MENTAL HEALTH BENCHMARKING INDICATORS – OVERVIEW

<table>
<thead>
<tr>
<th>Revision History</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Version</strong></td>
</tr>
<tr>
<td><strong>Version 1.0</strong></td>
</tr>
<tr>
<td>(24.06.2009)</td>
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<tr>
<td><strong>Version 1.0</strong></td>
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<td>(24.06.2009)</td>
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<tr>
<td><strong>Version 1.1</strong></td>
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<tr>
<td>(21.10.2009)</td>
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<tr>
<td><strong>Version 1.4</strong></td>
</tr>
<tr>
<td>(25.11.2009)</td>
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</tbody>
</table>

**Amendments:**
A&E data: Potential data source could be used to identify cohort of people who return to A&E; Explore secondary diagnosis when data is available.

Patient centred care: proposal to retain indicator as a separate measure pending further developments.

Suicide (standardised rates): Group similar regions e.g. rural/urban NHS Boards in analysis – additional indicator.

**Changes:**
Indicator 2.4 (Mortality rates for severe and enduring mentally ill population): Age at death for severe and enduring mentally ill population compared to age at death of the general population.

Exclude indicator 3.3 (Patient safety and risk management): To be renamed as a key domain.

**Proposals for future developments:**
Proposal of new ‘Patient Safety’ domain to replace ‘Patient Quality’.
### Version 1.5
(27.11.2009)

**Clinician/Policy/ISD Review: MH Benchmarking indicators 1.1. – 3.6**

**Changes**

**Amendments**
- Total drug costs: Add analysis/presentation by BNF category
- Readmissions indicator: adopt readmissions within 28 days and 133 days.
- Exclude 2.3: Patient satisfaction measure
- A&E Data mart: Split reports into A&E presentations due to substance misuse and mental health
- A&E Data mart: analysis should exclude treatment by ‘out of hours’ services.

**Additional social care benchmarking indicators**
Additional information on social care expenditure – split by commissioned and non-commissioned work.

- Workforce information for Mental Health Officers
- Additional information on the proportion of community care provided in secondary care.

**Proposals for future development**
Include social care expenditure in total spend for MH services

- Explore suicide rates on severe and enduring mentally ill population
- Proportion of bed days used by NHS Board of Residence and NHS Board of treatment
- A&E Data development: include additional data field to capture transfer/move of patient.

### Version 1.6
(01.10.2010)

**Adult Benchmarking Indicator Development Review**

**Amendments**
- Exclude: Average time to assessment and time to intervention
- Exclude: Costs of hospital dispensing of mental health drugs
- Exclude: Training and supervision for psychological therapies
- On hold: Percentage compliance with care planning standards
- On hold: Outpatient new to follow up ratios
- On hold: social work component of community mental health spend

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### Version 1.7
**Adult Mental Health Benchmarking Toolkit – May 2011 release**

**Amendments**
- Indicators involving costs expressed as per head of population.
- All other indicators using population rates expressed as per 100,000 population.
- Ratio of Voluntary to Compulsory inpatients changed to percentage.
- Readmissions 28 and 133 days moved from Person Centeredness to Effectiveness domain.
- Training and supervision index moved from Effectiveness to Safety domain.
- Relative Risk of death for severe and enduring mental illness – Added analysis without suicides.
- Suicides – Added suicides within 30 days information.

### Version 1.8
**Adult Mental Health Benchmarking Toolkit – March 2012 release**

**Amendments**
- Costs – Increasing difficulty in recording Health Board of Residence for NHS Boards, cost book no longer report on this data.
- NHS Board of Treatment now used and reported as per head of population NRAC adjusted.

### Version 1.9
**Adult Mental Health Benchmarking Toolkit – March 2013 release**

**Amendments**
- Change of methodology for the Severe & Enduring mental illness mortality rate indicator to match existing English definitions, where possible. The methodology now presents the ratio of the risk of dying in the mental health population divided by the risk in the general population.
<table>
<thead>
<tr>
<th>MH Benchmarking</th>
<th>Outcome Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Efficiency</td>
<td>Total spend for mental health per head of population</td>
</tr>
<tr>
<td>Description</td>
<td>Health care expenditure by board of treatment (including resource transfer) for General Psychiatry Services per head NRAC(^2) adjusted population.</td>
</tr>
<tr>
<td>Numerator</td>
<td>Total (net) expenditure (‘£000)</td>
</tr>
<tr>
<td>Denominator</td>
<td>Total population (NRAC adjusted population)</td>
</tr>
<tr>
<td>Data Source</td>
<td>ISD Website: <a href="http://www.isdscotland.org/Health-Topics/Finance/Costs">http://www.isdscotland.org/Health-Topics/Finance/Costs</a></td>
</tr>
<tr>
<td>Health Care Expenditure by NHS Board of Treatment for General Psychiatry Services (D340): summary of the expenditure for inpatients, outpatients, day patients, community psychiatric team and resource transfers for the financial year end. General psychiatry comprises general psychiatry, geriatric, forensic, child and adolescent specialities.</td>
<td></td>
</tr>
<tr>
<td>General Register for Scotland (GROS) – mid year population estimates</td>
<td></td>
</tr>
<tr>
<td>Updates</td>
<td>Updated annually (Nov/Dec).</td>
</tr>
<tr>
<td>Significance of measure</td>
<td>The measure provides information on overall expenditure in mental health services (general psychiatry) and may reflect variations in demand, capacity and management of health care services.</td>
</tr>
<tr>
<td>Related outcome measures</td>
<td>• Total mental health drug costs per head of population</td>
</tr>
<tr>
<td>Additional notes</td>
<td>• Total mental health staff numbers per 100,000 population</td>
</tr>
<tr>
<td>Expenditure for ‘general psychiatry’ refers to costs for all mental health specialities comprising general psychiatry, child/adolescent psychiatry, forensic psychiatry and psychotherapy, geriatric psychiatry and psychiatry of old age.</td>
<td></td>
</tr>
<tr>
<td>NHS Board of Residence costs no longer reported in Cost Book.</td>
<td></td>
</tr>
<tr>
<td>English equivalent</td>
<td>Financial spend on services: the amount spent on MH disorders per 100,000 unified weighted population. The weighted population is a combination of several other weighted populations used for the allocation of resources including weights for hospital and community health resources, prescribing, HIV/AIDS and primary medical services (Source: LHO(^3) Mental Health Scorecard) Total spend per resident population (NE PHO)</td>
</tr>
<tr>
<td>Australian equivalent</td>
<td>Cost per acute inpatient episode (Efficiency Indicator)</td>
</tr>
</tbody>
</table>

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\(^2\) NHS Scotland National Resource Allocation Committee recently revised and replaced the Arbuthnott formula. The Formula calculates target shares (percentages) for each NHS Board based on a weighted capitation approach that starts with the number of people resident in each NHS Board area. The formula then makes adjustments for the age/sex profile of the NHS Board population, their additional needs based on morbidity and life circumstances (including deprivation) and the excess costs of providing services in different geographical areas.

\(^3\) London Health Observatory (LHO); North East Public Health Observatory (NE PHO)
## MH Benchmarking

<table>
<thead>
<tr>
<th>MH Benchmarking</th>
<th>Outcome Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Efficiency</strong></td>
<td>Total mental health spend (community) per head (NRAC) population</td>
</tr>
</tbody>
</table>

### Description
Community health care expenditure by board of treatment (including resource transfer) for general psychiatry services per head NRAC adjusted population.

### Numerator
Community expenditure =  
- Day-patients  
- Community Psychiatric Team  
- Resource Transfer

### Denominator
Total population (NRAC adjusted population)

### Data source
ISD Website: [http://www.isdscotland.org/Health-Topics/Finance/Costs](http://www.isdscotland.org/Health-Topics/Finance/Costs)

Health Care Expenditure by NHS Board of Treatment for General Psychiatry Services (D340): summary of the expenditure for inpatients, outpatients, day patients, community psychiatric team and resource transfers for the financial year end.

General Register for Scotland (GROS) – mid year population estimates

### Updates
Updated annually (Nov/Dec).

### Significance of measure
The expenditure on community care may reflect pattern of service delivery and the shift in the balance of care from the hospital.

### Related outcome measures
- Total mental health staff numbers per 100,000 population
- Total spend for mental health per head of population
- Average length of stay
- Percentage readmissions greater than 28 days and 133 days/Total Admissions

### Additional Notes
- Expenditure for ‘general psychiatry’ refers to costs for all mental health specialities comprising general psychiatry, child/adolescent psychiatry, forensic psychiatry and psychotherapy, geriatric psychiatry and psychiatry of old age.
- Community service expenditure is a sum of the total costs for day patients, community psychiatric team and resource transfer.
- NHS Board of Residence no longer reported in Cost Book.

### English equivalent - (no data from LHO)

### Australian equivalent
Cost per 3 month community care period (Efficiency)  
Treatment days per community care period (Efficiency)
## MH Benchmarking

### Outcome Measure

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
<th>Numerator</th>
<th>Denominator</th>
<th>Data source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Efficiency</td>
<td>Community health care expenditure by board of treatment for general psychiatry services as a percentage of total health care expenditure.</td>
<td>Community expenditure = Day-patients + Community Psychiatric Team + Resource Transfer</td>
<td>Total expenditure</td>
<td>ISD Website: <a href="http://www.isdscotland.org/Health-Topics/Finance/Costs">http://www.isdscotland.org/Health-Topics/Finance/Costs</a></td>
</tr>
</tbody>
</table>

### Calculation

Community Expenditure X 100

Total Expenditure

### Significance of measure

The expenditure on community care may reflect the shift in the balance of care and pattern of service delivery.

### Related outcome measures

- Total mental health staff numbers per 100,000 population
- Total spend for mental health per head of population
- Average length of stay
- Percentage readmissions greater than 28 days and 133 days/Total Admissions

### Additional Notes

- Expenditure for ‘general psychiatry’ refers to costs for all mental health specialties comprising general psychiatry, child/adolescent psychiatry, forensic psychiatry and psychotherapy, geriatric psychiatry and psychiatry of old age.
- Community service expenditure is a sum of the total costs for day patients, community psychiatric team and resource transfer.
- NHS Board of Residence no longer reported in Cost Book.

### English equivalent

- (no data from LHO)

### Australian equivalent

- Cost per 3 month community care period (Efficiency)
- Treatment days per community care period (Efficiency)
## Mental Health Benchmarking Indicators – Overview

<table>
<thead>
<tr>
<th>MH Benchmarking</th>
<th>Outcome Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Equity</strong></td>
<td>Persons on incapacity benefit or severe disablement allowance with a mental health diagnosis per 1000 population</td>
</tr>
</tbody>
</table>

### Description

The number of incapacity benefit or severe disablement allowance claimants with a mental health diagnosis per 100,000 population (NRAC adjusted population).

**Total Number of Claimants x 100,000**  
NHS Board population (NRAC adjusted population)

### Numerator

Total number of incapacity benefit or severe disablement claimant with a mental health diagnosis

### Denominator

NHS Board population (NRAC adjusted population)

### Data Source

Directorate of Works and Pensions (DWP) Information Directorate: 100% Work and Pensions Longitudinal Study –

Incapacity benefits and severe disablement allowance by Scottish Health Board area and mental/behavioural condition.

General Register for Scotland (GROS) – mid year population estimates

### Updates

Quarterly updates – February, May, August, November

### Significance of Measure

Mental health and behavioural disorders are reportedly the main reason for claiming benefits in Scotland\(^5\). The measure is an indicator for the levels of unemployment due to mental health disorders and may show the prevalence of severe and enduring mental illness.

### Related Outcome Measures

- Social care benchmarking measures
- Total spend for mental health per head of population
- Relative risk of death for persons with severe and enduring mental illness.

### Additional Notes

The incapacity benefit and severe disablement allowance has been replaced with the Employment and Support Allowance (from October 2008). The new system considers individual’s capability and help/support needed to manage the condition and facilitate return to work. System will now form 2 tiers: work related activity group and support group (severe disablement – unable to return to work). All existing incapacity benefits will be transferred in 2013.

Related research on the mental health claimants/incapacity benefits suggests the interaction of deprivation (linked to high levels of unemployment).

Current updates (until November 2008) will be based on the previous system – incapacity benefits and severe disablement allowance until additional data from the employment support allowance system is validated.

### English Equivalent

Rate of people on incapacity/SDA benefit for mental health problems per 1000 population

### Australian Equivalent

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\(^4\) Mental Health Diagnosis defined by ICD 9/10 sub chapters.  
<table>
<thead>
<tr>
<th>MH Benchmarking</th>
<th>Process Measure</th>
</tr>
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<tbody>
<tr>
<td>Efficiency</td>
<td>Total mental health drug costs per head of population</td>
</tr>
</tbody>
</table>

**Description**
Gross ingredient costs (community prescribing only) per head NRAC adjusted population.

**Gross Ingredient Cost (GIC)**
NHS Board population (NRAC adjusted)

**Numerator**
Total gross ingredient costs for medicines used in mental health (BNF 4.1 – 4.4 & 4.11).

**Denominator**
NHS Board population (NRAC)

**Data source**
ISD website - [http://www.isdscotland.org/Health-Topics/Prescribing-and-Medicines/](http://www.isdscotland.org/Health-Topics/Prescribing-and-Medicines/)
General Register for Scotland (GROS) – mid year population estimates

**Updates**
Annual (December)

**Significance of measure**
Indicator is relevant to the healthcare management. GIC may reflect changes in the rate of prescribing or prescribing pattern (e.g. the use of more expensive medicines to manage a condition).

**Related outcome measures**
- Total spend for mental health per head of population

**Additional Notes**
- It is not possible to specify age range or speciality in prescribing statistics. Measure captures only community prescribing.
- Not all the drugs used in the treatment of mental illness are prescribed solely by the MH services. In addition, information source does not differentiate new/repeat prescriptions.
- Costs exclude broken bulk and prescriptions dispensed in England. Please note that not all the drugs used in the treatment of mental illness are prescribed solely by the Mental Health services. In addition, the information source does not differentiate new/repeat prescriptions.
- The indicator will be influenced by the price variation of medicines over time and prices differences between products.
- The Defined Daily Dose “is the assumed average maintenance dose per day for a drug used in its main indication in adults” and may be used to indicate the proportion of people receiving a certain drug treatment.

- BNF 4.1: Hypnotics and Anxiolytics
- BNF 4.2: Drugs used in psychoses and related disorders
- BNF 4.3: Anti-depressants
- BNF 4.4: CNS Stimulants and other drugs used for attention deficit hyperactivity disorder
- BNF 4.11: Drugs for dementia
<table>
<thead>
<tr>
<th>MH Benchmarking</th>
<th>Input/Process Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Efficiency</strong></td>
<td><strong>Total psychiatric beds per 100,000 population</strong></td>
</tr>
<tr>
<td><strong>Description</strong></td>
<td>The number of beds for mental health specialities (adjusted for cross boundary flow) per 100,000 population (NRAC adjusted).</td>
</tr>
<tr>
<td></td>
<td><strong>Total number of beds x 100,000</strong></td>
</tr>
<tr>
<td></td>
<td><strong>NHS Board population (NRAC adjusted)</strong></td>
</tr>
<tr>
<td><strong>Numerator</strong></td>
<td>Total beds</td>
</tr>
<tr>
<td><strong>Denominator</strong></td>
<td>Total population (NRAC adjusted population)</td>
</tr>
<tr>
<td><strong>Data source</strong></td>
<td>ISD(S) 1 extract</td>
</tr>
<tr>
<td></td>
<td>General Register for Scotland (GROS) – mid year population estimates</td>
</tr>
<tr>
<td><strong>Updates</strong></td>
<td>Updated annually (Nov/Dec).</td>
</tr>
<tr>
<td><strong>Significance of the measure</strong></td>
<td>The indicator provides information on the shift in the balance of care, pattern of service structure/utilisation and the availability of alternative services.</td>
</tr>
<tr>
<td><strong>Related outcome measures</strong></td>
<td>- Total mental health staff numbers per 100,000 population</td>
</tr>
<tr>
<td></td>
<td>- Percentage readmissions greater than 28 days and 133 days/Total admissions</td>
</tr>
<tr>
<td></td>
<td>- Average length of stay</td>
</tr>
<tr>
<td><strong>Additional Notes</strong></td>
<td>ISD (S)1 extract supplies data on the total number of average available staffed beds for mental health specialities G1 – G4 (general psychiatry, child/adolescent psychiatry, psychiatry of old age and forensic psychiatry).</td>
</tr>
<tr>
<td></td>
<td>Available beds: (allocated + borrowed) – (lent + temporary) beds</td>
</tr>
<tr>
<td></td>
<td>Analysis is based on Scottish Health Board of treatment.</td>
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<tr>
<td></td>
<td>NHS Shetland and NHS Orkney excluded (no bed facilities).</td>
</tr>
</tbody>
</table>
## MENTAL HEALTH BENCHMARKING INDICATORS – OVERVIEW

<table>
<thead>
<tr>
<th>MH Benchmarking</th>
<th>Input/Process Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Effectiveness</strong>&lt;br&gt;(Efficiency)</td>
<td><strong>Average length of stay (2 indicators)</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Average length of stay - mean and median</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Average length of stay - 80:20 split</strong></td>
</tr>
</tbody>
</table>
| **Description** | Average mean stay: The total length of inpatient stay for mental health specialties and principal diagnosis (days) divided by the spells of treatment (by NHS Board of treatment).  
Average median stay: the estimated length of stay for half of the persons admitted to be discharged during the specified period by NHS Board of residence. |
| **Numerator** | Total length of inpatient stay |
| **Denominator** | Total number of patient spells |
| **Data source** | ISD SMR04 data set |
| **Updates** | Periodically (i.e. SMR04 updated regularly) |
| **Significance of the measure** | The average length of stay measure is related to the structure/resources of care and the management of patient. |
| **Related outcome measures** | • Readmissions  
• Total number of beds  
• Total spend for mental health per head of population |
| **Syntax: calculations/assumptions** | ➢ Create spell based records from patient’s episode of care and retain patient descriptive information from the first episode – speciality, age, sex, admission date and other diagnostic data from the final episode: age at discharge, diagnostic description, NHS Board of treatment, record of previous psychiatric admission.  
➢ Exclude zero stays (‘0’ episodes). |

**Notes/Assumptions/Exclusions**
- Exclude non – Scottish NHS Board of residence.
- Specialties: G1 and G4 only
- Exclude all zero stays

Spell based analysis for records with principal diagnosis of mental health (zero stays excluded). The spell based analysis is proposed to ensure comparable data and exclude direct assessment of admission system/processes (i.e. triage/admission processes in some Boards may require more than one episode of care but by reviewing the spells, related episodes of treatment can be aggregated in analysis).
1.6b: Aim of analysis is to review information length of stay by the proportion of shortest and longest stays.

<table>
<thead>
<tr>
<th>80/20 Average Length of Stay split</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Notes/Assumptions/Exclusions</strong></td>
</tr>
<tr>
<td>o Exclude non – Scottish NHS Board of residence.</td>
</tr>
<tr>
<td>o Specialties G1 and G4 only</td>
</tr>
<tr>
<td>o Zero (0) stays excluded.</td>
</tr>
<tr>
<td>o 80% of the shortest stays focus on persons served via CMHT and crisis services.</td>
</tr>
<tr>
<td>o 20% of the longest stays focus on the delayed discharges and rehabilitation patients.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>English equivalent</th>
<th>Median stay (North – East Public Health Observatory)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australian equivalent</td>
<td>Average length of stay (acute wards only) – ‘a measure of timely ward processes and discharge planning’: average length of stay of completed discharges from acute psychiatric inpatient units (Efficiency).</td>
</tr>
</tbody>
</table>
### MH Benchmarking

#### Effectiveness

<table>
<thead>
<tr>
<th>MH Benchmarking</th>
<th>Process/Outcome Measure</th>
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<tbody>
<tr>
<td><strong>Effectiveness</strong></td>
<td>Percentage readmissions greater than or 28 days and 133 days of total admissions (spells).</td>
</tr>
</tbody>
</table>

#### Description

Number of readmissions for spells of inpatient treatment for mental health specialities within 28 or 133 days of patient’s discharge from a previous spell of treatment (any length of stay) as a percentage of total admissions.

**Readmissions within 28 days (or 133 days)**

\[ \text{Total Admissions} \]

#### Numerator

Total number of readmissions within 28 or 133 days

#### Denominator

Total admissions

#### Significance of measure

Indicator may refer to the management of patient, quality of care or aftercare and access/availability of community care/out of hours/other support services.

#### Related outcome measures linked to other scorecard indicators

- Total psychiatric beds per 100,000 population
- Total spend for mental health per head population
- Average length of stay

#### Data source

ISD - SMR04 dataset

#### Updates

Periodically (i.e. SMR04 updated regularly)

#### Syntax: calculations/assumptions

Readmissions to psychiatric units in Scotland by NHS Board of treatment and financial year.

**Assumptions**

- Each patient is counted more than once i.e. as many times as the individual is readmitted.
- Calculations are based on total number of spells.
- Specialties G1 and G4 only.
- The year of readmission is shown by the NHS Board of treatment and year that triggered the readmission.

#### Additional Notes

There are several variations of the readmissions indicator:

**HEAT indicator:**

The purpose of the readmissions heat indicator is to reduce psychiatric admissions. It is defined as a reduction in the number of psychiatric admissions for those who have had a psychiatric hospital admission of at least 7 days by 10% by the end of Dec 2009.

Analysis includes all psychiatric specialities except learning disabilities by health board of residence for elective/emergency admissions (but not inter-hospital) transfer. Results review readmissions in the previous year i.e. lag time of 1 year.

**NHS Trust – England (Source: London MH and Wellbeing Scorecard):**

Estimated percentage of readmission within 28 days post discharge.

Readmission is defined as the estimated percentage of people readmitted to a *general adult psychiatry* speciality after being *discharged from the same speciality*. 
Mental Health Collaborative: Readmissions within 133 days (Bathtub analysis) Adapted from an engineering concept which uses graphical presentations to describe the lifetime of a population of products (i.e. the entire population of products over time). It consists of 3 periods:

i) Infant mortality
ii) Normal lifetime
iii) Wear out

Failures that occur during the infant mortality are not expected ('highly undesirable) and may be due to system failures or other defects/blunders/error in assembly or design of the product.

Adapted to the mental health services, patients who are readmitted within the infant mortality period may suggest among other reasons, a gap in the system as a result of poor coordination/follow up of care, premature discharge etc.

The Bathtub Curve
Hypothetical Failure Rate versus Time

<table>
<thead>
<tr>
<th>English Equivalent</th>
<th>Estimated percentage of readmissions within 28 days post discharge for persons admitted to a general adult psychiatry speciality after being discharged from the same speciality.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australian Equivalent</td>
<td>28 day readmissions rate: any admission to any psychiatric unit that occurs within 28 days of initial discharge (inclusions: persons who spend at least one night in hospital; incomplete admissions or transfers are excluded).</td>
</tr>
<tr>
<td>MH Benchmarking</td>
<td>Process/Outcome Measure</td>
</tr>
<tr>
<td>-----------------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>Person Centeredness</td>
<td>Percentage delayed discharges</td>
</tr>
</tbody>
</table>

**Description**
The number of discharges for mental health specialties delayed by 6 weeks or longer than scheduled per 100,000 population.

**Numerator**
Total number of discharges for mental health specialties delayed by 6 weeks (based on July census figures i.e. snapshot data)

**Denominator**
Total NHS Board population (NRAC adjusted)

**Data source**
- ISD - Delayed discharge census
- General Register for Scotland (GROS) – mid year population estimates

**Updates**
Quarterly

**Significance of measure**
Discharges from mental health services could be a complex process requiring multidisciplinary approaches and integration of both hospital/social/community care processes. The measure may be an indication of NHS Board structures and working processes.

**Related outcome measures**
- Total number of psychiatric beds
- IT Systems/ Information quality and capture
- Staffing structure/social care processes

**Additional Notes**
Includes all mental health specialities (excludes learning disabilities)

**English equivalent**
- 

**Australian equivalent**
Percentage of discharges followed up within 7 days post discharge
## MH Benchmarking

### Process/Outcome Measure

**Efficiency**

Total mental health staff numbers per 100,000 population by psychiatrists, nurses, psychologists and consultants.

### Description

**Total number of staff x 100,000**  
NHS Board Population (NRAC Adjusted)

### Numerator

Total number of staff by staff category

### Denominator

NHS Board Population (NRAC Adjusted)

### Data source

NEC – ISD Psychology Workforce Planning Project  
ISD (SWISS) Workforce information  
[http://www.isdscotland.org/Health-Topics/Workforce/](http://www.isdscotland.org/Health-Topics/Workforce/)  
General Register for Scotland (GROS) – mid year population estimates

### Updates

ISD website - updated annually (Nov/Dec)  
HR template shows allocation of staff resources (estimated WTE) by service function for Adult Mental Health services

### Significance of measure

Indicator shows capacity/resources available to NHS Board/population.

### Related outcome measures linked to other scorecard indicators

- Total psychiatric beds per 100,000 population  
- Total spend for mental health per head population

### Assumptions

ISD (SWISS) workforce information based on categories of staff (in post) for mental health as at September of the same year:  
*Nursing resources classified by community/hospital for mental health specialities*  
*Consultants: information categorized by psychiatric specialities*  
*Psychologists: All Applied Psychologists employed in psychology for Adult Mental Health. Information categorized by NHS Board only.*

### Additional Notes

Social care benchmarking to update records of relevant staff - social workers and mental health officers.

### English equivalent

Number of WTE of community development workers employed

### Australian equivalent

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<table>
<thead>
<tr>
<th>MH Benchmarking</th>
<th>Process/Outcome Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety</td>
<td>Total mental health staff officers per 100,000 population (NRAC adjusted) by NHS Board.</td>
</tr>
</tbody>
</table>

**Description**

Total number of mental health officers x 100,000
NHS Board Population (NRAC Adjusted)

**Numerator**

Total number of mental health officers by NHS Board

**Denominator**

NHS Board Population (NRAC Adjusted)

**Data source**

Scottish Government – Mental Health Officers Survey
(http://www.scotland.gov.uk/Publications/2010/08/30114721/0)
General Register for Scotland (GROS) – mid year population estimates

**Updates**

Scottish Government website - updated annually (December)

**Significance of measure**

Indicator shows capacity/resources available to NHS Board/population.

**Related outcome measures linked to other scorecard indicators**

- Total psychiatric beds per 100,000 population
- Total spend for mental health per head of population
- Total mental health staff per 100,000 population

**Assumptions**

The survey collects information on the number of qualified mental health officers in Scotland from the staffing census held by local authorities in October each year.

The mental health officers comprise all grades - *basic grade staff, senior practitioner posts and team leaders/managers.*

**Additional Notes**

A Mental Health Officer is a qualified Social Worker with at least two years experience, who has completed a further years study on Mental Disorder and the related Law to achieve accreditation.
### MENTAL HEALTH BENCHMARKING INDICATORS – OVERVIEW

<table>
<thead>
<tr>
<th>MH Benchmarking</th>
<th>Process/Outcome Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Efficiency</td>
<td>Social Care beds for Mental Health per 100,000 population.</td>
</tr>
</tbody>
</table>

**Description**

Total number of occupied Local Authority funded Care Home beds x 100,000

NHS Board Population (NRAC Adjusted)

**Numerator**

Total number of occupied Local Authority funded Care Home beds for residents with mental health needs

**Denominator**

NHS Board Population (NRAC Adjusted)

**Data source**

Scottish Government Quarterly Return

(http://www.scotland.gov.uk/Topics/Statistics/Browse/Health/Data/KeyMarch2010)

General Register for Scotland (GROS) – mid year population estimates

**Updates**

Scottish Government website - updated annually

**Significance of measure**

Indicator shows capacity/resources available to NHS Board/population.

**Related outcome measures linked to other scorecard indicators**

- Total psychiatric beds per 100,000 population
- Total spend for mental health per head of population
- Total mental health staff per 100,000 population

**Additional Notes**

Results based on average number of residents within the four quarters of individual financial years (April to March)

All permanent/Long stay Care Home residents aged 18 plus with mental health needs, including residents with dementia. Residents in both Local Authority and Private Care Homes supported within and outwith the Local Authority are included as long as they are funded by the Local Authority. The level of funding is irrelevant and includes those only receiving Free Personal Nursing Care payments.
<table>
<thead>
<tr>
<th>MH Benchmarking</th>
<th>Process/Outcome Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Equity</strong></td>
<td>Relative risk of death for persons with severe and enduring mental illness compared to the general population for Scotland.</td>
</tr>
<tr>
<td><strong>Description</strong></td>
<td>The relative risk (or risk ratio) is the ratio of the risk of dying in the mental health population divided by the risk in the general population.</td>
</tr>
<tr>
<td><strong>Numerator</strong></td>
<td>Age-Sex standardised mortality rate of the mental health population.</td>
</tr>
<tr>
<td><strong>Denominator</strong></td>
<td>Mortality rate of the general population.</td>
</tr>
<tr>
<td><strong>Data source</strong></td>
<td>General Register for Scotland (GROS) and ISD SMR04 dataset</td>
</tr>
<tr>
<td><strong>Updates</strong></td>
<td>Periodic</td>
</tr>
<tr>
<td><strong>Significance of measure</strong></td>
<td>Indicator of quality linked to management of severe and enduring MH.</td>
</tr>
<tr>
<td><strong>Syntax/calculations/assumptions</strong></td>
<td><strong>Definition:</strong> The mental health population is defined as any inpatient between ages 18 to 74 who has been discharged in the current financial year or in either of the two previous financial years who is alive at the beginning of the current financial year.</td>
</tr>
<tr>
<td></td>
<td><strong>1). Calculate Mental Health mortality rate (age-sex standardised):</strong></td>
</tr>
<tr>
<td></td>
<td>- Select patients in the Mental Health Population and split by age range and sex.</td>
</tr>
<tr>
<td></td>
<td>- Calculate the number of deaths in the MH population by age range and sex and compute the age specific mortality rate (per 100,000).</td>
</tr>
<tr>
<td></td>
<td>- Calculate Age-Sex standardised rate (directly standardised using the Scottish male/female populations = Standard Population):</td>
</tr>
</tbody>
</table>
|                 | \[
|                 | \sum \text{Age specific rate} \times \text{Standard Population} \]
|                 | \[
|                 | \text{Scottish mid year population estimate} \]
|                 | **2). Calculate General Population mortality rate:** |
|                 | \[
|                 | \sum \text{Total Scottish deaths in each age range} \times 100,000 \]
|                 | \[
|                 | \text{Scottish mid year population estimate} \]
|                 | **3). Calculate the Relative Risk (risk ratio) of death for the Mental Health Population:** |
|                 | Age-Sex standardised rate  
|                 | General Population rate |
| **Additional notes** | The above method and definition matches the equivalent English indicator [https://indicators.ic.nhs.uk/webview/](https://indicators.ic.nhs.uk/webview/) where possible. It is likely, though, that the defined mental health populations will differ since Scottish data will only include inpatient activity from SMR04 whereas English data may include community activity. |
### MH Benchmarking Phase 2.5

<table>
<thead>
<tr>
<th><strong>Population Measure /Outcome Measure</strong></th>
<th><strong>Safety</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description</strong></td>
<td>Total number of suicides per 100,000 population (crude and age-sex-deprivation standardised rates)</td>
</tr>
<tr>
<td><strong>Numerator</strong></td>
<td>Total number of suicides (crude and age-sex-deprivation standardised )</td>
</tr>
<tr>
<td><strong>Denominator</strong></td>
<td>NHS Board Population</td>
</tr>
<tr>
<td><strong>Data source</strong></td>
<td>ISD – SMR04 data set, GROS death records, GROS population estimates General Register for Scotland (GROS) – mid year population estimates</td>
</tr>
<tr>
<td><strong>Updates</strong></td>
<td>Periodic</td>
</tr>
</tbody>
</table>
| **Significance of measure** | Indicator is a population measure that reflects Scottish Government commitment and policy/initiatives to address rates of suicide in Scotland.  
*Findings from National Confidential Enquiry show that 25% of suicide victims used mental health services within the previous year. The report suggests some implications for service provision. |
| **Related outcome measures** | • Patient quality (measure of patient needs/promote recovery)  
• Patient risk and risk management  
• Links to follow up - community care/social care |
| **Notes** | **5 year time periods recommended for robustness.**  
**Indirect standardisation**  
**Reference year used in calculation GROS estimate 2008 (alternative standard population may be chosen, in this case the 'middle' year of the 5 year period was selected)**  
**General Register for Scotland (GROS) definition of suicide:**  
deaths known or thought to be the result of intentional self harm and events of undetermined intent (ICD10 codes: X60-X84 and Y10-Y34)  
• Source: ISD General Register Office for Scotland (GROS) Death records, GROS 2008 population estimates, SIMD09.  
• The data presented shows rate of suicide in NHS Boards compared to suicides rates in the Scottish Population within the same time frame.  
• Scottish Index of Multiple Deprivation 2009 (SIMD09) identifies small area concentrations of multiple deprivation across Scotland based on datazone geography in 7 domains: income, employment, crime, education, health, housing and access.  
• Rural/Urban classifications are made by determining what percentage of the Board consists of rural or urban areas and a classification is made by whichever is the greater of the two.  
• The standardised rate for each of the Boards can vary considerably for each of the three different parts of analysis (i.e. All Health Board’s, Rural/Urban split & Island Boards). This is mainly due to the different crude rates used during the calculations, as each part has its own rate calculated. |
<table>
<thead>
<tr>
<th>MH Benchmarking</th>
<th>Process/Outcome Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Person Centeredness</strong></td>
<td><strong>Percentage of people on community based compulsory treatment orders (CCTO's) /Total number of compulsory treatment orders (CTO) by NHS Board Area.</strong></td>
</tr>
</tbody>
</table>

**Description**
The number of clients on community based compulsory treatment orders (CCTO's) as a percentage of total compulsory treatment orders CTO.

\[
\text{Total Number of Persons on Community CTO} \times 100 \\
\text{Total Number of Persons on CTO (community/hospital)}
\]

Indicator describes the total number of people on community based CTO as a proportion of total CTO (hospital and community) described as a percentage.

<table>
<thead>
<tr>
<th>Numerator</th>
<th>Total number of persons on community CTO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denominator</td>
<td>Total number of persons on CTO</td>
</tr>
</tbody>
</table>

**Data source**

**Updates**
Data collected quarterly (4 snapshots)
Updated annually (November/December)

**Significance of measure**
Indicator of quality linked to management of psychiatric episodes and could inform effective implementation of the Act.

**Related outcome measures**
- Patient quality (measure of patient needs/promote recovery)
- Patient safety and risk management
- Possible link to integrated care pathways
- Percentage community spend

**Additional notes**
Compulsory Treatment Order: authorised detention in hospital and/or treatment for a person for a period of 6 months granted by the tribunal.

Community based CTO’s refer to the imposed requirements on a person to reside at/report to a specific place for treatment.

The Mental Welfare Commission provides data based on the notifications received. The periods of compulsion are captured as episodes with a valid start and end date. Data is collected on the age, sex, length of episode, named person, community component (i.e. defined as community CTO or variation of notification to the community). It includes community treatment orders for people with learning disability or personality disorders.
<table>
<thead>
<tr>
<th>MH Benchmarking</th>
<th>Process/Outcome Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Patient Quality</strong></td>
<td><strong>Percentage of voluntary and compulsory inpatient admissions by NHS Board of Treatment.</strong></td>
</tr>
</tbody>
</table>

**Description**

Percentage of voluntary and compulsory inpatient admissions for persons with a length of stay of less than 90 days.

- *Percentage of voluntary*
- *Percentage of compulsory*

*Compulsory Treatment Order: authorised detention of patient in hospital and/or treatment for a person for a period of 6 months granted by the tribunal.*

**Numerator**

- *Percentage of voluntary*
- *Percentage of compulsory*

**Denominator**

- *-

**Data source**

ISD – SMR04 data set (field: status on admission)

**Significance of measure**

Indicator of patient quality to inform patterns of management of psychiatric episodes. It could inform effective implementation of the Act.

**Related outcome measures linked to other scorecard indicators**

- Possible link to integrated care pathways
- Total psychiatric beds per 100,000 population
- Total spend for mental health per 100,000 population
- % Community spend

**Additional Notes**

Relevant SMR04 data field – ‘status on admission’ defines the status of the patient at the time of admission to the episode with respect to the Mental Health Act. It comprises voluntary inpatients (including persons on holiday/respite care) and formal inpatients – persons subject to detention under Mental Health Act).

Please note that the 'status on admission' applies at the point of admission and does not account for patients whose status may change during an episode of care. The principal holder of information on patients who have been detained under the mental health acts is the Mental Welfare Commission.

Results based on spell based analysis of episodes of mental illness for general psychiatry and psychiatry of old age specialities.

Excludes

Persons with length of stay greater than 90 days excluded as a proxy for long stay beds.

Further information on SMR04 codes from ISD coding team and Gordon Thomson.
### MH Benchmarking

<table>
<thead>
<tr>
<th>Process/Output or Outcome Measure</th>
<th>Information Quality and Capture</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Effectiveness</strong></td>
<td></td>
</tr>
<tr>
<td>Description</td>
<td>An assessment of the quality of the extraction, collation and production of information.</td>
</tr>
</tbody>
</table>

**INDICATOR:**

Assessment of the completion and timeliness of submission of SMR04 records.

<table>
<thead>
<tr>
<th>Numerator</th>
<th>Number of discharge records submitted within specified time frame</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denominator</td>
<td>Total number of (expected) discharge records within specified time frame</td>
</tr>
<tr>
<td>Data source</td>
<td>ISD website (CHI completion will require data request).</td>
</tr>
<tr>
<td>Updates</td>
<td>Annual/ Quarterly</td>
</tr>
</tbody>
</table>

**Significance of measure**

Good quality information (valid and reliable) provides a sound knowledge base for determining important components of care/ health interventions in mental health services. This is particularly relevant because of the multidisciplinary nature and varying structures of service provision available.

**Related outcome measures linked to other scorecard indicators**

- Patient quality (measure of patient needs/promote recovery)
- Patient safety and risk management
- Structural distribution of resources (staff and costs)

**Additional notes**

SMR04 data is an episode based patient record held in ISD. It comprises all inpatients and day cases admitted and discharged from mental health specialities (General Psychiatry, Child Psychiatry, Adolescent Psychiatry, Forensic Psychiatry, Psychiatry of Old Age and Learning Disabilities).

SMR data is expected to be received by ISD up to 6 weeks following the end of the month of discharge/clinic attendance. SMR estimates show percentage of SMR completeness for each NHS Board as at the most recent mid-month snapshot of the file taken by the Data Monitoring Team.

Completeness is determined by comparing monthly snapshots with expected returns based on previous annual records. This could vary with the activity level in Boards and reports on outstanding returns.

Possible breakdown of information by NHS Board, speciality and hospital location.
<table>
<thead>
<tr>
<th>MH Benchmarking</th>
<th>Process Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety</td>
<td>Training and Supervision Index</td>
</tr>
<tr>
<td><strong>Description</strong></td>
<td>The amount of training delivered to and supervision provided by mental health staff e.g. training in care programme approach, self harm and suicide and looked after children.</td>
</tr>
<tr>
<td><strong>Numerator</strong></td>
<td>Number of (estimated) mental health staff trained in suicide prevention, education and training</td>
</tr>
<tr>
<td><strong>Denominator</strong></td>
<td>Total number of mental health staff requiring training in suicide prevention, education and training</td>
</tr>
<tr>
<td><strong>Data source</strong></td>
<td>Scottish Government (Official statistics) – HEAT target 5: Suicide prevention, education and training standard NHS boards are required to have 50% of front line staff trained in suicide prevention training by the end of December 2010 (data to be selected for all relevant MH staff only).</td>
</tr>
<tr>
<td><strong>Updates</strong></td>
<td>Annually/Quarterly</td>
</tr>
<tr>
<td><strong>Significance of measure</strong></td>
<td>The prevention of suicide is of national priority in Scotland. Findings from the National Confidential Enquiry on suicide and homicide by people with mental illness suggest that about 25% of suicide victims were in contact with mental health services within the year prior to death. Training in suicide alertness and intervention skills is an important component of the national suicide prevention strategy.</td>
</tr>
<tr>
<td><strong>Related outcome measures</strong></td>
<td>• Readmissions • Patient experience • Suicide rates per 100,000 population</td>
</tr>
<tr>
<td><strong>Additional notes</strong></td>
<td>Suicide training: only relevant staff (mental health staff groups) identified by NHS Boards to do mandatory training are included in the measure. The relevant front line staff may comprise General practitioners (GP’s), A&amp;E doctors, clinical psychologists, A&amp;E nurses, primary care nurses, mental health nurses, reception staff, NHS 24 nurses, Scottish Ambulance staff, paramedics, substance misuse workers.</td>
</tr>
</tbody>
</table>