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Integrated intervention for mental health co-morbidity in HIV-positive individuals: A public health assessment

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In South Africa, where it is estimated that more people have HIV than anywhere else in the world, HIV/AIDS and psychological disorder co-morbidity have been shown both to exacerbate the late diagnosis and treatment of psychological disorders and to affect adherence to ARVs. Targeted, affordable and evidence-based strategies to reach these populations are essential. Against this backdrop, a pilot project and situational assessment aimed at determining the context of psychological care and HIV treatment services in South Africa was undertaken. The situational analysis consisted of individual interviews, a patient survey, and a retrospective medical record data review. Training and mentorship were conducted from 2011 to 2013 by the Foundation for Professional Development (FPD) in five anti-retroviral therapy (ART) clinics in the Tshwane-Metsweding area. Data were both descriptively and inferentially analysed. Outcomes indicate that the general structure of HIV services is well organised and well run in the sampled clinics. However, mental healthcare and HIV services need to be integrated further. There is also a need to develop and pilot-test appropriate materials and models for the delivery of mental healthcare within the parameters of affordability, acceptability and availability further, and to advocate the advancement of mental health and HIV treatment and policy integration.

Keywords: HIV, AIDS, mental health co-morbidity, intervention, South Africa, public health

Introduction

The HIV and AIDS pandemic is one of the most serious public health challenges the world has ever faced. Furthermore, there is evidence of a high HIV seroprevalence in persons with serious chronic mental illnesses. In South Africa, Collins, Berkman, Mestry and Pillai (2009) found a seroprevalence rate of 26.5% in patients admitted to a public psychiatric hospital, while in Uganda, Maling, Todd, van der Paal, Grosskurth and Kinyanda (2011) reported a rate of 18.4% among first-time psychiatric admissions in two national referral hospitals. Infection with HIV has thus been consistently linked with poor mental health. Research from developed countries as well as from South Africa shows that people infected with HIV are twice as likely to exhibit depressive and anxiety disorders (common mental disorders) as the general population. In a case-control study, Adewuya, Afolabi, Ola, Ogundele, Ajibare and Oladipo (2007) reported a rate of 59.1% for psychiatric disorders compared to 19.5% in participants without HIV. In South Africa, the prevalence of psychiatric disorders in HIV-infected populations ranges from 43 to 56% compared with about 30% in the general adult population (Olley et al., 2003; Olley, Seedat & Stein, 2006; Freeman, Nkomo, Kafaar, & Kelly, 2007; Stein et al., 2010). In some patients, especially in resource poor settings, psychiatric disorders are the initial presenting clinical manifestation of HIV disease.

Several mechanisms have been implicated in the complex relationship between HIV and mental health. HIV is known to directly infect the central nervous system, which leads to neuropsychiatric complications such as minor cognitive and motor disorders, HIV-associated dementia and mood disorders. The high prevalence of psychiatric disorders reported in people living with HIV and AIDS (PLWHA) may actually reflect high rates of pre-existing mental and substance use disorders in demographic groups at increased risk for HIV (Burnam et al., 2001). On the other hand, emotional distress, depression and anxiety may occur in response to the initial crisis of a person's learning about his or her HIV status or to the subsequent development of symptoms and the associated disability, or may be related to the side-effects of anti-retroviral therapy (Atkinson & Grant, 1994; Owe-Larsson, Säll, Salamon, & Allgulander, 2009). Factors that have been associated with an increased likelihood of mental health disorder include the number of HIV-related symptoms, the viral load, a younger age, heavy alcohol use, unemployment and living alone. Furthermore, the lack of mental health intervention has been identified as a major barrier to antiretroviral therapy (ART) adherence among PLWHIV (DiMatteo, Lepper, & Croghan, 2000).

Despite the relationship between mental health and HIV/AIDS having been well established and the World Health Organization (WHO) recommending that attention to the psychosocial needs (which includes prevention and treatment of mental health problems) of people with AIDS

should be an integral part of HIV care, mental healthcare is yet to be integrated into HIV treatment programmes in many African and other resource poor countries (Collins, Holman, Freeman, & Pattel, 2006). Considering the fact that mental health resources and professionals are lacking across Africa, effective delivery of affordable psychological and mental healthcare to persons with mental illness can only be achieved by strengthening the capacity of those working within HIV prevention and treatment programmes to recognise and treat psychological problems.

Lazarus and Freeman (2009) report that within HIV settings, lay counsellors usually undertake relatively circumscribed forms of counselling and psychosocial support, using formal protocols and manuals. Within this model there is some provision for limited counselling in relation to issues that may arise, for example, safer sex and bereavement. These authors point out, however, that issues falling outside this model should be referred for further assessment or counselling by appropriately trained healthcare workers, preferably mental health professionals. This is in line with the WHO (2009; 2015) guidelines: while they advocate that basic counselling such as HIV testing services (HTS), adherence and support groups can be facilitated by paraprofessionals, they appear to indicate that the more complex forms of therapy should be carried out by trained professionals. The WHO (2009) guidelines for second-level care outline a number of psycho-therapeutic techniques that may be used with people who suffer from more severe mental health problems, asserting that often these problems may be beyond what health or community workers at a primary level can manage. They do not, however, state that lay professionals *cannot* provide such therapy. The literature does not appear to conclusively favour any one approach over another. Neither is there any evidence that indicates that services offered by mental health professionals are more useful than services offered by lay counsellors.

Methods

Until 2012 the Foundation for Professional Development (FPD) had initiated 110 000 people on highly active antiretroviral therapy (HAART) through the United States President's Emergency Plan for AIDS Relief (PEPFAR) funding in six districts in four provinces in South Africa. It has already been recognised by staff working with these patients that they have significant psychological and mental healthcare needs. FPD's decision to initiate a pilot mental health intervention was based on it being rolled out to all FPD's treatment sites, and possibly even more broadly throughout South Africa, should it prove to be effective and sustainable in the longer term.

Based on this premise, a pilot project and situational analysis consisting of individual interviews with clinic personnel was undertaken. Interviews were conducted by the study team consisting of two psychiatrists, two psychologists (one of which is the first author and the only person permanently employed by the FPD at the time of the project) and a social worker in English, Zulu and Sesotho at the pilot sites. Interviews were conducted with 8 managers, 9 doctors, 25 nurses, 6 social workers and 32 lay counsellors working in the HIV treatment services. Recruitment was voluntary and dependant on staff availability. For the individual interviews, open-ended questions were asked that addressed issues covered by the key questions presented, namely their views regarding the prevalence of mental disorders, the integration of psychological and mental healthcare into the ART clinics programmes, the existing levels of knowledge and skills in psychological and mental health, organisational and system support, and general suggestions with regard to the integration of services. Furthermore, a patient survey of 200 participants based on the General Health Questionnaire (Goldberg & Williams, 1988) was also undertaken. In addition, a retrospective medical record data analysis of 500 patient records, and a training and mentorship programme were conducted from 2011 to 2013 by the study team of mental health experts contracted by FPD. The overall purpose of this initiative was to determine the context of mental health in HIV treatment services in the Tshwane-Metsweding district in facilities supported by the FPD. The aim of this pilot project and research study was to explore, develop and implement an intervention to improve the physical and mental status of people with comorbid HIV infection and psychological disorders who attend primary-care HIV treatment sites. The pilot project and study were initiated in the Tshwane-Metsweding region of Gauteng at five sites: Soshanguve 3 (Shoshanguve), Phedisong (Garankuwa), Laudium Community Health Centres (Laudium) and Kalafong Hospital (Attridgeville), as well as at the free-standing ART site situated on the grounds of the Cullinan Care and Rehabilitation Centre (Cullinan).

Interviews were conducted at the pilot sites with managers, doctors, nurses, allied medical staff (social workers) and lay counsellors working in the HIV treatment services. Data were recorded on Excel spread sheets, triangulated, and both descriptively and inferentially analysed.

The intervention also consisted of training in modules for all levels of staff working in selected HIV treatment services and selected mental health services. This was followed by on-site mentoring and further training. Liaison with health service managers took place throughout to facilitate the project. Various aspects of the intervention were evaluated by means of programme evaluation techniques (such as field-based assignments in the course work, and follow-up surveys and field-site visits by the project team) in order to determine whether such an intervention could be sustainably implemented in other districts.

The project used existing staff and services as far as possible, and consisted of four phases: conceptualisation; baseline survey and training; on-site supervision, consultation and monitoring; and evaluation. Ethical approval for the study was obtained from the Foundation for Professional Development Research Ethics Committee (FPDREC) in January 2011.

Results

Soshanguve 3 Community Health Centre is situated in Block BB in the centre of Soshanguve. It provides comprehensive primary healthcare services, including mental health, tuberculosis (TB) and antiretroviral (ART) treatment services,

and has an emergency service. Both TB and mental health services are situated in the general PHC clinic, and involve dedicated staff and some rotating staff. Patients who are identified as HIV positive in the PHC clinic are referred to the HIV wellness clinic for staging and work-up. If patients do not yet meet criteria for ART, they continue to follow up at the wellness clinic. The ART treatment operates as a fully accredited service and acts as the "mother" clinic for eight other, smaller clinics in Soshanguve. The ART clinic provides treatment services to all patients over the age of three years, although children are primarily treated by the medical staff.

Phedisong 4 CHC is situated in Garankuwa. It is the only community health service in Garankuwa and operates on a 24-hour basis. Emergency services at the clinic are provided by nurses. There is no doctor available after hours. The CHC offers a comprehensive PHC service, including a mental health service and TB treatment services. HIV-positive patients are identified through the antenatal service, through HTS and through the general public healthcare PHC service (including the mental health service). All HIV-positive patients are referred to the ART clinic for assessment and treatment if necessary. In addition to providing ART, this clinic runs a wellness programme. The clinic recently started nurse-initiated ART, and plans to transfer patients to general PHC services throughout Garankuwa once more general staff have been trained in the ongoing management of people living with HIV.

Cullinan Clinic is an ART clinic situated in the grounds of the Cullinan Care and Rehabilitation Centre. The centre caters for people with severe and profound intellectual disability. The clinic's major challenge is its location. It is not part of a general PHC clinic and does not offer TB treatment or mental health services on site. It is not easily accessible and even the nearest residential area, Refilwe, is approximately 10 km away. There is no public transport to the clinic, so patients must walk. The clinic sends a mobile team out to 14 other PHC clinics in the district and provides them with HIV treatment support. However, there are very few vehicles available for use by the clinic staff, so they cannot easily reach communities to provide services. The clinic also provides a medico-legal service for people who have been sexually abused as well as for perpetrators who have been referred by the courts. This is a relatively well-staffed site with full-time medical and nursing staff, a dietician, a pharmacist and a social worker.

Kalafong Hospital is situated 12 km west of the city centre of Pretoria, next to Atteridgeville township. It is a large regional hospital offering some tertiary services. It is also an academic hospital associated with the University of Pretoria, and provides training for both undergraduate and postgraduate students from the Faculty of Health Sciences. It provides inpatient and outpatient services in all the major disciplines (except psychiatry) and many minor disciplines. The ART clinic at Kalafong Hospital was one of the first ART clinics in the Tshwane Metropolitan area and is an extremely busy clinic. It is divided into child and adult services, and all children and youth under the age of 20 years are seen in the child services section. According to the head of the Department of Family Medicine, ART clinic patients experience many social problems, and patients suffer from adjustment disorders and depression, as well as mental disorders secondary to general medical conditions, including HIV dementia. Although there is no protocol for the management of HIV dementia, patients are usually treated with HAART irrespective of CD4 count. However, the abovementioned head felt that less overt cognitive impairment is often missed. The Department of Family Medicine is the first contact unit for all patients visiting the hospital. They manage casualty and the general outpatient clinics. Patients are referred to specialised services when physicians from the Department of Family Medicine cannot manage them. All disorders in adults are managed, including psychiatric disorders that require inpatient or outpatient treatment. Assessments are undertaken every 72 hours in the inpatient unit of the department. Physicians in this department are comfortable with using psychotropic medication. There is a psychologist working in the department, social work services are provided by the hospital's social-work department, and there is usually a social worker in the ART clinic. Primary mental health services are supported by weekly visits from a doctor in the District Mental Health Service.

Laudium Community Health Centre offers a comprehensive primary healthcare service, including emergency services, chronic care services, TB treatment, child-care services (IMCI), reproductive health services (for example, family planning, and the Maternity Outpatient Unit, which offers antenatal, labour and post-natal care), a youth-friendly service, medico-legal services, rehabilitation services and HIV treatment services. The Lesedi ART clinic functions within the clinic, sharing a corridor with chronic care, TB and mental health services. Although rendering a separate service, the clinic on the whole appears to function in an integrated manner.

Prevalence of mental disorders

All the staff participants estimated that between 20 and 30% of adult HIV/AIDS patients suffer from a mental disorder. Health information systems do not record important mental health data, however, the retrospective record review and patient survey demonstrated that up to 30% of patients had symptoms of possible mental disorder, although less than 4% of records reviewed documented the presence of such symptoms. Common disorders mentioned by the managers, doctors, nurses, and social workers were depression, psychosis, as well as alcohol and cannabis abuse (including a heroin/cannabis combination called "nyaope" locally). Overall, participants seemed to be less aware of HIV dementia, suicidal ideation and post-traumatic stress disorder (PTSD). Domestic violence was recognised, particularly by the nurses, social workers and counsellors, as a common problem that could lead to or exacerbate mental illness. The relationship between the onset of psychological disorders and the diagnosis of HIV status was generally recognised by all the participant categories, however, it appears that some staff may disregard this at other times and assume that all mood disorders are due to adjustment reactions. Generally, there was less awareness of psychological disorders in children and adolescents across the various categories of staff participants, although the problems mentioned included depression, substance

abuse and developmental delay. The majority of the nursing staff participants acknowledged that they probably miss many cases of mental disorder if not presented with overt behavioural disturbance, and mentioned that poor adherence, persistent low moods and failure to improve over time would alert them to the possibility of depression. Persistent headaches were also identified as a marker of possible psychological problems.

Some specific differences in the types of psychological disorders at two of the sites included the following: Kalafong Hospital treats patients with serious mental illness and HIV who are admitted to Weskoppies Psychiatric Hospital. Kalafong Hospital also sees some injection drug users (IDUs) in their ART clinic, while Cullinan Clinic sees patients with PTSD due to the fact that victims of sexual assault are referred to this clinic.

Integrating psychological and mental health care into the ART clinics

The majority of participants across the different staff categories felt that patients receive considerable support from the ART clinics—they see multiple professionals and develop relationships with them over time. An important aspect mentioned was the attitude of staff. It was felt that if a staff member actively enquires about distress or shows that he or she is available to talk about issues of concern, patients are more likely to open up. The importance of developing a relationship with patients and observing their reactions over time was also highlighted by some participants across the disciplines/categories, mentioning that patients experienced a period of adjustment following their diagnosis, and that most patients did adjust and come to terms with their situation.

Although there is some privacy at most sites, privacy can sometimes be problematic, particularly when the clinics are busy. Most of these clinics see large numbers of patients, and there is an urgent need to transfer patients to other clinics where they would be able to access care and treatment more conveniently. The development of a sustained relationship between clinic staff and patients appears to play an important role in maintaining patient privacy.

Most staff members interviewed felt that a comprehensive HIV service should include the identification and management of psychological disorders. However, concern was raised about their ability with current staffing levels to implement anything more than basic screening and identification of patients with psychological disorders and referral to the mental health service. It would also be important to include screening on an ongoing episodic basis.

The nursing and counsellor participants were generally not aware of mental health non-governmental organisations (NGOs) that could provide services, and were a bit wary about the sustainability of NGO services. However, it was agreed that information about such NGOs should be made available at the ART clinics.

The principal of collaborative care (for example, referral to a psychiatrist when indicated) and individualised case management is probably not explicit enough, and could do with some emphasis, particularly in settings where a fully integrated system is not possible. One of the innovative ways of ensuring that patients receive all the care they need is found at the Laudium Clinic, where the ART clinic provides “courtesy managers” to take patients from one site to another if they have been referred, for example, from the ART clinic to Mental Health.

Existing levels of knowledge and skills in psychological and mental health

Most counsellors who were interviewed have not had training in basic counselling skills, but have had specific training in pre-test and post-test counselling, pre-ART preparation and adherence counselling. It appears that much of the work done by counsellors is educational, and that in fact very little counselling with regard to psychosocial problems is undertaken. With some exceptions, the counsellors do not currently have much capacity to undertake this kind of counselling. However, FPD has recently entered into an agreement with the National Department of Health (NDOH) to formalise the training of lay counsellors in terms of a one-year learnership, with the specific goal of expanding their role in dealing with mental health issues through improving their ability to provide related counselling and referral.

Organisational and system support

The District Health Service (DHS) and Kalafong Hospital management are very supportive of the ART clinics as well as of a mental health intervention in the service. It was notable that the leadership and support of the HIV and AIDS/STI/TB (HAST) managers and the FPD coordinators is generally good. Some management and nursing staff participants also mentioned leadership of the ART clinic as being critical to fostering a good team spirit among staff working in the clinic.

All the pilot sites are equipped with a comprehensive administrative and data management system. Dedicated administrative staff and data capturers are employed at all the sites. An electronic patient management form is currently completed manually by the staff, and all data is captured electronically. Data capturing is undertaken on the day of each patient visit. Patient files are kept in the ART clinic. It was noted that the patient management form filled out at the first assessment includes a question regarding the history of mental illness or substance abuse. There is no screening for psychological disorders at follow-up visits.

The issue of using a single file versus multiple records requires some consideration. It is probably preferable for the service rendering the most frequent service to hold the patient’s file. Patients have a “roaming file” that moves with them from one service to another, and it is important that all practitioners who interact with a patient, enter a record in this file, even if more detailed notes are kept by that service.

Suggestions from staff

All staff members interviewed felt that a screening tool and treatment protocols would be helpful. They also vocalised a need for improved access to mental health professionals (and possibly more of this category of staff to be made available). Furthermore, doctor, nursing, social work and manager participants felt that a one-week block of training was preferable to sporadic time away.

There was some discussion among the managerial and doctor staff participants regarding the role of FPD mentors, who provide a clinical service to a number of sites. It was felt that these mentors need training in and knowledge of HIV and mental health issues and information on how to access mental health services.

Identified problems

The heavy workload and the emotional demands were common themes mentioned by all staff participants during the interviews. A pervasive theme was the perceived lack of emotional support for clinic staff. Another problem highlighted at Kalafong Hospital was the difference in remuneration between FPD and Department of Health (DoH) counsellors.

Children and adolescents

All the sites manage children with HIV. Some sites only see children above the age of three or five years who are managed by medical staff. Kalafong Hospital has a separate paediatric HIV clinic, and also a specific adolescent clinic for children aged 11 to 19 years. There appears to be less knowledge about child and adolescent psychological issues at most of the sites, and staff very rarely refer children or adolescents to psychiatric services according to the majority of participants.

Psychological and mental health services

As part of the situational analysis, the District Mental Health Services (DMHS) and the academic Departments of Psychiatry of the Universities of Pretoria and Limpopo were approached. Currently there are no designated specialised tertiary level services in HIV Psychiatry. Weskoppies Psychiatric Hospital intends to establish a tertiary level neuropsychiatric service, but this has not yet been established. The psychiatric service personnel at the Dr George Mukhari Hospital have considerable experience in dealing with the neuropsychiatric aspects of HIV, and will be a good resource to district mental health services for more complicated cases.

The DMHS has already recognised the need to increase their involvement in the management of mental disorders in people living with HIV. Indeed, the Member of the Executive Council (MEC) for Health has given a mandate to this effect, and has encouraged mental health services to establish a presence in HIV treatment services. It is difficult to envisage how this could be achieved, however, with the current staffing levels in this service.

Mental health NGOs

NGOs approached were the South African Depression and Anxiety Group (SADAG), the North Gauteng Mental Health Society (NGMHS), and Families South Africa (FAMSA). In addition, the project team informed the South African Federation for Mental Health as well as the World Federation for Mental Health Africa Initiative of the project. The local SADAG, the NGMHS and FAMSA all provide training in counselling skills in addition to providing some services. These range from direct social work services, to individual and group counselling, support groups, marital counselling and a limited amount of psychotherapy.

Discussion and conclusion

This pilot intervention and situational analysis is regarded as primarily formative in nature, the goal being to collect and evaluate information and data needed to plan broad-scale integrated mental health and HIV programmes and initiatives at other PHCs with the emphasis on expediency and pragmatism. Empirical research relating to HIV and mental health co-morbidity is regarded as essential, as are the development and evaluation of psychosocial interventions, which could then be integrated into management of communicable and non-communicable diseases such as mental health illness and HIV/AIDS. In general, healthcare systems should be strengthened to improve delivery of psychological and mental health care by focusing on existing programmes and activities such as those which address the prevention and treatment of HIV, TB and malaria; gender-based violence; antenatal care; integrated management of childhood illnesses and child nutrition (in particular, child and adolescent psychological issues); and innovative management of chronic disease. An explicit mental health budget needs to be allocated for such activities.

Mental health ultimately affects progress towards the achievement of several Millennium Development Goals, such as promotion of gender equality and empowerment of women, reduction of child mortality, improvement of maternal health, and reversal of the spread of HIV/AIDS. Mental health awareness thus needs to be integrated into all aspects of health and social policy, health system planning, and delivery of primary and secondary general healthcare (Prince et al., 2007).

Although health information systems did not record important mental health data, a retrospective record review and a patient survey demonstrated that up to 30% of patients have symptoms of possible mental disorder, although less than 4% of records reviewed documented the presence of such symptoms. Approximately 100 staff members in the Tshwane District Health Services (DHS) received training in various aspects of HIV and mental health. These included training in screening for and identifying common mental disorders, HIV dementia and serious mental illness in PLWHA who attended the DHS; training in management of PLWHA with mental disorders; training in management of HIV and tuberculosis (TB) in people with mental illness; and training in basic counselling skills as well as psychotherapeutic interventions for PLWHA and mental disorders. Assessment of knowledge before and after training demonstrated that participants increased their knowledge and, in the case of HIV doctors and nurses, retained that knowledge over a six-month period. On-site mentoring was provided to a limited number of participants only. However, there was an improvement in the clinical skills of participants who attended mentoring sessions.

The pilot project identified the following strengths and opportunities: the general structure of HIV services at the time of the study was organised and well run; the staff working in these services are committed and hardworking; there is a psychological/mental health service available on site at four of the five sites; it appears that good use is made of social workers and psychologists where they are available; and there is already a screening question to identify mental

disorder at the first assessment. Furthermore, the political climate in South Africa favours mental health intervention at this time, managers at all levels are supportive of this intervention**,** staff were generally positive in terms of a psychological/mental health intervention, and there was overall consensus that this project provided the foundation for mental health services to be integrated into primary level services on a broader scale.

Apparent weaknesses and threats include insufficient information on the prevalence of psychological disorders at these sites; a lack of indicators in the existing information system to monitor the impact of the intervention; a lack of knowledge and skills in staff to screen for, identify and manage common mental disorders; insufficient mental health services; and, in some cases, poor communication between HIV and mental health services. There is also no formal relationship between the services. In addition, the following threats were discerned: a lack of time for training, a lack of resources, staff shortages and a high staff turnover, high patient numbers, the additional burden on overextended mental health services as a result of increased identification of mental disorders requiring intervention, and a shortage of psychotropic medication in the ART clinics piloted in (only amitriptyline, a tricyclic antidepressant with significant side-effects and interactions with ARVs was found). Furthermore, with the more recent switch to nurse-initiated management of anti-retroviral therapy (NIMART), adherence rates have declined and loss to follow-up has increased. Also, the Gauteng Department of Health has recently evicted all lay counsellors from their facilities, the reason behind this action remains unknown to the authors. As the duration of eviction in uncertain, it adds further complexity to the situation, and impedes strategies to train lay counsellors to provide contextual counselling services due to the lack of capacity.

In summation, there were significant challenges in implementing the pilot intervention. Many of these were health system related or due to the heavy workload (often leading to staff burnout) due to the pressing need for ART programmes, and inadequate resources in the DHS. Furthermore, South Africa is soon to adopt the World Health Organization's (2015) new "test and treat" guidelines for HIV patients, enabling patients to start treatment as soon as they are diagnosed instead of having to wait until their immune systems weaken. This will likely come at a further cost to the government, with potentially serious implications for the level of counselling and support that may be provided by healthcare workers in PHC settings, making the need for innovative approaches even more essential. The major concern with "test and treat" is that another 2 to 3 million people need to be added to an already overburdened public sector—the strategy now being explored by the NDOH is increased decanting of clinical stable patients (it remains uncertain as to whether or not mental health has been taken into consideration in this regard) to adherence support groups facilitated by lay counsellors. Within the next few months, PEPFAR is planning to initiate pilot programmes with implementation partners such as FPD that will organise private general practitioners to initiate and manage patients. Again, how mental health will be addressed within this context remains uncertain and necessitates serious consideration.

Additionally, a South African study indicates that the black African population group is significantly associated with worse ART adherence rates (which in turn exacerbates any psychological co-morbidity), this may be due to them more likely postponing medical care, having less access to care, and less trust in healthcare providers (Kong, Nahata, Lacombe, Seiber, & Balkrishnan, 2012). Also, women may face treatment barriers due to their lack of access to and control over resources, child-care responsibilities, restricted mobility and limited decision-making power, while the socialisation of men may mean that they will not seek HIV/mental health services due to a fear of stigma and discrimination, losing their jobs and of being perceived as "weak" or "unmanly" (dos Santos, Kruger, Mellors, Wolvaardt, & van der Ryst, 2014).

Overall, the pilot project outcomes indicate that it would not be possible to implement such an intervention in the current circumstances without dedicated staff to advocate for such interventions and to provide training and support to staff in the DHS. To facilitate the integration of mental health services that are more affordable for the South African context, basic counselling such as HTS, adherence and support groups should be facilitated by paraprofessionals that have received relevant training, while more advanced forms of therapy can be rendered by trained professionals such as medical doctors and nurses, under the supervision and guidance of psychiatric social workers, clinical psychologists and psychiatrists (according to the tenets of stepped-care and collaborative models) (Patel et al., 2003; Petersen, Hanass Hancock, Bhana, & Govender, 2014). Notwithstanding, it should be kept in mind that a severe shortage of professionals (and more recently, lay counsellors), including health and mental health practitioners, prevails in South Africa. There is international consensus that without urgent improvements in the performance of health systems, including significant strengthening of human resources for health, the world will fail to meet the Millennium Development Goals for health. Furthermore, the World Health Organization (2008) task shifting approach represents a return to the core principles of health services that are accessible, equitable and of good quality. Task shifting involves the rational redistribution of tasks among health workforce teams. Specific tasks are moved, where appropriate, from highly qualified health workers to health workers with shorter training and fewer qualifications in order to make more efficient use of the available human resources for health. The pilot study outcomes suggest that task shifting should be implemented alongside a stepped-care model in PHCs (although the new "test and treat" policies may make this more challenging) in that community health workers, primary healthcare workers, and other professional staff members can be trained to implement such services, and can be supervised by mental health professionals. Referral to a mental health practitioner should take place when there are indications of more severe mental health pathology, according to the principles of a stepped-care model. As indicated by Breuer, Myer, Struthers and Joska (2011) there is a need for prospective studies that investigate the bidirectional effects of mental illness and HIV on each other, as well as further studies on the impact of such combined mental health and HIV/AIDS interventions on PLWHA. It is also important to increase awareness that mental health constitutes a major barrier to reducing the

spread of HIV infection, to preventive efforts including the uptake of counselling and testing services and adoption of low-risk behaviours, adherence to HAART, and ultimately survival (Prince et al., 2007). This can only be achieved when empirical evidence from locally conducted research becomes available to guide the formulation of effective policy and intervention strategies.

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