In 2012, NASTAD Haiti began working with Haiti’s Ministry of Health (MoH) and the Centers for Disease Control and Prevention (CDC) to develop, pilot and implement a system of enhanced perinatal HIV surveillance. This effort aimed to improve public health disease surveillance of HIV infections among mothers and infants, and to promote linkage and adherence to HIV care, treatment and prophylaxis.

The system, named “SAFE” (Surveillance Active de la Femme Enceinte Seropositive), builds upon Haiti’s existing case-based HIV surveillance system and case management resources and was implemented nationally in 2014.

SAFE was designed to standardize collection of detailed, patient-level data about HIV-infected pregnant women and their infants, and to facilitate linkage to care for this vulnerable population. The Haitian Ministry of Health (MoH) requires that 10 “sentinel events” be reported related to HIV infection among pregnant women for epidemic tracking and to assure patient care and follow-up. These include initial diagnosis in pregnant women, entry into Prevention-of-Mother-to-Child Transmission (PMTCT)-related care, receipt of treatment and prophylaxis, and testing and treatment of HIV-exposed infants.

Once a pregnant woman is diagnosed with HIV, entry into PMTCT care is encouraged and a referral is provided. A PMTCT case manager interviews the patient to obtain demographic and clinical information. Patient data such as name, address,
national ID code, demographics and clinical data are recorded in both a clinic registry and a paper-based HIV case notification form. The case manager logs onto the SAFE system, a web-based interface, using a unique ID and a confidential password. Data from the case notification form are entered into the SAFE interface and populate an additional form, the Enhanced Perinatal HIV Surveillance form. Once data are entered into SAFE, the case becomes “active.” If there is no internet service, the system stores patient data and confidentially submits them once connectivity is restored.

During antenatal and postnatal care, key benchmarks are tracked and recorded in the SAFE patient record by the case manager, ensuring that mothers and their infants receive appropriate care, testing, prophylaxis and treatment. In addition, upon each login, the case manager is provided with bolded reminders on a summary data screen for patients needing follow-up. The reminders remain in place until appropriate follow-up information is entered. Case managers initiate outreach efforts as needed to contact patients who are lost to follow-up. Encrypted SAFE data are transferred electronically to a secure data system that is monitored by MoH and NASTAD Haiti staff.

Results

Preliminary data describe key outcomes, including PMTCT referral, enrollment and receipt of HIV treatment, are presented in the figure, below.

- Over 9,000 women have been followed through the system, with close to 7,000 births tracked.
- Data suggest that more needs to be done to encourage follow-up antenatal care visits:

<table>
<thead>
<tr>
<th>Number of Visits</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 visits</td>
<td>2,444</td>
<td>26</td>
</tr>
<tr>
<td>1 visit</td>
<td>3,889</td>
<td>42</td>
</tr>
<tr>
<td>2 visits</td>
<td>1,182</td>
<td>13</td>
</tr>
<tr>
<td>3 visits</td>
<td>1,274</td>
<td>14</td>
</tr>
<tr>
<td>4 or more visits</td>
<td>501</td>
<td>5</td>
</tr>
</tbody>
</table>
- During the past year, case managers and nursing staff at all PMTCT sites in Haiti were trained in system use.
- The system has been implemented at 99% of all PMTCT sites in Haiti (143 of 145 sites).
- During the coming year, the system will begin receiving electronic feeds of infant PCR HIV test results via Haiti’s National Public Health Lab.

Summary of Outcomes and Impact from NASTAD’s Technical Assistance

Preliminary SAFE data suggest that the system is functioning throughout Haiti to report data about the care, treatment and birth outcomes of pregnant women diagnosed with HIV. During the implementation process, MoH staff were actively engaged, and will continue to work with NASTAD Haiti to maintain the system, conduct monitoring and evaluation, and provide quality assurance. In addition, site level capacity for providing timely clinical care to HIV-infected mothers and their infants has increased, as has their ability to provide timely data reporting about critical PMTCT-related events.

As the system matures, the detailed case surveillance data offered through SAFE will be invaluable for planning and evaluation of prevention, treatment, and patient outreach and support programming, in line with the MoH’s goal to eliminate mother-to-child HIV transmission.

This work was supported by the cooperative agreement #U2GPS001617 from the U.S. Centers for Disease Control and Prevention (CDC). The contents are solely the responsibility of the authors and do not necessarily reflect the official views of the CDC.