Querying Your MMIS
Taking Inventory at the Data Warehouse

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Overview

- Medicaid data: What's in there?

- Know your data definitions

- Tips for better informal queries

- Formal queries for policy decision-making

Part 1: A Universe of Information…

A Medicaid Management Information System (MMIS) includes data on:

- Claims and HMO encounters
- Recipients
- Providers
- Procedure codes and policy
- Much, much more

…But there are billions and billions more stars.

An MMIS doesn't contain:

- Information that isn't part of Medicaid's business functions
- Dental diagnosis information
- Much, much more

So, you need to develop other sources for data, or learn which questions you can answer fruitfully

Part 2: Sometimes a Cigar is Not Just a Cigar

Rene Magritte, "The Treachery of Images"

…Or, Definitions Matter

Essential questions in data querying:

1. What question am I really asking?
2. What is the information that will answer my question?
3. How is that information collected and recorded in the MMIS?
4. What conclusions can I draw?
5. What caveats do I need to state?

A Bad Example

Measures of Dental Services By County, SFY 2001

County	Licensed Dentists	MA-Certified Dentists	% MA-Certified	Medicaid Eligibles	MA-Eligibles Receiving Services	% of Eligibles Receiving Services
Adams	2	3	150%	3,482	321	9%
Outa-gamie	149	99	66%	9,953	13,045	131%

Can you spot what's wrong with this picture?

A Bad Example

- Clinic IDs counted as "dentists"
- Recipients counted by place of residence for first column, place of service for second
- Older reports may not keep pace with reality
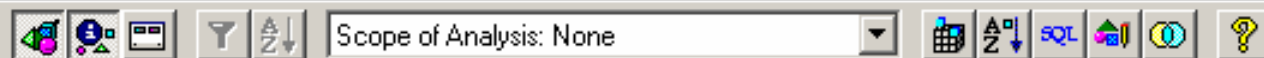
Moral: Definitions matter!

Part 3: Ad Hoc Queries

- Oracle database software is a powerful tool that lets an analyst run a variety of reports from the desktop
- Wisconsin uses the Business Objects software package
- Allows greater flexibility to ask questions, but demands better awareness of your dataset

Examples of Ad Hoc Queries

- Dollar production of a dental clinic in SFY 2005

- Number of prior authorizations for perio scaling approved but not used in CY 2005

- Use of fluoride varnishes by physicians since policy inception in February 2004

- Providers, by county, who had more than 20 paid claims in the last 6 months

Query Panel - Claims Analysis Universe

Scope of Analysis: None

Classes and Objects

- Claims Analysis Measures
  - Counts
    - Count Services
    - Count Details
    - Count Paid Claims
    - Count Denied Claims
    - Count Claims
    - Count ICNs
    - Count Family Planning Services
    - Count Healthcheck Services
    - Count First Service Dates
    - Unduplicated Recipients
    - Unduplicated Performing Providers
    - Unduplicated Billing Providers
  - Amounts and Quantities
    - Quantity Billed
    - Quantity Allowed
    - Amount Billed
    - Amount Allowed
    - Amount Paid
    - Amount Copay
    - Amount Outlier Allowed

Result Objects

- Count Paid Claims

Conditions

- First Service Date Between 7/1/2004 12:00:00 AM and 6/30/2005 12:00:00 AM

The number of claim services. Note: A claim detail consists of one to four services, depending upon whether or not additional service dates exist on the detail record. The Count Services measure element sums these services. For a summation of detail records only, select the Count Details measure element.

Options...   Save and Close   View...   Run   Cancel

Tips for Ad Hoc Queries

<u>Date Range</u>

- Use time periods where reporting is complete

- Example: Wisconsin's average lag time is 3 months for fee-for-service claims data, 6 months for HMO encounter data

- So, a complete analysis of SFY 2006 can't be done until January 2007

Tips for Ad Hoc Queries

Reduce, Reuse, Recycle

- Flexibility ≠ Constant Reinvention of the Wheel

- Reuse good queries where possible, and work to improve their layout

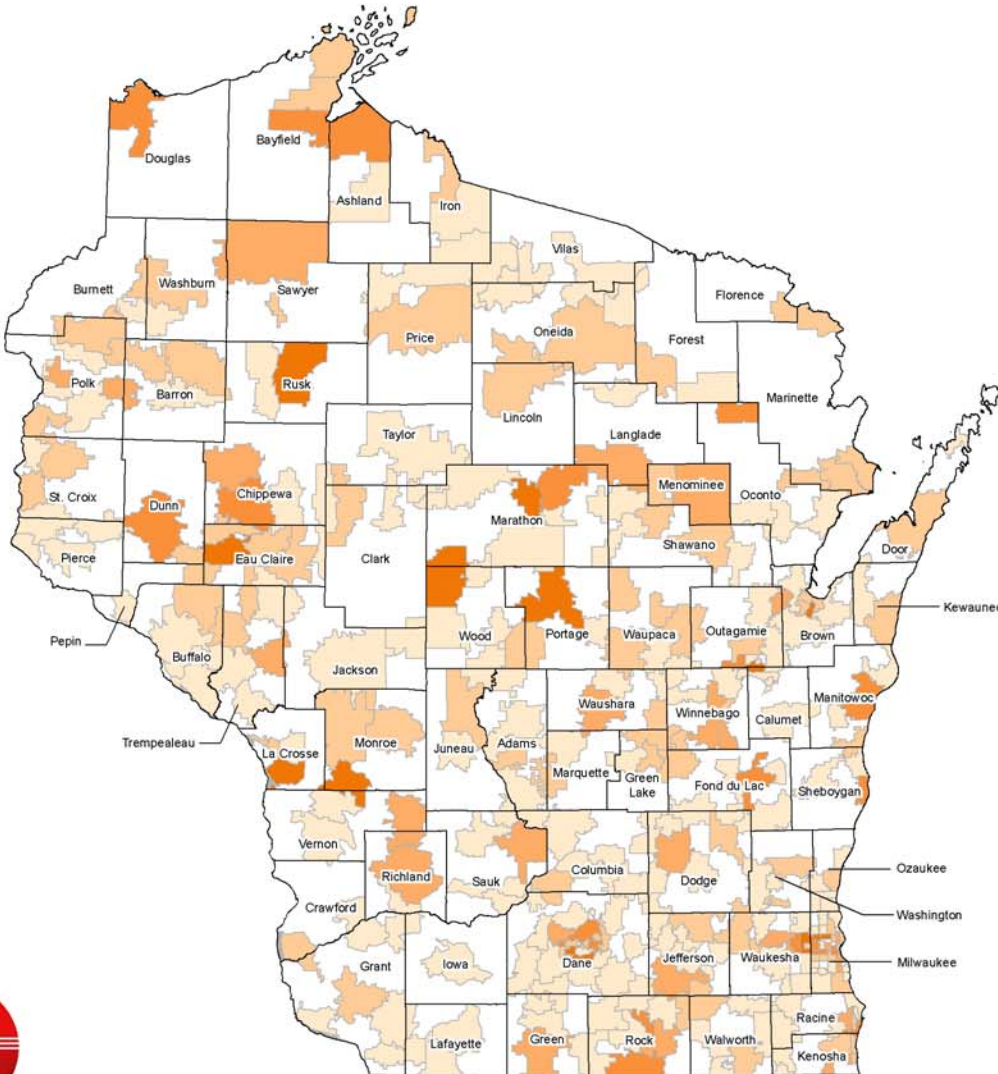- Recognize distinctions between questions that make a difference to the query

Tips for Ad Hoc Queries

Manipulating Data

- Sometimes the SQL software isn't the best tool for the job

- Export to tools like Access and Excel when necessary

- If you have GIS software, try loading geographic data into maps

Number of Paid Claims by Zip Code

Legend

Number of Paid Claims

- 1 - 428
- 470 - 1402
- 1449 - 2774
- 3114 - 5080
- 6284 - 13267

1 inch equals 50 miles

Source:
Bureau of Community Health Promotion,
Division of Public Health,
WI Department of Health and Family Services;

Map created by:
Aaron Weier, GIS Analyst, 608-267-2360
Bureau of Information Systems, WI DHFS

Date: 03-09-2006

Tips for Ad Hoc Queries

Know Your Data Environment

- Get familiar with claims coding and processing jargon in your MMIS
- Make friends with your Operations staff
- Find data dictionaries, online resources
- Know the limits of your knowledge

Part 4: Big Data Projects

- Projects that exit the office are destined for lives of their own
- Often require specialized expertise
- These documents need:
  - Accuracy <u>AND</u> Precision
  - Review by content experts and supervisors
  - Clarity on caveats and interpretation

Big Data Project Examples

Analysis of Dental Delivery Systems

- 68 Wisconsin counties are fee-for-service, 4 Milwaukee metro counties are HMO

- WI spent about $2 million more in capitation payments than it would have in FFS claims payments

- WI is instituting pay-for-performance mechanisms into its HMO contracts

Big Data Project Examples

Long-Term Impacts of Early Preventive Care

- Cohort of recipients enrolled continuously from birth in CY 1993 until age 5

- Preliminary findings:
  - Almost 60% of kids are touched by MA dental system by age 5
  - Long-term costs aren't lower for kids seen earlier

Summary

- Get to know your MMIS: definitions matter!
- Learn how to ask questions in ways that produce usable answers
- Develop resources and contacts
- Footnote everything <u>before</u> it goes out the door

Contact

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