**ONLINE SUPPLEMENTAL TABLES AND FIGURES**

*Evaluation of a Produce Prescription Program for Patients with Diabetes: A Longitudinal Analysis of Glycemic Control*

Hager et al.

**Figure S1: Systolic Blood Pressure by Month Intervals from Weighted GEE Regression for all Participants**

**Chart, line chart

Description automatically generated**

Results are from longitudinal, generalized estimating equation model using overlap weights created from propensity scores that predict probability of treatment. Each dot represents mean SBP in treatment (blue) or control (red) group within a monthly interval, e.g., baseline, within 1st month, within 2nd month, etc. Bars represent 95% confidence intervals. With overlap weights applied, the mean SBP at baseline is equivalent for treatment and control groups. Confidence intervals are smallest at baseline because every participant in the treatment and control groups have a baseline measurement.

**Figure S2: Diastolic Blood Pressure by Month Intervals from Weighted GEE Regression for all Participants**

**Chart, line chart

Description automatically generated**

Results are from longitudinal, generalized estimating equation model using overlap weights created from propensity scores that predict probability of treatment. Each dot represents mean DBP in treatment (blue) or control (red) group within a monthly interval, e.g., baseline, within 1st month, within 2nd month, etc. Bars represent 95% confidence intervals. With overlap weights applied, the mean DBP at baseline is equivalent for treatment and control groups. Confidence intervals are smallest at baseline because every participant in the treatment and control groups have a baseline measurement.

**Figure S3: Body Mass Index by Month Intervals from Weighted GEE Regression for all Participants**

**Chart, line chart

Description automatically generated**

Results are from longitudinal, generalized estimating equation model using overlap weights created from propensity scores that predict probability of treatment. Each dot represents mean BMI in treatment (blue) or control (red) group within a monthly interval, e.g., baseline, within 1st month, within 2nd month, etc. Bars represent 95% confidence intervals. With overlap weights applied, the mean BMI at baseline is equivalent for treatment and control groups. Confidence intervals are smallest at baseline because every participant in the treatment and control groups have a baseline measurement.

**Table S1: Change in HbA1c between Treatment and Control Group from Baseline to 9 Months by Month since Enrollment**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Month since Enrollment** | **Total number of measurements** | **Change in HbA1c in Participants** *Weighted Mean (SE)* | **Change in HbA1c in Controls** *Weighted Mean (SE)* | **Between Group**  **Difference** *Weighted Mean (95% CI)* |
| 0 | 786 | 8.617(0.102) | 8.617(0.143) | 0.000(-0.345,0.345) |
| 1 | 927 | -0.012(0.019) | -0.057(0.048) | 0.045(-0.055,0.146) |
| 2 | 1059 | -0.057(0.030) | -0.067(0.058) | 0.010(-0.117,0.137) |
| 3 | 1166 | -0.150(0.038) | -0.153(0.064) | 0.003(-0.143,0.150) |
| 4 | 1268 | -0.099(0.044) | -0.183(0.069) | 0.084(-0.077,0.245) |
| 5 | 1347 | -0.115(0.060) | -0.206(0.070) | 0.091(-0.089,0.271) |
| 6 | 1486 | -0.113(0.062) | -0.246(0.070) | 0.134(-0.049,0.317) |
| 7 | 1654 | -0.142(0.060) | -0.228(0.078) | 0.086(-0.106,0.278) |
| 8 | 1858 | -0.134(0.059) | -0.216(0.077) | 0.081(-0.108,0.271) |
| 9 | 2045 | -0.126(0.057) | -0.188(0.079) | 0.063(-0.128,0.253) |

Results are from longitudinal, generalized estimating equation model using overlap weights created from propensity scores. Separate regression models were run for each time period and included all available HbA1c measurements starting from enrollment to the end of each month. Produce prescription program lasted 6 months for each participant. With overlap weights applied, the mean Hba1c at baseline is equivalent for treatment and control groups.

**Table S2. Change in Hba1c, Blood Pressure, and Body Mass Index between Treatment and Control Groups for Participants with HbA1c > 8.0% at Enrollment**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Outcome** | **6-Month** | | |  |  | **9-Month** |  |
| Change in Treatment | Change in  Control | Between Group Difference |  | Change in Treatment | Change in  Control | Between Group Difference |
| *mean (SE)* | *mean (SE)* | *β (95% CI)* |  | *mean (SE)* | *mean (SE)* | *β (95% CI)* |
| HbA1c, *%* | -0.23 (0.11) | -0.35 (0.10) | 0.12 (-0.18, 0.41) |  | -0.34 (0.10) | -0.27 (0.12) | -0.06 (-0.37, 0.24) |
| SBP, *mmHg* | -0.02 (1.33) | -3.36 (2.62) | 3.34 (-2.42, 9.10) |  | 0.01 (1.83) | -2.69 (2.28) | 2.702 (-3.017,8.42) |
| DBP, *mmHg* | -2.13 (1.25) | -1.32 (1.13) | -0.81 (-4.10, 2.49) |  | -1.61 (1.39) | -0.95 (1.12) | -0.65 (-4.16, 2.85) |
| BMI, *kg/m2* | -0.08 (0.11) | -0.15 (0.12) | 0.07 (-0.26, 0.39) |  | -0.20 (0.14) | -0.23 (0.14) | 0.04 (-0.35, 0.43) |

N=146 in treatment group, N= 208 in control group

Results are from longitudinal, generalized estimating equation models using overlap weights created from propensity scores. All measures taken from baseline to 6 months were included in the 6-month analysis; all measures taken from baseline to 9 months were included in the 9-month analysis. Produce prescription program lasted 6 months for each participant.

**Table S3: Incidence rate of inpatient hospitalizations and emergency department admission associated with program participation at 6- and 9- months after enrollment**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Time Interval** | **Treatment** | | **Control** | | **Incidence Rate Ratio** (95%CI) |
| **Count** | **Incidence Rate** (SE) | **Count** | **Incidence Rate** (SE) |
| **Inpatient Hospitalizations** | | | | | |
| 6-month | 1 | 0.01 (0.01) | 8 | 0.04 (0.01) | 0.20 (0.02,1.60) |
| 9-month | 3 | 0.02 (0.01) | 17 | 0.07 (0.02) | 0.32 (0.09,1.14) |
| **Emergency Department** | | | | | |
| 6-month | 1 | 0.01 (0.01) | 2 | 0.01 (0.01) | 0.72 (0.06, 7.96) |
| 9-month | 3 | 0.02 (0.02) | 3 | 0.02 (0.01) | 1.44 (0.29, 7.14) |

N=146 in treatment group, N= 208 in control group

Results are from negative binomial generalized estimating equation models using overlap weights created from propensity scores. Models describe the incidence rate ratio (ie, relative risk) of hospitalization or emergency department admissions between treatment and control groups. With overlap weights applied, the mean count of inpatient hospitalizations and emergency department admissions within the 6-months prior to enrollment is equivalent for treatment and control groups. Produce prescription program lasted 6 months for each participant.

**Figure S4: HbA1c by Month Intervals from Weighted GEE Regression among participants with HbA1c > 8.0% at Enrollment**

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Results are from longitudinal, generalized estimating equation model using overlap weights created from propensity scores that predict probability of treatment. Each dot represents mean HbA1c in treatment (blue) or control (red) group within a monthly interval, e.g., baseline, within 1st month, within 2nd month, etc. Bars represent 95% confidence intervals. With overlap weights applied, the mean Hba1c at baseline is equivalent for treatment and control groups. Confidence intervals are smallest at baseline because every participant in the treatment and control groups have a baseline measurement.

**Table S4: Change in Hba1c between Treatment and Control Groups, Stratified by Measurements prior to COVID-19 and during COVID-19**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Month Since Enrollment** | **Number of Measurements** | **Change in  Participants**  *Mean (SE)* | **Change in Controls**  *Mean (SE)* | **Between Group Difference** *Mean (95% CI)* |
| *Prior to COVID-19 (Nov 2019 – Mar 2020)* | | | | |
| Baseline | 362 | 8.67 (0.17) | 8.67 (0.21) | 0.00 (-0.54, 0.54) |
| 1 | 68 | -0.13 (0.09) | -0.10 (0.30) | -0.02 (-0.64, 0.60) |
| 2 | 136 | -0.15 (0.18) | -0.08 (0.28) | -0.07 (-0.72, 0.58) |
| 3 | 122 | -0.68 (0.25) | 0.33 (0.47) | -1.01 (-2.06, 0.04) |
| 4 | 60 | -0.27 (0.16) | -0.24 (0.31) | -0.02 (-0.71, 0.67) |
| 5 | 30 | -0.34 (0.54) | -0.89 (0.27) | 0.55 (-0.61, 1.71) |
| *During COVID-19 (May 2020 – Nov 2020)* | | | | |
| Baseline | 621 | 8.59 (0.11) | 8.59 (0.17) | 0.00 (-0.40, 0.40) |
| 4 | 43 | -0.08 (1.08) | -0.46 (0.31) | 0.37 (-1.82, 2.57) |
| 5 | 87 | -0.09 (0.44) | -0.52 (0.23) | 0.43 (-0.54, 1.41) |
| 6 | 155 | -0.24 (0.27) | -0.41 (0.21) | 0.17 (-0.50, 0.85) |
| 7 | 182 | -0.26 (0.19) | -0.33 (0.16) | 0.07 (-0.42, 0.56) |
| 8 | 216 | -0.19 (0.14) | -0.14 (0.14) | -0.05 (-0.44, 0.33) |
| 9 | 53 | -0.14 (0.14) | -0.14 (0.13) | 0.00 (-0.37, 0.38) |

Results are from longitudinal, generalized estimating equation models using overlap weights created from propensity scores. Produce prescription program lasted 6 months for each participant and enrollment occurred on a rolling basis from Nov – Mar 2022.

**Table S5: Change in HbA1c among Treatment Group only, Stratified by Household Size**

|  |  |  |  |
| --- | --- | --- | --- |
| **Household Size** | **Sample Size** | **Baseline HbA1c**  *Mean (SE)* | **6-Month HbA1c Change**  *Mean (95% CI)* |
| 1 | 85 | 8.74 (0.19) | 0.02 (-0.58, 0.60) |
| 2 | 76 | 8.76 (0.20) | -0.32 (-0.75, 0.12) |
| 3 | 35 | 8.67 (0.31) | -0.05 (-0.62, 0.51) |
| 4-6 | 38 | 9.39 (0.28) | -0.23 (-0.76, 0.29) |

Results are from longitudinal, generalized estimating equation models controlling for including age, biological sex (male, female), self-reported race/ethnicity (Non-Hispanic White, non-Hispanic Black, Hispanic, other), health insurance status (Medicaid, Medicare, private / other), self-reported smoking status (never, current, former); history of congestive heart failure, cancer, chronic obstructive pulmonary disease, stroke, and renal disease; and the number of clinic visits, clinical consults, outpatient visits, inpatient hospitalizations, and emergency department visits in the six months prior to program enrollment.