

Improving STI Treatment Reporting Forms: Pennsylvania Department of Health's Innovative Approach

1. Overview

The Pennsylvania Department of Health (PA DOH) adapted its National Electronic Disease Surveillance System (PA-NEDSS) to allow providers to report STI treatment more efficiently. After listening to feedback from providers on the need to improve the user experience of PA-NEDSS, the health department partnered with Research Electronic Data Capture (REDCap) to create a new reporting form. Through this partnership, PA DOH was able to streamline the reporting process and track the percentage of treated STI cases. This tool outlines key steps and some considerations for other jurisdictions looking to improve the data quality of an existing program or implement a new reporting program.

2. Background

As one of the state performance measurement goals, PA DOH tracks the percentage of treated STI cases in alignment with CDC treatment guidelines. The treatment reporting form in PA-NEDSS captured only 42% of STI cases, and the state aimed to capture 80% of STI treatment. After speaking with providers, PA DOH learned that PA-NEDSS was an inefficient tracking platform because:

1. Providers were required to use the client's last name and accession number to report treatment. When labs reported back to the provider, labs would frequently truncate the accession numbers, making it impossible for providers to report treatments accurately.
2. The user experience involved cumbersome navigation and was clunky for providers with many different screens.
3. PA-NEDSS allowed for free text, which led to typos in provider names causing it to appear as though there were as many registered providers as residents of the state of Pennsylvania.

To streamline the program, PA DOH partnered with REDCap to develop a parallel reporting form to decrease barriers for providers reporting STI treatments.

3. REDCap Reporting System

The technical characteristics that addressed the weaknesses of PA-NEDSS and made the REDCap program successful were:

1. Designing the reporting system to use menus as much as possible, limiting the need for typing in free text.
 - By primarily using drop-down menus and skip logic within the new REDCap system, there were fewer opportunities for typos or mistakes and a more streamlined reporting process. Free text was limited to providers entering their National Provider Identifier (NPI).
2. Providers can view a log of treatments they have reported in the past.
3. Reporting multiple STIs and their respective treatments is done on one page.
 - The old system required providers to access multiple pages and re-enter redundant information if a patient had more than one STI.

4. Impact

Since implementing the new REDCap reporting form, PA DOH has observed numerous positive impacts:

1. Reduced PA DOH staff time for onboarding providers to report the number of STI treatments.
2. Improved data quality, including a historical log of reported treatment percentage and morbidity data.
3. Deepened working relationship with REDCap to augment and improve old technology within other projects in the state.

5. Adapting a REDCap Reporting Form Program

PA DOH's REDCap reporting system may be a good fit for your jurisdiction if you are seeing the following:

- Low percentage of treatment reporting.
- Providers not following CDC treatment guidelines.
- Poor user experiences, such as excessive free text and clunky screen navigation for providers when reporting cases and treatment.

REDCap developed a strategic plan with multiple milestones to ensure timely program implementation. However, PA DOH experienced some challenges while implementing the new REDCap reporting form system. Other jurisdictions looking to adapt and implement a similar system should be aware of potential challenges, including:

- Staff turnover, which may cause delays in meeting REDCap deadlines and overall implementation of the reporting system. Poor user experiences, such as excessive free text and clunky screen navigation for providers when reporting cases and treatment.
- Learning curve with REDCap's system.
 - Pennsylvania had familiarity with REDCap, having worked with them to streamline data collection related to COVID-19 and HIV, which minimized this barrier.

6. Recommendations and Resources

Strategies and resources that were key for a successful implementation of the REDCap reporting form include:

- A **dedicated leader with technical IT skills** to bridge communication between REDCap and the public health subject matter experts.
- Support for providers to ensure they are comfortable utilizing the new reporting form. PA DOH created an [instructional walk-through video with accompanying transcripts](#) to orient providers to the new system.
- **Leverage electronic case reporting** to develop a system to re-import information from REDCap to PA-NEDSS, which houses all treatment information.
- **Time and energy to devote to the fast pace of the project.** While the project moved quickly and was completed in six weeks, it required frequent check-ins and feedback during that time, meaning states should have enough staff time to dedicate to making changes as quickly as possible.
 - PA DOH had a **workgroup** of REDCap users consisting of office staff, disease intervention specialists and their supervisors, and a contracted provider who provided feedback on the reporting form during the program implementation period.
- **Controlled and stepwise release of the new program** to ensure a smooth transition for providers and the health department.

7. Next Steps

The Pennsylvania team would like to support other jurisdictions interested in implementing the new REDCap reporting form program or adapting an existing reporting program. While Pennsylvania adapted this system for STIs, the REDCap system can work for other project areas.

For additional information, please reach out to bebutler@pa.gov.