

# 2013 National Survey of Text4baby Participants

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## Executive Summary

In October and November of 2013, the Text4baby program, in collaboration with researchers from California State University San Marcos, conducted a nationwide telephone survey of a sample of Text4baby participants enrolled at least one month in the free mobile health service. The purpose of the telephone survey was to collect data on: (1) participant demographics, (2) participant interaction and engagement with the service, (3) participant experience and perceived usefulness, and (4) linguistic appropriateness of the Spanish messages. A total of 1,171 valid responses (912 English and 259 Spanish) were used for analyses. The average age of the participants was 27.1 years. About half (51.9%) of participants have an annual household income of under \$16,000. Participants reported an average household size of 3.83 people. The majority (82.4%) of participants have a high school education or greater and 15.6% reported having no health insurance. About half (53.2%) of participants reported that they are enrolled in Medicaid. Text4baby participants were highly satisfied with the Text4baby, rating the service as 4.44 on a scale of 1 to 5 (1=Not useful, 5=Very useful). Key findings include:

Text4baby helped participants remember important appointments and immunizations:

- 63.1% reported that Text4baby helped them remember an appointment (N=937).
- 75.4% reported that Text4baby helped them remember an immunization that they or their child needed (N=937).

Text4baby helped participants access health information and resources:

- 45.6% reported that they called a service or phone number that they received from a Text4baby message (N=932).
- 76.7% reported that they clicked a link that they received from a Text4baby message (N=932).

Text4baby informed participants of health information and medical issues:

- 95.3% reported that Text4baby messages informed them of health information that they did not know (N=942).
- 81.5% reported that Text4baby messages informed them of medical warning signs that they did not know (N=939).
- 65.2% of participants (excluding currently pregnant participants) reported that T4B messages helped them learn about baby's developmental milestones (N=208).

Text4baby facilitated communication with medical providers:

- 65.4% reported talking to their doctor about a topic that they read on a Text4baby message (N=974).

Text4baby helped participants access health services and make healthy choices:

- 47.2% of participants reported that Text4baby helped connect them to health services for them and/or their baby such as WIC, Medicaid or low cost immunizations (N=974).
- 91.2% of participants reported that Text4baby helped them make healthy choices for them and/or baby (N=924).

Text4baby is helping underserved populations, such as the uninsured and those with low educational attainment, who have limited access to information, healthcare and resources:

- 59.9% of uninsured participants reported that Text4baby has helped them access services, compared to 44.9% of insured participants (N=921).
- 60.4% of participants with less than a high school education reported that Text4baby has helped them access services compared to 44.5% of participants with a high school education or greater (N=928).

## **About Text4baby**

Text4baby is a free text message service that provides pregnant women and mothers of infants up to one year of age with timely health and safety tips and resources. Women enroll by texting 'Baby' (English) or 'Bebe' (Spanish) to 511411. Text4baby messages are grounded in traditional health behavior theories, using both uni- and bi-directional messaging as a cue to action and behavior change. Participants receive on average 3-4 text messages per week. The content of the messages are tailored to gestational age or baby's age. Message topics include breastfeeding support, nutritional and safety information, helpful tips, health coverage and support hotlines, and appointment and immunization reminders.

## **Survey Methodology & Analysis**

In October and November of 2013, randomly selected currently active Text4baby participants who had been enrolled in the Text4baby service for at least one month received a text message asking them to call a number to complete a telephone survey. The telephone survey was approved by the Institutional Review Board at California State University San Marcos (IRB 2013-103). Participants who receive Text4baby messages in English were directed to a phone survey in English, and participants who receive Text4baby messages in Spanish were directed to a phone survey in Spanish. The first recruitment message (sent on October 24, 2013) was sent to a randomly selected 9,000 English-message participants and 1,000 Spanish-message participants. The ratio of Spanish- to English-message participants randomly selected was based on the current proportion of those in the entire Text4baby population. The initial response rate was 3.0% (2.4% for English and 8.4% for Spanish). On November 7<sup>th</sup>, a second recruitment message was sent to 18,000 randomly selected English-message participants and 2,000 randomly selected Spanish-message participants. Participants who received the recruitment message in October were not eligible to receive the recruitment message sent in November. The response rate for the second invitation was slightly higher (5.8% overall, 5.4% for English, 11.6% for Spanish), possibly because the second recruitment message informed participants they would be entered into a raffle for a gift card. The survey instrument contained questions (24 for English participants and 28 for Spanish participants) that sought to gather the following self-reported information about the participant: (1) demographic

characteristics, (2) interaction and engagement with Text4baby, (3) participant experience and perceived usefulness of Text4baby, and (4) linguistic appropriateness of the Spanish messages.

Overall, 30,000 participants were randomly selected to receive the recruitment messages, and a total of 1,462 responses (response rate 4.9%) were received. The data was collected via telephone survey and was computed by the evaluation team. All duplicate and invalid cases were removed (some participants responded multiple times for unknown reasons, and some respondents did not respond to any survey question). After removing all the duplicates and invalid cases, a total of 1,171 valid responses (912 English and 259 Spanish) were used for analyses. As there were disproportionately more Spanish-speaking participants in the sample compared to the entire active Text4baby population (22.1% of the total valid responses in the sample, vs. 6.6% of the Text4baby population), the evaluation team employed statistical weighting to reduce the influence of the oversampled Spanish-speaking participants. Descriptive statistics, including frequencies, percentages and means, were prepared, and statistical tests were used to examine data for associations.

### Participant Demographics

<b>Table 1: Overview of Text4baby Participant Demographics</b>	
<b>Age</b>	<b>27 years</b> = Average age
<b>Race</b>	<b>58%</b> = Caucasian <b>28%</b> = African American <b>14%</b> = Other
<b>Ethnicity</b>	<b>30%</b> = Hispanic
<b>Family Size</b>	<b>3.8</b> = Average number of people living in the household
<b>Marital Status</b>	<b>44%</b> = Married
<b>Education</b>	<b>82%</b> = High school education or greater
<b>Income</b>	<b>52%</b> = Have an annual household income of under \$16,000
<b>Health Insurance status</b>	<b>16%</b> = Report they are uninsured <b>53%</b> = Report they have Medicaid

The survey collected demographic data to gain a better understanding of participant demographics. Over one-third (35.7%) of the survey participants reported they are currently pregnant and therefore are receiving Text4baby’s prenatal messaging; the remaining percentage (64.3%) reported they were new mothers and therefore are receiving Text4baby’s postpartum messages. Over 75% reported they own a smart phone. The average age of the survey participants was 27.1 years of age. 44.3% of participants reported they are married. The majority (57.8%) of participants reported their race is White/Caucasian, and 28% reported Black/African American. Roughly 30% reported they are Hispanic (including Mexican, Cuban, Puerto Rican, and other Hispanic groups). Over half of participants reported they are covered by Medicaid (53.2%). Similarly, most participants (82.4%) had at least a high school education level. Participant demographics are further described below:

#### **Race and Ethnicity**

Most participants described themselves as White/Caucasian (57.8%), and over one quarter described themselves as Black/African American (28.0%). Separately, participants were asked “Are you Hispanic?”

29.5% of respondents report being Hispanic (including Mexican, Cuban, Puerto Rican, and other Hispanic groups) (see Table 2).

**Table 2: Race and Ethnicity of Survey Participants**

		Percentage
<b>Race (N=951)</b>	White/Caucasian	57.8%
	Black/African American	28.0%
	Native American and Native Alaskan	2.7%
	Asian	2.0%
	Native Hawaiian or other Pacific Islanders	2.7%
	Other	6.9%
	Decline to answer	5.1%
	<b>Hispanics/Non-Hispanics (N=956)</b>	<b>Non-Hispanics</b>
	<b>Hispanics</b>	<b>29.5%</b>
	Mexicans	72.8%
	Cubans	16.4%
	Puerto Ricans	1.0%
	Other Hispanics	9.8%
	Decline to answer	6.0%

### ***Births & Family Size***

Survey participants were asked: “Including this pregnancy, how many children have you given birth to?” Participants reported that including this pregnancy they have on average 1.62 children (N=957). Survey participants were asked: “Including children, how many people live in your household?” The majority of survey participants reported having 3-4 persons living at home (average 3.83 per household) (N=902).

### ***Education***

Participants were asked about their education in two questions. First, they were asked “Are you a high school graduate?” If they responded yes, they were asked “Are you a college graduate?” Almost one fifth reported they had a less than high school education level (17.6%). Over half had a high school education level (53.5%) and almost a third reported having a college education level (29.0%) (N=961).

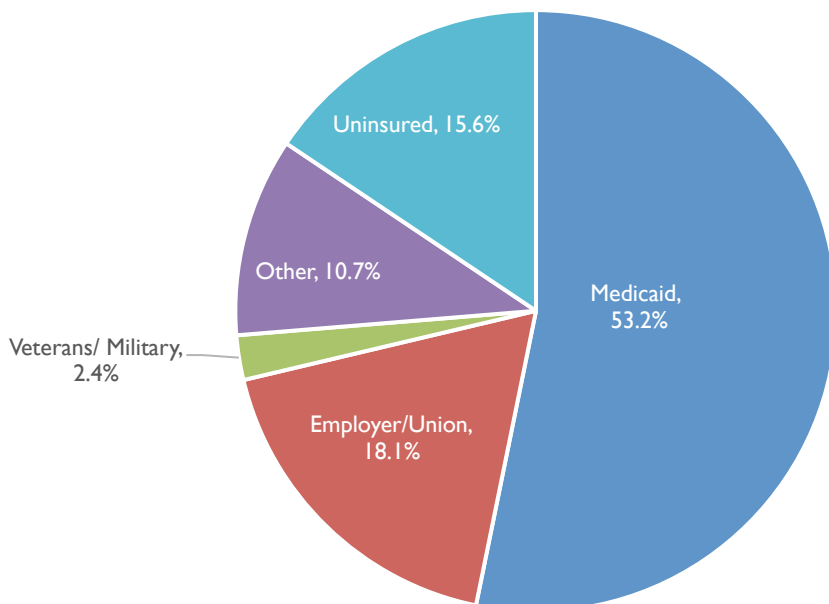
### ***Income***

Survey participants were asked: “What is your annual household income?” Over half (51.9%) of survey participants who provided their income level (N=943) report having an annual household income of under \$16,000. The most frequent annual household income category reported by participants was \$16,001 - 20,000. Furthermore, more than 90% reported an annual household income below \$20,000.

### ***Health Insurance***

Survey participants were asked, “What type of health insurance do you have?” (N=951). Most participants (84.4%) reported they had health insurance, with over half reporting they are covered by Medicaid (53.2%) and about one fifth have employer/union sponsored insurance (18.1%). 15.6% of the sample reports being uninsured (see Figure 1).

**Figure 1: Insurance Type for Survey Participants (N=951)**



**Key Findings**

Findings from the telephone survey indicate that Text4baby is impacting participants’ health knowledge and reminding them about appointments and immunizations. Findings also indicate that the service is facilitating participants’ interaction with their health providers and their access to health services and resources. Finally, the survey findings indicate that the mobile health information service is helping uninsured participants and those with lower educational attainment access health services. Differences in rates for some questions were significant when comparing traditionally underserved groups and their counterparts. Significant differences are noted in italicized text below.

**Table 3: Key Survey Findings**

	<b>Overall Findings</b>	<b>Findings for Underserved Groups</b>
<b>Text4baby participants are reminded of appointments and immunizations</b>	<p>63.1% reported that Text4baby helped them remember an appointment (N=937)</p> <p>75.4% reported that Text4baby helped them remember an immunization that they or their child needed (N=937)</p>	<p><i>Participants with less than high school education reported that Text4baby helped remind them of an appointment that they or their child needed at a higher rate than participants with a high school education or greater (79.1% vs 59.8%, p&lt;0.05)</i></p> <p><i>Participants with less than high school</i></p>

		<p>education reported that Text4baby helped remind them of an immunization that they or their child needed at a higher rate than participants with a high school education or greater (85.3% vs 73.3%, <math>p&lt;0.05</math>)</p>
<p><b>Text4baby participants are accessing health information resources provided through Text4baby</b></p>	<p>45.6% reported that they called a service or phone number that they received from a Text4baby message (N=932)</p> <p>76.7% reported that they clicked a link that they received from a Text4baby message (N=932)</p>	
<p><b>Text4baby is informing women of health information and medical issues</b></p>	<p>95.3% reported that Text4baby messages informed them of health information that they did not know (N=942)</p> <p>81.5% reported that Text4baby messages informed them of medical warning signs that they did not know (N=939)</p> <p>65.2% of participants (excluding currently pregnant participants) reported that T4B messages helped them learn about baby's developmental milestones (N=208)</p>	<p><i>Uninsured moms reported that Text4baby helped them learn about baby's developmental milestones (such as when baby should roll over and when baby should crawl) at a higher rate than insured moms (91.7% vs 80.6%, <math>p&lt;0.05</math>)</i></p>
<p><b>Text4baby is facilitating communication with medical providers</b></p>	<p>65.4% reported talking to their doctor about a topic that they read on a Text4baby message (N=974)</p>	
<p><b>Text4baby is helping women access services and make healthy choices for them and their baby</b></p>	<p>47.2% reported that Text4baby helped connect them to health services for them and/or their baby such as WIC, Medicaid/Medical or low cost immunizations (N=974)</p>	<p><i>Uninsured participants reported that at a higher rate than insured participants that Text4baby helped them get health services such as WIC, Medicaid, or low cost immunizations, for them or their baby (59.9% vs.</i></p>

	91.2% reported that Text4baby helped them make healthy choices for them and/or baby (N=924)	44.9%, $p < 0.05$  <i>Participants without a high school diploma reported at a higher rate than those high school or greater that Text4baby helped them get health services such as WIC, Medicaid, or low cost immunizations, for them or their baby (60.4% vs. 44.5%, <math>p &lt; 0.05</math>)</i>
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### Perceived Usefulness of Text4baby Service

The telephone survey asked participants to rate the usefulness of Text4baby service on a scale from 1 to 5 (1=Not useful, 5=Very useful); 909 participants responded to the question, rating the service as **4.44 out of 5**. About 65% of the participants rated the Text4baby services “5” or “Very useful,” and 85% rated the services above “4,” or above a strong indication that survey participants believe Text4baby is a useful service (see Table 4).

		Average	Descriptive Statistics
<b>Overall (N=909)</b>		<b>4.44</b>	Mean = 4.44 Mode = 5 SD = 0.925
<b>Education Level (N=909)</b>	Less than High School	4.66	t(239.626) = 3.532 p = 0.000*
	High school graduate or greater	4.40	
<b>Race (N=909)</b>	Caucasian	4.33	F(2, 753) = 6.690 p = 0.001*
	African American	4.59	
	Asian	4.28	
<b>Hispanics/Non-Hispanics (N=909)</b>	Hispanic	4.55	t(478.555) = -2.337 p = 0.020*
	Non-Hispanic	4.39	
<b>Insurance Status (N=909)</b>	Uninsured	4.70	F(2, 898) = 10.431 p = 0.000*
	Insured - Medicaid	4.47	
	Insured – Other	4.27	
<b>Language (N=909)</b>	English Message Participants	4.42	t (69.230) = -3.491 p = 0.001*
	Spanish Message Participants	4.76	

\* Statistically significant ( $p < 0.05$ )

Interestingly, the perceived usefulness of Text4baby reported by participants differed among groups. For example, the evaluation team found that those with less than a high school education found the service more useful than high school and college graduate participants. Additionally, African Americans reported the service was more useful than Caucasians and Hispanic respondents reported the service was more useful than non-Hispanic participants. Health insurance status was another statistically significant factor.

Survey participants who were uninsured reported higher rates of usefulness than those who have health insurance, either through Medicaid or other private insurance. In addition, participants who receive Text4baby messages in Spanish reported the service was more useful than those who receive messages in English. Participants' annual household income, age, pregnancy, cellphone type and marital status did not influence participants' perceived usefulness.

### **Linguistic Appropriateness**

In order to assess the linguistic appropriateness of the Spanish messages, participants receiving messages in Spanish were asked three additional questions regarding the content, clarity, and use of language employed in the messages. 14.2% of the participants who completed the telephone survey in Spanish (N=259) reported that some words and phrases used in the service were unfamiliar to them; only 3.0% reported that some of the Spanish used in the messages was incorrect. Overall 98.3% of Text4baby participants receiving messages in Spanish reported that the content included in the messages was clear and understandable. These data suggest that even though some linguistic issues may exist with the construction of Spanish messages, the content of the message was clear and understandable.

### **Conclusion**

Survey findings affirm that the Text4baby service is positively impacting pregnant women, new moms, and others who are getting information about caring for their health and giving their babies the best possible start in life, thereby achieving the goal of the Text4baby program. The demographic data captured from the survey informs us that Text4baby is reaching and impacting its target audience, which includes underrepresented minority groups, the uninsured, and those of lower socioeconomic status. By providing women enrolled in the program with health information, Text4baby is impacting participants' access to health services, information and knowledge; informing interaction with their health providers, and reminding participants about appointments and immunizations. As a result of the Text4baby service, participants report that they are more informed about their pregnancies, are reminded to attend appointments and get immunizations, better prepared to interact with their health providers, and report that the service has impacted access to health services they and their babies need. Moreover, participants within socially vulnerable groups such as the uninsured and those with less than a high school education report that they have benefitted from the Text4baby service at higher rates than participants who have health insurance and those with a high school education or greater. Findings from this survey help demonstrate the positive impact of Text4baby and the potential impact of mobile health interventions more broadly.

### **About the Authors**

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