

Integrating mental health care into primary care: the case of one rural district in Rwanda

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Integration of mental health care into primary care is a strategic priority of Rwanda's national mental health care programme and a central tenet of global mental health. In 2009, the international health care delivery organisation, Partners In Health, established a community based mental health programme to support national planning goals. In 2012, the organisation collaborated with the Rwanda Ministry of Health to implement a structured mentorship programme enabling government employed, primary care nurses to care for patients with severe mental disorders at primary care health care centres in one rural district. The implementation strategy included decentralised training and consistent supervision for four priority neuropsychiatric disorders. Lessons learned were applied through the transition of supervisory responsibilities to district hospital based government nurses. The programme's focus on structured mentorship for generalist nurses, systems based improvements and use of an existing public health care strengthening efforts highlight its potential as a model for integrating mental health care into primary care in resource limited settings.

Keywords: collaborative care, mental health, nurse training, primary care integration, quality improvement, Rwanda, task sharing

Introduction

Background

Neuropsychiatric disorders account for about one quarter of the global burden of disability, yet rarely receive priority among

Key implications for practice

- Describes a model to integrate mental health care into primary care, embedded within an existing public sector, health care strengthening programme that emphasises generalist nurse supervision and health system quality improvement methods
- Highlights how mental health care and clinical supervision within a government health system was supported by an international health care delivery organisation, rather than developing a parallel system of care
- Provides examples of challenges and solutions to initial system and human resource barriers to mental health integration into primary care in resource-limited settings

the many health conditions competing for political will and allocation of funds. In most low income countries, due to the extreme shortage of mental health specialists and other factors (Kakuma et al., 2011), 90% of people living with a severe mental disorder do not have access to mental health services (Lancet Global Mental Health Group, 2007). This is in spite of evidence for the efficacy of both psychosocial and pharmacological interventions for treating mental

disorders (World Health Organization (WHO), 2011a; 2011b). Innovative solutions that integrate mental health care into primary care settings, and that optimise health worker interventions through task sharing, could contribute to alleviating the burden of neuropsychiatric disorders in low income settings (Patel et al., 2007; Patel et al., 2013; Bass et al., 2012; Collins, Insel, Chockalingam, Daar, & Maddox, 2013; WHO, 2008a).

Despite the potential for the integration of mental health care into primary care to reduce the global burden of mental disorders, many challenges to implementation of integrated mental health care in *real world*, resource limited settings exist. In these settings, primary care is often delivered by nonspecialist providers, such as nurses with little formal training in mental health care, and training models across clinical domains often consist of short, centralised trainings without follow-up supervision and support for patient care (Rowe, de Savigny, Lanata, & Victora, 2005). In addition, supervisory capacity for mental health care provision in resource limited settings is challenging, as mental health care specialists are frequently overburdened clinicians with little supervisory experience or training in public health and clinical interventions. In addition, budgeting and infrastructure for building and maintaining regular clinical supervisory support within public primary care settings is usually nonexistent.

One potential solution to these challenges is to use the management and supervisory infrastructure of other existing, successful task shared endeavours already embedded within health systems as a starting point to integrate mental health care into primary care. Partners In Health (PIH), a nonprofit organisation working in ten countries, has been working to support the public health delivery system in three rural districts of Rwanda since 2005. Here, the integration of mental health care into a platform

developed to strengthen general primary health care in one rural district in Rwanda is discussed.

Setting: Rwandan context

The Republic of Rwanda has the highest population density in continental Africa, with a population of almost 12 million people covering an area of about 26,338 square kilometres. Beginning in the late 1950s, with the end of colonial rule, Rwanda experienced decades of unrest and intermittent periods of community level conflict stemming from ethnic divisions affirmed by Belgian colonialism. In April 1994, Rwanda was immersed in a brutal, state sponsored, genocide that killed over one million people within a period of three months. The country's political and socioeconomic infrastructure, including the health care system, was destroyed.

When post genocide reconstruction occurred, the government began to decentralise health system management to the districts in an effort to provide equitable health care closer to the communities. In short order, by 2012, every district in Rwanda had a functioning referral hospital. Each hospital is associated with eight to 20 primary care health centres. The health centre package of activities encompasses health promotion and prevention activities, as well as curative care and management of chronic illness (Republic of Rwanda, 2011a). Community Health Workers (CHWs) associated with each health centre (two to three per village) assist with case finding, medication adherence, and follow-up, as well as outreach and educational activities for their communities. As a result of significant investments in the health sector since the genocide, Rwanda has experienced significant improvements in premature mortality, including large reductions in maternal mortality, under five mortality and deaths secondary to infectious diseases such as HIV/AIDS, tuberculosis and malaria (Binagwaho et al., 2014).

Mental health policy/system development

Although data on the specific burden of mental disorders in Rwanda are limited, the lifetime prevalence of major mental disorders across sub-Saharan Africa is estimated to be around 12% (Lopez et al., 2006). Over the past half century, mental health care in Rwanda was primarily provided by one central neuropsychiatric hospital, which was established in the early 1970s by a Catholic charity organisation. Traditional healers were also called upon to provide mental health care, especially in rural areas. In the wake of the genocide, Rwanda has had to contend with significant additional mental health burdens, including high rates of depression and posttraumatic stress related disorders (PTSD) (Munyandamutsa, Mahoro Nkubamugisha, Gex-Fabry, & Eytan, 2012). In recognition of this high burden, post-genocide health system reconstruction efforts by the government led to the creation of a Division for Mental Health within the Ministry of Health (MoH) in 1995. A mental health policy was established, which called for the integration of psychiatric services into general district health systems (Republic of Rwanda, 2011b). Over the ensuing decade, mental health services were gradually decentralised to the districts, with inpatient and outpatient mental health services increasingly provided by at least one psychiatric nurse and psychologist in each of the 42 district hospitals (Kayiteshonga et al., 2013). However, the national budget for mental health care, as well as the ratio of public mental health workers to population within each district, has remained low. The Mental Health National Plan recognises that the most feasible option for improvement in access to mental health services is to integrate mental health into non-specialist primary care services (Republic of Rwanda, 2011b). This integration of mental health care into primary care uses a task sharing approach by delegating the tasks and responsibilities of mental health care from more

specialised mental health clinicians to less specialised primary care providers (Patel, Goel, & Desai, 2009). In 1999, the MoH initiated basic mental health training for primary care nurses in order to improve the recognition and management of mental health conditions; however, the human resource capacity for ongoing health centre level supervision following trainings remained limited.

Partners In Health and the Rwandan Ministry of Health collaboration

In 2005, PIH was invited by Rwandan President Paul Kagame to support Rwandan health system development by bringing its community based model of HIV/AIDS care to several of the most rural, impoverished districts in the country. As Rwanda built its national HIV/AIDS programme in the wake of the genocide, PIH supported the MoH to implement additional community based strategies to improve HIV treatment adherence and retention. These strategies included a CHW accompaniment model that employed regular home visits and directly observed therapy, in addition to targeted social and material support designed to reduce poverty and other structural barriers to treatment adherence and follow-up (Farmer et al., 2013). These health system strengthening efforts resulted in over 92% of enrolled people living with HIV/AIDS in PIH supported districts remaining in care after two years of daily therapy (Rich et al., 2012).

As clinical outcomes for people living with HIV/AIDS improved, PIH expanded its health system strengthening efforts to include other areas of clinical import. In 2009, PIH inaugurated a nascent mental health programme staffed by a Rwandan national, one of only several Rwandan psychologists with an advanced degree. This programme was funded in part by a gift from the Peter C. Alderman Foundation, as well as by academic support from the Program in Global

Mental Health and Social Change at Harvard Medical School. The programme initially started in Kayonza District, in the Eastern Province, with a focus on education and training of community leaders on mental disorders as treatable conditions. In 2010, the Rwandan team was expanded to include a psychiatric nurse and a social worker, and starting in 2011, additional support was provided by an expatriate academic psychiatrist based in Rwanda and sponsored by PIH and Harvard Medical School (USA) (<http://ghsm.hms.harvard.edu/education/fellowships#pagenel>). The local Rwandan team, along with the expatriate psychiatrist, were supported and mentored remotely and in person by a PIH cross site mental health team led by a senior psychiatrist with extensive experience in global mental health delivery, mental health care and public health, and PIH infrastructure with expertise in global health programme development, monitoring and evaluation, as well as curriculum development and training (Raviola, Becker, & Farmer, 2011). With several years of collective experience, it was recognised by the local team that its activities focusing on community education were diffuse and unable to be measured adequately, representing a barrier in justifying the programme's existence to administrative leadership at both PIH and the MoH. This was particularly relevant given the minimal budget for mental health related activities within the MoH programme.

In 2011, the collective, collaborative cross national team developed a strategic plan focused on development of measurable activities within a single district, Burera District, in northern Rwanda. The district is served by Butaro Hospital, a 150 bed public hospital built in 2011 by PIH in collaboration with the MoH. Butaro Hospital employs approximately 35 general nurses, 13 full time general practitioners, four psychiatric nurses and one psychologist. The hospital includes an outpatient mental health specialty clinic which operates five days per week. Patients

in need of acute psychiatric services are transferred from the mental health clinic or directly from district health centres to Butaro Hospital under the care of hospital based mental health workers, in collaboration with generalist physicians. The hospital is the primary referral centre for 20 district health centres, and serves an overall population of approximately 340,000 people, giving a ratio of population to mental health staff of 68,000:1.

Initially in Burera District, the mental health team focused its activities on supporting MoH staff to improve integration of mental health care into medical services at Butaro Hospital, particularly for people living with acute psychiatric problems who presented to the hospital. A psychiatric consultation liaison model was implemented with the aim of reducing transfers by ambulance out of the district to the national referral psychiatric hospital at Ndera (Smith et al., 2015). With the increasing transition of patients back to the local community, the PIH mental health team began to work with satellite health centres to facilitate continuity of care closer to communities and homes, and to learn about effective strategies for improved care and treatment adherence within this context.

Improving primary care: mentoring and enhanced supervision at health centres

In November 2010, the Rwandan MoH and PIH collaboratively launched the Mentoring and Enhanced Supervision at Health Centres (MESH) programme for primary care, designed to strengthen the public general health centre system and improve the quality of care provided by nurses at primary care health facilities in PIH supported districts of Rwanda (Anatole et al., 2013). This was not a mental health focused programme. The MESH program's initial focus was to support health centre nurse implementation of clinical protocols in child health, obstetrical and neonatal care, HIV care, and adult

health by incorporating decentralised didactic training with ongoing clinical mentorship and quality improvement activities at health centres. The model follows closely with WHO clinical mentoring guidelines developed for effective task shifting of HIV care (WHO, 2005).

MESH mentors are experienced public sector nurses with post secondary education and significant training in their clinical area of focus. Each month, the MESH mentors supervise clinical management and build clinical reasoning skills with nurse mentees in their area of clinical focus at assigned health centres, using an observation checklist to document nurses' adherence to clinical standards during direct patient care. MESH mentors use the checklist information to provide real time feedback to nurses regarding their clinical performance. During their supervision visits, mentors also review systems level performance with nurses and the health centre director, and help health centre staff to implement data driven, quality improvement activities.

Initial results from the MESH programme demonstrated significant improvements in a number of quality of care indicators, including completeness of patient assessment and improved diagnostic accuracy for certain child and adult illnesses after mentoring (Anatole et al., 2013). The MESH programme is currently being brought to scale nationally for HIV care in all districts in Rwanda, with preliminary plans in place for further future scale-up in other clinical domains.

Integrating mental health care into primary care: MESH mental health programme development

It was recognised that the original HIV and primary care focused MESH programme offered an effective primary care health delivery strengthening platform upon which to implement the national policy of

integrated mental health care into the public sector. Given the initial successes of the MESH programme for primary care, in August 2012, the PIH mental health team collaborated with Burera District MoH staff to implement a programme integrating mental health care into the public primary care health system using the MESH model.

Baseline assessment

A preliminary informal situational analysis of health centres in Burera District was conducted in 2012. Semi structured interviews with district health managers and health centre directors were completed to assess mental health service needs at health centres, the utility of a training and supervision programme, and the motivation and commitment of hospital services and selected health centres to participate in the programme. In addition, routine data from health centres were informally surveyed to determine whether mental health services were being offered at the health centres, as well as any currently available interventions and psychotropic medications. The range of mental disorders encountered at the health centres was also reviewed, as well as referral patterns for patients living with mental disorders and treated within the Burera District health system.

Three public health centres out of 20 were chosen as initial MESH mental health sites based on geography and high numbers of patients presenting with mental health problems (Figure 1). As nurses provide all primary health care at health centres in Rwanda, primary care nurses became the focus for the MESH Mental Health (MH) programme. Health centre directors were asked to choose two nurses from their health centre for participation in the programme based on clinical acumen, available clinical time and potential aptitude to implement newly acquired mental health knowledge and skills. Four major neuropsychiatric

Health facilities in Burera District



Figure 1: Map of initial MESH MH health centres.

disorders were chosen for clinical focus based on needs perceived by district mental health staff and health centre directors, as well as evidence of burden and treatment effectiveness: schizophrenia; bipolar disorder; major depressive disorder; and epilepsy (WHO, 2011b).

Training and supervision tools

A 40-hour training was developed to teach the practical aspects of clinical care of patients with mental disorders to the health centre primary care nurses. Training materials and guidelines were developed and adapted from the WHO mental health intervention guide for mental, neurological and substance use disorders in non specialist health settings (mhGAP) (WHO, 2011b). Other existing MoH and PIH mental health

materials, and published literature for task shifting in mental health care (Patel, 2003) were also used. The training materials were developed in close collaboration with the government employed district mental health staff, and community experts, to ensure that all training materials were culturally relevant and contextually appropriate to the local health system. The training curriculum included: basic communication skills; triage, including recognition of delirium; diagnosis and treatment of selected major mental disorders and epilepsy; psychoeducation and support to patients and families; crisis specific interventions; and triage protocols and referral pathways to specialist care when appropriate.

A mental health supervision checklist was adapted from pre existing MESH clinical

Table 1: MESH mental health supervision checklist elements

Intake assessment

- Reason for presentation
- History of present symptomatology, including disorder specific follow-up questions
- Psychiatric history
- Safety assessment
- Medical history
- Family and social history
- Substance use
- Vital signs
- Basic mental status exam
- Overall interviewing skills including expression of support/empathy
- Overall clinical assessment, including differential diagnosis

Initial treatment planning

- Basic psychoeducation for patients and family
- Psychopharmacologic management, including discussion of side effects
- Referral to appropriate level of care
- Planning for follow-up including collaboration with community based services (CHWs)

Ongoing management

- Symptom assessment
 - Functioning assessment including ability to get along in the community and self-care
 - Treatment response, including management of side effects
 - Ongoing psychoeducation and support
 - Treatment follow up planning
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programmes to assist with clinical mentoring and to ensure quality of care and standardisation of activities across clinical domains. The checklist contained dichotomous scoring of key observable features of a quality psychiatric evaluation, with the intention to improve diagnostic specificity, accurate treatment decision making, appropriate follow-up and referral procedures, and adequate patient and family support, including evidence based psychoeducation (Table 1). The checklist was also designed to facilitate performance data monitoring in order to inform the iterative adaptation of effective mental health practices at the health centre level through real time feedback. In addition, a facilities checklist was adapted from pre existing MESH clinical tools to assist with systems based quality controls and improvement project development.

Implementation Training

An initial MESH training was held over five days at Butaro Hospital. This was attended by two primary care providers from each public health centre in Burera District. Two psychiatric nurses, one government employed and one PIH employed, as well as one social worker and one Rwanda based expatriate psychiatrist, both PIH employed, served as trainers. Training consisted of didactic presentations, case studies, small group discussions, several role plays, and participatory games to foster critical thinking and problem solving skills among the participants. The mental health training promoted open discussion among participants, and trainers and participants were encouraged to express opinions about the

content and the training process, and to offer suggestions for improvement. This feedback was provided verbally during interactive sessions, and by written comments at the end of the training. Three quantitative multiple choice pre and post tests were used to evaluate the mental health care related knowledge of participants before and after the training. The construct validity of the tests was determined by the professional judgment of local and international experts, as well as comparison with other similar evaluation instruments used for other MESH clinical domains.

Clinical mentorship

Following the training, a schedule of individual supervision visits was arranged for the three selected health centres. A PIH employed Rwandan mental health nurse mentor travelled to each of the three public health centres weekly to provide onsite, individual mentorship to the two health centre nurses trained in mental health care delivery to run an initial pilot of the model. The mentor had a postsecondary degree in psychology, as well as training in psychiatric nursing. The health centre visits included: clinical observation, individual case review, documentation review, and brief didactic sessions. The mentor nurse used the case observation checklist to assess health centre nurse competency in performing key elements of basic psychiatric evaluations, accurately diagnosing patients and offering appropriate treatment and support based on diagnosis. The checklist allowed for real time assessment and response to training needs and areas for clinical improvement. Supervisory visits initially occurred weekly with a planned tapering down to bimonthly visits after six months and monthly visits after one year, although the frequency of ongoing supervision was also predicated on the mentor's assessment of the nurses' clinical capabilities and on whether satisfactory improvement in checklist scores were achieved after six months and one year.

Mentor support and training

The PIH employed MESH mental health nurse mentor, representing the role in the future of a government employed psychiatric nurse, received MESH specific training in conjunction with MESH mentors from other clinical areas, including an initial two-day clinical mentoring workshop focused on teaching techniques, effective communication, providing feedback, adult learning, using observation checklists in clinical mentoring and quality improvement methods including addressing systems issues. In addition, the mental health mentor attended quarterly supervision meetings with all MESH mentors to ensure coordination among clinical domains as well as receiving refresher training on clinical mentoring skills. The mental health mentor also worked closely with the in country expatriate psychiatrist to review and improve clinical training materials throughout the year. The psychiatrist periodically accompanied the mentor on health centre visits to support supervisory activities, assess checklist implementation fidelity and solicit programme feedback from the health centre director, nurses and patients.

Quality improvement

Both clinical and systems based quality improvement activities were integrated into the MESH mental health programme from its inception, in accordance with MESH programming in other clinical domains. The clinical checklist was periodically reviewed with health centre nurses, the expatriate psychiatrist, and the nurse mentor and was modified to include new elements or to clarify expectations for clinical practice. This process enabled health centre nurses to understand mental health service expectations and to provide achievable goals for improvement. A three-day clinical refresher training was held after six months, based on skills needing improvement as indicated by checklist data, as well as the nurse

Table 2: Health centre quality improvement initiatives supported by the MESH mental health programme

Identified gap	Action taken
1. Intermittently out of stock of psychotropic medications	Strengthened formulary management and communication between the district and health centre pharmacies
2. Inadequate physical facilities for patients with mental disorders	Collaborated with health centre directors to ensure dedicated clinic space for patients with mental disorders
3. Longitudinal documentation of clinical visits	Health centre nurses created a separate clinic register for patients with mental disorders
4. Food insecurity for vulnerable patients	Established criteria for enlisting social workers to support food packages for vulnerable patients in the community

mentor's perception of areas of clinical confusion.

During each supervision session, the nurse mentor also discussed systems based performance issues and 'quality gaps' with the health centre director and the health centre nurses, in order to improve patient care, clarify referral pathways, improve coordination between services and promote systems level improvement. The nurse mentor also worked with the health centre staff to formulate specific plans for improvements relating to the identified gaps, using the standard 'Plan-Do-Study-Act' quality improvement methodology for accelerating system improvements (Anatole et al., 2013). Table 2 describes selected examples of identified systemic quality gaps and actions taken to address them.

Programme progress

Uptake by the public sector system, without the creation of a parallel nongovernmental system of care, was rapid due to a high degree of organisation and management skill within the Rwandan public health care sector, a clear national mental health planning template and a successful initial pilot through the collaboration with PIH. Preliminary informal reports from participating health

centre nurses, patients and local authorities indicated that the MESH MH programme was feasible and acceptable at the three initial health centres. As a result, in August 2013, MESH MH mentorship was formally incorporated into the MoH run public health system in Burera District. Today mentorship is no longer provided by a PIH employed MESH mentor, but instead is provided in full by public, government employed district mental health nurses based at Butaro Hospital.

Initially following the transfer of mentorship from PIH to the public sector mental health nurses, the programme was then implemented at three additional health centres in the district. In 2014, the MESH MH program received a proof-of-concept seed grant from Grand Challenges Canada to implement the programme at all 20 health centres in Burera District for full district coverage, with the principal investigators being the national MoH director of mental health services and the Rwandan district clinical medical officer for PIH.

Discussion

Few models exist showing how evidence based mental health care can be effectively integrated and delivered in real world,

resource limited, primary care health settings. The MESH MH programme represents a systematic and innovative effort to integrate mental health care into the public health centre primary care system in Rwanda. The programme incorporated mental health care within an existing health centre strengthening effort, primarily by adapting structures of supported supervision initially designed to help health workers adhere to evidence based practices and guidelines in other clinical domains, initially focused on community based treatment of HIV/AIDS. There is emerging evidence that integrated mental health service provision may be most effective in places where primary care strengthening efforts are strong (Lund et al., 2012). Additionally, models of task sharing for other disorders such as HIV/AIDS may offer other countries a framework for beginning to integrate mental health care into general health settings. The programme described here has a number of strengths and challenges that are discussed below.

Strengths

Public health system strengthening

The MESH MH program is firmly grounded in Rwanda's National Strategic Plan for Mental Health. The MESH MH programme received public commitment at all health system levels both prior to and during implementation. Initially, the programme used a nurse mentor who was an employee of PIH, but mentorship responsibilities were handed over to an MoH district mental health nurse after one year. This government employed mental health nurse was already integrated into the district hospital structure and answers to the medical director responsible for all health care in the district. The MESH MH programme mentees are government employed health centre nurses, and all clinical and mentorship activities occur directly within the public health system. With the exception of the expatriate psychiatrist, the programme was

designed from the outset to use only human resources already working within the existing district health system. This ensured that the MESH MH programme focused primarily on building public capacity to improve mental health services at the health centre level. As Rwanda trains more psychiatrists through a new psychiatry residency training programme, the clinical and supervisory roles occupied by the expat psychiatrist can eventually be transferred to local psychiatrists so that all roles within the MESH MH system will be performed within the public sector. In addition, programme development has been an iterative process between the national MoH mental health team, PIH and local district mental health teams, in order to ensure that programming overall remains feasible and possible for scale-up to other districts in the future.

Consistent and reliable mentorship

In order to safely and effectively deliver mental health services within primary care in resource limited settings, mental health integration efforts must include capacity building for primary care health workers to provide the *actual* clinical care of patients with mental disorders (Collins et al., 2013). Task delegation to frontline workers for other chronic disorders has been most successful at improving health outcomes when combined with ongoing supportive supervision, specialist support and reliable referral networks (WHO, 2008b). The programme provided reliable, clinically sound supervision of primary care nurses to manage the chosen four major psychiatric disorders with independence and to provide clear criteria for referral to district mental health services for more complicated or severe cases (WHO, 2007). At the three initial health centres, trained and supervised primary care nurses initially did not feel comfortable or prepared to provide care on their own without the direct assistance of the mental health mentor. After about six months of supervision and the additional refresher

training specifically focused on psychotic disorders and epilepsy, nurses reported greater confidence in managing patients independently in close collaboration with the mentor. The MESH mentor also observed, both clinically and via improved checklist scores, that health centre nurses were managing patients more independently with success. A model emerged in which the primary care nurses performed the specific basic tasks outlined in the supervision checklist, including diagnosis, initial and follow-up treatment, psychoeducation and discussion of patient self-management techniques. The mentor was used for support and guidance on assigned days of mentorship and was available by phone throughout the week for mentorship of health centre nurses as needed.

Structured supervision checklist

The MESH MH programme adapted a structured clinical mental health supervision checklist from the broader MESH programme. The checklist was designed to provide both a baseline for quality of care provided by health centre nurses and to establish consistent and transparent criteria for mentors to use for supervision. Initially, the health centre nurses were concerned that a lower score may affect their work performance evaluations negatively, but the clear structure of the checklist as well as discussion about the purpose of the tool for provision of quality care promoted a meaningful working alliance between the nurses and the mentor. This provided a stable and safe context in which the interpersonal and clinical effectiveness of nurse mentees could be improved. The emphasis on a blame free approach in providing feedback to clinicians is consistent with current knowledge internationally on effective health system culture change in quality improvement (Institute of Medicine, 1999). The tool also allowed the mentor to anticipate learning needs early, to address them in real time, and to engage the health centre nurses in experiential learning of improved clinical practices.

Systems based quality improvement activities

Continuous systems based quality improvement processes are a key component of the MESH MH programme. Although the MESH MH mentor suggested areas for systems level improvement based on the facilities checklist, quality gaps were most often articulated by the health centre director, the health centre nurses, or both. Health centre staff took significant ownership of the improvement initiatives and would often implement small improvement projects on their own. Engaging in systems based quality improvement projects also developed confidence and credibility for health centre directors and nurses, and the belief that facility needs would be addressed in a timely way.

Challenges

Ensuring adequate coverage of services

Participating health centre nurses were initially selected by health centre directors, taking into account the clinical interests of the nurses, as well as clinical needs of each health centre. However, each nurse participating in the MESH MH programme had numerous clinical responsibilities in addition to the provision of mental health care, and balancing other clinical priorities at the primary care level with the provision of mental health care proved challenging. To address this challenge, health centre directors and nurses designated one day per week as the mental health clinic day. One of the two selected nurses participating in MESH was made available on this day to receive patients seeking care for a mental disorder, and was not primarily responsible for any other clinical services on that day. This helped both to ease the clinical burden on the primary care nurses providing mental health care and to ensure regular provision of services to patients.

Coordination among service levels

Prior to the MESH MH programme initiation, mental health services within the district had been provided almost entirely at the district hospital mental health clinic.

Although the MESH MH programme strengthened basic care for four major neuropsychiatric disorders within the primary care system, including referrals for complicated or ill patients, the process for linking health centre mental health care and district mental health services was difficult to organise. Some patients began seeking care at both the health centre and district hospital levels, rendering a duplication of activities for service delivery. Patients who were hospitalised for acute care at Butaro Hospital and then returned to follow-up within the primary care system were also difficult to track. More intensive psychotherapeutic and behavioural interventions for depression and psychotic disorders, treatment for alcohol and substance use disorders, and specific treatment for disorders of childhood and adolescence also remained available only at the district or central, national level mental health services in the urban capital. Challenges also remain in coordinating care across sectors and engaging professionals from other disciplines, such as teachers and social services in the care of patients with mental disorders. To overcome these obstacles the hospital mental health clinicians opened further communication channels to the health centres participating in the MESH MH programme in order to transmit key information and coordinate care. A basic electronic database was also created to help track patients from acute hospitalisation to outpatient care. However, the addition of a new service delivery level for mental health continues to require further efforts to optimally coordinate care.

Management of routine and quality data

Although primary care health centres in Rwanda routinely collect basic data for all patients seen at health centres, collection of data on mental health services rendered after the MESH MH programme was implemented was challenging. Routine service use data are recorded in paper health

centre registers by health centre nurses at the point of contact with patients. At the time of MESH MH implementation, however, the recording of mental health data in the registers was not standardised, and no resources nor staff time existed for routine data extraction or analysis. In addition, no electronic database existed yet for the systematic management of the MESH supervision checklists in order to gauge nurse progress. In response to these challenges, health centre nurses created a separate register for patients with mental disorders for easier data extraction and the MESH mentor worked with nurses to standardise the recording of health information for patients with mental disorders. Plans have also been made to create a database for MESH supervision checklists to gauge health centre nurse progress in clinical care and to supplement real time feedback given by mentors on their weekly visit.

Next steps

Integration of screening tools

Although the health centre nurse training incorporated both common and severe mental disorders, psychotic disorders and epilepsy received the most focus as those were the pressing needs perceived by the health centre directors and nurses. As the programme progresses, valid and reliable tools will be adapted to context as needed in order to screen patients for common mental disorders, to ensure clinically and culturally sound treatment and to track patient outcomes. This will be useful to ensure reliability of diagnosis beyond agreement with mentors and greater diagnostic clarity for all disorders, as well as to systematically document and initiate changes in the treatment plan for patients who are not improving.

Implementation of low intensity nonpharmacological interventions

As the programme grows, culturally sound and evidence based behavioural interventions will be incorporated more fully into

the structured supervision of the MESH MH programme. Basic psychotherapeutic approaches to depression care, assertive community treatment and psychosocial rehabilitation for patients with psychotic disorders, and brief interventions for alcohol related disorders, will be incorporated in the future. Ongoing needs assessment for incorporating care for the posttraumatic spectrum and acute stress reactions, and child and adolescent disorders, will also be implemented.

Formal engagement with community health

A new national CHW curriculum for chronic care and mental disorders has been finalised. This curriculum includes training on symptom recognition, case finding, referral and follow-up support for patients with mental disorders who receive care at the health centres. The curriculum will be implemented with CHWs associated with health centres in Burera District participating in the MESH MH programme. CHWs will then provide the formal linkages between the health system and communities, supporting patients in ongoing engagement in care and participating in community stigma reduction activities.

Rigorous monitoring and evaluation

As the programme progresses, routine process data generated by the supervision tools and checklists will be used to monitor nursing and health centre practices, inform supervision and guide continuous quality improvement endeavours. An electronic database has been created for retrospective entry of demographic and clinical characteristics of patients across all district health centres, as well as the district outpatient mental health clinic and will be used for patient tracking within the district. Indicators of programmatic success will need to include objective measures of improvement in clinical outcomes. A

comprehensive evaluation of the effects of MESH MH programming within the district system of care is planned for the next phase of programme implementation in order to document programme impact, including clinical and functioning outcomes for patients, as well as the impact of the programme on individual and household incomes.

Conclusion

The MESH MH programme to integrate mental health care into primary care provided at health centres grew from an initial PIH–MoH collaborative effort to strengthen care provided by health centre nurses in other health domains, as well as Rwanda's strategic priorities to decentralise mental health care to the rural district health system. The model is based on WHO guidelines for task sharing in HIV care that have proven successful in rural areas of Rwanda. The programme initially used a PIH employed mental health nurse to supervise and mentor primary care nurses in the care of patients with severe mental disorders, but transitioned supervision and mentorship roles to public sector mental health nurses after an initial pilot phase. The programme now engages public, district hospital based mental health staff to provide ongoing mentorship and supervision of health centre nurses to improve access and quality of care for patients living with mental disorders. The programme also provides a structured model for integration of mental health care into primary care in resource limited settings. Although a costing analysis is needed prior to large scale delivery of the programme, the MESH MH programme's location within the district public health system encourages its ongoing sustainability and creates the potential for scale-up and more decentralised mental health care delivery nationally. PIH mental health programmes in other low income countries, working in collaboration with Ministries of

Health, have also begun to adapt the MESH MH model based on emerging findings and experience.

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