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# Electronic Health Record Replacement Project

Green Mountain Care Board

March 2, 2017



THE  
University of Vermont  
HEALTH NETWORK

# Agenda

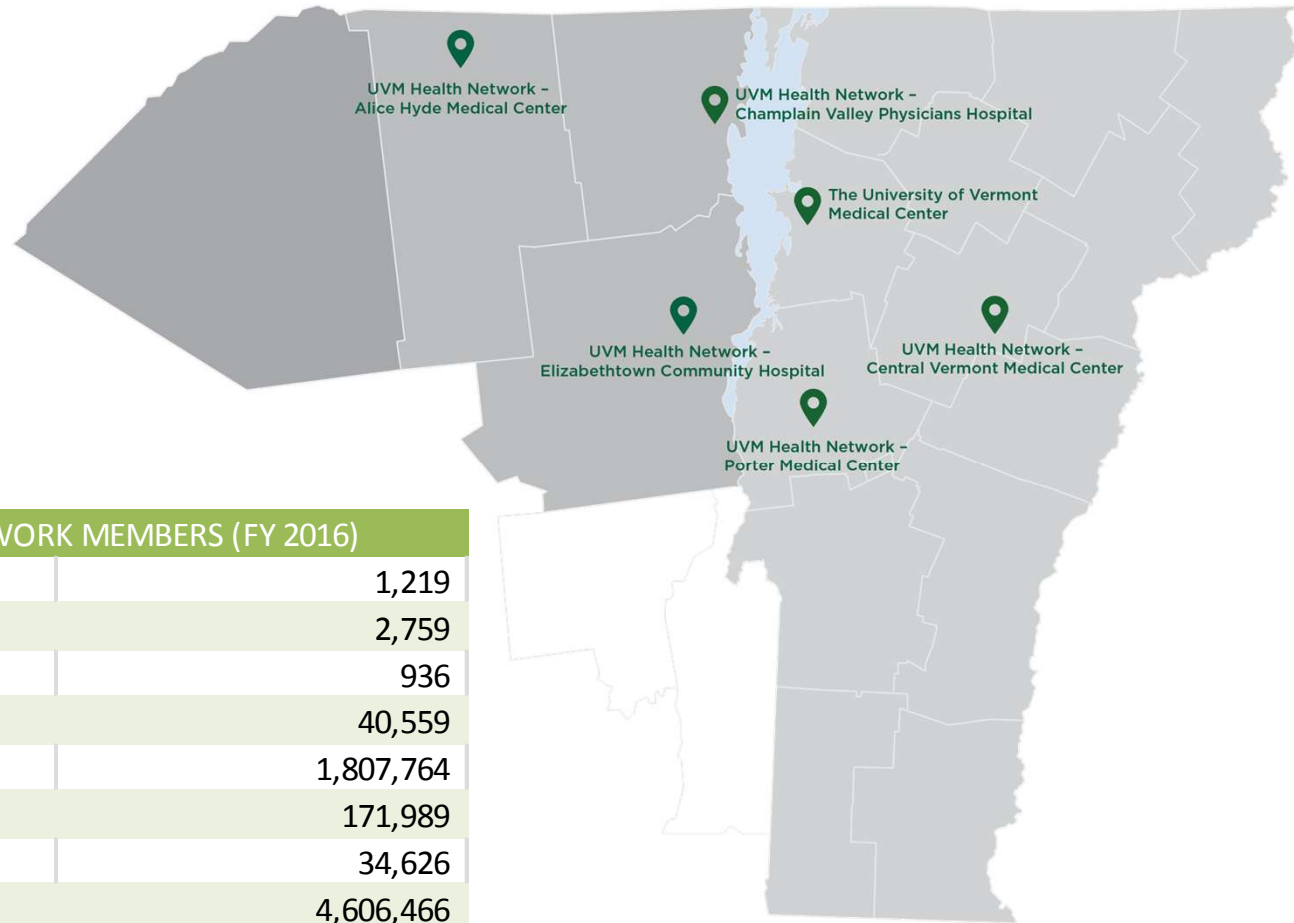


- Introductions and Overview
  - John R. Brumsted, MD, President and CEO, UVM Health Network, and CEO, UVM Medical Center
- Project overview
  - Adam Buckley, MD, MBA, Chief Information Officer, UVM Health Network
- Financial overview
  - Todd Keating, Chief Financial Officer, UVM Health Network

# Introductions and Overview



# The University of Vermont Health Network



STATISTICS - ALL NETWORK MEMBERS (FY 2016)	
Number of physicians	1,219
Number of RNs	2,759
Staffed beds	936
Inpatient discharges	40,559
Patient visits	1,807,764
ED visits	171,989
OR cases	34,626
Lab visits	4,606,466

# Project overview



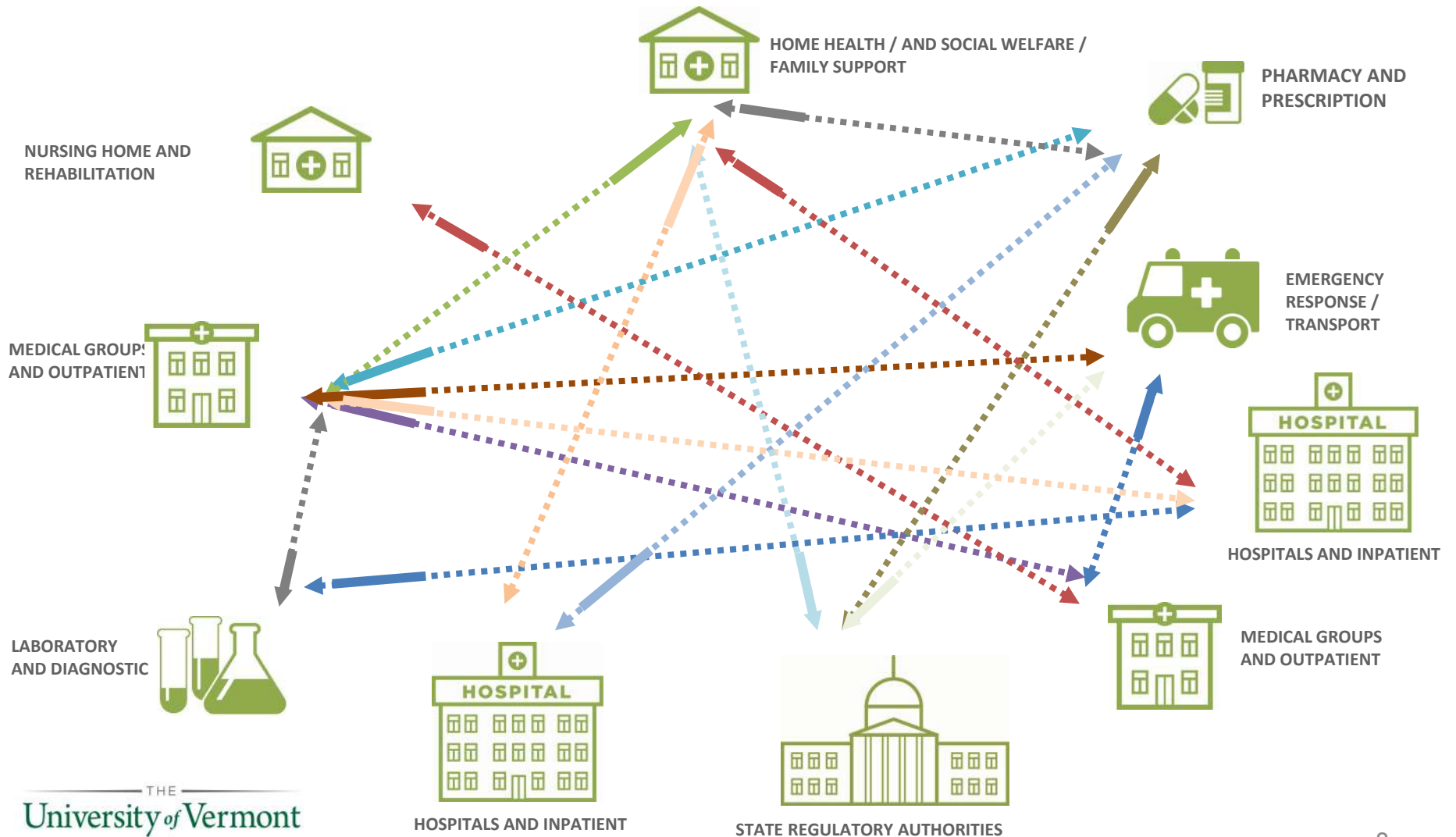
# What is an Electronic Health Record (EHR) and What are We Proposing?

- EHR consists of all important patient information
  - Health and clinical information, registration, billing, scheduling, and insurance
- The UVM Health Network is proposing a unified EHR
  - The project is to implement a connected system called Epic for four network hospitals:
    - University of Vermont Medical Center
    - Central Vermont Medical Center
    - Champlain Valley Physicians Hospital
    - Porter Medical Center

# Many UVMHN Systems are Outdated and Need Replacement

- Each UVM Health Network hospital has different systems for medical, billing, and scheduling, some more than 20 years old
- Many of these systems have reached the end of their useful life and need replacement or updating
- The existing systems do not guarantee that all necessary information is available when and where it is needed
- Multiple systems with multiple log ins and interfaces puts undue burden on patients and their families
- This hinders our ability to measure outcomes effectively and standardize care in order to improve the overall health of Vermonters and slow the growth of health care costs

# Current State of EHR at UVMHN is Complex and Disjointed for our Patients and Providers





# The Hodgepodge

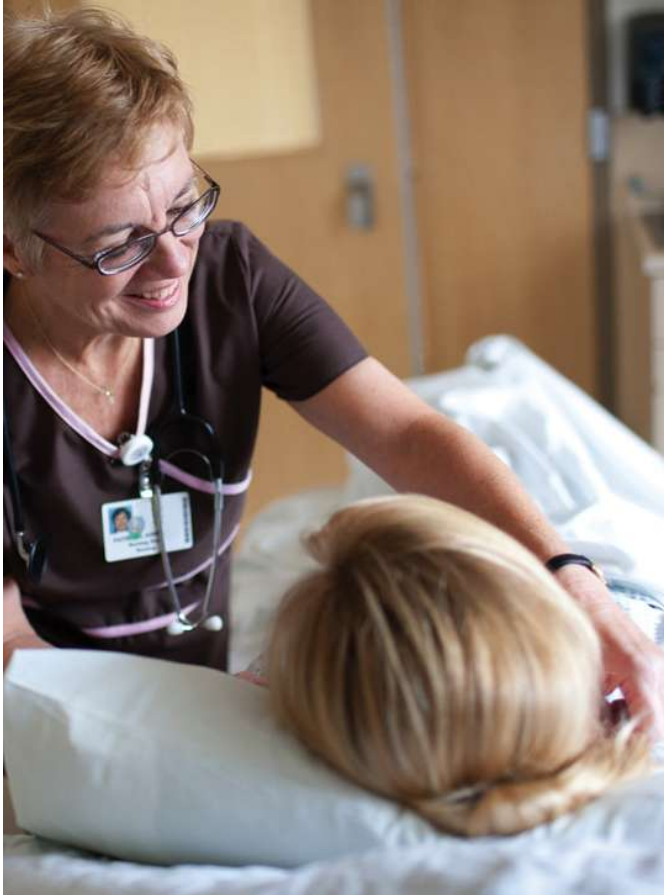
Organization	Inpatient Clinical System	Inpatient Financial System	Ambulatory Clinical System	Ambulatory Financial System	Clinical Ancillary Systems
UVM Medical Center	Epic	GE	Epic	GE	Optum (OR) Sunquest (lab) GE (imaging)
CVMC	Meditech	Meditech	eClinical Works	eClinical Works	Picis (ED) Philips (imaging) Merge (cardiology)
CVPH	Soarian	Soarian	GE Medent Paper	Soarian Medent None	ORSOS (OR) Sunquest (lab) Siemens (imaging) McKesson (cardiology)
Porter	Meditech	Meditech	Meditech LSS/MPM	Meditech LSS/MPM	MedHost (ED) Philips (imaging) ECS (nursing home)

# Why a Unified EHR?



- **Better patient & family experience**
  - Accurate, timely and up-to-date information available 24/7 to patients and families via one patient portal
  - Allows patients to schedule online, check lab and test results, communicate with providers, and more
  - Patients will have greater ease navigating the system with fewer redundant forms and provider questions

# Why a Unified EHR?



- **Higher-quality patient care**
  - Complete patient information available to providers across settings
  - Efficient and accurate information sharing among patients and providers
  - Patients will see enhanced communication and collaboration between providers
  - Patient care will be improved by better local and regional care coordination

# Why a Unified EHR?



- **Health care reform**
  - A unified EHR supports the goals of health care reform: improving the patient experience, improving the health of populations, and reducing health care costs
  - Investments in information technology power this collaboration

# Why a Unified EHR?



- **Patient-centered research**
  - Patients will have improved access to innovative research protocols as they move through the health care system
  - Patients will be able to be recruited to the newest treatment approaches during their care
  - Patient recruitment will be accessible across the health network

# Why a Unified EHR?

- **Benefits non-network hospitals, independent practices and community providers**
  - Having a complete patient record across the UVM Health Network enhances the value of connections
  - This system will support better coordination across the care continuum, regardless of whether or not the provider or hospital is part of the network
  - UVM Health Network will continue to offer “PRISM Regional,” allowing independent providers to use the system in their practices if they choose

# Why a Unified EHR?

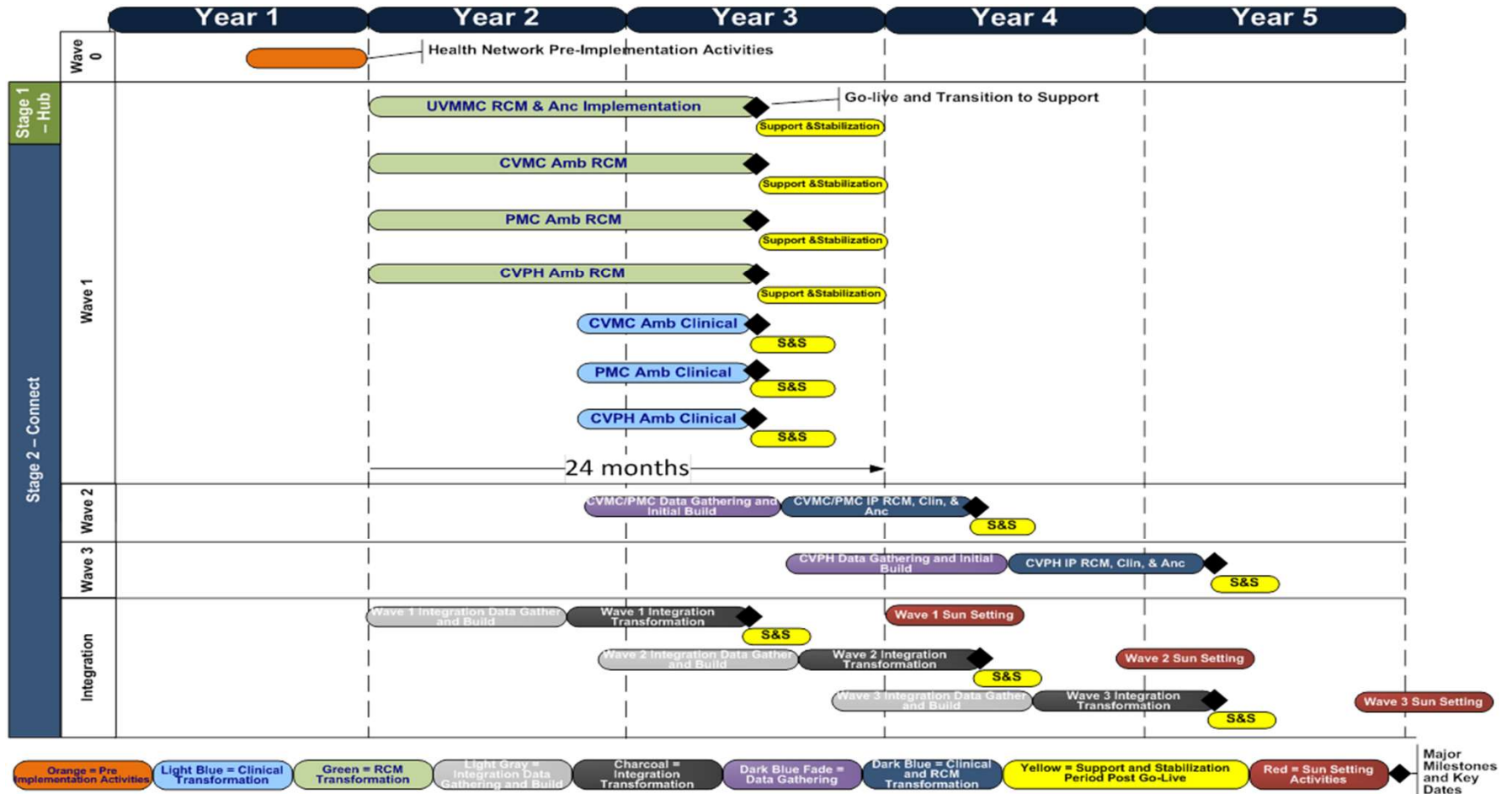
- **Enhanced information security and patient privacy**
  - Patient information and system security will be enhanced with additional audit capabilities that we currently do not have
  - Partnering with a vendor that is compliant with all federal and state security and safety standards will increase safeguards
  - Maintaining security and privacy standards for various systems increases risk and moving to one system will increase security

# Cost to Maintain, Update and Replace Existing Systems Separately

- Done independently, it could cost up to **\$200 million** for the four hospitals to upgrade their own systems and would lack the network connectivity
- It will cost **\$151 million** over 6 years to move the four network hospitals to a unified EHR system



# Implementation Timeline



# Project Safeguards

- We will draw from the UVM Medical Center's successful Epic clinical installation 10 years ago
- We have conducted a review of Epic installs nationally to understand implementation challenges
- Rigorous internal and external safeguards
  - Expert project management
  - Specialized internal governance
  - Robust public transparency and accountability
  - Thorough training and testing before activation
  - Adequate contingency

# Financial Overview



# Project Costs

- Capital cost: \$112.4 million
  - \$109.3 million capital expenditures
    - Software, hardware, implementation, internal and external staffing, training, data conversion
  - \$3.1 million capitalized interest

# “Total Cost of Ownership”

- TCO model captures all costs and savings associated with an HIT project over a defined period of time
  - “Best practice” for understanding true costs of a project
- TCO modeled for a six-year period (includes implementation and post-implementation period)
  - \$151.7 million net cost over six years (capital and operating combined)

# Cost and Funds Flow

<b>6-Year Summary of Epic Costs &amp; Funds Flow</b>					
	<b>Total University of Vermont Health Network (UVMHN)</b>	<b>University of Vermont Medical Center (UVMHC)</b>	<b>Central Vermont Medical Center (CVMC)</b>	<b>Porter Medical Center (Porter)</b>	<b>Champlain Valley Physicians Hospital (CVPH)</b>
Total Capital Costs <sup>1</sup>	\$109,254,817	\$109,254,817	\$0	\$0	\$0
Total Operating Costs <sup>2</sup>	\$85,889,541	\$85,889,541	\$0	\$0	\$0
Subscription Fees <sup>3</sup>	\$0	(\$30,744,948)	\$9,403,958	\$4,734,147	\$16,606,843
Total System & Staffing Offsets <sup>4</sup>	(\$43,451,154)	(\$27,101,902)	(\$4,322,229)	(\$2,748,998)	(\$9,278,024)
<b>Total Net Capital &amp; Operating Cost of Epic Implementation</b>	<b>\$151,693,203</b>	<b>\$137,297,507</b>	<b>\$5,081,729</b>	<b>\$1,985,148</b>	<b>\$7,328,819</b>
Footnotes: 1 UVMHC as the licensee has all the capital costs. Amount shown does not include capitalized interest. 2 UVMHC as the Epic licensee will be allocated all operating costs. 3 The UVMHN hospitals reimburse UVMHC for their share of the operating costs. 4 Staffing & system offset savings generated from Epic implementation.					

# Financial Projections

- 10-year financial models built for UVMHN and UVMMC
  - FY 2016 used as base year, FY 2017 based on budget (modified for known margin adjustment items)
  - FY 2018 – FY 2025 projections
    - NPR growth between 3.4% – 3.5%
    - Operating margin between 2.6% - 3.5%
  - Will refresh financial model and assumptions annually
- Assessed financial metrics to determine operational efficiencies necessary to maintain “A” rating
- Tested financial model and assumptions with Ponder & Co., a leading national health care financial advisor, for independent review

# Summary





# Unified Epic EHR

- This is a **necessary and important update** to EHR systems for patients
- **Higher-quality, safer care** for patients
- **Greater collaboration and care coordination** with our partners
- **Industry standard** for regulatory compliance
- **Carefully planned and budgeted** to not raise costs for patients
- **Rigorous internal and external safeguards** to mitigate and address risks