Institution: King's College London		
Unit of Assessment: 4		
Title of case study: Closing the global mental health gap: integrating mental healthcare into primary care in low and middle income countries		
Period when the underpinning research was undertaken: 2007-2020		
Details of staff conducting the underpinning research from the submitting unit:		
Name(s):	**Role(s) (e.g. job title):**	**Period(s) employed by submitting HEI:**
Dr Charlotte Hanlon	Reader	From 17/01/2012
Dr Mark Jordans	Reader	From 01/09/2013
Professor Crick Lund	Professor	From 01/05/2017
Professor Martin Prince	Professor	01/09/2009 - 30/09/2020
Professor Sir Graham Thornicroft	Professor	From 01/04/1992
Period when the claimed impact occurred: 2013-2020		
Is this case study continued from a case study submitted in 2014? N		

1. Summary of the impact

The World Health Organisation (WHO) estimates that 450 million people are affected by mental illness worldwide, contributing to 14% of the global burden of disease. However, this burden is not shared equally. King's research revealed inequalities between the numbers of people experiencing mental illness and those receiving treatment, demonstrating the disparities in low and middle income countries (LMICs). It also highlighted the barriers to tackling this treatment gap, including stigma around mental illness. This evidence drove a call to global action to address the mental health treatment gap. As a result, King's research has underpinned newly updated WHO guidance to support primary healthcare workers to deliver mental healthcare worldwide, and has informed national mental health strategies in countries such as Ethiopia and Nepal. In addition, King's researchers have collaborated to trial and evaluate innovative interventions in which members of local communities are trained to deliver mental health care on the ground, leading to the implementation of effective mental health treatment in these countries. Collectively, this means that hundreds of thousands of people across the world who would not otherwise have access to mental health care have now received it.

2. Underpinning research

Mental ill health contributes to at least 14% of the global burden of disease, and there are huge inequalities in access to treatment between countries. For example, in 2018 King's researchers found that over 90% of those in LMICs with depression do not receive the treatment they need. Trained healthcare workers are incredibly scarce – in Ethiopia there are 110 psychiatrists in a population of 112 million. An international collaboration led by King's, the London School of Hygiene and Tropical Medicine (LSHTM) and the WHO, identified the unmet need for high quality evidence on mental health treatment approaches around the world, and for the expansion of access to mental health care globally. The collaboration pioneered the field of Global Mental Health research, shifting from the previous research paradigm of epidemiology and descriptive studies: Instead, they proposed that research would have more impact if it worked at the level of government to determine the components of effective national mental health strategies, whilst also working with communities at grass roots level to develop effective local interventions. As a result, the focus in the field moved to implementing evidence-based improvements in mental health, rather than simply generating evidence.

King's research highlighted the gaps in mental health services worldwide and called for a scaling up of services. King's researchers, in an international collaboration co-led with the WHO and LSHTM, highlighted that scarcity of resources, inequities in their distribution, and inefficiencies

in their use worldwide were the norm in the first ever Lancet Series on Global Mental Health in 2007 **(1)**, an evidence-backed call to invest in mental health service provision worldwide. King's continued to drive research and implementation in the field with findings including: defining the gap in mental health service provision between LMICs and high income countries; identifying factors contributing to low rates of mental health treatment (namely stigma, discrimination, poverty and access); and reporting the economic benefits of providing mental health care. Together, these made a compelling case for addressing mental illness in LMICs. This fed in to the evidence synthesis of the Lancet Commission on Global Mental Health and Sustainable Development in 2018 **(2)**.

King's identified crucial components for mental health strategies in LMICs. Importantly, King's research showed that the critical factors for implementating evidence-based service provision in LMICs countries are: (i) strong governance; (ii) financing; (iii) a trained and supported workforce; (iv) mental health information systems; and (v) effective knowledge transfer **(3)**.

King's researchers identified effective local approaches for integrating mental health care into primary care. The Programme for Improving Mental Health Care (PRIME) – a consortium of King's and other research institutions and ministries of health in five countries – was established to generate high quality evidence on the effective implementation of mental health treatment programmes in primary healthcare contexts and low resource settings. King's researchers and collaborators from the University of Cape Town worked at grass roots level in Ethiopia, India, Nepal, South Africa and Uganda to develop and evaluate evidence-based interventions. For example, King's researchers evaluated a 'task-sharing' approach in the Sodo region of Ethiopia in which primary health care (PHC) workers shared the task of identifying and supporting people with mental health needs. The results showed that 94.5% of the diagnoses made by PHC workers trained to identify people with severe mental illness (SMI) were subsequently confirmed by a psychiatric nurse. Additionally, task-sharing facilitated treatment for people with SMI and reduced the likelihood of home restraint **(4)**, confirming the utility of this approach for scaling-up of mental health care in low resource settings.

King's also evaluated a 'community detection tool' in Nepal, developed for use by local community members as an appropriate response to identify people with mental illness and help them seek effective care. We found a 50% increase in utilisation of mental health services when the community detection tool was used **(5)**. King's researchers and collaborators developed and evaluated a mental health care plan for the Chitwan district in Nepal, which integrated mental health care into existing primary care services through the use of the community detection tool and the delivery of training to primary care workers. This integrated plan provided psychosocial support, alongside the availability of psychotropic medicines and health system strengthening. The evaluation found that training improved the rate at which primary care workers were able to identify and treat people with mental illness, resulting in an increase in the amount of evidence-based effective care being received **(6)**.

King's identified factors critical for scaling up approaches to mental health care. King's led the Emerging mental health systems in LMICs (EMERALD) consortium, which operated alongside PRIME in the same five countries, plus Nigeria, to investigate how integrated mental health care approaches developed at grass roots level and proven to work locally, can be scaled up for use at district level and above. Working with the WHO, policy makers, service user groups and primary care centres, King's researchers carried out economic cost/benefit analyses of different types of mental health care, including the development and evalutation of an updated module on mental, neurological and substance misuse (MNS) disorders in the United Nations OneHealth Tool, which assists countries in evaluating the economic cost and potential health benefits of implementing a mental health care plan **(7)**.

King's identfied that stigma around mental health in LMICs is a barrier to treatment. In studies in over 40 countries worldwide, King's researchers found that social contact reduces stigma and enables people with mental illness to better engage with mental health care **(8)**.

3. References to the research

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(2) Patel, V., Saxena, S., **C. Lund, C., Thornicroft, G.,** Baingana, F., Bolton, P., Chisholm, D., Collins, P.Y., Cooper, J.L., Eaton, J., Herrman, H., Herzallah, M.M., Huang, Y., **Jordans, M.J.D.,** Kleinman, A., Medina-Mora, M.E., Morgan, E., Niaz, U., Omigbodun, O., **Prince, M.,** Rahman, A., Saraceno, B., Sarkar, B.K., De Silva, M., Singh, I., Stein, D.J., Sunkel, C., and Unutzer, J. (2018) The Lancet Commission on global mental health and sustainable development. *Lancet* 392(10157), 1553-1598. DOI:10.1016/S0140-6736(18)31612-X

(3) **Semrau, M.,** Alem, A., Ayuso-Mateos, J.L., Chisholm, D., Gureje, O., **Hanlon, C., Jordans, M.,** Kigozi, F., **Lund, C.,** Petersen, I., Shidhaye R., and **Thornicroft, G.** (2019) Strengthening mental health systems in low- and middle-income countries: recommendations from the Emerald programme. *BYPsych open* 6;5(5):e73. DOI: 10.1192/bjo.2018.90.

(4) **Hanlon, C.,** Medhin, G., Selamu, M., Birhane, R., Dewey, M., Tirfessa, K., Garman, E., Asher, L., **Thornicroft, G.,** Patel, V., **Lund, C., Prince, M.,** Fekadu, A. (2019) Impact of integrated district level mental health care on clinical and social outcomes of people with severe mental illness in rural Ethiopia: an intervention cohort study. *Epidemiology and Psychiatric Sciences,* 29:e45. DOI: 10.1017/S2045796019000398

(5) **Jordans, M.J.D.,** Luitel, N.P., **Lund, C.** & Kohrt, B.A. (2020) Evaluation of proactive community case detection to increase help seeking for mental health care: a pragmatic randomized controlled trial. *Psychiatric Services*, 71(8), 810-815. DOI: 10.1176/appi.ps.201900377

(6) **Jordans, M.J.D.,** Luitel, N.P., Kohrt, B.A., Rathod, S.D., Garman E.C., De Silva M., Komproe I.H., Patel, V. & **Lund, C.** (2019) Community-, facility- and individual-level outcomes of a district mental healthcare plan in a low-resource setting in Nepal: a population-based evaluation. *PLOS Medicine* 16(2) e1002748 DOI: 10.1371/journal.pmed.1002748

(7) Chisholm, D, Docrat, S, Abdulmalik, J, Alem, A, Gureje O, Gurung D, **Hanlon C, Jordans M.J.D.,** Kangere, S, Kigozi, F, Mugisha, J, Muke, S., Olayiwola, S., Shidhaye, R., **Thornicroft, G.** and **Lund, C.** (2019) Mental health financing challenges, opportunities and strategies in low- and middle-income countries: findings from the Emerald project. *BJPsych Open*, e0, 1–9, DOI: 10.1192/bjo.2019.24

(8) **Thornicroft, G.,** Mehta, N., **Clement, S., Evans-Lacko, S., Doherty, M., Rose, D**., et al. (2016) Evidence for effective interventions to reduce mental-health-related stigma and discrimination. *The Lancet,* 387, 1123-1132, DOI: 10.1016/S0140-6736(15)00298-6

4. Details of the impact

King's research has been central to the continuing global call to address the gap in mental health infrastructure around the world, since underpinning the influential Lancet Call to Action in 2007. The multi-level approach King's has advocated – combining change at national, governmental level with effective grass roots implementation – has helped instigate changes in policy and strategy at international and national levels, while providing evidence to implement and scale up mental health programmes on the ground. Collectively, this has brought much needed support to empower countries and communities with limited resources to fill the mental health treatment gap.

King's research underpinned continuing development and updating of the WHO Mental Health Global Action Program (mhGAP). Based on research co-authored by King's **(1)**, the WHO launched its ongoing mhGAP programme (aimed at scaling up services for mental, neurological and substance use disorders especially in LMICs where healthcare resources are scarce) **[A1, A2]**. Subsequently, the programme also developed an Intervention Guide (IG) **[A3]** and Operations Manual (OM) **[A4]** on the basis of King's evidence to provide implementation support to primary care staff in limited resource settings. The WHO also developed the mhGAP community toolkit **[A5]**, which was influenced by King's researcher Hanlon's co-authored book *Where There Is No Psychiatrist* **[A6, A7]**. This toolkit supports progamme managers to identify local mental health needs, and tailor treatment accordingly.

Subsequent updates to these resources **[A8]** have drawn on the body of King's research on mental health needs and service provision in low resource settings, for example acknowledging the value

of proactive case-finding in the community **(5)**, and the need to consider the differences between countries **(1)**. Now available in online and smartphone app formats, the IG is produced in Arabic, Chinese, French, Greek, Hindi, Russian, and Spanish and is used in over 100 countries worldwide **[A1, A3]**. Given that this widespread uptake is sometimes in countries which do not provide feedback, measurements or evaluation, it is not possible to give an exact number of healthcare professionals trained, or number of people with mental illness reached. However, a review in 2018 found uptake of the IG in 90 countries, with positive evaluations available from 33 countries in Africa, the Middle East, Asia and South America **[A9]**. For example, the IG was used during a humanitarian crisis after a military operation in 2014 in Pakistan. 58 non-specialist healthcare workers working with internally displaced people were trained using mhGAP resources to detect mental illness, allowing people at high risk to access support that they would not otherwise have received **[A10]**. More recently, in 2019 an evaluation in Mozambique found that 177 health professionals and 1161 community health workers were trained to work with people with epilepsy, resulting in 89,869 consultations over four years, an increase of 67% **[A11]**.

Importantly, King's research has continued to make the case for improved global mental health care, providing new and valuable insights into how to make this happen on the ground for a broader range of resources and projects. For example, as a result of King's economic analyses in collaboration with WHO on the cost and benefit of implementing mental health care **(7)**, the United Nations introduced an updated MNS module to its OneHealth economic tool, the primary purpose of which is to assess public health investment needs in low and middle income countries **[A7, A1]**.

By showing what works at a local and district level, King's research has led to investment and scale up nationally of integrated mental health care.

Example (i): Nepal

As a result of King's research showing successful implementation and evaluation of an integrated mental health care plan and joint working with local partners in Chitwan district in Nepal **(6)**, there have been national policy changes and local initiatives developed beyond Chitwan. For example:

- Underpinned by findings from PRIME, the Nepalese Ministry of Health produced a Community Mental Health Care Package based on the mhGAP IG and standards, **[B1]**.
- The mental health care training of primary health workers developed in Chitwan district was officially adopted by the Nepalese National Training Institute and Ministry of Health **[B2]**.
- The Nepalese Ministry of Health endorsed the integrated mental health care plan and has included psychotropic medicines on the free drugs list for the first time **[B1, B3]**.
- Similar integrated health care plans as the one used in Nepal have been appropriately adapted and scaled up to 94 facilities across the five countries participating in PRIME in close collaboration with governmental partners **[B4]**.
- The community detection tool evaluated by King's in Nepal **[B5] (6)** is now being implemented and tested in countries including Belize, Sri Lanka and South Africa **[B6, B7,B8]**.

Example (ii): Ethiopia

As a result of King's research on the effectiveness of task-sharing as an approach to integrate mental health care into primary care in the Sodo region of Gurage Zone Ethiopia **(4)**, and by joint working with local partners, there have been a number of developments in the country:

- King's research findings **(4)** shaped Ethiopia's first National Mental Health Strategic Plan **[C1]**.
- King's researchers developed a participatory, integrated district level plan with key stakeholders, implemented and scaled-up care to the whole of the Gurage Zone **[C2]**.
- More than 100 frontline health workers, 100 community health workers, as well as healthcare managers and pharmacy technicians were trained to support delivery of mental health care. More than 600 people with SMI **(4)**, and 350 people with epilepsy **[C3]** have received care.

King's researchers have co-developed mental health services with communities, making implementation more effective, and addressing barriers to treatment caused by stigma, reaching many more of those who need support. By working closely with communities, King's research has identified and co-developed meaningful and effective routes to provide mental health

services such as task-sharing and community detection tools. Based on King's research around stigma **(8)** people living with mental illness have been engaged with the planning and delivery of services. In Nepal service users were involved in the training and supervision of primary healthcare workers and in Ethiopia service users shared their stories to teach community members and to train primary care staff.

With a focus on the reduction of stigma around mental health, the INDIGO partnership programme has implemented service user involvement in stigma reduction in 42 villages in Andhra Pradesh in India and showed significant improvements in knowledge, attitude and behaviour **[D1]**. In Ethiopia, the EMERALD program included experts with lived experience of mental illness into training for primary care workers, based on King's evidence that social contact is the best approach to reduce stigma **(8) [D2]**.

Service users report the benefit of access to psychological and pharmacological treatment, one saying *"the support group taught me to understand myself and accept who I am",* and another with SMI saying *"the treatment has helped… now I can work… the drugs have worked a lot for me. Now my drugs are my food, they are my tea".* Her mother comments *"they no longer shun her. She's no longer scared in her current state"* **[D3]**.

5. Sources to corroborate the impact

A Evidence corroborating how King's research informed the WHO's mental health work

A1 Testimonial from Tarun Dua, World Health Organisation; A2 WHO Mental Health Gap Action Programme (mhGAP); A3 mhGAP Intervention Guide; A4 mhGAP Operations Manual; A5 United Nations / World Health Organisation OneHealth economic tool; A6 mhGAP toolkit; A7 *Where There Is No Psychiatrist* book; A8 mhGAP Intervention Guide update 2015; A9 Evidence synthesis of mhGAP implementation by Keynejad et al 2018; A10 Evaluation of implementation of mhGAP in Pakistan by Humayun et al 2014; A11 Evaluation of implementation of mhGAP in Mozambique by Dos Santos et al 2019. [PDF]

B Evidence relating to impact in Nepal

B1 Government of Nepal Ministry of Health Community Mental Health Care Package, July 2017; B2 Mental Health Care training plan; B3 Process of inclusion of psychotropic medication in Nepalese mental health strategy; B4 PRIME report for UK Department for International Development (DfID); B5 English language version of community detection tool used in Nepal; B6 Email detailing Belize community detection tool; B7 Sri Lanka community detection tool; B8 South Africa Community Psychoeducation and Detection tool. [PDF]

C Evidence relating to impact in Ethiopia

C1 Ethiopian Ministry of Health testimonial; C2 Testimonial confirming King's involvement in Gurage District mental health plan; C3 Confirmation of number of people with epilepsy in Ethiopia receiving mental health care by Catalao et al 2018. [PDF]

D Evidence relating to co-production and stigma

D1 Evaluation of stigma campaign in India by Maulik et al 2019; D2 Ethiopian service user testimonial; D3 Video of service user and carer stories. [PDF]