

**Assessing the Impact of myHealth Rewards Program-related Communications on Enrollment:
Replication
(NCT04289623)**

Study Protocol with Statistical Analysis Plan

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Study Protocol

Purpose

The purpose of the study was to evaluate, prospectively, the potential impact of different email message conditions (standard promotional email, loss frame, endorsement from a medical expert, endorsement from a rank-and-file employee) on enrollment in a wellness program (myHealth Rewards) by Geisinger Health Plan (GHP) members. The current study was developed to test whether a loss frame email was more effective than a standard reminder email (replicating an earlier finding) in increasing myHealth Rewards login and enrollment rates. It was hypothesized that the loss frame email would increase enrollment compared with the standard email. The study also compared testimonials from a medical expert and a rank-and-file employee. This particular comparison was exploratory, and we did not have an a priori hypothesis on the performance of these emails.

Methods

Sample

Our population consisted of benefits-eligible Geisinger employees, excluding anyone who registered for the 2020 mHR program prior to the Wave 1 send date (February 25, 2020).

From the gathered data, we dropped 702 employees who did not have registration data (i.e., no confirmation if a registration did or did not occur), 506 employees who were not sent any email, and 68 employees who registered before the study period began.

After exclusions, there were 13,546 employees eligible for the study, with 8,143 who previously participated in the program and 5,403 who never participated (see Table 1). In each of these subgroups, employees were randomly assigned to one of two conditions in Wave 1 (standard email vs. loss frame). Two weeks after the Wave 1 emails were sent, there were 12,216 eligible employees who did not yet register, with 6,963 having been enrolled previously and 5,253 never having been enrolled. In each of these subgroups, employees were randomly assigned to one of two conditions to receive reminder emails in Wave 2 (peer endorsement vs. expert endorsement).

Control and experimental conditions

All employees received an email, which began by addressing recipients by their first names, with subject lines and messages varying as shown below. In Wave 1, employees received either the standard or the loss frame email. In Wave 2, employees who did not enroll after Wave 1 received either the expert endorsement or peer endorsement email.

Wave 1: Standard Email. The standard email had the subject line “myHealth Rewards registration is now open. Sign up to improve your health and save money.” As with the Study 1 email, it mentioned the average premium savings, the speed and ease of starting the enrollment process, and the deadline for registering and having health measures on file. The standard email also provided two text links for registering and finding free health screenings where health measures could be collected and registered at one convenient time and location. It also mentioned an additional financial reward – early-bird enrollees get entered to a weekly drawing for a \$20 gift card and will be entered into a final grand prize drawing for one of three prizes worth \$500. This group served as the active control group.

The other emails in this and subsequent waves contained and built upon all of the same information included in the standard email.

Wave 1: Loss frame email. The loss frame email had the subject line “Why are you throwing away \$2,227?” It suggested that employees were currently “throwing away” a precise dollar amount by not participating and that they could therefore avoid missing out on substantial gains (i.e., savings) by taking action.

Wave 2: Expert endorsement email. The expert endorsement email (see Figure 11) had the subject line “How myHealth Rewards changed my life.” It provided a testimonial from a Geisinger doctor and emphasized the simplicity and ease of taking the first step toward enrollment. The personal endorsement from a doctor presented a medically-trusted exemplar that indicated that the behavior was desirable and feasible.

Wave 2: Peer endorsement email. The peer endorsement email (see Figure 12) had the subject line “How myHealth Rewards changed my life.” It provided a testimonial from a Geisinger customer care specialist and emphasized the simplicity and ease of taking the first step toward enrollment. The personal endorsement from a rank-and-file presented a relatable exemplar – relative to many Geisinger staff who are not doctors – that indicated that the behavior was desirable and feasible.

Wave 3. A planned third wave that compared social norms presented in numeric or percentage formats was not conducted due to COVID-19-related changes in the mHR program.

Outcome measures

The outcome measures included (1) enrollment in the mHR program, (2) clicking on the mHR link in the email, and (3) opening the mHR email within each wave’s two-week duration, starting from the date the emails were sent. Wave 1 started on February 25 and ended on March 9, 2020. Wave 2 started on March 10 and ended on March 23, 2020. All measures were binary.

Enrollment was the primary outcome of interest, since it reflected the terminal behavior that could lead to savings and health outcomes improvements. However, the clicks to the mHR

link were also of interest, as a proximal outcome and potential mediator. For Wave 1, opening the mHR email was also a proximal indicator of how effective the message was, given that the subject line also varied by condition; in Wave 2, the subject lines were the same regardless of condition.

Statistical Analysis Plan

We conducted separate, parallel analyses for those who previously participated and never participated in the program. We also conducted separate analyses for waves 1 and 2. Binary logistic generalized linear models (GLMs) were used to analyze (1) enrollment and (2) click rates as a function of experimental condition. Odds ratios (ORs) were calculated, along with 95% confidence intervals (CIs); two-tailed p -values < 0.05 were used to determine statistical significance. To represent effect size, the standardized statistic, Cohen's d , was estimated using the formula $\text{LogOddsRatio} \times \sqrt{3}/\pi$ (Hasselblad & Hedges, 1995). Raw percentages with 95% CIs were also presented in graphs. All analyses were conducted in R.