Researchers develop model for treating HIV/AIDS, depression

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Today, people living with HIV/AIDS can remain healthy if they are able to engage in routine care and take the medicines that reduce their virus to undetectable levels. But for people with HIV who are also struggling with depression, that's often an insurmountable challenge, especially in South Africa, home to the highest number of cases in the world and a

significant shortage of mental health professionals.

But a new study in the Journal of the International AIDS Society has local and global implications for successfully treating both mental health and HIV/AIDS in settings like South Africa—or even Miami, the epicenter of new cases in the United States.

In the study, an international team of researchers—led by the University of Miami's Steven Safren and two colleagues—demonstrated the effectiveness of training nurses in public HIV clinics to deliver a specially adapted cognitive behavior therapy (CBT) to help people with depression and uncontrolled HIV adhere to their prescribed medication regiment. CBT is a proven approach for changing faulty or unhelpful thinking or behavioral patterns.

"We know that treating HIV-positive people who are clinically depressed with antidepressants alone does not affect their viral loads. Their depression may improve, but their adherence does not," said Safren, professor of psychology and director of the University's Center for HIV/AIDS Research and Mental Health. "So, given the global shortage of mental health professionals, we showed it is possible to train nurses to deliver cognitive-behavioral therapy for adherence and depression (CBT-AD), an intervention that successfully addresses both clinical depression and uncontrolled HIV."

Safren, who joined the University in 2015 from Harvard Medical School, conducted the study in a poor township just outside of Cape Town, South Africa, with fellow researchers John A. Joska, director of the HIV Mental Health Research Unit and professor of psychiatry at the University of Cape Town, and Conall O'Cleirigh, associate professor of psychology at Harvard and director of Behavioral Medicine at Massachusetts General Hospital.

For their study, the researchers recruited 161 patients with uncontrolled HIV/AIDS and clinical depression from four public health clinics in the township of Khayelitsha. Although a medical officer could prescribe antidepressants to the patients, the clinics have limited psychological services—as does the country in general. According to the study, South Africa only has 0.28 psychiatrists and 0.32 psychologists per 100,000 people.

At the onset of the study, all participants received the usual enhanced care for clinically depressed HIV-AIDS patients who did not achieve viral suppression after receiving the first month of their antiretroviral medication. That customary treatment included another prescription and follow-up meetings with an adherence counselor.

But half the patients were also randomly assigned to attend eight CBT-AD sessions, where specially trained nurses integrated strategies for treating depression with adherence counseling that included modules on life skills, depression, relaxation, mood monitoring, and problem-solving.

The idea, Safren said, was to help patients "turn down the volume" of their mental health symptoms, so they would be more open to counseling on the benefit of taking their medication. To track their adherence, the patients also received an electronic pill box, that—every time it was opened—transmitted a real-time signal to a web server.

And, researchers found, the task-shared approach delivered by nurses proved effective. Patients who completed the CBT-AD sessions were more than 2.5 times more likely to achieve undetectable viral loads that those who underwent the usual care.

Now, Safren noted, the next step will be for the research team to evaluate how to sustainably implement the CBT-AD approach in South

Africa, or even South Florida. He said the task-shared approach could be viable in Miami, where there are fewer services to help people achieve viral suppression than in other U.S. cities with large populations of people living with the virus.

"South Africa has the most cases of HIV/AIDS in the world and Miami is the city with the highest incidence of new cases in the U.S.—so there is a parallel," Safren pointed out. "And unlike places like New York or Massachusetts, where people are more likely to be virally suppressed, Florida doesn't have the same public health resources. If, for example, you're an HIV patient at Massachusetts General or Fenway Health, where I used to work, and you miss your visit, or your viral load becomes uncontrolled, social workers will swoop in and provide assistance. That doesn't happen as often in Florida and other places in the U.S. with less public health HIV/AIDS funding."

In addition to Safren, Joska, and O'Cleirigh, other co-authors on the study included Jasper S. Lee, a Ph.D. student, and Sierra A. Bainter, an assistant professor, both in the Department of Psychology at the University; as well as researchers from the University of Maryland, College Park; the University of Science and Technology in Mbarara, Uganda; the University of Washington in Seattle; and Stellenbosch University in Stellenbosch, South Africa.

More information: Steven A. Safren et al, Treating depression and improving adherence in HIV care with task-shared cognitive behavioural therapy in Khayelitsha, South Africa: a randomized controlled trial, *Journal of the International AIDS Society* (2021). DOI: 10.1002/jia2.25823

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