

ORIGINAL RESEARCH

# A Pilot Initiative to Deliver Community-based Psychiatric Services in Rural Haiti After the 2010 Earthquake



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## Abstract

**BACKGROUND** Worldwide, there is a gap between the burden of mental distress and disorder and access to mental health care. This gap is particularly large in low- and middle-income countries (LMICs). After the 2010 earthquake in Haiti, the international health care organizations Partners in Health and Zanmi Lasante worked to expand local mental health services in rural Haiti.

**OBJECTIVE** The aims of this study are to describe clinical characteristics of the patients served during a pilot project to deliver community-based psychiatric services in rural Haiti and to show how this experience complements the Mental Health Gap Action Programme (“mhGAP”), a tool developed by the World Health Organization to support mental health care delivery by nonspecialists in LMICs.

**METHODS** The pilot was conducted in March 2011. A visiting psychiatrist traveled to rural Haiti and paired with local clinicians to evaluate patients and to support quality improvement practices in psychiatric care. Patients received a standard neuropsychiatric evaluation. mhGAP was an important clinical reference. To assess the experience, we conducted a retrospective chart review of outpatient encounters.

**FINDINGS** Sixty-five patients presented with a wide range of common psychiatric, neurologic, and general medical conditions. Forty-nine of these patients (75%) reported primary problems subsumed by an mhGAP module. Fifteen patients (23%) reported headache as their chief complain, a condition that is not currently covered by mhGAP. Surprisingly, only 3 patients (5%), reported earthquake-related distress.

**CONCLUSIONS** Our clinical data reinforce the need for provision of standard psychiatric and neurologic services in LMICs. Such services ought to accompany interventions targeted specifically at disaster-related problems. Clinical situations falling outside existing mhGAP modules inspired the development of supplemental treatment protocols. These observations informed coordinated efforts at Zanmi Lasante to build a sustainable, integrated mental health system in Haiti that may be relevant to other resource-limited settings.

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**KEY WORDS** Caribbean region, community-based psychiatric and neurologic care delivery, global mental health, implementation, World Health Organization Mental Health Gap Action Programme (WHO mhGAP)

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## INTRODUCTION

Mental, neurologic, and substance use disorders represent 9 of the 20 leading causes of years of life lived with disability worldwide.<sup>1</sup> Unfortunately, 76% to 85% of individuals with serious psychiatric conditions and 75% of those with epilepsy living in resource-limited settings do not receive the treatment they need.<sup>2,3</sup> Strategies to provide community-based mental health care for adults and children in resource-limited settings are thus urgently needed.<sup>4–6</sup>

Addressing this treatment gap globally is a priority of the World Health Organization (WHO). The WHO Mental Health Gap Action Programme (mhGAP) represents an effort by the organization to provide low- and middle-income countries (LMICs) with an algorithm for diagnosis of common mental disorders and a variety of evidence-based recommendations for treatment that can be adapted to the local context depending on what treatments are available.<sup>7</sup> Despite recognition of “what” nonspecialist mental health providers can do to evaluate and treat mental disorders, less is known about “how” to implement and deliver key services.<sup>7</sup> Indeed, greater attention to “how” to improve access to health care throughout the world—including mental health care—is advocated by The Global Health 2035,<sup>8</sup> echoing observations previously highlighted in the literature.<sup>4,6,9</sup> To our knowledge, there are no reports in the medical literature highlighting the experience evaluating and treating patients in a resource-limited setting in relation to mhGAP.

Like others in LMICs, many Haitians—both before and after the January 12, 2010 earthquake damaged much of the public sector mental health system—lacked access to mental health care.<sup>10,11</sup> Systematic studies conducted pre- and post-earthquake demonstrated high rates of depressive symptoms among Haitians,<sup>12–14</sup> thus suggesting a considerable gap between burden of suffering from mental illness and access to treatment. However, there were few epidemiological studies and no

ethnographically informed tools to guide implementation of mental health services in rural Haiti at the time of the earthquake. Immediately after the 2010 earthquake, the international health care organization Partners In Health (PIH) and its sister organization in Haiti, Zanmi Lasante (ZL), began building up community-based mental health services in an integrated, evidence-based, and intersectoral way that prioritized local knowledge.<sup>4,10</sup> Ethnographic research was mobilized to gain an understanding of local notions of mental illness using a systematic approach that could also inform the development of tools to support care delivery.<sup>4,10,15</sup> A range of options were created for managing acute distress and chronic mental illness.<sup>10</sup> As described in this study, a visiting psychiatrist traveled to Haiti to accompany local ZL clinicians in providing psychiatric services at 5 ZL-supported, rural, public, Ministry of Health clinics. Whereas the primary goal was to collaborate with the local ZL team in providing care and training in the treatment of mental and neurologic disorders, it also provided an opportunity to work collaboratively in obtaining a snapshot of treatment needs among rural Haitians while improving practices in psychiatric care delivery. mhGAP was an important clinical resource during this pilot initiative to deliver psychiatric services, providing a framework for mental health care practice in a resource-limited setting and for training. To provide further insight on the treatment algorithms in mhGAP and their relevance in a post-disaster setting, we conducted a retrospective chart review of patients seeking outpatient psychiatric services during this initiative.

## METHODS

In March 2011, a psychiatrist from the United States (DJG) traveled to rural Haiti to support mental health services at Zanmi Lasante’s busiest clinics. Because a *sikyat* (psychiatrist in Haitian Creole) is regarded as a *doktè tèt* (“doctor of the head”) who doubles as a neurologist, clinical services and training to nonspecialists were offered for both mental

and neurologic disorders. E-mail consultation with a neurologist (AL) was available for patients with complex neurologic problems. Supervision was also provided by the US-based, PIH mental health director (a psychiatrist, GR) and the Haiti-based, ZL mental health director (a psychologist and priest, EE).

mhGAP served multiple purposes during this pilot initiative. First, it was reviewed by the psychiatrist before the initiative to orient him to mental health care, including epilepsy care, in a resource-limited setting. It was also reviewed with Haitian nonspecialist providers during the pilot initiative to orient them to this model for psychiatric assessment, clinical decision making, and management of patient conditions. At various points throughout the pilot, clinicians consulted mhGAP for recommendations about specific clinical situations (such as suicide) and for guidance in prescribing unfamiliar medications.

Psychiatry clinics were conducted on 16 days. Patients were referred for specialist evaluation by local clinicians or presented in response to announcements in the community and word of mouth. The psychiatrist conducted evaluations and/or supervised ZL psychologists and physicians as they evaluated patients. A skilled translator provided translation from English to Haitian Creole and from Haitian Creole to English. Each patient received an evaluation of his or her chief complaint, a psychiatric and neurologic review of systems, and a mental status examination. Affirmative responses during the psychiatric and neurologic review of systems generated an independent clinical inquiry by the psychiatrist to evaluate for associated psychiatric, neurologic, and medical conditions. Patients with neurologic or somatic complaints, or both, received a physical examination. Information from collateral sources was obtained when appropriate and available. Diagnoses were based on criteria in the Diagnostic and Statistical Manual of Mental Disorders, 4th Edition, Text-revision<sup>16</sup> and consistent with descriptions of the mental health conditions covered by mhGAP, allowing easy convergence of the references. Because mhGAP influenced the approach to the management of presenting problems during these initial outpatient encounters, we organized the retrospective chart review around patients' presenting problems: describing their duration and prior treatment, matching them to mhGAP modules, and reviewing initial steps in their management.

This research was considered exempt by the Institutional Review Board at the Harvard School

of Public Health and was approved by the Ethics Committee at ZL.

## RESULTS

Consistent with prior observations,<sup>17,18</sup> some chief complaints of patients were vague or potentially misleading. For example, patients with depression complained of "headache," "empty head," "dizziness," "tight heart," or a combination of some or all of these complaints. Although the chief complaint of a patient with a mental disorder (eg, depression) may not always represent a common feature of that disorder, we found that patients endorsed core features of that disorder (eg, a pervasive feeling of sadness) when asked in the context of a review of systems.

Patients seeking outpatient psychiatric services presented with a variety of common psychiatric and neurologic problems and often suffered from significant medical comorbidity (Table 1). Of the 65 patients we evaluated, 49 (75%) reported primary problems subsumed by an mhGAP module. Headache is not an mhGAP module, and 15 patients (23%) presented with headaches. Forty-one patients (63%) had at least 2 problems, including 5 patients with depression and migraine and 26 (40%) with clinically significant medical problems (eg, HIV, tuberculosis, hypertension, etc.). Five patients presented with symptoms of a neurologic illness that appeared to be related to a general medical condition (including 1 patient with well-treated epilepsy presenting with a headache in the setting of malaria). Only 3 patients (5%) reported that the earthquake or its aftermath was a traumatic or shocking event affecting their mental health and current functioning, and each of these patients reported mental health problems that predated the earthquake. Three patients reported current suicidal ideation (1 of these had a recent suicide attempt), and 5 had a history of agitation and aggression. One of the patients with a history of a psychotic disorder had symptoms of catatonia. Some children with learning problems and one with headache had been hit or beaten as a form of punishment, often out of a belief that it would motivate the child.

Fifty-nine patients (90%) were asked to follow-up with clinic staff for consultation with the primary care clinic, medication monitoring, psychotherapy, surveillance, or a combination of follow-ups. Forty-five patients (69%) were prescribed medication from the ZL formulary. Not including

**Table 1. Patient Characteristics Stratified by Primary Problem**

| Primary problem  | Number of Patients | Mean Age (Range) in Years | Males/Females | Mean Duration of Illness (Range) in Years | Mean Time in Treatment (Range) in Years |
|--|--------------------|---------------------------|---------------|---|---|
| Symptoms related to stress                                   | 1                  | 52 (N/A)                  | 0/1           | 0.5 (N/A)                                 | 0 (N/A)                                 |
| Dementia   | 1                  | 71 (N/A)                  | 0/1           | 3 (N/A)                                   | 0 (N/A)                                 |
| Depressive symptoms  | 9                  | 38 (20-76)                | 2/7           | 1.5 (0.25-4)                              | 0 (N/A)                                 |
| Headache   | 15                 | 31 (9-60)                 | 5/10          | 4.7 (0.2-11)*                             | 0 (N/A)*                                |
| Developmental or learning problems                           | 7                  | 11 (6-30)                 | 3/4           | 3.6 (1-6)†                                | 0 (N/A)                                 |
| Psychosis, agitation, logorrhea (including bipolar disorder) | 21                 | 37 (18-78)                | 5/16          | 4.3 (0.01-13)                             | 0.9 (0-13)                              |
| Seizure  | 10                 | 28 (10-63)                | 8/2           | 11.0 (0.75-24)                            | 5.0 (0-24)                              |
| Medical condition‡   | 1                  | 27 (N/A)                  | 0/1           | N/A (N/A)                                 | N/A (N/A)                               |
| Total  | 65                 | 32 (6-78)                 | 23/42         | 4.9                                       | 1.2                                     |

\* Individuals with headaches were often treated with acetaminophen or ibuprofen, but here we report on whether the 9 individuals with migraine disorders who might have benefited from prophylactic therapy had ever been treated with a prophylactic agent (such as amitriptyline).

† A homeless, nonverbal man who appeared 30 years old with probable autism was only known to the community members who referred him for the preceding 5 years. We presumed his problems had been lifelong, but truncated the duration of his illness at 5 years because of the absence of other collateral information.

‡ Vaginal itching.

remedies from traditional healers, only 13 patients (29%) who were prescribed medication had ever been prescribed medication specific for their diagnosis before. Of these, only 5 were in treatment for the duration of their illness (3 with epilepsy), although 1 of these patients was underdosed and another patient had poor adherence. Eight patients reported that they did not stay in treatment because of the cost associated with care (payment to psychiatrist, payment for medication, travel costs), although 4 of these patients had psychosis and poor adherence.

## CONCLUSIONS

This pilot initiative demonstrated that individuals seeking psychiatric services in post-earthquake, rural Haiti had common, often chronic conditions. The observation that very few patients reported earthquake-related problems is consistent with observations from a natural disaster setting in the United States (ie, among individuals displaced by Hurricane Katrina presenting for psychiatric care), but not traumatic events related to terrorism such as the Oklahoma City bombing in 1995 and the September 11, 2001 terrorist attack on New York City.<sup>19,20</sup> The fact that the majority of patients in our sample received standard biomedical and psychological interventions for their conditions for the first time is further evidence of limited access to mental health care in resource-limited settings. A significant amount of comorbidity underscores the importance of screening for a wide array of

common conditions, a biopsychosocial approach to patient evaluation, and integration with primary care. This information was useful as we decided how to allocate resources and plan training to build sustainable mental health services in the area.

mhGAP recommends assessing individuals for mental health conditions if they present with features of a “common presentation” for those conditions,<sup>7</sup> but our patients’ symptoms did not always conform to common presentations of mental disorders. Local expressions of emotional suffering (so-called “idioms of distress”) and general somatic complaints are also used by Haitians to describe their motivations for seeking primary care. Observations from a primary care clinic in rural Haiti demonstrated that 40% of patients evaluated by Haitian physicians had chief complaints that may have represented emotional distress.<sup>17</sup> The use of an expanded review of systems to elicit key features of common mental and neurologic disorders facilitated diagnosis, especially for those patients with vague or misleading chief complaints. A Haitian Creole version of the expanded review of systems has been elaborated on and incorporated into the ZL mental health evaluation form. Because Haitian physicians do not always explore the emotional dimensions of presenting problems,<sup>17</sup> this tool may facilitate the diagnosis and treatment of mental and neurologic disorders among nonspecialist providers.

mhGAP was helpful in guiding treatment decision making in this setting, but there were important areas that mhGAP did not address. One such

**Table 2. Additional Considerations Relating to the Evaluation and Treatment of Mental and Neurologic Disorders to Supplement mhGAP**

| Problem                       | Findings from Assessments  | Management Considerations to Supplement mhGAP   |
|-------------------------------|--|---|
| Headache/migraine             | Disorders related to headache such as migraine were common.  | Patients with chronic headache conditions, either independent of or associated with depression, were often taking daily analgesics, such as acetaminophen and ibuprofen, thus increasing the chance of side effects of these medications including rebound headache. Our treatment of choice for individuals with migraine was amitriptyline.   |
| Catatonia                     | Catatonic symptoms may be present.   | Catatonia is not mentioned in mhGAP, but treatment of a psychotic disorder with antipsychotics in the presence of catatonia may be contraindicated. Recommendations for catatonia treatment are summarized in a separate article. <sup>22</sup>   |
| Agitation/Aggression          | Some patients with no active treatment had a history of and/or recent violence toward others.  | Care should be taken to evaluate the safety of the patient and those around them, as well the safety of the setting in which the evaluation is occurring. Ideally, treatment with medication and rallying social support around the patient and family will reduce recurrence of violence.  |
| Corporal punishment           | Some children were physically punished for poor performance in school, including one child with a seizure disorder who was often struck in the head.                               | We discussed alternative strategies for behavior modification but also considered harm reduction strategies by asking parents not to hit children in the head.  |
| AED choice—general principles | AED options were limited, and there were many considerations to take into account when choosing an AED (cost, availability, and safety—especially for women of child-bearing age). | We received general recommendations from our consultant regarding how to select an AED. Phenobarbital has an advantage over others due to lower relative cost and once-daily administration; however, AED choice should be guided by whatever is consistently available. We discouraged use of valproic acid as a first-line agent because of higher relative cost and teratogenicity, except in the cases of absence seizure (discussed below) and HIV.  |
| AED choice—HIV                | Two patients with epilepsy had HIV and were on HIV antiretroviral therapy.   | Highlighted in mhGAP because they are the most commonly available AEDs in resource-limited settings, carbamazepine, phenobarbital, phenytoin, and/or valproic acid were the only AEDs available at our clinic sites. In patients with HIV on antiretroviral treatment, carbamazepine, phenobarbital, and phenytoin are hepatic enzyme-inducing drugs that can potentially increase the metabolism and lower the levels of some antiretroviral medication, thereby increasing the risk for failure of HIV treatment. Because valproic acid is not enzyme inducing, among these drugs we recommended it as a first-line agent in all individuals infected with HIV. |
| Absence seizure               | We had at least one case of suspected absence seizure.   | Valproic acid is the only AED listed in mhGAP that will treat absence seizures. If available, electroencephalogram may be particularly helpful for diagnosis of absence seizures.   |
| Status epilepticus            | One patient had bouts of status epilepticus related to either alcohol withdrawal or a primary seizure disorder.  | In the absence of easy access to a health center or rectal diazepam, one may consider administering lorazepam either buccally or sublingually for any seizure lasting longer than 5 minutes (Recommended pediatric dose of lorazepam: 0.05 to 0.1 mg/kg up to a maximum of 2 mg; Recommended adult dose of lorazepam: 2 mg).  |

AED, antiepileptic drugs; mhGAP, Mental Health Gap Action Programme.

missing piece at the time was an algorithm for anxiety disorders, including post-traumatic stress disorder (PTSD). A separate module on conditions related to stress was added in 2013.<sup>21</sup> Table 2 highlights a number of other important supplements to mhGAP that we developed during this initiative. Because headache was extremely common, with many patients reporting symptoms consistent with migraine, clinicians working in Haiti should be prepared to evaluate headaches and also be mindful of the link between headache and other conditions such as depression and anxiety. A headache/migraine module may be a useful addition to mhGAP.

This case series had several limitations. First, patients received a systematic but not structured interview. However, the use of a systematic interview approximates more closely real-world clinical experience and is consistent with a retrospective chart review. Second, symptoms of mental disorders may vary according to the setting, and evaluation and diagnostic tools are ideally specific to the context and sensitive to local notions of mental illness.<sup>4,15</sup> However, there is converging evidence that symptoms of depression and reactions to traumatic stress show great concordance to widely used diagnostic criteria for depression and PTSD in community-based samples of Haitians.<sup>14,23</sup> Third, this clinic-based sample is not a representative sample of patients in the community. Many of the patients who sought our psychiatric consultation or were referred for psychiatric consultation may have had more severe illness or may have been more knowledgeable about clinic-based initiatives. It is possible that many persons with earthquake-related distress and disorder either recovered by March 2011 or did not seek treatment. Because the catchment area of ZL sustained less damage from the earthquake

than nearer the epicenter, it is also possible that there were fewer persons who suffered earthquake-related trauma in the region where the pilot was conducted. Nevertheless, the patients who presented for care during the pilot are likely similar to those who would present for and benefit from psychiatric treatment in other disaster settings, especially in areas where access to psychiatric care has been compromised by disaster or is otherwise limited.<sup>20</sup> As many epidemiological surveys in post-disaster settings focus on a single disorder,<sup>24</sup> researchers may wish to widen their survey to include other conditions. Finally, in the absence of a wide array of medical tests or imaging, we could have missed a number of occult medical disorders.

Notwithstanding its limitations, this initiative provided useful insight into the evaluation and treatment of patients with mental and neurologic disorders in Haiti. This work may inform other efforts to determine “how” to deliver mental health care in resource-limited settings. The mhGAP supplements in Table 2 functioned as a useful clinical platform for the local team and the visiting psychiatrist when he returned to Haiti to work full time for 1 year in August 2011.<sup>18</sup> These tips and tools could help to establish a basic platform of services to strengthen mental health care in settings where epidemiological and ethnographic data are not available, or support care delivery to those persons with mental disorders identified in the context of other health initiatives and research. Because working “on the ground” in support of care delivery is an opportunity to learn about community needs and how to address health problems, what we learn by providing clinical services and through research should complement each other in this dynamic effort to promote the mental health of patients, families, and communities.

## REFERENCES

1. Vos T, Flaxman AD, Naghavi M, et al. Years lived with disability (YLDs) for 1160 sequelae of 289 diseases and injuries 1990–2010: a systematic analysis for the Global Burden of Disease Study 2010. *Lancet* 2012;380:2163–96.
2. Demyttenaere K, Bruffaerts R, Posada-Villa J, et al. Prevalence, severity, and unmet need for treatment of mental disorders in the World Health Organization World Mental Health Surveys. *JAMA* 2004;291:2581–90.
3. Meyer AC, Dua T, Ma J, Saxena S, Birbeck G. Global disparities in the epilepsy treatment gap: a systematic review. *Bull World Health Organ* 2010;88:260–6.
4. Belkin GS, Unützer J, Kessler RC, et al. Scaling up for the “bottom billion”: “5 x 5” implementation of community mental health care in low-income regions. *Psychiatr Serv* 2011;62:1494–502.
5. Collins PY, Patel V, Joestl SS, et al. Grand challenges in global mental health. *Nature* 2011;475:27–30.
6. Patel V, Thornicroft G. Packages of care for mental, neurological, and substance use disorders in low- and middle-income countries: PLOS Medicine series. *PLoS Med* 2009;6:1–2.

7. World Health Organization. mhGAP Intervention Guide for Mental, Neurological and Substance Use Disorders in Non-Specialized Health Settings (Version 1.0). Geneva, Switzerland: WHO; 2010.
8. Jamison DT, Summers LH, Alleyne G, et al. Global health 2035: a world converging within a generation. *Lancet* 2013;382:1898–955.
9. Collins PY, Insel TR, Chockalingam A, Daar A, Maddox YT. Grand challenges in global mental health: integration in research, policy, and practice. *PLoS Med* 2013;10:1–6.
10. Raviola G, Eustache E, Oswald C, Belkin GS. Mental health response in Haiti in the aftermath of the 2010 earthquake: a case study for building long-term solutions. *Harv Rev Psychiatry* 2012;20:68–77.
11. PAHO/WHO. *Le Systeme de Sante Mentale En Haiti*. Geneva, Switzerland: PAHO/WHO; 2011.
12. Martsof DS. Childhood maltreatment and mental and physical health in Haitian adults. *J Nurs Scholarsh* 2004;36:293–9.
13. Smith Fawzi MC, Eustache E, Oswald C, et al. Psychosocial functioning among HIV-affected youth and their caregivers in Haiti: implications for family-focused service provision in high HIV burden settings. *AIDS Patient Care STDS* 2010;24:147–58.
14. Wagenaar BH, Hagaman AK, Kaiser BN, McLean KE, Kohrt B. Depression, suicidal ideation, and associated factors: a cross-sectional study in rural Haiti. *BMC Psychiatry* 2012;12:149.
15. Rasmussen A, Eustache E, Raviola G, Kaiser B, Grelotti DJ, Belkin GS. Development and validation of a Haitian Creole screening instrument for depression. *Transcult Psychiatry* 2015;52:33–57.
16. American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (DSM-IV-TR)*. Washington, DC: APA; 2000.
17. Keys HM, Kaiser BN, Kohrt BA, Khoury NM, Brewster AR. Idioms of distress, ethnopsychology, and the clinical encounter in Haiti's Central Plateau. *Soc Sci Med* 2012;75:555–64.
18. Grelotti DJ. Even more mountains: challenges to implementing mental health services in resource-limited settings. *J Am Acad Child Adolesc Psychiatry* 2013;52:339–43.
19. Pandya A, Katz CL, Smith R, et al. Services provided by volunteer psychiatrists after 9/11 at the New York City family assistance center: September 12–November 20, 2001. *J Psychiatr Pract* 2010;16:193–9.
20. North CS. A tale of two studies of two disasters: comparing psychosocial responses to disaster among Oklahoma City bombing survivors and Hurricane Katrina evacuees. *Rehabil Psychol* 2010;55:241–6.
21. World Health Organization and United Nations High Commissioner for Refugees. *Assessment and Management of Conditions Specifically Related to Stress: mhGAP Intervention Guide Module (version 1.0)*. Geneva, Switzerland: WHO; 2013.
22. Bolton P, Surkan PJ, Gray AE, Desmousseaux M. The mental health and psychosocial effects of organized violence: a qualitative study in northern Haiti. *Transcult Psychiatry* 2012;49:590–612.
23. Kessler RC, McLaughlin KA, Green JG, et al. Childhood adversities and adult psychopathology in the WHO World Mental Health Surveys. *Br J Psychiatry* 2010;197:378–85.
24. Smith SL, Grelotti DJ, Fils-aime R, et al. Catatonia in resource-limited settings: a case series and treatment protocol. *Gen Hosp Psychiatry* 2015;37:89–93.