

# Health Information Technology and Telehealth: Converging Priorities

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Health Resources and Services Administration  
Office of Health Information Technology  
Office for the Advancement of Telehealth**



# Vision for America

**NO MATTER WHO YOU ARE  
OR  
WHERE YOU ARE  
YOU GET  
THE HEALTH CARE YOU NEED  
WHEN YOU NEED IT**

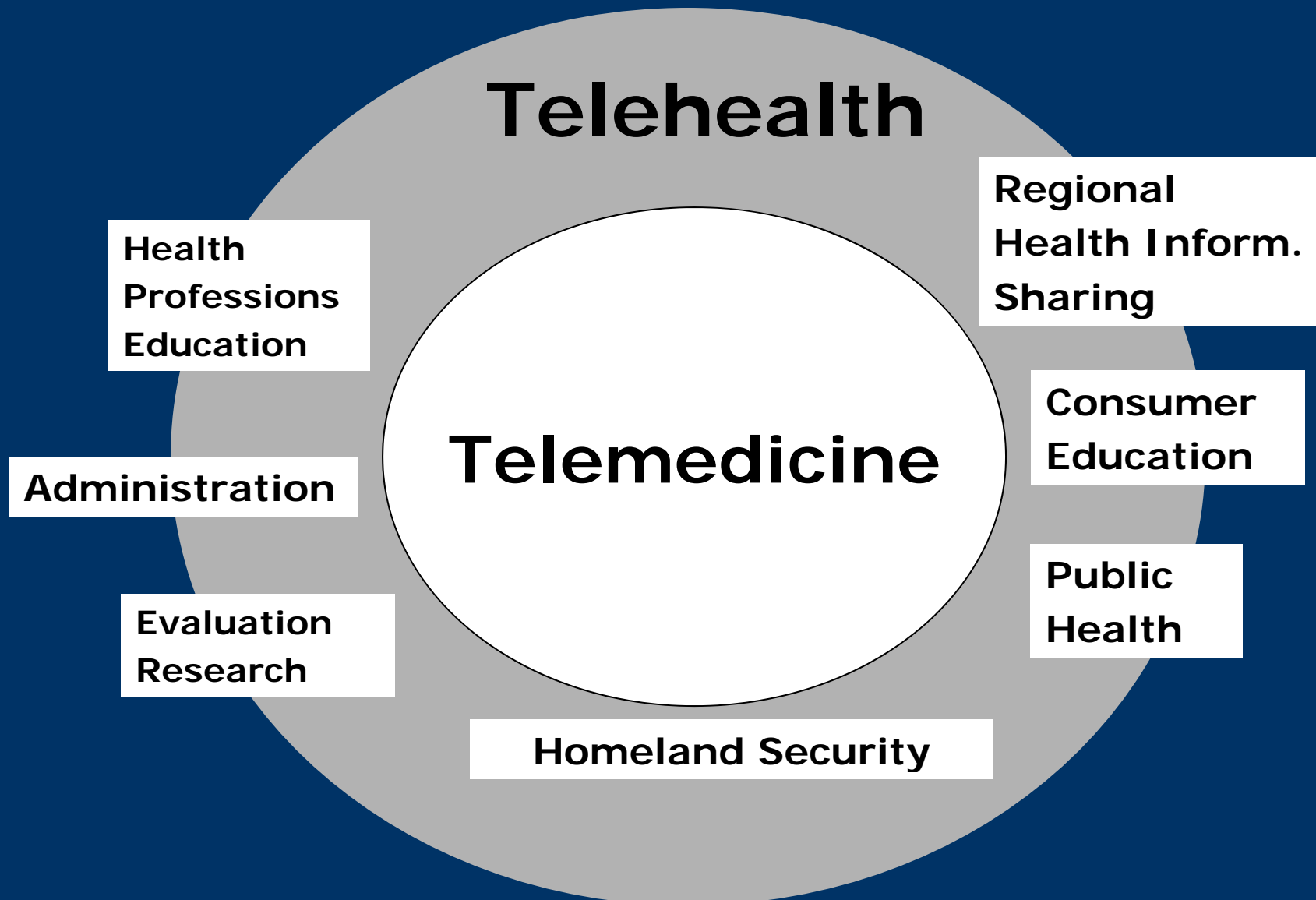
# Challenges to Effective Care in US

- **Access: Persistent Geographic and Functionally Isolated Populations**
- **Aging Population: By 2030, 70 million Americans estimated to be over age 65 (20% of population)**
- **Provider Shortages: By 2020, RN nurse shortage estimated to reach 1 million**

# Challenges to Effective Care in US

- **Baby Boomer Impact by 2020:**
  - Account for more than 40% of all physician visits
- **Baby Boomer Impact by 2030:**
  - 14 million will have diabetes
  - 26 million will have arthritis
  - More than 21 million will be considered obese/care will cost Medicare 34% more than for others
  - Knee replacements will increase 800% from today

# Telehealth vs. Telemedicine



# Definitions

- **Telemedicine:** The use of Telecommunications and information technologies to provide clinical services when distance separates the participants.
- **Telehealth:** The use of telecommunications and information technologies to support health care services when distance separates the participants.

# History of U.S. Involvement in Telehealth

- **Initiated telemedicine**
  - Dates back to 1880s after invention of the telephone
- **Early U.S. Telehealth/Telemedicine**
  - **Nebraska Medical Center - 1955**
  - **Massachusetts General Hospital/Logan International Airport Medical Station - 1967**
  - **Space Technology Applied to Rural Papago Advanced Health Care (STARPAHC) – 1972-1975**
  - **Alaska ATS-6 Satellite Biomedical Demonstration – 1971**
  - **Texas Tech -1989**

## Some telemedicine facts...

- **Almost 50 different medical subspecialties have successfully used telemedicine.**
- **There are approximately 200 active telemedicine networks in the United States, excluding purely radiology networks.**
- **Of these, estimates are that about half are actively providing patient care services on a daily basis.**

# A Different Kind of Toolbox

- *Telehealth can be thought of as a tool box of technologies applied to diverse health care needs in a wide range of settings to connect people to improve access to health care services.*

# Educational and Administrative Uses



Providers can receive continuing education without the need to travel.

- Continuing education
- Patient education
- Administrative meetings

# Real-Time Telemedicine



**Remote doctor examines a patient's inner ear from a remote location.**



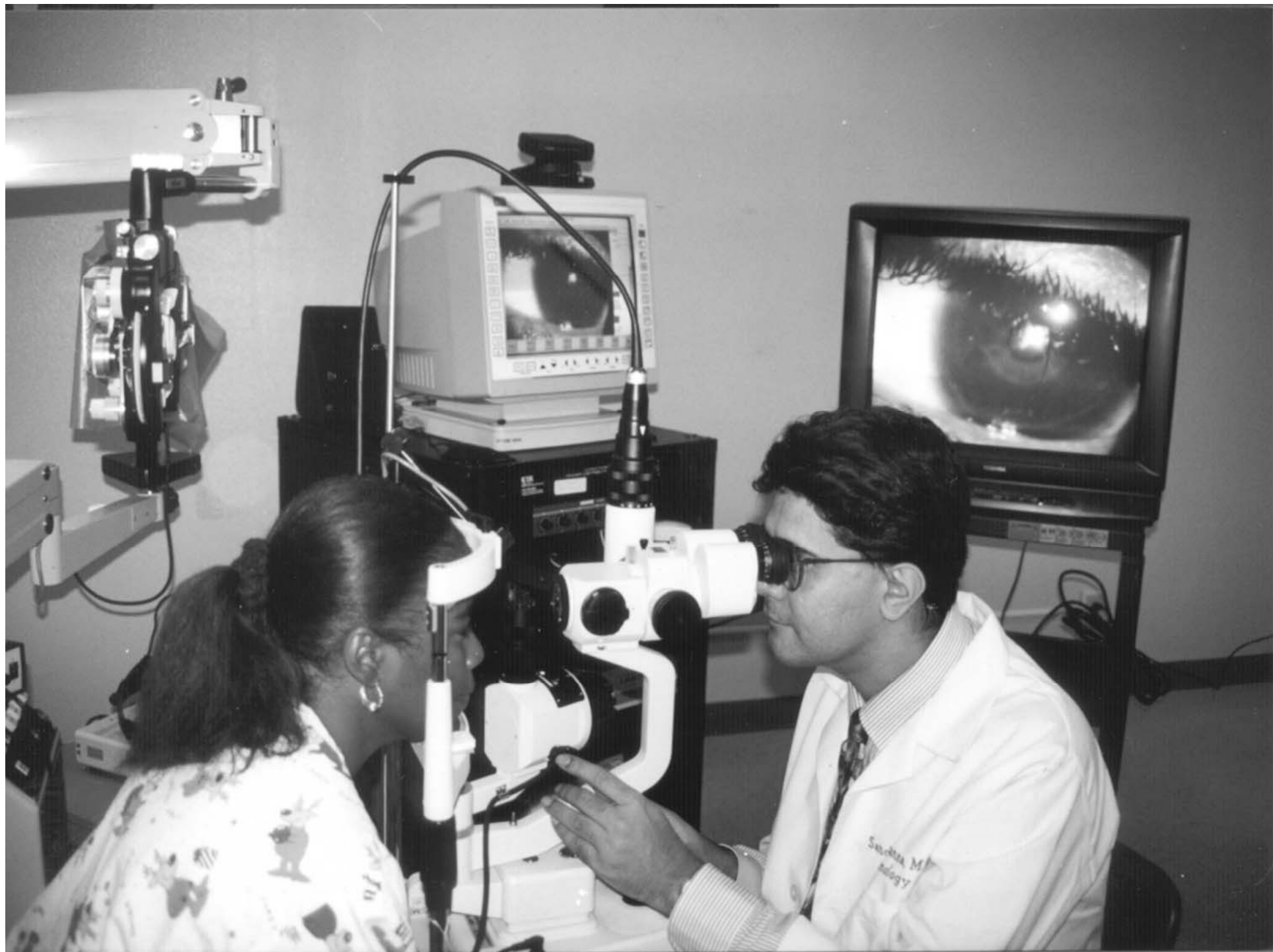
**Patient in rural ER gets benefit of local care plus remote consultation with specialists.**

# Store-and-Forward

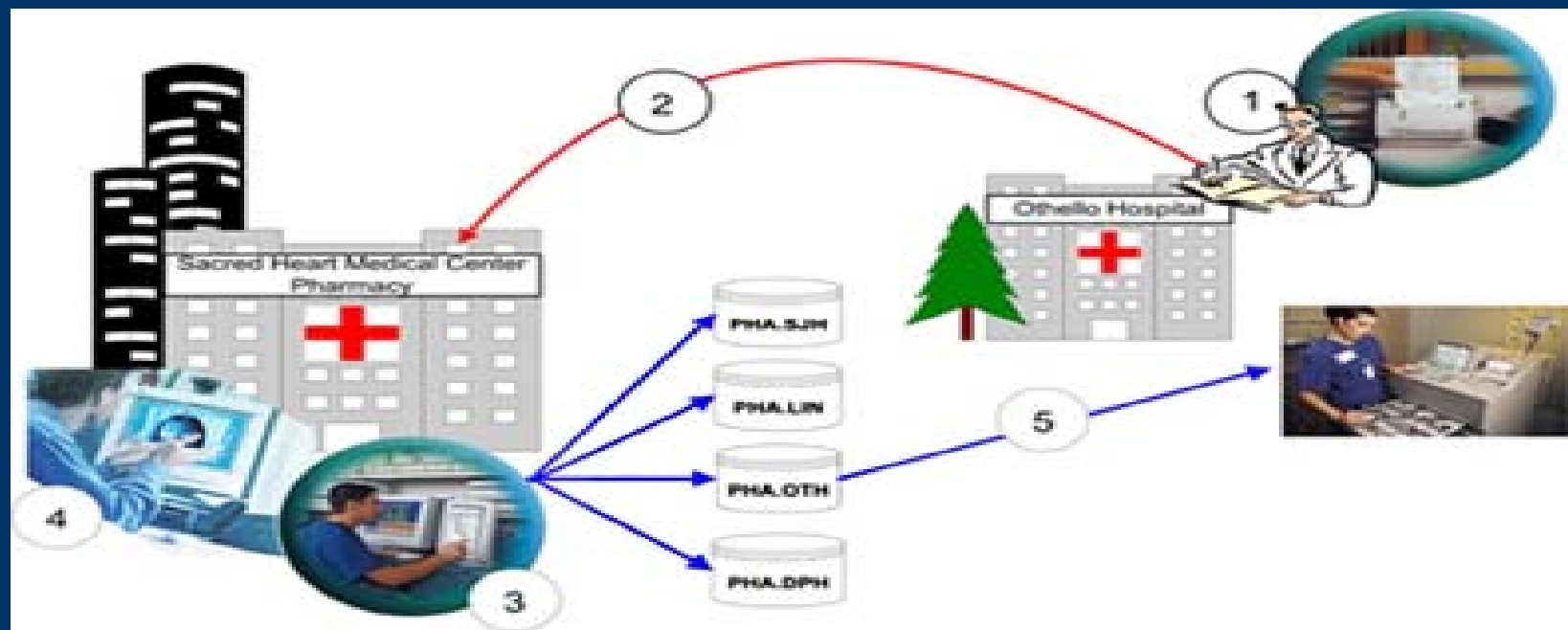


Clinician reviews scan which was forwarded for consultation.

- Primary care provider takes a still image and sends it to a consulting physician who later reviews it
- No real time interaction between patient & consultant
- Commonly used for dermatology, radiology



# Inland Northwest Telepharmacy System



1. Physician writes prescription which is scanned using PyxisConnect, Nurse enters physician order into rural hospital's database.
2. Scanned image is transmitted to SHMC Pharmacy.
3. Pharmacist at SHMC views the scanned image and reviews order using PyxisConnect.
4. Pharmacist and Doctor/Nurse can consult on the order using PolyCom video link.
5. Order is transmitted to Pysix MedStation for verification and dispensing by nursing staff.

# Emerging Technology Applications

- **Emphasis on low cost applications/Consumer friendly**
- **Applications that improve quality of care**
- **Integration of information systems within institutions and across health care institutions**

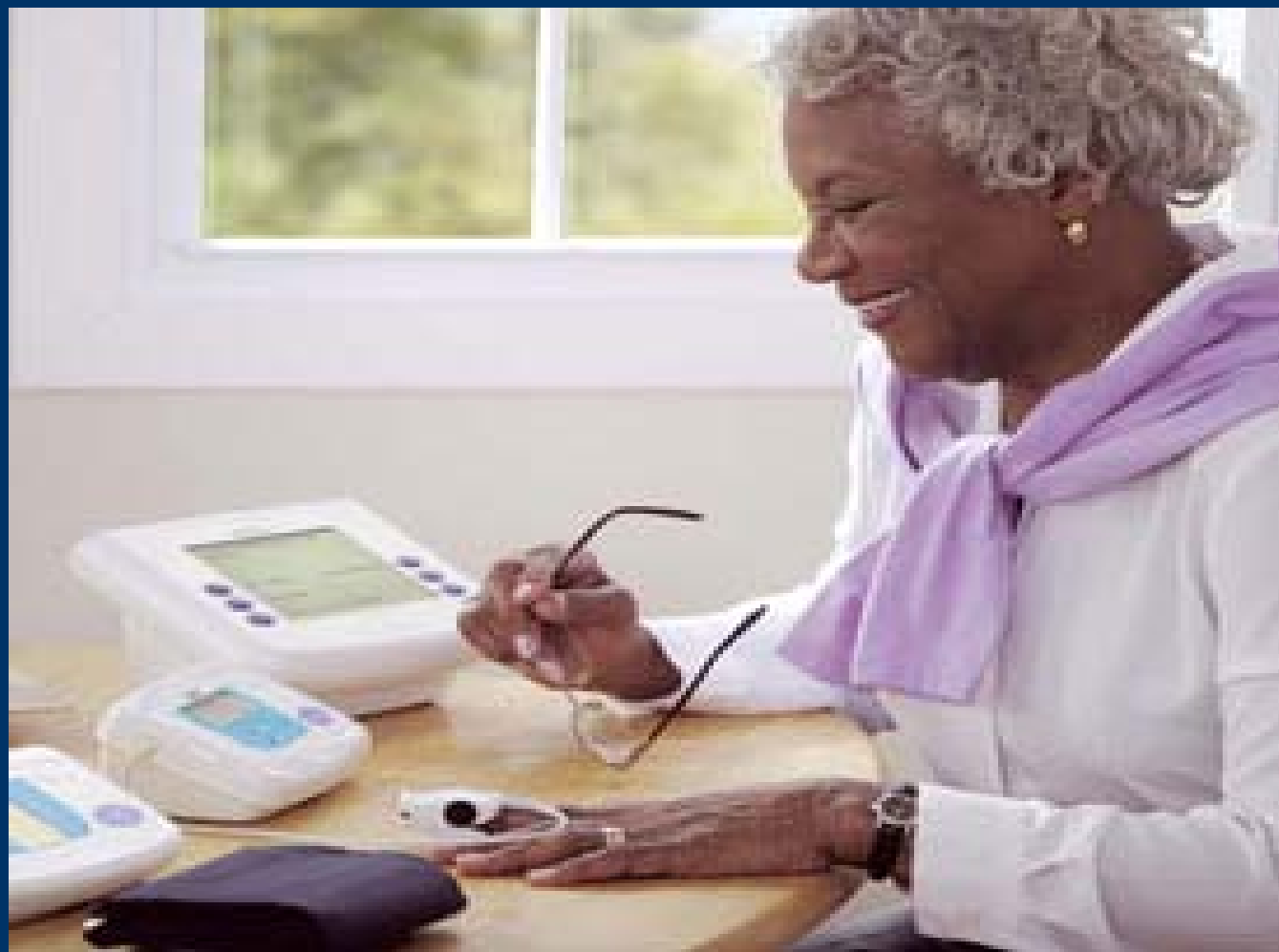
# Home Health



Patient and nurse interacting during a "video home visit."

- Low-cost equipment that needs only a regular phone line
- Used to check vital signs, monitor medications, visualize patient, provide enhanced support

# Disease Management



# Weight Chair



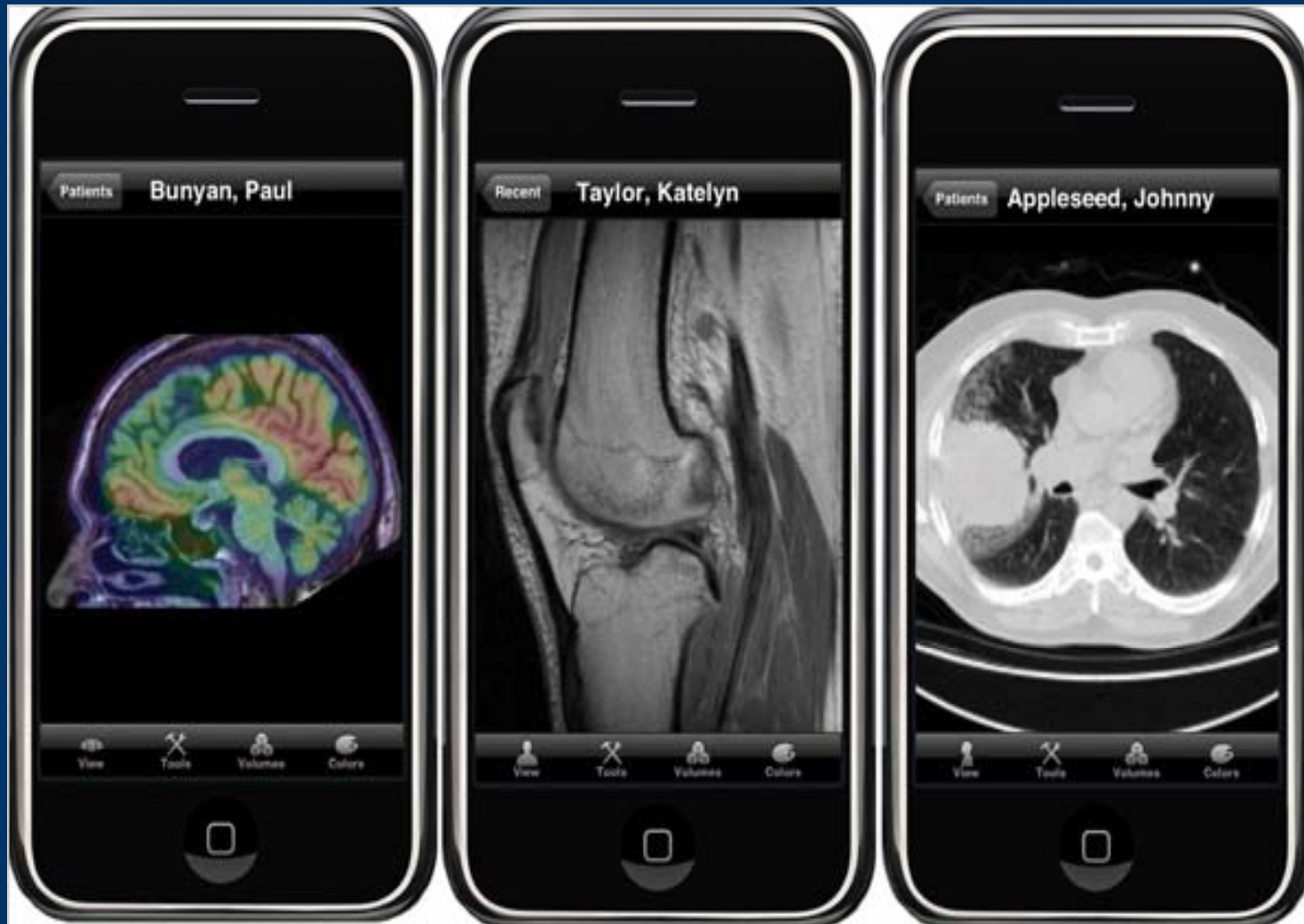
# Moray Telehealth Project



# Informatics



# Informatics

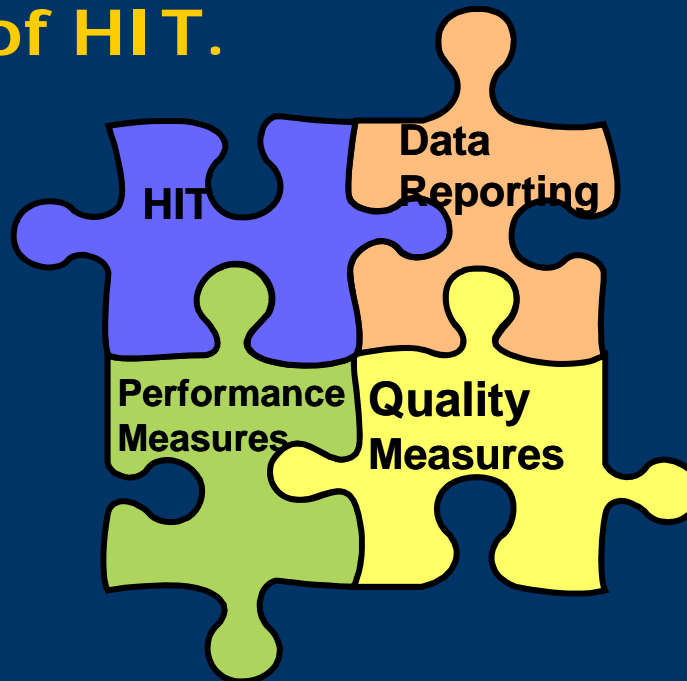


# What Do We Do

- Award planning and implementation grants for telehealth, electronic health records, and other health information technology innovations
- Provide technical assistance to HRSA grantees and staff (e.g., project officers and Office of Performance Review) related to effective HIT adoption and Federal and state policies and legislation
- Provide leadership and representation for HRSA grantees with Federal and state policymakers, researchers, and other stakeholders

# HRSA HIT Quality Strategy

HRSA's goal is not simply to collect data; it is also important that the data be used to track individual and population health outcomes and improve patient care. The long-term vision of HRSA and OHIT is to transform systems of care for safety-net populations through the effective use of HIT.



# Advancing HIT through Networks

- **Why Networks?**
  - Collaboration of health centers and other safety net providers
  - Economies of scale/cost efficiencies/volume
  - Enhanced efficiencies in business and clinical core areas
  - Higher performance and value
  - Sharing of expertise and staff among collaborators

# Division of State and Community Assistance (DSCA) FY 09 Grant

- **Division of HIT State and Community Assistance offered the following grant opportunities in FY 2009:**

- **Electronic Health Record Implementation for Health Center Controlled Networks Grant  
Release Date: Jan 5, 2009**
- **Health Information Technology Implementation for Health Center Controlled Networks Grant  
Release Date: Feb 2, 2009**

# EHR Implementation Grants

- **Eligibility**
  - Health Center Controlled Networks
  - Large multi site health centers with 30 or more sites
- **Objective**
  - To implement electronic health records (EHRs)
- **Project Period**
  - 1 Year
- **Activities Supported by Grant**
  - Has chosen a CCHIT-certified EHR system and needs additional funds for purchase, training, hardware, and conversion process from paper to electronic
  - Includes networks interested in spreading their capacity to other centers, via ASP or other means

# HIT Implementation Grant

- **Eligibility**
  - Health Center Controlled Networks
  - Large Multi Site Health Center with 30 or more sites
- **Objective**
  - To improve quality of care and health outcomes via effective use of HIT
- **Project Period**
  - 3 years
- **Activities Supported by Grant**
  - EHR Implementation
  - Early HIT Innovations
  - Advanced HIT Innovations
  - EHR Quality Improvement Project

# HIT Implementation Grant

- **Category 1 EHR Implementation\***
  - Chosen a CCHIT-certified EHR system and needs additional funds for purchase, training, hardware, and conversion process from paper to electronic.
- **Category 2 Early Innovations\***
  - Implement projects such as e-prescribing or a disease registry for those orgs that have no HIT infrastructure in place.
- **Category 3 Advanced Innovations\***
  - Enhances and/or builds upon current HIT capacity such as: personal health records, health information exchanges, smart cards, electronic mental or oral health record, or telehealth.
- **Category 4 EHR Quality Improvement Projects\***
  - Supports the utilization of data from an existing CCHIT-certified EHR to improve individual and population health outcomes. Funding enables providers to strengthen existing QI activities to use the data from the EHR to enhance preventative services and health outcomes for health center individuals.

# HRSA Telehealth Grant Awards

- First awards made by ORHP in 1989
- Awarded over \$250 million in grants since 1989
- HRSA created Office for the Advancement of Telehealth as a focal point for Telehealth activities in 1998
- Competitive and Congressionally-mandated projects

# Telehealth Grants (FY 2009)

- **Telehealth Resource Center Grant Program**
  - 3-Yr Grants
- **Telehealth Network Grant Program (including home health)**
  - 3-Yr Grants
- **Licensure Portability Grant Program**
  - 3-Yr Grants
- **Licensure Portability ARRA Initiative**
  - 2-Yr Grants

# HIT Technical Assistance

## Center

- Provide consistent HIT TA to HRSA grantees.
- TA "One to Many" Webinars
  - Slides, transcripts and recordings of calls are on the HRSA Health IT Community.
- Directly provides peer-to-peer technical assistance to obtain TA from an experienced peer in HIT or refers to Telehealth Resource Center
- Consultant technical assistance to obtain TA from an experienced consultant in HIT.
- Develop and maintain HRSA HIT Community including related Toolboxes and Modules.

# HRSA Health IT Toolbox

- A comprehensive online compilation of health IT planning, implementation and evaluation resources to support the implementation of health IT for safety net providers.
- The HRSA Health IT Toolbox is available to the

# Toolbox Landing Page



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Advancing Excellence in Health Care

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**AHRQ NATIONAL RESOURCE CENTER** **HEALTH INFORMATION TECHNOLOGY** **HRSA** Health IT Community

ADD THIS 

**Rural Health IT Adoption Toolbox**

- About the Toolbox
- Introduction to Rural Health
- Getting Started
- Health IT Selection and Implementation in Rural Settings
- Project Management and Staffing
- Opportunities for Collaboration
- Patient Quality Improvement, Evaluation and Optimization in Rural Settings

**Related Links**

- » [AHRQ-NRC Home](#)
- » [Health IT Adoption Toolbox](#)
- » [Health IT for Children Toolbox](#)
- » [Rural Health IT](#)

You Are Here: [Home](#)

Welcome to the Rural Health IT Adoption Toolbox, developed by the Office of Rural Health Policy (ORHP) in the Health Resources Services Administration (HRSA). This resource is meant to serve rural health providers seeking to implement health IT to improve the overall effectiveness of their institutions. We have organized this resource in a question-and-answer format and have attempted to compile a range of resources relevant to all stages of considering, planning, executing, and evaluating the implementation of health IT.

**Rural Health IT Adoption Toolbox Modules**

|  |   |
|--|---|
|  <p>➔ <b>1. Introduction to Rural Health</b></p> <p>This module provides an introduction to health IT adoption in rural settings, including Federal Government initiatives to support rural health providers.</p> |  <p>➔ <b>4. Project Management and Staffing</b></p> <p>This module describes how to set-up and manage a project team for implementing and EHR in a rural setting, including ways to overcome staffing limitations.</p> |
|  <p>➔ <b>2. Getting Started</b></p>   |  <p>➔ <b>5. Opportunities for</b></p>  |

**Search the Toolbox**

**Plug-in or Viewer**

If you have trouble viewing/downloading files from the toolbox; please select the appropriate plug-in or viewer.

- [Acrobat Reader](#)
- [MS Word Plug-in](#)
- [MS Excel Plug-in](#)
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# HIT TA Toolboxes/Modules

## –Current Toolbox

- Health IT Adoption Toolbox
- Rural Health
- Children's Health IT Toolbox

## –Upcoming Toolboxes

- Telehealth

## –Upcoming Modules for the Health IT Adoption Toolbox

- Network Development
- Personal Health Records
- e-prescribing
- Quality through HIT

# Rural Toolbox Modules

- The toolbox is organized into the following six modules:
  - Introduction to Rural Health
  - Getting Started
  - Health IT Selection and Implementation in Rural Settings
  - Project Management and Staffing
  - Opportunities for Collaboration
  - Patient Quality Improvement, Evaluation and Optimization in Rural Settings
- Question-and-answer framework is designed to help users find the information they need at various phases of a health IT implementation project

# EHR and Telehealth Regional Workshops

- Two-day, small group (less than 50 attendees), interactive workshops on EHR implementation and other HIT topics such as telehealth, school-based health, HIV/AIDS, rural health, health information exchange, and electronic prescribing
- OHIT partners with Health Center Controlled Networks, Telehealth, and other HRSA

# Telehealth Resource Centers

- **ARIZONA TELEHEALTH RESOURCE CENTER**
- **CALIFORNIA TELEHEALTH AND E-HEALTH CENTER**
- **CENTER FOR TELEHEALTH & E-HEALTH LAW**
- **MIDWEST ALLIANCE FOR TELEHEALTH AND TECHNOLOGIES RESOURCES**
- **NORTHEAST TELEHEALTH RESOURCE CENTER**
- **GREAT PLAINS TELEHEALTH RESOURCE CENTER**
- **NORTHWEST TELEHEALTH RESOURCE CENTER**

## Summary of American Recovery and

- **Total \$19.2 billion for HIT, including:**
  - **\$2 billion for the Office of the National Coordinator (ONC) HIT Funding**
  - **\$2 billion to HRSA to expand some primary health care programs, \$300 million to support the National Health Service Corps and \$200 million for health professions programs.**
  - **\$17.2 billion for incentives through Medicare and Medicaid reimbursement systems**
    - **Providers must demonstrate meaningful use of certified EHR technology**
- **Provides grant and loan programs to assist providers and consumers in adopting & utilizing HIT**
- **Privacy and security provisions for electronic health information**

# Summary of ARRA HIT Funding (cont)

- Additional HIT funding
  - \$4.7 billion for Broadband Technology Opportunities Program (NTIA)
  - \$2.5 billion for US Department of Agriculture Distance Learning, Telemedicine, Broadband Grant Program
  - \$500 million for Social Security Administration
  - \$85 million for Indian Health Service
  - \$50 million for Veterans Administration

# Technical Assistance/Information

<http://www.HRSA.gov/telehealth>

<http://healthit.ahrq.gov/>

## Grants Information

<http://www.grants.gov>

# Other Resources

- **American Telemedicine Association**

<http://www.atmeda.org>

# Do Telehealth/EHRs “Work”

- Answers are dependent on clinical service, setting, and implementation
- What we think we know:
  - Telehealth services can improve access in rural communities
  - Telehealth/EHRs can improve quality of care
  - Telehealth services/EHRs do not necessarily improve productivity; depends on workflow design
  - Telehealth: Cost-effectiveness shown in closed systems, such as the VA, Kaiser, and limited small studies of non-closed systems - “free-world.”

# Why is Implementing Telehealth and EHR Technologies Complicated?

- **Implementation can be costly, complicated, and time consuming**
- **Getting clinician buy-in can be difficult with some providers**
- **Successfully implementing and meaningfully using these technologies requires significant changes in how the medical practice operates**
- **Safety-net providers often operate on narrow financial margins and have many competing priorities, e.g., patient care, other operational initiatives**
- **There is an over-abundance of information about these technologies and few trusted resources**

# Key Challenges

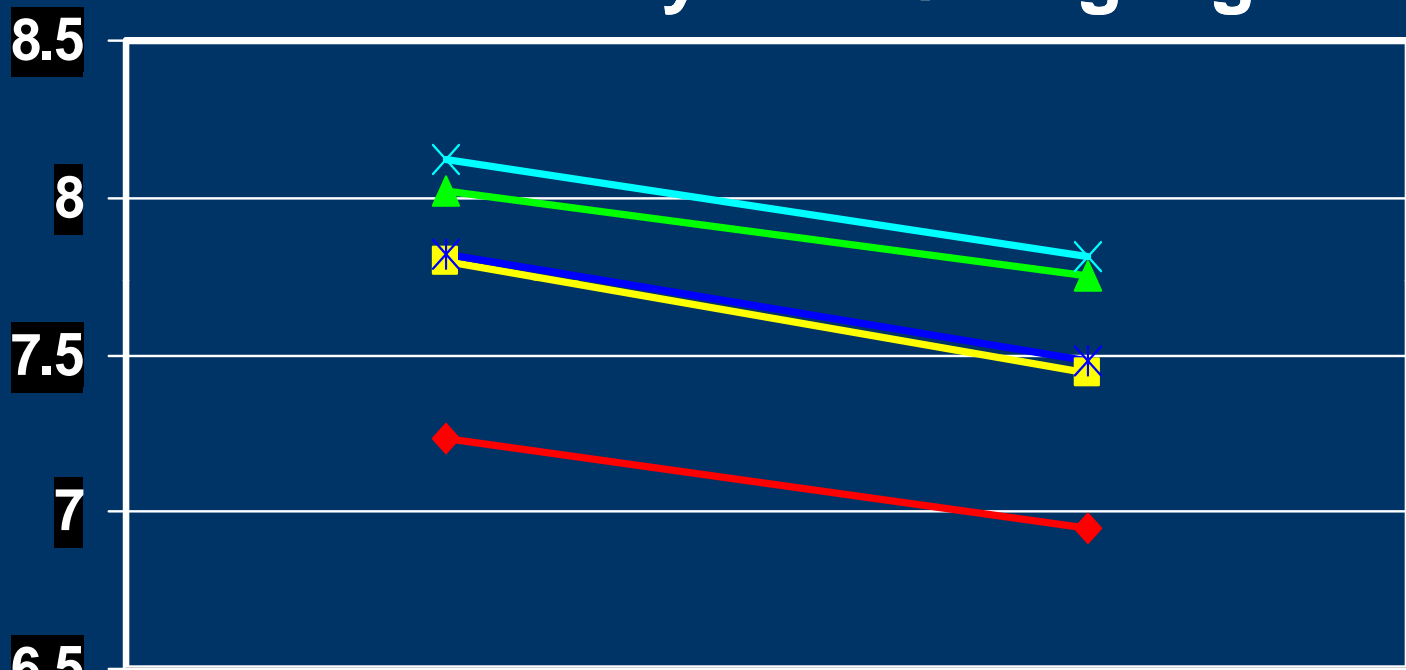
- **Reimbursement/Start-up Costs**
- **Infrastructure**
- **Re-engineering Practice/Clinical Acceptance**
- **Evaluating cost/effectiveness, value-added**
- **Financial Sustainability**
- **Licensure/credentialing/scope of practice**
- **Health Information Exchange at "Point of Care"**

# Addressing Telehealth Challenges: Demonstrating Value- Added

## Improve Clinical Acceptance:

- Demonstrate efficacy in broader range of clinical services and settings
- Reengineering Practice
  - Impact of Telehealth on work-flow and productivity
- Financial Sustainability:
  - Cost-effectiveness/not simply reducing costs
  - Alignment of incentives
- Workforce:
  - Address health professions shortages and maldistribution in light of increased demand due to demographics and expanded coverage

# Family Health Institute Reductions in HgbA1c with Treatment by Race /Language



|              | 1st HgbA1C | Most Recent |
|--------------|------------|-------------|
| White        | 7.23       | 6.95        |
| Black        | 7.80       | 7.44        |
| Latino-Eng   | 8.02       | 7.75        |
| Latino- Span | 8.12       | 7.81        |
| Other        | 7.82       | 7.48        |



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