CHAPTER 8

Term of Reference H: Data collection and outcome measures

(i)   Existing data collection methods and tools in relation to the measurement of mental health services

There are three primary reasons for the collection of information on mental health services:
- To support the continuity of mental health care across service settings and across the lifespan of the person
- To support mental health care and service planning
- To satisfy statutory reporting requirements.

The basic information requirements for mental health services were formulated in 1989 by Leginski and others[1] for the United States Mental Health Statistics Improvement Program (MHSIP). The same approach has been adopted by the Australian National Mental Health Strategy as general principles for local area information systems[2] and for national priorities and strategies for mental health information development[3].

The information collected is used to answer the following:
- Who NEEDS mental health care services?
  What are the characteristics of this population? What type of care is need? What service sector should provide the care?
- WHO receives care from mental health services at present?
  What is the demographic and clinical profile of these people?
- WHAT services are provided?
  Do the services address the identified need? What interventions are undertaken as part of the service provision? What specialist services are available in terms of populations and diagnostic groups?
- From WHOM are services received?
  Which sector (public, private, NGO) provides services? In what setting are services provided? What staff mix is involved in service provision? How equitable is access to services addressed?
- At what COST are services provided?
  What are the differential costs for service settings, different population groups, clinical severity? How efficient are mental health services/
- With what EFFECT are services delivered?
  Do clients show any improvement as a result of treatment? What treatments are most effective? What effects are expected?

Details of the current and planned data collection tools for mental health are summarised in the following table. Some of the tools and their purpose are described in more detail in this section.

Current and Planned Data Collection Tools for Mental Health

Data collection/tool	Current	Future	Publication
National Survey of Mental Health and Wellbeing 1997(Australian Bureau of Statistics) **Who NEEDS?**	- One Survey only (Commonwealth initiative) - People with psychosis and older adults not well covered . Separate child study. - Includes K10 self report client outcome measure	- Links will be possible with current and future National Health Surveys (ABS) which also includes the K10	- National Survey of Mental Health and Wellbeing 1997(ABS) various titles.
NSW Health Phone survey **Who NEEDS?**	- Ongoing, conducted by Public Health division. Contains specific Mental Health items including K10 self report client outcome measure. - Data can be accessed through HOIST (Health Outcomes Information Statistical Toolkit) .	- To continue	- Chief Health Officer's Report
Minimum Dataset for Mental Health Admitted Patients – Inpatient Statistics Collection (ISC**)** **WHO receives?** **WHAT services?**	- Mandated by Australian Health Care Agreements - Patient clinical, demographic and administrative details about inpatient episodes in psychiatric units and episodes in general hospital wards for patients with a primary psychiatric diagnosis. - A record is completed for each separation - Recording of interventions carried out during length of stay only in 20% of cases for Mental Health clients.	- Feeding of Mental Health relevant records to Health Information Exchange (HIE) and Client Data Linkage (CDL) for allocation of identifier has begun. - New Patient Administration System (PAS) systems being introduced will enable electronic connection to the STATE UI process which allocates a unique patient identifier to all records. - Data available in Area and State HIEs	- NSW Public Hospitals Comparison Data Book (NSW Department of Health) - Mental Health Services in Australia (AIHW)
Census of Residents in Psychiatric Facilities **WHO receives?**	- Paper based annual collection. - Enables collection of data for patients who are not captured by the ISC because they do not separate over the year period.	- To be replaced by ATS feed from PAS to HIE and CDL so that ward movements between acute, non acute and statewide wards are captured. - Main significance is in large Psychiatric hospitals - Will enable better monitoring of between Area flows.	- Used with ISC for Resource Distribution Formula.

Data collection/tool	Current	Future	Publication
Minimum data set Community Mental Health Care **WHO receives?** **WHAT services?** *From WHOM?* *At what COST?*	- Mandated by Australian Health Care Agreements. - Developmental non admitted client collection. - Major strategy of the Mental Health Information Development Program - First statewide client collection for ambulatory activity. - First data became available December 2001. - Clinical, demographic and administrative details about client for each ambulatory service contact. - Records fed to Area and State HIEs and CDL process for allocation of unique State client identifier (SUID) - Only de-identified data at State level in accordance with Privacy requirements. - Collected in interim systems at present but complete coverage across and within Areas yet to be achieved - Will migrate to CHIME system when functional for Mental Health.	- Data items to be increased to include activity/intervention done at each contact as well as the provider type, the duration of activity and the principle service category eg early intervention, acute, prevention etc. - Client diagnostic and intervention data can be linked to outcome data to assist in its interpretation. - The recording of activity duration and details about staff payment levels will enable the cost of each service event to be estimated for benchmarking. - DOHRS reporting through the HIE will be possible. - Recording of all ambulatory service activity – both client and non client related will be possible. % of time spent in relation to clients can be estimated. This enables planning of staffing levels and evaluation of current service delivery practices.	- Preliminary tables to evaluate data quality. - Business Objects Reports to be available from HIE.
Mental Health Outcomes and Asessment Tools and training (MH-OAT) **For what EFFECT?**	- Major strategy and mandatory under Mental Health Information Development Program Contract - Collection of Standard Client outcome measures according to a standard protocol in all MH settings Statewide. - Introduces standard documentation for clinical records - Training and data collection began July 2001. - The measures used are the HoNOS, HoNOSCA, HoNOS65+, RUG ADL, LSP16, K10, Factors	- Strengths and Difficulties Questionnaire for children to be introduced from July 2002. - Expect complete coverage by December 2002. - Data records will be extracted to HIE and CDL for linkage to other client activity, clinical and demographic records. - Analysis methods and reports	- Data yet to be extracted.

Data collection/tool	Current	Future	Publication
	influencing health status (FIH). - Collected in interim systems at present but complete coverage across and within Areas yet to be achieved - Will migrate to CHIME system when functional for MH.	to be planned.	
Client Data Linkage Facility (CDL**)** ***Who NEEDS?*** ***WHO receives?***	- Client records are fed to HIE then CDL where they are allocated a unique statewide identifier. - Major strategy of the Mental Health Information Development Program - CDL process for MH is pilot for all of Health State unique identifier (SUID) - MH ambulatory data successfully fed to CDL and identifiers allocated. - Feed of inpatient data commenced.	- enables data in HIE from different sources to be linked for the same patient across time and settings - enables linkage of client outcome data to client activity data across settings and time. - number of clients can be counted for comparison with estimated population need. - Will transition to Statewide Unique Identifier (SUID) process for all of health so MH data is integrated into mainstream processes. - New strategic systems-PAS and CHIME will have real time connection to this process.	- Reports on potential duplicate records so Areas can identify same client records in different services and resubmit corrected data.
Health Information Exchange (HIE**)** **(***Technology Tool)*	- Strategic data warehouse for health at Area and State level. - Creation of HIE extracts for MH data is Major strategy of the Mental Health Information Development Program - Sends selected records to the CDL process for identifier allocation - First extract version for MH ambulatory data is functioning. - Enables MH data to be part of mainstream processing	- Creation of HIE extract for MH-OAT outcome data in progress. - New expanded extract for ambulatory data also commenced. - Data validation checks created and included. - Will use MH ambulatory data to provide DOHRS requirements.	- Direct access available to tables and views using Access and SAS. - Business Objects reports to be created.

Data collection/tool	Current	Future	Publication
National Survey of Mental Health Services (NSMHS) **WHAT services ?**	- Mandated by Australian Health Care Agreements - Paper based annual survey started in 1992/93 at the beginning of the First National Mental Health Plan to monitor progress with the implementation of strategies under the plan. - Continues as the only reliable source of trend data about mental health services which allows national, state and Area comparisons on a range of service measures such as per capita expenditure or bed day cost , staff and bed numbers, type of service delivered, source of funds. - Also provides qualitative data about consumer involvement and other National Mental Health Policy Initiatives. - Not designed to include client information - Mainstream systems unable to provide reliable staff numbers or costs.	- Planned to incorporate most components into mainstream systems. - Estimates of staff numbers and costs by mainstream systems are particularly problematic and require major changes to Area accounting practices.	- National Mental Health Report of National Comparisons. - Numerous Area and Statewide reports for NSW available from Access system which holds data currently.
Department of Health Reporting System (DOHRS) **WHAT services?**	- Monthly reports of aggregated activity for services. - All areas must submit required data monthly - Can identify bed days, beds,separations, admissions etc by type of unit eg acute/non acute, financial program. - Community data only NAPOOS which are not timed and not a useful measure. - Does not report costs. - Does not report staff accurately	- Changes from July 2001 increased the amount of information available about type of NAPOOS and provider. - Mental Health ambulatory data will supply DOHRS requirements for non inpatient data. - MH will process ambulatory data to produce its own weighted and costed Occasions of Service as NAPOOS have no value.	-
Mental Health Bed Management System (MHBMS) **WHAT services?**	- Monitors the statewide availability of acute mental health beds in real time via a web based system. - Includes all Areas - Replaces paper based system. - Facilitates inter Area transfer of patients where necessary. -	- Reporting module similar to current Access system to be developed. - Monitoring of non acute and network beds to introduced	- On line view of Statewide bed availability. - Access system produces trend reports of bed utilisation .

Data collection/tool	Current	Future	Publication
Unaudited annual returns (UAR**)** **At what COST?**	- Mainstream cost data collection by program type - Mental Health is included by program type but reconciliation with National Survey Mental Health Services is still problematic.	-	
From WHOM?	- Most client collections record the service providing the activity but type or identity of provider is not recorded in most cases. - Mental Health ambulatory data will introduce this.		

Data Collection and Tools

The information systems needed to sustain service delivery are priorities at both a National and State level. The National Mental Health program has requirements for the delivery of client identified data in terms of minimum data sets and for the systematic measure of outcomes. Under the NSW Government Action Plan health information systems development is a major priority for NSW.

The National Survey of Mental Health commenced in 1992/93 to monitor progress with the implementation of strategies contained in the First National Health Plan. The Survey is carried out annually and is the only source of trend data about mental health services that allows national comparisons on a range of service measures.

Historically, data for mental health clients and services in NSW has been difficult to identify and separate from general health data. The only available client data has been for admitted patients in hospitals. No community client level data has existed at a State level to monitor change in process in terms of people moving from institutional settings to the community. Until recently, the main NSW Health data systems that provided data on mental health were the Inpatient Statistics Collection and the Department of Health Reporting System.

Since the mid 1990s, local clinical information systems have been developed to ensure that every service unit in an area health service can collect data and supply information to the Area Health Service data warehouse, the Health Information Exchange. Subject to privacy considerations that prevent the maintenance of identified clinical records at the state level, area health services can assemble an integrated record for each client across both inpatient and community services using a Client Data Linkage facility. The result is that client based clinical records can be assembled for all services by an individual in any area health service. At the State level, the data does not contain identifying information on the person but contains statistical information on all services received.

The Centre for Mental Health now manages a daily acute mental health bed surveillance system. The system is soon to be web based. Real time bed availability information will be available across the State. In future the system will monitor all bed types, including networks for statewide services.

To improve the quality of information for mental health clients and services the Mental Health Information Development Project (MHIDP) commenced in 1999. The five year, Commonwealth funded project is a major development to both meet NSW Health commitments regarding information delivery in terms of the Health Care Agreements and which aims to provide the information infrastructure and systems necessary to support high quality clinical care and program delivery. The building of this infrastructure and its effective functioning are reflected in the provision of hardware, the development and delivery of data systems (eg FISH and others), and the progressive delivery of core data from those systems which cover both inpatient and community care, will progressively include all age groups

The MHIDP .has two main activities:

1. Information Infrastructure Development
   - By July 2002, most Area Health Services will be using the same system to record data and outcomes on community ambulatory mental health clients. The system is known as SCI MHOAT (Service Contract Information – Mental Health Outcome and Assessment Tools).

- The Health Information Exchange, referred to above, is under development. It is a data warehouse that will process community data and will be made available throughout the State.
- Data reports with business objects have been developed and are under review. The reports are standardised and will be accessible by all area health services.
- The Client Data Linkage facility will enable all identifiable individuals presenting to public mental health services to be given a unique identifier at State level within privacy guidelines. Implementation of the facility will commence shortly. It will enable the records of the same client to be linked over time and across services. The first linkage will be between ambulatory and inpatient settings.

2. Information Standards Development
- The unique identifier concept will be extended to include service providers to enable linkage of clients, services and providers in the one data record.
- Data dictionaries and collection guidelines have been developed
- A comprehensive Intervention Classification System has been developed to enable providers to accurately record the details of all activity undertaken with or in behalf of the client. The System will be used in the ambulatory client data collection from July 2002.

Data and tools being used or developed to identify 'services' are:

- A Mental Health – Service Entity Register (MH-SER) created in January 2001 to identify individual service units within community health with a code number that is formally managed

- Provider codes are assigned locally, pending the development of a NSW Health provider register.

- A Mental Health-Clinical Item Coding (MH-CLIC) scheme is under development, based on principles similar to the Medical Benefits Schedule (MBS) to allow the classification of the two million undifferentiated 'Occasions of Service' (OOS) by their clinical content, purpose, and duration. The scheme incorporates all the procedure coding schemes used for mental health in the Australian, Canadian and US implementations of similar schemes. In particular, MH-CLIC provides mechanisms to capture both medications and dosages, since at present the most powerful treatments in use are not reported at all, or only in very global terms.

Mental health information is delivering
- 600,000 unit records of ambulatory OOS/contacts to the HIE (health information exchange)
  - First statewide electronic collection of community unit record data
  - Already 30% the size of the whole Inpatient Statistics Collection
- First application of the Client Data Linkage facility to assign a State Unique identifier in accordance NSW Privacy legislation
- First extract of National Minimum Data Set for Ambulatory mental health delivered on time on 31st December 2001, in accordance with the Australian Health Care Agreement

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A population planning approach for the provision of mental health care, the Mental Health Clinical Care and Prevention Model (MH-CCP), is in operation but will be further developed. The model suggests appropriate levels of service and predicts the associated resource requirements needed for a series of population groups according to age and disease severity based on available local and international epidemiological evidence. Data collected as a result of the MHIDP will enable the evaluation of actual service utilisation by clients with defined clinical severity with the type and amount of service suggested by the MH-CCP.

Outcome Measures

The historical emphasis of health information on assessing the volume of service activity has shifted to assessing the outcome of services received by individual clients.

The Mental Health Outcome and Assessment Tools (MH-OAT) and Training initiative is the part of the Mental Health Information Development Project that is directly concerned with client outcome measures.

The MH-OAT data capture outcomes and casemix for patients within NSW mental health services. The data is a requirement under the National Mental Health Information Development contract between the NSW Department of Health and the Commonwealth Department of Health and Aged Care.

This is a program aimed at strengthening clinical skills in assessment care planning and in systematic documentation of the clinical process. Its primary aims are to support clinical processes and their documentation, the fulfilment of information delivery in terms of systematic measures and data sets, and to build on skills of all clinical mental health staff. These materials are incorporated in, and backed by information systems development. The protocols were developed through an earlier research and development project, the acute services project, and were trialled in three Area Mental Health Services.

Mental Health Outcomes and Assessment Tools and Training initiative (MH-OAT)

1. Clinical Initiative
   - Strengthen the culture of mental health assessment
   - Introduce standard clinical documentation of mental health assessments
   - Introduce the routine collection of outcome measures
2. Information Development Initiative
   - Collect data for standardised outcome and casemix measures
   - Use data to inform clinical process and service development and effectiveness
3. Training Initiative
   - To improve mental health assessment skills
   - In the use of outcome measures
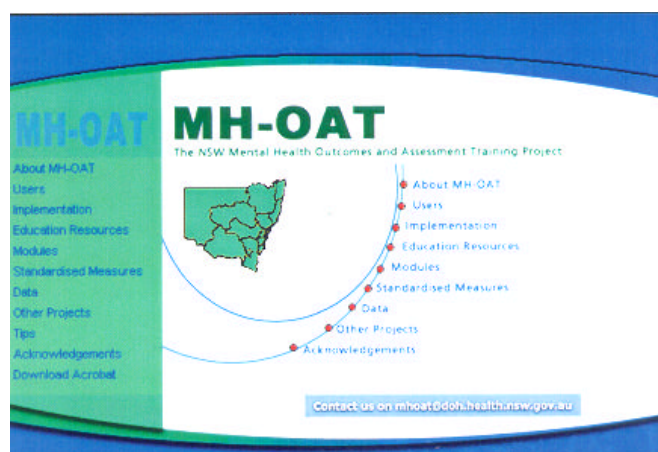
Activities and Achievements of the MHOAT program to date are summarised below:

ACTIVITIES

- Develop training materials   Completed
  - adult mental health workers
  - children and adolescent mental health workers
- Train ~350 MH-OAT trainers   Completed
- Train ~100 MH-OATCA trainers   Completed
  (Child and Adolescent Trainers)
- Train 6,000 staff in Areas (01/02)   55% complete
- All MH Services collecting data (01/02)   38% complete
- Develop Interim MH-OAT data system   Completed
- Include MH-OAT protocol in CHIME   In progress

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ACHIEVEMENTS

- First statewide collection of unit record health client outcome data across all service settings in Australia
- Training for all mental health staff (~ 6,000) across NSW
  - Adult mental health workers
  - Child and Adolescent mental health workers
- Comprehensive Web Site to support initiative
  - http://internal.health.nsw.gov.au/policy/cmh/mhoat/index.html
- NSW data collection protocol used as basis for national process

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MH-OAT Staff Training
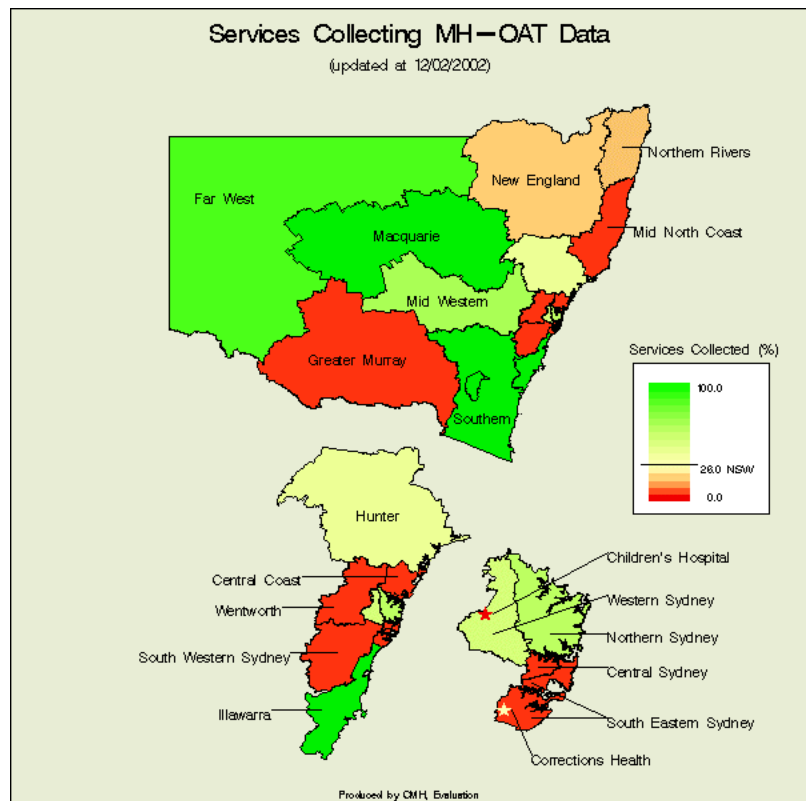
**(Percentage
Completed,
Feb 2002)**

Source: Monthly Reporting
from AHS (MH-OAT Web
site)
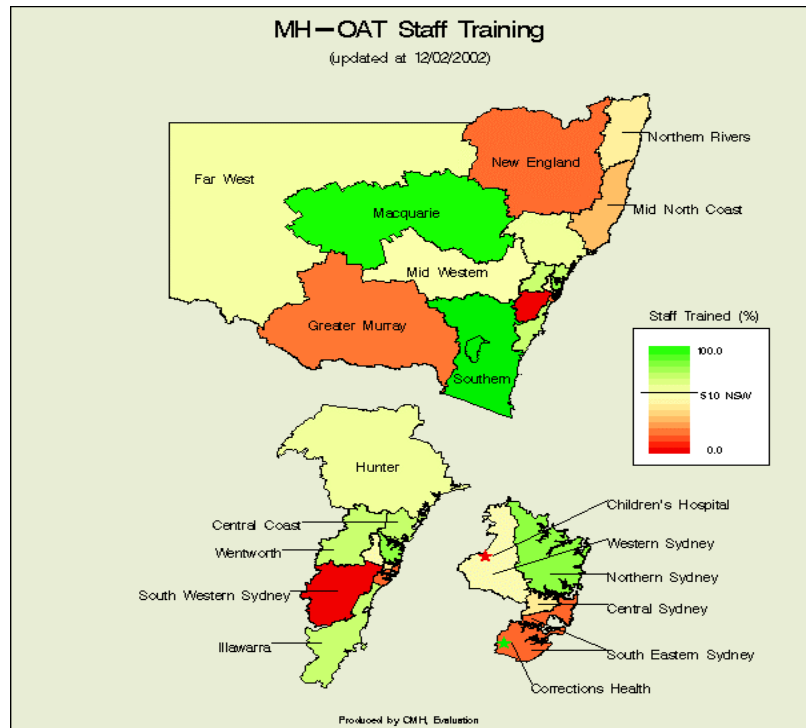
Mental Health Services Collecting MH-OAT data

**(Percentage
commenced
Feb 2002)**

Source: Monthly Reporting from
AHS (MH-OAT Web site)

(ii)   The level of involvement on non-Government mental health organisations in these measures.

Non-government mental health organisations in NSW are not required to collect any of the measures. However, the Mental Health Association of NSW utilised the Kessler –10 measure in its 'Healthy Mind Day' initiative on 11 April. The measure, named after Professor R C Kessler, Harvard University, is the only consumer self report measure in NSW for adults. It is used as a specific screening tool for anxiety and/or depression in NSW.

Non-government mental health organisations have participated in the processes of the National Mental Health Strategy under which the measures were chosen.   Information about NGO service provision and costs is captured and reported on annually in the National Survey of Mental Health.

The Mental Health Consumer Perceptions and Experiences of Services (MH-CoPES), a consumer feedback measure, is under development. Following consultation with consumer representatives, a Steering Committee has been established. The priorities of the Committee are the designing of a 'feedback' instrument and a collection process**.** The measure will provide invaluable consumer feedback on mental health services and care and will become one of the evaluation and monitoring tools to improve mental health services.

Summary:

- The current data collections generally do not include non government organisations in terms of collecting data on their clients. However, NGOs have indicated their wish to participate in the development of information, assessment and outcome monitoring systems for NGOs.

- Data about psychiatric patients in private hospitals is collected in the ISC and Resident Census.

- Consumers are represented on the steering committees for MHIDP and MH-OAT.

- NGOs and Aboriginal Medical Services will be part of the discussion for the next stage of MH-OAT implementation.

- Currently a National initiative is aiming to develop a National Minimum data set which would be appropriate for collection in NGOs.

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[1] Leginski W, Croze C, Driggers J, Dumpman S, Geersten D, Kamis-Gould E, Namerow J, Patton R, Wilson N, Wurster C. Data standards for mental health decision support systems: A report of the task force to revise the data content and system guidelines of the mental health statistics improvement program. Washington: National institute of Mental Health, US Department of Health and Human Services, 1989.

[2] Morris-Yates A, Andrews G. Local-area information systems for mental health services: General principles and guidelines. Developing outcome-oriented information systems for mental health services, Discussion paper Number 1. Canberra: Commonwealth Department of Health and Family Services; 1997. [See page 5.]

[3] Department of Health and Aged care. Mental health information development: National information priorities and strategies under the Second National Mental Health Plan 1998-2003. (First Edition June 1999). Commonwealth of Australia 1999. [see page 5].