



HIMSS[®]09

Connect to Care

“CONNECTing” to the NHIN

*Moderated by:
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Office of the National Coordinator for Health IT



An American First: Human-to-human transmission text over wire – The telegraph

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- Innovation supported by the Congress
- First test - Baltimore to Washington – 38 miles
- Standardized language (Morse Code)
- Rapid expansion by private sector
- Benefits to citizens
 - Expansion of commerce
 - Immediate access to news



An American First: Live patient transfer across the Nationwide Health Information Network

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This one-way electronic transfer of patient data between MedVirginia, a regional health group, and the Social Security Administration will enable SSA, with the patient's authorization, to obtain medical records for the disability review process in minutes instead of the current weeks and months.



NHIN Mission

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Mission

To achieve better quality, value, and affordability of health and wellness services by establishing the Nationwide Health Information Network as the common, secure, nationwide, interoperable network for exchanging health information, and provide this infrastructure with low adoption barriers.

- Establish the NHIN as the common, secure, nationwide, interoperable network for exchanging health information, and provide this infrastructure with low adoption barriers.
- There should be a common infrastructure that looks after the common good.
- Key to adoption is lowering the technical, cost and policy barriers.



NHIN Ideal

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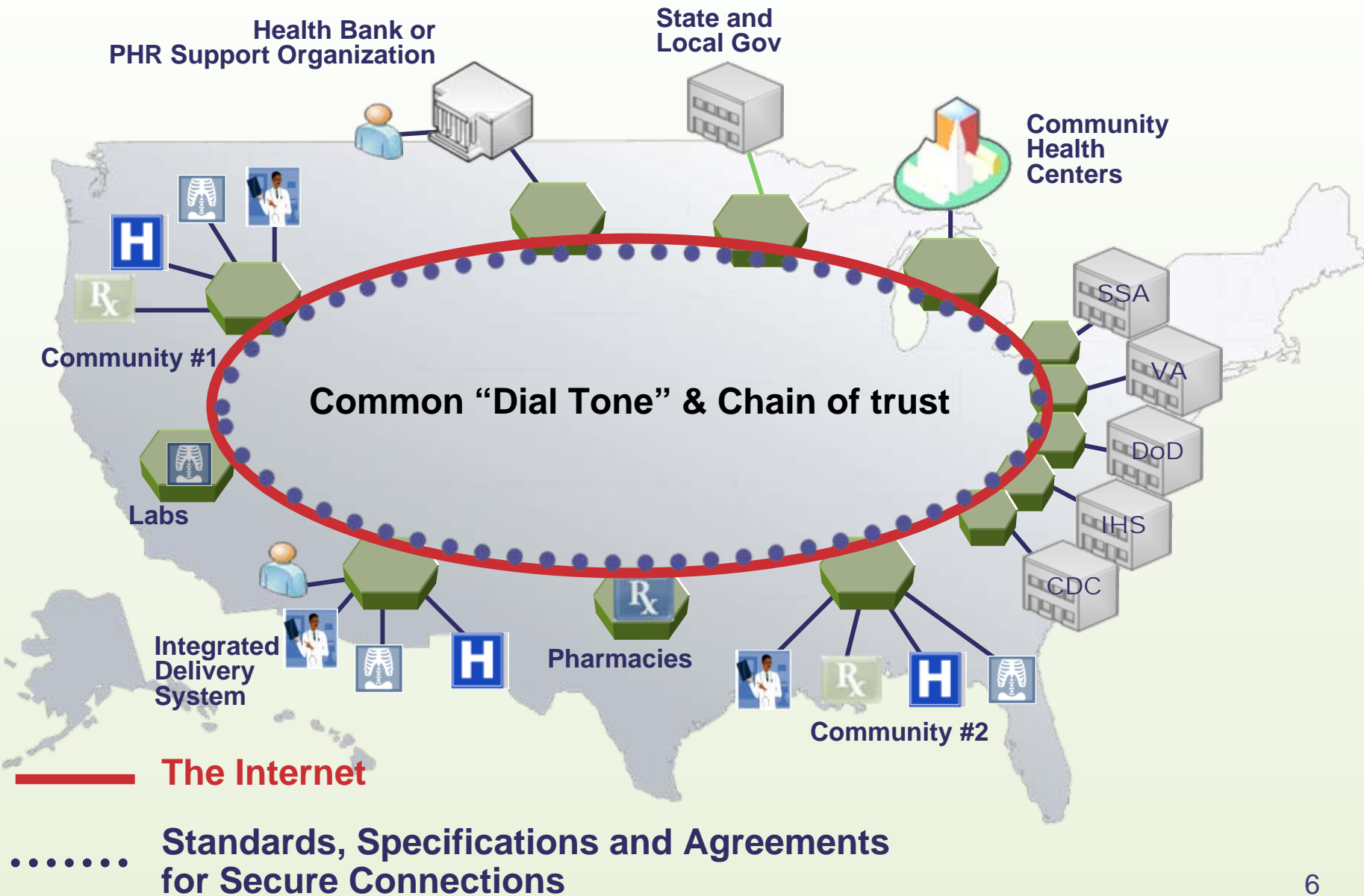
*“Set up as an ideal the facing of reality as honestly
and as cheerfully as possible.”*

– Dr. Karl Menninger

The NHIN is:

- A set of harmonized standards-based specifications for communicating between NHIEs
- A trust fabric that allows for private and secure exchange of Health Information. This includes:
 - An internet-based private network that ensures secure transport
 - Membership services to ensure only valid, trusted entities may participate
 - Certification to ensure that interoperability between entities
 - Legal agreements to protect privacy and security of information exchanges
 - A curated set of indexes to facilitate proper communications
- A governance model and operating procedures that structures and defines activities, roles and responsibilities of all participants; and
- The confederation of entities, including NHIEs, bound by this mission and governance.

The Nationwide Health Information Network





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What is CONNECT?



A Federal Health Architecture (FHA) multi-agency initiative to address:

- The emerging NHIN
- Participate in the NHIN Trial Implementations 2008
- Participate in NHIN Limited Productions/Pilots 2009

A technology solution for secure interoperable exchange of health information

- A Platform for Participation
- A Platform for Innovation



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What business problem does CONNECT solve?



Federal agencies want to be able to securely exchange interoperable electronic health information with each other, and non-Federal organizations



Agencies want a common solution for health information exchange that can support their mission priorities instead of building expensive, redundant, point-to-point solutions



State and Private sector health organizations are seeking consolidation and standardized interfaces for sharing Health Information with Federal agencies



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Leveraging the Nationwide Health Information Network to Improve the Disability Determination Process and Support the National Agenda





The Face of Disability



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Nationwide Health Information Network



Phone, Web, In-Person

- Auth. To Release Medical Records
- Demographic Information

DECISION MADE

SSA National Computer System

- Med Records
- Labs
- Background

Claimant Electronic Folder

State Agency

- Med Records
- Labs
- Background

DETERMINATION RECOMMENDATION

NHIN

Information Available About Claimant





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Provider Benefits



- Labor savings
- Potentially increased revenue stream
- Uncompensated care savings
- Administrative savings (printing & postage)
- Reductions in healthcare costs
- Patient satisfaction & marketability
- ER workload decrease / catastrophic care avoidance





Patient Benefits



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- Easier on the patient and family
- More accurate – facilitates claims process
- Reduces likelihood for consultative examination
- Resolves an unknown
- Potential monthly benefits
- Potential health insurance coverage
- Earlier and more effective treatment
- Facilitates other services





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**Enhanced Care Delivery by
CONNECTing to the NHIN:
*Biosurveillance Use Case***

Les Lenert, MD, MS, FACMI

Director, National Center for Public Health Informatics
Centers for Disease Control and Prevention



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Enhanced Care Delivery: Problems Caused by Disconnected Systems



Critical data needed for surveillance is not captured in many instances



Acquired information is not received in a timely manner



Public health interventions are delayed



Ability to communicate critical messages to the medical community is impaired



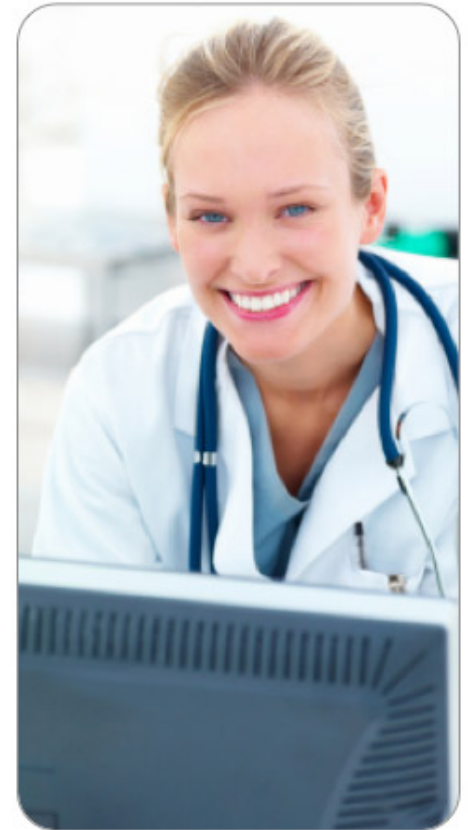
Community health programs are not designed and monitored effectively



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Enhanced Care Delivery: Expected Benefits from CONNECTing to the NHIN

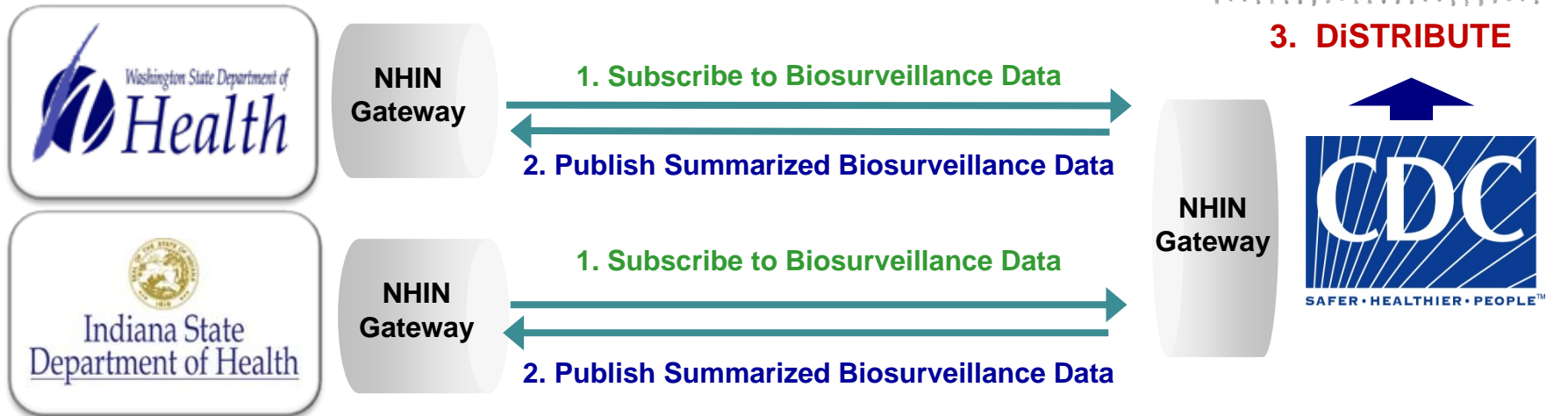
- Enhanced surveillance capabilities to support preparedness and notifiable disease scenarios in a timely manner
- Integration of relevant public health information into decision support processes
- Improved community health intervention and evaluation processes





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Biosurveillance Using Summarized Data



1. CDC uses NHIN Gateway to subscribe to summarized Biosurveillance data from State Health Departments (SHD)
2. SHD's publish summarized biosurveillance data via NHIN Gateway
3. CDC aggregates and visualizes summarized data using DiSTRIBuTE



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Enhanced Care Delivery: What This Means for the Rest of the Healthcare Industry

- **Enhanced surveillance capabilities** are an important component in improving the overall health of the population, serving to reduce health care costs

- **Quality of care can be positively impacted** when clinicians have easy access to important public health information

- **Health disparities can be recognized**, assessed and evaluated more effectively with more robust surveillance capabilities



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Improved Clinical Research and Trial Enrollment by CONNECTing to the NHIN:
Patient Trial Use Case

NAME

Title

National Cancer Institute



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caBIG[®]:

Enabling a New Era of Research and Care

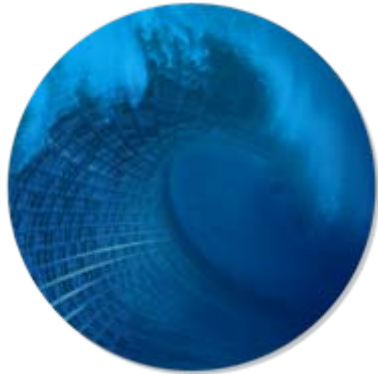
“**Cancer is** – and will continue to be – **a model for** the study of disease biology, for new thinking about the delivery of health-care, for the development of electronic medical records, and for a **healthcare system based on the uniqueness of each individual.**”*

“caBIG[®] is, first and foremost, about connections – between NCI researchers, cancer centers, Community Clinical Oncology Program participants involved in clinical trials, cooperative groups that conduct trials on NCI’s behalf, and participants in the NCI Community Cancer Centers Program. **caBIG[®] is....an internet for cancer research...**”*

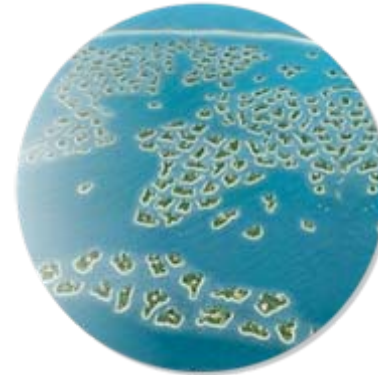


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Barriers to Interoperability



Tsunami of Genomic and Clinical Data



Islands of Information



Standard Language

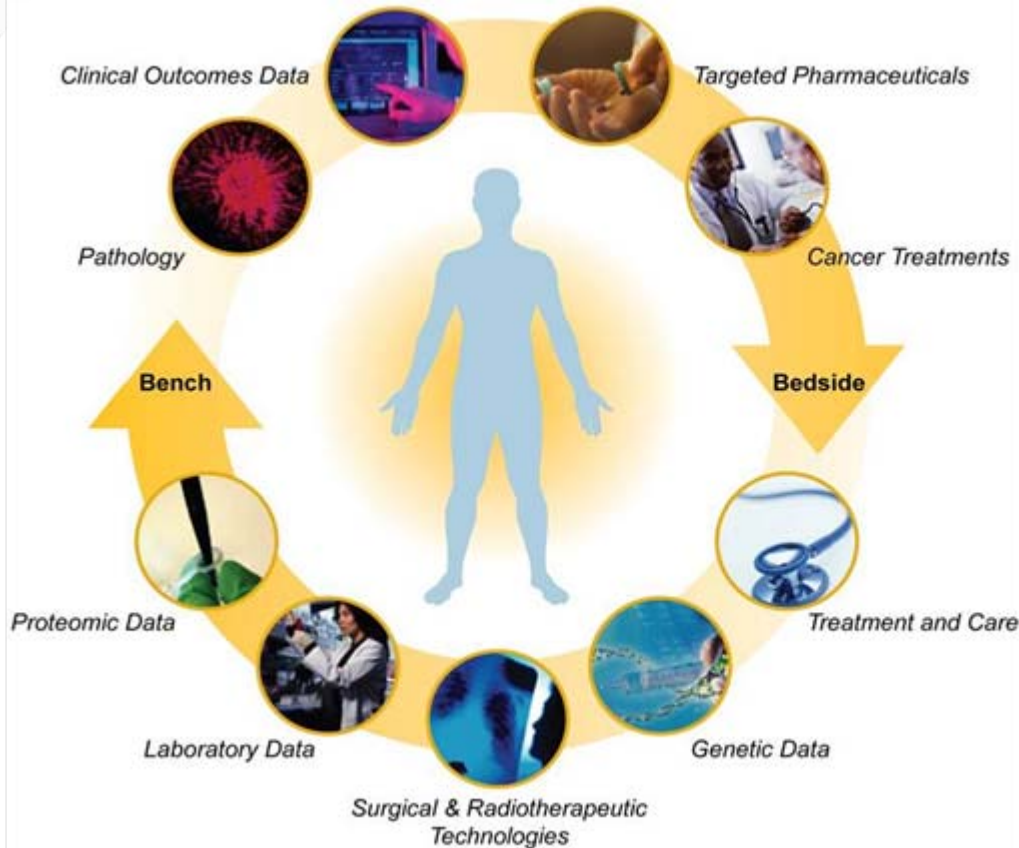


IT Systems Do Not Inter-operate



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Benefits of Interoperability: Linking Research to Care



Unifies clinical research, clinical care, and discovery (bench-bedside-bed) into a seamless continuum

Results in improved clinical outcomes

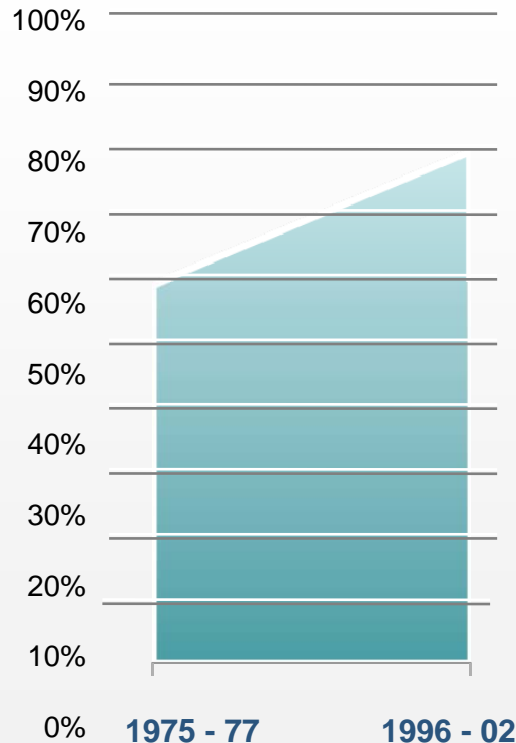
Accelerates the time from discovery to patient benefit



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Why Link Care Delivery to Clinical Research? Success in Childhood Cancer

Increased 5-year relative survival rate among children 10-14 years old diagnosed with ALL



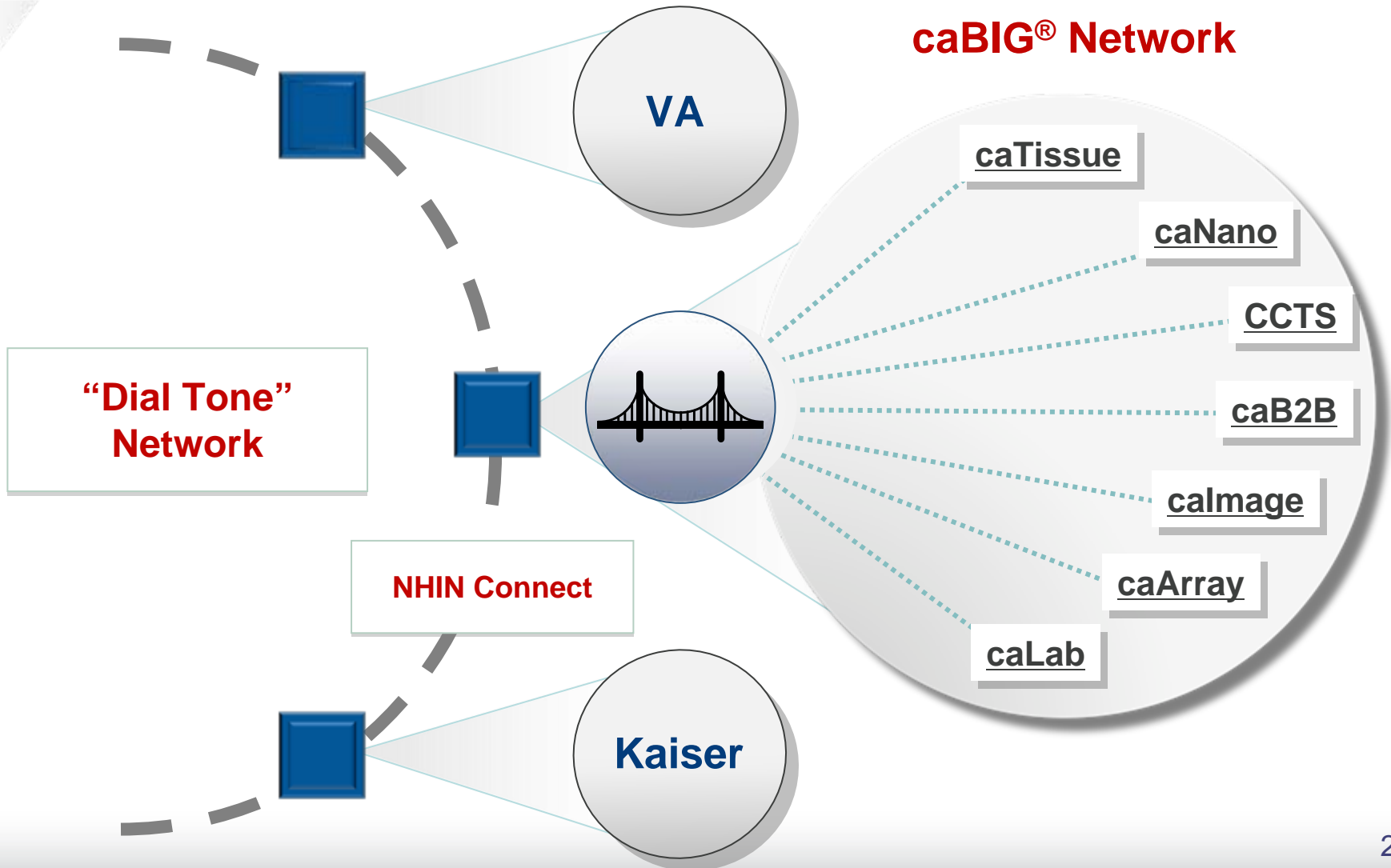
Childhood cancer treatment now blends care delivery and clinical research. Most children with cancer are enrolled in clinical trials. Using this approach:

- Researchers and practitioners are able to correlate experimental laboratory data with clinical data such as treatment, history, pathology and patient outcomes
- Clinical data are used to continuously evaluate outcomes
- Researchers can develop and refine evidence-based strategies at an individualized level
- Care providers improve quality by adherence to care standards



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caBIG[®] and the NHIN: Addressing Barriers to Interoperability





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caBIG[®]: Current Status

103 Services

**>50 NCI-designated
Cancer Centers
participating**

The screenshot shows the caGrid Portal interface in a Mozilla Firefox browser window. The page title is "caBIG :: caGrid Portal - Mozilla Firefox". The address bar shows the URL: http://cagrid-portal.nci.nih.gov/web/guest/home?p_p_id=cagridmap_WAR_cagridportlet&p_action=1&p_...

The page features a red header with the National Cancer Institute logo and the text "U.S. National Institutes of Health | www.cancer.gov". Below the header is a navigation bar with tabs for HOME, SERVICES, TOOLS, NEWS, and REGISTER. A "Welcome!" button is also present.

The main content area is titled "Gateway to the cancer Biomedical Informatics Grid." and includes a description of the portal's purpose. It also contains a "Categories:" dropdown menu set to "All Services" and a map of the United States with numerous blue circular icons representing services and participants. The map is powered by Google Maps.

On the right side, there is a "caGrid Status" section with a table of the five newest services:

Name	Type
CaArraySvc	AI
CaArraySvc	AI
ComparativeMar..	SI
ConsensusClust..	SI
ConsensusClust..	SI

Below the table, it states: "There are currently... 122 caBIG Participants, 108 grid services, which include 70 data services, and 30 analytical services." The last update was "9 minutes ago".

On the left side, there is a "News" section with a "Subscribe to caGrid News Feed" button and a "caGrid Portal 2.6.2 Released" announcement dated June 16, 2008. There is also a "caGrid Links" section with various links to user guides, wiki pages, and community websites.



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Enhanced Care Delivery by CONNECTing to the NHIN: *Improving Disaster Medical Care*

Robert Bencic, DDS, MBA
CAPT USPHS
Director, QA NDMS





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Enhanced Care Delivery: Problems Caused by Disconnected Systems



Patients are removed from their typical medical providers and care plan



Inability to acquire patient care information from other Federal partners (DoD, VA, SSA, IHS, CMS)



Inability to share information among various response locations in a federally declared disaster



Inability to quickly send data to other healthcare providers



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Enhanced Care Delivery: Expected Benefits from CONNECTing to the NHIN

- Access to medical data from other deployment locations
- Enable the acquisition of patient information from other federal departments (VA, CMS)
- Lay groundwork for future information sharing with non-federal government entities (hospitals, pharmacies, urgent care centers, and state programs)
- Enhance the usability of NDMS Disaster Medical Information System (DMIS)

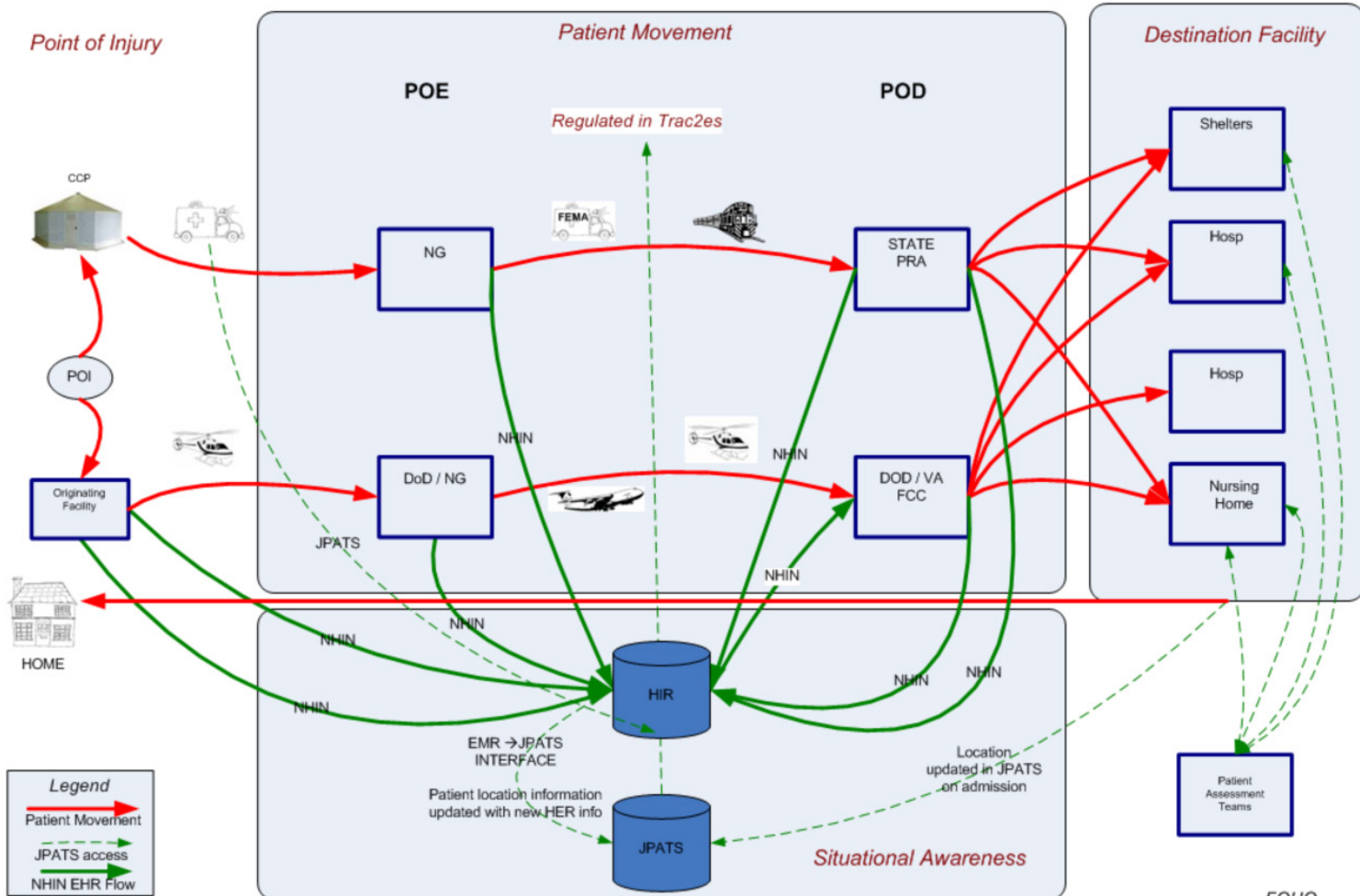




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Enhanced Care Delivery: Supporting Wounded Warriors through the NHIN

DMIS CONTINUUM OF CARE





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Enhanced Care Delivery: What This Means for the Rest of the Healthcare Industry

- NDMS can leverage ONC's standards and achieve its goal of having a standard framework for retrieving and sending patient data to other healthcare providers
-
- CONNECT software will minimize the in-house development time and costs
-
- Leveraging standard CONNECT software enhances patient care while minimizing limited implementation resources



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Department of Veterans Affairs



Business Drivers for health record interoperability

- 75% of the care veterans receive is from non-VA providers.
- Providers need a more complete record to make informed decisions, avoid duplicative therapies, orders, etc.
- Patients and families carry the burden and play the role of information exchange



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Department of Veterans Affairs



VA Hospitals	153
VA Nursing Homes	136
Domiciliary Residential Rehabilitation Treatment Programs	44
Outpatient Clinic Totals	876
Hospital Based Outpatient Clinics (HBOC)	156
Independent Outpatient Clinics (IOC)	4
Mobile Outpatient Clinics (MOC)	5
Community Based Outpatient Clinics (CBOC)	711
Vet Centers	206

- **Medical care to more than 5.4 million veterans with > 7 million enrollees**
- **Largest single provider of health professional training in the world**
- **One of the largest and most productive research organizations in the country**
- **Largest direct care provider for homeless persons in the country**



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Indian Health Service

...raising the physical, mental, social, and spiritual health of American Indians and Alaska Natives to the highest level... while honoring and protecting the inherent sovereign rights of Tribes...



- **Beneficiaries: Members of 562 federally recognized Tribes**
- **Service Population: 1.9 million**
- **Direct Patient Services (*Tribal and IHS facilities*):**
 - Inpatient Admissions: 56,298
 - Outpatient visits: 10,711,925
 - Dental Services: 3,290,923
- **Facilities:**
 - Hospitals: Tribal – 14, IHS – 31
 - Clinics: Tribal – 508, IHS – 93
- **Contract Health Services: Care purchased from private sector providers to supplement direct services**
- **Public Health Services: Safe water and sewerage systems**
- **Urban Indian Programs: Health services off the reservation**
- **Health IT: EHR, longitudinal patient care, population health**





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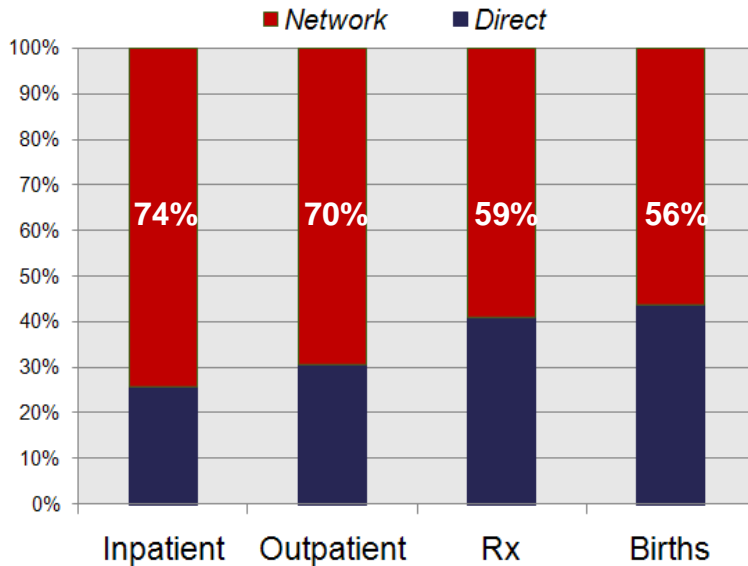
Department of Defense

Military Beneficiaries: 9.3 million

Military Bases in US: 202

Military hospitals	63	Medical/Dental Clinics	826
Encounters/month	9 million	Average outpatient visits/year/patient	4

**1:4 military families move in a given year
<50% of network consults make it back to the PCM**



CONUS Military Bases





Questions?