

# Health Management Information Systems (HMIS) Technical Working Group: Goals and Priorities

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# Presentation Overview

- PEPFAR: the 20,000 meter view
- PEPFAR structure
- HMIS TWG mission
- Elements of health information systems
- HMIS TWG goals, objectives
- HMIS recent activities
- HMIS priorities for FY08

# PEPFAR: the 20,000 Meter View

- The U.S. President's Emergency Plan for AIDS Relief (PEPFAR/the Emergency Plan) was launched in 2003 and is a five-year, \$15 billion multi-sectorial program to combat HIV around the world. Its overall goals are to:
  - Prevent 7 million new HIV infections
  - Provide antiretroviral care to 2 million HIV-infected people
  - Provide care for 10 million people infected and affected by HIV/AIDS, including orphans and vulnerable children
- Re-authorization in process, to extend PEPFAR for an additional 5 years (\$50 billion). Work in additional countries is expected.

# PEPFAR: the 20,000 Meter View (2)

- PEPFAR work is largely concentrated within 15 “focus” countries, which are among the world’s countries most heavily impacted by HIV:

- Botswana
- Ethiopia
- Haiti
- Mozambique
- Nigeria
- South Africa
- Uganda
- Zambia
- Cote d'Ivoire
- Guyana
- Kenya
- Namibia
- Rwanda
- Tanzania
- Vietnam

# PEPFAR: the 20,000 Meter View (3)

## ■ Prevention:

- *Progress achieved through September 30, 2007:*
  - Supported prevention of mother-to-child HIV transmission services for women during more than **10 million pregnancies** (cumulative for fiscal years 2004 through 2007).
  - Supported antiretroviral prophylaxis for HIV-positive women in over **827,000 pregnancies** (cumulative for fiscal years 2004 through 2007).
  - Supported prevention of an estimated **157,000 infant infections** (cumulative for fiscal years 2004 through 2007)

# PEPFAR: the 20,000 Meter View (4)

## ■ Prevention:

– *Progress achieved through September 30, 2006:*

- Supported community outreach activities to nearly **61.5 million people** to prevent sexual transmission.
- Supported training or retraining of nearly **520,000** people in provision of prevention services.
- Supported approximately **4,863 service outlets** for prevention of mother-to-child HIV transmission.
- Supported approximately **3,848 service outlets** for blood safety.

# PEPFAR: the 20,000 Meter View (5)

## ■ Treatment:

### – *Progress achieved through September 30, 2007:*

- Globally, supported life-saving antiretroviral treatment for approximately **1,445,500 men, women and children**.
- Supported life-saving antiretroviral treatment for approximately **1,358,500 men, women and children** through bilateral programs in PEPFAR's 15 focus countries in sub-Saharan Africa, Asia and the Caribbean.
- Of the people receiving antiretroviral treatment through direct U.S. Government (USG) support in the focus countries, nearly **86,000 are children** age 14 and under; a **77 percent increase** over the number of children on PEPFAR-supported treatment in 2006.
- In the focus countries, **62%** of the individuals on antiretroviral treatment as a result of direct PEPFAR support are **women and girls**.

### – *Progress achieved through September 30, 2006:*

- Supported training or retraining of approximately **52,000 people** in providing quality ART services.
- Supported approximately **1,912 ART sites**.

# PEPFAR: the 20,000 Meter View (6)

## ■ Care:

### – *Progress Achieved through September 30, 2007:*

- Supported care for more than **6.6 million**, including care for more than **2.7 million orphans and vulnerable children**
- Supported over **33 million** counseling and testing sessions to date for men, women and children.

### – *Progress Achieved through September 30, 2006:*

- Supported training or retraining of approximately **143,000 individuals** to care for orphans and vulnerable children in fiscal year 2006.
- Supported training or retraining of nearly **94,000 individuals** to care for people living with HIV/AIDS at **8,019 service sites**.

# PEPFAR: the 20,000 Meter View (7)

## ■ Department of State

- U.S. Agency for International Development
- Department of Defense
- Department of Commerce
- Department of Labor
- Department of Health and Human Services
- Peace Corps

## ■ Collaborators include:

- The World Health Organization
- Health Metrics Network
- The Joint United Nations Programme on HIV/AIDS
- Implementing partners
- Academic Institutions
- Host country governments

# PEPFAR: the 20,000 Meter View (8)

- The Emergency Plan supports the principles known as the “Three Ones”
  - one national plan
  - one national coordinating authority, and
  - one national monitoring and evaluation system

# PEPFAR Structure (1)

- Emphasis on decision-making by in-country teams, including all information system decisions. Information system decisions are usually made by individual implementing partners (i.e., the “third one” is not synonymous with use of a single, nationally adopted software tool)
- PEPFAR-wide policy making is facilitated by cross-agency technical working groups (TWGs, approximately 25), roughly mirroring the programmatic activities which PEPFAR supports (e.g., TWGs exist which focus on adult care and treatment, pediatric care, blood safety, prevention of mother-to-child transmission, most-at-risk populations, etc.)

# PEPFAR Structure (2)

- Within strategic information, PEPFAR has convened three technical working groups
  - Monitoring and Evaluation
  - Surveillance
  - Health Management Information Systems (HMIS)

# HMIS TWG Mission

- Over the next 5 years, the HMIS TWG will assist host country governments and USG field staff to design, implement, strengthen, and use health information systems, in support of achieving and monitoring HIV care, treatment, and prevention goals.

# HMIS TWG Mission (2)

- Mission is two-tiered, focusing on both:
  - Health information systems needed to implement services, at the point of service provision
  - Health information systems needed to monitor and evaluate activities (e.g., assure accountability)
- Variability: While there are many similarities, each PEPFAR country is in a different phase of developing its national health information system. HMIS strategy must be responsive to this reality, and specific activities in each country need to be tailored to the different progress to date in each location.

# Elements of Health Information Systems (1)

- Data content standards
- Data transmission specifications
- System interface requirements
- Assessment methodologies for HIS
- HIS capacity building: training, staffing up, developing leadership
- Enterprise architecture

## Elements of Health Information Systems (2)

- Inventory of information systems already in use
- Inventory of types of systems
- Enabling national ownership
- Communications infrastructure
- Policy development
- Governance for HIS

# HMIS TWG Goals (1)

- For PEPFAR II, new goals are being developed around:
  - Developing written five-year strategic plans for health information systems in all PEPFAR countries
  - Assessment/evaluation of implemented systems
  - Improved data quality
  - Increase data use
  - Improved human capacity around HIS planning, design, and implementation
  - Increased integration of separate information systems

# HMIS TWG Goals (2)

- For PEPFAR II, new goals are being developed around (cont.):
  - Automatic generation of indicators from existing facility-based systems
  - Increased timelines and completeness of data reporting
  - Improved sharing of technical expertise (e.g., South-to-South technical assistance)
  - Use of IT to increase quality of service delivery
  - Fully functional implementation of systems for clinical, lab, community, reporting (aggregate level), etc.
  - Assisting other TWGs in articulating their information systems strategies

# HMIS TWG Objectives (1)

- Identify, adapt, and promote best practices and innovative technologies for health information systems
- Advocate for health management information system resources needed to support the Emergency Plan
- Serve as clearinghouse for tools, standards, and guidelines helpful to U.S. missions
- Coordinate health information system activities across U.S. agencies and between headquarters and U.S. in country missions
- Develop the human and organizational capacity essential to sustaining information systems

# HMIS TWG Objectives (2)

- Provide technical assistance to U.S. in-country missions, host governments, and implementing partners in
  - documenting in-country PEPFAR information systems and needs, including their relationship to MOH system
  - Improving capacity to collect
    - client-level and clinical service information that assist in daily management of individual patients
    - facility-, district- and country-level information that assist with clinic and program management
  - designing country-level management information systems that integrate separate HIV information systems, including patient management, laboratory services, logistics management, and program indicators
  - integrating HIV facility-based information systems into broader regional or national health information systems
  - the collection of Emergency Plan core indicators

# HMIS TWG Objectives (3)

- Provide technical assistance in support of the following types of information systems:
  - Program management
  - Comprehensive training management
  - Facility-based patient-level information systems
  - Community-based services information systems
  - Palliative care – linking home-based to facility-based care for case management and patient tracking
  - Orphans and vulnerable children programs
  - Prevention activities and indicators
  - Blood safety tracking systems
  - Supply chain/logistics management information systems
  - Laboratory information systems

# HMIS TWG Recent Activities (1)

- Developing strategic plans: assisted Emergency Plan in-country missions and implementing partners in assessing and developing long-term information system strategies. In 2007 and 2008, assisted Ivory Coast, Haiti, Mozambique, Malawi, Guyana, Vietnam, Tanzania, Kenya, South Africa, Uganda, and Rwanda.
- Capacity building: conducted the workshop, “Strategies for Building National-Scale Longitudinal Patient Records Systems in PEPFAR Countries” in Lusaka, Zambia, attended by 73 U.S. government, implementing partner, and host government staff from 15 countries.
- Guidance development: with UNAIDS, published *Guidelines for Protecting the Confidentiality and Security of HIV Information*. Planned: Guidelines on use of health services identifiers.

# HMIS TWG Recent Activities (2)

- Evaluation: developed a generalized protocol for evaluating the implementation of electronic medical records systems (in clearance)
- Data transmission standards: published implementation guide for generating standard messages between different medical records systems. In Malawi, this guide was used to extract data developed by different implementing partners, into a third, national database for reporting indicators
- Data content standards: worked with developers of three different software systems (CareWare, OpenMRS, and ART-Info) to implement the WHO minimum data set for providing HIV antiretroviral therapy. Similar work is in process to define standard data sets for HIV/TB, PMTCT, and pediatric ART

# HMIS TWG Recent Activities (3)

- Software implementation guidance: with the Association of Public Health Laboratories (APHL), developed guidelines for implementing laboratory information systems on a national scale. This guidance is being implemented in Vietnam, Mozambique, and Tanzania
- With UNAIDS, harmonization and listing, in machine readable form, of all HIV-related reporting indicators, including a meta-data registry, data dictionary, and software prototype.

# HMIS FY08 Priorities (1)

- HMIS activities funded under PEPFAR should build on existing data and information system standards and contribute to and integrate with the health information infrastructure in program countries.
- Even though there may be differing needs at these various levels of implementation, it is critical that these systems be coordinated and interoperable.
  - In order to achieve interoperability, it is important for SI teams to follow international standards and guidelines produced by WHO, UNAIDS, HMN, International Standards Organization (ISO), International Telecommunications Union (ITU), UNICEF, among others, in the design of PEPFAR HMIS architecture and content.

# HMIS FY08 Priorities (2)

- As country programs continue to invest in any aspect of a Health Management Information System, it is important to bring focus and coherence to these efforts during FY 2008.
- When making decisions regarding the introduction or expansion of any component of information systems, USG teams should do so fully cognizant of the country context. This context ranges from the presence of a comprehensive HMIS strategy – into which any new or expanded components must fit – to the nature of applications and systems specific to particular service programs (e.g., HIV treatment, OVC, etc.).
- Future decisions need to ensure compatibility with the country strategy, as well as avoidance of duplicative, poorly functioning, or costly systems. Successful systems are present in most countries.
  - Every effort should be made to build on and work with those successes rather than introduce competing solutions.
  - If a new system is proposed, a justification addressing the added-value within the country context, as well as its relationship to and compatibility with existing systems will be required.

# HMIS FY08 Priorities (3)

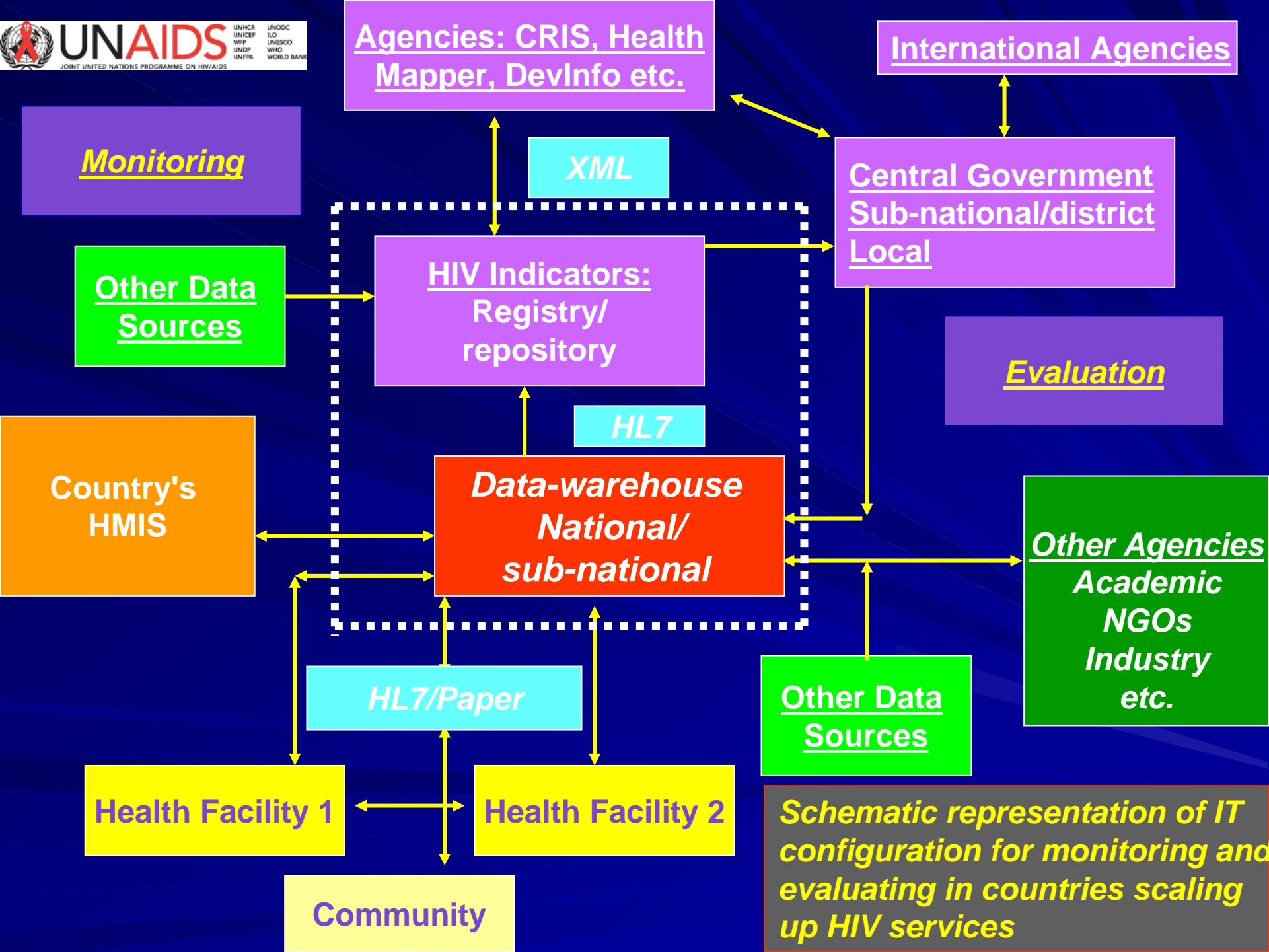
- HMIS activities include the development, implementation and evaluation of the following and other types of information systems and technologies:
  - Program management
  - Human resource (including qualification, licensure, deployment and training) management
  - Facility-based patient-level information systems
  - Community-based services information systems
    - Palliative care – linking home-based to facility-based care for case management and patient tracking
    - OVC programs
  - Prevention activities and indicators
  - Blood safety tracking systems
  - Logistics management information systems
  - Laboratory information systems
  - Information and communication technologies (ICT) infrastructure

# HMIS FY08 Priorities (4)

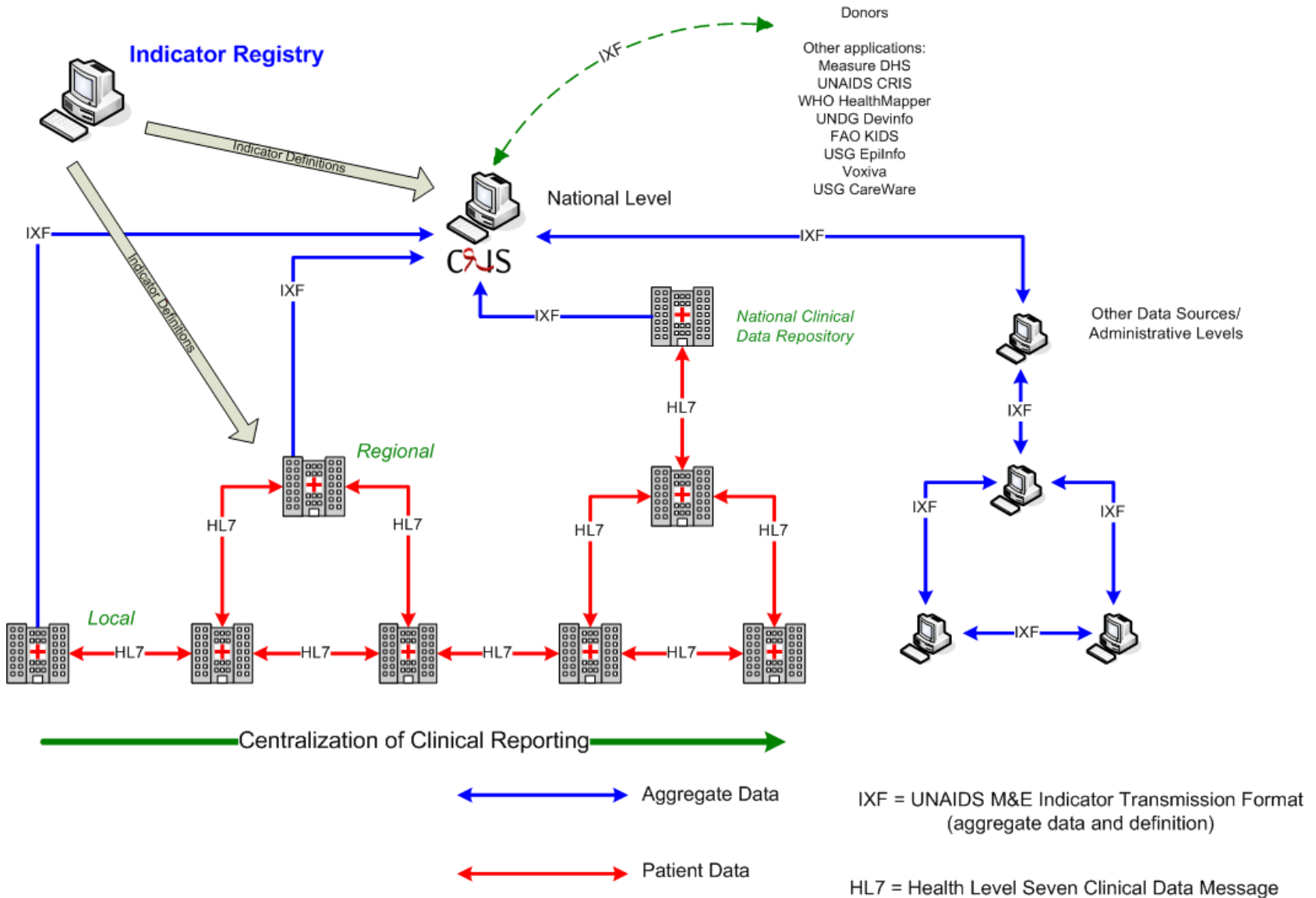
- In their HMIS activities in the COP, country SI teams should describe:
  - The intended overall information system framework/architecture, as well as the process for strategic planning, for appropriate decision-making, and for the maintenance, sustainability, and use of information systems.
  - For each specific activity, COP descriptions should include:
    - How requirements will be gathered
    - Whether inventories of existing systems were reviewed
    - Selection criteria and/or design of appropriate software (ensuring not to duplicate extant or concurrent efforts).
    - How progress on system implementation will be evaluated
    - Plans for human and organizational capacity development
    - Evaluating the implementation
    - Analysis and use of data

# HMIS FY08 Priorities (5)

- For COP 08 activities, countries might include needed support for
  - Developing a formal health information strategy, including a governance model, a health information model, and a health data dictionary
  - Use of international standards to support data integration across existing/new in-country health information systems
  - Implementation of service delivery support systems such as medical record systems and community-based services systems
  - Developing partnerships with local information and communication technology sector in order to leverage existing local technology solutions to improve communications among health sector service providers and partners.



# Aggregate Data Flow



# DRAFT ARCHITECTURE

