



# Evolution of Text4baby Influenza Vaccine Messaging



Text4baby is the nation's only free mobile information service for pregnant women and mothers of infants <1 year old designed to promote maternal and child health through text messaging.

Text4baby is jointly operated by ZERO TO THREE and Voxiva, Inc.

## Overview

The influenza (flu) vaccine has been shown to protect pregnant women and their infants from flu and flu-related complications that can cause severe illness and adverse pregnancy outcomes. Although flu vaccine coverage among pregnant women has slowly increased over the past 5 years—from 44% during the 2010–2011 flu season to 50% during the 2014–2015 flu season, according to an annual [Centers for Disease Control and Prevention \(CDC\) survey](#)—coverage is still not approaching the population level.

Maternal flu vaccination was identified as a critical issue to target at the inception of Text4baby. When the service launched in 2010, all participants were sent a text encouraging receipt of the flu vaccine during their first week of enrollment. During the 2011–2012 flu season, Text4baby piloted an annual flu module—a series of interactive text messages addressing flu shot barriers and urging moms to get the vaccine. Below is an overview of the module's 4-year evolution, highlighting yearly content, features, and key findings used to inform module enhancements.



### Text4baby (T4B) Flu Module Evolution and Key Findings



Pilot Year 2011–2012

#### Introduced Interactivity

*Are you planning to get a flu shot?*

31% responded (29,316 of 96,070)

#### Text Reminders

*Would you like a reminder to get a flu shot?*

56% said Yes

#### Tailored Education to Address Flu Shot Barriers

*If not, why?*

29% Don't think it's safe

28% Don't need it

24% It may give me the flu

19% Other

11% Cost

#### Key Findings

- Users engaged and responsive
- Data on health behaviors collected from a hard-to-reach population
- External validity: Top reasons for not getting a flu shot mirror CDC annual survey findings

(continued)

**Program Evaluation**

**Do Reminders or Tailored Education Improve Flu Vaccination?**

Those planning to receive a flu shot randomized to encouragement message OR reminder offer → Moms who received a reminder **2X** more likely to report vaccination

Those not planning to receive a flu shot randomized to encouragement message OR education tailored reason for non-vaccination → Moms concerned about cost who received text on free/low cost shots nearly **2X** more likely to report vaccination

**Findings Published in the American Journal of Preventive Medicine**

**T4B Questions Added to CDC Flu Survey of Pregnant Women**

**Goal:** Are T4B flu messages associated with higher maternal flu vaccination coverage? *Results pending*

**Key Findings**

- Methodology allowed for rapid assessment and improvement
- External validity: November T4B flu vaccine rate for pregnant women consistent with CDC rate
- Results consistent with other evidence; different approach needed to address safety concerns


**Informed Strategy**

All who enroll at any point during flu season receive:

- (1) Education on free/low cost shots
- (2) A separate reminder to get a shot

**Texted Coupons for Free Flu Shots**

**120,160+** coupons offered  
**16,030+** requested  
**2,060+** redeemed



**Expanded Education on Infant Vaccination**

For moms with infants ≥6 months old:

*Baby needs 2 shots at least 4 weeks apart to be protected*

**Flu Shot Status Collected in November and April**

*Did you get the flu shot?  
Did baby get the flu shot?*

**Key Findings**

- High redemption: 13% of T4B coupons redeemed vs 3–10% for similar efforts
- External validity: November and April T4B flu vaccine rate for pregnant women consistent with CDC rate
- Exploratory analysis suggests coupons may improve vaccination; future area of research


**Opt Out for those Vaccinated Early**

Those who respond “Already got shot” to September flu shot status survey do not receive additional flu shot messaging

**Expanded Coupon Offer and State-Specific Redemption Data**

*“Thank you so much for the free flu shot. I have no insurance ... I was concerned about how I would pay for one for myself. Thank you again!” –VA Sprint customer*

**221,410+** coupons offered, **20,860+** requested, **2,800+** redeemed  
 Redemption ranged from **4–27%** by state



**Surveillance Monitoring**

Continued monitoring of national and state-specific flu vaccine coverage among pregnant women

**Key Findings**

- T4B is a promising surveillance tool for health behaviors/outcomes
- External validity: November and April T4B flu vaccine rate for pregnant women consistent with CDC rate
- Coupon redemption rates varied by state; Rates were highest in Alabama (27%), Idaho (21%), Utah (19%), South Carolina (18%), and Colorado (18%)



## Summary

Text4baby's interactive flu module has allowed for rapid data collection and analysis to inform and improve the module over the past 4 years. In particular, the [evaluation of the 2012–2013 module](#) found:

- Among Text4baby mothers planning to get the vaccine, those who received a text reminder were 2X more likely to report getting the vaccine.
- Among Text4baby mothers who weren't planning to get the vaccine due to cost, those who received text-based tailored education on free/low cost flu shots were nearly 2X more likely to report getting the vaccine.

These and other findings were critical in shaping the overarching framework for the 2014–2015 module which will be used moving forward. Additional efforts—such as the partnership with RiteAid to provide text-based coupons for free flu shots—provide ideas for future opportunities for module enhancements and research to learn how to further improve flu vaccine rates for pregnant and postpartum mothers and infants  $\geq 6$  months old.

The Text4baby flu module also shows promise as a surveillance tool as flu vaccine rates for pregnant women are consistent with those reported by the CDC. Text4baby will continue to monitor flu vaccine coverage among participants and explore additional opportunities to use Text4baby for timely surveillance of flu vaccination and other health behaviors and outcomes.

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