Increasing Flu Shot Uptake Among Veterans at the St. Cloud VA

Postcards incorporating behavioral insights were not significantly more effective than an information-only postcard

Target a Priority Outcome

Influenza (flu) causes between 9 million and 36 million illnesses and between 12,000 and 56,000 deaths in the United States annually.[1] The veteran population, being older on average than the general population, is at greater risk of serious complications from the flu. The VA provides free flu shots to enrolled veterans and sets annual targets for flu shot uptake.

Translate Evidence-Based Insights Despite the seriousness of the flu, many people do not get the annual flu shot. Reasons include motivational barriers (for example, hesitancy about vaccines or belief that the shot can make you sick) and implementational barriers (failure to follow through and actually get the shot, despite intending to do so).[2] In collaboration with the St. Cloud VA Health Care System, the Office of Evaluation Sciences (OES) designed three different postcards to send to enrolled veterans: an information-only postcard, which provided details on how to get a flu shot, and two postcards informed by insights from the behavioral sciences. The first behaviorally informed postcard was designed to increase motivation and included a social norm statement about the number of St. Cloud veterans who get the flu shot.[3] The second behaviorally informed postcard was designed to facilitate implementation and included a prompt to write a concrete plan for getting a flu shot at a specific time and place.[4]

Embed Tests About 43,000 patients of the St. Cloud VA with mailing addresses on file were assigned at random to receive one of the three postcards. Postcards were sent to all patients in mid-September of 2017, prior to the opening of October walk-in flu shot clinics at the VA medical center in St. Cloud and in satellite clinics in three smaller towns.

Analyze Using Existing Data Data from VA electronic health records were used to compare flu shot uptake among the three groups between September 14, 2017, and May 1, 2018. The data included not just whether a patient got a flu shot but also the date of the flu shot, which enabled us to assess whether different postcards might prompt individuals to get shots earlier in the season. The data also included information about individual characteristics — including age, rurality, and prior flu shots — that enabled us to more precisely estimate the postcards' relative effectiveness.

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[1] Centers for Disease Control and Prevention (CDC) (2018), "Disease Burden of Influenza," https://www.cdc.gov/flu/about/disease/burden.htm, retrieved 7/18/2018.

[2] CDC (2013), "Surveillance of Influenza Vaccination Coverage," http://www.cdc.gov/mmwr/preview/mmwrhtml/ss6204a1.htm?s_cid%3Dss6204a1_x, retrieved 3/24/2017. Galarce EM, Minsky S, Viswanath K. (2011). Socioeconomic status, demographics, beliefs and A(H1N1) vaccine uptake in the United States. *Vaccine*, *29*(32):5284-9

[3] Social norms have been effective in prompting action in a variety of contexts (e.g., Cialdini et al., 2006, Managing social norms for persuasive impact. *Social Influence*, *1*(1), 3-15).

[4] Implementation prompts have been found to be effective in increasing flu shot uptake; Milkman KL, Beshears J, Choi JJ, Laibson D, Madrian BC (2011), Using implementation intentions prompts to enhance influenza vaccination rates. *Proceedings of the National Academy of Sciences*, *108*(26), 10415–20.

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Reanalyzed Results We did not observe any significant differences among the three postcards in either uptake or timing of flu shots. In each of the three groups, flu shot uptake was about 40%. Adjusting for individual characteristics including age, rurality, and prior flu shots, the difference between each behaviorally informed postcard and the information-only postcard was not statistically significant (motivation postcard: p = .27, 95% CI = [−.014, .004]; implementation postcard: p = .53, 95% CI = [−.012, .006]). We can rule out a difference as small as 0.9 percentage points between each behaviorally informed postcard and the information-only postcard. The three groups were also similar in timing. In all three groups, those who got flu shots got them on average 38 days after postcards were sent (median = 27 days). The difference in average days elapsed from mailing to flu shot between each behaviorally informed postcard and the information-only postcard was not statistically significant (motivation postcard: p = .42, 95% CI = [−0.73, 1.75]; implementation postcard: p = .87, 95% CI = [−1.33, 1.13]).

Build Evidence We conclude that the behaviorally informed postcards — one incorporating a social norm, the other an implementation prompt — were not more effective than an information-only postcard providing Veterans with details about how to get a flu shot in the VHA health care system. Because this evaluation did not include a no-postcard condition, these results do imply that the postcards were not effective, but only that the three postcards performed similarly.