Institution: King's College London (KCL)

Unit of Assessment: UoA4 – Psychology, Psychiatry & Neuroscience

Title of case study: 17: International dissemination of best practice in standardised needs assessment

1. Summary of the impact

King's College London (KCL) researchers developed and disseminated the Camberwell Assessment of Need (CAN) which provides a scientifically rigorous and flexible approach to assessing the mental health and social needs of people with a wide range of disorders. Mental Health services around the world are striving to increase the patient-centeredness of their care. The CAN supports this needs-led care planning to help transform mental health policy and practice. KCL work has resulted in CAN being the most internationally recognised and researched assessment tool available. The CAN is widely used in mental health policies and locally adapted versions are routinely used in clinical practice within both statutory mental health services and nongovernmental organisations in the UK and around the world.

2. Underpinning research

People with severe mental illness have a number of clinical and social needs. To help establish what these are, and how they can be addressed, researchers at Institute of Psychiatry, King's College London (KCL), led by Prof Graham Thornicroft (1992-present, Professor of Community Psychiatry), Prof Til Wykes (1986-present, Professor of Clinical Psychology) and Prof Mike Slade (1997-present, Professor of Health Services Research), developed the Camberwell Assessment of Need (CAN), a family of comprehensive, standardised assessments of needs in both health and social domains.

Needs for care: The CAN was initially developed to meet the 1990 NHS and Community Care Act requirement for needs-led care planning. It assesses 'met' or 'unmet' needs in 22 important domains of life including accommodation, self and home care, physical and mental health, safety to self and others, drug and alcohol use, relationships, money and transport. For each domain, the CAN identifies whether the service user has any difficulties and, if so, to establish if they are getting sufficient help to manage that need. A key advance is that CAN assessments can be made from the perspectives of the service user, staff and (where relevant) their relative/informal carer. The original version, CAN-R, was a research measure for use with adults aged 18-65 with severe mental illness such as schizophrenia. Further development included validation of CAN-R as a mental health service evaluation tool and development of a clinical version for staff to plan patient care. These were drafted by KCL researchers then modified with mental health expert and patient input. The amended versions, validated with 60 staff and 49 patients, had good inter-rater and test-retest reliability, identifying an average of 7.55 to 8.64 needs (1).

KCL research leads to CAN-based measures for different clinical and professional groups: KCL researchers developed clinical (1999), short (1999) and patient-rated (2008) versions of CAN. Variants have also been developed for people with learning disabilities (CANDID), forensic mental health (CANFOR), mothers with mental health problems (CAN-M), people in emergency relief situations (HESPER) and adults over 65 (CANE, in collaboration with University College London). KCL retains copyright on all versions. Details of the development of each measure are widely published. For instance, CANDID was amended to make it relevant to the needs of people with learning disabilities and mental health problems. Development involved input from service users, carers and expert health and social service professionals and included comparison to measures of psychiatric symptom severity and functioning. CANDID scores were significantly correlated with these measures, and both inter-rater and test-retest reliability were high (2).

KCL research highlights that different perspectives affect needs assessment: A key advantage of the CAN is the ability to separately assess staff and patient perspectives. These can differ, with implications for service planning, as highlighted in a number of KCL-led studies. For instance, in a 1996 study, the CAN was given to 45 staff/patient pairs and while they rated a similar number of needs, agreement between ratings of help received, help given and service satisfaction was low (3). Another study compared assessments of needs of 137 people with psychotic disorders. There were no differences in the number of needs rated (around 6.5) and some agreement about met needs; however, there was little agreement on unmet needs (4). These

findings have advanced psychiatric and other medical disciplines by demonstrating that the patient perspective can be reliably assessed. This laid the basis for subsequent shifts in NHS practice toward increased patient involvement and patient-focussed care.

Are needs related to aspects of care and disability? The CAN has been used by KCL researchers to investigate the relationship between domains of outcome such as social disability and satisfaction with care. For example, in a representative sample of 133 patients with psychosis, underlying unmet need was associated with poorer quality of life (5). This was reflected in a 2004 collaborative study with the University of Verona, Italy, where 121 patients were assessed in a variety of social and health-related areas and were followed-up a year later. The best baseline predictor of quality of life was again patient-rated unmet need (6). To investigate this causal relationship further, a multivariate time series analysis involving 73 adults using mental health services over 7 months using the patient assessed CANSAS (CAN Short Appraisal Schedule)) was carried out. The researchers discovered that unmet need affected quality of life even when unmet need changed (7). These studies highlighted how the patient's perspective on their difficulties must be central to mental health care.

3. References to the research

1. Phelan M, Slade M, Thornicroft G, et al. The Camberwell Assessment of Need: the validity and reliability of an instrument to assess the needs of people with severe mental illness. British Journal of Psychiatry 1995;167:589-95. Doi: 10.1192/bjp.167.5.589 (430 Scopus citations)
2. Xenitidis K, Thornicroft G, Leese M, et al. Reliability and validity of CANDID - a needs assessment instrument for adults with learning disabilities and mental health problems. British Journal of Psychiatry 2000;176:473-78. Doi:10.1192/bjp.176.5.473 (24 Scopus citations)
3. Slade M, Phelan M, Thornicroft G, Parkman S. The Camberwell Assessment of Need (CAN): comparison of assessments by staff and patients of the needs of the severely mentally ill, Social Psychiatry and Psychiatric Epidemiology 1996;31;109-13. Doi: (133 Scopus citations)
4. Slade M, Phelan M, Thornicroft G. A comparison of needs assessed by staff and an epidemiologically representative sample of patients with psychosis, Psychological Medicine 1998;28;543-50. Doi: (104 Scopus citations)
5. Slade M, Leese M, Taylor R, Thornicroft G. The association between needs and quality of life in an epidemiologically representative sample of people with psychosis, Acta Psychiatrica Scandinavica 1999;100:149-57. Doi: 10.1111/j.1600-0447.1999.tb10836.x (63 Scopus citations)
6. Slade M, Leese M, Ruggeri M, et al. Does meeting needs improve quality of life? Psychotherapy and Psychosomatics 2004;73:183-189. Doi: 10.1159/000076456 (40 Scopus citations)
7. Slade M, Leese M, Cahill S, et al. Patient-rated mental health needs and quality of life improvement. British Journal of Psychiatry 2005;187:256-61. Doi: 10.1192/bjp.187.3.256 (57 Scopus citations)

Grants

- 1992-1994. £42,685. PIs: G. Thornicroft, T. Wykes. The Development of a Short, Reliable and Valid Inter-agency Needs Assessment Instrument for the Severely Mentally ill. Department of Health R&D Division (Mental Health).
- 1996-1999. £317,350. PIs: G. Thornicroft, M. Knapp. International Outcome Measures in Mental Health. European Union.
- 2000-2005. £370,381. PIs: M. Slade, E. Kuipers, G. Thornicroft. The development of an evidence-based approach to implementing routine outcome assessment in adult mental health services. MRC Patient Oriented Clinician Scientist Fellowship.
- 2004-2006. £60,007. PIs: L. Howard, M. Slade, G. Thornicroft. Development of a women's CAN. SLAM Trustees/Guy's & St Thomas' Charitable Foundation/Institute of Social Psychiatry.

4. Details of the impact

Studies by KCL researchers demonstrated that reducing patient-rated unmet need causes, rather than is just associated with, outcome improvement. The findings empirically justify a needs-led approach to care planning utilising their Camberwell Assessment of Need (CAN) set of measures.

KCL research led to national use of CAN in services: The CAN is extensively used nationally, as confirmed by a number of sources. For instance, the book 'Outcome Measurement in Mental Health: Theory and Practice' states that CAN is "the most widely used instrument for assessment

of needs in mental health settings" (1a). The KCL group have actively supported dissemination into clinical practice internationally. This included liaison with colleagues, development of quality assurance and copyright protection systems and development of a comprehensive on-line resource: Research Into Recovery (1b). **The CAN is used across regions in England**. For example, in 2013 the Gloucester Caseload Project used CANSAS to compare staff and patient perceptions about changes in need across three assertive community treatment teams (1c).

KCL research produced international use of CAN in services: Under the direction of KCL, the CAN has been translated into 26 languages, including many European, Asian and African ones, with published psychometrics papers on versions in several of these languages (e.g. Romeva et al, 2010 discuss the Spanish translation of CANFOR: 1d). Translation of the CAN allowed it to be introduced across large catchment areas in several countries. For example, in Ontario, Canada, there are more than 300 Community Mental Health (CMH) agencies that, as a sector, identified "the need to enhance the assessment process and make it more effective for both the consumer and CMH staff." From December 2007, the Government-funded CMH Common Assessment Project (CMH CAP) was developed and is currently "delivering on the sector's vision of a streamlined assessment process that will standardise current practices across the province" (1e,f). Out of 80 candidate measures, **the CAN was chosen as the best measure upon which to base the Ontario Common Assessment of Need** (OCAN) which is used as the main measure throughout (1g). Their 2012 report detailed how all of the 294 CMH organisations eligible to implement OCAN would be doing so by the end of 2012, with, at that time, 20% of the organisations having completed all of their OCAN assessments (1f).

In the Netherlands the CAN is part of the Cumulative Needs for Care Monitor (CNCM) database, a psychiatric case register system developed to standardise and improve needs-based diagnosis in use throughout a defined catchment area in the south of the country (population 660,000) (1h). Here, the CAN is described as "the core instrument of the CNCM." This project is producing clinical findings directly informing service development, for instance, they found that compared with a control region, out-patient care consumption in the CNCM region was significantly higher regardless of treatment status at baseline (1i). A further example is that **CANSAS has been chosen for use in the Minimum Data Set of the Partners in Recovery (PIR) five-year national programme in Australia**. This is a £343m programme involving 300 consortium partner organisations to provide co-ordinated support for 24,000 people with severe mental illness and complex needs. The aims are to facilitate better coordination, strengthen partnerships, improve referral pathways and promote a community based recovery model (1j).

Dissemination into national policy: The CAN is recommended in a range of evaluation and policy documents in the UK. For instance, it was recommended "for clinical use to identify need" in the National Institute for Mental Health **in England's 2008 'Outcomes Compendium**,' which aimed to "provide information on ... measurement tools, their properties and their use" (2a). Similarly, in 2011 the Royal College of Psychiatrists published their 'Outcome Measures Recommended for Use in Adult Psychiatry,' saying of the short version of the CAN that it "has the advantage of showing how a service improves a service user's proportion of met needs (versus unmet needs)" and that "it may be especially important for rehabilitation services to evidence the degree to which they are addressing service users' complex problems" (2b).

KCL measure is used in international policy: A priority of the Mental Health Commission of Canada for Mental Health Strategy is to "improve mental health data collection, research and knowledge exchange across Canada." It cites Ontario's CMH CAP as a best practice example. **They propose the countrywide adoption of OCAN, adapted from the CAN, which they call "the most internationally recognized and researched assessment tool available"** (2c). In New South Wales, Australia, in 2009 the Network for Alcohol & other Drug Agencies, the main organisation for the over 100 non-governmental drug and alcohol services, produced a guide to 'Assessment and Outcome Measures for Drug and Alcohol Setting.' Here they provide a thorough review of the development and use of the CAN, citing a number of KCL papers including Phelan et al. 1995 and Slade et al. 1996, and describe it as "one of the most widely used instruments for ... needs assessment and treatment outcomes" (2d).

Dissemination into community and third sector: The CAN is widely used by non-governmental organisations (NGOs), in fact, one source says that "of all the outcome measures, **CANSAS has had the strongest uptake by NGOs"** (3a). For example, Neami National is an Australian non-government mental health organisation that provides support services within a recovery framework for 2,300 consumers with a serious mental illness across five states. Since 2009, the organisation has adopted the Collaborative Recovery Model (3b), which involves using CANSAS with all consumers as the basis for care planning (3c).

5. Sources to corroborate the impact

1) Dissemination into health and well-being agencies

a. Trauer T. Chpt 22: A review of instruments in outcome measurement (see pg 234). In Trauer (ed) Outcome Measurement in Mental Health: Theory and Practice. Cambridge: Cambridge University Press. 2010. ISBN-10: 0521118344
b. Research Into Recovery website: www.researchintorecovery.com/can
c. Macpherson R, et al. Evaluation of three assertive outreach teams. The Psychiatrist 2013;37:228-231. Doi:10.1192/pb.bp.112.040147
d. Romeva GE, et al. Clinical validation of the CANFOR scale (Camberwell Assessment of Need-Forensic version) for the needs assessment of people with mental health problems in the forensic services. Actas Esp Psiquiatrí 2010;38:129-137: http://www.actaspsiquiatria.es/repositorio//11/63/ENG/11-63-ENG-129-137-817835.pdf
e. OCAN website: https://www.ccim.on.ca/CMHA/OCAN/default.aspx
f. OCAN report: https://www.ccim.on.ca/CMHA/OCAN/Document/CMHProjectProfile_20120215_v1%206_CMHCAP-FINAL.pdf
g. Slade M. An evidence-based approach to routine outcome assessment. Advances in Psychiatric Treatment 2012;18:180-82. Doi:10.1192/apt.bp.111.009027
h. Drukker M, et al. The cumulative needs for care monitor. Soc Psychiatr Psych Epid 2010;45:475-85. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2834763/
i. Drukker M, et al. Does monitoring need for care in patients diagnosed with severe mental illness impact on Psychiatric Service Use?, BMC Psychiatry 2011;21(11):45: http://www.biomedcentral.com/content/pdf/1471-244X-11-45.pdf
j. Contact to confirm CANSAS in PIR: Assistant Secretary, Mental Health Services Branch, Australian Government Department of Health

2) Dissemination into policy community

a. National Institute for Mental Health in England. Outcomes Compendium (pgs 30, 45): http://webarchive.nationalarchives.gov.uk/20130107105354/http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/documents/digitalasset/dh_093677.pdf
b. Royal College of Psychiatrists (pg 20): http://www.rcpsych.ac.uk/files/pdfversion/op78x.pdf
c. Mental Health Commission of Canada (pg 87): http://strategy.mentalhealthcommission.ca/pdf/strategy-text-en.pdf
d. Network of Alcohol & other Drug Agencies (NADA) (pgs 14, 51-4) http://www.ntcoss.org.au/sites/www.ntcoss.org.au/files/Review_of_Measures_09.pdf

3) Dissemination into community and third sector

a. Tobias G. Chpt 16: Mental health outcome measurement in non-government organizations (see p165). In Trauer T (ed) Outcome Measurement in Mental Health: Theory and Practice. Cambridge: Cambridge University Press. 2010. ISBN-10: 0521118344
b. NEAMI - http://www.neami.org.au/wp-content/uploads/2012/01/2011 -Annual-Report.pdf [p.10 "NEAMI took the decision to implement the Collaborative Recovery Model...in 2009. the implementation was accompanied by a planned roll out to all services"]
c. Salgado J, et al. J Ment Health 2010;19(3):243-8. Doi: 10.3109/09638230903531126. NB: this paper doesn't specifically mention CANSAS but states "A detailed description of the training components has been published" (p.246) which refers to Oades L, et al. Australasian Psychiatry 2005;13(3):279-284. DOI:10.1111/j.1440-1665.2005.02202.x, which includes CANSAS