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Section 1 - Publishable summary

EMERALD



Logo: **Emerald**

Project title: Emerging mental health systems in low- and middle-income countries

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1.1 Summary description of project context and objectives

Health systems the world over are facing ever greater demands and challenges. The health systems of low- and middle-income countries (LMICs) are particularly strained due to the lower availability of resources and the higher overall burden of disease in these populations, compared to high-income countries. Many LMICs face a double burden of disease: While there are still extremely high, yet slowly decreasing levels of mortality due to communicable, maternal, perinatal and nutritional conditions, chronic non-communicable disease, including mental disorders, increase.

Health systems in LMICs are currently failing to meet the mental health needs of the populations they seek to serve. Starting from the premise that there can be 'no health without mental health' [1], a health system cannot be considered to be functioning properly if it is unable to protect and take care of the basic health rights and needs of the sick and the vulnerable – including the mentally ill. In the large majority of LMICs, resources and services for mental health are extremely meagre, with low-income countries allocating 0.5% and lower-middle income countries 1.9% of their health budget to the treatment and prevention of these disorders, even though they represent over 10% of the overall disease burden [2]. In low-income countries, there is on average only one psychiatrist per 1.7 million people and one psychiatric inpatient bed per 42,000 people [2]. The result of this is a substantial treatment gap. A large multicountry survey supported by WHO showed that 76–85% of people with severe mental disorders in low-income countries did not receive any treatment in the previous year [3], often with devastating consequences [4-11].

In the past years, much research has clarified how to tackle the growing burden of mental disorders. Landmark developments include the World Health Report in 2001 [12]; Lancet series on mental health in 2007 and 2011; the establishment of a Global Movement for Mental Health; the development of WHO's mhGAP programme for scaling up services for mental disorders [13,14]; the Grand Challenges in Global Mental Health review [15]; the

establishment of 'Collaborative Hubs for International Research in Mental Health' by the National Institute of Mental Health (NIMH); the WHO Executive Board resolution in 2012 addressing the global burden of mental disorders [16]; as well as the on-going Programme for Improving Mental health care (PRIME) [17].

What is still missing is how to translate this knowledge into practice within the health system. This is the research gap that the EMERALD project is addressing, to improve mental health outcomes in a fair and efficient way. Specifically, the EMERALD project aims to identify key barriers within the health system to, and solutions for, the scaled-up delivery of mental health services in LMICs [18].

This is being achieved through the following objectives:

Objective 1: Adequate, fair and sustainable resourcing (health system inputs): To identify health system resources, financing mechanisms and information needed to scale-up mental health services and move towards universal coverage.

Objective 2: Integrated service provision (health system processes): To evaluate the context, process, experience and factors of the health system which influence the implementation of mental health services.

Objective 3: Improved coverage and goal attainment (health system outputs): To develop, use and monitor indicators of mental health service coverage and the performance of the mental health system.

Underlying all of these health system objectives, there is a further fundamental need: To enhance local capacities and skills to plan, implement, evaluate and sustain system improvements.

The EMERALD consortium consists of 12 partners in Africa, Asia and Europe, who are working on the completion of these objectives to strengthen the mental health systems in 6 countries (Ethiopia, India, Nepal, Nigeria, South Africa and Uganda).

1.2 Work performed since the beginning of the project and the main results achieved so far

The EMERALD Project is organized across 6 work packages (WPs).

In **WP1** all ethics approvals have been obtained and annual ethics reviews conducted. Phone conferences have taken place on a monthly basis and the project consortium has had 6 in-person meetings (2 of which included meetings with policy-makers). A publication plan and protocol was developed early on in the project and 28 papers have been published so far. The Scientific Advisory Board has been convened and consulted. A consortium satisfaction survey was conducted and the excellent results were presented to the project group.

For **WP2**, the EMERALD countries have delivered 16 short courses to build capacity for mental health system strengthening in researchers, service planners, service users and caregivers. The EMERALD PhD fellows are making excellent progress: 4 students have published papers as first authors and a further 5 papers are under review. The EMERALD Masters course materials have been updated and formatted in preparation to make them Open Source by October 2017. Two systematic reviews have been published which synthesise the evidence base for capacity-building of service users and caregivers, as well as service planners. Two research reports have been published which explore the barriers and facilitators to greater service user involvement in mental health system strengthening in Ethiopia and India. A mixed methods evaluation of the impact of capacity-building is underway.

WP3 has developed a new tool to assess the costs and impacts of scaled-up delivery of mental health services, which has been contextualised and applied in all 6 countries. Estimated costs and health impacts of scaled-up delivery of a package of mental health care have been published and disseminated. WP3 has carried out a Household Survey of the economic and social impact of mental disorders (N=4,396), with baseline results indicating greater adversity among households with mental disorders in comparison to controls. 12-month longitudinal follow-up assessments are complete, and data cleaning and analysis are underway. A framework for sustainable mental health financing has been developed, and a situational assessment and a series of structured interviews with national experts have been completed to inform the production of sustainable mental health financing strategies in all 6 sites.

For **WP4**, strategies to address barriers to and through health care were identified and presented in all 6 countries. Country sites have identified 5 main pathways to and through care, and the barriers that impede care in each pathway. Specific strategies were identified for each pathway; Help-seeking (3 sites); Identification (1 site); Diagnosis

(3 sites); Treatment (2 sites); and Follow-up to recovery (3 sites). Baseline and annual facility and district profiles continue to be conducted. Baseline data for ACIC and PACIC have been conducted. Process evaluation and key stakeholder interviews have been conducted in all 6 countries. 6 papers have been published and 3 submitted for publication.

WP5 has conducted a situational analysis of the HMIS systems in all 6 countries (results published), a Delphi study with a panel of experts to develop a list of indicators for measuring service scale-up, coverage and performance (results published), and refined the list to a final set of possible indicators through in-country consultation workshops. The use of the resulting set of indicators, and accompanying purposively-developed forms to facilitate the integration of the indicators into existing health information systems, is currently being monitored and evaluated. To date, WP5 has conducted 270 case record reviews to assess the quality and adequacy of collected information, and 190 in-depth interviews with health workers to assess the feasibility of the new indicators.

In **WP6** the initial dissemination plan and protocol has been implemented and various social media platforms are being used to present EMERALD work. The project has been presented at 8 international conferences, and 2 press conferences have been organised and 4 press releases issued. EMERALD has been mentioned in the press in partner countries. Video interviews of EMERALD staff, researchers, PHD and Master students, PIs and senior researchers, and policy makers have been created and are accessible via the website and the YouTube channel. Since November 2015, the EMERALD website has received over 7.680 hits. EMERALD findings were reported in 2 separate events at the EC's DG DEVCO in Brussels in 2017.

1.3 The expected final results and their potential impact and use (including the socio-economic impact and the wider societal implications of the project so far)

The EMERALD programme seeks to strengthen mental health systems in six LMICs in Africa and Asia by strengthening several components of the mental health systems in these countries, including health system inputs, system processes, and performance outputs [18]. Based on the experience of the participating countries, the programme aims to achieve major positive impact by producing an evidence-based 'roadmap' for decision-makers in LMICs on how to scale-up mental health services within the constraints of the broader health system. This includes identifying what human and budgetary resources are needed to meet local targets, health financing policy options, governance requirements and coverage/performance indicators [19]. Furthermore, the EMERALD programme aims to map out and articulate the pathways used in the six local health systems to integrate mental health care within existing services [20-24]. It is also documenting the impact of this integration on service inputs, processes and outputs [25-27]. In so doing, the programme is producing workable and tested strategies for sustainable integration for health service providers, in the six countries and beyond. Another major impact of this programme is to identify, train and support the career progression of a new cadre of health professionals and researchers in LMICs with the information and skills needed to bring a health systems perspective to mental health planning, provision and evaluation, and one that complements existing knowledge, capacities and learning opportunities. This is alongside capacity-building activities to increase the involvement of service users and their caregivers [28-31], and build capacity amongst policy-makers and planners [32], in mental health system strengthening. Indeed, the shortage of technical know-how has been identified as a major barrier to the scale-up of mental health services in LMICs, and EMERALD aims to address this. By taking this comprehensive approach, we plan to improve the evidence base on how to enhance health system performance in practice in LMICs. Thereby we can ultimately reduce some of the mental health treatment gap that is prominent in LMICs and improve the care for people with mental health problems in these countries.

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