Data Integration: The Value of Using Mental Health Data with Data from Other Sources

Mental Health Data Infrastructure Grant Annual Meeting

December 4 and 5, 2003

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Substance Abuse and Mental Health Services Administration
Center for Substance Abuse Treatment
Center for Mental Health Services
www.samhsa.gov

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Introductions

Background

- Medstat has been working with integrated mental health and substance disorder data from a variety of sources
  - Medicaid
  - State MH and SA agencies
- Work is the result of a SAMHSA project

Data Integration: The Integrated Data Project

Dan Whalen

Medstat

SAMHSA's Integrated Database Project (IDB)

- Build a data base that presents a complete picture of MH and SA clients and their services
- Link *Clients* Who Received MH and/or SA Services From Different Sources
  - Medicaid
  - State MH Agency
  - State SA Agency
- Link All *Services* for Each Client

The IDB Project

- A Federal/State Collaboration
- SAMHSA Project Officers:
  - Rita Vandivort, CSAT
  - Joan Dilonardo, CSAT
  - Jeff Buck, CMHS
- Contract period
  - 1st Contract: 1996-2001
  - 2nd Contract: 2001-2004 (2006)

The IDB Project

- Collaboration with Three States
  - Delaware
  - Oklahoma
  - Washington

The Project Team

- Contractor: The Medstat Group
- Subcontractors:
  - National Association of State Alcohol and Drug Abuse Directors, Inc. (NASADAD)
  - National Association of State Mental Health Program Directors Research Institute (NASMHPD)
  - Research Triangle Institute (RTI)

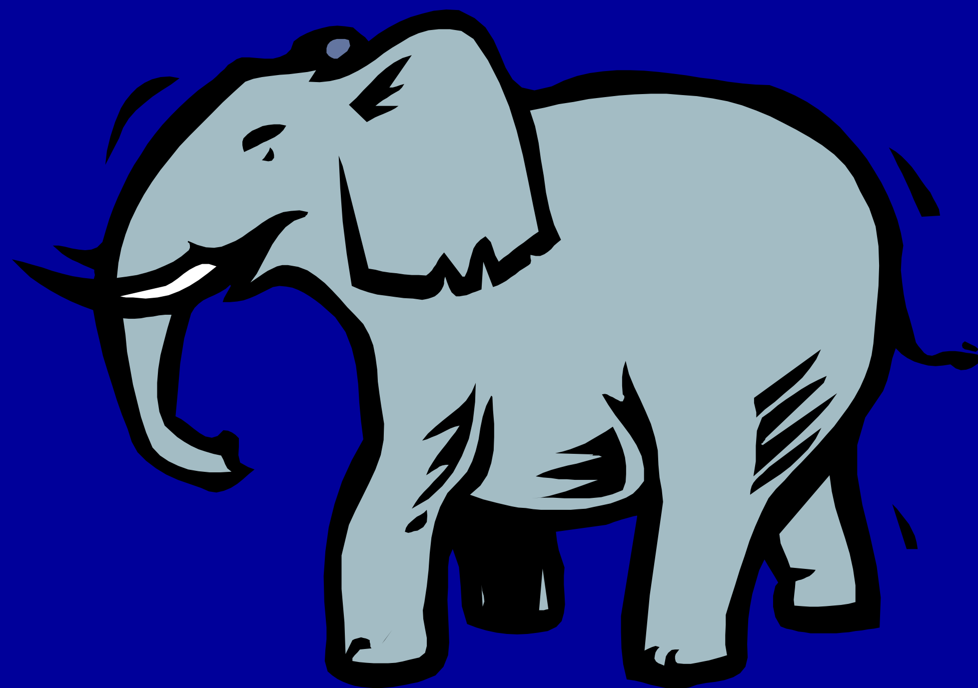
Value of Integrating Other Data

- Medicaid
- Medicare
- Substance abuse
- Criminal justice
- Education
- Employment

A Client's Health Picture

- Composed of many pieces
  - Fragmented
  - Focused
  - Incomplete
- Combining many pieces – integrating data
  - Builds a picture
  - Increases our understanding

A Complete Picture

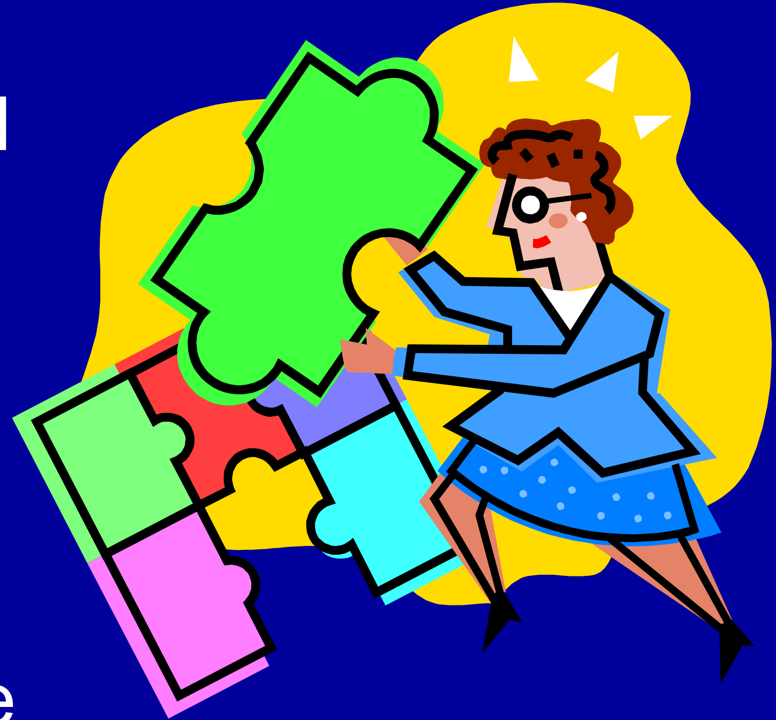


An Incomplete Picture

- Only using MH data misses
  - Many children
  - Psychotropic drug use
  - People with SA problems
- Only using Medicaid data misses
  - Misses all the non-Medicaid eligibles
  - But may pick up
    - Some SA people
    - A lot of MH people – especially kids

A More Complete Picture

- Using a single data source shows a limited segment of the population
- Data sources are like pieces of a puzzle
- Putting the pieces together completes the picture



Why Use Integrated Data?

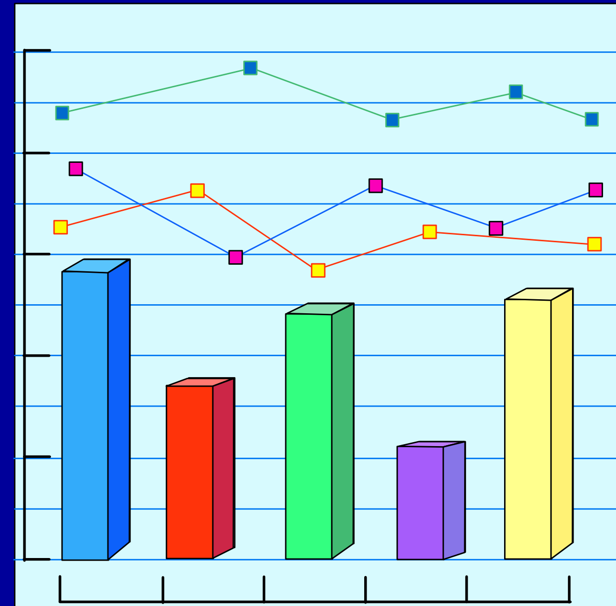
- Tracking continuity of care
- Information about Services & Costs
- Performance Measurement
- Co-morbidity and Concurrent Services
- Utilization reports
  - Tables 5 and 12

Challenges in Integrating Data

- Obtaining data
  - Data access
  - Data sharing agreements
- Data quality
  - Limited information
  - Missing information
  - Summarized data

The Importance of Integrated Data

Rosanna Coffey, Ph.D.
Medstat



The Value of Integrated Data for MH/SA

- New national studies enlighten MH/SA care
- More complete State views can improve State management of MH/SA care
- A glimmer of the potential of better information systems

National Studies from the IDB

How has the IDB been used?

National Studies from the IDB

- SMI Adults
- SED Children
- Co-Occurring MD&SUD Expenditures
- MD/SUD Co-Occurring Treatment Duration across Agencies
- Medicaid Psychotropic Medication

Why the IDB Was Critical for These Studies

- SMI Adults and SED Children
  - Only way to look at total population in public programs across agencies within States
- Co-Occurring MD&SUD Expenditures
  - Only way to identify who co-occurring clients are and tally all spending
- Co-Occurring MD&SUD Treatment Duration
  - Only way to identify full duration of treatment

Preliminary: Expenditures on Co-Occurring Clients

- Eleven percent of clients get 20% of resources
- Annual spending per co-occurring client is:
  - Nearly 2 times higher than clients with MD only
  - Nearly 4 times higher than clients with SUD only
- First, dollar estimates for co-occurring MD&SUD
- Wide State variation suggests no uniform approach to treating co-occurring illness

Preliminary: Co-Occurring Treatment Duration

- Co-occurring clients in treatment almost 4 times longer than single-disorder clients
- Co-occurring clients received the most services during their periods of treatment

- First view outside individual facilities
- Treatment length fits literature review of need for co-occurring care (Drake et al., *Schizo Bull.*, 1998)

State Studies from the IDB

How can the IDB be used for State policy making?

Potential State Uses of the IDB

- Cost
  - – Budget planning
  - – Managed care negotiation adjustments
  - – Program evaluation
    - Effectiveness of specific programs (e.g., ACT)
    - Saving money short term vs long run— client relapse and jumping around programs
    - Managed care skimming or saving – client characteristics and relapse
  - – Most costly clients and special programs

Potential State Uses of the IDB (cont'd)

- Quality of treatment
  - Treatment duration and referrals – Jumping around providers?
  - Integrated MD & SUD treatment – Does it work?
  - Readmission rates for SA treatment – Programs that work, what do they do?
  - Detox and followup care – Is it provided?

Potential State Uses of the IDB (cont'd)

- Medicaid and MH/SA agency coordination:
  - When does Medicaid play a role in treatment?
    - In identifying clients who need treatment?
    - In providing emergency care at relapse?
    - Constantly interacting with MH/SA services?
  - How do Medicaid resources contribute?
    - Through capitation or fee-for-service payments?
    - Helter-skelter unplanned?

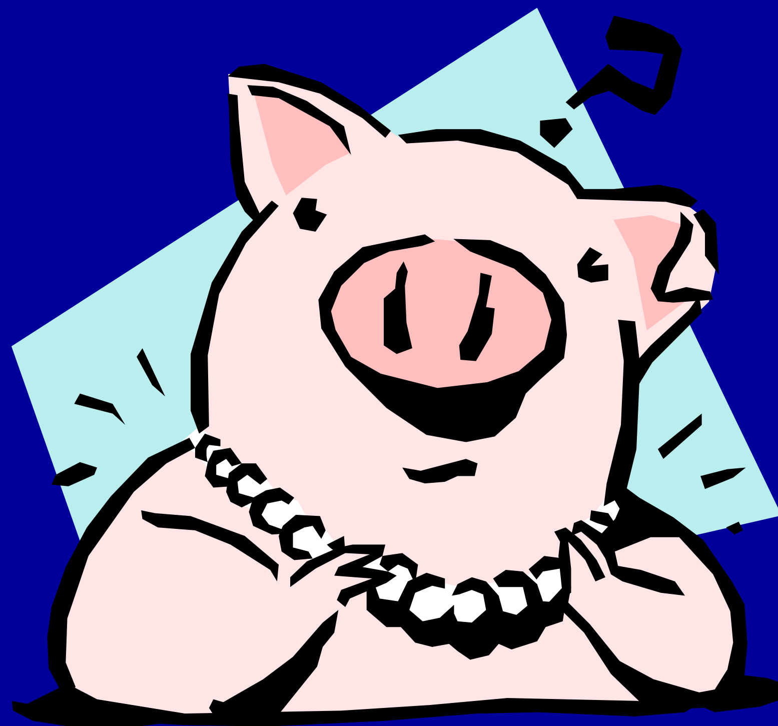
The IDB Glimmer of Potential

How can the IDB potential be enhanced?

Challenges of the IDB

- Incomplete diagnostic information
- Accurately counting across information systems
- Different definitions and coding across information systems
- Missing expenditures, especially for managed care encounter records
- Basic questions unanswered:
  - Who paid the bill?
  - What is the State environment?

Do you know what this is?



A Way to Enhance the Potential of Integrated State Data – Be Outrageous!

- Standardization
  - Examples: manufacturers, hospital discharges
- HIPAA transactions standards
  - A bandwagon opportunity
  - Link up almost seamlessly with Medicaid and private claims
- State-level unique person identifiers
  - A way to view care over time, place, and program with less expense and effort

Final Thoughts

- Integrated Data is Crucial:
  - To study some issues at all
  - For studying most issues well
- Existing systems can be integrated at considerable time and expense
- Jump on the bandwagon and realign information systems with HIPAA standards

Questions and Comments

The Use of Integrated Data in Delaware

Maurice L. Tippett

DSAMH, Delaware

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Use of Integrated Data in Delaware

- My Goal – To describe the history of data integration, our experience in day to day use and future plans.

- The Division of Substance Abuse and Mental Health (DSAMH) has an orientation towards “Data Integration” versus “Systems Integration”

The main focus for integrated data at DSAMH is the DAMART

- Housed on Microsoft SQL 7.0
- Microsoft Access 2000 is the query/report tool
- Also houses production systems like our “On Track for Training” system
- Just upgraded the database server to a “super server”
- The information is continuously updated, either on a daily or monthly basis
- Accessible from anywhere in the state WAN

The DataMart

- Contains mental health data (both community MH and inpatient MH)
- Contains substance abuse data
- All consumer data sets use the Master Client Index, which provides a unique consumer identifier
- Contains both episode and service data (limited)
- Certain Medicaid files are routinely added as well, such as enrollment and eligibility
- Recently added “report” tables for routine analysis (consistent answers each time a report is run)
- Over time we have added “calculated fields” such as LOS and AGE for easier analysis
- Lacks relevant episodes that DSAMH doesn’t pay for

DataMart Continued

- Three problems with Medicaid data
  - We have not become familiar with the Medicaid Managed Care data structure, the encounter data.
  - There are ongoing issues with timeliness and completeness of the Medicaid Managed Care data
  - We have not used the Medicaid pharmacy data as we would have wished
- Making it easy for our clinical and management staff – we created a query tool – called "CIM Query". Used by
  - Care management staff
  - Crisis staff
  - Treatment staff
  - Consumer relations staff
  - It is not available to staff of contractual programs

Further uses of Integrated Data

- Assists with consumer assessment
- Assists with consumer authorization for services
- Reporting on numerous facets of service system status
- Create a combined MH & SA census
- Analyze the overlap of MH and SA populations
- Analyze Medicaid eligible populations and type of Medicaid eligibility

Experience with SAMHSA Data Integration Project

- Moved us forward on data sharing
- Increased understanding of data structures
- Increased understanding of coding issues
- Increased awareness of utility of integrated data
- Provided a ready-to-use data base

Delaware Experience with PPE

- Probabilistic Population Estimation (PPE)
- Initial Analysis is underway with DSAMH adult treatment and DOC arrest data
- Formed multi-agency data integration committee
- Budget office interest
- Evolving interest in both data matching & population overlap estimation

Comparison of Direct Data Integration and PPE

- **Benefits of Data Integration**
- Direct client match
- Useful for clinical purposes
- Useful for daily management purposes
- Essential for managed care activities

- **Benefits of PPE**
- Doesn't violate confidentiality
- Inexpensive
- Useful for "system evaluation"
- Flexible
- Can quickly accommodate many data sources

Examples of Reporting Based on Data Integration

- Q1 - % overlap in fy 03 between DSAMH MH and AD populations
- Q2 - % MH and AD populations with certain types of Medicaid enrollment
- Q3 – Service mix for “high end” users of services.
- Q4 - % of DSAMH consumers with an arrest record.

Conclusions

- “Data Integration” has become an essential part of DSAMH operations
- DSAMH and its partners are very interested in furthering our data integration capabilities
- We plan to continue working with DOL, DOC, DVR, DCMHS, The Budget Office and others as we expand the project

The Use of Integrated Data in Oklahoma

Tracy Leeper

Grant Projects Manager, Decision Support Services Division.

The Use of Integrated Data in Washington

Judy Hall, Ph.D.

Research Director

DSHS, Mental Health Division

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The Uses of Integrated Data

Final Questions and Wrap Up