

Twilio: How Do I Send My Survey Invitations By Text Message (SMS)?

General information on Twilio + REDCap for sending survey invitations by SMS



What is Twilio? Why use it?

The most common way of sending REDCap surveys to participants is by emailing your survey invitations. In addition to email, you can also send REDCap survey invitations and even alerts through an integrated text messaging option via a company called [Twilio](https://www.twilio.com) (www.twilio.com). Never heard of it? You might have already used it! If you've sent or received texts to or from companies & orgs like Lyft, Netflix, the American Red Cross, or AirBnB, you've already been on the receiving end of Twilio's telephony services.

After you sign up for and fund a Twilio account, you'll link your Twilio account to your REDCap project (we'll tell you how in the other handout, *Twilio Instructions*). Your REDCap project can then use Twilio's services to send out your survey invitations, reminders, and other alerts by SMS. In limited instances (i.e. when no PHI is collected and surveys are very brief), you can even send the survey questions by SMS and have the participant text back their responses so they land directly in your REDCap project.

Vanderbilt University, creators of REDCap, partnered directly with Twilio to include this option. This means that in practice, it's just another REDCap feature. **Importantly, the data is stored in REDCap as in any other survey project. Your data is not stored in Twilio. Twilio is just providing the service to send the survey link (or in some cases, survey questions & responses).** They are similar to the postal service in that regard: they ferry messages back and forth. They do not read them or store copies of them.

How much does it cost?

While Twilio is a paid service, it's extremely affordable. To use Twilio in a REDCap project, a user first needs to go to www.twilio.com and set up and fund a Twilio account with a credit card. Text messages sent/received through Twilio cost **well under a penny per text** message and **\$1/month** for your phone number.

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What security & regulatory considerations do I need to be aware of?

- **Request Inspector:** Twilio-REDCap functionality is only advisable if a specific setting called Request Inspector is disabled on the user's Twilio account. Request Inspector typically records phone numbers as activity comes and goes through Twilio, in order to assist developers with the de-bugging process. It could be a HIPAA compliance issue if Twilio recorded this info for REDCap projects (no participants' phone numbers should be stored on Twilio's servers), so the REDCap administrator team will work with you to turn this off in Twilio. (Instructions to do this are found in *Twilio Instructions*.)

- **Survey by SMS conversation depends on PHI:**

If a survey is collecting PHI, you can only use Twilio to send survey links, i.e. "Click this link to open our survey," which then opens the survey in Safari or any other browser on a participant's mobile device. The participant then fills out the REDCap survey within their browser, exactly as if they received the invitation by email.

A study team can also use Twilio to conduct actual SMS conversations with survey questions as long as there is no PHI. For example: "Good evening! Did you eat any vegetables today? (1) Yes, (0) No." Participant texts back "1" and gets a response back: "Great job! Thanks for answering today's survey question."

- **Mobile device encryption:** Encryption or CHOP device status should **not** be a concern as no PHI is saved locally. All data is saved in REDCap. All that occurs on the device is that the respondent receives a survey link via SMS, or they are asked a non-PHI question to which they reply. Either way, the data is saved in the REDCap project. Of course, teams should be cognizant of who may have access to a participant's device and what the survey invitation language or survey questions say—sensitive topics should be avoided in invitations or SMS conversations in case the mobile device is used by someone other than the participant.

How do I use Twilio with REDCap?

- When using REDCap + Twilio, REDCap is still used to first create your forms and surveys. Twilio is then used to send them out by SMS (text messaging). Please see the *Twilio Instructions* handout for step-by-step directions.