patient dialysis would lead to any meaningful misclassification of a dialysis unit's anemia management practice. We disagree with Zhang et al that our findings are inconsistent with a report that the dialysis chain using the smallest doses of ESAs also had the lowest mortality rates.[1] Our model suggests that centers using ESAs the most aggressively across all hematocrit categories would have increased mortality rates relative to the most conservative centers. Therefore, our results are quite compatible with the cited report.

We agree with Dr Auerbach that IV iron is a useful aspect of anemia management. However, we note that a study of 10 169 hemodialysis patients found an 11% increased risk of all-cause mortality and a 12% increased risk of hospitalization in patients prescribed more than 10 vials of iron over a 6-month period compared with patients prescribed no iron.[2] That study cites 5 abstracts reporting associations between iron exposure and adverse events, including all-cause mortality and infection-related outcomes. It is likely true that most of the risk of anaphylaxis comes with use of high-molecular-weight iron dextran, but many other important aspects of IV iron use are not well understood. There is a lack of evidence on the comparative effectiveness and safety of different iron dosing strategies (including bolus vs maintenance dosing) and of the different iron complexes, which have different pharmacokinetic properties.

Changes in reimbursement coupled with evidence suggesting that frequent use of iron may increase hemoglobin in patients who do not respond well to ESAs[3] are likely to lead to increasing use of IV iron for anemia management in hemodialysis patients. This makes it increasingly important to continue studying IV iron to identify agents and dosing protocols that maximize its considerable benefits while minimizing possible harms and unnecessary use.

M. Alan Brookhart, PhD
Jerry Avorn, MD
Wolfgang Winkelmayer, MD, ScD
wcw1@stanford.edu
Department of Medicine
Brigham and Women's Hospital
Boston, Massachusetts

Financial Disclosures: Dr Brookhart reported having received investigator-initiated grant support from Amgen and participating in advisory boards of Amgen without receiving honoraria. Dr Winkelmayer reported receiving investigator-initiated grants from Amgen and GlaxoSmithKline and participating in advisory boards for AMAG Pharmaceuticals, Amgen, Astellas, Roche, Genzyme, and Fresenius. No other disclosures were reported.

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RESEARCH LETTER

Opting In vs Opting Out of Influenza Vaccination

To the Editor: Changes in how a choice is presented can affect the actions of decision makers, who have a tendency to stick with the default option.[1-3] For example, organ donation rates are much higher in an opt-out system (donor status is the default, explicitly opting out is required if a person does not want to donate) than in an opt-in system (nondonor status is the default, explicitly opting in is required if a person wants to be a donor).[4] Both systems give decision makers autonomy to choose according to their personal principles, but the opt-out system provides a "nudge"[5] toward donation.

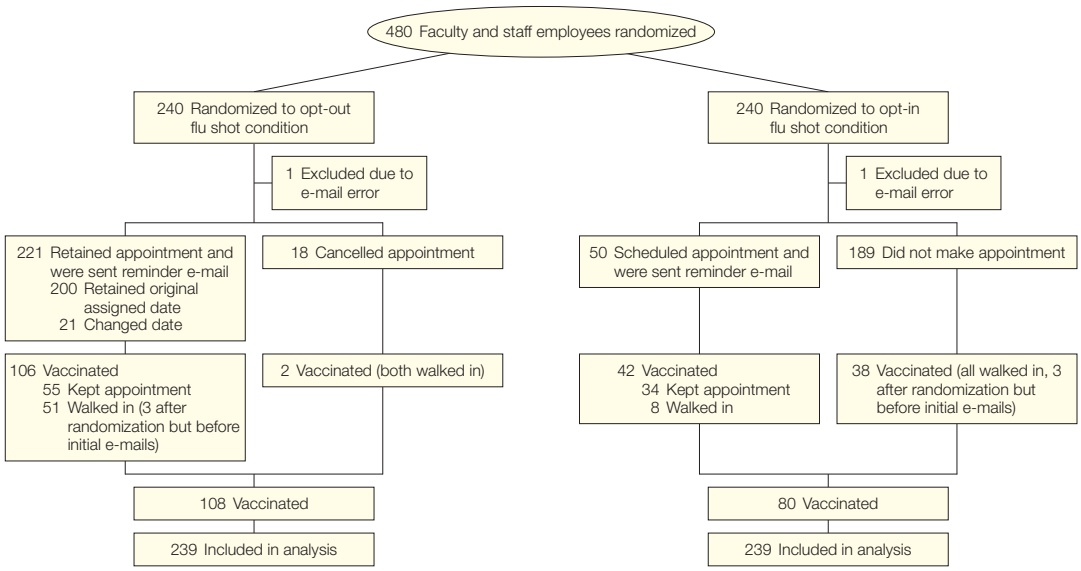
Although influenza vaccination may help prevent morbidity and mortality from seasonal or other pandemic influenza (such as 2009 influenza A [H1N1]), many people decline to receive an annual flu shot even when it is available for free at the workplace. We assessed whether modifying the default option could influence seasonal influenza vaccination.

Methods. In September 2009, after institutional review board waiver of signed consent, 480 faculty and staff employees at Rutgers University (stratified to achieve equal assignment by sex and employment category) were randomly assigned to 1 of 2 conditions (FIGURE). Those in the opt-out condition received an e-mail from the university occupational health department explaining that the participant had been scheduled for a flu shot appointment, with the day, time, and location provided; hyperlinks allowed participants to change or cancel the appointment. For those in the opt-in condition, the e-mail explained that free seasonal flu shots were available and provided a link to a Web page where participants could schedule an appointment for the following week. Five days later, all participants with an appointment (opt-out participants who changed or did not cancel their appointment and opt-in participants who made an appointment) were each sent a reminder e-mail about the appointment. Participants without an appointment could also be vaccinated as walk-ins. Two participants were excluded due to an e-mail error.

In January 2010, coders blinded to group assignment abstracted vaccination records at the occupational health department. χ^2 analyses conducted in SAS version 9.2 (SAS Institute, Cary, North Carolina) had an 80% power to detect an effect size of at least 0.13 with $\alpha = .05$. Logistic regression analyses tested mediation.

Results. In the opt-out condition, 108 of 239 participants (45%; 95% confidence interval [CI], 39%-52%) were vaccinated at the occupational health department, compared with 80 of 239 participants (33%; 95% CI,

Figure. Flow of Study Participants



27%-39%) in the opt-in condition ($P=.008$), a 36% relative increase. Six participants (3 in each group) were vaccinated after randomization but before initial e-mails were sent.

This difference was mediated by participant appointment status: only 18 opt-out participants (8%) canceled appointments, and only 50 opt-in participants (21%) made appointments. Consequently, opt-out participants were much more likely than opt-in participants to have an appointment (92% [95% CI, 89%-96%] vs 21% [95% CI, 16%-26%]; $P<.001$). Participants with an appointment were more likely than those without to get a flu shot, although not necessarily at the appointment time (Figure): 148 of 271 participants (55%; 95% CI, 49%-61%) vs 40 of 207 participants (19%; 95% CI, 14%-25%) ($P<.001$). Statistically controlling for appointment status eliminated the default effect (Sobel test=7.64, $P<.001$).

Comment. Both opt-in and opt-out conditions allow decision makers to select the option they want, but the opt-out condition increased the probability of a flu shot appointment, which in turn increased the likelihood of getting vaccinated. The study was limited to a university workplace sample, and vaccination records were limited to vaccinations received at the occupational health department. Nevertheless, the results suggest that automatic scheduling of flu shot appointments may be an effective way to increase vaccination rates.

Gretchen B. Chapman, PhD
gbc@rci.rutgers.edu
Meng Li, MS
Helen Colby, BA
Haewon Yoon, MS
Psychology Department
School of Arts and Sciences
Rutgers, the State University of New Jersey
Piscataway

Author Contributions: Dr Chapman had full access to all of the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis.
Study concept and design: Chapman, Li, Colby, Yoon.
Acquisition of data: Chapman, Li.
Analysis and interpretation of data: Chapman.
Drafting of the manuscript: Chapman.
Critical revision of the manuscript for important intellectual content: Li, Colby, Yoon.
Statistical analysis: Chapman.
Administrative, technical, or material support: Li, Colby, Yoon.
Study supervision: Chapman.
Financial Disclosures: None reported.
Additional Contributions: We acknowledge the cooperation and support of the staff in the Rutgers Department of Occupational Health. They did not receive additional compensation for their contributions.

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