

The Outcomes Data Mart: A Concept in the Making



The Ohio Mental Health Consumer Outcomes System is an ongoing endeavor to obtain outcomes measures for consumers served by Ohio's public mental health system. Consumer outcomes provide important information for the management of consumer care, the improvement of the service delivery system, and accountability for public resources.

The Ohio Mental Health Consumer Outcomes System has been a long time in the making. Consumer Outcomes are one of the key components of the ODMH Quality Agenda, and the system that supports the base of the Quality Triangle is starting to produce results.

History of the Outcomes Initiative

ODMH embarked on an effort to develop a process for measuring consumer outcomes statewide by soliciting the recommendations of a statewide panel that conferred for 16 months during Fiscal Years 1997 and 1998. A pilot process was developed and implemented in Fiscal Years 1999 and 2000 to identify strengths and weaknesses of the recommendations and to reach consensus with a group of volunteer local systems on the necessary elements of further implementation. Large scale statewide implementation was initiated in Fiscal Year 2001 through a series of incentive grants provided to local systems to facilitate their implementation of the Consumer Outcomes System.

Then in Fiscal Year 2004, ODMH adopted an Administrative Rules Package that established formal Outcomes System participation requirements, deadlines and criteria for agencies serving publicly-funded consumers. Those rules linked participation in the Outcomes System to agency Certification and specified that by September 4, 2004, agencies should be flowing Outcomes production data to ODMH, and that by September 4, 2005, agencies should be able to show evidence of use of Outcomes data in both treatment planning and agency performance improvement.

As of April 13, 2005, production data were flowing from 49 boards and 280 providers, and the production data base contained over 715,000 records relating to over 220,000 unique consumers.

With the Outcomes System in production, activities during Fiscal Years 2006 and 2007 will focus on expanding the production system, conducting a statewide evaluation and quality improvement of the Outcomes process, and the design and implementation of a statewide Outcomes Data Mart.



Designing the Outcomes Data Mart

Putting data into a system accomplishes little if one can't get it back out. Therefore, one of the key pieces of the overall Outcomes System is a web-based Outcomes Data Mart that allows users to generate reports based upon the Outcomes data that have been collected throughout the state and submitted to ODMH.

The conceptual design of the Outcomes Data mart was developed by a Statewide Outcomes Data Mart Committee made up of individuals representing providers, local community mental health/addiction boards, ODMH, and other constituents. The Committee met for 20 months during Fiscal Years 2003 and 2004 and issued its recommendations in the form of an Outcomes Data Mart Conceptual Model, from which much of the current article is derived.

Data Mart Design Principles

The following principles were adopted by the Statewide Outcomes Data Mart Committee:

Non-Technical Users — The Outcomes Data Mart will be accessible to a wide variety of individuals who have little sophistication using data analysis tools. Anticipated users include: (1) community mental health boards and agencies; (2) mental health consumers and family members; (3) ODMH Division of Program and Policy Development and others within ODMH; (4) ODMH Office of Program Evaluation Research; and (5) the general public.

Ease of Use — The Outcomes Data Mart will be easy to use, and won't require users to have prior knowledge of the specifics of the Consumer Outcomes Initiative or its instruments in order to make effective use of the data. The Outcomes Data Mart design won't force the user to perform detailed drill-downs that often "obscure the forest for the trees" and leave the user wondering, "now what did I just do?" Users will be able to respond to a series of simple, English language prompts and get the report they expect.

Decision-Support Design — The Outcomes Data Mart will be a simple tool to provide limited basic and accurate decision-support information about reported consumer outcomes in Ohio; it will not attempt to be "all things to all people." The primary uses of Outcomes Data Mart information are for clinical and organizational management rather than research.

No Within-Consumer Design — The Outcomes Data Mart will allow comparisons of consumer groups with a given set of characteristics to similar groups at different points in time (even though the individuals in the groups may not be the same). Difficulties inherent in programming and data integrity preclude the option of a "within-consumer" design where change measures within individuals could be measured at multiple points during treatment.

Confidentiality — Best practice, Ohio statute and HIPAA requirements mandate that information contained in the Outcomes Data Mart be completely confidential; it should not be possible to use any information in the Outcomes Data Mart to identify any specific individual. Therefore: (1) no consumer identifiers will be contained in the Outcomes Data Mart; (2) the number of reporting formats and options is limited by the design; and (3) no user downloading of raw data sets is allowed.

Two Display Options

In keeping with the philosophy of not trying to be everything to everyone, the Outcomes Data Mart offers only two types of results displays — simple frequency distribution graphs and two-dimensional tables.

Bar Graphs — Bar graphs are similar to those produced for the Initial Statewide Outcomes Report, with the X-axis representing the various reported values for the item or scale being displayed and the Y-axis representing the percentage of responses represented by each value. To the extent possible, appropriate sample measures (e.g., sample size, mean, median, standard deviation) are reported with each graph.

Bar graphs can be prepared for an individual service board, an individual residence board, an individual provider agency, or for the entire state.

Tables — The second display option is a table that lists the item or scale being requested as the column and one of the following variables as the rows:

- Time in Treatment
- Gender
- Race
- Living Situation
- Age
- Primary Diagnosis
- Education
- Marital Status (Adult Consumers Only)
- Employment Status (Adult Consumers Only)
- Mandated Treatment Status (Adult Consumers Only)

Tables can be prepared for the entire state, with rows representing service boards, residence boards, provider agencies, or a selected demographic characteristic (e.g., gender, education).

A Simple Approach to Preparing Outcomes Reports

A key strength of the Outcomes Data Mart is its ability to allow a non-sophisticated user with little or no knowledge of the details of the Outcomes Initiative to frame meaningful questions and get them answered. The Data Mart accomplishes this end by guiding the user to the desired information through two sets of simple, easily understood questions supported by on-screen lists and instructions.

Selecting the Consumer Outcomes to Include — The first set of prompts identifies the particular information to be included in the desired report and includes:

- Do you want to look at Outcomes information for adult consumers or child & adolescent consumers?
- Consumer Outcomes scores come from multiple sources. Whose measurements of the consumer would you like to see?
- List any special characteristics of the consumers for whom you'd like to see Outcomes scores.
- Outcomes are measured at various points during a consumer's treatment. Indicate the approximate time in treatment (as measured by days since admission) that best describes the consumers for whom you'd like to see Outcomes scores.
- Outcomes can be examined according to the fiscal or calendar year in which they were obtained. For what period would you like to see information?

Selecting the Report to Prepare — The second set of questions identifies the particular information to be included in the desired report and includes:

- Outcomes are measured for several areas for a consumer's life. From which area would you like to see information?
- Outcomes can be displayed as bar graphs or tables. How would you like to display the Outcomes you have selected?

By selecting various possible answers to the above questions, an extensive variety of targeted Outcomes reports can be generated by users with little or no technical sophistication.

Current Status

So, where are we today? The Outcomes Data Mart is currently under construction. The ODMH Office of Information Services (OIS) has contracted with a third-party vendor to undertake the technical programming and training of OIS staff. Although the vendor is under the direct supervision of OIS, the Outcomes Data Mart project itself is being guided by a steering committee comprised of representatives of OIS, the Division of Program and Policy Development (PPD) and the Office of Program Evaluation and Research (OPER).

If all continues to go as scheduled, the Outcomes Data Mart should be up and operating during the first half of Fiscal Year 2006.