

Healthcare Executive Survey: Six trends that will change healthcare over the next 5 years

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Learning Objectives



- Discuss the major trends impacting healthcare over the next 5 years and the impacts to the laboratory.

- Identify how the laboratory can adapt to these changes and create value for its stakeholders.

- Determine how risk and value-based care models impact the laboratory.

- Recognize the shifting requirements of patient populations.

Introduction

Huron interviewed 45 healthcare executives across the country



Focus



- We focused on six major themes:
 1. Consolidation of the Industry
 2. The Journey to Value
 3. Technology Investment and Innovation Return
 4. Big Data and the Advancement of Precision Medicine
 5. How Millennials Will Change Healthcare Delivery
 6. The Health System of the Future

Health System Success

Investment in innovative care delivery and new care models will drive health system success in the future

	Winners	Losers
Size of Health System	<ul style="list-style-type: none">Large health systems that will benefit from economies of scale and operational effectiveness	<ul style="list-style-type: none">Systems unable to achieve “system-ness”Lower-tier AMCs
Payment Model	<ul style="list-style-type: none">Value based models driven by improved quality and decreased clinical variationMedicare Advantage plans	<ul style="list-style-type: none">Models that define value only as cheaper priceModels that do not move away from Fee-for-service (FFS) payments
Technology & Innovation	<ul style="list-style-type: none">Systems that adapt to integrate telemedicine/ mhealthSystems using sophisticated technology to engage consumers	<ul style="list-style-type: none">Systems with minimal or inadequate investments (or adaptation) to integrate telehealthSystems with low inter-operability
Big Data & Analytics	<ul style="list-style-type: none">Systems that develop capabilities to combine patient data from claims, EHR, and clinical decision protocols for predictive risk stratification	<ul style="list-style-type: none">Systems with inadequate access to diverse data setsSystems with limited analytical capabilities

Source: Interviews of 45 health care executives

Consolidation of the Industry

Finding:

While respondents agreed that neither hospital nor physician consolidation has delivered on the triple aim, they believe that consolidation will continue

“Each market has its own unique dynamics and structure so consolidation approaches will vary from market to market”

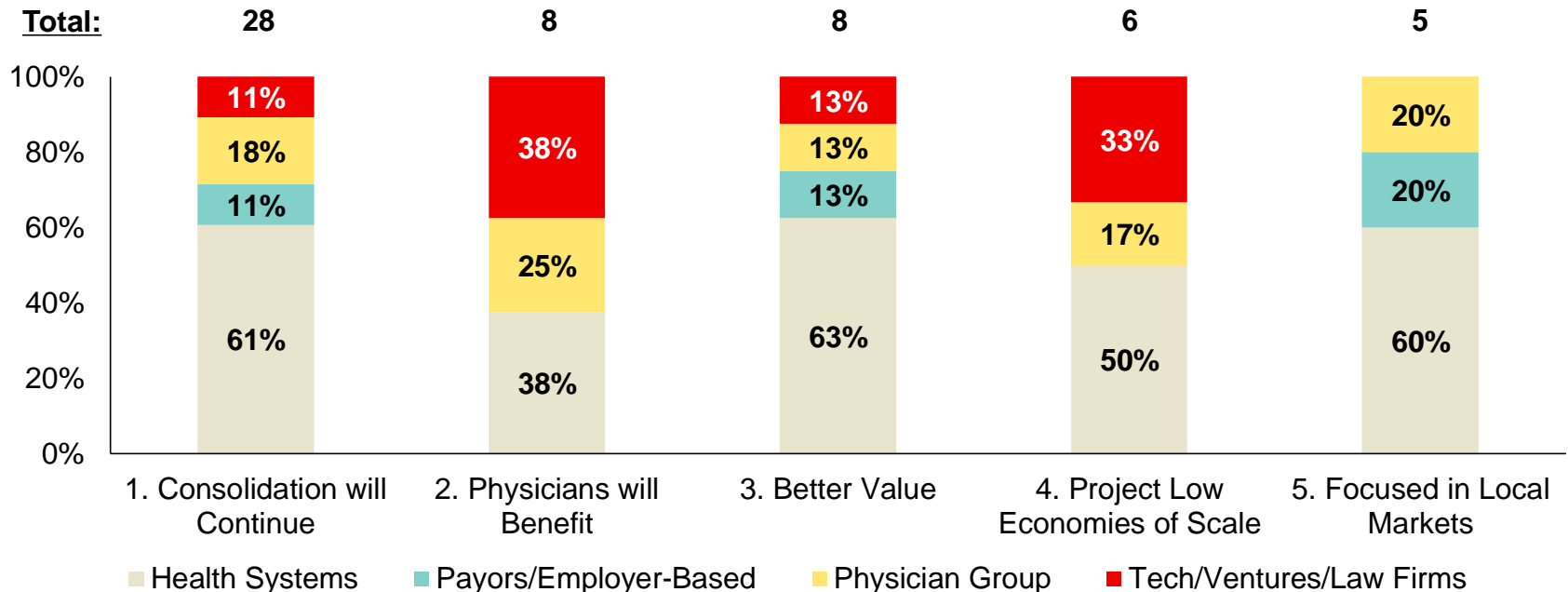
“We have seen aggressive M&A activity for the last 10 years, but there is little evidence that costs have been reduced”

“Couple the sophisticated systems of care that have been built, with the technological infrastructure that has been laid, and we will see huge innovation and enablement in the next 5-7 years”

“Larger health care systems are inherently more expensive so leveraging smaller systems’ capabilities is crucial to a successful partnership”

1 Consolidation of the Industry: Major Subthemes

Top 5 responses for Consolidation
(N = All Responses: 83)

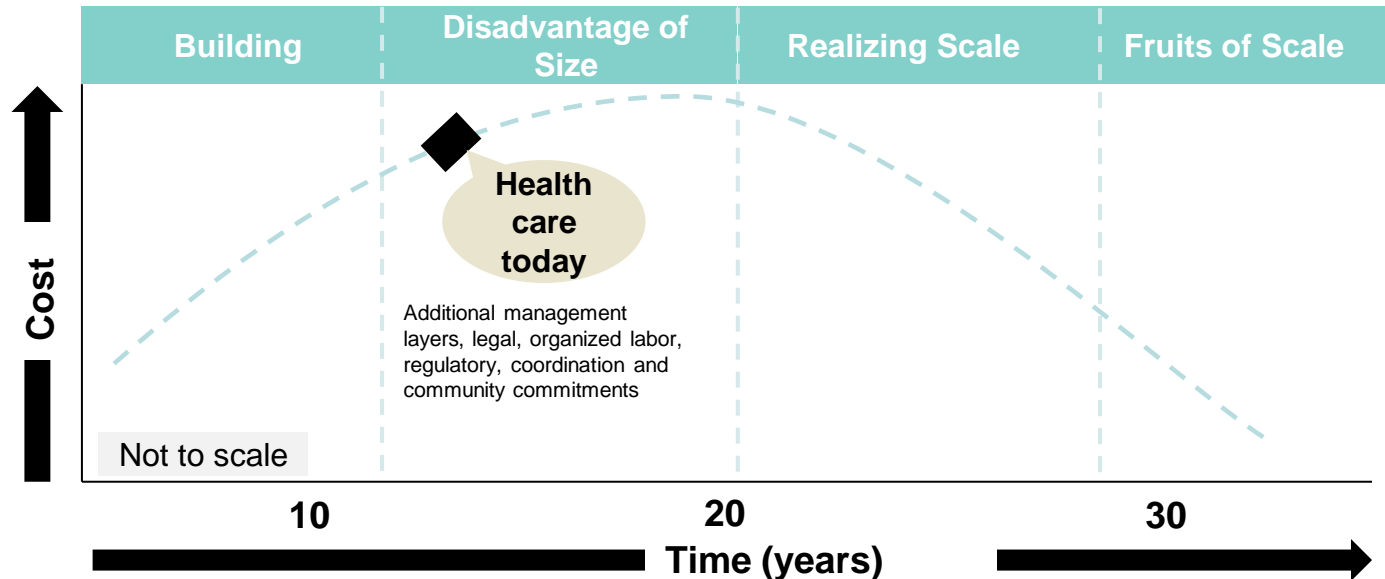


Top 5 Responses

- 1: Consolidation at the provider level will continue (Hospital and Physician)
- 2: Physicians benefit from consolidation
- 3: Consolidation can drive better value / approaches to population health
- 4: Not confident in the economies of scale provided by consolidation
- 5: Consolidation is focused in local markets

1 Consolidation of the Industry: making sense of perspective

Key insight: Large national fragmented industries go through natural consolidation lifecycles that at first, dramatically increase cost; but in 20 years yield cost savings



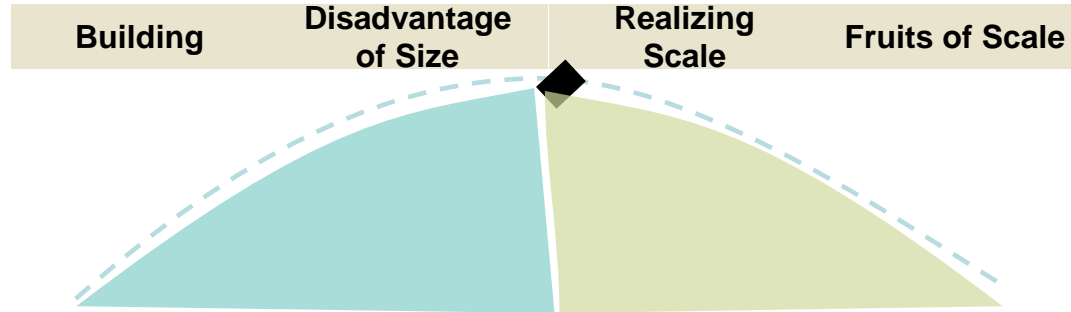
- In 2013 16% more hospitals (from 2,524 in 1999 to 2,941¹) are affiliated with a health system
- Health care services were 61% of 2016 deal volume² with investor interest in post-acute care sectors
- Q2 '16 was 7th consecutive quarter of significant deal activity with >200 announced transactions³ and 42% (over 6.7 billion) in value involved physician groups
- The industry is five years from having a framework in place that results in significant cost reduction – sophisticated management, state-of-the-art IT, and coordinated supply chain

1 <http://www.beckershospitalreview.com/hospital-transactions-and-valuation/60-statistics-and-thoughts-on-healthcare-hospital-and-physician-practice-m-a.html>

2 <https://products.levinassociates.com/aboutus/press-releases/pr1701healthcare/>

3 <http://managedhealthcareexecutive.modernmedicine.com/managed-healthcare-executive/news/healthcare-ma-trends-5-insights-healthcare-executives?page=0%2C0&trendmd-shared=1>

1 Consolidation of the Industry: the tipping point



Cost Increases

- Disparate IT platforms
- Multiple standards of care
- Incongruent cost allocation methodologies
- Legal/regulatory/ bureaucracy expenses

Other Industry Parallels

- When Daimler acquired Chrysler in 1998, merger-related savings were estimated to amount to \$3B within 3-5 years¹. However, Daimler paid \$37B for Chrysler, and less than a decade later they sold it for \$7B²
- Economists have estimated that between 1998 and 2001, large acquisitions cost the shareholders of acquiring firms \$397 billion³

Reduction in Cost Structure

- Common technology platforms
- Removal of unexplained clinical variations
- One standard of consistent care
- Increased physician leadership

Other Industry Parallels

- General Motors plans to reduce its global vehicle production platforms from **26 down to 4** by 2025⁴
- 10-25% of steel companies cost optimization is in
 - improved **enterprise governance and organizational structure** of their affiliates
 - central procurement, shared service centers and R&D centers
 - optimization of plant layout⁵

1 <https://www.wsj.com/articles/SB894581574689092500>

2 http://money.cnn.com/2007/05/14/news/companies/chrysler_sale/?postversion=2007051408

3 <https://hbr.org/2007/05/why-the-daimlerchrysler-merger>

4. <http://www.autonews.com/article/20141003/OEM01/141009910/gms-bold-platform-plan-aims-to-reduce-complexity-save-billions>

The Journey to Value

Finding:

There is consensus that the journey to value will continue albeit at a slower, more cautious pace

“Health systems that can eliminate unexplained clinical variations will be the winners, there will be a 90% movement to risk and global capitation”

“It's already done... now its about how payors will operate in the system and to what degree the providers want to focus”

“Journey to value is phased and focus will change and evolve

Phase 1: Govt. Programs, Physicians

Phase 2: Advanced Payment Models

Phase 3: Consumer”

“The Future is here, it is just not evenly distributed”

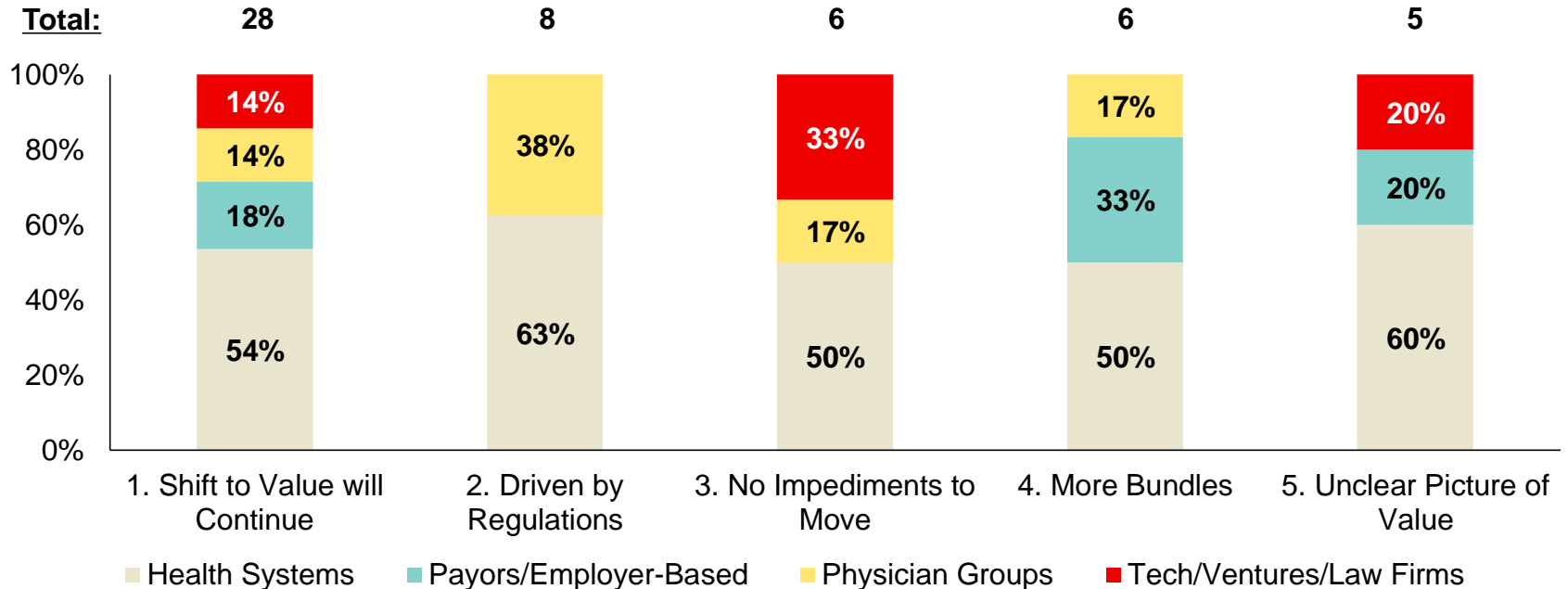
“Pressures from employers and govt are pushing us in that direction”

“We now have the tools to continue”

The Journey to Value: Major Subthemes

Top 5 responses for Move to Value

(N = All Responses: 74)



Top 5 Responses

1: A shift toward value will continue in the next 3-5 years

2: Regulation will be a key driver in value

3: There are impediments to a full shift to value in our current system

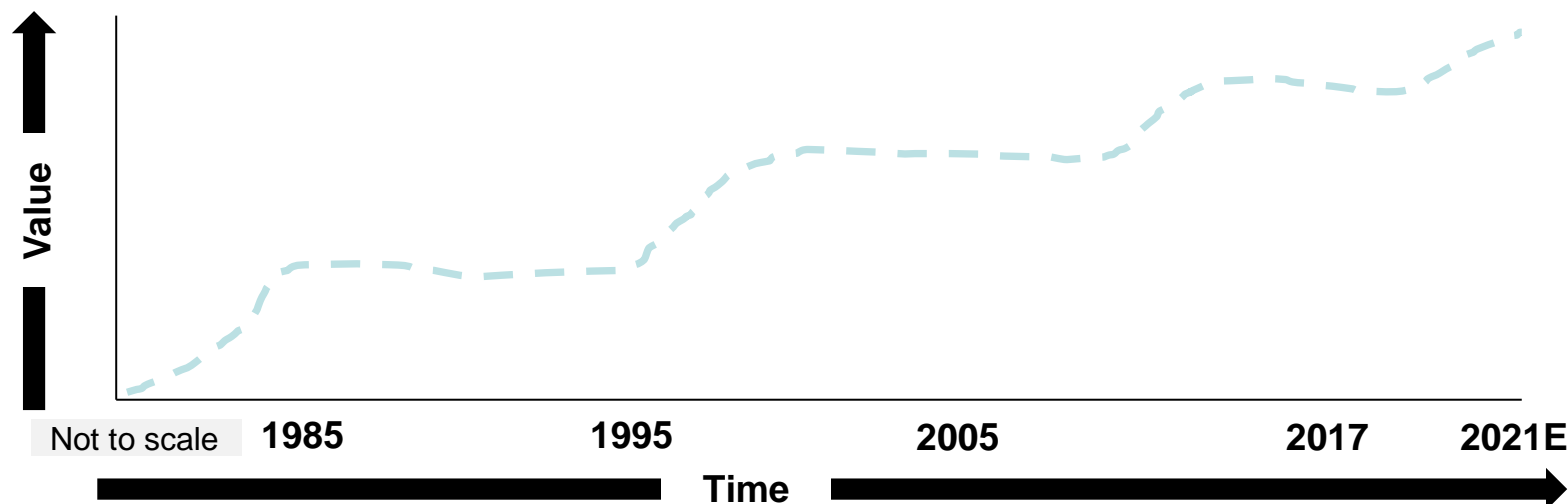
4: Bundled payments are going to become more prevalent

5: What value will look like specifically is unclear

The Journey to Value: a stair-step model growth pattern

Key insight: The journey to value is driven almost exclusively by government policies (growth value highly correlated to government policies)

Illustrative



- In 2017, CMS estimates 712,000 clinicians will be affected by MACRA
- Bundled payments will be 17% of medical payments (vs. 11% currently) and grow faster than other VBP models (e.g. capitation or global payments)¹
- In January 2016, there were 838 ACOs - up from 64 in 2011 and 490 in 2014²
- 31% of Medicare eligible in 2015 were in a Medicare Advantage plan; 1M more enrolled than 2014³

¹ <http://managedhealthcareexecutive.modernmedicine.com/managed-healthcare-executive/news/survey-reveals-3-value-based-payment-trends-watch>

² <http://healthaffairs.org/blog/2016/04/21/accountable-care-organizations-in-2016-private-and-public-sector-growth-and-dispersion/>

³ <http://www.kff.org/medicare/fact-sheet/medicare-advantage/>

Technology & Innovation

Finding:

\$600 Billion invested in EHRs in last 10 years has not produced savings nor innovation, yet all respondents projected continued investment

“EHRs have made physicians less productive as it takes them significantly more time to chart”

“Healthcare is the only industry in the world in which technology adds to cost”

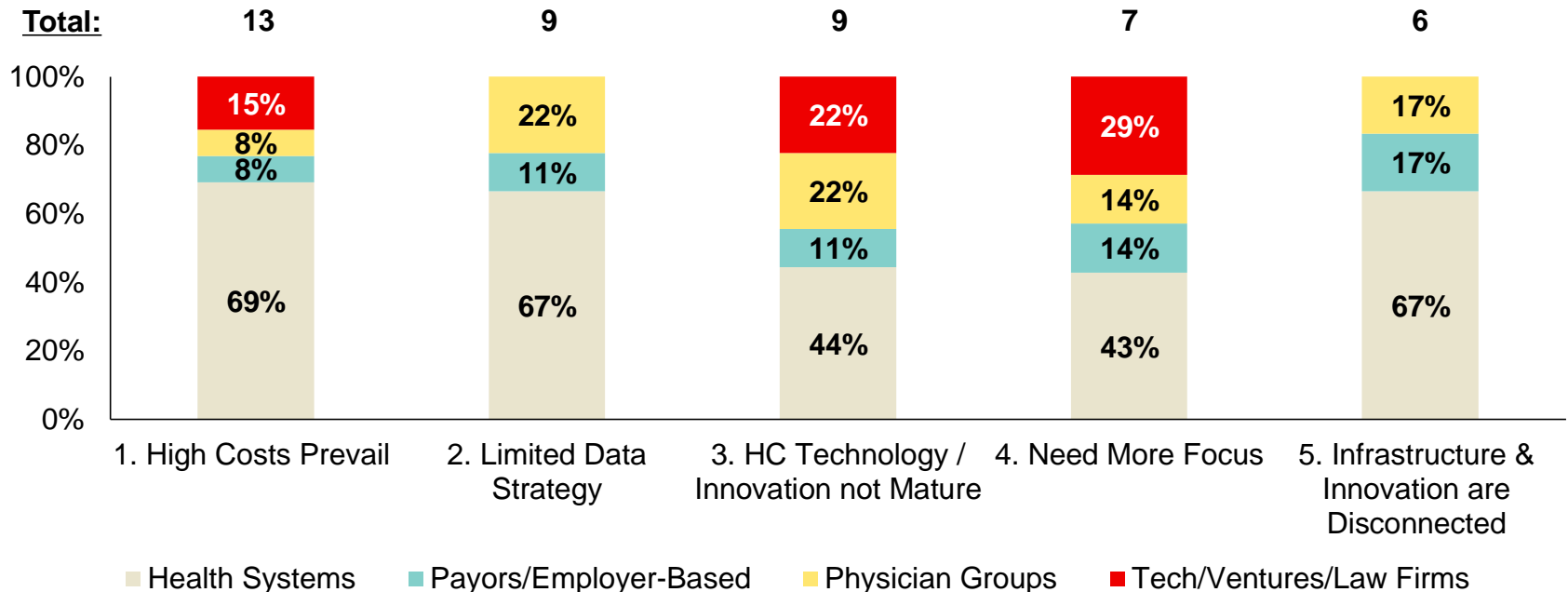
“When EHR systems can connect one record to another, one provider to another, and one patient to another, we will see vast improvements in clinical outcomes”

“EHRs are the infrastructure for innovation. We are on the cusp of leveraging them appropriately to realize massive innovation”

Technology & Innovation: Major Subthemes

Top 5 responses for Technology & Innovation

(N = All Responses: 70)

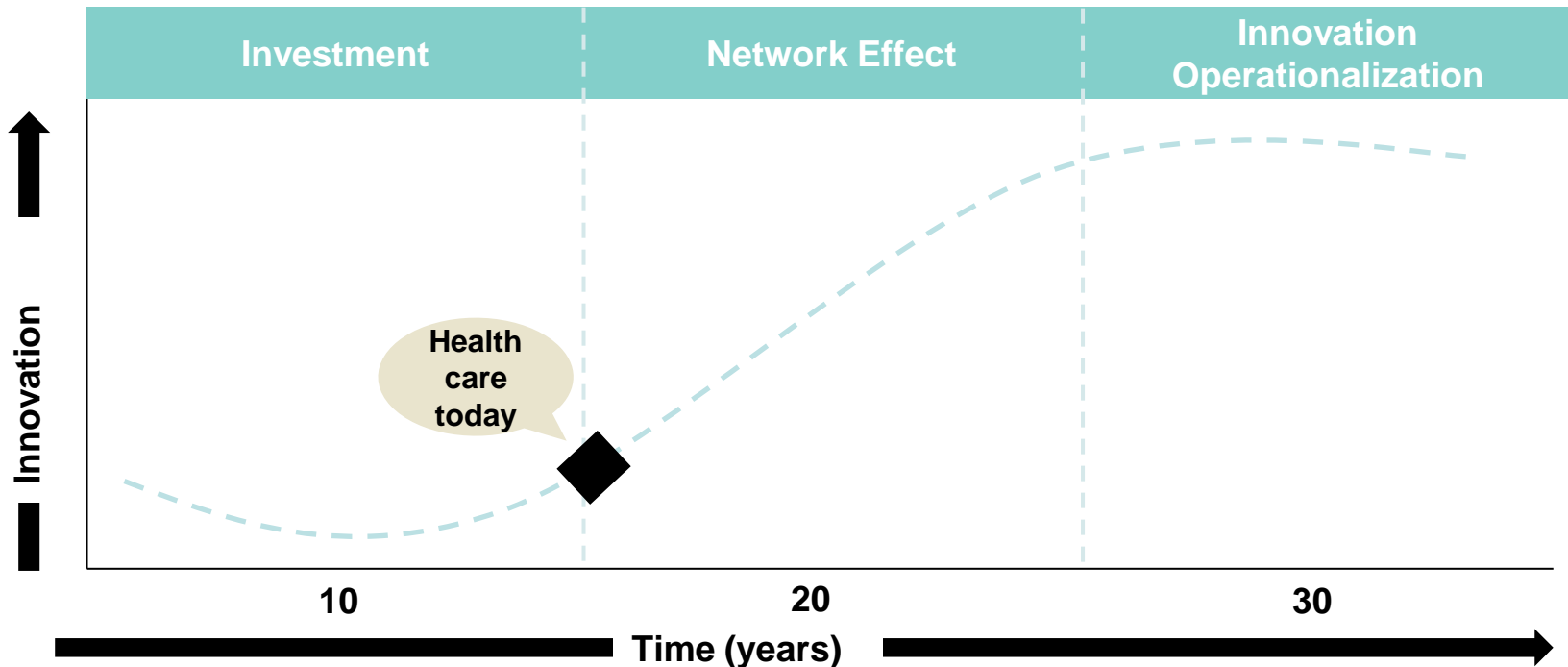


Top 5 Responses

- 1: Productivity and costs have not improved despite technology/innovation
- 2: We have the data, but it hasn't been strategically utilized
- 3: Healthcare doesn't properly utilize technology/innovation
- 4: There should be a focus on population health, value, and/or quality
- 5: Infrastructure needs to exist to take advantage of innovation

3 Technology & Innovation: the 30-year adoption curve

Key insight: Industry-wide innovation payback cycle is typically about 20 years; healthcare is only 10 years into the cycle



- Experimenting with available technology in new and different ways to realize planned and serendipitous value requires time to realize true business innovation
- As evidenced in other industries (e.g., interstate highway system, cable TV and the internet), innovation takes decades of investment to provide a return
- Innovation occurs at the intersection of capital and operating expenditures

Technology & Innovation

Innovative technology can generate value when connected to EHR data

Innovation archetypes

Mobile Health /
Telemedicine

ClickMedix:

- Reduced wait time for patients from months to less than 72 hours,
- Allowed physicians to serve 4-15 times more patients



Enterprise-wide mobile
interoperability
platform

AirStrip:

- Combines data from multiple EHR platforms
- Delivers to physicians' mobile device or desktop
- Sends key data points to a third-party analytics engine to help in patient risk identification



Virtual therapy /
Home-based
Rehabilitation

Reflexion health:

- Improves patient adherence to physical therapy
- Enhances clinician and patient engagement
- Reduces post-acute care costs



Companion
Diagnostics

Illumina:

- Leveraging innovative sequencing (e.g. NGS) and informatics solutions to drive the future of precision medicine



Wearable Devices /
Sensors

Proteus Digital Health:

- Wearables and ingestible sensors measure medication effectiveness
- Helps physicians improve treatment outcomes



Big Data and Precision Medicine

Finding:

While the promise of big data and precision medicine is yet unfulfilled, respondents believe that we will see clinical breakthroughs in the next 5-7 years

“So much has been made about **big data** that most of us have forgotten about **little data**, which can be analyzed and applied to large samples of the population to improve specific health outcomes”

“Genomics and precision medicine will certainly become more commonplace for services like oncology, but it will be another 5-10 years before highly acute care is impacted”

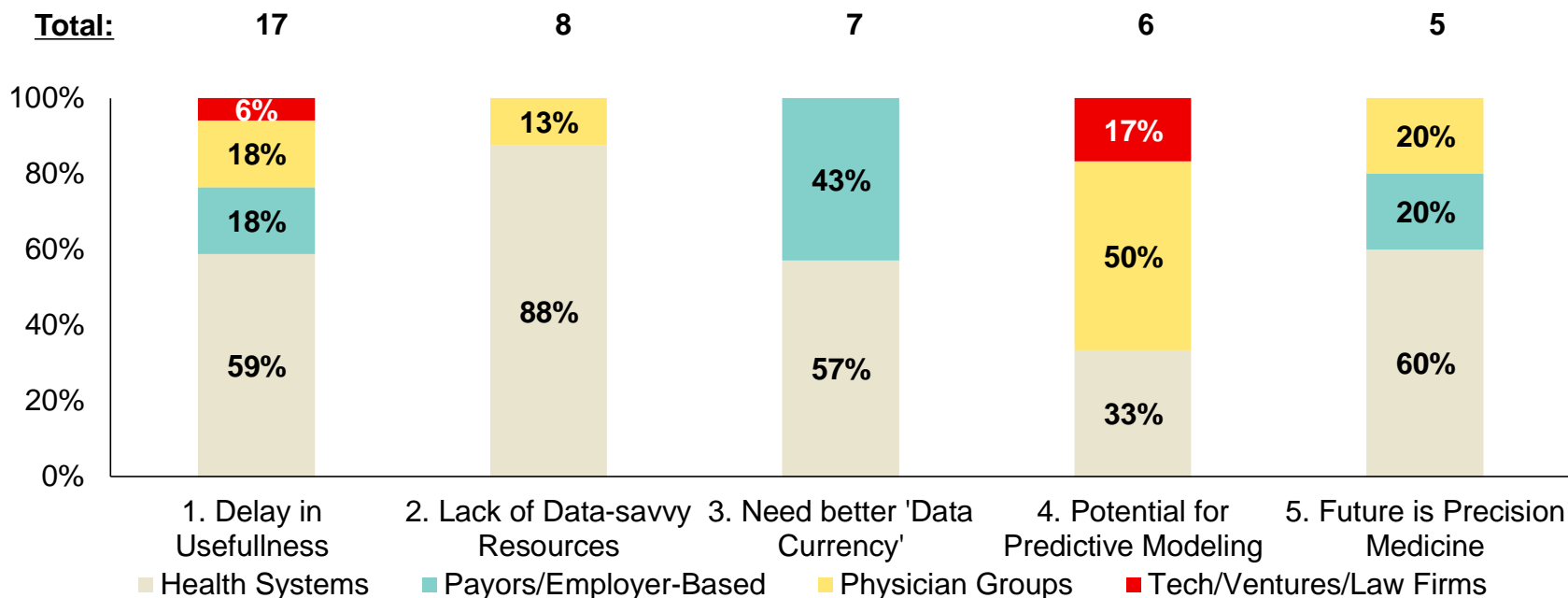
“Minimizing inaccurate diagnoses and treatments of diseases will be critical as we continue to move towards value. Big data and precision medicine will help us do that”

“Leveraging big data cannot be done in isolation. Providers, payors, pharmaceutical firms, and government entities must collaborate to harness the power that big data can provide”

Big Data and Precision Medicine: Major Subthemes

Top 5 responses for Big Data & Precision Medicine

(N = All Responses: 59)



Top 5 Responses

1: Information will *eventually* be useful

2: There is a lack of resources to fully utilize big data

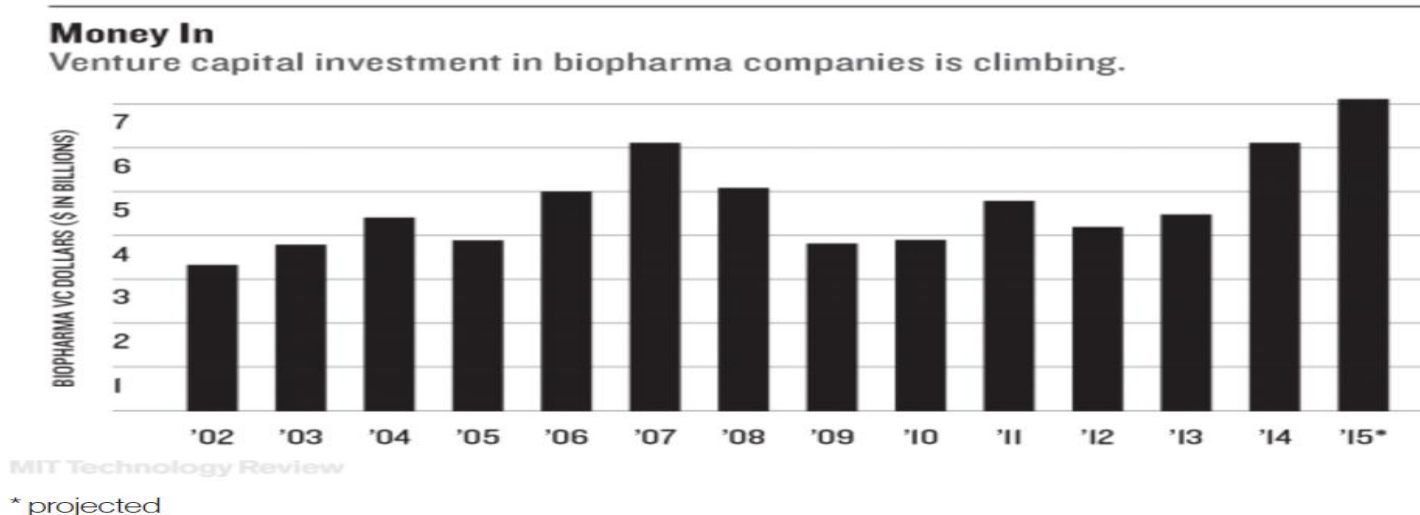
3: Data should be made available immediately, and it has to translate to action

4: The largest impact is in predictive modeling & for identifying co-morbidities/high risk patients

5: Big data will drive precision medicine and genomics

Big Data and Precision Medicine: the unwritten story

Key insight: We are in the 1st inning of a 9 inning ball game; in the next 7 years, we will still be struggling to fully connect big data with precision medicine and genomics



- Venture capital investment in biopharma was estimated at \$7 billion in 2015
- Healthcare data analytics companies received \$193M venture funding in Q1 2017¹; deals in eHealth sector rose 23%² with companies seeking strong data analytics and revenue cycle management
- Precision medicine helped curtail the AIDS/HIV epidemic with improved understanding of genes and identifying individuals for whom antiretroviral drugs would work best
- IBM's Watson is being trained to scan medical images to detect cancer and heart disease ailments

1. <http://mhealthspot.com/2017/04/mercom-digital-health-funding-hits-16b-q1-2017/>

2. <https://products.levinassociates.com/aboutus/press-releases/pr1701healthcare/>

Big Data and Precision Medicine

What Healthcare Systems can learn from Amazon

Comparative Value

- Preferences - “people who have made same /similar purchase”
- Popularity
- Side by side comparison of prices and product features

Instant Insight

- Availability
- Price
- Projected arrival date and time

Mobile Friendly Access

- Consumers
- Providers

Consistent Accuracy

- Commitment to fast, reliable, and accurate deliveries for its customers
- Premier service for expedited delivery (over 50% Amazon U.S. customers also use Amazon Prime)

Precision Analytics

- “Patients with this disease are more likely to...”
- Make decisions on which health systems are best place for this disease treatment
- Customized treatment options
- “Shopping cart” experience

Transparency and Better Outcomes

- Availability and locations for care
- Price and treatment transparency
- Accurate “get better” date

“You cannot manage what you cannot measure”

- Data should be intuitive, visually pleasing, and easily accessed from any mobile device
- Data should give patients insight anytime, anywhere

Fast and reliable care delivery

- High quality focus, no room for errors
- Clinical decision support

Millennials as Consumers Changing Healthcare Delivery

Finding:

Millennials will define new expectations for health delivery and drive decisions for baby boomer parents

“Understanding how millennials will take care of baby boomers is crucial to our organization’s strategic vision”

“Millennials have a strong desire for personalization and community. Creating a brand that aligns with their values is a major strategic initiative for us”

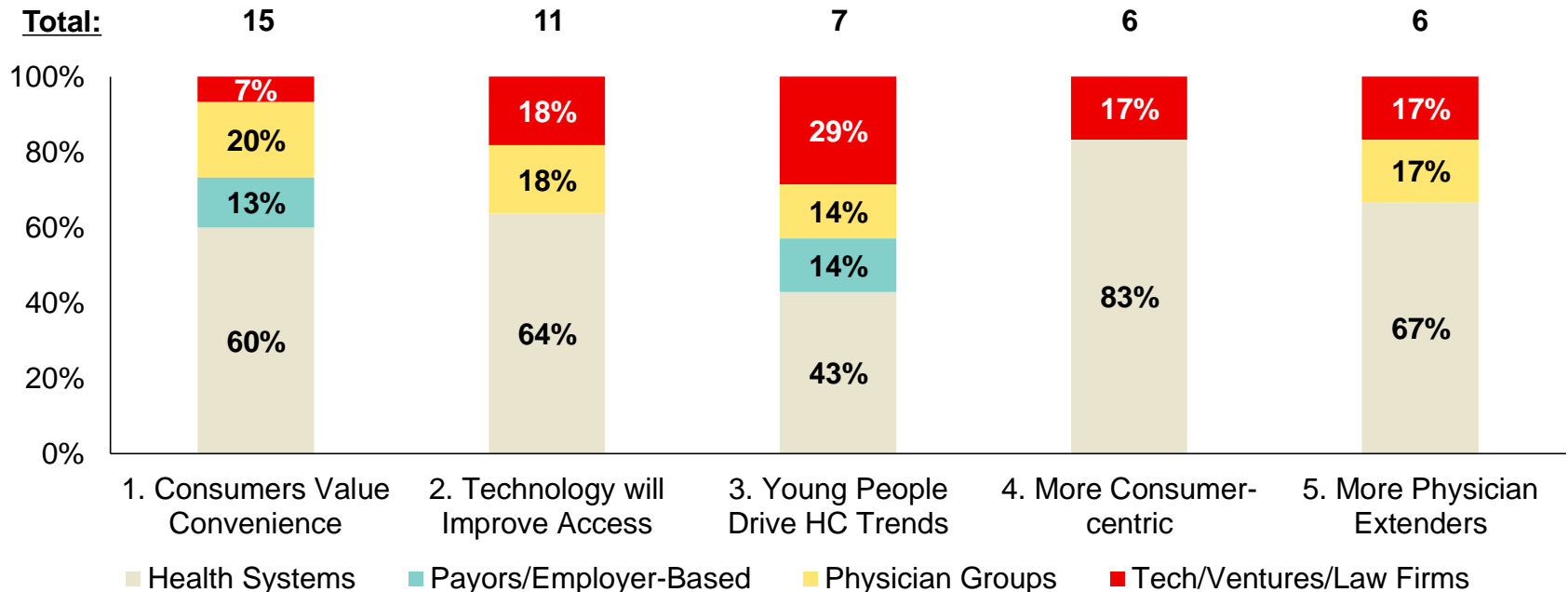
“Evolving our care delivery to incorporate mobile health will enable us to connect to a younger demographic”

“We know that convenience is a major concern for millennials so our continuum of care must expand into the retail space and other more convenient options”

Millennials as Consumers: Major Subthemes

Top 5 responses for Millennials as Consumers

(N = All Responses: 78)



Top 5 Responses

1: Consumers value convenience (access, timing, location)

2: Technology will aid in care access issues

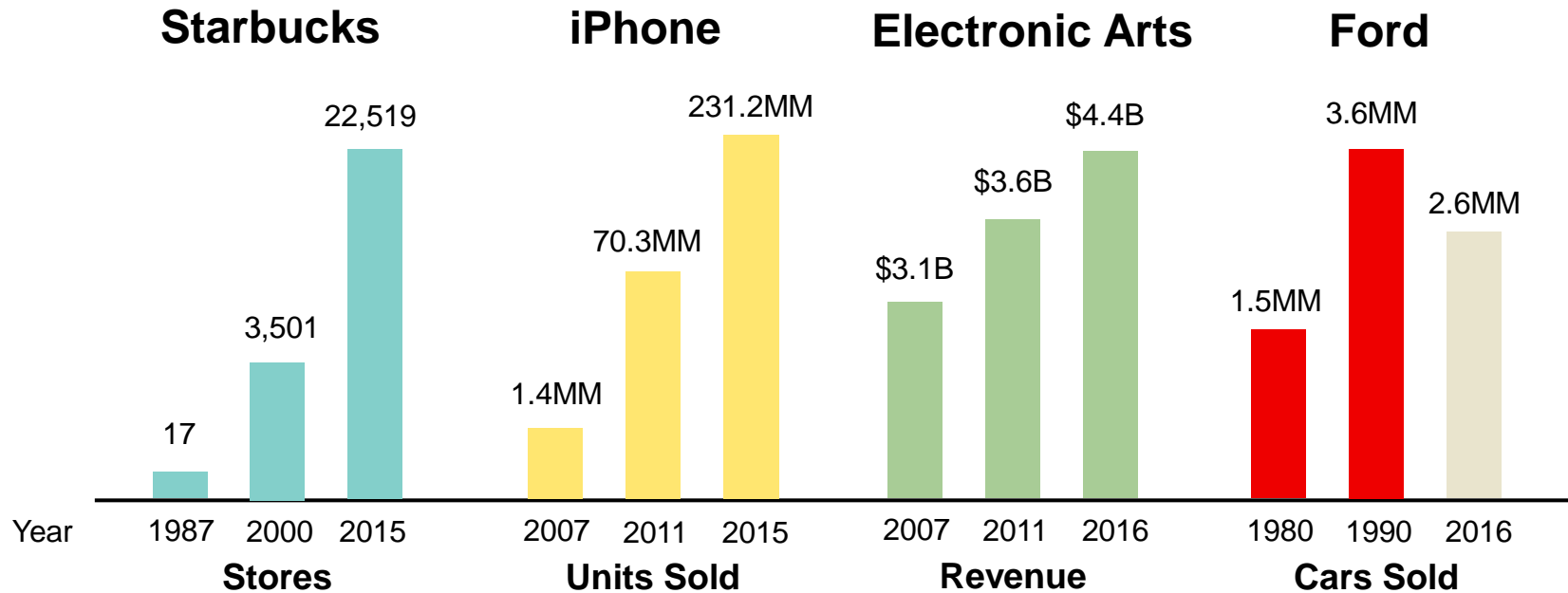
3: Younger consumers will drive healthcare trends

4: Healthcare will be more consumer-centric

5: Extenders (PAs, NPs, PharmDs) will take over more primary care duties (retail health)

Millennials as Consumers Changing Healthcare Delivery: a shift to community, brand and personalization

Key insight: Millennials have changed multiple industries (beverages, cable TV, phone, health); it is not just about cost and access but personalization, brand and community



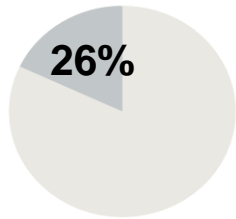
- By establishing an emotional connection with consumers, Starbucks created something that consumers didn't even know they needed – a \$5 cup of coffee
- The iPhone connects millennials virtually to the world in real time, capitalizing on their desire for immediate fulfillment, convenience, flexibility, and community
- As evidenced by decreasing car sales in the United States, millennials greatly prefer using services when needed versus owning assets

Source: Starbucks: starbucks.com; iPhone: Apple 10-K SEC Filings Item 6 Selected Financial Data; Electronic Arts: Electronic Arts Annual Earnings Release Reports; Ford: coporate.ford.com, Ford US Sales Results

Millennials - Consumer Preferences

- 83M Millennials at ~25% of US¹ population are a bigger set than Baby Boomers (75M)
- Millennials are more diverse as 44% make up part of a minority race or ethnic group¹

Cost



26% of Millennials say it is “difficult” to afford routine health costs²



1 in 5 Millennials opt out of health insurance due to costs²

Millennials currently feel they are “young and invincible“ and will often push health care off until something goes wrong

Use

- **“Instant gratification generation”**
- Use Social Media and Online Reviews to make choices
 - 75% use social media to research symptoms³
 - 90% of “younger millennials”(18 to 24) trust medical info shared on their social feeds³
 - 42% reviewed social media sites before choosing providers or making other healthcare decisions (HealthGrades, Consumer Reports, Glass Door)³
- Half of people aged 18 to 34 do not have a personal relationship with their physician

¹ <https://www.census.gov/newsroom/press-releases/2015/cb15-113.html> (born between 1982 and 2000)

² <http://www.cnbc.com/2016/06/27/millennials-cant-afford-health-insurance-adopt-risky-alternatives.html>

³ <https://www.usatoday.com/story/news/politics/elections/2016/02/07/heres-how-millennials-could-change-health-care/79818756/>

The Healthcare System of the Future

Finding:

The healthcare leaders of today do not agree on the successful health system of tomorrow

“I could see the end of non-profit healthcare as we know it.”

“Successful health systems will partner extensively and be the QB for consumer care”

“Our organization will need to embrace transparency and provide the best evidenced-based medicine in the market”

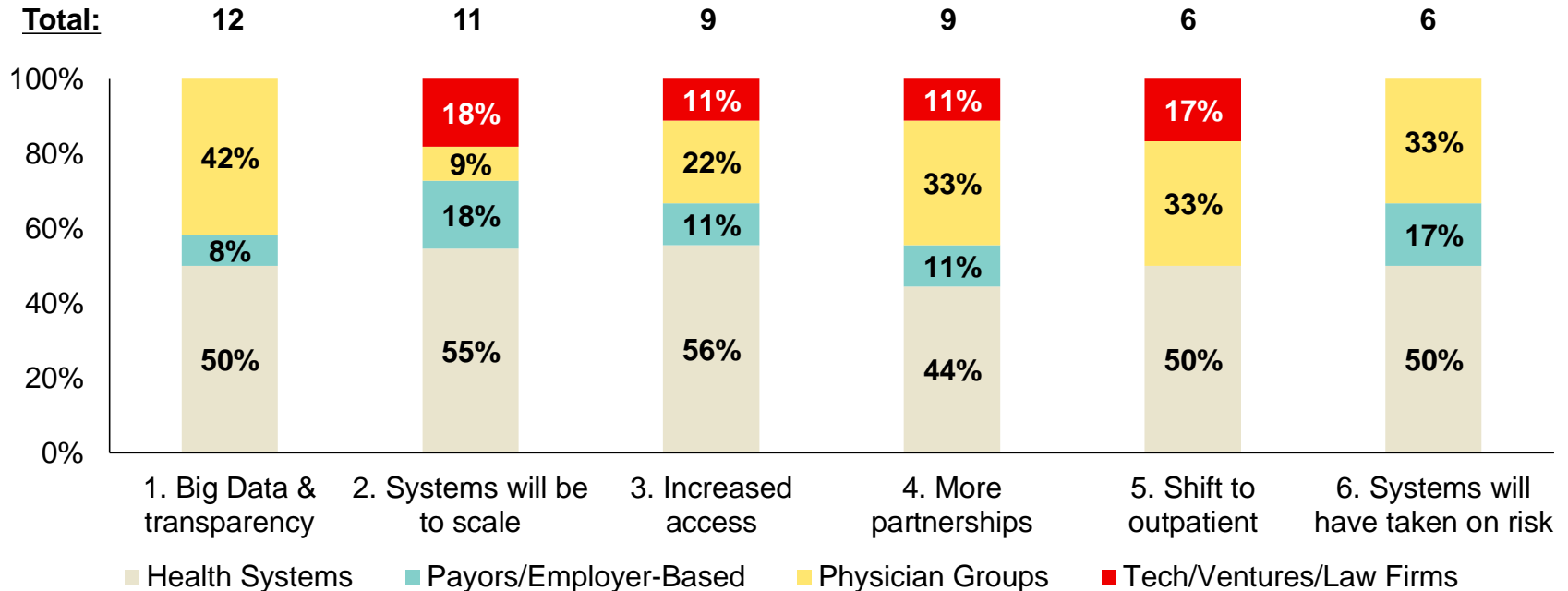
“Organizations like Kaiser, Geisinger, and Intermountain have set the standard for value and quality. I see many others emulating their models”

“Providers must be ready to take on risk, adapt payment strategies, and manage a population’s health efficiently and effectively”

6 Health System of the Future: Major Subthemes

Top 6 responses for Future Health Systems

(N = All Responses: 90)

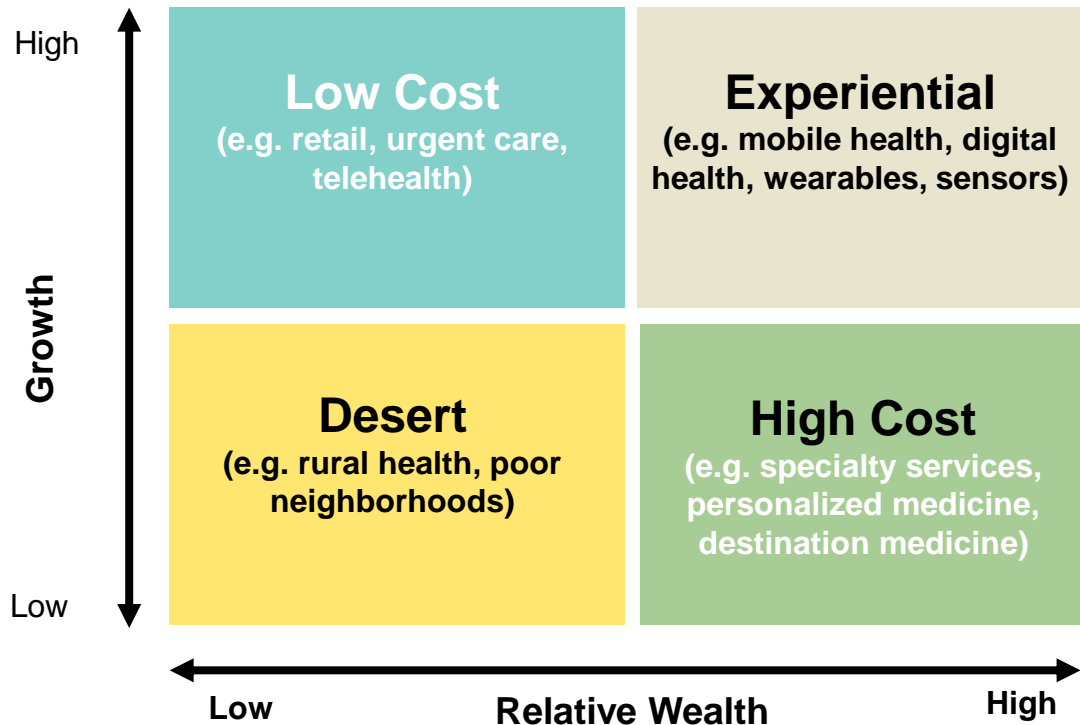


Top 6 Responses

- 1: Big data and patient transparency (costs, quality, etc.) will be key factors
2. Systems will be to scale
- 3: There will be increased access
4. Community centric and partnerships-based (with ASCs, EMS) to cover all care needs
- 5: Care will shift to outpatient
- 6: Systems will have taken on risk

6 The Healthcare System of the Future: a market based divergence

Key insight: Cultural, regulatory, & economic forces will evolve four distinct futures



Key characteristics

Desert

- Can't afford healthcare and indigent neighborhoods (e.g., Southside Chicago, Bronx)

Low Cost

- Value-based services, cash-based economy, small business and part-time workforce

Experiential

- Young and wealthy in innovation markets (e.g., Silicon Valley, Denver)

High Cost

- Wealthy (e.g., Beverly Hills) seeking specialized services

- Healthcare spend in the United States is estimated to reach \$5.3 trillion by 2024¹
- The US saw a 2.5% decrease in hospitals since 2010 and is projected to have 4,648 hospitals by 2024²
- In 2024, the average healthcare premium for a family of 4 is estimated to be \$24,383³

1: Centers for Medicare and Medicaid Services: National Health Expenditure Projections 2015-2025

2: Kaiser Family Foundation: State Health Facts, Total Hospitals; Excludes federal, long term, psychiatric, and chemical dependency hospitals

3: Kaiser Family Foundation: 2016 Employer Health Benefits Survey; Assumes 4% annual growth based on 2011-2016 actual premium increases

Questions?

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