

beyond good intentions: prompting people to make plans improves follow-through on important tasks

Todd Rogers, Katherine L. Milkman, Leslie K. John, & Michael I. Norton

abstract

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That mole on Bob's arm was growing larger and darker than the others, and it had been two years since his last appointment with the dermatologist. He kept intending to get to the dermatologist for his semi-annual checkup. But when could he find the time? His team at work was short-staffed and he was juggling half a dozen projects. His aging mother across town needed his help keeping up her house. He wanted to spend whatever time was left with his wife and kids. Summer turned to fall, then to winter, then to spring. When Bob finally found the time to visit the dermatologist and learned that his mole was malignant, his most desperate

wish was that he had followed through faster to see the doctor.

When individuals fail to follow through on well-intentioned plans, significant negative consequences can follow. It may seem that those repercussions are theirs and theirs alone, but they can be costly for both individuals and society. Bob's surgery and chemotherapy, requiring repeated hospitalization, will cost his health insurer hundreds of thousands of dollars. High medical costs increase insurance costs for everyone. Bob, of course, will lose income while recovering. The emotional toll on Bob and his loved ones is a particularly steep cost.

Previous research suggests a troubling fact: failure to follow through happens more often than not. In other words, people fail to fulfill the majority of their

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intentions.^{1,2} People often intend to exercise and eat healthfully but don't, contributing to poor health and rising health care costs. Many students intend to study regularly but do not make the time; meaning they learn less and risk failing to achieve their potential. A surprising number of citizens fail to complete tax forms in time to meet government deadlines, forcing them to pay unnecessary penalties. Many families of high school seniors neglect to complete college financial aid forms, resulting in some students losing out on aid needed to afford college. Some heads of household fail to submit applications for food stamps, increasing their family's food insecurity. New parents intend to formulate wills and purchase life insurance but never get around to either, leading to family battles and financial insecurity when tragedy strikes. And on and on.

How can policymakers and managers more effectively help people follow through on desirable behaviors? Today, they use a combination of carrots and sticks: bonuses, late fees and other financial incentives, or regulations that require necessary tasks to be completed. But these methods can be coercive and clumsy, and they often aren't optimal for the situation at hand. Strategically prompting people to form simple plans about how and when they will follow through on their intentions, however, provides a low-cost, simple, and potent tool to complement existing strategies.

Evidence is growing that planning prompts, which nudge people at key times to think through how and when they will follow through, make people more likely to act on matters of importance to them. These inexpensive prompts, which leverage insights from behavioral science, increase follow-through on a wide range of beneficial behaviors. And policymakers can deploy them while protecting people's freedom and minimizing government interference in people's lives.

Planning prompts are not the only type of inexpensive and nonpenalty nudges that research shows can move people toward beneficial behaviors. Creating a default choice in a menu of options is another (one example is the message, "Your Happy Meal will come with apple slices unless you tell us you prefer French fries"). Defaults work because people tend to exhibit inertia and stick with the de facto option. Another type of nudge used widely in advertising and energy efficiency communications, among other realms, communicates that many other people engage in a desirable behavior (for example, "90% of your neighbors are

consuming less energy than you are per month").³ This sort of message educates people about norms and plays on people's desire to conform to those norms.

Not all nudges, of course, are useful in every situation. It is unclear how a default choice could help people wanting to exercise more to remember to bring their running shoes to work, for example. However, planning prompts informed by behavioral science insights could. These interventions have the added benefit of facilitating life-improving behaviors and preserving individual liberty.⁴ They are grounded in one basic insight: Making concrete plans helps people follow through on their intentions.

Why Planning Prompts Work

Plan making has been studied for decades. There are deep and robust literatures on the topic and on the related power of goals, goal setting, and mental simulation.⁵⁻⁹ The evidence clearly shows that plan making can increase follow-through.

In one early randomized study on tetanus vaccination rates, for example, a team of social psychologists showed that 28% of Yale University seniors got the shot when they were encouraged to do so after being prompted to review their weekly schedules and to select a feasible time to stop by the health center to receive an inoculation. They were also given a list of times when shots were available and a campus map highlighting the health center's location. Only 3% of the seniors got the shot when they were simply encouraged to do so and were informed about how effective the shots were and their availability on campus.⁹

But why would prompting people to make concrete plans about when, where, and how they will act to achieve their intentions increase follow-through? Research suggests a number of reasons. Merely asking people if they intend to carry out a beneficial behavior can make it more likely that they will do it, according to numerous studies.¹⁰⁻¹³ For example, if you ask a person who is not planning to join a gym how likely she is to join a gym, the mere question may prompt her to think more about joining than she otherwise would have, which could then make her more likely to sign up for a gym membership.

Prompting people to make a plan capitalizes on other psychological forces as well. Specifically, guiding people to unpack the when, where, and how of fulfilling their

intentions can increase their likelihoods of following through.¹⁴ In part that's because making an action plan overcomes people's tendency to procrastinate when they intend to behave in beneficial ways that fail to provide instant gratification^{15,16} as well as their tendency to be overly optimistic about the time it will take to accomplish a task.¹⁷ It accomplishes this by encouraging people to develop specific strategies to overcome logistical obstacles to following through on their good intentions. Imagine someone—let's call her Sarah—who intends to get a flu vaccination, but getting the vaccination will require an hour of travel to and from a health clinic. Prompting Sarah to make a plan to get vaccinated may lead her to block an hour off on her calendar and enlist colleagues to cover her responsibilities while she is away. Moreover, by unpacking exactly which actions are required to get a flu shot, she will be less likely to underestimate the time needed to accomplish the task—a particularly common problem for complex tasks.¹⁸

Making a concrete action plan also helps people overcome forgetfulness, a common obstacle to following through on good intentions.^{19,20} For example, when Orbell, Hodgkins, and Sheeran surveyed women who intended but failed to perform self-examinations that can detect breast cancer, 70% of them reported that they forgot to do it.²¹ Making a plan counters this tendency by helping people remember their intentions at appropriate times and by activating predetermined strategies to overcome any challenges they anticipate. It also helps people remember that to achieve their intentions, they should engage in preprogrammed behaviors at specific moments—for example, a specific time of day, when a certain event occurs, or when a specific feeling or thought arises. In other words, "if situation Y arises, then engage in behavior X."^{6,22} For example, rather than Sarah simply saying she will get her flu shot next Tuesday, she could instead make a concrete plan: After she drops her son off at daycare next Tuesday, she will drive to the clinic to receive her shot. Unpacking the logistics in this way will make Sarah more likely to spontaneously remember to get her flu shot next Tuesday as she drives away from daycare.

Finally, committing to behaving in a certain way and then failing to follow through on this explicit commitment causes discomfort.²³ For example, if Sarah schedules an hour to get a flu shot on her calendar for next Tuesday but fails to get it, it would mean that she failed

to honor an explicit commitment recorded on her calendar. Anticipating such discomfort probably contributes to why planning prompts increase follow-through.

Planning prompts become even more effective when they require a person to inform someone else of a commitment, such as reporting the plan to a friend or family member. Such prompts add social pressure to follow through to the other benefits of plan making.²⁴ Returning to our flu shot example, if Sarah had told her spouse that she planned to get the shot on Tuesday, in addition to scheduling it on her calendar, a failure to get the shot would induce added discomfort and possible embarrassment.

Although making a plan helps people accomplish their intentions, when left to their own devices, people often fail to generate concrete plans.²⁵ Paradoxically, people frequently underplan when they begin with strong intentions. They mistakenly believe that their strong intentions are enough to propel them to perform desired behaviors, and that belief keeps them from using strategies that could help translate intentions into actions.²⁶ Thus, people are prone to underplanning the behaviors they would most like to accomplish. These results underscore the need for policy interventions that encourage plan making and suggest interventions could improve social welfare.

Evidence for the Effectiveness of Prompting People to Make Plans

Prompting people to make plans can aid follow-through on a wide range of beneficial behaviors, many of them relevant to public policy. For example, college students who committed to eating additional fruit each day over a two-week period were more successful when they also received prompts to plan how, when, and where they would eat additional fruit.²⁷ Planning prompts also increase follow-through on other beneficial intentions, including exercise,^{28,29} dieting,³⁰ smoking cessation,³¹ recycling,³² and test preparation^{33,34} (see reference 14 for an extended review of earlier work).

Three recent large-scale field experiments described below demonstrate the power of planning prompts to influence socially important behaviors. Each illustrates a light-touch approach that policymakers might use to elicit concrete plan making. They also highlight conditions that increase the effectiveness of planning prompts.

Getting People to Vote

In the United States, tens of millions of dollars are spent each election cycle to encourage citizens to vote. Greater citizen participation affects election results, as well as which groups of citizens have more influence over legislation (for a review, see reference 35). To find out whether planning prompts can increase the effectiveness of get-out-the-vote communications, one of us (Rogers, in collaboration with David Nickerson) randomly assigned 287,000 people to one of three groups during the 2008 Democratic primary election in Pennsylvania. Members of one group received a call that featured a typical get-out-the-vote phone script: They were reminded of the upcoming election, encouraged to vote, and asked if they intended to vote. The members of the second group encountered the same script, but they were also asked three additional plan-making questions: when they would vote, where would they be coming from, and how they would get to their polling place. Those in a third group were not contacted.

By analyzing public voting records, Rogers and Nickerson showed that those who received the call based on a typical get-out-the-vote phone script were 2.0 percentage points more likely to vote than were those who weren't called. However, those who were also asked plan-making questions were 4.1 percentage points more likely to vote than were those who were not called—a statistically significant increase over the 42.9% turnout of the control group. In short, adding three simple plan-making questions made get-out-the-vote calls more than twice as effective.³⁶ Further analyses suggested that the plan-making calls worked particularly well on those who likely had not yet made a plan for getting to their polling place: citizens who lived in households with no other eligible voters.

To put this effect size into context, we note that a voting shift of this magnitude in the 2008 presidential general election would have changed the outcomes in Florida, Indiana, North Carolina, and Missouri. Of course, generating so large an effect size in hotly contested battleground states during a fractious general election (as opposed to a less intense primary election) is highly unlikely, as is reaching 100% of eligible voters by phone to administer a plan-making intervention. This illustration simply shows that adding the plan-making prompt to the standard get-out-the-vote calls meaningfully increases the effectiveness of voter outreach.

Expanding Flu Immunity

Plan making alters important health behaviors as well. Milkman, Beshears, Choi, Laibson, and Madrian conducted two large-scale field experiments, in collaboration with Evive Health, a company that reminds employees of client corporations by mail when they are due to receive immunizations and medical exams.³⁷ The first experiment involved encouraging employees to receive shots to prevent seasonal influenza, which annually causes more than 30,000 hospitalizations and more than 25,000 deaths in the United States.^{38,39} The frequency of these adverse incidents could be greatly reduced if more people obtained flu shots, which are widely available, inexpensive, and effective. Past research has shown that sending reminder letters increases vaccination rates by an average of 8 percentage points.^{40,41}

To see if planning prompts induced people to get flu shots, Evive Health sent more than 3,000 employees of a Midwestern company mailings encouraging them to get free flu shots at a variety of on-site work clinics. Each mailing included the date(s) and time(s) of the free flu shots and the location of the clinic at the employees' work site. Employees were randomly assigned to one of two groups. Those in a *control* group received a mailing with only the personalized clinic information described above. Those in the *plan-making* condition also received a prompt urging them to (privately) write down in a box printed on the mailing the date and time they planned to attend a clinic. Clinic attendance sheets were used to track the receipt of flu shots. This subtle prompt to make plans cost little but increased flu shot uptake from 33% of targets in the control condition to 37% in the plan-making condition.³⁷

The prompt was most effective for employees whose on-site flu shot clinics were open just one day, as opposed to three or five days. In that case, the opportunity to receive a flu shot was fleeting, making failure to follow through especially costly. A full 38 percent of these employees obtained flu shots, 8 percentage points more than the control group, people who were not prompted and also had just one-day access to a flu shot clinic. These results suggest that plan-making interventions may be most potent in scenarios with only a narrow window of opportunity to act. They also indicate that adding a planning prompt to a reminder can boost follow-through by nearly as much as the reminder itself.^{40,41}

Preventing Colon Cancer

In the second experiment conducted by Milkman and colleagues, Evoke Health sent nearly 12,000 employees who were overdue for a colonoscopy a mailing reminding them to obtain the screening.⁴² The mailings provided personalized details about the cost of a colonoscopy and how to schedule an appointment. They also included a yellow sticky note affixed to the top right-hand corner, which recipients were prompted to use as a reminder to schedule and keep their colonoscopy appointment. Employees were randomly assigned to groups. For one group, this yellow note included a plan-making prompt with blank lines for employees to write down the doctor, clinic, and date of their appointment; for another group, the note was blank.

Approximately seven months after sending the mailing, insurance claims information for employees in the study were reviewed to confirm who had received colonoscopies. Among those who had received the plan-making mailing, 7.2% received a colonoscopy, whereas only 6.2% of those who received a reminder without a planning prompt followed through. Increasing the rate of obtaining colonoscopies by one percentage point would save 271 years of life for every 100,000 people who should receive the procedure, according to a 2008 study led by Memorial Sloan Kettering Cancer Center researchers.⁴³ Further, the plan-making mailer's impact was most potent among subpopulations at greatest risk of forgetfulness, such as older adults, adults with children, and those who did not obtain colonoscopies after earlier reminders. This finding is consistent with past psychological studies on the impact of planning prompts and highlights the value of the prompts as a potent tool for overcoming forgetfulness.

Making the Best-Laid Plans Better

As evidence of the power of making plans has grown, researchers have probed how to improve their effectiveness. Their efforts have yielded multiple enlightening clues, many of which are summarized in Table 1. (For more comprehensive scholarly reviews, see references 7, 14, and 44). For instance, spelling out the when, where, and how of achieving a given outcome will not improve follow-through unless people have (or are persuaded to form) an intention to pursue the goal.⁴⁵ Along the same lines, planning prompts are especially

effective if they target intentions rooted in individuals' personal values rather than external pressures.⁴⁶ Plan making is even more effective when people contrast how their lives would be improved if they accomplished their goals with how their lives are currently.⁴⁷

Planning prompts also work better under circumstances that make follow-through difficult. Prompts add the most value when people face obstacles to achieving their intentions.⁶ As previously discussed, these include forgetfulness⁴² and limited windows of opportunity to execute an action.^{37,48} They can also include cognitive busyness, when a person's cognitive bandwidth is occupied with multiple tasks.⁴⁹

Planning prompts are especially potent when they guide people to develop concrete and precise plans with formats such as "If I encounter situation X, then I will perform behavior Y." In this case, the plan is cognitively linked to situation X, and when the person faces that specific situation, it is automatically activated. For example, if the plan is, "At 6 p.m. tomorrow, buy a spinach salad for dinner from the deli next door," the person making the plan will be more likely to remember to go to the deli next store when the clock reads 6 p.m. Specifying the planned behavior is also critical. At 6 p.m., she will know it is time to buy a spinach salad specifically rather than needing to decide what food she should pick up.⁷ Further, as discussed previously, prompting people not only to form plans but also to state them publicly can enhance the impact of prompts by layering on the added benefits of social pressure and accountability.²³

Prompting people to plan, it should be noted, is not always useful. Planning prompts can be unnecessary, for instance, when fulfilling an intention is straightforward and easily accomplished⁵⁰ or when people have already planned.³⁶ The propensity to plan is a relatively stable individual attribute: Some people tend to regularly make plans, whereas others tend not to.²⁵ Those who tend not to plan stand to gain the most from planning prompts.

In some cases, plan making can actually be harmful and so plan-making prompts should be avoided. For example, making multiple plans concurrently may interfere with people's ability to recall and act on their intentions at critical moments.⁵¹ In addition, planning concurrently to fulfill multiple intentions rather than a single intention can emphasize the many challenges to accomplishing those intentions. This could be

Table 1. When and why plan making prompts are most effective

When planning prompts are most effective	Why the prompts appear to help
People already have a strong intention to act.	People may be more motivated to make careful plans when they have strong intentions.
Intentions are motivated by personal values as opposed to other pressures.	People may be more motivated to make careful plans when they are intrinsically invested in their intentions.
At least a few obstacles stand in the way.	Without obstacles, achieving goals does not require much effort or attention; therefore, planning is of trivial benefit.
People have not yet made plans.	It is redundant to prompt people who have already made plans to make plans again.
People are at high risk of forgetfulness.	People at risk of forgetfulness are most in need of tools to facilitate follow-through.
Limited time exists to perform a task.	Planning prompts reduce forgetting, and forgetting is costlier when the window of opportunity to act is limited.
Planning requires detailed thinking about how to overcome specific obstacles.	Prompts help people develop specific strategies that they will need to succeed at follow-through when faced with challenging obstacles.
It's necessary to act at a precise future moment.	Prompts strengthen the mental link between a specific time and a required action so people are more likely to remember their intentions at critical times.
People are prompted to be very specific about implementation details.	Thinking through specific details about the context in which an intention can be executed makes that context function as a reminder of a person's intentions.
People state their plans publicly.	Sharing plans creates accountability to others, which makes follow-through more likely.
People have a single goal as opposed to multiple different goals.	Prompts for multiple intentions discourage people by highlighting the difficulty of successfully accomplishing each intention.
The intention does not require acting opportunistically at unanticipated times.	Making specific plans can make people inflexible and not inclined to act at unplanned times.
Intentions can be achieved all at once, as opposed to requiring many separate steps.	Intentions that can be achieved all at once are less likely to be derailed by obstacles that people cannot control.

discouraging and undermine people's commitment to their intentions and, therefore, their success.⁵²

Additionally, recent research suggests that making a plan to accomplish intentions during prespecified moments may be detrimental to follow-through if people encounter unanticipated earlier opportunities to accomplish their intentions. Despite the benefits of plan making, under some conditions, it can prevent people from improvising new strategies to achieve their intentions.^{53,54} These new research findings suggest that policymakers should focus on administering planning prompts for single, specific intentions that can only be executed in specific time windows.

Planning prompts are more useful for straightforward tasks such as scheduling a doctor's appointment, which requires a single phone call, than for more complex tasks that require multiple discontinuous actions to complete.^{55,56} Writing a will, for example, often requires a person to collect documentation of one's assets and consult repeatedly with a lawyer. Intentions to carry out this sort of complex task are particularly vulnerable to disruption by factors outside of a decisionmaker's immediate control, such as experiencing a work or family emergency, getting distracted, or not having copies of the appropriate paperwork. To accomplish more complex tasks, it helps to break the job into

smaller tasks, each of which can be done in a single session. Doing this can turn complex tasks into simpler tasks that can be helped by planning prompts. As research into this area has expanded, so have insights into when planning prompts are more and less effective, which we summarize in Table 1.

The Promise of Planning Prompts

We envision multiple arenas in which prompting people to make concrete plans could help individuals and society. For example, the IRS could prompt parents of college kids to form a plan to complete the Free Application for Federal Student Aid (FAFSA) forms required to obtain financial aid when they file their taxes, which could help more students matriculate and finish their degree. Civic groups could prompt people to plan when and how they will get to their polling place or obtain and return an absentee ballot, increasing voter participation. Doctors could prompt patients to plan when and where they will receive flu shots, better controlling the spread of disease. Managers could prompt employees to plan time to follow through with clients, ensuring important tasks aren't left undone.

Planning prompts are not panaceas, of course, and important social problems such as low voter turnout, students dropping out of high school, and health-threatening habits will not be solved with any single intervention. But planning prompts could provide low-cost ways to boost the impact of existing interventions at minimal additional cost. Unfortunately, despite their widely documented efficacy, planning prompts are not yet widely deployed.

The underuse of planning prompts may be tied to policymakers' limited exposure to scholarly research in this area. Another explanation may be that most plan-making studies published before 2010, although scientifically valid, had limitations. Some examined outcomes with little policy relevance (for example, remembering to mail a researcher an envelope on a specific date). And some used samples of participants that were not easily generalized to a broader population (for example, samples made up entirely of undergraduate students). More recent planning-prompt research has overcome these limitations and may seem to policymakers to be more directly applicable to important social problems. Although further research is needed to understand when and for which

behaviors planning prompts work best, the work to date provides strong evidence that this tool can be used to generate scalable, cost-effective interventions that help people and organizations follow through on their good intentions.

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