

OES Vaccine Portfolio

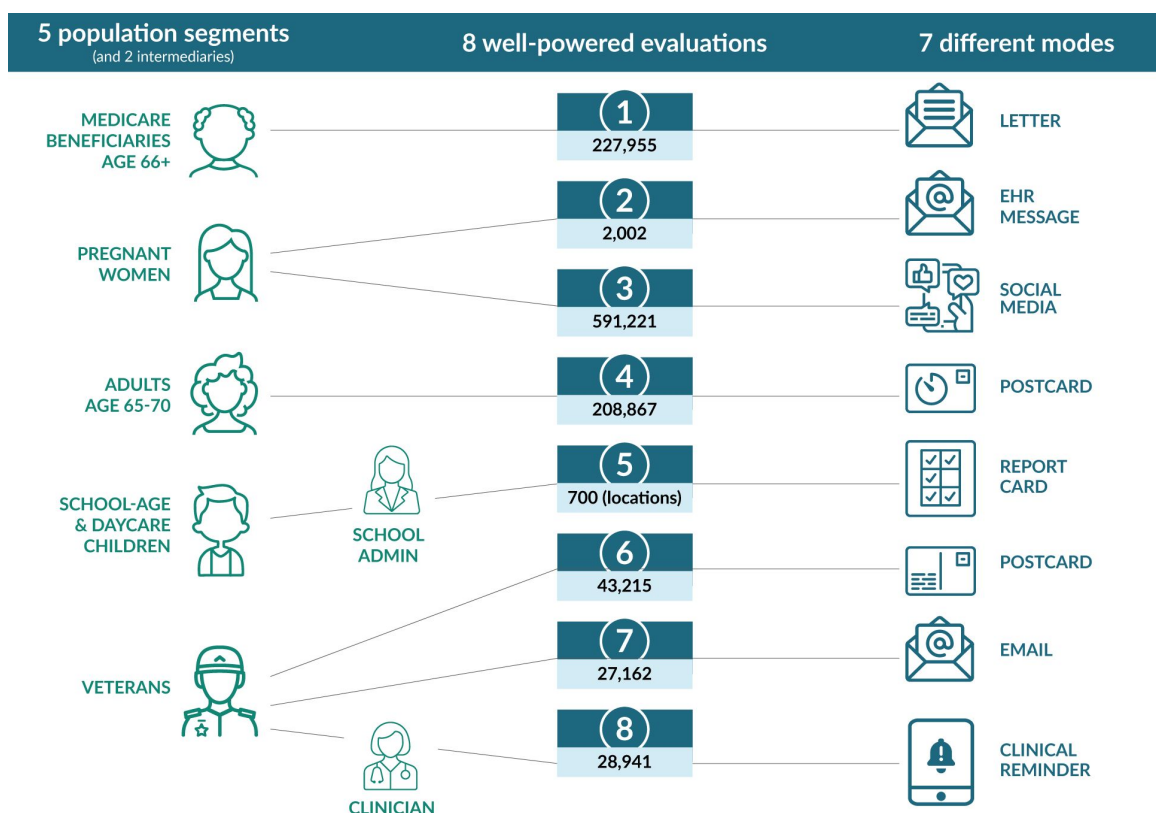
Intervention Packs

Low-cost interventions to increase vaccination uptake

Introduction

From 2015 to 2019, OES conducted [eight randomized evaluations](#) of **behaviorally-informed direct communications to promote vaccination uptake**. These evaluations had a median sample size of 55,000 recipients and used administrative data to measure uptake of influenza and other recommended adult and childhood vaccinations. The evaluations were conducted in collaboration with the Department of Health and Human Services Office of Infectious Disease and HIV/AIDS Policy (formerly the National Vaccine Program Office) as well as directly with implementation entities such as state departments of health and US Department of Veterans Affairs health facilities.

Figure 1: Summary of OES Evaluations



As shown in Figure 1, the interventions ranged from email, postcard, letter, or social media notifications for potential vaccine recipients, to a more formal report card of a school's vaccination compliance rate for school administrators, to an intensive change to a hospital's electronic health record (EHR) clinical reminders for clinicians.

In this document, we share more details on each of these interventions as well as others completed later and capture the behavioral insights incorporated with the hopes that agencies can continue learning from previous efforts. More on the evaluations and results are available on oes.gsa.gov/vaccines/.

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Note: Evaluations 1-8, which comprised the OES vaccination portfolio as of December 2020, are discussed in: Kappes, Heather Barry, Mattie Toma, Rekha Balu, Russ Burnett, Nuole Chen, Rebecca Johnson, Jessica Leight, Saad B. Omer, Elana Safran, Mary Steffel, Kris-Stella Trump, David Yokum, and Pompa Debroy. "Lessons for COVID-19 vaccination from eight federal government direct communication evaluations." *Behavioural Science & Policy* (2022).

Insights from the Behavioral and Social Sciences

Effective Communications Elements¹: Incorporating insights and formatting practices such as “keep it simple”, “make it easy”, “make it personal”, and “make it timely”.

Insight applied in interventions: [1](#), [2](#), [3](#), [4](#), [5](#), [9](#), [10](#)

Reminders²: Using a specific cue via a mode of communication to remind the recipient to take an action.

Insight applied in interventions: [2](#), [4](#), [8](#), [10](#)

Implementation Prompts or Enhanced Choice Prompts³: Prompts to write down the plan or steps needed to take a desired action or acknowledge the consequences of not taking an action.

Insights applied in interventions: [1](#), [6](#), [7](#)

Social Norms⁴: Influencing behavior through rules or expectations set by others (either descriptive or normative e.g. via peer comparisons).

Insight applied in intervention: [5](#), [6](#), [9](#)

Defaults⁵: Framing a recommended course of action by pre-selecting a choice option.

Insight applied in intervention: [7](#)

¹ Office of Evaluation Sciences. *How to design effective communications: What has OES learned?* PDF file. July 14, 2022.
<https://oes.gsa.gov/assets/abstracts/OES%20Learnings%20on%20Writing%20Better%20Communications%202018.pdf>

² Loretta Au, L., Ady Oster, G. Yeh, et al. “Utilizing an Electronic Health Record System to Improve Vaccination Coverage in Children.” *Appl Clin Inform* 1, no. 3 (2010): 221–231

³ Katherine L. Milkman et al., “Using Implementation Intentions Prompts to Enhance Influenza Vaccination Rates,” *Proceedings of the National Academy of Sciences*, 108 (2011): 10415–10420

⁴ Kiefe, Catarina I., et al. “Improving quality improvement using achievable benchmarks for physician feedback: a randomized controlled trial.” *JAMA* 285.22 (2001): 2871–2879

⁵ Gretchen B. Chapman, Meng Li, Helen Colby, and Haewon Yoon, “Opting In vs Opting Out of Influenza Vaccination,” *JAMA* 304 (2010): 43–44.



1. Encouraging Flu Vaccination Uptake among Medicare Beneficiaries

A collaboration with the U.S. Department of Health and Human Services | 2015

Project Summary:

The flu results in more than 200,000 hospitalizations and up to 48,000 deaths annually. The flu vaccine reduces the likelihood of infection by more than 60% and is fully covered by Medicare, yet only 6 in 10 Americans 65 and over actually receive the vaccination. The Centers for Medicare and Medicaid Services (CMS) and the National Vaccine Program Office (NVPO) in the Department of Health and Human Services (HHS), along with OES, co-designed behaviorally-informed letters to encourage flu vaccination uptake.

Intervention Description:

We randomly sampled 228,000 Medicare fee-for-service beneficiaries 66 and older in the fall of 2014. One half of the sample served as the control group and received no letter. The remaining participants were randomly assigned to receive one of four letters. All letters emphasized the risks of flu, encouraged the recipient to get vaccinated, and included the sender's signature and picture. The letters were based on promising evidence of using communication elements such as implementation prompts and enhanced choice prompts to encourage immunization.

What did we learn?

Receiving any of the four letters increased flu vaccination uptake by 0.59 percentage points, from 25.9% in the control group to 26.5% in the treatment group. The increase is equivalent to 673 additional Medicare beneficiaries receiving their flu vaccination.

The OES project page for this project can be accessed [here](#) and the publication is [here](#).

1. Encouraging Flu Vaccination Uptake among Medicare Beneficiaries

A collaboration with the U.S. Department of Health and Human Services | 2015

Treatment letter 1: Signed by the Surgeon General



DEPARTMENT OF HEALTH & HUMAN SERVICES
Public Health Service
Office of the Surgeon General
Rockville, MD 20852

Dear [BENEFICIARY_FIRST_NAME],

Protect yourself and those you love – get your free flu shot!

Almost 36,000 Americans die every year because of the influenza virus. The “flu” – as it’s commonly called – also results in more than 200,000 hospitalizations annually. Adults 65 and over, children 5 and younger, and pregnant women have the highest risk.

You can help! Getting the flu shot is the best way to protect yourself, your neighbors, and the ones you love. Because flu viruses change from year to year, it’s important to get a flu shot each year.

People with Medicare can get a **free** flu shot from doctors or other health care providers, and it’s widely available – just visit your local pharmacy, senior center, hospital, or doctor’s office.



So please don’t forget – get your free flu shot today!

Sincerely,
RADM Boris D. Lushniak

Boris D. Lushniak, M.D., M.P.H.
RADM, U.S. Public Health Service
Acting U.S. Surgeon General

Insights incorporated:

Personalized the letter with the recipient’s first name

Included a photo and signature of an authority figure to increase compliance and trust

1. Encouraging Flu Vaccination Uptake among Medicare Beneficiaries

A collaboration with the U.S. Department of Health and Human Services | 2015

Treatment letter 2: Signed by the Director of the NVPO



DEPARTMENT OF HEALTH & HUMAN SERVICES

Centers for Medicare & Medicaid Services

7500 Security Boulevard
Baltimore, MD 21244-1850

Dear [SBENEFICIARY_FIRST_NAME],

Protect yourself and those you love – get your free flu shot!


Almost 36,000 Americans die every year because of the influenza virus. The “flu” – as it’s commonly called – also results in more than 200,000 hospitalizations annually. Adults 65 and over, children 5 and younger, and pregnant women have the highest risk.

You can help! Getting the flu shot is the best way to protect yourself, your neighbors, and the ones you love. Because flu viruses change from year to year, it’s important to get a flu shot each year.

People with Medicare can get a **free** flu shot from doctors or other health care providers, and it’s widely available – just visit your local pharmacy, senior center, hospital, or doctor’s office.



So please don’t forget – get your free flu shot today!



Sincerely,

Dr. Bruce Gellin
Director, National Vaccine Program Office

Insights incorporated:


Personalized the letter with the recipient’s first name

Included a photo and signature of an authority figure to increase compliance and trust

1. Encouraging Flu Vaccination Uptake among Medicare Beneficiaries

A collaboration with the U.S. Department of Health and Human Services | 2015

Treatment letter 3: Signed by the Surgeon General with implementation prompt



DEPARTMENT OF HEALTH & HUMAN SERVICES
Public Health Service
Office of the Surgeon General
Rockville, MD 20852


Dear [BENEFICIARY_FIRST_NAME],

Protect yourself and those you love – get your free flu shot!

Almost 36,000 Americans die every year because of the influenza virus. The “flu” – as it’s commonly called – also results in more than 200,000 hospitalizations annually. Adults 65 and over, children 5 and younger, and pregnant women have the highest risk.

You can help! Getting the flu shot is the best way to protect yourself, your neighbors, and the ones you love. Because flu viruses change from year to year, it’s important to get a flu shot each year.

People with Medicare can get a **free** flu shot from doctors or other health care providers, and it’s widely available – just visit your local pharmacy, senior center, hospital, or doctor’s office.




So please don’t forget – get your free flu shot today!

Sincerely,
RADM Boris D. Lushniak

Boris D. Lushniak, M.D., M.P.H.
RADM, U.S. Public Health Service
Acting U.S. Surgeon General

P.S. Many people find it helpful to **make a plan** for getting their flu shot. Write yours below, and stick it on your refrigerator so you don’t forget!



I will get the flu shot to reduce my risk of getting and spreading the flu on:

_____, _____ **at** _____
(day of week) (month) (day) (time)

Insights incorporated:

Personalized the letter with the recipient’s first name


Included a photo and signature of an authority figure to increase compliance and trust

Included an implementation prompt to encouraging the recipient to make a plan for when and where they will get the flu vaccine

1. Encouraging Flu Vaccination Uptake among Medicare Beneficiaries

A collaboration with the U.S. Department of Health and Human Services | 2015

Treatment letter 4: Signed by the Surgeon General with implementation and enhanced choice prompts



DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Office of the Surgeon General
Rockville, MD 20852


Dear [BENEFICIARY_FIRST_NAME],

Protect yourself and those you love – get your free flu shot!

Almost 36,000 Americans die every year because of the influenza virus. The “flu” – as it’s commonly called – also results in more than 200,000 hospitalizations annually. Adults 65 and over, children 5 and younger, and pregnant women have the highest risk.

You can help! Getting the flu shot is the best way to protect yourself, your neighbors, and the ones you love. Because flu viruses change from year to year, it’s important to get a flu shot each year.

People with Medicare can get a **free** flu shot from doctors or other health care providers, and it’s widely available – just visit your local pharmacy, senior center, hospital, or doctor’s office.




So please don’t forget – get your free flu shot today!

Sincerely,

RADM Boris D. Lushniak

Boris D. Lushniak, M.D., M.P.H.
RADM, U.S. Public Health Service
Acting U.S. Surgeon General

P.S. Many people find it helpful to **decide now on a plan** for getting their flu shot. Mark your decided plan below, and stick it on your refrigerator so you don’t forget!

☐ I will get the flu shot to reduce my risk of getting and spreading the flu on:

(day of week), (month) (day) at (time)

☐ I will not get the flu shot, even if it means I am more likely to get sick and spread the flu.

Insights incorporated:

Personalized the letter with the recipient’s first name

Included a photo and signature of an authority figure to increase compliance and trust

Included an implementation prompt to encouraging the recipient to make a plan for when and where they will get the flu vaccine

Included an enhanced choice prompt to make the consequences of not getting the vaccine more salient for the recipient



2. Encouraging Flu Vaccination Uptake among Pregnant Women at Duke Medical Center

A collaboration with the U.S. Department of Health and Human Services | 2018

Project Summary:

The Centers for Disease Control and Prevention set a target for influenza vaccination rates among pregnant women of 80%, as part of the Healthy People 2020 objectives. In the 2016-17 influenza season, the influenza vaccination rate among pregnant women in the Duke University health system was 68%. In collaboration with the Duke University health system, the Office of Evaluation Sciences (OES) designed a simple message encouraging pregnant women to receive a flu shot, delivered via the electronic health records messaging system.

Intervention Description:

Patients were randomly assigned to the treatment condition, in which they received the newly-developed electronic message highlighting the importance of the flu vaccine, or a control condition in which they did not receive this targeted message.

What did we learn?

The results indicate that targeted communications around the importance of accessing the flu vaccine did not lead to increased uptake of the vaccine. In the full experimental sample, uptake of the flu vaccine was 40% in the control group and 38% in the treatment arm. The difference between the two enrollment rates is statistically insignificant ($p=.475$, 95% CI $[-.056, .026]$).

The OES project page for this project can be accessed [here](#).

2. Encouraging Flu Vaccination Uptake among Pregnant Women at Duke Medical Center

A collaboration with the U.S. Department of Health and Human Services | 2018

Treatment: Electronic message

[Secure messaging subject line:] It is time for the flu shot, to protect you and your baby

Dear <name>,

It is time to get your flu shot! The flu season starts in September, and the flu is more likely to cause severe illness in pregnant women than in women who are not pregnant.

Getting the flu vaccine is easy and quick. You do not need to make a separate appointment. Just ask the nurse or doctor at your next regularly scheduled appointment.

Remember - the flu shot given during pregnancy has been shown to protect both the mother and her baby for several months after birth from flu.

Sincerely,
Your care team at <name of prenatal care group>

Insights incorporated:

Reminded the recipient that they could receive the flu vaccine at their next scheduled appointment

Personalized the message with the recipient's first name and care team name



3. Testing Variations of Maternal Immunization Messages in a Social Media Campaign

A collaboration with the U.S. Department of Health and Human Services | 2017

Project Summary:

The Department of Health and Human Services (HHS) wanted to strengthen maternal immunization programs and increase uptake of recommended vaccines among pregnant women. In 2017, the National Vaccine Program Office (NVPO) developed a digital advertising campaign aimed at increasing site visits to Vaccines.gov, an informational website operated by NVPO. NVPO wanted to determine the relative effectiveness of different messaging to increase site visits. The Office of Evaluation Sciences (OES) worked with NVPO to craft variations of a social media ad that targeted pregnant social media users.

Intervention Description:

Four variations of the ad were tested for 18 days in November 2017 through an individual level randomized test, whereby zip codes (blocked by state) were randomly assigned to one of the four conditions. The text and image varied to focus on either benefits of vaccination for the baby only, or the baby and expecting mom. The four conditions were: (1) Baby-only message with baby-only image, (2) Baby-and-mom message with baby-only image, (3) Baby-only message with baby-and-mom image, and (4) Baby-and-mom message with baby-and-mom image.

What did we learn?

We did not observe any statistically significant differences in click-through rates between the ad variations.

The OES project page for this project can be accessed [here](#).

3. Testing Variations of Maternal Immunization Messages in a Social Media Campaign

A collaboration with the U.S. Department of Health and Human Services | 2017

Treatments 1-4

Social media ad 1: Baby-only message with baby-only image



Social media ad 3: Baby-only message with baby-and mom image



Insights incorporated:

Personalized the message by incorporating text and imagery relevant targeted to expecting mothers

Provided actionable information such as a link to a relevant and reputable website

Social media ad 2: Baby-and mom message with baby-only image



Social media ad 4: Baby-and mom message with baby-and mom image





4. Encouraging Uptake of the Recommended Adult Vaccines among Seniors in Louisiana

A collaboration with the U.S. Department of Health and Human Services | 2018

Project Summary:

The Centers for Disease Control and Prevention identify adults over age 65 as higher-risk for vaccine preventable diseases and recommends vaccines for influenza, tetanus, pneumonia, and shingles. The Louisiana Department of Health (LDH) identified increasing the number of vaccinated elderly as a priority.

Intervention Description:

Between October 2017 and January 2018, LDH sent a postcard reminder about recommended vaccines to elderly Louisiana residents (between the ages of 65-70) who appeared in the Louisiana Immunization Information Registry as overdue for a vaccine. Individuals were randomly assigned to the month in which they would receive the postcard reminder. Research shows that reminders may be particularly helpful in encouraging the elderly to vaccinate and can increase compliance with vaccine schedules by reducing rates of forgetfulness and complacency.

What did we learn?

The postcard reminder had a small but detectable effect among individuals who received the postcard in October. Individuals in the control group received 8.58 percent of their four vaccinations during the study period. Individuals in the October group received 0.27 percent more vaccinations (an additional 563 vaccinations) than individuals in the control group. The increase in vaccinations in October is detectable, while increases in November and December are not.


The OES project page for this project can be accessed [here](#) and the publication is [here](#).

4. Encouraging Uptake of the Recommended Adult Vaccines among Seniors in Louisiana

A collaboration with the U.S. Department of Health and Human Services | 2018

Treatment: Postcard

Our records show that you may be missing an important CDC-recommended vaccination




If you're 65 or older, the CDC recommends getting vaccinated against these diseases:

- Flu
- Shingles
- Pneumococcal Pneumonia
- Tetanus

Call your healthcare provider today to schedule a time to discuss vaccination

This postcard is being sent by your health plan, health clinic, or health department. Financial support for this communication has been provided by Pfizer Inc. No patient-specific information has been or will be provided to Pfizer.

♻️ 10% TOTAL RECYCLED FIBER PP-PNA-USA-2285-01 © 2017 Pfizer Inc. All rights reserved. Printed in USA/March 2017



Insights incorporated:

Personalized images and text to the needs of the 65+ population

Limited content to essential information, e.g. list of vaccines

Reminded recipients to call their provider to schedule recommended vaccines



5. Increasing Immunization Compliance among Schools and Daycares in a Mid-sized City

A collaboration with the U.S. Department of Health and Human Services | 2018

Project Summary:

Coordinating federal efforts and pursuing the prevention of infectious diseases through immunizations is a goal of the National Vaccine Program Office (NVPO) in the U.S. Department of Health and Human Services. OES and NVPO collaborated with the Department of Health in a mid-size city (DOH) to improve immunization compliance among students in schools and daycare centers. The project focused on overcoming several behavioral barriers for school leaders by sharing the following information: students' immunization compliance, appropriate action steps to boost compliance, the importance of immunization compliance, and where their school's compliance stands compared to other similar schools.

Intervention Description:

OES designed report cards to report on school and daycare centers' immunization compliance rates relative to top performers and a corresponding star rating. The report cards were created using data visualization software and by using the DOH's Immunization Information System, an immunization registry.

What did we learn?

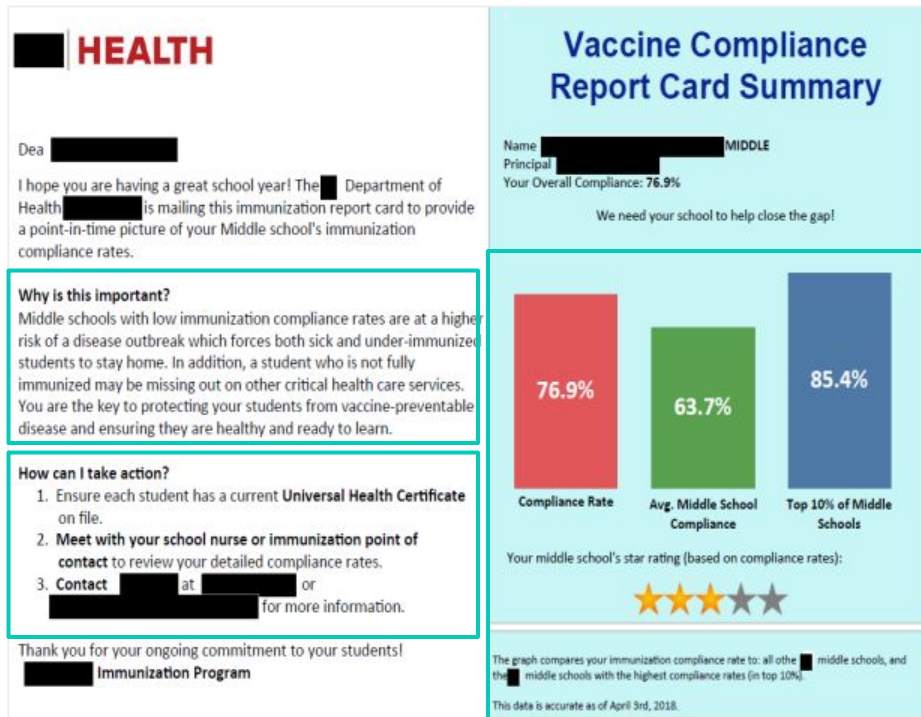
There was no significant difference in compliance rates between treatment and control schools at the end of the school year, six months after the first report card was sent.

The OES project page for this project can be accessed [here](#) and the publication is [here](#).

5. Increasing Immunization Compliance among Schools and Daycares in a Mid-sized City

A collaboration with the U.S. Department of Health and Human Services | 2018

Treatment: Sample report card

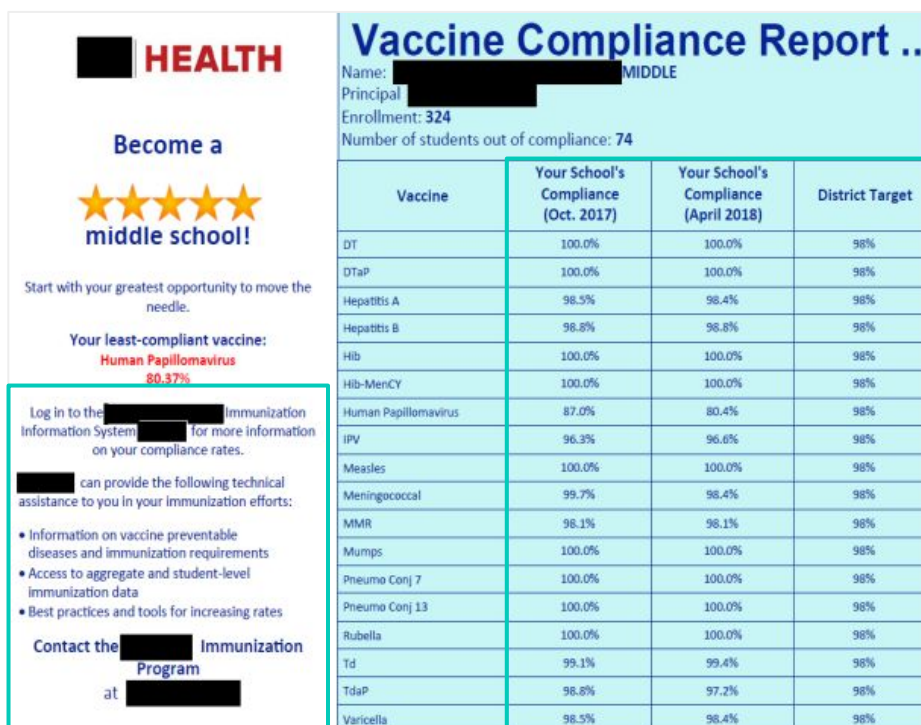


Insights incorporated:

Compared the recipient's compliance score with others to influence behavior through expectations set by others

Prioritized key information

Provided actionable information





6. Increasing Flu Vaccination Uptake at the VA St. Cloud Health Care System

A collaboration with the U.S. Department of Veterans Affairs | 2018

Project Summary:

The VA provides free flu shots to enrolled Veterans and aims to increase flu vaccination rates nationwide. 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 to increase flu vaccination.

Intervention Description:

Veterans were randomly assigned to receive one of the three postcards: a basic informational postcard, which provided details on how to get a flu shot, and two postcards informed by insights from the behavioral sciences — one designed to increase motivation, the other designed to facilitate implementation.

What did we learn?

There were no significant differences among the three postcards in either uptake or timing of flu shots.

The OES project page for this project can be accessed [here](#).

6. Increasing Flu Vaccination Uptake at the VA St. Cloud Health Care System

A collaboration with the U.S. Department of Veterans Affairs | 2018

Treatment postcard 1: Informational

It is time for your flu shot. It's easy, free, and the responsible thing to do.

Here are your options for getting vaccinated:

1. At a VA walk-in flu clinic:

St. Cloud VA Medical Center		
Date	Time	Location
Oct 3	8 am - 6:30 pm	Bldg 96
Oct 4 & 5	8 am - 4:30 pm	Bldg 96
Oct 7, 14, 21, 28 (Saturdays)	8 am - Noon	Bldg 1
Oct 10, 17, 24, 31 (Tuesdays)	4:30 pm - 6:30 pm	Bldg 1
Oct 10-31 (every weekday)	8 am - 4:30 pm	Urgent Care Clinic

Brainerd VA	
Date	Time
Oct 3	9 am - 3 pm
Oct 5	10 am - Noon
Oct 17	1 pm - 3 pm
Oct 27	10 am - Noon

Max J. Beilke VA (Alexandria)	
Date	Time
Oct 13 & 27	10 am - 2 pm

Montevideo VA	
Date	Time
Oct 3 & 11	9 am - 2 pm

2. At your next scheduled VA appointment:

Just ask your nurse or doctor at your next appointment.

Note: VA walk-in flu clinics are for enrolled Veterans only. No appointment is needed to get vaccinated at a walk-in clinic. If you get vaccinated outside the VA (for example, at a pharmacy), please tell us about it at your next visit.

Insights incorporated:

Included details such as where and when to get the vaccine

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6. Increasing Flu Vaccination Uptake at the VA St. Cloud Health Care System

A collaboration with the U.S. Department of Veterans Affairs | 2018

Treatment postcard 2: Motivational

It is time for your flu shot. It's easy, free, and the responsible thing to do.

Did you know?

7 out of 10
St. Cloud
Veterans
get their flu
shot.

Here are your options for getting vaccinated:

1. At a VA walk-in flu clinic:

St. Cloud VA Medical Center			Brainerd VA	
Date	Time	Location	Date	Time
Oct 3	8 am - 6:30 pm	Bldg 96	Oct 3	9 am - 3 pm
Oct 4 & 5	8 am - 4:30 pm	Bldg 96	Oct 5	10 am - Noon
Oct 7, 14, 21, 28 (Saturdays)	8 am - Noon	Bldg 1	Oct 17	1 pm - 3 pm
Oct 10, 17, 24, 31 (Tuesdays)	4:30 pm - 6:30 pm	Bldg 1	Oct 27	10 am - Noon
Oct 10-31 (every weekday)	8 am - 4:30 pm	Urgent Care Clinic		

Max J. Beilke VA (Alexandria)		Montevideo VA	
Date	Time	Date	Time
Oct 13 & 27	10 am - 2 pm	Oct 3 & 11	9 am - 2 pm

2. At your next scheduled VA appointment:

Just ask your nurse or doctor at your next appointment.

Note: VA walk-in flu clinics are for enrolled Veterans only. No appointment is needed to get vaccinated at a walk-in clinic. If you get vaccinated outside the VA (for example, at a pharmacy), please tell us about it at your next visit.

Insights incorporated:

- Included a prompt designed to increase the recipient's motivation to get the vaccine
- Included details such as where and when to get the vaccine

6. Increasing Flu Vaccination Uptake at the VA St. Cloud Health Care System

A collaboration with the U.S. Department of Veterans Affairs | 2018

Treatment postcard 3: Implementation prompt

It is time for your flu shot. It's easy, free, and the responsible thing to do.

Make a plan right now:

When?
____:____ am/pm

Where?

How will you get there?

Stick me on your fridge so you don't forget!

Here are your options for getting vaccinated:

1. At a VA walk-in flu clinic:

St. Cloud VA Medical Center			Brainerd VA	
Date	Time	Location	Date	Time
Oct 3	8 am - 6:30 pm	Bldg 96	Oct 3	9 am - 3 pm
Oct 4 & 5	8 am - 4:30 pm	Bldg 96	Oct 5	10 am - Noon
Oct 7, 14, 21, 28 (Saturdays)	8 am - Noon	Bldg 1	Oct 17	1 pm - 3 pm
Oct 10, 17, 24, 31 (Tuesdays)	4:30 pm - 6:30 pm	Bldg 1	Oct 27	10 am - Noon
Oct 10-31 (every weekday)	8 am - 4:30 pm	Urgent Care Clinic		

Max J. Beilke VA (Alexandria)		Montevideo VA	
Date	Time	Date	Time
Oct 13 & 27	10 am - 2 pm	Oct 3 & 11	9 am - 2 pm

2. At your next scheduled VA appointment:

Just ask your nurse or doctor at your next appointment.

Note: VA walk-in flu clinics are for enrolled Veterans only. No appointment is needed to get vaccinated at a walk-in clinic. If you get vaccinated outside the VA (for example, at a pharmacy), please tell us about it at your next visit.

Insights incorporated:

- Included a prompt designed to facilitate implementation
- Included details such as where and when to get the vaccine



7. Increasing Flu Vaccination Uptake at the VA New York Harbor Health Care System

A collaboration with the U.S. Department of Veterans Affairs | 2021

Project Summary:

Influenza or flu causes more than 9 million illnesses and more than 12,000 deaths in the United States annually. The VA provides free flu shots to enrolled Veterans and aims to increase flu vaccination rates nationwide. In collaboration with the New York Harbor VA Health Care System, the Office of Evaluation Sciences (OES) designed email messages to send to enrolled Veterans.

Intervention Description:

Veterans were randomly assigned to an email (treatment) group or a no-email (control) group. The email group received three emails during the flu season, with information about how to get a flu shot, and elements, based on evidence from the behavioral sciences, that were designed to increase individuals' motivation and follow-through. In particular, the emails framed getting a flu shot as a default course of action, the messages included an implementation prompt (a prompt to make a plan for getting a flu shot at a specific time and place), and the messages presented the benefits of a flu shot as concrete and near term (immunity beginning within two weeks).

What did we learn?



There was no significant effect of the emails on either uptake or timing of flu shots.

The OES project page for this project can be accessed [here](#).

7. Increasing Flu Vaccination Uptake at the VA New York Harbor Health Care System


A collaboration with the U.S. Department of Veterans Affairs | 2021

Treatment: Email sent via GovDelivery



U.S. Department
of Veterans Affairs

If you haven't gotten your flu shot, it is time! By getting the flu shot, you don't just protect yourself. You can protect your family, friends, and other veterans, too.



Here are your options for getting a free flu shot in the VA New York Harbor Health Care System:

- 1. Walk-in flu shots.** Walk-in flu shots are available from 8:30 am to 4:00 pm in the primary care clinics at the Manhattan campus, the Brooklyn campus, and the St. Albans Community Living Center and in the community clinics in Harlem and Staten Island
- 2. At your next scheduled appointment.** Just ask your nurse or doctor at your next appointment. All VA clinics are ready to give you your flu shot.

For more information, including locations and directions to all of the locations listed above, visit the [VA New York Harbor website](#).

Did you know? The flu shot starts protecting you within two weeks and lasts the whole flu season. Without it, you are more than twice as likely to get the flu, on average — and if you get the flu, you could pass it on to others.

Do you have questions about the flu shot? Call our Nurse Helpline at [800-877-6976](tel:800-877-6976). Also, if you get a flu shot somewhere other than a VA clinic, call your primary care nurse and let us know.

Sincerely,
Your care providers at VA New York Harbor

Many people find it helpful to make a plan for getting the flu shot. Print this email, write down your plan, and stick it on your fridge so you won't forget!

I will get the flu shot:

What day? _____ What time? ____:____ am/pm

Where? _____

How will you get there? _____

Insights incorporated:

Framed the decision to get the flu shot as a default to help increase take-up

Included a prompt designed to help the recipient make a plan for getting the shot at a specific time and place

Presented the benefits of the shot as concrete and near term



8. Increasing Flu Vaccination Uptake at the Atlanta VA Health Care System

A collaboration with the U.S. Department of Veterans Affairs | 2019

Project Summary:

At the Atlanta VA Health Care System, primary care physicians, advanced practice providers, and nurses described experiencing high rates of vaccine refusal from patients, as well as difficulty viewing a patient's full vaccination history within the electronic health record (EHR). Providers also noted that responding to multiple clinical reminders in the EHR took up a significant amount of time. The Atlanta VA and OES worked together to develop a modified clinical reminder to bundle individual clinical reminders for three adult vaccinations (Influenza, Pneumococcal, and Tdap), with the aim to make it easier for providers to recommend and order vaccines, thereby increasing patient vaccination rates.

Intervention Description:

Between October 2018 and April 2019, selected primary care teams consisting of physicians, advanced practice providers, and nurses were randomly assigned to receive the treatment: a modified clinical reminder in the EHR system that bundled separate clinical reminders for the three adult vaccinations; a vaccination dashboard relaying patient vaccination history and status; and talking points providers could use to address patient refusal, or vaccine hesitancy.

What did we learn?

Flu vaccination was higher among patients who saw primary care teams in the treatment group than patients who saw teams in the control group (22.3% versus 20.8%). However, when accounting for demographic characteristics and the clustering of patients within respective care teams, the difference is not statistically significant.

The OES project page for this project can be accessed [here](#).

8. Increasing Flu Vaccination Uptake at the Atlanta VA Health Care System

Treatment: Modified clinical reminder delivered via EHR

Insights incorporated:

Reminded the provider that their patient was due for a vaccine

Provided an immunization dashboard and patient history at-a-glance

Included essential information as a “bundled” vaccine reminder

VACCINATION DOCUMENTATION

- ☐ Your patient is DUE for the following vaccines: Click box to review the clinical reminder findings.
- ☐ Click here to view IMMUNIZATION HISTORY
- ☐ Click here to review a summary of VHA guidance for these vaccines.

INSTRUCTIONS

Use language that assumes the patient will get vaccinated - "It is time for your X shot today"

- ☒ Your patient is DUE for the following vaccines: Click box to review the clinical reminder findings.

CLINICAL REMINDERS DUE

	--STATUS--	--DUE DATE--	--LAST DONE--
Pneumococcal PCV13 (Prevnar13)	DUE NOW	DUE NOW	unknown
Tdap Immunization	DUE NOW	DUE NOW	unknown

CLINICAL REMINDERS SUMMARY

	--STATUS--	--DUE DATE--	--LAST DONE--
Pneumococcal PCV13 (Prevnar13)	DUE NOW	DUE NOW	unknown
Pneumococcal PPSV23 (Pneumovax)	N/A		00/00/2007
Td Immunization	DONE		05/21/2019
Tdap Immunization	DUE NOW	DUE NOW	unknown

- ☒ Click here to view IMMUNIZATION HISTORY

IMMUNIZATION HISTORY

Immunization	Series	Date	Facility	Reaction	Info
HEPATITIS B - SERIES #1 (HISTORIC*		06/26/2014	ATLANTA VA*		
INFLUENZA (HISTORICAL)		11/24/2009	No Site		<C>
		09/20/2007	No Site		
INFLUENZA, UNSPECIFIED FORMULATIO*		07/05/2010	7th Floor		
		11/24/2009	No Site		
		10/02/2009	Kroger		<C>
NOVEL INFLUENZA-H1N1-09, ALL FORM*		11/24/2009	No Site		<C>
PNEUMOCOCCAL POLYSACCHARIDE PPV23		00/00/2007	No Site		
		03/15/2002	ATLANTA VA*		
		00/00/2002	No Site		
TD(ADULT) UNSPECIFIED FORMULATION B		11/24/2009	No Site		
VARICELLA RECEIVED ELSEWHERE (HIS*		12/01/2009	PubliX		

8. Increasing Flu Vaccination Uptake at the Atlanta VA Health Care System

Treatment: Talking points delivered via EHR

Pprevnar-13 Immunization

Your patient is DUE for an Pprevnar 13 vaccination based on information available to this reminder.

☒ If the patient expresses concerns, click box to follow example below:

- a. Establish empathy and credibility - establish a connection
 - i. "I know that you want to do whatever you can to keep yourself healthy - I want the same thing"
- b. Acknowledge the patient's concern, provide alternative explanation for any myths but do not linger
 - i. "I understand that you are concerned about getting the flu, but the flu vaccine cannot give you the flu - it is a killed vaccine, it doesn't have any live virus."
- c. Pivot back to the disease and emphasize self-efficacy
 - i. "Getting the flu is serious for anybody, but can be particularly severe for older individuals. However, if you get the flu vaccine today you can reduce your likelihood of getting the flu and reduce the severity of the flu if you do get it."
 - ii. "It will also lessen the likelihood of spreading to others, including the elderly and immunocompromised. I strongly recommend the flu vaccine, I get it myself."

Insights incorporated:

Tailored the talking points to address patient refusal or vaccine hesitancy



9. Increasing Vaccine Uptake through Performance Feedback

A collaboration with the U.S. Department of Veterans Affairs | 2021

Project Summary:

The Department of Veterans Affairs (VA) National Center for Health Promotion and Disease Prevention promotes vaccinations for Veterans, in line with the Centers for Disease Control recommendations. Despite the availability of free flu vaccines at VA health care facilities, Veterans' rates of vaccination for flu and many other adult vaccinations fall below the Healthy People 2020 targets of 70%. At the Atlanta VA Health Care system, primary care physicians, advanced practice providers, and nurses reported being unaware of their panel's flu vaccination progress during the flu season. The Atlanta VA and OES developed a performance feedback intervention, including four monthly performance feedback emails, a leaflet with evidence-based practices to increase flu vaccination rates and an online Frequently Asked Questions document.

Intervention Description:

Evidence suggests that providing comparative provider vaccination rates can be successful in increasing vaccination rates, thus the performance feedback included flu vaccination rates for each provider group, or Patient Aligned Care Team (PACT). Specifically, it contained each PACT's current and past flu vaccination rates, the number of unvaccinated patients assigned to the PACT, and peer vaccination rates in the form of the "Top 10%" of PACTs at the Atlanta VA. It also highlighted the Healthy People 2020 vaccination targets for adults aged 18-64 (i.e., 70%).

What did we learn?

The results suggest that there was no statistically significant difference in flu vaccination rates between patients in treatment and control PACTs one month following the performance feedback treatment. We observed a vaccination rate of 13.3% among PACTs that received the performance feedback intervention and 13.5% among PACTs that did not during the study period ($p = 0.899$, 95% CI [-0.009, 0.014]).

The OES project page for this project can be accessed [here](#).

9. Increasing Vaccine Uptake through Performance Feedback

A collaboration with the U.S. Department of Veterans Affairs | 2021

Treatment: Performance feedback email

Dear [redacted] team members:

Thank you for your hard work and commitment to providing care to our Veterans. I am sharing vaccination rates for your team through December 30, 2019. These reflect patients currently empaneled to your PACT.

How Your PACT Compares to Others

Month	Your PACT Team (%)	Top 10% of PACT Teams (%)
Sep 19	12.4%	25.3%
Oct 19	14.3%	28.1%
Nov 19	17.2%	30.1%
Dec 19	24.5%	34.4%
Jan 20	34.4%	34.4%

Number of Patients Left for Your PACT to Vaccinate

Month	Number of Patients Left
Sep 19	1321
Oct 19	1203
Nov 19	1126
Dec 19	1040
Jan 20	0

Your vaccination rate through last month is 24.5%. We do understand the different local challenges each PACT faces. Therefore, we aim to support you in further improving your vaccination rate so that we can come as close as possible to the coverage targets of the Healthy People 2020 agenda.

Attached are 4 evidence-based recommendations that have worked for other PACTs to increase vaccination coverage among their patients. We hope these practice strategies will benefit you and your PACT team in providing the best care for your patients.

If you would like to know how your vaccination rates were calculated, or why you are receiving monthly vaccination alerts, please click on one of the following sharepoint links:

J:\FAQ Report Card_online (3).pdf

I:\FAQ Report Card_online (3).pdf

Very Best,





Insights incorporated:

Compared the recipient's vaccination rates with a target to influence behavior through expectations set by others

9. Increasing Vaccine Uptake through Performance Feedback

A collaboration with the U.S. Department of Veterans Affairs | 2021

Treatment: Leaflet sent to providers

	
<p>Make a Strong <i>Recommendation</i>!</p> <p>Your strong vaccination recommendation is one of the most important factors in patients accepting the vaccine. The CDC provides a useful fact sheet on how to make strong vaccine recommendations.</p>	<p>Provide <i>Information</i> to Patients!</p> <p>Share this informational handout with your patients that want additional information, have questions, or decline the influenza vaccination after your first recommendation.</p>
<p><i>Increase Flu Vaccination Coverage with Evidence-based <i>RIAV</i> Strategies</i></p>	
	
<p>Change <i>Appointment</i> Strategies!</p> <p>No schedule for vaccinations is the best schedule. Not requiring an appointment for receiving an influenza vaccination increases the convenience for patients, allowing them to remain flexible and get in and out fairly quickly from the vaccination clinic location.</p>	<p>Get <i>Vaccinated</i> Yourself!</p> <p>Health care workers that actually receive the vaccine can act as good role models to patients. CDC recommends that all U.S. health care workers get vaccinated annually against influenza. Please encourage your PACT members to get vaccinated themselves - did you already get your flu shot?</p>

Insights incorporated:
Prioritized key recommendations



10. Increasing Vaccine Uptake among Veterans at the Dorn VA Medical Center via a Reminder Postcard

A collaboration with the U.S. Department of Veterans Affairs | 2018

Project Summary:

In 2018, the Office of Evaluation Sciences and the Wm. Jennings Bryan Dorn VA Medical Center collaborated to identify interventions to increase flu vaccine uptake among Veterans who did not receive a flu vaccine the previous season. The Dorn VA ultimately selected a postcard intervention that included information on how to schedule a flu shot or primary care appointment.

Intervention Description:

OES and the Dorn VA Medical Center worked together to understand the feasibility of an intervention to increase flu vaccine uptake among enrolled Veterans. The proposed intervention involved alerting patients to an automatically-scheduled flu shot appointment, an idea motivated by previous research, which found that defaulting patients into vaccine appointments increased total vaccination rates by 10 percentage points.

The Dorn VA ultimately selected a postcard intervention that included information on how to schedule a flu shot or primary care appointment, but did not include information about an already-scheduled appointment.

What did we learn?


A follow-up analysis indicated that the Veterans who were sent a postcard were not significantly more likely to get vaccinated (9.0% vs. 8.4% of the Veterans who were not sent a postcard); although the analysis was not powered to detect effects smaller than 2.4 percentage points. There were also no significant differences observed in scheduling a primary care appointment, information about which was also included in the postcard.

The OES project page for this project can be accessed [here](#).

10. Increasing Vaccine Uptake among Veterans at the Dorn VA Medical Center via a Reminder Postcard

A collaboration with the U.S. Department of Veterans Affairs | 2018

Treatment: Postcard sent to veterans

VA  U.S. Department of Veterans Affairs
Veterans Health Administration
Patient Care Services
Health Promotion and Disease Prevention

Dear Valued Veteran,

The Flu is a highly contagious illness that can result in severe illness, pneumonia, hospitalization, or death so please protect yourself, family, and friends by getting a flu shot this flu season.

Here are your options for getting a flu shot:

1. With or without an appointment at the **Dorn VA or any VA Outpatient Clinic**, Monday-Friday 08:00-16:00.
2. **Walgreens Pharmacies** are providing FREE flu shots to VA patients with a VA ID.
3. **Call (800) 293-8262** if you would like to **make an appointment** for a flu shot OR to see your provider.

If you have already received your flu shot outside of the VA, please **Secure Message your primary care team or call **803-776-4000, ext. 4707** with the location and approximate date of your vaccination to ensure that your vaccination record is updated.*

Please wear loose clothing around your arms for administration of the flu shot.

Insights incorporated:

Reminded recipients to get a flu shot

Limited content to essential information, e.g. simple step-by-step instructions

Bolded key takeaways and actionable information such as locations and phone numbers