Understanding the Value of Health IT

An Educational Module for Long-Term and Post-Acute Care Providers

Understanding the Value of Health IT: Overview

- **Module 1: Current Health Care Landscape and Value of Health IT for LTPAC**
  - What is Health IT? Why is It Important in LTPAC Settings?
  - Understanding Drivers, Key Policies, and Regulations Related to Health IT and LTPAC
  - Case Study #1: Coordinated Care Oklahoma
- **Module 2: Health IT Adoption and Implementation**
  - National EHR Adoption Perspective
  - State-based EHR Adoption and Implementation
  - Health IT Adoption Challenges
  - Health IT Adoption Resources
  - Case Study #2: Camelot Brookside Care Center
- **Module 3: Health Information Exchange Adoption and Implementation**
  - What is Health Information Exchange? Why is It Important for LTPAC?
  - National HIE Adoption Perspective
  - Federal and State-based LTPAC HIE Implementations
  - Why is Patient Engagement Important for LTPAC
  - Case Study #3: CORHIO

Purpose and Goals

- The purpose of this educational module is to help early adopter LTPAC providers better understand the value of health information technology (health IT) and health information exchange (HIE).
- The module contains resources and information for LTPAC providers seeking to adopt and implement health IT.
- The goal of this module is to help LTPAC providers prepare for success in today's evolving health IT and value based payment environment.

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The **Office of the National Coordinator for Health Information Technology** (ONC) is the principal federal entity charged with coordination of nationwide efforts to implement and use health information technology and the electronic exchange of health information. For more information, visit www.HealthIT.gov.

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ONC recognizes the challenge for any one module to meet the needs and interests across the range of LTPAC provider types, agencies, and organizations especially given differences in size, geographic challenges, readiness for change, and financial resources. ONC invites you to use these materials wholly, or in part, and incorporate them into teaching materials to support your setting.

References or links in this module to any specific non- Federal entity, commercial product, process, service, or company do not constitute their endorsement or recommendation by the U.S. Government or the Department of Health and Human Services (HHS). HHS is not responsible for the content of any "off-site" website linked to in this presentation, nor is HHS responsible for such other website's compliance with section 508 (accessibility).

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MODULE 1: CURRENT HEALTH CARE LANDSCAPE AND VALUE OF HEALTH INFORMATION TECHNOLOGY FOR LTPAC

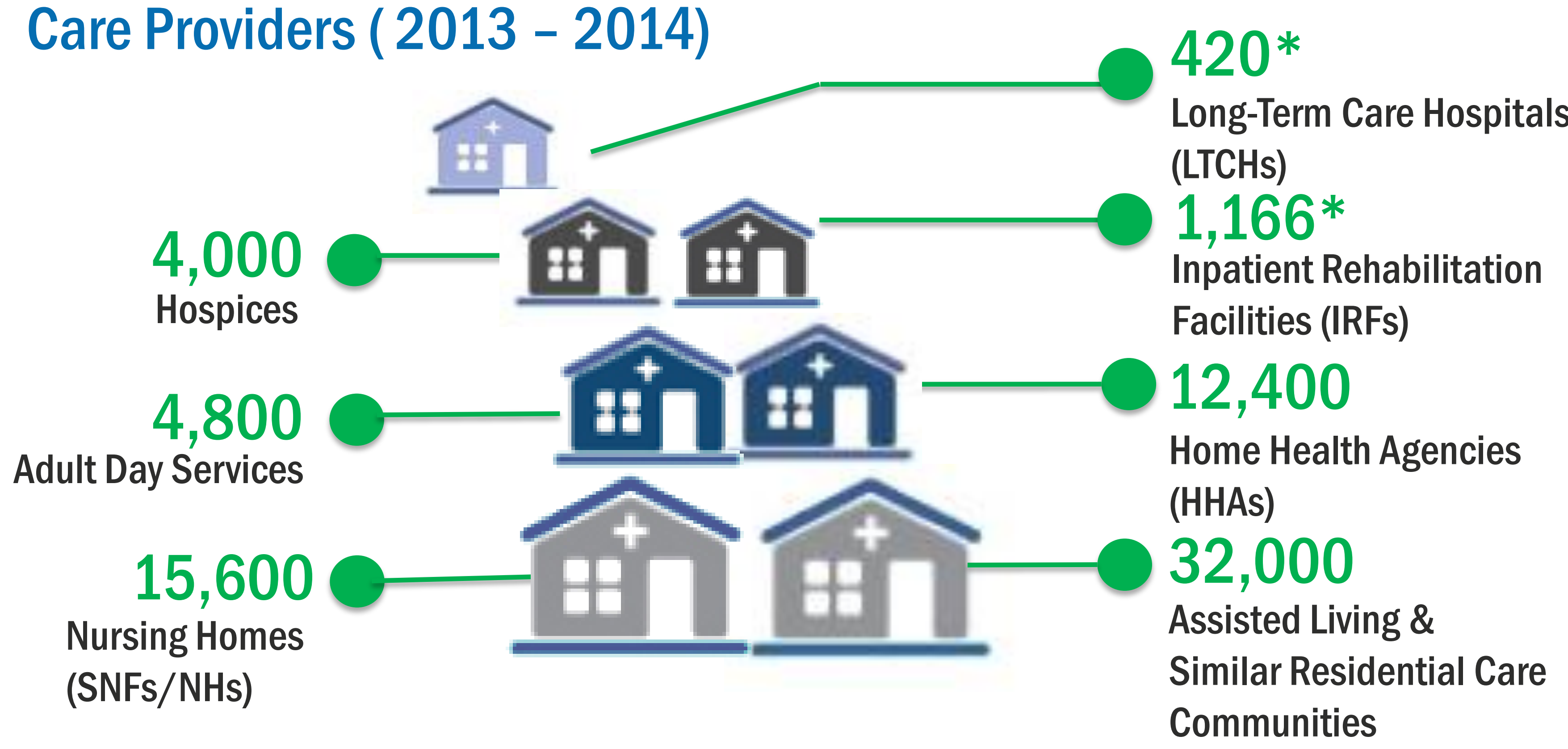
Module 1: Learning Objectives

Current Health Care Landscape and Value of Health IT for LTPAC

- What is Health IT? Why is It Important in LTPAC Settings?
- Understanding Drivers, Key Policies, and Regulations Related to Health IT and LTPAC
- Case Study #1: Coordinated Care Oklahoma

What do we mean by Long-Term and Post Acute Care (LTPAC)?

Total Number of Settings From National Study of Long-Term Care Providers (2013 – 2014)



In 2014, **nearly 67,000** LTPAC providers served over **9 million Americans.**

The Office of the National Coordinator for Health Information Technology

What is Health Information Technology?

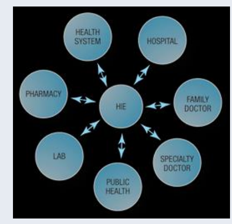
Health Information Technology (Health IT) is the use of electronic information systems that store, retrieve, share and enable health care providers, administrators, organizations and others to analyze health information and streamline health care delivery.

Health IT encompasses a variety of technologies from electronic health records (EHRs) to other tools such as patient portals, telehealth modalities and health information exchanges.

https://www.healthit.gov/patients-families/basics-health-it

What Are Examples of Health IT?

Electronic Health Record (EHR) is a digital version of a patient's paper chart. EHRs are real-time, patient-centered records that make information available instantly and securely to authorized users. While an EHR does contain the medical and treatment histories of patients, an EHR system is built to go beyond standard clinical data collected in a provider's office and can be inclusive of a broader view of a patient's care.



Health Information Exchange **(HIE)** allows doctors, nurses, pharmacists, other health care providers and patients to appropriately access and securely share a patient's vital medical information electronically—improving the speed, quality, safety and cost of patient care.

E-prescribing Tools generate and transmit permissible prescriptions electronically (eRx) and is a fast, efficient way to write/re-order and transmit prescriptions.

What Are Examples of Health IT?

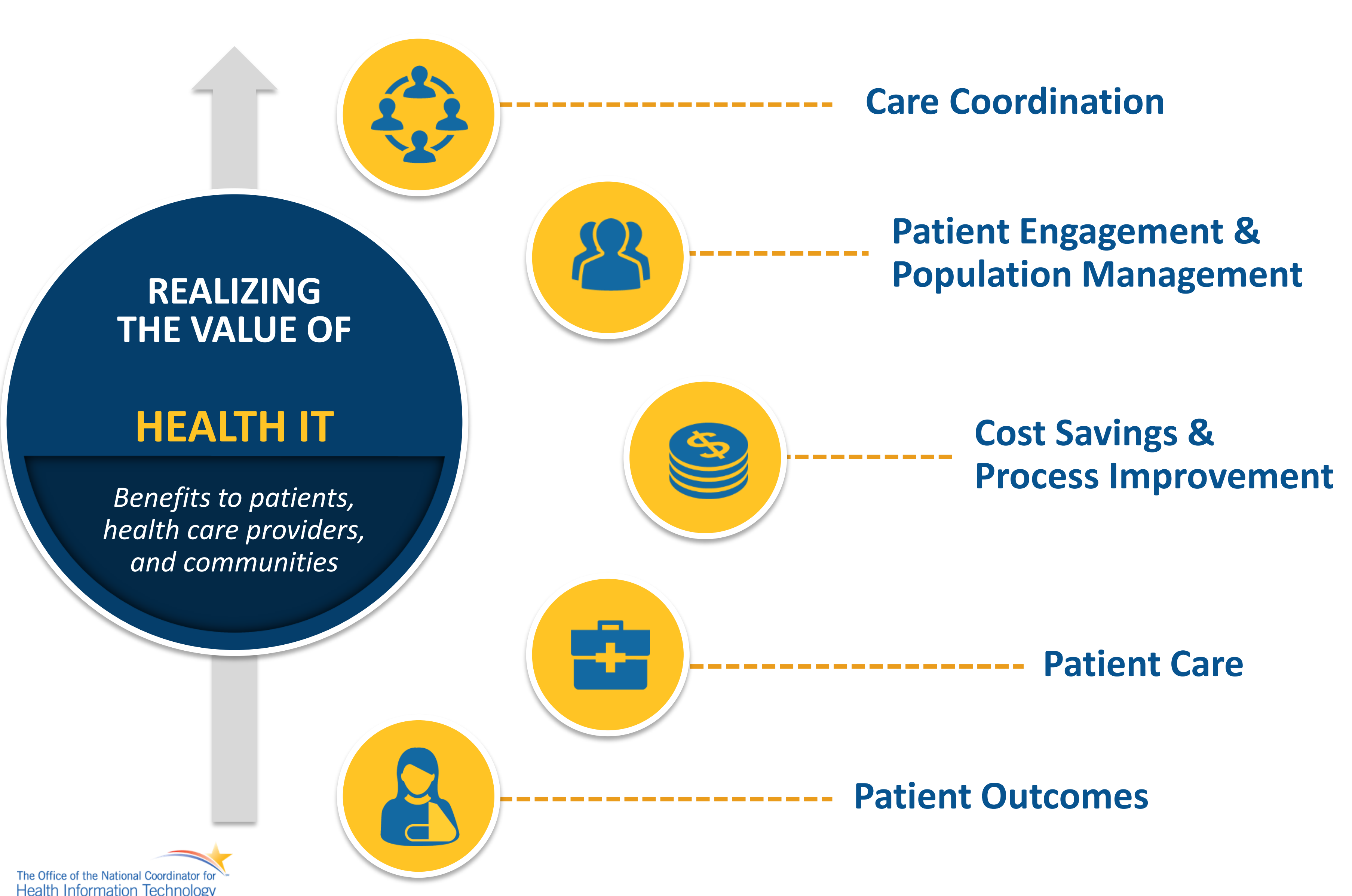
Telehealth modalities use electronic information and telecommunication technologies to support and promote long-distance clinical health care, patient and professional health-related education, public health and health administration. Technologies include video conferencing, store-and-forward imaging, streaming media, and terrestrial and wireless communications.

Personal Health Record is an electronic application used by patients to maintain and manage their health information in a private, secure, and confidential environment.

Mobile Devices are handheld transmitting devices with the capability to access, transmit, receive, and store health information, and the provider has control over the mobile device.

Online Communities can help people connect with one another to try to maximize good health or to respond to concerns about poor health.

Benefits of Adopting Health IT



Why is Health IT Important for Your LTPAC Organization?

Transitions of Care Complexity

40%

Of Medicare patients discharged from acute hospitals receive LTPAC services

25%

Of Medicare patients discharged to a skilled nursing facility were readmitted within **30 days**

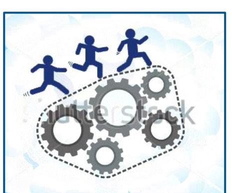
LTPAC providers receiving patients from other settings must gather information from multiple sources using multiple communication and exchange methods. Health IT can support efficiencies and economies of scale.

Source: https://aspe.hhs.gov/sites/default/files/pdf/76451/StratEng.pdf

Why is Health IT Important for Your LTPAC Organization?

Adopting Health IT Infrastructure to Support Care Coordination: Care coordination is critical to team based and accountable care and elevates the need for advanced health IT infrastructure and to enable integrated care.

Quality and Performance Measure Collection and Submission: There is value in capturing measures electronically and in using existing electronic data to inform progress toward achieving quality goals.



Workflow, Process Improvement, & Efficiencies: The delivery of care and services can be made more efficient through the use of electronic information received from other settings and the patient.

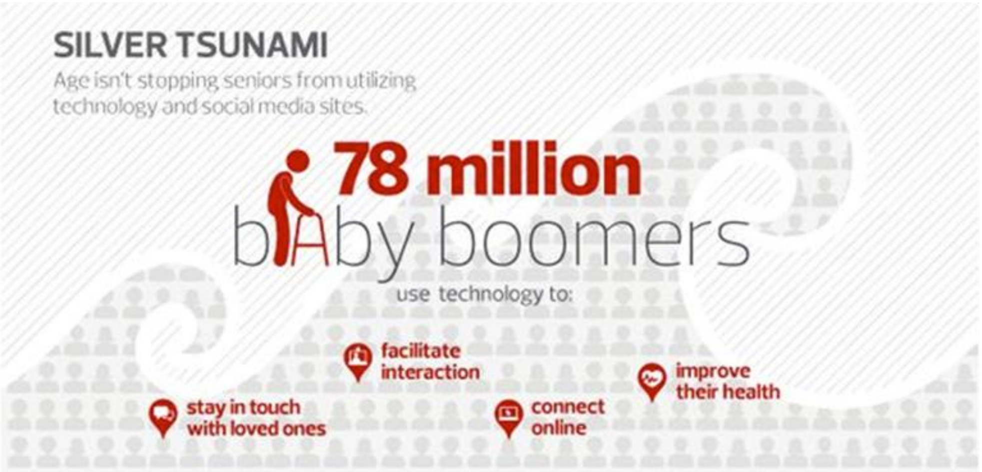
Patient Identification & Matching: Health IT facilitates the ability to identify patients, supports longitudinal care planning and can help ensure the care team is treating the correct patient.

Re-use of Data for Other Purposes: LTPAC providers benefit from re-use of data for public health reporting, patient safety reporting, adverse event reporting, and research.

Source: https://aspe.hhs.gov/sites/default/files/pdf/76451/StratEng.pdf

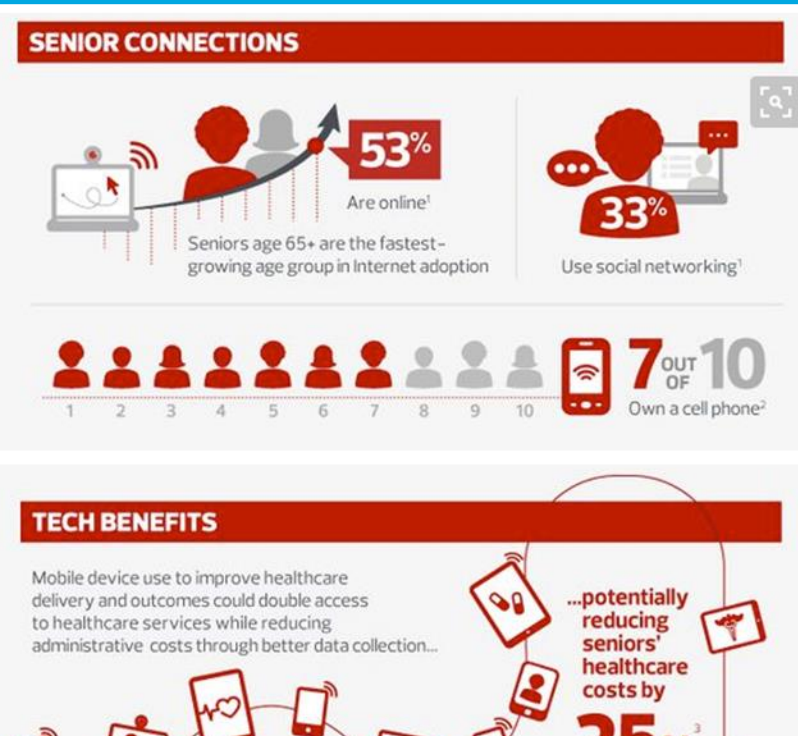
Technology Trends for Seniors and LTPAC Providers

SENIORS are embracing technology



Demand for LTPAC Services is Growing

THE NUMBER OF PEOPLE USING NURSING FACILITIES, ALTERNATIVE RESIDENTIAL CARE PLACES OR HOME CARE SERVICES IS PROJECTED TO INCREASE FROM 15 MILLION IN 2000 TO 27 MILLION IN 2050.[1]



Source: CDW Healthcare, "Infographic | Technology boom for seniors - Industry View", www.cdw.com/communIT

HOW IS THE EVOLVING HEALTH CARE LANDSCAPE ADVANCING HEALTH IT ADOPTION AND USE?

National Quality Strategy

Transforming Health Care Landscape: Shift to Value Based Care

Current Fee-For-Service

- Providers paid for volume of services, not outcomes
- Patients must navigate the health system
- Siloed Delivery of Care
- **Limited information sharing and integration across settings (paper and electronic)**

Emerging Value Based Care

- Providers paid for outcomes, not volume of services
- Care Team includes patient and all allied providers
- Emphasis on wellness, prevention and population health management
- **Emphasis on use of technology to integrate care and share information**

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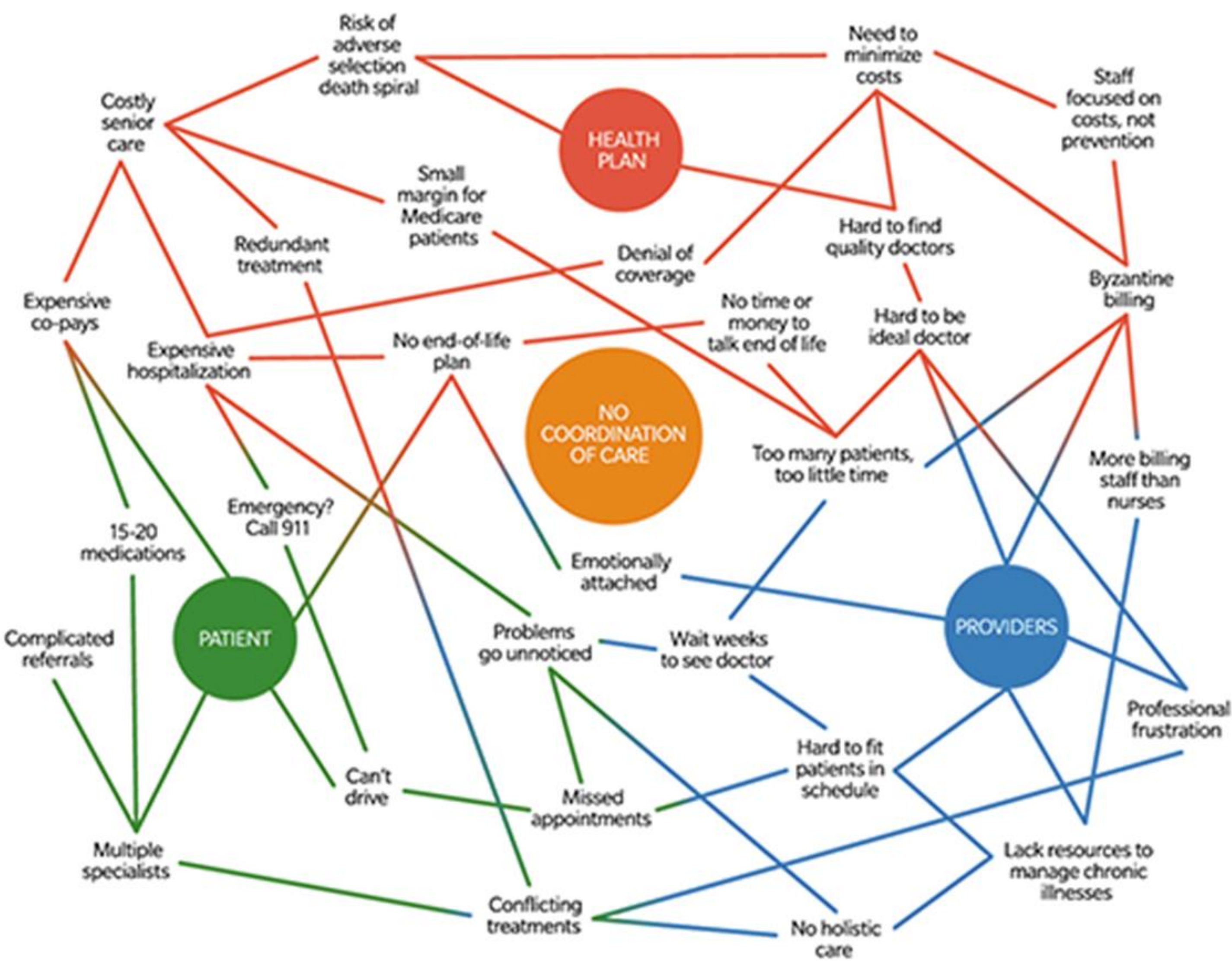
For more information on Value Based Care, visit: https://www.healthit.gov/playbook/value-based-care/

What Are Current Coordination of Care Challenges?



Source: http://health.oliverwyman.com/drive-innovation/2015/02/in_the_news_esther.html

What is the Role of Health IT in the Evolving Health Care Landscape?

THE SUCCESS OF NEW VALUE BASED CARE MODELS DEPENDS ON EFFECTIVE COMMUNICATION BETWEEN SITES AND HOW WELL THEY SHARE DATA. SYSTEM INTEROPERABILITY AND INTEGRATION IS CRITICAL TO CARE TEAMS.

Providers that are increasingly accountable for patient outcomes and total cost of care, regardless of where else that individual has received care, will increasingly demand access to an individual's complete record, laboratory results, broader health–related information and total cost of care required to effectively manage the person's health.

Connecting Health and Care for the Nation: A Shared Nationwide Interoperability Roadmap

The Future Accountable Care Community

Person & Caregiver

Acute & Specialty Hospital

LTPAC Setting

Wellness Setting

Health IT Enabled Care Coordination

Specialist

Pharmacy

Behavioral Health Provider

Urgent Care

Primary Care Provider

Home & Community Based Services

Health IT Solutions Include:

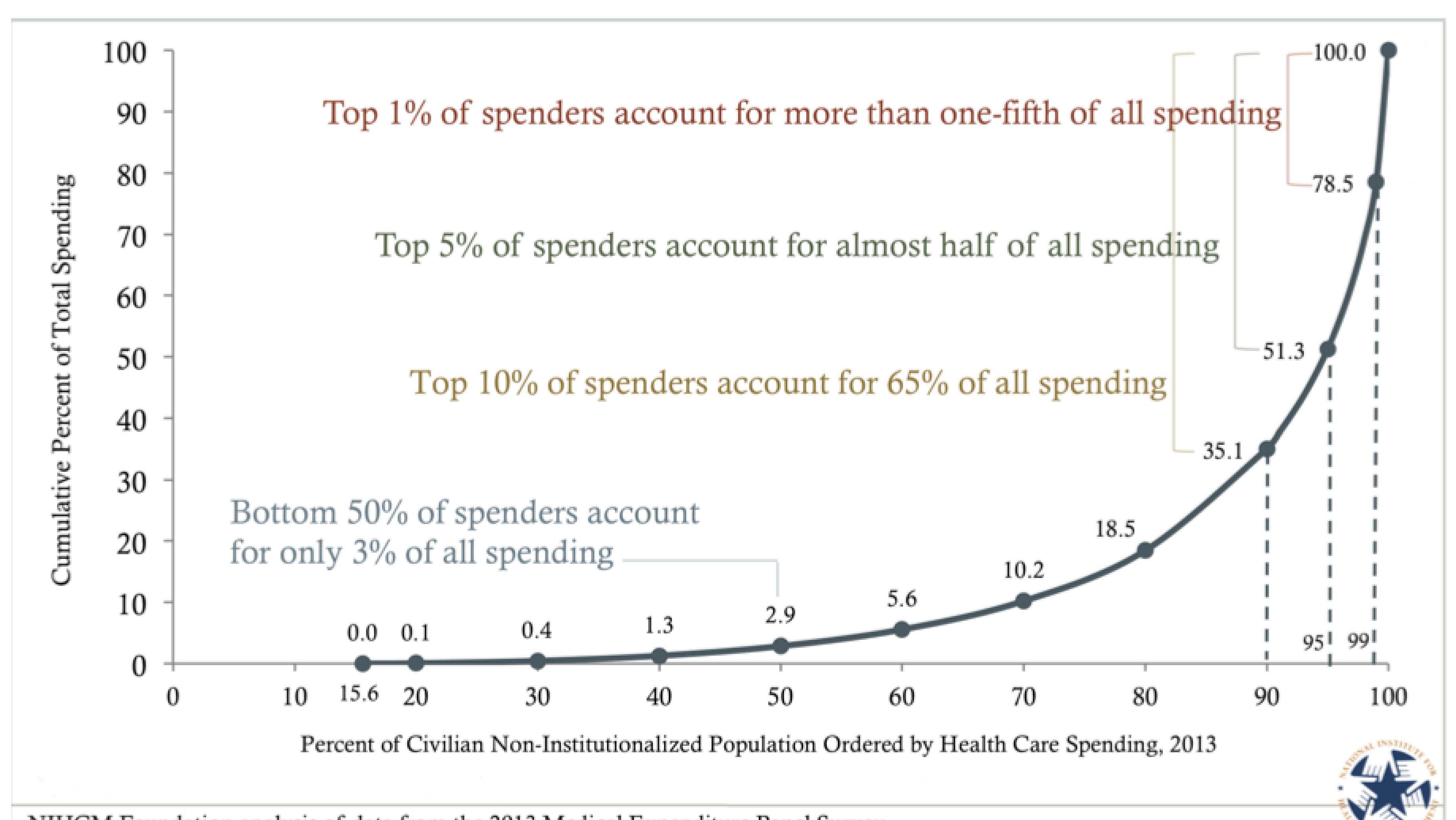
Clinical IT Systems:
- ✓ EHRs
- ✓ HIE Systems
- ✓ E-Prescribing Tools

Other Health IT Systems:
- ✓ Predictive analytics
- ✓ Telehealth
- ✓ Personal Health Records
- ✓ Mobile Devices
- ✓ Population Health Management Systems
- ✓ Home and Community Based Systems
- ✓ Online Communities

WHAT ARE THE BUSINESS DRIVERS FOR HEALTH IT ADOPTION AND USE?

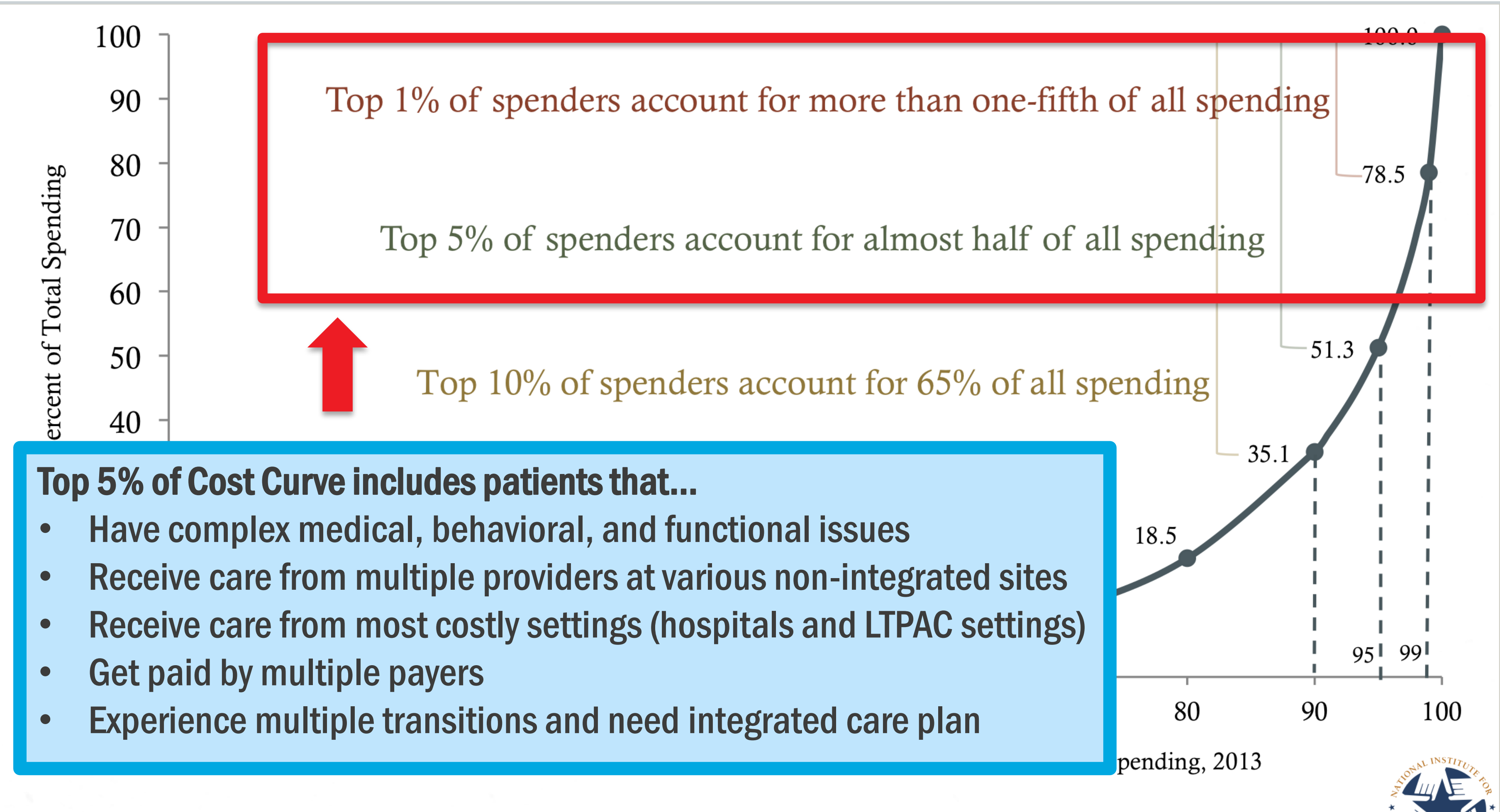
What Are Business Drivers Impacting LTPAC?

Only small portion of population accounts for highest spending in health care

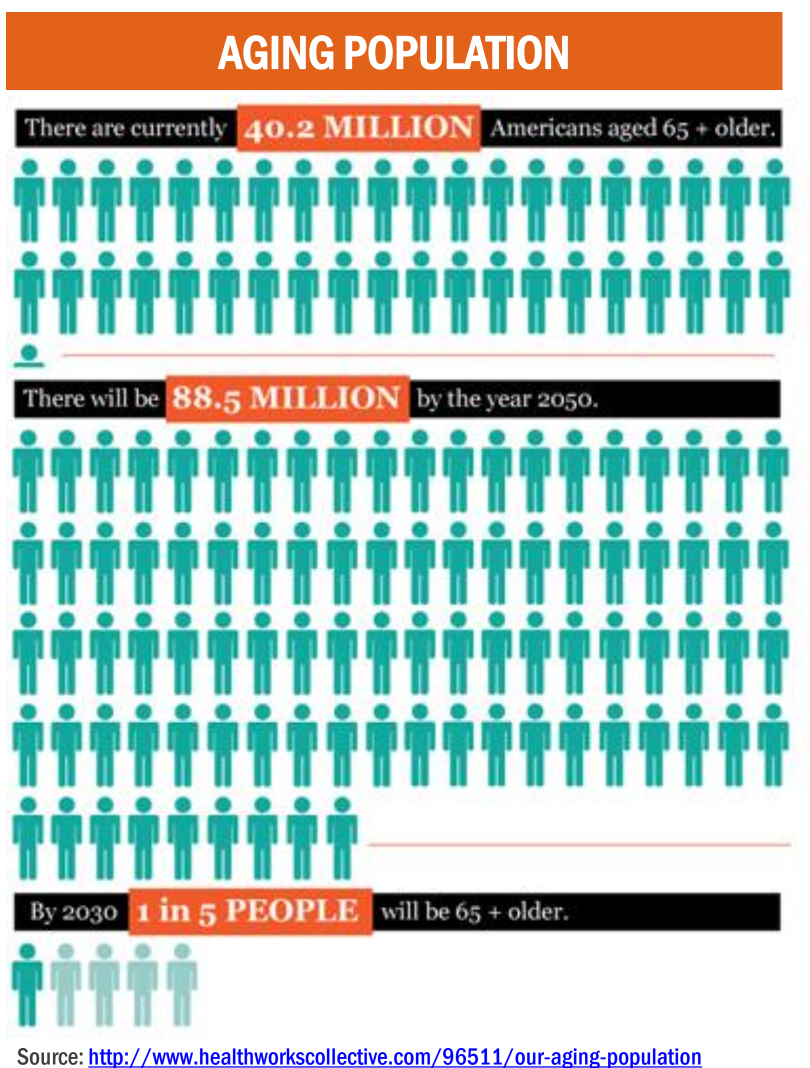


NIHCM Foundation analysis of data from the 2013 Medical Expenditure Panel Survey.

What Are Business Drivers Impacting LTPAC?



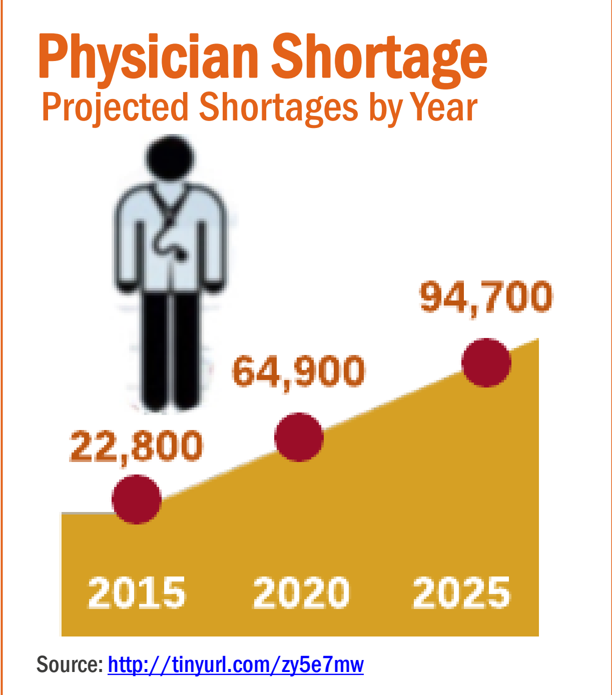
What is the Impact of the Evolving Health Environment on LTPAC?



Source: http://www.healthworkscollective.com/96511/our-aging-population

As a result of Physical and Cognitive Impairments, **70%** of Seniors will need long-term services and supports

Source: http://jama.jamanetwork.com/article.aspx?articleid=1733726



Source: http://tinyurl.com/zy5e7mw

Hospital (2013) Readmissions[1]

Nearly **18%** Of Medicare Patients readmitted in 30 days

An estimated $17B come from potentially avoidable readmissions

1: http://khn.org/news/medicare-readmissions-penalties-2015/

The Office of the National Coordinator for Health Information Technology

What Situations Are Reinforcing the Business Case for Interoperability in LTPAC?

Situation	Motivation (Business Driver)
Market Forces: Healthcare is going through a paradigm change from an episodic model to a person-centric electronic longitudinal care model with focus on prevention and wellness	• Meet the Triple Aim—better care, smarter spending, and healthier people • Be a shared risk partner with hospitals for new payment models • Implement nationally recognized transitions of care data exchange standards[1] • Diagnose chronic care requirements earlier
Admission Challenges: Patient is discharged to LTPAC on a Friday afternoon at 4:30pm to not incur additional 'Length of Stay' (LOS) days. Care is initiated over the weekend.	• Timely preparation requirements for admission (assessments, administrative, room) • Special services: respiratory, kidney, therapy, dietary • Medication reconciliation and availability • Medical doctor input
Patient Care: First 48 hours of care	• Chronic care diagnosis and longitudinal care plan developed and implemented • Pressure ulcer diagnosis and wound treatment • Sepsis diagnosis and special isolation • Pain management and medications

Source: Gregory Alexander, John Derr "Critical Conversations in Transitions of Care- Part 2" HIMSS Annual Conference 2016

1. Available via the ONC Interoperability Standards Advisory (ISA) https://www.healthit.gov/standards-advisory

POLICIES AND INVESTMENTS ON HEALTH IT POLICY AND USE

Federal Policy Opportunities for LTPAC

Relevant Health IT Legislation for LTPAC Providers

1996 — Health Insurance Portability and Accountability Act (HIPAA)

Establishes requirements for national standards for electronic health care transactions

Establishes requirements for national identifiers for providers, health insurance plans, and employers

- Privacy and Security Rules administered under HHS Office of Civil Rights
- Administrative Simplification Rules administered under CMS

2009 — Health Information Technology for Economic and Clinical Health (HITECH) Act

ONC HIE Grant Program awarded funding to MD, OK, MA and CO to develop innovative solutions for improving LTPAC transitions of care

- Established ONC authority over certification of Health IT
- Established CMS authority over Medicare and Medicaid EHR Incentive Programs

2010 — Affordable Care Act (ACA)

Supports integration of LTPAC providers in health information exchange: For example: CMS Demonstration Grants, Health Homes, and Aging and Disability Resource Centers

- Established comprehensive healthcare insurance and payment reforms that aim to increase access to health care, improve quality and lower health care costs, and provide new consumer protections

2014 — Improving Post Acute Care Transformation (IMPACT) Act

Expands opportunities to re-use standardized interoperable assessment data elements.

- Established requirements for CMS to make interoperable patient assessment and quality measures data from LTCHs, SNFs, HHAs, and IRFs

2015 — Medicare Access & Chip Reauthorization (MACRA) Act

Quality Payment Program applies to Medicare eligible clinicians; it aims to:

- Supports care improvement through better outcomes for patients, decreased provider burden, and preservation of independent clinical practice
- Promotes adoption of alternative payment models that align incentives across healthcare stakeholders

- Repeals the Sustainable Growth Rate (SGR) Formula
- Shifts from FFS to Value Based Payment for Medicare Providers
- Streamlines Meaningful Use and other quality programs under new Merit Based Incentive Payments System (MIPS)
- Provides bonus payments for participation in eligible Advanced Alternative Payment Models (APMs)

2016 — Rural Health Connectivity Act

Expands opportunities for eligible skilled nursing facilities to receive funding for telecommunications and broadband services

- Amends the Communications Act to permit eligible non-profit and public skilled nursing facilities to apply for support from the Universal Service Fund's Rural Health Program

Opportunities for LTPAC Health IT

Relevant Federal & State Supports for LTPAC Providers

Medicaid 1115 Delivery System Reform Incentive Payment (DSRIP) Program

Includes options for waiver flexibility, state plan amendments, health home models and Medicaid managed care expansion that can provide opportunities for collaboration and technology adoption to advance and improve health outcomes.

State Innovation Model (SIM) Grant Program

Provides states the opportunity to pilot innovative approaches to technology use, advanced analytics, new service delivery models, use of telehealth, and other efforts to improve access, efficiency, and outcomes, with a number of states focusing on expanding integrated care.

State Medicaid Letter #16-003 February 29, 2016

Expands support for Medicaid health information exchange describing options for how LTPAC providers could adopt health IT and leverage state supported health information exchange infrastructure. The policies outlined in the letter allow states to use HITECH Administrative Matching Funds to support the expansion of HIE infrastructure to help Medicaid clinicians that are eligible for EHR Incentive Payments connect with other Medicaid providers including long term care providers.

How to Get Involved

- ✓ Contact Your Provider Association
- ✓ Contact Your State's Health It Initiative Coordinator
- ✓ Learn More About ONC Certification Program

Snapshot of HITECH ACT

Health Information Technology for Economic and Clinical Health (HITECH) Act

Provides HHS with the authority to establish programs to improve health care quality, safety, and efficiency through the promotion of health IT, including EHRs and private and secure electronic health information exchange.

Medicare & Medicaid EHR Incentive Programs

Sections 4001-4201 of HITECH establish the CMS Medicare & Medicaid EHR Incentive Programs to provide incentive payments for eligible professionals, hospitals, and critical access hospitals as they adopt, implement, upgrade, or demonstrate meaningful use of certified EHR technology.

ONC Health IT Certification Program

The HITECH Act charged ONC with creating and maintaining a health IT certification program.

In 2010, ONC established the ONC Health IT Certification Program to oversee the voluntary certification and testing of health IT products which support the availability of certified health IT for its encouraged and required use under other federal, state, and private programs.

Shared Nationwide Interoperability Roadmap: Milestones Benefit Providers and Improve Care for Individuals

2015-2017

Send, receive, find and use priority data domains to improve health and health care quality

Providers evolve care processes and information reconciliation to ensure essential health information is sent, found, and/or received to support safe transitions in care.

2018-2020

Expand interoperable health IT and users to improve health and lower cost

Providers routinely and proactively seek outside information about individuals, including directly from patients, and can use it to coordinate care.

2021-2024

A learning health system enabled by nationwide interoperability

Providers routinely use relevant info from a variety of sources, including environmental, occupational, genetic, human service, and cutting edge research evidence to tailor care to the individual.

Interoperability: ***the ability of systems to exchange and use electronic health information from other systems without special effort on the part of the user.***

https://www.healthit.gov/policy-researchers-implementers/interoperability

Why is ONC Health IT Certification Program Important for LTPAC?

The ONC Certification 2015 Edition supports diverse health IT systems beyond EHRs that are used across the care continuum including those applicable for LTPAC settings. Certified Health IT system components (modules) are published in the Certified Health IT Product List (CHPL).

The ONC Certification Program is voluntary and 'agnostic' to settings and programs. Therefore, ONC certification can be used to support multiple programs and settings, including LTPAC.

The Certified Health IT Product List (CHPL) is the authoritative and comprehensive listing of Health IT certified through the ONC Health IT Certification Program. More information on CHPL: https://chpl.healthit.gov/#/search

How is Certified Health IT (2015 Edition) Relevant to LTPAC?

Certified health IT can be applied to health IT systems for broader settings of care including LTPAC.

Examples of certification criteria to support LTPAC needs include:

Transitions of Care

Enables the ability to send and receive essential health information to ensure the coordination and continuity of care as patients transfer to other care settings.

Clinical Information Reconciliation

Enables electronic clinical reconciliation of a patient's active medication, problem, and medication allergy list.

Care Plan

Provides a structured format for documenting a individual's care plan based on their unique needs.

Social, Psychological, Behavioral Data

Provides the capability to document and access a patient's social, psychological, and behavioral data.

Why Are Health IT Standards Important for LTPAC?

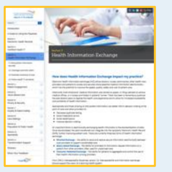
Health IT Standards provide the fundamental definitions for and structures of the data that can be communicated across a wide variety of healthcare use cases.

These standard formats allow for the creation of electronic messages that are exchanged between different health IT systems, which make interoperability and health information exchange possible.

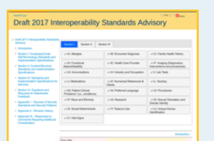
- Standards facilitate information exchange for LTPAC providers.
- Standards are needed to achieve consistent formats and data definitions.
- Direct Secure Messaging standard is agreed upon by multiple stakeholders as an easily implementable approach for LTPAC organizations to begin sharing information through an HIE or between providers to improve coordination of care.

Resources

Shared Nationwide Interoperability Roadmap emphasizes the adoption and use of national interoperability standards



ONC Standards/SDO Training Module



Annually updated Interoperability Standards Advisory

Case Study #1: Coordinated Care Oklahoma

Coordinated Care Oklahoma (CCO)

A non-profit organization, founded by a group of hospitals, health systems, physicians and healthcare professionals, providing health IT tools to support patient transitions of care to include those required to support the **HITECH EHR Incentive Program** requirements and test **emerging value based payment models.** The CCO HIE Platform integrates with member facilities' EHR systems within healthcare facilities across OK, AR, MS, KS and TX.

Care Coordination Capabilities:

- Admission, Discharge, Transmission (ADT) Alerts
- Advance Directives Exchange
- Referral Management
- Transition of Care Document Exchange

Improving Transitions of Care

COORDINATED CARE OKLAHOMA

49 HOSPITALS

4.8 MILLION PATIENT LIVES

300+ DATA CONTRIBUTING FACILITIES

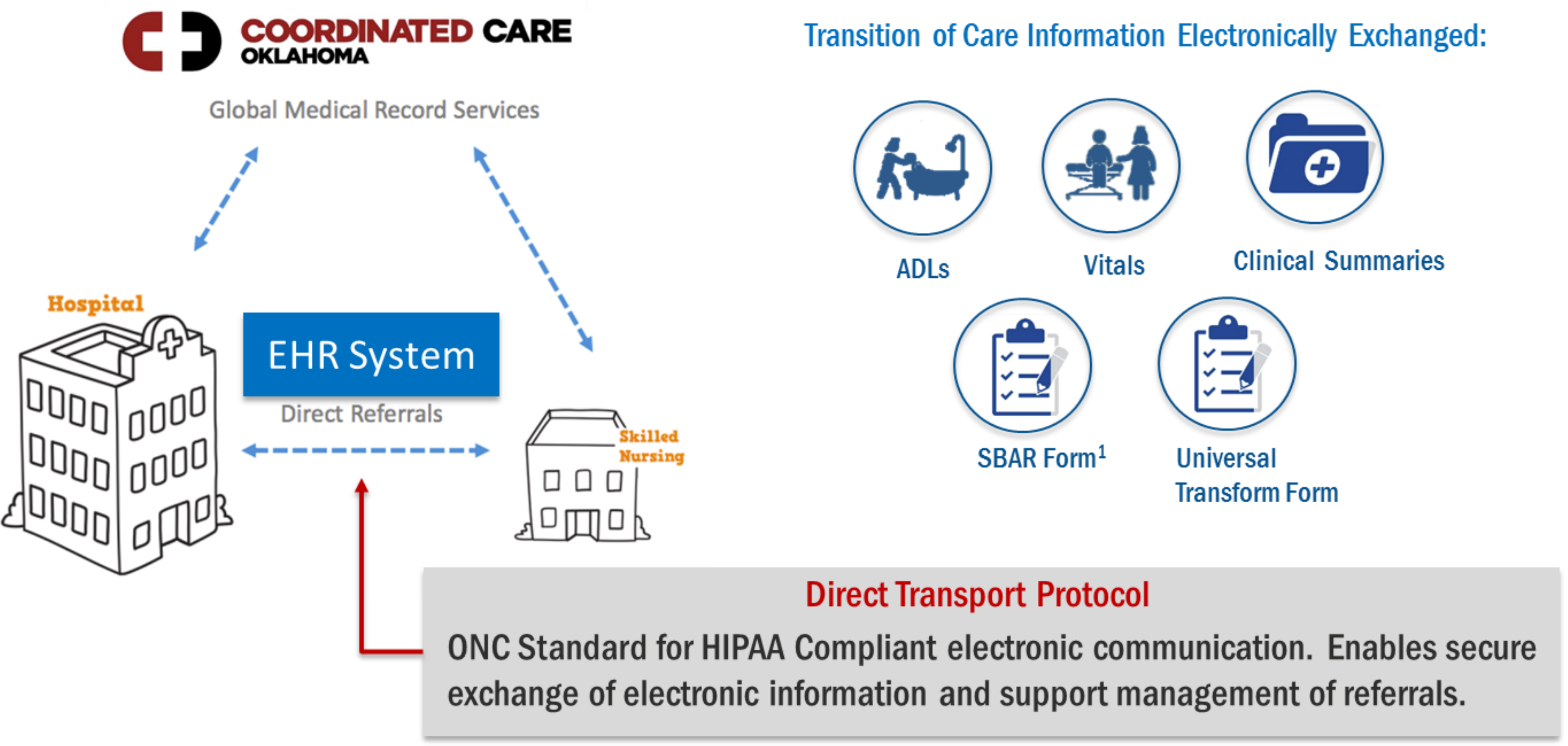
4,500 DATA CONTRIBUTING PROVIDERS

7 HEALTH SYSTEMS

Includes 17 LTPAC Provider Groups as of Aug 2016

Case Study #1 : Coordinated Care Oklahoma Pilot

Pilot Program initiated with **five LTPAC facilities** and **one acute care hospital**, Norman Regional Health System. Each LTPAC site adopted a new workflow that leveraged key features of the facility's new EHR system to capture patient information quickly and accurately. The new workflow required aides to document patient's health status on wall-mounted kiosks immediately after providing care.



1. The SBAR (Situation-Background-Assessment-Recommendation) technique provides a framework for communication between members of the health care team about a patient's condition. Please see: http://www.saferhealthcare.com/sbar/what-is-sbar/

Case Study #1 : Coordinated Care Oklahoma Health IT Integration

- Existing transfer agreement with local Hospital
- Existing sharing agreement and access to CCO
- Adoption of EHR system
- Adoption of standardized clinical documentation forms to record patient status: SBAR and UTF

- 10 patients to 1 Aide
- 1 charge nurse per shift
- 1 Designated Director of Nursing
- 1 Advanced Practice Registered NP
- 1 Medical Director

1. Aide enters change of patient status in EHR kiosk, mounted outside patient room
2. Charge Nurse receives immediate alert and completes SBAR form
3. Designated Provider reviews SBAR

TRANSFER PATIENT TO HOSPITAL?

NO → Treat Patient Immediately in SNF

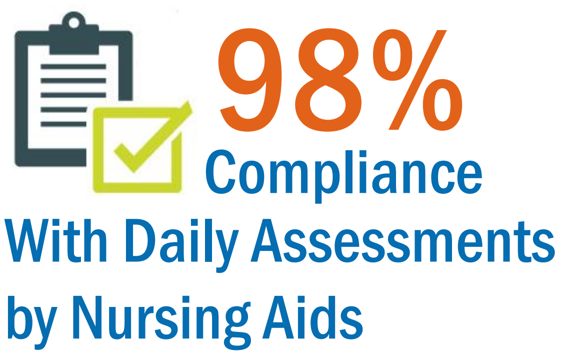
YES →

4. Designated Provider completes UTF and sends with SBAR to Hospital and CCO HIE
5. Hospital EHR system receives SBAR and UTF forms via secure messaging. Files attached to patient record in Hospital EHR.
6. Designated Provider uploads SBAR and UTF forms into HIE system so they may be viewed by other participating providers on patient's care team

Hospital

Source: http://www.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-20-2015/No3-Sept-2015/Care-Transitions-in-Long-term-Care-and-Acute-Care.html#Using

Case Study #1 : Coordinated Care Oklahoma Health IT Pilot Results



98%
Compliance
With Daily Assessments by Nursing Aids

97%
Patient Satisfaction

78%
Reduction of 30-day **readmission** overall in all five participating facilities

70%
Reduction of 30-day **return** to ED post-acute care discharge

50%
Reductions in **readmissions** in one year

KEY SUCCESS FACTORS: Adopting new provider communication workflows and health IT tools like EHR kiosks that require little if any previous training or computer skills and that can be conveniently accessed by all provider groups.

MODULE 2: Health IT Adoption and Implementation

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Module Purpose

The purpose of this module is to educate LTPAC providers on the applicability and usefulness of health information technology (health IT) and health information exchange (HIE). It includes educational information, case studies, and resources for LTPAC providers.

It is intended to help prepare LTPAC providers for success in the transforming service delivery and payment environment.

Module 2: Learning Objectives

Health IT Adoption and Implementation

- National EHR Adoption Perspective
- State-based EHR Adoption and Implementation
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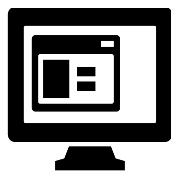
Health IT Adoption by Physicians and Hospitals

Rates of EHR Adoption

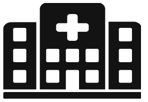
78% of Doctors

96% of Hospitals



Since the passage of the HITECH Act, the health IT landscape has dramatically evolved. In 2008, only 17% of physicians and 9% of hospitals had at least a basic EHR. In 2015, 96% of hospitals and 78% of physician offices use certified EHR technology.

4 in 10 physicians report sharing patient health information electronically, and 75% of hospitals electronically exchanged health information with outside providers in 2014.



Rates of electronic sharing with long term care providers lag behind. In 2014, only 11% of office-based physicians electronically shared patient information with long term care providers.

Health IT use among Individuals

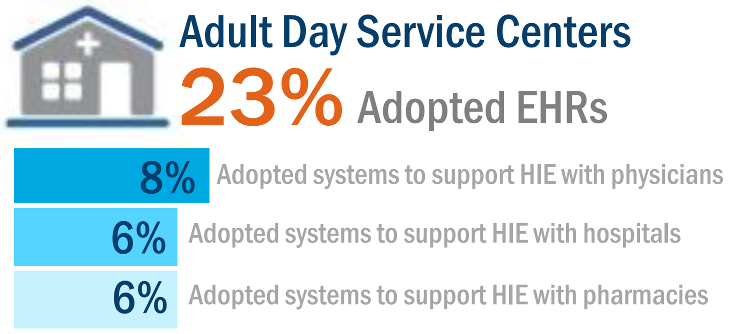
- In 2014, nearly 4 in 10 individuals were offered electronic access to their medical record.
- 48% of individuals communicated via email or text with a health care provider, used a health app on their smartphone, or looked at medical test results online
- 1 in 5 individuals used text messaging to communicate with their health care provider.
- 1 in 3 individuals emailed their health care provider

What Are National EHR Adoption Trends for LTPAC Settings?

2014-2015 national survey of **815 nursing home** administrators investigating nursing home health IT adoption found there is greater adoption of IT solutions to support **ADMINISTRATIVE** activities than there are for **CLINICAL** support[1].

Nursing Homes participating in IT Sophistication Survey Located by Zip Code

2014 National Surveys[2]

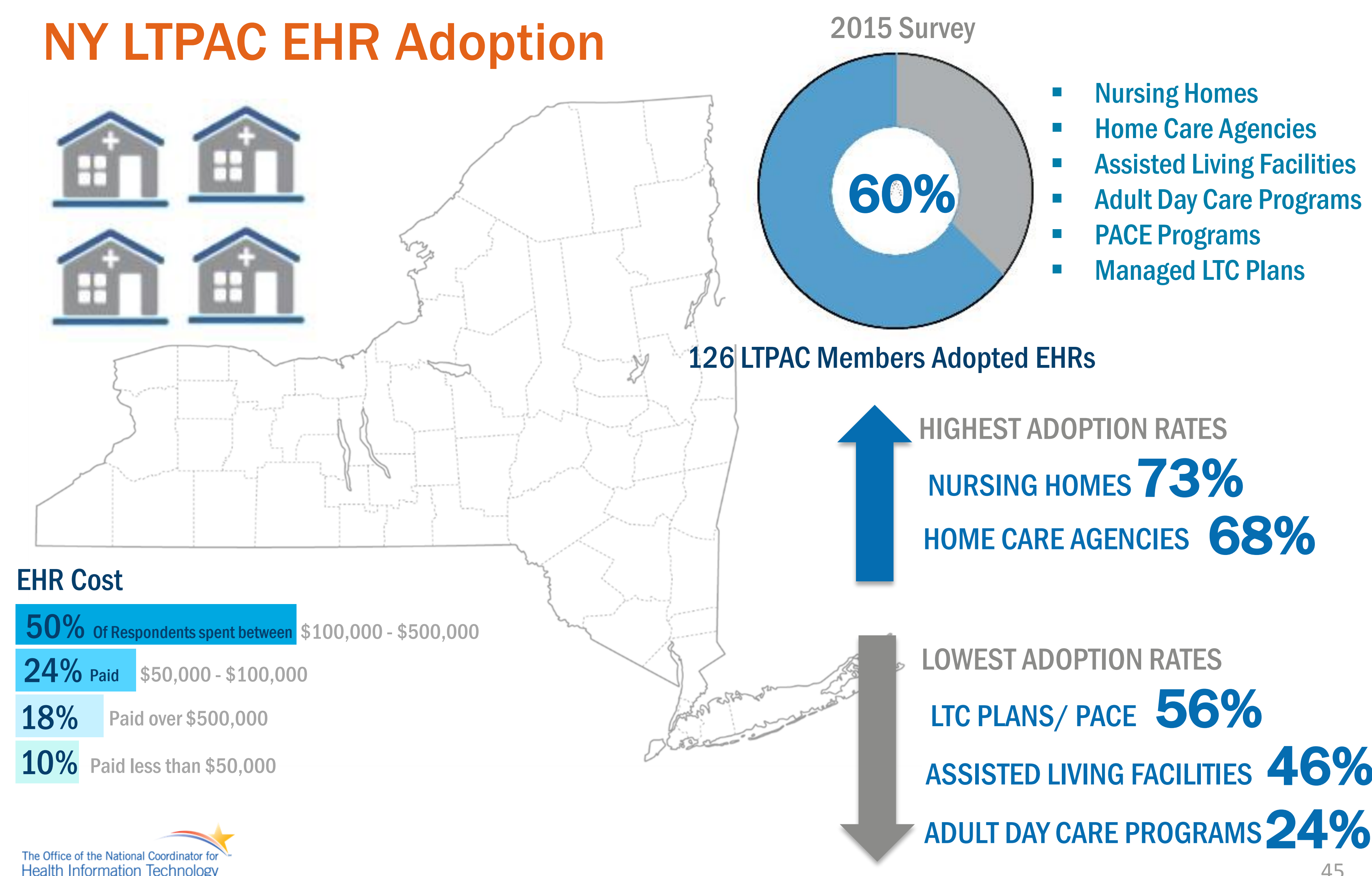


- 8% Adopted systems to support HIE with physicians
- 6% Adopted systems to support HIE with hospitals
- 6% Adopted systems to support HIE with pharmacies

- 11% Adopted systems to support HIE with physicians
- 8% Adopted systems to support HIE with hospitals
- 17% Adopted systems to support HIE with pharmacies

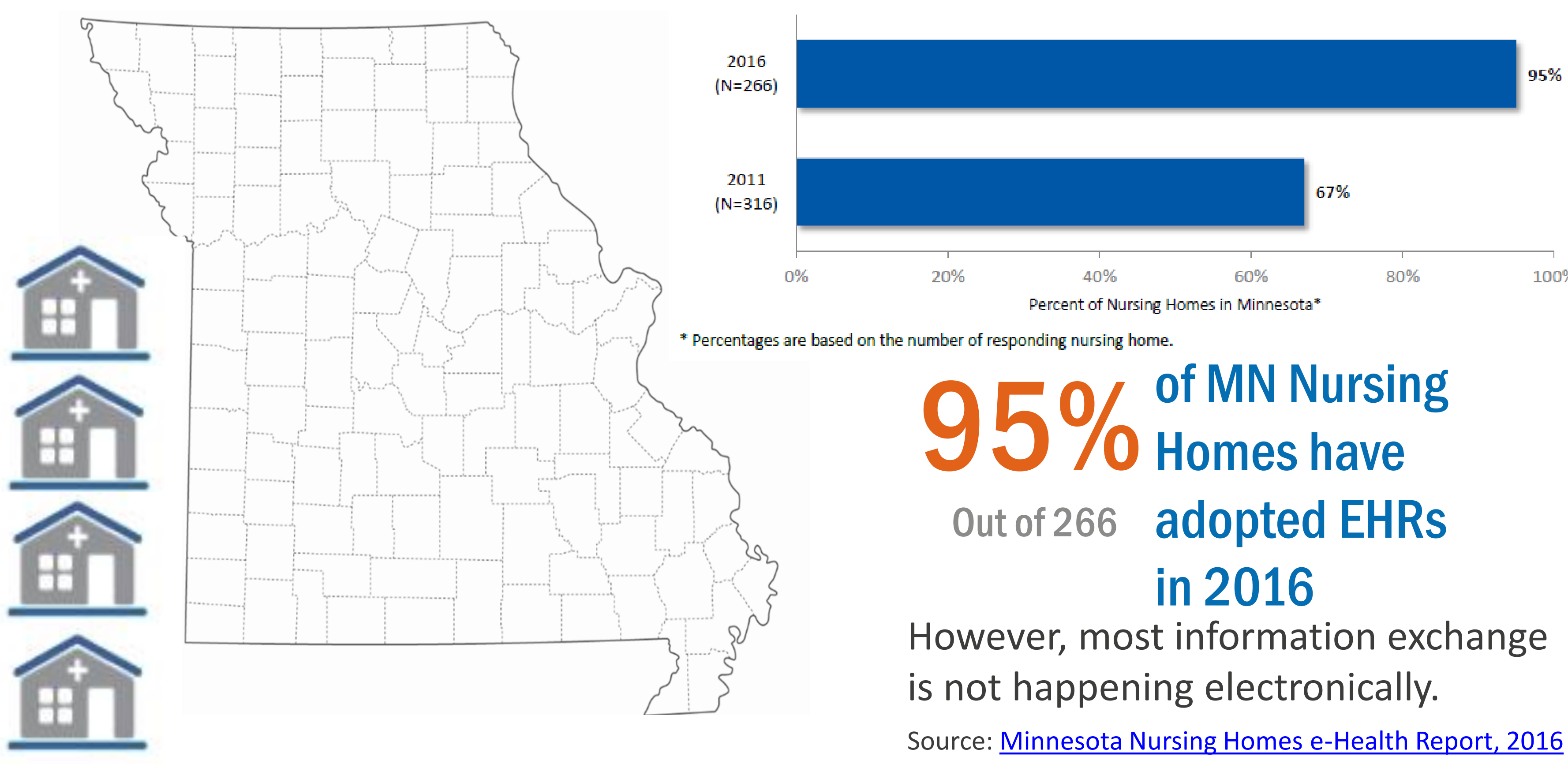
1. Source: http://www.ncbi.nlm.nih.gov/pubmed/27107444
2. http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6445a8.htm

What Are Examples of State Advancement in LTPAC EHR Adoption?



What Are Examples of State Advancement in LTPAC EHR Adoption?

MN LTPAC EHR Adoption



However, most information exchange is not happening electronically.

Source: Minnesota Nursing Homes e-Health Report, 2016

In 2016, the MN e-Health Roadmap for Behavioral Health, Local Public Health, LTPAC and Social Services was published and includes use cases, a person-centered view, recommendations, and actions to support and accelerate the adoption and use of e-health.

What Are LTPAC Health IT Adoption Challenges?

FINANCIAL BARRIERS

BH PROVIDERS

ELIGIBLE PROVIDERS

Not eligible for CMS EHR Incentive Programs

Limited capital to invest in robust IT systems and services

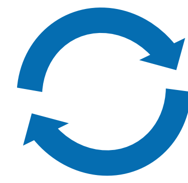
Limited resources to hire and retain required workforce

OPERATIONAL BARRIERS

Differences in clinical and administrative processes and needs

Workforce availability of clinical and technical skillsets

Leadership & organization skills capacity to select and acquire health IT



Lack of project management and governance expertise

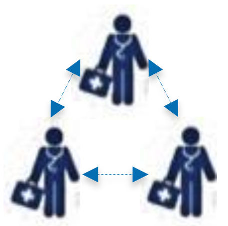
What Are LTPAC Health IT Adoption Challenges?

TECHNICAL BARRIERS

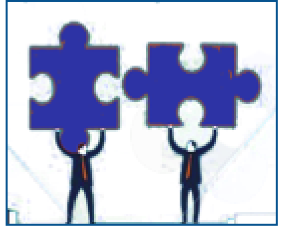
Implementation and usability of technology and related electronic documents

Lack of awareness of and need for interoperable HIE solutions

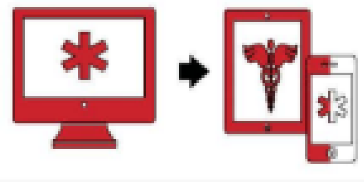
Lack of technology solutions to support LTPAC specific processes and workflow (EHRs are not the only solution)



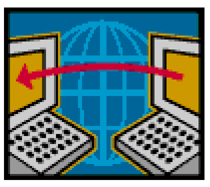
Limited ability to find or query provider address



Difficulty matching or identifying patients



Lack of capability to electronically receive or send data



Limited broadband availability in rural areas

Privacy and security of data

Health IT Adoption Toolkits for LTPAC

Stratis' Health Information Technology Toolkits can be used to implement a comprehensive EHR system, overhaul existing systems, or acquire individual Health IT applications.

Toolkits for **Nursing Homes and Home Health Agencies** can be used to help settings engage in e-health activities by optimizing the use of an **EHR** and facilitating information sharing through **HIE** and other forms of Health IT.

Care Coordination Toolkit available to assist multiple provider groups working together to provider patient-centered, coordinated care.

Source: https://www.stratishealth.org/expertise/healthit/

Beyond the EHR: Health IT Coordination Tools

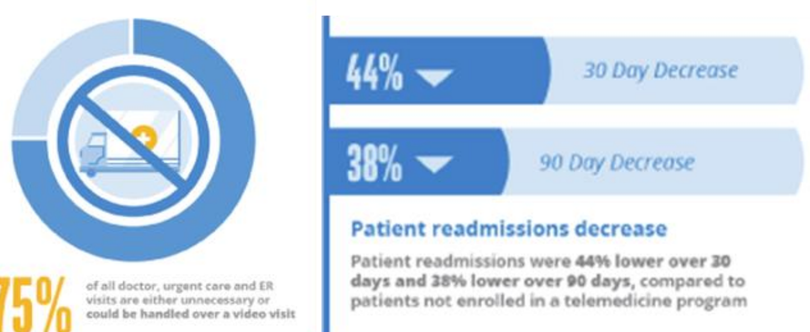
SOCIAL MEDIA

45.6% Of adults searched for health information when using social media.

33.8% Asked for health advice.

60% Of doctors say it improves quality of care delivered to patients

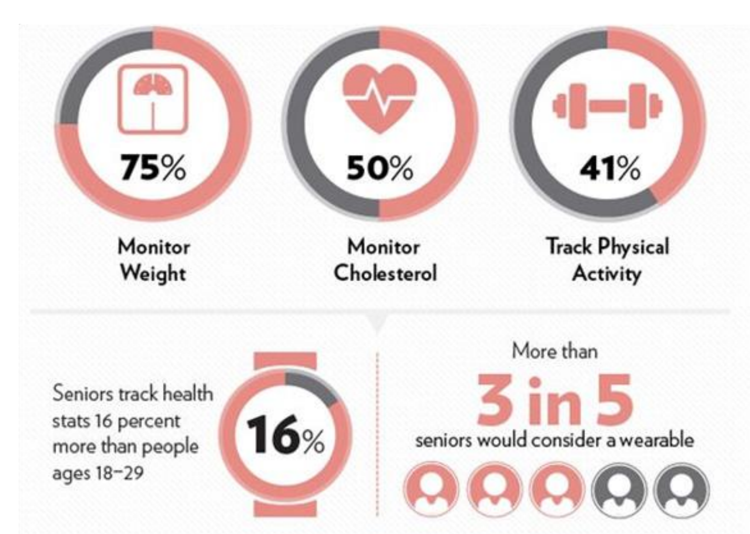
TELEHEALTH



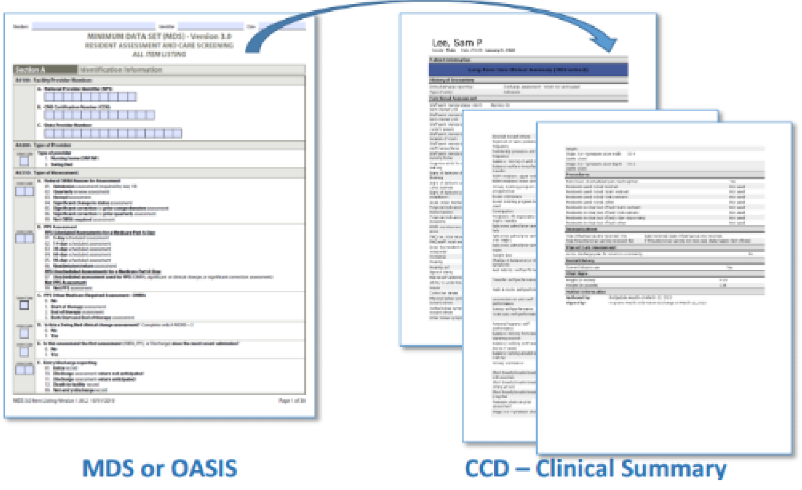
MOBILE HEALTH

WEARABLES

How older adults who value technology are using the **296** wearable devices on the market: .



Health IT Coordination Tools, Continued



MDS or OASIS

CCD – Clinical Summary

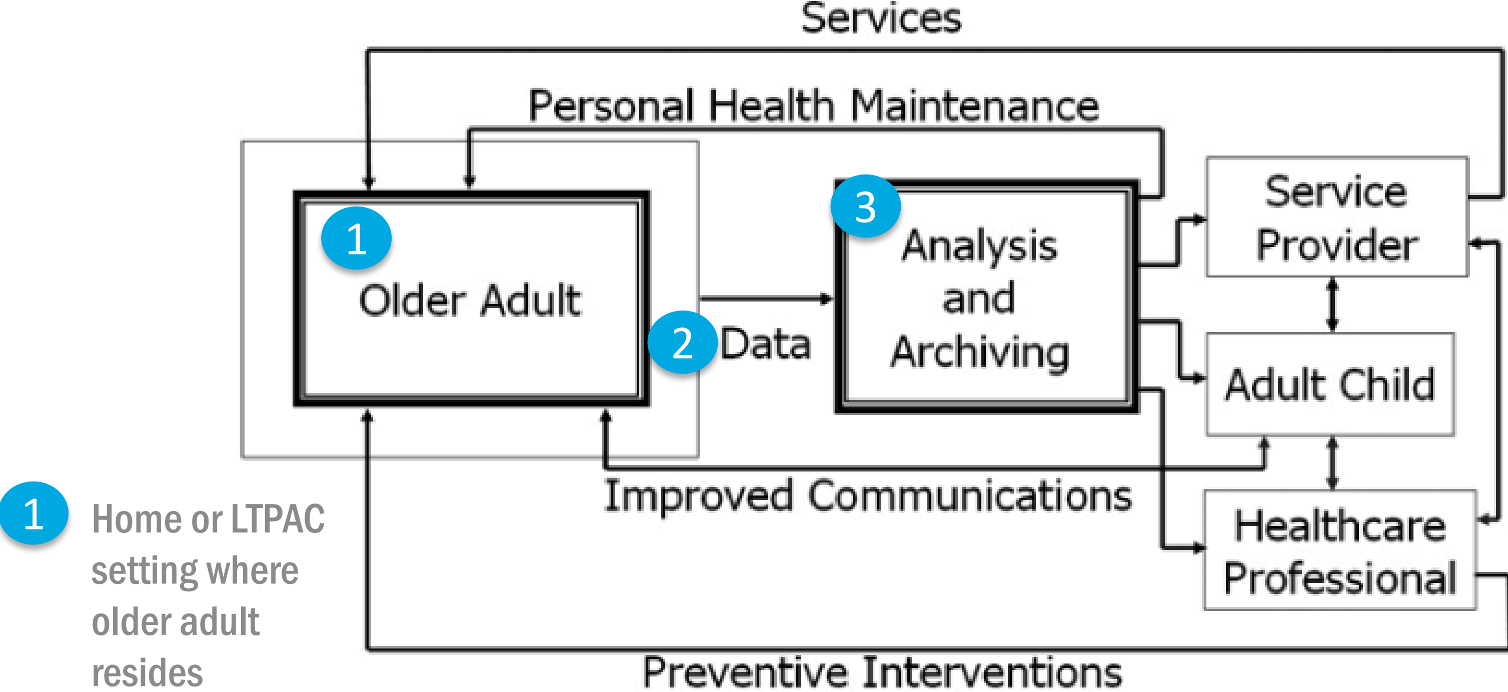
Transforms MDS and OASIS Patient Assessments into machine readable clinical summary format (continuity of care document)

Allows NURSING HOMES and HOME HEALTH AGENCIES with or without an EHR to REUSE data captured in Minimum Data Set (MDS) or Outcome and Assessment Information Set (OASIS) for interoperable HIE.

Enables sharing health information with other long-term care facilities, hospitals, and to physicians using existing workflows and technology.

How Can Telehealth Support the Care of Older Adults?

CAST Model for the Technology-Enabled Geriatric Care Paradigm



1 Home or LTPAC setting where older adult resides

2 Telehealth tools are used to capture safety, activity, physiological, health and socialization data. Data can be used by caregivers to detect indicators of early disease onset, deterioration, or improvement in health conditions at various levels.

3 Data analysis results can be made available to all stakeholders in the care process including the monitored older adult. Data can be integrated into EHR or PHR so that authorized care team members can access results anytime.

Source: http://www.leadingage.org/Telehealth_Whitepaper.aspx#1

Telehealth Resource Centers

TelehealthResourceCenters.org

NRTRC
NORTHWEST REGIONAL TELEHEALTH RESOURCE CENTER

gpTRAC
Great Plains Telehealth Resource & Assistance Center

HTRC
Heartland Telehealth Resource Center

NORTHEAST TELEHEALTH RESOURCE CENTER

UPPER MIDWEST Telehealth RESOURCE CENTER

CALIFORNIA TELEHEALTH RESOURCE CENTER
Your resource for telehealth success

Mid-Atlantic Telehealth Resource Center

PACIFIC BASIN TELEHEALTH RESOURCE CENTER
THE UNIVERSITY OF HAWAI'I AT MĀNOA

SOUTHWEST TRC TELEHEALTH RESOURCE CENTER

SOUTHEASTERN telehealth RESOURCE CENTER

learn telehealth
LearnTelehealth.org
SOUTH CENTRAL TELEHEALTH RESOURCE CENTER

TexLa
Telehealth Resource Center

Telehealth tools can be used by LTPAC Providers to provide health assessment, diagnosis, intervention, consultation, supervision information and education across a distance.

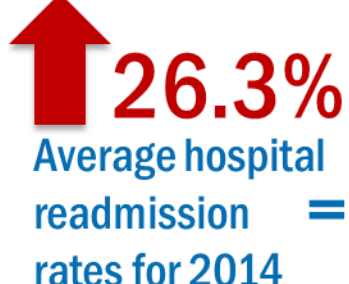
2 National Resource Centers

NRTRC	gpTRAC	NETRC
CTRC	HTRC	UMTRC
SWTRC	SCTRC	MATRC
PBTRC	TexLa	SETRC

12 Regional Resource Centers

Case Study #2: Camelot Brookside Care Center

120-bed Skilled Nursing Facility located in Jennings, LA implemented a multi-faceted approach to address their escalating readmission rates to include a new build onto their existing **EHR system** and adoption of a new **telehealth and remote patient monitoring** (RPM) system.



= **$5,000**

Monthly revenue loss

Re-hospitalization Issues

- Lack of coordination between each resident's attending doctor and on call doctor
- Absence of relevant history and physical information available when nursing communicates to the attending healthcare provider
- Need for immediate access to a healthcare provider for intervention and orders administration necessary to avert medical crisis

SOLUTIONS IMPLEMENTED

Increased upload and use of vital signs info in EHR

Rapid nurse response to changes in condition alerted through trends using the telehealth solution

Frequent vitals trending review by the APRN using EHR data from the beside

Wound care rounds implemented by certified wound care APRN

Immediate intervention on significant changes in condition by full care team

IV medications routinely administered at facility as ordered by doctor

On weekends and nights, APRN on call to initiate prompt and relevant care interventions for nursing staff

Daily meetings held to review critical patients with the direct care teams and APRN

Case Study #2 : Camelot Brookside Care Center Health IT Integration

Vitals/Weights Telehealth System Process Flow

APRN initiates clinical intervention as needed

Nurse or CNA collects patient vitals/weights and can use mobile kiosk to complete additional bedside documentation

Vitals/weights data integrated with patient ID & caregiver ID transmitted via internet to telehealth system

Patient data transmitted via internet to telehealth system tablet

Telehealth system sends alerts to APRN for any vitals/weight exceptions

Telehealth System

Vitals/weights data transmitted as HL7 observation/results (ORU) message from telehealth system to EHR system

Patient data transmitted as HL7 admit/discharge/ transfer (ADT) message from EHR system to telehealth system

EHR system populates transmitted data into patient chart and clinical dashboard

EHR System

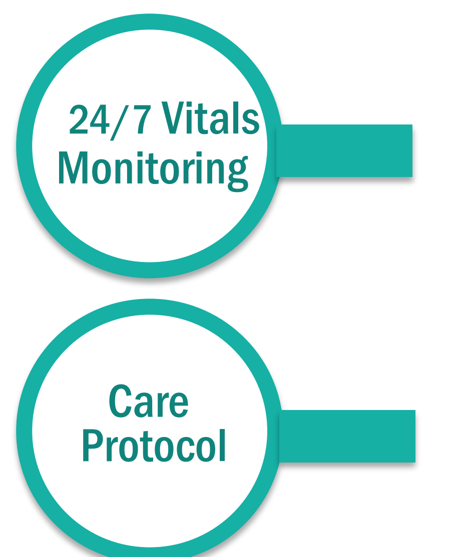
EHR system sends patient data when patients are admitted, discharged, transferred, or have other significant changes

Mobile kiosk serves as health IT coordination tool that: stores and forwards data, conducts Biometric Patient Monitoring, captures real time data, and provides immediate, wireless documentation from beside

Measurements integrated into EHR available for medication administration, nursing staff review, physician review, and dashboard alerts within minutes not hours

Case Study #2 : Camelot Brookside Care Center Key Success Factors

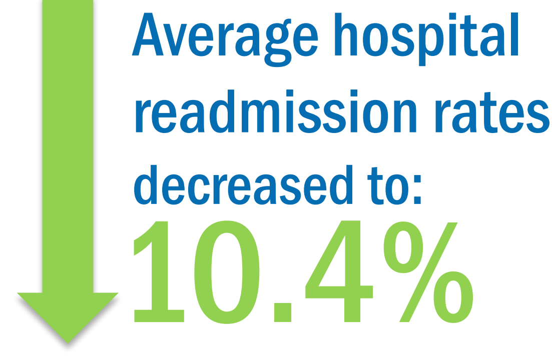
Improved provider-to-provider and system-to-system communication played significant role in improving proactive care and decreasing rate of hospital readmissions.



Top factor for patient readmission is presence of abnormal vital sign. Most readmissions occurred during night/evening. Active monitoring of vital signs, particularly during off-hours, helped to decrease readmission rate.

Superior care team coordination and use of connected vitals monitoring system by key members of care team

Proactive monitoring of alerts from vitals monitoring systems and proactive coordination of care between facility's APRN and physicians



With minimal investment in short timeframe

Source: http://www.leadingage.org/sites/default/files/Central_Control_Case_Study.pdf

Case Study #2 : Camelot Brookside Care Center Health IT Integration Results

Telehealth System and EHR System Integration Benefits

Can save up to
8 caregiver hours per day
= **$3,600** per month per facility

100 Sets of Vitals Per day
Per 100 Bed Facility

Previous Non-IT Integration Vitals Process	Time Required	Telehealth System Vitals Process	Time Required	Savings Delivered
Manual Vitals	4 minutes	Automated Vitals	1 minute	3 minutes
Document on Paper	1 minute	Auto-documentation	1 minute	n/a
Data Entry in Chart/Kiosk	4 minutes	Not Required	0 minutes	4 minutes
Total:	**9 minutes**		**2 minutes**	**7 minutes time savings**

MODULE 3: Health Information Exchange Adoption and Implementation

Understanding the Value of Health IT: Overview

- **Module 1: Current Health Care Landscape and Value of Health IT for LTPAC**
  - What is Health IT? Why is It Important in LTPAC Settings?
  - Understanding Drivers, Key Policies, and Regulations Related to Health IT and LTPAC
  - Case Study #1: Coordinated Care Oklahoma
- **Module 2: Health IT Adoption and Implementation**
  - National EHR Adoption Perspective
  - State-based EHR Adoption and Implementation
  - Health IT Adoption Challenges
  - Health IT Adoption Resources
  - Case Study #2: Camelot Brookside Care Center
- **Module 3: Health Information Exchange Adoption and Implementation**
  - What is Health Information Exchange? Why is It Important for LTPAC?
  - National HIE Adoption Perspective
  - Federal and State-based LTPAC HIE Implementations
  - Why is Patient Engagement Important for LTPAC
  - Case Study #3: CORHIO

Module Purpose

The purpose of this module is to educate LTPAC providers on the applicability and usefulness of health information technology (health IT) and health information exchange (HIE). It includes educational information, case studies, and resources for LTPAC providers.

It is intended to help prepare LTPAC providers for success in the transforming service delivery and payment environment.

Module 3: Learning Objectives

Health Information Exchange Adoption and Implementation

- What is Health Information Exchange? Why is It Important for LTPAC?
- National HIE Adoption Perspective
- Federal and State-based LTPAC HIE Implementations
- Why is Patient Engagement Important for LTPAC
- Case Study #3: CORHIO

About ONC & Module Disclaimer

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DISCLAIMER

ONC recognizes the challenge for any one module to meet the needs and interests across the range of LTPAC provider types, agencies, and organizations especially given differences in size, geographic challenges, readiness for change, and financial resources. ONC invites you to use these materials wholly, or in part, and incorporate them into teaching materials to support your setting.

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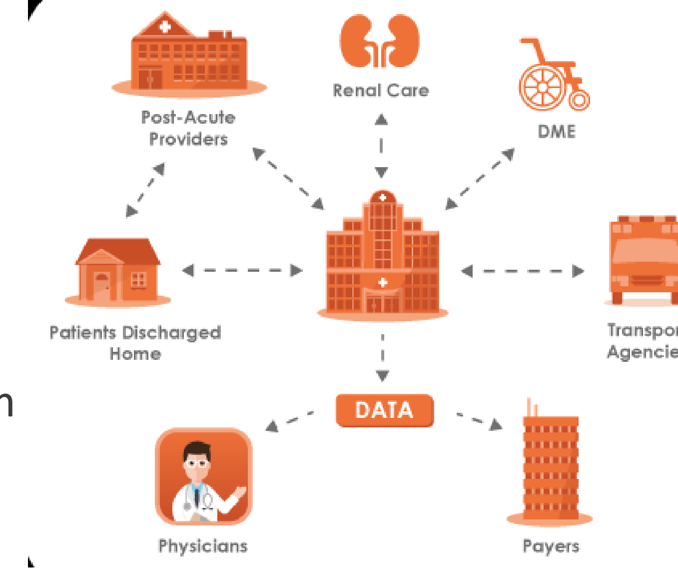
http://www.hhs.gov/disclaimer.html

What is Health Information Exchange (HIE)?

- *As a verb:* Health information exchange requires the ability to securely access and exchange an individual's health information across and between health stakeholder groups: e.g. providers, individuals, payers and other accountable entities
- Three forms of exchange:
  - **Directed Exchange—**ability to send and receive secure information electronically between providers and individuals to support coordinate care
  - **Query-based Exchange**—ability for providers to find and/or request information on a patient from other providers, often used for unplanned care
  - **Consumer Mediated Exchange**—ability for patients to aggregate and control the use of their health information among providers



- *As a noun:* An HIE is an organization that facilitates the information exchange within a network of facilities, community, state, or region

Why is HIE Important for LTPAC?

75%

of hospitals electronically exchanged health information with outside providers in 2014.

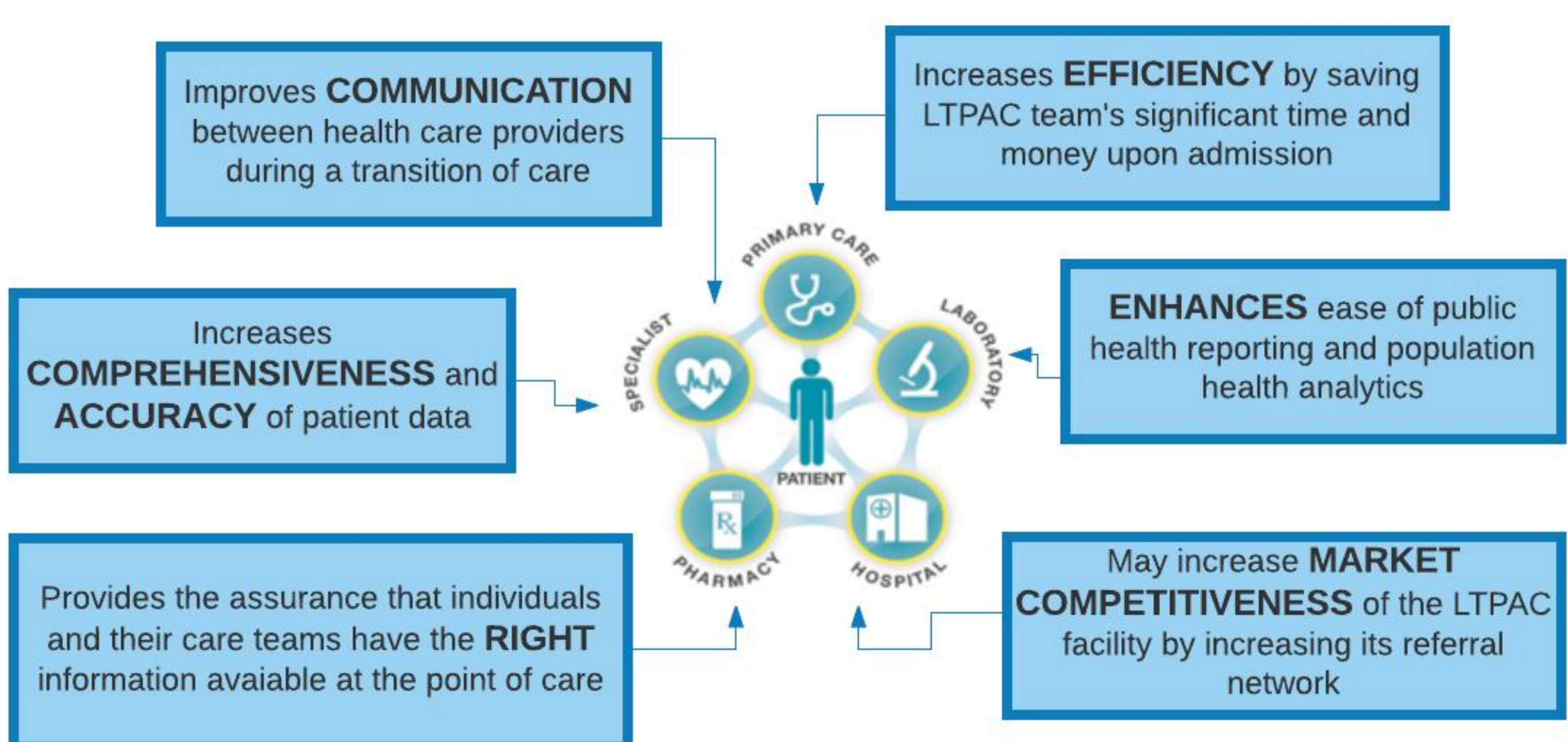
When multiple physicians are treating an individual following a hospital discharge, 78% of the time information about the individual's care is missing.

Poor care coordination increases the chance that an individual will suffer from a medication error or other health care error by 140%

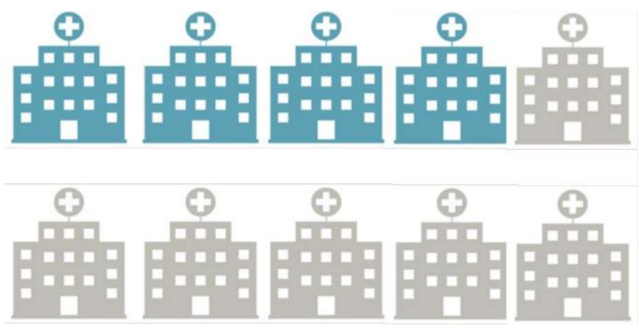
60%

of medication errors occur during times of transition.

Why is HIE Important for LTPAC?



2014 National HIE Adoption Perspective



4 in 10 Non-federal acute care hospitals

have necessary patient information electronically available from care settings outside their systems.

1 Out of 3 Physicians

electronically shared patient health information with other ambulatory providers to include Home Health Agencies and Nursing Homes.

Electronic information exchange among hospitals and outside providers by data type

Source: https://www.healthit.gov/sites/default/files/briefs/onc_databrief25_interoperabilityv16final_081115.pdf

National HIE Adoption Perspective

2014 National Survey[1] of **24 HIEs** receiving CCDs (any type) from Nursing homes (NH) or Home Health Agencies (HHAs).

4% Had experience receiving CCDs from NHs

12% Had experience receiving CCDs from HHAs

17% Had experience receiving other electronic information from NHs and HHAs e.g. admission/discharge/transfer notifications, care plans, insurance preauthorization requests

HIEs reported that LTPAC providers in their region generally had low rates of EHR adoption and ability to engage in more robust HIE

Comparisons between LTPACs is challenging due to considerable variation in:

HIE adoption between different LTPAC provider types

vs

Nursing Homes

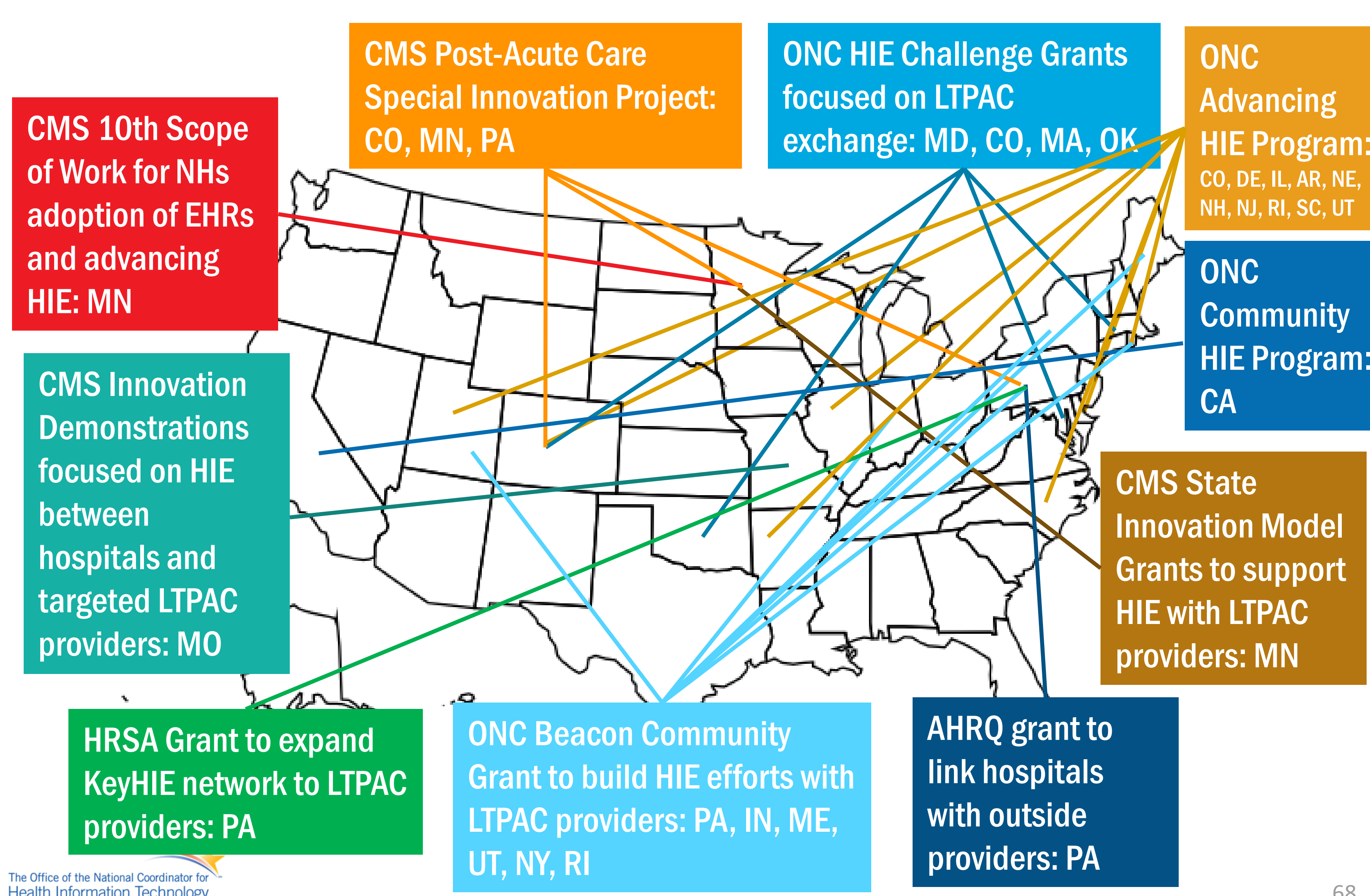
Residential Care Facilities

HIE adoption within LTPAC Providers

Different types of Nursing Home Providers

1. http://perspectives.ahima.org/survey-of-state-health-information-exchanges-regarding-inclusion-of-continuity-of-care-documents-for-long-term-post-acute-care-ltpac-patient-assessment/

Federal HIE LTPAC Funded Implementations



ONC HIE Award Program Spotlight

Advance Interoperable HIE Program (July 2015 – July 2017)

$29.6 MILLION TOTAL AWARDED

12 states for **2** years

10 of 12 selected LTPAC as a Target Population

AR, CO, DE, IL, NE, NH, NJ, RI, SC, UT

Community Interoperability & HIE Program (Sept 2015 – Sept 2016)

$1 MILLION TOTAL AWARDED

10 states for **1** year

1 of 10 working with SNFs and ALFs

CALIFORNIA

Goals

- **Advance Interoperable HIE Program:** Leverage successes from initial State HIE Projects to increase the adoption and use of interoperable health IT to improve care coordination.
- **Community Interoperability & HIE Program:** Create projects at the community level to increase HIE adoption and use among specific populations, which will help to address interoperability challenges.

KEY SUCCESS MEASURES

Increased adoption of critical HIE infrastructure, tools, and services

Increased movement of electronic, secure and standardized patient health information to improve care transitions

Increased interoperability of health information from external data sources used by consumers and providers from unaffiliated organizations

Exemplar LTPAC HIE Integration Tools

Adoption of KeyHIE Transform tool

ADT Messaging

Direct Mailboxes & Query Based Exchange

Discharge Summary Filters

Examples of Other National HIE Initiatives

Strategic
Health
Information
Exchange
Collaborative

Strategic Health Information Exchange Collaborative (SHIEC)
National trade association that provides resources to member HIE organizations so they may use information technology and trusted relationships in their service area to enable secure, authorized exchange of patient information among disparate providers.

Commonwell Health Alliance
Not-for-profit Trade Association dedicated to achieving cross-vendor interoperability that assures provider access to health data regardless of where care occurs.

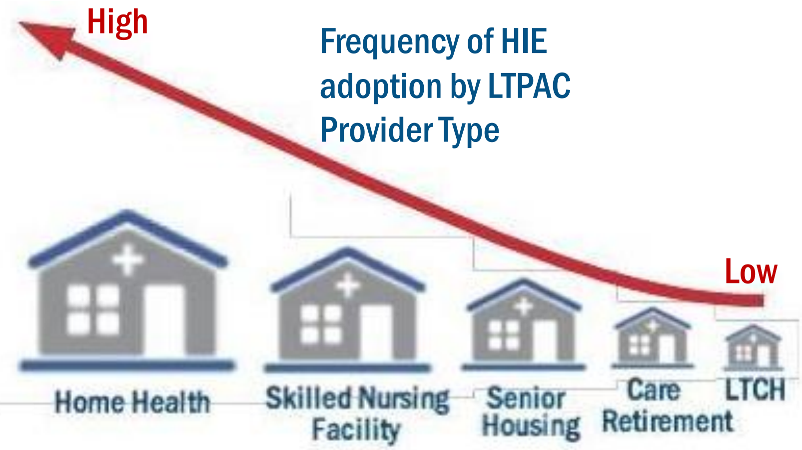
DirectTrust
Collaborative non-profit association of 142 health IT and health care provider organizations to support secure, interoperable health information exchange via the Direct message protocols.

The Sequoia Project
Non-profit organization, originally managed as the ONC eHealth Exchange, responsible for the advancement of an implementable, secure, and interoperable nationwide health information exchange.

Workgroup for Electronic Data Interchange (WEDI)
Non-profit organization focused on the use of health IT to improve healthcare information exchange—enhancing quality of care, improving efficiency and reducing costs.

State-Based HIE Implementations

A 2013 Study identified electronic HIE with LTPAC providers in 22 states.



1. Data captured from site visits to:
- Rush University Medical Center in Chicago, IL
- Beechwood Nursing Home in Western NY
- Eastern Maine Healthcare System (EHMS) in Bangor, ME

HIE is implemented to support transitions between care providers.

Most data exchanged is used to support[1]:

- Referral and Preadmission Assessment
- Referral for Community Services
- Transfer/Admission to LTPAC
- Transfer to Hospital or Another Health Care Provider from LTPAC
- Discharge information from LTPAC Provider to Patient Community
- ADT Event Reporting to HIEs

State-Based HIE Implementations

Most common electronic exchange from LTPAC to ED and hospital

Admission, Discharge, and Transfer (ADT) messages

ADT messages sent through LTPAC Provider EHR or HIE interface using secure messaging such as virtual provider network. Messages contain key information such as medications, lab test results, demographics, allergies, problems, and vital signs.

Directed Exchange

Supports variety of LTPAC HIE activities such as exchanging CCDs, sending ADT messages to hospitals supplemented with data from INTERACT forms, and sending SBAR content electronically.

Query-Based Exchange

Hospital ED admission staff can query for LTPAC information via an HIE organization upon admission, and retrieve patient information, typically in CCD format.

Source: https://aspe.hhs.gov/sites/default/files/pdf/76776/HIEengage.pdf

Administrative HIE Implementations

Most common HIE in support of administrative processes

Quality Measure Reporting

LTPAC sites are collecting and/or submitting quality measure data to support value based payments. Providers are collecting data through their EHRs or paper records and reporting electronically to CMS (e.g. Pioneer ACO).

Mandatory Reporting

Public Health authorities and state agencies maintain registries or repositories for reportable public health data. States like NY have developed electronic web portals to enter and submit reportable data.

Payment

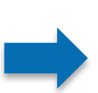
LTPAC providers may exchange health information with payers to support their case management and claims adjudication processes. Data exchanged includes: physician orders, certification/re-certifications, progress notes, flow sheets, medication and treatment administration records and assessments.

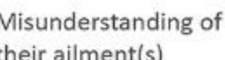
Source: https://aspe.hhs.gov/sites/default/files/pdf/76776/HIEengage.pdf

Why is Patient Engagement Important to LTPAC?

REDUCING READMISSIONS

Patients are often readmitted for reasons such as:





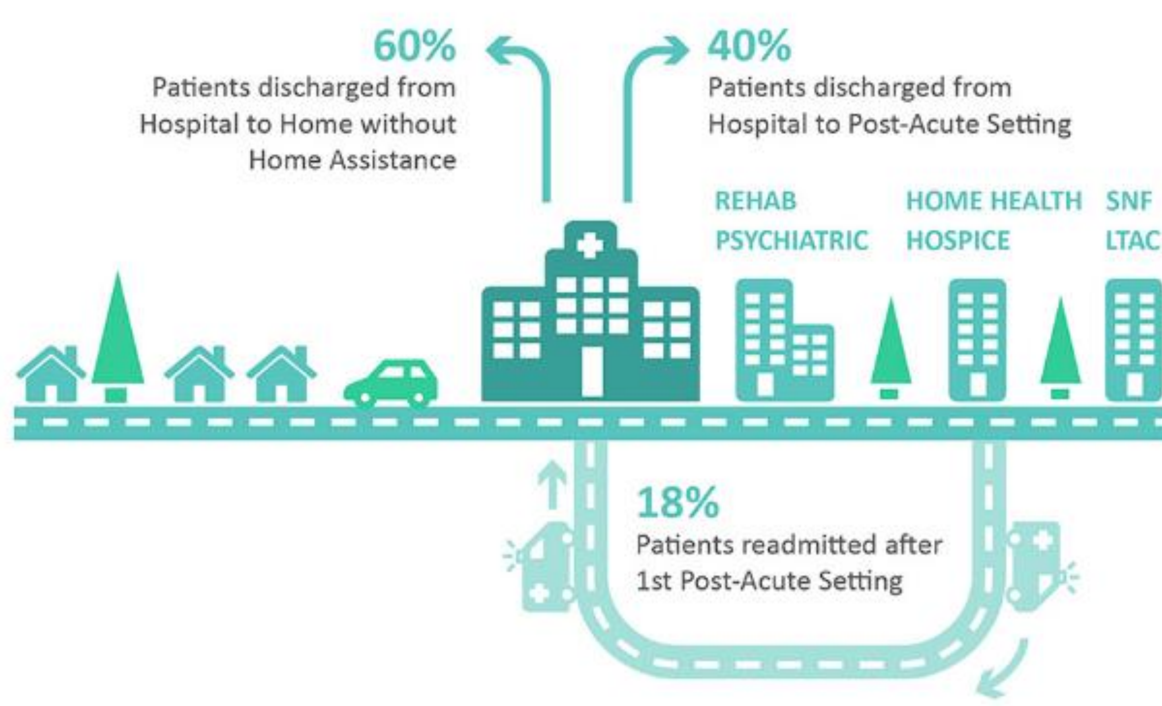
Misunderstanding of their ailment(s)

Confused about medicine usage

Not scheduling follow-up appointments with primary care

Being misinformed about test results

HIE technologies can help address these patient engagement challenges



The Office of the National Coordinator for Health Information Technology

Why is Patient Engagement Important to LTPAC?

SOCIAL DETERMINANTS OF HEALTH

Adopting tools to help providers capture social behavioral determinants can help LTPAC providers better understand patients' lives

Transportation issues

Housing situations

Diet

Education

Ability to pay for care

HIE TECHNOLOGIES LIKE PATIENT PORTALS AND MOBILE HEALTH TOOLS CAN HELP PROVIDERS GATHER ALL PATIENT INFORMATION INTO ONE VIEW

By **2020**, an impressive **80%** of health data will pass through the **cloud** at some point in its lifetime.

As **30-70%** of commercial payments executives expect to include value-based mechanisms within 3 years; having a **patient engagement strategy** in place to promote and increase **population wellness** will be imperative.

HIE Coordination Tools: Patient Portals for Consumer Mediated Exchange

IN AN ONLINE SURVEY OF U.S. ADULTS, AGED 18 AND OLDER

84% of people say their doctor's office has a **PATIENT PORTAL**

ADULTS AGE 55+ whose doctors have a Patient Portal are **MORE LIKELY** to say they have access to their health information via a Patient Portal (61%) than younger adults (45%)

TOP 3 BENEFITS OF PATIENT ENGAGEMENT TOOLS SHARING DATA WITH ELECTRONIC HEALTH RECORDS

- **75%** Allowing patients to access their health record for their review or to share with other doctors
- **75%** Providing patients with automatic alerts and reminders on appointments already booked
- **56%** Making it easier for patients to schedule or change an appointment

70% of patients find patient portals a convenient way to communicate with doctors.

Case Study #3: CORHIO

A non-profit, public private partnership regional health information organization providing advisory services to help healthcare professionals effectively use technology to improve care delivery and to capture value based information for analytics and population health programs.

Recipient of 2011 ONC Challenge Grant ($1.7M) to improve transitions of care with LTPAC providers.

Recipient of 2015 ONC Advanced Interoperability Grant to improve capture of data from LTPAC, Ambulatory and BH providers into HIE via a CCD.

+60 Hospitals

+4,000 Providers

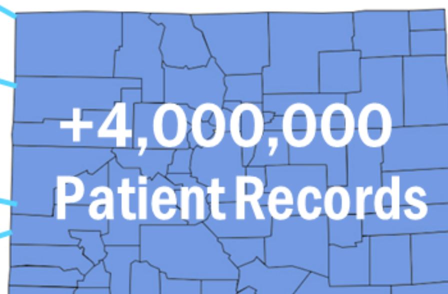
+146 LTPAC Facilities

41 BH Centers

4 Large Medical Laboratories

State Health Department

Colorado Springs Military Health System



- Bidirectional exchange with provider EHRs
- Many LTPAC Providers use secure, web-based query access to community health record system from which they can access patient records and generate CCDs regardless if they have an interoperable EHR
- Currently implementing Transform tool to allow LTPAC providers to reuse MDS and OASIS data in CCDs

Case Study #3: Current CORHIO Workflow

Hospital for Hip Replacement → Patient Referred to Post-Acute Setting → Handover to Post-Acute Setting → Follow-up by PCP

Hospital for Hip Replacement

- Patient in hospital for hip replacement surgery
- Patient needs further rehab post-discharge from hospital
- Hospital sends patient's inpatient medical information to PatientCare 360® (CORHIO's secure web portal)

Patient Referred to Post-Acute Setting

- Post-acute setting queries PatientCare 360 portal for preliminary hospital information to prepare for intake:
  - ✓ Face Sheet
  - ✓ Op Report
  - ✓ Inpatient Labs
  - ✓ Radiology Reports

Handover to Post-Acute Setting

- Post-acute setting is able to review patient's longitudinal medical record:
  - ✓ Discharge Summary
  - ✓ Final Labs
  - ✓ Rehab notes
  - ✓ Final MAR
  - ✓ Discharge Orders
- Patient Care Plan developed

Follow-up by PCP

- Post-acute setting discharges patient
- PCP queries patient in PatientCare 360 to prepare for follow-up visit
- PCP accesses the entire medical history on the patient, including both the hospital visit and post-acute treatments

THANK YOU