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BRIEF REPORT

Increasing Colonoscopies? A Psychological Perspective on Opting In Versus Opting Out

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Objective: A growing strategy to enhancing healthy decision making is to modify behavioral options to an "opt out" (i.e., if you do not want to participate, you must act) as opposed to an "opt in" (i.e., if you want to participate, you must act) default system (Choi, Laibson, Madrian, & Metrick). The current study, however, proposes that this growing trend may not always be strategic and examines these default systems in colonoscopy appointment show-up rates. ***Methods:*** Participants in an opt-in condition received instructions to call and schedule their colonoscopy appointment, whereas participants in an opt-out condition were mailed the date and time of an already scheduled appointment. We then assessed colonoscopy appointment show-up rates. ***Results:*** As predicted, results revealed significant decrements in the show-up rates of those in the opt-out (63%) versus opt-in condition, 85%; χ^2 (1) = 5.51, p = .02. Furthermore, when looking at patients who confirmed their appointment in both conditions, only 3% of opt-in (vs. 21% of opt-outpatients) no-showed, χ^2 (1) = 4.51, p = .03. ***Conclusion:*** Although modifying the default to an opt-out system has been shown to be effective in some health care procedures, the current results reveal this system is not always effective in producing the healthiest medical behaviors. Our research, then, suggests that opt-out paradigms are not an overall panacea for increasing participation in preventive health.

Keywords: default scheduling, opt-out, preventive health, colonoscopy, decision making

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Engaging others in preventive medicine is important because it often leads to earlier detection of health problems and more timely and cost-effective treatment (e.g., Kaiser Family Foundation, 2011). One preventive set of behaviors focused on increasing health-related action is to change the default choice in health-related decision-making processes. Across a variety of research paradigms, results reveal that the default option is the most pervasively implemented behavior (e.g., Johnson, Steffel, & Goldstein, 2005). Much of health care relies upon an "opt-in" default system in which people must take action in order to implement a desired, preventive health behavior (e.g., call the doctor to have your child's hearing tested) (Choi, Laibson, Madrian, & Metrick, 2003). A recently identified option, however, is to change the default to an "opt-out" system in which people must take action in order to avoid implementing the desired, preventive health behavior (e.g., call the school to opt your child out of the prescheduled hearing test).

Recent evidence is mounting to show the potential benefits of the opt-out default. For instance, organ donation rates are dramatically higher in European countries that institute an opt-out (vs. an opt-in) policy for organ donations (the default is donation, and one must sign up to be exempt if he or she does not want to donate; Johnson & Goldstein, 2003). This effect also emerged in a study involving 36 countries (Abadie & Gay, 2006), suggesting that the default typically observed in America, where the decision to donate one's organs is based on an opt-in system, may not be strategic. An opt-out system has also been shown to increase rates of participation in flu shots and HIV testing over an opt-in system (Chapman, Li, Colby, & Yoon, 2010; Yudin, Moravac, & Shah, 2007).

Given the improvement of health care-related behavioral engagement in opt-out systems, many researchers and practitioners advocate for its strategic use, particularly when an action is clearly recommended (e.g., vaccinations for eligible individuals; see Halpern, Ubel, & Asch, 2007). However, we believe that greater evidence is needed before instituting a widespread use of such policies because there may be situations in which the opt-out (vs. opt-in) default strategy would be less effective in producing healthy decision making.

The current study examines the use of default options for choosing to get a preventive colonoscopy screening. We chose to focus on this behavior because colonoscopies can detect colorectal cancer, which is the third most common cancer and second leading cause of cancer death in the country (Inadomi et al., 2012; National Cancer Institute, 2012). However, colorectal cancer is also one of the most preventable, detectable, and treatable types of cancer, yet

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many people who should undergo a colonoscopy do not (Shapiro et al., 2008; see also Inadomi et al., 2012).

We anticipate that people will be more likely to follow through on colonoscopy screenings with an opt-in rather than an opt-out scheduling default (H1). This expectation is consistent with self-determination theory (Deci & Ryan, 2000), which highlights the role that volitional choice (or autonomously chosen behavior) plays in successful pursuit of one's goals. Volitional choice may be greatly reduced in opt-out programs; that is, there is less individual empowerment in opting-out systems. In addition, unlike many of the other health behaviors previously examined (e.g., flu shots; Chapman et al., 2010), colonoscopy screenings already involve substantial anxiety about the preparation inconveniences (the dreaded, often multiday "bowel prep"), the fear of the procedure itself, and the fear of receiving bad news from the results (Mikocka-Walus, Molds, Rollbusch, & Andrews, 2012). Such medical anxiety is negatively correlated with seeking medical attention (e.g., Meechan, Collins, & Petrie, 2002). Patients may feel that they are being forced to engage in anxiety-provoking behaviors with an opt-out appointment and push back in a reactionary way (e.g., Kószegi, 2003; see also Vanereycken & Vansteenkiste, 2009). Opt-in conditions, however, likely reduce such reactions and anxiety because patients are empowered by making an appointment on their own terms.

In addition to comparing all individuals across the two assigned conditions, we also examined a subset that included just those who did call back the appointment desk to confirm, reschedule, and/or cancel the appointment. Consistent with our earlier prediction, we hypothesized that those in the opt-in (vs. opt-out) default strategy would be more likely to show up for the actual screening appointment (H2).

Method

Participants

Eighty-one patients between the ages of 60 and 70 years old were recruited from two gastroenterologists' office locations in the Midwest to participate in this study. All participants had at least one colonoscopy before and were newly eligible (i.e., it had been 10 years since their last appointment) to undergo a repeat colonoscopy.

Materials

We manipulated opt-in versus opt-out scheduling using typed letters sent to patients. For the opt-in condition, the standard protocol of the clinic was followed and patients received a letter reminding them of their eligibility for a colonoscopy. The letter had instructions to call the office and schedule an appointment with the secretary. In the opt-out condition, patients also received the standard letter explaining their recent eligibility for another colonoscopy. In addition, they received a date and time for an appointment that was scheduled already by the office secretary. Participants were instructed to call the appointment desk to confirm, change, or cancel the time if it did not work.

Procedure

At the beginning of each month, office secretaries compiled a list of their patients due for a repeat colonoscopy and mailed them letters. As per regular office protocol, once a patient was scheduled, he or she received a package in the mail with instructions on how to prepare for the colonoscopy. For the purposes of this study, the secretaries also included an informed consent form. Office secretaries used electronic spreadsheets to assign each patient an ID number and record information about the appointment scheduling process, including which condition each patient was in and whether they called to schedule, confirm, change, or cancel an appointment. Secretaries also recorded whether patients showed up for a scheduled appointment. All participants were debriefed by office secretaries and via letters.

Results

Overall Show-Up Rates (Hypothesis 1)

A chi-square analysis examining the difference between overall show-up rates with the opt-out versus the opt-in default strategies ($N = 81$) revealed, as expected, that show-up rates were significantly higher in the opt-in condition than the opt-out condition, $\chi^2 (1) = 5.51$, $p = .02$). As seen in Figure 1, a total of 85.4% (35 of 41) of those in the opt-in condition, whereas only 62.5% (25 of 40) of those in the opt-out condition, attended their screening appointment.

Show-up Rates Among Confirmed Appointments (Hypothesis 2)

When only the participants who called the appointment desk and confirmed, changed, and/or rescheduled their appointments ($N = 52$) were examined, a chi-square analysis revealed a significant effect, $\chi^2 (1) = 4.51$, $p = .03$. Results showed that 97% (32 of 33) of opt-in participants, but only 78.9% (15 of 19) of opt-out participants actually showed up for their appointments (see Figure 2).

Discussion

The current research showed that an opt-out system (relative to an opt-in strategy) harms adherence to a colonoscopy screening. That is, the results confirmed Hypothesis 1 and showed that an

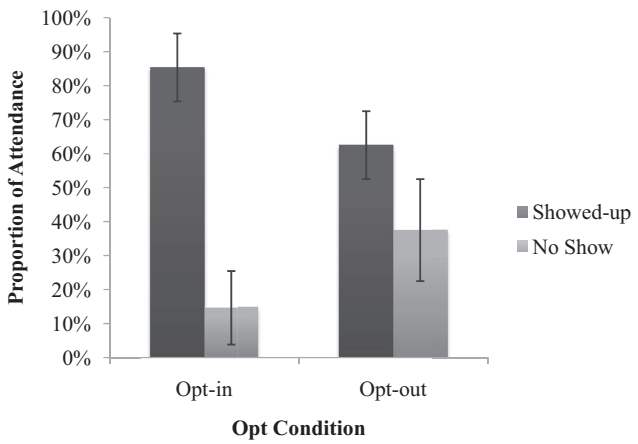

Figure 1. Number of patients who attended colonoscopy screening by scheduling method.

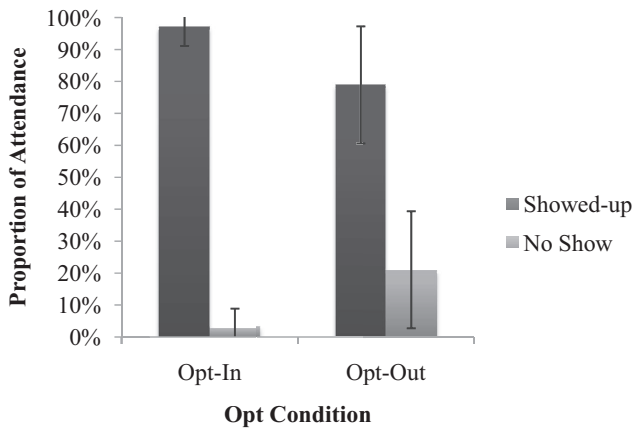

Figure 2. Number of patients who attended colonoscopy screening after confirming appointment by scheduling method.

already scheduled date and time diminished rather than enhanced the likelihood of patients showing up to their colonoscopy screenings. Such results suggest that for certain preventive health behaviors, opt-out methods may not be the most effective strategy.

We believe the default nature of opt-out scheduling may have appeared more controlling and obligatory in nature to patients, thereby increasing their levels of anxiety and ultimately deterring them from showing up for their colonoscopy screening. The theory of planned behavior (Ajzen, 1991), which states that perceived behavioral control influences intentions, is consistent with this rationale. As perceived control is lowered (which may have been the case in the opt-out condition), the person's intentions to perform a given behavior (e.g., showing up for the screening) also decreases. We anticipate that the anxiety of the opt-out condition coupled with the empowerment inherent in the opt-in condition may likely have produced the different show-up screening rates. We encourage future research to identify the precise mechanisms and moderators that differentiate when one default strategy is better than another, in an attempt to optimize engagement in health-related behaviors.

As predicted by Hypothesis 2, patients who confirmed (or changed) their appointment in the opt-in condition were more likely to actually attend the appointment than patients who confirmed (or changed) in the opt-out condition. Such results likewise support an investment model of commitment in which getting people to commit themselves is more likely to lead to adherence to health-related behaviors (Putnam, Finney, Barkley, & Bonner, 1994).

Notably, the overall show up rates for our sample were considerably higher (opt in, 85%; and opt out, 62%) than those typically reported for a comparable U.S. sample (50%; Shapiro et al., 2008). Unlike a national sample that includes Americans who do not have health care, do not see physicians regularly or at all, may have no risk factors, or may have no knowledge about the procedure or its benefits, our patients all had established relationships with physicians and already had undergone at least one prior colonoscopy. Although this does mean our sample is different from a national one, the critical comparison between 85% and 62% of individuals showing up based on scheduling strategy is striking. That is, 100% of the patients (all of whom had established relationships and prior experience) were due to get a screening and the type of scheduling strategy accounted for a 23% difference in attendance. Future research should examine how factors such as established relationships, health care access, and former experience with screening influence the effectiveness of opting-in versus opting-out strategies for colonoscopy screenings.

In conclusion, although modifying the default option to an opt-out system has been shown to be effective in increasing some health care behaviors, it should not simply be assumed the same is true for other, more invasive, preventive clinical procedures. A one-size-fits-all measure is not appropriate with choosing default scheduling options across the board when it comes to medical decision making. Future research should continue to look at default options within different types of medical scenarios (e.g., dental appointments, blood tests for cholesterol level, pap smears, and prostate screenings) as well as the moderating variables that might explain why and when certain defaults are more successful to preventative health behaviors than others.

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