U.S. Health Care and Health Policy: A Future of Care Without Walls?

Presentation by Susan Dentzer
President and CEO
The Network for Excellence in Health Innovation (NEHI)
Summer Leadership Summit 2016
July 22, 2016
For a variety of reasons, we are moving to systems of more distributed health care – “Health Care Without Walls”

Drivers include:

- Insurance coverage expansion and population growth
- Poor health of much of population
- High cost of system and need for more sustainable spending
Additional drivers include

- Dramatic advances in science and technology;
- the “digital delivery” platform,
- new locations and methods of care,
- consumerism and “retailization”

Some case examples of organizations negotiating these changes and shaping the future

Some conclusions
Forecasting the Future?

- Member of Healthcare Guidelines Revision Committee convened by Facility Guidelines Institute
- Now in process of updating 2014 Guidelines for 2018
- Goal: Influence health care buildings that are built during 2020 to 2030
- Build “future-proof” facilities that provide better health care and don’t stand in the way of innovation and adaptation
- Similar analysis can apply to attempting to forecast - or shape - the health care workforce

Guidelines for Health Care Facilities
Hospitals and Outpatient Facilities
The Facility Guidelines Institute
## Forces at Play

<table>
<thead>
<tr>
<th>Force</th>
<th>Force</th>
</tr>
</thead>
<tbody>
<tr>
<td>Payment</td>
<td>End of life Attitudes</td>
</tr>
<tr>
<td>Mental health care/primary care</td>
<td>Connectivity changes delivery</td>
</tr>
<tr>
<td>Healthy lifestyles/focus</td>
<td>Macroeconomics/available resources</td>
</tr>
<tr>
<td>Improved technology</td>
<td>Reorganize health care system around</td>
</tr>
<tr>
<td>Class Gap</td>
<td></td>
</tr>
<tr>
<td>Role of Government</td>
<td></td>
</tr>
<tr>
<td>Primary care expanded</td>
<td></td>
</tr>
<tr>
<td>Family as caregivers</td>
<td></td>
</tr>
<tr>
<td>Employers aggressive on delivery</td>
<td>Big data</td>
</tr>
<tr>
<td>Acute disease becomes chronic</td>
<td>Breakthroughs/cure cancer</td>
</tr>
<tr>
<td>Specialty care distributed vs. concentrated</td>
<td>Consumers empowered</td>
</tr>
<tr>
<td></td>
<td>Patient engagement</td>
</tr>
</tbody>
</table>
Big Change from the Good Old (Really old) Days
And from the more recent Good Old Days of the House Call
How Much Change Will We See From Health Care Today?
Underlying Trends in Health and Health Care

- Expansion in insurance coverage: estimated 21 million newly covered through Affordable Care Act
- Huge growth looms in Medicare and Medicaid due to demographic shifts
- Suggests more use of health care services

Figure 1: Quarterly Uninsured Rate Estimates for Nonelderly Adults (Ages 18 to 64) Using the Gallup-Healthways Well-Being Index, 2012 to 2016

Source: The Office of the Assistant Secretary for Planning and Evaluation’s (ASPE) analysis of the Gallup-Healthways Well-Being Index survey data through February 22, 2016.
Key features of our “system:” Payment

- With some exceptions, we have traditionally paid for “piece work” (units) of care, regardless of “value” (quality of care, health outcomes etc.).

- Fee-for-service still primary mode of most physician payment and much hospital payment (outside of Medicare).
Goals of payment and delivery system innovation: Improving value and affordability

**Old Model**
- Reward unit cost
- Inadequate focus on care efficiency and patient centeredness
- Payment for unproven services; limited alignment with quality

**New Model**
- Reward health outcomes and population health
- Lower cost while improving patient experience
- Improve quality, safety and evidence
Poor health of the population: Institute of Medicine study, January 2013

- “For many years, Americans have been dying at younger ages than people in almost all other high-income countries.”
- “Not only are their lives shorter, but Americans also have a longstanding pattern of poorer health that is strikingly consistent and pervasive over the life course – at birth, during childhood and adolescence, for young and middle-aged adults, and for older adults.”
Aging baby boomers are in bad shape

- In 2008, 41 percent of those born between 1946 and 1964 had three or more chronic conditions
- 51 percent had one or two chronic conditions
- Only 8 percent had no chronic conditions
- 72% of men and 67% of women were overweight or obese

Rising morbidity and mortality in midlife

- Estimated 500,000 lives lost 1999-2013 in U.S. due to rise in all-cause mortality of middle-aged, white, non Hispanic men and women
- Increasing death rates from drug and alcohol poisonings, suicide, chronic liver diseases, cirrhosis
- Biggest mortality increases among those with least education
- Morbidity: self-reported declines in health, mental health, ability to conduct activities of daily living
- Increases in chronic pain and ability to work

Source: Anne Case and Angus Deaton, "Rising morbidity and mortality in midlife among white non-Hispanic Americans in the 21st century, Proceedings of the National Academy of Sciences, vol. 112 no. 49, 15078-15083
Understanding what drives overall health status

![Chart showing the impact of socioeconomic factors, clinical care, physical environment, and health behaviors on overall health status.](chart.png)
40 years old

History of high blood pressure, diabetes, asthma, and chronic low back pain

Affected by fetal alcohol syndrome, developmental delay, and obesity

Victim of childhood abuse

Suffers from post-traumatic stress disorder, anxiety, and bipolar disorder

Lives in public housing

Unemployed

Covered by Medicaid

Over previous year, saw primary care physician 23 times

- Missed 10 other appointments
- Phoned primary care clinic 22 times
- Made 21 emergency department visits
- Admitted to hospital 3 times for issues that could have been treated by his primary care physician


Complex, High-User Patients: 5% of Population Driving 50% of Health Care Spending
Moving health care outside the walls and into homes and communities:
Multiple Dimensions
Addressing social needs: Case study of Promedica, Ohio and Michigan

- 13 hospital system in NE Ohio, SE Michigan; a health plan; statewide Medicaid provider.

- President and CEO Randy Oostra: “If we couldn’t address social determinants in our communities we were missing the ball with respect to our mission.”

- Identified link between hunger and poor health; large number of food insecure households in area

- Established “Come to the Table” program
“Come to the Table,” at ProMedica

- Program to repackage un-served food from a local casino for distribution to food pantries
- “Food pharmacies” in medical office buildings, allowing physicians to write prescriptions for nutritious foods
- New fresh food market in Toledo
- ProMedica employees teach about nutrition using “learning map” toolkits in local schools
THE “HOSPITAL-WITHOUT-WALLS”

Pre-illness | Illness | Post-illness

Health Maintenance
- Vaccination
- Public Health Education
- Health Screening
- Workplace Health promotion

Illness Care
- Cost effective, efficient care
  - systems processes
  - clinical pathways

Health Recovery
- Skills-for-life
- Homecare support
- Follow-up support
Health Care Goes Retail

Services and Costs

- Minor illness exam: $62
- Minor injury exam: $62
- Skin condition exam: $62
- Wellness & prevention: $20-$66
- Vaccinations: $30-$112

Additional charges may apply. Most insurance accepted. Contact your insurance company to verify coverage.
Innovations in care sites: “Hospital at home”

- Presbyterian Health Services, New Mexico, in partnership with Johns Hopkins; Mt. Sinai health system, New York

- Identified patients who could be “hospitalized” at home and deployed physicians and nurses to care for them

- At Presbyterian, all results equal or better than in hospital

- Receipt of antibiotics in pneumonia patients and medications for heart failure patients superior

- Variable costs per stay are $1000-$2000 lower = 19%

- Patient satisfaction mean score = 90.7%

Source: Lesley Cryer et al, “Cost For Hospital At Home Patients Were 19 Percent Lower, With Equal or Better Outcomes Compared To Similar Patients,” Health Affairs, June 2012
Health Care Goes Offshore

- Narayana Hrudayalaya – “God’s Compassionate Care” – Bangalore, India-based health and hospital system/network
- 5,000 beds in India now; aims for 30,000 in next five years
- Average cost of heart surgery is $2,000 and is aiming for $800 – partly through far greater use of trained aides
- “Our vision: Affordable Quality Healthcare for the Masses Worldwide”
- Partnered with Ascension Health Alliance on $2 billion tertiary care hospital in Cayman Islands, opened in 2014
Hospital of the future?

100 beds now; to grow to 2,000

Prices 1/3 of US With travel and hotel
Uber Health

- Uber now has a unit called Uber Health.
- A pilot run over the last two years enabled people to summon an Uber car with a nurse, who would come to a setting where at least 10 people were assembled to administer flu vaccines.
Future of robotics

- From conventional hospital robots distributing goods today...
- A walking robot could easily visit an individual in a home to deliver medications or perform tests.
New Medical Technology: The Smart Phone
Transformation of care in health systems, today and tomorrow

- In a system in Midwest betting heavily on a risk-based, ACO model, CEO predicts that ½ of patient “encounters” in 5 years to take place over a smart phone

- Potential enormous: e.g., handheld ultrasound; point of care cancer screening; sensors able to identify volatile organic compounds (VOCs) commonly associated with lung cancer
Innovations among payers/health services: The thinking at Aetna

- Technology and logistical capability exists “to create a self-curated experience for each individual in developing their own journey in health.”

- 5G wireless technology will be 100-200 times faster than 4G and increases network expandability exponentially
  - EHR and other data can follow patient on an app
  - Most care delivered in home and “failure” is defined as care provided anywhere else
  
  “Payer” becomes platform to connect patient to most appropriate providers; health insurance evolves into ....???

Mark Bertolini (top), Aetna’s chairman and CEO; Gary Loveman, executive vice president
Disruptive Technologies

- Telehealth, digital health, mhealth (mobile), apps
- Pushing care out of institutions and into homes and offices
- Enabling more self care
- Engaging patients and enhancing sense of knowledge, confidence, activation
The Digital Health Explosion

- Data could ultimately be collected from ten “omes” – including genome, epigenome, physiome, anatome, proteome, metabolome, microbiome, transcriptome, phenome, and exposome.
- Potentially one trillion bits of data per person per year.
- “Internet of Medical Things” to lead to 50 billion connected devices globally by 2020 -- about 6-7 per person.
- Opportunities for vastly more predictive analytics and other means of harnessing data.
Precision Medicine Initiative

- Research cohort of more than 1 million Americans to be assembled and grown over time
- Specimens biobanked and studied; examination of variations in genes, environment, lifestyles
- The Scripps Research Institute will use mobile apps, biosensors, the internet and more to keep tabs on key health metrics for the about 1/3 of the 1 million Americans in cohort
Recent entrants into health care... who’s next?
Recent entrants into health care: Apple

- Apple Health dashboard allows consumers to compile and view health care information
- Apple’s HealthKit: new platform for health apps
- Apple Watch has heart rate sensors; annual sales of 485 million predicted
- Links with EHR’s
- Exploring incorporation of blood pressure and glucose monitoring into iPhone
Telehealth

- Example of Teladoc, the largest company providing telehealth services
- 1.5 million patients seen to date.
- Out-of-pocket charges for a visit are $45.

- Working with CVS on telehealth via CVS’s retail clinics
- CVS developing a smartphone app that could enable an individual to arrange a telehealth appointment
Intel Healthcare Innovation Barometer, 2014

- Online survey conducted across 8 countries for Intel by Penn Schoen Berland

- 57% of those surveyed believe traditional hospitals will be “obsolete in the future.”

- 72% of those surveyed willing to see a doctor via video conference for non-urgent appointments.

Source: http://newsroom.intel.com/community/intel_newsroom/blog/2013/12/09/the-world-agrees-technology-inspires-optimism-for-healthcare
What if we were building health systems anew today?

Bernard Tyson, CEO, Kaiser Permanente

“If I were building Kaiser Permanente today, I would build it on the back of technology.”

What if you “never had to step out of the 21st century to get what you need from Kaiser Permanente”?

Kaiser's 10.1 million enrollees had

- 60 million face-to-face visits
- More than 23 million e-visits in 2015
INNOVATIONS AT KAISER PERMANENTE

- Garfield Innovation Center
- “Imagining Care Anywhere”
Artificial intelligence, cognitive computing, and “machine learning:” IBM’s Watson Health

- Cognitive computing system that can process natural language, unstructured data and learn from experience
- IBM says won’t replace doctors, but will support their decision making – and is already doing so at Anthem, Mayo Clinic, Memorial Sloan Kettering
- Has already “completed” medical school and undergoing “training” in oncology and other fields
AMAZON GOES TO PROVIDENCE

- Rod Hochman, MD, President and CEO, Providence Hospital system

- Providence is building its care on a digital platform to help lower unit costs and utilization.

- Will also own and operate healthcare clinics inside Walgreens stores in Oregon and Washington.

- Initially hired 12 people from Amazon to come over and do this for them.

- Those from Amazon arrived and were, he says, “shocked at our lack of consumer focus.”
Now 120 people from Amazon and Microsoft at Providence

“You have to get people who’ve lived in this space”

25,000 virtual visits projected this year through Providence’s system, Health eXpress

Employers, e.g. Intel, eager to avoid employees’ time away from work

Also considering health kiosks at work site
“Meet the disruptor:” Aaron Martin, Providence’s senior vice president for strategy and innovation
The Potential

- Drastically increase care convenience
- Increase access, especially in underserved areas
- Leverage and extend existing provider base
- Reduce unnecessary “friction” in system - e.g., lost productivity, absenteeism from work
- Cut costs
The Obstacles

- Inertia: systems have to change
- Lots of sunk costs in existing plant and capital
- Need for different work force?
- State laws and regulations still impede activities such as telehealth; absence of national licensure
- Data privacy and security; HIPAA and state statutes
Conclusions

- Trend toward distributed health care outside of conventional institutions – “Health Care Without Walls” – is real
- Pace of change probably steady but scope uncertain
- Much dependent on human factors and policy, not technology
- Major implications for ongoing shape of health care sector, architecture, construction
- Best advice? Flexibility and adaptability all around