Research brief | Impact of financial incentives on behavior change program participation and risk reduction

BACKGROUND

Employers are increasingly using financial incentives to elicit worksite health promotion (WHP) program participation. Several studies suggest incentives can increase participation rates in health assessments (HAs) and behavior change programs. Specifically tailored incentives may also contribute to 12-month smoking cessation or weight loss, but some research suggests offering extrinsic rewards may decrease intrinsic motivation and stifle long-term behavior change.

With the use and dollar amount of financial incentives increasing, the cost-effectiveness of incentives is becoming an important concern for employers. The incentive costs in recent clinical trials have been high, and authors noted that more research is needed to ultimately answer the question of cost-effectiveness. To further address this question, StayWell Health Management (StayWell) conducted a study that examined how incentives are associated with coaching program participation rates and behavior change outcomes.

STUDY METHODS

The study included 24 clients of StayWell, representing 50,605 coaching program registrants. Information was collected on the value of incentives offered by each client for participation in intervention programs.

The outcome variables were program registration rate, program completion rate, and percent risk change. Registration and completion rates were obtained from standard StayWell reports for each client.

Percent risk change was measured using the StayWell health assessment (HA). This risk change measure included nine health risk areas, and was defined as the difference in the average number of risks between the baseline and follow-up HA, expressed as a percent of the average number of risks at baseline. Risk change was calculated for individuals who participated in a behavior change program and had a baseline and follow-up HA.

Table 1 compares registration rates, completion rates, and percent risk change for clients who offered incentives versus clients who did not offer incentives. To assess general patterns in the data, scatterplot diagrams were used to compare the incentive value for each client to their respective percent risk change (Figure 1). The estimated cost of incentives was divided by the estimated additional risks reduced for clients who offered incentives in order to evaluate the cost-effectiveness of offering incentives (Table 2).
### Table 1. Average (mean) participation and percent risk change by incentive status

<table>
<thead>
<tr>
<th></th>
<th>Incentives (n = 15)</th>
<th>No Incentives (n = 9)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registration Rate</td>
<td>29.7%</td>
<td>26.0%</td>
</tr>
<tr>
<td>Telephone Completion Rate*</td>
<td>82.9%</td>
<td>76.4%</td>
</tr>
<tr>
<td>Risk Change (% improvement)‡</td>
<td>7.0%</td>
<td>8.5%</td>
</tr>
</tbody>
</table>

* Positive numbers represent health risk improvement. Higher numbers indicate more health risk improvement, i.e. better outcomes.
‡ Statistically significant (p < 0.05)

### RESULTS

Among clients that offered incentives, the value ranged from $25 to $360, with an average value of $98. Companies offering incentives had an average registration rate of 29.7% and completion rate of 82.9%, compared to a slightly lower average of 26.0% registration and 76.4% completion rates for companies that did not offer incentives. Companies that offered incentives had a risk improvement of 7.0%, which was lower than the 8.5% risk improvement for companies that did not offer incentives. However, the percent risk change varied widely across clients, ranging from 2% to nearly 15% for individuals who participated in an intervention program. The general pattern suggests that clients who offer higher-value incentives tend to have lower rates of risk reduction among intervention program participants (Figure 1).

![Figure 1. Company-level percentage risk improvement by incentive value](image-url)
The average participation and percent risk change rates from Table 1 were used to create Table 2, which estimates the cost-effectiveness of incentives for program participation among 1,000 eligible individuals. Based on this analysis, the cost per additional health risk reduced was $24,108.

**Table 2. Projected participation, percent risk change, and cost for 1,000 individuals eligible for behavior change programs**

<table>
<thead>
<tr>
<th></th>
<th>Incentives (avg cost/participant = $98)</th>
<th>No Incentives (avg cost/participant = $0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated registrations</td>
<td>297</td>
<td>260</td>
</tr>
<tr>
<td>Estimated completions</td>
<td>246</td>
<td>199</td>
</tr>
<tr>
<td>Estimated incentive cost</td>
<td>246 x $98 = $24,108</td>
<td>$0</td>
</tr>
<tr>
<td>Estimated risks reduced*</td>
<td>65</td>
<td>64</td>
</tr>
<tr>
<td></td>
<td>(1 additional risk reduced)</td>
<td></td>
</tr>
<tr>
<td>Estimated incentive cost per additional risk reduced</td>
<td>$24,108 / 1 = $24,108</td>
<td>$0</td>
</tr>
</tbody>
</table>

* Assumes 3.78 risks per person at baseline, which was the average number of risks for program participants in this study.

**CONCLUSION**

The study found that offering financial incentives for program completion was associated with somewhat higher program participation and completion rates. However, because risk improvement was less among those who were offered incentives to complete programs, the results suggest that incentives may not be effective or cost-effective in improving intervention outcomes. These results need to be confirmed with future research because the sample for this study was small and the organizations studied were all relatively large.

It is also noteworthy that risk improvement among these organizations was quite variable, ranging from 2% to nearly 15%. This suggests that incentives do not tell the whole story when it comes to predicting risk improvement, and that other best practices, like a good communication strategy and manager support for workplace health promotion programs, are necessary to maximize program outcomes. Such strategies may help to augment the impact of incentives.

StayWell will continue to evaluate how incentives influence participation, engagement, and behavior change to provide our clients with the best-available information to support the effective and cost-effective use of incentives.
REFERENCES


