Process and outcome-based financial incentives to improve self-management and glycemic control in people with Type 2 diabetes in Singapore: A randomized controlled trial

**Table 1.1 Estimated effects of the intervention by arms and the incremental effect of incentive[a]: Regressions not controlling for confounders (N=240)**

| | Study Arms | | Incremental effect of incentive | |
|---|---|---|---|---|
| | UC+ | Incentive | Estimate | [95% CI] |
| **Primary outcome** | | | | |
| Mean change in HbA1c at Month 6 | -0.66 | -0.96 | -0.31 | [-0.74, 0.13] |
| **Secondary outcomes** | | | | |
| Mean no. of glucose readings within acceptable range (out of 3 tests) during the last week of intervention | 0.15 | 0.48 | 0.33 | [0.07,0.58] |
| Mean no. of glucose readings (out of 3 tests) during the last week of intervention | 0.13 | 0.25 | 0.87 | [-0.06, 1.80] |
| Mean no. of medication adherent days during the last week of intervention | 1.06 | 1.85 | 0.79 | [0.05, 1.53] |
| Mean no. of physically active days during the last week of intervention | 1.11 | 2.59 | 1.49 | [0.65, 2.32] |

[a] Calculated as the difference in change from baseline at Month 6 between intervention and control groups.
Source: Author calculations using the data collected from the study.
Abbreviations:
HbA1c: Glycated Hemoglobin
EQ-5D-5L: EuroQol Five Dimension Scale

Marcel Bilger, Mitesh Shah, Ngiap Chuan Tan, Cynthia Y.L. Tan, Filipinas G. Bundoc, Joann Bairavi, Eric A. Finkelstein
Correspondence to Marcel Bilger (marcel.bilger@wu.ac.at), Vienna University of Business and Economics, Austria

Process and outcome-based financial incentives to improve self-management and glycemic control in people with Type 2 diabetes in Singapore: A randomized controlled trial

**Table 1.2 Estimated effects of the intervention by arms and the incremental effect of incentive[a]: Last observation carried forward (N=240)**

| | Study Arms | | Incremental effect of incentive | |
|---|---|---|---|---|
| | UC+ | Incentive | Estimate | [95% CI] |
| **Primary outcome** | | | | |
| Mean change in HbA1c at Month 6 | -0.54 | -0.79 | -0.24 | [-0.59, 0.11] |
| **Secondary outcomes** | | | | |
| Mean no. of glucose readings within acceptable range (out of 3 tests) during the last week of intervention | 0.12 | 0.41 | 0.29 | [0.08, 0.50] |
| Mean no. of glucose readings (out of 3 tests) during the last week of intervention | 0.14 | 0.21 | 0.07 | [-0.03, 0.17] |
| Mean no. of medication adherent days during the last week of intervention | 1.09 | 1.63 | 0.54 | [0.0004, 1.08] |
| Mean no. of physically active days during the last week of intervention | 1.39 | 2.26 | 0.87 | [0.29, 1.44] |

[a] Calculated as the difference in change from baseline at Month 6 between intervention and control groups.
Source: Author calculations using the data collected from the study.
Abbreviations:
HbA1c: Glycated Hemoglobin
EQ-5D-5L: EuroQol Five Dimension Scale

Marcel Bilger, Mitesh Shah, Ngiap Chuan Tan, Cynthia Y.L. Tan, Filipinas G. Bundoc, Joann Bairavi, Eric A. Finkelstein
Correspondence to Marcel Bilger (marcel.bilger@wu.ac.at), Vienna University of Business and Economics, Austria

Process and outcome-based financial incentives to improve self-management and glycemic control in people with Type 2 diabetes in Singapore: A randomized controlled trial

**Table 1.3 Estimated effects of the intervention by arms and the incremental effect of incentive[a]: Using a per protocol approach (N=240)**

| | Study Arms | | Incremental effect of incentive | |
|---|---|---|---|---|
| | UC+ | Incentive | Estimate | [95% CI] |
| **Primary outcome** | | | | |
| Mean change in HbA1c at Month 6 | -0.66 | -0.96 | -0.30 | [-0.67, 0.067] |
| **Secondary outcomes** | | | | |
| Mean no. of glucose readings within acceptable range (out of 3 tests) during the last week of intervention | 0.15 | 0.48 | 0.32 | [0.07, 0.57] |
| Mean no. of glucose readings (out of 3 tests) during the last week of intervention | 0.15 | 0.25 | 0.09 | [-0.03, 0.21] |
| Mean no. of medication adherent days during the last week of intervention | 1.12 | 1.84 | 0.71 | [0.06, 1.37] |
| Mean no. of physically active days during the last week of intervention | 1.36 | 2.51 | 1.15 | [0.44, 1.86] |

[a] Calculated as the difference in change from baseline at Month 6 between intervention and control groups.
Source: Author calculations using the data collected from the study.
Abbreviations:
HbA1c: Glycated Hemoglobin
EQ-5D-5L: EuroQol Five Dimension Scale

Marcel Bilger, Mitesh Shah, Ngiap Chuan Tan, Cynthia Y.L. Tan, Filipinas G. Bundoc, Joann Bairavi, Eric A. Finkelstein
Correspondence to Marcel Bilger (marcel.bilger@wu.ac.at), Vienna University of Business and Economics, Austria

Process and outcome-based financial incentives to improve self-management and glycemic control in people with Type 2 diabetes in Singapore: A randomized controlled trial

**Table 2.1 Estimated effects of the intervention by incentive arms and the incremental effect of outcome-based incentive[a]: Regressions not controlling for confounders (N=240)**

| | Incentive Arms | | Incremental effect of outcome-based vs. process-based incentives | |
|---|---|---|---|---|
| | Process | Outcome | Estimate | [95% CI] |
| **Primary outcome** | | | | |
| Mean change in HbA1c at Month 6 | -0.85 | -1.07 | -0.22 | [-0.62, 0.18] |
| **Secondary outcomes** | | | | |
| Mean no. of glucose readings within acceptable range (out of 3 tests) during the last week of intervention | 0.45 | 0.50 | 0.05 | [-0.23, 0.32] |
| Mean no. of glucose readings (out of 3 tests) during the last week of intervention | 0.29 | 0.22 | 0.37 | [-1.09, 0.37] |
| Mean no. of medication adherent days during the last week of intervention | 2.36 | 1.36 | -1.00 | [-1.74, -0.27] |
| Mean no. of physically active days during the last week of intervention | 3.50 | 1.69 | -1.81 | [-2.66, -0.96] |
| Mean incentive payout during the last week of intervention | 6.69 | 5.00 | -1.69 | [-3.58, 0.20] |
| Mean time (in minutes) taken by the intervention during the last week of intervention | 15.39 | 13.14 | -2.24 | [-4.17, -0.31] |

[a] Calculated as the difference in change from baseline at Month 6 between that adherence outcome and process groups.
Source: Author calculations using the data collected from the study.
Abbreviations:
HbA1c: Glycated Hemoglobin
EQ-5D-5L: EuroQol Five Dimension Scale

Marcel Bilger, Mitesh Shah, Ngiap Chuan Tan, Cynthia Y.L. Tan, Filipinas G. Bundoc, Joann Bairavi, Eric A. Finkelstein
Correspondence to Marcel Bilger (marcel.bilger@wu.ac.at), Vienna University of Business and Economics, Austria

Process and outcome-based financial incentives to improve self-management and glycemic control in people with Type 2 diabetes in Singapore: A randomized controlled trial

**Table 2.2 Estimated effects of the intervention by incentive arms and the incremental effect of outcome-based incentive[a]: Last observation carried forward (N=240)**

| | Incentive Arms | | Incremental effect of outcome-based vs. process-based incentives | |
|---|---|---|---|---|
| | **Process** | **Outcome** | **Estimate** | **[95% CI]** |
| **Primary outcome** | | | | |
| Mean change in HbA1c at Month 6 | -0.77 | -0.83 | -0.06 | [-0.41, 0.29] |
| **Secondary outcomes** | | | | |
| Mean no. of glucose readings within acceptable range (out of 3 tests) during the last week of intervention | 0.40 | 0.43 | 0.03 | [-0.20, 0.26] |
| Mean no. of glucose readings (out of 3 tests) during the last week of intervention | 0.25 | 0.19 | -0.06 | [-0.17, 0.05] |
| Mean no. of medication adherent days during the last week of intervention | 1.98 | 1.36 | -0.62 | [-1.19, -0.04] |
| Mean no. of physically active days during the last week of intervention | 2.96 | 1.76 | -1.20 | [-1.82, -0.57] |
| Mean incentive payout during the last week of intervention | 5.65 | 6.09 | 0.45 | [-1.23, 2.12] |
| Mean time (in minutes) taken by the intervention during the last week of intervention | 15.47 | 13.33 | -2.14 | [-4.25, -0.04] |

[a] Calculated as the difference in change from baseline at Month 6 between that adherence outcome and process groups.
Source: Author calculations using the data collected from the study.
Abbreviations:
HbA1c: Glycated Hemoglobin
EQ-5D-5L: EuroQol Five Dimension Scale

Marcel Bilger, Mitesh Shah, Ngiap Chuan Tan, Cynthia Y.L. Tan, Filipinas G. Bundoc, Joann Bairavi, Eric A. Finkelstein
Correspondence to Marcel Bilger (marcel.bilger@wu.ac.at), Vienna University of Business and Economics, Austria

Process and outcome-based financial incentives to improve self-management and glycemic control in people with Type 2 diabetes in Singapore: A randomized controlled trial

**Table 2.3 Estimated effects of the intervention by incentive arms and the incremental effect of outcome-based incentive[a]: Using a per protocol approach (N=240)**

| | Incentive Arms | | Incremental effect of outcome-based vs. process-based incentives | |
|---|---|---|---|---|
| | **Process** | **Outcome** | **Estimate** | **[95% CI]** |
| **Primary outcome** | | | | |
| Mean change in HbA1c at Month 6 | -0.94 | -1.00 | -0.05 | [-0.40, 0.30] |
| **Secondary outcomes** | | | | |
| Mean no. of glucose readings within acceptable range (out of 3 tests) during the last week of intervention | 0.45 | 0.50 | 0.06 | [-0.22, 0.33] |
| Mean no. of glucose readings (out of 3 tests) during the last week of intervention | 0.29 | 0.23 | -0.06 | [-0.19, 0.07] |
| Mean no. of medication adherent days during the last week of intervention | 2.19 | 1.53 | -0.66 | [-1.35, 0.02] |
| Mean no. of physically active days during the last week of intervention | 3.28 | 1.90 | -1.37 | [-2.13, -0.62] |
| Mean incentive payout during the last week of intervention | 6.01 | 6.86 | 0.85 | [-1.40, 3.10] |
| Mean time (in minutes) taken by the intervention during the last week of intervention | 15.70 | 12.84 | -2.86 | [-4.91, -0.80] |

[a] Calculated as the difference in change from baseline at Month 6 between that adherence outcome and process groups.
Source: Author calculations using the data collected from the study.
Abbreviations:
HbA1c: Glycated Hemoglobin
EQ-5D-5L: EuroQol Five Dimension Scale

Marcel Bilger, Mitesh Shah, Ngiap Chuan Tan, Cynthia Y.L. Tan, Filipinas G. Bundoc, Joann Bairavi, Eric A. Finkelstein
Correspondence to Marcel Bilger (marcel.bilger@wu.ac.at), Vienna University of Business and Economics, Austria