

## **A little could go a long way: financing for mental healthcare in low and middle-income countries**

**Laura Asher<sup>1</sup>, Mary De Silva<sup>2</sup>**

<sup>1</sup> Centre for Global Mental Health, Department of Population Health, London School of Hygiene and Tropical Medicine, Keppel Street, London WC1E 7HT

<sup>2</sup> Wellcome Trust, Gibbs Building, Euston Road, London NW1 2BE

Chisholm et al have made an innovative and timely contribution towards efforts to scale up mental healthcare in low and middle-income countries (LMIC) (Chisholm et al., 2016). This paper is one output of a broader programme of work, 'Emerging mental health systems in LMIC' (Emerald), which aims to generate evidence and capacity to enhance health system performance in delivering mental health care (Semrau et al., 2015). How best to address the vast treatment gap for mental disorders is a major challenge for most low-resource settings. The dire shortage of mental health specialists, coupled with chronic underinvestment in mental health services by both governments and international donors, are key reasons for poor access to care. High levels of disability, mortality and human rights violations amongst people with mental illness are some of the consequences of this underinvestment and resulting treatment gap (Fekadu et al., 2015, Drew et al., 2011). The WHO's mental health Gap Action Programme (mhGAP) guides the integration of mental healthcare in primary care. Not only does this approach address the specialist skills shortage, but it also represents a more efficient use of resources than the normative model of long-term inpatient treatment (Chisholm and Saxena, 2012). A key achievement of global mental health research to date is the accumulation of evidence that non-specialists in LMIC can provide cost-effective, feasible and acceptable care for a range of mental disorders (Patel et al., 2011, Chatterjee et al., 2014). However, there is a long road ahead before universal health coverage for mental illness is realised. The financing and widespread scale up of evidence-based interventions is contingent on policy makers being aware of the magnitude of the task ahead, the resources required, and the potential benefits

of such endeavours. This knowledge is essential to plan effectively for implementation and to prioritise how scarce resources should be used.

Chisholm et al describe the development of a bespoke mental health module for the United Nation's OneHealth Tool (OHT), and the application of this instrument to determine the resources needed to achieve target levels of coverage for three priority mental and neurological disorders- depression, psychosis and epilepsy- across six LMIC (Chisholm et al., 2016). Moreover, they have projected the potential health impacts, expressed as healthy life years gained, achievable with this investment. Chisholm et al have plainly demonstrated that with small investments in mental healthcare substantial health benefits could be attained. In the low-income countries included in this study- Ethiopia, Uganda and Nepal- annual expenditure of US\$ 0.34-1.27 per capita of total population at target coverage levels could translate into 755 to 947 healthy life years gained per one million population in the final year of each country's projection. Yet whilst the resources needed are small in absolute terms, they represent a significant increase compared to current expenditure which sits between US\$ 0.11- 0.33 at baseline levels of coverage for the three low-income countries.

The implications of these findings for global mental health are clear. First, there is an on-going need for cost-effective mental health interventions to be developed and evaluated in LMIC. There are exciting developments in the evaluation of interventions for psychosis, depression and epilepsy in the Emerald countries and other LMICs using randomised (Asher et al., 2016, Hanlon et al., 2016, Chibanda et al., 2015) and non-randomised designs (De Silva et al., 2016), but such evaluations still remain the exception rather than the rule. The attention of researchers should also turn to the challenges of implementation, rather than simply evaluation in relatively small-scale trials (Thornicroft, 2012). A separate Emerald work stream will use a mixed methods approach to investigate the implementation of mhGAP in six LMICs (Semrau et al., 2015). Second, advocacy efforts to encourage sustained political commitment to mental health, particularly in the face of numerous competing demands, remain paramount (Hendler et al., 2016). Third, policy makers in LMIC must be

equipped with appropriate analytical tools to make mental health resource needs assessments in the context of their wider national health plans, and in particular to be able to forecast the benefits of increases in investment. Indeed the broader value of the work presented by Chisholm et al lies in the public availability of the mental health module of the OHT; the authors anticipate that the tool will be used by health planners and health system researchers in other settings.

It is widely acknowledged that progressive realisation is the approach required for most countries expanding mental health services, in terms of population coverage and also with regard to which interventions are offered and which conditions are addressed (Patel, 2015). Setting interim targets for treatment coverage that are merely ambitious, rather than frankly unrealistic, is a key challenge. Chisholm et al present scale up periods of between five and seven years, selected by country partners, and there is evidently some pragmatism in the target coverage levels chosen. However, in some cases there are striking differences between the extremely low baseline coverage and the target coverage. For example in Ethiopia the target coverage (10%) for each of three interventions for depression, including ‘intensive psychosocial treatment and anti-depressant medication of first episode moderate-severe cases’, a one hundred fold increase from baseline coverage (0.1%) is required. It remains to be seen if such huge changes can practically be achieved within a seven-year period, and therefore whether the projected health impacts can be realised. Whilst contact coverage refers to the proportion of persons in need of a service who actually receive an appropriate intervention, effective coverage is defined as ‘the probability that individuals will receive health gain from an intervention if they need it’ (De Silva et al., 2014). Increased effective coverage of mental health interventions is the ultimate goal of scale-up efforts, but there are several potential barriers to achieving this in LMIC.

First, whilst non-specialists can deliver effective mental health interventions in a trial setting, there is limited experience worldwide of task shifting at scale. Several challenges will need to be surmounted including the logistical issues of

training and supervising vast numbers of primary care staff and community health workers to deliver high-quality and effective care in the long term (Patel, 2015, Hanlon et al., 2016). Second is the issue of acceptability of the proposed mental health interventions, without which engagement, and therefore treatment response, is likely to be poor. Several approaches have been identified to increase the acceptability, and therefore demand, for psychological therapies in LMIC (Patel et al., 2011); for example, in Pakistan a psychological therapy for perinatal depression focused on infant health and development, rather than depression, to increase acceptability to participants (Rahman, 2007). The importance of addressing the broader social needs of service users in LMIC, in particular through supporting livelihoods, has also been highlighted (Kidd et al., 2016, Lund et al., 2011, Patel, 2015, Patel et al., 2011); whether these more intensive approaches can be scaled up has received little attention to date. The troublesome side effect profile of first generation anti-psychotics, which are recommended by mhGAP, may threaten medication adherence rates. Third is the issue of the affordability of mental healthcare. In order to promote equitable access, governments should ensure that costs are met by financial protection measures such as health insurance schemes (Patel et al., 2015). This is particularly important given the chronic nature of many mental disorders and the heavy financial burden on families due to treatment costs and loss of productivity. Whilst some of the countries included in Chisholm et al's analysis provide free psychotropic medication (Hanlon et al., 2014), in Ethiopia, as in many other LMICs, there are no health insurance schemes and psychotropic medications costs are borne directly by service users. This may prove to be a critical barrier to people with mental illness receiving services as intended.

An important strength of the mental health module of the OHT is the ability to easily compare estimated costs and health impacts across disorders. It can be discerned that the greatest benefits, in terms of healthy life years gained, are obtainable through implementing interventions for depression and epilepsy, compared to psychosis. However, as previously noted by Chisholm, other factors should also be taken into account by policy makers when priority setting, including the impact on productivity and human rights, and the financial

implications for the household (Chisholm and Saxena, 2012, Strand et al., 2016). The prominence of these issues in relation to psychosis lends support for it to remain a priority disorder for investment. The economic impact of mental disorders is another area of investigation of the Emerald work programme using detailed household surveys in the six participating countries (Semrau et al., 2015). In future it is possible this information will also contribute to priority setting across mental disorders.

A further strength Chisholm et al's paper is the extensive collaboration with policy makers and planners in each of the six LMICs. This directly challenges the assertion that efforts to improve mental health in LMIC naturally have an imperialist flavour, in which a Western biomedical agenda is imposed upon unwilling and unequal participants (White and Sashidharan, 2014, Summerfield, 2013). Furthermore, utilising highly contextualised estimates of available human resources, costs, likely efficacy, and adherence to interventions, as well as tailoring target coverage to the setting, undoubtedly increases the accuracy of data. The results are also more likely to be useful to, and therefore used by, national policy makers. This work also acted as a capacity building exercise, from which country partners can go on to independently refine projections as more information becomes available or to add other disorders, for example alcohol dependence in South Africa.

It is clear that increased funding for mental healthcare is sorely needed in most LMIC. Chisholm et al have demonstrated that a little investment could go a long way in terms of health benefits. Some have called for a global mental health fund to rival the Global Fund to Fight AIDS, Tuberculosis, and Malaria; such a fund, it is proposed, would support access to free anti-psychotic medication and psychosocial support across LMIC (Farooq et al., 2016). Whilst this is a laudable appeal, sustained commitment from governments to invest in scaling up mental healthcare is needed first and foremost, not least because such a fund is unlikely to materialise in the near future. Others have proposed that governments use funds raised from increased income tax on unhealthy products, for example tobacco, or divert expenditure from non-evidence based interventions, such as

multivitamins, to mental health (Patel et al., 2015). Whilst increased funding may be slow to emerge, the mental health module of the OHT is at least an important first step supporting the widespread funding for, and implementation of, mental health interventions in LMIC.

### **Financial Support**

None.

### **Conflict of Interest**

The authors declare that there are no conflicts of interest.

- Asher, L., De Silva, M., Hanlon, C., Weiss, H. A., Birhane, R., Ejigu, D. A., Medhin, G., Patel, V. & Fekadu, A.** 2016. Community-based Rehabilitation Intervention for people with Schizophrenia in Ethiopia (RISE): study protocol for a cluster randomised controlled trial. *Trials*, 17, 299.
- Chatterjee, S., Naik, S., John, S., Dabholkar, H., Balaji, M., Koschorke, M., Varghese, M., Thara, R., Weiss, H. A., Williams, P., Mccrone, P., Patel, V. & Thornicroft, G.** 2014. Effectiveness of a community-based intervention for people with schizophrenia and their caregivers in India (COPSI): a randomised controlled trial. *The Lancet*, 383, 1385-1394.
- Chibanda, D., Bowers, T., Verhey, R., Rusakaniko, S., Abas, M., Weiss, H. A. & Araya, R.** 2015. The Friendship Bench programme: a cluster randomised controlled trial of a brief psychological intervention for common mental disorders delivered by lay health workers in Zimbabwe. *International Journal of Mental Health Systems*, 9, 21.
- Chisholm, D., Heslin, M., Docrat, S., Nanda, S., Shidaye, R., Upadhaya, N., Jordans, M., Abdulmalik, J., Olayiwola, S., Gureje, O., Kizza, D., Mugisha, J., Kigozi, F., Hanlon, C., Adugna, M., Sanders, R., Pretorius, C., Thornicroft, G. & Lund, C.** 2016. Scaling-up services for psychosis, depression and epilepsy in Sub-Saharan Africa and South Asia: development and application of a mental health systems planning tool (OneHealth). *Epidemiology and Psychiatric Sciences*.
- Chisholm, D. & Saxena, S.** 2012. Cost effectiveness of strategies to combat neuropsychiatric conditions in sub-Saharan Africa and South East Asia: mathematical modelling study. *British Medical Journal*, 344, e609.
- De Silva, M. J., Lee, L., Fuhr, D. C., Rathod, S., Chisholm, D., Schellenberg, J. & Patel, V.** 2014. Estimating the coverage of mental health programmes: a systematic review. *International Journal of Epidemiology*, 43, 341-353.
- De Silva, M. J., Rathod, S. D., Hanlon, C., Breuer, E., Chisholm, D., Fekadu, A., Jordans, M., Kigozi, F., Petersen, I., Shidhaye, R., Medhin, G., Ssebunnya, J., Prince, M., Thornicroft, G., Tomlinson, M., Lund, C. & Patel, V.** 2016. Evaluation of district mental healthcare plans: the PRIME consortium methodology. *British Journal of Psychiatry*, 208 Suppl 56, s63-70.

- Drew, N., Funk, M., Tang, S., Lamichhane, J., Chávez, E., Katontoka, S., Pathare, S., Lewis, O., Gostin, L. & Saraceno, B.** 2011. Human rights violations of people with mental and psychosocial disabilities: an unresolved global crisis. *The Lancet*, 378, 1664-1675.
- Farooq, S., Burns, J., Sumathipala, A. & Naeem, F.** 2016. A global mental health fund for serious mental illness in low-income and middle-income countries. *Lancet Psychiatry*, 3, 495-497.
- Fekadu, A., Medhin, G., Kebede, D., Alem, A., Cleare, A. J., Prince, M., Hanlon, C. & Shibre, T.** 2015. Excess mortality in severe mental illness: 10-year population-based cohort study in rural Ethiopia. *British Journal of Psychiatry*, 206, 289-296.
- Hanlon, C., Alem, A., Medhin, G., Shibre, T., Ejigu, D. A., Negussie, H., Dewey, M., Wissow, L., Prince, M., Susser, E., Lund, C. & Fekadu, A.** 2016. Task sharing for the care of severe mental disorders in a low-income country (TaSCS): study protocol for a randomised, controlled, non-inferiority trial. *Trials*, 17, 76.
- Hanlon, C., Luitel, N. P., Kathree, T., Murhar, V., Shrivasta, S., Medhin, G., Ssebunnya, J., Fekadu, A., Shidhaye, R., Petersen, I., Jordans, M., Kigozi, F., Thornicroft, G., Patel, V., Tomlinson, M., Lund, C., Breuer, E., De Silva, M. & Prince, M.** 2014. Challenges and opportunities for implementing integrated mental health care: a district level situation analysis from five low- and middle-income countries. *PloS One*, 9, e88437.
- Hendler, R., Kidia, K., Machando, D., Crooks, M., Mangezi, W., Abas, M., Katz, C., Thornicroft, G., Semrau, M. & Jack, H.** 2016. "We Are Not Really Marketing Mental Health": Mental Health Advocacy in Zimbabwe. *PloS One*, 11, e0161860.
- Kidd, S. A., Madan, A., Rallabandi, S., Cole, D. C., Muskat, E., Raja, S., Wiljer, D., Aylward, D. & Mckenzie, K.** 2016. A Multiple Case Study of Mental Health Interventions in Middle Income Countries: Considering the Science of Delivery. *PloS One*, 11, e0152083.
- Lund, C., De Silva, M., Plagerson, S., Cooper, S., Chisholm, D., Das, J., Knapp, M. & Patel, V.** 2011. Poverty and mental disorders: breaking the cycle in low-income and middle-income countries. *The Lancet*, 378, 1502-1514.
- Patel, V.** 2015. Universal Health Coverage for Schizophrenia: A Global Mental Health Priority. *Schizophrenia Bulletin*, 42, 885-890.
- Patel, V., Chisholm, D., Parikh, R., Charlson, F. J., Degenhardt, L., Dua, T., Ferrari, A. J., Hyman, S., Laxminarayan, R., Levin, C., Lund, C., Medina Mora, M. E., Petersen, I., Scott, J., Shidhaye, R., Vijayakumar, L., Thornicroft, G. & Whiteford, H.** 2015. Addressing the burden of mental, neurological, and substance use disorders: key messages from Disease Control Priorities, 3rd edition. *The Lancet*, 387, 1672-1685.
- Patel, V., Chowdhary, N., Rahman, A. & Verdelli, H.** 2011. Improving access to psychological treatments: lessons from developing countries. *Behaviour Research and Therapy*, 49, 523-528.
- Rahman, A.** 2007. Challenges and opportunities in developing a psychological intervention for perinatal depression in rural Pakistan--a multi-method study. *Archives of Women's Mental Health*, 10, 211-219.
- Semrau, M., Evans-Lacko, S., Alem, A., Ayuso-Mateos, J. L., Chisholm, D., Gureje, O., Hanlon, C., Jordans, M., Kigozi, F., Lempp, H., Lund, C.,**

- Petersen, I., Shidhaye, R. & Thornicroft, G.** 2015. Strengthening mental health systems in low- and middle-income countries: the Emerald programme. *BMC Medicine*, 13, 79.
- Strand, K. B., Chisholm, D., Fekadu, A. & Johansson, K. A.** 2016. Scaling-up essential neuropsychiatric services in Ethiopia: a cost-effectiveness analysis. *Health Policy and Planning*, 31, 504-513.
- Summerfield, D.** 2013. "Global mental health" is an oxymoron and medical imperialism. *British Medical Journal*, 346, f3509.
- Thornicroft, G.** 2012. Evidence-based mental health care and implementation science in low- and middle-income countries. *Epidemiology and Psychiatric Sciences*, 21, 241-244.
- White, R. & Sashidharan** 2014. Towards a more nuanced global mental health. *British Journal of Psychiatry*, 204, 415-417.
-