# Supplemental Online Content

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# 1 Descriptive Analyses of Baseline Participant Characteristics

Characteristics collected at baseline but not included in Table 1 of main paper. This analysis is based on the original statistical analysis plan.

## 1.1 eTable 1. Baseline Characteristics by Arm

| Characteristic | Total (n=805) | Control (n=201) | Sweepstakes (n=199) | Deadline Sweepstakes (n=204) | Sweepstakes & Contract (n=201) |
|---|---|---|---|---|---|
| Health Condition, n (%) | | | | | |
| Excellent | 29 (3.6) | 4 (2.0) | 8 (4.0) | 6 (2.9) | 11 (5.5) |
| Very Good | 181 (22.5) | 53 (26.4) | 37 (18.6) | 42 (20.6) | 49 (24.4) |
| Good | 365 (45.3) | 86 (42.8) | 93 (46.7) | 98 (48.0) | 88 (43.8) |
| Fair | 211 (26.2) | 56 (27.9) | 57 (28.6) | 54 (26.5) | 44 (21.9) |
| Poor | 19 (2.4) | 2 (1.0) | 4 (2.0) | 4 (2.0) | 9 (4.5) |
| Stages of Change, n (%)[a] | | | | | |
| Maintenance Stage | 549 (68.2) | 140 (69.7) | 124 (62.3) | 144 (70.6) | 141 (70.1) |
| Action Stage | 220 (27.3) | 54 (26.9) | 63 (31.7) | 53 (26.0) | 50 (24.9) |
| Preparation Stage | 26 (3.2) | 4 (2.0) | 10 (5.0) | 5 (2.5) | 7 (3.5) |
| Contemplation Stage | 8 (1.0) | 2 (1.0) | 1 (0.5) | 2 (1.0) | 3 (1.5) |
| Pre-contemplation Stage | 2 (0.2) | 1 (0.5) | 1 (0.5) | 0 (0.0) | 0 (0.0) |
| Patient Activation Measure Level, n (%)[b] | | | | | |
| May not yet believe that the patient role is important | 23 (2.9) | 7 (3.5) | 5 (2.5) | 5 (2.5) | 6 (3.0) |
| Lacks confidence and knowledge to take action | 29 (3.6) | 7 (3.5) | 8 (4.0) | 8 (3.9) | 6 (3.0) |
| Beginning to take action | 85 (10.6) | 21 (10.4) | 20 (10.1) | 23 (11.3) | 21 (10.4) |
| Has difficulty maintaining behaviors over time | 668 (83.0) | 166 (82.6) | 166 (83.4) | 168 (82.4) | 168 (83.6) |
| Financial incentives will help me to take my statin [c], n (%) | | | | | |
| Strongly disagree | 127 (15.8) | 30 (14.9) | 39 (19.6) | 27 (13.3) | 31 (15.4) |
| Somewhat disagree | 112 (13.9) | 26 (12.9) | 28 (14.1) | 30 (14.8) | 28 (13.9) |
| Neither agree or disagree | 234 (29.1) | 59 (29.4) | 54 (27.1) | 65 (32.0) | 56 (27.9) |
| Agree | 212 (26.4) | 55 (27.4) | 45 (22.6) | 51 (25.1) | 61 (30.3) |
| Strongly agree | 119 (14.8) | 31 (15.4) | 33 (16.6) | 30 (14.8) | 25 (12.4) |
| Financial incentives will help ot hers to take their statin [c], n (%) | | | | | |
| Strongly disagree | 36 (4.5) | 10 (5.0) | 9 (4.5) | 6 (3.0) | 11 (5.5) |
| Somewhat disagree | 57 (7.1) | 18 (9.0) | 13 (6.5) | 13 (6.4) | 13 (6.5) |
| Neither agree or disagree | 236 (29.4) | 56 (27.9) | 59 (29.6) | 55 (27.1) | 66 (32.8) |
| Agree | 346 (43.0) | 85 (42.3) | 82 (41.2) | 101 (49.8) | 78 (38.8) |
| Strongly agree | 129 (16.0) | 32 (15.9) | 36 (18.1) | 28 (13.8) | 33 (16.4) |
| Household Size[c], mean (SD) | 2.5 (1.4) | 2.6 (1.4) | 2.7 (1.5) | 2.4 (1.5) | 2.5 (1.3) |

| Characteristic | Total (n=805) | Control (n=201) | Sweepstakes (n=199) | Deadline Sweepstakes (n=204) | Sweepstakes & Contract (n=201) |
|---|---|---|---|---|---|
| Financial situation[c,g], n (%) | | | | | |
| Very constrained | 150 (18.7) | 38 (18.9) | 42 (21.2) | 35 (17.2) | 35 (17.5) |
| Somewhat constrained | 228 (28.4) | 65 (32.3) | 57 (28.8) | 55 (27.1) | 51 (25.5) |
| Neutral | 205 (25.6) | 44 (21.9) | 52 (26.3) | 49 (24.1) | 60 (30.0) |
| Somewhat comfortable | 171 (21.3) | 43 (21.4) | 34 (17.2) | 55 (27.1) | 39 (19.5) |
| Very comfortable | 48 (6.0) | 11 (5.5) | 13 (6.6) | 9 (4.4) | 15 (7.5) |
| Spare money this week[c,d], mean (SD) | 3.7 (2.8) | 3.7 (2.7) | 3.4 (2.5) | 3.9 (2.9) | 3.9 (3.0) |
| Able to pay next month[c,e,g] mean (SD) | 4.2 (3.8) | 3.9 (3.7) | 4 (3.7) | 4.6 (3.9) | 4.3 (3.9) |
| Are you generally fully prepared to take risks[c,f,g], mean (SD) | 4.9 (2.6) | 5 (2.6) | 4.7 (2.5) | 5.1 (2.7) | 5 (2.8) |

[a]Nigg, C.R., Burbank, P., Padula, C., Dufresne, R., Rossi, J. S., Velicer, W. F., Laforge, R. G. & Prochaska, J. O. (1999). Stages of change across ten health risk behaviors for older adults. *The Gerontologist*, 39, 473-482

[b] Insignia Health. Patient Activation Measure; Copyright 2003-2010, University of Oregon. All Rights reserved."

[c] Not all participants responded; incomplete data.

[d] Think about your specific expenses and your available spare money this week. How much available spare money do you have this week? This question scores from 1 – Very little available money to 11 – A lot of available money

[e] Imagine that next month you had an unexpected expense of $1,500 such as a medical bill or a necessary car repair. How likely is it that you would be able to pay this bill in full and on time without having to dip into your retirement fund, borrow money or charge it to a credit card? This question scores from 1 – Very Unlikely to 11 – Very likely

[f] Score from 1 – Not prepared to take risks to 10 – Fully prepared to take risks

[g] From SLACK questionnaire as described in: Zauberman, G. & Lynch, J.G. (2005) Resource Slack and Propensity to Discount Delayed Investments of Time Versus Money. *Journal of Experimental Psychology: General*, 134, 23-37.

# 2 Measured Adherence Analyses

## 2.1 eTable 2. Measured Adherence 0-6 Months (Means, 95% CI) by Arm

This analysis is based on the original statistical analysis plan.

| Subgroup | Analysis | Metric | Arm | | | |
|---|---|---|---|---|---|---|
| | | | Control | Simple Sweepstakes | Deadline Sweepstakes | Sweepstakes & Deposit |
| Gender | Female (n=519) | Individual Group | 0.64 (0.60, 0.68) | 0.82 (0.78, 0.87) | 0.84 (0.80, 0.88) | 0.87 (0.83, 0.91) |
| | | Difference from control | | 0.18 (0.12, 0.24) | 0.20 (0.14, 0.26) | 0.22 (0.17, 0.28) |
| | | P-value | | <.001 | <.001 | <.001 |
| | Male (n=286) | Individual Group | 0.77 (0.73, 0.80) | 0.87 (0.83, 0.90) | 0.88 (0.84, 0.92) | 0.89 (0.85, 0.93) |
| | | Difference from control | | 0.10 (0.05, 0.15) | 0.12 (0.06, 0.17) | 0.12 (0.07, 0.18) |
| | | P-value | | <.001 | <.001 | <.001 |
| Race | Black (n=384) | Individual Group | 0.65 (0.60, 0.69) | 0.81 (0.77, 0.86) | 0.83 (0.78, 0.87) | 0.85 (0.80, 0.89) |
| | | Difference from control | | 0.16 (0.10, 0.23) | 0.18 (0.12, 0.25) | 0.20 (0.14, 0.27) |
| | | P-value | | <.001 | <.001 | <.001 |
| | White (n=370) | Individual Group | 0.75 (0.71, 0.78) | 0.87 (0.83, 0.91) | 0.89 (0.85, 0.93) | 0.90 (0.86, 0.94) |
| | | Difference from control | | 0.13 (0.07, 0.18) | 0.14 (0.09, 0.19) | 0.15 (0.10, 0.21) |
| | | P-value | | <.001 | <.001 | <.001 |
| | Other (n=53) | Individual Group | 0.53 (0.40, 0.66) | 0.83 (0.69, 0.97) | 0.88 (0.74, 1.02) | 0.86 (0.73, 0.99) |
| | | Difference from control | | 0.30 (0.10, 0.49) | 0.35 (0.16, 0.54) | 0.33 (0.14, 0.52) |
| | | P-value | | 0.003 | <.001 | <.001 |
| Income | Below $50,000 (n=414) | Individual Group | 0.67 (0.62, 0.71) | 0.83 (0.78, 0.87) | 0.84 (0.79, 0.88) | 0.87 (0.82, 0.91) |
| | | Difference from control | | 0.16 (0.10, 0.23) | 0.17 (0.11, 0.23) | 0.20 (0.14, 0.26) |
| | | P-value | | <.001 | <.001 | <.001 |
| | Above $50,000 (n=380) | Individual Group | 0.72 (0.68, 0.75) | 0.85 (0.81, 0.89) | 0.88 (0.84, 0.91) | 0.88 (0.85, 0.92) |
| | | Difference from control | | 0.13 (0.08, 0.19) | 0.16 (0.11, 0.21) | 0.17 (0.11, 0.22) |
| | | P-value | | <.001 | <.001 | <.001 |
| Baseline LDL levels | 100-129 mg/l (n=419) | Individual Group | 0.71 (0.67, 0.75) | 0.84 (0.79, 0.88) | 0.87 (0.83, 0.91) | 0.88 (0.84, 0.92) |
| | | Difference from control | | 0.13 (0.07, 0.19) | 0.16 (0.10, 0.21) | 0.17 (0.12, 0.23) |
| | | P-value | | <.001 | <.001 | <.001 |

| Subgroup | Analysis | Metric | Arm | | | |
|---|---|---|---|---|---|---|
| | | | Control | Simple Sweepstakes | Deadline Sweepstakes | Sweepstakes & Deposit |
| Baseline LDL levels | 130-159 mg/l (n=173) | Individual Group | 0.68 (0.62, 0.75) | 0.84 (0.78, 0.90) | 0.87 (0.80, 0.93) | 0.86 (0.80, 0.92) |
| | | Difference from control | | 0.16 (0.07, 0.25) | 0.18 (0.09, 0.27) | 0.17 (0.09, 0.26) |
| | | P-value | | <.001 | <.001 | <.001 |
| | 160-189 mg/l (n=70) | Individual Group | 0.68 (0.60, 0.77) | 0.87 (0.79, 0.95) | 0.85 (0.77, 0.94) | 0.88 (0.76, 1.00) |
| | | Difference from control | | 0.18 (0.06, 0.30) | 0.17 (0.05, 0.29) | 0.20 (0.05, 0.34) |
| | | P-value | | 0.003 | 0.008 | 0.011 |
| | >190 mg/l (n=143) | Individual Group | 0.63 (0.56, 0.70) | 0.82 (0.75, 0.90) | 0.81 (0.73, 0.90) | 0.86 (0.79, 0.94) |
| | | Difference from control | | 0.19 (0.09, 0.30) | 0.18 (0.07, 0.29) | 0.23 (0.13, 0.34) |
| | | P-value | | <.001 | 0.001 | <.001 |

## 2.2 eTable 3. Measured Adherence During Final 30 Days of Intervention (Means, 95% CI) by Arm

This analysis is based on post-hoc additions to the statistical analysis plan.

| Subgroup | Analysis | Metric | Arm | | | |
|---|---|---|---|---|---|---|
| | | | Control | Simple Sweepstakes | Deadline Sweepstakes | Sweepstakes & Deposit |
| Gender | Female (n=519) | Individual Group | 0.54 (0.49, 0.60) | 0.74 (0.69, 0.80) | 0.81 (0.75, 0.86) | 0.82 (0.77, 0.88) |
| | | Difference from control | | 0.20 (0.12, 0.28) | 0.27 (0.19, 0.34) | 0.28 (0.20, 0.36) |
| | | P-value | | <.001 | <.001 | <.001 |
| | Male (n=286) | Individual Group | 0.68 (0.62, 0.73) | 0.82 (0.76, 0.87) | 0.86 (0.81, 0.92) | 0.87 (0.81, 0.92) |
| | | Difference from control | | 0.14 (0.06, 0.22) | 0.19 (0.11, 0.27) | 0.19 (0.11, 0.27) |
| | | P-value | | <.001 | <.001 | <.001 |
| Race | Black (n=384) | Individual Group | 0.55 (0.48, 0.61) | 0.74 (0.68, 0.80) | 0.79 (0.73, 0.85) | 0.79 (0.73, 0.86) |
| | | Difference from control | | 0.19 (0.11, 0.28) | 0.24 (0.15, 0.33) | 0.25 (0.15, 0.34) |
| | | P-value | | <.001 | <.001 | <.001 |
| | White (n=370) | Individual Group | 0.65 (0.60, 0.71) | 0.80 (0.74, 0.86) | 0.87 (0.81, 0.93) | 0.88 (0.83, 0.94) |
| | | Difference from control | | 0.15 (0.07, 0.23) | 0.22 (0.14, 0.30) | 0.23 (0.15, 0.31) |
| | | P-value | | <.001 | <.001 | <.001 |

| Subgroup | Analysis | Metric | Arm | | | |
|---|---|---|---|---|---|---|
| | | | Control | Simple Sweepstakes | Deadline Sweepstakes | Sweepstakes & Deposit |
| Race | Other (n=53) | Individual Group | 0.45 (0.28, 0.62) | 0.80 (0.61, 0.99) | 0.86 (0.67, 1.04) | 0.85 (0.67, 1.02) |
| | | Difference from control | | 0.35 (0.09, 0.61) | 0.41 (0.15, 0.66) | 0.40 (0.15, 0.64) |
| | | P-value | | 0.008 | 0.003 | 0.002 |
| Income | Below $50,000 (n=414) | Individual Group | 0.56 (0.49, 0.62) | 0.77 (0.71, 0.83) | 0.81 (0.75, 0.87) | 0.82 (0.75, 0.88) |
| | | Difference from control | | 0.21 (0.13, 0.30) | 0.25 (0.17, 0.34) | 0.26 (0.17, 0.35) |
| | | P-value | | <.001 | <.001 | <.001 |
| | Above $50,000 (n=380) | Individual Group | 0.64 (0.58, 0.69) | 0.77 (0.72, 0.83) | 0.85 (0.79, 0.90) | 0.87 (0.82, 0.92) |
| | | Difference from control | | 0.14 (0.06, 0.21) | 0.21 (0.13, 0.29) | 0.23 (0.16, 0.31) |
| | | P-value | | <.001 | <.001 | <.001 |
| Baseline LDL levels | 100-129 mg/l (n=419) | Individual Group | 0.62 (0.56, 0.68) | 0.76 (0.70, 0.82) | 0.84 (0.79, 0.90) | 0.86 (0.81, 0.92) |
| | | Difference from control | | 0.14 (0.05, 0.22) | 0.22 (0.14, 0.30) | 0.24 (0.16, 0.32) |
| | | P-value | | 0.001 | <.001 | <.001 |
| | 130-159 mg/l (n=173) | Individual Group | 0.55 (0.46, 0.65) | 0.77 (0.68, 0.86) | 0.82 (0.72, 0.92) | 0.82 (0.73, 0.90) |
| | | Difference from control | | 0.22 (0.08, 0.35) | 0.26 (0.13, 0.40) | 0.26 (0.13, 0.39) |
| | | P-value | | 0.001 | <.001 | <.001 |
| | 160-189 mg/l (n=70) | Individual Group | 0.56 (0.42, 0.70) | 0.80 (0.67, 0.93) | 0.80 (0.67, 0.94) | 0.80 (0.61, 0.99) |
| | | Difference from control | | 0.24 (0.05, 0.43) | 0.25 (0.05, 0.44) | 0.24 (0.01, 0.48) |
| | | P-value | | 0.014 | 0.014 | 0.044 |
| | >190 mg/l (n=143) | Individual Group | 0.56 (0.47, 0.66) | 0.78 (0.67, 0.88) | 0.80 (0.69, 0.91) | 0.81 (0.70, 0.91) |
| | | Difference from control | | 0.21 (0.07, 0.35) | 0.24 (0.09, 0.38) | 0.24 (0.10, 0.38) |
| | | P-value | | 0.003 | 0.001 | <.001 |

# 3 Change in LDL-c Analyses

## 3.1 Change in LDL-c during the study

### 3.1.1 eTable 4. Change in LDL-C From Baseline to 12 Months (Means, 95% CI) by Arm [a]

This analysis is based on the original statistical analysis plan.

| Subgroup | Analysis | Metric | Arm | | | |
|---|---|---|---|---|---|---|
| | | | Control | Simple Sweepstakes | Deadline Sweepstakes | Sweepstakes & Deposit |
| - | Complete Case, adjusting for baseline LDL[b] (n=636) | Individual Group | -33.9 (-39.2, -28.6) | -32.9 (-38.2, -27.7) | -33.2 (-38.4, -28.1) | -36.9 (-42.2, -31.7) |
| | | Difference from control | | 0.9 (-6.5, 8.4) | 0.6 (-6.8, 8.0) | -3.0 (-10.5, 4.4) |
| | | P-value | | 0.803 | 0.866 | 0.422 |
| - | Without adjusting for baseline LDL (n=805) | Individual Group | -35.8 (-42.1, -29.4) | -33.9 (-40.2, -27.6) | -31.5 (-37.8, -25.3) | -34.6 (-40.9, -28.2) |
| | | Difference from control | | 1.8 (-7.1, 10.7) | 4.2 (-4.7, 13.2) | 1.2 (-7.7, 10.1) |
| | | P-value | | 0.687 | 0.354 | 0.790 |
| - | Adjusting for baseline LDL, race, gender, income and education (n=805) | Individual Group | -39.3 (-49.1, -29.4) | -38.6 (-48.3, -28.9) | -39.1 (-48.4, -29.7) | -42.1 (-51.7, -32.5) |
| | | Difference from control | | -0.6 (-7.8, 6.5) | -0.4 (-7.7, 6.8) | -3.5 (-10.8, 3.8) |
| | | P-value | | 0.862 | 0.910 | 0.350 |
| Gender | Female, adjusting for baseline LDL (n=519) | Individual Group | -31.6 (-38.1, -25.2) | -30.9 (-37.4, -24.4) | -31.0 (-37.3, -24.6) | -34.5 (-41.1, -27.8) |
| | | Difference from control | | 0.7 (-8.4, 9.9) | 0.6 (-8.6, 9.8) | -2.9 (-12.0, 6.3) |
| | | P-value | | 0.874 | 0.893 | 0.542 |
| | Male, adjusting for baseline LDL (n=286) | Individual Group | -37.3 (-45.7, -28.8) | -35.5 (-43.6, -27.4) | -37.1 (-45.3, -28.9) | -40.0 (-48.2, -31.7) |
| | | Difference from control | | 1.8 (-9.9, 13.5) | 0.2 (-11.5, 11.9) | -2.7 (-14.3, 8.9) |
| | | P-value | | 0.762 | 0.975 | 0.650 |
| Race | Black, adjusting for baseline LDL (n=384) | Individual Group | -29.9 (-37.8, -22.1) | -30.9 (-38.1, -23.7) | -24.9 (-32.1, -17.6) | -31.9 (-39.8, -24.0) |
| | | Difference from control | | -1.0 (-11.7, 9.7) | 5.1 (-5.6, 15.8) | -2.0 (-13.0, 9.1) |
| | | P-value | | 0.859 | 0.352 | 0.728 |
| | White, adjusting for baseline LDL (n=370) | Individual Group | -36.0 (-42.9, -29.0) | -32.4 (-39.9, -25.0) | -39.6 (-46.8, -32.4) | -39.6 (-46.6, -32.6) |
| | | Difference from control | | 3.6 (-6.5, 13.6) | -3.6 (-13.5, 6.3) | -3.6 (-13.3, 6.1) |
| | | P-value | | 0.489 | 0.472 | 0.468 |
| | Other, adjusting for baseline LDL (n=53) | Individual Group | -39.7 (-61.1, -18.4) | -42.2 (-63.8, -20.6) | -58.1 (-81.0, -35.2) | -42.8 (-63.9, -21.7) |
| | | Difference from control | | -2.5 (-32.7, 27.7) | -18.3 (-49.3, 12.6) | -3.0 (-32.7, 26.6) |
| | | P-value | | 0.872 | 0.246 | 0.841 |

| Subgroup | Analysis | Metric | Arm | | | |
|---|---|---|---|---|---|---|
| | | | Control | Simple Sweepstakes | Deadline Sweepstakes | Sweepstakes & Deposit |
| Income | Below $50,000, adjusting for baseline LDL (n=414) | Individual Group | -29.8 (-37.1, -22.5) | -28.8 (-36.0, -21.7) | -26.3 (-33.7, -19.0) | -30.7 (-38.1, -23.3) |
| | | Difference from control | | 1.0 (-9.3, 11.2) | 3.5 (-6.9, 13.9) | -0.9 (-11.2, 9.5) |
| | | P-value | | 0.855 | 0.512 | 0.871 |
| | Above $50,000, adjusting for baseline LDL (n=380) | Individual Group | -37.4 (-44.7, -30.0) | -35.9 (-43.1, -28.7) | -39.9 (-47.0, -32.8) | -41.9 (-49.1, -34.6) |
| | | Difference from control | | 1.5 (-8.7, 11.7) | -2.5 (-12.7, 7.7) | -4.5 (-14.8, 5.8) |
| | | P-value | | 0.775 | 0.626 | 0.390 |
| Baseline LDL levels | 100-129 mg/l (n=419) | Individual Group | -18.2 (-24.5, -11.8) | -14.7 (-21.0, -8.4) | -15.5 (-21.4, -9.6) | -15.7 (-21.8, -9.6) |
| | | Difference from control | | 3.4 (-5.3, 12.2) | 2.7 (-6.0, 11.3) | 2.4 (-6.3, 11.2) |
| | | P-value | | 0.441 | 0.544 | 0.584 |
| | 130-159 mg/l (n=173) | Individual Group | -36.5 (-48.3, -24.7) | -21.3 (-32.9, -9.7) | -34.5 (-47.0, -21.9) | -33.4 (-44.2, -22.7) |
| | | Difference from control | | 15.2 (-1.3, 31.7) | 2.1 (-14.9, 19.0) | 3.1 (-12.8, 19.0) |
| | | P-value | | 0.070 | 0.812 | 0.703 |
| | 160-189 mg/l (n=70) | Individual Group | -36.6 (-54.8, -18.5) | -59.5 (-75.2, -43.9) | -46.4 (-63.5, -29.4) | -63.9 (-86.4, -41.4) |
| | | Difference from control | | -22.9 (-46.7, 0.9) | -9.8 (-35.1, 15.5) | -27.3 (-55.6, 1.1) |
| | | P-value | | 0.060 | 0.448 | 0.060 |
| | >190 mg/l (n=143) | Individual Group | -75.1 (-89.3, -60.8) | -84.1 (-99.0, -69.3) | -77.7 (-93.3, -62.0) | -90.4 (-106.2, -74.6) |
| | | Difference from control | | -9.1 (-29.7, 11.5) | -2.6 (-23.9, 18.7) | -15.4 (-36.8, 6.0) |
| | | P-value | | 0.387 | 0.808 | 0.159 |
| Recruitment site | Employer or Insurance, adjusting for baseline LDL (n=67) | Individual Group | -18.9 (-35.3, -2.6) | -13.4 (-27.8, 0.9) | -31.5 (-45.7, -17.4) | -20.2 (-35.6, -4.7) |
| | | Difference from control | | 5.5 (-16.2, 27.3) | -12.6 (-34.2, 9.0) | -1.2 (-23.4, 21.0) |
| | | P-value | | 0.618 | 0.252 | 0.915 |
| | Penn Medicine, adjusting for baseline LDL (n=738) | Individual Group | -35.0 (-40.4, -29.5) | -34.2 (-39.6, -28.7) | -33.3 (-38.7, -27.9) | -37.9 (-43.4, -32.5) |
| | | Difference from control | | 0.8 (-6.8, 8.4) | 1.7 (-6.1, 9.5) | -2.9 (-10.6, 4.7) |
| | | P-value | | 0.833 | 0.669 | 0.450 |

[a] Incomplete follow-up LDL measurements were addressed using multiple imputation unless noted otherwise

[b] Incomplete follow-up LDL measurements were NOT addressed using multiple imputation

## 3.2 Maintenance of LDL-C Post-study

This analysis is based on post-hoc additions to the statistical analysis plan.

We considered whether participation in the trial succeeded in creating behaviors consistent with long-term maintenance of LDL-C levels obtained at the end of the official trial period. For 738 participants who were enrolled from the Penn Medicine, we obtained lab results from the Electronic Health Record (EHR) up to 36 months after participation in the study ended. At the time of data extraction, 498 (67.5%) participants had at least one post-study LDL measurement. 100% of the Penn Medicine participants had at least 24 months of follow-up, and 365 (49.5%) of the Penn Medicine participants had 36 months of follow-up.
As seen in eTable 5, participants who lacked any post-study measurement tended to have higher baseline LDL-C and were more likely to be black.

### 3.2.1 eTable 5. Penn Medicine: Baseline Characteristics of Participants With and Without a Post-Study LDL-C Measurement

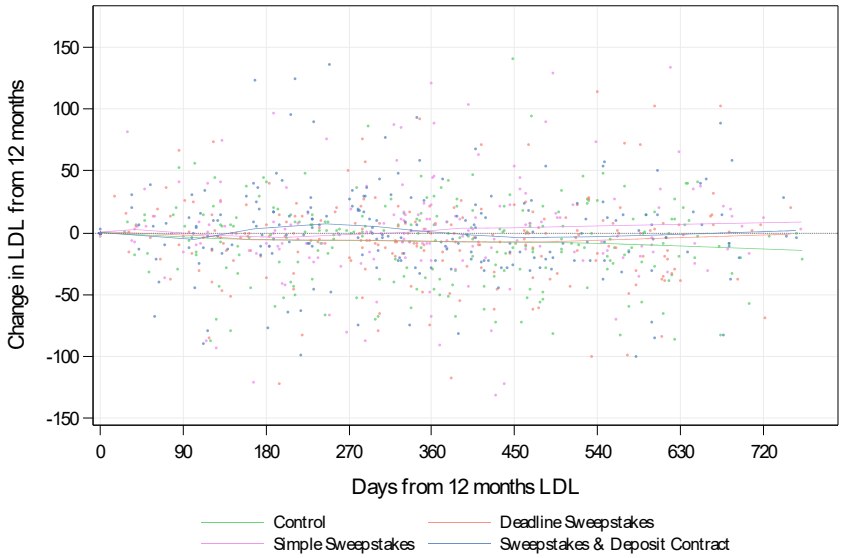
A total of 399 participants had LDL-C measured both at 12-months and at least once as part of usual-care post study. Usual-care measurements were determined from the EHR up to 36 months post-study. Compared to individuals without a post-study measurement, Individuals with at least one post-study measurement were more likely to be White, have somewhat lower LDL-C at baseline, and were less likely to be from the control group. We fit a loess (locally estimated scatterplot smoothing) curve for each intervention group. eFigure 1 suggests that while there was considerable variance in LDL-C among these participants, mean LDL-C level was little changed at 2 years.

| Characteristic | A least one post-study measurement (n=501) | | No post-study measurement (n=237) |
|---|---|---|---|
| | With an on-study measurement at 12 months (n=399) | Without an on-study measurement at 12 months (n=102) | |
| Age, mean (SD) | 59.7 (9.5) | 58.1 (11.4) | 58.3 (11.1) |
| Gender, n (%) | | | |
| Female | 263 (65.9) | 65(63.7) | 155 (65.4) |
| Male | 136 (34.1) | 37 (36.3) | 82 (34.6) |
| Race [a], n (%) | | | |
| Black | 185 (46.5) | 53 (52.0) | 133 (56.1) |
| White | 190 (47.7) | 42 (41.2) | 93 (39.2) |
| Other | 23 (5.8) | 7 (6.9) | 11 (4.6) |
| Baseline LDL, mean (SD) | 139.7 (41.6) | 144.8 (37.5) | 153.2 (48.3) |
| Intervention, n (%) | | | |
| Control | 106 (26.6) | 27 (26.5) | 51 (21.5) |
| Simple Sweepstakes | 98 (24.6) | 24 (23.5) | 61 (25.7) |

| | | | |
|---|---|---|---|
| Deadline Sweepstakes | 95 (23.8) | 26 (25.5) | 65 (27.4) |
| Sweepstakes & Deposit | 100 (25.1) | 25 (24.5) | 60 (25.3) |

[a] Not all participants responded; incomplete data.

### 3.2.2 **eFigure 1.** Penn Medicine: Change in LDL-C Post-Study With Loess Smoothed Curves




## 3.3 Comparison with eligible non-enrolled Penn Medicine patients.

This analysis is based on post-hoc additions to the statistical analysis plan.

Among 4404 Penn Medicine patients who were potentially eligible for the study based on an LDL-C measurement and at least one diagnostic criteria, 3666 (83.2%) did not enroll in the study. We received IRB-approval to collect information on demographics and any LDL-C value recorded in the EHR. A total of 2490 (67.9%) patients had at least one LDL-C measurement recorded in the EHR within the first year of their eligibility date.

eTable 6 suggests the non-enrolled participants tended to have somewhat lower LDL, were somewhat older and more likely to be male and white.

### 3.3.1 eTable 6. Penn Medicine: Baseline Characteristics of Eligible Nonenrolled Patients Compared to Enrolled Participants in Control Group

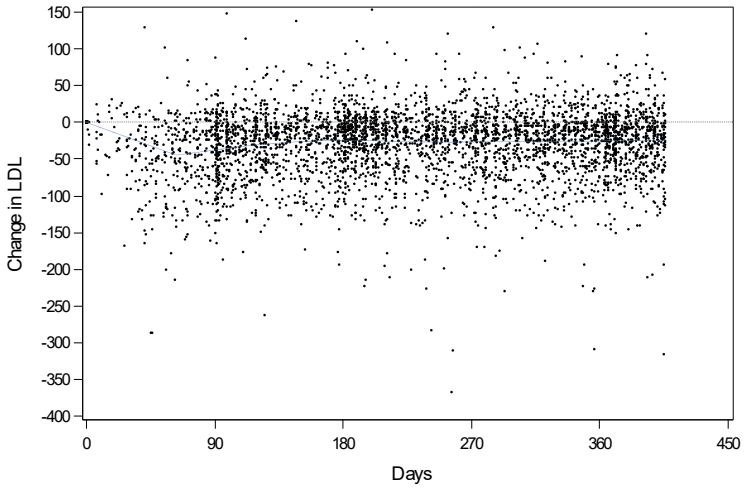
Analyses are for participants with at least one post-baseline measurement.

| Baseline Characteristic | Control (n=165) | Non-enrolled (n=2,490) |
|---|---|---|
| Age, mean (SD) | 58.2 (10.1) | 63.6 (11.2) |
| Gender, n (%) | | |
| Female | 111 (67.3) | 1362 (54.7) |
| Male | 54 (32.7) | 1128 (45.3) |
| Race, n (%) | | |
| Black | 78 (47.3) | 937 (37.6) |
| White | 76 (46.1) | 1320 (53.0) |
| Other | 11 (6.7) | 233 (9.4) |
| Missing | | |
| Baseline LDL-C, mean (SD) | 149 (46.6) | 137.7 (40.9) |
| # Follow-ups, n (%) | | |
| 1 | 35 (21.2) | 1360 (54.6) |
| 2 | 130 (78.8) | 785 (31.5) |
| >2 | 0 (0.0) | 345 (13.9) |

We fit a loess curve to $\Delta_{LDL}$ as a function of time for 2490 non-enrolled Penn Medicine patients with at least one post-baseline measurement. eFigure 2 suggests that LDL-C level dropped substantially in the first 90 days, and then remained reasonably constant throughout the remainder of the year.

### 3.3.2 eFigure 2. Penn Medicine: Nonenrolled Individuals: Change in LDL-C From Baseline With Loess Smoothing Curves

Participant had at least one post baseline measurement. Dashed line at 0 change in LDL-C.



We modeled $\Delta_{LDL}$ as a function of time using a mixed effects model with a piecewise linear spline adjusting for baseline LDL, age, gender and race as covariates in the model. This model was used to estimate the mean change from baseline at 6 and 12 months. eTable 7 includes results for the non-enrolled along with those of participants who enrolled and were randomized to the control arm.

### 3.3.3 eTable 7. Penn Medicine: Mean (95% CI) Change From Baseline in LDL-C at 6 and 12 Months for Participants Enrolled to the Control Arm and for Nonenrolled Individuals.

All Participants had at least one measurement post-baseline. Results are adjusted for a baseline of 143.2 mg/dl and for an individual of age 58.5 years. Results for the control arm are based on measurements collected at specific visits; results for the non-enrolled are based on the mixed effects model fit to measurements of LDL-C collected from usual-care.

| Groups | Enrolled to Control Arm | | Non-enrolled | |
|---|---|---|---|---|
| | n | $\Delta_{LDL}$ | n | $\Delta_{LDL}$ |
| **6 Months Endpoint (Day 180)** | | | | |
| All Participants | 165 | -39.8 (-45.8, -33.7) | 2490 | -31.0 (-32.5, -29.5) |
| Black & Female | 64 | -44.3 (-51.4, -37.2) | 612 | -35.2 (-37.0, -33.4) |
| Black & Male | 14 | -34.2 (-47.6, -20.8) | 325 | -29.3 (-32.5, -26.1) |
| White & Female | 44 | -40.1 (-52.9, -27.2) | 644 | -35.1 (-38.2, -31.9) |
| White & Male | 32 | -39.8 (-45.8, -33.7) | 676 | -31.0 (-32.5, -29.5) |
| Other & Female | 3 | -37.8 (-43.7, -32.0) | 106 | -25.7 (-27.6, -23.8) |
| Other & Male | 8 | -43.7 ( -51.6, -35.8) | 127 | -31.5 (-33.6, -29.4) |
| **12 Months Endpoint (Day 360)** | | | | |
| All Participants | 165 | -35.1 (-40.9, -29.3) | 2490 | -27.8 (-29.6, -26.0) |
| Black & Female | 32 | -39.6 (-46.5, -32.7) | 612 | -32.0 (-34.0, -30.0) |
| Black & Male | 3 | -29.5 (-42.8, -16.2) | 325 | -26.1 (-29.4, -22.7) |
| White & Female | 8 | -35.4 (-48.1, -22.7) | 644 | -31.8 (-35.1, -28.5) |
| White & Male | 165 | -35.1 (-40.9, -29.3) | 676 | -27.8 (-29.6, -26.0) |
| Other & Male | 64 | -33.2 (-38.9, -27.4) | 106 | -22.5 (-24.6, -20.4) |
| Other & Female | 14 | -39.0 (-46.9, -31.2) | 127 | -28.3 (-30.6, -25.9) |

## 4 Adherence and Change in LDL Analysis

This analysis is based on post-hoc additions to the statistical analysis plan.

eTable 8 shows results for regression models for $\Delta_{LDL}$ at 6 and 12 months as a function of 6-month measured adherence and baseline LDL. The intervention arms were pooled for the analysis under the assumption that any effect of intervention should be mediated by adherence.

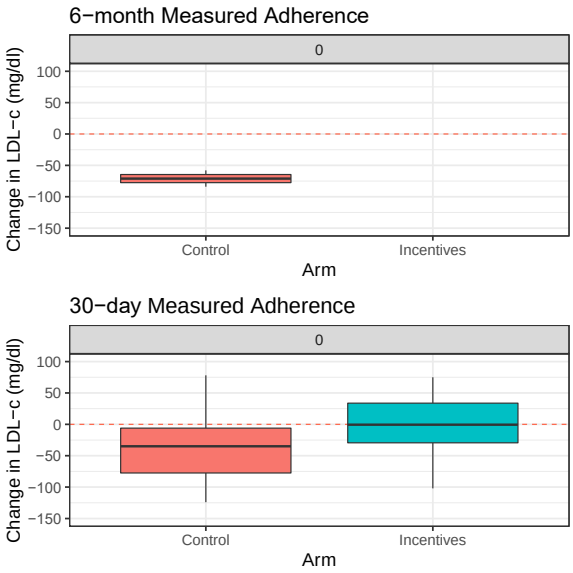
### 4.1 eTable 8. Regression Models for the Reduction in $\boldsymbol{\Delta_{LDL}}$ From Baseline to Either 6- or 12-Months by 6-Month Measured Adherence (Proportion of Days With Electronic Pill Bottle Opened Over 180 Days).

| Outcome(mg/dl) | Predictors | Terms (95% CI) | Adjusted $r^2$ |
|---|---|---|---|
| $\Delta_{LDL}(6\ mo)$ | Intercept[1] | -11.3 (-22.8, 0.) | 0.47 |
| | Adherence (per 0.10 increase) | -2.7 (-4.0, -1.5) | |
| | Baseline LDL-C (per 10 mg/dl increase) | -6.9 (-6.3, -7.5) | |
| | $\Delta_{\text{ctrl}}$[2] | -6.2 (-12.0, -0.4) | |
| | | | |
| $\Delta_{LDL}(12\ mo)$ | Intercept[1] | -4.5 (-17.5,8.2) | 0.41 |
| | Adherence (per 0.10 increase) | -3.4 (-4.8, -2.0) | |
| | Baseline LDL-C (per 10 mg/dl increase) | -6.3 (-6.9, -5.7) | |
| | $\Delta_{\text{ctrl}}$[2] | -5.0 (-11.3, 1.4) | |
| [1] Mean outcome for pooled intervention arms at the mean baseline LDL-C | | | |
| [2] Mean difference between control and intervention groups | | | |

eFigure 3 shows boxplots for participants with measured adherence of zero. Only two individuals, both in the control arm had a measured adherence of zero for the 6-month intervention. Compared to the incentive arms, participants in the control arm with a measured adherence of zero for the final 30 days of the intervention, tended to have larger reductions in $\Delta_{LDL}$. Some of these participants may have used devices other than their electronic pill bottle to store their medication, suggesting that measured adherence for the controls may have underestimated true adherence.

We note that temporal relationships between adherence to statin medication and LDL-C are not completely understood. Thus, it is also possible that these participants were adherent in the days or weeks preceding the final 30 days, and that this adherence was reflected in larger reductions in LDL-C.

## 4.2 eFigure 3. Change in LDL-C From Baseline to 6 Months in Individuals With Measured Adherence of Zero During Either the Entire 6 Months (n=2) or the Final 30 Days of the Intervention (n=23 for Control and n=16 for Incentives).



## 5 Sensitivity to Failure and Model of Electronic Pill Bottles

This analysis is for additions to the statistical analysis plan specified prior to trial completion.

Among 805 participants, 360 (44.7%) were exposed to the 'high-failure' period. On average, participants in this trial experienced 21% of days in the intervention period during the high-failure period. Compared to individuals who were not exposed to the 'high-failure' period, participants exposed to the high-failure period had a 4.7 mg/dl (95% CI: -0.5, 10.0, p-value=0.07) bigger reduction in $\Delta_{LDL}$ from Baseline to 12 months, after adjusting for baseline LDL-c. We did not observe an impact of exposure to the high-failure period on the effect of the intervention (p=0.95).

A total of 51 (6.3%) of the participants experienced a device 'swap' i.e., these participants used at least two different models of electronic pill bottles during the trial. Among participants with at least one device swap vs those who used a single device throughout the trial, mean $\Delta_{LDL}$ from baseline to 12 months was similar (p-value=0.38). Participants exposed to the high-failure period or device swap had similar completion rates at 12 months (79.3% for participants without exposure to the high-failure period or a device swap and 78.9% for participants with exposure to the high-failure period or a device swap). We did not observe an impact of exposure to a device swap on the effect of the intervention (p=0.80).

We found significant differences in mean $\Delta_{LDL}$ from Baseline to 12 months among the three electronic pill bottle models used in the study (p=0.03). Notably, participants who only used model 3 had 9.9 (95% CI: 1.8, 18.0) mg/dl larger reduction in LDL compared with participants who only used model 1. Electronic pill bottle model did not appear to have an impact on the magnitude of the intervention on the primary outcome (p=0.61).

## 6 Overall attrition rate and by arm

Note: The power calculation anticipated a 20% attrition rate (see Putt et al 2019).

| Arm | Missing 12 months LDL-C, n (%) |
|---|---|
| Overall | 169 (21.1) |
| Control | 45 (22.1) |
| Simple Sweepstakes | 40 (20.1) |
| Deadline Sweepstakes | 42 (21.1) |
| Sweepstakes & Deposit Contract | 42 (21.1) |