Behavioral Interventions to Increase Engagement with Evaluation Findings in Nigeria

Pilot Final Report

April 2024

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Acknowledgments

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Abbreviations

B-R   Breakthrough Research Nigeria

BA-N   Breakthrough ACTION Nigeria

COM-B   Capability, Opportunity, Motivation - Behavior

D4I   Data for Impact

DRMC   Data Research and Mapping Consult

GHSC-PSM Global Health Supply Chain Program – Procurement and Supply Management

HPN   Health, Population, and Nutrition

HWM   Health Workforce Management Project

IHP   Integrated Health Program

IT   information technology

LHSS   Local Health System Sustainability Project

M&E   monitoring and evaluation

PMI-S   U.S. President's Malaria Initiative for States

USAID   United States Agency for International Development

Executive Summary
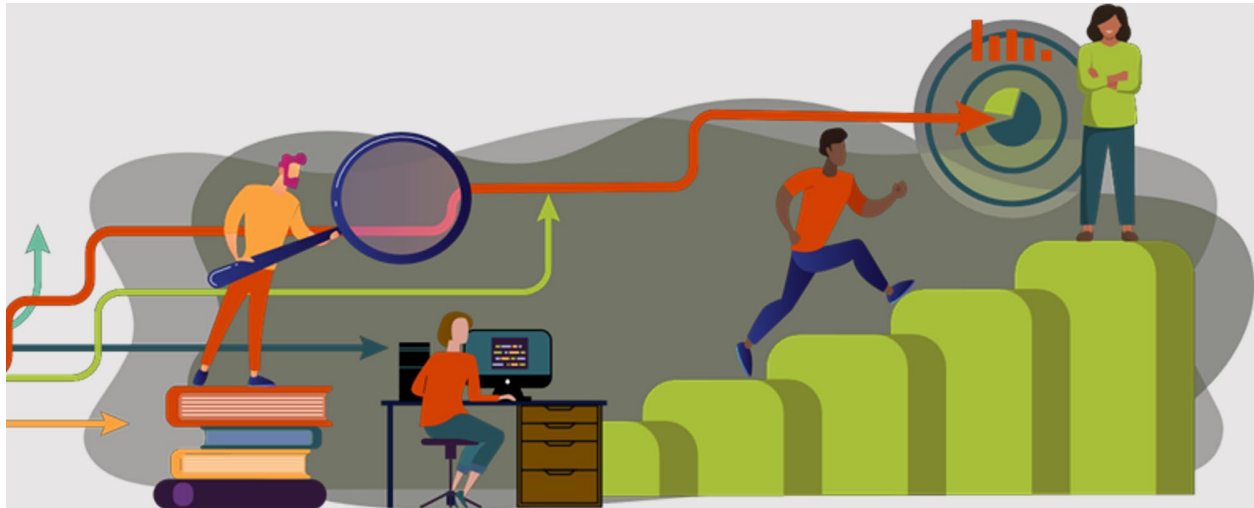
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Background

Data for Impact (D4I), in cooperation with the United States Agency for International Development (USAID), ran a pilot to test two strategies to mitigate behavioral barriers and leverage behavioral enablers of the use of evaluation findings from USAID global health programs. The aim was to learn lessons on how to implement behavioral interventions to improve the use of evidence within USAID and offer a blueprint for testing similar interventions in other contexts.

The pilot was carried out in Nigeria, with the primary target group for increasing evaluation findings being USAID Nigeria Mission staff. The focus was increasing engagement with qualitative findings from the Nigeria Multi-Activity Evaluation, an outcome evaluation of four USAID Nigeria Mission Health, Population, and Nutrition (HPN) activities.

Pilot Strategies

The pilot consisted of two strategies: (1) Tailored email messages about evaluation findings using a combination of behavioral insights, and (2) Strengthening an evaluation findings dissemination event with behavioral techniques.

Strategy 1: Tailored Email Messages about Evaluation Findings Using a Combination of Behavioral Insights

This strategy aimed to increase engagement with evaluation findings among USAID Nigeria Mission HPN staff and USAID Global Health Bureau Nigeria backstops, as well as stakeholders on D4I's email distribution list who are residents of Nigeria. The pilot team randomly assigned the USAID staff and the D4I listserv members to three groups. Each group was sent one of three different email message types with links to evaluation products. The message types were:

- Control (i.e., no behavioral intervention): e.g., "There is new evidence available now from the Nigeria Multi-Activity Evaluation."

- Professional identity: e.g., "As a USAID team member, you use evidence to strengthen the impact

of your work. There is new evidence on global health programming available now from the Nigeria Multi-Activity Evaluation."

- Loss framing: e.g., "If you don't take a look at these latest findings, you risk missing out on key insights to introduce improvements into future efforts in your strategies, projects, and activities."

Email recipients received three rounds of emails—in July, August, and September of 2023. The emails were personalized in that they included the recipient's name in the greeting.

Figure E1. Randomized control design for Strategy 1

Measured **clicks on links**   Measured **clicks on links** and **email opens**

Strategy 2. Strengthening an Evaluation Finding Dissemination Event with Behavioral Techniques

The second strategy aimed to increase engagement with evaluation findings among USAID Nigeria Mission staff and other stakeholders participating in the Nigeria Multi-Activity Evaluation Annual Review Meeting on June 27, 2023 in Abuja, Nigeria. The pilot team delivered two sessions during the meeting: one on setting a common goal for everyone in the room for the day, and another on planning to link findings with actions and creating a "commitment card" aimed at committing participants to engaging with or using evaluation findings.

The sessions were supplemented with specially written pre-event and post-event emails to participants from D4I leadership and USAID, as well as social media posts. These communications: (1) reinforced messaging core to this strategy—that participants have a shared identity as evidence users, (2) recognized participants for engaging in an activity aimed at strengthening the use of evidence, and (3) reminded participants of the two common goals on evidence that they had agreed to during the event.

Measurement

For Strategy 1, we measured the open rates of the emails (for the D4I listserv recipients) and the click-throughs on links to evaluation products (for the USAID and the D4I listserv recipients). For Strategy 2, we ran a pre- and post-survey for the dissemination event.[1] We also ran a final survey to cover both strategies.

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[1] Strategy 1 findings reported on are statistically significant at p<0.10. Strategy 2 differences from the pre- and post- survey may not be statistically significant as significance tests were not carried out for the survey.

Key Findings

Key Findings for Strategy 1

1. **Different behaviorally-informed email messages had a different impact on USAID staff and D4I listserv members engaging with findings** (opening emails and clicking on links). For example, employing a loss framing message was the most effective technique to promote USAID Nigeria's staff engagement with evaluation findings. The loss framing group clicked on links 12% of the time, the control group 8% of the time, and the professional identity group 5% of the time. In contrast, for the D4I listserv, employing a professional identity message was most effective. The professional identity group opened the emails 30% of the time, as compared to 23% for the control group and 22% for the loss framing group. There were no statistically significant differences in click-through rates based on messages among D4I listserv recipients.

Figure E2. USAID staff clicks on links (% of total)
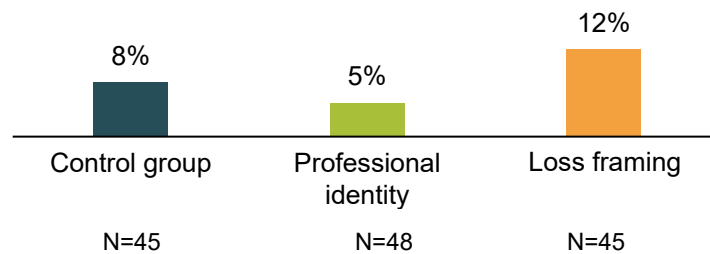
Note: Percentages refer to clicks on links per message group across the full intervention. Rates are based on the total sample size per treatment group.

Figure E3. D4I's listserv members email opens (% of total available)
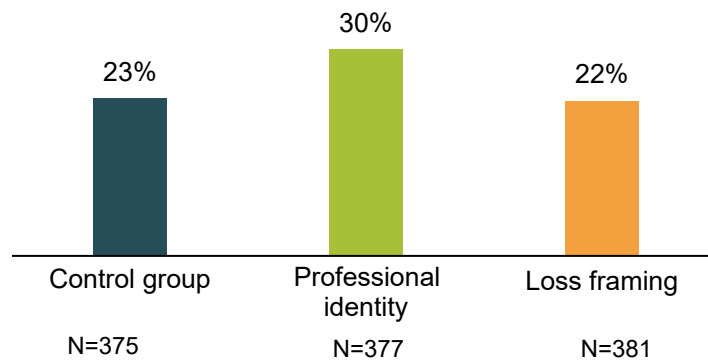
Note: Figure X displays email open rates per message group across the full intervention. Rates are based on the total sample size per treatment group.

2. **With USAID Nigeria staff, there were differences in the effectiveness of email messages depending on gender.** Women were the most likely to engage with findings when presented with the loss framing messages—they clicked on 17% of the loss framing links compared to 3% for the control message and 2% for the professional identity message. In contrast, men were most likely to engage with findings when presented with the control message—they clicked on 15% of the control message links compared to 8% for the professional identity message and 5% for the loss framing message.

Figure E4. USAID staff clicks on links by gender (% of total)
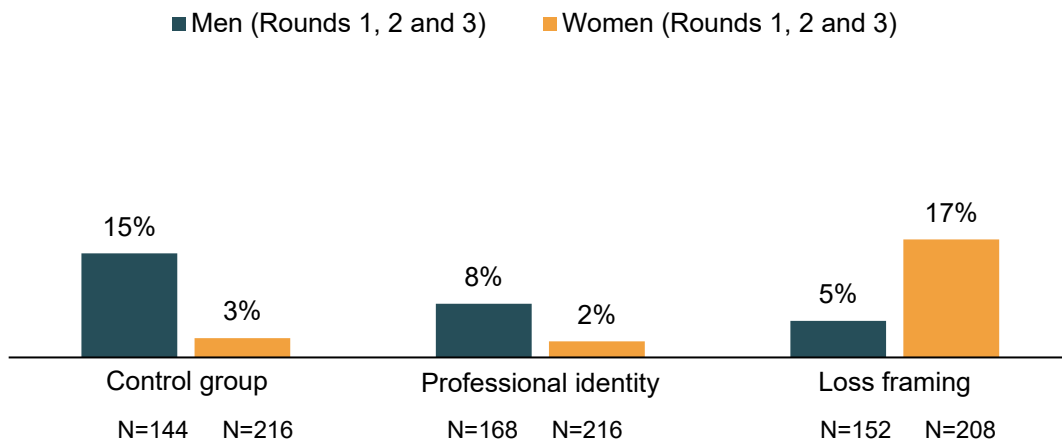
Note: Percentages refer to clicks on links by the gender of the participant. Percentages are based on the total sample size.

3. **Among D4I listserv recipients, the professional identity message was the most effective technique to drive engagement with the findings.** As noted, the professional identity group opened the emails 30% of the time, as compared to 23% for the control group and 22% for the loss framing group. The impact of this technique was large and stable across the three rounds of emails, and it worked best to motivate both women and men across the full intervention.

4. **Emails that included fewer links had more clicks**. For both the USAID and D4I listserv groups, the third round, which had only one link, had the highest engagement, independent of the message. USAID recipients clicked on 44% of the total links shared in this round, as compared to 31% in Round 1 (two links) and 17% in Round 2 (five links). Similarly, D4I members clicked on 45% of the links in Round 3 (one link), twice as much as in Round 1 (23%, two links) and in Round 2 (22%, five links). Having only one link may have prevented information overload or signaled the importance of that one link, leading to more clicks in that round.

Figure E5. USAID staff clicks on links per round (% of total)
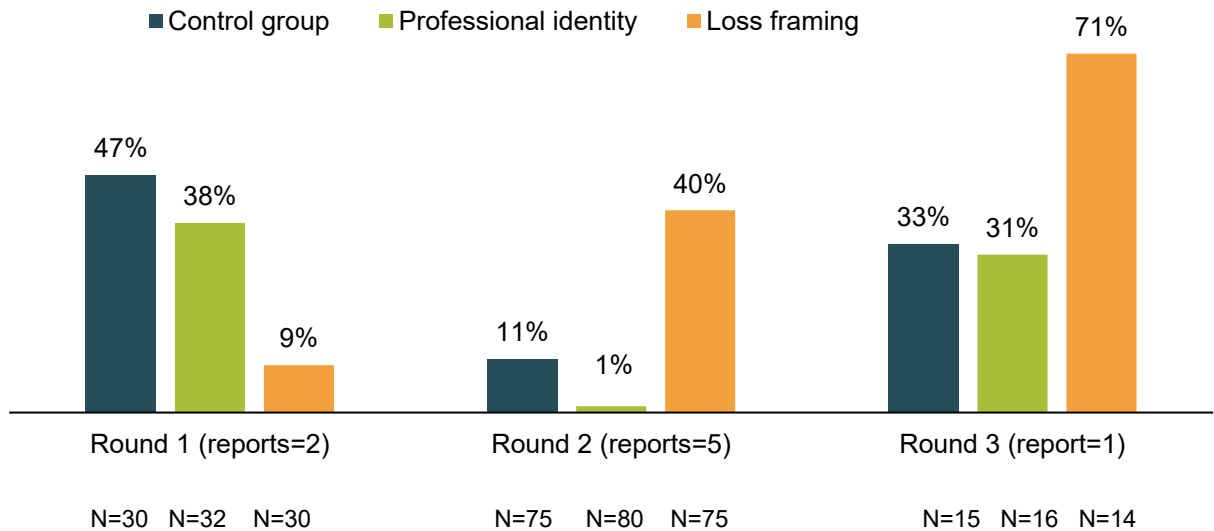
Legend: ■ Control group ■ Professional identity ■ Loss framing

Round 1 (reports=2): Control group 47%, Professional identity 38%, Loss framing 9%
N=30 N=32 N=30

Round 2 (reports=5): Control group 11%, Professional identity 1%, Loss framing 40%
N=75 N=80 N=75

Round 3 (report=1): Control group 33%, Professional identity 31%, Loss framing 71%
N=15 N=16 N=14

Note: Percentages refer to clicks on links per message group and round of the intervention. Rates are based on the total sample size per treatment group in each round.

Figure E6. D4I's list members clicks on links per round (% of total)
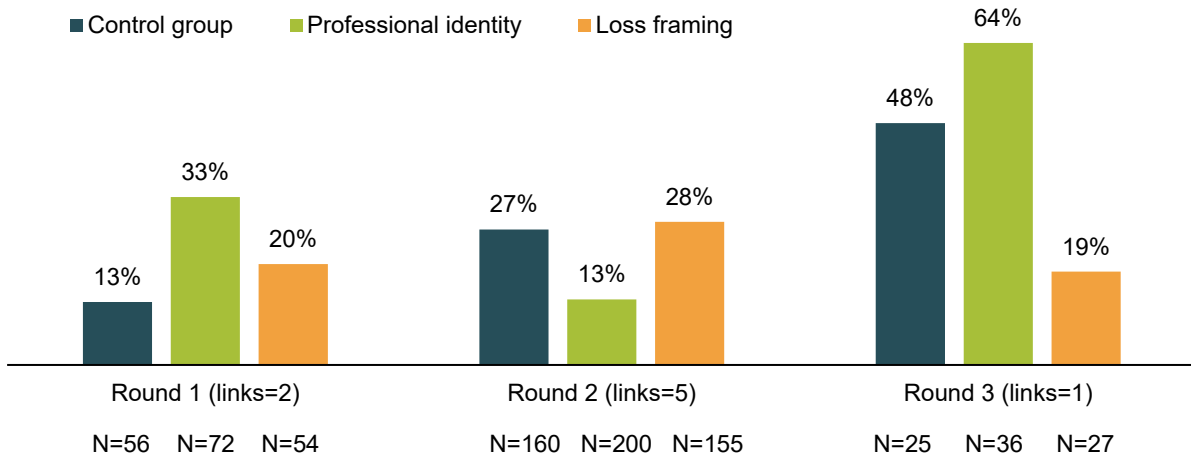
Legend: ■ Control group ■ Professional identity ■ Loss framing

Round 1 (links=2): Control group 13%, Professional identity 33%, Loss framing 20%
N=56 N=72 N=54

Round 2 (links=5): Control group 27%, Professional identity 13%, Loss framing 28%
N=160 N=200 N=155

Round 3 (links=1): Control group 48%, Professional identity 64%, Loss framing 19%
N=25 N=36 N=27

Note: Percentages refer to clicks on links per message group and round. Rates are based on the sub-sample of participants that opened an email and the total number of links.

Key Findings for Strategy 2

1. **The dissemination event had conditions favorable to building trust between evaluators and evidence users**: it was well structured with clear objectives and opportunities for formal and informal interactions. There were also indicators of existing trust between the participants and the evaluators. Before the event, participants expressed that they could have constructive conversations with other attendees regarding improving future programming. Further, participants already considered the findings relevant (84%) and credible (84%) prior to the event, and some commented on the quality of the evaluators

as the reason for their perceptions of the credibility of the findings. The behavioral interventions used within the two pilot sessions, therefore, could provide a boost to supporting evidence use, but perhaps would not make as much of a difference in terms of increasing engagement with the findings if these other factors were not in place.

2. **The session to create common goals was easy to implement due to its relative simplicity and appeared successful to the facilitators**, based on the apparent participant enthusiasm and how quickly participants grasped the instructions and implemented the steps. It may have been easy for participants to agree on shared goals because 94% already felt before the event that they had shared goals with other attendees regarding improving health programming.

3. **The session to create commitment cards demonstrated promise**, with 77% of participants finding it useful. However, it highlighted areas for improvement, in particular in terms of giving participants sufficient time to digest the findings and to discuss how they could be applied to their teams before having individuals identify and commit to individual goals.

4. **Participants' plans to use the evaluation findings increased slightly**, with 89% of respondents in the pre-event questionnaire agreeing or strongly agreeing that they would use the findings. This rose to 100% after the event.

Recommendations

Key Recommendations for Strategy 1

Tailor email communications about evaluation findings.

Tailoring email communications can improve engagement with evaluation findings among USAID Nigeria staff and D4I listserv members. The divergent findings regarding the impact of messages on the two target groups (USAID Nigeria staff and the D4I listserv members) and different genders underscore the importance of tailoring behavioral interventions to the unique needs and psychological profiles of different groups.

Use loss framing messaging under specific circumstances.

Email communication emphasizing loss framing techniques can promote engagement with evaluation findings among USAID Nigeria staff. However, the most tailored strategy for this target group would employ the loss framing technique to motivate women and a basic personalization feature to motivate men. Extrapolating more broadly to other evidence-use target groups, using the loss framing technique may be effective when the message comes from a colleague or another trusted, known, and/or close source; when the content of the message is highly relevant to the recipients; and when recipients have some agency regarding preventing the potential loss.

Use professional identity messaging when email recipients are more "distant" from the messenger and the evaluation content.

Email communications that reinforce a professional identity as evidence users can foster greater engagement with evaluation findings among D4I listserv members. Extrapolating more broadly to other evidence-use target groups, this may be an effective technique when sending out emails and, in particular, be more effective than a "loss framing" message where the recipients do not know the sender personally, where the content may be more "distant" or less relevant to them directly, and where the potential loss is more abstract.


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Consider sharing fewer links and information in email communications.

To increase the likelihood of recipients clicking on links to evaluation products, it may be effective to limit the number of links and the overall amount of information in an email communication.

Key Recommendations for Strategy 2

Assess whether target users consider your findings to be relevant before planning a dissemination campaign or designing an evidence-use intervention.
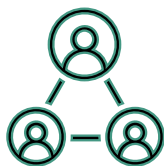
Because the relevance of findings is a critical factor in whether people will engage with them, when designing evidence-use interventions, it is important to assess whether target users perceive the findings to be relevant. If not, this is the first factor that needs to be tackled in any evidence-use intervention.

Review how to access findings in a session during an evaluation dissemination event.

An important enabler of using findings is knowing where to access them. Demonstrating to participants how to access findings during an evaluation dissemination event—for instance, by going over a website with them—may be a simple and effective way to increase engagement with the findings.

Highlight which evaluation methodology was used and why it is fit for purpose to increase evidence users' perception of evaluator credibility.

Evidence users should feel that the methods chosen were rigorous and that evaluators are unbiased. Evaluation dissemination events as well as the evaluation itself should highlight each of the points, taking care to state evaluators' backgrounds and potential conflicts of interest within the text.

Strengthen the sense of shared group identity at evaluation events.

To strengthen the credibility of findings, it is important to build trust between evidence users and evaluators. One way to do this is to strengthen the sense of shared group identity at evaluation events. This can be done in multiple ways, including by creating shared goals for the group. Where possible, the shared goals agreed to during the session should be reinforced by being referenced throughout the day and in follow-up communications. In addition, shared group identity can be strengthened by other techniques, such as encouraging evaluation staff to sit with other participants and giving participants beyond the evaluation team an opportunity to present or lead activities.

Photo © Adobe Stock

Use commitment cards to promote the use of findings, but implement them carefully.

First, the commitment card exercise should be done once participants have digested the evaluation findings and have reflected on how the findings might connect to their work. Second, the exercise, which focuses on an individual goal, should be framed within the context of a project or organization, where work tasks normally flow from organizational, project, or team decisions. Only after team goals are set can individuals consider what their individual goals might be within the team structure, and the commitment card can be filled out.

Introduction

Evaluation findings are not always engaged with or used to inform decisions. Some reasons for this are "behavioral," such as people's attitudes, social norms, or habits toward using evidence. Therefore, solutions that target technical or organizational barriers to evidence use may not be impactful. Solutions that address behavioral barriers—using "behavioral insights," i.e., findings from social psychology, behavioral economics, and neuroscience—may be more effective at increasing the use of findings.

To test this, Data for Impact (D4I), in collaboration with the United States Agency for International Development (USAID), piloted two strategies in Nigeria that aimed to address behavioral barriers and leverage behavioral enablers to engaging with evaluation findings. The team developed recommendations for implementing such behavioral interventions within USAID.

The primary target group for increasing engagement with evaluation findings was USAID Nigeria Mission staff. The focus was on the qualitative findings from the Nigeria Multi-Activity Evaluation. This is an outcome evaluation of four USAID Nigeria Mission Health, Population, and Nutrition (HPN) activities. The evaluation is providing "evidence for health programming, with a focus on comparing an integrated health programming approach with a disease-focused approach (malaria)."[2]

The two pilot strategies were selected from a longer list of potential strategies and tailored to the context based on:

- The results of a previous study carried out by the D4I pilot team on the barriers and enablers to the use of evaluation findings from USAID global health programs.

- A self-assessment questionnaire that was 'designed by the D4I team to collect insights from USAID Nigeria Mission staff on barriers and enablers to the use of evaluation findings in the specific context of the pilot. The self-assessment questionnaire, administered in March 2023, was filled out by intended users of the findings at the USAID Nigeria Mission. The questionnaire asked respondents if they agreed or disagreed that various factors would make them more likely to use evaluation findings. These factors covered capability, opportunity, and motivation-related factors, as per the study's conceptual framework—the Capability, Opportunity, and Motivation – Behavior (COM-B) model of behavior change. The questionnaire also asked how many times per year respondents used various types of evaluation findings dissemination products.

- Needs and challenges reported by the USAID Nigeria Mission point of contact and the Nigeria Multi-Activity Evaluation team regarding the use of evaluation findings, including the Nigeria Multi-Activity Evaluation and other evaluations.

The strategies were also aligned with the D4I Nigeria Multi-Activity Evaluation dissemination plan.

Target Behavior

The pilot aimed to increase *engagement* with evaluation findings. We understood engagement with evaluation findings to mean that people read, watched, listened, and/or attended to materials (e.g., written, video, audio, in-person, or virtual events) related to the findings.

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[2] Protocol - Nigeria Multi-Activity Evaluation (2022), Data for Impact.

Our target behavior was *engagement* over *use* because people need to engage with findings before being able to use them, which is a key step in the evaluation findings journey. Also, people will only use findings if there is an opportunity for them to do so; for example, if a related project is being designed, the pilot team would not have any control over these types of decision-making opportunities during the pilot. Additionally, it is more feasible to measure engagement than use, making it the more appropriate behavior to target in a behavioral intervention pilot.

Figure 1. Transition from awareness of findings to use
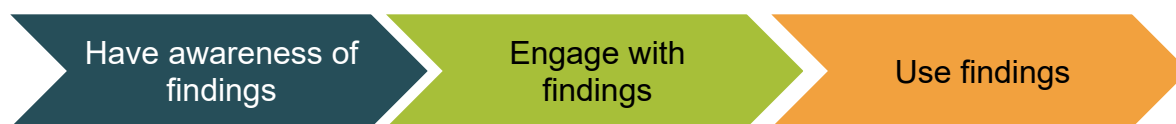
Target Groups

The primary target group for the pilot was HPN Office staff at USAID Nigeria, and the Global Health Bureau's Nigeria backstops.

Secondary target groups were: Nigeria global health activity implementing partners, such as Breakthrough ACTION Nigeria (BA-N), Breakthrough Research Nigeria (Population Council) [B-R], Data Research and Mapping Consult (DRMC), Health Workforce Management Project (HWM), U.S. President's Malaria Initiative for States (PMI-S), USAID Global Health Supply Chain Program – Procurement and Supply Management (GHSC-PSM), USAID Integrated Health Program (IHP), USAID Local Health System Sustainability Project (LHSS).

Tertiary target groups included other professionals in Nigeria within D4I's email distribution list.

Methods

Strategy Implementation

We implemented two strategies: (1) Tailored email messages about evaluation findings using a combination of behavioral insights, and (2) Strengthening an evaluation finding dissemination event with behavioral techniques.

Strategy 1: Tailored Email Messages about Evaluation Findings Using a Combination of Behavioral Insights

Target statements
1. USAID Nigeria Mission HPN staff and Global Health Bureau Nigeria backstops engage with more materials that cover the findings from the Nigeria Multi Activity Evaluation by September 2023.
2. Other global health professionals in Nigeria (within D4I's email distribution list) engage with more materials related to the Nigeria Multi Activity Evaluation by September 2023.

About the Strategy

This strategy entailed email communications that used behavioral strategies to increase engagement with evaluation findings among USAID Nigeria Mission HPN staff, Global Health Bureau Nigeria backstops, and stakeholders on D4I's email distribution list. Links to evaluation products were embedded in the emails.

The text in the experimental conditions was developed using behavioral insights to encourage increased engagement with these products.

Key materials developed
1. Behaviorally-informed email scripts 2. Guidelines on personalizing and sending email using different software

Set Up

There were two groups of email recipients:

- Group 1: USAID Nigeria – All HPN Office and Global Health Bureau Nigeria staff. This group was selected because the Nigeria Multi-Activity Evaluation findings were expected to be highly relevant to these individuals.
- Group 2: All members of the D4I email list who were residents of Nigeria. This group was included in order to test the messages with a larger sample and to disseminate the findings further. The evaluation is most relevant to individuals in Nigeria, so all D4I listserv members who are residents of Nigeria were included in the sample.

The D4I team identified which evaluation content produced by the Nigeria Multi-Activity Evaluation team would be shared in each email round. The team also prepared guidelines on how to send out the emails to the two groups. Emails to Group 1 were sent via Gmail by the USAID Nigeria Mission Project Management Specialist M&E. Unique URLs were created by the D4I web team for the Group 1 emails for each email condition. Emails to Group 2 were sent by D4I's Knowledge Management Manager using D4I's email distribution platform, EMMA.

Table 1. Email recipients and number of links per round

	Number of USAID recipients	Number of D4I listserv recipients
Round 1 (number of links: 2)		
Control	15	126
Professional Identity	16	126
Loss Framing	16	127
Round 2 (number of links: 5)		
Control	15	125
Professional Identity	16	126
Loss Framing	15	127
Round 3 (number of links: 1)		
Control	15	124
Professional Identity	16	125
Loss Framing	14	127

Email Design

The D4I team wrote email scripts, including the email subject and email body. The emails (text only) were designed to convey three types of messages—one control and two experimental:

- *Control (i.e., no behavioral intervention):* a control message including only basic information about the content being shared. E.g., "There is new evidence available now from the Nigeria Multi-Activity Evaluation."

- *Professional identity*: a professional identity message tailored to reinforce recipients' professional mission and duty. E.g., "As a USAID team member, you use evidence to strengthen the impact of your work. There is new evidence on global health programming available now from the Nigeria Multi-Activity Evaluation."

- *Loss framing:* a loss aversion message pointing to the potential loss of missed opportunities associated with not engaging with evaluation findings. E.g., "If you don't take a look at these latest findings, you risk missing out on key insights to introduce improvements into future efforts in your strategies, projects, and activities."

The emails were personalized, with emails addressed "Dear [Name]." This contrasts with blanket emails that start with greetings such as "Dear All." This approach was used in all rounds of emails and for both groups except in the third round to Group 1, because at this point USAID's system blocked the "multi-send mode" feature in the sender's Gmail. In this exception, emails were addressed to "Dear Colleague."

The emails were tailored to the two groups, incorporating slight differences while maintaining the message types and personalization consistent between them. For example, the professional identity message for the USAID group included: "As a USAID team member, you use evidence to strengthen the impact of your work." In comparison, the professional identity message for the D4I group read: "As a global health professional, you use evidence to strengthen the impact of your work."

An example of the email scripts can be found in Appendix A.[3]

Email Distribution

The emails were sent in three rounds. The first round included links to two evaluation products, the second round to five evaluation products, and the third round to one evaluation product. This design allowed us to robustly measure how engagement levels varied by the type of message (control, professional identity, or loss framing), and to get an indication of how engagement may have varied by) the number of product links shared (1, 2, or 5)[4].

The first round of emails was sent on June 20, 2023, the second on July 25, 2023, and the third round on August 22, 2023.

Strategy Rationale

Tailored emails

Creating targeted communication products for different audiences increases the likelihood of the

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[3] The emails did not include graphics and data visualizations. This was because we wanted to test the effects of the behaviorally-informed messages, and to do this it was best to keep the emails as "simple" as possible. Further, graphics and other data visualizations are already well-proven for increasing engagement with emails and other forms of communications, and we therefore did not need to test whether this was the case.

[4] Because the products were different in each of the three rounds, comparing engagement by round only provides an indication of the potential difference by the number of links, as the difference could also be due to the products in each round (that is, due to recipients' interest or lack of interest in the given product(s).

audiences paying attention to and absorbing information (Chapman et al., 2021; Zdunek et al., 2021). Tailoring messages to segmented audience groups has proven effective for changing behaviors, including in the health sphere (Bol, Smit, & Lustria, 2020, p.1).

Personalization

Personalizing communications can be an effective way to attract attention. For example, using people's names in emails from organizations that are known to the recipients can increase email open rates and click-through rates on links within the emails (Gesenhues, 2014).

Message types

Various types of messages have been shown to be effective in promoting behaviors. This includes professional identity and loss framing.

- *Professional identity:* A message on professional identity reminds people of their identity as users of evidence for decision making. This type of message can be effective because people try to avoid cognitive dissonance—an internal conflict that occurs when our behaviors do not align with our beliefs about ourselves (Cancino-Montecinos, Björklund, & Lindholm, 2020). Reminding individuals that their professional identity includes being *evidence-informed decision makers* can translate into greater evidence use as they may be more eager to access new evidence.

- *Loss framing:* People are more sensitive to losses than to gains, and loss framing—explaining how one stands to lose from not using evidence—has been shown to be effective to increase evidence use (McCormack, Sheridan, Lewis, et al., 2013). Noting the potential risks of not using evidence may be more effective than explaining how they would stand to gain from using it.

Theory of Change

According to our Theory of Change, Strategy 1 pilot activities aimed at shifting a number of behavioral determinants. For all the messages, findings that arrived in recipients' email inboxes would increase physical opportunity to engage with the findings. The tailoring and personalization of the emails would increase recipients' motivation to open and read them. The professional identity messages would increase recipients' motivation to open and read the emails by strengthening their professional identity as evidence users. The loss framing messages would increase recipients' motivation to open and read the emails by acting on their loss aversion. Shifts in these behavioral determinants (physical opportunity and motivation) would lead to increased engagement with the evaluation findings.

Figure 2. Strategy 1 Theory of Change
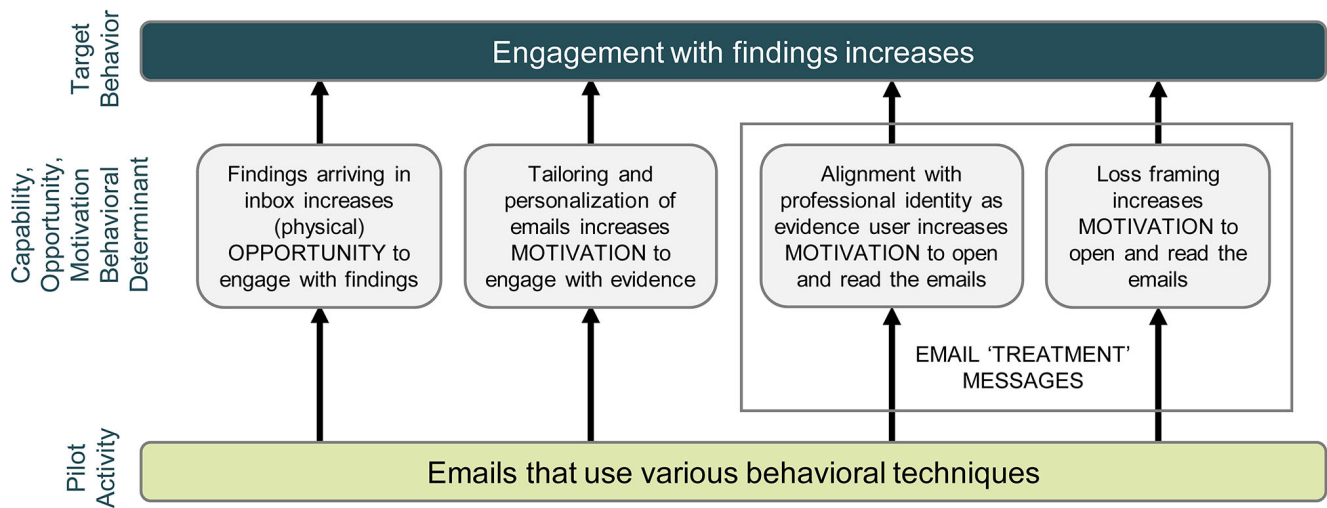
Assumptions

The main assumption underlying the Theory of Change was that by increasing engagement with findings, the use of findings was likely to increase. Other key assumptions regarding this strategy's causal pathways were that recipients open their email inboxes on a regular basis; recipients have sufficient time to open emails; the behavioral techniques are effective in this context to increase motivation to open and read the emails; differences in individuals' capability to use the findings (e.g., different skill levels for interpreting data) do not lead to major differentials in their willingness to engage with findings; and the different levels of power that individuals have to be able to use the findings (e.g., hierarchy in the organization or informal decision-making authority) do not lead to major differentials in individuals' willingness to engage with findings.

Strategy 2: Strengthening an Evaluation Finding Dissemination Event with Behavioral Techniques

Target statements
1. USAID Nigeria Mission staff engage with more materials that cover the findings from the Nigeria Multi Activity Evaluation by September 2023.
2. Nigeria global health activity implementing partners engage with more materials related to the Nigeria Multi Activity Evaluation by September 2023.

About the Strategy

This strategy aimed to increase engagement with evaluation findings among USAID Nigeria Mission staff and other stakeholders, in particular activity implementing partners participating in the Nigeria Multi-Activity Evaluation Annual Review Meeting in Abuja, Nigeria on June 27, 2023. The D4I team worked with the Nigeria Multi-Activity Evaluation team to adapt the content and communication for the planned meeting. The specific activities were: (1) adjusting the existing agenda to embed two sessions that used behavioral techniques to strengthen the promotion of evidence use; and (2) adapting event invitations, follow-up emails and social media to reinforce professional/social identities, group goals, and commitments made during the sessions.

Key materials and activities developed
1. Co-designed agenda with evaluation team
2. In-session facilitator guides, session structures, and PowerPoint slides
3. Commitment card
4. Pre- and post-event emails to participants
5. Social media toolkit

Behavioral Activities During the Event

Two members of the D4I Pilot team joined the Nigeria Multi-Activity Evaluation team at their Annual Review Meeting to facilitate the following behavioral activities:

1. *Establishing group goals*: In a session called "Establishing a shared mindset," participants, including the evaluation team and USAID staff, were encouraged to take two minutes to consider the question: "What do you want to get out of today's meeting on the HPN Multi-Activity Evaluation findings?" Following individual thinking time, participants were asked to share their goals with their table and agree on a common, succinct goal for the group. Each table shared their goal, and these goals were captured on flipcharts. Participants then voted for the two goals that most resonated with them. The two goals with the most votes were displayed on the wall throughout the rest of the meeting. This activity was scheduled at the beginning of the day to ensure that participants attended the rest of the day identifying more strongly as a member of a group with the rest of the participants, including the evaluation team and USAID staff.

2. *Setting goals and creating commitment devices*: During a later session called "Evidence to action: Making use of the evaluation findings," participants were asked to make a voluntary commitment to an action related to using the evaluation's findings. Participants were first asked to select an individual realistic goal that either related to a specific action that developed from the evaluation findings or that related to how they would further engage with the findings (such as scheduling a meeting with their teams to further discuss the findings). Once they had selected their goals, participants were asked to fill out a "commitment card." This card had been developed by the D4I team and entailed a section for participants to identify and record: (a) a deadline for the goal; (b) a next step required to complete the goal; and (c) a voluntary "reward" for achieving the goal and/or a "penalty" for failing to reach the goal. Participants were encouraged to share this card with colleagues or display it visually at their place of work. The commitment card can be found in Appendix B.

Throughout the sessions, facilitators focused on using language that signaled they were part of the same group as the participants (e.g., we/us) and referred to participants as "evidence-driven professionals" or "evidence-informed experts."

Adapted Communication around the Event

Pre-Annual Review Meeting emails: The D4I pilot team developed text to be sent with email communications by the Nigeria Multi-Activity Evaluation team before the event to promote the shared professional identity of the invitees as individuals who use evidence for decision making. This included specific subject titles and email body text, such as:

As a key expert in this field, we believe your participation in this meeting will add great value into a group of like-minded professionals who place evidence and rigor at the heart of their work, and in so doing help improve health outcomes and save lives.

The email also included a request to complete the pre-meeting baseline survey.

Post-Annual Review Meeting emails: The D4I pilot team drafted emails to be shared by USAID and the Nigeria Multi-Activity Evaluation team after the event to reinforce the messaging from the Annual Review Meeting on participants' professional identities, the goals set, and their commitments. The follow-up thank you email from USAID, sent by the USAID Project Management Specialist M&E, was designed to highlight participants' professional identity as evidence users and to make use of the power of social influence. The follow-up thank you email from the senior Nigeria Multi-Activity Evaluation staff member also promoted the shared identity message and reinforced the two shared goals that were agreed to during the event.

 The emails included text, such as:

> *Many thanks for your participation in the Nigeria HPN Multi-Activity Evaluation Annual Review Meeting. We were glad to welcome such an engaged group of like-minded impact-driven professionals to take part in the discussion. It was excellent to create unifying goals for our group…*

Participants were reminded to complete the post-event survey if they had not filled it in at the event.

Social Media Toolkit

A social media toolkit was designed for the event, with tailored posts using behavioral insights to be shared across Facebook, LinkedIn, and X (formerly known as Twitter) before and after the Annual Review Meeting. The pre-event posts were intended to build or strengthen the shared professional identities of the attendees, as "evidence-informed experts" (see Figure 3). The post-event posts recognized the attendance of the participants at the evaluation meeting and further enforced the group's established identities (see Figures 4 and 5). In total, D4I used five different posts across Facebook, X/Twitter, and LinkedIn, two before the event and three afterwards. USAID Nigeria shared three of these pre-event posts on Facebook, Twitter/X, and Instagram. Three examples are shown below:

Figure 3. USAID Nigeria Instagram post, pre-event, June 26 (Accessed here.)
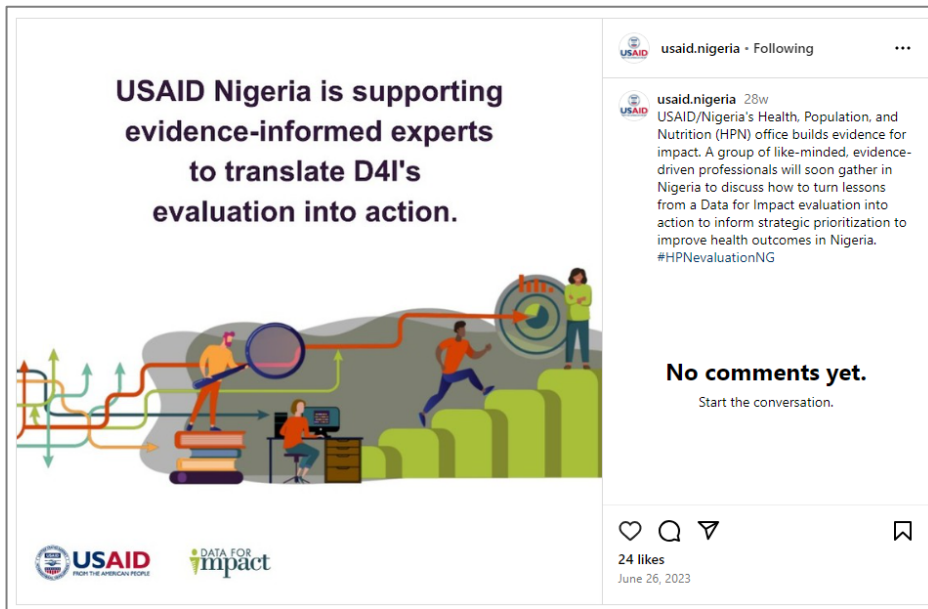
Figure 4. USAID Facebook post about the event, June 26 (Accessed here.)
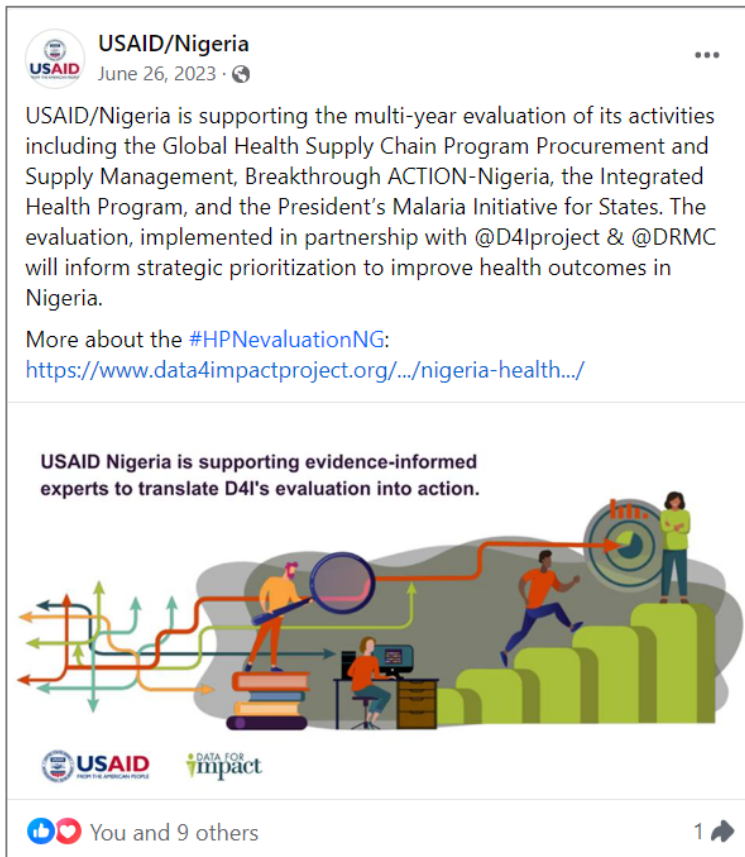
Figure 5. D4I Facebook post after the event, June 28 (Accessed <u>here.</u>)

Strategy Rationale

Structured interactions between evidence generators and evidence users

Unstructured collaborations between decision makers and researchers do not appear to be effective at increasing evidence use. However, structured and well-designed interactions (i.e., those with a clear objective and a Theory of Change or plan for achieving that objective) can affect capability, opportunity, and motivation to use evidence (Langer, Tripney, and Gough, 2016). In D4I's research, USAID stakeholders frequently reported that engagement between parties in an evaluation (e.g., collaborating on designing evaluation questions) was an enabler to evidence use.

Creating a group goal

Evaluations can lead to shifts in resources and other high-stakes decision making with potentially negative repercussions for implementers, and such a concern may prevent fully open discussions between evaluators and implementers. Interviews with USAID staff pointed to the importance of building trust between parties to reduce defensiveness and allow for more constructive conversations (Slota, Ake, and Jones, 2022). Creating a shared social identity for decision makers and evaluators is useful in decreasing defensiveness because individuals react less defensively to criticism from within their group than from members of a different group (Thurmer, McCrea, & McIntyre, 2018). A shared social identity can also be developed by collaboratively agreeing upon goals that promote group alignment (Tajfel, 1982; Barnett, Boduszek, & Willmott, 2021).

Strengthening professional identities

Wenzel, Woodyatt, and McLean (2020) report that a perceived threat to an individual's social identity (e.g., professional identity as a Chief of Party) can lead to increased defensiveness and decreased willingness to improve or change. Accordingly, interactions between individuals, especially when critique is likely, should be done with care to affirm individuals' values and social identity (Wenzel, Woodyatt, & McLean, 2020). Additionally, activities that provide a sense of purpose and contribute to valued social goals can promote identity change through interventions (Barnett, Boduszek, & Willmott, 2021).

Setting clear goals and commitment devices

Interviews with USAID highlighted that a lack of defined roles and accountability around evaluation evidence promotion was a key barrier to evidence use. Setting goals improves motivation, reduces procrastination, increases mental focus, and provides a sense of purpose. Commitment devices, which commit people to goals, promote social accountability and provide clarity on the roles and responsibilities to act on evidence (Bieleke, Keller, & Gollwitzer, 2021). Therefore, clear action plans and commitments to action (along with follow-up communication) both clarify roles and encourage follow-through on actions to increase evidence use.

Recognizing attendance

The D4I study on evaluation use found that social influence at USAID, specifically in the form of leadership, is an important enabler of evidence use. Social incentives, such as public recognition of evidence use, can help create, maintain, and strengthen social norms around using evaluation evidence. Social recognition can strengthen decision makers' existing intrinsic motivation to use evidence if the initial intrinsic motivation is salient and can confirm a person's competence or the value of their work (Hennessey, Moran, Altringer, et al., 2014).

Theory of Change

According to our Theory of Change, Strategy 2 pilot activities aimed to: strengthen an evidence use professional group identity, increase trust in the evaluation team, lead to the formulation of evidence-use goals, and provide social incentives and pressures to engage with evidence (intermediate outcomes). Strengthened group identity and increased trust in evaluators would strengthen perceptions of the credibility and relevance of findings, thereby increasing motivation to engage with findings (behavioral determinants). Social incentives and social pressure would increase motivation and social "opportunity" to engage with findings (behavioral determinants). Event communications would also increase physical "opportunity" to engage with evaluation products (behavioral determinants). The shift in these behavioral determinants (motivation, social opportunity, and physical opportunity) would lead to increased engagement with evaluation findings.

Figure 6. Strategy 2 Theory of Change
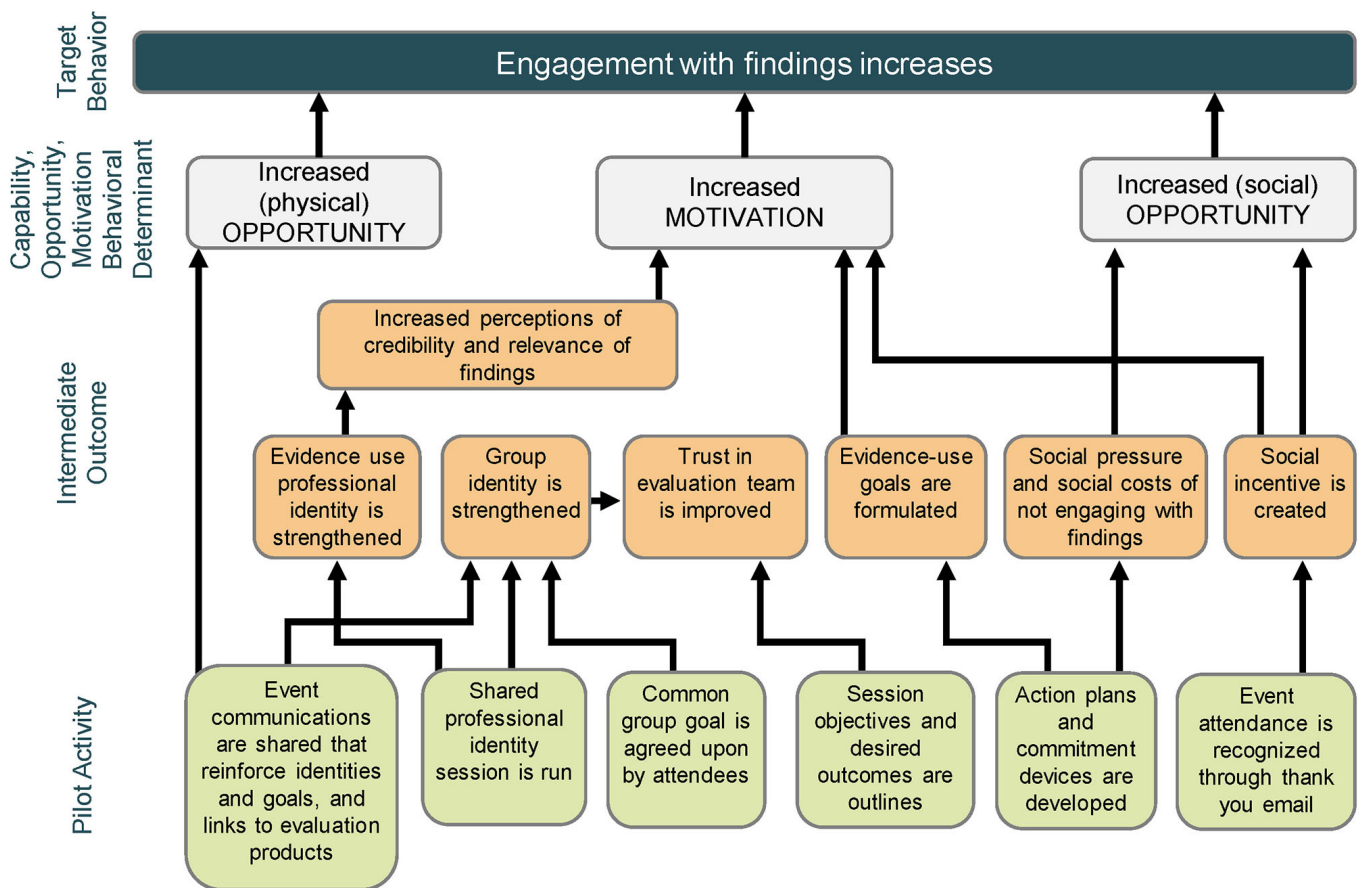
Assumptions

The main assumption underlying this Theory of Change is that by increasing engagement with findings, the use of findings is likely to increase as well. Other key assumptions in this strategy's causal pathway included that: participants join the dissemination event; participants are attentive and engaged in the activities developed during the dissemination event; the behavioral techniques to be implemented are effective in this context to increase the motivation of the participants to seek and engage with evaluation findings; differences in the capacity to use the findings do not translate into large differences in participants' willingness to engage with findings; and any differences in individuals' power to use the findings, such as formal or informal hierarchical structures, do not lead to large differences in their willingness to engage with the findings.

Measurement of Effectiveness

Strategy-Specific Measurements

Strategy 1: Email Messages about Evaluation Findings that Use a Combination of Behavioral Insights

Strategy 1 used a randomized controlled experimental design. Individuals on the USAID staff list and those

on the D4I listserv list were first randomly assigned to the three messaging groups (one control and two treatment). Each recipient received one type of message in all three rounds (for example, a recipient received a professional identity message in Round 1, Round 2, and Round 3). The team measured: (1) click-throughs on the links within the emails and (2) email open rates over one week after the emails were sent.

- *Click-through rates:* The USAID group was only assessed using the click-through rates, as their internal system did not allow for the measurement of email open rates. For the USAID group, the D4I team measured engagement with the evaluation reports by using Google Analytics to capture the number of times an evaluation report was opened using the unique link shared in each email condition. For the D4I listserv group, the email platform, EMMA, measured click-through rates.

- *Open rates:* D4I listserv engagement was also tracked by measuring whether a participant opened the emails through EMMA.

To explore gender differences, each USAID Nigeria treatment group was split into women and men so that for each email round, six separate emails were sent out (e.g., women-control group; men-control; women-professional identity; etc.). This was the only way to measure difference by gender in the USAID group.

For the D4I list, each of the three treatment groups was split into: women, men, and unknown gender. For each email round, nine emails were sent (e.g., women-control, men-control, unknown-control, etc.).

Strategy 2: Strengthening an Evaluation Finding Dissemination Event with Behavioral Techniques

For this strategy, we administered a pre- and post-event questionnaire to participants to see if there was any shift in the causal pathway along the Theory of Change.

- *The pre-event questionnaire* was shared via email prior to the event and on-site using a paper form before the start of the dissemination event. It included questions that focused on the components of the Theory of Change such as their perceptions of the credibility or relevance of the findings and their perceptions of the evaluators.

- *The post-event questionnaire* was administered at the end of the dissemination event via a paper form and in a follow-up email that included a link for participants who had left early or not completed the form on the day. This questionnaire included many of the same questions as the pre-event questionnaire but also asked additional questions focused on the specific event activities, such as whether participants believed they had common goals with the other attendees and whether the commitment card helped with their planning.

Cross-Strategy Measurement

In September 2023, the D4I pilot team administered a final questionnaire among USAID Nigeria HPN staff. Questions focused specifically on the implemented strategies. For example, respondents were asked whether they recalled receiving emails about the evaluation and then whether they used the evaluation findings, and if so, how. They were also asked questions relating to the strategies' Theories of Change causal pathways, for example, regarding their sense of professional identity. Unfortunately, only four people responded to this questionnaire due to changes at the Mission and the resulting time pressures on staff, and so the questionnaire had limited use.

Results

Strategy 1: Email Messages about Evaluation Findings that use a Combination of Behavioral Insights

This section presents the results of the email intervention designed to promote engagement with evaluation findings in two groups: (1) USAID Nigeria HPN staff and USAID Nigeria Global Health Backstops, and (2) D4I's email listserv members residing in Nigeria. The intervention examined the effectiveness of three messages using two metrics: (1) email open rates and (2) click-throughs on links within the emails. The intervention investigated these outcomes in three rounds of emails.[5]

The study used a 10% p-value threshold as the main criterion for achieving statistical significance. This significance level was used to assess the research findings' statistical validity, with strength increasing the closer the p-value approached zero (p=0.000). In this section on Strategy 1 results, all the reported findings are significant, unless otherwise stated. Please see Appendix C for all p-values shared in this section.

It is also worth noting that the sample sizes employed to estimate results vary across groups of analysis and rounds of data collection. This variation is due to two factors: 1. differences in the total number of recipients in the groups of analysis (as some individuals were removed from the recipient lists and others were added in the different rounds, for instance, because some staff had left USAID Nigeria); and 2. differences in the total number of products sent per round of data collection (i.e., the number of links in the emails). See Table 4 in Appendix D for all sample sizes.

Results for Emails to USAID Staff

The results indicate that employing a loss framing message is the most effective technique to promote USAID Nigeria staff's engagement with evaluation findings, as measured by click-through rates.[6] Participants in the loss framing group clicked on products 12% of the time (out of all the products). As shown in Figure 7, a greater percentage of participants in the loss framing group (12%) clicked on the products when compared to participants in the control group (8%) and when compared to participants in the professional identity group (5%).

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[5] The study did not measure whether a participant engaged with evaluation products through other access points beyond the links provided in the emails. For instance, recipients may have accessed the products directly from the website at a later moment (instead of re-entering through the email access).

[6] Overall, participants clicked on 8% (88) of the total products shared during the full intervention.

Figure 7. USAID staff clicks on links (% of total)
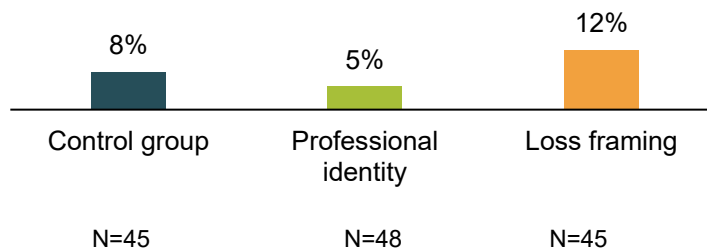
8%	5%	12%
Control group	Professional identity	Loss framing
N=45	N=48	N=45

Note: Percentages refer to clicks on links per message group across the full intervention. Rates are based on the total sample size per treatment group.

When examining the results by round, the loss framing message remains as the leading technique to increase engagement with evaluation findings in two of the three rounds. As shown in Figure 8, participants in the loss framing group clicked on a higher percentage of links in the second and third rounds when compared against participants in the control group (40% versus 11% in Round 2, and 71% versus 33% in Round 3). However, in the first round, participants in the control and professional identity groups were much more likely to click on the links than participants in the loss framing group, with differences exceeding 29 percentage points.

Interestingly, the findings indicate that emails that include simpler or less information may increase engagement with the material shared. For instance, the third round, which had only one link, had the highest engagement independently of the treatment group. Participants clicked on 44% (20) of the total links shared in this round.[7]

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[7] The pilot was not designed to compare results by intervention rounds. There may be other reasons why the third round link received the most clicks, for example, greater interest in the linked-to product.

Figure 8. USAID staff clicks on links per round (% of total)

■ Control group   ■ Professional identity   ■ Loss framing

	Round 1 (reports=2)	Round 2 (reports=5)	Round 3 (report=1)
Control group	47%	11%	33%
Professional identity	38%	1%	31%
Loss framing	9%	40%	71%

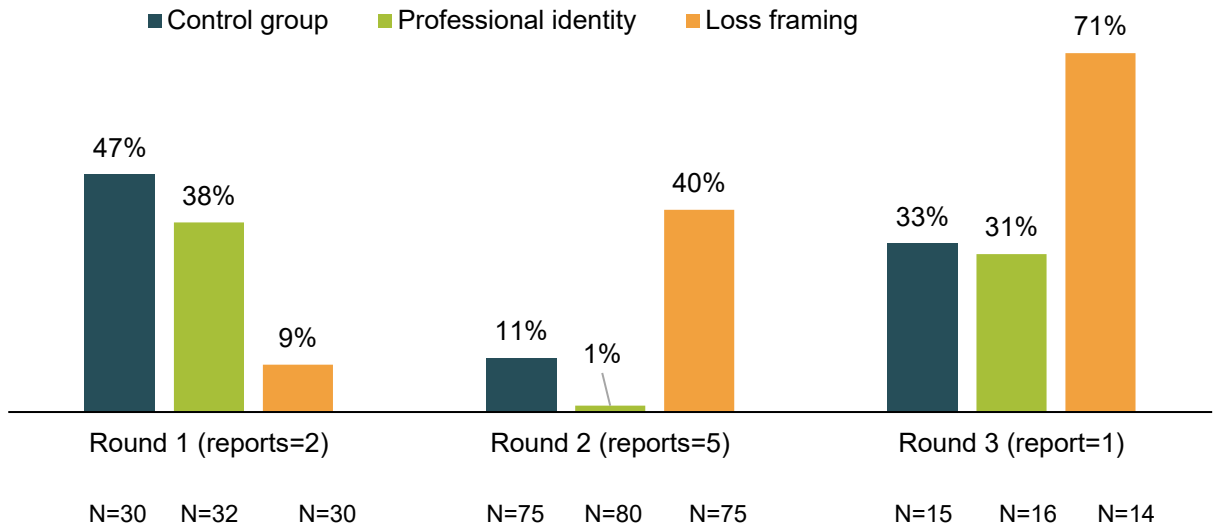N=30 N=32 N=30   N=75 N=80 N=75   N=15 N=16 N=14

Note: Percentages refer to clicks on links per message group and round of the intervention. Rates are based on the total sample size per treatment group in each round.

Differences by Gender

The findings point to differences in the effectiveness of email communication when examining recipients' genders (Figure 9). Women in the loss framing group (17%) were more likely to click on the links than women receiving the control message (3%) or professional identity (2%) message. Conversely, men receiving the control message (15%) clicked on the links more often when compared to men in the professional identity (8%) and loss framing (5%) groups.

Overall, when compared to men, women clicked on links more often when receiving the loss framing message. As compared to women, men were more likely to click on links when receiving the professional identity message and when receiving the control message.

Figure 9. USAID staff clicks on links by gender (% of total)

■ Men (Rounds 1, 2 and 3)   ■ Women (Rounds 1, 2 and 3)

	Control group	Professional identity	Loss framing
Men	15%	8%	5%
Women	3%	2%	17%

N=144 N=216   N=168 N=216   N=152 N=208
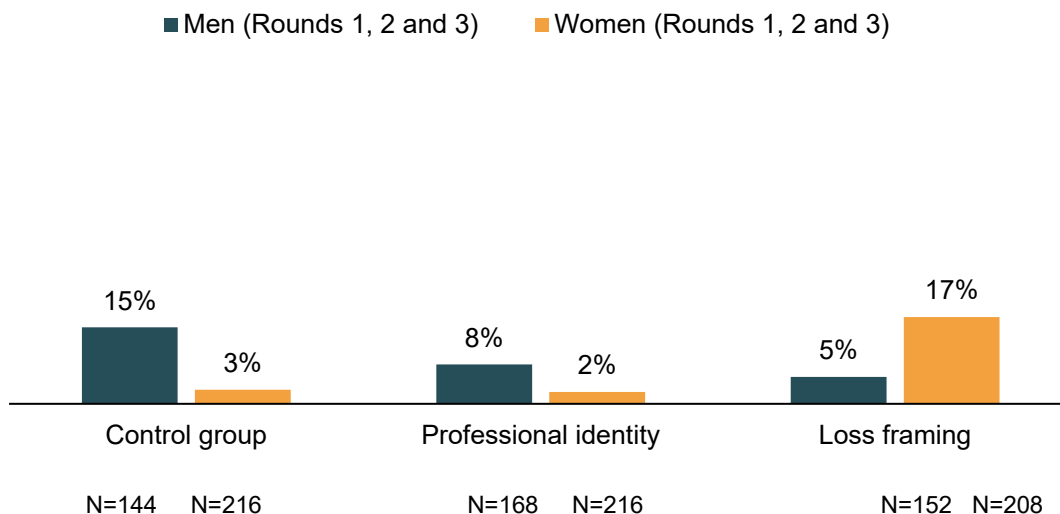
Note: Percentages refer to clicks on links by gender of the participant. Percentages are based on the total sample size.

Results for Emails to D4I's Listserv Members

The professional identity message was the most effective technique to drive engagement with evaluation findings amongst the D4I listserv members, as measured by opened emails and click-throughs.[8] As shown in Figure 10, participants in the professional identity group opened emails most frequently (30% of the time). Across the full intervention, the professional identity group opened the emails 30% of the time, as compared to 23% in the control group and 22% in the loss framing group.

Figure 10. D4I's listserv members email opens (% of total available)
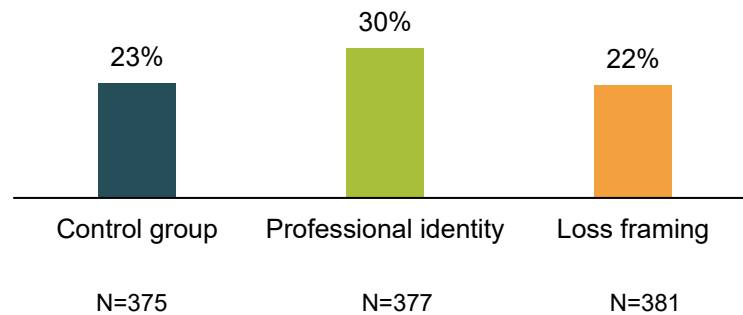
Note: Figure 10 displays email open rates per message group across the full intervention. Rates are based on the total sample size per treatment group.

On average, participants clicked on 9% of the links, with no statistically significant difference between treatment groups (as shown in Figure 11).

Figure 11. D4I's listserv members clicks on links (% of total available)

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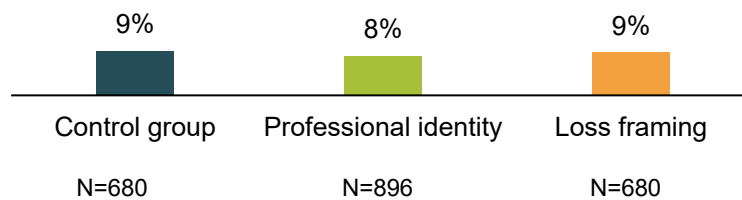
[8] Overall, 25% (282) of subjects opened their emails, and there were 9% (195) clicks on links.

Note: Figure 11 displays clicks on links per message group across the full intervention. Rates are based on the sub-sample of participants who opened the email and the total number of links available within the email.

The effectiveness of professional identity messaging remained when examining the results by round. Recipients in the professional identity group opened emails most frequently in each of the three rounds of the study (see Figure 13). Participants in the control and loss framing groups showed no sizable differences in email open rates.

Interestingly, recipients of the professional identity message were also more likely to *click* on the links in Rounds 1 and 3 (see Figure 12). **However, this positive effect of the professional identity message was not observed in Round 2, possibly because of the higher number of products included in the emails (i.e., five products were added in this round).** For instance, the third round that included a single link demonstrated the highest proportion of total clicks on the links (45%), which is twice as large as the rates found in Rounds 1 (23%, two links) and 2 (22%, five links).

Figure 12. D4I's list members email opens per round (% of total available)

Note: Figure 12 displays the email open rates per message group and round. Rates are based on the total sample size per treatment group in each round.

Figure 13. D4I's list members clicks on links per round (% of total available)
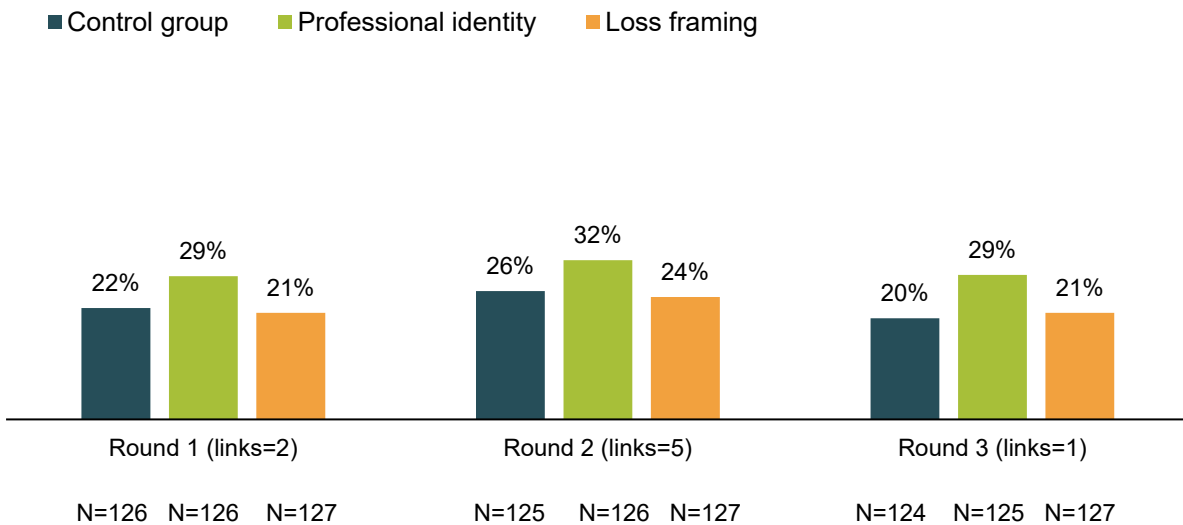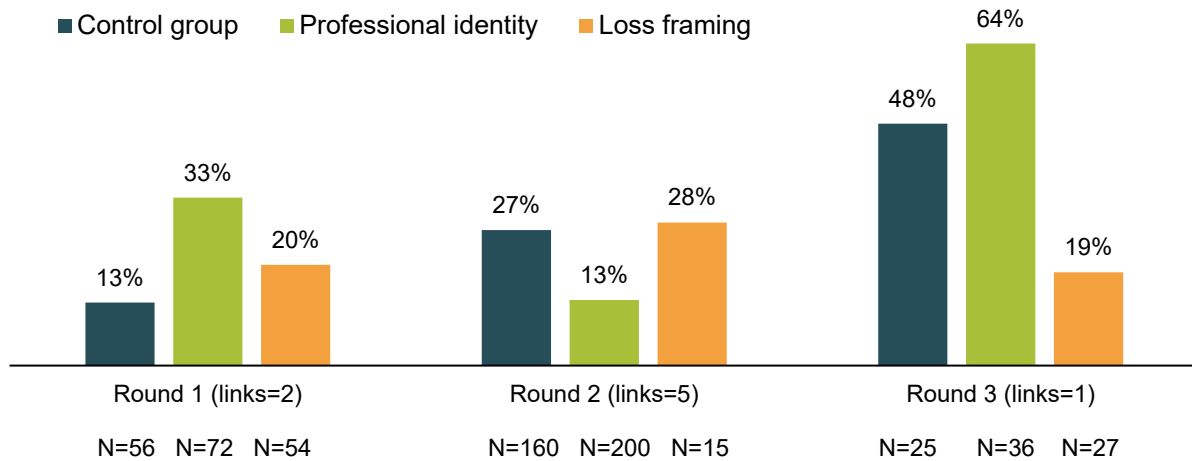

Note: Figure 13 displays clicks on links per message group and round. Rates are based on the sub-sample of participants that opened an email and the total number of links.

Differences by Gender

There were some differences in message impact when examined by the gender of the recipient. As shown in Figure 14, **both women (29%) and men (32%) in the professional identity group opened emails more frequently than participants in the control and loss framing groups.** Women in the professional identity group were 13 percentage points more likely to open emails than those in the loss framing group (16%), but they showed no significant difference when compared to women in the control group (24%). Men in the professional identity group were 7 percentage points more likely to open emails than those in the loss framing group (25%), and 9 percentage points more likely to open emails than those in the control group (23%). Recipients with no known gender were more likely to open an email when receiving the loss framing email (24%) than those in the control group (12%). There was no statistical difference in open rates between the participants with no known gender receiving the loss framing (24%) and those receiving the professional identity emails (14%).

Figure 14. D4I's listserv members email opens by gender (% of total available)

Legend: ■ Control group ■ Professional identity ■ Loss framing

	Men			Women			Unknown		
Control group	23%			24%			12%		
Professional identity		32%			29%			14%	
Loss framing			25%			16%			24%
	N=248	N=248	N=252	N=94	N=93	N=96	N=33	N=36	N=33
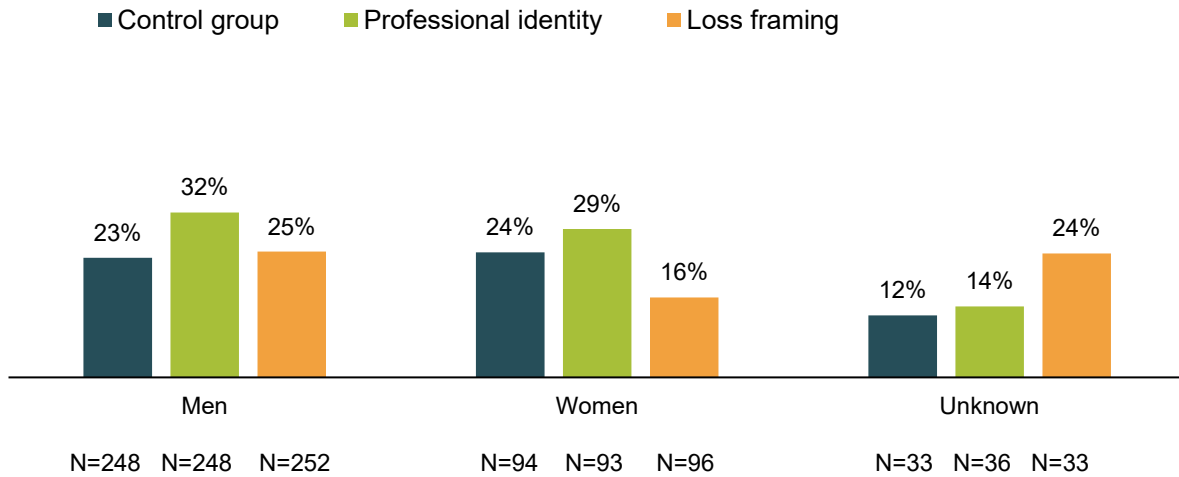
Note: Figure 14 displays the email open rates per gender of the participant across the full intervention. Rates are based on the total sample size.

Men in the control group were more likely to click on links than those in the professional identity group. Women in the professional identity group were more likely to click on links with respect to those in the control group, but showed no difference when compared to the loss framing group.

Among recipients whose gender is unknown, the highest click-through rates were among the professional identity group (see Figure 15). Overall, men were more likely to click on links when receiving the control message as compared to women. Women were more likely to click on links when receiving the professional identity message as compared to men. There was no statistical difference between genders in the loss framing group.

Figure 15. D4I's listserv members clicks on links by gender (% of total available)

Legend: ■ Control group ■ Professional identity ■ Loss framing

	Control group	Professional identity	Loss framing		Control group	Professional identity	Loss framing		Control group	Professional identity	Loss framing
	10%	6%	8%		5%	10%	10%		22%	28%	13%
	N=464	N=640	N=496		N=184	N=216	N=120		N=32	N=40	N=64
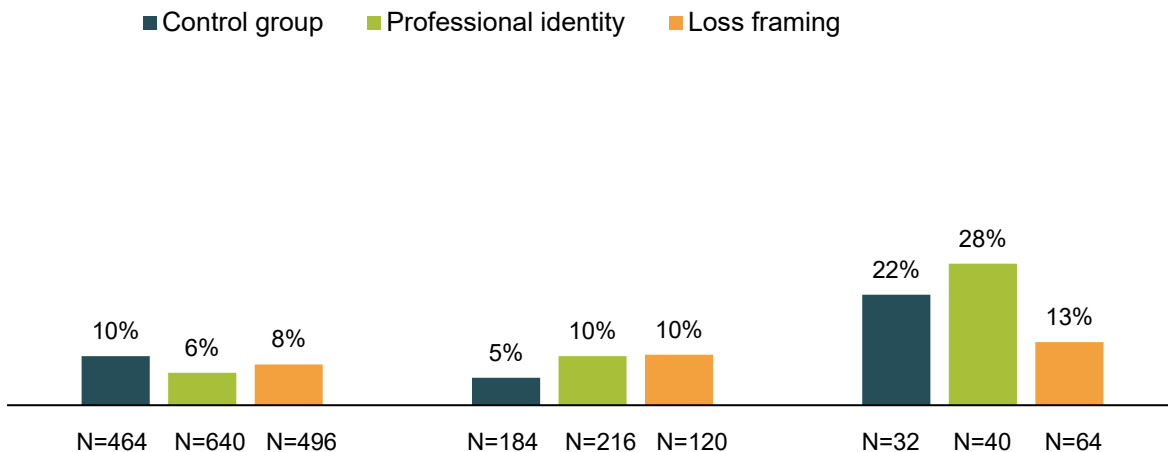
Note: Figure 15 displays clicks on links per gender of the participants across the full intervention. Rates are based on the sub-sample of participants who opened an email and the total number of links available.

Strategy 2: Strengthening an Evaluation Findings Dissemination Event with Behavioral Techniques

Strategy 2 aimed to increase engagement with evaluation findings amongst USAID Nigeria Mission staff and other stakeholders participating in the Nigeria Multi-Activity Evaluation Annual Review Meeting in Abuja, Nigeria, on June 27, 2023. The attendees included: USAID implementing partners (16), USAID staff (6), D4I staff (4), local government officials (2), and others of unknown affiliation (6).[9]

Attendees completed pre- and post-event questionnaires, and the results were compared. The pre-event questionnaire received 21 responses, although two of these responses were completely blank and one was only half completed. There were five women and 13 men amongst the respondents, and the three partial or non-completed respondents did not include information about their gender. The post-event questionnaire received 17 responses. Of these, seven were women and nine were men, and one preferred not to answer.

Unfortunately, a final questionnaire for USAID Nigeria staff that was sent a few weeks after the event did not receive sufficient responses for analysis, though the few comments that were received were considered when reflecting on the findings and future recommendations. These comments aligned with the results from the pre- and post-questionnaire and did not change any of our conclusions.

These findings are subject to two major limitations. First, the sample sizes were quite small, and they become even smaller when disaggregated across genders. This made it difficult to detect statistically significant differences in the pre- and post-event data. As such, the report does not claim the findings below to be statistically significant. Second, there was not a perfect overlap between those who filled out the questionnaire prior to the event and those who filled it in at the end of the event, as some attendees left in the middle of the event and others joined halfway through. It is difficult to estimate exactly what that overlap was, given that the questionnaire was anonymous.

Testing the Theory of Change and its Assumptions

The pre- and post-questionnaires focused on how effective pilot activities were in producing results along the Theory of Change pathways. A number of Theory of Change assumptions were tested, including whether differences in individuals' power to use the findings, such as formal and informal hierarchal structures, lead to differences in their willingness to engage with the findings. Other assumptions, such as whether participants joined the event and were attentive and engaged in the dissemination event activities, were observed by the facilitators conducting the session (as assessed by whether the participants were looking at speakers who were presenting, participating actively in discussions, and/or asking questions). Finally, the assumption that differences in the capacity to use the findings do not translate into large differences in participants' willingness to engage with the findings remains untested, although the questionnaire of USAID Nigeria staff used to select the pilot strategies did not identify capacity as a major barrier to evidence use among this group.

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[9] According to the event sign-in sheet.

Decision-Making Power

First, we investigated decision-making power in response to the Theory of Change assumption that, "Any differences in individuals' power to use the findings, such as formal or informal hierarchical structures, do not lead to large differences in their willingness to engage with the findings."

In the pre-questionnaire, two-thirds (67%) of respondents agreed or strongly agreed with the statement, "I have decision-making power or influence to use the Nigeria HPN Multi-Activity Evaluation findings to improve programming for the activities involved in this evaluation or future programming," with 11% neither agreeing nor disagreeing and 22% disagreeing or strongly disagreeing. There was no difference in how women and men responded to this question. Eighteen individuals submitted comments to further explain their answers. One individual stated: "I have good understanding with Ministry of Health and Primary Healthcare Board. With my advocacy knowledge, I believe I can do something." On the negative side, one respondent stated that, "USAID contracts are restrictive and so implementers are boxed into what's agreed upon from start most of the time."

In the post-questionnaire, three-quarters still agreed or strongly agreed that they had decision-making power (77%), with 6% neither agreeing nor disagreeing, and 18% disagreeing or strongly disagreeing. Women may have felt slightly more empowered than men, as 86% of women agreed or strongly agreed with the statement (versus 67% men), 14% of women neither agreed or disagreed (0% for men), and 0% disagreed or strongly disagreed (33% of men). Twelve individuals submitted comments to further explain their answers. On the one hand, a respondent stated: "As program manager, I am able to recommend to activities and programs I manage on the use of data and evidence to inform action." In contrast, another respondent wrote, "I don't have the power to make any decision."

Knowledge on Where to Access Findings

To ensure that attendees had the physical opportunity to access evaluation findings, at the beginning of the dissemination event the evaluation team showed participants how to navigate the updated D4I website to show where the findings were stored online. Accordingly, **there was a large increase in attendees' agreement with the statement, "I know where/how to access the Nigeria Multi-activity findings."** In the pre-questionnaire, 42% of respondents agreed or strongly agreed with the statement, while 94% agreed or strongly agreed in the post-questionnaire. In the pre-questionnaire, 47% of respondents neither agreed nor disagreed with the statement and 11% disagreed or strongly disagreed with it. In the post-questionnaire, 0% of respondents neither agreed nor disagreed with the statement, and 6% disagreed or strongly disagreed with it. This increase was larger amongst women than men, with 20% of women agreeing or strongly agreeing with the statement, 20% neither agreeing nor disagreeing, and 60% disagreeing or strongly disagreeing in the pre-event questionnaire. In the post-event questionnaire, 100% of women agreed or strongly agreed with the statement.

Common Group Goals

The event session called "Creating a Shared Mindset" focused on establishing shared group goals. According to facilitators, the session was successful, with participants engaging and coming up with their own goals that differed from the event objectives presented at the beginning of the session and finally agreeing on two common goals focused on evidence use. **After the event, 100% of respondents agreed or strongly agreed with the statement "I feel that the other event attendees (D4I evaluation team,**

implementing partners, USAID staff) and I share common goals with regards to improving health programming." But the level of agreement with this statement was already very high in the pre-event questionnaire, with 94% agreeing or strongly agreeing. There was not a noticeable gender difference in responses to this statement.

Knowing How to Apply the Findings

The first part of the "Evidence to Action" activity, led by the evaluation team, was meant to help participants better understand how to apply the study findings to their work. **Comparing pre- and post-questionnaire responses showed that there was a large increase in attendees' ability to apply evaluation findings to their work, especially among women.** 63% of respondents agreed or strongly agreed with this statement in the pre-event questionnaire, with 94% answering this way in the post-event questionnaire. 32% neither agreed nor disagreed, and 5% disagreed with the statement in the pre-event questionnaire, whereas in the post-event questionnaire, 0% neither agreed nor disagreed, and 5.9% disagreed or strongly disagreed.

As mentioned, there was a larger increase in women's perceived ability to apply evaluation findings to their work after the dissemination event than that seen amongst men. Amongst women, 40% agreed or strongly agreed with the statement in the pre-questionnaire, with 86% answering this way in the post-questionnaire. 60% neither agreed nor disagreed, and 0% disagreed or strongly disagreed in the pre-event questionnaire, whereas in the post-event questionnaire, 0% neither agreed nor disagreed, and 14% disagreed or strongly disagreed with the statement. In the pre-questionnaire, women were less likely to agree that they knew how to apply evaluation findings than men, with only 50% of women responding agreeing or strongly agreeing with the statement and 100% of men responding this way. Ten percent of women neither agreed nor disagreed with the statement as opposed to 0% of the men responding, and 40% of women disagreed or strongly disagreed as opposed to 0% of the men.

Defining Individual Goals and Committing to Using Findings

The second part of the "Evidence to Action" activity was defining an individual goal for engaging with evaluation findings and creating a commitment card (see Appendix B). Facilitators noted mixed engagement with this activity. Nevertheless, **77% of participants either agreed or strongly agreed that "the Evidence to Action activity (with goal setting and a commitment contract) helped me clarify my plans to use the findings of the Nigeria HPN Multi-Activity Evaluation."** Just 18% of respondents neither agreed nor disagreed, with 6% disagreeing or strongly agreeing. Women's agreement scores (57%) were lower than men's (89%).

Social Expectations Regarding the Use of Findings

There was also no difference in overall respondents' belief that their colleagues expect them to use evaluation findings. In the pre-event questionnaire, 67% agreed or strongly agreed with the statement, 28% neither agreed nor disagreed, and 6% disagreed or strongly disagreed. In the post-event questionnaire, 71% of respondents agreed or strongly agreed, 29% neither agreed nor disagreed, and 0% disagreed or strongly disagreed. However, there was a noticeable decrease in agreement with this statement amongst women agreeing that their colleagues expected them to use evaluation findings. In the pre-event questionnaire, 80% of women responding agreed or strongly agreed with the statement, with 20% neither agreeing nor disagreeing. In the post-event questionnaire, 57% of women agreed or strongly

agreed with the statement, with 43% neither agreeing nor disagreeing.

Relevance and Credibility of Findings

According to the pilot's Theory of Change, the activities should ultimately increase perceptions of the credibility and relevance of findings, thereby increasing engagement with the evidence. The event participants, however, found the evaluators credible and the findings relevant to their work even before the dissemination event began.

In the pre-event questionnaire, around 84% of respondents agreed or strongly agreed that "the HPN Multi-Activity Findings are relevant to my work", increasing to 94% in the post-event questionnaire. This positive trend was only seen among men, however. One hundred percent of women agreed or strongly agreed with the statement in the pre-event questionnaire, as opposed to only 86% in the post-event questionnaire, with 14% neither agreeing nor disagreeing with the statement. In contrast, in the pre-event questionnaire, 77% of men agreed or strongly agreed with the statement as opposed to 100% in the post-event questionnaire, with 23% neither agreeing nor disagreeing with the statement in the pre-event questionnaire as opposed to 0% in the post-event questionnaire.

Nineteen respondents submitted comments regarding relevancy, with one respondent commenting that the findings "helps us make informed decisions and evaluations about the project, better interpret the results, and determine any potential implications for future programming or interventions." In the post-event questionnaire, 12 respondents submitted comments, with one respondent stating that the evidence could be used "for decision making, programming, and policy formulation."

In the pre-event questionnaire, 84% of respondents agreed or strongly agreed with the statement, "the Nigeria HPN Multi-Activity Evaluation findings are credible," increasing to 94% in the post-event questionnaire. In the 19 comments in the pre-event questionnaire, most respondents (10) referred to the mixed-methods approach used in the evaluation, as well as the triangulation of data as reasons for considering the findings credible. One respondent stated,

> *The Nigeria HPN Multi-Activity Evaluation findings are credible because they were conducted using a rigorous methodology that involved both quantitative and qualitative data collection methods. The evaluation team also included experts in the relevant fields, ensuring that the findings were based on sound research. Additionally, the evaluation findings are consistent with other research on the topic, further supporting their credibility.*

Three respondents referred to the credibility of D4I implementers, and two mentioned that these were independent, third-party evaluators. Similarly, 10 respondents included comments in the post-questionnaire, with six of these referring to the credibility of the mixed methods approach and triangulating findings. Two of these referred to the composition of the team, with one respondent stating, "the process was rigorously construed with team of committed researchers."

Constructive Conversations

There was no observed difference in responses to the question regarding people being able to have constructive conversations with other Nigeria HPN Multi-Activity Evaluation stakeholders around improving programming in the future, with 100% of respondents strongly agreeing or agreeing with the statement in the post-event questionnaire. This may be because levels of agreement with this statement

were already high in the pre-event questionnaire, at 94%. There was no meaningful gender difference in the responses.

Plans to Use Evaluation Findings

While the timeframe of these questionnaires was not sufficient to measure if participants used the evidence, the questionnaires did ask if attendees planned to use the findings. There was a small increase in agreement with the following statement, "I plan to use the Nigeria HPN Multi-Activity Evaluation findings." Nearly 89% of respondents in the pre-event questionnaire agreed or strongly agreed with the statement, and 100% of respondents agreed or strongly agreed in the post-event questionnaire. Another 6% neither agreed nor disagreed with the statement in the pre-event questionnaire, whereas in the post-event questionnaire, 0% of respondents neither agreed nor disagreed, and 0% disagreed or strongly disagreed with the statement in the post-event questionnaire.

In the pre-event questionnaire, 18 respondents submitted comments about their plans to use the evaluation findings. **Nine respondents referred to using the findings to adapt their current projects,** and three mentioned sharing the findings with the community to increase their engagement with policy discussions. One respondent said they planned to "1. share the findings with my team members 2. Discuss possible activities to strengthen gaps 3. Plan activities in the coming FY24 work plan to fit into the overall objectives of the project and HPN." On the other hand, one respondent stated, "I am not an end user of the findings but rather someone who generates and provides data." Twelve respondents submitted comments in the post-event questionnaire. Similarly, six respondents referred to applying the findings to adapt their current programs, with two mentioning research and two mentioning shaping future policies or activity designs. One respondent said, "Once I have clearer understanding, I can increase activities that can sustain gains and reduce or stop activities that is not working." However, another respondent stated, "The use of the findings at my level is limited. I will have to share with my superiors."

Discussion

Strategy 1

The significant differences in email opens and clicks under Strategy 1 suggest that select, targeted messages can be effectively used to increase engagement with email content. This approach can offer a good return on investment because crafting such messages does not take much time once a message type (loss frame, professional identity, etc.) has been selected. Determining which kinds of messages work best with a particular group is also not difficult, especially when testing within one's own organization, when information technology (IT) security is not a major challenge, and when using an email platform that automatically tracks opens and clicks. On the other hand, if there are complications, such as having to create unique links for each treatment group to allow for measurement, as in the case of USAID email recipients in the pilot, then this approach is more time-consuming and may not be worth the effort for a smaller target population. If the emails are sent to a very large number of people, however, then the extra effort (e.g., creating a few bespoke links) may be worth the time. For instance, with an email list of 1,000 recipients, the difference between 22% and 30% opens, as was the case for the D4I listserv, is 80 people, and over multiple rounds of emails, this can have a major difference in information obtained and acted upon by the target group.

For USAID staff, the loss framing technique was the most effective in promoting engagement with the evaluation products by emphasizing the potential negative consequences of not adopting the new findings. In contrast, among the D4I's list community, the professional identity message was most effective, with the impact of this technique being large and stable across the three rounds of emails. The divergent effectiveness of the types of messages between the two groups may be a result of nuanced psychological mechanisms at play such as the trust in the sender and the value given to the evaluation products shared in the communication.

USAID staff may have responded more favorably to the loss framing technique due to its ability to invoke a heightened sense of urgency and personal relevance as it was sent directly from a trusted and known USAID senior colleague. These participants may have understood that the information shared by their contact was of substantial importance, especially as the evaluation products referred to USAID programs in Nigeria and could prove useful for their daily activities. Missing out on this information could be a critical mistake, impacting their effectiveness and other related factors, such as their reputation in the workplace. In comparison with the D4I list, USAID staff were 'closer' to the potential loss presented to them—the loss would occur on projects their teams were working on. At the same time, they may have had more control over what could be lost, and therefore more control over how to prevent that loss.

In contrast, the professional identity message may have resonated more with the D4I's list participants as the emails were sent from a less trusted or known source and the presented findings were not necessarily as directly related to their daily work. Taken together, this may have produced a weaker signal in terms of the significance and urgency of the information contained in the evaluation products as applicable to their daily activities. Thus, the emails that tapped into their aspirational self-concept and intrinsic professional motivations proved more effective in aligning their behaviors (engaging with the findings) with their professional identities as evidence users. Finally, as the D4I list participants opted in to the list, they may have been more invested in learning and professional development around evidence use for health and

therefore could have been more susceptible to professional identity messaging.

Interestingly, in the USAID staff group, when disaggregated by gender, the loss framing technique was most effective for women, while the control message worked best to motivate men. Some research suggests that women may be more sensitive to loss framing in certain situations or decision-making contexts, meaning that in these situations, women are more likely to avoid risky options when framed in terms of potential losses (see, for example, Huang and Wang, 2010). USAID's women on staff may be more risk averse than men when it comes to making suboptimal decisions at work, making the loss framing message more effective for this cohort.

Overall, these divergent findings underscore the importance of tailoring behavioral interventions to the unique needs and psychological profiles of different groups, also known as "audience segmentation." They emphasize the need for a tailored approach in promoting the adoption of evaluation findings, including consideration of who the sender or messenger is in relation to recipients, how directly relevant the findings are, and the recipients' gender.

Finally, sharing a single product at a time may have maximized engagement with evaluation findings[10]. Consistent with the findings of behavioral literature, increasing the number of products shared in email communication may have overwhelmed recipients with information, decreasing their likelihood of paying attention and consequently clicking on the links. In addition, presenting a single evaluation product in an email may have signaled its importance to recipients, encouraging them to engage with it.

Addressing Operational Challenges

The pilot team also learned a number of operational lessons in implementing the pilot, which deserve mention.

Leadership-related: The original design and Theory of Change of this strategy had planned for the email communications to come from the relevant leadership of each target group. This was based on D4I's study, which showed that most USAID Nigeria staff are more inclined to use evaluation findings if leaders at USAID actively promote their use (Slota, Ake, & Jones, 2022). Additionally, independent research highlights that leaders have the potential to reinforce organizational norms regarding evidence use (Langer, Tripney, & Gough, 2016). However, due to limitations in organizational capacity, senior leadership (or leaders easily recognized by participants in the case of the D4I list) could not be directly involved. Instead, messages were conveyed through senior colleagues. To enhance future efforts, exploring the impact of engaging well-known leaders in messaging, as outlined in the recommendations section, could be considered.

IT security-related: The biggest challenge in implementing this intervention was IT. USAID IT security requirements, including strict limits on the type of software and add-ons that USAID staff can use and the types of links they can open, meant that it was challenging to find a means of sending emails that allowed for: (1.) measuring opens and clicks on links within the emails; (2.) personalizing the email greetings so they included each recipient's name; and (potentially less critical but still important for the implementer) (3.) reducing the time burden on the USAID staff member who the emails are sent by (or on behalf of). After

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[10] There is a possibility that the email with one link, to one product, included a product that was much more interesting to email recipients, so we can only say that including a single product *may have* increased engagement. The pilot was not designed to compare results by intervention rounds.

exploring multiple solutions with USAID (including using MailChimp, Google add-ons, and shortened Bitly links), the solution the D4I team identified was for a USAID staff member, the USAID Nigeria Mission Project Management Specialist M&E, to send mass emails with personalized greetings through his Gmail and for us to track link clicks using Google Analytics by creating bespoke links for each content piece in each email message. We supported the Project Management Specialist to do this, including testing the process with him. The Project Management Specialist was able to successfully send out the first two rounds of emails, with it only taking him 10 minutes total per round. By the third round, however, the mass email function had been disabled in his email account. As such, we found another solution—the emails were sent in batches to the various groups. However, this no longer allowed them to be personalized (i.e., instead of each recipient being addressed by name, such as "Dear Oife," they would be addressed as "colleagues").[11] This process of having to work within strict IT security environments taught us a number of lessons for implementing an intervention like this with a "third-party" organization, which are noted in the recommendations section as "operational recommendations."

Strategy 2

According to the literature, for researcher-evidence user interactions to lead to increased use of evidence, a number of conditions need to be met. Among these, interactions should be structured with clear objectives, there must be opportunities for formal and informal interactions, and trust must be built. The dissemination event met these criteria—organizers created structured activities, communicated the objectives of the event and activities clearly, and provided opportunities for informal interaction. While we cannot speak to the level of trust between the evaluators and participants, as noted above, the pre-questionnaire already showed that participants considered the evaluation findings to be credible, and some commented on the quality of the evaluators as the reason for that. Further, also before the event, participants expressed they could have constructive conversations with other attendees regarding improving future programming, which may be an indicator of a reasonably high (or at least not low) level of trust between them (as increasing intragroup trust can facilitate constructive conversations).

As such, this event had in place a number of factors that would, in theory, make it effective for increasing the use of findings. The behavioral interventions used within the two pilot sessions, therefore, could provide a boost to supporting evidence use but perhaps would not make as much of a difference in terms of increasing engagement with the findings as if these other factors were not in place.

Additionally, before the event, the majority of attendees already felt that the findings were relevant to their work (which may be due to the volume of evidence that the evaluation had already produced prior to this particular dissemination event and previous dissemination events). Relevance is a key factor in evidence being used. This may seem like common sense. However, it may not always be obvious to people that a piece of evidence is relevant to them, and so it is actually the *perception* of relevance that matters in whether people will engage with findings, and perception can be shaped. According to the literature, perception of the relevance of evidence depends on timing, context, and clear and actionable recommendations. The event participants, perhaps unsurprisingly, perceived this evaluation to be relevant as they were in the midst of implementing the project the findings were about. While this evaluation did

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[11] To note, there were no challenges in sending emails to the D4I listserv including personalizing the greetings and measuring opens and clicks, using the EMMA platform.

not require interventions that aimed to increase perceptions of relevance, for other evaluations, understanding whether this very fundamental driver of evidence use is in place —that is, whether target users perceive the evaluation to be relevant—may be a critical starting point for creating dissemination plans or designing evidence-use interventions. Without helping people see that an evaluation is relevant to them, there is little use in implementing any other methods for increasing evidence use.

By making participants aware of where to find the findings on the website, the event also made it easier for them to access the findings, which is another key factor in using evidence. Indeed, the assessment that the pilot team carried out amongst USAID staff to select the pilot strategies identified the accessibility of the findings as one of the most important barriers to the use of evaluation findings. By simply going over the new website and showing participants where the information was stored, evaluators helped remove barriers related to limited time and information overload. While this particular activity was not a pilot intervention, it demonstrated the power of a simple explanation at a moment when individuals were in a context where they were able to focus on the topic. Participants expressing better knowledge of where to access the findings may also point to the benefit of creating a user-friendly platform for storing information, as the information was stored on D4I's updated website.

"Establishing a Shared Mindset"

Strengthening a group identity, including by using inclusive shared language (such as "evidence users") and creating common goals, can serve to build trust between evaluators and evaluation users, thereby strengthening perceptions of credibility and the relevance of findings and increasing motivation to engage with the findings. Already before the event, participants had a sense that they shared common goals with others at the event. This is perhaps why the "Establishing a Shared Mindset" session was easy to implement and appeared successful to the facilitators. At the end of the event, 100% of participants felt they shared common goals with others, but compared to 94% prior to the event, this is not a large increase. Therefore, this activity was perhaps less needed for this evaluation than it may be for others. Given its relative simplicity, the general enthusiasm of participants engaging in the activity, and the potential it has in driving toward evidence use, this is a highly worthwhile activity for evaluators to employ during events.

Where possible, the shared goals agreed to during the session should be reinforced by being referenced throughout the day and in follow-up communications (including on social media). Further efforts could also be made to strengthen a sense of shared identity at a dissemination event. The D4I team noted that we could have: (1) arranged seating such that evaluators and other participants mixed more; (2) Made the lanyards/badges the same for both groups; and (3) given speaking roles to participants so that they were more integrated with the evaluators.

"Evidence to Action"

Commitment devices, such as the one used during the "Evidence to Action" session, create motivation and promote social accountability. Setting goals, as part of creating commitment devices, improves motivation, reduces procrastination, increases mental focus, and provides a sense of purpose. Therefore, using commitment devices when engaging with evidence should increase evidence use.

The "Evidence to Action" commitment card activity offered promise (with 77% of participants finding it

useful) but demonstrated areas for improvement.[12] While the facilitators felt that the instructions for this activity were clear and the materials were properly developed, the levels of participant engagement were mixed. One reason could be that this was a new activity for participants, and they may not have fully understood it or been convinced by its value. With the session occurring at the end of a full day filled with presented information, participants may have been tired and less interested in trying something new, especially when there was no requirement for them to do so. While the commitment card was shared with the USAID Nigeria Mission Project Management Specialist M&E ahead of time, it is also possible that some of the language did not resonate perfectly with participants. Another likely explanation is that individual goals were difficult to create in that moment. The activity required attendees to identify their own evidence-use goals, but perhaps attendees were not given enough time to reflect on how the findings connected to their work within the larger context of their team. They may have needed to wait for an agreement with their team, or at least their managers, as to how to use the findings, limiting their ability to set individual goals during the event.

The overarching lesson from the activity was that it held promise for promoting the use of findings, but some adjustments should be made to how it was implemented. This includes making more of an effort to convey the benefits of using a commitment card, including by sharing more examples of successful uses and engaging leaders to model its use. It also includes piloting the card with a few individuals before rolling it out more widely, to check for any language or implementation recommendations. Having senior leaders, and in this case USAID members themselves, fill out the card simultaneously with other participants would provide greater social pressure or motivation to participate. Perhaps most importantly, it requires considering how and when individual goals can be made in the evidence-dissemination/action-planning processes when individuals work within teams. These lessons are noted in the recommendations below.

Recommendations

Recommendations Regarding Email Communications[13]

- **Tailor email communications on evaluation findings**. Tailoring email communications can improve engagement with evaluation findings among USAID Nigeria staff and D4I's list members. The divergent findings regarding the impact of messages on the two target groups (USAID Nigeria and D4I listserv members) and different genders underscore the importance of tailoring behavioral interventions to the unique needs and psychological profiles of different groups. This includes tailoring the approach based on who the sender or messenger is in relation to the recipients and how directly relevant the findings are to the recipients.

- **Use loss framing messaging when the messenger is trusted and the content is highly relevant.** Email communication that emphasizes loss framing techniques can promote the engagement of evaluation findings among USAID Nigeria staff. However, the most tailored strategy for this target group would employ the loss framing technique to motivate women and a basic personalization

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[12] Social expectations of the use of evidence did not shift after the activity, as theory would predict, but this would only happen after the commitment cards were shared with others, for example by being displayed in one's office, so this could not be measured immediately after the event.

[13] The recommendations are based on findings from the pilot only. They do not, therefore, cover the wide range of evidence-use and engagement approaches possible. For instance, the recommendations do not reference the power of graphics and data visualization to both engage users and to convey information effectively, as the pilot did not focus on graphics and data visualization.

feature to motivate men. Extrapolating more broadly, to other evidence-use target groups, using the loss framing technique may be effective when the message comes from a colleague or another trusted, known, and/or close source; when the content of the message is highly relevant to the recipients; and where they have more agency or power to prevent the potential loss.

- **Use professional identity as evidence users messaging when email recipients are more "distant" from the messenger and the evaluation content.** Email communication that reinforces the professional identity of D4I's list members as evidence users can foster greater engagement with evaluation findings among this group. Extrapolating more broadly, to other evidence-use target groups, this may be an effective technique when sending out emails where the recipients do not know the sender personally (such as e-Newsletters) and where the content may be more "distant" or less relevant to them directly.

- **Consider sharing fewer links and information in email communications.** To increase the likelihood of recipients clicking on links to evaluation products, it may be most effective to limit the number of links included in an email communication to the minimum amount needed. This may work by preventing information overload or by signaling the value of the few products shared.

- **Consider leveraging recognized leadership to sign-off email communications.** Evidence suggests that leadership can reinforce evidence-use norms, and that specific support from leadership would encourage the use of evaluation findings by USAID Nigeria staff. As such, future interventions should explore the impact of visibly engaging with relevant senior leaders, specifically through signing-off emails, to both promote and reinforce evaluation-use norms.

- **Apply operational best practices**. (1) Engage the recipients' organization's (such as USAID's) IT staff early in the intervention design process to explore which email mechanisms can and cannot be considered, so that you can do further research on solutions and involve your own web and IT teams early if needed. (2) When possible, use email distribution platforms such as MailChimp and EMMA, which facilitate measurement and personalization, but take steps to prevent these emails from being labeled spam in recipients' inboxes. (3) Once a solution is identified, test the solution thoroughly before implementation. (4) Check for holidays or major events for recipients (e.g., trainings in the offices or public holidays in recipients' countries) and avoid scheduling emails on these dates.

Recommendations Regarding Evaluation Dissemination Events

- **Review how to access findings in a session during an evaluation dissemination event.** Demonstrating to participants how to access findings during an evaluation dissemination event— i.e., by going over a website with them—may be a simple and effective way to increase their engagement with the findings.

- **Assess whether target users consider your findings to be relevant before planning a dissemination campaign or designing an evidence-use intervention.** Because the relevance of findings is a critical factor in whether people will engage with them, when designing evidence-use interventions, it is important to assess whether the target users perceive the findings to be relevant. If not, this is the first factor that needs to be tackled.

- **Highlight which evaluation methodology was used and why it is fit for purpose to increase evidence users' perception of evaluator credibility.** Evidence users should feel that the methods chosen were rigorous and that evaluators are unbiased. Evaluation dissemination events as well as the evaluation itself should highlight each of the points, taking care to state evaluators'

backgrounds and potential conflicts of interest within the text.

- **Strengthen the sense of shared group identity at evaluation events.** To strengthen the credibility of findings, it is important to build trust between evidence users and evaluators. One way to do this is to strengthen the sense of shared group identity at evaluation events. This can be done in multiple ways, including by creating shared goals for the group. When possible, the shared goals agreed to during the session should be reinforced by being posted in an easy-to-see location and referenced throughout the day and in follow-up communications (including on social media). In addition, shared group identity can be strengthened by : (1) encouraging evaluation staff to sit with other participants, (2) ensuring that badges and lanyards are the same for both evaluators and other participants; (3) giving other participants beyond the evaluation team an opportunity to present (e.g., to discuss implications of findings); and (4) sharing event and group photos on social media.

- **Implement commitment cards for evidence use carefully:**
  - **Localize the commitment card tool by piloting it in advance with a few participants.** This may lead to changes in the language used on the card or ideas of how it can be implemented, and it may point to how much the participants will need to be convinced of the value of such a commitment card before being asked to engage with it.
  - **Engage leaders to model filling out the card.** Leaders should be engaged in advance to ensure they are able to fully engage and guide their team members through the exercise. Stop periodically to ensure that participants have completed the steps of the activity, with leaders sharing when they have completed each step.
  - **Situate the commitment card exercise later in a dissemination event agenda, or even in a follow-up event or activity.** The aim is to give participants sufficient time to digest the evaluation findings and reflect on how the findings might connect to their work.
  - **Frame the commitment card exercise, which focuses on an individual goal, within the context of a project or organization, where work tasks normally flow from organizational, project, or team decisions.** Staff may need to wait for an agreement with their team as to how to use the findings and not be able to make a decision as to how to use the findings until they get the go-ahead from their managers. After the team goals are set, individuals can consider what their individual goals might be within the team structure, and the commitment card can be filled out.

Conclusion

This study has shown that behavioral interventions that have been used in other domains, such as behaviorally-informed messaging, professional identity strengthening, and commitment devices, can be effective in increasing engagement with the evaluation findings of USAID global health programs. These interventions are not sector-specific and can be used to support the use of evaluation findings in other areas and with other clients. The two strategies implemented also confirmed a well-known fact: behavioral interventions need to be tailored to the context, including day-to-day ways of working, of the target group.

Overall, findings from the email strategy are more conclusive than those from the event strategy because the email strategy effects were easier to measure. The email strategy allowed us to measure engagement by tracking email opens and link clicks in a randomized control design, while the event measurement relied on observation and self-reporting, which has a number of limitations. Event participants' self-reporting seemed overly positive. For instance, 100% of participants said that they would use the evaluation findings, but the literature and previous D4I research point out multiple barriers to evidence use, suggesting that the self-reported attitudes may not perfectly reflect reality. In addition, over 23% of event participants expressed that they did not have the decision-making power or influence to use the findings to improve programming for the activities involved in this evaluation or future programming, and this too would limit to what extent they could use the findings. As such, it is possible that the dissemination event participants' self-reported plans to use evidence have not directly translated into evidence use. Indeed, the well-documented "implementation-action gap" underscores how common it is for individuals' intentions to not turn into plans of action. Knowing whether a behavior change intervention has worked is only possible by measuring the ultimate target behavior, in this case, the use of findings.

This study set out to increase *engagement* with findings, as it was not possible to observe *use* within the scope and timeframe of the pilot. In the case of both strategies, the question remains whether increased engagement with findings has led to greater use. If the pilot was longer, it could be possible to explore this as well as dig deeper into what kind of evidence use the strategies supported—for instance, informing people's thinking on a topic or directly leading to specific decisions. Some of the gender differences observed under both strategies also point to the need to do further research on how such interventions impact women, men, and non-binary individuals.

Further, in the email strategy, in addition to differences by gender, there were significant differences by target group. Future studies should explore the nuances, replicability, and scalability of the insights to other populations and settings. This effort can also contribute to understanding the long-term effects (or sustainability) of messaging techniques.

Finally, the strategies were implemented with USAID as part of a pilot. In an ideal situation, these strategies would have been implemented by USAID itself—this would remove some of the barriers to implementation and strengthen the strategies. For example, this could allow for leaders to be more directly involved in promoting evidence use as part of the strategies. Internally, without the restrictions of a time-limited pilot implemented by an external party, it may also be easier to measure the use of the findings and get a better understanding of intervention effectiveness.

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Appendix A. Evaluation Use Email Script Examples

1. Control

Subject title: New briefs on health programming in Nigeria

Dear [first name],

I hope this email finds you well. There is new evidence on health programming available from the Nigeria Multi-Activity Evaluation.

Read the briefs now:

- Link to evaluation product (number of links varied by round)

Sincerely,

[Leader's name and title]

2. Professional identity

Subject title: New findings for evidence-informed decision-makers like yourself

Dear [first name],

I hope this email finds you well.

As a global health professional, you use evidence to strengthen the impact of your work. There is new evidence available on health programming from the Nigeria Multi-Activity Evaluation.

Read the briefs now:

- Link to evaluation product (number of links varied by round)

Sincerely,

[Leader's name and title]

3. Loss framing

Subject title: Don't miss out on insights that will help improve your work

Dear [first name],

I hope this email finds you well. There is new evidence on health programming available from the Nigeria Multi-Activity Evaluation.

If you don't look at these new findings, you risk missing out on key insights to improve your strategies, projects, and activities and help save lives.

Read the briefs now:

- Link to evaluation product (number of links varied by round)

Sincerely,

[Leader's name and title]

Appendix B. Evaluation Use Commitment Card

HPN Multi-Activity Evaluation - Annual Review Meeting

Commitment to Evaluation Use

1. A. In this form, I, [add full name] _____ provide my written commitment to dedicate the time required to complete my goal related to the HPN Multi-Activity Evaluation. My goal is to [write goal, such as: adjust activity workplan based on the evaluation findings, build in an evaluation evidence review into an intervention design process, etc.]:

_____

_____

1. B. I will reach this goal by [add deadline] _____. I will set the following reminder [add reminder type, for example, a Google calendar reminder, reminder on my mobile phone, etc.]:

_____.

2. To accomplish my goal, my next step is to [add key next step you need to take by a specific deadline, such as: arrange a meeting with my team next week, review the activity budget by July 30, set aside time dedicated to reviewing the findings by July 15, etc.]:

_____

_____.

3. A. If I accomplish my goal, I will reward myself by [add reward, such as: going to my favorite restaurant, doing an activity I love, buying myself an item I've wanted for some time, etc.]:

_____

_____.

AND/ OR (Choose 3. A. and/or 3. B.)

3. B. If I miss my goal (without a good reason outside of my control), I will voluntarily [add penalty, such as: do someone I don't like a favor, declare on my social media profile that I didn't accomplish the goal, etc.]

_____

_____.

4. I understand my engagement with, and use of, these evaluation findings will help improve the effectiveness of my work. I also understand this form does not have any legal implications besides my own voluntary commitment.

Signature: _____

June 27, 2023

Appendix C. Strategy 1 P-Values

Table 2. P-value results for emails to USAID staff

Category of outcome	Type of message(s) or group(s)	Propensity Group #1	Propensity Group #2	P-value diff. in means (P1 – P2)
Total (3 rounds)	Loss framing vs Control	0.12	0.08	0.022**
Total (3 rounds)	Loss framing vs Professional identity	0.12	0.05	0.000***
Total (3 rounds)	Control vs Professional identity	0.08	0.05	0.054*
Round 2	Loss framing vs Control	0.40	0.11	0.000***
Round 3	Loss framing vs Control	0.71	0.33	0.020**
Total women (3 rounds)	Loss framing vs Control	0.17	0.03	0.000***
Total women (3 rounds)	Loss framing vs Professional identity	0.17	0.02	0.000***
Total gender (3 rounds)	Loss framing: women versus men	0.17	0.05	0.001***
Total gender (3 rounds)	Professional identity: men vs women	0.08	0.02	0.006***
Total gender (3 rounds)	Control: men versus women	0.15	0.03	0.000***
Total men (3 rounds)	Control versus Loss framing	0.15	0.05	0.003***
Total men (3 rounds)	Control versus Professional identity	0.15	0.08	0.027**
Total gender (3 rounds)	Men vs women	0.09	0.07	0.129

Note: The table presents the main p-value results shared within the report. Symbols denote statistically significant difference at: * p<10%, ** p<5%, *** p<1%.

Table 3. P-value results for emails to D4I's listserv

Category of outcome	Type of message or group	Propensity Group #1 (%)	Propensity Group #2 (%)	P-value diff. in means (P1 – P2)
Open rates				
Total (3 rounds)	Professional identity vs Control	0.30	0.23	0.014**
Total (3 rounds)	Professional identity vs Loss framing	0.30	0.22	0.001***
Total (3 rounds)	Control vs Loss framing	0.23	0.22	0.452
Round 2	Professional identity vs Control	0.32	0.26	0.140
Total men (3 rounds)	Professional identity vs Loss framing	0.32	0.25	0.029**
Total men (3 rounds)	Professional identity vs Control	.32	.23	0.023**
Total women (3 rounds)	Professional identity vs Loss framing	0.29	0.16	0.013**
Total women (3 rounds)	Professional identity vs Control	0.29	0.24	0.239
Total unknown (3 rounds)	Loss framing vs Professional identity	0.24	0.14	0.136
Total unknown (3 rounds)	Loss framing vs Control	0.24	0.12	0.100
Clicks on links				
Total	Round 3 vs Round 2	0.45	0.22	0.000***
Total	Round 3 vs Round 1	0.45	0.23	0.000***
Round 3	Professional identity vs Control	0.64	0.48	0.100
Round 1	Professional identity vs Loss framing	0.33	0.20	0.054*
Total gender (3 rounds)	Men vs women: Control	0.10	0.05	0.039**
Total gender (3 rounds)	Women vs men: Professional identity	0.10	0.06	0.052*
Total men (3 rounds)	Control vs Professional identity	0.10	0.06	0.022**
Total women (3 rounds)	Professional identity and Loss framing	0.10	0.10	0.532
Total unknown (3 rounds)	Professional identity vs Loss framing	0.28	0.13	0.027**
Total unknown (3 rounds)	Control vs Loss framing	0.22	0.13	0.117

Note: The table presents the main p-value results shared within the report. Symbols denote statistically significant difference at: * p<10%, ** p<5%, *** p<1%.

Appendix D. Strategy 1 Sample Sizes

Table 4. Sample sizes for all rounds for USAID and D4I listserv recipients

Round 1

Number of links per email: 2

Group	USAID			D4I Listserv							
Treatment	Sample size for clicks (women & men)	Sample size for clicks – women	Sample size for clicks – men	Sample size for email opens (women, men & unknown)	Sample size for email opens – women	Sample size for email opens – men	Sample size for email opens – unknown	Sample size for clicks (women, men & unknown)	Sample size for clicks – women	Sample size for clicks – men	Sample size for clicks – unknown
Control	30	18	12	126	32	83	11	252	64	166	22
Professional Identity	32	18	14	126	31	83	12	252	62	166	24
Loss Framing	32	18	14	127	32	84	11	254	64	168	22
Total	94	54	40	379	95	250	34	758	190	500	68

Round 2

Number of links per email: 5

Group	USAID			D4I Listserv							
Treatment	Sample size for clicks (women & men; all rounds)	Sample size for clicks – women	Sample size for clicks – men	Sample size for email opens (women & men; all rounds)	Sample size for email opens – women	Sample size for email opens – men	Sample size for email opens – unknown	Sample size for clicks (women & men; all rounds)	Sample size for clicks – women	Sample size for clicks – men	Sample size for clicks – unknown
Control	75	45	30	125	31	83	11	625	155	415	55
Professional Identity	80	45	35	126	31	83	12	630	155	415	60
Loss Framing	75	45	30	127	32	84	11	535	160	420	55
Total	230	135	95	378	94	250	34	1790	470	1250	170

Round 3

Number of links per email: 1

Group	USAID			D4I Listserv							
Treatment	Sample size for clicks (women & men; all rounds)	Sample size for clicks – women	Sample size for clicks – men	Sample size for email opens (women & men; all rounds)	Sample size for email opens – women	Sample size for email opens – men	Sample size for email opens – unknown	Sample size for clicks (women & men; all rounds)	Sample size for clicks – women	Sample size for clicks – men	Sample size for clicks – unknown
Control	15	9	6	124	31	82	11	124	31	82	11
Professional Identity	16	9	7	125	31	82	12	125	31	82	12
Loss Framing	14	8	6	127	32	84	11	127	32	84	11
Total	45	26	19	376	94	248	34	376	94	248	34

Data for Impact

University of North Carolina at Chapel Hill
123 West Franklin Street, Suite 330
Chapel Hill, NC 27516 USA

Phone: 919-445-6949

D4I@unc.edu
http://www.data4impactproject.org