Institution: London School of Hygiene & Tropical Medicine (LSHTM)

Unit of Assessment: 2

Title of case study: Lay health worker interventions to treat mental health disorders

Period when the underpinning research was undertaken: 2010-2016

Details of staff conducting the underpinning research from the submitting unit:

Name(s):	Role(s) (e.g. job title):	Period(s) employed:
Vikram Patel	Professor	01/10/2000-31/03/2017
Helen Weiss	Professor	01/01/1997-present
Betty Kirkwood	Professor	01/10/1979-31/07/2019
Abhijit Nadkarni	Research Fellow; Associate Professor	01/09/2011-28/02/2015; 01/09/2018-present
Dixon Chibanda	Associate Professor	01/09/2018-present
Ricardo Araya	Professor	01/01/2014-22/01/2017
& associated research teams		

Period when the claimed impact occurred: 2013-2020

Is this case study continued from a case study submitted in 2014? No

1. Summary of the impact (indicative maximum 100 words)

There is a significant gap between those who need mental health care and those who receive care in low- and middle-income countries (LMICs) due to a major shortage of psychiatrists and psychologists. LSHTM-led research from 2013 onwards showed how lay health workers could help people with common mental health disorders. This played a key role in informing, promoting and scaling-up new evidence-based approaches to mental health care in LMICs, including training lay health workers, and developing national policies to improve access to treatment in Africa and India. For example, the ground-breaking Friendship Bench intervention, which trains elderly community health workers, has been expanded across Zimbabwe, reaching 80,000 people in over 50 communities, and replicated in other countries.

2. Underpinning research (indicative maximum 500 words)

Common mental disorders comprise two main diagnostic categories: depressive disorders and anxiety disorders. WHO data indicate that 4.4% of the global population suffer from depressive disorders, and 3.6% from anxiety disorders. These are not just the most common types of mental illness, but were also the leading cause of Years Lived with Disability (YLD) in 2015. Alcohol use is also a leading cause of YLD and death, accounting for 7% of male adult deaths and 2% of adult female deaths globally. Many individuals with mental health disorders remain untreated, resulting in a 'treatment gap' - the proportion of people with disease who are not in treatment. For example, in India, approximately 10% of the population have depression, anxiety or substance use disorders, but 83% of this group do not receive treatment. In Zimbabwe in 2018, there were just 12 psychiatrists and 16 psychologists for a population of 14.4 million.

To address this gap, LSHTM staff including Chibanda, Nadkarni, Weiss, Patel, Araya and Kirkwood tested new approaches to mental health care using trained and supervised lay-health workers delivering community-based psychosocial interventions.

The benefits of counselling by lay workers

In India, between 2013 and 2015, LSHTM researchers led randomised controlled trials (RCTs) estimating the effectiveness of counselling and health promoting activity for alcoholism and depression respectively. The trials, led by Patel, demonstrated improved mental health outcomes for people as a result of community intervention strategies.

- The MANAshanti Sudhar Shodh (MANAS) ('project to promote mental health' in Konkani) trial found that a lay-counsellor-led intervention for depressive and anxiety disorders led to improvements in recovery from common mental disorders over 12 months. The trial randomised 24 primary health care (PHC) facilities to a collaborative stepped-care treatment model of case management and psychosocial interventions provided by a trained lay counsellor. Of the 1098 patients with common mental disorders in this intervention group, 620 (65.0%) had recovered at 6 months compared with 553/1144 (52.9%) of those in the control group. The effectiveness was sustained at the 12-month endpoint (3.1).
- The Healthy Activity Program (HAP) of PREMIUM (Program for Effective Mental Health Interventions in Under-Resourced Health Systems) randomised 495 adult primary care attendees with moderately severe to severe depression to either the HAP (lay-counsellor delivered treatment for severe depression) plus enhanced usual care (EUC) or EUC alone. HAP participants showed gains at the end of treatment on outcomes such as severity of depression, remission, recovery and suicidal behaviour, and maintained these through the 12-month follow-up (3.2, 3.3).
- The Counselling for Alcohol Problems (CAP) of PREMIUM randomised 377 adult male primary care attendees with harmful alcohol tendencies to either CAP plus enhanced usual care (EUC) or EUC alone. CAP participants showed gains at the end of treatment on outcomes such as remission, abstinence, recovery and percent of days abstinent, and maintained these through the 12-month follow-up (3.4, 3.5).

The Friendship Bench approach

In Zimbabwe, LSHTM collaborated with Kings College London and the University of Zimbabwe on the Friendship Bench trial, which evaluated a scalable and cost-effective intervention to reduce the mental health treatment gap in LMICs. The trial was carried out by Araya, Weiss as trial statistician, Chibanda (then University of Zimbabwe, now LSHTM, who went on to found the Friendship Bench initiative) and Abas of King's College London.

To combat the lack of clinical professionals in psychiatric care, the team in Zimbabwe trained elderly community lay health workers (known as 'grandmothers') in problem-solving therapy and behaviour activation (a coping strategy to increase contact with positively rewarding activities) from 2014 to 2015. The lay health workers then delivered up to 6 one-to-one sessions on a park bench near a primary health care facility over a 4 to 6 week period. Among 573 randomised patients (286 in the intervention group and 287 in the control group), 85% were women, and 41% were living with HIV. The trial found that at the 6-month endpoint, intervention group participants had fewer symptoms than control group participants on the Shona Symptom Questionnaire. Intervention group participants were also found to have lower risk of symptoms of depression (3.6).

3. References to the research (indicative maximum of six references)

3.1 Patel V, Weiss HA, Chowdhary N, Naik S**,** Pednekar S, Chatterjee S, **De Silva MJ,** Bhat B, Araya R, King M, Simon G, Verdeli H**, Kirkwood BR**. 2010. Effectiveness of an intervention led by lay health counsellors for depressive and anxiety disorders in primary care in Goa, India (MANAS): a cluster randomised controlled trial. *Lancet.* 18;376(9758):2086-95. doi: 10.1016/S0140-6736(10)61508-5.

3.2 Patel V, Weobong B, **Weiss HA**, Anand A, Bhat B, Katti B, Dimidjian S, **Araya R,** Hollon DS, King M, Vijayakumar L, Park A, McDaid D, Wilson T, Velleman R, **Kirkwood B**, Fairburn C. 2017. The Healthy Activity Program (HAP), a lay counsellor-delivered brief psychological treatment for severe depression, in primary care in India: a randomised controlled trial. *Lancet.* 389(10065), 176-185. doi: 10.1016/S0140-6736(16)31589-6

3.3 Weobong B, **Weiss HA**, McDaid D, Singla DR, Hollon SD, Nadkarni A***,** Park A, Bhat B, Katti B, Anand A, Dimidjian S, Araya R***,** King M, Vijayakumar L, Wilson T, Velleman R, **Kirkwood B**, Fairburn C, **Patel V**. 2017. Sustained effectiveness and cost-effectiveness of the Healthy Activity Programme, a brief psychological treatment for depression delivered by lay counsellors in primary

care: 12-month follow-up of a randomised controlled trial. *PLOS Medicine.* 14(9):e1002385. doi: org/10.1371/journal.pmed.1002385

3.4 Nadkarni A***,** Weobong B, **Weiss HA,** McCambridge J, Bhat B, Katti B, Murthy P, King M, McDaid D, Park A, Wilson T, **Kirkwood BR**, Fairburn CG, Velleman R, **Patel V**. 2017. Counselling for Alcohol Problems (CAP), a lay counsellor-delivered brief psychological treatment for harmful drinking in men, in primary care in India: a randomised controlled trial. *Lancet.* 389(10065):186-95. doi: org/10.1016/S0140-6736(16)31590-2

3.5 Nadkarni A***, Weiss HA,** Weobong B, McDaid D, Singla DR, Park AL, Bhat B, Katti B, McCambridge J, Murthy P, King M, Wilson TG, **Kirkwood B,** Fairburn C, Velleman R, **Patel V**. 2017. Sustained effectiveness and cost-effectiveness of Counselling for Alcohol Problems, a brief psychological treatment for harmful drinking in men, delivered by lay counsellors in primary care: 12-month follow-up of a randomised controlled trial. *PLOS Medicine.* 14(9):e1002386. doi: 10.1371/journal.pmed.1002386.

3.6 Chibanda D***, Weiss HA**, Verhey R, **Simms V**, Munjoma R, Rusakaniko S, Chingono A, Munetsi E, Bere T, Manda E, Abas M, and **Araya R.** 2016. Effect of a Primary Care-Based Psychological Intervention on Symptoms of Common Mental Disorders in Zimbabwe: A Randomized Clinical Trial. *JAMA.* **316**(24):2618-2626. doi:10.1001/jama.2016.19102

*not employed by LSHTM at time of research

We believe this body of research meets the 'at least 2*' definition given its reach, significance and rigour.

4. Details of the impact (indicative maximum 750 words)

This programme of research by LSHTM researchers and country partners underpinned the increased introduction of innovative interventions to address common mental health problems in resource-poor settings in India, Zimbabwe and elsewhere. The researchers addressed the shortage in psychiatrists in these settings by training lay health workers to deliver counselling and therapy to thousands of people who would otherwise have missed out on any care.

The ultimate lay worker intervention for mental health: the Friendship Bench

The Friendship Bench trial demonstrated the effectiveness of lay health workers delivering talking therapy at primary care level to help people in their communities suffering from anxiety and depression. Since its pilot in Harare, Zimbabwe, the Friendship Bench has become a national and international tool to improve mental health. The training material was adjusted to suit a wider audience, and the intervention rolled out in 2016 in Harare, in cooperation with the City Health Department, by training groups of 30 lay health workers in three different locations. A randomised design for the roll-out enabled it to be scientifically evaluated. Beneficiaries of the programme experienced an 80% reduction in depression and suicidal thoughts, and a 60% improvement in quality of life (5.1). The Friendship Bench team then trained over 400 'grandmothers' who provided talking therapy in 70 communities in Zimbabwe, helping over 30,000 people in 2017 alone (5.2).

The Friendship Bench became a national programme in Zimbabwe in March 2019, and by then was available in more than 100 communities in Harare, Chitungwiza, and Gweru. By 2020, over 50,000 people across the country had accessed the programme via 700 trained grandmothers (5.3). During the COVID-19 pandemic, when social distancing measures had to be implemented, the Friendship Bench Zimbabwe adapted to provide a free talking therapy service through the 'Friendship Bench open line', offering one-to-one support with a trained counsellor over the phone.

A follow-on initiative called 'Circle Kubatana Tose' (meaning 'holding hands together') enables Friendship Bench clients to join community support groups after they have had individual sessions. These have been running for 6 years in 34 communities, reporting improvement in quality of life,

income generation, and school attendance of participants. The groups share personal experiences to support each other, and have set up community gardens and business initiatives.

Spreading globally and sharing learning with high-income countries

From Zimbabwe, the Friendship Bench has been implemented in Malawi, Zanzibar, and Kenya, and also integrated into HIV care. Although the Friendship Bench was developed in the global South, it has been adapted for countries in the global North, a valuable example of South-North learning. In New York, Friendship Benches were piloted in 2016 in the Bronx area of the city and launched in mid-2017, attracting approximately 30,000 visitors in their first year (5.2). A total of 60,000 people visited a New York Friendship Bench between 2017 and 2018, demonstrating the programme's relevance for high-income settings (5.2, 5.4). The New York programme supplied free downloadable PDF resources for lay health worker training, including training manuals, patient questionnaires, and information on culturally appropriate terminology. Several Canadian organisations have also implemented the approach with support from the original Zimbabwe team and funding from Grand Challenges Canada.

Dixon Chibanda, the founder of Friendship Bench, joined LSHTM in 2018. Prior to this, he gave a TED Talk on the Friendship Bench trial in 2017, which has had 2.9 million views (5.5). Since joining LSHTM, Chibanda has participated in a mental health awareness panel with HRH Prince William The Duke of Cambridge and New Zealand Prime Minster Jacinda Ardern at the 2019 World Economic Forum in Davos. At the Global Mental Health Summit in 2018, The Duke and Duchess of Cambridge pledged their support to the Friendship Bench (5.6).

Training manuals and education programmes

The MANAS and PREMIUM trial outputs were adapted into psychological treatment manuals in 2013, co-authored by Nadkarni, Patel and others, on Counselling for Alcohol Problems and the Healthy Activity Programme. 4 free, competency-based open access digital courses were subsequently developed by the authors in partnership with the Annenberg Physician Training Programme in Addictive Disease and the PREMIUM programme, funded by the Wellcome Trust, and in association with Sangath Organisation and the Government of Goa's Directorate of Health Services. The courses (Alcohol Counselling; Depression Counselling; Psychological Counselling; and Screening for Alcohol, Tobacco, and Other Substance Abuse Disorders in Primary Care) were hosted by NextGenU.org and aimed at community health workers and lay people providing peer counselling (5.7).

The trials in India also underpinned the specific recommendations of the Disease Control Priorities (DCP) 3 on Mental, Neurological and Substance Use Disorders, which was co-edited by Patel in 2015 (5.8). The DCP is a periodic review of the most up-to-date evidence on cost-effective interventions to address the burden of disease in low-resource settings. It is targeted at governments, universities and physicians, and aims to strengthen capacity for evidence-based decision making.

Based on the outputs of the PREMIUM trials, since re-joining LSHTM in 2018, Nadkarni also delivered training on depression, alcohol and tobacco de-addiction, and on counselling programmes, to several groups of participants in Africa and Asia including nurses, dentists, doctors, and counsellors in Goa in 2020, Buddhist nuns at the Ladakh Nuns Association in 2019, and counsellors and staff at the Sex Workers' Outreach Programme in Nairobi, Kenya.

Recognising the need for degree-based mental health training for professionals in the field and the importance of strengthening mental health systems worldwide, LSHTM and King's College London (KCL) launched a Master's in Global Mental Health in 2012. Nadkarni, Chibanda and others wrote course material based on research findings, and taught students about policy, leadership and research to address the resource shortage of trained psychiatrists and evidence-base for action in global mental health. The MSc has accepted 50 students per year since its inception, with around half from LMICs. Graduates have gone on to careers in national mental health policy and planning, epidemiological and mental health services research, and advisory and advocacy roles in governments, international agencies and non-governmental organisations.

5. Sources to corroborate the impact (indicative maximum of 10 references)

5.1 Chibanda D, Weiss H and Verhey R et al. 2016. Effect of a primary care-based psychological intervention on symptoms of common mental disorders in Zimbabwe: a randomised clinical trial. *JAMA.* 316(24):2618-2626 doi:10.1001/jama.2016.19102

5.2 BBC Future Article: How one bench and a team of grandmothers can beat depression. Accessed at: https://www.bbc.com/future/article/20181015-how-one-bench-and-a-team-of-grandmothers-can-beat-depression

- Contains information and numbers on scale up

Mental Health Innovation Network, accessed at: https://www.mhinnovation.net/innovations/friendship-bench

- Impact summary contains information and numbers on scale up

5.3 The Friendship Bench Extended profile, accessed at: https://www.friendshipbenchzimbabwe.org/mediacentre

5.4 Mosaic (Wellcome) feature on Chibanda and Abas: https://mosaicscience.com/story/friendship-bench-zimbabwe-mental-health-dixon-chibanda-depression/

- Details on Friendship Bench in Zimbabwe and NYC programme

5.5 'Why I train grandmothers to treat depression.' Dixon Chibanda: TEDWomen 2017. Accessed at: https://www.ted.com/talks/dixon_chibanda_why_i_train_grandmothers_to_treat_depression?language=en

5.6 Twitter @KensingtonRoyal. The Duke & Duchess of Cambridge visit the Friendship Bench. Accessed at: https://twitter.com/kensingtonroyal/status/1049651090113871873?lang=en

5.7 Courses for community health workers hosted by NextGen.org. Accessed at: https://nextgenu.org/course/index.php?categoryid=162

- Co-developed by Nadkarni and Patel and based on trials

Anand A, Chowdhury N, Dimidjian S and **Patel V.** Healthy Activity Programme manual. 2013.

Dabholkar H, **Nadhkarni A,** Velleman R and **Patel V.** Counselling for alcohol problems manual. 2013.

5.8 Patel, V., D. Chisholm., T. Dua, R. Laxminarayan, and M. E. Medina-Mora, editors. 2015. Mental, Neurological, and Substance Use Disorders. Disease Control Priorities, third edition, volume 4. Washington, DC: World Bank. doi:10.1596/978-1-4648-0426-7. License: Creative Commons Attribution CC BY 3.0 IGO. Accessed at:

- MANAS trial reference pg 217
- MANAS trial in text pg 78
- Edited by Patel (corresponding author)