

**Veterans Health Administration
Office of Information**

VHA Identity Management – Master Patient Index (MPI)

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Management Data Quality**

**NATIONAL COMMITTEE ON VITAL AND HEALTH STATISTICS
Subcommittee on Standards and Security**

Identity Management Defined

- Identity management (IdM) is comprised of the set of business processes, and a supporting infrastructure, for the creation, maintenance, and use of digital identities within a legal and policy context. - BurtonGroup™ 2003
- Unique identification for all patients of interest to VHA, forming a consolidated identity domain
- Consistent, robust matching capability
- Methods to resolve and prevent identity problems
- Enables sharing identity updates between systems

Mission of VHA Identity Management

- Ensure identity management capabilities facilitate highest quality of healthcare for patients
- Provide data that is complete, accurate, and easily accessible
- Eliminate potential for patient safety issues
- Support initiatives for the sharing of data between facilities, Agencies and organizations

Technical Specifications of VHA's Identity Management

- VHA unique identifier is the Integration Control Number (ICN)
- Master Patient Index (MPI) serves as the enterprise index of unique patients and correlations to disparate systems
- Veterans Integrated Service Technology Architecture (VistA) serves VA medical centers as the VHA-developed software to support medical center functions, including the EHR

Other Acronyms

- DFN – Data File Number (Internal VistA ID)
- Station # - number assigned to each VistA instance
- DoD – Department of Defense
- FHIE/BHIE – Federal Health Information Exchange/Bi-directional Health Information Exchange
- CHDR – Consolidated Health Data Repository
- CHI – Consolidated Health Informatics

Enterprise Unique Identifiers (ICNs)

- Consistent with the ASTM E1714-95 standard for a universal health identifier (UHID). The ASTM standard identifies UHID as being a 16 digit number, followed by a character delimiter, followed by a 6 digit checksum, followed by an optional 4 digit encryption scheme.
- Current ICN format begins with a 9 or 10 digit number followed by a “V” followed by a 6 digit checksum (1001169715V528328).
- Provides the key to linking patient and other person data across the enterprise, including VA facilities and corporate systems

MPI as defined by HL7 v2.4 Standard

An MPI is generally used to manage person identification and cross-reference across disparate systems. Healthcare organizations may have several systems handling various different data processing needs, from laboratory to billing, each with its own database of persons and person identifier numbering schemes. Each of these can be called an ID Domain. An MPI can function as a **Correlation Manager** between these domains, providing a cross-reference of a person's identifiers across each of the domains. Typically an MPI will also have one universal or enterprise identifier that uniquely identifies the person in the MPI itself.

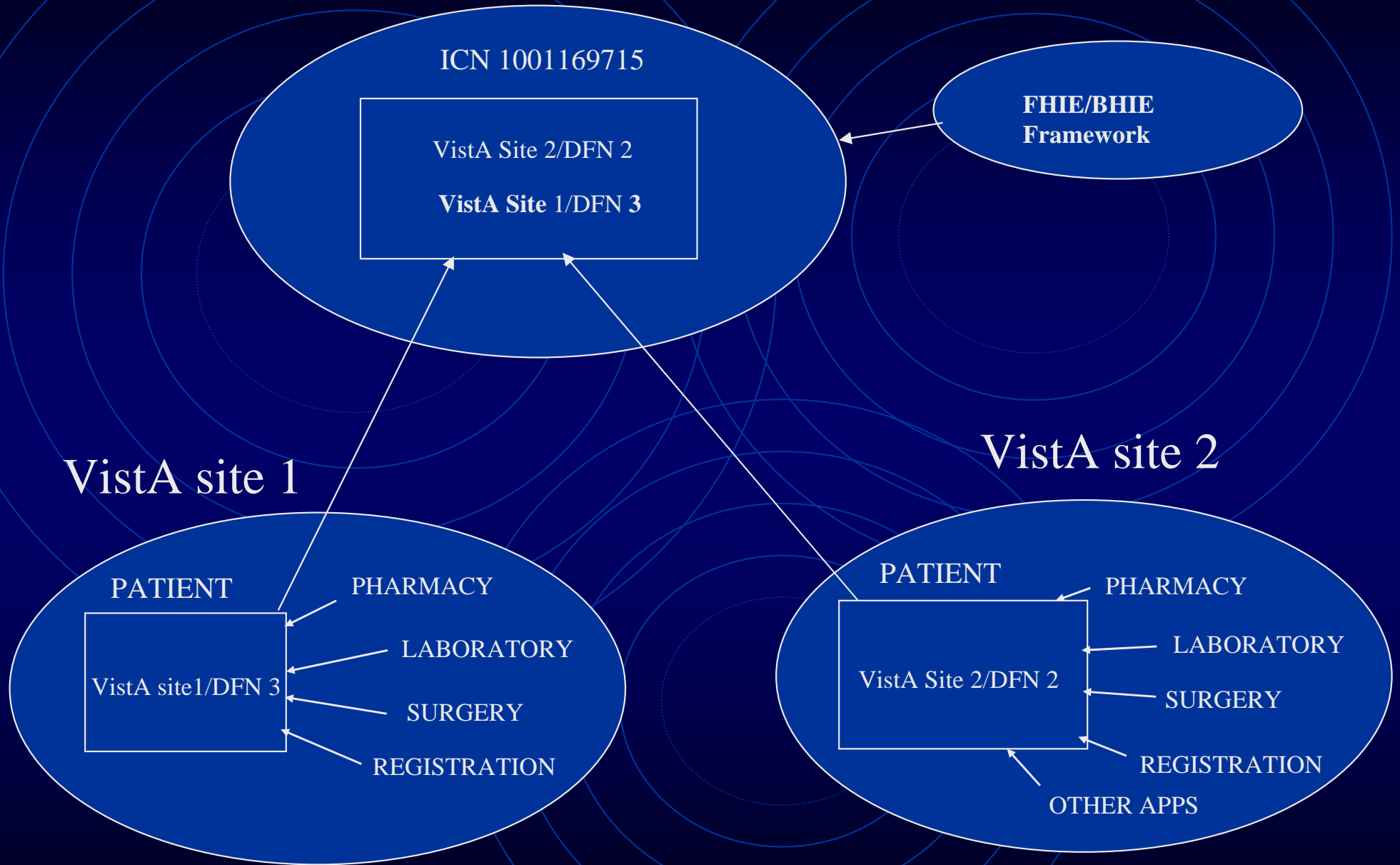
MPI functionality defined by HL7 v2.4 Standard

- Manage person identification and cross-reference across disparate systems
- Provide methods to retrieve an identifier for a person, given a set of traits or demographics for that person. An example of the use of this is for a client system to query the MPI for a person given a set of demographics. The MPI uses matching algorithms to find possible matching persons, and returns to the client system the identifiers for those persons.

Master Patient Index (MPI) VHA's Implementation

- Correlation of VHA active Patients (VistA DFNs) from 134 field facility systems under a unique enterprise identifier (ICN); completed in 1998
- ICN/VPID is a system identifier, not intended to be used on printed or viewable materials
- DoD patients correlated to the ICN/VPID, using the FHIE framework
- Uses VistA HL7 v1.6 (HL7 v2.4 standard) to communicate & exchange data with sites and other ID Domains

VHA's MPI



Master Patient Index

- VHA MPI stores key patient identity data for active patients, including:
 - Patient name
 - Date of Birth
 - Mother's Maiden Name
 - Place of Birth City and Place of Birth State
 - Alternate ID's (SSN, Claim #, deprecated ICNs)
 - Date of Death
 - MPI-related data (ICN and correlated ID Domain/ID's)

MPI - Current Statistics

Statistics as of **February 1, 2006:**

- MPI contains **16.2 million** unique patients.
- MPI contains 17.2 million correlations, including 1.3 million correlations to DoD patients (in the FHIE framework).
- Approximately **20,000** new patient records are added each week to the MPI.

Use of the ICN/VPID in VHA

- Current applications/systems that utilize the ICN for enumeration and correlation
 - Federal Health Information Exchange (FHIE) – allows information exchange with DoD and real-time access to data through Remote Data View
 - VistA Computerized Patient Record System (CPRS), including Remote Data Views and Inter-facility Consults
 - My HealthVet – RxRefill allows patients to request prescription refills on-line

ST_PATIENT J
0001 Jan 02,1929 (76)

Visit Not Selected
Current Provider Not Selected

Primary Care Team Unassigned

Flag Remote Data ?

Signed Notes

Visit: 05/04/05 PATIENT ED - HEALTH INFORMATION [T], *** No Location **, Doug Aanes (May 04,05@09:05)

- All signed notes
- May 04,05 PATIEN
- May 02,05 CT SUR
- May 02,05 MEDICA
- Apr 21,05 INTERVE
- Apr 20,05 PAIN DU
- Apr 08,05 INFORME
- Apr 07,05 EMPLOY
- Mar 21,05 PATIENT
- Mar 21,05 PATIENT
- Mar 18,05 PATIENT
- Mar 16,05 1010M -
- Mar 16,05 OT DAY
- Mar 07,05 General t
- Mar 01,05 MH VPC
- Mar 01,05 INFORM
- Feb 28,05 INFORM
- Feb 17,05 PC CBOC
- Feb 16,05 VASCUL
- Feb 09,05 PT OUTF
- Feb 09,05 EYE CLIF
- Jan 31,05 H&P ENT
- Jan 30,05 NURSINI
- Jan 27,05 NURSINI
- Jan 27,05 EMPLOY
- Jan 25,05 INTERDI
- Jan 25,05 NURSINI
- Jan 25,05 NURSINI
- Jan 25,05 NURSINI
- Jan 23,05 NURSINI
- Jan 22,05 NURSINI

TITLE: PATIENT ED - HEALTH INFORMATION [T]
 DATE OF NOTE: MAY 04, 2005@09:05:07 ENTRY DATE: MAY 04, 2005@09:05:11
 AUTHOR: AANES,DOUGLAS EXP COSIGNER:
 URGENCY: STATUS: COMPLETED

At 7:51 AM on May 04, 2005 , the patient (and/or surrogate) received the following document: COTC PRE-OP INSTRUCTIONS .
 This document was selected from category: Patient Instructions .
 This document was selected from specialty: General Surgery .

*** SCANNED DOCUMENT ***
 SIGNATURE NOT REQUIRED

Administrative Closure: 05/04/2005
 by: User IMED

Templates
 Encounter
 New Note

Patient Identification and Selection

- Initial identity traits collected at each point of contact (Name, SSN, DOB, Gender)
- Query to MPI performed for possible match to existing unique entry
- Retrieval of existing information, if match found
- Patient lists used in CPRS
- Identity trait lookups in local VistA

VHA Data Quality Coordinator

- Coordination with:
 - One VA activities for IdM
 - Data Standardization
 - Patient Safety
 - Identity Management

VHA Identity Management Data Quality Program

- Act as business stewards of identity data
- Define business rules and processes governing identity management
- Resolve existing data integrity issues on the MPI and local VistA systems
- Facilitate and monitor resolution data quality anomalies at the sites
- Facilitate the development and distribution of information and training to users
- Improve the awareness and understanding of the MPI and its roles and functions

VHA IdM

- Efforts to integrate data quality into all aspects of Identity Management
 - Patient Selection Modifications/Design
 - Data Cleansing/Integrity
 - Patient Safety issues/prevention
 - Identification of data anomalies
 - Analysis and resolution of identity data quality issues

MPI Resources

- MPI/PD development web site:
http://vista.med.va.gov/mpi_pd/index.html
- MPI Data Quality Management Team web site:
<http://vaww.vhacoweb1.cio.med.va.gov/dataquality/mpidqteam.htm>
- Email at sara.temlitz@med.va.gov
- Documentation:
[http://vista.med.va.gov/VistA_Lib/Clinical/MPI_Patient_Demographics_\(MPI-PD\)/](http://vista.med.va.gov/VistA_Lib/Clinical/MPI_Patient_Demographics_(MPI-PD)/)