Evolution of the HIV/AIDS Case Surveillance System in Haiti

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Setting the Context
Republic of Haiti

- Population: 10 million
  - 50% in the capital
- GDP: $1,300 pp
  - 40% unemployment
  - 80% below poverty level
- Growing infrastructure:
  - 10 departments with some self governance
  - Good access to all departmental capitals
  - More challenging access to rural Haiti
  - Much infrastructure damaged in last two years, but is being rebuilt.
Infectious Disease Surveillance in Haiti

- Sentinel site infectious disease reports +/-weekly from the 1990s
  - Incomplete reporting in general, no HIV cases

- HIV/ANC sentinel site surveillance from 1996
  - Gives trend data each two-three years

  - Will provide trend data

→ Some HIV-specific epidemiologic information available, but not robust and timely trend data
HIV/AIDS Surveillance in Haiti

- National Commitment since 1985
  - Clinical standards; patient testing/treatment/care

- GHESKIO & PIH: 2 non-government networks for ARV treatment care and support. Research, patient tracking

- PEPFAR and Global Fund investment from 2003
  - Rapid expansion of testing/treatment/care sites
  - Major focus on person-level data collection for M&E
  - Large investment in IT systems
    - National web-based program M&E system
    - National Electronic Medical Record (EMR)

- UNAIDS: estimation of prevalence, incidence and number of cases

→ Great possibility for robust and timely HIV-specific epidemiologic information
HIV/AIDS Case Surveillance: experience of NASTAD
HIV/AIDS Case Surveillance in Haiti

• Goals:
  ▫ Observation of distribution and spread of the disease
  ▫ Identification of factors that influence disease transmission
  ▫ Creation, modification, and implementation of policy and programs linked to the true prevention, treatment, and care needs of the population

• Hypothesis for System Development:
  ▫ A strong system can help monitor trends in the epidemic, to allow for better directed HIV prevention resources and targeted HIV/AIDS services

• Objectives of the System:
  ▫ Gather data to meet goals via systematic reporting of:
    • All HIV positive case identified in HIV testing/treatment/care sites
    • All HIV-related reportable sentinel events identified in HIV treatment/care sites
Building the System

7. Nationwide Implementation (Dec 1st, 2008)
8. Monitoring, Evaluation, Supportive Supervision (2011 to date)
The HIV/AIDS Surveillance System
What is Collected - Sentinel/Reportable Events

Haiti Core HIV/AIDS Surveillance

- 1st HIV+ Test (date)
- Entry to Care (date)
- 1st CD4 (date) (value)
- Ongoing CD4 (date) (value)
  Note: 1st CD4<350
  Note: 1st CD4<200
- Clinical Diagnosis WHO Stage 3&4 AIDS
- 1st ART (date)
- Death (date)
What is Collected - Person-level Data

• Primary Level (defines case)
  ▫ Name
  ▫ Place of residence
  ▫ Sex
  ▫ Date of Birth
  ▫ Testing institution
  ▫ Test date

• Secondary Level
  ▫ Demographics:
    • place of birth, mother’s maiden name, occupation, marital status
  ▫ Risk factor(s)
  ▫ Likely mode(s) of transmission
  ▫ For women, pregnancy and estimated date of delivery

• Disease progression
  ▫ Date and location of entry to care
  ▫ Date ART commenced
  ▫ Date/results of CD4 tests
  ▫ Confirmed AIDS diagnosis
  ▫ Confirmed death of patient

Note: These were KEY variables added after the first pilot to allow for removal of duplicate cases and disease progression matching. The ‘unique’ ID approach did not prove effective.
How the Case Data are Collected

• HIV testing sites
  ▫ Use of paper HIV Case Report Form
    • Data gathered from patient register and patient interview
    • Data entered into electronic interface on site
  ▫ Use of automated case data shared from sites where valid and approved EMR (one of three) is in use

• HIV treatment and care sites
  ▫ Use of automated case data share from sites where valid and approved EMR (one of three) is in use
Patient Registers
Patient Registers

Note: Name is collected right from the point of testing
Un formulaire de notification du VIH/SIDA pour les adultes (âgé ≥ 15 ans) est illustré. Le formulaire est divisé en plusieurs sections, notamment :

1. Identification
   - Nom du patient
   - Prénom du patient
   - Date de naissance
   - Sexe
   - Statut matrimonial

2. Mode possible de transmission
   - Rapports sexuels avec un homme
   - Injections de drogue
   - Transfusion de sang

3. Autres facteurs de risque
   - Histoire ou présence de Syphilis
   - Histoire ou présence d'autre IST
   - Victime d'agression sexuelle

4. Diagnostic du VIH
   - Date du diagnostic VIH+ : Mois/Année
   - Nom de l'établissement où le test a été réalisé

Le formulaire est disponible sous deux formats :
- Paper-Based
- Web-Based
Note: The three EMRs:
- Were developed before the case surveillance system
- Each use different technology
- Were not developed for case surveillance

BUT:
- Each EMR has the required variables
- Each EMR can create a patient-level Excel file
- The case surveillance system can import an Excel file

This has:
- Reduced work load
- Improved data collection
- Shows the spectrum of disease
How the Data are Managed

VCT
PMTCT

MESI
Monitoring, Evaluation, and Surveillance Interface

PEPFAR
Treatment & Care

National EMR
(I-TECH)

Other Treatment and Care
(GHESKIO, PIH)

Local EMRs

Laboratory-Based Reporting

HIV/AIDS Case Surveillance
Centralized Database

Epidemiologic Analyses
Periodic Reports
Quality Assurance

Note: Use of Patient Name and seven other variables to de-duplicate repeat case reports and to match disease progression events to the original diagnosis
Keys to Success
(aka Lessons Learned)
# Keys to Success

**Valuable Infrastructure**
- Defined System Policies
  - National Reporting Mandate
  - Norms and Procedures Manual (user friendly)
- Named Reporting
  - (or, use of a government-produced Unique ID that is linked to name)
- Simple IT System
  - Can be accessed and edited locally
  - Accepts simple data feeds from other systems (EMRs)

**Valuable Processes**
- Defined and Supported System Procedures
  - Staff roles and responsibilities
  - Simple data collection process
  - Semi-automated data flow and data cleaning
  - Frequent data analysis and reporting
  - Regular supportive supervision
- In-depth and frequent, repeat training and technical assistance
Some Possible Data Analyses and Future Developments
Some Data

- Close to 250,000 cases or events reported to HASS
  - Approximately 150,000 unique cases identified
    - +/- 100,000 cases in the system multiple times due to repeat testing or reported clinical progression
  - Estimate that 124,000 cases are living
    - 62% of the cases are female
      - (but close to 75% of people who access HIV testing services are women)
  - Approximately 52% of HIV cases report a residence in Port-au-Prince vs PaP holding 37% of the population
  - 142 sites reporting cases
    - Of target of +/- 180 sites
  - Estimated 95% completeness of reporting (number of cases expected)
Understanding the Spectrum of HIV Disease in Haiti - Where Can Programs be Improved?

**Haiti Core HIV/AIDS Surveillance**

- **1st HIV+ Test** (date)
- **Entry to Care** (date)
- **1st CD4** (date) (value)
- **Note:** 1st CD4 < 350
- **Ongoing CD4** (date) (value)
- **Note:** 1st CD4 < 200
- **Clinical Diagnosis**
  - WHO Stage 3&4 AIDS
- **1st ART** (date)
- **Death** (date)
Method of Case Surveillance Data Use to Estimate Need

- HIV+ Test (MESI)
- HIV+ Case Reported
- Entered into care
- First CD4 Test
- AIDS Diagnosed (WHO Stage 3 or 4 or CD4<350)
- ART prescribed
- Death

What are the gaps in access?
How can these be improved?
What services or supports are needed?
Haiti’s Calculated Cascade (8/12)
Future Direction: Active PMTCT Surveillance

**Pre-Natal and Pediatric HIV/AIDS Surveillance**

- Pregnancy+ HIV+ Test (date)
- Entry to PMTCT (date)
- 1st ART (PMTCT Prophylaxis) (date)
- Prophylaxis at Delivery (date)
- Prophylaxis Post-Delivery + while Nursing
- Entry to Care (date)
- Infant Prophylaxis after birth (AZT, NVP) (date)
- Infant Visit within 72 Hours (date)
- Infant PCR (date)
- Entry to Care (date)
- Infant HIV Screen (date @ 6 months)
- Infant HIV Screen (date @ 18 months)
Future Directions: TB Surveillance

Haiti Core TB Surveillance

- 1st TB+ Test (date) (type) (method)
- Entry to Care (date)
- Treatment prescribed (date) (regime)
- Follow-up Visits (date) (bacilloscopy result) (weight)
- Treatment Termination (date)
- Treatment Outcome (date) (result)
- Death (date)
Thank you