Text Messaging in REDCap
&
REDCap Mobile App

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Collaborative Data Services (CDS)

2016 Spring REDCap Seminar Series

1. Mar 3: Creating data forms with online designer & data dictionary
2. Apr 14: Working with surveys, invites, participants, & survey queues
3. May 17: Longitudinal studies, data quality rules, reports, importing & exporting
4. **Jun 23: REDCap mobile app & texting**
5. July 14: Advanced features (ontologies, double data entry, data access groups, randomization, and more)

Tell Your Friends & Co-Workers

- Introduction to REDCap at Fred Hutch (overview talk)
  - July 11, 2016
  - October 4, 2016
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- Repeating the 5-part REDCap Drilldown Seminars
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Agenda

- Sending SMS Messages (a.k.a. texts)
- Using the Mobile App to collect data offline

SMS Messaging in REDCap

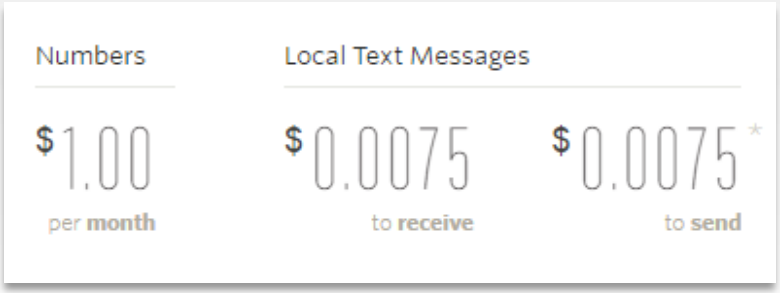
or REDCap meets Twilio

Before Version 6.6

- In order to send survey invitations to participants, you had exactly one option:
  - Send the user an invitation in an email
  - Actually, with the REDCap API and a lot of programming, you could also invite participants using SMS (text) messages, but this was a lot of work
- With the release of Version 6.6 on May 29, 2015, you can now have a choice in sending invites to participants from within REDCap using email or SMS (text) messages

Texting Setup & Configuration (1 of 4)

1. Create an SMS Messaging account at Twilio (http://twilio.com)
   - This costs money but the costs are quite reasonable



All steps in Twilio

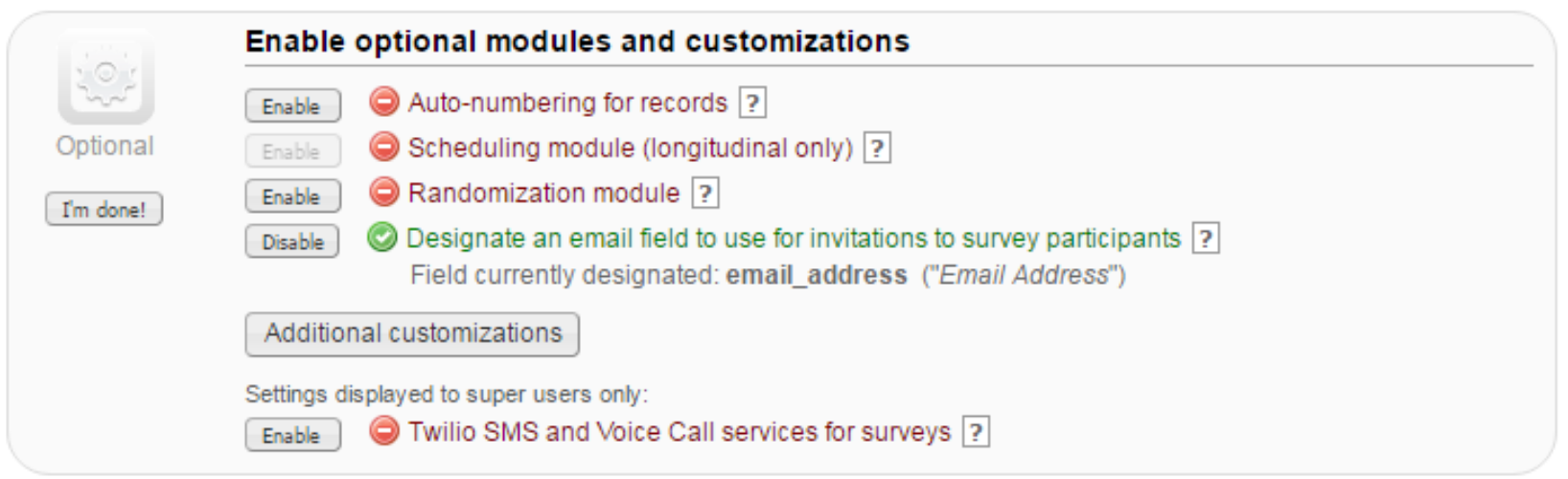
2. Generate your Twilio Account SID, Auth token, and phone number

3. Turn off logging in Twilio for Data Compliance!
   - Go to Voice Products | Programming Voice | Configure or Settings
     - Disable Request Inspector

Texting Setup & Configuration (2 of 4)

4. Setup the project to enable Twilio SMS for the project

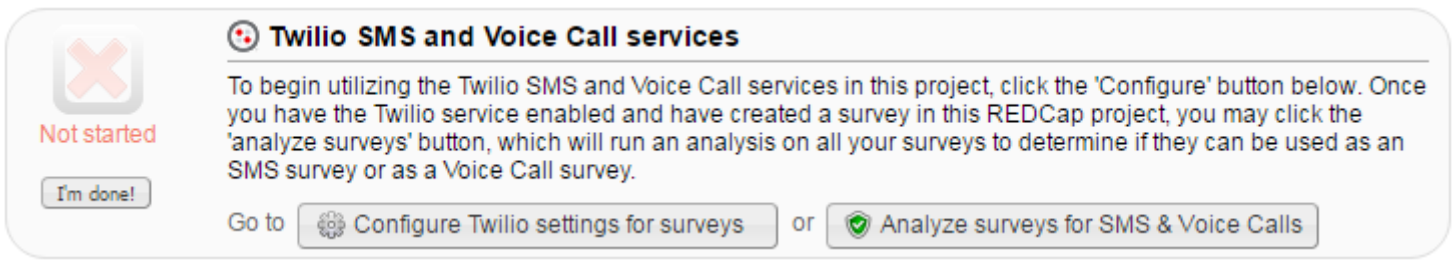
In REDCap



Texting Setup & Configuration (3 of 4)

5. Configure Twilio account settings for the project at “Twilio SMS and Voice Call services” dialog
   - You’ll need Twilio Account SID, Auth token, and phone number from step #2

6. Now you will be able to configure survey settings for the project using additional project setup section

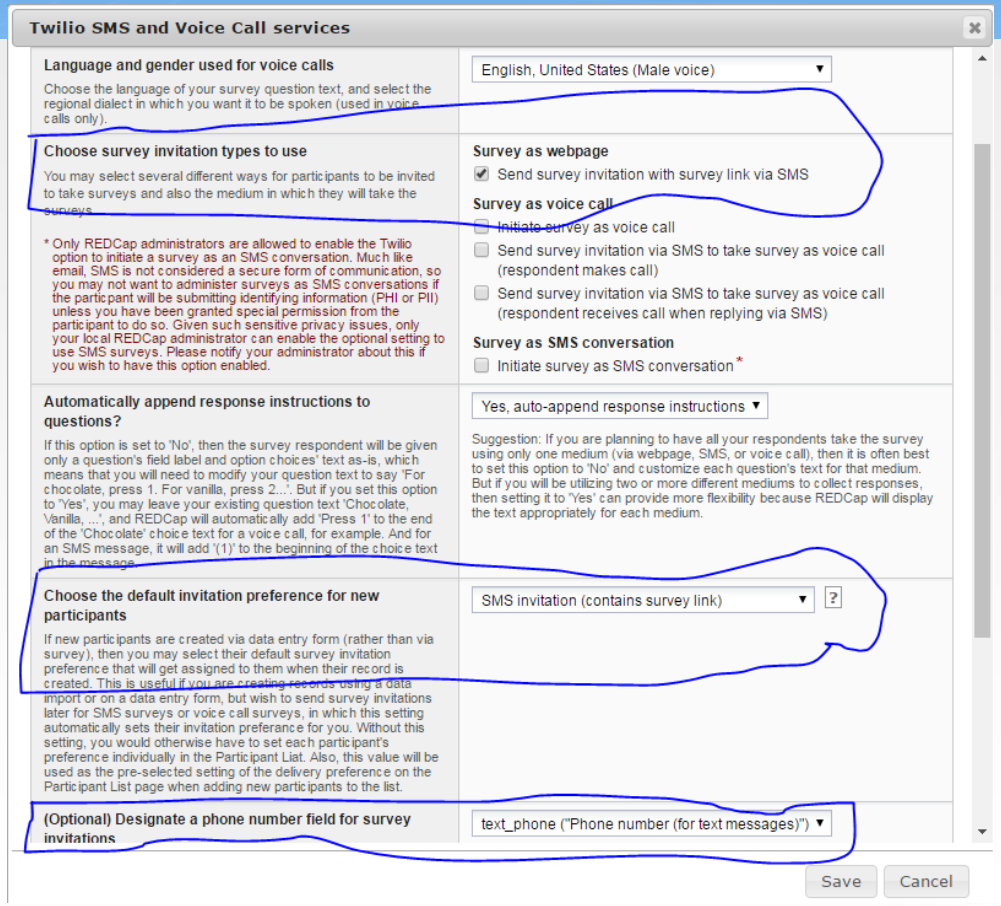


All steps in REDCap

Texting Setup & Configuration (4 of 4)

7. Click on “Configure Twilio settings for surveys” and answer a few questions at dialog
   - Note that there are additional voice call settings and completion of the survey via an SMS conversation settings *(all require additional Twilio fees to use)*

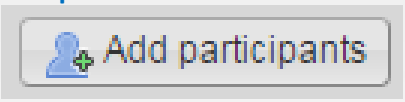
In REDCap



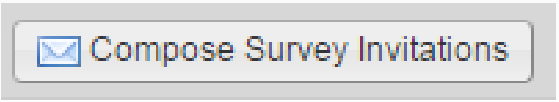
Using Texting to Invite Participants

- Decide first whether you will be..
  1. Using a survey with a (potential) participant list –or–
  2. You will be contacting study participants for (follow-up) surveys –or–
  3. Using anonymous broadcast text message

Inviting Participants
Using a survey with a participant list

- Add participants
  - Manage Survey Participants
    - Participant List
      - 

- Adjust email/text preference for invites in Participant List

- Send out invites
  - Manage Survey Participants
    - Participant List
      - 

- Information in participant list will not flow through to survey results

Inviting Participants

You will be contacting study pts for follow-up surveys

1. Setup capturing of phone number on baseline instrument
   - Project Setup
     - Configure Twilio settings for surveys
       - (Optional) Designate a phone number field for survey invitations
2. Adjust email/text preference for invites in Participant List

3. Setup Automated Survey Invitations
   - Online Designer

4. As a participant completes the trigger form, invites will be sent out (optionally after a configurable delay with or without conditions)

Inviting Participants
Using anonymous broadcast text message

- Manage Survey Participants
  - Public Survey Link
    - Voice Calling and SMS options for the Public Survey

- The phone numbers you use will not be tracked against survey completions

Using the REDCap Mobile App

or How to collect data in REDCap when offline

Before Version 6.5

- In order to collect data in REDCap, you have to be connected to the Internet
- But on May 22, 2015, Vanderbilt released the REDCap Mobile App in iOS and Android versions

Using the REDCap Mobile App

1. Download App and configure for project & create users (Connection required; once per device)
   - Your user account will need mobile app rights.
2. Download data to device (Connection required)
   - Only if mobile users will need to edit existing records
3. Create and/or Update records on device (Disconnected)
4. Synchronize Device with REDCap server (Connection required)

Setting up the REDCap Mobile App

Online

1. Download and install REDCap Mobile App (once per device)
2. Initialize the App and create the Admin account (once per device)
3. Create user accounts on each device (once per device/user)
   - You must be logged in as Admin user to create/manage user accounts
4. Connect each user account to REDCap Project (once per device/user)

Connect each user account to REDCap Project

(once per device/user)

1. From REDCap – will require assistance of REDCap Administrator
   a. Create REDCap user(s) that will have REDCap mobile rights. It could be one REDCap user per device or one REDCap user for multiple devices, or even one REDCap user for each mobile device user
   b. Log in as this user and click API|Request API token
   c. Still logged in as this user, click REDCap Mobile App and from Set Up Project in Mobile App tab, use either the QR code or Initialization code (click first on Can't get the QR code to work?) to setup project on device
   d. Use either QR code or Initialization code on device to setup project for each user

Collecting New Records in REDCap Mobile App Offline

1. Data collector user logs into device
2. Press My Projects
3. Press link containing Name of Project
4. Press Collect Data
5. Press link containing Name of Instrument
6. Press Create New Record
7. Enter data and press Save Record
8. Continue creating records

Updating Records in REDCap Mobile App

Online & Offline

1. Data collector user logs into device
2. Press My Projects
3. Press link containing Name of Project
4. Press Check for Other Records on Server or Refresh Setup & Data (online)
5. Press Collect Data
6. Press link containing Name of Instrument
7. Press link of Existing Record (or press Create New Record)
8. Enter data and press Save Record
9. Continue updating/creating records

Synchronizing with REDCap Mobile App

Online

1. Data collector user logs into device
2. Press My Projects
3. Press link containing Name of Project
4. Press Send Data to Server
5. Press Begin Send of All Data or Select a Partial Set of Records

Refreshing Project in REDCap Mobile App

Online

This is necessary when you have modified one or more instruments

1. Data collector user logs into device
2. Press My Projects
3. Press link containing Name of Project
4. Press Refresh Setup & Data

Managing Users in REDCap Mobile App

Online

1. Admin user logs into device
2. Press Add new User or press on link of the name of existing user
3. Logout of Admin account

Android Emulators

- One way to use the REDCap Mobile app with Windows tablets or laptops is to employ an Android emulator on Windows/OSX
- Resources
  - http://www.androidauthority.com/best-android-emulators-for-pc-655308/
  - http://techapple.net/2014/05/3-best-android-emulators-for-mac-os-macbook-run-and-install-android-app-on-your-mac-os-x-macbook-airpro/

Summary

REDCap Supports Two Exciting New Features

- Use of SMS (Text) Messaging for surveys
- REDCap Mobile app allows offline data collection on iOS, Android, and Windows/OSX (using an Android emulator such as BlueStack)

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REDCap™

Thank you!

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