# Research to Practice Brief

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## Using Text Message Reminders to Promote Program Attendance: Considerations from STREAMS

**For more information about the Strengthening Relationship Education and Marriage Services (STREAMS) project, please visit the project web page.**

### INTRODUCTION

Voluntary programs need effective strategies to help reach their service population, boost initial participation, and support regular attendance. Limited participation is a common challenge in voluntary, family-based programs (Eisner and Meidert 2011; Fabiano 2007; Nock and Photos 2006). In addition, the people most in need of services might face significant hurdles to consistently attending (Erickson and Egeland 2011).

This brief presents six practical considerations for practitioners who want to try using text message reminders to increase participation at the first session of a voluntary program and regular attendance thereafter. Text messages can give people practical, timely reminders of when program sessions are set to occur. Text messaging tools can make the process of sending texts easy and efficient (see box on these tools).

The considerations in this brief draw on lessons from the Strengthening Relationship Education and Marriage Services (STREAMS) evaluation, conducted by Mathematica and its partner, Public Strategies, for the U.S. Department of Health and Human Services. As part of STREAMS, the Mathematica and Public Strategies team assessed the effectiveness of text message reminders for promoting couples' attendance at voluntary Healthy Marriage and Relationship Education (HMRE) workshops (Patnaik et al. 2022). Over a three-year period, we developed different types of text message reminders and used a random assignment study to test their impacts on couples' attendance at a five-session HMRE group workshop called ELEVATE.

Compared to a control group that received no reminders, we found that simple reminders

> ### TEXT MESSAGING TOOLS
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> Software and web platforms are available to send text message reminders to a large number of clients at the same time. Many companies offer these tools, and each tool has its own pricing model, customer support, and feature options. Examples of features include scheduling messages, two-way messaging, automating responses, polling, analyzing delivery and response rates, and maintaining contact lists.

increased attendance at the first workshop session by 12 percent. Among couples who attended the first session, attendance at the remaining sessions was high, and none of the reminders increased the total number of sessions attended. Drawing on the findings of our study and our experiences developing and testing the test message reminders, this brief highlights six considerations that can help maximize the impact of text message reminders on attendance.

### SEEK INPUT FROM COMMUNITY MEMBERS, PROGRAM STAFF, AND CLIENTS

Programs can help maximize their impact by prioritizing input from the community and the program staff implementing an intervention (Minkler 2012). This input can help practitioners design (van Hierden et al. 2021) and implement (Ramadnadhan et al. 2018) their programs, and feedback from participants and community partners can also help with retention (Estreet et al. 2017). For text message reminders, input on the content, format, and timing of messages can help programs develop messages that resonate with participants and support workshop attendance.

For STREAMS, we conducted focus groups with clients, interviewed program facilitators, and held regular meetings with program leaders to get their input on the content and timing of our text message reminders. For example, some focus group participants told us that adding graphics or videos to the messages might make them more engaging, so we developed and tested some reminders that included graphics. Throughout this brief, we provide suggestions on ways to obtain and incorporate input from community members, program staff, and clients to inform your reminder strategy.

### UNDERSTAND THE SERVICE POPULATION

To design effective text message reminders, you must understand your clients' needs, preferences, goals, motivations, and constraints. For STREAMS, we used a client survey to learn about clients' demographic, socioeconomic, and family characteristics and their motivations for signing up for the five-session ELEVATE program. Collecting data directly from clients can help you understand what they hope to get out of the program, what might prevent them from attending, and how open they are to receiving reminders (see box). If conducting a survey isn't possible, review the program's eligibility criteria and recruitment methods for clues about the characteristics of clients who are likely to enroll, or look for published studies and data on similar programs. This might give you insights into your clients' motivations for enrolling in your program and their potential barriers to attending classes, such as a lack of transportation or child care.

In addition to looking at their background characteristics, consider clients' experiences with the program. Examine the program's recruitment methods, content, incentives, and supports by studying program materials and talking with program staff. To document the processes or interactions that a client experiences while progressing through your program, consider customer journey mapping, a collaborative process that puts the needs and goals of participants at the center of efforts to design or improve a product or service (Richardson 2010). Mapping can reveal "pain points" for clients, their "touchpoints" with the staff, and the factors that make it easier or harder for them to attend classes. It can also help you see whether clients experience the program in different ways and consequently would benefit from different types of reminders.

> **IDEAS FOR SEEKING INPUT**
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> **Surveying** clients when they enter the program can help you learn information about them that is not available through other sources, such as their motivation for enrolling. This information might give you ideas for how to motivate them to regularly attend.

If possible, collect and analyze program attendance data to identify patterns and pinpoint attendance drop-offs. For STREAMS, we did not initially have data on program attendance, because ELEVATE was a new program. However, as the study unfolded, we learned that (1) couples who attended the first session maintained high attendance at remaining sessions, and (2) text message reminders did not affect continued attendance beyond the first session. We also found that the largest drop in attendance occurred between workshop registration and the first session. We then shifted the study's focus to improving attendance at that first session and found that simple reminders increased the initial attendance rate by 12 percent compared to sending no reminders. Analyzing attendance data in this way helped us make an important midcourse correction.

### BE THOUGHTFUL AND INTENTIONAL ABOUT THE CONTENT OF TEXT MESSAGE REMINDERS

The content of text message reminders can influence how effective they are (Milkman et al. 2021; Hallsworth et al. 2015; Dechausay et al. 2015; Patnaik et al. 2022). This section contains some pointers on how to create effective content.

**Personalize messages.** Research on texting recommends including the recipient's first name in the message (Head et al. 2013). This personalization can boost engagement and confirm to clients that the message is reaching the right person. Some text messaging software will automatically pre-fill names into messages without requiring you to manually type and customize each message. For STREAMS, we used software to personalize reminders with the recipient's name and (when appropriate) the name of their partner. The sender or the program should also be clearly identified so clients understand why they are being contacted and know whom to contact with questions.

**Keep it concise.** Aim for succinct messages that are easy to understand. Clients should be able to get all the information they need in a quick skim of the message. Ideally, the content should be less than 160 characters long (including spaces and punctuation) so it fits in one text message.

**Include the essential information.** Be sure to include information that clients need in order to attend your program or activity. Simple reminders that give the timing and location of appointments have been found to increase attendance in health care and education settings (Hasvold and Wootton 2011; Robotham et al. 2016; Bergman and Chan 2019). For STREAMS, each reminder referenced the

> **IDEAS FOR SEEKING INPUT**
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> Hold a **working group** with program staff and leaders to determine the essential information you want to convey.

ELEVATE workshop and included the date and time of the next class. Getting feedback from program staff and leaders can help you keep your messages concise while still including key information (see box).

**Strike the right tone.** Make the message friendly, yet professional. Most people prefer messages that are grammatically correct, free of spelling errors, polite, and nonaggressive (Muench et al. 2014). Use plain language that clients can understand.

**Consider clients' circumstances and preferences.** Keep clients' circumstances in mind when deciding on message content. For example, a text asking clients to make child care plans so they can attend a program would be more appropriate for parents of young children than for parents of older children. Client preferences might also matter, because individuals can be sensitive to variations in the content of text messages (Muench et al. 2014). It is especially important to be mindful of client preferences when dealing with a sensitive topic. For example, a reminder that highlights an HMRE program's potential to improve relationship quality might boost some couples' motivation to attend, but it could unintentionally offend others, depending on how people perceive the quality of their relationships, their motivations, and their enthusiasm for pursuing HMRE. Consider pre-testing messages and asking a few clients for input before sending them to a larger group (see box).

**Keep reminders simple when serving diverse clients.** If a program serves clients with widely varying circumstances and preferences, it can be difficult to create content that will resonate with everyone. Furthermore, the importance and subtlety of these challenges can be difficult to foresee despite extensive planning. For example, the STREAMS study involved couples in varied relationship and life circumstances, and we found that simple reminders were more effective at increasing attendance at the first workshop than sending no reminders at all or sending enhanced reminders that included motivational messages, graphics, and peer testimonials. We found differences by age and cultural context in the feedback that clients provided on the enhanced content—such as how people perceived messages that were intended to be humorous. Practitioners might want to keep reminders simple when their program serves a diverse client base.

## BE INTENTIONAL ABOUT THE TIMING AND FREQUENCY OF MESSAGES

Reminders should be well timed so they are delivered close to an upcoming event (CDC 2019). In determining when to send a reminder, consider both (1) the time it will take clients to complete any actions needed to attend and (2) the amount of time before the event. For example, clients may need to be reminded of a class at least a day in advance so they can plan their travel logistics and secure child care. However, if the reminder is sent too far in advance, they might forget the class date or time. The ELEVATE workshop was held in the evening between 6 and 9 p.m., so a reminder was sent around 6 p.m. the day before.

It's also important to consider work, school, and sleep schedules when deciding on when to send the reminders. Some text messaging software will allow you to schedule text messages in advance. For STREAMS, we scheduled all messages to be sent in the early evening, when clients were less likely to be distracted by other demands and more likely to be at home and able to communicate with their partner about the upcoming session.

Be intentional about how many reminders you send. Once they reach a certain frequency, more is not necessarily better (Antinyan et al. 2021). For STREAMS, we sent one to three messages for every week of the five-week workshop (including one message the evening before class). We hypothesized that we should send at least one reminder per week to have an effect, but that too many reminders might be viewed as intrusive or repetitive. Consider asking clients how often they would like to receive reminders (see box). For STREAMS, some focus group participants shared that three messages a week felt repetitive; we reduced the number of messages to at most two per week for the rest of the study.

## TRACK AND ASSESS YOUR PROGRESS

Gather and analyze information about the text message reminders and clients' engagement with the program. Start by identifying the specific measure of attendance you want to improve. For example, is it more crucial that clients engage with some program components than with others, or that they attend some minimum number of sessions? Make sure the program collects attendance information on your key outcome.

If possible, design a way to track the effectiveness of the reminders. For STREAMS, we randomly assigned couples to either a control group that received no reminders or to one of several treatment groups that received different types of reminders. We then compared attendance outcomes across groups to estimate the impacts of the text message reminders. Even without a random assignment study, you can compare the attendance outcomes of clients who received reminders to the outcomes of past clients with similar characteristics who did not receive reminders, or you can look for sudden changes in aggregate attendance outcomes that coincided with sending the reminders.

Focus groups or follow-up surveys can also help you understand why reminders may not be working as well as expected (see box). In STREAMS, when we found text message reminders had no impact on increasing later attendance by couples who attended the first session, we interviewed program staff and clients. We found that some couples missed a session for reasons that a text message reminder would not have affected—for example, someone was called in for an unexpected shift at work (Alamillo et al. 2020). This feedback helped us understand the limitations of sending text reminders to increase attendance at sessions beyond the first one.

**IDEAS FOR SEEKING INPUT**

A **focus group** with clients can reveal the reasons why reminders might not be working and what might work better. What part of the message content did or did not resonate with clients, and why? Would the same content have been more effective if reminders had been sent at a different time? This kind of feedback can help you tweak message content or target reminders more effectively.

## ABOUT THE STREAMS EVALUATION

Since the early 2000s, the Administration for Children and Families (ACF) in the U.S. Department of Health and Human Services has led a sustained effort to expand the available evidence on HMRE programs. In 2015, ACF contracted with Mathematica and its partner, Public Strategies, to conduct the STREAMS evaluation to help identify strategies for improving the delivery and effectiveness of HMRE programs. The evaluation focuses on understudied populations and program approaches not covered in ACF's prior federal evaluations. STREAMS includes in-depth process studies, random assignment impact studies, a rapid-cycle evaluation of text message reminders to improve attendance at HMRE group workshops, a formative evaluation of a facilitation training curriculum for HMRE programs for high school students, and predictive analytic modeling of attendance at HMRE group workshops.

Learn more about the evaluation at https://www.acf.hhs.gov/opre/project/opre/research/strengthening-relationship-education-and-marriage-services-streams.

Read more about the impact study of text message reminders for HMRE workshops at https://www.acf.hhs.gov/opre/report/text-message-reminders-and-their-impact-attendance-healthy-marriage-and-relationship-0.

## REFERENCES

Baumgartner, Scott, and Diane Paulsell. "MotherWise: Implementation of a Healthy Marriage and Relationship Education Program for Pregnant and New Mothers." OPRE Report # 2019-42, Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services, 2019.

Bergman, P., and E.W. Chan. "Leveraging Parents Through Low-Cost Technology: The Impact of High-Frequency Information on Student Achievement." *Journal of Human Resources,* vol. 56, 2019, pp. 125–158.

Centers for Disease Control and Prevention. "CDC Guide for Writing for Social Media." Updated December 27, 2019. https://www.cdc.gov/socialmedia/tools/guidelines/guideforwriting.html.

Centers for Disease Control and Prevention. "Social Media Guidelines and Best Practices." Updated June 24, 2010. https://www.cdc.gov/socialmedia/tools/guidelines/pdf/textmessages.pdf.

Dechausay, N., C. Anzelone, and L. Reardon. "The Power of Prompts: Using Behavioral Insights to Encourage People to Participate." OPRE Report #2015-75. Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services, 2015.

Denby, R. W., E. Gomez, and K.A. Alford. "Promoting Well-Being Through Relationship Building: The Role of Smartphone Technology in Foster Care." *Journal of Technology in Human Services,* vol. 34, no. 2, 2016, pp. 183–208.

Estreet, A., J. Apata, F. Kamangar, C. Schutzman, J. Buccheri, A.M. O'Keefe, F. Wagner, and P. Sheikhattari. "Improving Participants' Retention in a Smoking Cessation Intervention Using a Community-Based Participatory Research Approach." *International Journal of Preventive Medicine,* vol. 8, no. 106, 2017. https://doi.org/10.4103/ijpvm.IJPVM_303_17,

Fletcher, R., F. Kay-Lambkin, C. May, C. Oldmeadow, J. Attia, and L. Leigh. "Supporting Men Through Their Transition to Fatherhood With Messages Delivered to Their Smartphones: A Feasibility Study of SMS4dads." *BMC Public Health*, vol. 17, no. 1, 2017, pp. 1–10.

Friend, Daniel, Heather Zaveri, and Kathleen Feeney. "Implementation of Career STREAMS: An Integrated Employment and Healthy Relationship Program for Young Adults." OPRE Report # 2020-80. Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services, 2020.

Guillot-Wright, S. P., Y. Lu, E.D. Torres, V. D. Le, H.R. Hall, and J.R. Temple. "Design and Feasibility of a School-Based Text Message Campaign to Promote Healthy Relationships." *School Mental Health*, vol. 10, no. 4, 2018, pp. 428–436.

Hallsworth, M., Berry, D., Sanders, M., Sallis, A., King, D. Vlaev, I., & Darzi, A. (2015). Stating Appointment Costs In SMS Reminders Reduces Missed Hospital Appointments: Findings From Two Randomized Controlled Trials. PLOS One, 10(9).

Hasvold, P.E., and R. Wootton, R. (2011). Use of Telephone and SMS Reminders to Improve Attendance at Hospital Appointments: A Systematic Review. *Journal of Telemedicine and Telecare*, vol. 17, no. 7, 2011, pp. 358–364.

Head, K. J., S. M. Noar, N. T. Iannario, and N. G. Harrigton. "Efficacy Of Text Messaging-Based Interventions For Health Promotion: A Meta-Analysis." *Social Science & Medicine*, vol. 97, November 2013, pp. 41–48. https://doi.org/10.1016/j.socscimed.2013.08.003.

Milkman, K., M. Patel, L. Gandhi, H. Graci, D.M. Gromit, H. Ho, J. Kay, T. Lee, M. Akinola, J. Beshears, J. Bogard, A. Buttenheim, C. Chabris, G. Chapman, J. Choi, H. Dai, C. Fox, A. Goren, and M. Hilchey, et al. "A Mega-Study of Text-Based Nudges Encouraging Patients to Get Vaccinated at an Upcoming Doctor's Appointment." *Proceedings of the National Academy of Sciences of the United States of America*, vol. 118, no. 20, 2021, pp. 1–28.

Minkler, M., editor. *Community Organizing and Community Building for Health and Welfare.* Rutgers University Press, 2012.

Muench, F., K. van Stolk-Cooke, J. Morgenstern, A. N. Kuerbis, and K. Markle. "Understanding Messaging Preferences to Inform Development of Mobile Goal-Directed Behavioral Interventions." *Journal of Medical Internet Research*, vol. 16, 2014. doi: 10.2196/jmir.2945.

National Association of County and City Health Officials. "Mobilizing for Action Through Planning and Partnerships (MAPP)." https://www.naccho.org/programs/public-health-infrastructure/performance-improvement/community-health-assessment/mapp.

Patnaik, Ankita, Jonathan E. Gellar, Rebecca Dunn, and Brian Goesling. "Text Message Reminders and Their Impact on Attendance at Healthy Marriage and Relationship Education Workshops." OPRE Report #2022-49. Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services, 2022.

Ramanadhan, S., M.M. Davis, R. Armstrong, B. Baquero, L.K. Ko, J.C. Leng, R.G. Salloum, N.A. Vaughan, and R.C. Brownson. "Participatory Implementation Science to Increase the Impact of Evidence-Based Cancer Prevention and Control." *Cancer Causes & Control*, vol. 29, no. 3, 2018, pp. 363–369.

Richardson, Adam. "Using Customer Journey Maps to Improve Customer Experience." *Harvard Business Review*, November 2010. https://hbr.org/2010/11/using-customer-journey-maps-to, 2010.

Robotham, D., S. Satkunanathan, J. Reynolds, D. Stahl, and T. Wykes. "Using Digital Notifications to Improve Attendance in Clinic: Systematic Review and Meta-Analysis." *BMJ Open*, vol. 6, no. 10, 2016, pp. 1–14.

van Hierden, Y., T. Dietrich, and S. Rundle-Thiele. "Designing an eHealth Well-Being Program: A Participatory Design Approach." *International Journal of Environmental Research and Public Health*, vol. 18, no. 14, 2021.

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