# Creating Multilingual Forms in Open REDCap
Best Practices Brief

Overview

Participants in research studies or clinical trials should reflect the populations who are most affected by the disease.[1] A lack of representation of populations at highest risk of the disease in research studies and clinical trials has resulted in interventions that have not translated well in the real-world and have not been efficacious for all populations.[1] Research has shown that one of the most effective best practices in community engaged research is to create study materials in multiple languages in addition to English.[2] Translating study materials into multiple languages improves efforts to reach populations experiencing health disparities, including limited English proficient groups.[2] According to National Academies of Sciences, Engineering, and Medicine, one of the key opportunities for clinical or research investigators to inclusively reach all populations is to create in-language study materials and hire translators or multilingual research staff.[3] One of the commonly used survey tool at NYULH is Open REDCap. This guidance document will review how to create in-language surveys using Open REDCap and tips on how to maximize the language features within Open REDCap.

The **Multi-Language Management (MLM)** Application was launched in NYU Langone Health Open REDCap in early 2022. Prior to this, an external Multilingual module was used for language translation, which was not supported by Open REDCap. Open REDCap cannot translate surveys for users, but this application allows Open REDCap surveys and all settings to be presented in multiple languages. Note: all changes made to any Open REDCap survey should be saved throughout the creation process.
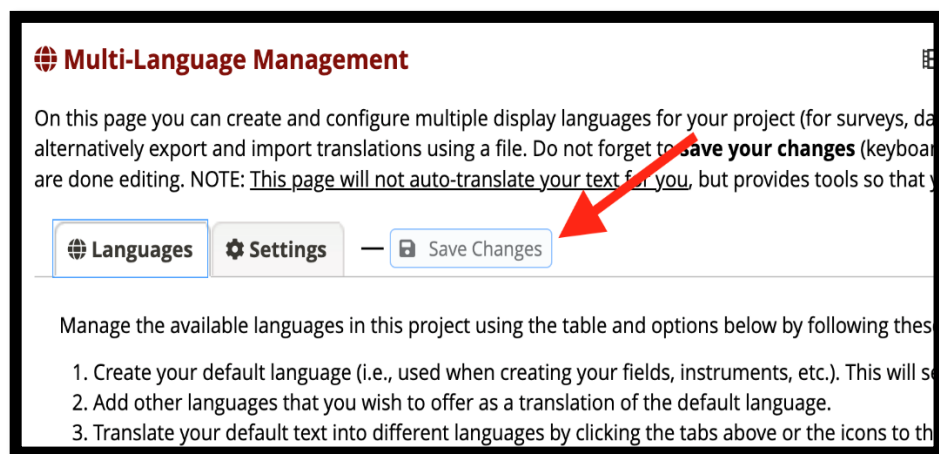
Creating a Survey using the Open REDCap MLM Application

1. Add your survey and all settings in English, as you would normally add a survey in Open REDCap. Click 'Multi-Language Management' option to the left of the screen *(as seen in **Figure 1** below)*.
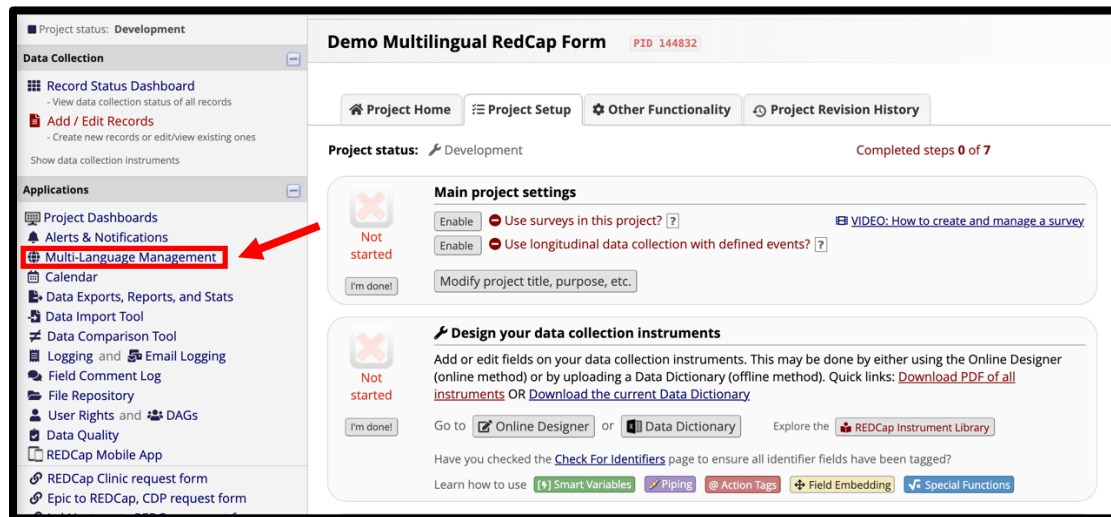

Figure 1. *The link to the MLM portal in Open REDCap is listed on the left of screen (see arrow). This image shows the main homepage of Open REDCap.*

2. To add languages, a default language must first be added and enabled. To set a default language, click 'Add a new language' (*as seen in **Figure 2** below*).
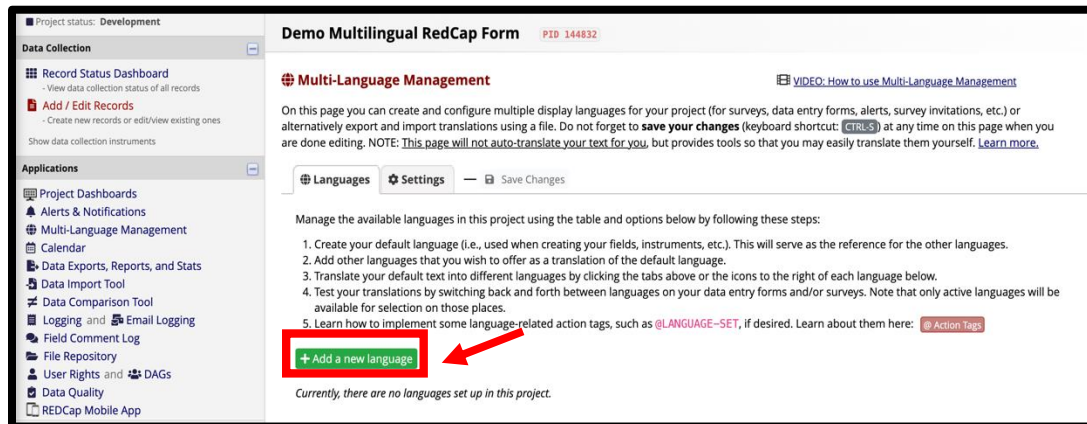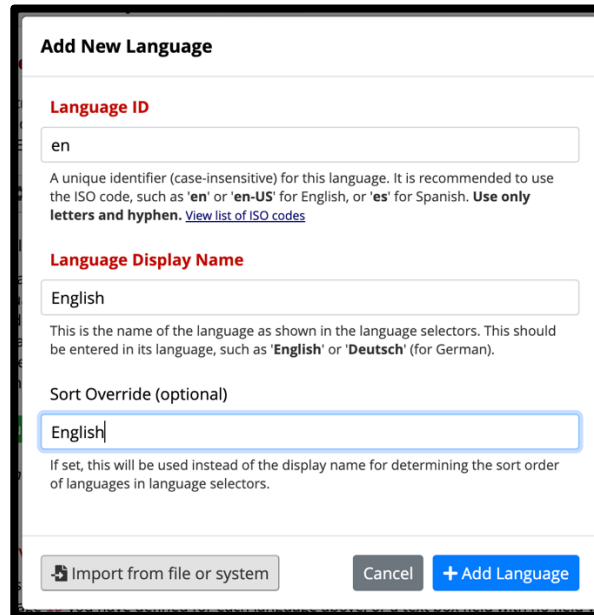

Figure 2. *The 'add a new language' button can be found on the main MLM application homepage at the bottom of the screen (see arrow).*

3. To add English as a language, type in 'en' for Language ID, 'English' for Language Display Name, set 'English' as sort override (how the language will be ordered), and add *(as seen in **Figure 3** below)*.
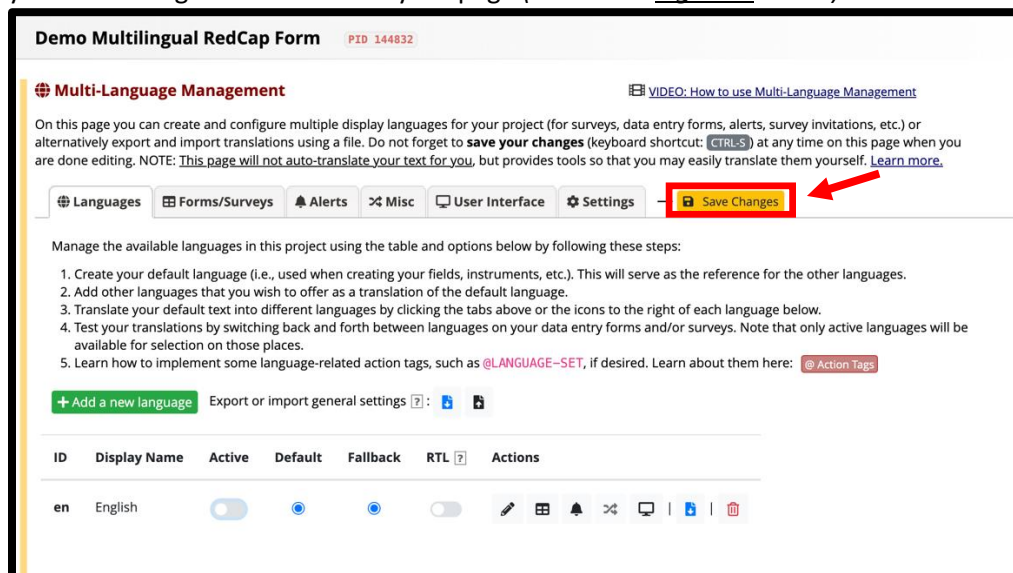

Figure 3. The 'add a new language' window is shown here.

4. Once your default language is set, save your changes (click the yellow 'Save Changes' button at the top right of the page). Note: All changes must be saved throughout the editing process, if not a yellow warning bar will show on your page *(as seen in **Figure 4** below)*.

Figure 4. The 'Save Changes' button can be found on the main MLM application homepage at the top of the screen (see arrow). A warning bar will show to the left of the page if changes are not saved.

5. To add additional languages to your Open REDCap form, click the green 'add a new language' button, then click the 'View list of ISO codes' hyperlink under the 'Language ID' section of the page. The hyperlink will take you to a webpage of language codes. Find the language you would like to use, input the 'language ID' and 'language display name', then click 'add language' button *(as shown in **Figure 5** below).*
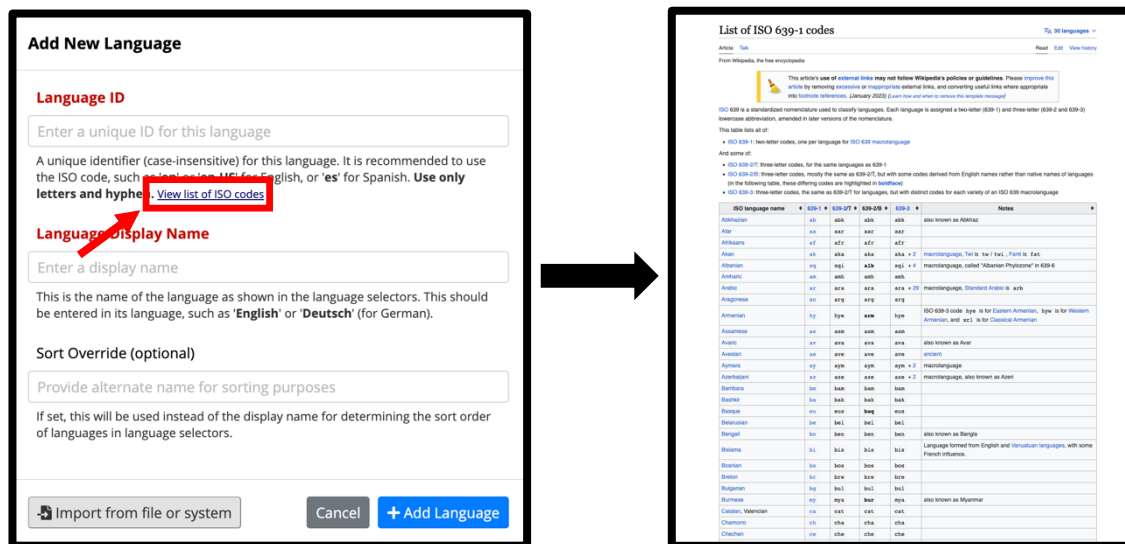

__Figure 5.__ The 'add a new language' form includes a hyperlink to a complete list of language ISO codes (see arrow). The hyperlink will take you to a Wikipedia page shown to the right.

6. Once you have selected a language code, insert the 'language ID' and the 'language display name' into the form. For this example, we used Hmong as the language, inputting 'hmn,' 'Hmoob,' and Hmong, respectively *(as shown in **Figure 6** below).*

__Figure 6.__ The 'add a new language' form shows how new languages should be added to the MLM portal.

7. Once all languages have been added to the MLM portal, click the 'active' toggle button to change the color to blue. If a language is read right to left (e.g., Arabic), RTL should be toggled blue *(as shown in **Figure 7** below).*
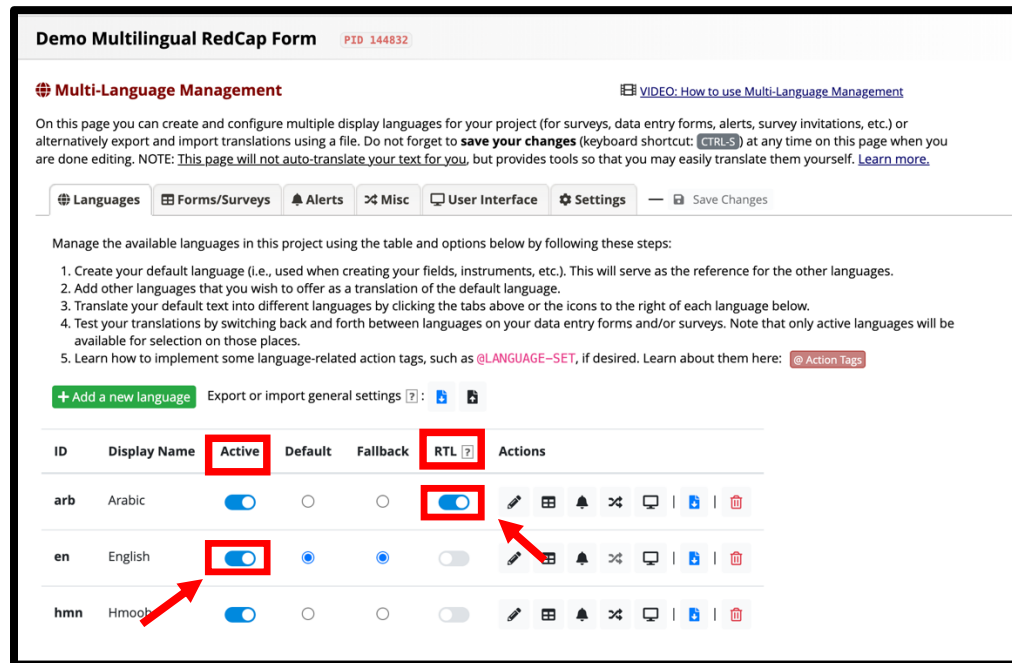

Figure 7. The 'active' toggle button will appear grey on the application homepage. Once selected they change to blue which means the function is enabled (see arrow). Both examples of 'RTL' and 'Active' from step 7 are shown here (see arrows).

8. Once the languages are set, they must be enabled on the survey. To do so, click the 'Forms/Surveys' tab on the MPM application homepage *(as shown in **Figure 8** below).*
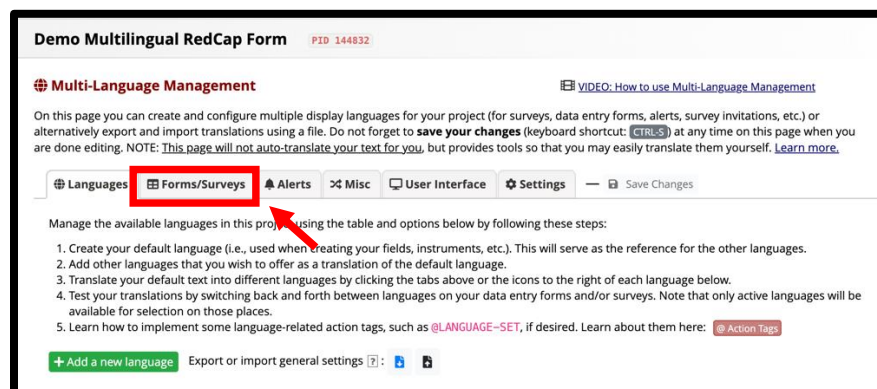

Figure 8. The 'Forms/Surveys' tab can be found at the top of the application homepage, to the right of 'Languages' tab (see arrow).

9. Click the 'Data Entry' and 'Survey' toggle buttons for each language. Fields and survey settings can be translated for each language (*as shown in **Figure 9** below*).

Figure 9. *To enable the data entry and survey translation functions for each language, click the grey toggle buttons located under the application 'Forms/Surveys' tab (see arrow).*

10. To enter translations for specific fields of a survey, click the 'exclude' button under the 'Fields' header. You will be redirected to the 'Fields' page where you can input which sections you'd like translated (*as shown in **Figure 10** below*). Once enabled, the option will read 'include'.

Figure 10. *To create survey translations for each language, click the 'exclude' button located under the 'Fields' section of application 'Forms/Surveys' tab (see arrow).*

11. Clicking 'Survey Settings' will provide an interface to translate the survey instructions and completion text (*as shown in **Figure 11** below*).
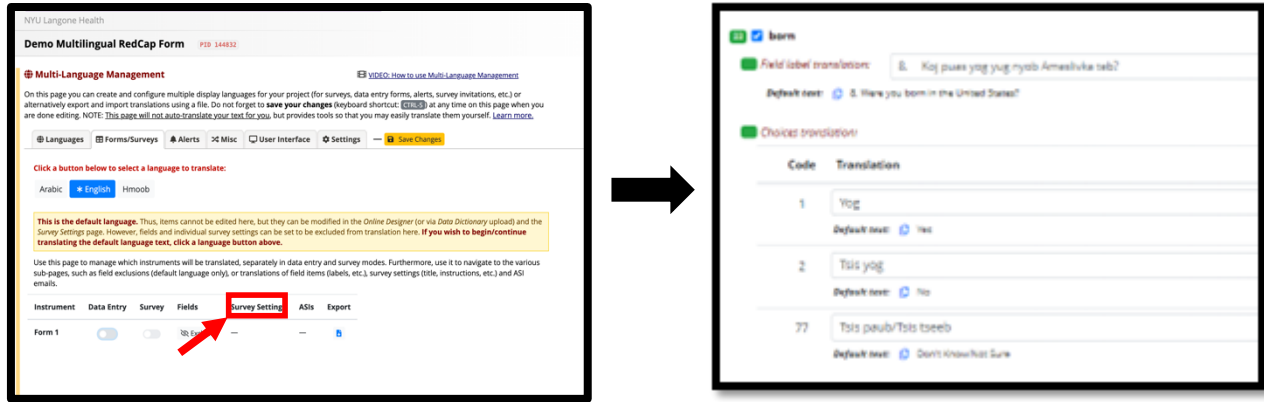

Figure 11. *The 'Survey Settings' is located to the right of 'Fields' option (see arrow). This example does not have this option because there is no survey created for this file since it is a demo survey. Once selected, you will be taken to a page similar to the example shown on the right.*

12. Once the survey settings have been set, click the 'User Interface' tab to translate all survey elements that are not part of the survey tool (e.g., error messages, field types, buttons, reCAPTCHA, save & return later, etc.*, as shown in **Figure 12** below). Note: this step must be completed for each language in which you want translated prompts.*
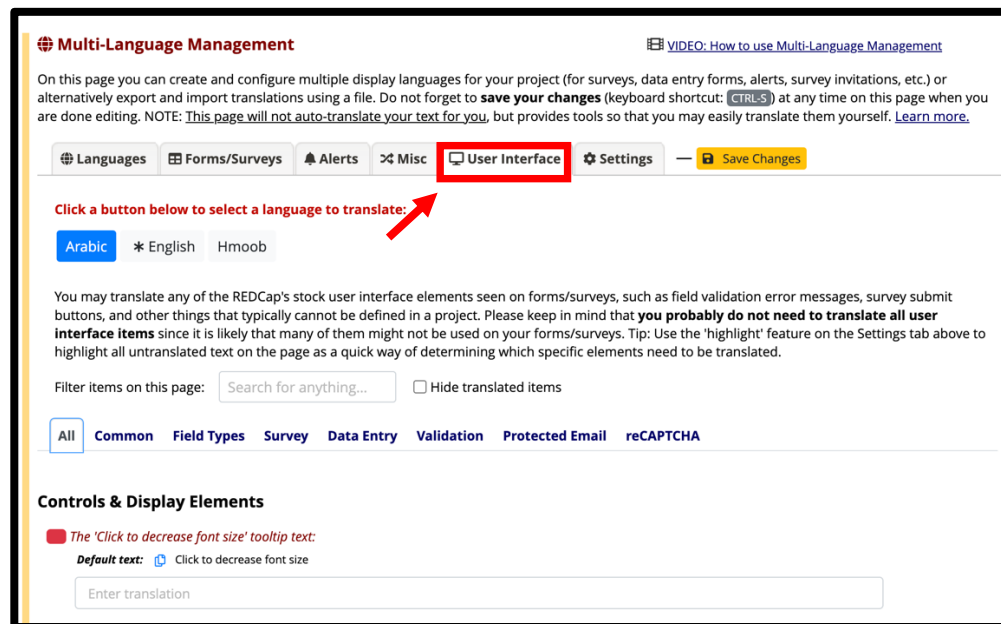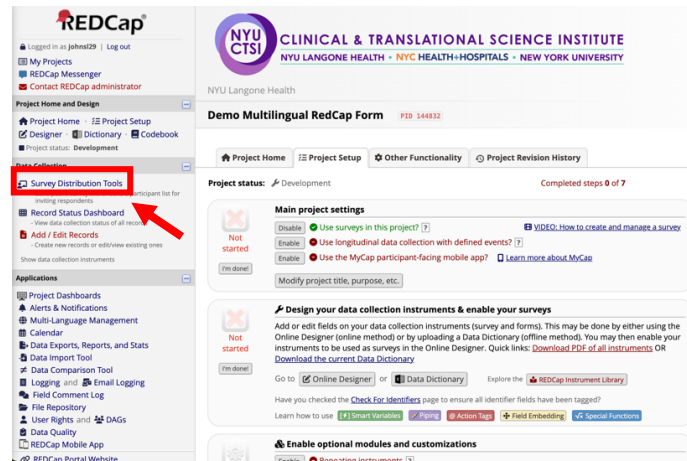

Figure 12. *The 'User Interface' is located to the right of 'Misc' tab on the MLM application toolbar (see arrow). Once selected, you will be taken to the 'Controls & Display Elements' page shown here.*

13. To view and test the survey, click 'Survey Distribution Tools' on the main menu, then select the 'open public survey' button. You scan then select your language of choice by clicking on language function on the right-hand corner of the survey *(as shown in **Figure 13** below)*.

Figure 13. To view a survey in a different language, click the 'Survey Distribution' button located on the left-hand side of the main menu page (see arrow). Open the survey by selecting 'open public survey'. Once opened, you can view the survey in every language by clicking the language button at the top of the survey (see arrow).

14. If you plan to administer another survey using any previously used languages, you can export the data for each language from the completed project and import them into the new project. As shown in ***Figure 14*** below, click on the download icon (i.e., blue file with the arrow pointing down to the right of the list of languages), and then you choose what you would like to export (it can include just user interface, survey items, etc.) *(see **Figure 14** shown below).*

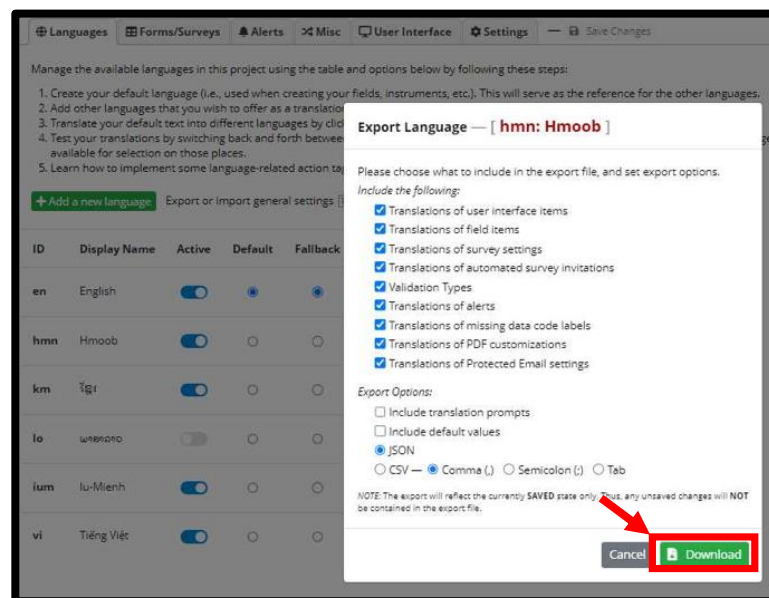*Figure 14.* *Once a survey is created, you can create other surveys using the same by exporting the language then importing the downloaded language file (see arrow).*

Lessons Learned

- Open REDCap cannot directly translate surveys for users, but surveys can be formatted in different languages using the MLM application in Open REDCap.
- All translations, including reCAPTCHA, error messages, and the user interface, should be ready to enter when creating the online survey database.
- Allow plenty of time for set up and testing of the survey and all translations; test the database extensively before putting it into production.
- Save your changes regularly using 'Control S' or 'save changes' so that changes are not lost.
- While the project must have a default language, this language can be turned off. Because default is generally English and added on the project setup, no translations need to be added.
- Languages can be exported and imported from and to projects.

Additional Resources

- For more information on managing Multi-Language Open REDCap form, see the following NYU Health Sciences Library training modules:
    1. [Multi-Language Management in Open REDCap, Part 1](#)
    2. [Multi-Language Management in Open REDCap, Part 2](#)
    3. [Multi-Language Management in Open REDCap, Part 3](#)
    4. [Multi-Language Management in Open REDCap, Part 4](#)
    5. [Multi-Language Management in Open REDCap, Part 5](#)
- For Multi-Language Open REDCap coding tips, see master documents [here](#).
- For more support on Multi-Language Open REDCap Surveys, see tip sheet [here](#).
- For more information on Open REDCap, contact the Data Services team of the at the NYULH Health Sciences Library (hsl.dataservices@nyulangone.org).

Works Cited

1. Oh SS, Galanter J, Thakur N, Pino-Yanes M, Barcelo NE, White MJ, et al. (2015). Diversity in clinical and biomedical research: a promise yet to be fulfilled. PLoS Medicine 12(12):e1001918.
2. Squires A, Sadarangani T, Jones S. (2020). Strategies for overcoming language barriers in research. J Adv Nurs. 76(2):706-714.
3. National Academies of Sciences, Engineering, and Medicine. (2022). Improving Representation in Clinical Trials and Research: Building Research Equity for Women and Underrepresented Groups. Washington, DC: The National Academies Press.

Updated April 2025.