

**SOCIAL RETURN ON INVESTMENT**

Room Attendant Training Program



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## INTRODUCTION



The Room Attendant Training Program is the most comprehensive skills training program available at the Hospitality Training Center in Boston, MA. It provides individuals with the skills necessary to find employment in the hospitality industry, specifically as room attendants in hotels.

Since its start in 2009, the Room Attendant Training Program has been a core entity among the services provided by BEST Corp. at the Hospitality Training Center. Since the beginning of 2011, 106 participants have completed the program, with 89.6% of them finding new employment in the hospitality industry. The training program utilizes the relationship between the Hospitality Training Center and the Greater Boston Hospitality Employers (GBHE) to place graduates in GBHE hotels, all of which have a collective bargaining agreement with the UNITE HERE Local 26 union. Jobs at these hotels pay well, offer a low cost, comprehensive benefit package, and provide job security.

Sponsored by several grants, including a Career Pathways grant from SkillWorks, this program has demonstrated a significant social return on investment. Those individuals who are selected to participate in the five-week, 150 hour training program are either unemployed or low wage workers. Unemployed and underemployed individuals are likely to receive various benefits from the government including Medicaid (provided by MassHealth in Massachusetts) and Food Stamps (SNAP). The costs associated with providing these benefits are covered by government expenditures and, therefore, society as a whole. After finding employment, the majority of training participants receive health insurance sponsored by their new employers and no longer receive Medicaid benefits. Additionally, none of the participants who found new employment continued to receive Food Stamps (SNAP).

Graduates generally earn higher wages and salaries after placement, which generates additional tax revenue paid to the state, local, and federal government. This additional social benefit can be calculated to demonstrate the monetary value to society of the training program. This report will demonstrate the social benefit and return on investment of the Room Attendant Training Program offered by the Hospitality Training Center.

The surveying methodology employed to complete this analysis is relatively straightforward. The training program participants provided the information used in the calculations. Prior to beginning the training program, potential participants are asked to describe their current family financial situation as well as their personal income and other relevant information. After participants complete the program, the career coaches, who assist program participants in finding employment, perform regular check-ins with participants to determine job retention for placements. Career coaches also request a copy of each placed individual's first pay stub to confirm the hourly wages earned.



## SUMMARY OF RESULTS

**\$3,055,717** in total social benefit savings for new participants from 2011–2015

- \$1,662,727 saved from January 2011–June 2014
- \$1,392,990 in projected savings July 2014–December 2015
- Calculation includes the following factors:
  - Government spending for unemployed and low income employees
    - \$2,073,779 of savings for Medicaid provided by MassHealth
    - \$256,367 in savings for Food Stamps (SNAP)
  - \$725,571 in additional tax revenue generated through new employment
  - A five year evaluation period
  - Retention of participants in their new employment

**673.66%** return on investment

- Based on initial funding requirements of \$4,200 per participant
- \$453,600 cost for 108 participants

**108** individuals participated in the Room Attendant Training Program since 2011

- 106 completed the training program
- Prior to completing the training program
  - 43 were unemployed (39.8%)
  - 49 were employed earning less than \$10 per hour (45.4%)
  - 16 were employed earning more than \$10 per hour (14.8%)
  - 84 were members of families that qualified for Medicaid (77.8%)
  - \$9.40 average hourly wage for those employed
  - \$958,430 in collective annual earned income
- After completing the training program
  - 95 found new employment in the hospitality industry (87.96%)
  - 83 receive a comprehensive benefit package, with health insurance (87.4%)
  - 13 were unemployed (12.0%)
  - 9 were employed earning less than \$10 per hour (8.3%)
  - 90 were employed earning more than \$10 per hour (83.3%)
  - \$16.48 average hourly wage for those employed
  - \$2,129,252 in collective annual earned income
- Average hourly income (for those employed) rose from \$9.40 to \$16.48 (75.3%)



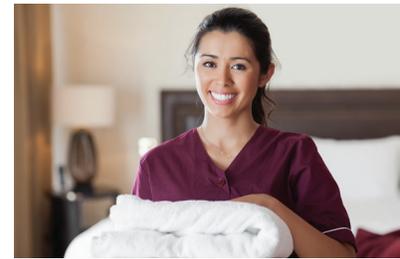
## METHODOLOGY

There are four main areas considered when calculating the social benefit of the Room Attendant Training Program. In the subsequent sections, the methodology for each specific element of the calculation will be discussed.

1. ***Cost to society of the participants:*** 38.9% of participants were unemployed prior to participating in the program, and were therefore eligible to receive various benefits from the government, including Medicaid provided by MassHealth and Food Stamps (SNAP). Many of those who were employed before entering the training program had a household income low enough to maintain eligibility for both of these government assistance programs.
2. ***Tax revenue collected by state, local, and federal agencies:*** Individuals pay state and federal taxes on their earned income. Low income earners typically spend a large percentage of their income, thereby contributing to sales taxes as well. [1] The additional tax revenue generated from the increased incomes of program participants can be considered a savings to society because it offsets the costs for others who are the beneficiaries of social programs.
3. ***Length of Room Attendant Training Program:*** The Room Attendant Training Program has been active for approximately six years. For the purposes of this analysis, and to provide the most accurate and up to date information possible, only data from participants who started the program after the beginning of 2011 is being used. To appreciate the value of the program, not only as a static figure, but to also demonstrate the long term benefits of the program, this analysis projects future earnings for participants through the end of 2015.
4. ***Job retention rates:*** Of the participants who are placed in hotel jobs, some retain their first position; others do not retain their first position, but find employment at another hotel. Still others do not retain their first position and never re-enter work in the hospitality industry. For this reason, it is important to have a method for determining, on average, how long an individual has been employed by their first employer. Additionally, for individuals who do not retain their first position, it is important to determine the percentage who find new employment at a comparable hotel with a collective bargaining agreement.

Data collection occurs at a few separate stages in the program. When an individual is accepted into the program, they provide general information about their current employment situation including hourly wages, average number of hours worked per week, family size, total household income, and any social benefits they are receiving. After completing the program, the participant provides the same data regarding their newfound employment, if applicable. From this data, the change in costs to society before and after the Room Attendant Training Program can be calculated. Several follow-up phone calls are also made at specific time intervals to determine the employment situation of each participant for the purposes of calculating retention.

Finally, all of this information is used collaboratively with initial funding and cost per student data to calculate the return on investment for each dollar spent on the Room Attendant Training Program.



## MEDICAID CALCULATION

Massachusetts has the highest rate of Medicaid coverage for eligible citizens in the country, about 82.8%. This translates to a high cost to the state and federal governments, who are providing this coverage. Using federally mandated eligibility requirements and information provided by program participants, specifically family size and household income, it is possible to determine if the family qualifies for Medicaid insurance coverage provided by MassHealth. By helping participants find employment at hotels with comprehensive health insurance benefits, like the Greater Boston Hospitality Employers (GBHE) hotels, these costs are greatly reduced.

### *Household Income Estimate*

During intake, total household income is reported by the participant as a range: \$0–\$21,000, \$21,001–\$28,000, \$28,001–\$35,000 and so on. This presents a problem for determining if a household qualifies for Medicaid; some of the income ranges represent both families who qualify and those who do not. In some cases, to fairly determine which households qualify for Medicaid in Massachusetts, a household income estimate needs to be made and then compared to the Medicaid cut-off. Different estimation techniques were utilized to make household income estimates for different family types: single adult families and multiple adult families.

For households with one adult, the household income estimate was generated from the data reported by the participant. All participants report their current wage and average number of hours worked per week; these numbers are multiplied to determine the participant's average weekly wage. The weekly wage is then multiplied by 36.1972 (the average number of weeks worked per year for employees in the hospitality industry) to determine the participant's annual income. This average number of weeks worked per year was calculated using the average retention rate for the national hospitality industry and average time spent unemployed in Massachusetts. A comprehensive explanation of this calculation can be found in the "Annual Salary Increase" section of this report, found on page 11. Since these households only have one adult, the participant's annual income is the only expected income and can be used as their household income estimate.

**EXAMPLE:**

Adults in household: 1

Household income range: \$0-21,000

Hourly wage: \$9 per hour

Hours worked per week: 30

Average weeks worked per year (calculated): 36.1972 weeks

$\$9 \text{ per hour} \times 30 \text{ hours per week} = \$270 \text{ per week}$

$\$270 \text{ per week} \times 36.1972 = \$9773.24 \text{ annual income}$

For households with multiple adults, the participant's estimated income is generated with the same method described above; however, an additional step must be taken to estimate their household income because another adult in their household may be working and making financial contributions as well. Once the annual income has been calculated for all participants, the income of each participant with multiple adults in their household is compared to their reported household income range. For participants whose personal income is higher than the mean of their reported income range, this analysis utilizes the personal income as their estimated household income. For those participants whose personal income falls below the mean of their reported household income range, this analysis assumes that the reported household income range is accurate and that the remainder of the household income is generated by another adult in the household. In this case, the estimated household income is equal to the mean of the household income range.

**EXAMPLE:**

Adults in household: 2

Household income range: \$21,001-28,000

Participant hourly wage: \$10 per hour

Hours worked per week: 32

Average weeks worked per year (calculated): 36.1972 weeks

$\$10 \text{ per hour} \times 32 \text{ hours per week} = \$320 \text{ per week}$

$\$320 \text{ per week} \times 36.1972 = \$11,583.10 \text{ annual income}$

$(\$21,001 + 28,000)/2 = \$24,500.50 \text{ mean of income range}$

$\$11,583.10 < \$24,500.50$

Estimated household income: \$24,500.50

## Medicaid Eligibility

Adults in Massachusetts qualify for Medicaid if their household income is at or below 133% of the poverty line; children under the age of 18 qualify if their household income is at or below 150% of the poverty line. The poverty line varies, dependent upon family size and is displayed in the chart at right. [2][3]

Household Size	100%	133%	150%
1	\$11,670	\$15,521	\$17,505
2	\$15,730	\$20,921	\$23,595
3	\$19,790	\$26,321	\$29,685
4	\$23,850	\$31,721	\$35,775
5	\$27,910	\$37,120	\$41,865
6	\$31,970	\$42,520	\$47,955
7	\$36,030	\$47,920	\$54,045

The estimated household income calculated above is compared to the Medicaid eligibility income according to household size to determine if the adults and/or children in the household qualify for Medicaid. If the household estimated income is less than the established Medicaid eligibility lines, it is assumed the family qualifies.

### EXAMPLE:

Adults in household: 2

Children in household: 2

Estimated household income: \$31,500.50

Medicaid eligibility income requirement

133% for adults: \$31,721

150% for children: \$35,775

Assumption: All four members of this household are eligible to receive Medicaid.

These analyses and assumptions were applied to all participants, according to their reported family size and estimated household income levels. Once eligibility is determined, the cost of providing Medicaid is necessary in order to determine the savings to society associated with participants no longer receiving Medicaid.

## Cost of Providing Medicaid

To calculate the cost to the government for providing Medicaid and not simply which participants are eligible, the following method was utilized. The average cost for providing one year of Medicaid coverage in Massachusetts is as follows: \$3,959 per adult, \$21,613 per senior, and \$3,590 per child [3]. Approximately 82.8% of eligible adults in Massachusetts actually receive health insurance through Medicaid; 96.1%

of eligible children are covered [4] [5]. From this information, the cost to provide Medicaid for adults and children can be determined.

Since participants do not report the number of seniors covered by their health insurance, the average cost for seniors must be compiled with the cost of the average adult. 7.5% of the current population of adult individuals covered by the Greater Boston Hospitality Employers (GBHE) health plan are seniors. Using this prevalence rate, an adapted cost for providing Medicaid to adults in Massachusetts is calculated as shown below:

**CALCULATION:**

$\$21,613 \text{ per senior} \times .075 \text{ prevalence of seniors} = \$1,620.975$

$\$3,959 \text{ per adult} \times .925 \text{ prevalence of adults} = \$3,662.07$

$\$1,620.975 + 3,662.075 = \$5,283.05$

$\$5,283.05 \times .828 \text{ of eligible adults covered by Medicaid} = \$4,374.365 \text{ cost per adult}$

A similar calculation is used for estimating the cost of covering one child, however, the number of children is known, so only the second part of the calculation is necessary.

**CALCULATION:**

$\$3,590 \text{ per child} \times .961 \text{ percent of eligible children covered by Medicaid} = \$3,449.99 \text{ cost per child}$

These costs can be applied to all children and adults in eligible households; however, only households in which the participant is placed in a GBHE hotel are utilized to calculate the savings to society. Individuals who are not placed in a GBHE hotel but who earn enough after the program that their household no longer qualifies for Medicaid may still be able to receive subsidized health insurance. Because we cannot be sure of the type of health insurance purchased by this population, they are not counted in the savings to society. Those individuals who found employment at GBHE hotels receive affordable health insurance: \$12 per week for family benefits; \$4 per week for individual benefits. The family health benefits provided by GBHE only apply to a maximum of two adults per family. This was taken into account when calculating the cost of Medicaid as well; the cost to provide Medicaid for families with more than two adults was adjusted to account for only the two adults who would be covered after the program. Those participants who are employed by GBHE hotels no longer receive government assistance for health care; so the costs associated with providing them Medicaid can be considered savings to society, calculated as demonstrated below:

**EXAMPLE:**

Adults in household: 2

Children in household: 3

Household income falls below 133% of poverty line

Employed at GBHE hotel after program

2 adults x \$4,374.365 = \$8,748.73

3 children x \$3,449.99 = \$10,349.97

\$8,748.73 + \$10,349.97 = \$19,098.70 savings to society after one year of employment

The estimated savings will then be multiplied by a yearly multiplier, described in the “Retention Rate and Time Frame” section below, to account for the total length of time in the evaluation period and job retention.

It should be noted that in Massachusetts, Medicaid costs are paid 50% by the federal government and 50% by the state government. For this reason, savings must be attributed to both the federal and state government. For the purpose of this analysis, savings to the federal and state governments will not be identified independently.

Based on the calculations outlined above, the total savings to society for all households that are no longer utilizing Medicaid is approximately \$2,073,779.

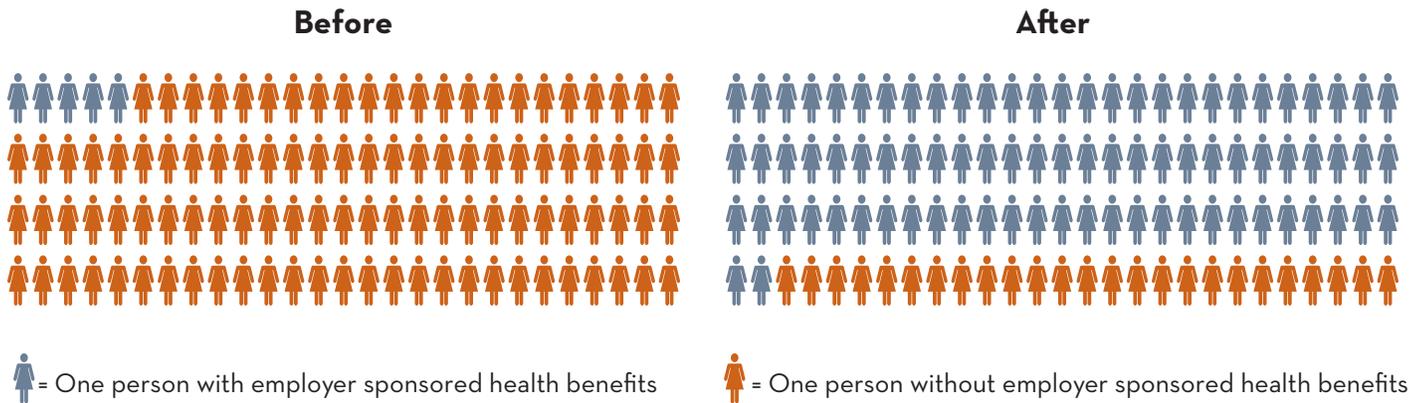
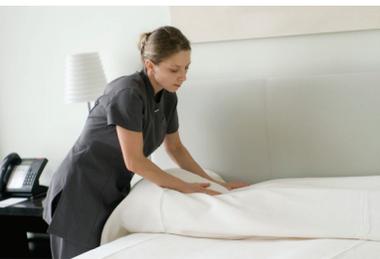


Figure 1. The number of people receiving comprehensive, employer sponsored health benefits before and after the program



## OTHER SOCIAL SERVICES

In addition to qualifying for Medicaid, many low income households receive other forms of government sponsored assistance. At intake, participants were asked to identify benefits they receive, including: Tax Assistance for Needy Families (TANF), Tax Assistance for Families with Dependent Children (TAFDC), Food Stamps (SNAP), and Social Security Insurance—Disability (SSI), Veterans' Benefits, or Unemployment Benefits. The costs for these different programs vary on necessity, usually calculated by comparing family size with household income.

Conveniently, for the purposes of calculating costs, only benefits for those participants who actually received placements and are no longer eligible, thereby demonstrating a savings, need to be calculated. The additional services received by individuals who gained new employment after the program were Food Stamps (SNAP). For this reason, the calculations associated with Food Stamps (SNAP) are the only ones necessary to calculate these savings.

### **Food Stamps (SNAP)**

Food Stamps (SNAP) is the only benefit that placed program participants indicated receiving. Because information was provided voluntarily, unlike the Medicaid information in the previous section, a calculation determining eligibility is not necessary, only a calculation for the costs is needed.

The majority of those who indicated receiving Food Stamps (SNAP) found new employment after participating in the training program, which increased their household income to a level at which they were no longer eligible for Food Stamps (SNAP), saving those costs. The cost is approximately \$133.07 for each family member receiving Food Stamps (SNAP) each month. [5] With the information provided by the participants regarding family size, it is possible to calculate the total costs associated with providing Food Stamps (SNAP) to these participants.

#### **EXAMPLE:**

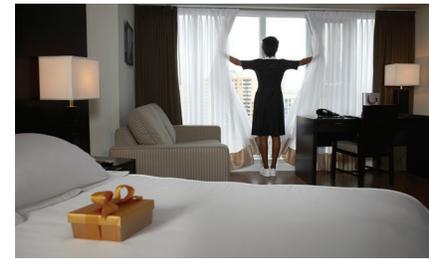
Family Size: 4

Cost to provide Food Stamps (SNAP) per person each month: \$133.07

4 people x \$133.07 per person = \$532.28 in Food Stamps (SNAP) savings each month

\$532.28 in Food Stamps (SNAP) costs each month x 12 months = \$6,387.36 in Food Stamps (SNAP) cost per year

Based on these calculations, it was demonstrated that each year, approximately \$76,648 in Food Stamps (SNAP) associated costs are saved.



## **ADDITIONAL TAX REVENUE GENERATED**

After completing the Room Attendant Training Program, each participant is assisted with finding a job in the hospitality industry, usually as a room attendant in a Greater Boston Hospitality Employers (GBHE) hotel. GBHE employees are currently earning wages of \$18.51 per hour and are offered employer sponsored health insurance as part of a benefit package worth approximately \$8.40 per hour. With effectively all participants earning higher wages and annual salaries, there is also an increase in tax revenue generated for the state, local, and federal government. Tax revenue pays for the social programs that many low income individuals and families may receive. To fully calculate the return on investment for the Room Attendant Training Program, it is necessary to calculate the additional tax revenue that is generated at these new jobs.

There are several important factors that are necessary for this calculation. The total annual salary, the annual salary increase for the participant, the total household income for the participant's families, and the percentage of income contributed to taxes are all key components of determining this figure.

### ***Annual Salary and Annual Salary Increase***

Upon obtaining new employment, participants provide a pay stub detailing their paid hourly wage and the number of hours that they work each week. Hospitality Training Center staff members also perform quarterly check-ins with each participant, during which they discuss participants' current employment status. Many participants, specifically those who found employment at GBHE hotels, are now earning significantly more per hour than they were when they first started at their positions. There are a few reasons for this. In the collective bargaining agreement, there are mandated annual wage increases for all GBHE employees. As an acknowledgment of HTC's value in screening and training services, most GBHE hotels hire Room Attendant Training Program graduates at the full union rate. However, those who are hired at 70% of the full union rate begin earning the full rate within six months to one year of their hire date. For the purposes of this analysis, the wage from the most recent quarterly check-in is used as that participant's current hourly wage. This figure fairly represents an average wage for each participant, although typically higher than the placement wage, it does not account for union mandated wage increases, which would be included in a future projection. Also, many participants only earned their initial placement wage for a short period of time before being bumped up to full union salary.

According to Hospitality Training Center career coaches, many of whom have experience in Human Resources at hotels, many hospitality workers in their first years of employment, and sometimes extending beyond that timeframe, are seasonal employees and work approximately 38 weeks out of the year, with the winter months off. When calculating their yearly earnings, the hourly wage is multiplied by the average hours per week and then again, by 38 weeks a year. This provides a fair calculation for annual salary for each program participant.

**EXAMPLE:**

After hourly wage: \$18.51 per hour

After hourly hours worked per week: 40

$\$18.51 \text{ per hour} \times 40 \text{ hours per week} = \$740.40 \text{ per week}$

$\$740.40 \text{ per week} \times 38 \text{ weeks} = \$28,135.20 \text{ new annual salary}$

Prior to participation in the program, each prospective candidate was required to provide personal information, including hourly wage and average hours worked per week. The number of weeks worked per year, however, is missing for individuals before program participation. The 38 weeks per year estimate cannot be utilized for these individuals because many are employed by non-union employers. Lower income jobs have a relatively high turnover rate when compared to higher wage positions, especially in the leisure and hospitality industry. [6] To calculate the anticipated number of weeks an individual would be working, data was collected from online sources indicating the average turnover rate for leisure and hospitality employees, as well as average time on unemployment. This information was used to make a calculation to determine the length of time, on average, each employee would remain employed at their current rate.

In January 2013, there were 12,379,000 employees in the food service and accommodation industry nationwide. Throughout the course of 2013, 9,116,000 of them were replaced by new employees. [7] Additionally, the median time that someone stayed unemployed in Massachusetts in May of 2014 was approximately 14.6 weeks. [8] With these two pieces of information, the average time that an individual spends employed at a job in the food service and accommodation industry before being turned over can be calculated.

### **CALCULATION:**

If 9,116,000 of 12,379,000 in a particular industry are replaced each year, this demonstrates a turnover rate of 71.37%.

$100\% - 71.37\% = 28.63\%$  of original employees who are replaced in the following year

$28.63\% \times 52$  weeks in one year = 14.8876 weeks into the second year the entire workforce has been replaced

52 weeks in one year + 14.8876 weeks = 66.8876 weeks until the entire workforce is replaced

$66.8876$  weeks / 2 = 33.4483 weeks is average length of time until an employee is replaced

$33.4483$  weeks + 14.6 weeks (average length of time unemployed) = 48.0438 weeks for an average employment cycle

$33.4483$  weeks of employment / 48.0438 weeks for an entire cycle = 69.61% of the time a person is employed

52 weeks in a year  $\times$  69.61% of the time = 36.1972 weeks out of the year on average someone is employed

Using this figure, 36.1972 weeks worked on average per year, and multiplying it by the average hourly wage and the number of hours worked per week, the total annual salary for each individual prior to participating in this program can be calculated. The difference between the annual salary prior to program completion and the annual salary after placement is the annual salary gain, which is a necessary figure for determining after program household income level.

### **EXAMPLE:**

Prior hourly wage: \$10 per hour

Prior hours worked per week: 25

Average weeks worked per year (calculated): 36.1972 weeks

Annual salary after completing the program: \$28,135.20

$\$10$  per hour  $\times$  25 hours per week = \$250 per week

$\$250$  per week  $\times$  36.1972 weeks per year = \$9,049.30 earned per year

$\$28,135.20$  per year -  $\$9,049.30$  per year = \$19,085.90 in annual salary increase

Many participants were unemployed when beginning this training program. However, it is apparent that they are motivated individuals; it is unfair to assume that all individuals who were unemployed before beginning the program will remain unemployed for the entire length of time considered by this analysis. For this reason, all unemployed individuals had the average hourly wage and average hours worked

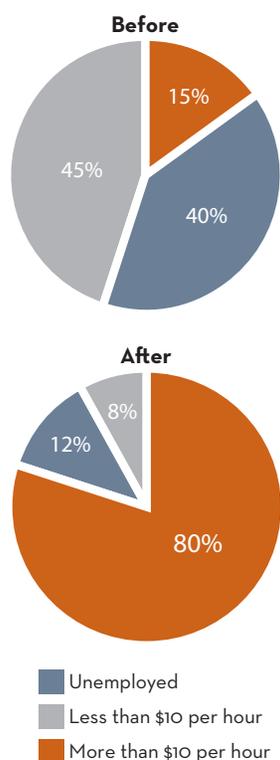


Figure 2. Wages earned by participants before and after program participation.

per week of all other program participants applied to their personal statistics as opposed to using zero for both of those figures. This provides a fair control group to demonstrate that unplaced program participants will not remain unemployed for the entire time of this analysis. Of those program participants who were employed at intake, the average hourly wage was \$9.40 per hour, and they worked an average of 30.27 hours per week. Using the formula outlined above, these figures were applied to the unemployed participants.

### Household Income

Having calculated the personal annual salary increase for all program participants, which applies to everyone that was placed (about 88% of the participant population), an accurate household income must be determined. In addition to their own personal income, participants provided their entire household income. Reported as a range, the actual figure for household income is estimated. A comprehensive explanation of how the household income estimate is calculated can be found in the “Household Income Estimate” section on page 4.

### Tax Rate

The final piece of information necessary to determine the additional tax revenue generated by program participants at their new jobs is the actual percentage of their income that is paid in taxes. The US tax code is well known for being overly complicated; however, there are certain resources available that provide an estimate for the percentage of earned income contributed to taxes based on household income. The calculation here will combine two of these estimates, one for federal income tax and the other for state and local tax contributions, in order to determine what the tax rates should be for program participants.

First, the Massachusetts Budget and Policy Center provides calculations for the aggregated percentage of tax contributed to the state and local government based on household income. [1] It demonstrates that although most low income individuals do not contribute very much in personal income tax, they do contribute to taxes in other ways. One way is by paying a larger percentage of their income in sales taxes on purchases that they make. The table below will document this information and demonstrate the aggregate percent applied to each household income level.

Second, the Tax Policy Center, which is a collaboration of the Urban Institute and the Brookings Institution, developed a calculation that estimates the percentage of income contributed to federal taxes. [9] Again, it is demonstrated that lower income households contribute very small amounts to the federal income tax and, in certain

circumstances, receive money back in the form of an Earned Income Tax Credit. This study takes this into account and provides a figure for the individual tax contribution, as a percentage of total household income.

Household Income Level	State and Local	Federal	Total Tax Contribution
\$0-\$10,000	9.5%	1.5%	11.0%
\$10,001-\$20,000	9.5%	1.0%	10.5%
\$20,001-\$30,000	9.3%	5.7%	15.0%
\$30,001-\$40,000	9.3%	9.9%	19.2%
\$40,001-\$50,000	9.4%	12.4%	21.8%
\$50,001-\$75,000	9.4%	14.9%	24.3%

With the estimated household income, annual wage increase, and total tax contribution calculated for each program participant, the additional tax revenue generated as a result of new employment can be calculated. It is important to calculate the additional tax revenue generated by calculating the tax revenue generated for the entire household before participation in the program and then subtracting it from the tax revenue generated from the entire household after finding new employment. Many program participants experienced a wage gain large enough to move their household through several of the household income levels in the chart above. For this reason, the respective tax rates are applied to the different annual salaries reported by each individual before and after program participation. The new tax rate has an effect on the taxes contributed for all wage earners in that household. This analysis assumes that all other wage earners will maintain their current annual salary.

**EXAMPLE:**

Before household income range: \$21,001-\$28,000

Estimated household income: \$24,500

Previous annual salary for participant: \$9,049.30

Participant annual salary increase: \$19,085.90

\$24,500 household income -> 15.0% of income contributed to state, local, and federal taxes (see chart above)

\$24,500 x 15.0% in tax contributions = \$3,675.00 in annual household tax contributions

\$24,500 household income - \$9,049.30 participants previous income = \$15,450.70 other wage earner's salary

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*This training program takes individuals who were previously unlikely candidates for employment and provides them with the skills and network necessary to find good employment in the hospitality industry.*

$\$15,450.70 + \$19,985.90 = \$34,536.60$  is new household income

$\$34,536.60$  new household income -> 19.2% of income contributed to state, local, and federal taxes (see chart above)

$\$34,536.60$  new household income x 19.2% in tax contributions =  $\$6,631.03$  in after program household tax contributions each year

$\$6,631.03$  in after program tax contributions— $\$3,675.00$  in prior tax contributions =  $\$2,956.03$  in additional annual household tax contributions generated

These calculations reflect the additional tax revenue generated for all three levels of government for one year. For each year that the participant remains active as an employee at his or her placement, or in a comparable position, their household will contribute this much in additional tax revenue.



## RETENTION RATE AND TIME FRAME

The Room Attendant Training Program has been providing program participants with the skills, training, and network necessary to find good employment in the hospitality industry since 2009. This analysis focuses on the outcomes produced in the previous eight program cycles, going back to the beginning of 2011. All other calculations in this analysis focus on a period of one year. This time frame makes the most sense when considering factors like annual salary, which is generally reported as a product of a single year. However, participants who found employment in the earlier years have demonstrated greater savings to society simply because they have continued working, and contributing to society, for a longer period of time; this should be considered in the final calculations.

Program participant retention in their new positions must be considered as well. It is one thing for them to get placed in a new position, but it is another thing to continue to be employed at that same job two years later. Turnover rates are relatively high in the hospitality industry, but program participants have demonstrated high rates of retention. This fact is important both for employers, who face significant costs when finding new employees, and for program participants themselves who have demonstrated their motivation and ability to maintain good careers.

These are two important statistics that, after being measured, are both part of a formula to calculate an individualized yearly multiplier for each participant. The yearly multiplier is multiplied by the individual results for each participant's social benefit calculations in order to determine the entire savings to society over the given period of time.

### **Retention Rate**

After placement, each program participant is contacted every three months by a Hospitality Training Center employee for a quarterly check-in. During these conversations, participants are asked about their current work status including whether or not they are still employed, how much they are making per hour, and how many hours they are working per week. According to these check-ins, many of the participants are still employed at their first job placements. A few, however, left those jobs and found comparable positions elsewhere. Fewer still are no longer working at all.

From these quarterly check-ins, it is apparent that those with the highest retention rates are those who found the best placements. 91.6% of those finding employment at a Greater Boston Hospitality Employers (GBHE) hotel were still employed by the original employers during their most recent quarterly check-in. 89.5% of all program participants since 2011 are either working at their original placements, or have

found comparable positions elsewhere. Not only does this training program provide opportunity for a new job, it provides participants with in-demand skill sets that prepare them for a career.

The retention rate percentage does not directly impact the initial calculations because every calculation for each participant is done individually and they only reflect the length of time each participant was employed. However, it does have an effect when extrapolating into the future. Calculating the retention rate for the future is impossible; however, it is a fair assumption that the current retention rate will reflect the future rate as well.

### **Time Frame**

Many program participants from the beginning of 2011 have been employed at their initial placement jobs for over three years. Participants placed more recently are also overwhelmingly still employed; however, because they have not been employed as long as those placed in 2011, more recent participants have not yet reached a higher earning potential.

The cutoff date for determining potential earnings in the interim is July 1, 2014. The yearly multiplier will first reflect the length of time between each program participant's first day at his or her new job and July 1, 2014.

#### **EXAMPLE:**

Participant job start date: 4/25/2011

Cut off date: 7/1/2014

$7/1/2014 - 4/25/2011 = 1163$  days between these two dates

$1163 / 365 = 3.1863$  years employed

If the program participant lost his or her job and did not find a comparable position, such as another position at a GBHE hotel, then the cutoff date is the last day working at their original placement.

#### **EXAMPLE:**

Participant job start date: 4/1/2013

Termination date: 6/15/2013

$6/15/2013 - 4/1/2013 = 1163$  days between these two dates

$1163 / 365 = 3.1863$  years employed

Many program participants did not even begin their new jobs until the cutoff date, or even later in certain circumstances. For this reason, a future date was chosen to

extrapolate potential earnings for participants until the future date to demonstrate the effect of the training program. The final date for the analysis is December 31, 2015, extending the period of evaluation by about one and one half years and projecting additional savings over this time. This makes the entire length of evaluation about five years. Only those individuals who were placed early in 2011 would have a yearly multiplier of almost five years.

When extrapolating into the future, potential retention rates need to be part of the calculation as well. The additional one and one half years of projected time will be multiplied by the retention rate, 89.5%. This new figure of 1.3425 years will then be added to the number of years employed for each participant to determine his or her personal yearly multiplier. This accurately takes into account the extrapolated length of time as well as the retention rate for all participants. Future projections were only made for those participants who were still employed on July 1, 2014.

**EXAMPLE:**

Years employed: 3.1863 years

Extrapolated time: 1.5 years

Retention rate: 89.5%

$89.5\% \times 1.5 \text{ years of extrapolated time} = 1.3425 \text{ additional years}$

$3.1863 \text{ years employed} + 1.3425 \text{ additional years} = 4.5288 \text{ yearly multiplier}$

This calculated yearly multiplier is considered the period of time for which the particular participant is being evaluated. This variable is then included in the calculations for each statistic: additional tax revenue generated, savings resulting from health insurance, and savings associated with other social services.

**EXAMPLE:**

Yearly Multiplier: 4.5288 years

Additional tax generated annually: \$3,439 per year

Savings from MassHealth: \$4,374.365 per year

Savings from Food Stamps (SNAP) per year: \$1,596 per year

$\$3,439 \text{ in tax revenue} \times 4.5288 \text{ years} = \$15,574.54 \text{ in total additional tax revenue generated}$

$\$4,374.365 \text{ MassHealth savings} \times 4.5288 \text{ years} = \$19,810.62 \text{ in total MassHealth savings}$

$\$1,596 \text{ in Food Stamps (SNAP) savings} \times 4.5288 \text{ years} = \$7,227.96 \text{ in Food Stamps (SNAP)}$

$\$15,574.54 + \$19,810.62 + \$7,227.96 = \$42,613.09 \text{ in total savings for this participant}$



## **FINDINGS IN DETAIL**

### ***Population Demographic Changes***

Many of the placed program participants are now part of a different demographic group than before the participation. Most of them earn a higher hourly wage which translates to greater annual income. Many are no longer eligible for the same social services as before. More, still, are employed by Greater Boston Hospitality Employers (GBHE) and receive a very comprehensive, and low cost, health insurance package, meaning they no longer require Medicaid, regardless of their new income.

### ***Finding New Employment***

The fundamental purpose of the Room Attendant Training Program is to provide program participants with new employment. The foundation of a strong career with a family sustaining wage is achieved by many, and this is an important outcome metric for determining the success of the program as a whole. From 2011 through 2014, there were 106 program graduates. 95 of them, who represent 89.6% of the population, found new employment as a result of the training program. 83 of those placed found jobs at GBHE partner hotels with good hourly wages and excellent benefit packages, representing 87.4% of the population.

### ***Wage Increases and Additional Hours Worked***

One of the defining elements of the Room Attendant Training Program is its focus on ensuring that participants are placed in well-paid jobs. Most program participants work at positions for higher hourly wages after the program than before. Higher hourly wages are one of the primary motivating forces for participants enrolling in the training program.

Measuring the change in average hourly wages for participants is not necessary for calculating the social return on investment; however, it is an important statistic to measure and track as an independent evaluation metric.

Of the 61% of program participants who were employed prior to starting the training program, the average hourly wage was \$9.40 per hour. This hourly wage is slightly higher than the Massachusetts minimum wage, which at the time of writing this report was \$8.00 per hour [10]. As of July 1, 2014, the average hourly wage for those employed is \$16.48 per hour, an increase of over 75% (fig 1). This figure is over twice the minimum wage in Massachusetts. As is mentioned several times throughout this report,

a large majority of the program participants who were placed are employed by GBHE hotels, where the starting pay for room attendants is \$18.51 per hour, in 2014 with graduated annual increases.

It is important to note that these averages are only measuring the wages of the program participants who were employed at either stage of the process, either before or after training. This average does not include those who were unemployed at either stage.

Another contributing factor to annual salary is the number of hours worked each week. Many individuals working in low wage positions only work part time. Prior to participating in the program, employed participants were working on average of 30.27 hours per week. After completing the program, participants who were employed worked an average of 36.02 hours per week. When combined with the hourly wage increases, this results in a large addition to total annual salary for program participants.

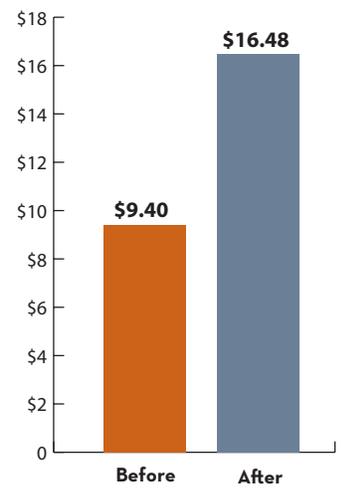
### **Social Services Dependency**

The majority of the savings from the Room Attendant Training Program result from removing participants' dependency on social service programs, specifically Medicaid and Food Stamps (SNAP). The cost to provide these benefits is very high and reducing the necessity for them is financially beneficial for all levels of government.

To determine eligibility for Medicaid, a formula was developed to determine whether or not a household's income was below the 133% of the poverty line threshold. Children of families earning below 150% of the poverty line are also eligible. For a more detailed description of the formula developed for determining eligibility, as well as how the costs for providing the service were calculated, please see the sections "Medicaid Eligibility" and "Cost of Providing Medicaid," on pages 6 and 7 respectively.

Prior to completing the program, 84 participants were members of Medicaid eligible households and eight households had children who were eligible. After completing the program 63 participants who were members of Medicaid eligible households had found employment that included an employer sponsored health insurance benefit package and were, therefore, no longer utilizing Medicaid services. Additionally, four of the households with children who had previously been eligible no longer received Medicaid due to new employment.

Food Stamps (SNAP) was the only other benefit that was indicated by the program participants as being received by participants who found new positions. 17 program participants were initially receiving Food Stamps (SNAP) from the government, and 16 of them found new employment removing their eligibility for the program.



*Figure 3. Average hourly wage increase for employed participants.*



## SOCIAL RETURN ON INVESTMENT

The social return on investment statistic demonstrates the value of the Room Attendant Training Program based on the initial cost of providing social services and the savings to society generated. As a result of participating in the training program many individuals gain new employment with higher wages, are less likely to depend on social services, and generate additional tax revenue. The methodologies and calculations from the sections above indicate the savings to society for the training program, and the following sections will put those savings into perspective by comparing them to the initial costs of the Room Attendant Training Program.

### *Cost for Providing the Program*

In order to put into perspective the savings that are a result of the program, the initial cost for program services is the other piece necessary for the final equation. As one might speculate, there are many costs associated with providing comprehensive services to program participants. The funding for these projects has historically been provided by grants from various funding agencies, including SkillWorks and English for New Bostonians.

There are several necessary components for the full time training program, including classroom space, instructors, administrative staff, career coaches to assist participants in finding jobs after completing the course, and specialty trainers who focus on topics such as ergonomics. Additionally, significant funds must be utilized for comprehensive screening processes to select only one program participant from every ten applicants. Based on these factors, the Hospitality Training Center has calculated, during a separate analysis, that the cost for providing the Room Attendant Training Program is \$4,200 per participant. This takes into account all of the costs associated with the training program, including outreach and screening, administration, and documentation costs. Even though staff may not be working directly with the program participants to provide training, they are working toward the final goal of providing a committed group of individuals with these skills.

#### **CALCULATION:**

Cost to provide training: \$4,200 per participant

Total number of participants: 108 participants

$\$4,200 \text{ per participant} \times 108 \text{ participants} = \$453,600 \text{ to provide training}$

### **Social Return on Investment Calculation**

A social return on investment takes into account several factors to demonstrate the value of the training program as measured by the benefits it produces. This particular methodology is focused on the savings to society as a result of moving people off of government sponsored benefit programs, such as Medicaid or Food Stamps (SNAP), and simultaneously generating additional tax revenue from their new, higher paid employment.

By comparing the resulting savings to society from the training program to the cost of providing the program, one can calculate the social return on investment of this training program. The higher the social return on investment, the greater the effect the training program has on savings for the state, local, and federal levels of government.

To calculate the social return on investment, one must divide the savings resulting from the training program by the initial investment, the cost associated with providing the training.

#### **CALCULATION:**

Savings resulting from MassHealth: \$2,073,779

Savings resulting from additional tax revenue: \$725,571

Savings resulting from Food Stamps (SNAP): \$256,367

Total cost for training 108 program participants: \$453,600

$\$2,073,779 + \$725,571 + \$256,367 = \$3,055,717$  in total savings to the government

$\$3,055,717$  in savings /  $\$453,600$  initial investment = 6.7366 return on investment

6.7366 = 673.66% social return on investment

The final calculated social return on investment is 673.66%. This means that for every \$1.00 invested in initial training costs for these program participants, \$6.73 in savings is generated for the state, local, and federal governments.



## CONCLUSION

*The hotels at which the Room Attendant Training Program participants find employment have demonstrated higher retention rates than many other hotels and facets of the industry*

The Room Attendant Training Program, provided by the Hospitality Training Center through BEST Corp., has had a substantial social impact on many residents in the Boston community. With a return on investment of 673.66%, new enrollments since 2011 have saved society over \$1.58 million by July 1st 2014 and are projected to save another \$1.33 million through the end of 2015. 108 individuals have participated in the training program in this period of time and are now consistently contributing more to society in the form of tax revenue than they were before the training program. Assuming these individuals remain employed at comparable jobs in the hospitality industry, their contributions and savings to society will persist.

The costs to the government have decreased, and the tax revenue generated by participants' new incomes has increased. These are important characteristics of an impressive and successful workforce development program.

It has also been demonstrated, through this study and others, that employees who are paid more and have better working conditions take more pride in their work and are more likely to be retained. [6] The hotels at which the Room Attendant Training Program participants find employment have demonstrated higher retention rates than many other hotels and facets of the industry [6]. High retention is not only a positive outcome for the employer, who will spend less money training new employees, but for the economy as a whole. Employees moving from position to position reduce the efficiency of the workforce. By training individuals for particular careers in which those individuals retain employment, the program saves employers money that would usually be spent on training costs. It is estimated that employers spend anywhere from 30%-200% of an employee's annual salary on training a new employee. These are funds which can now be reinvested elsewhere.

In addition to the demonstrated economic effects of this training program, the impact should also be viewed through the lens of social justice. Yes, the significant return on investment is valuable; however, it is also important to note that 108 individuals who participated in the program have been given the opportunity for a good career in a growing industry, an opportunity which they may not have had otherwise. Many program participants did not have a US high school diploma, spoke English as a second language, and/or were unemployed before beginning the training program. All of these factors can limit a job-seeker's options. With the help of training and Hospitality Training Center's reputation among hospitality employers, individuals are able to gain new employment. The jobs gained by training program participants provide a very good hourly wage, often over twice the minimum wage, and comprehensive medical

benefits. Recent trends have demonstrated that the rising cost of healthcare is one of the leading causes of financial oppression and bankruptcy in the United States [11]. Gaining a job with comprehensive health benefits could, therefore, reduce the risk of an individual entering poverty and lessen their financial stress. This training program does more than simply train people; it takes individuals who previously faced difficulty and limited options in finding a permanent career and provides them with the skills and network necessary to find and keep good employment in the hospitality industry.

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## ABOUT THE AUTHORS

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Kenzie is studying social work at Boston College and will receive her Master of Social Work degree in May 2015. Her primary interests are international social work and program management and evaluation. Kenzie has a passion for working in Africa and collaborating with local partners in human rights-based programming. She is an advocate for innovative solutions and the use of data to inform programming decisions in social work.

### ***Anthony Harrison***

Anthony is a recent graduate of Northeastern University, having completed his Masters of Science in Law and Public Policy, with a focus on program evaluation, data analysis, and data visualization techniques. He believes wholeheartedly in the virtues of data driven policy making solutions. An advocate for progressive issues, he has experience with the organized labor movement, both international and domestic. A self-described Rawlsian, his philosophical background provided the foundation for his studies in public policy.

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