

# HEALTH IMPACT STATEMENT

Diabetes Prevention Programs help people to lose weight in Hawaii ([Domain 4 / Strategy 2](#))

## PROBLEM DESCRIPTION

Diabetes is an escalating and expensive health concern in the United States (US). Rising rates of obesity, combined with an aging population, contribute to growing numbers of Americans with type-2 diabetes [1]. Diabetes concentrates among the most economically- and socially-disadvantaged population groups, including ethnic minorities and those with low educational attainment and income [1]. Americans with diabetes spend large sums of money for medical care [2]. Their condition can contribute to absenteeism, reduced productivity, diabetes-related disability, and premature death [2].

Rates of diabetes are increasing steadily in the State of Hawaii and currently sit at just over 8% of the population [3, 4]. Rates of prediabetes also continue to grow, which increases the risk of diabetes, heart disease, and stroke in the future [4]. Currently, over 14% of the population reports as prediabetic [5]. Without intervention, 15-30% of those with prediabetes will develop type-2 diabetes in five years [5]. Several disadvantaged communities also report rates well above the state average [4]. For example, Native Hawaiians, other Pacific Islanders, and older adults are at greater risk for diabetes [4].

Diabetes is preventable, even among those with prediabetes. Controlled studies show that lifestyle interventions such as the National Diabetes Prevention Program, referred to here as DPP, can prevent or delay type-2 diabetes in those with prediabetes. DPP classes are provided weekly and focus on sustainable lifestyle changes that increase physical activity and improve diet. Success in DPP is measured by losing 5 to 10% of one's body weight over a year. When fully implemented, DPP can reduce new cases of diabetes by 58%, compared to no intervention [6]. Lifestyle interventions such as DPP are also cost-effective [2].

## INTERVENTION

The CDC seeks to increase the participation of people with prediabetes in DPP. In Hawaii, no CDC-recognized DPPs existed before March 2016, representing an important resource gap and limitation for preventing diabetes. CDC 1305 funds supported State staff in engaging potential DPP organizations and providing technical assistance to start their programs. These efforts, along with others supported by CDC and the state, helped Hawaii and its community partners to rapidly scaleup DPPs to 15 CDC-recognized organizations, which covered 510 people as of January 2018. Sites are located primarily on the islands of Oahu and Hawaii, which are where most of the state's population resides. Federally qualified health centers, hospitals, pharmacies, and the YMCA all represent places where DPP is now offered in Hawaii.

## HEALTH IMPACT

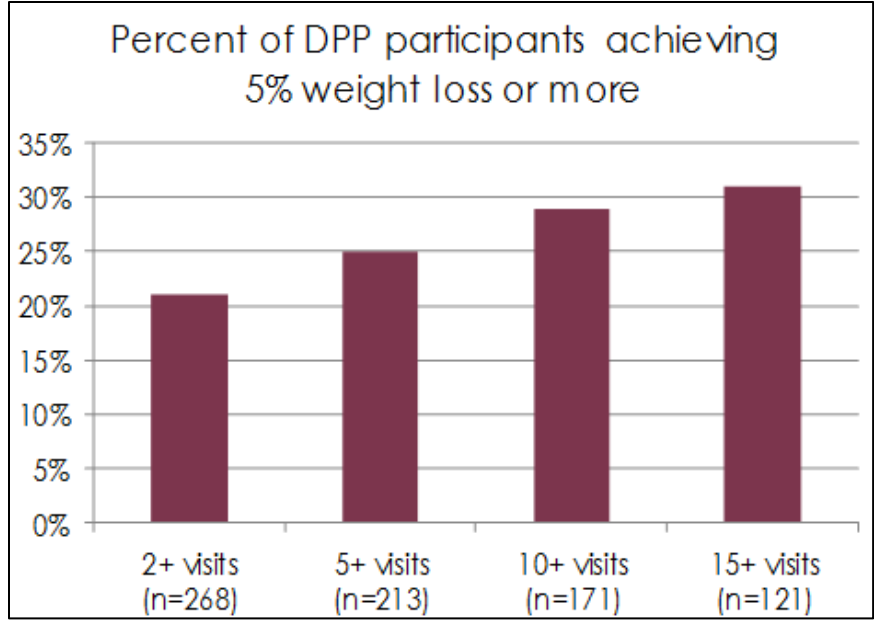
With 1305 funding, the State of Hawaii not only introduced a new program to prevent diabetes, but also rapidly expanded the program's reach. For example, between October 2017 and January 2018, the number of DPP participants went from 389 to 510, representing a 31 percent increase in just three months.

Because DPP is in its early stages in Hawaii, most program participants have not had enough time to complete a full 12-month program. Despite this, the state collected preliminary data on 299 participants from ten of the state's DPP sites. Weight loss and physical activity was statistically analyzed across time.

Substantial weight loss was observed among Hawaii's DPP participants, even though many had not completed a full year on the program. Of the 268 participants that were sampled and who attended two DPP classes or more, 1-in-5 lost 5% or more of their starting bodyweight. Nearly 1-in-3 participants who attended 10 classes or more lost this amount of weight (see figure). These results suggest that greater attendance in DPP courses over time fosters better weight loss outcomes. Significant weight loss was seen across all race/ethnicity groups. This is important because there are high rates of diabetes in Native Hawaiians and Other Pacific Islanders.

Not only did many DPP participants lose weight, but several of them moved from overweight to normal weight and from obese to overweight categories, according to their body mass index. For example, among people who attended five or more DPP classes, the percentage classified as normal weight nearly doubled between first and last recorded visits (6.5 to 12.0%).

Physical activity is important for diabetes prevention, even among people who do not lose weight [6]. Hawaii's DPP participants also reported greater physical activity over time. On average, those who attended at least five DPP classes increased their weekly physical activity by 50 minutes/week. That is nearly an hour extra.



Statewide results indicate that DPP helps people at high risk of developing diabetes to become more active and lose weight, both overall and across the racial/ethnic groups of relevance to our state. These are key to preventing and/or delaying diabetes onset. Given the high cost of treating and managing diabetes, continued expansion of DPP is essential for Hawaii to slow and reverse the growing number of people with this condition. The State of Hawaii continues to build the infrastructure to support DPP, which includes expanding insurance coverage for and promoting enrollment in the programs. Since regular participation in DPP is important for maximum program impact, additional opportunities and options to deliver the program are needed, such as through worksites, so that more people at risk of the condition can easily access this successful program.

**References**

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