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# **'Built for expansion': the 'social life' of the WHO's mental health GAP Intervention Guide**

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## **Abstract**

The focus of the paper is the WHO's mhGAP Intervention Guide (mhGAP-IG) 2.0 (2016), an evidence-based tool and guideline to help detect, diagnose and manage the most common mental disorders, designed for use by non-specialists globally but particularly in low- and middle-income countries. This research traces the always partial 'living history' and 'social lives' (the performance and conditions of possibility) of mhGAP-IG— how it is 'done' and what it 'does. We examine the conditions of possibility that produce and legitimate mhGAP-IG, and the ways these are 'black-boxed' through casting mhGAP-IG in technical rather than epistemological terms. The paper illuminates how its explicit design for global expansion positions mhGAP-IG as open to questioning from those who are technical 'insiders' and setting the epistemological parameters of its own critique. It analyses mhGAP-IG as an 'inscription device' that inscribes and materialises algorithmic imaginaries of mental health that impact on design and local implementation. This paper is one attempt at initiating dialogue with the WHO from perspectives and methodological approaches not usually included in the conversation. Throughout, mhGAP-IG within the wider global mental health assemblages that make the tool possible and shape its global circulation.

## **Introduction**

The World Health Organization's (WHO) (2008) Mental Health Gap Action Programme (mhGAP) aims to mitigate the 'treatment gap' between need for mental health interventions and availability of specialist care especially in LMICs. A key component in closing this gap is the WHO's mhGAP-Intervention Guide (mhGAP-IG), developed in 2010 as 'a simple tool to help detect, diagnose and manage the most common mental, neurological, and substance [MNS] use disorders' (Department of Mental Health and Substance Abuse, WHO 2011, 2), specifically addressing non-specialist audiences (i.e. doctors, nurses, other health workers, without mental health specialism, as well as health planners and managers (WHO 2016). The Guide is now in version 2.0 (2016) and is also available as a smartphone app (e-mhGAP).

The WHO describe the mhGAP-IG as 'an evidence-based technical tool aimed at supporting non-specialized health-care providers to redistribute clinical tasks previously reserved for mental health specialists' (WHO, 2017a, 75). mhGAP-IG is an evidence-based guideline using an algorithmic protocol designed for 'streamlined and simplified clinical assessment', where one moves through a flowchart of questions, eliciting yes or no answers from the person interviewed, with the input of answer they give determining the next questions asked (from a predetermined list) (WHO 2016). The IG is part of a larger portfolio of products including training materials, and implementation and operations manuals (WHO 2015, 13).

The choice to focus on mhGAP-IG in this paper lies in its global significance, evident in the fact that the ‘first mhGAP-IG was used in over 80 countries and translated into more than 20 languages’ (Keynejad et al. 2017, 1). mhGAP-IG is the ‘principal clinical tool being used as part of the scaling up strategy of the mhGAP program in countries’, and provides ‘a definitive platform to define “what” should be scaled up’ (Dua et al. 2011, 9). The IG is framed as providing ‘the ingredients for scaling up mental health services in LMICs’ (Petersen et al., 2011: 319) – a ‘robust foundation for scaling up by answering the key question of what should be scaled up’ (Patel, 2012: 8). Some argue that the mhGAP-IG ‘should become the standard approach for all countries and health sectors’ (Patel et al. 2011:1442).

As algorithmic tools become an increasingly common state of the art (see Jasovic-Gasic et al. 2013), and given the global significance of the mhGAP-IG, it is important to question the conditions of production of these tools and guidelines, their underlying theories and assumptions about mental health, and how the kinds of knowledge that they create have implications for the governance and experience of mental health globally. According to the WHO the development of mhGAP is seen as an iterative process and feedback is encouraged. This paper is then one attempt at initiating dialogue with the WHO from perspectives and methodological approaches not usually included in the conversation. This paper aims to extend and somewhat disrupt the ‘official’ story that is told by the WHO about mhGAP-IG by making a first step in tracing its ‘social life’.

### **Methodology: The ‘social life’ of mhGAP-IG**

This paper is an early stage in a larger study documenting how the mhGAP-IG is ‘done’ in multiple sites by different actors who coalesce around the guidelines, from crafting its design to implementing in the field. Our methodological approach traces the social life of the mhGAP-IG, building upon ethnographic work into quantification (Merry 2016), medical technologies (Hardon and Moyer 2014), and pharmaceuticals (Ecks and Basu 2009). We understand the mhGAP-IG as a culturally constituted object, aiming to highlight the conditions of its production as well as its ‘social uses and consequences’ (Whyte, van der Geest, and Hardon 2003, 13 & 3).

The focus our research is the ‘doing’ of mhGAP-IG – how is it ‘done’ and what does it ‘do’, particularly in regard to its design for global expansion. In this paper, the ‘doing’ of mhGAP-IG is organised around an analysis of its contemporary and historical conditions of possibility; how it is made; and how it is performed across different sites. Our analysis begins by focusing on the ‘conditions of possibility’ (a Foucauldian approach widely used in Critical Global Health, for example by Bell (2017) to trace the history of evidence-based medicine) of mhGAP. We explore the context in which mhGAP-IG developed and was made to make sense (i.e. conceptions of mental ‘illness’ as universal, commensurable and measurable; metrics that construct mental illness as chronic, disabling, and burdensome but also as treatable; and technical conceptions of care).

We then give a detailed account of the methodological approach to the production of mhGAP-IG and the (partial) story behind its construction. We are interested in how the

mhGAP-IG, and e-mhGAP act as ‘inscription devices’ (Latour and Woolgar, 1979), in the wider quantification of mental health, diverting attention from their material process of production, and constitute ‘the domains they appear to represent’ (Rose, 1999, 198). We aim to explore how mhGAP operates as part of ‘the knowledge-power processes that inscribe and materialize the world in some forms rather than others’ (Haraway 1997, 7), and makes possible certain understandings of mental health over others. The significance of this approach lies in making visible the ‘black box’ (Porter 1995) of the mhGAP-IG and its associated products i.e. the social, cultural and political processes that produce systems of classification but are often obscured in technical language (Mills and Hilberg, 2018).

In talking about performance, our focus is on the ‘doing’ (Mol, 2002) of the mhGAP-IG, and the ways the mhGAP-IG ‘does’ mental health (for example, as ‘illness’). This approach understands the mhGAP-IG as multiple – meaning that despite its algorithmic approach to decision-making– we’re interested in how the guidelines are done differently in different contexts, and the alignments and contrasts between these different ways of doing. For example, how mhGAP-IG is done at the annual Forums is different from how mhGAP-IG is done during implementation in one country to another, which is different again to how a government Ministry does mhGAP-IG. Our methodological approach in this paper includes participant observation into the performative aspect of mhGAP, and specifically here, one of the author’s attendance at the 2017 mhGAP Forum; ongoing discussion with some of the main architects of mhGAP-IG; and engagement with the extensive reports produced by international organizations.

Our focus on ‘social life’ extends to explore the historical and political forces that produce and legitimate mhGAP-IG. In this analysis we are interested in how the history of classification and quantification of mental health for international comparison ‘lives’ on (Stoler, 2002) – shaping present algorithmic conceptualizations of mental health. In doing this, the paper draws upon postcolonial analysis of quantification and technology (Appadurai 1993) and Haraway’s feminist technoscience (1997), aiming to situate the knowledge that has made mhGAP-IG possible and to show how this knowledge risks displacing other situated knowledges about mental distress. Situating the mhGAP-IG in this way contrasts with WHO framings of it as universal, where design is explicitly for global expansion.

The mhGAP-IG does not operate in a vacuum and its historical conditions of possibility for mhGAP-IG are ‘alive’ in the present (Stoler, 2002). Therefore, these histories and the wider global assemblage of mental health in which mhGAP is embedded, are woven throughout the analysis, which focuses on how mhGAP is made and how it is performed across different sites. Our analysis and findings are organised as follows: first, we set the scene with a foundational condition of possibility for mhGAP-IG – the construction of a ‘treatment gap’; next we detail the making of mhGAP-IG; we then explore the expansionary logic built into the tool; followed by tracing its living history, and analysing it as an ‘inscription device’, before we conclude.

## Analysis and Findings

### The ‘gap’ in mhGAP

A key condition of possibility and a central narrative trope for the development of mhGAP and its products, is the construction of a ‘treatment gap’. A statistic illustrating this gap was oft-repeated at the mhGAP Forum: that 45% of the world’s population lives in a country where there is less than 1 psychiatrist per 100,000 people (WHO Global Health Observatory Data 2014). The mhGAP programme’s conception of the treatment gap relies on burden of disease metrics, and very frequently references them (see for example WHO 2015, 13; WHO 2018; WHO 2008) as does global mental health literature (Lund et al. 2012, 1), reifying Global Burden of Disease calculations as an important ‘rhetorical resource’ within global (mental) health (Weisz, Cambrosio, and Cointet 2017, 520).

The statistical construction of a treatment gap enacts a performative function in spurring action (Applbaum 2015) and constructing a sense of urgency to close the ‘gap’. For example, Dua et al. (2011) claimed that guidelines were ‘urgently needed’ to tackle the ‘large treatment gap’ (of around 75%) in LMICs. Metrics have been central in making visible and constructing the lack of availability of mental health care as a “hidden emergency” (Funk & Van Ommeren 2010), where failure to act is framed as a “failure of humanity” (Kleinman 2009). Thus, mhGAP mobilises a moral call for action made on the basis of a quantified notion of the scale of the ‘problem’, which has been hugely successful in increasing global visibility of mental health. The mhGAP-IG emerged as a solution to this ‘emergency’, a way for Governments, clinicians and others to ‘act’ on mental health to reduce the quantified burden. Partly made possible through metrics, the mhGAP-IG has since come to be used in the production of metrics, such as for economic modelling to highlight the economic burden of mental disorders and to make a case for ‘return in investment’ of interventions (Chisholm et al. 2016, 415; Summergrad 2016).

The underlying assumptions of mhGAP’s ‘treatment gap’ have not gone without critique. Some critique the WHO’s ‘use of alarming statistics’ as being too heavily biomedical and overly focused on ‘treating individual conditions’, paving ‘the way for further medicalization of global mental health’ (UN Human Rights Council 2017, 5). Similarly, concerns have been raised that the mhGAP-IG disregards ‘ongoing debate about the cross-cultural validity of psychiatric diagnoses’ and suggests ‘an overreliance on psychotropic medication’ (White and Sashidharan 2014, 415); that it overlooks grass-roots approaches (Kirmayer and Pedersen 2014); and that it constructs mental health as being largely a technical problem of delivery of services (Applbaum 2015) - a ‘problem’ amenable to treatment using packages of care.

### How mhGAP-IG was made

For many in our ongoing expert interviews and personal communication with some of the actors who crafted mhGAP-IG, the above arguments around cross-cultural validity of diagnosis had created stagnation within mental health governance. The idea of

mhGAP-IG grew in opposition to this nihilism – a practical response to show something could be done. The original Guideline Development Group for mhGAP-IG was formed in 2007, led by Shekhar Saxena (then Director of the Department of Mental Health and Substance Abuse, at the WHO). A grant was applied for to enable the Group to hold a workshop at the Rockefeller Foundation’s Bellagio Center in Italy, and it was here, next to Lake Como, that ideas were ‘hashed out’ for the first IG (what would need to be done?; what format would it take?; who would be the audience?) The concept of task-sharing was central throughout. The Group consisted of professionals who work in the field (including psychiatrists, psychologists and NGO representatives), but did not include services users. According to one of our expert interviews, the ‘process was very congenial and collegial, with a ‘clear sense of cause, personal relationships and friendship’. This workshop was then followed by larger workshops at the WHO, with Graham Thornicroft taking on leadership of the Guideline development, while Corrado Barbui led the systematic review process.

The methodological process of developing the original mhGAP guidelines is outlined in a number of places: an article by Dua et al. (2011) published in PLoS Medicine and widely cited; and in WHO documents (all available online through the WHO mhGAP Evidence Resource Centre ([http://www.who.int/mental\\_health/mhgap/evidence/en/](http://www.who.int/mental_health/mhgap/evidence/en/)) (WHO, 2009). The development of the mhGAP-IG firstly began with the identification of its ‘priority conditions’ - ‘depression, schizophrenia and other psychotic disorders (including bipolar disorder), suicide prevention, epilepsy, dementia, disorders due to use of alcohol and illicit drugs, and mental disorders in children’ WHO, 2009, 2). These were ‘identified on the basis of high mortality and morbidity, high economic costs, or association with violation of human rights within the area of MNS disorders’ (WHO, 2009, 2), showing the centrality of metrics to the development of mhGAP (Mills, 2018).

The guidelines were ‘based on systematic reviews of the best available evidence and consideration of values, preferences, and feasibility issues from an international perspective’ (Dua et al. 2011, 2). This process exposed the fact that little evidence on mental health interventions was available from LMICs, in which cases ‘new systematic reviews were commissioned’ (WHO, 2009, p5). Once the priority conditions were identified, the formulation of scoping questions began, in consultation with an international expert panel using the PICO framework (Population, Intervention, Comparator, Outcome, Time) (WHO, 2009, 4). The evidence was then graded using the Grading of Recommendations Assessment, Development and Evaluation (GRADE) approach, which synthesises the scientific evidence on the effectiveness of clinical interventions (Dua et al., 2011; WHO, 2009, 2015). GRADE methodology includes only data that meet specific pre-determined scientific criteria (from systematic reviews and RCTs). This means that smaller-scale qualitative data was excluded from the development of mhGAP-IG from the start (Cooper, 2015). According to Cooper, who details the methodological development of the mhGAP-IG and explores its significance for African countries, the

elision of more qualitative data has time and time again been shown to lead to misleading accounts that overlook certain crucial dimensions...[because] there may be potentially important aspects of the social world that cannot so easily be captured by the scientific processes of abstraction, reduction and standardization and prediction. And yet these more qualitative ‘things’ end up being excluded or silenced within the current evidence-based edifice (Cooper, 2015, 532-533).

Evidence-based medicine (EBM) is a key condition of possibility for mhGAP-IG, meaning that debates about EBM are also applicable to the mhGAP-IG. Central to EBM and mhGAP-IG is the standardisation of decision-making processes (Timmermans and Berg, 2003). This is linked to a wider ‘audit cultures’ (Strathern, 2000), where medical expertise is configured in statistical and epidemiological terms seen by some as a democratising force that remedies a growing distrust in professional opinion and autonomy (Bell, 2017). Others point out that hierarchies of evidence established within EBM (and in the making of mhGAP-IG) (with systematic reviews and Randomized Control Trials (RCTs) seen as the gold standard) and an emphasis on rationality, frames ways of conceiving of and doing health and care that are not amenable to being measured as ‘irrational’, thus discrediting and delegitimizing them within global health (Bell, 2017, p. 75). This is evident for the mhGAP guidelines, which Vikram Patel (a key figure in the Movement for Global Mental Health) says ‘should become the standard approach for all countries and health sectors’, meaning that ‘irrational and inappropriate interventions should be discouraged and weeded out’ (Patel et al. 2011:1442). ‘Irrational and inappropriate’ here seems to mean those interventions lacking an evidence-base as defined by the parameters of EBM, which conceptualises other frameworks as being ‘non-scientific’ in a hierarchy where bio-medical and psychiatric knowledge is privileged (Mills, 2014). The displacement of indigenous forms of healing as being ‘irrational’ was also a colonial strategy. For example, in British colonized India, and occurred simultaneously alongside the recruitment, and co-option, of indigenous healers to extend public health strategies into rural areas (Khalid, 2009). Thus, the logic of ‘task-sharing’ alongside conceptualization of ‘rationality’ have a colonial history.

By setting the parameters of what counts as evidence, and not including users and survivors in the early formulation of mhGAP, the makers of mhGAP-IG craft the epistemological parameters of critique for the guidelines, excluding alternative conceptualisations from different worldviews of distress (such as different cultural understandings, and/or user/survivor/Mad epistemologies) (LeBlanc and Kinsella 2016; D. Rose 2017; Russo and Sweeney 2016). Sociological research into the production of guidelines show that is common for them to create their own parameters for debate, which often allow technical debate but no political debate (Timmermans and Berg, 2003). This, alongside the technical accounts of how mhGAP-IG was made, risks positioning the mhGAP-IG as only open to questioning from those who are technical ‘insiders’. This practice stands in contrast to the stated intentions of the WHO, where development of mhGAP is seen as an iterative process, and where feedback is encouraged.



There are also critiques from within the methodological paradigm. Dua et al. identify a number of challenges in creating the guidelines, including no or very poor quality evidence ‘insufficient to make any recommendation’, for example this was the case for some psychosocial interventions (p. 2); and a majority of evidence from high-income countries, raising issues of applicability because of feasibility issues and lack of infrastructure. Dua et al. give the example that ‘full cognitive behavioural therapy may be hardly feasible in many low- and middle-income settings considering the training, supervision, and time needed for this intervention, and taking into consideration the need for local adaptations’ (pp. 2-3).

The WHO’s strong emphasis on evidence-based guidelines (Dua et al. 2011), means that the mhGAP-IG will undergo revisions every 5 years, hence the launch of version two of the guidelines in 2016 (WHO 2015). In 2015, a ‘WHO mhGAP Guideline Update’ was published and used to inform development of the mhGAP-IG version 2 (2016). The review of version 1.0 focused on evaluating the efficacy of different interventions, balancing evidence, for example, between drug-based treatments and psychosocial interventions. A number of changes were made: from more strongly emphasizing the ‘General principles of care’, to the inclusion of more low intensity psychological interventions (thanks to availability of more evidence). This links to a simultaneous increase in the evidence base around the implementation of mhGAP, especially through the PRIME (Programme for Improving Mental health care) project (Lund et al. 2012).

Furthermore, the development of e-mhgap (the app and increased online availability) impacted the structure of the second IG, leading to a change from a horizontal flowchart into a vertical decision-making model, which is more compatible with the format of smartphone apps. While this has the advantage of reducing printing costs and being easier to update, a vertical format impacts use through requiring the user to navigate the flowchart in a predetermined order, and thus being more prescriptive as to how it is administered.

### **Building mhGAP-IG for expansion**

In October 2017, the ninth meeting of the mhGAP Forum took place at the WHO in Geneva, and was attended by China Mills. The Forums, and other such events, operate as a performative space where mhGAP is ‘done’, including providing an opportunity for those who use mhGAP products, including Member States and ambassadors, to network and to feedback to the WHO.

Multiple issues were discussed at the 2017 Forum, but for the purposes of this paper, we will focus on two topics: the explicit rationality of expansion underlying the development of mhGAP and its link to digitisation, and the tension between the local and global enacted at the Forum. The 2017 Forum saw the launch of the mhGAP Intervention Guide 2.0 app (e-mhGAP, WHO 2017c), alongside launching mhGAP Training Packages and an Operations Manual (WHO 2017a; see also Forum Report WHO 2017b). The app, like the mhGAP-IG, uses an assessment algorithm of yes/no answers to produce suggested treatment outcomes which vary from psychoeducation to

psychopharmaceuticals. However, the app is not simply a digitised version of the IG, it also ‘adds value’ through a note-taking and feedback function, which tracks previous answers, meaning it can be used as a learning tool and has the potential to link to electronic health records.

Digitisation was framed as a central issue at the Forum. Tarun Dua (a key figure in the design of the app at the WHO) emphasised the importance of digitisation of mhGAP products to reach more people. Similarly, Shekhar Saxena, in talking about ‘the road ahead’, emphasized the need for digitisation in ‘every part of the world’ so that e-mhGAP gives ‘you the material you need to scale up mental health’. Dua explained that a complex design lies underneath the app’s easy use, with a similar layout to the IG. She explained that the app is ‘built for expansion’.

‘Expansion’ and ‘scale’ invoke a spatial orientation of mental health, where knowledge and practices are seen as extendable through a geographic plane. This expansionary logic has epistemological effects, shaping the idea of local context, the interaction between the global and the local, and impacts design. Designing mhGAP-IG for expansion necessarily requires the decontextualisation and simplification (Merry, 2016; Lingard, 2011) of mental health, framed as largely universal and commensurable, in order for the guidelines to travel. Building for expansion also means that more contextualised ‘local’ interventions that aren’t as amenable to being ‘scaled up’ are somehow made not to count (even though they may be more effective) (Bell, 2017).

At the Forum, implementation and training were conceived as key to expansion, with pre-publication Operations Manuals given out to attendees, showing step-by-step implementation of mhGAP. The guidelines cover the assembly of mhGAP, including forming an operations team, carrying out situational analysis, planning and budgeting, and templates for plans are included. There is an expectation in the Manual that components will need ‘adapting’ to local contexts, including translation, and many of the tools are described as being ‘adaptable’. Tarun Dua explained that a key feature of this process is that trainers can choose modules depending on local relevance and context. The Forum was also the stage for the launch of new Training Manuals - Training of Trainers and Supervisors (ToTS), and Training of Health-care Providers (ToHP) (WHO, 2017a). The WHO provides extensive and comprehensive training materials for the mhGAP-IG, all available online for free. These materials include: session by session outlines for a full week’s training, each including learning outcomes, activities, and evaluation exercises; powerpoints and videos; and pre and post-training multiple choice questions for assessment.

The ToTS manual states: ‘When adapting the ToTS training to local context, care should be taken to avoid adding or removing slides, eliminating activities or interactive components, or removing the opportunities for participants to practise these skills’ (WHO, 2017a, 6). Although we can’t know from the manuals how training takes place in practice (and indeed this would make for fascinating ethnographic research into another component of mhGAP-IG’s social life), local context is acknowledged as a matter of

translation and having a choice between predetermined training components (although not adding and removing slides in training activities). There is however a growing literature documenting the development of country-specific versions of mhGAP-IG, where the guidelines are seen as a ‘generic template that requires adaptation and contextualization to suit the particular needs of the health system in a given country’ (Abdulmalik et al. 2013 on implementation in Nigeria). Much of this conceives of local context through differing organisation of health systems, availability of resources and different models of training. However, this literature and WHO training manuals do not tend to conceive of how localized understandings and practice might disrupt or question the underlying logic and epistemology of universal tools such as the mhGAP products. Kenneth Maes (2017) documents similar cultural models of training practices within Africa’s AIDS industry, where well-intentioned programmes provide narrow training (often through manuals providing detailed ‘scripted minutiae’) in ‘technical forms of care’ and interpersonal skills that risk reorienting localised forms of care to more clinical conceptions (76-77) and that overlook ‘the political economies that shape the global health industry’ (72).

Expansion was mentioned throughout the Forum, showing the WHO’s long-term ambition in terms of the globalization of mental health services. Devora Kestel (Unit Chief for Mental Health and Substance Use, at the Pan American Health Organisation (PAHO) and the WHO) talked about mhGAP training in the Americas, and the ‘gradual expansion’ in Central America as the region adopts mhGAP as a key strategy. E-learning has been helpful to reach islands with limited resources, and a mental health ‘virtual clinic’ is under development. A key objective of this work is to ‘identify, diagnose and treat’ MNS, because ‘mhGAP trainees need to develop diagnostic skills based on ICD 10’ (Kestel, WHO mhGAP Forum, 2017).

### **The living history of mhGAP-IG**

mhGAP-IG is based on the WHO’s International Classification of Diseases (ICD-10), now in its 10<sup>th</sup> version. Discussion of the social life of psychiatric classificatory systems (how they are made and how they circulate) is important because these criteria are programmed into and performed globally through diagnostic algorithms, such as mhGAP-IG, and are thus key conditions of possibility. While diagnosis through mhGAP-IG is pre-determined by an algorithm, it is also likely a fluid social process (Nissen and Risør 2018) that is ‘done’ differently in different contexts. However fluid, diagnostic texts have global significance in setting the terms for debate and their creation has long created controversy over what gets included in the criteria and who gets to decide. This reflects both the social life of diagnostic texts and the ‘importance of diagnosis to the governance of social and clinical life’ (Pickersgill, 2013, 521).

Up to its fifth version, the ICD was produced by the French Government, coming in its sixth revision to be published in 1948 by the newly formed WHO. Due to low rates of adoption outside of France, the WHO established a commission to put together ICD-8 – said to be the first symptom-based model of classification, and conceptualised as a public classification useful for epidemiological work to compare findings across countries

through promoting uniformity in usage (Fulford and Sartorius 2009). The nomenclature from ICD-8 was adopted by the American Psychiatric Association (APA) in the Diagnostic and Statistical Manual of Mental Disorders (DSM) II, replacing earlier psychodynamic and theoretical frameworks.

The aim to ‘improve the comparability of statistical information about rates of mental disorder between different parts of the world’ (Fulford and Sartorius 2009, 39) was written into the ICD from an early stage. But further homogenization of reporting systems and evaluation was seen as necessary. The APA, after much publicized critique of DSM I and II, set up a taskforce – headed by Robert Spitzer – to create a radically different classification system – DSM III- using rating scales and structured diagnostic interviews, specifically designed to systematize how people report ‘symptoms’, to enable commensurability between diagnosis in different contexts, and ultimately to make psychiatric decisions more data driven (Orr 2006, 226; Whooley 2017). Before his work on the DSM III, Robert Spitzer experimented with the computer simulation of psychiatric diagnosis, aiming to ‘replicate in the realm of code’ what clinicians practice daily, ‘transforming mental disorders into patterns of information that can be manipulated by computer algorithms’, and leading to the development of computerized diagnostic programmes: DIAGNO I, II, and III (Orr 2006, 243–44).

DIAGNO was based not on a statistical model but on a logical decision-tree model, consisting of a series of true or false questions on a standardised interview scale (based on the Psychiatric Status Schedule), where the output is ‘one of 25 standard American Psychiatric Association (APA) diagnoses’ (Spitzer and Endicott 1968, 747). Thus, from the 1970s onwards, the pressure to find ways for non-specialists to produce statistics for international comparison about mental disorder shaped the design of psychiatric nosology and classification systems (Orr 2006) and drove their increasing digitisation. Here in DIAGNO, we can see an early predecessor of the WHO’s mhGAP-IG, with its algorithmic decision-making models and management tools designed for use by trained non-specialists.

This shows that expansionary logic (including the conceptualisation of mental disorders as universal and the desirability of uniformity in usage globally) was built into diagnostic criteria from its early formulations, thus making mhGAP-IG thinkable and do-able. In fact, psychiatric classificatory systems, and the imaginary of what is now known as ‘mental disorder’ as being universal, dates back further than the beginnings of the DSM, ICD and cybernetics. ‘Colonial political arithmetic’ (Appadurai 1993, 133) was a critical component of colonial biopolitics, where invasive investigations of poor people, ‘lunatics’ and criminals carried out domestically were transposed to whole populations of the colonies. More specifically, from censuses carried out in the USA in 1840 and in India in 1871, a colonial concern with calculating prevalence rates of insanity started to emerge. This provided in the US early claims of the statistical link between blackness and madness (Gilman 2004, 11), while in British-colonized India insanity was framed as an illness of civilization, meaning India (whose population was understood by the colonizers to be uncivilized) had one-eighth the level of insanity of England and Wales (Sarin and

Jain 2012). The measurement of mental health for purposes of international comparison, then, has a long and complex genealogy that links calculation and enumeration to domestic and colonial forms of governance. Here it becomes apparent that not only do techniques quantifying mental health constitute that which they measure (Hacking 2006; 1982), enumerative logic also serves a justificatory role – justifying the colonial biopolitical logics and moral economies of the times in which the calculations occur.

This ‘living’ history of the conditions that make mhGAP-IG possible is significant to its social life, as it situates the guidelines within a long-articulated impetus to create data on mental health for international comparison and that is written into contemporary global north understandings of what constitutes mental distress. This frames mhGAP-IG as only one of the most recent manifestations of a long-standing project aiming to develop a universalized understanding of mental health, to some extent questioning ways of talking about the globalisation of psychiatry, and algorithmic health interventions, as ‘new’ phenomena (Rich and Miah 2017).

### **mhGAP-IG as an ‘inscription device’**

The above discussion of the historical and contemporary production of mhGAP-IG is significant to the ways mhGAP-IG operates as an ‘inscription device’. For Latour and Woolgar (1977, 63) a feature of ‘inscription devices’ (in the laboratory) is that once the inscription has been produced (the end product) ‘the intermediary steps which made its production possible are forgotten...and the material processes which gave rise to it are either forgotten or taken for granted as being merely technical matters’. While mhGAP-IG is designed explicitly for use in non-laboratory contexts, we can see how once the ‘inscription’ (the diagnosis and resultant interventions) have been produced, the material processes of production that made the device possible (the controversial history of diagnostic criteria, the development of guidelines at the Rockefeller Foundation Bellagio Centre next to Lake Como, and the other factors documented above) are forgotten or seen only as technical matters. This contributes to the ‘black boxing’ – the rendering invisible and hence incontestable—of the complex array of judgments and decisions that go into the creation of classificatory systems and the data they produce (Porter 1995, 42). This makes the inscriptions of mhGAP-IG (its diagnoses and interventions) appear as facts that seem only open to challenge from technological insiders and inscribes subjective decisions and culturally specific rationalities of diagnostic criteria deeply into the project of global mental health. Also inscribed but rendered invisible are the discriminatory prejudices (ableism, classism, heterosexism, racism, sanism, and sexism) themselves threaded deeply within the classificatory politics of diagnostic criteria (Fernando 2010; Metzl 2009; Ussher 2017). This process of black-boxing should be of importance to the WHO as it goes against its stated aim of eliciting feedback for its mental health products.

The reconfiguring of epistemological issues as technical issues and related black boxing of mhGAP-IG is evident in Patel’s identification of future ‘roadblocks’ for the guidelines, seen to ‘lie on the path between knowing what works (as synthesized in the mhGAP-IG) and how it will be delivered “to scale” – that is, to entire populations’

(Patel, 2012, 8). Here it is taken for granted that mhGAP-IG provides the recipe for what works, shifting the debate to focus only on more seemingly technical questions of how to optimize the scale of implementation.

Black-boxing also enables another key element in the production of mhGAP-IG to be side-lined – its funding architecture. The WHO acknowledges financial contributions in the development and production of the mhGAP-IG (2016) from a number of Governments, charitable organizations (such as Autism Speaks), and the corporation Syngenta (WHO 2016, vi). The intermingling of corporate interests and public health agenda setting is a marker of a number of global health programmes, as Sunder Rajan shows for example in the co-production of corporate value and public health knowledge through international clinical trials (Sunder Rajan 2017). Yet this merging of health, business and philanthropy, its impact on the development and use of technology in global mental health, and its multiple (and sometimes uneasy) effects, has so far attracted minimal scholarly attention. A closer look at Syngenta's financial contribution to the mhGAP-IG reveals a complex relationship to the global mental health agenda. Syngenta is a Swiss biotechnology and agribusiness company owned by ChemChina. Syngenta has been widely critiqued for contributing to India's agrarian crisis through restrictive seed patenting practices, and to high rates of farmer suicides linked to debt (Münster 2015; Perspectives 2009). The corporate practices of Syngenta sit somewhat uneasily alongside their sponsorship of the WHO's World Suicide Prevention policies (WHO 2014) and of the mhGAP-IG – which includes suicide as one of its priority conditions and has management and prevention strategies written into its algorithm

At the mhGAP app's launch at the Forum, the National Institute of Mental Health (NIMH) was acknowledged for providing technical and financial support, and Universal Doctor (a private health technology company based in Spain)<sup>1</sup> as the app developer. Here then not only does the app use global north diagnostic classifications, it is also developed using global north expertise in technological production. This is not an isolated case in the field of digital health, as most market leaders are based in the UK or US, and work in LMICs is often based on innovation in the global north.<sup>2</sup>

### **Conclusion: Algorithmic inscriptions of global mental health**

This short and partial journey through some aspects of the social life of the mhGAP-IG focused on how the tool was made, its sites of performance, its conditions of possibility and its living history. In tracing the living colonial history of mhGAP-IG, the paper argued that the measurement of mental health for international comparison (and expansion) is already written into contemporary understandings of what constitutes mental distress, for example in the historical development of universal psychiatric nosology. These deep historical roots spanning colonial biometrics and censuses of

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<sup>1</sup> [http://www.universaldocor.com/sect/en\\_GB/9004/Our+team.html](http://www.universaldocor.com/sect/en_GB/9004/Our+team.html)

<sup>2</sup> Much of the work around mental health innovation is brought together by the Mental Health Innovation network, based at the London School of Hygiene and Tropical Medicine ([www.mhinnovation.net](http://www.mhinnovation.net)).

insanity underlie the conditions of possibility for the expansionary logic of mhGAP, and the wider Movement for Global Mental Health. mhGAP could be seen to operate, like EBM more generally, as a ‘technology of capture, synthesis and dissemination’ (Broom and Adams, 2012:2).

Part of the social life of mhGAP-IG is the wider global mental health assemblage (crafted through metrics, funding, EBM etc) in which the tool is embedded and circulates. The paper showed how quantification (including systematization and commensuration), decontextualisation, epistemological exclusivity, and digitisation, converge to construct a globalised notion of mental health, out of which a particular algorithmic imaginary of mental disorder emerges. We saw how the relationship between the mhGAP-IG as a global tool and local context is mediated through a choice of predetermined modules and training packages (that also always entail some fluidity in practice). Importantly, this pre-selection of possible inputs is part of an algorithm’s influence on the data it creates. Critical studies have focused increasingly on epistemological effects of algorithms (see collection in Amoore and Piotukh 2015), and how digital technology and data have a fundamental influence on “ways of seeing the world” (Beer 2017, 8).

The analysis throughout this paper was written in the spirit of engaging in dialogue with the WHO. We argue in the paper the importance of paying closer attention to the epistemological underpinnings of mhGAP-IG’s algorithmic imaginary, in order to open the ‘black box’ of its production. An important element in this process is to take seriously critique of mhGAP-IG both from within its own paradigm and from other epistemological standpoints, particularly the multiple perspectives of and critiques from what might broadly be termed user/survivor/ Mad, as well as situated, localised, and indigenous, epistemologies (LeBlanc and Kinsella 2016; D. Rose 2017). This would also need to take seriously what algorithmic approaches miss, i.e. those understandings and practices ‘not easily rendered in the language of standardization and [that] may lie outside of scientific metaphysical realities’ (Cooper, 2015, 532).

The paper has highlighted how mhGAP and its products operate as part of ‘the knowledge-power processes that inscribe and materialize’ (Haraway 1997, 7), i.e. ‘do’, mental health in particular ways (as an illness, as universal, and as measurable) rather than others. In this way, the mhGAP-IG acts as global ‘inscription device’ that reifies specific theories and practices (Latour and Woolgar 1977) of mental health, and constitutes ‘the domains [it] appear[s] to represent’ (Rose, 1999, 198). This means that the ‘ethnospecific narrative field’ (Haraway, 1997:4) of mhGAP-IG is made to seem universal, while the guidelines function as a device that enables different manifestations of distress to be connected up and conceived of in ways already determined by Euro-American specifications (Strathern, 1992:17).

The mhGAP-IG is only one of an increasing number of diagnostic algorithms used for mental health, and the social lives discussed in this paper are far from the only sites that exert an influence on the formulation of its content. The examples here are only a

beginning of a necessarily and always partial account of the social life of mhGAP-IG, given that it is done differently in different contexts. Therefore, much was missing here, including the relationalities that make possible mhGAP and that mhGAP make possible - the relationships and power dynamics between ‘non-specialists’ administering the tool and those whose answers are inputted; within the WHO; and between the WHO and those who use mhGAP but have no say in its design. Also missing here, but part of our ongoing larger research, are accounts of how mhGAP-IG is done in different contexts, i.e. how people actually use it in the field, and the ways different actors understand, implement, appropriate and/or resist these guidelines. This paper has marked a starting point in tracing the multiple ‘doings’ of mhGAP-IG - connecting questions of how it is ‘done’ and what does it ‘do’ - to the living histories and wider global mental health assemblages that make the tool possible and shape its global circulation.

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