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**HIMSS**  
SOUTH CAROLINA *Chapter*

# SmartCare: The Final Frontier of Healthcare Transformation

# • Conflict of Interest Disclosure

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Salary:	Royalty:
Consulting Fees (e.g., advisory boards): Colorado Hospital Association	Receipt of Intellectual Property Rights/Patent Holder:
Fees for Non-CME Services Received Directly from a Commercial Interest or their Agents (e.g., speakers' bureau):	Contracted Research:
Ownership Interest (stocks, stock options or other ownership interest excluding diversified mutual funds):	Other:

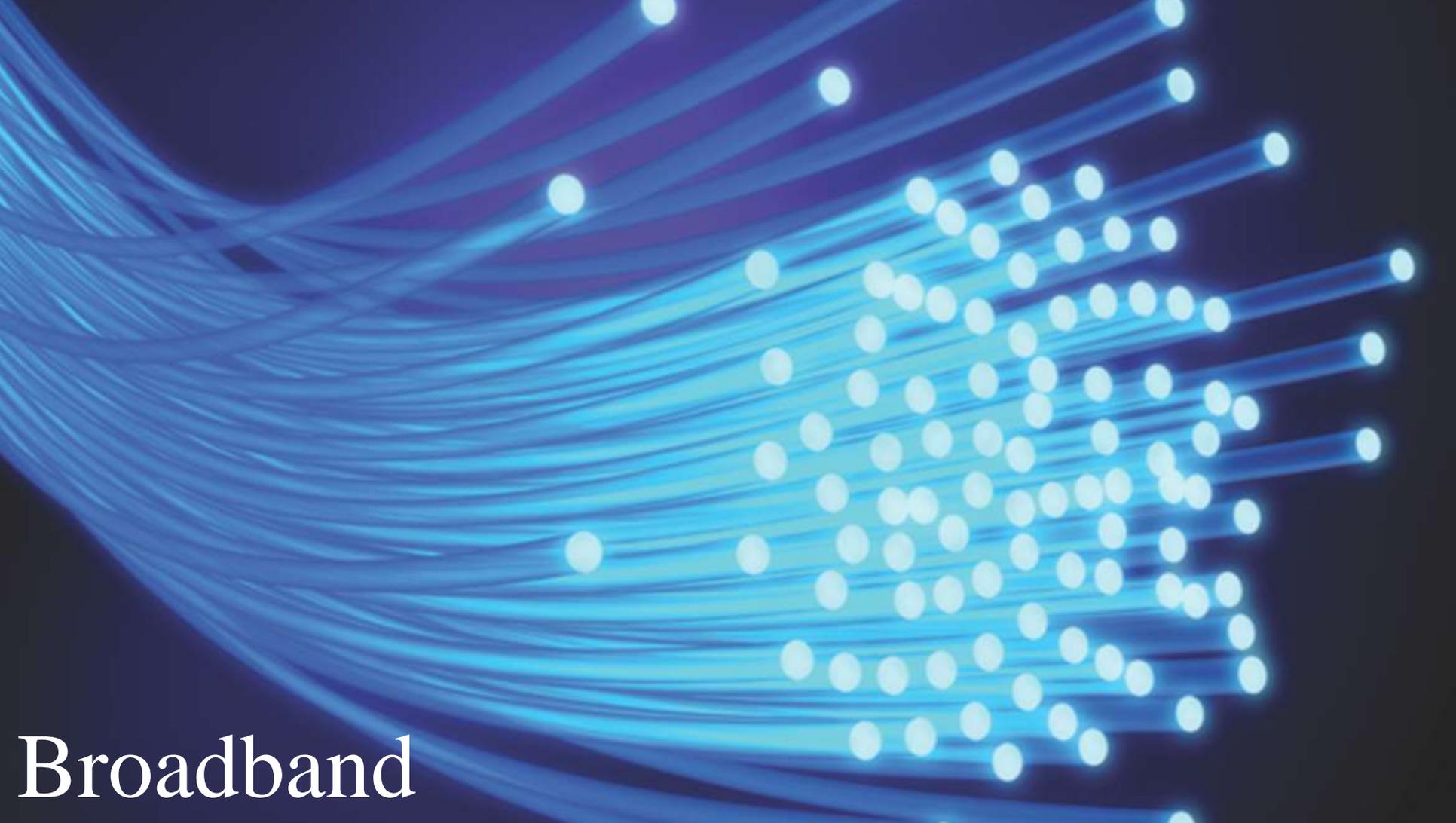


What innovations in modern society will have the most disruptive impact on healthcare in the next decade?

# Societal Transformations

- 1800 – Railroad networks – Transcontinental commerce
- 1920 – Telephone networks – Audio communication at a distance
- 1930 – Electricity Grid – Agriculture, Industry to the Great Plains
- 1930 – Radio networks – Audio communication to mass audiences
- 1940 – TV networks – Visual communication to mass audiences
- 1950 – Interstate highway - Economic Growth and development

## **Infrastructure Networks**



Broadband

# Do we still need Hospitals?

David Payne  
June 3, 2016

*“ if observation takes place in the community with specialist services accessed digitally and remotely, doesn't the hospital become more like a university campus, where the growth in online learning now means students rarely, if ever, need to set foot inside a classroom?”*





The NEW ENGLAND  
JOURNAL of MEDICINE

## Do Hospitals Still Make Sense?

Jennifer L. Wiler, MD, MBA,

Dec. 20, 2017

*“inpatient care is not what the typical consumer needs”*

# The New York Times

## Are Hospitals becoming obsolete?

Ezekiel J Emanuel

Feb 25, 2018

*“While they may never completely go away, they will continue to shrink in number and importance. That is inevitable and good.”*

BECKER'S

# HOSPITAL REVIEW

## Walmart unveils plan to build healthcare workforce

Sept 24, 2019

- 7 bachelor's degrees and 2 career diplomas in health-related fields
- \$1 a day
- Fill [future] healthcare jobs across Walmart and Sam's Clubs

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**Forbes**

## **Healthcare May Eventually Become A Bigger Business For Best Buy Than Selling Electronics**

Sept 24, 2019

- Health monitoring services for seniors and other digital health initiatives ... could generate anywhere between \$11 billion and \$46 billion.

# KANSAS CITY BUSINESS JOURNAL

## Humana, Walgreens expand pilot of senior care centers

Sept 24, 2019

- 7th “Partners in Primary Care” center
- Full-service primary care clinics for seniors 65+
- 3 are co-located inside a Walgreens

# The New York Times

## CVS Health adds 1st digital health app to its offerings

Sept 24, 2019

- Sleepio, an all-digital insomnia treatment app
- Animated therapist giving behavior modification tx
- First purely digital therapy tool offered by CVS Health
- Chosen because it is backed by several rigorous studies

# The New York Times

## Amazon launches “Amazon Care”, a virtual medical clinic

Sept 24, 2019

- virtual health clinic with in-home follow-ups
- see a health provider via a mobile app or website
- text a nurse on any health topic in minutes
- If an employee needs follow-up care, a nurse goes to the home
- Amazon prescribe medications within a few hours

# No Hospital Involved!

# Emerging Realities

*Future Healthcare systems will not*

- *be driven by hospitals*
- *be your only sources of data*
- *be your only site of care delivery.*









♥ RESTING HEART RATE

76 bpm

🇺🇸 TIME IN HEART RATE ZONES



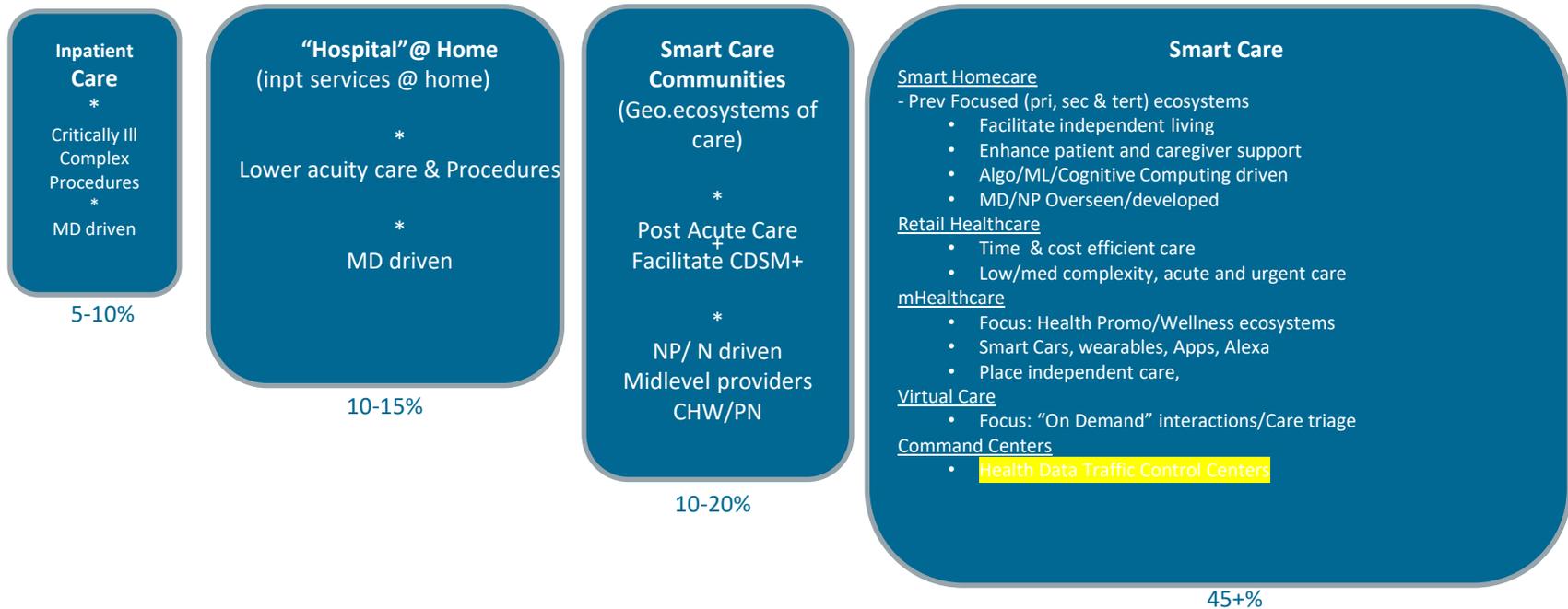






*Mark Bertolini*

# Future organization of Care



# *Challenge for the future*

How do we capture the data, deliver care services and monitor disease trajectories of all people in a population?

# Technology Evolution

1. Rapid increases in processing power
2. Rapid increases in data storage capacity
3. Miniaturization

*\*Increasingly able to harness complexity\**

*\*Reducing value of probabilistic methods & inferential statistics\**

# *Digital Health*

Use of technology, broadband and data to deliver health services.

Medical Services

Public Health services

Social services

Wellness Services

Transportation services

Government Services

# “Smart Technology”

## Early years

- Remote Sensing with alerts to the provider, EMR, Patient
  - Alert fatigue
  - False positives
  - Natural Variability
  - Atypical patients and presentations

# “Smart Technology”

Devices with embedded chips that can react appropriately to external stimuli without human intervention.

Motion sensors  
Self-driving cars  
CGM

# *Smart Cities & Communities*

Cities that use technology, data, AI and broadband, in real time, to improve quality of living for residents.

Same as the basic components for  
Digital Health and Smart Technologies

## **Smart Technologies + Digital Health + Smart Communities**

Use technology, data, AI & broadband to delivery automated health services anywhere the person is located in the community.

Ecosystems of services enabled by connecting everyone to the people, information and resources they need to get healthy and stay well



## Key elements of SmartCare

- Smart City infrastructure
- Systems of connected people
- Networked Smart devices
- Automated virtual services

# Implications

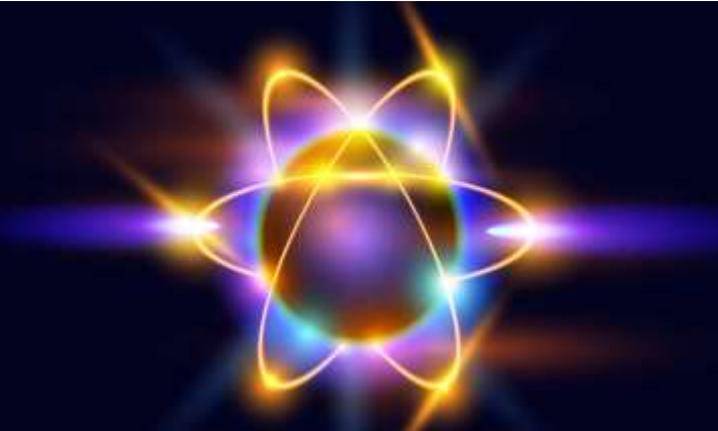
Care teams no longer defined by available experts or subspecialists.

*“Patient’s care team has always been bigger than the clinical team.”*



Health Systems no longer built on linear, sequential services delivered only at hospital.

*Ecosystems of data & services delivered simultaneously, continuously, automatically, anytime, anywhere*



# *Emerging Reality*

- Digital Technologies Enable
  - The capture of an explosion of data
  - The analysis of any and all data elements
  - The delivery of health & care services at the point of need

This changes everything!

# Greystone

Helping health organizations pivot and thrive in a digital world

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