The Food Box Pilot

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THE INNOVATION

Food insecurity was increasingly recognized as a serious problem in the United States even before the COVID-19 pandemic. Beginning in 2018, our federally qualified health center (FQHC) used a modest amount of HRSA FQHC supplemental funding ($10,000) targeted at mental health expansion to test the feasibility of providing food for patients with documented depression and food insecurity. There is some evidence that proper nutrition helps with depression.[1]

WHO AND WHERE

As an FQHC in Des Moines, Iowa that screens for food insecurity among other social determinants of health, we have been aware of this issue for many years. We worked with a longstanding local food pantry partner to provide weekly food boxes for patients with a Patient Health Questionnaire (PHQ-9) score >14 (moderately severe or severe depression) and food insecurity as identified on the PRAPARE social determinant screening tool.[2]

HOW

We provided a weekly box of fresh fruits and vegetables for the identified patient and a box for any family members in the home (up to 4 boxes) at a pantry cost of $6/box. Patients were identified in the electronic medical record or by our primary care physicians. Community Health Workers (CHWs) in our Wellness Center prepared boxes for patient pick-up before the weekend. Simple cooking instructions were distributed with the boxes.

It became immediately apparent that transportation was a barrier for some, so our CHWs began delivering boxes to those participants. PHQ-9s were available prior to entering the program and were repeated after variable time in the program. Our aim was to see if this was a feasible endeavor and if the outcomes were at least trending in a positive direction. The project ended in March 2020, when the COVID-19 pandemic disrupted almost all aspects of our FQHC.

Twenty-four patients were enrolled and had complete data. Average PHQ-9 score showed a significant improvement of 6.4 +/- 7.9 (95% CI, 3.3-9.6), P <0.001, near or shortly after the project end. Enrollment period varied from 1 to 12 months. Sixteen participants lowered their PHQ score, 5 increased, and 3 were essentially unchanged. Lack of a control group reduces the value of the pilot data. A post project satisfaction questionnaire was administered by telephone, with findings almost universally positive (**Supplemental Table 1**).

LESSONS LEARNED

We conclude that this food box approach is feasible, with the right community partners and modest funding. Clinical outcomes trended toward improvement of depression and patients were satisfied. Transportation and other socioeconomic issues were a barrier. Our delivery of the boxes provided some fascinating insights. For some, social isolation was a companion issue. The CHWs were welcomed into the homes, asked for cooking advice, engaged in conversations about patients' lives, and sometimes uncovered helpful information, such as a spouse's drinking issue. With the latest dietary advice suggesting we should consume 50% fruits and vegetables, we chose this as a simple dietary supplement plan, without the cost of more sophisticated dietary counseling.[3] A lot of produce goes to waste in the food system, and our pantry partners were expert in harvesting these items.

We are currently working with a new coalition of organizations, including a Medicaid MCO, and a commercial fruit and vegetable supplier, to expand and further study this intervention.

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Supplemental materials

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