Policy prospects and usability of a classification tool for mapping mental health services in New Zealand

The ESMS/DESDE approach

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The Four Leadership Questions: Service Quality

- Do you know how good you are?
- Do you know where you stand relative to the best?
- Do you know where the variation exists?
- Do you know the rate of improvement over time?
Paradigm shift in health & social policy

<table>
<thead>
<tr>
<th>Evidence based care (EBC)</th>
<th>Evidence Informed Policy (1)</th>
<th>Knowledge Guided Policy (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• RCT</td>
<td>• EBC</td>
<td>• Expert knowledge</td>
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<tr>
<td>• Expt. approach</td>
<td>• Local information</td>
<td>• Practical / Implicit K.</td>
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<tr>
<td></td>
<td>• Epid &amp; Routine</td>
<td>• Complex decision</td>
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<tr>
<td></td>
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<td>support systems</td>
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</table>

1. Lavis et al, Health Research Policy and Systems 2009 (SUPPORT MODEL)
2. Gibert et al, Health Research Policy and Systems 2010 (EbCA MODEL)
Why a classification of health services?

- Systematic evaluation of local data for evidence-informed policy
- Standard and comparable Listing of services
- Semantic interoperability
- Resource allocation and priority setting
- Financing and accountability: CASE MIX / CARE MIX
- International territorial comparison

Availability / Accessibility / Acceptability / Efficiency / Equity

Parity / Mobility / Quality
Current situation in EU countries

EU Charter of Fundamental Rights (Art. 35):
Having access to high-quality healthcare when and where it is needed

EU health databases and health care system indicators

• Lack of semantic agreement on service naming and coding systems (Semantic variability)
• Service complexity

Inadequate framework for mobility and access
CARE EQUITY & MOBILITY

EQUITY: Impartial allocation of care (resources, programmes and treatments) to different groups and individuals

- **Eligibility**: Equal opportunity criteria to access care services. Specific groups are not excluded.

- **Availability**: The care option is available in the catchment area

- **Accessiblility**: The care option is not influenced by restrictions and/or limitations in time, distance or information (e.g. user rights)

- **Utilisation**: Available care alternatives are actually utilised by users

MOBILITY: When moving to a new placement users can access and utilise similar care alternatives to those available in the former location OR basic care alternatives are available and comparable across two different territories
What is semantic interoperability?

“The ability for information shared by systems to be understood at the level of formally defined domain concepts so that the information is computer processable by the receiving systems”

A COMMON LANGUAGE IN SERVICES FOR LTC
- Transferability and terminological variability

› Day care – Same day admission.
  - Other Day care
› Outpatient - Non admitted
› Rehabilitation - Subacute
› Hospital – Day Hospital – “Home hospital”

- Commensurability: Diff. units of analysis, lack of comparison like-with-like

- Service providers
- Service delivery
- Modalities of care
- Interventions
- Activities
- Philosophy of care
ESMS/DESDE Development

- 1994 – BIOMED – EPCAT Team
- 1997 – Development of services assessment methodology and instruments - *EPCAT battery: ESDS, ESMS, ICMHC*
- 1999 – International use (Italy / Spain)
- 2002 – DESDE: Ministry of Health (Spain) – Adapt. to Disabilities
- 2005 – ESMS-1 MHEEN-II/EPCAT
- 2008 – eDESDE-LTC
- 2009 – *Finland MHS (Lancet, 2009)*
- 2011 – eDESDE-LTC
- 2013 – REMAST
INSTRUMENT

- Introduction: General principles and Guidelines
- Section A: Introductory questions
- Section B: Coding Long Term Care. Principles and Guidelines
- Section C: Counting Long Term Care. Principles and Guidelines
- Section D: Service Inventory
SERVICES: Basic Stable Inputs of Care (BSICs)

1. Catchment area

2. Target Population

3. Main Type of Care (MTC)
DEFINITION OF SERVICE (BSIC)

It is the minimal set of inputs with temporal continuity and organisational stability for delivering health related care to a defined and identified group of users in a specific location. It is usually composed of an administrative unit with an organised set of structures and professionals.

Within the production model (input-throughput-output), BSIC refers only to functions of care that are stable and continuous over time and not to other organisational arrangements, tangible inputs (devices, facilities), or procedures (interventions). The operational description of BSIC depends on its main characteristics or attributes (users, staff, organization, and structure).
### INCLUSION CRITERIA FOR BSIC

<table>
<thead>
<tr>
<th>LEVEL 1 (parent attributes)</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>A. - Human resources</td>
<td>A. - Same professionals</td>
</tr>
<tr>
<td>B. - Consumer</td>
<td>B. - Same users</td>
</tr>
<tr>
<td>C. - Temporal stability</td>
<td>C. - Temporal continuity</td>
</tr>
</tbody>
</table>

**Other attributes (Organisational stability)**

<table>
<thead>
<tr>
<th>LEVEL 2</th>
<th></th>
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<tbody>
<tr>
<td>1. - Legal entity</td>
<td></td>
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<tr>
<td>2. - Administrative unit</td>
<td></td>
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<tr>
<td>3. - Own premises</td>
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</table>

<table>
<thead>
<tr>
<th>LEVEL 3</th>
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<tr>
<td>4. - Own accountancy</td>
<td></td>
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<tr>
<th>LEVEL 4 (additional)</th>
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<tr>
<td>5. - Separated Documents and/or individual coding in larger databases</td>
<td></td>
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</tbody>
</table>

US: Leginsky, 1989 // Australia: ABF URG/DRG Emergency departments
UNITS OF ANALYSIS MICRORGANISATION OF CARE

STABLE MICROORG. OF CARE

VALUES (DESCRIPTORS)

BASIC STABLE INPUTS OF CARE

BSIC

MTC

MAIN TYPES OF CARE

BSIC: Area (H) / Target (ICD/ICF) / MTC / Qualifier

Other UA: Interventions, Activities, Phylosophy
It is the main DESCRIPTOR of the ‘generic care function’ of the BSIC. The Main Type of Care describe the principal activity carried out at the unit (e.g. R-residential: the user sleeps in the setting). MTCs have been identified in a series of related projects within the ESMS/DESDE programme for allowing service comparisons across different territories. They have been arranged in a tree taxonomy according to six descriptor levels:

1) **Main branch** (or main function of care: I) information, A) Accessibility, S) Self-care and voluntary, O) Outpatient, D) Day care, R) Residential care)

2) **Health status** of user (Acute/Non-acute)

3) **Main typology** of care within every main branch

4) **Intensity of care** (in time dedicated to service delivery, or in specialisation of staff or the micro-organisation system)

5) **Specific typology** of care (in every level of intensity)

6) **Additional typology of care.** The additional qualifier describes a single activity of the BSIC which is not its main characteristic but is relevant for understanding the specific SIC being described.
DESDE-LTC Tree taxonomy - 91 codes

LONG TERM CARE

INFORMATION FOR CARE
- GUIDANCE AND ASSESSMENT
- INFORMATION
  - COMMUNICATION
  - PERSONAL ACCOMPANIMENT
  - CASE COORDINATION
  - PHYSICAL MOBILITY
  - OTHER ACCESSIBILITY CARE

ACCESSIBILITY TO CARE

SELF-HELP AND VOLUNTARY CARE
- NON-PROFESSIONAL STAFF
  - PROFESSIONAL STAFF

OUTPATIENT CARE
- ACUTE
  - HOME & MOBILE
  - NON MOBILE
  - NON ACUTE
    (Continuing care)

DAY CARE
- ACUTE
  - HOME & MOBILE
  - NON MOBILE

RESIDENTIAL CARE
- ACUTE
  - 24 HOURS PHYSICIAN COVER
  - NON 24H PHYSICIAN COVER
- DAY CARE
  - EPISODIC
  - CONTINUOS

LONG TERM CARE (Continuing care)
- WORK
  - WORK RELATED ACTIVITIES
  - NON-WORK STRUCTURED CARE
  - NON STRUCTURED CARE

NON-PROFESSIONAL STAFF

NON MOBILE

OTHER RESIDENTIAL

PROGRAMMED AVAILABILITY
Target Tag – ID (identifier) – Descriptor – [DESDE label] – Qualifier

Tree Tag - ID (identifier) - DESDE-LTC descriptor - [DESDE-LTC label] -Qualifier

Outpatient care, Non-acute, Non-mobile, High-intensity, reference center of the area

- A[Fxx]- O8.1 r  - Mental care community center
- A[ICD]- O8.1 r  - Primary care center
Bottom-up development in different care sectors

- Mental health, Disabilities, Ageing, Long-term care and Chronic care

- Ontology based: Conceptual mapping, Coding, Glossary

- Standardised instruments available: ESMS > DESDE > DESDE-LTC
  - Feasibility, reliability, validity

- Usability
  - National listing of disability services in Spain (2012)
  - Mapping of MH & LTC services by the Depts of Health
    Catalonia / Basque Country / Spain / Finland / Chile
  - International comparisons in over 17 countries in MH / Refinement
  - Use for evidence-informed policy: benchmarking, analysis of technical efficiency, development of MHS indicators
USABILITY OF ESMS/DESDE APPROACH

**WHO - FAMILY OF INTERNATIONAL CLASSIFICATIONS ANNUAL NETWORK MEETING 2012**

**USE OF THE EUROPEAN CLASSIFICATION OF SERVICES ‘DESDE-LTC’ FOR MAPPING AND PLANNING MENTAL CARE IN CATALONIA (SPAIN)**


*Department of Health. Government of Catalonia (Spain)

**Abstract** Within the evidence-informed model of health policy, the standard description of local provision of services is critical to guide decision making. The Catalan Department of Health participated in the development of the European classification of services for long term care.

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**Identification and location of hot and cold spots of treated prevalence of depression in Catalonia (Spain)**

José A Salinas-Pérez1, Carlos R García-Alonso2, Cristina Molina-Parrilla3, Esther Jordà-Sampietro4 and Luis Salvador-Carulla5 for the GEOscAT Group

*International Journal of Health Geographics 2012, 11:36*

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**Methodological Advances in Unit Cost Calculation of Psychiatric Residential Care in Spain**

Karen Moreno,1* Eduardo Sánchez2, Luis Salvador-Carulla3

*J Ment Health Policy Econ 11, 79-88 (2008)*

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**Use of an Operational Model of Community Care to Assess Technical Efficiency and Benchmarking of Small Mental Health Areas in Spain**

Luis Salvador-Carulla1, Carlos García-Alonso2, Juan Luis Gonzalez-Caballero3, Marco Garrido-Cumbra3

*J Ment Health Policy Econ 10, 63-76 (2007)*
- Standard description of service provision (availability and capacity)

- Spatial Analysis – Geographical Information Systems

- Development of bottom-up indicators of Community MHC

- Local/Regional Comparisons

- Use of Expert-based Collaborative Analysis and modelling
  - System indicators of performance
  - Relative efficiency
  - Quality assessment and benchmarking
  - Support decision making
MH Care System in Girona (Sp)
Profile of MTCs in GIRONA & CATALONIA (Sp)
The parts of the Remast toolkit

- Services Inventory (DESDE-LTC)
- Policies and Description
- SES Index
- Geographical Information
ACUTE RESIDENTIAL & HOSPITAL CARE

- Romania mental health system does not have a specific area

Includes DESDE-LTC codes:
- Hospital: R1 R2 R3.0
- Non-hospital: R0 R3.1.1

** Hospital Georges Daumezon: 7 psychiatric sectors
Case CATALONIA: local impact of research

- In 2006 the design of the MH day hospital was changed and DESDE coding was introduced in the MH Plan of Catalonia
- Since 2010, service mapping results were actively communicated to regional decision makers and use for planning
- In November 2013, more funding was provided for MH service research in Girona
- In 2014, relative technical efficiency will be incorporated to priority and resource allocation
Case FINLAND: local impact of research

- In 2013, service mapping results were actively communicated to local decision makers.
- In September 2013, the hospital district board organised a hearing of REFINEMENT experts and decided to re-allocate resources and to close three psychiatric hospitals.
- In the future, two psychiatric hospitals will provide specialised care with psychiatrists on-site 24 hours.
- Acute residential care for mental disorders will also be provided in small acute units located at general hospitals, supported by community care teams.
15 years on: What has been achieved?

- COMMENSURABILITY: Units of analysis
  Basic Stable Inputs of Care (BSIC)

- TRANSFERABILITY: Coding of services
  Main Types of Care (MTC)

- TERMINOLOGICAL VARIABILITY:
  Glossary of terms and
  Semantic interoperability

- MISSING FOCUS: CARE-DRIVEN CASEMIX & CAREMIX
MTC availability and use can be compared across areas regardless of how services are named. ESMS/DESDE provides a standard coding system of services for care and for LTC which can be incorporated to electronic registers, databases and websites.

Its use may allow for a better semantic interoperability across different information systems. It may also be a useful support decision tool to improve informed-evidence planning.

The assessment and analysis of mental health services is still complex and requires training and considerable human effort.
What is next?

- Atlas of Mental Health and efficiency of the MH system in the Basque Country
- Atlas of MH in Chile
- Atlas of MH in NSW (with the NSW Commission MH)
- Algorythm for on-line completion of DESDE-LTC in social services (Andalucia)
- Publication of the REFINEMENT results in 8 EU countries
IS there any implication relevant to NZ?
Who is being seen, *where*, why and by *whom*

- **Activity data**
  - 2000
  - Who gets what from who

- **Outcomes data**
  - 2005
  - with what effect

- A single rich data source

**PRIMH D**
## Adult services
### Indicators reported during Phase IV

<table>
<thead>
<tr>
<th>KPI</th>
<th>Description</th>
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<tbody>
<tr>
<td>KPI 1</td>
<td>Parts 1 to 4 – Total HoNOS score (inpatient) - effect size large</td>
</tr>
<tr>
<td>KPI 2</td>
<td>28 day <strong>acute inpatient</strong> readmission rate</td>
</tr>
<tr>
<td>KPI 8</td>
<td>Average length of <strong>acute inpatient</strong> stay</td>
</tr>
<tr>
<td>KPI 9</td>
<td>Average length of <strong>residential rehabilitation</strong> facility stay *</td>
</tr>
<tr>
<td>KPI 12</td>
<td><strong>Community treatment days</strong> per service user (quarterly)</td>
</tr>
<tr>
<td>KPI 16</td>
<td><strong>NGO services</strong> investment - overall</td>
</tr>
<tr>
<td>KPI 18</td>
<td>Pre-admission <strong>community care</strong> *</td>
</tr>
<tr>
<td>KPI 19</td>
<td>Post-discharge community care *</td>
</tr>
<tr>
<td>KPI 28</td>
<td>Total staff turnover *</td>
</tr>
<tr>
<td>KPI 29</td>
<td>Sick leave usage *</td>
</tr>
<tr>
<td>KPI 31</td>
<td>Client index</td>
</tr>
<tr>
<td>KPI 33</td>
<td>Percentage of contact time with client participation</td>
</tr>
<tr>
<td>KPI 34</td>
<td>Community service-user-related time</td>
</tr>
</tbody>
</table>

**NB:** The indicators with an asterisk were reported by DHBs and NGOs from September 2011.

Source: Northern DHB Support Agency, [http://www.ndsa.co.nz/OurServicesWhatWeDo/MentalHealth/KPIFramework.aspx](http://www.ndsa.co.nz/OurServicesWhatWeDo/MentalHealth/KPIFramework.aspx)
The 10 key features of good service provision

› relapse prevention plan
› health treatment and advice
› access
› recovery based treatment
› continuity
› a personal assessment & treatment plan
› social support
› service accountability
› coordination of services
› service evaluation