LTCare Adult Functional Screen Datamart Universe, the data also provides research capabilities

Examples of long-term care programs for which an adult may be functionally eligible include Family Care, CIP (Community Integration Program for adults with disabilities), COP (Community Options Program for long-term-care support to keep people in their own homes), Pace/Partnership, SSI (Wisconsin Supplemental Security Income), and HCBW (Home and Community Based Waivers).

LTCare Adult Personal Care Functional Screen Datamart Universe

The LTCare Adult Personal Care Functional Screen Datamart Universe contains data collected performing functional screens that assess the abilities of adults to care for themselves and to identify the help they need in order to meet their personal care needs.

LTCare Child Functional Screen Datamart Universe

The LTCare Child Functional Screen Datamart Universe contains data collected performing functional screens of children. These assessments for children include identifying functional deficits consistent with Mental retardation, Developmental Disabilities, and Mental Health issues.

Examples of programs for which a child may be functionally eligible include Katie Beckett, Family Support Program, Mental Health Wraparound / Children come first, Community Options Program and Children's Waivers.

LTCare Mental Health Functional Screen Datamart Universe

The LTCare Mental Health Functional Screen Datamart Universe contains data collected performing functional screens of children and adults. These assessments include identifying needs consistent with mental illness or the effects of substance abuse.

Examples of programs for which a person may be functionally eligible because of mental health deficits include:

- Blue Ribbon Commission target group 1 or 2 (BRC)
- Community Supports Program (CSP)
- Adult Long Term Care Referral and/or a Children's Long Term Supports referral Comprehensive Community Services (CCS) Medicaid benefit
- Uniform Placement Criteria (UPC) referral
- Community Options Program (COP) level 3 benefit.

Data Loading

How up-to-date is the data? The short answer is that Functional Screen data is loaded once a month, and Encounter data is loaded weekly.

Encounter Data

Encounter Data is loaded once each week. Data is loaded only after its submission is certified. The weekly Encounter load affects the following universes:

- LTC Encounter Audit and Archive
- LTC Encounter ODS
- LTCare Encounter Datamart Universe

Functional Screen Data

Functional Screen data is loaded once each month. The Functional Screen data load affects the following universes:

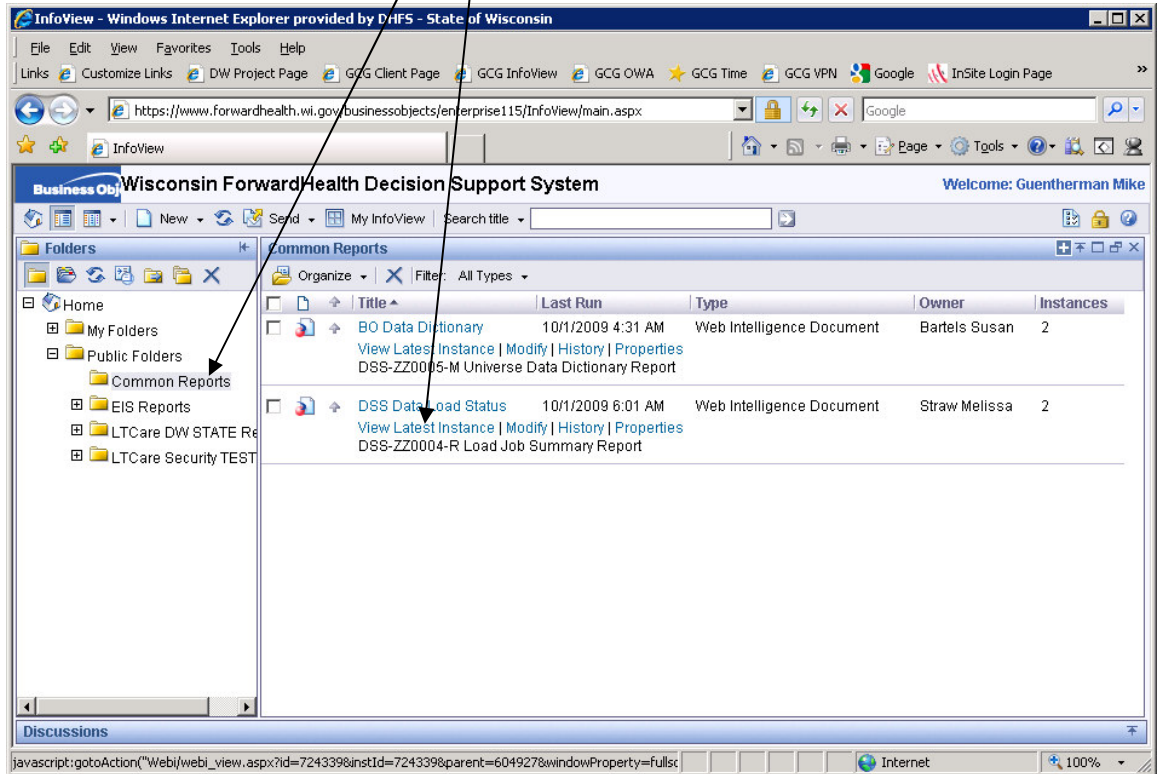
- FSIA Audit and Archive
- LTCare Adult Functional Screen Datamart Universe
- LTCare Adult Personal Care Functional Screen Datamart Universe
- LTCare Child Functional Screen Datamart Universe
- LTCare Mental Health Functional Screen Datamart Universe

DSS Load Status Report

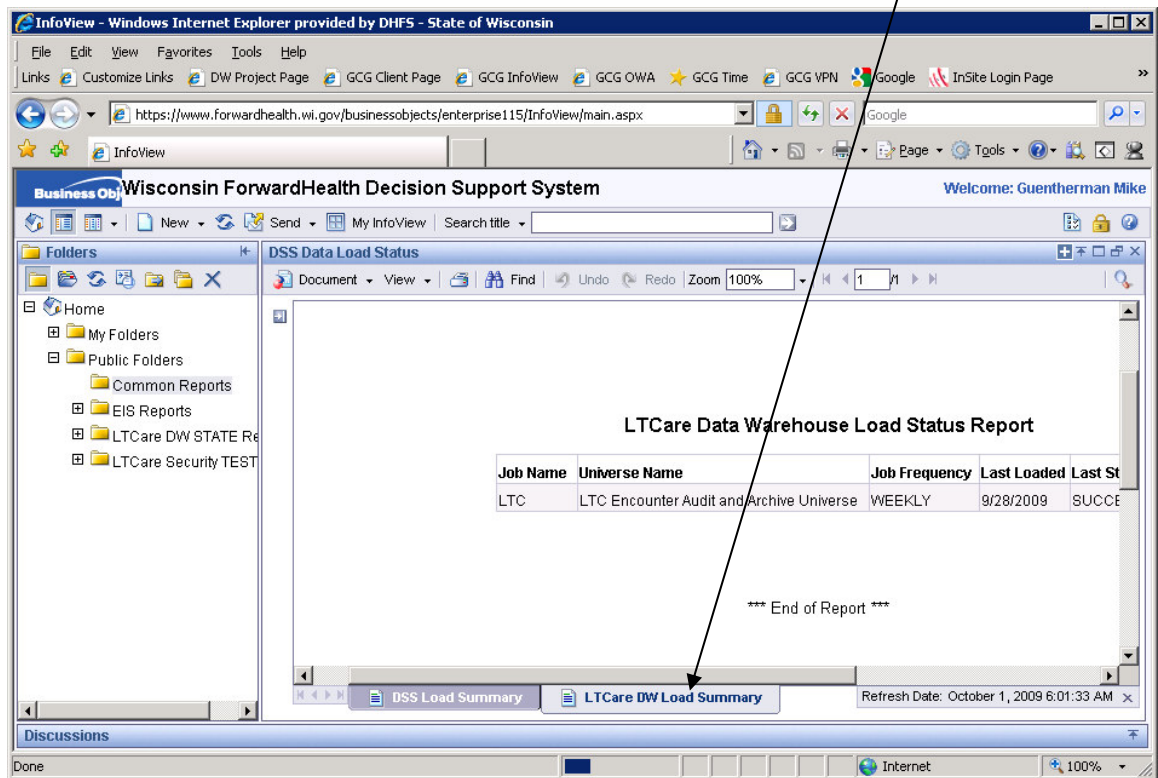
Details about the data loads are provided in a report named *DSS Load Status*. This report is updated daily at 6 A.M.

Note: The one report has more than one tab. Click on the tabs below the load report that comes up first in order to see the other reports. The 'DSS Load Summary' is for the entire dss data warehouse. The 'LTCare Data Warehouse Load Status Report' is for the loads related to the data in the LTC Universes.

This is how to find the report: When you log in to Infoview, the left-hand panel contains folders. Click on the plus sign to the left of 'Public folders', This will expand the list to show your available public folders. Click on the words 'Common Reports', and the available reports will appear in the right-hand panel. Find 'DSS Load Status' and click on 'View Latest Instance' under the report name. The report will appear in the right-hand panel.



The tab we want is 'LTCare Data Warehouse Load Status Report'.



Access to Data From Peer Organizations

Many users of The LTCare Data Warehouse will have access to data from peer organizations. A limited data set (LDS) is a part of the LTCare Data Warehouse.

The HIPAA law allows disclosure of data for research and analysis related to the improvement of health care or health care provision. A Limited Data Set (LDS) is data that has had the most common personal identifiers removed. The data provided, however, does not meet the definition of de-identified data, so it remains subject to the HIPAA regulations. This is because there are cases where a person's combination of medical conditions and demographic information are unusual enough that some users can figure out or guess at the identity of the client. Users have signed an agreement that they will not attempt to identify anyone this way or disclose the identity of a person that they have figured out this way.

The purpose of the LDS is to allow external partners to view information about other partners. The agencies will then be able to query the database for specific case mixes, etc. to benchmark themselves in comparison to others. This will allow MCOs to use this information in such a way that could result in better services to clients, improved outcomes, and potentially reduced financial costs for MCOs.

Future Additional Data Sources

New data sources will be continually added to the LTCare Data Warehouse.

The timetable depends on acquiring funding for the work needed to include specific data, considerations that affect the priority for adding specific data, and the ability of DHS and our vendor, EDS, to assign people to the effort.

Some proposed additions include:

- a. MA Enrollment data from interChange
- b. Reference Tables to ensure that shared code sets are available via the data warehouse.
- c. Birth to 3 Program data.
- d. MA card services/claims data for MCO members.
- e. WITS Wisconsin incident tracking data
- f. PPS program participation data.
- g. Public Health data that is relevant
- h. CARES data that is relevant
- i. ICF-MR Relocation Tracking

Web Intelligence Concepts

Web Intelligence Report

A Web Intelligence report is a report created using BusinessObjects' Web Intelligence query module.

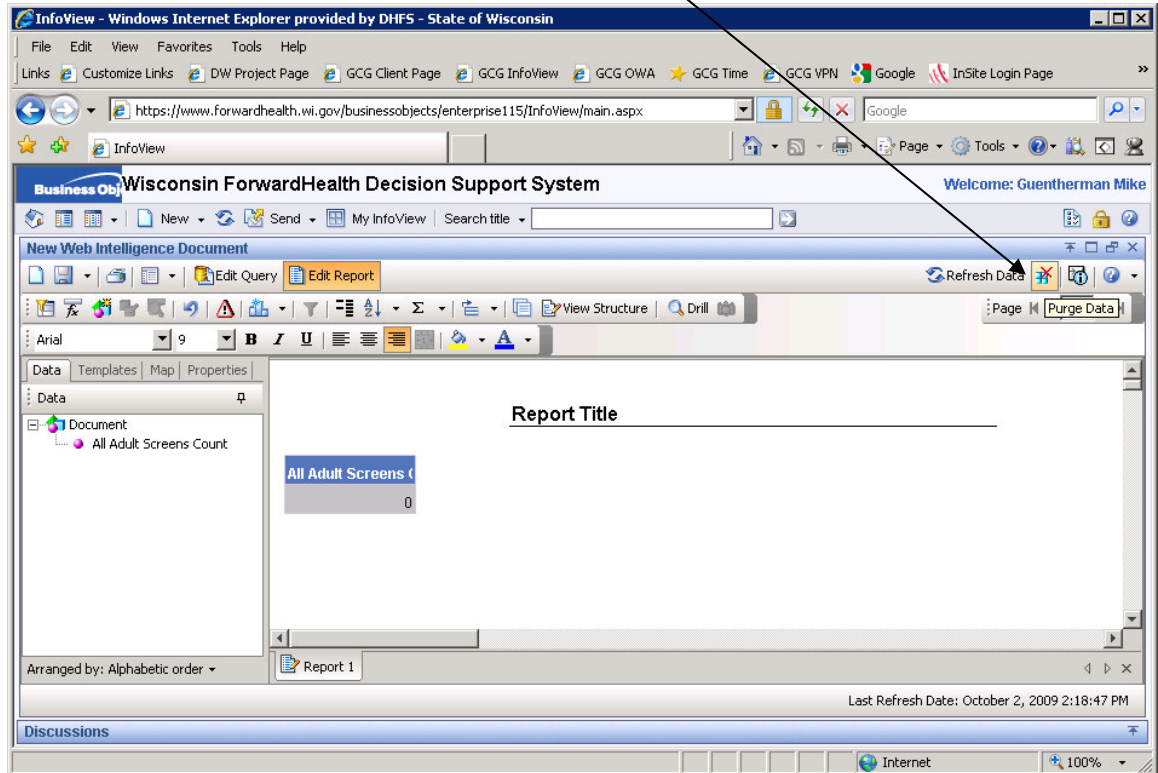
The folders under 'Public Folders' hold Web Intelligence reports that are already developed and are of interest to users who have access to that public folder. Many of these are run on a regular schedule.

Your 'My Folders' 'Inbox' contains reports sent to you.

You may create your own reports, and save them in your 'Favorites' folders, as well as send them to other BusinessObjects users.

Can there be a Web Intelligence Report without any data in it?

A Web Intelligence report can exist without any report data in it. To remove data from a report, Purge the data by clicking on the purge icon.



The important concept is that a Web Intelligence Report can exist with no data in it, and this is often the preferred. Think of it as a blank template.

Web Intelligence Reports are made up of three main components - the query, the page layout, and the data. The query component is the code that will get data from the database. The Page Layout component specifies how the report will look on the screen and printed page, including a title, column headers and the placement of data. Last of all, the Data component in the report is the results from running the query that are then placed into the page layout.

The skeleton report (query and page layout with the data purged out) is something you can save. You can send this skeleton to other Web Intelligence users, and you can also schedule it to run.

An example where a purged report is useful is when you have a report that you want run monthly at the first of the month. You can create the report, purge out the data, and schedule the report to run on the first of each month. When the first of the month passes the original purged report will not contain any data, but the history will show the scheduled output that ran on the first of the month.

Why do some reports already contain data?

This may seem like a strange question.

One of the previous topics is: Can there be a Web Intelligence Report without any data in it? The answer is 'yes, a Web Intelligence report can be saved without any data in it'. But what about reports with data?

You may want to save a report with data in it to serve as a snapshot of the data at a certain time. An example is a monthly report that runs after the end of each month, and each monthly report is saved for reference.

Someone may choose to send a report to an Inbox, or to one of the public folders with data already in it for these reasons:

- The recipient may not have the permission to run the report.
- The recipient can open and view the completed report in one step.
- The sender of the report knows exactly what the recipient will see.
- Many reports take a long time to run and use a lot of computer power. It is more efficient to run such a report once, perhaps at night, and send out the results.
- The report does not have any protected health information.
- The report data is the same for all recipients.

These are some problems that may arise when distributing a report that includes data:

- A lot of data storage space is used up.

Each copy of a report takes up the same amount of space as the original. If a copy of a report goes out to 9 folders, it uses 10 times as much storage space. If your report has many pages of data, consider distributing it without the data.

- There is a risk of disclosing protected health information.

When a report runs, it gets the data that the user who is running the report has security permissions to see.

When this report is sent out with data included, the user who receives the report sees the data from the originating user.

Although our security insures that whoever runs a report gets the data that is right for that user to see; when that person sends the report including data, the recipient sees what the person who ran the report saw. The result may be the unintended release of Protected Health Information.

Why save a Web Intelligence Report without any data in it?

Think of a Web Intelligence Report as a structure that always includes a query and a page layout. The data in the report is optional. You may save and distribute a report with data or without data.

The important concept is that a Web Intelligence Report can exist with no data in it, and this is often the preferred.

Here are some reasons for saving a report without any data in it:

- A report saved without data saves storage space. Any report is smaller without the data in it. Storage space is limited and we want to save space.
- When a report has no data in it, it needs to be run by the user. A report will contain the most up-to-date data, because each user needs to run it.
- Each user will get the data that is appropriate for the user, because the user's security settings are applied at the time the report runs.
- A report saved without data will not disclose any protected health information.

When you send a report to someone in another organization, you will typically want to send it without any data. Otherwise, they will open the report and see your data. You want to send the report framework without any data because each organization is limited to viewing the data pertaining to its own clients, at least where the data might identify a client. If you create a report that has protected health information in it, and you want to share the report with other agencies so that they can display their own data in the same way, you will want to purge the data from the report, save the report (after it has no data associated with it) and then send the report.

When other people receive the empty report framework and run the report, the security settings insure that the report will only contain data that they are permitted to see.

Getting Started

Log In to the Long Term Care Data Warehouse

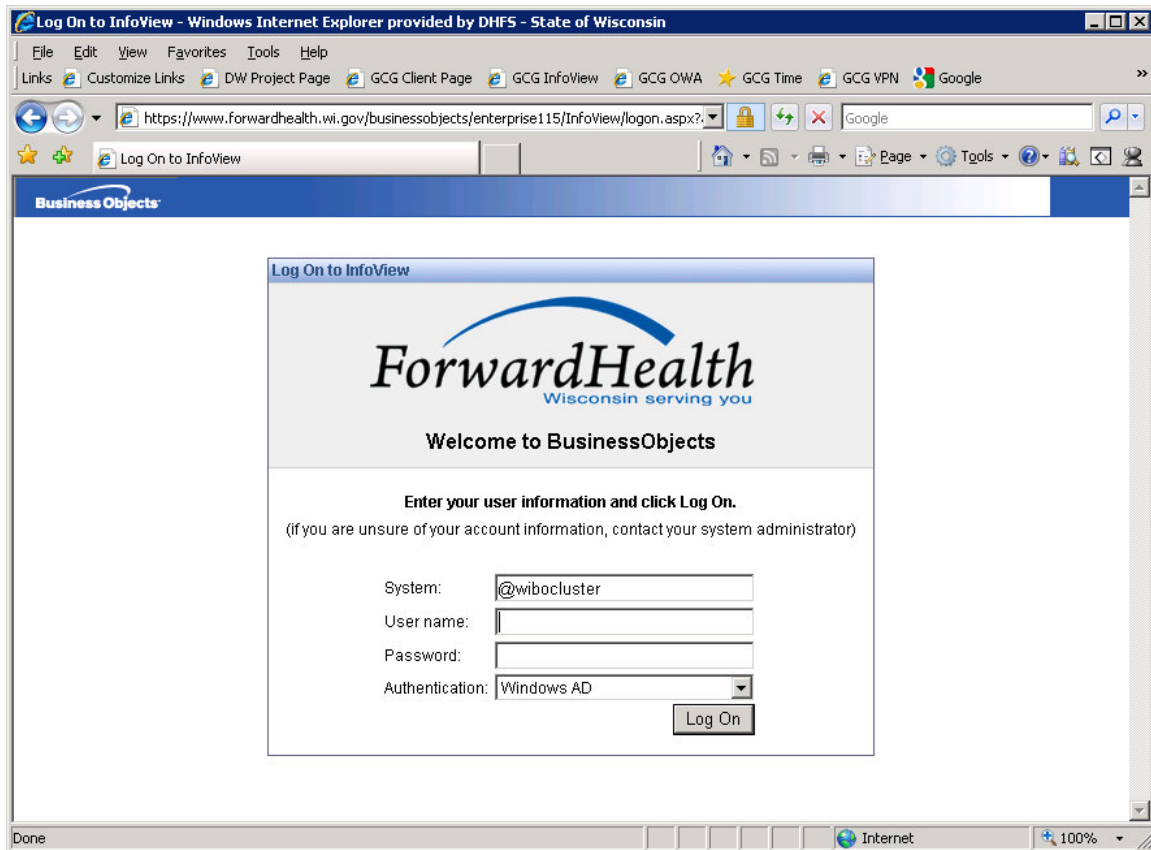
Each user needs security access to the Long Term Care Data Warehouse. Arrange access through your supervisor or local security administrator.

Open your web browser. This is usually Microsoft Internet Explorer or Firefox.

The web address for most users is:

<https://www.bo.forwardhealth.wi.gov/BOE/BI>

The address will take you to a login page.



Enter the following requested information

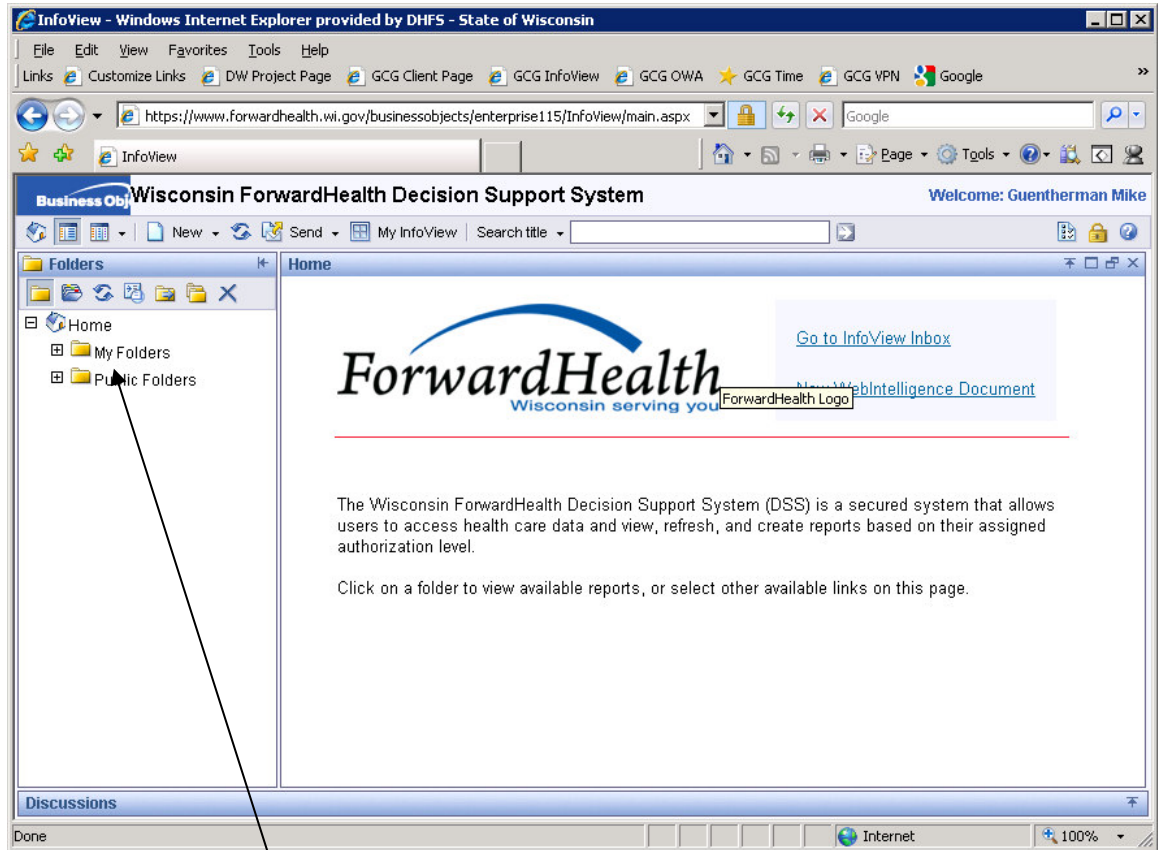
System: @wibocluster

User Name: [type in your user name]

Password: [type in your password, using capital and lower case exactly as given]


Authentication: Windows AD


A successful login takes you to a Forward Health home page.



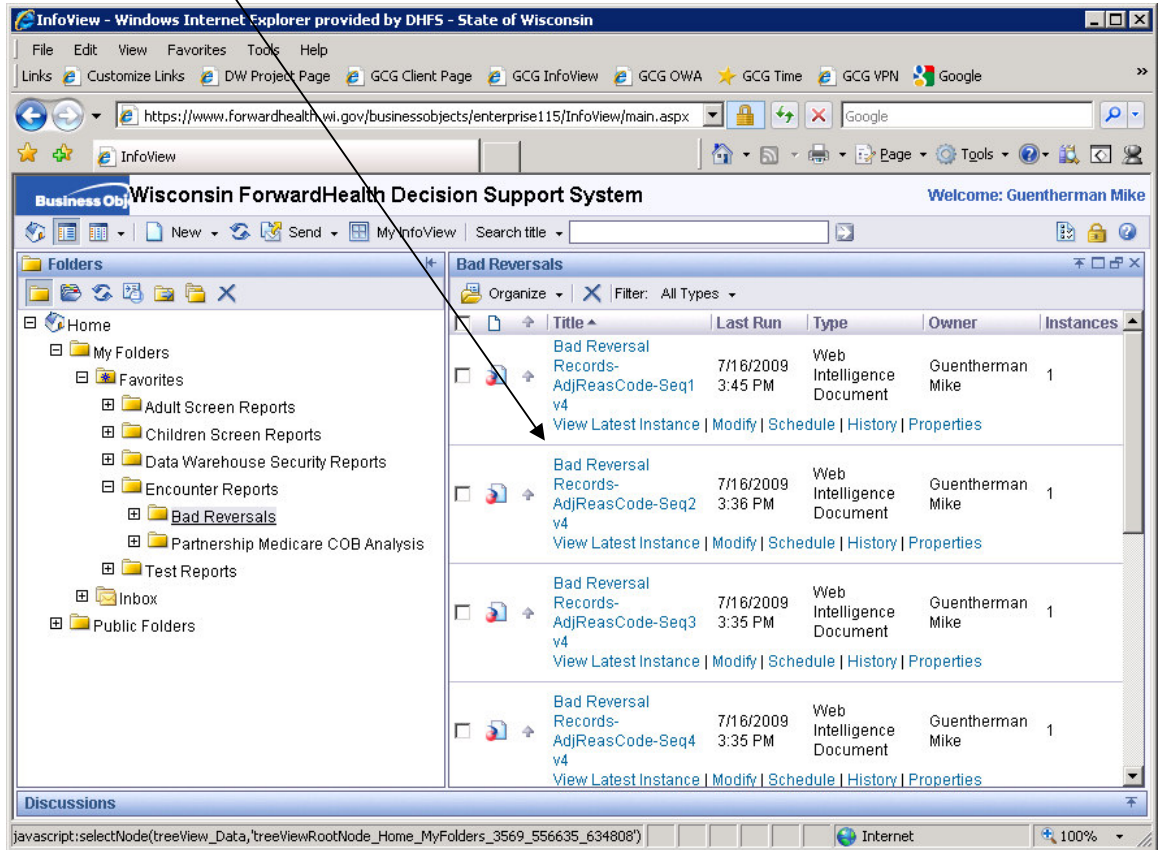
Open a Report

When you log on for the first time, open or view any available reports by using the 'Folders' panel on the left hand side of the screen.

When there is a plus sign  to the left of a folder name, it means that there are additional sub-folders under that folder.

When you click on a plus sign  by a folder name, the folder expands to list sub-folders.

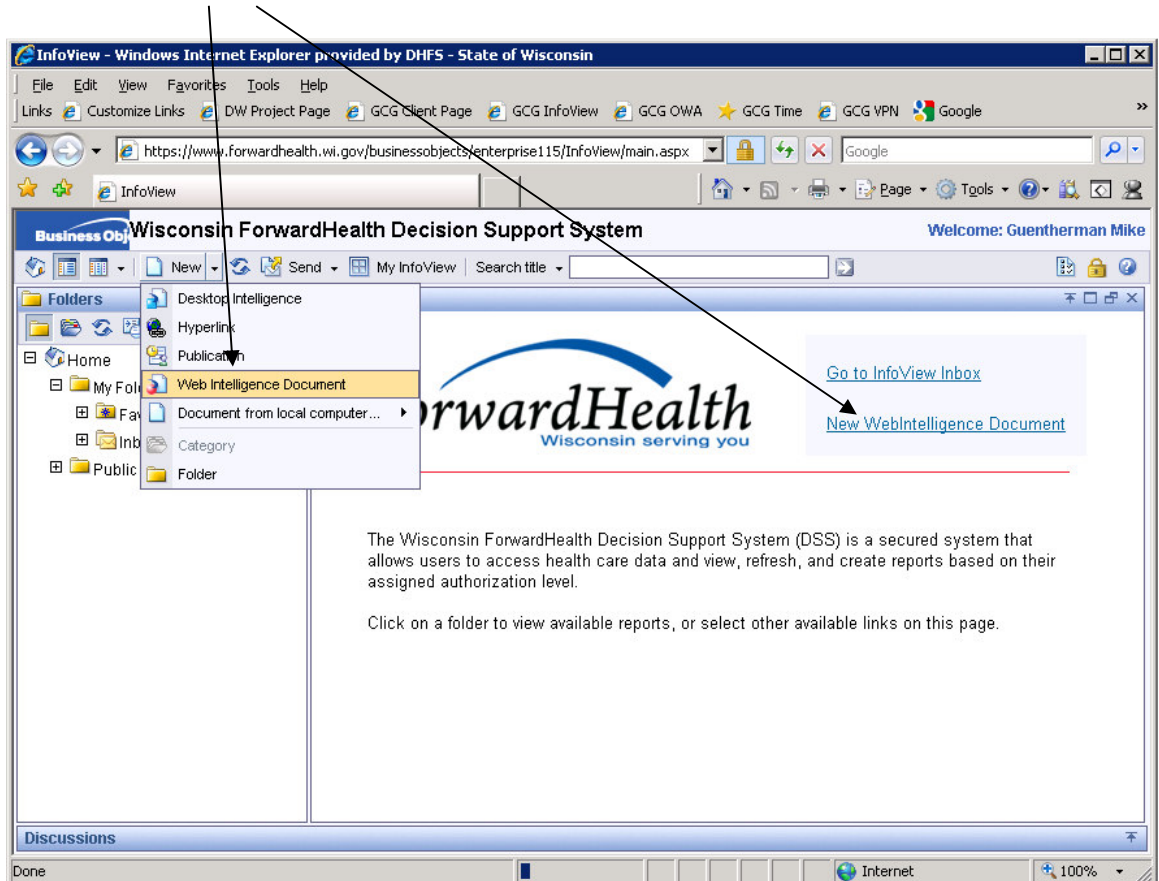
When you click on a folder name, reports in that folder are displayed in the large panel to the right.



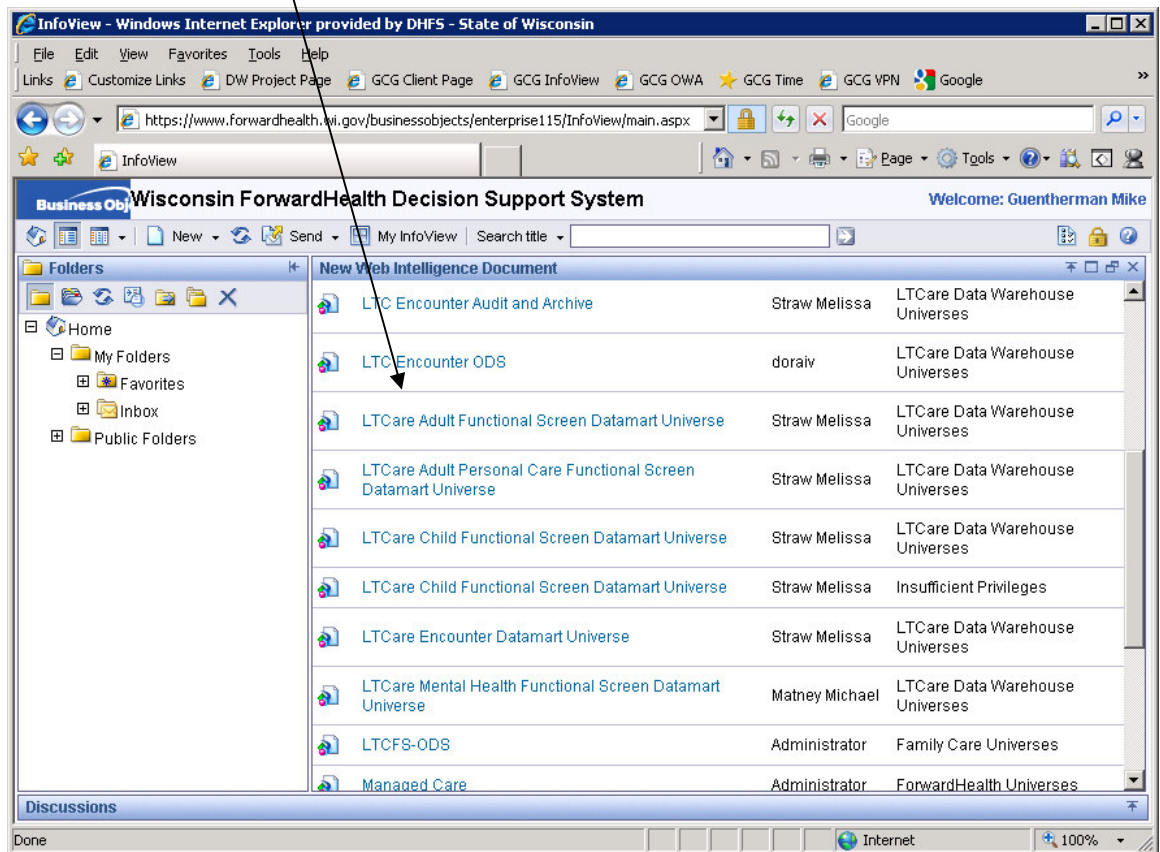
Create a Report

There are two ways to begin creating a new Web Intelligence report.

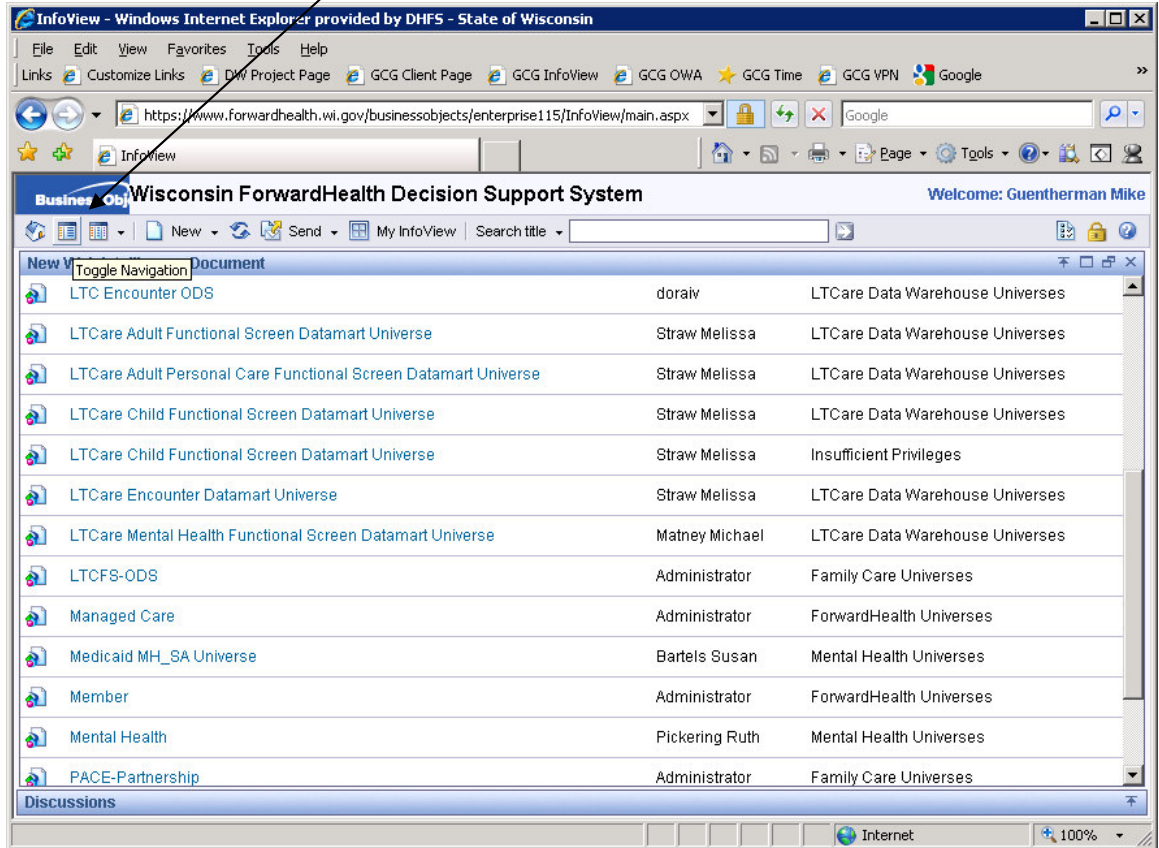
1. Go to the Home panel in Web Intelligence. To the right of the logo for Forward Health – Wisconsin serving you there is a gray box. Click on the words ‘New Web Intelligence Document’.
2. On the line that has the house icon at the far left, there is a section with the word ‘New’ and a down arrow. Click on the down arrow to see the drop-down list of options. From the drop-down list, click on ‘Web Intelligence Document’



In the large panel, select the Universe you want to use for your report. Some users will have only one Universe listed. Click on the name of the Universe you want to use. This will lead to the report creation panels.



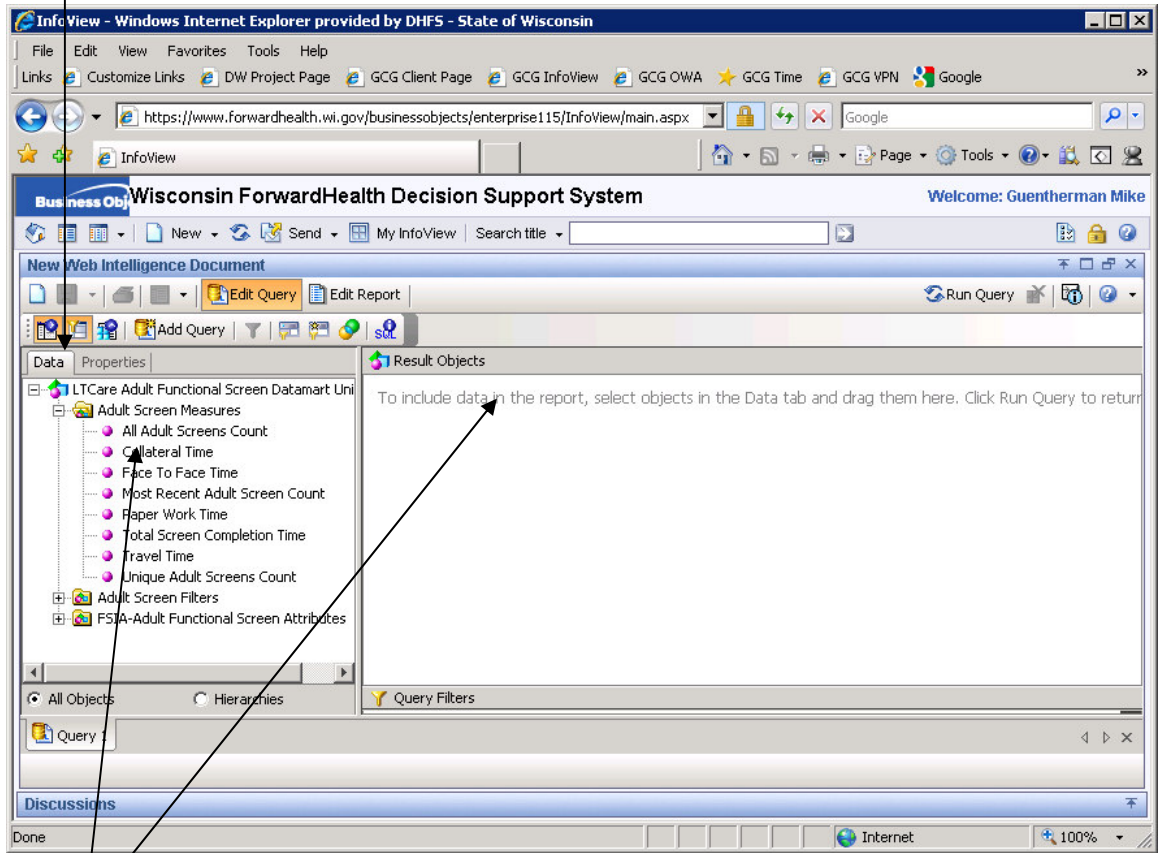
To get more space on the screen, you may want to remove the 'Folders' panel on the left. To toggle this on or off, look at the icons in the row directly above the word 'Folders'. The first icon is a house. The second icon looks like a report page. Click on this second icon to toggle the 'Folders' display on and off.



The data tab at the top of the left panel shows a listing of all the items in the selected Universe. The top section of Universe items is measures. These are items that give a count or an addition sum to use in a report.

The second section of Universe items is filters. These are typical subsets of the data, including such things as 'Most Recent Screen' or a prompt for a 'Diagnosis Code'

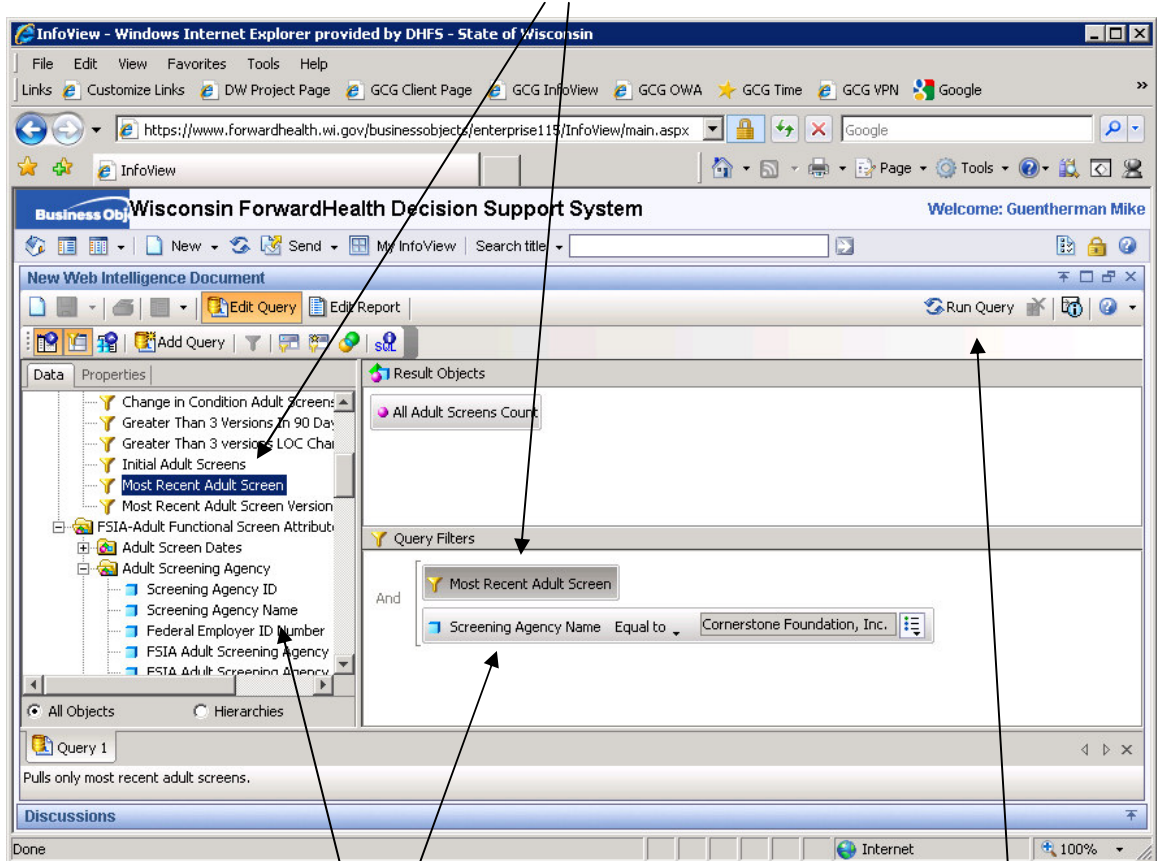
The following sections of Universe items are groupings of data. One group has the various available dates. One is information about clients. One is information about providers. The others are specific to the data of the Universe.



To get a piece of data into your report, find it in the data tab, click on it, and drag it into the upper right panel named 'Result Objects'. These are the items that will be available for your report.

There are two simple ways to limit or filter the data for a report.

One way to filter is to choose items from the filters area. Find the filter item(s) you want in the second area in the data tab. Double click on it, and it will appear in the 'Query Filters' panel. Otherwise, click on it, and drag it into the 'Query Filters' panel.



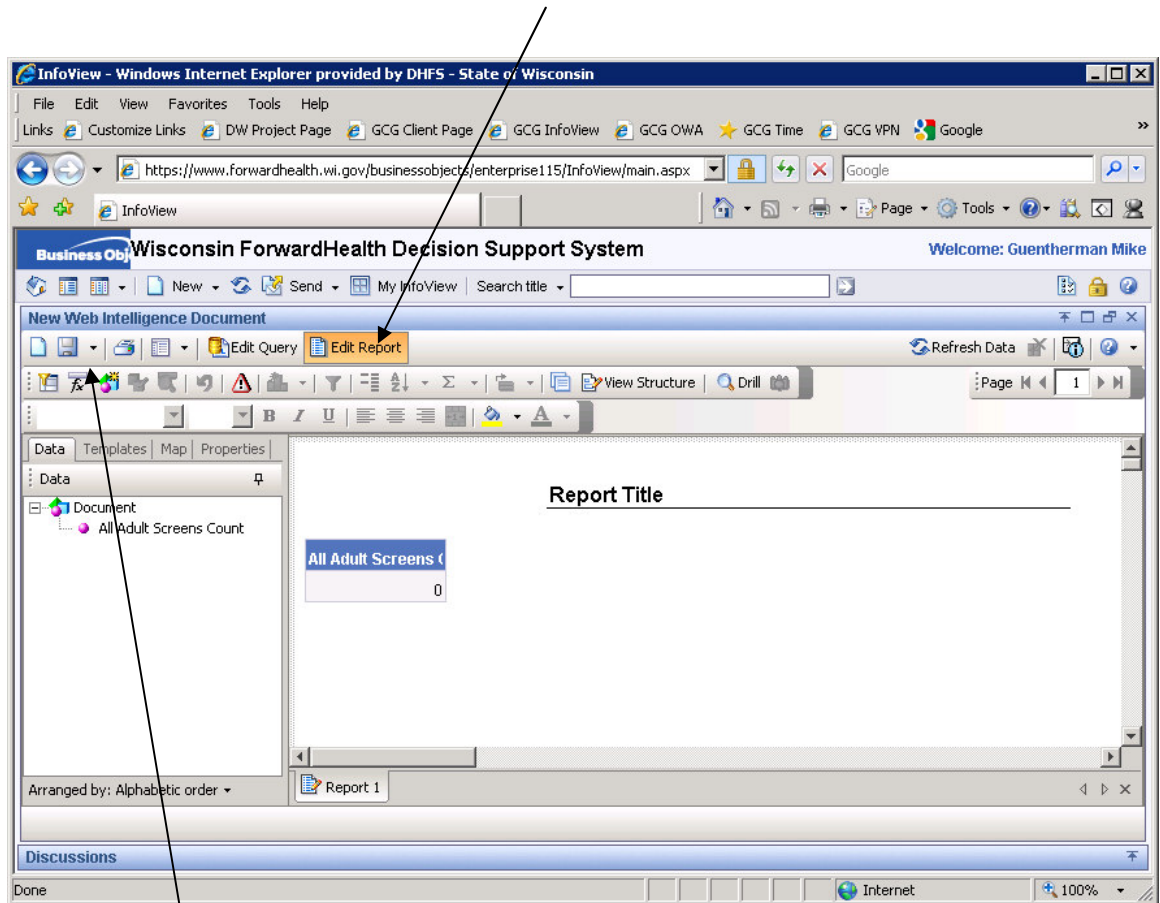
You can also filter by choosing one of the data items in the Universe. Find it in the data tab, click on it and drag it into the 'Query Filters' panel. In this case, you will need to specify what you want. In the 'Query Filters' panel, the data item name will have a down arrow to the right. Click on this and choose the best option for your filtering, such as 'equal to'. Then click on the next icon to the right. This provides options for you to type in the value you want to select, choose the value from a list, give the user a prompt each time the report is run, or look for a situation where the value for the filter is the same as the value in some other field.

Once you have some items in the 'Result Objects' panel, you can run the report by clicking on the 'Run Query' symbol in the line above the 'Result Objects' panel.

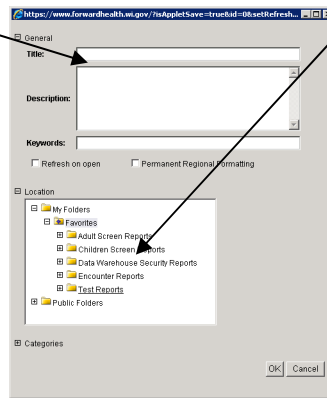
The first time you click on 'Run Query', the report will have all of the fields contained in the 'Result Objects' panel. If you later on remove some and run the query again, the removed fields will be gone from the report. However, if you later on add some more fields to the 'Result Objects' panel and run the query again, the newly added fields will not appear in the report. In that case, you need to find the missing items in the data tab to the left of the report, and drag them into the report one at a time.

Save a Report

To save the report, you need to be in the report layout area, not in the query specification area.



Above the data tab and report contents, there is a blue-grey line with the words 'New Web Intelligence Document'. Just below that the second icon looks like a data storage floppy disk. Click on the second icon to activate the pop-up window for saving a document. At a minimum fill in a title for your report, and choose the location where you want the report to be saved. Usually, reports will be saved in a sub-folder under 'My Folders', 'Favorites'.



If your report has data in it, the data is also saved, along with the query and report layout. If you want to save the report definition (query and layout) but not the data, you can purge the data before saving the report.

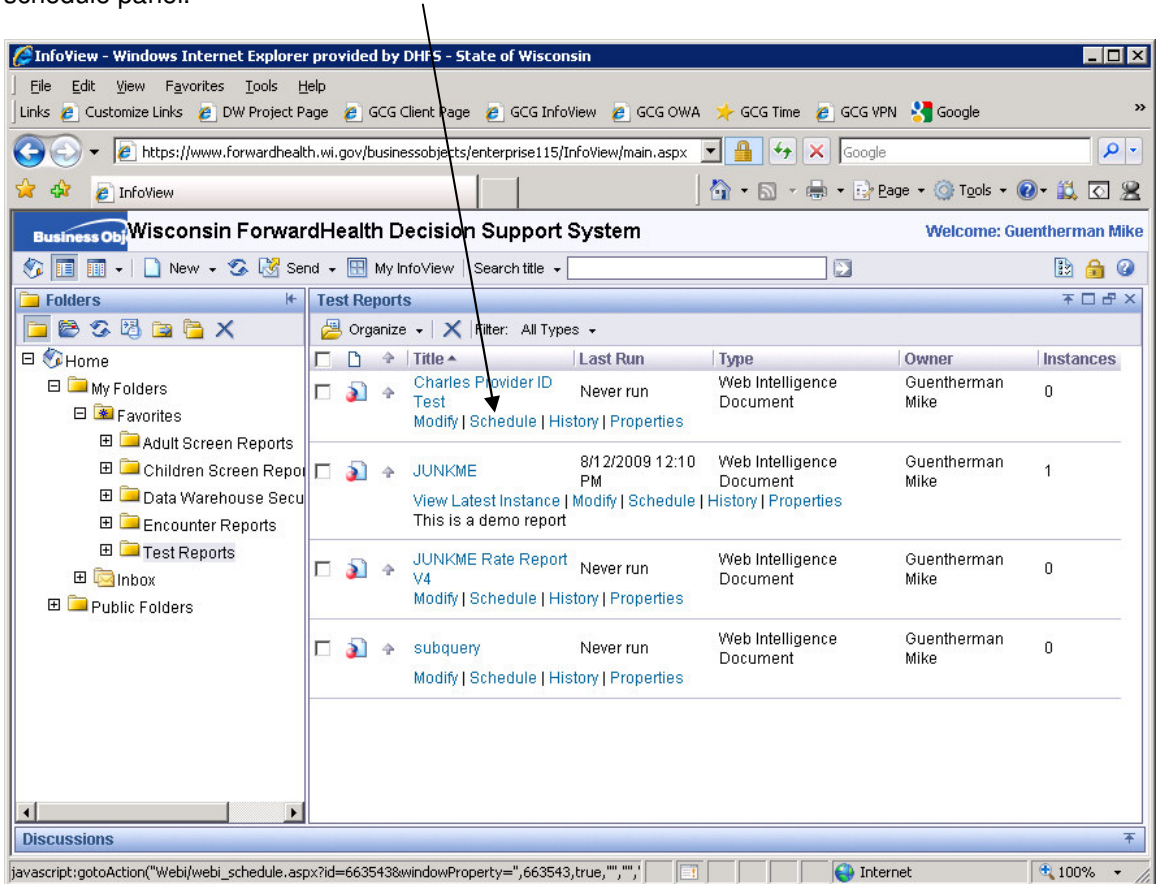
Run a Report

Running a report means scheduling a report or clicking the button to refresh the data in a report. Viewing a report means opening a report that has already been scheduled and run. Another way of viewing a report is to open it for editing, clicking on the 'Refresh Data' area. When data is returned, the report panel is displayed so that you can view the report.

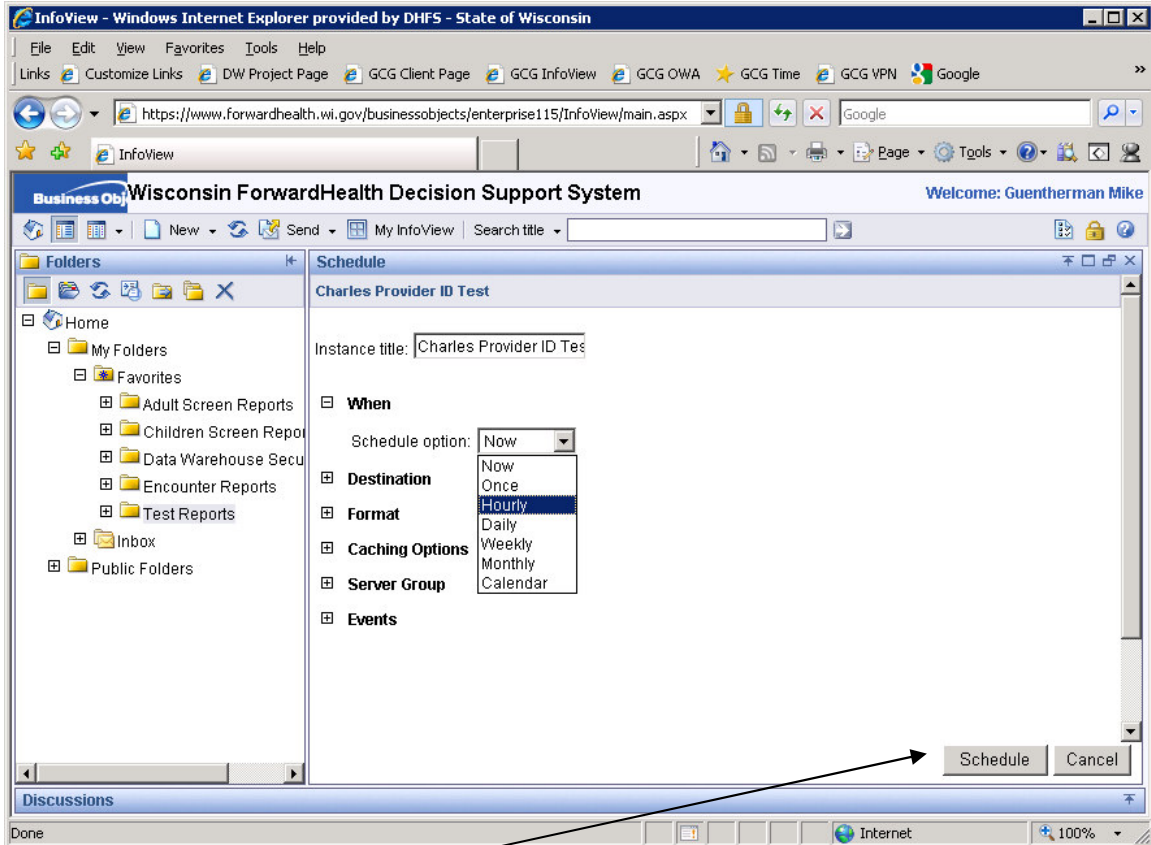
Some standard reports run automatically on a regular schedule and are sent to public folders or individual Inboxes.

Schedule a Report

To schedule a report make sure the 'Folders' panel is toggled so it can be seen. Open the folders and click on folder names to find the name of the report you want to schedule. Underneath the name of the report, click on the word 'Schedule'. This will bring up the schedule panel.



In the schedule panel, you can define the frequency to run the report, set options to define the format of the output, and fill in values for user defined prompts.



Click on the Schedule button and the report will be put on the scheduler to run at your defined time.

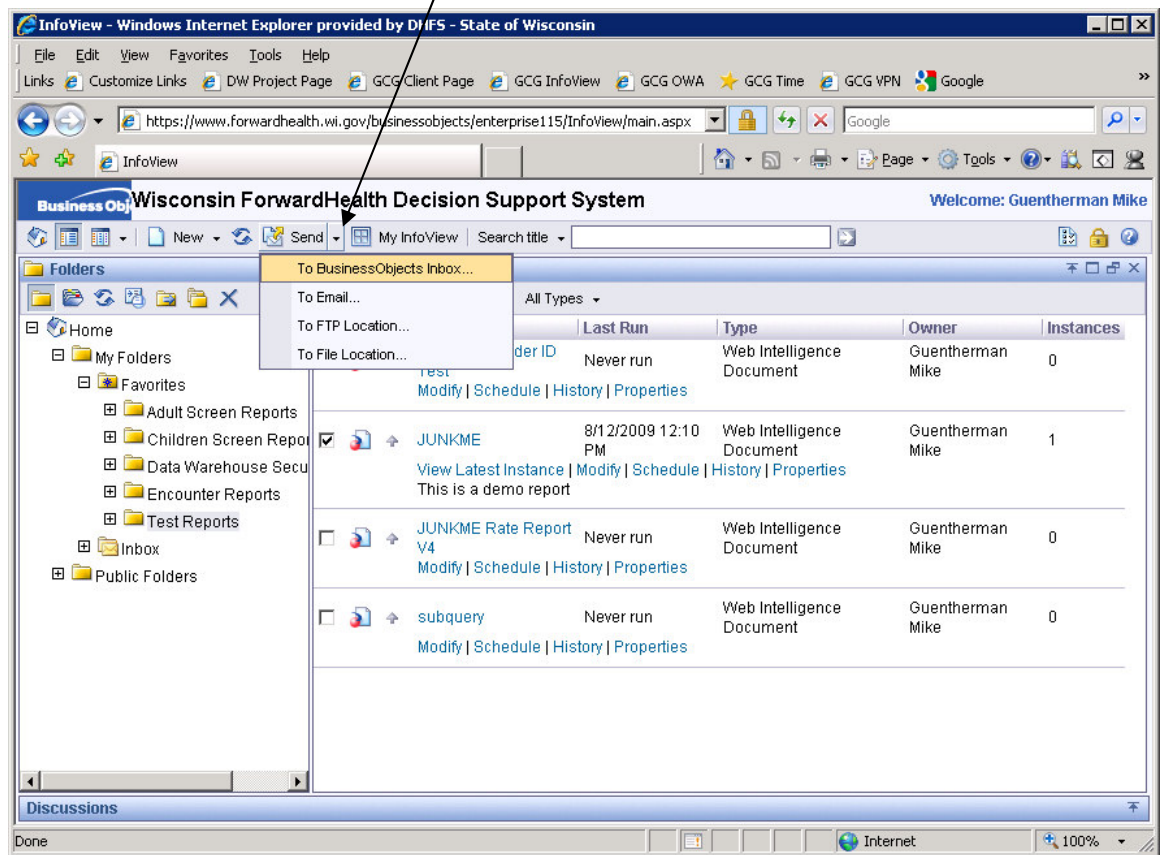
Send a Report to Another BusinessObjects User

Send a report:

1. Select the report you want to send.

2. Use 'Send'.

In InfoView, locate the row of symbols underneath the line that reads *BusinessObjects Wisconsin Forward Health Decision System*. In that row, find the word 'Send'. Click on the down arrow to the right of the word 'Send'.

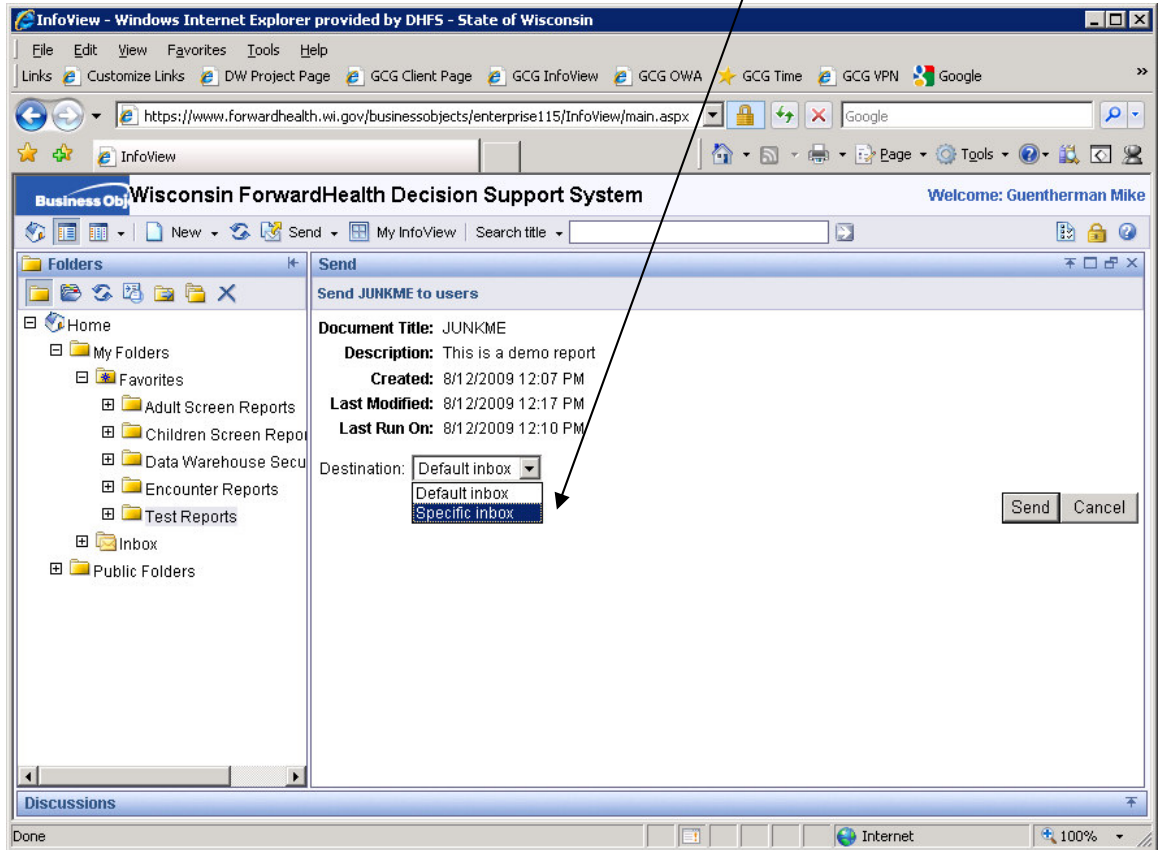


3. Send 'To BusinessObjects Inbox'.

From the drop-down list, choose the top item 'To BusinessObjects Inbox'. (All of the other options are disabled.)

4. Choose 'Specific Inbox'.

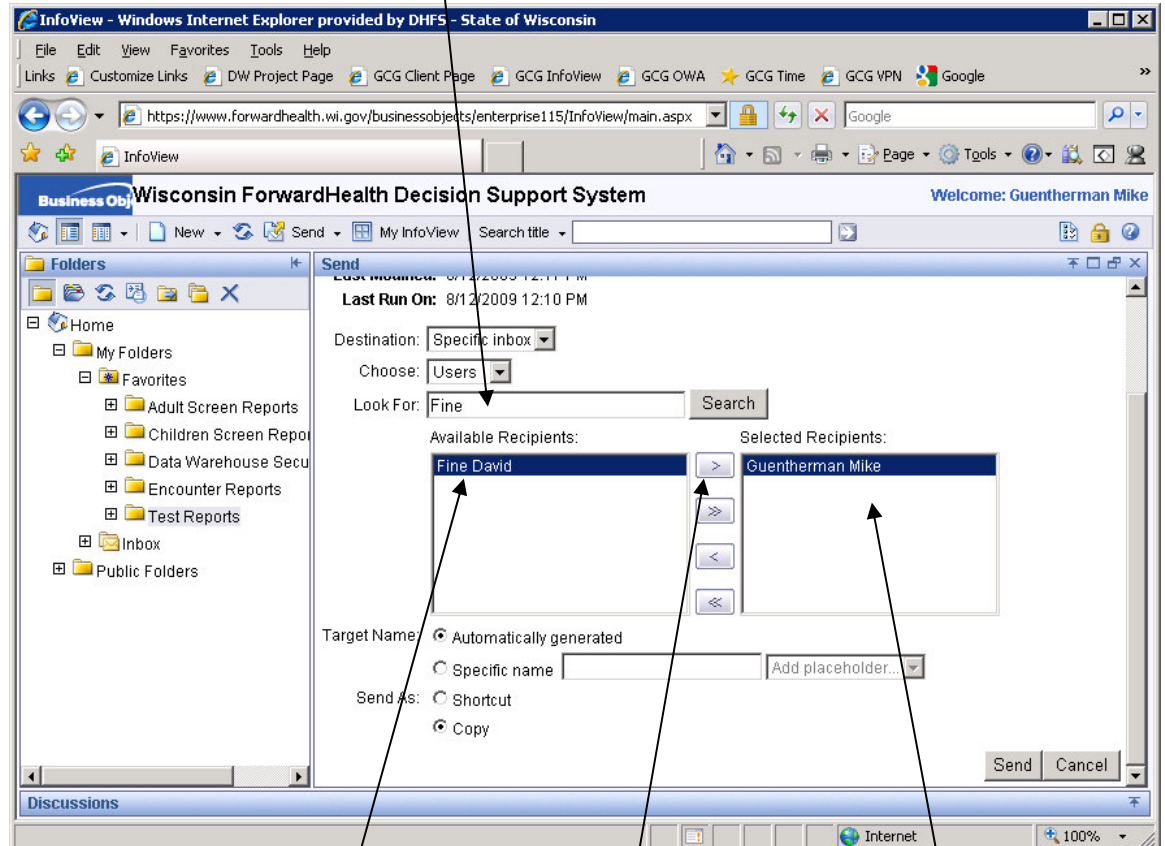
The Send panel will replace whatever was in the large right hand panel. The sixth line will read *Destination: Default inbox*. Click on the down arrow to the right of *Destination: Default inbox* and choose 'Specific Inbox'. More choices will appear.



5. Move names from the Available Recipients box to the Selected Recipients box.

In the Choose box, select either Users or Groups.

In the Look For box, type in something so that the name you want is included in the Available Recipients box. For example, type a few characters of a person's name.



Highlight the name you want, by clicking on it.

Click on the arrow to move the highlighted name into the right-hand Selected Recipients box.

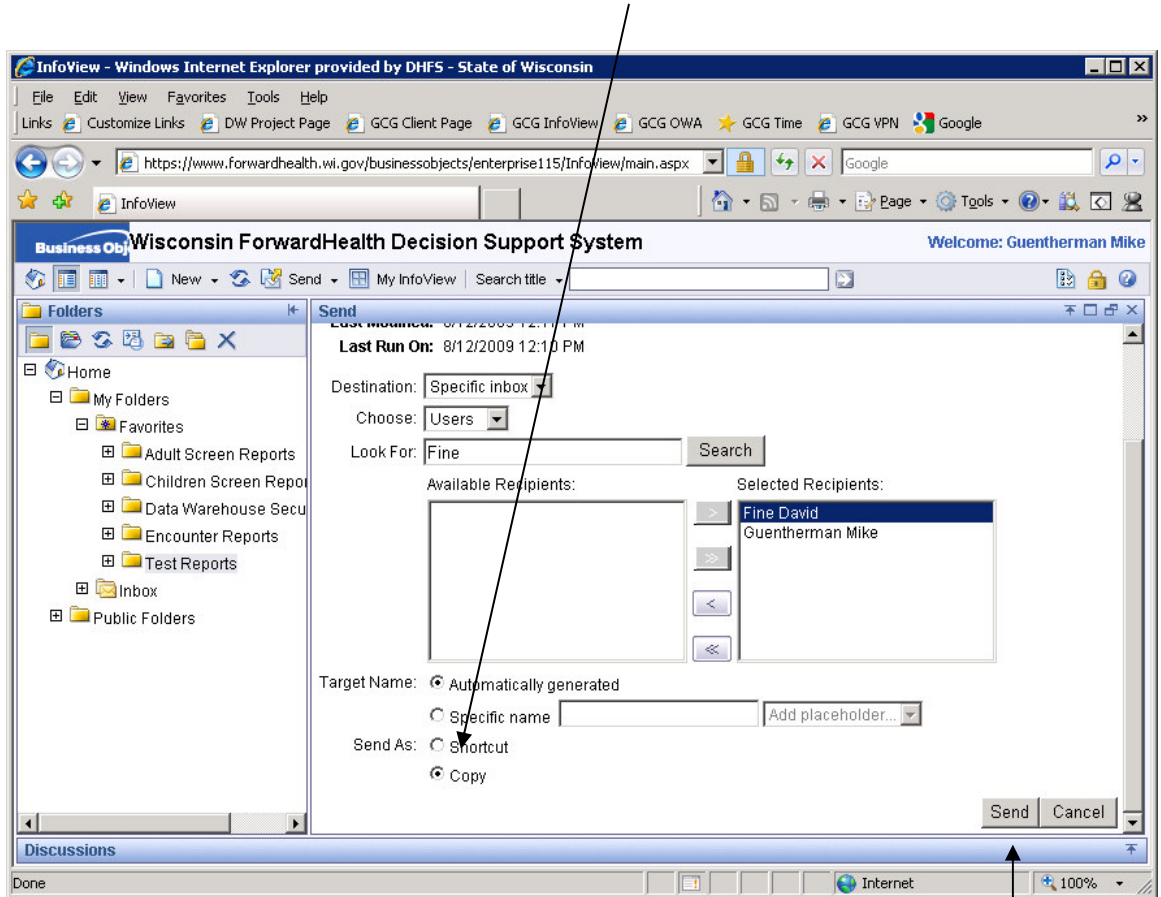
Repeat until all desired recipient names are in the right-hand box.

6. Select a target name for the sent report

Normally, use the default name for the report, which is its current name. That makes it easier to keep track of your reports. If you prefer, you can enter a specific name.

7. Select a *Send As* option

Normally, click the button to send the report as a Copy. This sends the query, the report layout, and any data currently in the report.



The other alternative, a shortcut, is a link to the report. This works only when the report is located in a public folder that both the sender and the recipient can access.

8. Click on Send

Find the Send button in the lower right corner of the panel, and click on Send. A copy of the report will be sent to the selected users BusinessObjects Inboxes.

Delete a Report

There are three ways to free up the space that a report uses.

1. Delete the report. When a report is no longer needed, delete it.

2. Purge the data from the report and then save it. This saves the query and report layout specifications, but not the data. When a report has many pages of data, it is thoughtful to purge the data before saving the report.
3. Delete instances of the report. Each time a report is scheduled, it creates a new instance with the report query, page definition and the current data. When you look at a list of reports in a folder, the right hand column lists the number of saved historical instances or snapshots of the report. Deleting instances that are not needed frees up space.

Using Other Universes

In general, it is wisest to use the Universes with the names LTCare . . . Datamart Universe.

In some cases, it may be reasonable and possible to combine LTCare DW data with data from other universes. In order to do this, you will need to know the data very well and have advanced skills in using Web Intelligence or else get technical help.

When you go into Web Intelligence to create a new document, you see a list of Universes from which to choose. The LTCare Data Warehouse universes that are specially designed for business intelligence and ad-hoc reports have names that begin with 'LTCare' and end with 'Datamart Universe':

- LTCare Adult Functional Screen Datamart Universe
- LTCare Adult Personal Care Functional Screen Datamart Universe
- LTCare Child Functional Screen Datamart Universe
- LTCare Encounter Datamart Universe
- LTCare Mental Health Functional Screen Datamart Universe

Other LTCare Data Warehouse Universes are copies of the source systems, and are not designed for flexible queries and business intelligence. They are used to investigate situations where we need to see exactly what is in the source data acquisition systems. They are:

- LTCare FSIA Audit and Archive (Functional Screen Information Access)
- LTC Encounter Audit and Archive
- LTC Encounter ODS (Operational Data Store)

Depending on your work functions and security permission, you may have other Universes to choose from within Web Intelligence. Some examples are Claims Analysis, CMO Encounter ODS, Family Care, HSRS LTS, and LTCFS-ODS.

These are not part of the LTCare Data Warehouse and are not designed for easy merging with data from the LTCare Data Warehouse Datamart Universes, but it is possible using a merged dimension. See the training materials for more information on merged dimensions. Training materials can be found at <http://dhs.wisconsin.gov/datawarehouse/training.htm>

Space and Performance

Reports that Complete Quickly

How can you avoid reports that take a long time to run? Before you click Refresh Data or Schedule a report to run, review this checklist

1. Do you have at least one field from the Universe? If not, your count or total may include all Encounters or all Functional Screens of any type.
2. Have you limited the results to the set you want? If you have filters to limit results to a date range, to a provider, to a client attribute (such as age, diagnosis, eligibility)
3. If a query runs for a long time, look at the results and see if any filter can be added to limit the results set so the report will be more useful to you and run more quickly.

Space is a Limited Resource

Everyone who uses Web Intelligence shares one large report storage area. If that area is full, there is no space to store new instances of reports. When the shared storage area becomes too full, an email goes to all users, asking each of us to review our personal reports and to delete as many as we can to free up space. This request causes a bit of chaos in our lives at someone else's priority. Instead of reacting to a crisis, get in the habit of deleting unneeded copies of reports from your personal folders.

You have control over what is stored in your personal folders. Each time a report is saved after a data refresh, or a report is Scheduled, a new copy of the report is saved that has the data from the report query.

If you want to keep a report definition and layout so you can run it periodically, you can save it without data. That allows you to keep your report development work but use the least space.

A scheduled report may have many instances. This is the number to the right of the report name when you are viewing a list of reports in your 'My Folders' area. Check the history list for that report, and see if you can delete any instances.

Privacy and confidentiality

The LTCare Data Warehouse is carefully designed so that each user who runs a report sees only the protected health information for his or her organization, and cannot see data that identifies clients of other organizations.

Before a person receives access to the LTCare Data Warehouse, he or she signs data use agreements. This section of the User Guide highlights some of the privacy regulations, and alerts you to the new risks that the business intelligence tools expose.

Continue to protect the privacy of clients

You have received training about the federal and state laws that provide protection for personal health information (PHI) and guidance about when PHI can be disclosed.

The federal requirements are in The Health Insurance Portability and Accountability Act of 1996, often referred to by its acronym HIPAA. The Health Information Technology for Economic and Clinical Health Act (HITECH Act), enacted as part of the American Recovery and Reinvestment Act of 2009, imposes additional requirements

Report it if the LTC Data Warehouse discloses PHI in violation of privacy rules.

If you run a report or receive a report that contains data that you believe you should not see because of PHI that it contains, please contact Mike Guentherman at (608) 261-8340, your security officer, the State help desk, or the EDS help desk.

The LTCare Data Warehouse has the strongest possible security applied at the database level. The security is extensively tested. However, the security is complex and complexity can introduce mistakes.

The desired result is that each user of the LTCare Data Warehouse is limited to seeing only the protected health information that is appropriate for the organization for which the user works.

Please report any occurrences where the LTCare Data Warehouse presents you with data that you believe you should not see.

Be careful about reports you print

You can print Web Intelligence reports. When you print a report that contains PHI, pick up the output from the printer right away. Do not leave a report at the printer, on your desk, or anywhere else where unauthorized people can discover it, read it, or take it. When you no longer need a report with PHI, shred the printed copy.

Be careful about reports you save to your PC

Web Intelligence reports can be saved to your work computer or other digital devices in the form of Excel Files or PDF files. If a report contains PHI, be careful so that people walking by your computer cannot read the report on your screen. Lock your computer when you are away from your desk, so that others cannot use your workstation to open, copy or e-mail a report. Delete reports from your computer when you no longer need them.

Be especially careful when working at a computer that is a public computer, such as a public library computer.

Also, protect your PC and other device from loss or theft.

A brief review of HIPAA

The HIPAA Privacy Rule protects all "individually identifiable health information" held or transmitted by a covered entity or its business associate, in any form or media, whether electronic, paper, or oral. The Privacy Rule calls this information Protected Health Information (PHI).

PHI is health related information that can identify a particular individual, either by itself or when combined with other identifying information. PHI includes data that relates to:

- the individual's past, present or future physical or mental health,
- the provision of health care to the individual, or
- the past, present, or future payment for the provision of health care to the individual,

and that identifies the individual or for which there is a reasonable basis to believe it can be used to identify the individual.

Identifying Individuals: Data that can identify an individual includes many common identifiers such as name, address, birth date, and Social Security Number. In some cases, it may be possible to identify a person through a combination of demographic data and health data. For example, there may be only one person in a large geographic area with a particular racial heritage mix, age, and a history of particular diagnoses and surgeries. Keep in mind that someone looking at a report, who has specific knowledge of some people in an area, may figure out who the report is about, and thereby PHI is disclosed that the person is not entitled to know.

Minimum Necessary: A central aspect of the Privacy Rule is the principle of "minimum necessary" use and disclosure. A covered entity and its staff must make reasonable efforts to use, disclose, and request only the minimum amount of protected health information needed to accomplish the intended purpose.

HITECH enhancements to HIPAA

We have been hearing quite a bit about electronic health records in relation to protecting the people we serve. Now the federal government has made provisions under the Health Information Technology for Economic and Clinical Health Act ("HITECH") of the American Recovery and Reinvestment Act ("ARRA"). This was signed into law on February 17, 2009. HITECH included significant changes to the HIPAA privacy and security regulations. Many of these changes were made to help facilitate the implementation of electronic health records.

The HITECH Act came from the idea that widespread adoption of Health Information Technology ("HIT") and Electronic Health Records ("EHRs") can't occur without a key element. The public needs to have solid assurances that the privacy and security of their patient health information is protected.

Help and Training

Department of Health Services Data Warehouse Web Site:

<http://dhs.wi.gov/lcaredatawarehouse/index.htm>

This web site is the place to start. The web site contains information that is specific to the LTCare Data Warehouse including a calendar of events, frequently asked questions, load schedules, various training materials and this user guide.

Local trainer:

Each organization should have at least one person who has received training in the use of Web Intelligence and the LTCare Data Warehouse. This person can lead classes and

provide one-on-one training. This person is your first, most accessible and fastest source of help.

On-line BusinessObjects Help:

- a. When using InfoView or Web Intelligence screens, on-line help is available by clicking the question mark on the screen.
- b. BusinessObjects has a web site with documentation about the use of their products. The products that relate to the LTCare Data Warehouse are
 - i. BusinessObjects version XI Release 2
 - ii. InfoView
 - iii. Web Intelligence (using the Java option)

The web site address is http://help.sap.com/businessobject/product_guides/

This lists documents about all of the company's products, but there are selection options at the top of the page. Instead of the default 'all products', click on the down arrow to see the drop-down list, and select Web Intelligence.

Two very good resources on that web site are:

Building Reports using the Web Intelligence Java Report Panel

http://help.sap.com/businessobject/product_guides/boexir2/en/xir2_wi_jrp_en.pdf

This is an excellent guide to using Web Intelligence for building queries and formatting reports. It is 566 pages long. Each chapter begins with an Overview of the topic covered in the chapter.

Performing On-report Analysis using Web Intelligence:

http://help.sap.com/businessobject/product_guides/boexir2/en/xir2_wi_analysis_en.pdf

This is an excellent guide to using Web Intelligence, with a special emphasis on enhancing existing queries by adding charts and graphs, or adding data from additional queries or Universes. It is 344 pages long.

EDS Help Desk:

EDS has the State contract for implementing and maintaining the Decision Support System / Data Warehouse (DSS/DW). The EDS DSS/DW Help Desk staff is available Monday-Friday from 7:30am – 5pm to answer questions about use of the data warehouse and the Business Objects query tools. Contact the EDS DSS/DW Help Desk about:

- Problems logging in to InfoView and Web Intelligence.
- If you do not see a Universe you expect to see

EDS Help Desk:

Phone: (608) 221-4746 x80550

Email: VEDSDSSHelp@wisconsin.gov