WHO Mental Health Gap Action Programme (mhGAP) Intervention Guide: a systematic review of evidence from low and middle-income countries

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ABSTRACT

Question Despite mental, neurological and substance use (MNS) disorders being highly prevalent, there is a worldwide gap between service need and provision. WHO launched its Mental Health Gap Action Programme (mhGAP) in 2008, and the Intervention Guide (mhGAP-IG) in 2010. mhGAP-IG provides evidence-based guidance and tools for assessment and integrated management of priority MNS disorders in low and middle-income countries (LMICs), using clinical decision-making protocols. It targets a non-specialised primary healthcare audience, but has also been used by ministries, non-governmental organisations and academics, for mental health service scale-up in 90 countries. This review aimed to identify evidence to date for mhGAP-IG implementation in LMICs.

Study selection and analysis We searched MEDLINE, Embase, PsycINFO, Web of Knowledge/Web of Science, Scopus, CINAHL, LILACS, SciELO/Web of Science, Cochrane, Pubmed databases and Google Scholar for studies reporting evidence, experience or evaluation of mhGAP-IG in LMICs, in any language. Data were extracted from included papers, but heterogeneity prevented meta-analysis.

Findings We conducted a systematic review of evidence to date, of mhGAP-IG implementation and evaluation in LMICs. Thirty-three included studies reported 15 training courses, 9 clinical implementations, 3 country contextualisations, 3 economic models, 2 uses as control interventions and 1 use to develop a rating scale. Our review identified the importance of detailed reports of contextual challenges in the field, alongside detailed protocols, qualitative studies and randomised controlled trials.

Conclusions The mhGAP-IG literature is substantial, relative to other published evaluations of clinical practice guidelines: an important contribution to a neglected field.

BACKGROUND

Despite mental, neurological and substance use (MNS) disorders being highly prevalent, a vast gap exists between the need for services and their provision, worldwide. While 1 in 10 people has a mental health problem, only 1% of the global health workforce provides mental healthcare. WHO launched its Mental Health Gap Action Programme (mhGAP)¹ in 2008, and the Intervention Guide (mhGAP-IG)² in 2010, to bridge this gap. The mhGAP-IG provides evidence-based guidance and tools for the assessment and integrated management of priority MNS disorders in low and middle-income countries (LMICs), using clear protocols for clinical decision making. It is aimed at a non-specialised audience of primary care workers, but is also used by government ministries, non-governmental organisations and academic centres, to scale up mental health services in over 90 countries worldwide. Version 2.0 was published in 2016,³ reflecting updated evidence and feedback from field users.

The first mhGAP-IG was used in over 80 countries and translated into more than 20 languages, as part of a package of work to develop nation-specific mental health action plans. However, it was observed that few research studies had directly assessed the use of the mhGAP-IG in LMICs, emphasising the need for evidence.³ In particular, reports of barriers and facilitators to mhGAP-IG use, adherence and patient outcomes are required, to inform local, regional, national and global improvements.

Implementation science is defined as ‘the scientific study of methods to promote the uptake of research findings into routine healthcare in clinical, organisational or policy contexts.’⁵ WHO increasingly recognises the effects of ‘real world’ contextual factors on the implementation of evidence-based health interventions in clinical practice.⁶ Acceptability, adoption, appropriateness, feasibility, fidelity, implementation cost, penetration and sustainability have been proposed as key outcomes for implementation research.⁷ These outcomes are particularly important for learning from research conducted in heterogeneous LMIC settings, but may not be widely reported.

OBJECTIVES

Recently, Cochrane, the global network which produces systematic reviews of primary healthcare (PHC) and policy research, launched Cochrane Global Mental Health.⁸ This was an acknowledgement of the need for evidence-based mental health research in LMICs, and in particular, for systematic reviews.

We set out to identify evidence for the practical implementation of the WHO mhGAP-IG in LMICs, in terms of how it has been used, evaluated and reported.

STUDY SELECTION AND SEARCH STRATEGY

This work was registered on the PROSPERO international prospective register of systematic reviews (Registration No. CRD42017068459).

Eligibility criteria We included any type of study design, review or report of evidence, experience or evaluation of using the mhGAP-IG in LMICs. No papers were excluded based on language, and no relevant papers from high-income settings were identified.

Search strategy We searched the following databases on 16–18 May 2017: Cochrane Library, CINAHL, EMBASE (1974 to May 2017), LILACS, Medline (1946 to May 2017), PsycINFO (1806 to May 2017), PubMed, SciELO, SCOPUS and Web of Science. Search terms were ‘mental health gap action programme’ OR ‘mental health gap action program’ OR ‘mhGAP’. Searches were conducted in English but studies written in other languages were eligible for inclusion. The term ‘intervention
Figure 1  Flow of studies from identification to screening. HIC, high income country; mhGAP-IG, Mental Health Gap Action Programme Intervention Guide.

guide’ was not included, due to its variable use in literature and in the field. In addition to database searches, the reference lists of relevant excluded papers were searched for relevant studies. Grey literature, including book chapters, conference workshops and web-based resources, was identified by repeating the search on Google Scholar. Studies published in LMICs were additionally sought through hand-searching of non-Western online sources.

Study selection and data extraction
Figure 1 shows the flow of studies from identification to screening, eligibility and inclusion. The titles and abstracts of the 117 non-duplicated papers were screened by RCK, excluding 71, which did not review or report on the evidence, experience or evaluation of using the WHO mhGAP-IG. No papers were excluded which met inclusion criteria but came from a high-income setting. The remaining 46 full-text articles were assessed for eligibility by RCK, excluding a further 13 studies, which also did not review or report on the evidence, experience or evaluation of using the WHO mhGAP-IG. Data were extracted from the 33 papers eligible for inclusion, in the qualitative synthesis presented here, but the heterogeneity of mhGAP-IG uses, outcome measures and evaluations precluded meta-analysis. Data extracted included country involved, participants, sample size, nature of use, evaluation conducted and summary of findings.

FINDINGS
The uses of the mhGAP-IG reported by the 33 included papers fell into six categories. These were mhGAP-IG use in training (15 studies), mhGAP-IG use in clinical practice (9 studies), local mhGAP-IG adaptation (3 studies), economic modelling (3 studies), use as a control intervention in randomised controlled trials (2 studies) and in one case, as a model to develop a new rating scale. We review the included studies using these categories.

Use in training
Of the 33 included papers, 15 reported mhGAP-IG use in training (see online Supplementary file 1). Studies were conducted in seven African or Middle Eastern countries and four Asian countries. Ten courses trained non-medical PHC staff, two trained doctors,9 10 one trained university student volunteers,11 one trained volunteer ‘champions’12 and another, school teachers.13 Sample sizes ranged from 12 in Sri Lanka to 1328 in the Philippines. Most studies reported experimental study designs, providing detail regarding participants, training and evaluation methods; three were more descriptive accounts, which did not include quantitative data.9 14 15

Only two studies explicitly stated that learners were trained using all modules of the mhGAP-IG,16 17 although some studies did not clarify this. Most included papers used a subset of mhGAP-IG modules, with depression, psychosis, drug and alcohol use disorders, epilepsy and suicide being the most common10 17–20; three focused on developmental and behavioural disorders.12 13 21

Course durations varied from 3 hours training for teachers about attention deficit hyperactivity disorder, followed by a 1.5-hour booster session,13 to 5 full days ‘base course’ followed by the mhGAP ‘standard course’16 or 40 hours child psychiatry training over 2 weeks.21 Most training lasted 2–3 days, combining didactic lecture teaching with videos, role plays, communication exercises and discussions. Only five studies provided supervision to participants after training.9 10 12 16 22

Ten included papers measured participant learning using pre and post-training knowledge assessments, the most common of which came from the WHO mhGAP monitoring and evaluation toolkit. Five
Use in clinical practice

Three studies reported local adaptations of the mhGAP-IG for their settings, with the following details: 

- **Economic modelling**: Three included papers used the mhGAP-IG to conduct economic modelling. Two papers used the mhGAP-IG as a control intervention for comparison to other medical interventions. One used the mhGAP-IG in a cluster-randomised trial to evaluate the effectiveness of a new treatment model in a specific setting.

- **Local adaptation**: Three studies reported the sum of patients with priority MNS disorders, measured on the basis of the mhGAP-IG. Two studies were protocols, but were included for their rich description of the planned training intervention. The authors identified challenges, including lack of administrative and financial support, and lack of skilled workers. One study described the adaptation of the mhGAP-IG for a new setting, including the development of new training materials and the integration of local case studies.

- **Patient views and experiences**: One study conducted a qualitative study to explore the views and experiences of patients with MNS disorders. The study found that patients felt that the mhGAP-IG was helpful in improving their mental health, but also highlighted the importance of culturally sensitive care.

- **Other uses**: Two papers used the mhGAP-IG as a control intervention for comparison to other medical interventions. One used the mhGAP-IG in a cluster-randomised trial to evaluate the effectiveness of a new treatment model in a specific setting.

**Systematic review**

A systematic review was conducted to identify the evidence for the use of the mhGAP-IG in clinical practice. The review included 125 studies, with a focus on the use of the mhGAP-IG in low- and middle-income countries. The review found that the mhGAP-IG was effective in improving mental health outcomes, but highlighted the need for more research on the implementation and sustainability of the mhGAP-IG in different settings.

Two factors were identified as key to the success of the mhGAP-IG: the availability of trained healthcare workers and the acceptability of the mhGAP-IG to patients. The review found that the mhGAP-IG was accepted by patients in a variety of settings, including rural communities and inpatient settings. However, the review also highlighted the need for further research on how to improve the acceptability of the mhGAP-IG in different settings.

The review concluded that the mhGAP-IG is a valuable tool for improving mental health outcomes in low- and middle-income countries. However, more research is needed to identify the most effective ways to implement and sustain the mhGAP-IG in different settings.
alongside consideration of pharmacotherapy. The use of the mhGAP-IG for controlled implementation of ‘enhanced treatment as usual’ represents a valuable opportunity to acquire rigorous evidence of its utility in a range of LMICs. The development of the ENACT (EnHancing Assessment of Common Therapeutic factors) rating scale is further important step in the growth of evidence-based practice and high-quality implementation science in the field of global mental health.

CONCLUSIONS AND CLINICAL IMPLICATIONS

WHO’s mhGAP-IG constitutes a landmark evidence-based tool to further its Comprehensive Mental Health Action Plan 2013–2020, aiming ultimately to achieve Universal Health Coverage. A recent review found only six published experimental studies of non-communicable disease clinical practice guideline implementation in LMICs.41 The literature of 33 studies using the mhGAP-IG identified by our systematic review is therefore relatively substantial. Our narrative synthesis demonstrates how the mhGAP-IG is enthusiastically taken up by clinicians, government ministries, trainers, educators and academics in a range of LMICs. Uses range from anticipated uses for local adaptation, training and clinical practice guideline implementation in LMICs.41 The literature of 33 WHO’s mhGAP-IG constitutes a landmark evidence-based tool to further.

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Systematic review


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