

# BJPsych International

## Guest editorial

- 27 **Mental health and poverty in the UK – time for change?**  
Jed Boardman, Nisha Dogra and Peter Hindley

## Thematic papers: Mental health and climate change

- 29 **Mind games: standing by while the world ignores climate change**  
Daniel L. Maughan and Helen L. Berry
- 31 **Worrying about climate change: is it responsible to promote public debate?**  
Helen L. Berry and Dominic Peel
- 33 **Implications of participatory methods to address mental health needs associated with climate change: 'photovoice' in Nepal**  
Elizabeth K. MacFarlane, Renu Shakya, Helen L. Berry and Brandon A. Kohrt
- 36 **Reducing non-attendance rates in community psychiatry: a case for sustainable development?**  
Daniel L. Maughan and Michael Pearce

## Mental health law profiles

- 40 **Introduction**  
George Ikkos
- 40 **Malaysian mental health law**  
Nusrat N. Khan, Badi'ah Yahya, Abd Kadir Abu Bakar and Roger C. Ho
- 42 **An overview of mental health legislation in Singapore**  
Roger C. Ho, Cyrus S. Ho, Nusrat Khan and Ee Heok Kua

## Special papers

- 44 **Access to community-based mental healthcare and psychosocial support within a disaster context**  
Katherine P O'Hanlon and Boris Budosan
- 47 **Psychosocial rehabilitation for severe mental illnesses in general hospital psychiatric settings in South Asia**  
Mamta Sood and Rakesh K. Chadda
- 49 **A witch defended by a psychiatrist**  
Manohar Dhadphale
- 50 **Pandora's box**  
Eleni Palazidou

Volume 12  
Number 2  
May 2015

ISSN 2056-4740

*Blog*  
[www.bjpinternationalblog.org](http://www.bjpinternationalblog.org)

*Facebook*  
[www.facebook.com/BJPsychInternational](http://www.facebook.com/BJPsychInternational)

*Twitter*  
@BJPsychInt



Volume 12  
Number 2  
May 2015  
ISSN 2056-4740

#### Mission of *BJPsych International*

We address themes that have real practical relevance to supporting patients, with a particular, but not exclusive, focus on the needs of low- and middle-income countries as well as the mental health needs of the poor and socially excluded in more developed countries. Contributors who can provide examples of innovative practice, which could be emulated elsewhere at minimal cost, are especially welcome, as are papers on public mental health.

## Editor

David Skuse

### Deputy Editor

George Ikkos

### Founding Editor

Hamid Ghodse

### Staff

Jonica Thomas

Andrew Morris (Head of Publications)

## Open access

Online access to *BJPsych International* is unrestricted; use of its content is governed by an Open Access Licence Agreement.

## Blog

<http://www.BJPsychInternationalblog.org>

## Facebook

<https://www.facebook.com/BJPsychInternational>

## Twitter

@BJPsychInt

## Editorial board

### Senior Editorial Advisors

Rachel Jenkins  
UK

John Cox  
UK

### Associate Editors

Michel Botbol (Europe)  
France

Nick Bouras (Special Papers)  
UK

Santosh Chaturvedi (Indian  
Subcontinent)  
India

Manu Dhadhpale (Country  
Profiles)  
India

David Jimenez (Media and  
South America)  
UK

Kelly Lai (South-East Asia)  
Hong Kong

Nasser Loza (Middle East)  
Egypt

Daniel Maughan  
(Sustainability)  
UK

Olufemi Olugbile (Africa)  
Nigeria

Eleni Palazidou (Pandora's  
Box)  
UK

Dr Ian Soosay (Oceania)  
New Zealand

### Other members

Katy Briffa  
UK

Jorge Calderon  
Chile

Rakesh Chadda  
India

George Christodoulou  
Greece

Anna Datta  
New Zealand

Oluwole Famuyiwa  
UK

Stephen Kisely  
Australia

Marinos Kyriakopoulos  
UK

Gholam Reza Mir-Sepassi  
Iran

Hellme Najim  
UK

David Ndetei  
Kenya

Sean O'Domhnaill  
Ireland

Sundararajan Rajagopal  
India

Mohamed Omar Salem  
UAE

Samuel Stein  
UK

## Subscriptions

*BJPsych International* is published four times a year.

For subscriptions non-members of the College should contact:

Publications Subscriptions Department, Maney Publishing, Suite 1C, Joseph's Well, Hanover Walk, Leeds LS3 1AB, UK tel. +44 (0)113 243 2800; fax +44 (0)113 386 8178; email [subscriptions@maney.co.uk](mailto:subscriptions@maney.co.uk)

For subscriptions in North America please contact: Maney Publishing North America, 875 Massachusetts Avenue, 7th Floor, Cambridge, MA 02139, USA tel. 866 297 5154 (toll free); fax 617 354 6875; email [maney@maneyusa.com](mailto:maney@maneyusa.com)

Annual subscription rates for print issues for 2015 (four issues, post free) are £35.00 (US\$63.00). Single issues are £10.00 (US\$18.00), post free.

Design © The Royal College of Psychiatrists 2015.

For copyright enquiries, please contact the Director of Publications and Website, Royal College of Psychiatrists.

All rights reserved. No part of this publication may be reprinted or reproduced or utilised in any form or by any electronic, mechanical or other means, now known or hereafter invented, including photocopying and recording, or in any information storage or retrieval system, without permission in writing from the publishers.

The views presented in this publication do not necessarily reflect those of the Royal College of Psychiatrists, and the publishers are not responsible for any error of omission or fact.

The Royal College of Psychiatrists is a charity registered in England and Wales (228636) and in Scotland (SC038369).

From 2003 to 2013 *BJPsych International* was entitled *International Psychiatry* and until 2006 published as (and subtitled) the *Bulletin of the Board of International Affairs* of the Royal College of Psychiatrists. Printed in the UK by Henry Ling Limited at the Dorset Press, Dorchester DT1 1HD.

The paper used in this publication meets the minimum requirements for the American National Standard for Information Sciences – Permanence of Paper for Printed Library Materials, ANSI Z39.48-1984.

## Notice to contributors

*BJPsych International* publishes articles dealing with mental health policy, promotion and legislation, the administration and management of mental health services, and training in psychiatry around the world. The journal aims to be a platform for work that is generally underrepresented in the literature, especially psychiatry in low- and middle-income countries.

Manuscripts for publication must be submitted online at <http://submit-ip.rcpsych.org> (general enquiries may be addressed to [ip@rcpsych.ac.uk](mailto:ip@rcpsych.ac.uk)).

Manuscripts accepted for publication are copy-edited to improve readability and to ensure conformity with house style. Authors whose first language is not English are encouraged to contribute; our copy-editor will make any necessary corrections, in consultation with the authors.

Contributions are accepted for publication on the condition that their substance has not been published or submitted elsewhere. Once a paper is accepted for publication, all its authors are required to disclose any potential conflict of interest. Completion of the form developed by the International Committee of Medical Journal Editors for this purpose ([http://www.icmje.org/coi\\_disclosure.pdf](http://www.icmje.org/coi_disclosure.pdf)) is mandatory.

### About our peer-review process

All articles submitted are reviewed by a minimum of two peers to ensure that their content, length and structure are appropriate for the journal. Not all papers will be accepted for publication, but our peer-review process is intended to assist our authors in producing articles for worldwide dissemination. Wherever possible, our expert panel of assessors will help authors to improve their papers to maximise their impact when published.

## Contributions to the blog

Readers are encouraged to contribute online at <http://www.BJPsychInternationalblog.org>

# Mental health and poverty in the UK – time for change?

Jed Boardman,<sup>1</sup> Nisha Dogra<sup>2</sup> and Peter Hindley<sup>3</sup>

<sup>1</sup>Consultant/Senior Lecturer in Social Psychiatry, South London and Maudsley NHS Foundation Trust, and Health Services and Population Research Department, Institute of Psychiatry, London, UK, email jed.boardman@slam.nhs.uk

<sup>2</sup>Professor of Psychiatry Education and Honorary Consultant in Child and Adolescent Psychiatry, Greenwood Institute of Child Health, University of Leicester, Leicester, UK

<sup>3</sup>Consultant Child and Adolescent Psychiatrist, South London and Maudsley NHS Foundation Trust, Children's Psychological Medicine, St Thomas' Hospital, London, UK

**Poverty and income inequality have increased in the UK since the 1970s. Poverty and mental ill-health are closely associated and disadvantage can have long-term consequences. In addition, the recent recession and austerity measures have had a detrimental effect on people with mental health problems and the mental health of the population. Mental health services can play a role in addressing the problems of poverty and inequality.**

Poverty affects people worldwide and is seen at its worst in low-income countries. However, in the UK, despite a developed welfare state and the huge improvements seen in the 20th century in the quality of life for its citizens, today around 21% of the population – 13 million people, of whom 3.7 million are children – live in poverty (MacInnes *et al*, 2014a). This may not be the absolute poverty of the 19th century still prevalent in many parts of the world, but it is real and pernicious. Poverty, though, is not inevitable. Poverty in the UK means living on a household budget below 60% of the median national income, with insufficient resources to meet minimum needs.

In the UK, the number of people living in poverty increased from 7 million to 13.8 million between 1979 and 1998 and, despite some annual variations, has remained roughly at this level since (MacInnes *et al*, 2014a). About 8% of people experience persistent poverty (poor in 3 or more years of a 4-year period), and being poor in the past increases the chances of being poor in the future (Hills, 2014). Both pensioner poverty and child poverty have fallen in the past 15 years, but not sufficiently to meet the targets set by successive governments (MacInnes *et al*, 2014a). Moreover, during the same period, the income gap between rich and poor has widened, making the UK one of the most income-unequal nations (Wilkinson & Pickett, 2009). High income inequality is associated with high levels of mental health problems, mortality, drug misuse, child ill-health, teenage pregnancy, homicide and imprisonment (Wilkinson & Pickett, 2009).

The recession that began in 2008 changed the context in which poverty persists. The UK has not seen the high levels of unemployment seen in previous recessions, but wages have stagnated, resulting in earnings falling relative to prices. Having a job is no longer a route out of poverty; 40% of all people in poverty are in paid employment (MacInnes *et al*, 2014a). Jobs are often insecure, more people are underemployed, 4.8 million people earn less than the living wage, housing costs have

risen, debt has increased, and pay-day lenders and food banks have proliferated (MacInnes *et al*, 2014a). The austerity measures taken by many European governments, including the UK government, are known to have had a detrimental effect on the physical and mental health of populations (Wahlbeck & McDaid, 2012). In the UK, people in poverty bear 39% of all cuts to welfare and local government spending (Duffy, 2013). Austerity measures and their effects are likely to persist.

## Poverty and mental health

There is a clear association between poverty and mental health. Low-income groups have higher rates of mental health conditions, particularly severe and enduring problems, than high-income groups (Boardman *et al*, 2010). For children, these differences are particularly pronounced, with a threefold difference in prevalence of any mental disorder between rich and poor households (Green *et al*, 2005). Adults in contact with mental health services are likely to be on welfare benefits and may not receive their full benefit entitlement. Children living in households where an adult is in receipt of benefit payments are 2.5 times more likely to have a mental health problem than the average child (Meltzer *et al*, 2000).

People with mental health problems are at increased risk of economic hardship. They are likely: to be in debt; to live in poor neighbourhoods with high rates of crime, environmental neglect and poor transport; to live in social housing or poor-quality housing; to be unemployed; to have limited education or training; to have small social networks; to be in poor physical health; and to have less access to essential services (Boardman *et al*, 2010). People with first ever mental health service contact for schizophrenia are between 2.7 and 3.5 times more likely to experience multiple features of disadvantage than the general population. These disadvantages are risk factors for the whole range of mental health problems, including intellectual disabilities, substance misuse and suicide.

Some groups are at particular risk of both poverty and mental health problems: migrants, asylum seekers, refugees, the homeless, looked-after children and those with disabilities. People with long-term mental health problems, intellectual disabilities and those with complex needs, in common with people with other chronic health conditions, face additional costs as a consequence, which further strains their low incomes. It is likely that poverty among these groups is underestimated (MacInnes *et al*, 2014b) and many have faced higher living costs in recent years.

## Why does poverty matter?

Poverty is bad for people's health, wastes human resources and potential, is economically costly and represents a failure of the welfare state. Mental health problems are both the cause and the consequence of poverty. Living under the constraints of poverty has short- and long-term sequelae (Hills *et al*, 2009). For example, being brought up in poverty affects children through its association with deficits in cognitive, emotional, social and physical development, the consequences of which may be lifelong. Poverty has inter-generational as well as intra-generational effects: early life experiences such as family disruption, educational disadvantage and poverty contribute to poor health and social outcomes, which then contribute to further disadvantage in the future. Children born into poor families have worse life outcomes than those born into better-off households.

Poverty implies a lack of material resources, which reduces the likelihood of living a valued and healthy life. But also detrimental is the stigmatising impact of poverty, which in turn reinforces prejudice, discrimination and humiliation, leading to those experiencing poverty being further undermined and shamed. The loss of dignity and pride further damages health and well-being.

Importantly, poverty is dynamic: people move into and out of it (Hills, 2014). At some points in the development and course of mental health problems, people may be particularly vulnerable to experiencing loss of income, job, home, family and support. These risks can be mitigated by timely interventions and paying due attention to financial, employment and other social interventions. However, people are also vulnerable to changes in social and welfare policies.

## A way forward?

While there is no easy single solution to poverty, the UK lacks a coherent anti-poverty strategy. At the policy level, the solutions are dependent on a coordinated response from central government and an effective anti-poverty strategy linked to economic policy, which requires political commitment, clear lines of accountability, dedicated institutions and systems of governance, coordination across government, external stakeholder involvement, and monitoring and review (MacInnes *et al*, 2014c). Current priorities include reducing conditionality, the provision of a 'living wage' and a focus on the costs of living, including housing costs and child care (MacInnes *et al*, 2014a). Policies need to focus on the life span and the effects on families.

We need to rethink our current austerity initiatives and focus on the need to increase investment in key areas of public spending. People in poverty are highly dependent on education, housing, health and social services. Wahlbeck & McDaid (2012) suggest that the recession may offer an opportunity to strengthen policies that support mental health. Policy decisions that harm population mental health and well-being may hamper a return to a healthy economy.

Poverty is a collective responsibility and requires a collective response in which employers, landlords, local authorities and service providers all have a role (MacInnes *et al*, 2014a). Is there a role for mental health services and the National Health Service in tackling poverty? We must first acknowledge that poverty is a health issue. The association between mental health and poverty must become a key priority for research. We need to be aware of: the pathways into and out of poverty; the impact of poverty on service users and their experiences; the associated forms of exclusion; and the barriers to life chances. Mental health workers need to act as advocates for the users of services. Within mental health services there needs to be a greater focus on ways to try to ensure socially inclusive outcomes, harnessing people's lived experience and utilising interventions that have economic payoffs through direct savings to the public sector, employers and wider society (Boardman *et al*, 2010; Knapp, 2012). These interventions include early intervention services, supported employment schemes, supported housing schemes, welfare benefit advice, peer support workers, and parenting programmes for children with conduct disorder.

Poverty and income inequality affect us all. There is not only a moral case but also a compelling business case to be made for eradicating poverty and creating a more just society. This raises fundamental questions about how we value human life and the kind of society that we wish to live in. The question is whether there is a political will for change and whether, as mental health professionals, we are willing to challenge those actions and policies that compound disadvantage.

## References

- Boardman, J., Currie, A., Killaspy, H., *et al* (2010) *Social Inclusion and Mental Health*. RCPsych Publications.
- Duffy, S. (2013) *A Fair Society? How the Cuts Target Disabled People*. Centre for Welfare Reform.
- Green, H., McGinnity, A., Meltzer, H., *et al* (2005) *Mental Health of Children and Young People in Great Britain, 2004*. Palgrave Macmillan.
- Hills, J. (2014) *Good Times, Bad Times. The Welfare Myth of Them and Us*. Policy Press.
- Hills, J., Sefton, T. & Stewart, K. (eds) (2009) *Towards a More Equal Society? Poverty, Inequality and Policy Since 1997*. Policy Press.
- Knapp, M. (2012) Mental health in an age of austerity. *Evidence Based Mental Health*, 15, 54–55.
- MacInnes, T., Aldridge, H., Bushe, S., *et al* (2014a) *Monitoring Poverty and Social Exclusion 2014*. Joseph Rowntree Foundation.
- MacInnes, T., Tinson, A., Gaffney, D., *et al* (2014b) *Disability, Long Term Conditions and Poverty*. New Policy Institute.
- MacInnes, T., Bushe, S., Kelly, P., *et al* (2014c) *International and Historical Anti-poverty Strategies: Evidence and Policy Review*. New Policy Institute.
- Meltzer, H., Gatward, R., Goodman, R., *et al* (2000) *The Mental Health of Children and Adolescents in Great Britain*. TSO.
- Wahlbeck, K. & McDaid, D. (2012) Actions to alleviate the mental health impact of the economic crisis. *World Psychiatry*, 11, 139–145.
- Wilkinson, R. & Pickett, K. (2009) *The Spirit Level. Why More Equal Societies Almost Always Do Better*. Penguin.

Further references are available on request from the authors.

# Mind games: standing by while the world ignores climate change

Daniel L. Maughan<sup>1</sup> and Helen L. Berry<sup>2</sup>

<sup>1</sup>Sustainability Fellow, Royal College of Psychiatrists, London, UK; Centre for Sustainable Healthcare, Oxford, UK, email daniel.maughan@sustainablehealthcare.org.uk

<sup>2</sup>Adjunct Professor, ANU Climate Change Institute, The Australian National University; and Professor, Faculty of Health, University of Canberra, Australia

**The mental health effects of climate change are significant and highly concerning, yet little is known about the magnitude of these effects or how best to manage them. This introduction to the thematic papers in this issue explains why climate change is an increasingly important matter for all health services.**

The United Nations (UN) has a track record of identifying the global issues that define each generation. The Millennium Development Goals, the most recent programme, achieved good success (UN, 2013), perhaps partly because they included easy-to-understand health goals such as 'improve maternal health' and 'reduce child mortality' (UN, 2013). Framing goals to address the increasingly complex problems that will face us through to the middle of the 21st century, especially climate change and its impact on health, may not be so simple. The UN's Sustainable Development Goals currently in preparation will dominate the post-2015 UN development agenda (Sachs, 2012). Perhaps unsurprisingly, given continued population growth and the increasing prevalence of consumption-oriented ways of living, these goals focus on ecosystems, natural resources, water and agricultural practices. Importantly, a new goal has been added: 'Take urgent action to combat climate change and its impacts' (UN, 2014).

While this is self-evidently important (Intergovernmental Panel on Climate Change, 2013), the UN's lack of specific focus on human health impacts is a significant concern: to be blunt, if we care about climate change, it is because we care about human well-being (Mcmichael *et al.*, 2014). The earth would endure without our species; indeed, we could argue that the sooner we warm our planet sufficiently to render ourselves few or extinct, the sooner our planet's ecosystems will be able to begin restoring themselves. But if we start acting in the interests of human well-being for the next century instead of just the next week, we will, *de facto*, do the things needed to take care of the earth's life-support system and the world's most vulnerable people and places. Have no doubt: this is our mess and we have to fix it now.

## Climate change and health

It is now unlikely that global warming will remain within the 2°C 'guardrail' increase from pre-industrial global temperature levels; the effects this is likely to have on human health are predicted to be catastrophic (Intergovernmental Panel on Climate Change, 2014). More and more leading

voices, such as the World Health Organization (WHO) and the *Lancet*, have proclaimed climate change to be the largest threat to human health in the 21st century (Chan, 2008; Costello *et al.*, 2009). In 2015, the *Lancet* will launch a second commission to examine this issue further, particularly the sustainability of human civilisations in the face of multiple environmental threats (*Lancet*, 2014).

As always, mental health is the Cinderella of health, mentioned only in passing, if at all. Yet by 2010, largely due to population growth and ageing, mental and substance use disorders were already the world's leading cause of years lived with disability (Whiteford *et al.*, 2013). Climate change could profoundly harm mental health (Berry *et al.*, 2010) and, because mental illness is associated with substantial disability, it will mean an increased challenge to patients' adaptive capacity and coping that psychiatry cannot overlook. If nothing else, those with mental disorders and their service providers and carers will have to be prepared to cope with the immediate crisis and the later aftermath of increasingly severe and frequent extreme weather events. We can look forward to more and worse drought, cyclones, flooding and heatwaves, all of which have detrimental effects on mental health (Page *et al.*, 2007; Hayes *et al.*, 2009; Murray *et al.*, 2011; McDermott *et al.*, 2014; O'Brien *et al.*, 2014) and many of which may co-occur (e.g. drought and extreme heat).

Leading international institutions such as the UN and the WHO are taking climate change seriously. But most national health services remain unresponsive to this threat to human health and, indeed, to their own contribution to the problem, despite calls to action (Pencheon, 2009; Blashki *et al.*, 2011; Costello *et al.*, 2013). For example, in the UK, the healthcare sector emits 25 million tonnes of carbon per year and is the largest emitter of greenhouse gases in the public sector (NHS Sustainable Development Unit, 2013). Most other countries have not measured the carbon footprint of their healthcare systems. Similarly, medical training institutions and primary care settings have done little to include climate change in professional and service development, again despite calls for such action and suggestions for how to go about it (Blashki *et al.*, 2009; Green *et al.*, 2009; Maughan *et al.*, 2014).

## A service response

Why is it that doctors, whose aim it is to improve health (and, above all, to do no harm) are, with the emissions associated with delivering healthcare, adding significantly to the health threat posed

by climate change? One reason could be that climate change is too complex a phenomenon with which to engage, a circumstance which, combined with the complexity of mental health, has led to paralysis. If the largest threat to human health this century were a disease, perhaps psychiatrists would know about it and perhaps more research would be implemented aimed at how to tackle the problem – as has been the case for the impacts of climate change on the spread of infectious and vector-borne diseases. However, the mental health effects of climate change provide no classic pathological process for psychiatrists to engage with or understand; and climate change will have effects primarily at the community rather than at the individual level. Furthermore, the mental health effects of climate change are wide-ranging and grossly entwined with the social, geographical and political context (Berry *et al*, 2010; O'Brien *et al*, 2014). Greater understanding is needed of how climate change will affect communities and what communities can do to prepare and respond, especially as key actions would be beneficial to resilience and adaptive capacity, that is, to collective and individual mental health and well-being.

We are far from having a good understanding of these multifaceted effects. However, professionals in mental health have skills that are of particular pertinence in managing the effects of climate change. Understanding how individuals might adapt to climate change and the psychological responses (anxiety) and interpersonal behavioural processes (seeking social support or helping others) that may arise require a knowledge of psychology. Psychiatrists, psychologists and mental health research leaders could help individuals and whole communities consider how best to adapt to the effects climate change will have on local ecosystems and infrastructures. Herein lies a jewel as yet unpolished: the act of coming together under effective local leadership to solve collective local problems, acting for the greater good, can build social capital, which is powerfully protective of mental health (Berry, 2009).

What is clear is that doctors should be advocates for climate change mitigation and adaptation, including in the workplace. We can begin this process first by gaining more understanding about how climate change might affect both population and individual mental health, and second by reducing the carbon footprint of healthcare. We must also inform, promote and support community-level activities to mitigate or adapt.

The three thematic articles in this issue on climate change discuss the necessary responses. The first explores how population-level attitudes to climate change are linked to mental health and well-being, and how these linkages are moderated by demographic and socioeconomic characteristics in rural and remote Australia. The second records emerging evidence for local adaptation among women in Nepal. The third provides an exploratory analysis of how a mental health organisation might reduce its carbon footprint. That last

article focuses specifically on how reducing the internationally ubiquitous phenomenon of clinic non-attendance can lead to improved quality of care while reducing environmental and economic costs.

## References

- Berry, H. L. (2009) Pearl in the oyster: climate change as a mental health opportunity. *Australasian Psychiatry*, 17, 453–456.
- Berry, H. L., Bowen, K. & Kjellstrom, T. (2010) Climate change and mental health: a causal pathways framework. *International Journal of Public Health*, 55, 123–132.
- Blashki, G., Berry, H. L. & Kidd, M. R. (2009) Primary health care responses to climate change. In *Climate Change and Social Justice* (ed. J. Moss), pp. 144–167. Melbourne University Press.
- Blashki, G., Armstrong, G., Berry, H. L., *et al* (2011) Preparing health services for climate change in Australia. *Asia-Pacific Journal of Public Health*, 23 (Suppl. 2), 133S–143S.
- Chan, M. (2008) *The Impact of Climate Change on Human Health*. WHO.
- Costello, A., Abbas, M., Allen, A., *et al* (2009) Managing the health effects of climate change. *Lancet*, 373, 1693–1733.
- Costello, A., Montgomery, H. & Watts, N. (2013) Climate change: the challenge for healthcare professionals. *BMJ (Clinical Research)*, 347, f6060.
- Green, E. I. H., Blashki, G., Berry, H. L., *et al* (2009) Preparing Australian medical students for climate change. *Australian Family Physician*, 38, 726–729.
- Hayes, J., Mason, J., Brown, F., *et al* (2009) Floods in 2007 and older adult services: lessons learnt. *Psychiatric Bulletin*, 33, 332–336.
- Intergovernmental Panel on Climate Change (2013) *Climate Change 2013*. United Nations. Available at [http://www.climatechange2013.org/images/uploads/WGI\\_AR5\\_SPM\\_brochure.pdf](http://www.climatechange2013.org/images/uploads/WGI_AR5_SPM_brochure.pdf) (accessed 26 October 2013).
- Intergovernmental Panel on Climate Change (2014) *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge University Press.
- Lancet (2014) Climate change and health – action please, not words. *Lancet*, 384, 1071.
- Maughan, D., Berry, H. & Davison, P. (2014) What psychiatrists should know about environmental sustainability and what they should be doing about it. *International Psychiatry*, 11, 27–30.
- McDermott, B., Cobham, V., Berry, H., *et al* (2014) Correlates of persisting posttraumatic symptoms in children and adolescents 18 months after a cyclone disaster. *Australian and New Zealand Journal of Psychiatry*, 48, 80–86.
- McMichael, A. J., Berry, H. L. & Butler, C. (2014) Climate change. IPCC Impacts report: staring into the abyss. *World Nutrition*, 5, 432–435.
- Murray, V., Caldin, H., Amlot, R., *et al* (2011) *The Effects of Flooding on Mental Health*. Health Protection Agency.
- NHS Sustainable Development Unit (2013) *Goods and Services Carbon Hotspots*. Available at [http://www.sdu.nhs.uk/documents/resources/Hotspot\\_full.pdf](http://www.sdu.nhs.uk/documents/resources/Hotspot_full.pdf) (accessed 12 March 2015).
- O'Brien, L. V., Berry, H. L., Coleman, C., *et al* (2014) Drought as a mental health exposure. *Environmental Research*, 131, 181–187.
- Page, L. A., Hajat, S. & Kovats, R. S. (2007) Relationship between daily suicide counts and temperature in England and Wales. *British Journal of Psychiatry*, 191, 106–112.
- Pencheon, D. (2009) Health services and climate change: what can be done? *Journal of Health Services Research and Policy*, 14, 2–4.
- Sachs, J. D. (2012) From Millennium Development Goals to Sustainable Development Goals. *Lancet*, 379, 2206–2211.
- UN (2013) *The Millennium Development Goals Report*. United Nations.
- UN (2014) *Outcome Document – Open Working Group on Sustainable Development Goals*. Available at <http://sustainabledevelopment.un.org/focussdgs.html> (accessed 8 October 2014).
- Whiteford, H. A., Degenhardt, L., Rehm, J., *et al* (2013) Global burden of disease attributable to mental and substance use disorders: findings from the Global Burden of Disease Study 2010. *Lancet*, 382, 1575–1586.

# Worrying about climate change: is it responsible to promote public debate?

Helen L. Berry<sup>1</sup> and Dominic Peel<sup>2</sup>

<sup>1</sup>Adjunct Professor, ANU Climate Change Institute, The Australian National University; and Professor, Faculty of Health, University of Canberra, Australia, email helen.berry@canberra.edu.au

<sup>2</sup>PhD Candidate, Faculty of Health, University of Canberra, Australia

**Some fear that provoking widespread worry about climate change may harm mental health. The Regional Wellbeing Survey, a large study of health, well-being and life in rural and regional Australia, examined climate change worry and attitudes. Most respondents were worried about climate change and agreed that fossil fuel use causes global warming, but there was no evidence to suggest that worry about climate change is linked to mental health in the general population. Respectful, calm, considered public debate about how to respond to climate change is unlikely to be harmful to population mental health. Individually focused clinical approaches are unlikely to be effective as a primary approach in managing the mental health impacts of climate change. Instead, collective, systems-based approaches will be needed.**

There is near-total scientific consensus that the world is warming and that current climate change is unprecedented and potentially disastrous (Intergovernmental Panel on Climate Change, 2014). Climate change is now considered the world's greatest health threat (Costello *et al.*, 2009) but health research on climate change has, to date, emphasised physical health. With mental disorders being the leading cause of global years lost to disability (Whiteford *et al.*, 2013), constituting 13% of the global burden of disease (Collins *et al.*, 2011), mental health needs greater priority.

Properly framed, accurate and timely public information could help stimulate constructive public debate and the motivation necessary to galvanise action; but some fear that provoking widespread worry about the possible impacts of climate change may harm mental health (Swim *et al.*, 2011). The study of climate change and mental health is in its infancy and there is little concrete evidence to inform decision-making about the possible mental health impacts of promoting public debate about climate change. The aim of this study was to contribute evidence on whether climate change attitudes and, particularly, worry about climate change are linked to mental health and well-being, taking account place-based and sociodemographic factors.

## Methods

Data were taken from wave 1 (2013) of the Regional Wellbeing Survey, a survey of health, well-being and life in rural and regional Australia (see <http://www.canberra.edu.au/murray-darling-crn/regional-wellbeing>). Our sub-sample comprised

6674 respondents (mean age 52.48 years, s.d. 14.45) who completed a module on climate change. Participants included 3705 (55.51%) women and 2799 (41.94%) men; 170 (2.55%) did not specify a gender. Most people (58%) were living in regional towns or cities, significantly more women (65%) than men (48%); the rest were living mainly on rural properties (30% women and 49% men). Consistent with the rural focus of the dataset, only 3% (197 respondents) were living in capital cities.

A wide range of place-based and socio-demographic measures were included in the study. Mental health problems were screened using the Kessler 10-item Psychological Distress Scale (K10; Kessler *et al.*, 2003), which records non-specific symptoms of anxiety and depression. Emotional well-being was screened by measuring life satisfaction, happiness and optimism. Climate change attitudes were measured on three items: 'Human use of fossil fuels is changing the climate' (indicating belief in human-induced climate change), 'I am worried about global warming' and 'The science behind global warming is doubtful' (indicating distrust of the science).

We calculated descriptive statistics, analyses of variance, bivariate correlations and multiple hierarchical linear regression models to explore relationships among correlates and predictors of both 'worry' about climate change and trust in climate science. Statistical analyses were performed in StataSE 13 (64-bit). Full methodological details are available from the corresponding author.

## Results

Most people were worried about climate change (56%) and agreed that fossil fuel use causes global warming (63%) and that climate science is trustworthy (55%). Climate change attitudes were strongly positively correlated, such that those agreeing with one item were likely to agree with the other items. Most of the measures used in the study were statistically significantly correlated with climate change attitudes but, for the most part, only trivially. Residents of capital cities, women, younger people, more educated people and those with high household incomes tended to worry slightly more than others, as did more distressed, pessimistic and less satisfied people. Farmers, people living on rural properties and in places where agriculture is important, older people, those working long hours, home owners and more optimistic, satisfied and happier people tended very slightly to disagree with the climate change items.

All the factors together, excluding climate change attitudes, explained only 7% of the

variance in 'worry about climate change'. When attitudes to climate change (especially about fossil fuel use) were included in the analyses, this figure increased to 58%. Further analyses indicated that climate change attitudes accounted for the small contribution of place-based, sociodemographic and illness/well-being factors to explaining worry about climate change. An identical analysis was undertaken to analyse what predicted belief that fossil fuel use is causing global warming, because this was by far the strongest predictor of worrying about climate change. The results differed little from the first analysis. No aspect of mental health and well-being helped predict beliefs about fossil fuel use. Instead, trust in the science was by far the strongest predictor of this attitude. Tables of results are available from the corresponding author.

## Discussion

We found no evidence to suggest that general community worry about climate change is substantially directly or indirectly linked to population-level psychiatric morbidity. Regional and rural Australians, like most Australians (Stefanova *et al*, 2014) and others around the world (Capstick *et al*, 2015), do worry about climate change. They are likely to do so primarily if they believe that human activity is causing climate change and if they trust the science behind it. Their worry is linked to many of the factors investigated here, including aspects of mental health and well-being, but these account for an almost negligible proportion of their worry.

While cross-sectional studies cannot address causality, it is unlikely that worrying about climate change would substantially cause people to become poorly educated, married or resident on farms. Conversely, it makes sense to propose that believing human activity is causing (potentially disastrous) global warming would engender worry; and that certain predisposing factors might influence, in complex ways (Doherty & Clayton, 2011), the likelihood of believing this. This view is consistent with emerging evidence that climate change attitudes reflect social (rather than individual) context, such as politics, economics (Capstick *et al*, 2015), norms, social identity and general public uncertainty about the science itself; and that these constrain adaptation options. We must therefore look to relevant theories to explain these beliefs. There is thus value, as a starting point, in thinking systemically about society's major relevant social and technological processes (Doherty & Clayton, 2011) and about barriers to climate change adaptation (Swim *et al*, 2011) to guide realistic mental health strategies relating to climate change.

Systemic approaches would suggest a primary (though not exclusive) focus on carefully tailored policy (such as disaster preparedness planning that incorporates consideration of mental health) rather than on clinical responses, with an emphasis on collective approaches. Appropriately constructed, these could have the additional benefit of building social capital and emotional resilience (Berry, 2009; Berry *et al*, 2010), both

of which are protective of mental health. Proper framing of responses would require sophisticated understanding of: types of people, their varied interests, beliefs, aspirations, challenges and fears; what they know about climate change; what they would be able and willing to do; and the kinds of messages they would 'hear', the conversations in which they would engage and the media via which messages could be promoted.

The expansion of services to help the minority of people who have psychiatric disorders and vulnerabilities 'overcome stress, worry, and despair' in relation to climate change (Swim *et al*, 2011) may be a consideration, but this is not a priority for population mental health policy. Frightening people, especially those who are affected by disorders, would be irresponsible and unhelpful. The mental health workforce and those who train it have moral and practical responsibilities in advocacy for ill and vulnerable individuals and their foreseeable service needs (Maughan *et al*, 2014). But it is essential to differentiate between rational, manageable concern about climate change and pathological anxiety (Swim *et al*, 2011). The present findings provide preliminary empirical corroboration that the two are not the same. Violent storms destroying houses may traumatise people and prolonged drought may cause widespread distress, but respectful, calm, considered public debate about how to respond to climate change will not.

## References

- Berry, H. L. (2009) Pearl in the oyster: climate change as a mental health opportunity. *Australasian Psychiatry*, 17, 453–456.
- Berry, H. L., Bowen, K. & Kjellstrom, T. (2010) Climate change and mental health: a causal pathways framework. *International Journal of Public Health*, 52, 123–132.
- Capstick, S., Whitmarsh, L., Poortinga, W., *et al* (2015) International trends in public perceptions of climate change over the past quarter century. *Wiley Interdisciplinary Reviews: Climate Change*, 6, 35–61.
- Collins, P. Y., Patel, V., Joestl, S. S., *et al* (2011) Grand challenges in global mental health. *Nature*, 475, 27–30.
- Costello, A., Abbas, M., Allen, A., *et al* (2009) Managing the health effects of climate change. *Lancet*, 373, 1693–1733.
- Doherty, T. J. & Clayton, S. (2011) The psychological impacts of global climate change. *American Psychologist*, 66, 265–276.
- Intergovernmental Panel on Climate Change (2014) *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge University Press.
- Kessler, R. C., Barker, P. R., Colpe, L. J., *et al* (2003) Screening for serious mental illness in the general population. *Archives of General Psychiatry*, 60, 184–189.
- Maughan, D., Berry, H. L. & Davison, P. (2014) What psychiatrists should know about environmental sustainability and what they should be doing about it. *International Psychiatry*, 11, 27–30.
- Stefanova, K., Connor, J. & O'Halloran, T. (2014) *Climate of the Nation 2014 – Australian Attitudes on Climate Change: Are Australians Climate Dinosaurs?* Climate Council.
- Swim, J., Clayton, S., Doherty, T. J., *et al* (2011) Psychology and global climate change: addressing a multi-faceted phenomenon and set of challenges. A report by the American Psychological Association's Task Force on the Interface Between Psychology and Global Climate Change. *American Psychologist*, 66, 181–193.
- Whiteford, H. A., Degenhardt, L., Rehm, J., *et al* (2013) Global burden of disease attributable to mental and substance use disorders: findings from the Global Burden of Disease Study 2010. *Lancet*, 382, 1575–1586.



# Implications of participatory methods to address mental health needs associated with climate change: ‘photovoice’ in Nepal

Elizabeth K. MacFarlane,<sup>1</sup> Renu Shakya,<sup>2</sup> Helen L. Berry<sup>3</sup> and Brandon A. Kohrt<sup>4</sup>

<sup>1</sup>Graduate Student, Duke Global Health Institute, Duke University, Durham, North Carolina, USA; Graduate Student, Fuqua School of Business, Duke University, Durham, North Carolina, USA, email ekm27@duke.edu

<sup>2</sup>Clinical Psychology Graduate Program, Tribhuvan University, Kathmandu, Nepal; TIRI Fellow, Colorado State University Livestock Climate Change Collaborative Research Support Program, Kathmandu, Nepal

<sup>3</sup>Adjunct Professor, ANU Climate Change Institute, The Australian National University; and Professor, Faculty of Health, University of Canberra, Australia

<sup>4</sup>Assistant Professor, Duke Global Health Institute, Duke University, Durham, North Carolina, USA; Technical Advisor, Transcultural Psychosocial Organization (TPO), Nepal, Kathmandu, Nepal; Assistant Professor, Department of Psychiatry and Behavioral Sciences, Duke University School of Medicine, Durham, North Carolina, USA

**‘Photovoice’, a community-based participatory research methodology, uses images as a tool to deconstruct problems by posing meaningful questions in a community to find actionable solutions. This community-enhancing technique was used to elicit experiences of climate change among women in rural Nepal. The current analysis employs mixed methods to explore the subjective mental health experience of participating in a 4- to 5-day photovoice process focused on climate change. A secondary objective of this work was to explore whether or not photovoice training, as a one-time 4- to 5-day intensive intervention, can mobilise people to be more aware of environmental changes related to climate change and to be more resilient to these changes, while providing positive mental health outcomes.**

Climate change is the largest global health threat of the 21st century (Costello *et al.*, 2009) and, despite currently limited empirical evidence, it is expected directly and indirectly to harm communities’ psychosocial well-being. Vulnerable people and places, especially rural areas in low- and middle-income countries, will be disproportionately harmed because of their underlying socioeconomic disadvantage and reduced access to health services (Berry *et al.*, 2010). International calls for gender equity (e.g. from the World Health Organization and the United Nations) remind us that women have disproportionately high levels of underlying disadvantage; women may therefore face additional harm from climate change, particularly in countries that have few resources and great risk. The aims of this study were to investigate whether community-based participatory research can help women in a vulnerable low-income country understand and adapt to important environmental challenges related to climate change, and whether this activity could help promote mental health.

## Method

### Setting and participants

This study was set in the mid-western region of Nepal, Jumla district, considered a high-risk area for climate change (Gentle & Maraseni, 2012). The *Nepal Human Development Report 2014* stated

that, with life expectancy of 63 years and a human development index of 0.409, Jumla district is one of the most underdeveloped and economically depressed districts in Nepal (United Nations Development Programme, 2014). The United Nations Field Coordination Office (2010) reported that Jumla’s ecology is vulnerable to landslides, drought and hailstorms, and these result in chronic food deficits, infrastructure damage and community displacement, all of which threaten health and well-being.

Participants were ten women subsistence farmers aged 27–49 years (mean 37.5 years) who participated voluntarily in this mixed-methods study. Women were recruited by a key informant living in Jumla who works for our partner organisation, Transcultural Psychosocial Organization – Nepal. All the women were Hindu, five from the lower caste (‘Dalit’, also known locally as the ‘Nepali’ caste) and five from the upper caste (‘Bahun’ or ‘Thakuri’). Caste groups were recorded because lower caste is associated with poorer mental health (Kohrt *et al.*, 2009). Eight women could not read or write.

Ethical approval for this study was given by Duke University and Nepal Health Research Council (protocol numbers Pro0052631 and 50, respectively). Data were collected June–August 2014.

### Measures and procedure

All women participated in three study components: ‘photovoice’; in-depth interviews (immediately after the final photovoice session and at follow-up 2 weeks later – time 1 and time 2); and self-report questionnaires. Photovoice is a community-based participatory research methodology which uses photographs taken by participants as a basis for deconstructing important questions they articulate, for the purpose of finding actionable solutions in the community (Wang & Burris, 1997). Photovoice has been used in climate change research in Uganda and Canada (Berrang-Ford *et al.*, 2012; Healey *et al.*, 2011). One of its strengths is that it gives agency to the community being studied (an important goal of the present study) while providing contextual understanding of the study topic.

A standard photovoice model consisting of five sessions (introductory session, three image-analysis sessions, one theme-validation session) (Wang &

Burris, 1997) was deployed over 4–5 days (participants chose this timeframe). First, the Nepali research assistant with the principal investigator taught participants how to use a camera (none of the women had used a camera before) and discussed ethics and group norms. Then, participants formulated important questions related to climate change and mental health (e.g. ‘how will water scarcity affect our well-being and livelihood?’).

After the introductory session, participants took photographs related to this question and shared their favourite images at the following analysis sessions. During these sessions, women selected one representative image each. They then deconstructed them using the ‘SHOWeD’ discussion format, facilitated by the Nepali research assistant:

- What do you **See** in the photograph?
- What is **H**appening in the photograph?
- How does this relate to **O**ur lives?
- **W**hy does this problem or strength exist?
- What can we **D**o about it?

This standard process was modified slightly to meet the cultural context, which included removing the E question (How do we become Empowered with our new social understanding of problem-posing questions?). Their conversations were recorded and later translated and transcribed by the research assistant.

In the final session, the research team and participants reviewed the themes that had emerged from the women’s discussions.

The photovoice sessions culminated with two photography exhibitions in the community (one lower caste, one upper caste, as interactions between castes is limited) to showcase the women’s photographs and accompanying narratives, both selected by the women.

During each session, the women received breakfast and a small travel stipend (in accordance with local customs for compensation).

Self-reported mental health (presence of symptoms of depression) was assessed before and after the photovoice intervention using the Nepali version of the Beck Depression Inventory (BDI; higher scores indicate greater depression) (Kohrt *et al.*, 2002). Prior to the first photovoice session, we also collected self-report demographic information: religion, literacy, age, caste and marital status. Transcripts from the two interviews (time 1 and time 2) were analysed in NVIVO for Mac (version 10) using grounded theory to develop the analysis codebook. Quantitative analyses were conducted using STATA software 13.1.

## Results

A paired *t*-test revealed a significant reduction in depression following the photovoice sessions: mean BDI<sub>allwomen</sub> score, time 1 = 23.20, s.d. 9.00, and time 2 = 7.44, s.d. 8.05 ( $t = 7.97, p < 0.001$ ).

The interviews revealed three themes: the benefits of sharing environmental best practices; the importance of building community capacity to adapt to and mitigate environmental issues in the community; and the importance of sharing stories to build confidence and ease pain (Tables 1 and 2). The interviews also highlighted barriers to maintaining photovoice projects in the community: no one to train or facilitate; no funding to participate (60% said they would need compensation and food to participate in facilitator training or future photovoice sessions); and envy from non-participants in the community. Notably, though 40% stated they would need a non-peer facilitator, 60% said they could self-facilitate if facilitator training were available.

## Discussion

The aims of this study were to investigate whether community-based participatory research can help women in a vulnerable low-income country understand and adapt to important environmental challenges related to climate change; and whether this activity could help promote mental health.





**Table 1**

Examples of participants’ accounts of the effects of climate change on their mental health and well-being, and useful adaptive strategies

Theme	Quote
Benefits of sharing environmental best practices	‘We talked about water scarcity, drought and we understood about the pain in our heart. This is very big learning ... if we try to dig deeper, there will be made a hole in the ground, but if we don’t dig the ground will be smooth. That is, if you want to keep on digging deeper, there will always be more to share.’ <i>25 years old, Dalit, illiterate</i>
Importance of building community capacity to adapt to and mitigate environmental issues in the community	‘What I feel is, though I am a part of a problem, I can take few small steps like. I can plant a tree after cutting one tree. I can educate my children. I can keep my surroundings clean.... If I do good things like these then people will also follow. That is how our society will progress. We should behave positively with everyone and not to think negatively about others. We shouldn’t lie.’ <i>27 years old, Bahun, literate</i>
Importance of sharing stories to build confidence and ease pain	‘In this training, we learned that we women need to come together and talk and sing and dance. All us women have pain in our heart, so we can come together, talk about funny things and smile too to get rid of pain. This also we learned.... Besides that, I also learned to speak in front of people.’ <i>49 years old, Dalit, illiterate</i>
Barriers to sustainability of photovoice	‘Without remuneration who will come to take training? These women from the village, when they have to speak in front of the group, their heart trembles ... so if there was no money being given, why would they come then?’ <i>45 years old, Dalit, illiterate</i>

**Table 2**

Photograph assignments taken by photovoice participants

Problem-posing question	Representative quotes	Photovoice results
What are the problems faced due to drought?	'This woman who has gone to plough the field is lying sad thinking how to grow food.' <i>45 years old, Dalit, illiterate</i>	
What are the impacts of water scarcity?	'Due to lack of water, these cows lick the soil... There is no water; life seems dried up.' <i>25 years old, Dalit, illiterate</i>	
What are the causes of stress?	'Despite working very hard in the field, we cannot have a good harvest; this gives pain in my heart.' <i>43 years old, Bahun, illiterate</i>	
Due to <i>hawapani bigriyera</i> (climate change), what diseases are contracted by us?	'Due to lack of drinking water, my little granddaughter is suffering from diarrhoea and vomiting. This little child is suffering; sometimes her fever is going high, sometimes low. Elder people are also getting sick; I am also sick – I have dysentery.' <i>45 years old, Dalit, illiterate</i>	

While further studies using larger samples and different settings will be needed to confirm the findings, women subsistence farmers in this study reported reduced depression after sharing stories and ideas using photovoice.

As in Uganda (Berrang-Ford *et al*, 2012), the Nepali women's photovoice discussions elucidated climate-sensitive health issues and showed how social and cultural factors influenced them. These Nepali women engaged with and enjoyed photovoice, supporting the view that participatory methods represent ethical, feasible and culturally appropriate approaches to engage community members for mental health promotion in the context of climate change (Wang & Burris, 1997); and that these methods can help reduce health disparities (Wallerstein & Duran, 2006). Photovoice could thus be used as a community-based and participatory mental health intervention in the context of climate change.

These findings imply that local Jumla policy should be adapted to support women *in place* and

that dedicated resources are needed for this. Psychiatrists and community health workers can help by:

- integrating mental health services into primary care
- promoting community resilience
- educating communities about the mental health effects of climate change (Maughan *et al*, 2014).

Photovoice can be used as a well accepted tool to achieve these goals, particularly for building needed social capital.

## Conclusion

Women subsistence farmers face formidable risks from climate change. Photovoice, as a well accepted participatory method, can help identify local and existing resources (e.g. women's groups, environmental training), generate adaptive strategies and promote mental health. This study highlights the importance of mental health and emotional responses related to climate change and their effect on adaptive capacities, coping and community capacity. Creating opportunities, such as photovoice, to share stories about the changing environment, and to discuss adaptive responses, may help to strengthen emotional resilience.

## References

- Berrang-Ford, L., Dingle, K., Ford, J. D., *et al* (2012) Vulnerability of indigenous health to climate change: a case study of Uganda's Batwa Pygmies. *Social Science and Medicine*, 75, 1067–1077.
- Berry, H. L., Bowen, K. & Kjellstrom, T. (2010) Climate change and mental health: a causal pathways framework. *International Journal of Public Health*, 55, 123–132.
- Costello, A., Abbas, M., Allen, A., *et al* (2009) Managing the health effects of climate change. *Lancet*, 373, 1693–1733.
- Gentle, P. & Maraseni, T. N. (2012) Climate change, poverty and livelihoods: adaptation practices by rural mountain communities in Nepal. *Environmental Science and Policy*, 21, 24–34.
- Healey, G., Magner, K. M., Ritter, R., *et al* (2011) Community perspectives on the impact of climate change on health in Nunavut, Canada. *Arctic*, 64, 89–97.
- Kohrt, B. A., Kunz, R. D., Koirala, N. R., *et al* (2002) Validation of a Nepali version of the Beck Depression Inventory. *Nepalese Journal of Psychiatry*, 2, 123–130.
- Kohrt, B. A., Speckman, R. A., Kunz, R. D., *et al* (2009) Culture in psychiatric epidemiology: using ethnography and multiple mediator models to assess the relationship of caste with depression and anxiety in Nepal. *Annals of Human Biology*, 36, 261–280.
- Maughan, D., Berry, H. L. & Davison, P. (2014) What psychiatrists should know about environmental sustainability and what they should be doing about it. *International Psychiatry*, 11, 27–30.
- United Nations Development Programme (2014) *Nepal Human Development Report 2014*. UN.
- United Nations Field Coordination Office (2010) *An Overview of the Mid-Western Region of Nepal*. UN.
- Wallerstein, N. B. & Duran, B. (2006) Using community-based participatory research to address health disparities. *Health Promotion Practice*, 7, 312–323.
- Wang, C. & Burris, M. A. (1997) Photovoice: concept, methodology, and use for participatory needs assessment. *Health Education and Behavior*, 24, 369–387.



# Reducing non-attendance rates in community psychiatry: a case for sustainable development?

Daniel L. Maughan<sup>1</sup> and Michael Pearce<sup>2</sup>

<sup>1</sup>Sustainability Fellow, Royal College of Psychiatrists, London, UK; Centre for Sustainable Healthcare, Oxford, UK, email [daniel.maughan@sustainablehealthcare.org.uk](mailto:daniel.maughan@sustainablehealthcare.org.uk)

<sup>2</sup>Core Trainee in Psychiatry, Oxford Health NHS Foundation Trust, Oxford, UK

**Non-attendance at mental health clinics is an international problem. A survey was conducted in the UK investigating communication methods used by staff to inform and remind patients about appointments. Increased number of communication methods used was associated with a reduced non-attendance rate. A care modelling analysis is provided that explores the healthcare use of three hypothetical patients following clinic non-attendance. The financial and environmental costs of each are then calculated and results discussed. Reducing non-attendance is achievable through the use of multiple communication methods. This small change can improve the sustainability of mental healthcare in different countries by improving quality of care and reducing financial and environmental costs.**

Healthcare, globally, is a carbon-intensive industry. In the USA, healthcare contributes 8% of national greenhouse gas emissions (Chung & Meltzer, 2009). In the UK, healthcare emits 25 million tonnes of carbon each year (NHS Sustainable Development Unit, 2013), which is more than the whole carbon footprint of some European countries (Rogers, 2012, pp. 1–2). Mental health services account for 1.47 million tonnes of this. The World Health Organization has stated that climate change is the largest threat to human health in the 21st century (Chan, 2008). It is already having significant effects on global mental health (McDermott *et al*, 2014; O'Brien *et al*, 2014). It is a concern that the healthcare sector is contributing so much to this threat as a consequence of its carbon footprint.

Importantly, improving the environmental sustainability of mental health services is not just about reducing energy use: it is also about transforming clinical care. Buildings and energy use make up 17% of the carbon footprint, but clinical factors make up the majority of the footprint: pharmaceuticals, 22%; medical equipment, 13%; and clinically related travel, 13% (NHS Sustainable Development Unit, 2013). This paper seeks to highlight how mental health services can improve financial and environmental sustainability by making simple changes to clinical practice. It uses the example of how reducing rates of non-attendance at clinic appointments (known as DNA, for 'did not attend') can improve quality of care while reducing financial and environmental costs.

## Reducing DNA rates can improve the sustainability of mental healthcare

Internationally, the average DNA rate across mental health services lies between 15% and 20% (NHS England, n.d.; Pang *et al*, 1995; Adelufosi *et al*, 2013), although some countries report rates of over 30% (Alnamlah, 2006). Mental health services in every country would benefit from a reduction in DNA rates, for many reasons. From a clinical perspective, there are three main reasons why mental health services need to reduce DNA rates. First, patients who do not attend are more unwell and more functionally impaired than those who do attend (Killaspy *et al*, 2000). Second, non-attendance following hospital admission predicts readmission (Mitchell & Selmes, 2007). Patients who do not attend their follow-up appointments have a 25% chance of being readmitted, compared with 10% for those who do attend (Nelson, 2000). And third, higher DNA rates are closely linked with medication non-adherence, further increasing the chances of relapse (Mitchell & Selmes, 2007). Non-attendance, therefore, likely indicates a group of patients who are at increased risk of poor health outcomes and high future service use.

From a service evaluation perspective, there are three further reasons to reduce DNA rates. First, missed appointments are financially costly. In the UK, the cost has been estimated at £600 million per year (Sims *et al*, 2012). Second, they have an opportunity cost of wasting staff time. Third, there are environmental costs. These include the energy for heating and lighting the clinic room and the use of fuel from failed home visits or attempts at 'cold calling'. However, these environmental costs increase dramatically when the future health costs potentially arising following multiple missed appointments are included, such as the carbon footprint of an in-patient admission. These environmental costs are considered in this paper.

## Reducing DNAs. What works?

The two most common reasons for DNAs are patients forgetting about the appointment and administrative errors (NHS Institute for Innovation and Improvement, 2008). Between mental health services in the UK there is a nine-fold variation in DNA rates for initial assessments (Quest, n.d.), which suggests that much non-attendance is avoidable. A Cochrane review looking at the effectiveness of communications to improve appointment attendance for people with serious mental illness

found that telephone calls and texts might increase rates of attendance (Reda & Makhoul, 2001). Evidence suggests that patients are more likely to attend following telephone reminders even if they have failed to attend their initial clinic appointment (Mitchell & Selmes, 2007) and that the higher the DNA rate, the greater the impact of reminders (NHS Institute for Innovation and Improvement, 2008). One study found that SMS reminders (i.e. text messages via mobile phone) led to a DNA rate reduction of 25% (Sims *et al.*, 2012). However, there is no evidence to suggest that simply sending further repeat appointment letters will increase attendance (Mitchell & Selmes, 2007). Using a range of communication methods is therefore an important component of reducing DNA rates.

To explore the question of whether reducing DNA rates can improve the sustainability of mental healthcare, a survey is next presented here that investigates the association between DNA rates and the use of different communication methods. Following this, an exploratory care modelling analysis investigated the potential impacts of DNAs on subsequent healthcare use and the associated financial and environmental costs.

### Survey of methods used by staff to remind patients about appointments

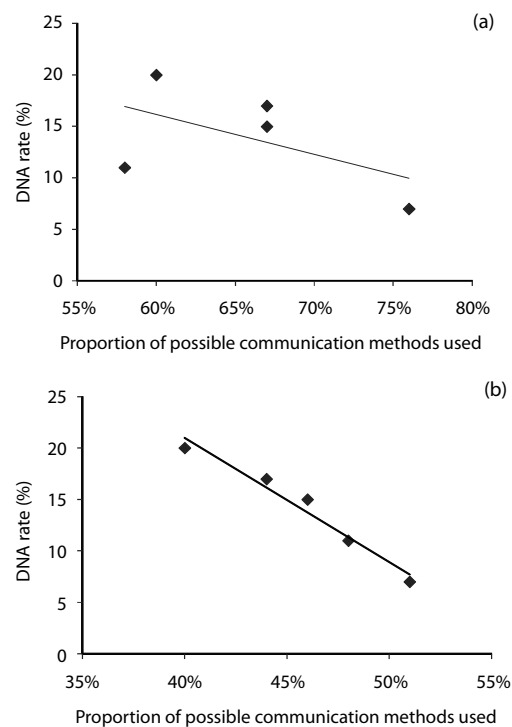
A survey was conducted at Oxford Health NHS Foundation Trust, in the UK, investigating how DNA rates vary against the number of different communication methods used by staff to inform patients about appointments. The survey analysed the following methods: telephone call; letter; arranging the appointment in the room; offering an appointment card; and text messaging.

#### Methods

An electronic survey was sent in January 2014 to all staff working in community settings. It asked about the communication methods they used for different types of appointment. DNA rates were obtained from administrative data for each community mental health team from April 2013 to January 2014. For each team, the average number of communication methods used was calculated. For example, 100% of members of one team may send an initial appointment letter, 57% call the patient and 71% routinely send text messages. Individual communication options were then added together to give an average percentage of the total possible communication methods, so  $(100 + 57 + 71)/3 = 76\%$  of possible total communication methods used by the team.

#### Results

The survey was sent out to 450 staff and received 153 responses (a 34% response rate). There was no association between any individual communication method and team DNA rate. There was, however, a clear relationship between total number of communication methods used and team DNA rate for adult community teams (Fig. 1). In services for older adults, there was no association between communication methods and DNA rate.



**Fig. 1**

Effect of communications on team DNA rate: (a) initial assessments; (b) follow-up appointments

### A care modelling analysis of the potential financial and environmental impacts of DNAs

There is great variation in the type of DNA and some types are more serious than others. It is therefore useful to present scenarios of the type of problems that can present in any (international) setting. Patient types have been created using key international predictors of non-attendance at mental health clinics from three countries: Nigeria (Adelufosi *et al.*, 2013), China (Pang *et al.*, 1995) and the UK (Mitchell & Selmes, 2007). These predictors have been grouped into three hypothetical patient types. The scenarios attempt to illustrate the potential financial and environmental costs of DNA, compared with the costs of prompting patients to attend appointments. Table 1 summarises the associated costs in each scenario.

#### Scenarios

Patient A: low risk

Ms A is 22 years old and has depression. She is referred to mental health services following a poor response to antidepressant treatment. She receives a letter asking her to attend an appointment but she forgets. She is sent another letter but, as her family doctor had told her that he is sceptical about the value of psychiatric support and because she lives far from the clinic, again she does not attend. Following this, a third letter is sent and the secretary phones her to encourage her to attend; however, the patient's depression has now worsened and she does not want to leave the house, so a home visit is arranged.

**Table 1**

Financial and environmental costs of predicted healthcare use for three hypothetical cases, patients A–C

Stage of presentation	Financial cost (£)	Financial cost (% burden)	Environmental cost (kg CO <sub>2</sub> e <sup>a</sup> )	Environmental cost (% burden)
<b>Patient A</b>				
<i>Cost prior to DNA</i>				
Initial letter	0.53	<0.1	0.14	0.3
First appointment	139	24.8	13	23.9
<b>Total cost prior to DNA</b>	<b>139.53</b>	<b>24.9</b>	<b>13.14</b>	<b>24.2</b>
<i>Cost following DNA</i>				
Second letter	0.53	<0.1	0.14	0.3
Second appointment	139	24.8	13	23.9
Third letter	0.53	<0.1	0.14	0.3
Phone call (5 min)	0.27	<0.1	0.003	<0.1
Third appointment	139	24.8	13	23.9
Travel to home visit	2.12	0.4	1.87	3.4
Fourth appointment	139	24.8	13	23.9
<b>Total cost following DNA</b>	<b>420.45</b>	<b>75.1</b>	<b>41.15</b>	<b>75.8</b>
<b>Total cost</b>	<b>560</b>	<b>100</b>	<b>54</b>	<b>100</b>
<b>Patient B</b>				
<i>Cost prior to DNA</i>				
Initial letter	0.53	<0.1	0.14	<0.1
First appointment	139	8.7	13	2.1
<b>Total cost prior to DNA</b>	<b>139.53</b>	<b>8.3</b>	<b>13.14</b>	<b>2.1</b>
<i>Cost following DNA</i>				
Second letter	0.53	<0.1	0.14	<0.1
Three phone calls	0.81	<0.1	0.009	<0.1
Second appointment	139	8.7	13	2.1
Travel to first home visit	2.12	0.1	1.87	0.3
Third appointment	139	8.7	13	2.1
Travel to second home visit	2.12	0.1	1.87	0.3
Fourth appointment	139	8.7	13	2.1
Mental Health Act assessment <sup>b</sup>				
travel	6.36	0.4	5.61	0.9
appointment	371	23.1	13	2.1
Ambulance call-out	235	14.7	68	11.0
Mental health admission	430	26.8	476	76.9
<b>Total cost following DNA</b>	<b>1464.94</b>	<b>91.3</b>	<b>606</b>	<b>97.9</b>
<b>Total cost</b>	<b>1604</b>	<b>100</b>	<b>619</b>	<b>100</b>
<b>Patient C</b>				
<i>Cost prior to DNA</i>				
Initial letter	0.53	<0.1	0.14	<0.1
First appointment	139	11.1	13	2.35
<b>Total cost prior to DNA</b>	<b>139.53</b>	<b>11.2</b>	<b>13.14</b>	<b>2.4</b>
<i>Cost following DNA</i>				
First phone call	0.27	<0.1	0.003	<0.1
Second appointment	139	11.1	13	2.35
Second phone call	0.27	<0.1	0.003	<0.1
Third appointment	139	11.1	13	2.35
Ambulance call-out	235	18.8	68	12.3
General hospital admission	598	47.8	446	80.6
<b>Total cost following DNA</b>	<b>1111.54</b>	<b>88.8</b>	<b>540</b>	<b>97.6</b>
<b>Total cost</b>	<b>1251</b>	<b>100</b>	<b>553.1</b>	<b>100</b>

<sup>a</sup> Carbon dioxide equivalent units.

<sup>b</sup> Requires two doctors plus a social worker, so travel costs are 3 × 2.12 to give the 6.36 and 3 × 1.87 to give the 5.61, and costs for the appointment are 2 doctors each at 139 plus 1 social worker at 93 = 371.

Data for financial and environmental costs were obtained from the following sources: Post Office website; Curtis (2013); British Telecom website; local travel survey (unpublished); NHS Sustainable Development Unit (2013); Berners-Lee (2010).

DNA, did not attend.

Patient B: moderate risk

Mr B has bipolar disorder. He is referred due to concerns about his behaviour following recent discharge from hospital. He is homeless and has been smoking cannabis and displaying signs of mania. An appointment letter is sent to his sister's house (where he often stays) but it is not read. A letter is sent for another appointment and three calls are made to his mobile phone, but he does not agree with the referral so initially does not respond. He answers the last phone call and agrees to attend but then forgets to do so. The team cold-call at his sister's home but he is not there. Reports have been made about increasingly erratic behaviour and a Mental Health Act assessment is arranged, following which he is admitted.

Patient C: high risk

Ms C has low mood and personality disorder. As the referral letter is poor and the referrer is not aware that her suicide risk is high, the psychiatrist sends a letter for an appointment in the following week. She does not attend and is upset as she expected a review the following day. The secretary calls the patient to make another appointment. After some persuading, she agrees to be assessed, but again fails to attend, due to anxiety. A further phone call is made and she again agrees to be seen, but she becomes overwhelmed with anxiety again so does not attend. Her suicidal thoughts worsen and she takes an overdose of tablets. She is found collapsed at home by her mother, who calls an ambulance and she is admitted to hospital for resuscitation.

### Projected financial and environmental costs per mental health trust

To provide a benchmark cost for DNAs per mental healthcare organisation, average costs from the scenarios have been multiplied by the average number of DNAs for initial assessments. The data were available for 33 of the 53 mental health trusts in England during October and December 2013 (NHS England, n.d.). A national average DNA rate was calculated from the data. In Table 2, projected financial and environmental costs of healthcare use potentially due to DNAs are displayed.

### Discussion

This paper provides a strong rationale for maximising all types of communication prompts to patients for every appointment. First, there is evidence to suggest that avoiding non-attendance can provide significant health benefit. Second, the survey demonstrates that using a variety of simple communications can be effective at reducing DNA rates. Lastly, these scenarios show how small the financial and environmental costs are for the different communication methods (<1%) when compared with the healthcare costs of patient non-attendance (>75%). Most of the financial costs are due to staff and admissions. The vast majority of the carbon footprint is due to admissions, with the next largest component being the energy use for heating and lighting clinical spaces.

**Table 2**

Projected financial and environmental costs of DNA for initial assessments

Parameters	Values
Number of initial assessments seen across 33 trusts per year	199 344
Number of DNAs for initial assessments across 33 trusts per year	23 596
National DNA rate for initial assessments	11.8 %
Average number of DNAs per trust per year for initial assessments	715
Average financial cost of healthcare use per patient following DNA (taken from values reported in Table 1)	£1 044 999
Average environmental cost of healthcare use per patient following DNA (taken from values reported in Table 1)	534 kg CO <sub>2</sub> e
Total financial cost per trust per year of DNAs for initial assessment	£714 000
Total environmental cost per trust per year of DNAs for initial assessment	293 tonnes CO <sub>2</sub> e

The Cochrane review (Reda & Makhoul, 2001) on DNAs corroborates the finding that the best way to reduce non-attendance is through combining all types of communication methods. That review then draws the conclusions that prompts to encourage attendance are 'cheap' and, considering the financial implications of missed appointments, the intervention 'would potentially pay for itself through the reduction in costs associated with non-attendance' (Reda & Makhoul, 2001). The scenarios presented here demonstrate these potential savings.

The financial impacts of DNAs in mental health have been reviewed (Sims *et al*, 2012). However, the environmental impacts of DNAs have not been discussed. These are significant and add weight to the argument that communications to patients about upcoming appointments should be prioritised. In fact, missed appointments are so common across all countries that avoiding them would have a significant effect on the environmental impact of global healthcare. Taking England as an example, in 2013 there were over 5.5 million non-attendances; given that the environmental impact of the energy use for each appointment is 13 kg CO<sub>2</sub>, this means that, without including travel or subsequent attempts to see the patient, the environmental saving could be as much as 70 000 tonnes of CO<sub>2</sub> per year.

### Implications

A significant increase in the use of the different communication methods is needed to remind patients about their appointments. Mobile phone use is now ubiquitous, even in low- and middle-income countries and, with the use of smartphones increasing rapidly, mental health services in all countries should be using text messages, emails and social media alongside letters and phone calls to increase attendance. An automated system could be developed to provide the patient with phone, text (SMS) and email communications automatically. While this system would have environmental and financial costs, it would most likely lead to a significant reduction in healthcare costs following reductions in DNA rates and reduced subsequent healthcare use, as indicated in this study.

It will sometimes be necessary to perform a home visit for patients who are disengaged or who cannot attend the clinic. Nonetheless, aiming for maximum attendance rates at clinics is an essential part of a sustainable service. Patient attendance of

standard community appointments can improve health outcomes and reduce financial and environmental costs.

### References

- Adelufosi, A. O., Ogunwale, A., Adepone, A. B., *et al* (2013) Pattern of attendance and predictors of default among Nigerian outpatients with schizophrenia. *African Journal of Psychiatry*, **16**, 283–287.
- Alnamlah, A. (2006) What is interfering with attendance in adult psychiatric outpatient clinics? *Neurosciences*, **11**, 293–296.
- Berners-Lee, M. (2010) *How Bad Are Bananas?* Profile Books.
- Chan, M. (2008) *The Impact of Climate Change on Human Health*. WHO.
- Chung, J. W. & Meltzer, D. O. (2009) Estimate of the carbon footprint of the US health care sector. *JAMA*, **302**, 1970–1972.
- Curtis, L. (2013) *Unit Costs of Health and Social Care 2013*. Available at <http://www.pssru.ac.uk/project-pages/unit-costs/2013/> (accessed 9 April 2013).
- Killaspay, H., Banerjee, S., King, M., *et al* (2000) Prospective controlled study of psychiatric out-patient non-attendance. *British Journal of Psychiatry*, **176**, 160–165.
- McDermott, B., Cobham, V., Berry, H., *et al* (2014) Correlates of persisting posttraumatic symptoms in children and adolescents 18 months after a cyclone disaster. *Australian and New Zealand Journal of Psychiatry*, **48**, 80–86.
- Mitchell, A. J. & Selmes, T. (2007) Why don't patients attend their appointments? Maintaining engagement with psychiatric services. *Advances in Psychiatric Treatment*, **13**, 423–434.
- Nelson, E. A. (2000) Effects of discharge planning and compliance with outpatient appointments on readmission rates. *Psychiatric Services*, **51**, 885–889.
- NHS England (n.d.) Statistics: quarterly hospital activity data. Available at <http://www.england.nhs.uk/statistics/statistical-work-areas/hospital-activity/quarterly-hospital-activity/qar-data/> (accessed 10 April 2014).
- NHS Institute for Innovation and Improvement (2008) *DNAs – Reducing Did Not Attends*. Available at [http://www.institute.nhs.uk/quality\\_and\\_service\\_improvement\\_tools/quality\\_and\\_service\\_improvement\\_tools/dnas\\_-\\_reducing\\_did\\_not\\_attends.html#sthash.NGZXJiON.dpuf](http://www.institute.nhs.uk/quality_and_service_improvement_tools/quality_and_service_improvement_tools/dnas_-_reducing_did_not_attends.html#sthash.NGZXJiON.dpuf) (accessed 10 April 2014).
- NHS Sustainable Development Unit (2013) *Carbon Footprint Update for NHS in England 2012*. Available at [http://www.sduhealth.org.uk/documents/Carbon\\_Footprint\\_summary\\_NHS\\_update\\_2013.pdf](http://www.sduhealth.org.uk/documents/Carbon_Footprint_summary_NHS_update_2013.pdf) (accessed 28 January 2014).
- O'Brien, L. V., Berry, H. L., Coleman, C., *et al* (2014) Drought as a mental health exposure. *Environmental Research*, **131**, 181–187.
- Pang, A. H., Tso, S., Ungvari, G. S., *et al* (1995) An audit study of defaulters of regular psychiatric outpatient appointments in Hong Kong. *International Journal of Social Psychiatry*, **41**, 103–107.
- Quest (n.d.) *Mental Health Pathway Efficiency and Productivity Report*. Available at [http://www.qihub.scot.nhs.uk/media/266122/mh%20pathway%20efficiency%20and%20productivity%20report%20\(2\).pdf](http://www.qihub.scot.nhs.uk/media/266122/mh%20pathway%20efficiency%20and%20productivity%20report%20(2).pdf) (accessed 10 April 2014).
- Reda, S. & Makhoul, S. (2001) Prompts to encourage appointment attendance for people with serious mental illness. *Cochrane Database of Systematic Reviews*, (2), CD002085.
- Rogers, S. (2012) *Carbon Emissions of Countries*. Available at: <http://www.theguardian.com/environment/datablog/2012/jun/21/world-carbon-emissions-league-table-country#data>.
- Sims, H., Sanghara, H., Hayes, D., *et al* (2012) Text message reminders of appointments: a pilot intervention at four community mental health clinics in London. *Psychiatric Services*, **63**, 161–168.

# Mental health law profiles

George Ikkos

Consultant Psychiatrist in Liaison Psychiatry, Royal National Orthopaedic Hospital, London, UK, email ikkos@doctors.org.uk

Though vastly different in geographical size and significantly different in population numbers, Malaysia and Singapore, which separated amicably in 1963 (through Singapore being 'expelled' from Malaysia following a referendum), share some characteristics; for example, they are both multi-ethnic, carry the legacy of the British Empire and have flourished economically since liberation.

The legacy of empire, investment in education and the knowledge economy and increasing economic prosperity perhaps have provided the foundations for significant attention to mental health law and related legislation in both Malaysia and Singapore. The laws, as well as carrying the British influence, also seem to express the divergence of cultures from the old colonial centre that may have occurred since independence. For example, it is interesting to see that in Malaysia 'promiscuity' is lumped together with 'immoral conduct', something that would be unlikely to achieve similar consensus in the UK today, where

different significance would be attached to such behaviour by different people, be that vulnerability and low self-esteem, compulsion, lifestyle choice, poor judgement or even pride.

More worrying perhaps is the situation in Singapore, where the law seems to separate rather too rigidly mental health and general hospital services. For one of the handful of richest countries in the world in terms of per capita income, this seems surprising. However, this country also has one of the highest proportions of millionaires in the world and high degrees of social inequality. The question arises therefore whether high rates of social inequality (despite prosperity) may be associated with retrograde state and social attitudes towards people who are mentally ill. There is evidence from other countries that this may be the case (Bark, 2014).

## Reference

Bark, N. (2014) Prisoner mental health in the USA. *International Psychiatry*, 11, 53–55.

# Malaysian mental health law

Nusrat N. Khan,<sup>1</sup> Badi'ah Yahya,<sup>2</sup> Abd Kadir Abu Bakar<sup>3</sup> and Roger C. Ho<sup>4</sup>

<sup>1</sup>Senior Clinical Lecturer, Newcastle University Medicine Malaysia, email nusrat.khan@newcastle.edu.my

<sup>2</sup>Consultant Forensic Psychiatrist, Hospital Permai, Johor Bahru, Malaysia

<sup>3</sup>Senior Consultant Psychiatrist and Director, Hospital Permai, Johor Bahru, Malaysia

<sup>4</sup>Assistant Professor and Consultant, Department of Psychological Medicine, Yong Loo Lin School of Medicine, National University of Singapore

**The Malaysian Mental Health Act 2001 did not come into effect until the Mental Health Regulations 2010 came into force. The Act provides a framework for the delivery of comprehensive care, treatment, control, protection and rehabilitation of those with mental disorders. The Act governs the establishment of private and government psychiatric hospitals, psychiatric nursing homes and community mental health centres. This paper outlines the provisions of the Act and the Regulations.**

The Mental Health Act 2001 was passed by Parliament in Malaysia in August 2001 but did not come into operation until 2010, when the Mental Health Regulations 2010 came into force. In the private sector, the Mental Health Act 2001 is to be interpreted alongside the Private Healthcare Facilities and Service Act 1998. The present paper summarises the legislation only as it relates to non-offender populations. The 2001 Act provides a framework for the comprehensive care of those

with mental disorders. It has provision for the establishment of private and government psychiatric hospitals, psychiatric nursing homes and community mental health centres. According to the World Health Organization (2011), Malaysia has 0.83 psychiatrists, 3.31 nurses and 0.29 psychologists per 100 000 population.

## Historical perspective

Before Malaysia gained independence in 1957, the Lunatic Ordinance of Sabah 1951 was enacted by the British. That was followed by the Mental Disorders Ordinance of 1952 for Peninsular Malaysia. In 1961 (after independence) the Mental Health Ordinance Sarawak was passed (Haque, 2005).

The Ministry of Health introduced the Mental Health Act 2001 (together with Mental Health Regulations 2010), which was seen as a turning point for mental healthcare as it contained detailed policy guidelines for the delivery of services. The Act consolidates the law in relation to mental disorder and provides procedures for the admission, detention, lodging, care, treatment, rehabilitation,



control and protection of persons who are mentally disordered and for related matters.

Other significant events which have driven change include the integration of mental healthcare into primary practice in 1998 and the introduction of the Mental Health Policy. Malaysia has seen a significant change for the better in its provision of mental healthcare, as evidenced by the introduction of home treatment teams in 2000, the opening up of new psychiatric units within general hospitals, primary care centres providing mental health services and the setting up and maintenance of family support groups.

### **How mental disorder is defined in law**

The Act defines mental disorder as 'any mental illness, arrested or incomplete development of the mind, psychiatric disorder or any other disorder or disability of the mind however acquired'. It clarifies that a person cannot be construed as suffering from a mental disorder 'by reason only of promiscuity or other immoral conduct, sexual deviancy, consumption of alcohol or drugs, or where he expresses or refuses or fails to express a particular political or religious opinion or belief, or of his antisocial personality'. It further clarifies that the aforementioned exception does not prevent serious physiological, biochemical or psychological effects, temporary or permanent, of drug or alcohol consumption from being regarded as an indication that a person is mentally ill.

### **Grounds for compulsion**

The statutory criteria for detention state that a patient must be suffering from a 'mental disorder of a nature or degree' that 'warrants admission into a psychiatric hospital' for 'the purpose of assessment or treatment in the interests of his own health or safety or with a view to the protection of other persons'.

The Act stipulates that a person can be admitted involuntarily if suspected of being mentally disordered, when the application for detention is made by a relative of the person to the medical director of the psychiatric hospital or on the recommendation of a medical officer or registered medical practitioner following a personal examination no more than 5 days before admission. The application for detention lies solely with the medical profession, unlike in some jurisdictions (e.g. the UK) where an approved mental health professional can also apply.

Relatives of patients or patients themselves can make an application to the medical director for discharge of an involuntary patient. The medical director is then required to examine the patient and to determine whether continued detention is required, and to record the findings in a report. There are a number of safeguards should the family feel they want to appeal the medical director's decision, which includes referral to the hospital's board of visitors (see below) and, failing this, a further appeal, to the Malaysian Director General of Health.

### **Board of visitors**

The Act describes the functions and responsibilities of an external agency called the 'board of visitors', which has a number of functions, including reviewing patients' detention, looking into complaints and inspecting facilities. The Minister of Health appoints a board of visitors for each psychiatric hospital and psychiatric nursing home and each board consists of not fewer than three members. The visitors to a psychiatric hospital must include a medical officer or registered medical practitioner, preferably a psychiatrist, who does not work in the hospital, and two other visitors, one of whom must be a woman.

At the review of a case, the visitors may, following the report of the medical director and personal examination of the person, direct that the patient is immediately discharged or discharged at a later date as specified, or the detention is continued for a period not exceeding 12 months. A patient is required to be reviewed by the visitors at least every 12 months.

### **Consent**

The Act deals with consent to surgery, to clinical trials for patients with a mental disorder and to electroconvulsive therapy. The Act states that consent for these can be given 'by the patient himself if he is capable of giving consent as assessed by a psychiatrist', by 'his guardian in the case of a minor or a relative in the case of an adult, if the patient is incapable of giving consent' or by two psychiatrists, one of whom shall be the attending psychiatrist, if there is no guardian or relative of the patient available or traceable and the patient him- or herself is incapable of giving consent.

The Act specifically states that 'no consent is required for other forms of conventional treatment', which include psychiatric medication.

The criteria used for assessing consent (by the attending psychiatrist) as detailed in the Act are that the person understands the following:

- the condition for which the treatment is proposed
- the nature and purpose of the treatment
- the risks involved in undergoing the treatment
- the risks involved in not undergoing the treatment.

### **Power to discharge**

The Act states that the medical director of a psychiatric hospital may at any time discharge an involuntary patient from the hospital if it is in the best interests of the patient and the patient is not in need of further care.

Involuntary patients are allowed leave of absence for up to 1 month, but further leave not exceeding 1 month is possible if they continue to meet the criteria for detention but require further testing in the community. The medical director may, though, revoke the leave of absence and require the involuntary patient to return to the

psychiatric hospital. The patient may be taken into custody by any police officer or social welfare officer or any person authorised in writing by the medical director.

### Community care

The 2010 Mental Health Regulations specifically state that a psychiatric hospital or community mental health centre shall ensure establishment of a community mental health team for community mental healthcare services. The community mental health team shall be multidisciplinary, preferably led by a psychiatrist.

Any involuntary patients discharged or granted leave of absence from a psychiatric hospital may undergo community treatment if required by the medical director or the visitors. The Act permits compulsory community treatment but, practically, this does not work at present.

### Patients' rights

The Regulations place a specific duty on the medical director of every psychiatric hospital to ensure all patients are provided with statements of

their rights that shall be in a manner and language understood by the patients. Statements of patients' right shall be exhibited in a conspicuous part of the psychiatric facility.

### Conclusion

It has been suggested that the turning point for the provision of mental healthcare in Malaysia was the introduction of the Mental Health Act in 2001 (Chong & Mohamad, 2013). The Act's support for community treatment should promote the growth of community mental health services, with a reduction in the number of beds at mental health hospitals, resulting in a more effective and comprehensive service which better suits the needs of patients.

### References

- Chong, S. T. & Mohamad, M. S. (2013) The mental health development in Malaysia: history, current issue and future development. *Asian Social Science*, 9(6), 1–8.
- Haque, A. (2005) Mental health concepts and program development in Malaysia. *Journal of Mental Health*, 14, 183–195.
- World Health Organization (2011) *Mental Health Atlas 2011*. Department of Mental Health and Substance Abuse, WHO.



# An overview of mental health legislation in Singapore

Roger C. Ho,<sup>1</sup> Cyrus S. Ho,<sup>2</sup> Nusrat Khan<sup>3</sup> and Ee Heok Kua<sup>4</sup>

<sup>1</sup>Assistant Professor and Consultant, Department of Psychological Medicine, Yong Loo Lin School of Medicine, National University of Singapore, email pcmrhcm@nus.edu.sg

<sup>2</sup>Registrar, Department of Psychological Medicine, National University Hospital, Singapore

<sup>3</sup>Senior Clinical Lecturer, Newcastle University Medicine Malaysia

<sup>4</sup>Professor and Senior Consultant, Department of Psychological Medicine, Yong Loo Lin School of Medicine, National University of Singapore

**This article summarises the development of mental health legislation in Singapore in three distinctive periods: pre-1965; 1965–2007 and 2007 onwards. It highlights the origin of mental health legislation and the relationship between mental health services and legislation in Singapore. The Mental Health (Care and Treatment) Act 2008 and Mental Capacity Act 2008 are described in detail.**

### History

The Republic of Singapore is a city state with a population of 5.3 million, mainly of Chinese, Malay, Indian and Eurasian background. Singapore was a British colony from 1819 to 1963, was briefly part of Malaysia and then became an independent nation in 1965. The legal system in Singapore is based on the English common law. As a result, the mental health legislation originated from England and there have been parallel developments. The first local mental health law, the Lunacy Act 1858, was implemented in 1863 (Bewley, 2008, pp. 1–9) and the lunatic asylum was established. Several officials

from the colonial government were appointed as visitors to ensure the safe treatment of the asylum's residents. Police officers but not medical professionals were empowered to apprehend 'lunatics' and commit them to the asylum.

In 1935, the Mental Disorders and Treatment Ordinance was introduced. It allowed the compulsory detention of persons of unsound mind. In 1960, the government of Singapore made an amendment to the Ordinance which empowered medical practitioners to send a person with a mental illness to the mental hospital (Woodbridge Hospital) for assessment. The Mental Disorders and Treatment Act 1965, modelled on the UK Mental Health Act 1959, was the only mental health law governing involuntary admission from 1965 to 2007.

### Mental health services

In Singapore, mental health services are provided by: the government general hospitals; the Institute of Mental Health (IMH), a state mental health hospital; out-patient poly-clinics; and private psychiatric services. The IMH has 50 psychiatric wards and has around 2000 in-patient beds. There

**Table 1**

Summary of the Mental Health (Care and Treatment) Act 2008 with cross-reference the UK Mental Health Act 1983/2007

Form	Maximum duration of involuntary hospitalisation	Order requirements	Equivalent section of the UK Act
1	72 hours	A designated medical practitioner working at the Institute of Mental Health (IMH) applies the Act based on the risk posed by patients to themselves or others	Section 4
2	1 month	A designated medical practitioner working at the IMH applies the Act if the risk posed by patients to themselves or others is still present	Section 2
3	6 months	Two independent designated medical practitioners, one of whom is a psychiatrist working at the IMH, apply the Act if the risk posed by patients to themselves or others is still present	Section 3

are three general hospitals in Singapore which have non-gazette psychiatric wards, with around 60 in-patient beds in total (gazette wards are those gazetted by the government as having the legal power to detain psychiatric patients deemed to be at risk to themselves under the terms of the Mental Health Act). The IMH is the only psychiatric hospital which provides involuntary admission because there is a shortage of psychiatric beds in other general hospitals.

### The Mental Health (Care and Treatment) Act 2008

The Singapore Mental Health (Care and Treatment) Act 2008 is similar to its older version, the Mental Disorders and Treatment Act 1965. Under the new Act (see Table 1), a designated medical practitioner at the IMH may sign Form 1, which allows the involuntary admission of an individual suffering from a mental illness into the IMH for treatment, for up to 72 hours.

This Act is helpful for patients who are mentally ill and at significant psychiatric risk but who decline voluntary treatment. Currently, Form 1 is available only at the IMH and not at general hospitals or clinics. This implies that only medical practitioners working at the IMH can formally apply this Act and make the final decision on involuntary admission. This arrangement has led to the following situations in general hospitals. First, the general hospital doctors may not be able to admit psychiatric patients who are at risk but who insist on discharge, as they are unable to sign Form 1 in their hospitals. Second, carers may challenge the decision made by general hospital doctors to transfer a patient to the IMH, as that cannot be a formal process. Third, general hospital doctors often have to sedate or apply physical restraints to patients when sending them to the IMH via ambulance. These treatments are initiated before Form 1 is signed. The current legal defence is based on earlier legislation and the common law, which allows general hospital doctors to send patients to the IMH for assessment in good faith. Fourth, the 2008 Act may not apply to patients with significant psychiatric and medical risks because the IMH is a psychiatric hospital without medical and surgical departments.

The above situations would not occur if the mental health legislation empowered doctors to sign legal documents in medical settings prior to a patient's involuntary admission to psychiatric facilities, as happens in other countries. In

Singapore, the extension of the power of detention to general hospitals has been discussed, but the need for more secure psychiatric facilities and gazette wards within general hospitals would be required. The Mental Health Act in Singapore does not have civil treatment orders, in contrast to the UK Mental Health Act 1983, section 5(2) of which allows urgent detention of voluntary in-patients and section 135 of which allows entry to a patient's home and removal of the patient to a place of safety.

### The Mental Capacity Act 2008

The Mental Capacity Act 2008 came into operation in March 2010 in response to the ageing population and parallel developments in other jurisdictions. This Act safeguards vulnerable members of society. When assessing the capacity of a person, the doctor needs to determine two things: first, whether the person suffers from an impairment in the functioning of the mind; and second, if an impairment is present, whether the impairment impedes the person from making decisions. The Act provides five guiding principles, summarised in Box 1, modelled on the Mental Capacity Act 2005 in the UK.

Under this Act, a person who is older than 21 years is allowed make an advanced medical directive if the decision relates to refusal of treatment or lasting powers of attorney (LPA) if the decision relates to personal assets. Under the LPA, a person ('the donor') can appoint a proxy ('the donee') to act or make decisions on his or her behalf for matters relating to personal welfare, property and finances when the person loses his or her capacity.

#### Box 1. Guiding principles of the Mental Capacity Act 2008

- 1 Every individual possesses the capacity to make a decision, unless proven otherwise.
- 2 A person cannot be assumed to lack capacity unless all steps are taken to help him or her to make a decision but the process is unsuccessful.
- 3 A person cannot be assumed to lack capacity merely because he or she makes an unwise decision.
- 4 Any decision made on behalf of an individual who lacks capacity must be in the person's best interest.
- 5 There must be consideration as to how a decision made on behalf of an incapacitated person can be achieved in a way that is less restrictive to his or her rights.

### Box 2. Definition of incapacity under the Mental Capacity Act 2008

A person lacks mental capacity if impaired in one of the following areas:

- communicate his or her decision by any means
- remember specific information required for decision-making
- understand the information relevant to the decision-making
- use or weigh relevant information as part of the decision-making process.

Box 2 summarises the definition of incapacity. The donee is expected to make decisions based on the best interests, wishes, beliefs and values of the donor. The Act requires an independent certificate issuer, such as a lawyer, psychiatrist or accredited general practitioner, to explain the terms of the LPA and ensure that the donor understands the implications before the LPA is signed voluntarily. There is a 6-week period before the LPA can be registered and this provides opportunities for other parties to raise objections and concerns if there is a violation of the Act. The LPA does not cover areas such as decision to resuscitate, consent to treatment, advanced medical directives, execution of wills or consent to marriage or divorce.

The Act allows a court to appoint a deputy to make decisions on behalf of an individual. As a result, parents of children with intellectual disability can apply to the court and appoint themselves as deputies for their children and another person

as a successor deputy when the parents themselves lose capacity or pass away.

The Act follows the British Mental Capacity Act and requires the establishment of the Office of Public Guardian. This office appoints a board of visitors to protect donors by monitoring donees and court-appointed deputies. Visitors are registered health professionals who can provide independent advice to donors, donees and deputies.

### Conclusions

The mental health legislation in Singapore and the UK share a common root. There are still some aspects of the Mental Health Act which require ongoing consultation and refinement, such as supervised treatment in community settings, clear legal and clinical criteria for fitness to drive and the establishment of gazette wards in general hospitals. Recent improvements to education in forensic psychiatry in the undergraduate and post-graduate curriculum will certainly beget a better cadre of doctors and psychiatrists for the future.

### References

Bewley, T. (2008) *Madness to Mental Illness: A History of the Royal College of Psychiatrists*. Gaskell.

### Legislation

Both the Mental Health (Care and Treatment) Act 2008 (No. 21 of 2008) and the Mental Capacity Act 2008 are available (via alphabetical listing or search) at <http://statutes.agc.gov.sg> (accessed 5 January 2014).

SPECIAL  
PAPER

## Access to community-based mental healthcare and psychosocial support within a disaster context

Katherine P O'Hanlon<sup>1</sup> and Boris Budosan<sup>2</sup>

<sup>1</sup>Principal Consultant, Maximus, Inc.; ABEM Emergency Physician, email [kateohanlon@hotmail.com](mailto:kateohanlon@hotmail.com)

<sup>2</sup>Consultant Psychiatrist

**After a large-scale humanitarian disaster, 30–50% of victims develop moderate or severe psychological distress. Rates of mild and moderate mental disorders increase by 5–10% and severe disorders by 1–2%. Those with such disorders need access to mental healthcare. Primary care clinics are appropriate due to their easy accessibility and the non-stigmatising environment. There is a consensus among experts that the mental health effects of disaster are best addressed by existing services, that is, through capacity building rather than by establishing parallel systems. Mental health interventions in emergencies should begin with a clear vision for the long-term advancement of community services.**

Mental health and psychosocial support (MHPSS) services are often inadequate before a disaster (Saxena *et al*, 2007). Worldwide, disaster settings are challenged to provide appropriate access to mental healthcare. Haiti had a severe shortage of mental health institutions and professionals prior to the 2010 earthquake. In Sri Lanka, two general practitioners provided MHPSS in tsunami-affected Kalmunai and Hambantota districts with populations over 400 000, because district general hospitals had no departments to treat mental health patients. In Pakistan, two psychiatrists and one mental health hospital in Mansehra provided services to the North-West Frontier, with a population over 1 million, before it was hit by a major earthquake in 2005. In Jordan, 150 000 Iraqi refugees from the 2003 war sought costly mental

health services from private psychiatrists or the psychiatric hospital in Amman, since Jordanian general hospitals had no psychiatric wards. There were long waiting-lists and shortages of medication. In Croatia, before the 1991–95 war, mental health services were accessible at the community level, although general and psychiatric hospitals provided most services. Mental healthcare in pre-war Iraq was provided at two state psychiatric hospitals in Baghdad and 22 psychiatric units attached to general hospitals.

After a disaster, gaps between needs and services widen. Some 30–50% of victims develop moderate or severe psychological distress. This group can benefit from social interventions and basic psychological treatment. Rates of mild and moderate mental disorders increase by 5–10% and severe disorders by 1–2% (Van Ommeren *et al*, 2005). Those with such disorders need access to mental healthcare, which is best provided through primary healthcare or community mental healthcare. Primary care clinics are appropriate owing to their easy accessibility and the non-stigmatising environment (Van Ommeren *et al*, 2005).

There is a global consensus among experts that the effects of disaster on mental health are best addressed by existing services, that is, through capacity building rather than by establishing parallel systems (Inter-Agency Standing Committee, 2007). MHPSS interventions in emergencies should begin with a clear vision for the long-term advancement of community mental health services (Perez-Salez *et al*, 2011). A post-disaster focus on mental health, paired with professional expertise, can improve community services and access for affected populations (Saraceno *et al*, 2007).

### **The aims for mental healthcare and psychosocial care after disasters**

After a disaster, MHPSS is designed to improve the emotional, mental and social well-being of beneficiaries. Individuals are empowered and thereby enhance their resilience and emotional stability. Stress disorders are managed in order to prevent severe mental health problems. At the societal level, families and groups are assisted through support networks. Interventions serve to raise awareness, mitigate stress and restore social and cultural constructs. Access at the community level to mental health services is ensured.

The broad and long-term impact of disasters on population mental health necessitates community-oriented services to address psychological problems. The process of community strengthening provides a fertile social context to mitigate the emotional response to adversity (Global Fund, 2014).

### **Interventions**

Evidence-based experience in disaster settings supports certain psychological and social interventions. The training of volunteers and para-professionals can quickly improve access to basic psychosocial services for the population. In

Sri Lanka after the tsunami, 500 community-level workers were recruited, trained and appointed to 14 tsunami-affected communities, nine of which had no psychiatrist. In Haiti after the 2010 earthquake, 190 community-level workers trained by Cordaid, an international non-governmental organisation (INGO), brought crucial interventions to five targeted departments. In Syria, the United Nations High Commissioner for Refugees (UNHCR) used community outreach and psychosocial centres to provide MHPSS and improve well-being.

Community-level mental healthcare can be enhanced by supporting primary care with training, assistance and supervision by mental health professionals (World Health Organization, 2008). Training can increase knowledge and improve competency. A 6-month training programme in mental health for general practitioners and mid-level public health staff by INGO International Medical Corps (IMC) in Sri Lanka after the tsunami increased knowledge, improved detection of mental disorders and led to the registration of more mental health patients in all administrative areas. Thirteen out-patient mental health clinics, operated by trained primary care staff, were opened after IMC provided training in one district and four new mental health clinics were opened in another district. In Lebanon, IMC trained 152 primary care doctors, nurses and social workers in the identification, management and referral of patients with mental health problems. Trainees increased their knowledge and met competency standards. In Haiti, INGO Cordaid provided training in mental health to 115 non-specialist healthcare providers.

To enhance and support broad community recovery after a disaster, health agencies should collaborate with other sectors, especially in the restitution of education services, shelter and people's livelihoods. Collaboration will help achieve the goals of demystifying mental health issues, supporting the well-being of populations affected by emergencies and providing a forum for advocacy (Inter-Agency Standing Committee, 2007).

### **Discussion**

Mental health interventions in post-disaster settings can develop service capacity and community access through non-specialist health practitioners and community-level workers. Community-level interventions can improve well-being, resilience and awareness. Stigma can be reduced and mental health services for more severe mental illness can be provided, especially in the short and mid-term.

The disaster response should enhance access to mental health services (Perez-Salez *et al*, 2011) and improve preparedness for future emergencies (Inter-Agency Standing Committee, 2007), but new services are often unsustainable. Although unsustainable, rapid and broad access is usually valued over long-term development. The long-term impact and sustainability of interventions

depend heavily on linkages with the health and social welfare systems (World Health Organization, 2013). Health system leaders can catalyse the development of community mental health services, so integrating MHPSS programmes with existing systems is preferred to stand-alone programmes (Inter-Agency Standing Committee, 2007; Saraceno *et al*, 2007; Perez-Salez *et al*, 2011; World Health Organization, 2013). An intervention by INGO Center for Attitudinal Healing during and after the war in Croatia (1994–96) developed linkages with international and local stakeholders but was not sustainable due to poor linkages with the government health sector.

Sustainable change in mental health services is facilitated by the political will of the government to formulate policy that integrates mental healthcare with primary healthcare through both funding and professional expertise. Primary care workers and mental healthcare professionals may best be trained by professionally designed and implemented methods, including on-the-job psychiatrist supervision (World Health Organization, 2008). This was achieved in Sri Lanka after the tsunami, but not in Pakistan after the 2005 earthquake. In Pakistan, the major challenge was poor implementation of mental health policy by trained primary care workers. In Haiti, the shortage of psychiatrists was a serious limiting factor for the implementation of a shared-care model of psychiatric consultation with non-specialist providers.

When MHPSS interventions are implemented by foreign organisations after a disaster, co-operation with local governments should be sought, cultivated and monitored for improvement. After the Croatian war, a mental health centre developed for the community failed to become an official unit of the mental health service. The first community mental health centre recognised within the Croatian mental health service came a decade later, with the Mental Health Project for South-Eastern Europe (SEE) under a Social Cohesion Initiative. The SEE Mental Health Project had favourable operational factors, high political visibility and an approach to overall health which improved social cohesion in the region (World Health Organization Regional Office for Europe, 2008).

The political support for long-term change within the mental health system was important for that European project and in other disaster settings, for example in Sri Lanka after the tsunami. Financial sustainability of gains achieved by disaster-related MHPSS interventions is consistently problematic due to insufficient budgets for community mental health services. Training budgets, salaries and organisational costs cannot be covered by the limited health sector funds available in most disaster-affected societies.

### The future

Post-disaster MHPSS projects have been conducted worldwide, but usually without plans for sustainability or scaling up. Future endeavours should seek

sustainability beyond the initial funding by international donors. Up-scaling of such programmes should be a cooperative effort with governments of affected countries, modelled through health and social welfare sectors. Community projects can plant seeds for service development if properly positioned and fashioned to integrate with local practices.

Context-specific methods should be emphasised and local approaches should be respected. This is achieved through proper assessment and identification of existing MHPSS needs and services. The focus should be on evidence-based outcome indicators such as the well-being and resilience of disaster-affected populations (Perez-Salez *et al*, 2011). Inclusion of MHPSS interventions in the basic package of health services provided during an emergency is recommended to improve sustainability. Sustainable progress may be achieved through cyclical interventions with foreign and local cooperation and a long-term view. Local players can gradually assume full responsibility for improved mental health services, especially if consistent with strategy for a whole region (Jitendra *et al*, 2007).

More evidence is needed on the effectiveness of MHPSS interventions, targeting provider training, psychosocial support and sustainable services post-disaster, and in particular on the clinical effectiveness, feasibility and cost-effectiveness of low-intensity, low-cost interventions that may be extended to practice settings (Overseas Development Institute, 2013).

Importantly, a post-disaster focus on improving access to community-based MHPSS is a priority for global relief agencies, including the World Health Organization (Van Ommeren *et al*, 2005), the United Nations High Commissioner for Refugees (2013), the International Federation of Red Cross and Red Crescent Societies, and Doctors Without Borders.

### References

- Global Fund (2014) *Community Systems Strengthening Framework*. Available at <http://www.theglobalfund.org/en/> (accessed 30 April 2014).
- Inter-Agency Standing Committee (2007) *IASC Guidelines on Mental Health and Psychosocial Support in Emergency Settings*. IASC. Available at [http://www.who.int/mental\\_health/emergencies/guidelines\\_iasc\\_mental\\_health\\_psychosocial\\_june\\_2007.pdf](http://www.who.int/mental_health/emergencies/guidelines_iasc_mental_health_psychosocial_june_2007.pdf) (accessed 13 April 2014).
- Jitendra, K. T., Goel, D., Kallivayalil, R. A., *et al* (2007) Regional cooperation in South Asia in the field of mental health. *World Psychiatry*, 6, 57–59.
- Overseas Development Institute (2013) *Health Interventions in Humanitarian Crisis: A Call for More Quality Research*. ODI. Available at <http://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/8765.pdf> (accessed March 2015).
- Perez-Salez, P., Liria, A. F., Baingana, F., *et al* (2011) Integrating mental health into existing systems of care during and after complex humanitarian emergencies. *Intervention*, 9, 345–357.
- Saraceno, B., Van Ommeren, M., Batniji, R., *et al* (2007) Barriers to improvement of mental health services in low-income and middle-income countries. *Lancet*, 370, 1164–1174.
- Saxena, S., Thornicroft, G., Knapp, M., *et al* (2007) Resources for mental health: scarcity, inequity and inefficiency. *Lancet*, 370, 878–889.

United Nations High Commissioner for Refugees (2013) *UNHCR's Mental Health and Psychosocial Support. Global Review 2013*. Available at <http://www.unhcr.org/51f67bdc9.pdf> (accessed 15 April 2014).

Van Ommeren, M., Saxena, S. & Saraceno, B. (2005) Mental and social health during and after acute emergencies: emerging consensus? *Bulletin of the World Health Organization*, 83, 71–75.

World Health Organization (2008) *Integrating Mental Health into Primary Care: A Global Perspective*. Available at [http://www.who.int/mental\\_health/policy/Integratingmhintoprimarycare2008\\_lastversion.pdf](http://www.who.int/mental_health/policy/Integratingmhintoprimarycare2008_lastversion.pdf) (accessed 15 April 2014).

World Health Organization (2013) *Building Back Better: Sustainable Mental Health Care After Emergencies*. Available at [http://www.who.int/mental\\_health/emergencies/building\\_back\\_better/en](http://www.who.int/mental_health/emergencies/building_back_better/en) (accessed 15 April 2014).

World Health Organization Regional Office for Europe (2008) *Approaching Mental Health Reform Regionally: The Mental Health Project for South-Eastern Europe*. Available at [http://www.euro.who.int/\\_\\_data/assets/pdf\\_file/0006/102399/E92163.pdf](http://www.euro.who.int/__data/assets/pdf_file/0006/102399/E92163.pdf) (accessed 15 April 2014).



# Psychosocial rehabilitation for severe mental illnesses in general hospital psychiatric settings in South Asia

Mamta Sood<sup>1</sup> and Rakesh K. Chadda<sup>2</sup>

<sup>1</sup>Additional Professor of Psychiatry, All India Institute of Medical Sciences, New Delhi, India, email [soodmamta@gmail.com](mailto:soodmamta@gmail.com)

<sup>2</sup>Professor of Psychiatry, All India Institute of Medical Sciences, New Delhi, India

**In South Asia, general hospital psychiatric units (GHPUs) have developed as an alternative to mental hospitals for the provision of comprehensive mental health services, training and research. GHPUs provide clinical care for all types of patients, including those with severe mental illnesses (SMIs). However, psychosocial rehabilitation is often neglected in GHPUs, partly because of the predominance of the medical model in routine clinical care and a lack of resources. This paper discusses the challenges in the management of SMIs in GHPUs and proposes a model of psychosocial rehabilitation which could be used in such settings.**

In South Asia, patients with severe mental illnesses (SMIs) are seen in a variety of mental health service settings, including general hospital psychiatric units (GHPUs), psychiatric hospitals, psychiatric nursing homes, poly-clinics and office-based practices. A GHPU is a psychiatric wing in a medical school or general hospital (Wig, 1987).

The GHPUs are the main resource for general mental healthcare in South Asia. They serve large numbers of patients with SMIs, common mental disorders, substance misuse, psychosexual disorders and childhood psychiatric disorders. Liaison work constitutes only a small proportion of the total. The GHPUs also serve as the main teaching set-ups. However, psychosocial rehabilitation (PSR) is often neglected in GHPUs. This paper focuses on a model of PSR which could be used in such settings.

## Development and advantages of GHPUs

In South Asia, GHPUs started under the influence of wider international developments, like the establishment of psychiatric services in general hospitals and the introduction of effective psychotropic

medication. The first GHPU was started in India at Kolkata in 1933 and in Sri Lanka at Colombo in 1949. The subsequent increase in the number of GHPUs was not due to the closure of psychiatric hospitals or a decrease in the number of psychiatric beds as was seen in the West (Mendis, 2003) but was the result of poor mental health resources. In high-income countries, psychiatric services in general hospital settings generally include out-patient clinics, liaison services, emergency psychiatry, day care, substance use treatment and some other specialist clinics with or without a short-stay in-patient unit. There may also be teaching and research (Lipsitt, 2003). A large proportion of the mental healthcare is provided by specialist mental health centres or in community settings.

In contrast, GHPUs provide comprehensive mental health services in the form of clinical care, training and research. Patients with all types of psychiatric disorder, including SMIs, are managed there. They are not referred to mental hospitals and are given long-term follow-up care. The services are mostly publicly funded and patients are admitted to open wards for a short duration, either free or at very low cost (US\$10–15 a month, which includes food, essential medicines and basic recreation facilities). Family members are usually expected to stay with the patient.

The advantages of running services from GHPUs are manifold: availability of services in the community; involvement of family members in care; a reduction of stigma; and increased rates of help seeking for mental health problems. Due to inter-specialty collaboration, the physical problems associated with mental illnesses and conversely psychiatric problems associated with physical illnesses are better addressed. Also, emergency psychiatric services are integrated with hospital emergency services. GHPUs in medical schools play an important role in undergraduate teaching

and postgraduate residency training and have made significant contributions in psychiatric research (Wig & Avsthi, 2004).

### Challenges of PSR services for SMIs in GHPU settings

In South Asia, PSR services are offered in a few well resourced publicly and privately funded psychiatric hospitals and rehabilitation centres. A few project-based PSR projects (Chatterjee *et al.*, 2014) have demonstrated the usefulness of PSR in low- and middle-income countries. However, these are not necessarily replicable because they are generally carried out in ideal settings (Jacob, 2011) and are limited in both duration and funding. Furthermore, the evidence-based guidelines available from high-income countries for PSR (e.g. Dixon *et al.*, 2010) are difficult to implement because of a lack of infrastructure, staff and other resources (Soltani *et al.*, 2004).

Most GHPUs have few non-medical mental health professionals like clinical psychologists, psychiatric social workers and psychiatric nurses. It is often presumed that efforts at PSR begin only after amelioration of psychopathology, and thus PSR may not be even considered if a patient is still symptomatic. Moreover, the in-patient stay is usually restricted to a few weeks. The emphasis on a medical rather than a bio-psychosocial model of management, medical training centred in tertiary care and the large patient loads in GHPUs combine to entrench pharmacological intervention in routine practice, with minimal informal psycho-education. Further, there is a lack of standard protocols and clinical practice guidelines tailored to local needs and resources. This results in poor integration of PSR in routine clinical practice.

### PSR for SMIs in GHPUs

South Asia has a considerable mismatch between the burden of psychiatric morbidity and mental health resources, resulting in a mental health gap of almost 90% (World Health Organization, 2001). The problem is compounded by inefficient use of existing resources (Saxena *et al.*, 2007).

In this context, GHPUs represent a different kind of resource, one which is almost universally available, as the presence of a GHPU in a medical school is a mandatory requirement for the medical school curriculum in many countries. Because they are tertiary care facilities situated in urban/semi-urban areas, they are easily accessible.

Nearly 90% of the patients with SMIs in South Asia live with their families. The families play multiple roles in care: identification of psychopathology, initiating treatment, procuring and supervising medicines, and providing psychosocial support (Avasthi, 2010). Family interventions can be planned easily because of this involvement. The life expectancy of patients with SMIs is at least 20% less than for the general population, due to the elevated risk factors for many chronic diseases, the iatrogenic effects of psychotropic medication and

poorer access to physical healthcare (Thorncroft, 2011).

Recognition and early management of undiagnosed and untreated physical comorbidities in the patients with SMIs in GHPU settings is facilitated by the availability of other specialists in the same premises. Group initiatives like day care, group therapies and family self-help groups can also be taken up because less stigma is attached to GHPU settings. Also, information technology, especially mobile phones, can be used to deliver psychoeducation (Haberer *et al.*, 2013). By establishing linkages with non-governmental and governmental organisations, social and vocational rehabilitation can also be planned.

### Conclusion

Over the last eight decades in South Asia, especially in India, GHPUs have developed as an alternative to the mental hospital model for the provision of mental health services. Patients with all types of psychiatric disorders are treated in GHPUs. It is possible to deliver PSR for patients with SMIs by optimising the use of GHPUs, according to local needs, without any additional cost.

### References

- Avasthi, A. (2010) Preserve and strengthen family to promote mental health. *Indian Journal of Psychiatry*, 52, 113–126.
- Chatterjee, S., Naik, S., John, S., *et al.* (2014) Effectiveness of a community-based intervention for people with schizophrenia and their caregivers in India (COPSI): a randomised controlled trial. *Lancet*, 383, 1385–1394.
- Dixon, L. B., Dickerson, F., Bellack, A. S., *et al.* (2010) Schizophrenia Patient Outcomes Research Team (PORT). The 2009 schizophrenia PORT psychosocial treatment recommendations and summary statements. *Schizophrenia Bulletin*, 36, 48–70.
- Haberer, J. E., Trabin, T. & Klinkman, M. (2013) Furthering the reliable and valid measurement of mental health screening, diagnoses, treatment and outcomes through health information technology. *General Hospital Psychiatry*, 35, 349–353.
- Jacob, K. S. (2011) Repackaging mental health programs in low- and middle-income countries. *Indian Journal of Psychiatry*, 53, 195–198.
- Lipsitt, D. R. (2003) Psychiatry and the general hospital in an age of uncertainty. *World Psychiatry*, 2, 87–92.
- Mendis, N. (2003) Importance of general hospital in the development of mental health care. *World Psychiatry*, 2, 100–102.
- Saxena, S., Thorncroft, G., Knapp, M., *et al.* (2007) Resources for mental health: scarcity, inequity, and inefficiency. *Lancet*, 370, 878–889.
- Soltani, A., Moayyeri, A. & Raza, M. (2004) Impediments to implementing evidence-based mental health in developing countries. *Evidence Based Mental Health*, 7, 64–66.
- Thorncroft, G. (2011) Physical health disparities and mental illness: the scandal of premature mortality. *British Journal of Psychiatry*, 199, 441–442.
- Wig, N. N. (1987) Psychiatric units in general hospitals – right time for evaluation. *Indian Journal of Psychiatry*, 20, 1–5.
- Wig, N. N. & Avasthi, A. (2004) Origin and growth of general hospital psychiatry. In *Mental Health: An Indian Perspective, 1946–2003* (eds S. P. Agrawal *et al.*), pp. 101–108. Directorate General of Health Services Ministry of Health and Family Welfare.
- World Health Organization (2001) *The World Health Report: 2001: Mental Health: New Understanding, New Hope*. WHO.



# A witch defended by a psychiatrist

Manohar Dhadphale

Professor and Academic  
Head, Kamala Nehru Hospital,  
Pune, India, email Manohar\_  
dhadphale@yahoo.co.uk

**Some 40 years ago I was at a loss when I was summoned as an expert witness in an indigenous tribal court to defend a witness accused of witchcraft. The experience shows how the psychiatrist's work requires knowledge of an individual's spiritual framework.**

Ideas of the supernatural are ubiquitous. However, few Western-educated psychiatrists are trained to write a court report on cases of spirit possession and the like. Psychiatrists operating in a different culture are expected to study the local traditional belief system. They ought to understand the local credo and familiarise themselves with mental illness presenting in the guise of black magic or spirit possession.

Some 40 years ago I was initially at a loss when I was summoned as an expert witness in an indigenous tribal court in Zambia. The prosecutor asked me many challenging and at times unnerving questions. The experience shows how the psychiatrist's work requires knowledge of an individual's spiritual framework.

## The case

In a commanding voice, the senior judge in the tribal court asked me: 'What do you know about witchcraft, doctor? Can you please tell this court about your experience in dealing with cases of witchcraft?' The judge was a towering figure in his early 50s; he had the reputation of being well versed in tribal customs, philosophy and history. I had been summoned as an expert witness, to present my report in a police case involving a 'witch'. A 56-year-old woman, Maria, was accused of having kidnapped a 14-year-old girl, Anne, using witchcraft. The court had two witness boxes. I stood in one while the other was occupied by the accused 'witch'. The family of the aggrieved girl sat among the spectators. Many from Maria's township had crowded the court and the press was also present to report on this sensational case.

With some trepidation I told the judge politely: 'I have lived in rural Africa for many years and am familiar with the traditional concepts colloquially known as witchcraft.' The court appeared satisfied with this. A little emboldened I revealed to the court my recently published scientific paper in the *East African Medical Journal* on *ngulu* (Dhadphale, 1979). (The term *ngulu* is a general one that includes spirit possession, witchcraft, sorcery, bewitchment and some cultural concepts of supernatural phenomena.) I also quoted a few African references from the paper and brought to the notice of the court my 15 years' experience in

rural Africa. My paper had investigated traditional beliefs about witchcraft among 16- to 18-year-old Zambian girls. I had asked (among other things) whether they believed that *ngulu* does exist and affects individuals. The response was highly significant: *all* respondents believed that witchcraft does exist and is not imagined. Further, they agreed that Western medical practitioners do not understand witchcraft and should refer all *ngulu* victims to traditional healers. Only the latter understand and are able to treat spirit possession. Regarding the relationship between mental illness and *ngulu*, most of them believed they were linked.

The prosecutor then started a barrage of queries. I had some difficulty in answering to his satisfaction. He wanted me to say either yes or no. I told the court that it was not so simple. He was trying to prove to the court that Maria was guilty and to convict her of the serious crime of child abduction. The crowd and the prosecutor did not like what I said in defence of Maria: that she was not guilty by reason of mental illness. I asked that the prosecutor be advised to deal with the evidence before the court with sensitivity and to put his personal views aside.

Three months earlier, the local papers had sensationalised the original incident. An angry crowd had gathered outside Maria's house, threatening to burn it down. People alleged that Maria, a *known witch*, had kidnapped a girl from the neighbourhood and hidden her. The police were called as people had become rowdy and potentially violent. They ordered the crowd to disperse peacefully but the mob was becoming unmanageable.

After dispersing the crowd with tear gas, the police started their investigation by searching Maria's cottage but they could not find the missing girl. Over the years, Maria had earned a dubious reputation as a wicked witch possessing the supernatural power to make people vanish. Local people claimed that she particularly enjoyed abducting small girls. The police arrested Maria and charged her with child abduction. At the preliminary enquiry by the local magistrate, her defence lawyer claimed that Maria was insane. A psychiatric report was required before she could be charged with the serious offence of child abduction (which would have attracted a long prison sentence). Maria was sent to my unit for a psychiatric assessment. I was ordered to report whether she was insane or a witch.

She was admitted and put on close observation. I ordered day and night reports, with a close watch on her behaviour, especially her interaction with the staff and visitors, and particularly with children. Our social worker visited her home and talked to the family of the victim and neighbours.

After 7 weeks of observation, a ward case conference was held, attended by my whole team. Conclusions were drawn and I submitted my report to the court and awaited further instruction. The report stated that Maria had chronic schizophrenia and was currently in a defect state. She had relapsed in the past, with frank delusions of being a witch and hearing God's voice tell her that she had extraordinary powers to make anyone disappear. She was of somewhat low intelligence. She had no children of her own and liked playing with small children from the neighbourhood. She longed for a daughter of her own and sometimes claimed someone else's child and was unwilling to return the child to the parents. No one took her seriously. During psychotic relapse she boasted of her supernatural prowess. It was during such a relapse that the recent incident had occurred.

Thus, Maria was mentally ill and needed psychiatric care. By reason of her mental condition, she was not responsible for the offence. I asked the court to issue an order for Maria's treatment.

The prosecutor tried to demolish my report by quoting cases of witchcraft he had seen. He told the court to reject my report *in toto*, as no one in the local population believed that Maria was mad or mentally ill: she *was* a witch and used witchcraft to kidnap children. He wanted the court to convict her as charged and asked that Maria be given exemplary punishment in order to deter other acts of child abduction. He wondered whether a Western-trained psychiatrist knew anything at all about indigenous illnesses or was aware of *ngulu*.

The court rejected the prosecution's arguments and accepted my report. Maria was remanded to a mental ward. Most members of the public were not entirely satisfied with the verdict and left the court in disappointment. Maria was duly admitted to my ward, was treated with depot injections and was asymptomatic 3 years later.

### Comment

Maria fitted the traditional stereotype of a witch. Her local community did not believe that she had a

mental disorder, even after the court verdict. They also doubted my knowledge and understanding of indigenous illness. Laher (2014), in her study of illness conceptualisation in African, Hindu and Islamic faiths, recommends that the training of mental health workers include knowledge of local culture, skills and awareness. I have held this view and have incorporated it in my teaching.

The fall-out of this case was interesting. The press debated witchcraft *vis-à-vis* mental illness and argued whether traditional healers and Western-trained mental health workers could work together. I followed their suggestion and sought the advice of known healers to assist me in managing some cases of *ngulu*. From his personal experience in Nigeria, Prince (1964) has suggested that traditional healers have a role in dealing with cases of spirit possession and could be helpful in treatment. Cooperation between Western-trained psychiatrists and traditional healers was rewarding. Some years later I learned with regret that the arrangement with healers had been discontinued.

In the early 1980s, while doing research in primary health clinics in rural Kenya, I found that a significant number of patients with a diagnosable mental illness seen in psychiatric clinics (urban as well as rural) had visited traditional healers. Therefore, Western-trained psychiatrists should familiarise themselves with the local concepts of mental illness and spirit possession. This idea is well supported by Incayawar *et al* (2009); they term this an 'unwitting partnership'. I have been unable to find any reference to a psychiatrist having defended a psychotic witch in a traditional court.

### References

- Dhadphale, M. (1979) Attitude of a group of Zambian females to spirit possession. *East African Medical Journal*, 56, 450–453.
- Incayawar, M., Wintrob, R. & Bartocci, G. (eds) (2009) *Psychiatrists and Traditional Healers – Unwitting Partners in Global Mental Health*. Wiley.
- Laher S. (2014) An overview of illness conceptualizations in African, Hindu and Islamic traditions: towards cultural competence. *South African Journal of Psychology*, 44, 191–204.
- Prince, R. (1964) Indigenous Yoruba psychiatry. In *Magic, Faith and Healing* (ed. A. Kiev), pp. 84–120. Free Press.



Pandora searches the world literature for evidence, news and other sources on matters of interest (doesn't shy away from controversy) to bring to the reader. She welcomes comments and suggestions (via [ip@rcpsych.ac.uk](mailto:ip@rcpsych.ac.uk))

### MDGs a missed opportunity?

Lack of investment in mental health is a key driver of poverty and inequality in low- and middle-income countries. Neuropsychiatric disorders account for 13% of the global burden of disease, with 70% of these accounted for by low- and middle-income countries. The year 2000, a time of optimism, marked the Millennium Declaration, and the start of the Millennium Development Goals (MDGs), a 15-year international agenda for global development, was greeted with hope. That programme focused on health challenges, guiding health budgets of national governments, non-governmental organisations (NGOs) and the wider aid community, and its achievements should not be underestimated. However, it was a missed

opportunity as far as mental health is concerned. According to McGovern, in a commentary appearing in the *International Journal of Mental Health Systems*, the MDGs failed adequately to consider mental health and he urges that a specific focus be placed on mental disorders in the post-2015 agenda for development. He argues that investment in mental health pays wider dividends than purely on the level of clinical outcomes, and recommends that the post-2015 agenda specifically includes access to mental healthcare and the use of evidence-based diagnosis and management. Better investment in mental health can address the global burden of mental disorders.

McGovern, P. (2014) Why should mental health have a place in the post-2015 global health agenda? *International Journal of Mental Health Systems*, 8, 38.



### Europe's mental health support

How does Europe fare as far as mental health-care provision is concerned? Thirty-eight per cent of Europeans suffer from a mental illness every year. In 2014, the Intelligence Unit of the *Economist*, sponsored by Janssen Pharmaceutica NV, carried out a study and produced a report titled *Mental Health Integration – Provision for Supporting People With Mental Illness: A Comparison of 30 European Countries*, which makes sobering reading. The study examined a number of measures, including environment (providing a stable home and family), access to healthcare, opportunities for improving work and education, and what was termed 'governance' (reducing stigma and increasing awareness). Despite some differences across the 30 European countries, the common themes were 'silo thinking and acting and lack of integrated support'. The report identified a number of areas where action was needed: more research into the epidemiological, medical and social care process and outcomes; availability of funding 'appropriate to the task'; finishing the task of deinstitutionalisation; focusing on the task of providing integrated, community-based services; and integrated employment services in community-based care provision.

### No health without mental health

There is already a large body of evidence demonstrating that mental illness is associated with high rates of physical morbidity and mortality. A meta-analysis of 203 studies from 29 countries carried out by researchers from Emory University in Atlanta estimated the risk of death among those with mental illness (from 148 studies) to be 2.22 times higher than in the comparison population. Of the deaths among the mentally ill group, 67.3% were due to natural causes and 17.5% to unnatural causes, with the rest attributed to 'other or unknown causes'. It was estimated that 14.3% of deaths worldwide, that is about 8 million deaths per year, are attributable to mental disorders and it was concluded that more attention should be paid to the more common mental disorders, with emphasis on preventing and managing comorbidity with physical conditions.

Reisinger, E., et al (2015) Mortality in mental disorders and global disease burden implications. *JAMA Psychiatry*. doi: 10.1001/jamapsychiatry.2014.2502.

### 'Sestrin 3', the epilepsy gene, orchestra conductor?

Most neuropsychiatric conditions are attributed to multiple gene involvement but how does this gene network operate? Researchers at Imperial College London used a technique called 'systems genetics' to unravel how genes work together in epilepsy. They examined brain tissue donated by 129 people and carried out further analyses using laboratory mice and zebra fish. They were able to identify a gene known as Sestrin 3 (SESN3), which had never been linked to epilepsy before but which is involved in coordinating about

400 genes associated with epilepsy. Unravelling how SESN3 controls the gene network could lead to the development of more effective anti-epileptic agents. Understanding the mechanisms involved in gene regulation in epilepsy could also be useful in the management of other brain conditions, such as Alzheimer's disease and neurodevelopmental disorders.

Johnson, M., et al (2015) Systems-genetics identifies Sestrin 3 as a regulator of a proconvulsant gene network in human epileptic hippocampus. *Nature Communications*, 26 January. doi: 10.1038/ncomms7031.

### Chronic undernourishment

As many as 805 million people, that is one in nine people in the world (total world population 7.3 billion), are considered chronically undernourished according to the United Nations Food and Agriculture Organization. Most of these (791 million) live in low- and middle-income countries, and poverty plays a major role in their undernourishment. However, living in affluent countries doesn't guarantee adequate nourishment; as many as 11 million people who live in high-income countries are also considered undernourished! You can read more on the subject of world hunger and malnutrition and their causes at <http://www.fao.org/publications/sofi/2014/en/>

### Good night!

Insomnia, a common condition on its own or in association with other conditions (psychiatric or physical), is often a 'nightmare' to treat for doctors and a major burden to patients. Several generations of hypnotics have, over the years, been claimed to be better than their predecessors but they all eventually were found to cause tolerance and dependence, which impose major limitations in their use. Better understanding of how the brain works in inducing sleep could pave the way to the development of more specific and non-dependence-forming drugs. It was believed that hypnotics acting via particular receptors (e.g. GABA) have a wide effect on all parts of the brain. However, widespread action on the brain may not be necessary, according to scientists at Imperial College London, who made an interesting discovery. They showed that 'switching on' the neurons in a specific area of the brain, the preoptic hypothalamus, is responsible for shutting down the areas of the brain that are inactive during sleep. This process is very similar to what happens in the 'deep recovery sleep' which occurs after a period of sleep deprivation. They demonstrated that certain types of sedative drugs work by switching on this area of the brain. Could this mean that new drugs which target these neurons in the preoptic hypothalamus will be successful in inducing sleep in a more 'natural' way and be less likely to be associated with dependence problems?

Zhang, Z., et al (2015) Neuronal ensembles sufficient for recovery sleep and the sedative actions of  $\alpha_2$  adrenergic agonists. *Nature Neuroscience*. doi: 10.1038/nn.3957.

