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HATiP

HIV & AIDS Treatment in Practice

Issue 145 | 17 September 2009

In this issue:

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Mental health and HIV: a clinical review

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Key points

- **People with HIV may experience a wide range of mental health problems, which not only affect quality of life but also negatively affect health-seeking behaviour, adherence, retention in care, transmission risk and clinical health.**
- **Studies in the developing world show a high prevalence of psychiatric disorders in people with HIV, most commonly depression, anxiety and substance misuse.**
- **Mental health provision in resource-limited settings is often remote or under-resourced, and many health care workers may lack training in how to diagnose and manage mental health problems.**
- **A range of screening tools for mental health problems exist. At the most basic level, all patients should be asked about mood and feelings of helplessness or depression at each clinic or home visit, in order to identify patients in need of further attention.**
- **The Substance Abuse and Mental Illness Symptoms Screener has been validated specially for use in people with HIV.**
- **When identified, depression can be managed by physicians or clinical officers, but health care workers need to be aware of the potential for interactions between many drugs used in psychiatric treatment and antiretroviral drugs (see tables at end of this edition).**
- **There are many psychotherapeutic approaches which can be provided by trained professionals. Basic counselling can also assist individuals, especially where suffering follows diagnosis or relates to stigma or bereavement.**
- **Mental health care is likely to have greater success when it addresses underlying causes of mental ill-health such as poverty, lack of access to health care, lack of employment opportunities.**
- **More research is needed to establish which interventions are more successful, and to understand the extent to which culturally-specific interventions are needed.**

Case study

24 year-old Daya was married and eagerly expecting her first child —but during her third month of pregnancy she tested HIV-positive during a routine antenatal clinic visit.

Distraught and confused, Daya declined a counselling session and rushed home to confront her husband.

He said the test results must be wrong, and refused to visit the health centre for an HIV test because he said it wasn't necessary. So Daya decided to go for a second HIV test at a different health centre but again her results were positive.

On hearing this news, Daya's husband flew into a violent rage, accused her of being a prostitute and severely beat her. Bruised and exhausted, angry and uncertain of the future of her pregnancy and marriage, Daya took an overdose of pills. Her husband took her to the hospital, but looked her in the eyes and told her that their marriage was finished. This was the last time she ever saw him.

Daya recovered from her suicide attempt, and subsequently went to live with her parents for the duration of her pregnancy. She became increasingly withdrawn and tearful, had frequent bouts of insomnia and depressed mood, and continued to think about suicide.

At 37 weeks pregnant, Daya gave birth to a baby girl and named her Chipo.

Chipo's birth didn't resolve Daya's depression. She continued to feel low and was having trouble adequately feeding the infant. She feared that her baby might turn out to be HIV-positive, and occasionally had thoughts about killing both herself and the child.

This case study, excerpted from a joint report from WHO and the World Organization of Family Doctors (WONCA) Integrating mental health into primary care: A global perspective illustrates how a mental health problem (in this case a severe depressive disorder) can develop after an HIV diagnosis (The outcome of Daya's case will be described later in the article).

But for many people with HIV, severe mental health disorders and disabilities —whether depression, psychoses, personality disorders, alcohol/substance misuse or developmental disabilities — precede HIV infection and were actually part of the reason why

they became infected in the first place (see below). Without treatment, these problems are likely to persist.

Though data suggest the prevalence of mental disorders varies widely by setting — and may be influenced by difficult life circumstances (psychosocial factors such as poverty, conflict, sexual violence), culture and coping mechanisms, a growing body of data show that HIV/AIDS and mental health issues are often tightly interwoven. And regardless of whether a condition was pre-existing or emerged after becoming HIV-infected, mental health problems can complicate the care and clinical management of people with HIV, by potentially decreasing adherence and increasing losses to follow-up, reducing quality of life, and leading to poorer health outcomes.

"Mental illness, such as depression, adds to immune suppression," Dr John Joska, the Western Cape Province Programme Manager for HIV Psychiatry recently told the Inter Press Service. People with HIV and mental illness "get sicker quicker, then use more health services, need more hospitalisation and have *lower* quality of life."

In most settings, evidence suggests that people with mental health disorders or disabilities also have less access to HIV services, or at least have poorer health-seeking behaviour — but few health services seem to be addressing the HIV-related needs of the mentally ill.

According to some sources, the overall contribution of mental illnesses to the global burden of disease is growing.

"WHO figures clearly show that the burden [from] depression is likely to increase — so much so that in 2030 this will be the single biggest cause for burden, out of all health conditions," Dr Shekhar Saxena of the Department of Mental Health at the WHO, told the BBC World Service at the start of the first Global Mental Health Summit held in Athens, Greece, in the beginning of September.

While this projection may be subject to debate, Dr Saxena's other point is not: a mental health problem, such as "depression is as much of a disease as any other physical disease that people suffer from and they have a right to get correct advice and treatment within the same health care settings which look after other health conditions."

Attending to mental health issues should be an essential component of holistic palliative care offered to people with HIV (and their families). The palliative care approach aims to alleviate a person and their family's pain and suffering over the entire course of illness, whether due to HIV's physical effects or the emotional, psychological, and spiritual suffering associated with HIV. People with HIV are more than just lab tests or physical symptoms that need to be treated — there will always be a psychological dimension to their suffering that needs to be assessed and managed. In many cases, this goes well beyond 'distress' and becomes an illness of its own.

"The diagnosis and treatment of psychiatric disorders is essential to the well-being of a person infected by HIV. Appropriate mental health care is also essential if patients are to engage in treatment and sustain sobriety and protective sexual practices," wrote Dr Marshall Forstein in *A Clinical Guide to Supportive and Palliative Care for HIV/AIDS*.[1] He added, "it is never appropriate to assume that a psychiatric symptom is merely an "understandable" emotional reaction to a particular situation."

Addressing these needs may be challenging however, because mental health has long been a neglected matter in most resource-limited settings and there may be little infrastructure and training to deal with it. In the World Health Report 2001, WHO estimated that 450 million people worldwide are directly affected by mental, behavioural, neurological and substance use disorders — and most of these people are living in developing countries.[2]

Approximately one in four people visiting a health service has at least one mental health issue but most of these are neither diagnosed nor treated. This is because "most middle and low-income countries devote less than 1% of their health expenditure to mental health, according to WHO'S Department of Mental Health and Substance Abuse.

"Unfortunately, mental illness is not seen as an integral part of care for people on antiretroviral treatment (ART). As a result, patients are under-diagnosed and under-treated," Dr Joska said in the Inter Press Service article.

A quick survey of HATIP's advisory panel suggests that most HIV programmes have only limited capacity to recognise and manage these conditions:

"In Malawi, the ART clinics are so busy and run by paramedical officers and nurses that I really do think mental health problems get missed and are not well dealt with," Dr Anthony Harries, of the International Union Against Tuberculosis and Lung Disease(formerly with the Ministry of Health in Malawi) told HATIP, adding, "there is one mental health specialist for the whole country."

"Mental health issues are huge in our patients," said Dr Doug Wilson of Edendale Hospital, in KwaZulu Natal, South Africa. But "the mental health infrastructure is severely under-funded, while support services for families and partners fall on overworked social workers."

"Mental health problems are undiagnosed and often impact on adherence but we only detect the non-adherence and do not address mental health adequately," Dr Halima Dawood of Greys Hospital in KwaZulu Natal told HATIP. "We don't have adequate staff in terms of psychologists and Psychiatry only sees the patient as outpatients or after 48 hours of hospitalisation. This is an unsatisfactory arrangement. And services for families and bereavement counselling are almost absent at my site—it is the exception rather than the rule."

"Mental health issues are important especially for us in Zimbabwe where depression, stress and feelings of hopelessness are frequent among all people, whether HIV-positive or not, due to our continued suffering," said Dr Riitta Dlodlo, also of the Union.

And yet, consistently, panellists suggested that busy clinicians have too little time to manage these issues adequately.

"One of the most challenging issues in Malawi was and is just time," Dr. Kevin Bezanson of the University of Toronto, the Temmy Latner Centre for Palliative Care told HATIP. Dr Bezanson was formerly stationed in Malawi. "In the context of a public health approach, the numbers are overwhelming and these issues take time to identify and address well."

"Doctors tend to rely on counsellors to address problems that they have no time to deal with," said Chris Green of the Spiritia Foundation in Indonesia, "but the counsellors are rarely trained for anything other than pre- and post-test counselling."

But a growing number of experts are insisting that it doesn't have to be this way — that mental health can be incorporated into primary health care and that HIV programmes may be the logical first place to start. By integrating mental health into relevant guidelines and "ensuring adequate training in basic medical and psychological management of disorders, a holistic and integrated primary mental healthcare approach can be promoted," wrote Dr Melvin C Freeman and colleagues back in 2005.[3] "Moreover, we believe that, in the case of HIV/AIDS, there is already a substantial human resource base among the primary care providers who are ideally placed to provide front-line mental healthcare in the '3 by 5' initiative... HIV/AIDS counsellors."

With "additional training and relevant materials" Freeman et al argue, it should be possible to integrate "psychiatric and psychosocial interventions that should benefit both the mental and the physical health of people living with HIV/AIDS."

"As the roll-out of antiretrovirals to people living with HIV/AIDS continues to increase in South Africa, so too does the need to integrate mental health services into HIV care," Dr Joska and colleagues wrote in the South African Journal of Psychiatry in 2008.[4] "Screening tools for mental disorders are both available and feasible and should be incorporated into routine ARV care, with support from dedicated HIV mental health services."

A global movement to push this agenda has begun. Two years ago, there was *a series of articles in The Lancet*, one of which declared that in addition to the morbidity and mortality directly attributable to mental disorders, they are so intimately linked with other health problems such as HIV and other chronic conditions, that "there can be no health without mental health."[5] With the launch last year of the WHO Mental Health Gap Action Programme (mhGAP), there is increasing political pressure to improve mental health services available in low- and middle-income countries.

An overview of the mental health disorders commonly reported in people with or affected by HIV

Mental health issues commonly seen in people with HIV range from mild distress to frank clinical conditions. This issue will deal primarily with psychological/psychiatric conditions, as previous issues of HATIP addressed neurological conditions, such as HIV-associated dementia or neurocognitive disorders that arise as a consequence of HIV infection or opportunistic infections in the brain (see HATIP January 2007 part 1 and part 2 for an overview of these subjects).

However, many symptoms of certain psychological disorders overlap with neurological problems, which may need to be considered in the differential diagnosis.

Mental disorders have been defined and classified by diagnostic systems like the *International Classification of Disorders, 10th Edition (ICD-10)'s Classification of Mental and Behavioural Disorders: Clinical Descriptions and Diagnostic Guidelines*, and the American Psychological Association's Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV), neither of which are freely available, though a very handy summary of the DSM-IV is available online at http://allpsych.com/disorders/dsm.html. Both systems are due to be updated within the next several years.

While there's a fair amount of agreement between the two systems, some conditions are categorised differently. But in both systems, the classifications themselves are somewhat reductionist, in other words, some of the distinctions between categories seem artificial, and diagnoses often overlap with each other — some critics argue that psychopathology should rather be seen as a spectrum of symptoms.[6]

Since there are, as of yet, no lab tests for psychiatric or psychological disorders, these diagnostic systems and definitions must be the product of expert consensus (and a review of previous versions of the diagnostic systems show that the expert consensus evolves substantially with each iteration). This brings up another important issue: the experts are mostly drawn from industrialised societies, and what may be considered to be disruptive or abnormal behaviour in one society may not be in another. Some have accused the diagnostic systems of being ethnocentric or culturally biased, and there seem to be some data to support this.[7, 8, 9]

Increased research in different societies and cultures is needed to help make these diagnostic systems more global.

So, while there are ongoing debates about how some of the disorders ought best to be defined, the following list focuses on some of the important features of the disorders that are most commonly reported in people with HIV in the medical literature, including serious pre-existing problems that could potentially increase vulnerability to HIV, as well as conditions that result from HIV diagnosis and illness for both the person with HIV and their family.

[Unless otherwise noted, the following section is derived primarily from the following sources [10,11,12,13] as well as the summaries at http://allpsych.com/disorders/dsm.html].

Depression

Everyone gets depressed at some point in his or her life; and as a symptom, depression is part of many psychiatric conditions. However, the classification systems differentiate between depressive mood disorders, including major depression (sometimes called clinical or endogenous depression), dysthymia (a chronic but less severe low mood lasting more than two years), and adjustment disorders with depression (having difficulty adjusting to an event or stress in life), sometimes referred to as demoralisation.

Major depressive disorder (MDD) is characterised by a persistent low mood, low self-esteem, decreased energy, and a loss of interest or pleasure in normally enjoyable activities. There can also be sleep disturbances (increased sleep or insomnia and fatigue), changes in appetite (with weight gain or weight loss) and thoughts of suicide. MDD disrupts a person's work, family and social life; mood may be so low that there may be a loss of facial expressions, slow psychomotor responses, difficulty concentrating, with memory problems (the condition is sometimes mistaken for HIV-related dementia). In some people, low mood may present as anger or irritability or utter lack of emotion; they may also have delusions of being persecuted.

Biological, psychological, and social factors may contribute to the development of MDD. It may in fact be triggered by a life event like an adjustment disorder but becomes established in such a way that psychiatrists believe it should be seen (and treated) as a brain disease (something like a chronic chemical imbalance in the brain).

Some studies suggest that suicidal ideation may be particularly common in people with HIV, especially if they lose family support or as they develop symptoms.

Adjustment disorder depression or demoralisation commonly occurs following an HIV diagnosis, the break down of a relationship, bereavement due to the loss of a loved one from HIV or other difficult life circumstances, especially when there is inadequate support for an individual. Adjustment depression can be quite severe — people may at times become overwhelmed by sorrow— and difficult to distinguish from MDD in an HIV clinic setting. According to Treisman et al, the condition is less likely to be associated with a negative self-image or ideas of suicide — while people with major depression are more likely to have completely lost any sense of enjoyment from activities that were previously pleasurable. Such symptoms may also be helpful in distinguishing depression from HIV-related cognitive impairment.

Post-partum/natal depression tends to occur within the first six months after delivery that persists more than a couple of weeks. Affected mothers may feel despondent, inadequate, unable to care for their infant, irritable or tearful.

Efavirenz, antiretrovirals and depression: The anti-HIV drug efavirenz (*Sustiva,* also in the combination pill *Atripla*) has been reported to cause or aggravate underlying psychological problems.

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Some people have difficulty sleeping, or vivid dreams or nightmares. Other people have reported the emergence of depression without any other apparent cause. A large French study has disputed these reports, noting the high burden of pre-existing psychiatric problems among people with HIV. Nevertheless, concerns persist.[14] Other antiretroviral drugs have occasionally been cited as the causes of psychiatric conditions such as mania, depression and anxiety. However the extent to which other antiretroviral drugs might affect mental health is still poorly characterised despite nearly 15 years experience of their use in combination therapy.

A note about end of life depression and bereavement: "Even at the end of life, depression is a disorder that requires treatment, and should never be considered a normal response to illness or dying," wrote Dr Forstein. Depression at this stage may be associated with emotional flattening and withdrawal from loved ones but should be distinguished from grief. "While sadness may be present in both conditions, grief is a normal reaction to loss or impending loss. Further, grief may manifest differently across cultures.... Grief, however, is often accompanied by powerful and profound affective states and crying, while severe depression appears more like an emotional paralysis, with patients often unable to mobilise any affect other than hopelessness." Another palliative care resource, suggests that, "the presence of suicidal ideation and inappropriate guilt may help to differentiate the two."[15]

Of course, death also has a profound impact on one's loved ones. According to a recent literature review in *The Lancet*, bereaved individuals report diverse psychological reactions, with depression or anxiety frequently becoming clinically important. Bereavement is also associated with an excess risk of mortality due to many causes, including suicide, particularly in the early weeks and months after loss.[16]

Bipolar disorder

Bipolar disorder is characterised by periods of mania (excessive excitement) or hypomania that may be followed with episodes of depression.[17] It is generally divided into two key types.

Bipolar I involves at least one manic episode during which time the individual has a heightened mood and a sense of being virtually indestructible. During manic episodes, self-esteem may be abnormally elevated and there may even be delusions of grandeur; the individual may be extremely talkative, have racing thoughts, and a reduced need for sleep. Sometimes speech becomes pressured (difficult to interrupt), thoughts become scrambled, disorganised or illogical, perceptions altered, and auditory hallucinations may occur.

The periods of mania can last for months and cause severe consequences, because the individual may engage in activities that are poorly thought out and sometimes quite dangerous. For example, the individual may make over commitments, rash personal decisions, spend recklessly, and engage in risky sexual behaviour, and/or the use of drugs or alcohol. Hypersexuality is often reported among manic individuals. Mania may or may not be followed by an episode of depression — which may at least partly be due to dealing with the consequences of their mania.

People with **Bipolar II disorder** experience hypomania (less severe and without psychotic features) followed by bouts of depression — often within the same week. Bipolar II is generally much less destructive to one's social or work life.

AIDS mania: There are several reports in the literature of people without prior or family history of bipolar disorder who have developed a similar manic syndrome in the end-stage of HIV infection, which may be due to opportunistic infections or the direct effect of HIV.

Schizophrenia

Schizophrenia is believed to be a thought disorder characterised by disorganised speech and behaviour (such as dressing inappropriately, or purposeless movements/catatonia), perceptual abnormalities, delusions, and hallucinations (referred to as positive or criteria A symptoms), sometimes accompanied with apathy, withdrawal from social interaction, and a loss of will (negative or criteria B symptoms). The individual may believe that external forces have taken control of their thoughts and actions, or that their thoughts are being broadcast.

While genetic, early neurodevelomental, early environment or psychological factors may play a role in the development of schizophrenia, it often appears to be catalysed by a stressful event, usually sometime between adolescence and young adulthood, after which time, it becomes a neuropathology. There is rarely a return to the premorbid state, though symptoms may be ameliorated and suffering reduced.

There can be grave consequences of developing schizophrenia or other severe psychoses in some settings where such behaviour is highly stigmatised and where people may even attribute the symptoms to witchcraft or possession by spirits.

Substance abuse disorders

A disorder related to the misuse or dependence on a substance such as a drug, alcohol or medications that alters one's senses. Importantly, many persons with a substance misuse disorder have a concurrent mental health disorder — and their substance misuse could be a misdirected attempt to self-medicate.

Substance abuse refers to recurrent use or indulgence of a substance despite the fact that it causes social, occupational, psychological or physical problems for oneself or harms others. For instance, substance abuse may be associated with a failure to fulfil work, school, or family responsibilities, driving while intoxicated or engaging in other dangerous activities while intoxicated, or getting in trouble with the law.

S**ubstance dependence** is physiologic dependence on a substance that occurs when compulsive and repetitive use result in tolerance to the effect of the drug and withdrawal symptoms when use is reduced or stopped. Eventually, the individual will sacrifice key assets (time, money, employment and relationships) to continue taking the substance.

Other disorders

Anxiety disorders include a large number of conditions characterised by abnormal or inappropriate feelings of worry or panic, with heart palpitations, sweating, tensed muscles, agitation, nervousness but without any immediate reason for such a reaction. Other anxiety disorders result in an entirely different emotional response, such as social phobias or agoraphobia.

Anxiety may manifest as an adjustment disorder after a negative life event, such as conflict, HIV diagnosis, or related negative events, such as rejection and stigma, or losing a loved one to AIDS.

Post-traumatic stress disorder (PTSD): PTSD is a form of anxiety disorder following a traumatic event that causes intense distress, recurring fears and/or helplessness in an individual. Symptoms may follow soon after the event or only manifest years later and may include re-experiencing the trauma through nightmares, obsessive thoughts, and flashbacks, avoidance of situations associated with the event; psychological or social withdrawal; irritability, jumpiness, or aggressiveness.

Sexual dysfunction is a very common problem in people with chronic ill health. It can also contribute to other mental health problems (e.g. depression) and have a significant impact on quality of life and feelings of self worth. These conditions might be especially common in people with HIV, because of the association of sex with their diagnosis, the fear of transmitting the virus to others, or the fear of rejection following disclosure of HIV. There may also be physiological reasons for sexual dysfunction that need to be considered in differential diagnosis.

Sleep disorders are common among people with HIV and may interact with other complications, exacerbating cognitive and memory problems, and potentially complicating adherence to treatment schedules. HIV-related sleep disorders may be characterised by a shorter total sleep time, a delayed time failing to sleep and reduced sleep efficiency (restless sleep with more time spent awake).

Personality disorders are enduring and inflexible patterns of behaviour that may cause personal or social difficulties. These are perhaps the most subjective of diagnoses listed here, and perhaps the most rooted in expectations that vary by culture (The DSM-IV lists 10 such disorders, the ICD-10 eight). Studies in industrialised societies report that many people with HIV have personality disorders, especially the DSM-IV's borderline personality disorder (BPD), which is characterised as having a low sense of self-worth, intense fear of abandonment that leads to clingy, or attention-seeking self-destructive behaviour (including impulsivity regarding sex and drugs) which in turn causes instability in relationships.

The pattern of behaviour may result from abuse, loss or some other psychosocial factor that established a very negative self-image during childhood, leading some critics to charge that BPD may simply be a reaction to PTSD. But since the diagnosis is much more likely to be made in women, it has been labelled as sexist.[18] Even though the personality traits and psychological risk factors linked with BPD are commonly found in resource-limited settings, it is not a diagnosis that is commonly reported in non-Western literature.[19] However, it is possible that people just "act out" in culturally specific ways.[20]

Do mental health disorders increase the risk for HIV infection?

In industrialised countries, such as the US, several studies suggest that people with severe mental illness have a dramatically higher HIV prevalence than the general population, with rates of HIV infection ranging from 3.1% to 22.9% (compared with an HIV prevalence of 0.3% to 0.4% in the general population in the US).[21, 22, 23, 24] A recent American study among the general psychiatric population at Duke Hospital (people with less severe problems) found that HIV infection was present in 1.2% of the psychiatric outpatients, approximately four times the HIV prevalence in the general adult population.[25] Among the general psychiatric population, HIV prevalence was higher among people with substance abuse disorders (5%), personality disorders (3.1%), bipolar disorders (2.6%), and PTSD (2.1%). To explain these rates, many studies have looked at the effects of mental illness on behaviour and living circumstances.

For instance, one study of people presenting for voluntary HIV testing found they had a sevenfold increase in lifetime rates of mood disorders, such as MDD, compared to the general population.[26] Other researchers have identified depression as a risk factor associated with unprotected sex, multiple sex partners, and contracting sexually transmitted diseases.[27, 28, 29] The situation is often compounded by alcohol and substance abuse, but in a survey of people attending a sexually transmitted disease clinic, HIV risk behaviours were still significantly higher in those with depression compared to non-depressed people even after adjustment for substance abuse.[30] "Depression may increase the likelihood of engaging in these behaviours to mitigate distress, and depression can compromise motivation to change these behaviours," Hutton et al wrote.

Similarly other studies have found that other psychiatric disorders also increase vulnerability to HIV infection though people with different diagnoses may be more prone to engage in different kinds of high-risk behaviour.[31] People experiencing mania or hypomania may be more likely to engage in unsafe sexual and substance abuse behaviours.[32] A survey of psychiatric patients in New York found that people with excited symptoms (mania) were much more likely to have multiple sex partners, while exchanging sex for money or drugs was much more common among people with schizophrenia than among those with other diagnoses.[33] Triesman et al noted that "patients with schizophrenia generally receive poor medical care, and are often involved in coercive sexual behaviours and substance use."[34]

Substance abuse also places people at increased risk for contracting HIV, both directly (in the case of injecting drug use), or because of increased sexual risk-taking behaviour associated with intoxication or addiction. Injecting drug use is the leading risk factor for HIV in many parts of the world.[35] Another recent review found a strong association between HIV-infection risk and the use of alcohol and non-injecting drug use.[36] When lives are so disrupted by substance dependence that people live on the streets or in unstable housing, exchanging sex for drugs or money may be more common.[37, 38]

So there is little doubt that mental health disorders that impair judgment could increase risk-taking, and that people with mental illness may be less able to negotiate safe sexual encounters and be subject to coercion. Some people suffering from severe mental health problems may be unable to access or understand information about HIV/AIDS and thus protect themselves. Also, some people with severe depression or who have low self-esteem may not care whether they become infected, or may act in a way they perceive to be self-destructive. Finally, serious mental disorders may make it difficult for someone to find or keep employment and maintain steady relationships. They are more likely to experience periods of homelessness and thus may be coerced to engage in risky behaviour in order to survive.

But again, these data come from lower prevalence settings, where the HIV epidemic is primarily found among most-at-risk populations (men who have sex with men, sex workers and injecting drug users (IDUs)) who also have a greater burden of mental illness because of their marginalisation by society. The psychosocial factors associated with mental illness in other parts of the world are often quite different, as are the socio-demographics of the HIV pandemic (although it is important to remember that epidemics among most-at risk populations coexist alongside generalised epidemics).

Substance abuse disorders, especially alcohol abuse, in sub-Saharan Africa, have consistently been associated with a higher rate of sexually transmitted infections, greater numbers of concurrent sex partners, less condom use and exchanging sex for money and alcohol.[39, 40, 41, 42, 43] But there are fewer data on the burden of HIV in people with other mental illnesses in resource-limited settings, and what data are available do not consistently show a greatly increased risk of HIV.

In a 2003 study in Tamil Nadu India, the HIV prevalence among newly admitted psychiatric patients was found to be 1.03%.[44] The

authors concluded that this was not significantly higher than the prevalence for other hospital admissions of 0.7%, which also happened to be what, at the time, was believed to be the national HIV prevalence. However, since then, India has concluded that earlier estimates of HIV were about twice as high as they should have been and HIV prevalence is currently estimated to be around 0.34%.

A survey of sexual activity among psychiatric patients in southern India found less sexual risk taking than expected.[45] "We found that only 5% of the patients reported high-risk sexual behaviour in the past years," wrote Chandra et al; however, they noted that, "in India, it is more common than it is in the West for adults to continue to live with their families, which may restrict opportunities for sexual activity."

This might be true of people with mental illness in a number of non-industrial societies.[46] Of note, a survey of outpatients with schizophrenia in Nigeria found that they were significantly less likely to be sexually active than a matched patient group (people with diabetes).[47] However, they had more misconceptions about HIV/AIDS and were also more likely to engage in high-risk behaviours when they did have sex. That study did not assess the HIV burden amongst the two groups however.

A subsequent study in India, which looked at the prevalence of several sexually transmitted infections in people seeking treatment for a mental disorder in India, suggested that there was in fact some increase in risk. Out of 1,639 subjects, 948 were stable enough to consent to be interviewed and screened. The study found a prevalence of 1.7% for HIV, 3% for hepatitis B, 3.1% for syphilis, and 10% for chlamydia — rates that appear to be higher than those in the general Indian population.

There is an appalling lack of data in sub-Saharan Africa. What data there are come from southern Africa and report an HIV prevalence among psychiatric patients that is not dissimilar to that among the general population — though given how high the HIV prevalence is in southern Africa, that is of little comfort.

A study from Zimbabwe in 1996 screened 143 inpatients admitted to Harare Central Hospital's Psychiatric Unit and found an HIV prevalence of 23.8%.[48] More recently, Dr Pamela Collins of Columbia University conducted a study at a public psychiatric institution in KwaZulu Natal, South Africa, among 151 patients who were psychiatrically stable and able to give informed consent.[49] Forty people (26.5%) were HIV-positive; as in the general population, women were more likely to be infected than men (OR 2.74; 95% CI=1.25-6.04; p=0.012).

Because of testing consent issues, these surveys may be missing a greater burden of HIV among people with severe mental illness.[50] But it is possible that in settings where HIV is hyperendemic and where being involved in multiple concurrent sexual partnerships is normative behaviour in the general population (and is, in fact, largely what is driving the epidemic), mental illness may not so greatly increase risk.

Again, there are fewer data in African settings and some of it seems conflicting. For instance, a study in a Cape Town township found that people with depression, reported alcohol abuse, and PTSD were more likely to report experiences of forced sex [adjusted odds ratio (AOR) 2.53; 95% confidence intervals (CI) 1.60-4.02], transactional sex (AOR 2.88; 95% CI 1.29-6.48) but also *increased* condom use (AOR 2.07; 95% CI 1.32-3.25).[51] The authors noted that because of the cross-sectional nature of the survey, no temporal associations could be made (in other words, the causal relationship is unclear —the PTSD may well have been the consequence of the forced sex).

Regardless, the two African HIV prevalence surveys noted above demonstrate that there is a clear need for HIV services among vulnerable people with mental illness. Collins et al wrote "These results underscore the importance of integrated mental health and HIV care in institutional and outpatient mental health settings and affirm the need for detailed HIV risk assessment as a routine part of psychiatric care. Correspondingly, HIV care and treatment programs should be made available to people with psychiatric symptoms."[52]

The burden of mental illness in resource-limited settings among people with or affected by HIV

On top of the baseline of pre-existing mental illness among people with HIV can be added mental health complications that may emerge once people learn their diagnosis, and try to deal with HIV-related ill health, stigma, discrimination, rejection or bereavement, as well as financial, employment and relationship problems.[53]

According to studies from North America and Europe, this results in an enormous burden of mental health issues in people with HIV. One survey of HIV-doctors and their patients even suggested that 70% of people with HIV experience some mental health problem. A large meta-analysis confirmed that people with HIV were almost twice as likely to suffer from major depressive disorder as matched people in the general population.[54]

And a WHO report last year stated "that the prevalence of mental illnesses in HIV-infected individuals is substantially higher than in the general population," though it also noted that "HIV tends to be concentrated in highly vulnerable, marginalised and stigmatised populations" who have "have higher levels of mental health disorders than the general population."

But once again, there are very limited data from resource-limited settings where HIV is more common in the general population, where many people, HIV-infected or not, may face very trying life circumstances, but where coping mechanisms and social capital are also quite different. The data that do exist, if taken at face value, would mean the burden of mental illnesses in people with HIV varies dramatically across different parts of the world and populations. Some of the heterogeneity in study findings stem from "the variation in mental health instruments, sampling, study design, and timing of the assessment in relation to receiving the HIV diagnosis most likely influenced the prevalence of mental illness reported," according to a review by Collins et al.[55] In fact, very few of the studies from resource-limited settings assess mental health in the same way.

However, in one of the largest studies, conducted over 15 years ago, investigators used a screening tool that had been validated for cross-cultural use in five cities — São Paulo, Brazil, Bangkok, Thailand, Munich Germany, Kinshasa, Democratic Republic of Congo (DRC), and Nairobi, Kenya — to compare rates of mental illness among people with HIV and matched HIV-negative controls.[56] Overall, only about 6% of the participants had depression, and while symptomatic people with HIV had significantly higher depression scores than the HIV-negative controls, this wasn't consistently the case for those without symptoms. The highest levels of mental health diagnoses (~20%) were recorded amongst symptomatic HIV-positive MSM in Sao Paolo, Brazil and IDUs in Bangkok — but such illnesses were relatively uncommon in people with HIV from Kinshasa and Nairobi, even among symptomatic people.

The lower overall incidence of mental illness in the African sites of this study is curious, but it is not the only time such an observation has been made: the World Health Organization (WHO) World Mental Health (WMH) Survey Initiative looked at one African

country — Nigeria — and found that only 4.7% had had a DSM–IV disorder in the past 12 months (with a 12.1% lifetime rate).[57]

Somewhat higher rates have recently been found in a large study in Zambia which recorded "mental distress" in 15.4% of surveyed women and 12.4% of surveyed men.[58] Of note, the prevalence of HIV was 13.5% and 18.2% for the rural and urban population in the study, but most of the survey participants (86.4%) did not know their own HIV status. Even so, the study's authors believed that much of the mental distress that was found may have been due to HIV— both directly and indirectly through its effect on health — since factors such as self-rated health, self-perceived HIV risk and worry of being HIV-infected were closely related to mental distress.

Poor mental health seems much more common in South Africa where, after HIV, neuropsychiatric disorders comprise the second largest component of the national burden of disease.[59] In a household survey involving 4351 South African adults (the South African Stress and Health (SASH) survey), the lifetime prevalence of DSM-IV disorders (using the World Health Organization Composite International Diagnostic Interview (CIDI) was 30.3% for any psychiatric disorder, including 15.8% for anxiety disorders, 9.8% for mood disorders (including MDD), 13.4% for substance use disorders.[60] These rates are lower than in some Western countries but higher than in most of the other countries in the World Mental Health Survey.

Stein et al suggest the higher rates of mental health problems could be due to South Africa's recent history of racial discrimination, political violence, and ongoing socio-economic disparities, high rates of gender inequalityand criminal violence. But another factor could be the enormous burden of HIV/AIDS and AIDS-related mortality in the country. Many survivors of the concentrated HIV epidemics in the West are deeply traumatised by the impact of the AIDS epidemic on their communities, and emerging data are suggesting this may also be the case among deeply affected communities in southern Africa.

Earlier this year, a further analysis of the SASH survey concluded that mental health diagnoses were significantly more common in people who knew someone who had died of AIDS — and researchers calculated that up to 15% of 12-month DSM-IV disorders in the South African adult population could be due to the impact of AIDS-related mortality.[61] Of course, many of those who knew people who have died of AIDS may have also been dealing with their own HIV diagnosis.

For instance, in one study, researchers from the University of the Witwatersrand in Johannesburg found depression in about 56% of the people with HIV (and this was unrelated to subjects' immune status).[62] In another study, 56% of people with HIV had at least one psychiatric disorder at baseline, and 48% of patients had at least one psychiatric disorder at 6 months.[63] Depression and PTSD were the most prevalent disorders both at baseline (34.9% and 14.8%) and follow-up (26% and 20%), respectively.

In contrast, a study presented at this year's South African AIDS Conference (SAAC), used the same tool (the MINI International Neuropsychiatric Interview) in over 600 people with HIV in the Free State Province and only found 15% with anxiety and 9% with depression.[64]

Another study presented at SAAC screened for common mental disorders in 302 subjects attending the Nthabiseng HIV Clinic at Chris Hani Baragwanath Hospital and three HIV Wellness clinics (one in Soweto, one at an informal settlement south of Johannesburg, and one at a rural hospital in Limpopo Province).[65] 31% of the participants had a current mental disorder (40% had a disorder at some point in their life). Almost 21% had a current depressive and/or anxiety disorder, 7.6% had a substance use disorder. Notably 60% of those with a lifetime depressive disorder had their first onset after their HIV diagnosis.

A systematic review of 23 studies on the mental health of people with HIV was recently published in the *African Journal of AIDS Research* by René Brandt of the University of Cape Town. She concluded that, "the majority of the studies reviewed reported that about half of HIV-infected adults sampled had some form of psychiatric disorder," while depression was the most common clinical disorder (over 20% in most studies).[66]

Given Dr Dlodlo's comments earlier in this HATIP, it's not surprising that some of the most disturbing findings came from Zimbabwe. These came from a cross-sectional study using a number of assessment tools on a convenience sample of 200 subjects recruited in Epworth, a township outside of Harare, Zimbabwe, that had a very high point-prevalence of HIV — 59.3%.[67] 71.3% of the people with HIV were suffering from mental health complications compared to 44.3% of those who were HIV-negative (OR=3.12, 95% CI=1.64-5.95, P=0.0002). The most common psychiatric symptoms were "emotional withdrawal, depressed mood, suspiciousness, apparent sadness, reduced sleep and suicidal thoughts (especially among women)."

Another study that found a very high rate of mental disorders comes from Uganda, where researchers enrolled patients attending a TASO (The AIDS Service Organisation) clinic (every fifth consenting person with HIV attending the clinic).[68] Notably out of the 46 total subjects, 31 were also unemployed. Participants were interviewed using the MINI tool — and 82.6% were found to have at least one psychiatric disorder. 54.3% had MDD, 17.4% bipolar affective disorder, 17.4% psychoses (non-affective) and 32.6% a panic disorder. 23 patients (60.5%) had multiple diagnoses. The disorders were generally severe —13% had current suicidal thoughts. "The need for psychiatric treatment is high among those attending the clinic, but none was receiving any form of psychiatric treatment or care at the time of the survey," the authors wrote.

It is difficult to reconcile the high rates of mental illness in this study with the lower rates found in so many other African studies, but the differences could be explained by different economic, psychosocial, socio-demographic and health-related risk factors that make poor mental outcomes more likely. Brandt looked at such factors across the 23 African studies in people with HIV and concluded: "Those experiencing less [mental health] problems were less likely to be poor and more likely to be employed, educated and receiving antiretroviral treatment (ART)... Evidence has also suggested that HIV-infected women may be at greater risk than HIV-infected men for poor mental health, at least where depression is concerned, while levels of alcohol and substance use are higher among men. Poor health, receiving poor-quality health services, and a lack of material and emotional support from one's family and friends were also associated with greater psychiatric morbidity among PLHIV," she wrote.

A glance at some recent studies from Tanzania supports the conclusion that some psychosocial risk factors increase mental health morbidity in some people with HIV. One screened 220 people with HIV from a rural Tanzanian clinic for mental health disorders (as defined by ICD-10) and identified depression or mixed anxiety and depression in 15.5% of subjects (2.7% had severe depression) with 4.5% suffering from other anxiety disorders (phobias and panic disorders).[69] Perhaps living an agrarian life (where people may receive more family and community support) reduces poor mental health outcomes as opposed to living in an urban or periurban setting because these findings were at the lower end of the range of what was found in other studies from Tanzania.

For instance, in urban Tanzanian settings, depression was found in 45% of HIV-positive mothers one year or more postpartum (perhaps not surprising given the stresses related to motherhood)[70] and in 21% of outpatients on ART.[71] However, the authors of the rural study noted that there is also a possibility that this one centre was unusually supportive of its clients (it provided free food, transport and a social worker). One of the authors, Dr Katie Marwick of the University of Edinburgh, told HATIP that they also assessed predictors of mental illness, which are not included in the final paper because of wide confidence intervals. "It is still interesting to note that the pattern of risk factors replicates other published findings," she said.

Another factor identified by several studies is internalised stigma felt by some people with HIV.[72] A US study found that internalised stigma contributed significantly to levels of depression, anxiety, and hopelessness even after controlling for the effects of behavioural variables, health status, and demographic characteristics — and may help explain the differences seen in different studies.[73] Subsequently, there were similar findings in a study in Cape Town, which found that internalised stigma was a significant predictor of depression, in an analysis that also included demographic characteristics, health and treatment status, social support, and substance use.[74]

Stigma was also a major factor associated with depression in Peru, where over two-thirds of Peruvian women living with HIV and poverty were reported to be suffering from depression.

More recently, at the South African AIDS conference earlier this year, a poster presentation described a study involving over a thousand participants in both Cape Town and Swaziland, and 239 participants in Atlanta, Georgia, reported that despite obvious cultural differences, internalised stigma was positively correlated with depression scores in all three countries, with higher internalised stigma scores associated with more severe depression.[75] Subjects who reported greater social support were also less likely to have internalised stigma.

Access to HIV treatment and care, especially ART, could be another factor affecting the extent to which an HIV diagnosis increases the risk of mental illness (and something which has changed dramatically in resource-limited settings in the last several years). However, while ART may help people cope with having HIV, a study presented at this year's HIV Implementers' Meeting suggests that it is unlikely to affect mental health problems, such as substance use disorders, that were present before someone's HIV diagnosis — and there may be other unexpected consequences of treatment as well.

Case study: mental health, substance misuse and HIV treatment in Vietnam

"My nephew has only been on ART for a year. When he had just started the treatment, his CD4 counted was only 3 cells. After one year, he gained seven kilograms and was quite healthy. Then he fell back onto drugs. Everyone in my family advised him but he did not listen. He skipped dosages from time to time and completely stopped the treatment a few months ago. He had from three to four dosages of drugs [heroin] *a day. He died recently."* A comment by a male living with HIV in Ho Chi Minh City, Vietnam

"While physical health improves across the board for PLHIV on ART, we find there are clearly issues related to livelihood, self-esteem, sadness and drug relapse, which are important factors influencing quality of life and adherence in our clients," Dr Kimberly Green of Family Health International, said during a session on Mental Health at this year's HIV Implementers' Meeting in Windhoek, Namibia.[76]

She was describing the findings of two studies: one, an observational cohort study initiated in 2005 to measure clinical, psychosocial and behavioural outcomes of ART in a population of 247 people with HIV attending two outpatient clinics in Ho Chi Minh City; the second, a subsequent quality of life study.

Although the two clinics are linked with a number of interventions to support people with HIV, such as community and home-based care, support groups as well as support for children affected by HIV, there was very minimal mental health support provided. According to Dr Green, this is fairly typical of Vietnam, where most of the mental health services are provided at the provincial or tertiary level hospitals, and almost all on an inpatient basis.

When Dr Green and her colleagues observed poor or decreasing quality of life responses from their patients, despite excellent clinical responses, they developed a qualitative study that was embedded into the cohort study, focused on five areas:

- Client perceptions on quality of life resulting from ART
- Client adherence to ART/factors affecting adherence
- Client perception of clinic-based and community and home-based care (CHBC) services provided by staff and referral services
- How introduction of ART may have changed stigma and discrimination in different settings
- Changes in sexual risk and drug-using behavior

The study randomly selected participants from the observational cohort (including their families) as well as clinic clients who had not been study participants, to tease out any differences between those who enrolled in ART and were part of the study from the very opening of the clinic versus those who had started ART later. Methods included nine focus groups and 42 in-depth interviews with 96 people.

They found that most participants scored their quality of life as a '5' on a ten-point scale — in other words, mediocre. What was good about their quality of life was their improved physical well-being, but a number of social and emotional issues were dragging the quality of life down. These included:

- Lack of employment
- Feeling 'lost' and that life was without meaning
- Lack of self-confidence
- Feeling sad, depressed
- Drug relapse
- Lack of support from family members
- Anxiety about their health and future

"Lack of employment was seen as a major problem and one which contributed to lack of self-confidence, lack of pride and lack of independence, and linked with this was a feeling which was described as "feeling lost", feeling that life had no purpose," said Dr Green. Ironically, becoming ill with HIV had initially given peoples' lives some focus: getting better and accessing ART. But now that their lives had stabilised, many felt a void, which many said could be filled if they could just find employment. This would also improve their ability to get their families support, which many felt had decreased since going onto ART.

"People living with HIV who participated in the study said that their families were very supportive when they were ill and when they were first enrolled on ART, as adherence supporters. But once they felt better, they were expected to contribute to the income of the

household —particularly since a lot of the other family members had allocated their own resources for their healthcare. So with that expectation on people living with HIV in the study to provide more support to the family, they felt like family support had been withdrawn," said Dr Green.

Ironically, even though ART had improved their health, many participants said that they felt closer to death because their immune systems were no longer able to function without medicines.

'You see, I even felt sadder when taking ARV... By that time I understood that meant I was very weak already. For me, when I still felt well, that meant my CD4 count was above 200. I was living positively, no sorrows... until I was put on ART... I knew that I was... almost gone,' said one.

The ongoing emotional distress made it more difficult for clients who were former substance users to avoid relapse — and failure to adhere to treatment. Notably, in the quantitative study, there were very high rates of documented adherence (95% or more reported 95% or greater adherence) — this was measured through individual reports and clinic records. However, participants in the qualitative study and their healthcare providers estimated that excellent adherence rates would be no more than 70%. They identified drug and alcohol use as the major contributors to low adherence rates; but sadness, depression and lack of work and social support were also key factors.

'Among 100 clients on ART here, I can say that from 20 to 30% are using heroin,' said one participant. According to Dr Green, "a number of the people who participated in the research, estimated the relapse rates to be around that percent. But there were a few who thought it was even higher."

Recommendations from Dr Green's study come later in the article.

Moving forward with a shaky evidence base

While no one could argue that there is a need to implement mental health interventions for people with HIV and visa versa, both Collins' and Brandt's reviews characterise the available evidence base as somewhat less than robust. High quality research is needed to determine the true scale of the mental health challenges that ART and HIV care programmes are facing.

Collins et al wrote that, their "review demonstrates the need for methodologically sound studies of mental health throughout the course of HIV and interventions that employ identified variables (e.g. coping, family support) for efficacy in reducing symptoms of mental illness."

"Mental health services are needed for all those faced with poverty and exposure to high HIV prevalence. However, the particular risks and experiences associated with being HIV-positive should be the subject of empirical research aimed at driving policy and practice," wrote Dr Brandt. She added that, "research on predictors of mental health outcomes and on factors associated with adherence to ART, which can be targeted in interventions (for example, coping strategies) should also be prioritised."

The impact of mental health on HIV-related outcomes

Regardless of how great the burden of mental disorders in the local population, when a person with HIV is suffering from poor mental health the data from both resource rich and constrained settings consistently show that it can delay his or her health-seeking behaviour (in fact, decreased health-seeking behaviour may result in the true burden of mental illness in people with HIV being under-recognised), may decrease adherence to treatment, and increase the likelihood of dropping out of HIV risk reduction programmes.[77, 78, 79, 80, 81]

For instance, a recent study from Ethiopia, reported that people without depression were twice as likely to be adherent as those who were depressed (OR, 2.13, 95%CI, 1.18, 3.81).[82] However, the authors noted that patients who reported better social support also had better adherence, and as other studies have pointed out, depression and a lack of social support are closely linked. Also, in addition to adherence to medication schedules, Dr Joska believes that HIV programmes need to consider that a fair amount of their losses-to-follow-up are likely due to poor mental health and substance abuse.[83]

But mental health disorders should never become an excuse to withhold ART because studies have shown that treatment of depression and other mental health conditions can achieve good adherence to antiretroviral regimens and therapeutic outcomes.[84, 85] In fact, a recent US study found that people with psychiatric disorders were significantly less likely to discontinue ART — but it is important to note that this was also linked to the number of mental health visits that these patients had, which may have been opportunities to reinforce the need for good adherence.[86]

But to treat or provide therapy for mental health disorders, programmes must first detect them.

Improving mental health services for people with HIV

At a routine postnatal visit, an assessment by Daya's primary care provider picked up that she had a problem and the nurse investigated further. She referred Daya to a community counsellor, who enrolled her into a community group therapy programme for new mothers.

During one group therapy session, Daya heard that many other women had had similar troubles. She finally opened up about everything that had happened to her over the past year. She told the group about her HIV status, how her husband had beaten and then left her, and the difficulties she was having with Chipo.

She told them she was afraid that Chipo might turn out to be HIV-positive even though they took medications to prevent this in the PMTCT programme. She also told them she was afraid of dying from AIDS, and how occasionally thoughts of killing herself and her baby had crossed her mind.

She kept going to group therapy and on her primary care nurse's recommendation, also started taking an antidepressant medication. In just a month, the clouds began lifting. She successfully weaned Chipo onto replacement feeding and no longer felt suicidal. In fact, she actually started smiling again.[87]

The case for expanding and decentralising mental health services

Daya is extremely fortunate to have been attended to by a health worker who actually took the time to assess her wellbeing at the clinic visit and then to initiate appropriate care and treatment (in this case, both antidepressant medication and community-based

services). Many people aren't so lucky because of the global failure to invest in mental health services.

"The public mental health budget in many countries is mainly spent on maintaining institutional care, with few or no resources being made available for more effective services in the community," according to the 2001 World Health Report.[88] And these institutions have an appalling track record.

"Psychiatric hospitals have a history of serious human rights violations, poor clinical outcomes and inadequate rehabilitation programmes. They are also costly and consume a disproportionate proportion of mental health expenditures," according to the WHO/WONCA Report.

Furthermore, it seems highly unlikely that someone with depression, or suffering from bereavement would ever make a long journey looking for such an institution to find help. Even people with the most severe disorders are poorly served by this approach to care.[89] As a result, people like Daya usually suffer in isolation.

The only way to address this treatment gap is to bring these services closer to where people may actually access them. In fact, WHO has been recommending that psychiatric hospitals be closed and replaced by services in general hospitals, community mental health services and services integrated into primary care.

"Integrating mental health services into primary care is the most viable way of closing the treatment gap and ensuring that people get the mental health care they need," according to the WHO/WONCA report. The Lancet Global Mental Health Group argued that a basic, evidence-based package of services for core mental disorders could easily be scaled up.[90] They estimated that the amount needed to provide services on the necessary scale for three mental disorders (schizophrenia, depression, bipolar affective disorder) and one risk factor (hazardous alcohol use) would be US$2 per person per year in low-income countries and $3–4 in lower middle-income countries, "which is modest compared with the requirements for scaling-up of services for other major contributors to the global burden of disease." Some suggested that the first place to start would be to integrate mental health care into HIV services.[91]

There might be some logic to this according to Dr Anthony Harries, of the International Union Against Tuberculosis and Lung Disease (formerly of the Ministry of Health in Malawi).

"Mental health tends to be chronic and we have been arguing for a couple of years that HIV care is similar to care for other chronic diseases such as diabetes, hypertension and also mental health. I don't see why we cannot have chronic care clinics that look after communicable and non-communicable diseases at the same time," he told HATIP. In Malawi, Dr Harries and others adopted key elements of the DOTS model to roll-out HIV services extremely rapidly; and he was recently the lead author of a *PLoS Medicine* paper recommending that the model be used for other chronic non-communicable diseases (NCDs).[92]

"How are NCDs currently managed in the routine health care settings of African countries? In brief, badly," wrote Dr Harries and his colleagues. "Some of us know from personal experience of running routine diabetes and hypertension clinics in African hospitals that there are no formalised systems of recording how many patients have been diagnosed and started on therapy, how many are retained on therapy, or what proportion have died or developed complications. In summary, unstructured and unmonitored clinical care and little information about morbidity or mortality from NCDs are mostly the norm in sub-Saharan Africa. How do we begin to rectify this unsatisfactory situation? A possible solution arises out of the existing "DOTS" framework for control of TB."

In the meantime, however, there is a danger that provision of mental health services could become just another task that is loaded onto overburdened health workers — but a particularly challenging one because most health workers have only limited training in mental health. And while training of primary health-care workers to take on more of these tasks may achieve some short-term successes, another series of papers in the Lancet (September 2008) on the Rebirth and Revision of the Alma Ata Declaration pointed out that studies have shown that these benefits diminish over time without sustained and adequate support. The series noted that back in 1978, the Alma Ata Declaration called for the expansion of comprehensive health service delivery at the primary care level, but in the years since — and in a climate where nurses are being tasked with more and more to do — there has been a shift towards recognising the strengths of integrated systems (mixed vertical programmes and primary care systems) — which can offer both greater reach and high quality support.[93]

"Experience in low-income and middle-income countries indicates that to be fully effective and efficient, primary care tasks must be limited and feasible. Primary mental healthcare (as with primary health care for other chronic diseases) must be complemented by additional levels of service, including components of secondary care to which primary health workers can turn for referrals, support, and supervision," wrote Beaglehole et al in another paper in that Lancet series.[94]

This sort of multi-tiered expansion of mental health services is exactly what Dr John Joska seems to be developing in Cape Town. Initially his programme was funded to provide tertiary level care to people with HIV who had severe mental illness and complex neuropsychiatric disorders, but Dr Joska soon concluded that this group was already fairly well catered for by the existing psychiatric services.

"What was really needed was input into ambulant ART services," he told HATIP. "Our first step was to provide adequate referral support across the metro of Cape Town. To this end, I have appointed a psychiatrist to each side. These people manage referral clinics at the busy regional/district hospitals and some referral centres. My next step was to introduce the notion of screening for common mental disorders including substance abuse at primary care." At present, this consists of a screening project at two pilot sites where a project manager and a nurse are screening and providing services.

"I have come to believe that clinics need a dedicated HIV mental health nurse present, at least for 1-2 days of the week. I am trying to find a way to convince the Province that if they want to retain people in care, they must do this. In parallel, we have begun to provide training in mental disorders to counsellors entering the service."

There are some steps HIV programmes can take to detect and better manage mental disorders among their clients, but it is important to stress that it will take a multidisciplinary/team-based approach to tackle this issue. In regions such as the Western Cape, which is much better resourced than many other settings, it may be beneficial to add mental health specialists to the team. In other settings, HIV programmes will have to collaborate with other service providers.

"We recommend that, first, resources and time be dedicated to establishing and strengthening relationships to existing mental health services and HIV care programmes," Collins et al wrote. "This can be achieved as donors and program directors recognize the importance of allocating funds for mental health services in HIV care (including procurement of psychopharmacological medications) and stipulate mental health integration."

Screening for mental health disorders

Even so, given the prevalence of distress, depression, substance misuse and other disorders among people with HIV, many experts are arguing that HIV care providers should be routinely screening for these issues. Of course, some of this is already occurring in post-HIV test counselling, and ART readiness assessments. But Dr Joska doesn't think this goes far enough.

"I feel detection [of mental health problems] is below par, and that ongoing training, and the use of a tool would improve this," Dr Joska told HATIP — but he said that he is conducting a study on the use of such a tool to strengthen his case.

Although there are an abundance of mental health screening tools mentioned in the literature, only a handful have been adapted for use in busy clinic settings. Last year, Dr Vikram Patel of the London School of Hygiene and Tropical Medicine and colleagues ran a study comparing five tests under field conditions in almost 600 subjects attending five primary health clinics in India.[95] The five instruments were the General Health Questionnaire (GHQ, 12 questions or items);[96] the Primary Health Questionnaire (PHQ, nine items); the Kessler Psychological Distress Scale (K10, 10 items)[97] and the shorter 6-item K6; and the Self-Reporting Questionnaire (SRQ, 20 items).[98] Every participant was then interviewed with a much more involved structured lay diagnostic interview, the Revised Clinical Interview Schedule (CIS-R).[99] The researchers concluded that the GHQ and SRQ showed the best results but the tests had moderate to high degrees of correlation with one another.

The Zambian study mentioned earlier in the issue adapted a 10-item version of the SRQ to measure mental distress in Zambia, by adding weights to the 10 indicator questions, based on the adapted criterion for the DSM-IV classification for depression (with a cut off point of 7) (see box).[100, 101]

SRQ-10 diagnostic symptoms and weights

Diagnostic	Symptom Question	Weight
A. Thoughts of Death	*Has the thought of ending your life been on your mind?*	5
B. Loss of interest or pleasure	*Is your daily life suffering?*	3
	Are you unable to play a useful part in your life?	3
	Do you find it difficult to enjoy your daily activities?	3
C. Depressed mood	*Do you sleep badly?*	1
	Do you cry more than usual?	1
	Do you have difficulties deciding?	1
	Are you tired all the time?	1
	Do you often have headaches?	1
	Is your digestion poor?	1

However, this tool is primarily focused on depression. In a paper in the *South African Journal of Psychiatry*, Dr Joska and colleagues noted that there don't seem to be many tools that are tailored to the range of specific problems encountered in ART clinic populations. They could only find one, the Substance Abuse and Mental Illness Symptoms Screener (SAMISS), which has been validated for use in people living with HIV in the US.

The SAMISS (see below) includes sixteen screening questions for alcohol and substance abuse, major depression, panic disorder and PTSD, as well as adjustment disorders. We should note however, that some of the questions regarding substance abuse may be specific to the US — for example, it would label anyone who has a glass of wine or a beer with dinner each night as having a substance abuse problem. Other items could score differently than expected in a resource-limited setting as well. For instance, in her book *HIV/AIDS Care and Counselling*, Dr Alta Van Dyk notes that there are "cultural differences in the expression of depression — especially when these concern the duration of mourning after the loss of a significant other."[102] Nevertheless, in the US at least, a validation study by Pence et al concluded that the SAMISS was highly sensitive and had moderate specificity for both substance abuse and mental illness; and "due to its brevity," the researchers wrote "the SAMISS can be feasibly integrated into routine care in busy clinical settings."[103]

Of course, busy is relative, and it may be hard to imagine a nurse who doesn't bother to ask a patient about cough or fever (to screen for TB) using a sixteen-question checklist on mental health. It might be easier to include one or two questions about mood at each clinic visit —to flag potential problems and in order to understand whether a patient is suffering. **As an initial screen, the Columbia Clinical Manual recommends using two basic questions such as 'during the past month, have you felt like you were losing interest or pleasure in doing things? Or have you felt down, depressed or helpless?' If there is a yes response to either of these questions further investigation is warranted**.[104]

Notably, many palliative care assessment tools also include questions about psychiatric symptoms, such as the Edmonton Symptom Assessment Scale (ESAS)[105] which was developed for use in cancer patients to rate the severity of common symptoms including anxiety and depression. Making at least some inquiry about the emotional and mental health of a patient could make the clinic visit more cordial — and perhaps make a follow-up visit more likely. And when a sign of distress is detected, a locally adapted version of the SAMISS might be useful for further investigation by a trained nurse or counsellor to assess the severity of the problem. However, people who are only 'mildly distressed' may also need psychosocial support to help prevent a more serious problem developing.

Dr Joska et al suggested that the SAMISS should be administered along with the International HIV Dementia Scale (IHDS) in any person who is just about to start ART, who has failed ART, or has been on ART for a couple of years.

The Substance Abuse and Mental Illness Symptoms Screener (SAMISS)

Substance abuse:

Respondent screens positive if sum of responses to questions 1–3 is ≥5, response to question 4 or 5 is ≥3, or response to question 6 or 7 is ≥1.

1. How often do you have a drink containing alcohol?

(0) Never (1) Monthly or less (2) 2–4 times/mo (3) 2–3 times/wk (4) ≥4 times/wk

2. How many drinks do you have on a typical day when you are drinking?

(0) None (1) 1 or 2 (2) 3 or 4 (3) 5 or 6 (4) 7–9 (5) ≥10

3. How often do you have ≥4 drinks on 1 occasion?

(0) Never (1) Less than monthly (2) Monthly (3) Weekly (4) Daily or almost daily

4. In the past year, how often did you use non-prescription drugs to get high or to change the way you feel?

(0) Never (1) Less than monthly (2) Monthly (3) Weekly (4) Daily or almost daily

5. In the past year, how often did you use drugs prescribed to you or to someone else to get high or change the way you feel?

(0) Never (1) Less than monthly (2) Monthly (3) Weekly (4) Daily or almost daily

6. In the past year, how often did you drink or use drugs more than you meant to?

(0) Never (1) Less than monthly (2) Monthly (3) Weekly (4) Daily or almost daily

7. How often did you feel you wanted or needed to cut down on your drinking or drug use in the past year, and were not able to?

(0) Never (1) Less than monthly (2) Monthly (3) Weekly (4) Daily or almost daily

Mental illness:

Respondent screens positive if response to any question is ''Yes.''

8. In the past year, when not high or intoxicated, did you ever feel extremely energetic or irritable and more talkative than usual?

9. In the past year, were you ever on medication or antidepressants for depression or nerve problems?

10. In the past year, was there ever a time when you felt sad, blue, or depressed for ≥2 weeks in a row?

11. In the past year, was there ever a time lasting ≥2 weeks when you lost interest in most things like hobbies, work, or activities that usually give you pleasure?

12. In the past year, did you ever have a period lasting ≥1 month when most of the time you felt worried and anxious?

13. In the past year, did you have a spell or an attack when all of a sudden you felt frightened, anxious, or very uneasy when most people would not be afraid or anxious?

14. In the past year, did you ever have a spell or an attack when for no reason your heart suddenly started to race, you felt faint, or you couldn't catch your breath? (If respondent volunteers, ''Only when having a heart attack or due to physical causes,'' mark ''No.'')

15. During your lifetime, as a child or adult, have you experienced or witnessed traumatic event(s) that involved harm to yourself or to others? (If yes: In the past year, have you been troubled by flashbacks, nightmares, or thoughts of the trauma?)

16. In the past 3 months, have you experienced any event(s) or received information that was so upsetting it affected how you cope with everyday life?

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Counselling and listening skills for health care workers

Simply having a tool is not enough. In addition to learning how to administer a tool, healthcare workers must be taught some basic counselling and listening skills in order to effectively administer a psychological assessment.

Regardless of what tool is used, the WHO/WONCA report stress that "health workers must ensure the confidential nature of consultations, and must refrain from appearing judgemental to patients." It also suggests including some more "open-ended questions to allow patients to tell their stories and discuss their concerns more freely."

Part of the challenge may actually be getting someone to sit through and participate in the assessment. Again, mental illness is highly stigmatised, perhaps most so by men. For instance, in the study in Zambia, "whereas refusal to participate was low, the non-participation due to absence was relatively high among men," wrote Chipimo and Fylkesnes.

Again, Dr Van Dyk stressed very striking differences in cultural communication that may need to be considered in a counselling or interview session:

- Make sure that the way you orientate yourself to be with your client (attending) does not affront instead of reassuring your client. Read your client's body language and be guided by it.
- Familiarise yourself with traditional forms of greeting, and make sure you can pronounce and spell the client's name correctly. Don't make judgments based on stereotypes such as the client's hairstyle or dress.
- Bear in mind that people from different cultures may have different attitudes to matters such as personal communication distance, punctuality and time schedules.
- It may be a problem if you are much younger than your client, or of the opposite sex. In many cultures elderly people customarily don't discuss their problems with younger people because 'they are children'. Discuss this potential problem with your client.
- Respect the client's customs and ways of communicating. These may include making or avoiding of eye contact, who should sit, stand or walk first, how a man should act towards a woman and a woman towards a man, and how adults and children should behave towards one another.
- Be aware that direct eye contact is not an admired form of behavior in all cultures. Many cultures regard it as rude, a challenge, or even as confrontational. In some cultures it would be regarded as ill-mannered if a young person were to look directly at an older person. Let the client be your guide - observe him or her and be sensitive to what is comfortable for him or her.
- Many counsellors have the habit of touching their clients as a way of showing empathy. But touching may not be appropriate in all cultures. It could be seen as degrading (you touch a child out of sympathy, not an adult) or, if the touching involves a person of the opposite sex, it may be seen as an expression of sexual attention.

Dr Joska stressed that his programme matches the nurses to the patients' culture and language.

"I have tried to employ Xhosa speaking staff where possible. Nurses in our programme must be from the culture of the patients," he told HATIP.

Diagnoses

It should be remembered that the SAMISS and the IHDS are only screening tools, and highly sensitive ones at that.

"Cases detected by lay counsellors or nurses should then be referred to a mental health nurse for more detailed assessment," Joska et al wrote. This would involve the use of a more structured diagnostic tool, such as the MINI neuropsychiatric interview.[106] "True cases may be managed on site by community mental health

services, or referred to secondary support clinics if needed," they wrote.

A trained clinician should be able to make some diagnoses, such as for major depressive disorder. According to the DSM-IV-TR, this diagnosis can be made in the presence of five or more symptoms, including depressed mood and a loss of interest or enjoyment in previously enjoyed activities, for two or more weeks. The other key symptoms may include psychomotor agitation/ retardation, loss of concentration, fatigue, sleep disturbances, appetite or weight disturbances, suicidal ideation, and feelings of guilt or worthlessness. The presence of fewer symptoms could indicate an adjustment depression.

However, it is extremely important to determine whether the individual has had symptoms of mania or hypomania in the past, because the management of depression and bipolar disorder is completely different. Indeed, attempting to treat depression in someone with bipolar disorder may actually trigger a serious manic episode.

While any health worker can be trained to recognise the signs of other serious mental disorders, in many cases this will lead to referral to a specialist for diagnosis and treatment — especially if there is a chance that the patient presents a risk of harm to himself or others .

Where there is no mental health specialist nearby for referral, clinicians should be trained to manage more difficult cases or consult with a specialist remotely. Ultimately, an aim of the global health movement is to try to provide primary or community based care for as many psychiatric conditions as possible.

Before prescribing pharmacological treatment, a clinician should exclude any possible biological causes for the patient's symptom. For instance, symptoms of anxiety may also be caused by a range of medications, recreational drugs, excess caffeine, herbal supplements; or conditions such as adrenal insufficiency, hyperthyroidism, hypoglycemia, or hypoxia due to respiratory infections.[107] Likewise, sleep or sexual disorders may have a number of physiological causes that should be investigated.

Suicide evaluation

Suicidal ideation, however, should prompt immediate further assessment, especially if the patient is likely to be under the influence of psychoactive substances and alcohol or in the midst of a delirium or psychosis. Some resources, such as the Columbia Manual suggest that signs of suicidal ideation should trigger an urgent referral to a trained specialist.

Risk factors and considerations in the evaluation of suicide risk

- Significant suicidal ideation*
- Specific intent or plan*; available means
- Hopelessness*
- Previous suicide attempts*
- Depressed mood, mood disorders*
- Family history of suicide or mood disorders*
- Schizophrenia, psychosis (not necessarily command hallucinations)*
- Organic mental syndromes*
- Intoxication with alcohol*, other substances
- Recent major loss, particularly through suicide
- Preoccupation with death
- Fantasies of reunion through death
- Homicidal rage
- Caucasian race*

**These factors have been documented as risk factors for suicide.* [108]

However, specialist care may not always be available. In such situations, Dr Forstein's recommendations may prove useful:[109]

"It is important to ask specific and direct questions such as the following:

How are you feeling today?

Has it ever become so (painful, frustrating, difficult, frightening) that you have thought about giving up? About ending your life?

Would you ever consider doing so? Under what circumstances have you considered this?

Do you currently have any thoughts or plans to hurt yourself?

"When a patient admits to suicidal ideation, inquire about whether he or she has thought about a specific plan to carry it out. Ask about the consequences of doing so, to the patient and those in the patient's life. Assess whether there is an intent to die, even if the methodology seems not very lethal to the provider, for example, the patient says he or she will take 20 pills which may not be biologically lethal, but psychologically is intended to end life. Providers are often reluctant to ask about suicidal ideation. Asking does not engender such ideas in people who do not have those thoughts to begin with. When a provider asks about suicidal ideation, it acknowledges the amount of pain and suffering the patient has endured, and often feels supportive and caring to the patient. It is also important to understand that the idea of suicide may provide to some a sense of ultimate control when it appears that control over the mind, body, or environment is slipping away. It would be unusual for anyone who experiences the shock of a new diagnosis of HIV, cancer or loss of function to not consider how much life is worth living and under what circumstances. Simply being able to verbalise the feeling of having ultimate control, and deciding if that is even a possibility, may help patients feel understood and more in control of their lives. Suicidal ideation may also be a sign of undiagnosed depression, under-treated pain, or other co-morbid conditions."

Therapeutic modalities

Recognition or diagnosis of mental health conditions must be accompanied by appropriate and evidence-based treatment. There are a number of therapeutic modalities available for people with HIV (and their loved ones) suffering from distress, bereavement, and diagnosed mental health disorders, including pharmacotherapy (such as antidepressant medications or antipsychotics) and an array of psychotherapeutic, counselling and social interventions. Drug therapies for mental health problems may work better if used along with special kinds of psychological therapy. Social interventions that target psychosocial risks factors associated with greater psychiatric morbidity may also lead to mental health improvements.

"Basic drug and psychotherapeutic treatments need to be made available at all levels of health care," wrote Prince et al in the lead *Lancet* article In the mental health series in 2007.[110] "Primary and secondary care providers should overcome their reluctance to treat patients with severe mental illnesses, and learn effective ways to interact and communicate with these patients."

The Columbia Manual recommends a systematic approach to treatment, starting with an inventory of local resources.[111] For instance, is there a mental health specialist at the clinic or in the community? What counselling resources are available nearby? Are there patient support groups willing to accept new members? What spiritual or religious organisations provide services? Where would a patient who might need psychiatric hospitalisation be referred?

Clinics should also form partnerships with local palliative care organisations and hospices who may be able to provide additional support and map local resources.

Pharmacotherapies

Most people suffering from major depressive disorder and other serious mental health disorders in resource-limited settings do not get the medication they need. While the pharmaceutical management for bipolar disorder and schizophrenia is complex and should be initiated by a specialist or with specialist support, non-specialists should be able to treat depression.

Clinicians in resource-limited settings need to overcome their hesitancy to prescribe simple treatments for depression.[112] However, doctors need to be aware that many of the psychiatric medications have drug interactions with antiretrovirals, while others may have serious over-lapping toxicity that the HIV clinician and mental health specialist should be aware of (see tables at the end of this edition, which list a number of the medications that are commonly prescribed for people with psychiatric disorders). Some of these medications are not marketed or affordable in some countries, though generics are available for many. That does not, however, mean that there will be access to a steady supply at the clinic, so programmes prescribing antidepressants should first assess the supply.

Close initial follow-up of people placed on these medications is essential. "It is not appropriate to diagnose a depression (with its inherent risk of suicide), start a medication (that may be initially agitating and cause other side-effects prior to any benefit) and have the patient follow-up in 3 to 4 weeks," wrote Triesman et al, suggesting weekly follow-up to watch for side-effects and titrate the dose.[113] Doses of all psychoactive drugs are generally started low and increased gradually to therapeutic range. It may take 6 to 8 weeks at that dose to see a clear benefit.

Recognising the hardship that weekly visits to the clinic could entail, the Columbia Manual recommends using a combination of follow-up methods including home visits, and phone calls.

Patients need to be reassured that early agitating effects of antidepressants will diminish, and that drugs may take some time to produce benefit.

WHO has also produced a series of resources and training materials on mental health and HIV. This one provides basic clinical information on psychiatric diagnosis and treatment for HIV care providers working in low income settings.

Although it is not a widespread problem yet in most resource limited settings, the WHO/WONCA report warns against prescribing mental health treatments for those who do not need them: "For example, in some countries health workers increasingly are prescribing antidepressants and anxiolytics for people who are experiencing unhappiness but do not meet the threshold for a mental disorder. Psychotropic medications are also sometimes overused in lieu of other modes of evidence-based treatment such as psychotherapy."[114]

A note about St John's Wort: St John's Wort is an herbal supplement that is commonly used to treat mild depression.However, the herbal compound also interacts with, and should not be taken at the same time as protease inhibitors, or efavirenz or nevirapine, since it could reduce concentrations of these drugs, promoting the emergence of resistance and possibly contributing to treatment failure (see research report).

Psychotherapies

There are literally hundreds of types of psychotherapy, each of which are meant to help individuals cope with problems, or take more charge of their lives and develop positive ways to deal with emotionally distressing life events or circumstances. There is some evidence to support the effectiveness of some of these approaches for some indications, but little in the way of data on their relative efficacy with each other or with pharmacotherapy.

The following descriptions of the broad categories of psychotherapy, were previously published in NAM's AIDS Treatment Update, July 2002.

The term cognitive behavioural therapy (CBT) pertains to a range of therapies that include behaviour therapy, behaviour modification, and cognitive therapy in various combinations. They are all theoretically distinct.

Behavioural approaches typically involve a formal behavioural analysis of a patient's problem. This is followed by an individually tailored application of techniques to change behaviour. Behaviour change is of paramount importance.

Cognitive approaches emphasise the role that cognitions play in mediating feelings and behaviour. The aim is to modify though processes directly. Therapy involves trying to identify automatic thought processes (such as hopelessness during depression), and tuition in how to recognise and challenge such thought processes. It helps people to connect life events to mood episodes, and encourages people to find new goals.

Long-term **psychodynamic psychotherapy** may last several years. It is based on psychoanalytic theory, and its distinctive feature is the resolution of unconscious conflicts. It makes direct use of the patient's experience of both the therapist and the therapeutic relationship. It aims to improve the patient's conscious understanding of difficulties and enable the assimilation of previously avoided, potentially painful experience. Brief psychotherapy may last for six months with weekly or bi-weekly sessions. It is focused on specific issues in the hope that the improved understanding it brings about will facilitate patients to effect a more lasting symptomatic change. This is achieved through processes that extend beyond the end of treatment. Patients who opt for this approach will need adequate capacity to tolerate frustration and psychic pain.

WHO has produced a booklet to assist 'second level' health care workers deal with problems that require psychotherapeutic counselling.

Group interpersonal psychotherapy or support groups are widely used as 'places of healing' to help people cope with trauma or grief, or to adjust to an HIV diagnosis. The groups may also act as a forum for obtaining advice in dealing with practical difficulties. Support groups are also widely used to reinforce positive behaviours in individuals fighting substance abuse.

Notably, a community-based randomised study of group therapy for depression was conducted in rural Uganda several years ago.[115] Thirty villages were randomly assigned to either receive sixteen weekly group therapy sessions or to be a control. The study involved over 200 participants. At the end of the study there was a mean reduction in depression severity score of 17.47 points in the group therapy group versus 3.55 points for controls ($P < 0.001$).

Collin's et al noted that "the community-based randomized control trial conducted in rural Uganda demonstrated the efficacy of interpersonal psychotherapy in a region with high HIV prevalence. Group IPT presents a low-cost intervention for people with HIV and those affected by HIV that does not require specialist mental health care providers to implement. With adaptation, such interventions may be usefully implemented in multiple cultural settings."

WHO has published a working tool on setting up and running support groups.

Counselling is usually conducted on a short-term basis (4 to 12 sessions), by individuals who have formal qualifications in counselling. Counselling may be used to help people to cope better with distress caused by immediate crises, to help people better understand their reactions to events, and to develop better coping strategies. It is particularly useful for the treatment of mild to moderate depression and interpersonal problems. It can be used to facilitate patients in determining a realistic assessment of their adherence to treatments, and in adjusting to the daily routine of taking ART.

Clinical psychologists may draw upon several different therapeutic methods during the course of treatment. Particular psychiatric problems do not preclude or require intervention with a particular therapy. At best, patients should be evaluated in a co-ordinated psychological treatment service that has expertise in a range of specific therapies.

There is at least one study from South Africa that found that one-on-one counselling and support groups could demonstrated no effect.[116] Of course, this may have been due to the style of the counselling or support being offered.

It is critically important that counsellors try to know the client's culture, according to Professor Alta Van Dyk: "For a century or more, traditional healing and Western forms of counselling and psychotherapy have operated side by side in Africa, but mostly in mutual isolation... Western counsellors must be aware of these differences if they want to render a helpful service to clients from a traditional background. To ignore a client's cultural background not only leads to misunderstanding, but can be anti-therapeutic and harmful."[117]

WHO has also produced a guide on basic counselling as part of its HIV and mental health series.

Other forms of therapy

It may be that other types of interventions may be more culturally appropriate given how coping mechanisms vary from culture to culture.

Any number of activities that reduce stress, such as meditation, yoga, physical activity or dancing have been used to help people deal with depression or anxiety. For instance, one of Prof Van Dyk's studies noted that women from Zulu culture tended to deal with stress through group activities, such as singing, dancing and mutual discussions — rather than one on one or private activities.[118]

Targetting psychosocial risk factors

While there are a growing number of researchers reporting the benefits of psychotherapies for people with HIV in resource-limited settings, others have voiced frustrations about extremely difficult psychosocial conditions. For instance, one poster by Burgess et al, at the South African AIDS Conference, described how community support groups were set up for mental health support and that some "soon developed into hubs of community action, geared at addressing social driven issues within their communities.[119] However, gains were often undermined by the effects of broader social issues such as poverty and a combination of AIDS-related and mental health related-stigma." In other words, in a context of unemployment and other stressors, the intervention was like pouring water into a leaky bucket.

"For mental health programming to have the greatest effect in HIV/AIDS impacted communities, it should also address underlying social factors within a community which can contribute to states of mental ill health," Burgess et al noted.

One of the factors that Dr Green's study in Vietnam focused on was the lack of employment — which many people cited as one of the main reasons for their poor quality of life. It might help to set up a support group or to go into counselling to talk about how bad having HIV and being unemployed makes someone feel, but it might be more effective to help the person find work, or to in some other way to give their life purpose.

"One of the first recommendations that came out of our study is to scale-up vocational training and employment schemes. This is difficult, it is always difficult - these types of interventions - and particularly with the current economic situation. However, there are a number of PEPFAR partners and others in Vietnam who are attempting to do this, with at least some small-scale successes thus far," said Green.

Other participants in her study cited their desire to start families, so another form of intervention in that setting would be to provide pre-conceptual counselling and to integrate family planning services into care and treatment programs. "This is happening on an ad-hoc-basis but there are really limited tools available, that can help provide us do more systematic assessment and support for people living with HIV," she said.

Whether seen as a therapeutic modality or perhaps as adjunctive therapy, such interventions can have a profound impact on people's lives.

The WHO/WONCA report described similar interventions following initial treatment for severe mental disorders in Neuquén, Argentina, a province with great economic disparities.

"After patients have been stabilised, the Austral (community-based rehabilitation centre) seeks to reintegrate people into the community and help them achieve economic independence. The clinic venue, a former private home in the centre of downtown, was chosen so that patients were not isolated and stigmatised, but rather received care in a central area. One of the most important achievements of the Austral has been to involve artisans, artists, farmers, educators, and other community members in the rehabilitation programme. An example of this is a work group of people with schizophrenia, who learnt farming skills and after two years were able to buy the land they farmed and construct a nursery. In addition, after receiving carpentry and other classes, the same group started selling good-quality wood products at the local market."

By giving people another focus other than their mental illness or their HIV infection, such interventions could in turn be crucial for the long term success of treatment and care, and help reduce the burden that these illnesses place upon the family. It might also be interesting to see how these interventions targeting psychosocial risk factors stack up against the conventional pharmacological and psychotherapeutic interventions.

One of the articles, by Patel et al, in the Lancet series on mental health, reviews the research on the different modes of therapy for the main mental health disorders, and concluded that while there may not be as much evidence in support of their use in low or middle-income countries as in the industrialised world, there was still enough to support their global scale up.[120] Given the suffering that people living with HIV and mental illness endure, this message is probably long overdue. However, it is important not to use broad-brush strokes when introducing interventions in different settings, especially as the only study to evaluate formal support services in people with HIV failed to demonstrate any impact.

"Given that individual counselling and support groups are what most policymakers consider to be a psychosocial service for PLHIV, more research on the benefits of these interventions would be valuable and could help direct the allocation of scarce human and financial resources," Dr Brandt wrote in her review.[121] Such data need to be gathered on the operational effectiveness of these therapies as they are rolled out — along with accurate data on the

actual mental health needs now, and over time among people living, aging and dying with HIV in resource-limited settings.

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Common psychiatric medications (availability varies by country)

Therapeutic dose ranges are listed because physicians and psychiatrists tend to start treatment with a low dose and gradually escalate the dose until a therapeutic effect is achieved.

All antidepressants may increase the risk of suicidality in children and adolescents, according to a 2004 FDA analysis based on studies lasting up to four months. This warning was subsequently extended to adults under the age of 25, but a comprehensive review published in 2007 found that the benefits of antidepressants in children and adolescents suffering major depressive disorder outweighed the risks.[i]

Many potential interactions remain clinically untested and the interactions outlined in the tables are largely theoretical based on the known metabolism of the psychiatric medications by the cytochrome P450 isoenzymes. Please consult a specialist for the most recent information regarding coadministration of the medications when there is a potential for interaction with protease inhibitors (PIs) or non-nucleoside reverse transcriptase inhibitors (NNRTIs).

Antidepressants		
Drug	Therapeutic Dose Range	Major side effects/drug interactions
Buproprion	50 to 400mg; divided doses	Side effects include anxiety/psychosis/seizures. Potential for interactions with PIs/NNRTIs: No effect on PI levels but ritonavir-boosted PIs expected to decrease bupropion levels. Coadministration with Kaletra significantly reduced levels but dose should not exceed recommended dose because ritonavir both induces and inhibits CYP2B6 hepatic enzymes that metabolise bupropion. Efavirenz decreases bupropion exposure by 55%
Venlafaxine	37.5 to 300mg	Withdrawal associated with GI distress, headaches, anxiety. Blood pressure elevations in hypertensive patients. Potential interaction with PIs/NNRTIs. Decreased indinavir exposure
Citalopram	10 to 60mg (SSRI)	Potential interactions with PIs/NNRTIs: Citalopram unlikely to affect other drugs concentrations, but ritonavir-boosted PIs may increase citalopram concentrations.
Sertraline	25 to 200mg (SSRI)	Potential interactions with PIs/NNRTIs. Ritonavir may increase levels.
Fluoxetine	10 to 80mg (SSRI)	Long half-life. Potential interaction with PIs except nelfinavir. Ritonavir may increase fluoxetine concentrations. Cardiac and neurological events have been reported when coadministered. A decrease in fluoxetine dose may be needed.
Paroxetine	10 to 50mg q hs (SSRI)	Most sedating SSRI anticholinergic, may cause withdrawal symptoms. Potential interactions with PIs (except nelfinavir). Ritonavir may increase paroxetine concentrations.
Fluvoxamine	25 to 300mg (SSRI)	(Mainly used for OCD) Potential for interactions with PIs/NNRTIs: A CYP3A4 inhibitor
Mirtazapine	15 to 45mg	Some risk of haematologic problems (agranulocytosis, neutropenia) Significant potential for interactions with strong CYP3A4 inhibitors. NNRTIs may reduce mirtazapine concentrations
Nefazodone	50 to 400mg	Warning of potential for hepatic toxicity/liver failure. Potential interactions with PIs/NNRTIs. Ritonavir: may increase nefazodone concentrations. Cardiac and neurological events have been reported when coadministered.
Nortriptyline	50–150 mg q hs	Potential interaction with PIs except nelfinavir. Ritonavir may increase nortriptyline levels
Desipramine	100–300 mg q hs	Potential interaction with PIs. Standard ritonavir doses increased desipramine exposure but nelfinavir & Kaletra had no effect

Imipramine	50–300 mg q hs	Potential interaction with PIs: Ritonavir may increase levels
Clomipramine	150–250 mg q hs	Potential interaction with PIs. Ritonavir or ritonavir boosted PIs may increase clomipramine concentrations
Doxepin	75–300 mg q hs	Potential interaction with PIs. Ritonavir or ritonavir boosted PIs may increase doxepin concentrations
Duloxetine	20-30 mg bid	Sometimes used for chronic pain/neuropathy

Abbreviations: SSRI-selective serotonin reuptake inhibitors, q hs (before sleep).

Mood stabilisers		
Lithium carbonate	600 to 1800mg in divided dose (varies with renal function)	Warnings: Lithium level monitoring needed for safety. Countraindicated in pregnancy or in people with kidney disease. Can cause nephrogenic diabetes insipidus, hypothyroidism, leukocytosis, seizures, cardiac conduction abnormalities. Lithium toxicity can begin with GI distress, confusion, tremors. No drug interaction data available
Valproic acid	500 to 2000mg, titrated by blood levels (50 to 100mg/mL)	Warnings related to liver toxicity, pancreatitis, teratogenicity. Other side effects include thrombocytopenia, GI distress, ataxia, tremors. Possible interactions with some PIs & nevirapine. Ritonavir may decrease valproate concentrations. Increased lopinavir AUC by ~38%, no effect on valproate. However, case report of 48% reduction of valproate levels in one person taking Kaletra.
Gabapentin	600 to 3000mg/bid-qid	Used as adjunctive medication No drug interactions
Topiramate	25 to 100 mg/bid-tid (max=400mg qd)	Used as adjunctive medication Potential for interaction with PIs/NNRTIs
Lamotrigine	25 to 100mg/bid-tid (max=400 qd)	Warning: Dose escalation schedule to avoid Stevens Johnson Syndrome/rash (25 mg for two weeks, 50 mg for two weeks). Potential interactions some PIs. Ritonavir-containing regimens may decrease lamotrigine concentrations
Carbamazepine	600–1600 mg in divided doses	Warning re aplastic anaemia. May also cause severe rash, agranulocytosis, and a syndrome of inappropriate antidiuretic hormone hypersecretion (SIADH). Carbamazepine reduces PI concentrations, including *Kaletra* (which should not be given once daily with carbamazepine), while PIs, especially ritonavir, increase carbamazepine concentrations and toxicity. Carbamazepine reduces efavirenz concentrations (decreasing C_{min} by 47%). Both nevirapine and efavirenz decrease carbamazepine concentrations.

Antipsychotics

Most typical antipsychotics to varying degrees can cause extrapyramidal side-effects (EPS), which are due to dopamine blockade, resulting in tremors, slurred speech, anxiety, inability to move or conversely an inability to stop moving, dystonia, distress, paranoia, and parkinsonism. Prolonged dopamine blockade can lead to tardive dyskinesia (abnormal involuntary movements often of the tongue and mouth may cause breathing problems). People with HIV/AIDS and neurological problems may be more sensitive to EPS.[ii]

There are black box warnings on the atypical anti-psychotics; these are associated with increase risk of death in elderly patients. They also cause metabolic complications including hyperglycemia, diabetes, weight gain and high cholesterol.

Risperidone	0.5 to 6mg qd or in divided doses	Atypical. Indequate data in pregnancy/breastfeeding women. Few interactions, possible that ritonavir coadministration may increase risperidone concentrations
Olanzapine	2.5 to 30mg qd or in divided doses	Atypical. Potential interactions with PIs/NNRTIs. Ritonavir significantly decreases olanzapine concentrations
Quetiapine	25 to 600mg qd or in divided doses	Atypical. Very sedating. Potential interactions with PIs/NNRTIs
Ziprasidone	20–80 mg twice daily (with a max of 80 mg twice daily	Warning re prolonged QT interval. Atypical.

		Potential interactions with PIs/NNRTIs. CYP3A4 inhibitors increase such as ritonavir may increase ziprasidone levels.
Aripiprazole	15–30 mg daily (max dose of 30 mg daily)	Atypical Potential interactions with PIs/NNRTIs
Clozapine	300–450 mg daily in divided doses with a max of 900 mg daily	Warnings re agranulocytosis, seizures, myocarditis, and orthostatic hypotension Potential interaction with PIs. Contraindicated with indinavir, possibly full dose ritonavir, which may increase clozapine concentrations thereby increasing the risk of serious haematologic abnormalities
Haloperidol	5–20 mg daily once or in divided doses (max dose is 100 mg daily	EPS Potential interactions with PIs/NNRTIs. Ritonavir may increase haloperidol concentrations
Fluphenazine	5–20 mg daily once or in divided doses (max dose is 100 mg daily)	EPS Drug interaction data unavailable

Anxiolytics/Hypnotics/ Sedatives See also SSRIs above		
Clonazepam	1 to 4mg in divided doses	Potential interaction with PIs/NNRTIs. Ritonavir may increase clonazepam concentrations dangerously. Nevirapine may decrease clonazepam concentrations.
Lorazepam	1 to 6mg in divided doses	No significant interactions
Buspirone	15 to 45mg in divided doses	Lowers convulsion threshold. Contraindicated during pregnancy/lactation, severe kidney or liver impairment Potential for interactions with PIs/NNRTIs. Ritonavir increases buspirone concentrations. Case report of parkinsonism in patient co-administered ritonavir-boosted indinavir
Zolpidem	5 to 10mg	Potential interactions with PIs/NNRTIs.
Zaleplon	5 to 10mg	Potential interactions with PIs/NNRTIs.
Temezepam	15 to 30mg	No drug interactions
Trazodone	25 to 300mg	An SSRI but highly sedating. Potential interaction with PIs/NNRTIs. Low doses of ritonavir significantly increase trazodone concentrations and associated with adverse events of nausea, dizziness, hypotension, syncope.

Medications used in alcohol/opiate dependence/withdrawal		
Disulfiram	250 to 500mg	Coadministration is contraindicated with lopinavir and ritonavir oral solutions which contain alcohol not tablets
Clorazepate	15 to 40mg q 2 to 6 hours	Potential for interactions with PIs/NNRTIs. Ritonavir coadministration may increase clorazepate concentrations. In EU, ritonavir coadministration contraindicated due to the risk of extreme sedation and respiratory depression. Indinavir/ritonavir contraindicated.
Methadone	60 to 120+mg qd for dependence, 5 to 20mg in divided doses, tapered by 5mg/day for withdrawal	With the exception of atazanavir, there are potential interactions with PIs/NNRTIs. Efaverinz, nevirapine, ritonavir, Kaletra and other ritonavir-boosted PIs significantly decrease methadone exposures and may lead to withdrawal. Methadone doubles AZT levels
Clonidine	0.3mg in 3 divided doses; increase to 2 mg/day in divided doses	Drug interaction data unavailable

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about HATiP

A regular electronic newsletter for health care workers and community-based organisations on HIV treatment in resource-limited settings.

Its publication is supported by the UK government's Department for International Development (DfID), the Diana, Princess of Wales Memorial Fund and the Stop TB Department of the World Health Organization.

Other supporters include Positive Action GlaxoSmithKline (founding sponsor); Abbott Fund; Abbott Molecular; Cavidi; Elton John AIDS Foundation; Merck & Co., Inc.; Pfizer Ltd; F Hoffmann La Roche; Schering Plough; and Tibotec, a division of Janssen Cilag.

The newsletter is edited by Theo Smart (Cape Town) and Keith Alcorn, NAM's Senior Editor (London).

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