Food Is Medicine for People Living With HIV

People who received medically tailored meals and groceries reported improved mental and physical health.

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A program for people with HIV that provides healthy food and nutrition counseling led to fewer hospitalization admissions, better treatment adherence and improvements in mental and physical health, according to study results published in the Journal of Infectious Diseases.

“Medically tailored meals and groceries, combined with nutritional education, reduced hospitalizations, improved mental health and medication adherence and decreased unprotected sex among people with HIV at high risk for food insecurity,” the study authors concluded. “These findings underscore the promise of [tailored food programs] to improve multiple domains of health for people with HIV and reduce health care costs through lower health care utilization.”

It’s well known that a nutritious diet is a key to good health, but many people have little knowledge about good nutrition and limited access to affordable healthy food. Inconsistent access to healthy food is recognized as a key determinant of poor health among people with HIV, and support is growing for a “food is medicine” approach.

Food support for people with HIV in the United States consists of “an interlocking patchwork” of government support, including the Supplemental Nutrition Assistance Program (“food stamps”) and the Ryan White HIV/AIDS program, nonprofit agencies and community-based programs such as church food pantries and soup kitchens, Kartika Palar, PhD, of the University of California San Francisco, and colleagues noted as background.

“Traditional nutrition safety-net approaches focus on preventing hunger and reducing economic distress but sometimes have unintended consequences undermining health, such as providing foods high in salt or sugar,” they wrote. The food is medicine approach, in contrast, “has the potential to address twin goals of improving food security and health.”

Prior studies have linked food insecurity in wealthy countries to high rates of depression, anxiety and other mental health conditions, increased risk of HIV and other sexually transmitted infections (STIs), worse adherence to antiretroviral treatment, higher viral loads, lower CD4 cell counts and increased mortality. But there were previously no randomized trials of medically tailored food

programs for HIV-positive people.

Palar's team conducted a study to evaluate outcomes among existing clients of Project Open Hand, a San Francisco–based nonprofit that provides food assistance for people with chronic illnesses. The CHEFS-HIV trial (NCT03191253), conducted during 2016–2017, included nearly 200 low-income people living with HIV. The study compared 93 clients who were randomly assigned to participate in a special food program and 98 who received standard food services.

Most participants were middle-aged men (median age 55 years), and they had been living with HIV for a median of 22 years. About a third were white, a quarter were Black and about 10% were Latino. At baseline, 39% had uncontrolled HIV, higher than the proportion citywide. Many had comorbidities, including diabetes, hypertension and cardiovascular disease; mental health diagnoses and substance use were common. The median income was about $1,000 per month, and more than 60% reported food insecurity. Participants had to have the ability to store and reheat perishable food, which likely excluded some unsheltered homeless people.

People in the intervention group received medically appropriate meals and groceries tailored to support their health (either 14 frozen prepared meals or seven meals and groceries each week) plus a supplemental bag of groceries to round out their nutritional needs. They also participated in three group nutrition education classes led by a registered dietitian and two individual nutrition counseling sessions. Those in the control group received the standard weekly allocation of meals and groceries (enough for one or two meals per day) and met briefly with a dietitian every six months. Food could be delivered if clients were unable to pick it up. Health, nutrition and behavioral outcomes were assessed at baseline and six months later.

At six months, nearly 90% of participants in both groups remained in the study. People in the intervention group reported less food insecurity and consumed less fatty food, though there was no difference in reported consumption of fruits and vegetables. People in the program were 89% less likely to be hospitalized, and the researchers estimated that the intervention could have reduced hospitalization costs by $178,781. People receiving enhanced food services were also less likely to report depression, unprotected sex and treatment adherence below 90%. Viral suppression rates improved in both groups, with no significant difference between them. Despite these favorable outcomes, there was no significant difference in reported health-related quality of life.

"The six-month CHEFS-HIV intervention, pairing an intensive community-based program of [medically tailored meals and groceries] with registered dietitian-led nutrition education, did not impact HIV viral suppression or health-related quality of life," the study authors concluded. "However, it improved food security and [antiretroviral therapy] adherence and reduced depressive symptom severity, unprotected sexual encounters and overnight hospitalizations, compared to controls."

The researchers speculated that the reduction in unprotected sex might have occurred because addressing food insecurity decreased the need to engage in transactional sex or succumb to

pressure to have unprotected sex to secure resources for food. “Thus, medically tailored food programs may contribute to population efforts to reduce STIs by reducing unprotected sex among individuals for whom food insecurity affects sexual decision-making,” they wrote.

Differences between the groups may have been diminished because both groups received meals and groceries, the researchers suggested. The effect likely would have been stronger if the intervention group was compared with people who received no food assistance. With regard to viral suppression, a majority of participants in both groups had controlled HIV at the outset, and the city’s Getting to Zero initiative to improve citywide viral suppression rates started at around the same time.

“While suppressed viral load is critical for the health of people with HIV and for reducing HIV transmission, social factors linked to food insecurity…are often strong contributors to emergency department use, hospitalization and death in San Francisco,” the researchers wrote. “These factors may explain the decreased odds of hospitalization with the intervention, despite the lack of impact on viral suppression.”

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