The Future Is Calling:
Leading private sector innovators discuss the latest developments in telehealth initiatives and challenges

Tuesday, October 7, 2014
12:00 pm
B-318 Rayburn House Office Building

Agenda

Welcome and Opening Remarks
Mary R. Grealy, President, Healthcare Leadership Council

HLC Member Company Presentations

St. John Providence Health System (member of HLC member Ascension Health)
Richard D. Fessler, M.D.
Chairman Department of Surgery
St. John Providence Health System
Warren, Michigan

BlueCross BlueShield of Tennessee
Elaine Manieri, DPh
Vice President, Pharmacy and Medical Vendor Programs
BlueCross BlueShield of Tennessee
Chattanooga, Tennessee

Baystate Health (member of HLC member Premier healthcare alliance)
Joel Vengco
Vice President of Information & Technology and Chief Information Officer
Baystate Health
Springfield, Massachusetts

Memorial Healthcare System (member of HLC member Premier healthcare alliance)
Forest Blanton
Senior Vice President and Chief Information Officer
Memorial Healthcare System
Hollywood, Florida

Panel Questions & Answers

Closing Remarks
Mary R. Grealy
HLC WORKFORCE PRINCIPLES

Overview
Innovation in healthcare is not limited to medicines or devices; it includes the way in which care is delivered. With the implementation of the Patient Protection and Affordable Care Act (PPACA) and the changing demographics in this country, the way healthcare is delivered and the workforce required to do so will need to change in response. The Healthcare Leadership Council (HLC) views the healthcare workforce from a unique, multisectoral perspective that reinforces HLC member efforts to promote value and quality and highlights the changing healthcare delivery system.

HLC developed these Workforce Principles to guide HLC’s activity and strategy in addressing healthcare workforce challenges. These principles may also guide federal and state policymakers as they draft legislation and regulations that affect the healthcare workforce.

Overarching Goals
HLC members believe that any steps taken to address existing and future healthcare workforce challenges should (1) look to the future needs and structures of the healthcare system; and (2) support a healthcare system based on quality and value.

Build the Future Healthcare System. As the healthcare system changes, so too must the healthcare workforce. Public and private efforts to develop and strengthen the healthcare workforce must be constructed in a way that encourages the healthcare delivery system to lower costs and improve outcomes. HLC believes that workforce policies geared toward the goals of the future rather than the current system will produce a shift toward improved quality in healthcare and create a workforce ready to address critical needs.

Promote Quality and Value. The existing workforce must also transform to reflect the changing healthcare landscape. Efforts to improve and strengthen the healthcare workforce must move the system from volume-based, episodic care to value-driven, team-based, quality care that incorporates prevention and other important health determinants. HLC believes that we must realign the current workforce to better promote quality and value.
Key Strategies

1. Ensure a Sufficient Healthcare Workforce

- All sectors of American healthcare are or will be affected by a shortage of specialists, physicians, nurses, skilled scientists, pharmacists, and/or allied health workers that provide the expertise and personnel to treat an increasingly diverse, aging, and chronic disease-ridden population. This has an effect throughout the healthcare system, including healthcare coverage and the ability to treat patients, as well as the cost of healthcare.

- In particular, the physician workforce is hampered by policies and payment systems that have resulted in a shortage of physicians in certain disciplines and geographic areas, and at financially strained academic medical centers serving the sickest and most vulnerable patients. Graduate Medical Education (GME), funded under the Medicare program, has not been updated for more than 15 years, and misaligned payment systems discourage individuals from pursuing careers in key specialties or geographic areas, while an aging population combined with increased access to insurance coverage through healthcare reform has and will continue to strain the system.

- The healthcare workforce pipeline for all sectors of healthcare begins with STEM (science, technology, engineering, and math) education. Increased STEM education is needed at all levels of education to train and retain the workers needed to fill more traditional healthcare jobs, as well as geneticists, engineers, and people who are able to interpret the large amounts of data produced in healthcare. A shortage in graduates with a STEM educational background has made it difficult for some healthcare companies to hire qualified workers for high-paying positions in the U.S. A well-educated, qualified workforce is essential to research, innovation, and patient care.

- **HLC believes** that an emphasis on STEM education should be integrated into federal policies. The federal government has many areas of influence that should be used to promote STEM skills, including immigration policies, policies to drive innovation, federal and state spending priorities, and education policies affecting elementary, secondary, and postsecondary students.

- **HLC believes** we need dramatic reform of how physicians are trained and paid. Payment policies should be sufficient to cover the full cost of direct and indirect medical education in the clinical setting, be better aligned to meet geographic needs, and be more efficiently allocated to meet evolving patient demand. Payment should be sufficient enough to support education and bring enough workers into the system.
2. Support Nonphysician Providers

- Nonphysician providers such as nurse practitioners, nurse assistants, community-based providers, pharmacists, and trained health educators are an integral part of the healthcare delivery system. Health services provided by nonphysician providers are an important way for the current healthcare system to be more productive and efficient because the services they provide are often lower cost to the patient and supplement the care given in a traditional healthcare setting. Additionally, providers of this type are critical to the development of team-based care.

- **HLC believes** that, in order to meet the needs of a growing and aging population, we need dramatic reform of how the healthcare workforce incorporates nonphysician providers. Nonphysician providers should be allowed to deliver the care that they are trained to provide in collaboration with health teams. Reimbursement and regulatory gaps or barriers should be addressed so this type of care is accessible by more patients.

3. Promote and Enhance Tools That Support a More Efficient Healthcare Workforce

- In order to make the workforce as efficient, effective, and patient-centric as possible, providers from all sectors must utilize tools to reach, treat, and engage patients. Telehealth is an important component of these tools.
  
  **Telehealth:**
  - Acts as a force-multiplier, extending the ability of the current healthcare workforce to meet patient needs (e.g., in underserved areas);
  - Can elevate quality by reaching individuals more effectively (e.g., locating noncompliant patients or providing interpretation services for those with language barriers); and
  - Supports improved workforce training and development (e.g., using telehealth to train or retrain workers and allowing workers to interact with each other via telehealth).

- **HLC believes** that telehealth legislation and regulation should be flexible enough so that new and innovative technologies do not face disincentives from outdated frameworks. Additionally, HLC supports reexamining restrictive reimbursement and regulatory barriers that make it challenging to use telehealth across state lines and for qualified nonphysicians to be paid for care provided in a telehealth setting.
Virtual Care

St John Providence Health System Telestroke Experience
Stroke Telemedicine – What is It?

- Decision making support for physicians
  - Evidence based
  - Algorithm driven
  - Delivers physician expertise to patient’s point of access
- Creates a mutually beneficial relationship
- Almost immediate access to specialists
- Significant cultural and financial implications for sites that:
  - Previously transferred all stroke patients or
  - Did not effectively or aggressively treat stroke
Stroke Telemedicine – Why?

- Stroke is the leading cause of disability in adults
- It is the most common reason for admission to a nursing home
- 137 Million people in the US live more than 60 minutes from a stroke center\(^1\)
- Only a small percentage of stroke eligible patients for IV thrombolysis receive it
- 26% of stroke victims are still in a nursing home 6 months after their stroke\(^2\)

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1. AHA Heart Disease and Stroke Statistics
Our patient is:
- Unable to speak
- He is unable to move his right arm or face
- His right leg is weak

Our team is notified
- Telemedicine contact
- Tpa is delivered
- No improvement
No blood traveling from the neck to brain...
After clot removal
Stroke Telemedicine – Why?

- TEMPiS\(^1\)
  - Patients more likely to receive tPA
  - Less likely to have poor functional outcome at 3 months
- Sairanen et al\(^2\)
  - Functional outcomes of telestroke patients were similar to those in a comprehensive stroke center
  - Mortality and sICH rates did not differ
- Demaerschalk, B M\(^3\)
  - High accuracy, reliability, efficacy and effectiveness- high grade recommendations with telestroke compared to telephone.

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Stroke Telemedicine – Why?

Improving the experience of people and caregivers

People / Communities
- Treatment options previously unavailable
- Improved access, especially for most vulnerable populations
- Improved quality of life, return to function
- Appropriate utilization and escalation
- Lifetime care and relationships
- Community education

Providers / Caregivers
- Specialists and PCP collaboration
- Reputation
Stroke Care Benchmarks
CAH & Community Hospital

Prior to Telehealth support
Following Telehealth Initiative
Stroke Telemedicine – Why?

Improving the health of defined populations while decreasing the cost of care

Spoke Site
- Staff education, identification of patients
- Transfer rates decrease
- Improved ED throughput
- PCP education improves, able to manage more patients
- Maintain downstream revenue
- Quality, data, treatment rates
- Participation in research

Hub Site
- Halo effect, reputation
- Hardwire process
- Treatment rates
- Volume for research / publications
Stroke Telemedicine – How?
Utilizing Proven Methodology
Systematic process for review of readiness
Process maps and instructions for use
Algorithm driven standard work
Hub and Spoke:
- Champions, IT, Credentialing
- Capabilities
- Implementation timeline
Stroke Telemedicine – Where?

- Stroke Center- Hub
- Affiliate- Spoke

Designated Rural Counties
Metro Detroit Region
Cities with Critical Access Hospital
Cities with Hospital
Metropolitan Cities
Stroke Telemedicine – Barriers to Success?

- Significant learning and support curve
  - Significant resource requirements
    - Infrastructure
    - Physician Champions
    - Device communication

- Inconsistent state and federal policies and regulations
  - Interstate physician licensing
  - Inter-facility credentialing
  - Affiliation and service agreements
  - Physician contracting
  - Reimbursement
  - Nominal communication between state licensing boards
Conclusions

Telemedicine

• Offers time and cost savings to patients and caregivers.
• Offers access to care for vulnerable patient populations.
• Removes access barriers traditionally defined by geography, scarce resources or time.
• Delivers care at the patient’s point of access to our health care system.
A Payer’s Perspective

Presented by Elaine Manieri
VP Pharmacy and Medical Vendor Programs

Healthcare Leadership Council
Washington, D.C.
October 7, 2014
Telehealth: Payer's Perspective

- Improved Access
- Maintain Quality Standards
- Increased Affordability
U.S. Healthcare Problem

“There is this **perfect storm** of increased demand with the newly insured, a shortage of primary-care physicians and specialists, and a need to keep costs in control. I think telehealth provides a real vehicle for doing that.”

Mario Gutierrez
Executive Director
Time Magazine Center for Connected Health Policy

TIME
The Affordable Care Act has:

✓ Increased demand for health care
  ▪ Underserved rural areas
  ▪ Higher demand for physicians

✓ Incentivized re-direction of low acuity care
  ▪ Changing from fee-for-service medicine (volume) to reimbursement based on the quality of care

✓ Penalized hospital re-admission
  ▪ Return trips to the hospital costs Medicare $17 billion each year
Telehealth Opportunity

- 900 million U.S. doctor visits per year
- More than half are low acuity, information, prescription
- Average family practice wait time is 20.3 days
- 30 million uninsured to be added to system
- Huge doctor shortage predicted – particularly primary care

*U.S. Telehealth Services forecasted to grow from $240 Million in 2013 to $1.9 Billion in 2018 (Forbes)*
Telemedicine Appeal Grows for Employers and Individuals

“This year, 28% of companies with more than 1,000 employees offer telemedicine as a benefit and 24% expect to add that capability in 2015.”

TOWERS WATSON
What would they have done instead?

- Primary Care Doctor: 50.9%
- Emergency Room: 27.9%
- Urgent Care Clinic: 14.4%
- No Treatment: 6.6%

80% of adult ER visits are due to lack of access to other providers.*

Yearly PCP visits are projected to increase ~40% by 2025, while also facing a shortage of PCPs.**

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Quality Healthcare Delivery

- High customer satisfaction
  - Little or no wait time
  - Convenient
- Standardized treatment algorithms
  - Based on nationally accepted standards
- Appropriate prescribing
Telehealth: Payer's Perspective

- Improved Access
- Maintain Quality Standards
- Increased Affordability
Baystate Health

Population Health and Data Liquidity
October 7, 2014

Joel L. Vengco
Vice President & Chief Information Officer
A problem has been detected and Windows has been shut down to prevent damage to your computer.

(It sucks to be you right about now...)  

If this is the first time you've seen this error screen, restart your computer. If this screen appears again, follow these steps:

Check to make sure any new hardware or software is properly installed. If this is a new installation, ask your hardware or software manufacturer for any Windows updates you might need.

If problems continue, disable or remove any newly installed hardware or software. Disable BIOS memory options such as caching or shadowing. If you need to use Safe Mode to remove or disable components, restart your computer, press F8 to select Advanced Startup Options, and then select Safe Mode.

Technical information:

*** STOP: 0x00000000A (0x0227001d, 0x00000002, 0x00000000, 0x804eba3a)

Beginning dump of physical memory
Physical memory dump complete.
Contact your system administrator or technical support group for further assistance.
Baystate Health

- $1.8B, 11K employees, serving population of 1M
- 4 hospitals
  - Incl. flagship academic medical center
- 4 Community Health Centers
- 90 medical groups, VNA, hospice
- Largest reference lab in the region
- 1800+ Physicians total
- Operates a commercial health plan (Health New England)
Baystate Health’s Community Hospitals

- **Franklin Medical Center**
  - Serving Franklin County (pop. 72,000)
  - Towns average 2,000-10,000 residents
  - 21% Medicaid

- **Mary Lane Hospital**
  - Serving mostly Hampshire County
  - Location is about 10,000 residents
  - 11% Medicaid

- **Wing Hospital**
  - Serving Hampshire and Worcester County
  - 8% Medicaid
Population Health Initiatives

- Baycare Health Partners
  - PHO includes four hospitals and 200 medical groups
- Pioneer Valley Accountable Care (PVAC)
  - Regional ACO
  - Managing 90K patients at risk
- Pioneer Valley Information Exchange (PVIX)
  - Connecting providers across the region to create “One Patient, One Record”
  - Provides additional value-added services to members
- myBaystateHealth
  - Patient engagement portal
- Health Plan and Hospital-based Care Management Program
- Center for Analytics
- Telehealth Programs
“Keeping care local”
- Last year, two of our community hospitals referred:
  - Over 5,000 patients to Baystate Medical Center (30-60 miles on avg)
  - Approximately 300 patients were referred to Boston (90-120 miles on avg)

Initiatives (many are still in pilot because not reimbursed)
- Specialty Referral
  - Telestroke
  - Neurology Services
  - Tele-speech and swallow consult
- Remote monitoring
  - VNA
  - Epilepsy Monitoring
- eICU
- Behavioral Health
- New initiatives:
  - eVisits
Enabling Population Health Initiatives
made simple...maybe

1. Data Liquidity
   - Data Standardization
   - Semantic and syntactic interoperability

2. Knowledge & Insight
   - Retrospective reporting
   - Event Alerting
   - Predictive Modeling / Forecasting
   - Analytics Platform

3. Action
   - Interventions
   - Patient campaigns and engagement
   - Apps
   - Portal platform
   - Innovation

Baystate Health
Baystate’s Framework: Data to Action

3rd party Apps and Innovations

Knowledge & Analytics

Data Transformation Services, Standard Terminologies, Ontologies, Aggregation

(HIE + pvix)

EHRs (N+1) APIs
Lab & Rx APIs Registration (ADT) APIs Practice Management APIs Claims APIs Genomics APIs Other Data Sources APIs

Baystate Health
Connecting Our Western MA Community
Pioneer Valley Information Exchange (PVIX)

Starts with Data Liquidity.

A standards-based exchange approach using IHE architecture and SDO harmonization (CCDA).

Now connecting over 20 EHR types and counting.

This has been a challenge!
Our Regional Challenges

- **Interoperability**
  - Standards still not being met across EHRs and HIEs
  - We are left to develop translations and mappings (cost is high)
  - Vendor core needs to start with standards (syntactic and semantic)
  - Patient identification and physician identification are still key
  - True analytics capabilities are at risk of being achieved

- **Cost**
  - Interface costs are high, especially for small practices and small hospitals
  - Additional cost required to aggregate data
  - HIE sustainability will always be at risk due to high maintenance costs
Our Regional Challenges

- **Vendor**
  - No single system can solve everything – innovations from combining technologies
  - Vendors lock their data and logic, shutting out competitors and innovators
  - History of ERP vendors in other industries have shown success in open platforms (e.g., SAP)

- **Knowledge**
  - Content and knowledge interoperability
  - Sharing rules, decision support syntax
Our Regional Challenges

❖ Workflows
  • Even if we achieve data liquidity, workflow and business logic integration is difficult to achieve with among competing vendors
    ▪ Single Sign-On (SSO)
    ▪ Patient in-context / auto lookup
  • Physicians will be turned-off if ease of access is not possible
    - Convenience trumps function
  • Integrate analytics back into EHRs...often vendors won’t allow unless it’s their own
Recommendations

- Publish standards-based APIs to enable evolution and innovation
  - Data and knowledge access
  - Discrete data access (e.g., FHIR standard)
  - Workflow and business logic
  - Needed for HIE Initiatives, healthcare IT evolution, Telehealth, Analytics

- MU and other regulatory mandates should:
  - Be market-driven
  - Consider usability and adoptable workflows
Healthcare IT needs to evolve in a true **Platform** as others industries have
We need this for healthcare
At work for a healthier world
- South Broward Hospital District
  - Seven Commissioners appointed by the Governor of Florida
  - Covers the Southern Third of Broward County Florida, between Miami and Fort Lauderdale
  - Property taxes are low and used only for
    - Required Medicaid Match for Broward County
    - Community Development Agencies
    - Property Appraiser Fees
    - No taxes applied to indigent care, healthcare operations, or other functions
Healthcare Facilities
- Six Hospitals
- 180 employed physicians, mostly specialists
- Numerous indigent care clinics

Forest Blanton
- Senior VP & CIO
- 31 years with Memorial
Current Environment

- **Medical Staff**
  - 180 employed physicians
  - Approximately 1600 voluntary physicians

- **Electronic Health Records**
  - Epic used in Hospitals, clinics and employed physician practices
  - Over 65 separate EHR vendors used by the Voluntary Medical Staff

- **Health Information Exchange**
  - State network connecting major healthcare systems
  - Atlantic Coast Health Information Exchange
    - Private HIE connecting MHS to its physicians
    - Installed in 2010
    - Technically at end of life
    - Replacement alternatives being evaluated

- **Epic CareEverywhere**
  - Widely used to exchange information with other Epic users
  - One connection to an EHR from a different vendor
Current Environment (cont)

Population Health Initiatives

- Memorial Health Network (MHN)
  - Physician led Integrated Network
  - Currently managing about 45,000 lives
  - Shared Savings Model

- South Florida Community Care Network (SFCCN)
  - Jointly owned by MHS and Broward Health
  - Under State Contract
  - Managing 45,000 Medicaid Lives

- Broward Guardian
  - Medicare Shared Savings ACO
  - 70 Primary Care Physicians
  - Approximately 6,000 lives
Telemedicine Initiatives

- Specialist Outreach
  - Telestroke
  - Neonatology

- Remote Monitoring
  - Home Health
  - eICU

- Consumer Virtual Medicine
  - Epic Mychart

- Clinical Video Conferencing
  - Oncology
  - Cardiology

- Operating Room Integration
  - Specimen review

- No Reimbursement to date
Interoperability issues

- Most EHR systems are proprietary silos
  - Required bridges and interfaces are complex, expensive, offer lower functionality, and are problem prone

- Population health analytics
  - Aggregate data
    - Necessary for analytics
    - required for clinical decision support, risk stratification and predictive modeling to support quality, safety, efficiency, cost and utilization of care programs
    - no single system presently capable of providing all necessary functions

- Multiple disparate Data sources
  - Claims from each payer
  - EHR data feeds
  - Pharmacy benefit managers
  - Reference Labs
Interoperability issues (cont)

- Care management
  - Difficult to enable support in multiple disparate systems
    - Evidence based medicine guidelines
    - Alerts
    - Gaps in care
    - Event Notification
  - Multiple logins and user names
  - Multiple portals
  - Obtrusive workflow will limit clinician adoption

- Standardization of nomenclature
  - Coding methodologies
  - Laboratory reference ranges
  - Interchange of protocols and patient alerts
Interoperability issues (cont)

Research implications
- Difficult to acquire consistent data
- Data in different formats
- Differences in nomenclature complicate analysis

Health Information exchange
- Multiple standards and degrees of support
- Limited support for consistent standards
- Expensive interfaces and professional services
- Poor implementation support
Recommendations

- We support open and public APIs
  - potentially required standard
  - workflow-based APIs
  - population heath alerts and protocols
  - data access protocols and standards

- We also agree on the need for prescriptive emerging standards including Fast Healthcare Interoperability Resources (FHIR)

- Standards should be market driven but facilitated
  - key government drivers such as meaningful use (MU) and EHR certification requirements
  - efforts should be made to avoid restricting innovation and flexibility while still enabling interoperability
HLC MEMBERS
2014
(Alphabetized by Company)

HLC Chairman
Greg Irace
President & CEO
Sanofi US

Mark Bertolini
Chair, President & CEO
Aetna

Todd Ebert
CEO
Amerinet

Steven Collis
President & CEO
AmerisourceBergen

Rolf Hoffmann
SVP, U.S. Commercial Operations
Amgen

Anthony Tersigni, EdD, FACHE
President & CEO
Ascension

Jonathan Bush
President & CEO
athenahealth, Inc.

Joel Allison
CEO
Baylor Scott & White Health

Marc Grodman, M.D.
Chairman, President & CEO
Bio-Reference Laboratories, Inc.

William Gracey
President & CEO
BlueCross BlueShield of Tennessee

Paul Fonteyne
President & CEO
Boehringer Ingelheim USA

George Barrett
Chairman & CEO
Cardinal Health

Toby Cosgrove, M.D.
CEO & President
Cleveland Clinic Foundation

Tim Ring
Chairman & CEO
C. R. Bard

Michael A. Mussallem
Chairman & CEO
Edwards Lifesciences

Alex Azar
President, Lilly USA
Eli Lilly and Company

Neil de Crescenzo
CEO
Emdeon

John Finan, Jr.
President & CEO
Franciscan Missionaries of Our Lady
Health System, Inc.

Patricia Hemingway Hall
President & CEO
Health Care Service Corporation

Robert Mandel, M.D.
CEO
Health Dialog

Daniel Tassé
Chairman & CEO
Ikaria

Daniel Evans, Jr.
President & CEO
Indiana University Health
Paul Meister  
Chairman & CEO  
inVentiv Health

Jennifer Taubert  
Company Group Chairman, North American Pharmaceuticals  
Johnson & Johnson

Susan Turney, M.D.  
CEO  
Marshfield Clinic Health System

John Noseworthy, M.D.  
President & CEO  
Mayo Clinic

John Hammergren  
Chairman & CEO  
McKesson Corporation

Chris O’Connell  
EVP & President, Restorative Therapies Group  
Medtronic

Barry Arbuckle, Ph.D.  
President & CEO  
MemorialCare Health System

Robert McMahon  
President, U.S. Market  
Merck

Steven Corwin, M.D.  
CEO  
NewYork-Presbyterian Hospital

Mark Neaman  
President & CEO  
NorthShore University HealthSystem

Christi Shaw  
U.S. Country President and President, Novartis Pharmaceuticals Corporation  
Novartis

Jesper Hoiland  
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Novo Nordisk, Inc.

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Susan DeVore  
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Premier healthcare alliance

Chris Wing  
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SCAN Health Plan

Tim Scannell  
Group President, MedSurg & Neurotechnology  
Stryker

Tom Skelton  
CEO  
Surescripts

Doug Cole  
President  
Takeda Pharmaceuticals U.S.A.

Douglas Hawthorne, FACHE  
Founding CEO Emeritas  
Texas Health Resources

Frank Tarallo  
CEO  
Theragenics

Curt Nonomaque  
President & CEO  
VHA Inc.

Gregory Wasson  
President & CEO  
Walgreens

James Chambers  
President & CEO  
Weight Watchers International

Jaideep Bajaj  
Chairman  
ZS Associates

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