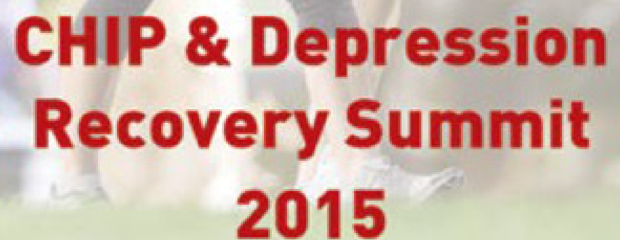

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Complete Health Improvement Program

Example of advertising for Chip Program.
From *Record*, December 6, 2014.

PAUL RANKIN

Paul Rankin, Ph.D. (Avondale College of Higher Education, NSW Australia) currently serves as the Health Director Greater Sydney Conference of the Seventh-day Adventist Church. Rankin, New Zealand by birth, is a conjoint lecture in Lifestyle Medicine at Avondale College of Higher Education. He has worked as nurse, pastor, missionary pilot, health educator, administrator, and academic. He is passionate about his family, wife Sonia, and three adult children. He enjoys hang gliding, woodworking, and hiking.

The Complete Health Improvement Program (CHIP) was founded in the United States in 1988. CHIP has driven positive health outcomes for tens of thousands of participants and generated more than 35 published scientific papers. CHIP is a community-based lifestyle intervention program. It uses behavioral change principles in a group or self-guided setting. It educates in an entertaining style and utilizes modern adult learning tools to help participants make fundamental lifestyle changes that have been shown to lower key health risk factors within 10 to 12 weeks. The CHIP program has been extensively utilized by Seventh-day Adventist churches in North America, the South Pacific, and Europe. Participants usually experience significant reductions in total cholesterol, LDL cholesterol, fasting blood glucose, blood pressure, and weight loss. CHIP is a powerful disease reversal tool that disrupts and curtails the rising chronic disease rates in a highly effective manner.

History

CHIP was developed in 1988 by Hans Diehl, as the Coronary Health Improvement Program. He had worked for a period as the research director at the Pritikin Longevity Centre.[1] Diehl was impressed by the outcomes achieved by participants in the residential programs at the center but recognized that the expense of the program was prohibitive to many individuals. He observed that the lifestyle prescriptions the participants practiced in the residential program were more likely to be difficult to sustain when the participants returned to their home environment. In response, Diehl developed CHIP as a community-based lifestyle intervention based on the lifestyle principles promoted at the Pritikin Longevity Centre and the work of Ellen G. White.

CHIP was developed as a 30-day lifestyle intervention that encouraged participants to move toward an optimal diet, engage in at least 30 minutes a day of aerobic exercise, and reduce stress. The optimal diet is defined as a whole-food, plant-based diet, emphasizing fruits, grains, legumes, and vegetables *ad libitum,* with little or no animal products. This eating pattern recommended that no more than 15 percent of calories be derived from fat, and a daily intake of less than 10 teaspoons of added sugar, 5 grams of salt and 15 miligrams of cholesterol. The consumption of 2 to 2.5 liters of water each day was also recommended.[2]

The primary goals of CHIP were to substantially improve blood lipid, blood pressure, and blood sugar levels. Secondary goals were to decrease weight, eliminate smoking, enhance daily exercise, improve stress coping strategies, and decrease medication used for hypertension, diabetes, and heart disease.[3]

The program delivery was in 16 two-hour sessions over a four- or five-week period, and focused on developing intelligent self-care through a clearer understanding of the nature and etiology of cardiovascular disease and type 2 diabetes, their epidemiology and risk factors .[4] CHIP incorporated accountability measures with a "health screen" conducted at the beginning and at the end of the intervention. The health screen included measurement of height, weight, blood pressure (BP), lipid profile, and fasting plasma glucose (FPG). The results of the health screen were used to motivate participants to maintain lifestyle changes and to improve health-related self-efficacy through the intervention. Following the completion of the initial intervention, participants were encouraged to join with CHIP alumni who meet on a monthly basis to provide ongoing support for the lifestyle changes initiated during the intervention.

The first program was conducted in British Columbia, Canada, in 1988. This program

consisted of a risk assessment of factors pertaining to chronic lifestyle disease, which included a brief medical history, blood pressure, height, weight, food frequency, and fasting blood drawn to measure total cholesterol (TC), low-density lipoprotein (LDL), high-density lipooprotein (HDL), triglycerides (TG), and fasting plasma glucose (FPG). The

program involved participants meeting four nights a week for four weeks. Following the four-week program a further health appraisal was conducted. The final health appraisal showed a decrease in blood pressure, resting heart rate, TC, LDL, TG, FPG, and body weight.[5]

Following the success of the initial program numerous other programs were conducted in North America. In 1997 the program series was videotaped in front of a live audience at the Borgess Medical Center, Kalamazoo, Michigan, USA. A curriculum package was then built to support these recordings. The results of CHIP programs in Kalamazoo, Michigan, were published by Hans Diehl in 1998 in the *American Journal of Cardiology*.[6]

In 1999 CHIP was established in Rockford, Illinois, at the invitation of Dr. Roger Greenlaw, medical director of the Centre for Contemporary Medicine attached to the Swedish-American Hospital, after he read Diehl's paper in the *American Journal of Cardiology*. Rockford has since become the business center for CHIP,[7] where the program is delivered by health professionals.

Subsequent to the success of the professional delivery of CHIP, Hans Diehl further developed CHIP so that it could be delivered by volunteers who were non-health professionals to members of their local community, outside the confines of a recognized medical establishment. The program was made available to volunteer directors by supplying them with the recorded presentations from Kalamazoo, Michigan, on DVD, curriculum material for participants, and with two days of training for the volunteer directors. Volunteers from community interest groups, mostly members of the Seventh-day Adventist Church, adopted the program.

In 2012 the CHIP program was purchased by Sanitarium Health and Well-being Company, which is owned by the South Pacific Division of the Seventh-day Adventist Church. At this time it was recognized that CHIP had impact on more than just coronary heart disease, as studies have shown that CHIP is effective in addressing other chronic diseases, such as type 2 diabetes[8] and even depression,[9] so the program was renamed the Complete Health Improvement Program. The new owners of the program adapted and expanded CHIP with newly recorded video presentations, participant kit, and facilitator's manual. The video presenters on the new program included Hans Diehl, Darren Morton, and Andre Avery. The program was expanded from 16 sessions delivered over four weeks to 18 sessions delivered over 12 weeks. In the first 11 sessions participants were educated on the etiology of chronic disease and the benefits of positive lifestyle choices, focusing particularly on diet and physical activity. In the second section of the new CHIP intervention (sessions 12-18) the emphasis was on overcoming barriers and providing participants with strategies for maintaining successful lifestyle change. In this section the lifestyle determinants of disease are also addressed, including substance use, sleep, stress, and mental and emotional health.[10]

Research and Publications

The first publication relating to CHIP was the paper published by Hans Diehl in *American Journal of Cardiology* in 1998.[11] Roger Greenlaw spearheaded a research program into the results obtained by the CHIP programs in Rockford, Illinois. This includes National Institutes of Health funding for two randomized control trials of CHIP. This research has resulted in a number of articles published on the results obtained from the Rockford programs, which were all delivered by paid facilitators.[12] This research showed that CHIP, when delivered by paid facilitators, was capable of producing significant reductions in risk factors for coronary artery disease and type 2 diabetes in a relatively short period of time.

The first study of the effectiveness of the volunteer-facilitated CHIP programs involved data on 5,070 participants from 176 programs conducted at 136 sites throughout North America between 2006 and 2009.[13] Subsequent to this study multisite studies of volunteer-facilitated CHIP programs have been conducted in Australasia,[14] Canada,[15] the Philippines,[16] Appalachia in Ohio,[17] and in indigenous Australian populations.[18] A study of the long-term effectiveness of the volunteer-facilitated CHIP interventions has shown that participants maintained improved health status four years after intervention and that 67percent of participants who returned for follow-up reported still being compliant with the CHIP lifestyle 49 months after the end of the intervention.[19]

Conclusion

CHIP continues to be delivered in clinical, corporate, and community settings. To date, approximately 75,000 people have completed the CHIP program worldwide. It is presently being offered in numerous countries, including the United States, Canada, Australia, New Zealand, the United Kingdom, the Philippines, Papua New Guinea, Fiji, the Solomon Islands, Vanuatu, the Bahamas, Botswana, and Mexico.[20]

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