“DUMP THE PLUMP”: A 5-YEAR HAWAII DEPARTMENT OF HEALTH WORKSITE WELLNESS PROGRAM, A PILOT STUDY.

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*Vision without action is merely a dream. Action without vision just passes the time.*

*Vision with action can change the world.* - Joel A. Barker
DEDICATION

For my parents

Marcelino Longayan Calimlim and Pacita Sapitola Calimlim

whose sacrifices afforded my siblings and I a life of opportunities
ABSTRACT

The increased prevalence of obesity and overweight in the United States and Hawaii are just some of the underlying factors leading to catastrophic death rates due to heart disease. Hence, a worksite wellness Program entitled “Dump The Plump” (DTP) was conceptualized, implemented, and sustained at the State Laboratories Division (SLD) for a period of five years, 2010-2015 to reverse or prevent these risk factors. With the University of Hawaii Institutional Review Board approval, SLD employees were recruited and self-identified as a Player or Cheerleader into the DTP intervention which initially lasted for 1 year then shortened to six months thereafter. The objective of this study was to determine whether or not participation in DTP lead to weight loss in SLD employees decreasing obesity and overweight prevalence at SLD.

In 2014, a prospective cohort study was implemented at SLD. DTP participants who consented to receive the DTP intervention were defined as “cases”, while other SLD employees who consented not to receive the DTP intervention were defined as “controls”. A paired t-test was investigated to determine if there was significant weight loss in study subjects after the DTP intervention by comparing their before weight ($M=153.73$, $SD=34.04$), and after weight ($M=152.33$, $SD=34.37$). The paired t-test indicated a $t (24) =1.3807$ $p= 0.1801$ and a 95% confidence interval (CI) for weight loss (-0.6947, 3.5027). This indicated an average weight loss of 1.38 pounds by study subjects, since the $p$-value was greater than the alpha value of 0.05, the weight loss was not significant. A Fisher’s exact test indicated that weight loss was not significantly associated with study status (cases vs. controls), gender (male vs. female) or DTP status (Player vs. Cheerleader) $p=1.0$. Also, a two sample $t$-test for independent groups was performed on the cases ($N=23$) to determine if their weight loss ($M=1.3826$, $SD=5.2624$) was
associated with DTP intervention, compared to the controls (N=2) who didn’t receive DTP intervention (M=1.6500, SD=3.3234). The independent samples t-test was not associated with a statistically significant effect of weight loss with cases compared to controls, t (1.48) = -0.10, p=0.930. This indicated that there was no significant difference in weight loss in the cases compared to the controls. Lastly an odds ratio (OR) was computed to estimate the association between DTP intervention (case vs. control status) and weight loss and showed an OR=1.88 (0.10,34.13). The odds of weight loss was 1.88 times greater in cases compared to controls, since the CI includes 1, the results are not statistically significant.

In 2015, a longitudinal study was approved for retrospective data for years 2010-2015 of SLD employees who participated in DTP during the five year period. Several variables were investigated to determine if a linear relationship existed in determining weight loss in study subjects. Data analysis exploring a linear model, Model 1, showed no significant linear relationship between weight loss and gender p=0.06 or weight loss and DTP status p= 0.14. Moreover, a linear mixed-effect model, Model 2, showed there was no significant linear relationship between weight loss and the fixed effects of gender p= 0.21 or DTP status p= 0.25, when coupled with the random effect of subject id. However, a paired t-test was performed to compare DTP participants before weight (M=160.35, SD=39.97), to their after weight (M=157.24,SD=37.85) to determine if weight loss did not occur after DTP intervention. Results indicated an average weight loss of 4.6011 pounds of study subjects with a p-value<0.0001 with 95% confidence intervals of weight loss (1.7725, 4.4510). The results suggest that the DTP intervention resulted in significant weight loss in DTP participants at the SLD and Maui District Health Lab.

Key words: Worksite Wellness, Hawaii Department of Health, State Laboratories Division, Well-being Assessment, Hawaii Medical Service Association, Healthways
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<th>Abbreviation</th>
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<tbody>
<tr>
<td>ACOEM</td>
<td>American College of Occupational and Environmental Medicine</td>
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<td>ADA</td>
<td>American Diabetes Association</td>
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<td>AHA</td>
<td>American Heart Association</td>
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<tr>
<td>BFRSS</td>
<td>Behavioral Risk Factor Surveillance System</td>
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<td>CDC</td>
<td>Centers for Disease Control and Prevention</td>
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<td>CI</td>
<td>Confidence Interval</td>
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<td>CITI</td>
<td>Collaborative Institutional Training Initiative</td>
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<td>DTP</td>
<td>Dump The Plump</td>
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<td>$df$</td>
<td>Degrees of Freedom</td>
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<tr>
<td>HDOH</td>
<td>Hawaii Department of Health</td>
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<tr>
<td>HIPS</td>
<td>Health Information Privacy And Security</td>
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<td>HMSA</td>
<td>Hawaii Medical Service Association</td>
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<tr>
<td>IRB</td>
<td>Institutional Review Board</td>
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<tr>
<td>$M$</td>
<td>Mean</td>
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<tr>
<td>$N$</td>
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<td>$OR$</td>
<td>Odds Ratio</td>
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<td>$SD$</td>
<td>Standard Deviation</td>
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<tr>
<td>SLD</td>
<td>State Laboratories Division</td>
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<td>$t$</td>
<td>Test statistic</td>
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<tr>
<td>WBA</td>
<td>Well-Being Assessment</td>
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<td>Worksite Wellness</td>
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INTRODUCTION

Heart disease is the leading cause of death in the United States, killing over 611,105 people annually. In 2014, 26.6 million American adults were diagnosed with heart disease[1]. Risk factors such as medical conditions and lifestyle choices, i.e. smoking, diabetes, overweight and obesity, poor diet, and physical inactivity can all increase the risk for developing coronary heart disease, the most common type of heart disease [2]. One of the underlying health risk factors of heath disease is the increased prevalence of overweight and obesity [3, 4]. In Americans, it is ballooning out of control. According to the Centers for Disease Control and Prevention (CDC) Behavioral Risk Factor Surveillance System (BFRSS), in 2015 no state had a prevalence of obesity less than 20% [5] (Appendix A). As a nation, overweight and obesity have been on the rise since 1988 where 56% of adults aged 20 and over were at risk; compared to 2012 in which 68.6% are at risk for this chronic health condition [6]. The same dismal picture is also captured locally in the state of Hawaii. Aggregated data from 2013 indicated that 21.8% of the population was reported as being obese, while 33.6% were categorized as overweight. These indicators are in stark contrast to Hawaii data obtained in 1995 when 10.8% of the population was obese and 32% were overweight [7]. Not only can the risk factor of overweight and obesity be prevented, they can be reversed [8]. Controlling for overweight and obesity can, in essence, reduce a person’s risk of heart disease and subsequent death. Hence, a pilot worksite wellness program entitled “Dump the Plump” (DTP) was conceptualized, implemented, and sustained at the Hawaii Department of Health, State Laboratories Division (SLD) at 2725 Waimano Home Road in Pearl City, Hawaii, for a period of no less than 5 years. Achieving positive results requires culture change, which occurs gradually [9, 10].
Worksite wellness programs have become a viable intervention strategy [11-13]. According to the Bureau of Labor Statistics, American Time Use Survey, more Americans aged 25-54, are working longer hours, about 8.9 hours (37%) of their 24-hour day at work [14]. It’s a controlled environment that facilitates effective communication, fosters long-term commitment and employee involvement, and garners upper management support [15]. The American College of Occupational and Environmental Medicine (ACOEM) believes that the workplace is a critical location for achieving the goals of health reform and for improving the overall health of employees and subsequently, their families [16]. Still other research has cited that worksite wellness programs have facilitated bonding between workers and development of a regular exercise routine [17, 18]. Worksites have become ideal environments for health promotion because they are convenient locations and provide an atmosphere conducive for wellness programs.

Some of the benefits for implementing a worksite wellness program were that for every dollar invested in worksite intervention, a return on investment was realized in health care savings [19-25]. Other benefits included positive changes in eating behavior and reducing cardiovascular risk [26, 27]. Moreover an effective worksite wellness program can attract exceptional employees, improve on-the-job decision-making and work efficiency, improve presenteeism and productivity, decrease absenteeism, lower cholesterol, increase morale and mental well being, increase organizational commitment, decrease turnover, and reduce organizational conflict [25, 28-36].

To increase employee participation, certain aspects of effective worksite wellness programs were incorporated into the DTP model. A meta-analysis performed by Huang et al. (2016) showed that incentives are associated with a 23% increased participation rate. Robroek et
al. (2009) also showed increased participation in worksite wellness programs when incentives were offered. Increased participation resulted when the program targeted multiple components and behaviors of employees and employers [37-40].

Insufficient incentives, inconvenient location, and lack of time were cited as barriers to participation in worksite wellness program [41]. Other reasons for non participation included having no interest in physical activity or already engaging in high rates of physical activity [42]. Worksite wellness programs may violate the American with Disabilities Act, in that penalties could be implemented when employees don't participate in worksite wellness programs because they are physically unable to do so [43] or that a person’s disability should be taken into account when designing a worksite wellness program [43].

The null hypothesis of this research project proposed that participation in DTP worksite wellness program does not promote weight loss in state employees. While the alternative hypothesis proposed that participation in DTP worksite wellness program does promote weight loss in state employees.

**Design and implementation of the intervention**

A worksite wellness program entitled “Dump The Plump” was piloted at the Hawaii Department of Health State Laboratories Division (SLD) for a period of five years from 2010-2015. The program was comprehensive in design, complementing health education classes with physical exercise. Alternate Fridays featured educational classes provided by Hawaii Medical Service Association (HMSA) via Healthways health educators covering topics such as diabetes, heart disease, women’s health, men’s health, and outdoor fitness (Appendix B). Group physical activities engaged the other Fridays with events that included flag football, soccer, kickball, quidditch, and group walking (Appendix C). A schedule of events has been included (Appendix
D). State laboratorians who voluntarily decided to participate in DTP self-identified as either Players or Cheerleaders. Players are employees who are actively trying to lose weight for the competition while Cheerleaders are not actively trying to lose weight for the competition.

The differences between the two types of DTP participants consisted of the following: 1. Participation fees: $10 for Players versus $5 for Cheerleaders 2. Trophies and cash prizes for 1st, 2nd, and 3rd winners of both genders was be reserved for only the Players. 3. Likewise, only the top male and female Players were recognized on a customized perpetual plaque for display in the SLD lobby. Both Players and Cheerleaders were eligible to participate in HMSA/Healthways educational classes, lunchtime group activities, and had access to an onsite exercise room and showers (Appendix E). Players were required to be weighed in triplicate at the start of the DTP program and once again, six months later at the end of the intervention. Cheerleaders had the option to be weighed or not weighed, except during the 2014 Season. At this time the Prospective Cohort arm of the study was instituted so all staff who consented to participate were required to be weighed in triplicate at the start and end of the intervention. Incentives were distributed at both the initial and final weigh-ins to encourage participation in the program. All participants were required to sign a waiver which removed liability from the State of Hawaii. Participants who opted in for the research project also signed a consent form allowing use of their personal information.

Events

Other activities included an annual HMSA/Healthways Biometrics Screening coupled with a Gallup-Healthways Well-Being 5™ assessment (WBA). The WBA provided a more comprehensive and accurate picture of an individual’s well-being than assessments that focus only on physical health. Researchers have shown that in worksites without an intervention,
improved health benefits were attributable to the health assessments and personalized feedback received [44]. When the requisite number of HMSA members (N=30) participated in the WBA, an aggregate report devoid of any personally-identifying information was provided to the SLD DTP Program Coordinator and the SLD Laboratory Director which helped fine tune the intervention strategy (Appendix G).

Another activity included “Quick Fits” in which flexibility, strength, and balance of DTP participants were assessed by HMSA/Healthways personnel (Appendix F). These metrics were standardized by gender as well as age. DTP participants of both genders with the highest “Quick Fits” metrics were awarded medals at the annual awards ceremony to reinforce future participation of current DTP participants and other SLD staff.

DTP Participants were also encouraged to participate in external events such as the American Diabetes Association Step Out: Walk to Stop Diabetes and the American Heart Association Oahu Heart walk (Appendix H-I). DTP participants and other SLD employees who were not participating in DTP, raised monies towards these two worthwhile charities. Some also participated in the actual walks with friends and family members supportive of their healthier lifestyle. Lastly, the “Adventurer’s Club” was an annual hike on different locations throughout Oahu which all SLD staff were encouraged to join (Appendix J).

Communication

DTP participants were emailed any pertinent information. This method of information delivery was advantageous because every employee at the SLD is required to have an email account which facilitated dissemination of information. A DTP communication board housed in the SLD lobby featured any planned events and displayed pictures of previous events. Event fliers were also posted by the mandatory sign out log. This manual log required all SLD
employees to physically sign out of the building at the end of their work shift. This prompted staff to stop to initial out of the manual log and electronically fob out of the building; hence placement of the DTP flier at this ideal location provided a hard-copy reminder of upcoming events for all DTP participants as well as other SLD employees to read.

A DTP article was also incorporated into the monthly SLD newsletter (Appendix K.). The article featured DTP participants engaging in physical activities, summarized the previous month’s activities, and relayed information of upcoming events. The newsletter articles are physical representations of commitment from senior leaders that promote cultural acceptance of a worksite wellness program [45]. This multi-component communication of health promotion events maximized reach to each DTP participant and as an added bonus, other SLD employees as well.

**Winner Determination**

Attendance was taken at each DTP sanctioned event which encompassed both internal and external activities. One point was assigned for internal events such as HMSA education classes or physical activities held on the SLD grounds. External events were awarded more points due to the extra effort required of participants, i.e. fundraising for the event, driving to the event, walking the course, etc. During the Awards Ceremony incentives were distributed based on decreasing ranked order as determined by participation points received by attending the education classes and/or group activities throughout the six month intervention.

The top male and female winners for the HMSA “Quick Fits” with the highest combined score for strength, flexibility and balance were rewarded with personalized medals. The “Quick Fits” scores were standardized for gender and age. Older employees are required to perform less than younger employees to receive the same score. Likewise women employees are required to
perform less than male employees to receive the same score. Lastly the 3\textsuperscript{rd}, 2\textsuperscript{nd}, and 1\textsuperscript{st} Place winners were announced in reverse order for both genders. The winners from the Players group were determined by most percent weight loss. This metric is calculated by the mean total pounds lost divided by their mean initial weight in pounds, and then multiplied by 100 (Appendix L).

**Program Evaluation**

As DTP participants (Players before Cheerleaders) were called to retrieve the incentive of their choice, they were also required to turn in an anonymous evaluation of the DTP worksite wellness program (Appendix M). Their anonymous feedback helped to further refine the worksite wellness program. During the Awards Ceremony all SLD employees were shown a PowerPoint presentation summarizing the entire six-month intervention. The PowerPoint presentation was shown to a captive audience highlighting their fellow employees happily engaged during a DTP activity, such as an HMSA education class, outdoor activity, or external event. This public display of the six-month intervention helped other SLD staff visualize the positive impact DTP had on its participants as well as provide the current DTP participants a chronicle of events that helped accurately recollect the last six months and evaluate the program vividly.
METHODS

Human Studies Approval

The principal investigator for the research project had to complete Collaborative Institutional Training Initiative (CITI) training for students conducting no more than minimal risk research, as well as Health Information Privacy and Security (HIPS) prior to applying for Institutional Review Board (IRB) approval. IRB approval was obtained for years in which personal information was gathered (Appendix N-P).

Recruitment of potential participants

Any employee of the SLD located at 2725 Waimano Home Road, Pearl City, Hawaii and the Maui District Health Office located at 54 South High Street, Wailuku, and Maui were eligible to participate in the DTP program in 2015. For years 2010-2014 only employees of the SLD were eligible to participate. Prior to the start of the program, SLD employees were presented with information about the program during a monthly mandatory staff meeting. The PowerPoint presentation included a six month summary of Dr. Whelen’s 50-mile Challenge during the DTP off season (Appendix Q). Some of the slides captured SLD staff, some of which were previous DTP participants at the American Diabetes Association: Walk to Stop Diabetes and the American Heart Association Oahu Heart Walk. These slides highlighted the monies raised for these charities as well as the number of SLD staff who participated alongside their family and friends. Other slides showcased staff participating in numerous external events: 5K Zombie run, 10mile Turkey trot on Thanksgiving Day, the 26.2 mile Honolulu Marathon held in December, the 8.1mile Great Aloha Run held in February and the annual Adventurer’s Club Hike (Appendix J,R). All SLD employees were provided with information about DTP during the PowerPoint presentation. Some of the talking points included: Why employees should exercise
at work, the reduction of medical costs as a benefit, the increasing obesity trends of the United States according to the CDC, were just some of the reasons highlighted why the worksite wellness program DTP should be instituted. Next the logistics of how the DTP program works was disseminated: when it starts, the difference in membership status, attendance at planned activities determining incentive order during the awards ceremony, submission of a program evaluation to redeem incentives at the awards ceremony, how winners are determined, attainment of prizes for the top three winners (cash prize and trophies) and the top winners for both gender being immortalized on a perpetual plaque for prosperity were also discussed (Appendix S). To further entice participation, the previous year’s participants were shown along with their aggregated pounds lost. The DTP winners were also displayed holding their cash prize, trophies, and perpetual plaque, all to provide visual confirmation that the program works. At the end of the presentation, a reminder was given to potential participants that the initial weigh-in will take place in the 3rd floor library. This ended the recruitment phase of the study.

**Initial weigh-in of DTP Participants**

A few days prior to the weigh-in, another blast email was sent to all SLD staff reminding them that the initial weigh-in will be held in the library from 12pm to 1pm. A flier was also posted by the mandatory sign out sheet duplicating the information sent on the email. During the initial weigh in, the SLD employee identified their preferred participant status, Players (actively losing weight for the competition) vs. Cheerleaders (not actively losing weight for the competition). The DTP participant was allowed time to read and sign the DTP waiver (Appendix T) and the UH consent form (Appendix U-V) if they were willing to participate in the research study. All DTP Players and consenting DTP Cheerleaders were privately weighed in triplicate on an electronic scale after the removal of shoes, extraneous clothing, watches, and
other items in pockets. After being weighed the participant was given a list of scheduled events, and a BMI chart, to track their progress. The DTP participant was also reminded that the waiver would allow them access to the on-site exercise room. This initial weigh-in marked the start of the intervention and served as the first instance of attaining an incentive to participate in the program. The incentive for participating in the weigh-in usually consisted of various small potted plants that the participants could choose from (Appendix S). The plants would serve as horticultural therapy for the DTP participant.

**Intervention**

The intervention lasted for six months. All participants were given a schedule of events. The schedule was color coded for ease of identification. Light green events were for HMSA/Healthways Education classes; purple for DTP activities; pink for weigh-ins, orange for HMSA events, yellow for fundraising bake sale, and red for presentations and external events. The schedule provided the location, time, and responsible person for each event. An attendance sheet was provided during each event in which DTP participants were able to sign in and get points for attending the event. Pictures were also taken to document each event. Different activity levels were planned to account for the different activity levels of the DTP participants. Different health topics were scheduled to encompass the different expressed interests of participants (Appendix B). External events that focused on Health and closely impacted SLD staff was also promoted. Fund raising was done so that monies raised could directly benefit the charities chosen. These external events fostered camaraderie among SLD staff and their family and friends to work towards a common goal. Aside from weight, gender and participation points were the only other variables measured.
Weigh-out of DTP Participants

Immediately outside of the library, a small table and a couple of chairs were set up for DTP participants to wait for their opportunity to be weighed. On the table, a sheet of paper would be used to display the different incentives that could be made available to the DTP participants at the Awards Ceremony. This wait time provided the DTP participant an opportunity to contemplate their choice of incentive and vote for their favorite. All DTP Players and consenting DTP Cheerleaders were privately weighed in triplicate on an electronic scale after the removal of shoes, extraneous clothing, watches, and other items in pockets. This was also the second instance for a DTP participant to receive an incentive for participating in the program. The incentive for participating in the final weigh-in usually consisted of various small potted plants that the participants could choose from, usually different from the plants that were available to them during the initial weigh in. The plants would serve as horticultural therapy.

Awards Ceremony

The DTP Awards ceremony was held during the next sequential monthly mandatory staff meeting after the final weigh in. During this meeting, all SLD employees were provided a summary of the DTP six month interventions. Based on DTP status, Players before Cheerleaders, participants were called in decreasing participation points, to pick out the incentive of their choice. This event marked the third instance of receiving an incentive for participating in DTP. DTP participants also submitted an evaluation form in exchange for their final incentive. Next, the “Quick Fits” champs of both genders were revealed and awarded personalized medals. Then in reverse order the top three DTP Players of both genders were revealed and awarded cash prizes and personalized trophies. The cash prizes were directly drawn from the DTP Player participation fees and divvied up as follows: 12.5% was allotted for
3rd place, 25% was allotted for 2nd place and DTP Champions of both genders received 50% of the participation fees. The remaining 25% was used to purchase drinks (an incentive for those who participated in outdoor activities). The actual dollar amount of the cash prize was dependent on the number of Player participants in each gender class. To raise the funds to purchase the trophies, perpetual plaque inscriptions, and final incentives that were distributed during the awards ceremony, an annual DTP bake sale was held (Appendix W.). Lastly the top male and female DTP winners also had their names immortalized on a perpetual plaque, which is on permanent display in the SLD lobby. Public announcement of winners has been shown to reinforce participation in future campaigns [35]. Thereafter, a DTP board would display the season’s winners for an entire year as well as announce any pertinent information, to hopefully increase recruitment for the next round of DTP intervention. At the closing of the awards ceremony, staffs are reminded that Dr. Whelen’s 50-mile challenge would ensue and that they are encouraged to submit their miles to the DTP coordinator so that monthly summaries of participants and aggregated mileage could be displayed. When the new season’s winners are announced, the previous season’s winners and corresponding season’s events are put on permanent display in the onsite exercise room.

**Statistical Methods**

Statistical analysis was performed using a combination of Excel 2007, RStudio version 3.2.2, and SAS 9.4 data analysis software. Descriptive statistics used to describe the 2014 prospective cohort included graphs of the actual study participants, percentages and frequencies, gender distributions, and enumeration of participation status as well as weight loss status. Distribution of weight loss with 95% confidence intervals (CIs), Q-Q plots, box plots, and scatter plots were also used to show non-normal distribution of the 2014 dataset. A paired $t$-test was
performed to determine if there was significant weight loss measuring before weight compared to after weight. Also, an independent $t$-test for two groups was used to determine if there was a difference in weight loss between cases (with DTP intervention) and controls (without DTP intervention). To account for the small study size ($N=25$) and less than the requisite number of ($N=5$) in each cell of the 2x2 table, a Fisher’s Exact Test was used to determine if weight loss was a result of study status (case vs. control), gender (male vs. female), or DTP (Player vs. Cheerleader). Lastly an odds ratio ($OR$) was computed to estimate the association between DTP intervention (case vs. control status) and weight loss.

For the 2010-2015 longitudinal study descriptive statistics used to describe the cohort and included graphs of the actual study participants, distribution of weight loss with 95% confidence intervals. Q-Q plots, box plots, and scatter plots were also used to show non-normal distribution of the 2010-2015 cohort. A linear model, Model 1, was used to determine if there was a linear relationship between weight loss and gender (male vs. female), and DTP status (Player vs. Cheerleader). Next a linear mixed-effect model, Model 2, was used to determine if a linear relationship existed between weight loss and the fixed effects of gender (male vs. female), and DTP status (Player vs. Cheerleader) when coupled with the random effect of subject id. Lastly a paired $t$-test was used to determine if weight loss was observed in each DTP participant after the 6-month DTP intervention.
RESULTS

2014 Prospective Cohort

At the start of the 2014 prospective cohort study, a total of thirty-three participants were successfully enrolled out of 86 eligible employees at the SLD resulting in a 37.5% participation rate (Fig.1). Twenty-eight subjects (85%) volunteered as cases, to receive the DTP intervention. Five subjects (15%) volunteered as controls, to not receive the DTP intervention. All subjects were weighed in triplicate prior to the start of the intervention and again at the end of the intervention six months later. Five cases and three controls were lost to follow-up (24%) and did not weigh out of the study. As a result only twenty-five subjects had corresponding before and after data.

Only two out of twenty-five (8%) were controls, one of which was male and the other female (Figs.1, 2, 3). Twenty-three out of twenty-five (92%) were cases, eight (35%) of which were male and fifteen (65%) were female (Figs. 2, 3). This marked an unbalanced distribution in participant status, study status, and gender (Figs. 3, 4).

For the weight loss status of the 2014 study population, one control gained weight while the other lost weight (Fig. 5). Of twenty-three cases, seven (30%) identified as cheerleaders while sixteen (70%) identified as players. Eight of the twenty-three cases (35%) did not lose weight, while fifteen of the cases (65%) had lost weight.

The difference in before and after weight of test subjects appears to be positively skewed indicating a slight difference from normal distribution (Fig. 6). There is a positive difference in weight loss of the test subjects. Points did not fall directly on the line of the Q-Q plot indicating that the data were not normally distributed (Fig. 7).

The mean of the after weight is slightly lower than the mean of the before weight (Fig. 8).
More points fall below the line indicating a decrease in weight after the DTP intervention in test subjects, with the mean of the points just slightly below the line in the before area (Fig. 9).

A paired t-test comparing before weight versus after weight, indicated an average weight loss of 1.38 pounds, \( t (24) =1.38, p= 0.180 \). Since the \( p= 0.1801 \) was greater than the alpha level of 0.05, the weight loss does not appear to be significant (Fig 10). Fisher’s Exact tests were then performed to account for the small sample size (N=25) and less than 5 counts in each square of the 2X2 table (Fig.11) Results show that weight loss was not significantly a result of study status, gender, or DTP status \( p= 1.0 \) (Fig.12).

An independent t-test was then performed on the cases (N=23) to determine if weight loss \( (M=1.3826, SD=5.2624) \) was associated with DTP intervention, compared to the controls \( (N=2) \) who didn’t receive DTP intervention \( (M=1.6500, SD=3.3234) \). The independent samples t-test was not associated with a statistically significant effect of weight loss with cases compared to controls, \( t (1.48) = -0.10, p=0.930 \). Thus, the DTP intervention was not associated with a statistically significant weight loss (Fig. 13).

Lastly an odds ratio was computed to estimate the association between DTP intervention (case vs. control) and weight loss and showed an \( OR = 1.88 \) with 95% confidence intervals \( (0.10,34.13) \) (Fig.11). This indicates that the odds of weight loss are 1.88 times greater in cases compared to controls, since the CI includes 1, these results are not statistically significant.

**2010-2015 Longitudinal Study**

Fifty-five different SLD employees participated in DTP from 2010 to 2015 (Fig. 14). A total of ten employees (18%) were lost to follow-up due to no comparator data or failure to acquire consent resulting in a final count of 45 study subjects (Fig. 15). Descriptive statistics of the data include 119 paired observations for the 45 subjects with a before mean weight of 160.35
pounds with a standard deviation of 39.97 pounds and an after mean weight of 157.24 pounds with a standard deviation of 37.85 pounds (Fig. 16). Weight loss distribution, show a non-normal distribution, positively skewed with the median pounds lost greater than the mode (Fig.17). The leptokurtic-like distribution show that a higher density of the weight loss centering on the mean. The median after weight show a slight decrease in median weight of the test subjects (Fig. 18). Moreover, the scatter plot supports weight loss as the mean of the points just slightly below the midline in the before area (Fig 19). The Q-Q plots show the outliers of weight loss in the upper quartile, resulting in a non-normal distribution (Fig. 20). Weight loss based on gender indicates that males had a slightly greater weight loss than females, with outliers far beyond the upper quartile (Fig. 21). Weight loss based on season; indicate that the greatest weight loss was in season 3 which also coincides with the greatest number of participants. However, the greatest outlier of weight loss was seen in season 0.5 (Fig 22). Weight loss based on DTP status, indicate that Players had a slightly higher weight loss with the greatest pounds lost, shown by the outliers well beyond the upper quartile (Fig. 23). The data from Model 1, suggests that weight loss was not significantly associated with gender, or DTP status (Fig 25). The evidence suggests that there is no significant linear relationship between weight loss and gender \( p = 0.06 \); or weight loss and DTP status \( p = 0.14 \). Plots indicate that data is not normally distributed (Fig. 24).

Model 2 explored a linear mixed-effect model. The fixed effect of the model was the variable of weight loss as function of gender and DTP status, coupled with the random effect of subject id. The evidence suggests there was no significant linear relationship between weight loss and gender \( p = 0.21 \); or weight loss and DTP status \( p = 0.25 \), when coupled with the random effect of subject id (Fig 27). The plots show that residuals appear to be evenly distributed around
Moreover there is a large distribution of random effects with no obvious clustering (Fig. 26).

A paired $t$-test was performed on DTP participants before weight ($M=160.35$, $SD=39.97$), and after weight ($M=157.24$, $SD=37.85$) to determine if weight loss did not occur after DTP intervention (Fig. 28). The data suggest a strong association of weight loss in DTP participants, $t(118)=4.6011, p<0.0001$ (Fig. 28), despite a non-normal distribution of the 2010-2015 longitudinal study subjects.

<table>
<thead>
<tr>
<th></th>
<th>Initial</th>
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<tbody>
<tr>
<td>Cases</td>
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<td>23</td>
</tr>
<tr>
<td>Controls</td>
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<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>33</td>
<td>25</td>
</tr>
</tbody>
</table>

Figure 1. Number of participants of the 2014 prospective cohort.

![2014 Prospective Cohort, N=25](image)

Figure 2. Percent frequency of the 2014 prospective cohort, N=25.
Figure 3. Percent frequency of gender distribution of the 2014 prospective cohort, N=25.
Figure 4. Number of 2014 prospective cohort and their self identified DTP participant status, N=25.

Figure 5. Number of 2014 prospective cohort and their weight loss status, N=25.
Figure 6. Non-normal distribution of difference of before and after weight in 2014 prospective cohort, N=25. Blue area underneath graph indicates 95% confidence interval of difference of before and after weight.
Figure 7. Q-Q plot indicating non-normal distribution of difference of before and after weight in 2014 prospective cohort, N=25.

Figure 8. Box plot of before weight and after weight in 2014 prospective cohort, N=25. The number 1 indicates the before weight and number 2 indicates the after weight.
Figure 9. Scatter plot of before weight and after weight in 2014 prospective cohort, N=25. Mean circle falling below line indicates weight loss in study subjects.

<table>
<thead>
<tr>
<th>Paired t-test</th>
</tr>
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<tbody>
<tr>
<td>N</td>
</tr>
<tr>
<td>Mean</td>
</tr>
<tr>
<td>Std Dev</td>
</tr>
<tr>
<td>DF</td>
</tr>
<tr>
<td>t Value</td>
</tr>
<tr>
<td>p Value</td>
</tr>
<tr>
<td>95% CI Lower</td>
</tr>
<tr>
<td>95% CI Upper</td>
</tr>
</tbody>
</table>

Figure 10. Paired t-test for before and after weight in 2014 prospective cohort, N=25.

<table>
<thead>
<tr>
<th>2x2 Contingency Table and corresponding Odds Ratio</th>
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<tr>
<td>Weightloss</td>
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</tr>
<tr>
<td>Cases (DTP)</td>
</tr>
<tr>
<td>Controls (No DTP)</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

Odds Ratio (OR) 1.88
95% CI Lower 0.10
95% CI Upper 34.13

Figure 11. Outcome (weight loss vs. no weight loss) by exposure (cases with DTP intervention vs. controls without DTP intervention), 2X2 table of 2014 prospective cohort, N=25 and corresponding odds ratio.
<table>
<thead>
<tr>
<th>Fisher's Exact Test</th>
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<tr>
<td>Test</td>
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<tr>
<td>Weight loss by Study Status</td>
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</tr>
<tr>
<td>Weight loss by Gender</td>
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</tr>
<tr>
<td>Weight loss by DTP Status</td>
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</tr>
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</table>

Figure 12. Fisher’s Exact Test for 2014 prospective cohort, N=25.

<table>
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<th>Independent t-test</th>
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<td>N</td>
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<td>Mean</td>
<td>1.3826</td>
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<tr>
<td>Std Dev</td>
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</tr>
<tr>
<td>Minimum</td>
<td>-10.5000</td>
</tr>
<tr>
<td>Maximum</td>
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</tr>
<tr>
<td>DF</td>
<td>1.4804</td>
</tr>
<tr>
<td>t Value</td>
<td>-0.1031</td>
</tr>
<tr>
<td>p Value</td>
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<td>95% CI Lower</td>
<td>-0.8930</td>
</tr>
<tr>
<td>95% CI Upper</td>
<td>3.6583</td>
</tr>
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</table>

Figure 13. Independent t-test of weight loss in cases vs. controls in 2014 prospective cohort, N=25.

![Dump The Plump 2010-2015](image)

Figure 14. Number of participants in DTP from years 2010-2015.
Figure 15. Final count of DTP participants who consented to the 2010-2015 longitudinal study, N=45.

<table>
<thead>
<tr>
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<th>After</th>
</tr>
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<tbody>
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</tr>
<tr>
<td>Mean</td>
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</tr>
<tr>
<td>Median</td>
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</tr>
<tr>
<td>Skewness</td>
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<td>1.0554</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>1.1511</td>
<td>1.2133</td>
</tr>
<tr>
<td>DF</td>
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<td></td>
</tr>
<tr>
<td>t Value</td>
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</tr>
<tr>
<td>p Value</td>
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<td></td>
</tr>
<tr>
<td>95% CI Lower</td>
<td>1.7725</td>
<td></td>
</tr>
<tr>
<td>95% CI Upper</td>
<td>4.451</td>
<td></td>
</tr>
</tbody>
</table>

Figure 16. Descriptive statistics and paired t-test of before and after weight of 2010-2015 longitudinal study subjects, N=45 with 119 paired observations.
Figure 17. Distribution of difference of before and after weight of 2010-2015 longitudinal study subjects, N=45.

Figure 18. Box plot of before and after weight of the 2010-2015 longitudinal study subjects, N=45. The number 1 indicates the before weight and number 2 indicates the after weight.
Figure 19. Scatter plot of before and after weight of the 2010-2015 longitudinal study subjects, N=45. Mean circle falling below line indicates weight loss in study subjects.
Figure 20. Q-Q plot of difference in before and after weight of the 2010-2015 longitudinal study subjects, N=45. Circles beyond the line indicate non-normal distribution.

Figure 21. Box plot of weight loss based on gender of the 2010-2015 longitudinal study subjects, N=45.
Figure 22. Plot of weight loss based on season of the 2010-2015 longitudinal study subjects, N=45.

Figure 23. Box plot of weight loss based on DTP Status of the 2010-2015 longitudinal study subjects, N=45.
Model 1. Linear model of weight loss is a function of gender and DTP status (four plots).

Figure 24. Model 1: Linear model of weight loss as a function of gender and DTP status. Plots indicate non-normal distribution of dataset.
<table>
<thead>
<tr>
<th></th>
<th>Estimate</th>
<th>Std. Error</th>
<th>t value</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
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<td>1.515</td>
<td>0.269</td>
<td>0.788</td>
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<tr>
<td>Male Gender</td>
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<td>1.438</td>
<td>1.862</td>
<td>0.062</td>
</tr>
<tr>
<td>Player Status</td>
<td>2.420</td>
<td>1.624</td>
<td>1.490</td>
<td>0.139</td>
</tr>
</tbody>
</table>

Figure 25. Model 1: Linear model to determine if weight loss was associated with gender or DTP status.

Model 2 Linear mixed-effect model. Fixed effect of weight loss as a function of gender and DTP status with the random effect of subject ID (two plots).

Figure 26. Model 2: Linear mixed-effect model. Fixed effect of weight loss as a function of gender and DTP status with the random effect of subject ID.
<table>
<thead>
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<th>Estimate</th>
<th>Std. Error</th>
<th>t value</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
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<td>1.284</td>
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<td>Player Status</td>
<td>2.078</td>
<td>1.784</td>
<td>1.165</td>
<td>0.248</td>
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</table>

**Figure 27.** Model 2: Linear mixed-effect model to determine if weight loss was associated with gender or DTP status (fixed effect) when coupled with subject id (random effect).

<table>
<thead>
<tr>
<th></th>
<th>Before</th>
<th>After</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
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<td>Variance</td>
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<td>1.2133</td>
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<tr>
<td>DF</td>
<td>118</td>
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</tr>
<tr>
<td>t Value</td>
<td>4.6</td>
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<tr>
<td>p Value</td>
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<td></td>
</tr>
<tr>
<td>95% CI Upper</td>
<td>4.451</td>
<td></td>
</tr>
</tbody>
</table>

**Figure 28.** Dependent paired $t$-test of the 2010-2015 longitudinal study subjects, $N=45$. 
Figure 29. Histogram of the before weight.
Figure 30. Histogram of the after weight.
DISCUSSION

Previous worksite wellness studies among Native Hawaiians indicated that they were open to worksite wellness programs that focused on weight loss, healthy eating, and physical activity [46]. The systematic review indicated that incentives, a multi-component strategy, and focus on multiple behaviors rather than on physical activity only will increase participation rates [38]. Dump The Plump was conceptualized to encompass these components as well as other components that proved successful in previous studies, i.e. incentives, newsletters, well-being assessments.

The aggregate report from the HMSA/Healthways biometrics screening and well-being assessment was a metric used to determine if the staff at SLD had improved health status. However, it was difficult to determine if DTP participants’ health status improved as the aggregated data from the HMSA/Healthways biometrics screening and WBA included other SLD employees not participating in DTP. Since participants dropped in and out of the DTP program, the data in the aggregated report did not capture information from the same individuals each year. Albeit, it still provided a snapshot of the SLD employee population in time. Unfortunately, the aggregate report was only provided when the requisite number of employees with HMSA insurance coverage (N=30) participated in the biometrics screening and completed their WBA (in years 2009, 2010, 2011, and 2013). Participating employees despite insurance coverage still received a yearly health report card that could be used to increase their self-awareness of their current health status (Appendix G). In 2013, reporting of health information shifted to focus on the six domains of Well-being: Life Evaluation, Emotional Health, Physical Health, Healthy Behavior, Work Environment and Basic Assess. The 2013 SLD data is listed side by side to National data, all well-being domains were less than the nation. This is surprising
in that Hawaii was ranked 1st or 2nd in the top quintile for the Nation on all six domains except Basic Access in which Hawaii was ranked 14th (HMSA data, not shown).

Some of the drawbacks encountered during the DTP intervention were participant drop off or loss to follow-up, as with 2014 prospective cohort, eight subjects (24%) were lost. Five cases (62.5%) and three controls (37.5%). All of the five cases were Players, three of which were female (60%) and two were male (40%). Of the three controls, one was female (33.3%) and two were male (66.7%). During the 2010-2015 longitudinal study, ten subjects (18%) were lost to follow-up. Three of the subjects were female (30%) and seven were male (70%). If participants gained weight during the intervention, they may have opted not to weigh out for personal reasons.

Evaluation responses (Appendix M) turned in by 2015 DTP participants cited that conflicts in work schedules (50%), illness and injuries (21%) and unmotivated and uninterested (14%) in activities provided, prevented them from joining DTP activities. They have also cited that pursuing a healthier lifestyle (44%), losing weight (13%), getting motivated and Precy (10%) motivated them to join DTP. The evaluation responses from the DTP participants provided insight and helped evolve DTP into its current working model (Appendix X). Unfortunately evaluations only date back to 2013, when DTP was realized into a master’s project.

The facilities at the SLD may be non-existent at other worksites, namely an onsite exercise room, personal lockers, and showers. SLD employees with their science-based backgrounds may yield higher participation rates than other worksites due to their intrinsic need of evidence based life-style interventions [29]. It is suggested that it might be hard to account for the bias introduced by the likelihood that participants in voluntary wellness programs are more motivated and healthier to begin with than their nonparticipant coworkers [47].
As expected there were more women participating in the intervention than men, as cited in other studies [28, 35]. What was not expected was that the percent weight loss in men was greater than the percent weight loss than the women, despite their lower participation rate.

**Limitations and Strengths**

SLD employees might not be a representative sample of the larger population in Hawaii. Therefore results from this study might not be replicated in the larger Hawaii population. As other studies indicated a “one-size-fits-all” approach when planning a worksite wellness program is not going to meet the needs of all employees or employers [48-52]. SLD employees and their attitudes towards DTP may not be duplicated in other worksites [15].

The data did not reach statistical significance with the linear models investigated. It is possible that the small number of DTP participants in the 2014 prospective cohort (N=25) and the 2010-2015 longitudinal study (N=45) could have been a factor. It is possible that weight loss in DTP participants does not have a linear relationship to their gender, study status, or DTP status. However, with the paired t-test the 2010-2015 longitudinal study statistical significance was reached. There was significant weight loss during the 5 year study.

Addition of the Maui Laboratorians to the DTP program in 2015 did show weight loss, but not without its fair share of logistical problems due to distance from SLD. HMSA classes were not easily disseminated through Skype and Biometrics Screenings were not afforded to them due to their low sample number (N=3), one log lower than the requisite number (N=30) for an onsite screening.

Without an annual bake sale coordinated by a DTP crew member (Appendix W), funds would not be generated to purchase the Awards Ceremony incentives. This is a pitfall that could be avoided if more sustainable resources could be secured.
Having a Health Champion [53] and wellness crew [54] at the worksite, or having a worksite wellness program in place that is supported by the Administration, or having HMSA/Healthways educators and program managers providing expertise, may have provided the necessary stimulus for the weight loss of SLD employees.

A multi-faceted component may have secured successful weight loss at SLD and the Maui Lab. It may be worth investigating if the DTP model would work at other state departments, or elucidate the detrimental effects of the removal of DTP at SLD.

Conclusions

Weight loss was observed in SLD employees who participated in the DTP worksite wellness program. The didactic design of education coupled with exercise, provided opportunities for DTP participants to find motivation and camaraderie among themselves ensuring the success of DTP as a worksite wellness program.
REFERENCES


No state had a prevalence of obesity less than 20%.

In 6 states (California, Colorado, Hawaii, Massachusetts, Montana, and Utah) and the District of Columbia, obesity ranged from 20% to less than 25%.

19 states and Puerto Rico had a prevalence of obesity between 25% and less than 30%.

Obesity prevalence in 21 states and Guam was 30% to less than 35%.

Four states (Alabama, Louisiana, Mississippi, and West Virginia) had an obesity prevalence of 35% or greater.

The South had the highest prevalence of obesity (31.2%), followed by the Midwest (30.7%), the Northeast (26.4%), and the West (25.2%).
Appendix B. HMSA Educational Classes.

<table>
<thead>
<tr>
<th>Disease Awareness</th>
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</thead>
<tbody>
<tr>
<td>Hypertension Explained</td>
</tr>
<tr>
<td>Heart Disease or Heart at Ease</td>
</tr>
<tr>
<td>Men’s Health</td>
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<tr>
<td>Diabetes 101-Understanding Diabetes</td>
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<tr>
<td>What the HECK is Cholesterol</td>
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<tr>
<td>Women’s Health</td>
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<tr>
<td>General Health</td>
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<tr>
<td>Digestive Health-Your Ally in Well Being</td>
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<td>Germ Busters-Relief from the Common Cold &amp; Flu</td>
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<tr>
<td>RE/THINK...a practical introduction to positive psychology</td>
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<td>Sweet Dreams: the Benefits of Sleep</td>
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<tr>
<td>Healthy Aging</td>
</tr>
<tr>
<td>Brain Fitness</td>
</tr>
<tr>
<td>Successful Aging Begins with You</td>
</tr>
<tr>
<td>Injury Prevention &amp; Safety</td>
</tr>
<tr>
<td>Back to Basics</td>
</tr>
<tr>
<td>Balanced Life</td>
</tr>
<tr>
<td>Workstation Wellness</td>
</tr>
<tr>
<td>Nutrition</td>
</tr>
<tr>
<td>Eating on the Run</td>
</tr>
<tr>
<td>Healthy Eating Island Style</td>
</tr>
<tr>
<td>Meatless Alternatives</td>
</tr>
<tr>
<td>Supermarketing</td>
</tr>
<tr>
<td>Season’s Eatings (Offered only in November and December)</td>
</tr>
<tr>
<td>Physical Activity &amp; Exercise</td>
</tr>
<tr>
<td>Exercise: The Magic Bullet</td>
</tr>
<tr>
<td>Mind your Muscles</td>
</tr>
<tr>
<td>Outdoor Fitness</td>
</tr>
<tr>
<td>Stress Management</td>
</tr>
<tr>
<td>Meditation</td>
</tr>
<tr>
<td>Music and Health</td>
</tr>
<tr>
<td>No Tears Customer Service</td>
</tr>
<tr>
<td>Stress Bucket</td>
</tr>
<tr>
<td>Take a Look at Stress</td>
</tr>
<tr>
<td>Weight Awareness</td>
</tr>
<tr>
<td>Goodbye Diet! Hello Health12!</td>
</tr>
<tr>
<td>What ARE Calories and Why are They Trying to Wreck My Life!</td>
</tr>
<tr>
<td>Youth Wellness</td>
</tr>
<tr>
<td>Family fitness</td>
</tr>
<tr>
<td>Fitness Testing</td>
</tr>
<tr>
<td>Quick Fits (Not a Workshop)</td>
</tr>
</tbody>
</table>
Appendix C. Lunchtime Activities.

1. Backlawn
2. Parking lot
3. **In the woods**
D. Typical schedule of events for the DTP Season.

<table>
<thead>
<tr>
<th>Month</th>
<th>Date</th>
<th>2015 Dump The Plump Planned Events</th>
<th>Location</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>February</td>
<td>2/11/15</td>
<td>Presentation at SLD Staff Meeting with American Diabetes Association (ADA) staff</td>
<td>Auditorium</td>
<td>9am-10am</td>
</tr>
<tr>
<td></td>
<td>2/13/15</td>
<td>Initial Weigh In</td>
<td>Library</td>
<td>12pm-1pm</td>
</tr>
<tr>
<td></td>
<td>2/20/15</td>
<td>Activities: Walking club with Bille at 11:30am / Julian Michael's DVD with Becky at 12pm</td>
<td>Outside / Exercise room</td>
<td>11:30am / 12:00pm</td>
</tr>
<tr>
<td></td>
<td>2/27/15</td>
<td>HMSA Class-Sweet Dreams the Benefits of Sleep-Pete Clines</td>
<td>1st Floor Conference Room</td>
<td>12pm-1pm</td>
</tr>
<tr>
<td>March</td>
<td>3/6/15</td>
<td>HMSA Class-Diabetes 101-Steve McCall</td>
<td>1st Floor Conference Room</td>
<td>12pm-1pm</td>
</tr>
<tr>
<td></td>
<td>3/13/15</td>
<td>Activities: Walking club with Bille at 11:30am / Julian Michael's DVD with Becky at 12pm</td>
<td>Outside / Exercise room</td>
<td>11:30am / 12:00pm</td>
</tr>
<tr>
<td></td>
<td>3/20/15</td>
<td>HMSA Class-Brain Fitness-Steve McCall</td>
<td>1st Floor Conference Room</td>
<td>12pm-1pm</td>
</tr>
<tr>
<td></td>
<td>3/21/15</td>
<td>ADA Step Out: Walk to Stop Diabetes - Co-Captains Billie Ann Carroll-Kikala / Tanya Viernes</td>
<td>Kapiolani Park</td>
<td>7:00am</td>
</tr>
<tr>
<td>April</td>
<td>4/2/15</td>
<td>HMSA Class-Goodbye Diet! Hello Health! 2!-Steve McCall</td>
<td>1st Floor Conference Room</td>
<td>12pm-1pm</td>
</tr>
<tr>
<td></td>
<td>4/10/15</td>
<td>Activities: Walking club with Bille at 11:30am / Julian Michael's DVD with Becky at 12pm</td>
<td>Outside / Exercise room</td>
<td>11:30am / 12:00pm</td>
</tr>
<tr>
<td></td>
<td>4/16/15</td>
<td>Activity: Cardio Kickboxing / Muay Thai with Darnell</td>
<td>Exercise room</td>
<td>12pm-1pm</td>
</tr>
<tr>
<td></td>
<td>4/17/15</td>
<td>Activity: Walking club with Billie</td>
<td>Outside</td>
<td>11:30am</td>
</tr>
<tr>
<td></td>
<td>4/24/15</td>
<td>HMSA Class-Stress Bucket-Pete Clines</td>
<td>1st Floor Conference Room</td>
<td>12pm-1pm</td>
</tr>
<tr>
<td>May</td>
<td>5/1/15</td>
<td>Activities: Walking club with Bille at 11:30am / Random activity with Kris at 12pm</td>
<td>Outside</td>
<td>11:30am / 12:00pm</td>
</tr>
<tr>
<td></td>
<td>5/8/15</td>
<td>HMSA Class-Womens Health-Pete Clines</td>
<td>1st Floor Conference Room</td>
<td>12pm-1pm</td>
</tr>
<tr>
<td></td>
<td>5/15/15</td>
<td>Activities: Walking club with Bille at 11:30am / Random activity with Kris at 12pm</td>
<td>Outside</td>
<td>11:30am / 12:00pm</td>
</tr>
<tr>
<td></td>
<td>5/22/15</td>
<td>HMSA Class-Exercise the Magic bullet-Pete Clines</td>
<td>1st Floor Conference Room</td>
<td>12pm-1pm</td>
</tr>
<tr>
<td></td>
<td>5/29/15</td>
<td>Activities: Walking club with Bille at 11:30am / Random activity with Kris at 12pm</td>
<td>Outside</td>
<td>11:30am / 12:00pm</td>
</tr>
<tr>
<td>June</td>
<td>6/5/15</td>
<td>HMSA Class-Successful aging begins with you-Steve McCall</td>
<td>1st Floor Conference Room</td>
<td>12pm-1pm</td>
</tr>
<tr>
<td></td>
<td>6/19/15</td>
<td>HMSA Class-Take a look at Stress-Steve McCall</td>
<td>1st Floor Conference Room</td>
<td>12pm-1pm</td>
</tr>
<tr>
<td></td>
<td>6/25/15</td>
<td>Activity: Cardio Kickboxing / Muay Thai with Darnell</td>
<td>Exercise room</td>
<td>12pm-1pm</td>
</tr>
<tr>
<td></td>
<td>6/26/15</td>
<td>Activity: Walking club with Billie</td>
<td>Outside</td>
<td>11:30am</td>
</tr>
<tr>
<td>July</td>
<td>7/2/15</td>
<td>HMSA Class-Eating on the run-Pete Clines</td>
<td>1st Floor Conference Room</td>
<td>12pm-1pm</td>
</tr>
<tr>
<td></td>
<td>7/10/15</td>
<td>HMSA Class-Back to basics-Pete Clines</td>
<td>1st Floor Conference Room</td>
<td>12pm-1pm</td>
</tr>
<tr>
<td></td>
<td>7/16/15</td>
<td>Activity: Cardio Kickboxing / Muay Thai with Darnell</td>
<td>Exercise room</td>
<td>12pm-1pm</td>
</tr>
<tr>
<td></td>
<td>7/17/15</td>
<td>Activity: Walking club with Billie</td>
<td>Outside</td>
<td>11:30am</td>
</tr>
<tr>
<td></td>
<td>7/24/15</td>
<td>HMSA Class-Digestive health-your ally-Steve McCall</td>
<td>1st Floor Conference Room</td>
<td>12pm-1pm</td>
</tr>
<tr>
<td></td>
<td>7/31/15</td>
<td>Activities: Walking club with Bille at 11:30am / Random activity with Kris at 12pm</td>
<td>Outside</td>
<td>11:30am / 12:00pm</td>
</tr>
<tr>
<td>August</td>
<td>8/7/15</td>
<td>Quick Fits-Pete Clines and Brian Fowler</td>
<td>1st Floor Conference Room</td>
<td>Varies</td>
</tr>
<tr>
<td></td>
<td>8/8/15</td>
<td>American Heart Association 2015 Oahu Heart Walk- MMB lead with Team leader Billie Ann Carroll-Kikala</td>
<td>Kapiolani Park</td>
<td>7:00am</td>
</tr>
<tr>
<td></td>
<td>8/12/15</td>
<td>HMSA Biometrics Screening</td>
<td>1st Floor Conference Room</td>
<td>Varies</td>
</tr>
<tr>
<td></td>
<td>8/14/15</td>
<td>Final Weigh In</td>
<td>Library</td>
<td>12pm-1pm</td>
</tr>
<tr>
<td></td>
<td>8/17/15</td>
<td>Dump The Plump Bake Sale-Elsie Chun</td>
<td>Lobby</td>
<td>9am-10am</td>
</tr>
<tr>
<td>September</td>
<td>9/8/15</td>
<td>Awards Ceremony at SLD Staff Meeting</td>
<td>Auditorium</td>
<td>9am-10am</td>
</tr>
</tbody>
</table>
Appendix E. Facilities at SLD.

Exercise room

![Exercise room images]
Appendix F. HMSA Quick Fits.

Strength  Flexibility  Balance

2015 Quick Fits Champions (Women’s and Men’s Tied for first place)
Appendix G. HMSA Biometrics Screening and Well-Being Assessment.

### HMSA Well-being Assessment

#### Aggregated Data, 2009-2011

Ave Lifestyle Score and Average Age are numbers. BMI, Blood pressure, Total Cholesterol and Glucose (Non-fasting) are in percent of staff falling within guidelines listed below.

<table>
<thead>
<tr>
<th>BMI (kg/m²)</th>
<th>Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;18.5</td>
<td>Underweight</td>
</tr>
<tr>
<td>18.5 -24.9</td>
<td>Good</td>
</tr>
<tr>
<td>25.0-29.9</td>
<td>Overweight</td>
</tr>
<tr>
<td>30.0+</td>
<td>Obese</td>
</tr>
</tbody>
</table>

Blood Pressure: Less than 120/80 mm/Hg  
Total Cholesterol: Less than 200mg/dL  
Glucose (Non-Fasting): Less than or equal to 5.6

<table>
<thead>
<tr>
<th>Six Well-Being Domains</th>
<th>SLD 2013</th>
<th>Nation 2013</th>
<th>What is measured</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life Evaluation</td>
<td>46.7</td>
<td>55.5</td>
<td>Perceived standard of living today and in the future</td>
</tr>
<tr>
<td>Emotional Health</td>
<td>75.7</td>
<td>79.8</td>
<td>Array of emotions and coping skills</td>
</tr>
<tr>
<td>Physical Health</td>
<td>77</td>
<td>79.3</td>
<td>How individuals are managing their health</td>
</tr>
<tr>
<td>Healthy Behavior</td>
<td>50.8</td>
<td>62</td>
<td>Healthy lifestyle practices</td>
</tr>
<tr>
<td>Work Environment</td>
<td>30</td>
<td>47.3</td>
<td>How people feel about their work culture/environment</td>
</tr>
<tr>
<td>Basic Access</td>
<td>82.8</td>
<td>83.6</td>
<td>Access to basic needs such as healthcare, healthy food, exercise, and personal safety</td>
</tr>
</tbody>
</table>
Appendix H. American Diabetes Association Step Out: Walk to Stop Diabetes.

<table>
<thead>
<tr>
<th>N</th>
<th>Date</th>
<th>Team Captains</th>
<th>N=SLD Walkers</th>
<th>N=Family and Friends</th>
<th>Amount raised</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3/16/13</td>
<td>Dr. Alejandro Preciado</td>
<td>12</td>
<td>11</td>
<td>$ 2,907.00</td>
</tr>
<tr>
<td>2</td>
<td>3/15/14</td>
<td>Billie Ann Carroll-Kikala/ Tanya Viernes</td>
<td>5</td>
<td>4</td>
<td>$ 1,659.00</td>
</tr>
<tr>
<td>3</td>
<td>3/21/15</td>
<td>Billie Ann Carroll-Kikala/ Tanya Viernes</td>
<td>12</td>
<td>11</td>
<td>$ 2,614.00</td>
</tr>
</tbody>
</table>
Appendix I. American Heart Association Oahu Heart Walk.

<table>
<thead>
<tr>
<th>N</th>
<th>Date</th>
<th>Section</th>
<th>Team Captain</th>
<th>N=SLD Walkers</th>
<th>N=Family and Friends</th>
<th>Amount raised</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8/8/15</td>
<td>MMB</td>
<td>Billie Ann Carroll-Kikala</td>
<td>9</td>
<td>5</td>
<td>$1,345.00</td>
</tr>
</tbody>
</table>
Appendix J. Adventurer’s Club.

<table>
<thead>
<tr>
<th>N</th>
<th>Date</th>
<th>Team Captains</th>
<th>N=SLD Hikers</th>
<th>N=Family and Friends</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>7/4/13</td>
<td>Roland &quot;Kwai&quot; Lee</td>
<td>6</td>
<td>2</td>
<td>Wa'ahila Ridge Trail-Mt. Olympus</td>
</tr>
<tr>
<td>2</td>
<td>2/7/15</td>
<td>Roland &quot;Kwai&quot; Lee</td>
<td>6</td>
<td>2</td>
<td>Kaniakapupu</td>
</tr>
</tbody>
</table>
Appendix K. DTP Article in monthly SLD newsletter.

SLD Newsletters

Division Staff Meeting
There will be no Division meeting in October. The next Division meeting will be on Wednesday, November 12, 2014 at 8:00 A.M. in the Auditorium.

SLD Staff Meeting
- EHA Conference: 1
- Dumping the Plump! Awards: 2
- Cardio Group: 3
- Techie Tips: 1
- The Facility Matters: 5
- Recycling Opportunities: 3
- SLD Office Calendar: 4

2014 EHA Educational Conference
The EHA will participate in the first-ever Environmental Health Administration (EHA) Educational Conference, uniting all the divisions and programs under EHA. The Division EHA staff meeting will be held October 14-15, 2014 at the Aloha Towers Hotel, Waikiki, in Honolulu and will feature a broad spectrum of informative presentations and many interesting topics, such as "Tongue-Fry"...Developing Practical and Effective Communication Skills presented by Green Tiger. The SLD team will present on "Tongue-Fry-By"...Dropping the Plump! Workforce Wellness Program presented by Green Tiger. The SLD team will present on "Tongue-Fry-By"...Dropping the Plump! Workforce Wellness Program presented by Green Tiger.

Screening of Foods and Human Biomonitoring of Metals in Support of Healthy People 2020
- Orlando Blanco-Ramirez, Jerry Phipps, and SLD "Drops the Plump! Workforce Wellness Program" (P receives). This is a unique opportunity, already tested and coordinated by Lynn Nascimento and the Environmental Health Services Division of the EHA program to get to know each other and what they do.

"Dump the Plump" Awards
By Peggy Colman
Congratulations to our 2014 Dump the Plump Winners: First Place - Mary Nogura and Teresa Osburn; second place - Dr. Paul Fox and Maya Wong; and the 2014 DTP Champions: Darrin Garrett and Becky Kamakakehau! Great job to everyone who participated in the 2014 DTP season! You deserve recognition for your proactive efforts pursuing a healthier lifestyle. We hope that you've met your weight loss goals and if not, don't fret! Just ask us our winners, they all put a lot of effort into losing weight and they are keeping the weight off! So, keep it up, not to mention the DTP incentive!

SLD Newsletters
Vol. 2014 Issue 10
October 2014

This is the SLD Newsletter, the newsletter of the State Laboratories Division and its personnel

Techie Tips

By Teresa Colbro

IT Resources Policy
Just a friendly reminder. This use of the State's Information Technology (IT) resource by its employees is a privilege and shall be used for furthering State business and is subject to the citizens of Hawaii's "...as stated in the intra-Departmental Directive 92-2 dated June 20, 2014 on Acceptable Use of Information Technology (IT) Resources Policy. Here's the link to the policy:


How to Take a Screenshot with Windows 7
They say a picture is worth a thousand words. When it comes to your computer, this is doubly true. There are times when it's simply easier to show someone what you're seeing on your screen than to attempt to describe it. Whether you're giving instructions, asking for assistance, putting together a presentation or something else altogether, a screenshot can make the entire process simpler and more effective. Capturing your screen — and then pasting it in a document, sending it, emailing it or saving it as a PDF is quick and easy to do.

To take a screenshot of the entire screen, simply press the Print Screen button. To capture an active window, press Alt + Print Screen. In order to make a new button, before you use your computer, email, print or edit your screen capture, you'll need to save it into Microsoft Word, Outlook, Paint or a similar image editing program.

IT Support
Need technical assistance? Please use the IT Request System to request help with computers, printers, scanners, etc. The IT Request System will send you a confirmation e-mail when a request is submitted. All IT staff will receive your request via e-mail and will respond to your request as soon as possible.

Here's the link to our IT Request System:


The Facility Matters
By Stephen Scharbach

Facility Inspections will be returning to the lab on July 17th to follow up on our last inspection which was on March 27th. Hood and BSC contamination have been completed. Several pieces of equipment did not pass. So, before you use a lab hood or BSC, please verify that there is a certification sticker dated June...
Appendix L. Calculation for Percent weight loss.

**Winner = Most Plump Dumped***

*Based on percentage of weight lost

Example if you weigh 150 pounds and now you weigh 120 pounds.

You lost 30 pounds!

Take 150-120=30 then 30/150=0.20 0.20x100=20%

You had a total weight loss of 20%
Appendix M. DTP Program Evaluation Form and responses.

2015 Dump the Plump (DTP) Evaluation.

Please fill out and return to receive your incentive.

What made you join DTP?

If you participated in the activities, which were your favorites?

What prevented you from joining in the activities?

Should the HMSA classes be discontinued? Y / N Why?

What did you like about DTP?

What did you NOT like about DTP?

Should the walking trails be discontinued? Y / N Why?

Would you pay for an instructor for group exercise? Y / N

If we purchased or got a donated treadmill, would you use it? Y / N

Do you participate in Dr. Whelen’s 50 mile challenge?

If NO, how can we get you to join?

Should DTP be discontinued? Y / N Why?
If DTP had your section compete against the other sections in SLD, would you be willing to participate? Y / N Why?

Would your section participate for a $1000.00 cash prize?

Any suggestions for improvement?

Any last thoughts?
2015 Evaluation Responses: 33/41 (80.5% response rate)

Q1 What made you join DTP?
A1  Precy's enthusiasm. Statistics. Camaraderie. Awareness to be in good shape
Incentives. Needed to focus on getting more fit. Maintain a healthy lifestyle.
Precy's enthusiastic encouragement. Support healthy lifestyle.
Health and fitness. Past presentation. Health. Wanted to lose a few pounds.
Lose weight. Gave me some incentive to lose/maintain my weight.
To participate in an SLD activity and support DTP because I think it is a good program.
Get healthier. To get motivated. Co-workers. To get encouragement to lose weight
be healthier. I like its programs. What's not to like? It's great! Idea of losing weight.
To lose weight and that administration supports and encourages a healthy lifestyle
in the workplace. Excited to be involved with a department supported at work
wellness program! Thought program would help motivate me to be more active
and healthful. To get fit and change everything in my life. To keep fit. Self-interest.
Precy told me to. Giving support to those who wants active lifestyle.

What made you join DTP?

- Healthy lifestyle: 44%
- Lose weight: 13%
- Precy: 10%
- Motivation: 10%
- Fun and camaraderie: 7%
- Incentives: 3%
- Presentation: 3%
- Statistics: 3%
- Good program: 7%
Q2 If you participated in the activities, which were your favorites?
A2 Quick Fits. Only went to boxing class couple of times.
Kickball. Walking bake sale camaraderie HMSA talks/classes. Unable to attend.
NA. Did not participate. Bake sale (jk). The classes. Friday talks/classes.
Yoga and wellness class (Maui). Unable to participate due to distance.
Wellness classes by Kris Mills yoga dance classes. Kickball was fun. Quidditch.
Walking. Boxing. Walking with the ladies. I missed most of them.
Quidditch was ok but the rules need to be refined a bit. HMSA classes
Q3 What prevented you from joining in the activities?
A3

Q4 Should the HMSA classes be discontinued? Y/N Why?

A4

No 22

Very informative. Good information for free. They are very informative. Always good to be reminded of good health practices. Good Education. Not discontinued, just fine tuned & new subjects added. Really help. Low attendance. People pass on info if they attended. I learned a lot from attending. I think people benefit from them. I really like all the classes. Most of the classes were repeated. When I can make them, I always learn something new. HMSA classes has been very educational. Informative and gave us guidelines on healthy living.

Yes 6

If there’s enough interest /attendance. They’re repeating. Did not attend any. The classes are low in attendance. The reception is bad and we can hardly understand. We didn't have good Skype connections but all topics were great. We’d like it better if slides were sent to us before session. If not its difficult for us to follow along.

Neutral 2

Maybe 1

Maybe an every other year type of thing many of the classes were repeats
What did you like about DTP?

Encouragement. Encourages exercise. Camaraderie. Remind me that everyone else is also aware of this issue. Activities-Quidditch. The camaraderie and the fun. Activities, Classes and Activities, Group activities. Everything-Precy's the Best! Incentives. Easy to participate. Incentives. The plants. Information. Biometric Screening. Many activities were offered. I think it got a lot of people enjoyed it-good job! Morale booster. Reason to try to lose weight. Its programs and activities. It breaks the monotony of work. Coming together as a department!! Maui came together at the Wailuku health center: HIV, PHN's and mental health. Thank you for the opportunity to join SLD. Everything. Playing outside. Trying to get everybody in good health. I enjoyed the camaraderie. Forces me to think about health. Activities. Seeing everybody cutting down on calorie intake.

![Pie chart showing the reasons for liking DTP]

- Motivation/Encouragement: 16%
- Fun and camaraderie: 16%
- Motivation/Encouragement: 16%
- Incentives: 8%
- Everything: 11%
- Healthier lifestyle: 11%
- Physical activities: 22%
- Biometrics Screening: 3%
- HMSA classes: 5%
- Lose weight: 3%
Q6: What did you NOT like about DTP?
A6: Preaching to the choir. Nothing. Sometimes the time slots were hard for me but that’s ok. The last weigh in. Outdoor was hot. Nothing. Not sure. No exercise classes I was interested in joining. None. Nothing. No comment. Nothing. The pressure of competition. Frustrating to not have access to the on-site activities was really sad to miss Quidditch and Kick ball. Skype was hard to hear and see slides. Wish there was a monthly check to motivate us. Nothing. Not really DTPs fault, but just didn't have the time. Nothing, everything is good. I wished more people participated. Not eating at the end. My incentive for Joining was the $5 that I gave to join in the first place.

What did you NOT like about DTP?

- Nothing: 40%
- Weigh-in: 5%
- Distance: 10%
- Competition: 10%
- Incentive: 5%
- Low participation: 5%
- Time constraints: 10%
- Weather: 5%
- Not interested: 5%
Q7 Should the walking trails be discontinued? Y/N Why?
A7 No 19 I think those trails should be continued and move/better walkable. It was fun. If there’s enough interest/attendance. Good land stewardship. Good activity. I like the trails but the pigs prevent me from using them fully. I think people like it. People seem to enjoy it. It’s good. Cause we worked our butts off to make it. Walking is great way of exercising.
Yes 4 Too hot. Trails are nice but upkeep may not be worth it. I don’t use the trails. On the fence tough to maintain. Mosquitoes. Hot/humid. It’s the same trails and it’s very wet. Don’t feel like it’s a workout. Haven’t used them much It seems most people just walk in the parking lot
Neutral 1 Don’t know
Q8 Would you pay for an instructor for group exercise?
A8

No  18  Probably not
Yes  8  Yoga please. $25/month. We had the luck of local in house expertise for yoga. Wellness classes and dance movement. If cost was reasonable. This didn't work well in the past (aerobics). That would be nice to be able to exercise during our lunch hour or right after work.
Maybe  3  Depending on exercise. Depends.

Would you pay for an instructor for group exercise?

- No: 62%
- Yes: 28%
- Maybe: 10%
Q9  If we purchased or got a donated treadmill, would you use it?

A9  

No  13  Have one at home.

Yes  9  Definitely. That will be very good. I'm doing treadmill at home so it would be really convenient to use it during my lunch hour. The only problem we may face is everybody will be fighting for this machine at the same time.

Maybe  7  If not crowded. Unlikely. In theory maybe.
Q10  Do you participate in Dr. Whelen's 50 mile challenge? If NO, how can we get you to join.
A10  No  12  Too much work. Too busy in personal life. I will try. No ice cream.
      Yes 16  Sometimes. I just started. I did in the past. I did but didn't document my efforts. When I remember.
Comments  Give us 1 min off work / per

Do you participate in Dr. Whelen's 50 mile challenge?

- Yes 57%
- No 43%
Q11  Should DTP be discontinued? Y/N Why?
A11  No 29  Adjustments can be made. It is a healthy program that everyone should participate in. It’s a good motivator to exercise. I like it. Because it doesn’t hurt and is helpful to some people. Ever since DTP program launched, I noticed how we all started to eat healthier and this change is good for all of us.

Should DTP be discontinued?

No
100%
If DTP had your section compete against the other sections in SLD, would you be willing to participate? Y/N Why?

A12
Yes 14  Depends on prize. It'll be fun. Nothing like a good competition. Sure. I would. It would be fun. It's more fun competing as a group. Fun competition. Trying to help other get in good health.
No 11  My participation is sporadic. I normally do the workout at home. I really don't like competitions. Sections aren't evenly balanced. Don't like competitions. Because I'm not all that into those kind of competitions.
Maybe 3  If it was done in a way to keep things interesting rather than cut throat
Q13  Would your section participate for a $1000.00 cash prize?
A13  Yes  16   Definitely. Oh yeah. I would-I'm not sure if coworkers would. I think so.
       No   5    Probably not unless for charity. I think probably not.
       Maybe 1
Comments  I don't know my section is small. Gambling.
           This sounds cut throat see above. I would sell my mother for $1000.00
           As mentioned before I'm not really into competitions like that

Q14  Any suggestions for improvement?
       Set aside basement conference room for larger exercise groups 10-30.
       More weekend activities. More exercise options.
       More advance notice for some of the activities-some were 1 day notice.
       Walking after office hours. Maui to have access to the blood work testing and wellness score.
       Send us HMSA handouts before the session so we can follow along.
       Keep up the good work Precy.
Q15. Any last thoughts?
A15. Meditation. Mahalo. Awesome job running this program. Maybe some low impact exercises for us old folks. Personal trainers. Thank you Precy for all your hard work. Bad time to start dieting bad excuse. Thank you so much to Precy for spearheading this project and to Dr. Whelen for supporting it. I truly believe that "health is your greatest wealth" not fame nor money. Well-being is priceless. Maybe we could have done the "Fit" testing with guided instructions. Thank you! Wish you could have HMSA do our assessment. Oakland will win the Super Bowl. Hope DTP stays on. Thank you Precy!! Pizza. Thanks Precy for coming up with DTP program.

2014 Evaluation Responses: 27/35 (77.1% response rate)

Q1. What made you join DTP?
Q2 If you participated in the activities, which were your favorites?
Q3  What prevented you from joining in the activities?

![Pie chart showing reasons for not joining in activities](chart.png)

Q4  If you attended the HMSA classes, which did you like the least?
A4  All good. I liked all! Mind your muscle. I only attended the ones I was interested in. None None. I did not attend any classes. Hmmm, they were all good. NA. All were very informative. None. The one I attended was good-Workstation ergo. They were all good. Meditation. NA.
Q5 What prevented you from joining the HMSA classes?

<table>
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<td>Nothing</td>
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<tr>
<td>Forgot</td>
<td>5%</td>
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<tr>
<td>Unmotivated / Uninterested</td>
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What prevented you from joining the HMSA classes?
Q6  What did you like about DTP?

![What did you like about DTP?](chart.png)
Q7 What did you NOT like about DTP?
No comment. The activities. That it ends. NA. None. None. Nothing really was all good.
Nothing. All good. NA.

Q8 Have you used the walking trails? If NO, what prevented you from using the trails?
A8 Yes 13 Once, will go back when grounds are not muddy.
No 15 No time! Just didn't have the chance. I don't know where they are. Time and pigs.
I don't want to walk. Not having the proper attire. Not paved, mosquitoes.
It's hot outside during lunch. Did not have time. But I will check them out one day.
Too long. I usually do my own walking around my house.
Q9 Would you exercise with a group of co-workers during lunch? After work? During the weekend?

A9

<table>
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<th>Weekend</th>
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<tr>
<td>Yes</td>
<td>14 Sometimes.</td>
<td>11 Possibly. Probably after</td>
<td>7</td>
</tr>
<tr>
<td>No</td>
<td>3 eat lunch at</td>
<td>work if I have time &amp; I still</td>
<td>3 Kind of hard with baby.</td>
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<tr>
<td></td>
<td>lunchtime</td>
<td>have the energy.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>No 4 Kind of hard with baby.</td>
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</tr>
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</table>

Comments
Boxing sounds interesting with group of coworkers. Maybe. Yes it's a good idea.
I exercised with paid teacher. Yes. Not sure. If my body will permit
If I don't other competing engagements such as club meetings, etc. I do.

Would you exercise with a group of co-workers during lunch?

- Yes: 82%
- No: 18%

Would you exercise with a group of co-workers after work?

- Yes: 73%
- No: 27%
Q10  Do you participate in Dr. Whelen's 50 mile challenge? If NO, how can we get you to join.
A10  Yes  9  Em, I'll do my best. It
     No  9  I forget to log my activities. I will try, really! I just have to do it. Incentive.
           I will. Encourage people to keep actual mileage. No poke with a sharp stick.
           I don't like to keep track of things. The other year, thinking of doing it again.
           I will join. I'm just lazy to log in my hours.

Q11  If YES, how can we keep you in his challenge?
A11  Incentives. Not much. NA. ? Will continue without any incentive. Incentives
           Incentive awards. Maybe and incentive (coin?). None. Health.
Q12 Any suggestions for improvement?
NA. Tennis and golfing outing. See below.
If we could get a bench to workout with in the exercise room, would be good.
Lectures could be a little bit short (45mins). Get more people out for soccer & other activities.
Encourage it to be a lifestyle rather as a competition.

Q13 Any last thoughts?
A13 Thanks Precy! Good work! Good job! Good job. No. Thanks for organizing this Precy.
42. Good job, keep doing this. Good job! Continue this program.
Need a chicken mascot. Thanks Precy, Kris, Billie-Ann!

2013 Evaluation Responses: 34/40 (85% response rate)
Q1 Did you join DTP? If NO, how can we get you to join?
A1 No 5 Just cheerleading, thinking about it.
Not interested. Will join the next time.
I didn’t realize there were still cheerleaders.

Q2 Did you join DTP? If YES, how can we keep you in the program?
A2 Yes 28 Keep having incentives. Continue. Incentives. Keep having it. Give me money!
Keep it going. Incentives. Keep doing it. Incentives. Just do the same
and work harder, and help people get in the program. Cool incentives.
Will stay with program-some incentive to watch my weight. More incentives.
Incentives, activities, change start/end dates. More soccer. More gifts.
Keep doing what you’re doing. Fun activities. Keep up Incentives.
Something to keep you working towards a goal. More fruit picking/foraging!

Did you join DTP? If YES, how can we keep you in the program?

- Incentives: 45%
- Activities: 18%
- Lose weight: 4%
- Continue with DTP: 23%
- Change program dates: 5%
- Focus on goal: 5%

82
Q3 If you participated in the activities, which were your favorites?
Sports at lunch. Ultimate Frisbee. HMSA classes and Zumba. NA. No didn't.
the sport activities-football, soccer etc. Bake Sale! Didn't. Didn't participate :(.
All of them. Soccer. Competitive team on team activities. Lychee picking.
Quick Fits. Soccer. I haven’t participated only because of lunch schedules.
Soccer (watching it, not playing! :))

If you participated in the activities, which were your favorites?

- **Activities**: 64%
- **Classes**: 13%
- **Bake Sale**: 3%
- **NA/Didn't participate**: 20%

Q4 If you attended the HMSA classes, which did you like the least?
A4 Missed them all. Any taught by Pete. NA. Yes (1). NA. Stress reduction. Liked all the classes.
Liked them all. I liked all the classes. None. Didn't attend :( NA.
All the classes that I attended. Didn’t. I learned from all of them.
NA. No. They were all ok. NA. None. All of them. None.
All of them, Interesting.

Q5 What did you like about DTP?
A5 Working out with co-workers. Activities. Great way to lose weight. Fellowship
We get to play outside. Classes. Meet co-workers, fun, healthy. Lose weight.
You have a room to exercise with people or by yourself, Thanks, Great! Classes.
Group competitions. Did keep me aware my weight-some incentive to watch out.
The plants. The idea of the program. All of it. Reason to get off my butt.
Good opportunities for actives and seminars. HMSA Classes.
:( I like the "cheering"-winners vs. losers. It teaches you and keeps you active.
Q6 What did you not like about DTP?
A6 Not much. None. Nothing. Too short. NA. NA. Outside activities. NA. None. Weighing in. Start and end dates-Start after holidays and end before holidays. The plants died. Limited activities, the start & end dates of the program. None. It was too short. That the award is not based on maintaining a healthy weight. Classes. The Activities are at lunch, I eat lunch at lunch. It was hard cuz of lunch time. I gained weight!! It didn't work.

Q7 Would you exercise with co-workers outside of work?
A7  Yes  21  If time allows. I will exercise with co-workers. If can fit in schedule.
   No   3   Not likely...I'm a loner. Probably not.
  Maybe 9   Depends. Not sure. I used to.

Would you exercise with co-workers outside of work?

- Yes 64%
- No 9%
- Maybe 27%

Q8   Would you use a walking trail if it was on work grounds?
A8   Yes  27  Yes I would like to. Sure.
   No   3   Sweat too much.

Would you use a walking trail if it was on work grounds?

- Yes 79%
- No 9%
- Maybe 12%
Q9  Would you exercise with a group of co-workers during lunch? After work?
A9  Yes  26  Lunch or after work if schedule permits. After work only.
     Only after work. Lunch time. After work maybe during lunch.
No   4   Loner. Not at lunch. Not after work. Don't want to work out during work.
Maybe 3   It depends.

**Would you exercise with a group of co-workers during lunch? After work?**

![Pie chart showing responses to Q9]

Q10  Do you participate in Dr. Whelen's challenge? If NO, how can we get you to join in?
A10  Yes  13  I signed up, but didn't log anything. I forget to log in.
     Incentives, better ways to keep track of progress. Not interested.
     easy to track at first but tends to lose interest after a while.
     Will join this time.
Maybe 1  I would like to participate in Dr. Whelen's challenge.
     What's that? Info would be good.

**Do you participate in Dr. Whelen's challenge? If NO, how can we get you to join in?**

![Pie chart showing responses to Q10]
Q11
A11 Have incentives. Do it again. Add group hikes :) Keep it going.
Will stay involved. Prizes. Offer group events to earn miles.
Make incentives. More gifts. It was easy because it made you want to do it (Motivation).

Do you participated in Dr. Whelen's challenge? If YES, how can we keep you in his challenge?

- Keep doing it 14%
- Incentives 57%
- Group activites 29%

Q12 Any suggestions for improvement?
It would be interesting to have a device that measure fat %.
You are doing a great job. Thank you very much, especially Precy!
Change up activities so more might participate. No suggestions, this is a great
program to be in and feel good about yourself and lose Dump the Plump.
Change start and end dates. No. Start beginning of year-end at the end of year? (or before holidays)
Make the program longer. No. Make it a "lifestyle" rather than a "competition"
More weighing in the process, like 1 time / 1 or 2 months.
Can we plant fruit trees on state property? Or a garden. Are there mango trees here?

Q13 Any last thoughts?
A13 Branch chiefs to give financial support. Cheerleaders could participate for free. None
Drinks do not need to be provided during activities, so money not needed from cheerleaders.
Everyone just bring their own water. .7 to go! Good program. Thanks Precy.
Thanks Precy! Precy is doing a great job! Kudos! Good Job!!
Thank you Precy for all your hard work!! Good job.
Just very interesting/learning how to deal with certain situation regarding food, health, etc.
It was fun!!! Good job Precy and everybody.
Appendix N. CITI Students conducting no more than minimal risk research curriculum completion report.

COLLABORATIVE INSTITUTIONAL TRAINING INITIATIVE (CITI)

STUDENTS CONDUCTING NO MORE THAN MINIMAL RISK RESEARCH CURRICULUM COMPLETION REPORT

Printed on 02/07/2014

LEARNER: Precilia Calimlim (ID: 3941966)
DEPARTMENT: Public Health 808 778-0946
PHONE: University of Hawaii 02/06/2017
INSTITUTION: EXPIRATION DATE:

STUDENTS - CLASS PROJECTS: This course is appropriate for students doing class projects that qualify as "No More Than Minimal Risk" human subjects research.

COURSE/STAGE: Basic Course/1
PASSED ON: 02/07/2014
REFERENCE ID: 12095343

REQUIRED MODULES

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For this Completion Report to be valid, the learner listed above must be affiliated with a CITI Program participating institution or be a paid Independent Learner. Falsified information and unauthorized use of the CITI Program course site is unethical, and may be considered research misconduct by your institution.

Paul Braunschweiger Ph.D.
Professor, University of Miami
Director Office of Research Education
CITI Program Course Coordinator
Appendix O. CITI Health information privacy and security (HIPS) curriculum completion report.

COLLABORATIVE INSTITUTIONAL TRAINING INITIATIVE (CITI)

CITI HEALTH INFORMATION PRIVACY AND SECURITY (HIPS) CURRICULUM COMPLETION REPORT

Printed on 05/13/2014

<table>
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<td>PHONE</td>
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<td>INSTITUTION</td>
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<td>EXPIRATION DATE</td>
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CITI HEALTH INFORMATION PRIVACY AND SECURITY (HIPS) FOR STUDENTS AND INSTRUCTORS: This course for Students and Instructors will satisfy the mandate for basic training in the HIPAA. In addition other modules on keeping your computers, passwords and electronic media safe and secure are included.

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For this Completion Report to be valid, the learner listed above must be affiliated with a CITI Program participating institution or be a paid Independent Learner. Falsified information and unauthorized use of the CITI Program course site is unethical, and may be considered research misconduct by your institution.

Paul Braunschweiger Ph.D. Professor,  
University of Miami  
Director Office of Research Education  
CITI Program Course Coordinator
Appendix P. CHS#22170 “Dump the Plump: A Department of Health Worksite Wellness Program” Human Studies Program approval.

UNIVERSITY
of HAWAI'I'
MANOA

May 22, 2014

TO: Precilia Calimlim
Principal Investigator
Public Health Sciences - Epidemiology
Denise A. Lin-DeShetler, MPH, MA

FROM: Denise A. Lin-DeShetler, MPH, MA
Director

SUBJECT: CHS #22170- "Dump the Plump: A Department of Health Worksite Wellness Program"

This letter is your record of the Human Studies Program approval of this study as exempt.

On May 22, 2014, the University of Hawai‘i (UH) Human Studies Program approved this study as exempt from federal regulations pertaining to the protection of human research participants. The authority for the exemption applicable to your study is documented in the Code of Federal Regulations at 45CFR 46.101(b)(Exempt Category 2).

Exempt studies are subject to the ethical principles articulated in The Belmont Report, found at http://www.hawaii.edu/irb/html/manual/apendices/A/belmont.html.

Exempt studies do not require regular continuing review by the Human Studies Program. However, if you propose to modify your study, you must receive approval from the Human Studies Program prior to implementing any changes. You can submit your proposed changes via email at ulirb@hawaii.edu. (The subject line should read: Exempt Study Modification.) The Human Studies Program may review the exempt status at that time and request an application for approval as non-exempt research.

In order to protect the confidentiality of research participants, we encourage you to destroy private information which can be linked to the identities of individuals as soon as it is reasonable to do so. Signed consent forms, as applicable to your study, should be maintained for at least the duration of your project.

This approval does not expire. However, please notify the Human Studies Program when your study is complete. Upon notification, we will close our files pertaining to your study.

If you have any questions relating to the protection of human research participants, please contact the Human Studies Program at 956-5007 or ulirb@hawaii.edu. We wish you success in carrying out your research project.
Appendix Q. Dr. Whelen’s 50 mile monthly challenge.

Dr. Whelen's 50 mile Challenge 2013 to 2015

Total Miles

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Dr Whelen's 50 mile Challenge 2013-2015

Average Miles

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<td>60</td>
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Appendix R. External Events.

1. Zombie Dash: 5K (3.1 mile) run away from Zombies

2. Turkey Trot: 10 mile jog on Thanksgiving Day
3. Honolulu Marathon: 26.2 miles

4. Great Aloha Run: 8.1 miles
Appendix S. Incentives.
Appendix T. DTP Waiver.

CONSENT TO PARTICIPATE IN THE
"Dump The Plump" Program

By signing below, you represent that you have read and understood these terms and conditions and agree, warrant, and covenant as follows:

I hereby agree to voluntarily participate in the "Dump The Plump" program activities, which include health and wellness classes, exercise videos, team sports, hiking and use of exercise equipment which can be offered by third party vendors from the community in health and wellness or other types of health professionals and adjunct professionals. I understand that the intent and purpose of this program is to improve my health and well-being. I realize that there may be some inherent risk to me in participating in this program and I knowingly and willingly accept and assume the risks. I understand that before starting my exercise or physical activity routine, or any significant change in my diet, it is recommended that I consult with my physician.

In addition, I understand that I may revoke this authorization at any time by written notice to the Dump The Plump Program. I understand that if I do not sign this authorization, I will be ineligible to participate in the "Dump The Plump" program activities or receive program incentives.

The "Dump The Plump" program is not intended in any way to be a substitute for professional medical advice and I should seek the advice of my physician or other qualified health provider with any questions I may have regarding a medical condition, my health in general, and/or the appropriateness of "Dump The Plump" program activities for me. Neither the "Dump The Plump" program nor any other program or service offered by my employer, should be relied on by me for medical diagnosis or treatment. I should never disregard medical advice or delay in seeking it. I recognize that in an emergency, I should call 911 or my local emergency assistance number;

The information I provide through the "Dump The Plump" program is intended to be used by the "Dump The Plump" program committee for the purposes of evaluating the "Dump The Plump" program and determining my eligibility to be awarded incentives for participating in the program and that HIPAA and ADA regulations are adhered to if applicable.

I am at least 18 years of age.

I am solely responsible for any misrepresentation I may make or any inaccurate information I may provide; and
IN CONSIDERATION OF MY BEING PERMITTED TO PARTICIPATE IN THE “DUMP THE PLUMP” PROGRAM ACTIVITIES, ON MY OWN BEHALF AND FOR MY PERSONAL REPRESENTATIVES, ASSIGNS, HEIRS, AND NEXT OF KIN, I HEREBY EXPRESSLY RELEASE, WAIVE, DISCHARGE AND COVENANT NOT TO SUE THE DEPARTMENT OF HEALTH, ITS AFFILIATES AND SUBSIDIARIES, AS WELL AS THEIR ASSIGNS, AGENTS, ATTORNEYS, HEIRS AND NEXT OF KIN, INCLUDING ITS OFFICERS, DIRECTORS, AGENTS, EMPLOYEES AND BUSINESS ASSOCIATES (AND THESE PARTIES SHALL NOT BE LIABLE TO ME) ON ACCOUNT OF INJURY TO PERSON OR PROPERTY, ILLNESS OR DEATH, SUFFERED BY ME, WHETHER CAUSED BY NEGLIGENCE OR OTHERWISE, FOR ANY CLAIMS, DEMANDS, CAUSES OF ACTION OR DAMAGES, WHETHER DIRECT OR INDIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL, PUNITIVE OR OTHERWISE ARISING OUT OF OR IN CONNECTION WITH THE “DUMP THE PLUMP” PROGRAM OR IN CONNECTION WITH ANY INFORMATION I OBTAIN FROM, OR ANY OTHER INTERACTION WITH, THE HAWAII DEPARTMENT OF HEALTH, STATE LABORATORIES DIVISION. IN DOING SO, I AGREE THAT I AM WAIVING VOLUNTARILY AND UNEQUIVOCALLY ANY LIABILITY OF THE HAWAII DEPARTMENT OF HEALTH, STATE LABORATORIES DIVISION.

I understand, agree, acknowledge and/or represent that I have the full right and authority to give my agreement to this Disclaimer and Participation Agreement.

_________________________          _______________________
Print Name                          Company Name

_________________________          _______________________
Signature                          Date
Appendix U. Consent to Participate in the 2014 Prospective Cohort.

University of Hawai‘i

Consent to Participate in Research Project:

_Evaluation of a worksite wellness program “Dump The Plump” as an effective means to employee weight loss._

My name is Precilia Calimlim. I am a graduate student at the University of Hawaii at Manoa in the Office of Public Health with emphasis in Epidemiology. I am doing a research project as a requirement for earning my graduate degree. The purpose of my project is to evaluate the “Dump The Plump” worksite wellness program as an effective weight loss measure. I am asking you to participate because you recently used these services.

**Activities and Time Commitment:** If you participate in this project, I will meet with you for an interview at your employment during a predetermined date with time intervals between 12pm-1pm. The interview will take 5-10 minutes. The interview will consist of you allowing me to record and document your initial weight and provide you information about the Dump The Plump Program. At the end of the Dump The Plump Program, I will meet with you again at your employment during a predetermined date with time intervals between 12pm-1pm. The exit interview will take 5-10 minutes and consist of you allowing me to record and document your final weight.

**Benefits and Risks:** There will be no direct benefit to you for participating in this interview. The results of this project may help improve the Dump The Plump worksite wellness program to benefit participants. I believe there is little risk to you in participating in this research project. You may become stressed or uncomfortable when you are being weighed or discussing topics with me during the interview. If you do become stressed or uncomfortable, you can stop the interview or you can withdraw from the project altogether.

**Privacy and Confidentiality:** I will keep all information in a safe place. Only my University of Hawaii advisor and I will have access to the information. Other agencies that have legal permission have the right to review research records. The University of Hawaii Human Studies Program has the right to review research records for this study. When I report the results of my research project, I will not use your name. I will not use any other personal identifying information that can identify you. I will use pseudonyms (fake names) and report my findings in a way that protects your privacy and confidentiality to the extent allowed by law.

**Voluntary Participation:** Your participation in this project is completely voluntary. You may stop participating at any time. If you stop being in the study, there will be no penalty or loss to you. Your choice to participate or not participate will not affect your rights to services of the Dump The Plump worksite wellness program.
If you agree to participate in this project, please sign and date this signature page and return it to:

Precilia Calimlim, Principal Investigator at: Precilia@hawaii.edu

Signature:

I have read and understand the information provided to me about being in the research project, *Evaluation of a worksite wellness program “Dump The Plump” as an effective means to employee weight loss.*

My signature below indicates that I agree to participate in this research project.

Printed name: __________________________________________

Signature: __________________________________________

Date: __________________________________________

You will be given a copy of this consent form for your records.
Appendix V. Consent to Participate in the 2010-2015 Longitudinal Study.

University of Hawai'i

Consent to Participate in Research Project:

*Evaluation of a worksite wellness program “Dump The Plump” as an effective means to employee weight loss.*

My name is Precilia Calimlim. I am a graduate student at the University of Hawaii at Manoa in the Office of Public Health with emphasis in Epidemiology. I am doing a research project as a requirement for earning my graduate degree. The purpose of my project is to evaluate the “Dump The Plump” worksite wellness program as an effective weight loss measure. I am asking you to participate because you recently used these services.

**Activities and Time Commitment:** If you participate in this project, I will meet with you for an interview at your employment during a predetermined date with time intervals between 12pm-1pm. The interview will take 5-10 minutes. The interview will consist of you allowing me to record and document your initial weight and provide you information about the Dump The Plump Program. At the end of the Dump The Plump Program, I will meet with you again at your employment during a predetermined date with time intervals between 12pm-1pm. The exit interview will take 5-10 minutes and consist of you allowing me to record and document your final weight.

**Benefits and Risks:** There will be no direct benefit to you for participating in this interview. The results of this project may help improve the Dump The Plump worksite wellness program to benefit participants. I believe there is little risk to you in participating in this research project. You may become stressed or uncomfortable when you are being weighed or discussing topics with me during the interview. If you do become stressed or uncomfortable, you can stop the interview or you can withdraw from the project altogether.

**Privacy and Confidentiality:** I will keep all information in a safe place. Only my University of Hawaii advisor and I will have access to the information. Other agencies that have legal permission have the right to review research records. The University of Hawaii Human Studies Program has the right to review research records for this study. When I report the results of my research project, I will not use your name. I will not use any other personal identifying information that can identify you. I will use pseudonyms (fake names) and report my findings in a way that protects your privacy and confidentiality to the extent allowed by law.
**Voluntary Participation:** Your participation in this project is completely voluntary. You may stop participating at any time. If you stop being in the study, there will be no penalty or loss to you. Your choice to participate or not participate will not affect your rights to services of the Dump The Plump worksite wellness program.

If you agree to participate in this project, please sign and date this signature page and return it to:

Precilia Calimlim, Principal Investigator at: Precilia@hawaii.edu

**Signature:**

I have read and understand the information provided to me about being in the research project, *Evaluation of a worksite wellness program “Dump The Plump” as an effective means to employee weight loss.*

My signature below indicates that I agree to participate in this 2015 research project and my consent to use my retrospective data for all the years I’ve participated in Dump The Plump.

Printed name: ______________________________

Signature: ______________________________

Date: ______________________________

You will be given a copy of this consent form for your records.
Appendix W. Annual DTP Bake Sale.
Appendix X. Current working Model of DTP

Dump The Plump
Worksite Wellness Program

- February – August
  DTP Intervention
  6months
  [HMSA]

- March
  American Diabetes Association Walk

- February
  Initial weigh-in

- January
  SLD Staff Meeting
  Summary of Dr. Whelen’s Challenge
  Recruitment for DTP

- Adventurer’s Club
  Annual Hike

- September – February
  Dr. Whelen’s 50 mile challenge
  6months

- August
  American Heart Association Walk

- August
  Final weigh-out

- DTP Bake sale

- September
  SLD Staff Meeting
  DTP Awards Ceremony
  Recruitment for Dr. Whelen’s 50mile Challenge

- September/October
  HMSA Biometrics Screening and Wellbeing Assessment

- [SLD Staff Meeting]
  September
  HMSA Biometrics Screening and Wellbeing Assessment