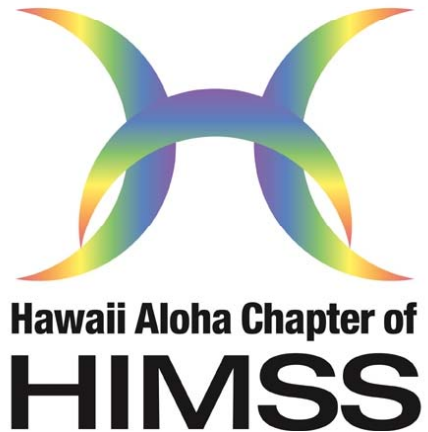


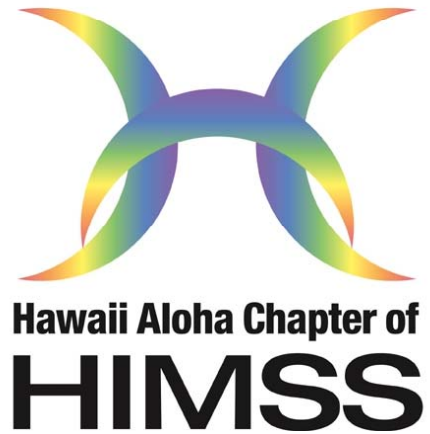
Susan Forbes, DrPH
Current President

President & CEO,
Hawaii Health Information Corporation



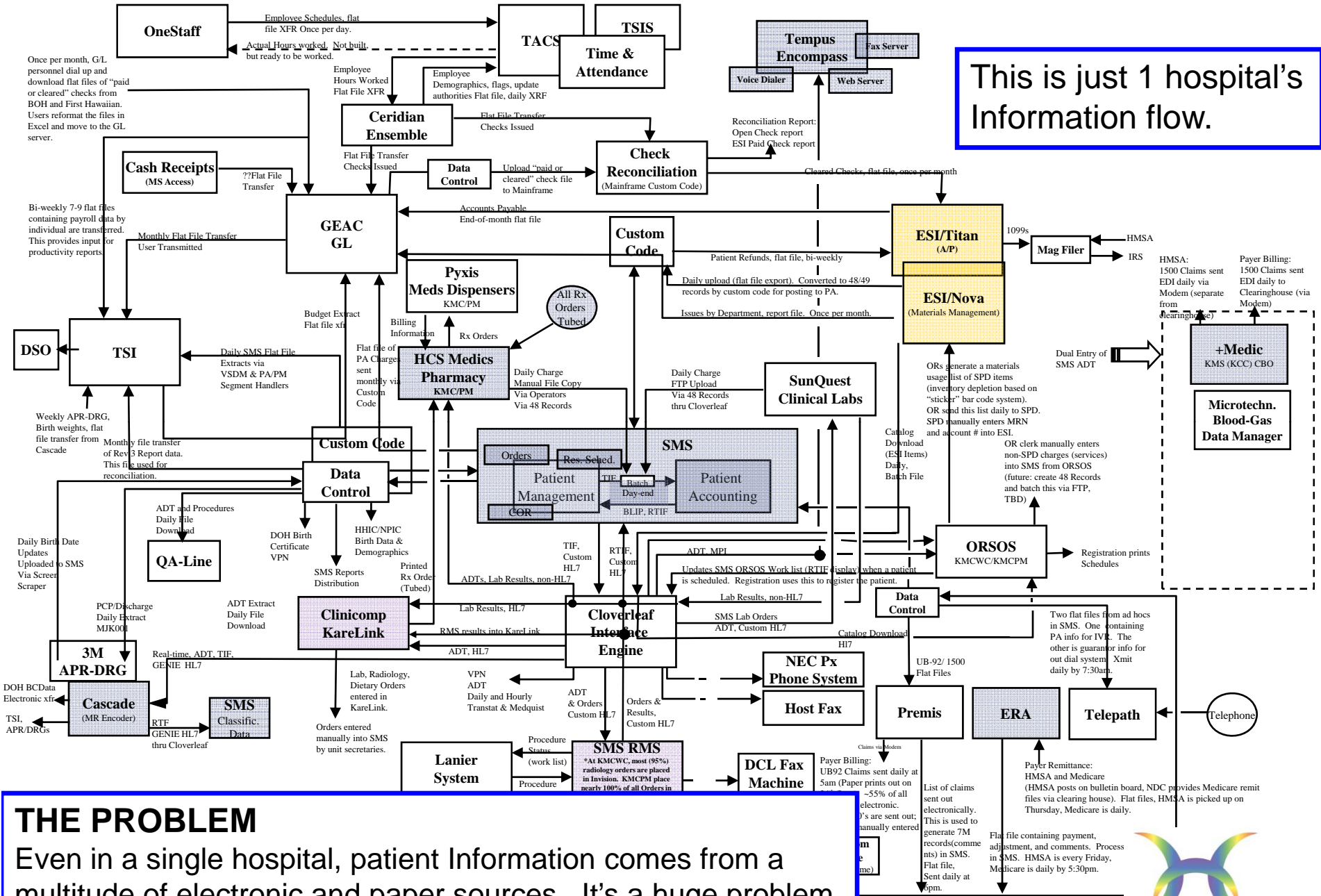
Steve Hurlbut
RHIO Liaison

Account Executive, Phoenix Health Systems, Inc.
CIO, ISI Health Enhancement Services



Steve Robertson
Member

Senior Vice President of Revenue Management &
CIO, Hawaii Pacific Health



THE PROBLEM

Even in a single hospital, patient Information comes from a multitude of electronic and paper sources. It's a huge problem to reconcile this information into a view to support real-time clinical decisions. Imagine 22 hospitals and 100+ clinics.

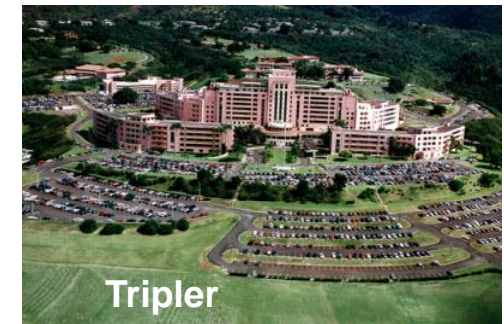
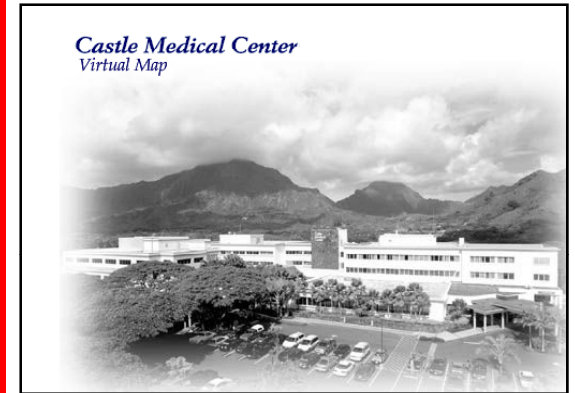


What are Hawaii Hospitals Doing?

Most of our largest Hospitals have already installed (or nearly installed) Electronic Medical Record systems. We are among the top 20% in the country.

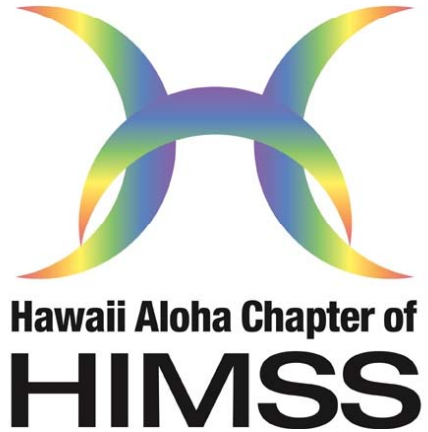


Even better: The hospitals in this red box use the same kind of EMR system. Combined they have more than 2 million patients in their registries. Much of the hard work is done.



How can you help?

- ▶ Technology is the easy part, it is less than 20% of the problem and cost.
- ▶ The hardest thing is getting everyone to agree on how to do things.
 1. Encourage and incent efforts to improve clinical information exchange between clinics and hospitals. Healthcare providers can't afford to do it on their own.
 2. Revise legislation and remove the barriers that impede clinical exchange that supports patient care.

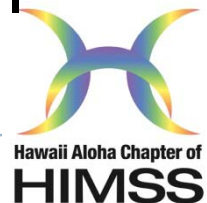


Creighton Arita
Member

President & CEO, TeamPraxis, LLC

About TeamPraxis

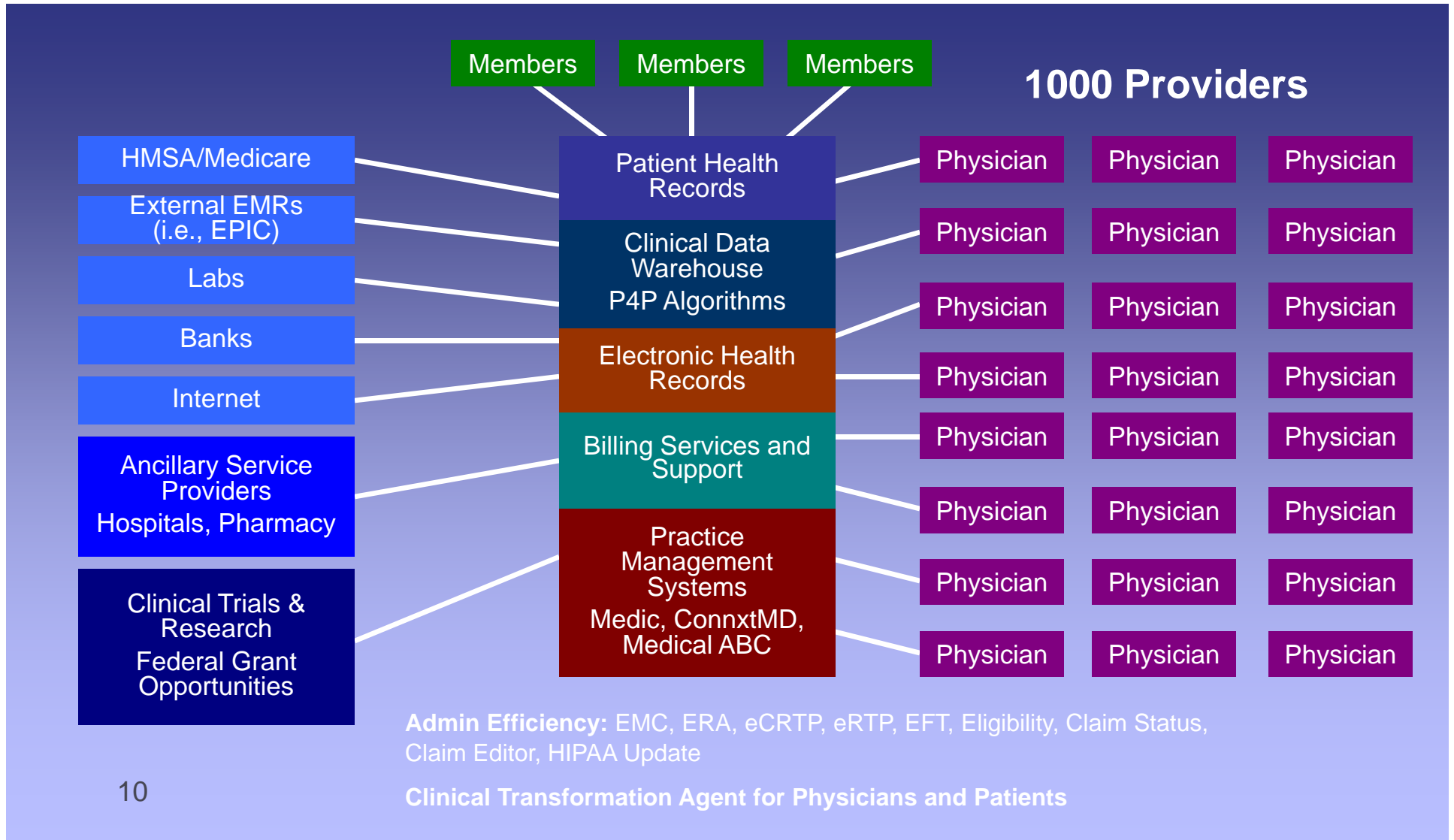
- ▶ Founded in 1992 as a Regional Physician Information Network to empower physicians to provide the highest quality of patient care.
- ▶ Largest Physician Information Network in Hawaii, serving more than 1,000 providers across the state, including 120 on Electronic Health Records (EHR).
- ▶ Local staff of more than 140 (and growing), with 13 Certified Professional Coders and 50 offshore full-time contractors.
- ▶ A leader in developing innovative healthcare software solutions with a focus on serving physicians.
- ▶ A Qualified High Technology Business under Act 221



Key Milestones for 2007

- ▶ Raised \$20 million in local Act 221 funding
- ▶ Exported our Clinical Quality Solution software tool to Allscripts through a National Reseller Agreement
- ▶ Purchased an exclusive Statewide enterprise license for TouchWorks EHR, making this award-winning product available to every Hawaii physician
- ▶ Reached key partnership agreements with HMSA, Queens, HHSC, DLS, CLH and First Hawaiian Bank

Our Business Model: MSO ASP Non Sharing



Challenges

- ▶ Accelerating adoption of EHR among local physicians
- ▶ Participation in Federal programs
 - ▶ Almost all require official State endorsement or acknowledgement

What the Legislature Can Do to Help

- ▶ **Help encourage EHR adoption**
 - ▶ Create incentives and community awareness
- ▶ **Establish a point person to endorse community initiatives that would allow for participation in Federal programs**

What are the benefits of Electronic Health Records?

▶ **Benefits to Physicians**

- ▶ Facilitates improved documentation (complete, legible records)
- ▶ Easy to share patient information with labs, other physicians/specialists
- ▶ Reduces need for physical storage space
- ▶ Improves office efficiency (fewer chart pulls/filing)

▶ **Benefits to Patients**

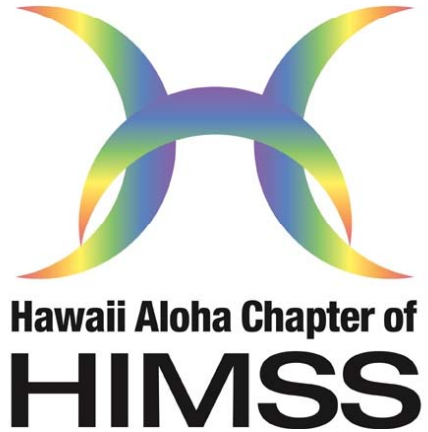
- ▶ Improved documentation reduces common preventable medical errors (e.g., prescription errors)
- ▶ Improved information flow and access to complete patient records during Emergency Room situations

▶ **Benefits to Community**

- ▶ Reduced duplicate tests/services, preventable medical errors
- ▶ Curbs the rising costs of healthcare

Impact of EHR to Doctors?

- ▶ **Three Phases of Adoption**
 - ▶ Substitutive Phase
 - ▶ Replace paper chart
 - ▶ Efficiency Phase
 - ▶ Tasking
 - ▶ eLabs
 - ▶ ePrescriptions
 - ▶ Transformative Phase
 - ▶ Chronic Disease Management and Preventative Health



Georgiana Fujita
Immediate Past President

HMSA Senior Vice President

What is HMSA Doing

- ▶ ePrescribing
- ▶ 50 Million Initiative for Innovation & Quality
 - \$30 Million for Hospitals
 - \$20 Million for Physicians to Adopt Electronic Medical Records (EMRs)
- ▶ Recognition of Telemedicine Services

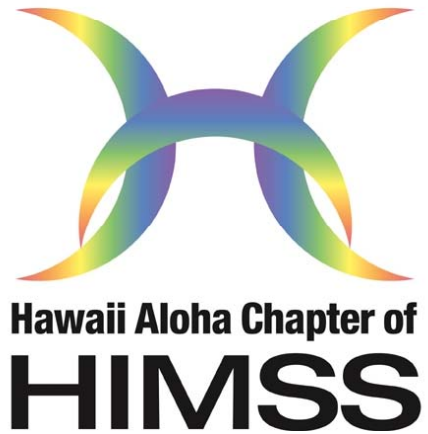


Challenges

- ▶ Impact on Day-to-Day Operations
- ▶ Conversion of Paper Records
- ▶ Commitment of Resources

How You Can Help

- ▶ Encourage State DOH, DHS & HHSC Participation
- ▶ Support Development of Infrastructure
 - Provide Opportunity for Matching Funds
 - Align Privacy/Security Requirements
 - Require Interoperability Standards Adoption
 - Provide Incentives i.e., Tax Credits



Lee Castonguay
Advocacy Chair

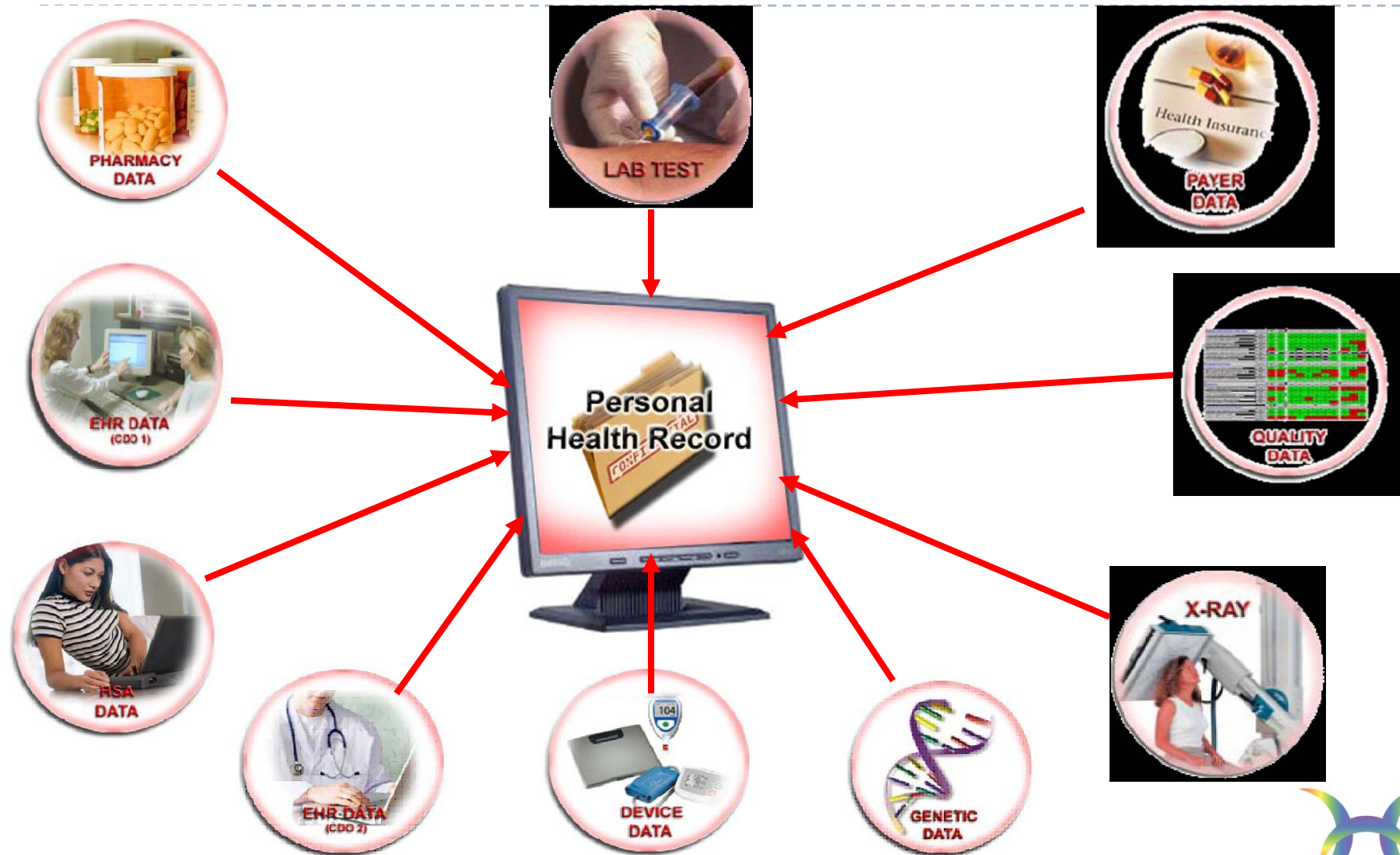
Healthcare Information Specialist,
Telecommunications and Information Policy Group

Consumer Managed Health Record

- ▶ **Empower the Consumer**
 - ▶ Control who has access to what data
 - ▶ Own their data and their identification number
 - ▶ Choose to participate or not in research
- ▶ **Automated Data Population**
 - ▶ Physicians
 - ▶ Labs
 - ▶ Pharmacies
 - ▶ Hospitals
 - ▶ Home monitoring devices
 - ▶ Insurance companies
- ▶ **Added Value Services**
 - ▶ Disease Management
 - ▶ Resource Directories
 - ▶ Health Savings Account

Population of PHR

Comes from multiple data sources

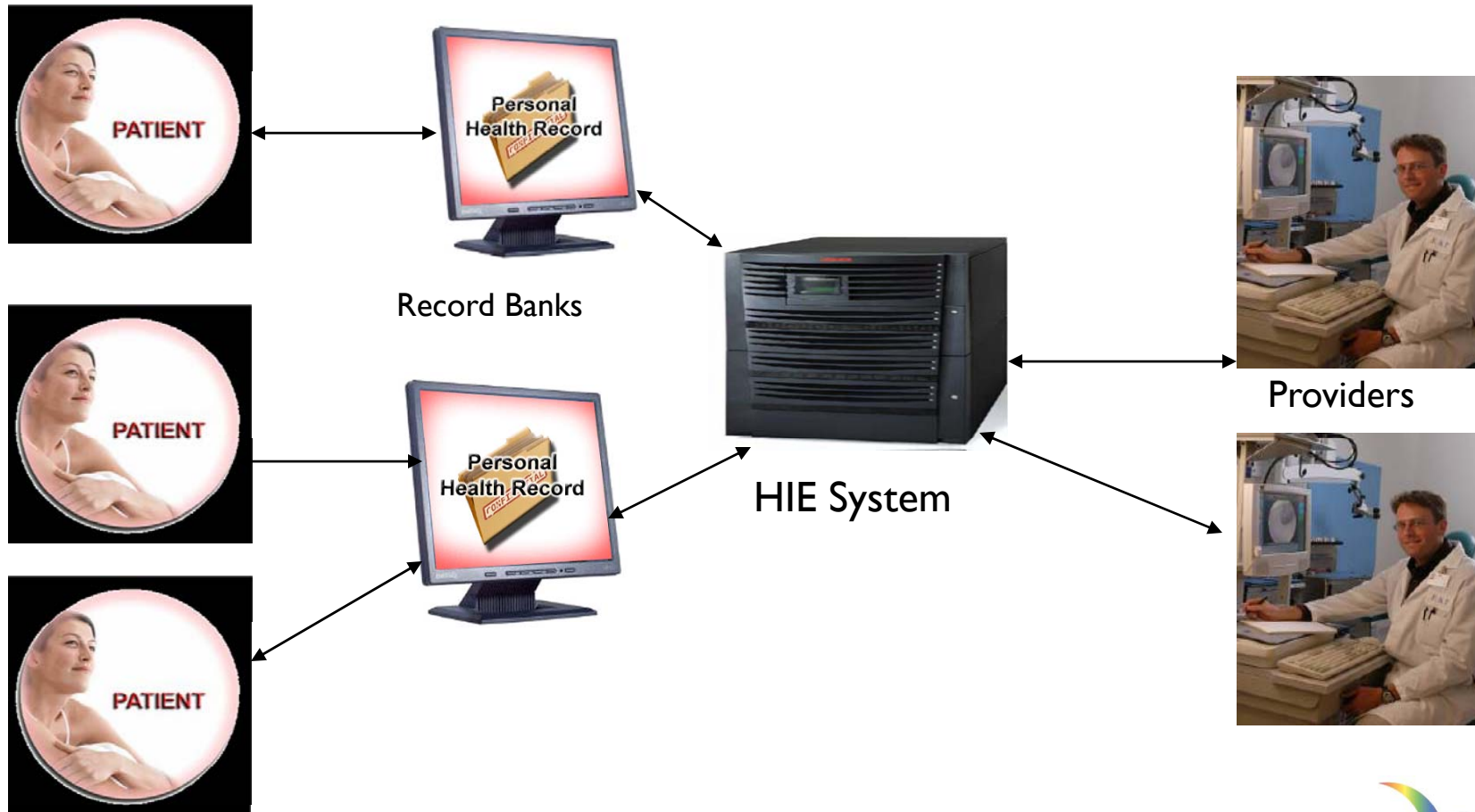


Consumer Managed Health Records

▶ CONCEPT

- ▶ Consumer opens Personal Health Record (PHR) account (similar to a bank account) and gets routing and account number
- ▶ Consumer provides their health account number to all providers, labs, pharmacies, etc.
- ▶ Health services electronically send pertinent data to Consumer's health account
- ▶ Consumer determines who can look at what parts of their health record, thus eliminating many privacy issues
- ▶ Consumer determines if they want their data to be used as part of research efforts (and can get remunerated for it)
- ▶ Consumer can not change provider data, but can add to it and control whom can view it
- ▶ A RHIO can provide a standard gateway for providers to access consumer health records; plus other services like specialized views, a clearance house to update health records, and messaging and alert services

An HIE provides the Hub



Consumer Privacy Issues

- ▶ **42 percent** of Americans feel privacy risks outweigh the expected benefits of electronic health records.
 - ▶ *(Harris-Westin 2006)*
- ▶ **77 percent** of Americans fear that their data in electronic records will be used for purposes other than their healthcare, like marketing.
 - ▶ *(Lake Research Partners for Markle Foundation, Nov. 11-15, 2006)*
- ▶ **59 percent** of healthcare consumers do not trust their health insurer.
 - ▶ *(Harris/WSJ 2004)*
- ▶ **53 percent** of Americans are very concerned about health insurers gaining access to their electronic health records.
 - ▶ *(Lake Research Partners for Markle Foundation in Nov. 11-15, 2006)*

Benefits

- ▶ Empowers the Consumer to manage their PHR
- ▶ Allows the Consumer to control whom has access to the PHR
- ▶ Provides an easier Consent process between Consumers and Researchers
- ▶ Ensures the correct patient record is being updated and displayed for clinical use
- ▶ Medication reconciliation (checking the mix of drug with other drugs and allergies) can be performed
- ▶ Helps resolve privacy issues, both actual and perceived

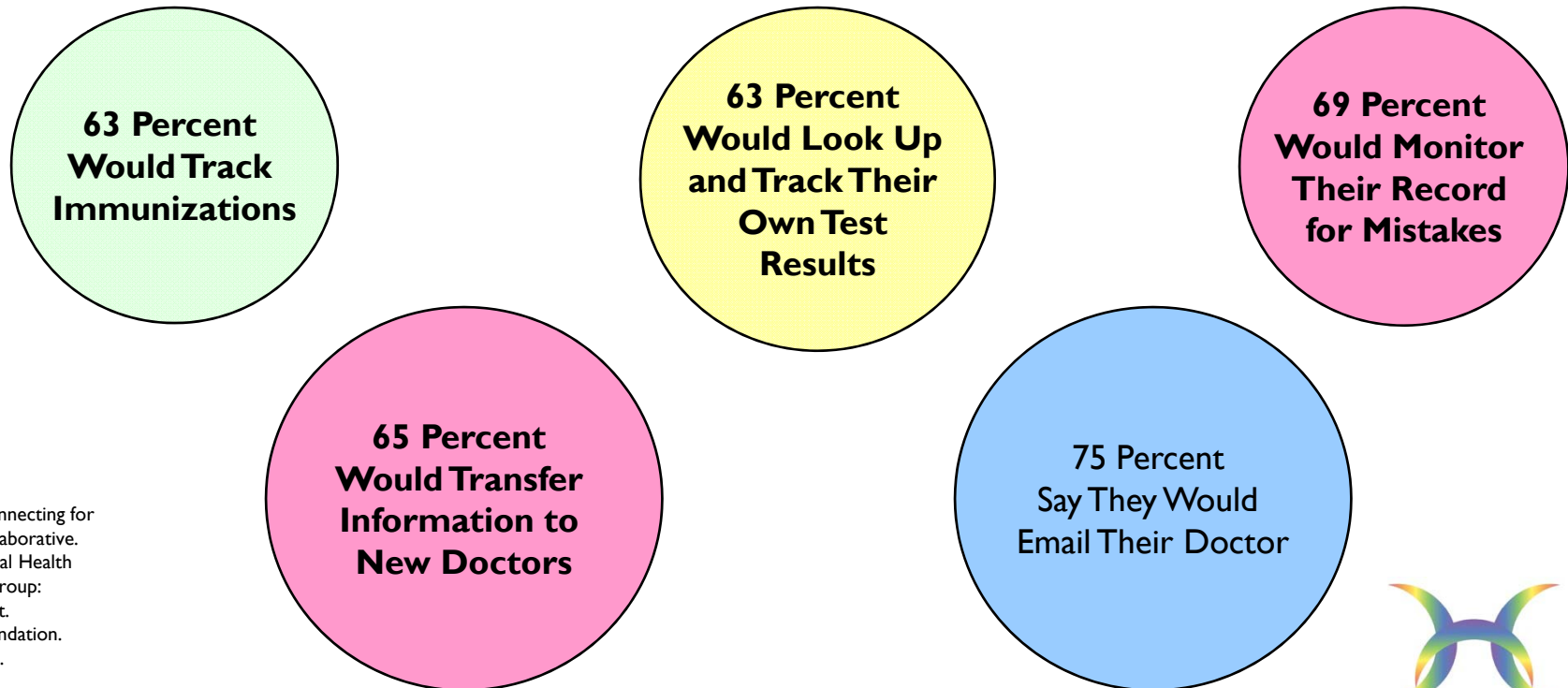
Challenges

- ▶ Conformity to data standards which is a common problem with all data sharing solutions
- ▶ Leadership – if recognized as a public health issue, Federal and State leadership is required
- ▶ Startup funds
- ▶ Sustainable models
- ▶ People that don't sign up

Consumers Want Health IT

Americans who know about connected, interoperable health care systems recognize their benefits.

- Roughly 70% report that they would use one or more features of a PHR.



Source: Connecting for Health Collaborative. The Personal Health Working Group: Final Report. Markle Foundation. July 1, 2003.

Consumer Managed Health Records

▶ SUSTAINABILTY

- ▶ PHR Banks can use some screen display space for internal advertising
- ▶ PHR Banks can sell de-identified data
- ▶ PHR Banks can sell identified data with consumer consent (can share remuneration)
- ▶ PHR Banks can provide other online health services and charge consumer
- ▶ Providers can subscribe to RHIO to simplify access and receive other benefits
- ▶ Insurance industry can provide incentives for consumers and providers to use PHR
- ▶ Employers can elect to provide the service as a benefit

National Legislative HIT Environment

- ▶ No significant action during 1st Session (2007) of 110th Congress
- ▶ What to expect during 2nd Session (2008)?
 - ▶ S. 1693 (Wired for Health Care Quality Act)
 - ▶ Has passed HELP Committee
 - ▶ Awaiting full Senate Action; No House Action to date
 - ▶ H.R. 1467 (10,000 Trained by 2010)
 - ▶ Passed House
 - ▶ No Senate Action to date
 - ▶ S. 2408 (Medicare Electronic Medication and Safety Protection Act)
 - ▶ Introduced into both House and Senate

Top Issues

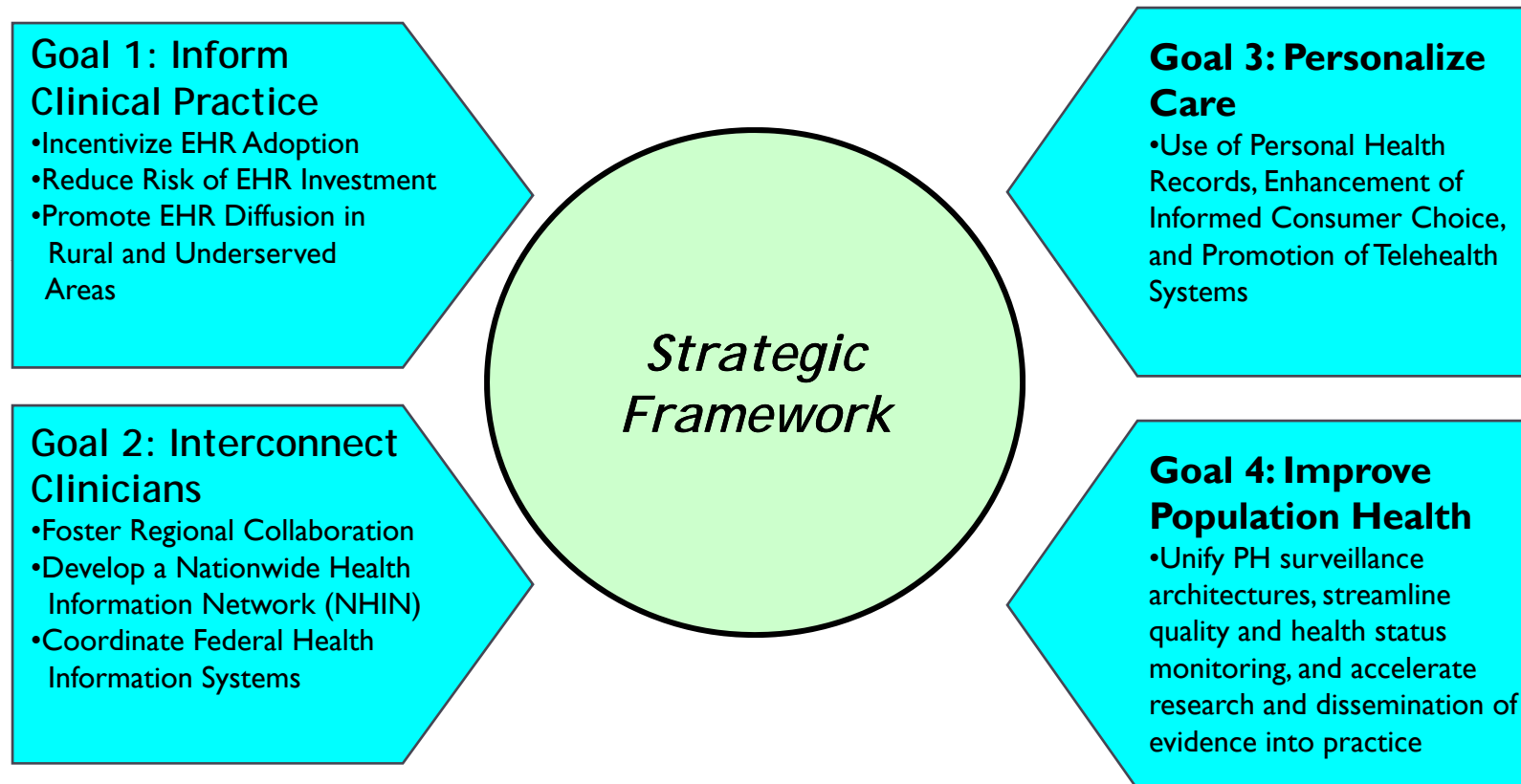
- ▶ **Privacy and Security**
 - ▶ Some are demanding that no healthcare legislation passes without patient guarantees to privacy and security
- ▶ **E-prescribing legislation will probably be attached to Medicare Physician Reimbursement Reform**
- ▶ **Office of National Coordinator for HIT and American Health Information Community could end in January 2009 unless both are codified into law.**

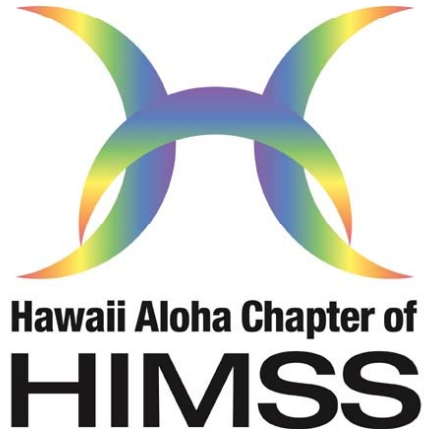
State Legislative HIT Environment

- ▶ **2008 Session** – Almost all states have introduced legislation that addresses an aspect of HIT, such as public health informatics, ePrescribing, privacy, standards, etc.

- ▶ **Prominent State HIT Legislation:**
 - ▶ **MASSACHUSETTS Senate Bill 263**
 - Establishes the Massachusetts eHealth Institute to develop a statewide plan for HIT (Introduced)
 - ▶ **NEW JERSEY Assembly Bill 4044**
 - Established New Jersey Health Information Technology Commission (Signed into law by Governor Corzine)
 - ▶ **NEW MEXICO House Bill 522**
 - Addresses the use of health information that resides on an EHR, such as individuals' rights regarding disclosure of health information and creates penalties for the unauthorized disclosure of health information (Introduced)

Publication of a Strategic Framework: July 2004





Christine Sakuda
Member

Information Officer, HPCA
President, HHIE

What is the HPCA?



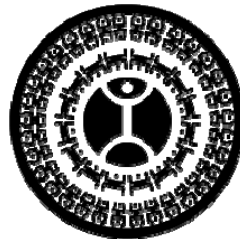
- ▶ Dedicated to fostering primary health care to all of Hawai`i's residents
- ▶ Represents health organizations and providers focused on primary care for medically underserved people
- ▶ Core membership of nonprofit multi-service Community Health Centers and Native Hawaiian Health Care Systems seeing nearly 100,000 patients annually on five islands.

Why is HPCA involved in HIE?

- ▶ To support growing health information system needs of CHCs:
 - ▶ Practice management systems
 - ▶ Electronic medical records
 - ▶ Disease registries
 - ▶ Telemedicine outreach
 - ▶ Membership communications through video-conferencing
 - ▶ Quality improvement initiatives
 - ▶ Bandwidth to support multiple clinic sites and information exchange
 - ▶ Continuity of care with other healthcare providers

What is the Holomua Project?

A partnership between community health centers (CHCs) and hospitals that is committed to improving health care for vulnerable patient populations transitioning between facilities by developing and implementing a Master Visit Registry (HMVR) (i.e., a patient record locator system).



Who is involved?

- ▶ **Community Health Centers**

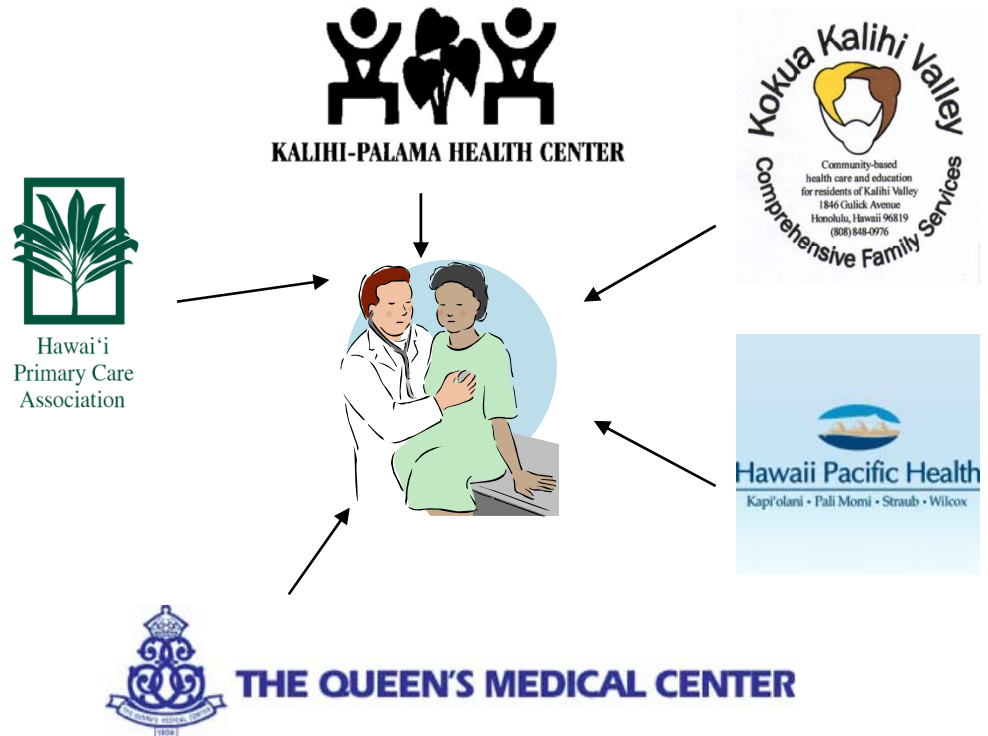
- ▶ Kalihi Palama HC
- ▶ Kokua Kalihi Valley HC

- ▶ **Hospitals**

- ▶ Hawai`i Pacific Health
- ▶ The Queen's Medical Center

- ▶ **Patient Community**

- ▶ **Grantee-Hawai`i Primary Care Association**



What kind of HIE is being developed?

▶ Master Visit Registry

- ▶ A connection broker between disparate sources
- ▶ A record locator service listing a patients history of visits
- ▶ Identifies the types of service and who provided service
- ▶ Patient information remains at host institution

What is the HMVR?

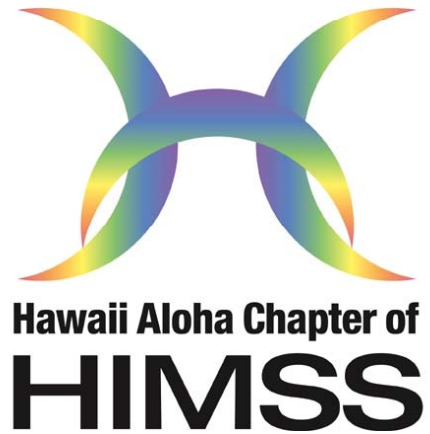
The HMVR allows the treating provider to review a list of the patient's visit history, identify which visit is pertinent to his/her case and contact the host Partner, via phone or electronically to request the patient's medical record.

The HMVR includes:

1. a Master Patient Index (MPI), which identifies what types of services the patient has had in the past, who provided it, and where it was provided using a matching patient algorithm; and
2. a Master Physician Index (MMDI), which is a list of all physicians in the Partnership who enter data into their organization's respective registry, each with a unique identification number.

What are the benefits of this HIE?

- ▶ Increase interoperability between health care facilities' health information systems.
- ▶ Address fundamental transitional patient care issues such as patients inadequately prepared for next care settings, conflicting advice for illness management, and inability to reach the right practitioner.
- ▶ Decrease adverse medical management/drug events after discharge.
- ▶ Decrease errors related to discontinuity: medication continuity, test result follow-up, and work-ups.
- ▶ Increase accuracy of discharge/transfer information conveyed to next setting.
- ▶ Increase patient awareness about health information technology and the impact it has on their transitional care.



Hawai`i Health Information Exchange

What is the HHIE?

- ▶ A group of healthcare leaders committed to improving healthcare in Hawai`i through the electronic exchange of health information technology

Who are members of the HHIE?

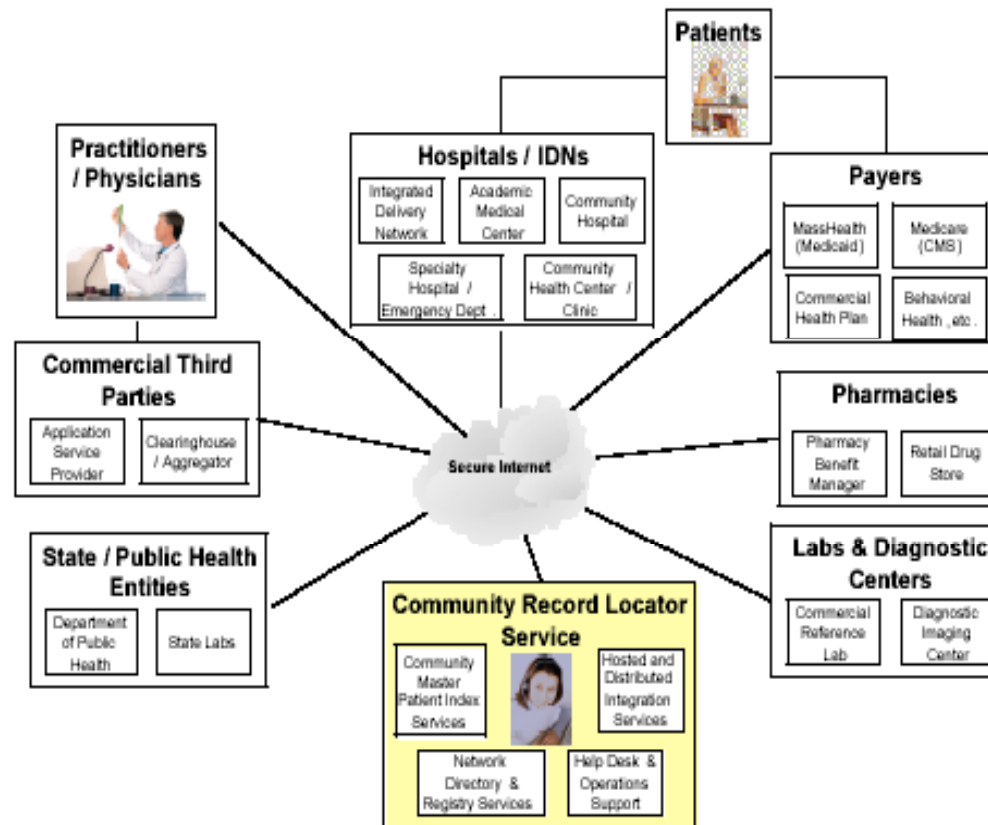
- ▶ **Laboratories**
- ▶ **Community Organizations**
- ▶ **Industry Experts**
- ▶ **Health Care Insurers**
- ▶ **Hospitals**
- ▶ **Ancillary Service**
- ▶ **Providers**
- ▶ **Physician Organizations**

HHIE Board of Directors (11/07)

- ▶ *Kevin Roberts* - Castle Medical Center
- ▶ *William Watkins* - Clinical Labs
- ▶ *Raymond Yeung* - DLS Labs
- ▶ *Gary Allen* - Hawaii Business Health Council
- ▶ *Susan Forbes* - Hawaii Health Information Corp.
- ▶ *William Donahue* - Hawaii Independent Physicians Association
- ▶ *Georgiana Fujita* - Hawaii Medical Services Assoc.
- ▶ *Steve Robertson* - Hawaii Pacific Health
- ▶ *Christine Sakuda* - Hawaii Primary Care Association
- ▶ *Kevin Roberson* - Hawaii Health Systems Corporation
- ▶ *Steve Hurlbut* - Phoenix Health Systems
- ▶ *Creighton Arita* - Team Praxis
- ▶ *Allan Shiraishi* - Queens Medical Center
- ❖ *Dew-Anne Langcaon* - Pacific-Cap Management, Inc.
- ❖ *Skip Keane*
- ❖ *Ron Hiranda*

Where is HHIE now?

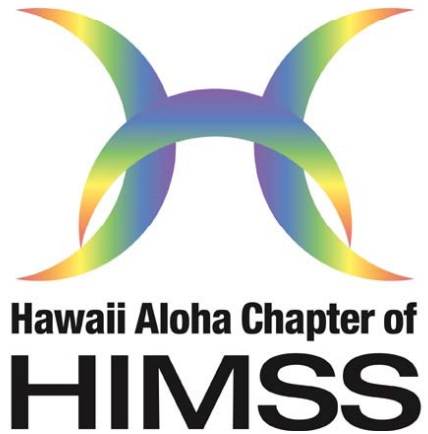
- ▶ Board organization
- ▶ Applying for 501c3 status



Key HHIE Goals

- ▶ Coordination of complex technical, political, financial and social issues of HIE
- ▶ Build privacy and security into the business and technical infrastructures so legal requirements and public expectations related to privacy and security are met.
- ▶ Build trust and goodwill among members
- ▶ Create a platform for shared investment and financial sustainability.

Note: The objective of HHIE is NOT to create a single, statewide community data repository. A guiding principle for HHIE is that individual organizations maintain ownership, control, and accountability to their patients and physicians for the data in their systems.



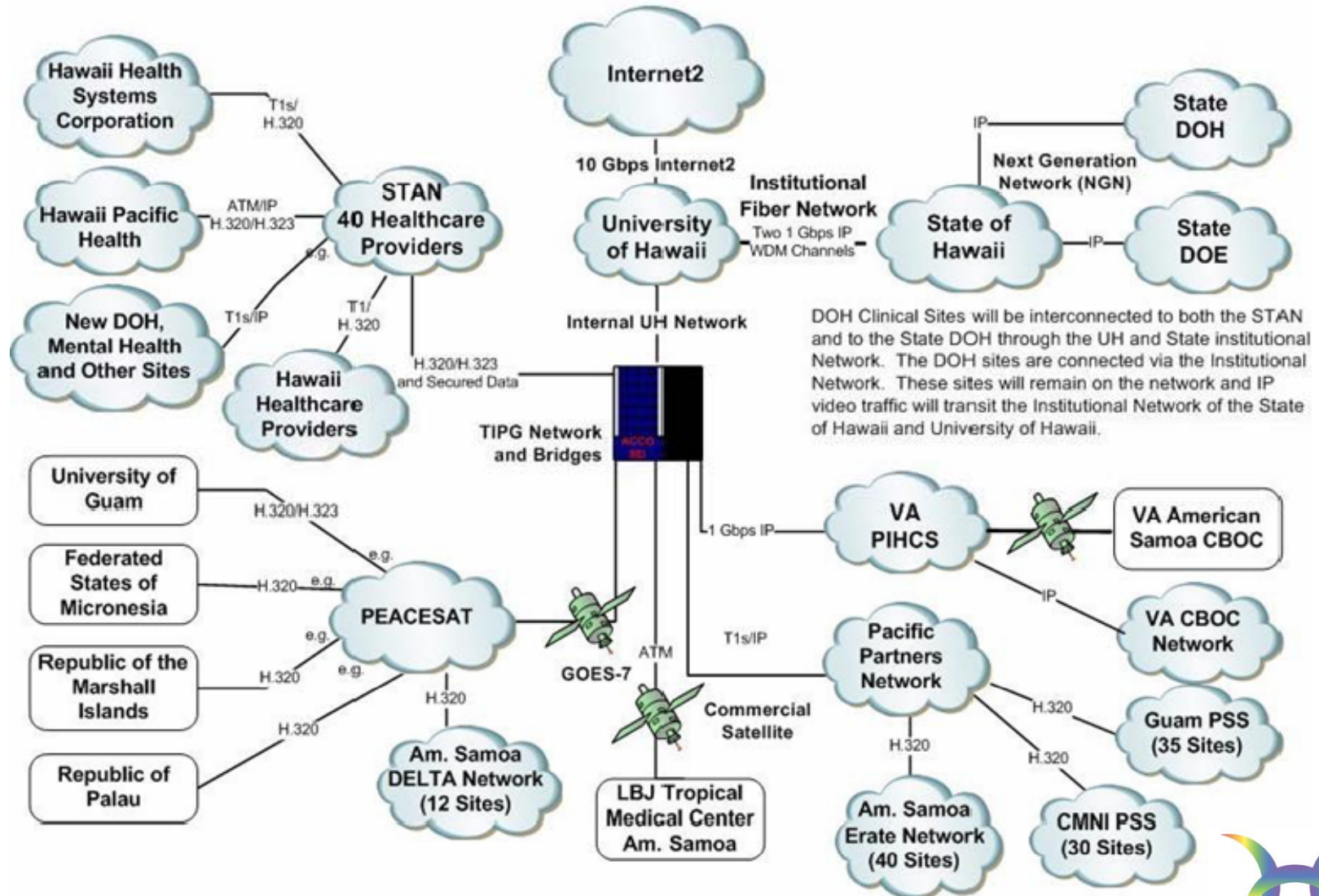
Dale Moyen
President-Elect

Manager of Telehealth & Media Services, HPH

Broadband Access for Healthcare: What is Hawaii Doing?

- ▶ FCC Pacific Broadband Telehealth Demonstration Project (PBTDB) - \$4.7 Million over 3 years / University of Hawaii is Lead
 - ▶ Telemedicine, Video Conferencing, Distance Education, & EHR
 - ▶ Will interconnect 97 sites in Hawaii & Pacific
 - ▶ Will provide min TI (1.5Mbps) within Hawaii
 - ▶ Will Interconnect 7 existing networks:
 - ▶ State Telehealth Access Network
 - ▶ Hawaii Health Systems Corporation Network
 - ▶ Hawaii Department of Health Network
 - ▶ Next Generation Network of the Hawaii State Government
 - ▶ VA Pacific Island Health Care System Network
 - ▶ Hawaii Pacific Health Network
 - ▶ Pan Pacific Education and Communication Experiments by Satellite.
- ▶ FCC Joint Advisory Committee on Communications Capabilities of Emergency Medical & Public Health Care Facilities
- ▶ Hawaii Telehealth Consortium – Advancing Telehealth in Hawaii

Figure 3 – Conceptual Representation of the FCC Pacific Broadband Telehealth Demonstration Project



DOH Clinical Sites will be interconnected to both the STAN and to the State DOH through the UH and State institutional Network. The DOH sites are connected via the Institutional Network. These sites will remain on the network and IP video traffic will transit the Institutional Network of the State of Hawaii and University of Hawaii.



Why does Broadband Matter for Healthcare in Hawaii?

- ▶ Provides remote access to Specialty Care and Physicians where none exist
- ▶ Supports Telehealth and EMR / PHR Access as well as Medical Education
- ▶ Opens door to new Healthcare Applications:
 - ▶ Remote Monitoring
 - ▶ Disease Management
 - ▶ Nursing Home Monitoring & Telehealth – Waitlist problem
 - ▶ Electronic ICU / Trauma Care / MRI & CAT Scan electronic image transfer
 - ▶ Physician to Physician / Physician to Patient Consultations
 - ▶ Healthcare without boundaries
- ▶ Provides direct broadband communications from any FCC PBTDP site to any other site on the network. Easy, quality connections at minimal cost.
- ▶ Supports emergency medical communications and information sharing during natural disasters, pandemics, and other disruptive events.
- ▶ Hawaii and the U.S. are falling behind other developed countries.
- ▶ Will help assist and mitigate impending Physician and Nursing Shortages.



Broadband for Healthcare - Challenges & Roadblocks

- ▶ **Technology**
 - ▶ Current Public Broadband Infrastructure needs to be upgraded
 - ▶ Some areas on the mainland have greater than 10Mbps to the home
 - ▶ New high speed broadband wireless technologies needed
 - ▶ Interoperability
 - ▶ Even though systems are connected they cannot talk to each other
 - ▶ Competing Standards and technologies
 - ▶ Vested interests in current broadband infrastructure
- ▶ **Business Process Support of Telehealth**
 - ▶ Physician acceptance of new ways to deliver healthcare
 - ▶ Medical Reimbursement of Telehealth Services
 - ▶ Coverage of Telehealth Services by Malpractice Insurance
- ▶ **Sustainability – how does all this get paid for?**
 - ▶ Initial implementation = grants such as FCC PBTDB
 - ▶ Long Term = monthly subscription fees

How You Can Help

- ▶ Support Current Hawaii Initiatives and Activities
- ▶ Encourage Continued Development of Hawaii Broadband Infrastructure
 - ▶ Tax Incentives and Credits – Act 221?
 - ▶ Hawaii High Tech Development Corporation
- ▶ Assist to remove Roadblocks
- ▶ Fund Department of Health and Hawaii Healthcare System Corporation Broadband Infrastructure Improvements
- ▶ Support / Legislate Standards for Interoperability
- ▶ Utilize Broadband Infrastructure Federal Initiatives and Grants for Hawaii
 - ▶ Homeland Security
 - ▶ FCC
 - ▶ Others

Broadband Matters! Thank you for your support

