



Messaging and Message Standards to
Support AntiRetroviral Therapy

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- **Data exchange and anti-retroviral therapy**
- **Health Level 7, a standards development organization**
- **Using standards to support ART**

Requirements for ART



Provide large scale access to anti-retroviral treatment. Sustain that treatment as long as needed.

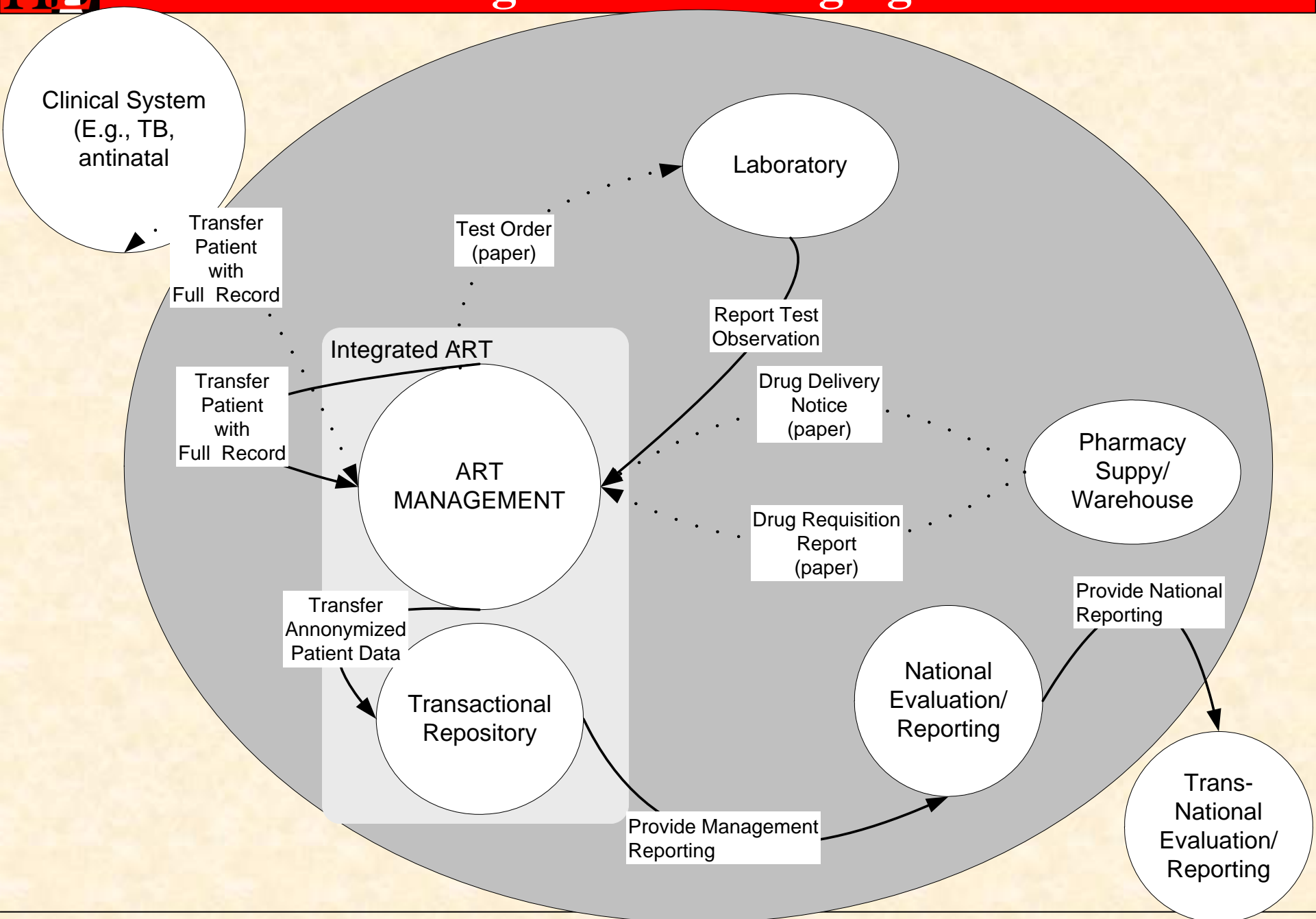
Retard the development of resistant HIV strains

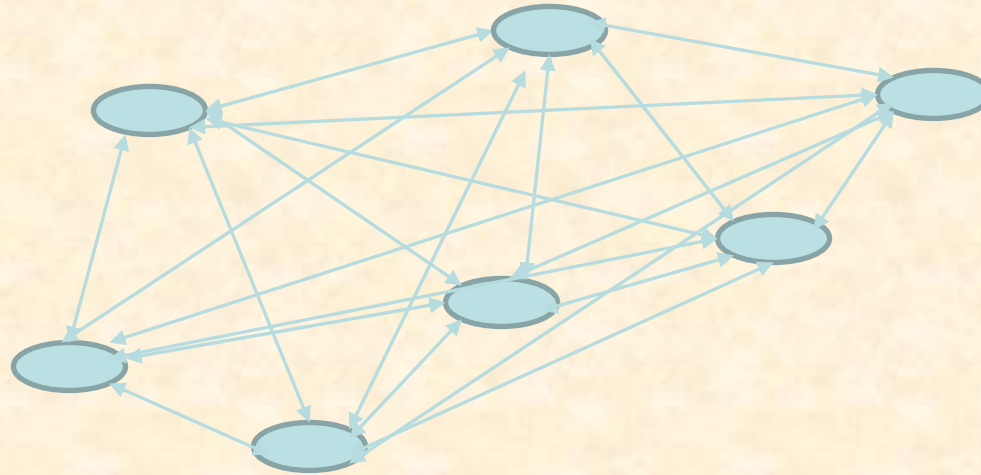
Provide a seedbed for growing electronic medical records.

- **Open up and support clinical settings that provide treatment to many thousands of people.**
- **Maintain relevant patient information to support treatment for the lifetime of the patient.**
- **Support information flows to laboratories, pharmacies, and other external organizations.**
- **Generate data needed for management and evaluation – indicators.**



What goes into managing ART?





- **Universal implementation of one application or application platform is not possible.**
(It may not be desirable.)
- **Implementing individual pair wise solutions to data exchange needs is expensive.**

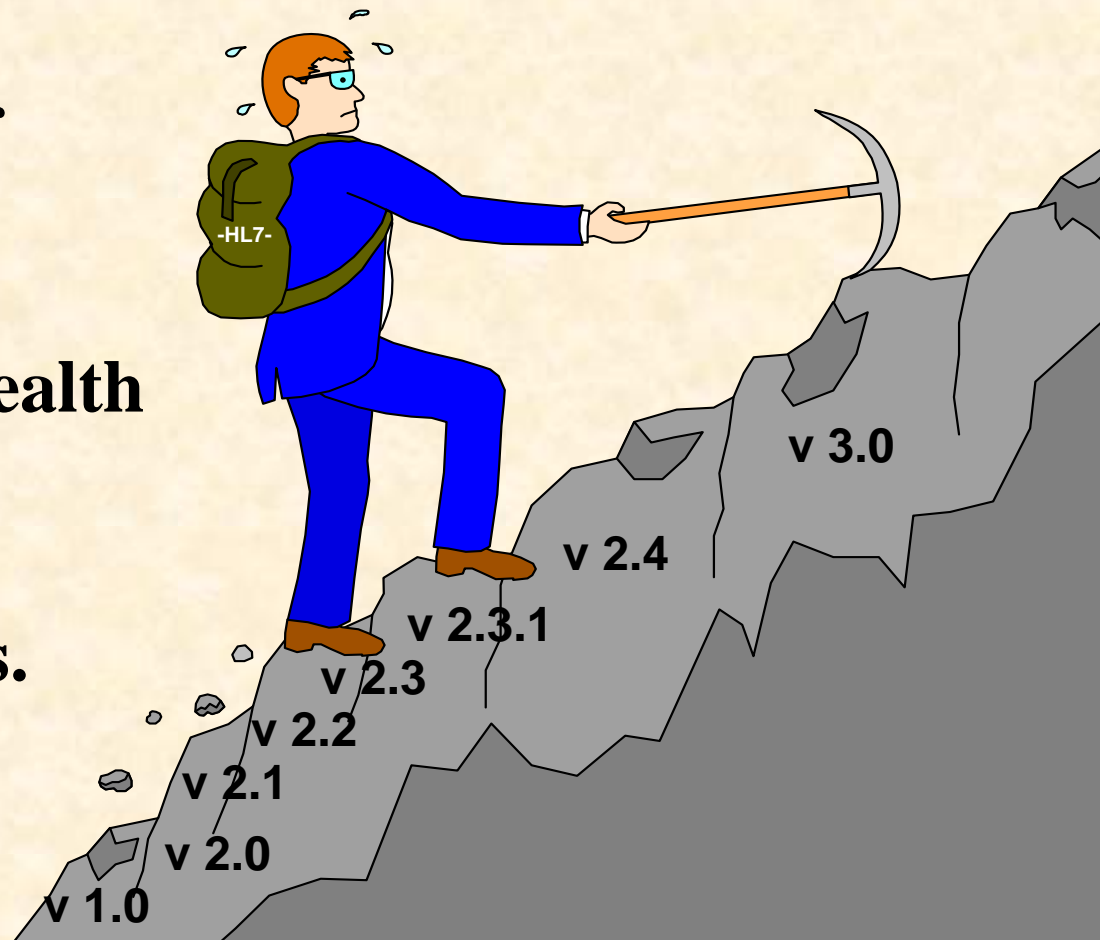
- **When to send a message?**
Triggering events
- **What items to include?**
Message content and format
- **Which concepts to share?**
Vocabulary
- **How to move transactions?**
Networking, communications

HL7 the Organization



HL7 was born in 1987. Since then the extent of use, and level of activity has mushroomed.

- **The purpose of HL7 is to develop and publish protocol specifications for application level communications among diverse health data acquisition, processing, and handling systems.**

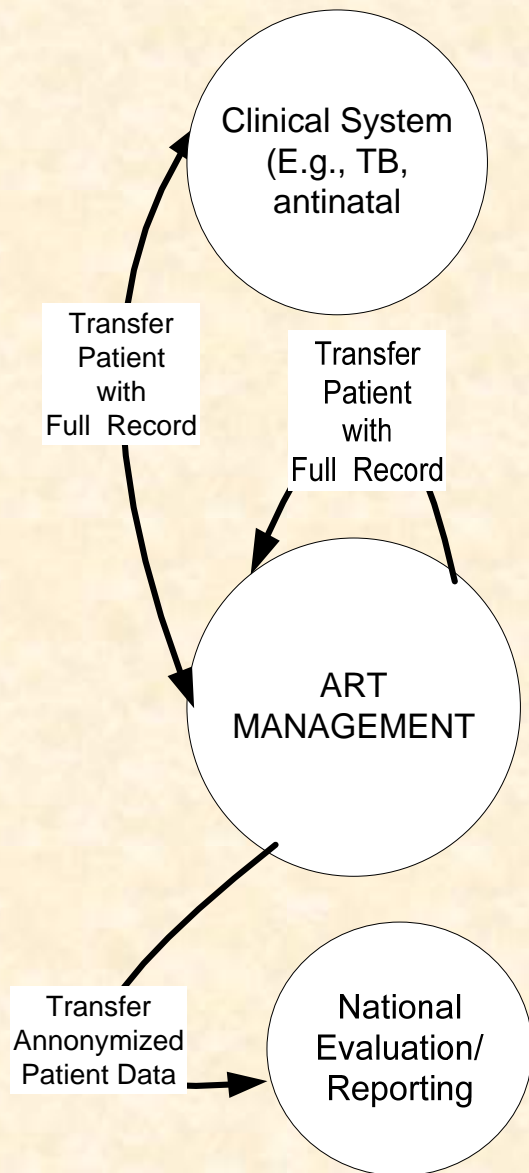


- **Application level data exchange: trigger events & contents of a standard message. E.g.:**
 - **OMG – General Clinical Order Message**
 - **OMG – Create/Modify General Clinical Order**
- **Supports use of comprehensive vocabularies such as LOINC, SNOMED. Does not define clinical vocabularies**
- **Provides a framework for managing messages and using data. Does not networking protocols or communications technology**



What is HL7?

- **ANSI (American National Standards Organization) accredited SDO (Standards Development Organization)**
- **Includes;**
 - Over 500 organizational members
 - About 1500 total members
 - Up to 500 attend the Working Group Meetings
- **National affiliates in:**
 - Argentina - Czech Republic - Ireland - Sweden
 - Australia - Denmark - Italy - Switzerland
 - Brazil - Finland - Japan - Taiwan
 - Mexico - France - Korea - Turkey
 - Canada - Germany - Mexico - The Netherlands
 - China - Greece - New Zealand - United Kingdom
 - Croatia - India - Spain - Uruguay



- **Rigorously specify the minimal data for patient management.**
 - Make it possible to load a reporting database capable of generating needed indicators.
 - Capture data needed when patients transfer between clinic.

- **Add on additional flows as needed**
 - Lab reporting?

- **IG: a clear and concise description of the requirements for messaging in a particular context**
- **Today's Guide:**
 - Is based on the WHO ART Monitoring Guidelines
 - Defines the message structure and segments to be used
 - Specifies needed HL7 data types
(The data types are used to encapsulate complex data such as name and address)
 - Contains needed vocabularies:
 - Observations/Questions
 - Results/Answers

- **Use the WHO Patient Monitoring Guidelines to determine needed concepts. E.g., HIV Type, Family planning method, Name of clinic transferred from.**
- **Use a vocabulary containing a code for each concept – LOINC (Logical Observation Identifiers, Names, & Codes). Have codes added if necessary.**
- **Create a vocabulary with needed observation result codes**
- **Document the specified vocabulary in a separate database.**
 - **At WHO?**

- **Documentation**

- Transfer Patient Information Implementation Guide
 - Drawing requirements from WHO Patient Monitoring Guidelines for HIV care and Antiretroviral Therapy (ART),
- WHO-ART Vocabulary: Questions & Answers
- Guidance Document for Interface Implementation of Anti-Retroviral Therapy Messaging

- **This implementation guide documents the use of the Health Level 7 (HL7) Version 2.5 P01 (Add Patient Account) specification to support the transfer of a patient record in the context of Anti-Retroviral Therapy (ART) Messaging. While the primary use of this specification is for transferring patient records between clinical sites, it can also be used – if the data is anonymized – for transferring patient records to a repository to serve reporting purposes.**
- **The document contains the following key sections:**
- **Messaging Scenarios:** describes the context and usage for the messaging.
- **Abstract Message:** indicates the segments that comprise the message, and describes their ordering and repetition.
- **Segment & Field Descriptions:** provides details about the segments that make up the message, and the fields that comprise the segments.
- **Data Types:** defines the data types that establish the format and components of fields.
- **Code Systems and Value Sets:** includes the list of valid values for coded fields within the message, and describes how vocabulary items are managed.

- **Create LOINC panel to support needed observation types.**

Details for LOINC record # 45230-0

45230-0 District where patient entered HIV Rx: ID: Pt: ^Patient: Nom: Reported

NAME

Component	Property	Time	System
District where patient entered HIV Rx	ID	Pt	^Patient

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BASIC PROPERTIES

Class/Type: ART/Clinical
 Units Required: N

DEFINITION/DESCRIPTION

The local administrative area, e.g., county.

CORE PARTS

- **Develop ART Messaging code sets for specific observation results**

- **Competing priorities**
- **Installing a single national system seems attractive**
- **Capturing ART Transfer activity is often not a priority**
- **For reporting and indicator creation, moving the data to a central point is only a component of the solution**

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