Health Coaches for Hypertension Control

Evidence-based Hypertension Self-Management Program for Older Adults

Website: www.clemson.edu/aging

Year Program First Implemented in Community Settings: 2010

Program Synopsis:

General description of program

Health Coaches for Hypertension Control (HCHC) is an evidence-based, small group hypertension self-management program developed specifically for older adults. The eight sessions comprising the program are led by trained lay leaders who are trained by a Master Trainer. The sessions include: Basics of Hypertension Control; Nutrition and Hypertension Control; Physical Activity and Hypertension Control; Tobacco Cessation; Stress Management; Medication Management; and Long-Term Action Plan. Sessions meet weekly for 1.5 hours sessions, for eight weeks.

Program goal

The goal of Health Coaches for Hypertension Control is to improve hypertension self-management through health behavior change.

Reasoning behind the program design and elements

Research has shown that trained indigenous volunteers can effectively deliver self-management education and that optimal population health promotion requires more than clinical care and pharmacological intervention. Enduring lifestyle changes necessary for chronic disease self-management require not only knowledge, but also self-efficacy and readiness to change health behaviors, which is typically not possible to build in standard medical practice. Peer-led, community-based programs such as HCHC are an important complement to clinical care. HCHC had no negative outcomes and participants, as well as Health Coaches, provided very positive feedback about the program. Physicians who referred their patients to the program were pleased to see their patients become more efficacious self-managers.

HCHC standardized manuals and educational materials can be readily used in other communities

Target population

Adults age 45 years and above.
Desired outcomes;

- Increased physical activity levels.
- Reduction of sodium in diet and increased consumption of fruits and vegetables.
- Improved stress management skills.
- Improved medication management.
- Weight loss of those who are overweight.
- Cessation of tobacco use when present.
- Improved ability to track self-management behaviors.
- Improved ability to establish short-term and long-term goals for self-management.
- Reduction of blood pressure when greater than 140/90.

Measures and evaluation activities:

Measures include a Health Risk Appraisal (HRA), the Personal Wellness Profile (PWP) by Wellsource, surveys to measure self-management self-efficacy (adapted from Perceived Competence Scale with alpha across four items of .90) and a 17-item knowledge survey based on NHLBI and AHA materials, tested for health literacy appropriateness. Hospital staff measured fasting systolic and diastolic blood pressure; weight; waist circumference; total, LDL, and HDL cholesterol; triglycerides and glucose.

Health Outcomes and Evidence Supporting Health Outcomes

In Phase 1 of program testing (n=146, > 60 YO) which included eight weekly core modules and eight weekly supplementary modules in nutrition and physical activity, we used a pre/post-test evaluation design. Of 146 participants who completed baseline, 8 week, and 16 week assessments, we observed a statistically significant increase in hypertension-related knowledge with 69.01% correct at baseline, 77.10% correct at 8 weeks, and 77.30% correct at 16 weeks. From baseline to 8 weeks and 16 weeks, after adjusting for multiple comparisons, we observed statistically significant movement from cognitive stages to behavioral stages for readiness to be physically active (p < .001), to practice good eating habits (p < .001), to lose weight or maintain a healthy weight (p < .001), to handle stress well (p = .001), and to live an overall healthy lifestyle (p < .001). We also observed statistically significant changes in self-reported consumption of fruits and vegetables (p = .002), effort to eat primarily low-fat foods (p < .001), and ability to cope with life stress (p < .001) after adjusting for multiple comparisons. We observed changes in all clinical measures in the appropriate direction; however, only changes in systolic BP (~5.781 mmHg; p = .001), weight (~2.475 lb; p < .001), and fasting glucose (~5.096 mg/dl; p = .004) were statistically significantly different after adjusting for multiple comparisons. We observed that 40.4% of our analytic sample met the Healthy People 2020 definition of controlled hypertension (“mean systolic blood pressure < 140 mmHg and mean diastolic blood pressure < 90 mmHg”) at baseline; increasing to 51.0% at 16 weeks post-intervention.
In Phase 2 of program testing, (n=185 participants, > 45 YO) which only included eight weekly core modules, we used a batch-randomization (treatment vs. delayed treatment) design. Comparisons between completers and non-completers revealed no statistical differences in gender, age, race/ethnicity, and number of comorbidities. A higher proportion of treatment group participants moved from the cognitive to behavioral stages of motivational readiness for being physically active ($P < .001$), practicing healthy eating habits ($P = .001$), handling stress well ($P = .001$), and reported living an overall healthy lifestyle ($P = .003$). We observed a group by time interaction for perceived competence for hypertension self-management, $F(1.134) = 4.957$, $P = .028$, $\eta^2 = .036$. Specifically, treatment group participants demonstrated a greater average increase in perceived competence for self-management compared with control group participants during the study. For the perceived competence in hypertension self-management scale, Cronbach’s alpha coefficient ranged from .841 at baseline to .911 at posttest indicating good to excellent internal consistency. In addition, there was a group by time interaction for hypertension-related knowledge, $F (1.160) = 16.571$, $P < .0005$, $\eta^2 = .094$. Specifically, treatment group participants demonstrated a greater increase in mean hypertension-related knowledge compared with control group participants (Figure 1). Omnibus (multivariate) tests for changes in clinical values revealed no group by time interaction ($P = .057$) and no main effect for group ($P = .569$); however, a main effect for time ($P < .001$) was observed. Univariate analyses pinpointed small changes in systolic blood pressure ($P = .001$), diastolic blood pressure ($P = .018$), weight ($P = .048$), waist circumference ($P < .001$), and HDL cholesterol ($P = .036$) for both the treatment and control groups. Although not statistically significant, mean changes from baseline to 8 weeks postintervention are of greater magnitude in the treatment group and some changes may be clinically significant.

Program Costs - Training

Master Training - $500 per person. Training includes one day training with skill development, scripted manual and participant notebooks for each session, posters emphasizing main points covered in each session, data collection forms, and instructor support including e-mail and conference calls.

Program Costs – participants materials and supplies

The site license for the Personal Wellness Profile Health Risk Appraisal used in evaluation of the program was $5620 and an external evaluator for program cost about $4000 per year. The evaluator finalized the Wait-List Control research design and data collection protocols and evaluation measures; supervised data entry, management, and analysis; and contributed to progress report and manuscript production. The program Community Coordinator salary was approximately $33,000 per year. The Community Coordinator developed and implemented recruitment plans, arranged for Health Coach trainings, arranged logistics for HCHC sessions and arranged for
implementation of the HRA and clinic measures provided by hospital partner wellness staff, conducted monthly Health Coach meetings, assisted with creation of periodic progress reports and manuscripts.

The cost of materials and supplies was $180 for each participant. Materials included participant notebooks and daily behavior monitoring log. Supplies included a blood pressure monitor, stress management CD, pedometer, and low-sodium cookbook.

Resource Requirements

Facility

Enough space for 10-12 participants to be seating around a table. Comfortable room temperature (68-72 degrees).

Equipment and materials

10-12 chairs and table large enough to accommodate chairs
Blood pressure monitor
Pedometers
Stress management CD
Low-sodium cookbook
Rolling cart for Health Coach to use in transporting materials and supplies

Training requirements

Master Trainer training
Must have credentials in health-related field and experience in working with older adults
Demonstrated skill in facilitating small group learning strategies
Clearance of background check for criminal activity
Health Coach (lay leader) training
Member of community shared by targeted participants
Clearance of background check for criminal activity
Demonstrated skill in implementing HCHC sessions
Agreement to provide at least one 8-session series per year

References:


Dye, CJ; Williams, JE; Evatt, JH. Activating Patients for Sustained Chronic Disease Self-Management: Thinking Beyond Clinical Outcomes. Journal of Primary Care & Community Health. 2016: 1–6. DOI: 10.1177/2150131915626562. (for results see Figure 1 and Table 1 and 2.)