Future Healthcare Trends

West Virginia MGMA 2019 State Conference
Stonewall Resort
Roanoke, WV

September 20, 2019

MGMA®

Learning Objectives

1. Describe how industry consolidation, remote monitoring, augmented intelligence, and technological advances will disrupt healthcare delivery
2. Describe the advantages physician practices will have over larger healthcare institutions in the future healthcare delivery system
3. Recommend strategies a physician practice can use to leverage these technologies to benefit itself and its patients

MGMA®

A storm of change is coming – Will you be ready?

NOAA/STAR Hurricane Florence, 12:30pm EDT, September 12, 2018

MGMA®

Learning Objective 1

Describe how industry consolidation, remote monitoring, augmented intelligence, and technological advances will disrupt healthcare delivery

MGMA®

Not every current issue is new

"The biggest problem directly facing this group today is to see that the cost of producing professional service is kept within the ability of the average citizen to pay."

Harry Harwick, Business Manager, Mayo Clinic
1st Annual Conference of Clinic Managers
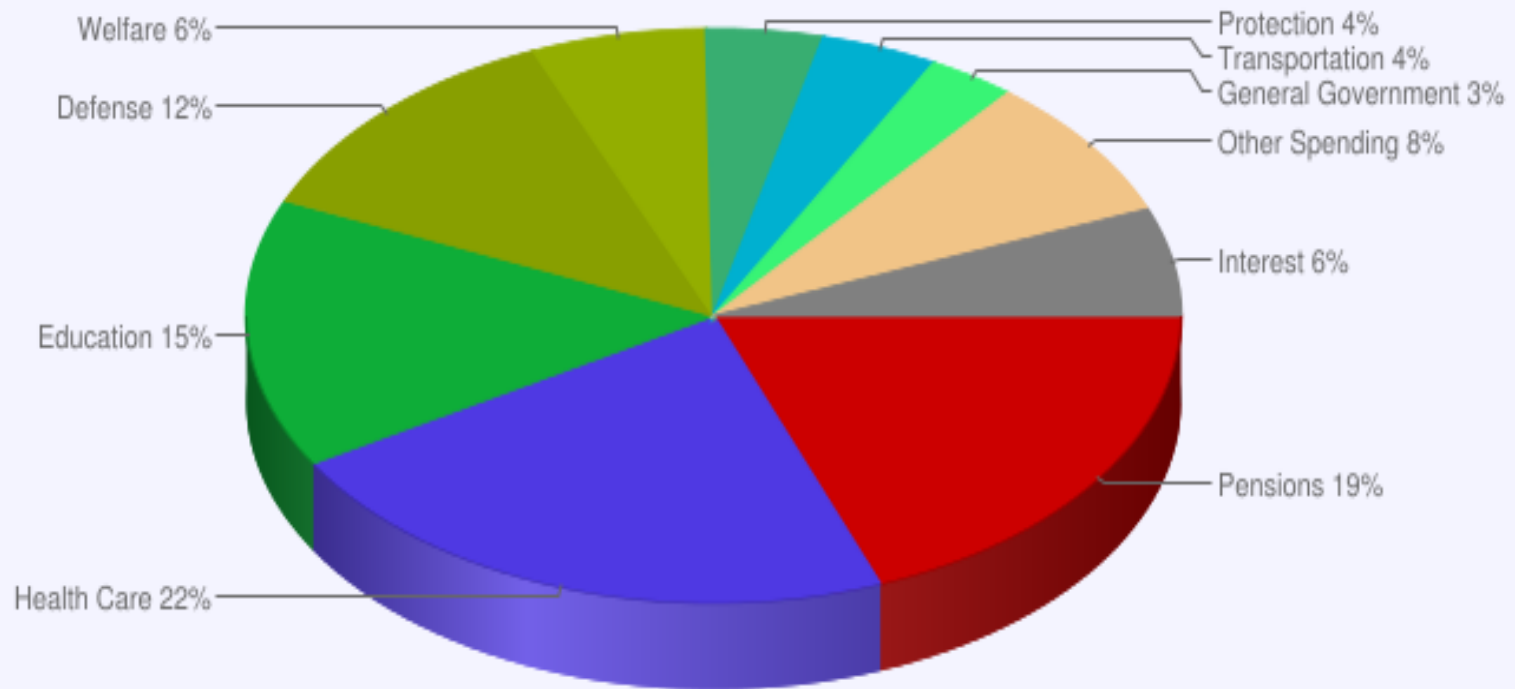Madison, Wisconsin
November 1, 1926

Harry J. Harwick

MGMA®

What is driving change

1. Healthcare costs too much and patients and insurers are looking to reduce their payments
2. Medicare and Medicaid payment to physicians and hospitals is determined by the government entities with little or no input from hospitals and physicians
3. Insurance payment to physicians and hospitals can be negotiated, but only by entities with "clout"
4. Operating costs continue to increase due to the effect of inflation and investment in new technologies and staff
5. With constrained payment and narrow profit margins, healthcare organizations are focusing on increasing negotiating clout and reducing operating costs
6. A new generation of patients values convenience more than established relationships with healthcare providers

MGMA

# The current environment: Healthcare is the largest portion of federal spending

Total Spending for United States - FY 2018

Welfare 6%
Defense 12%
Education 15%
Health Care 22%
Protection 4%
Transportation 4%
General Government 3%
Other Spending 8%
Interest 6%
Pensions 19%

https://www.usgovernmentdebt.us/united_states_total_spending_pie_chart

MGMA

Healthcare is more expensive as we age

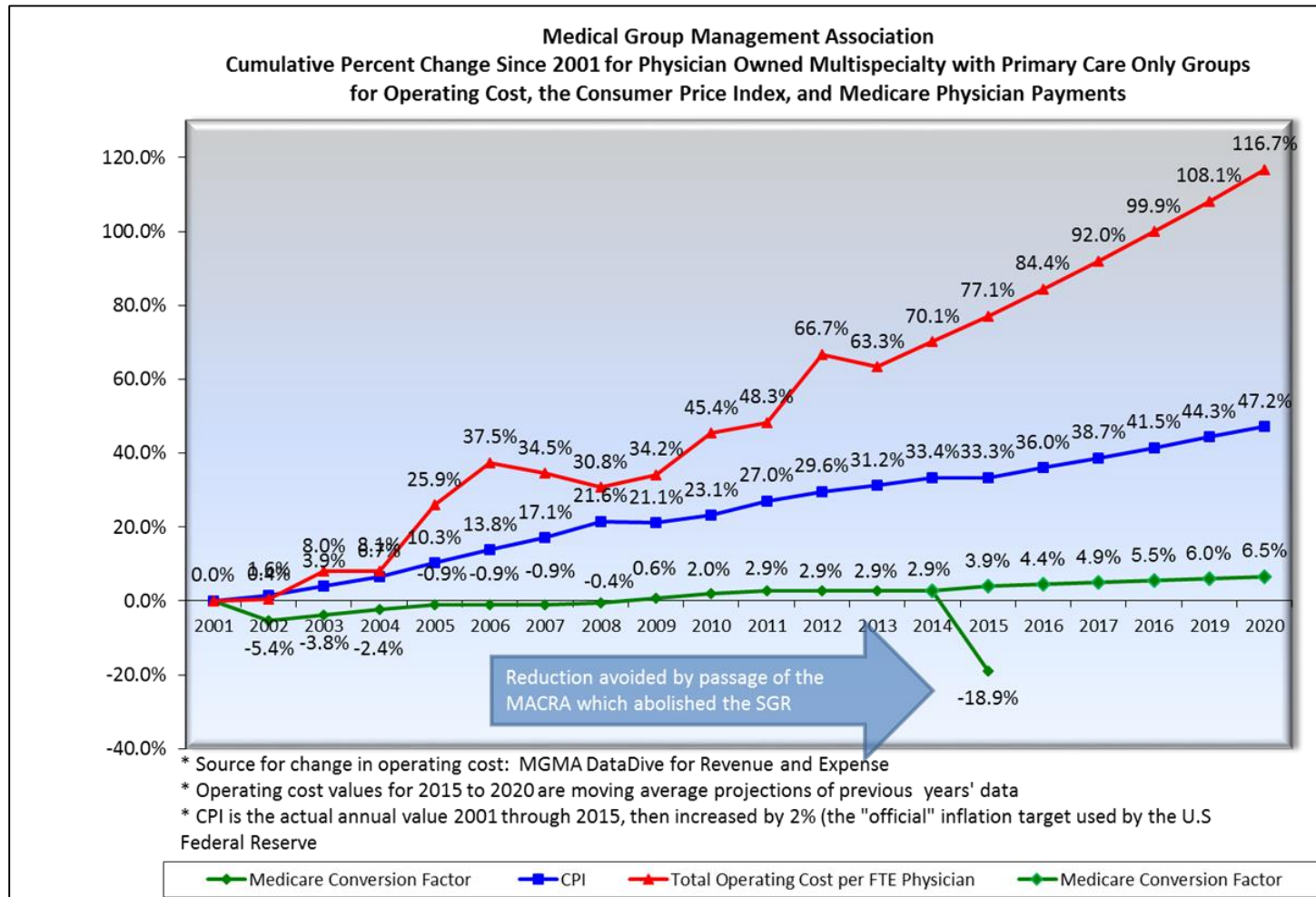## 2012 Total Personal Health Care Per-capita Spending

Category	Amount
Overall	$7,564
0-18	$3,552
19-44	$4,458
45-64	$9,513
65-84	$16,872
85+	$32,411
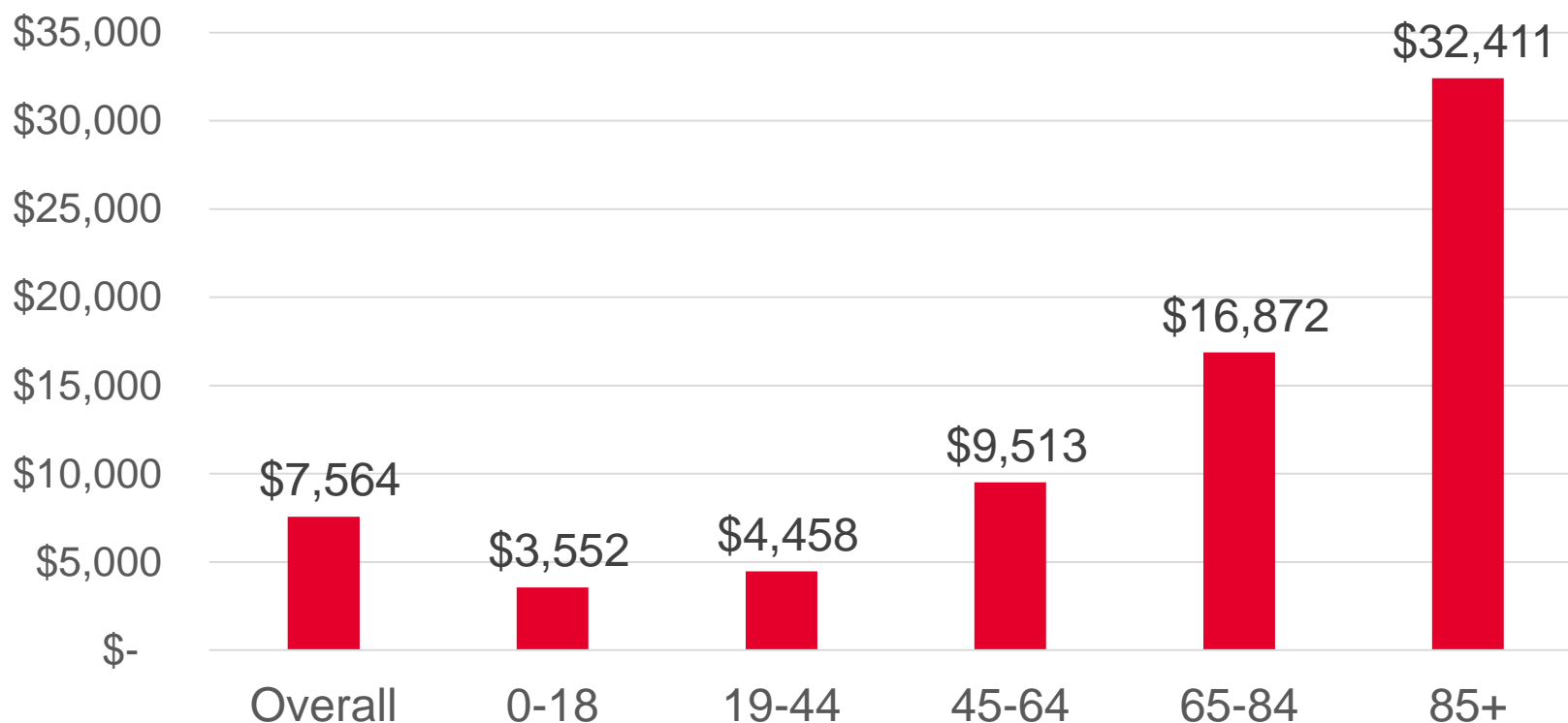
Source: CMS National Health Expenditures Fact Sheet

MGMA®

The U.S. has an aging population so federal health expenditures are increasing

Medicare Trustees Report 2018
US from FY 1967 to FY 2040
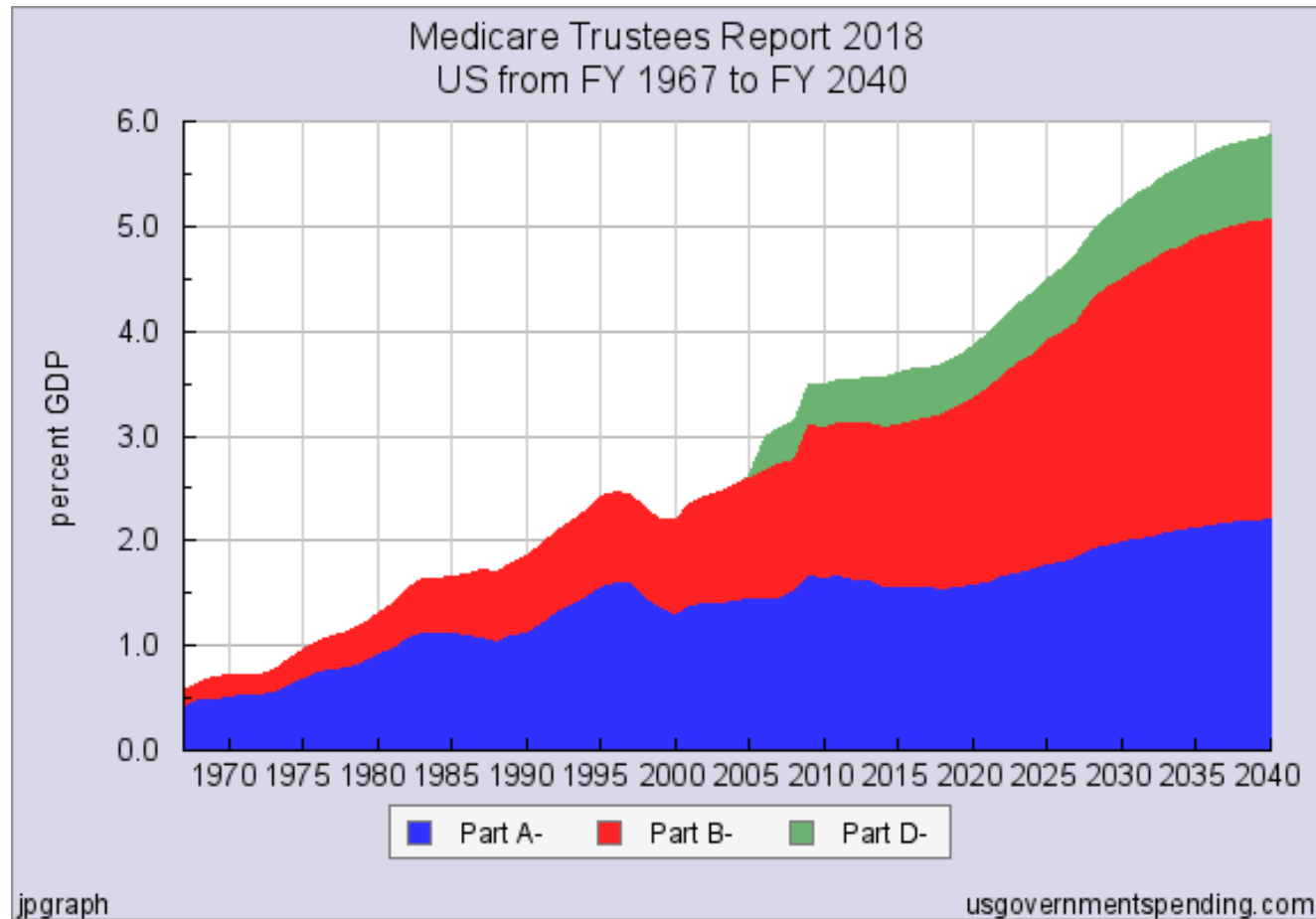
Source:https://www.usgovernmentdebt.us/medicare_trustees_report_1967_2040USb_18s1li011l cn_F0t

MGMA

Under MACRA Medicare payment remains static while costs and inflation increase

Medical Group Management Association
Cumulative Percent Change Since 2001 for Physician Owned Multispecialty with Primary Care Only Groups
for Operating Cost, the Consumer Price Index, and Medicare Physician Payments

* Source for change in operating cost: MGMA DataDive for Revenue and Expense
* Operating cost values for 2015 to 2020 are moving average projections of previous years' data
* CPI is the actual annual value 2001 through 2015, then increased by 2% (the "official" inflation target used by the U.S Federal Reserve

Reduction avoided by passage of the MACRA which abolished the SGR

Legend: Medicare Conversion Factor — CPI — Total Operating Cost per FTE Physician — Medicare Conversion Factor

- 10 -

MGMA

# Healthcare organizations are responding to changing economic conditions

- Younger physicians prefer larger practices for the more predictable income and work–life balance
- Most solo practitioners are older doctors and as they retire they are not replaced
- Younger physicians are less inclined to want the business and entrepreneurial demands of small practice
- Larger practices better compete with other providers and have a stronger negotiating position with insurers
- Small practices lack infrastructure to collect, manage, and report cost and quality
- Larger practices have economies of scale that small practices cannot match

http://www.nmms.org/sites/default/files/images/2013_9_23_ama_survey_prp-physician-practice-arrangements.pdf
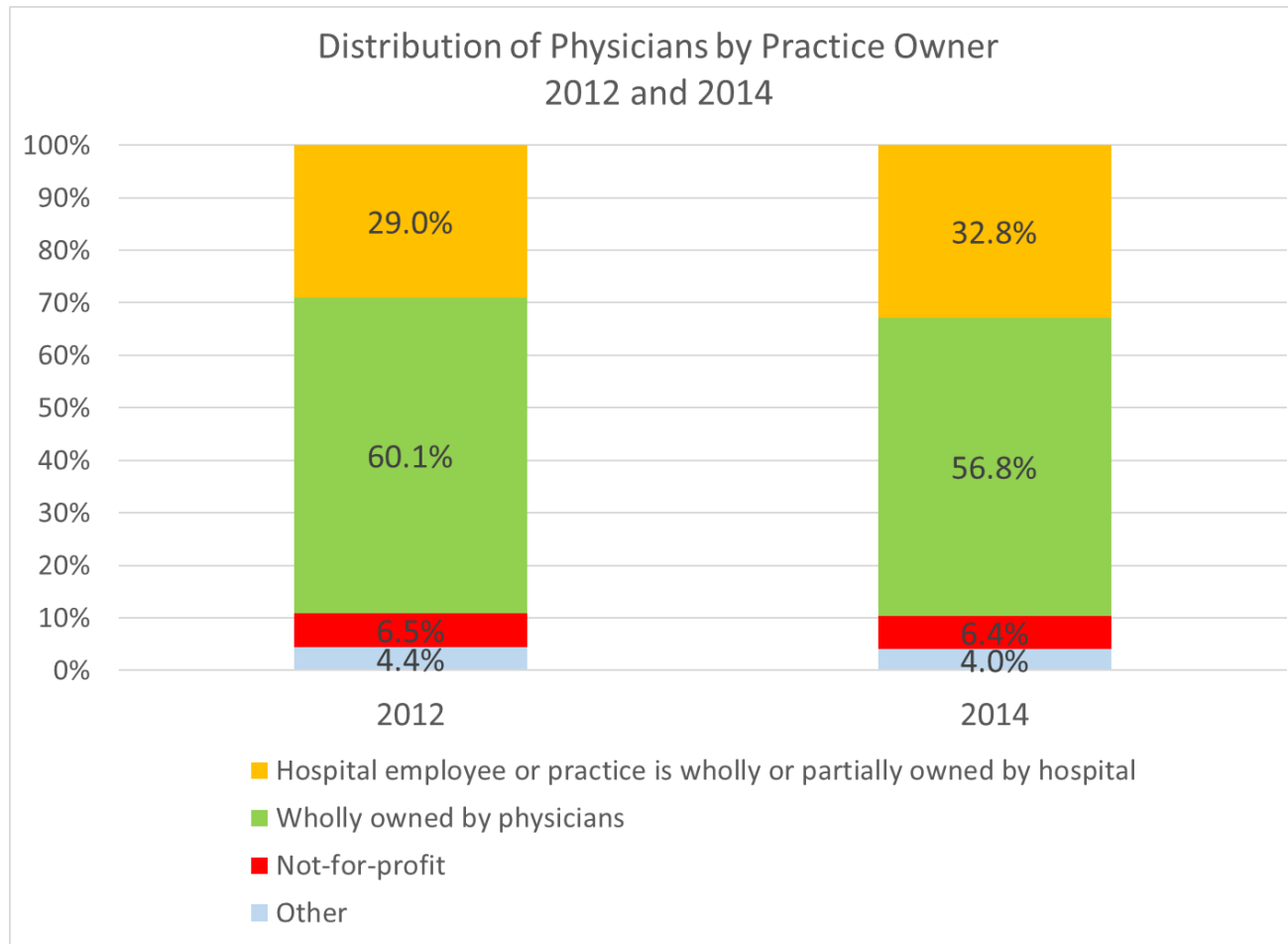
MGMA®

Physicians are practicing in larger groups

Percentages of US physicians in practice groups of various sizes, June 2013 and December 2015

■ June 2013   ■ December 2015
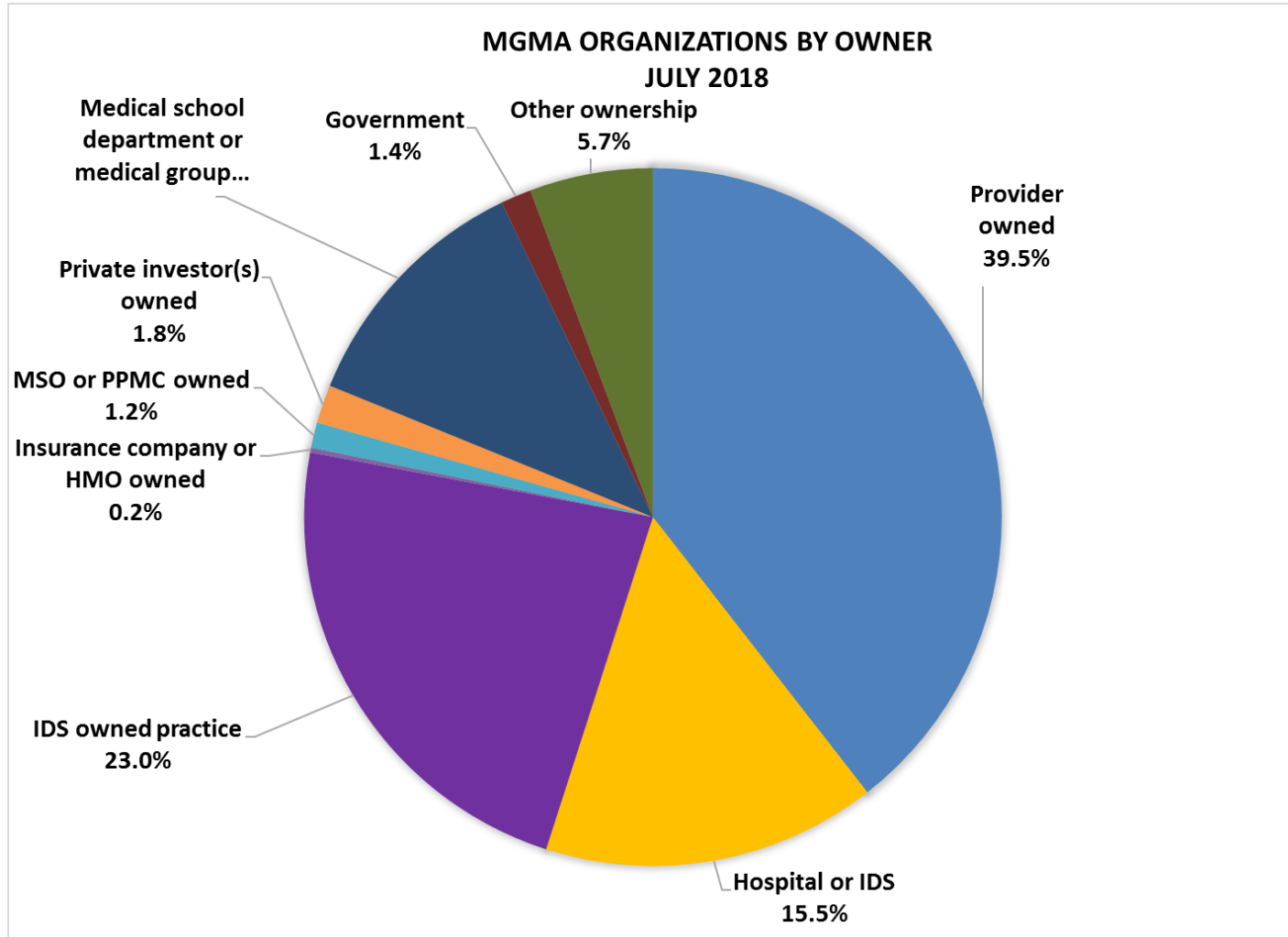
ALL PHYSICIANS

Number of physicians in a practice
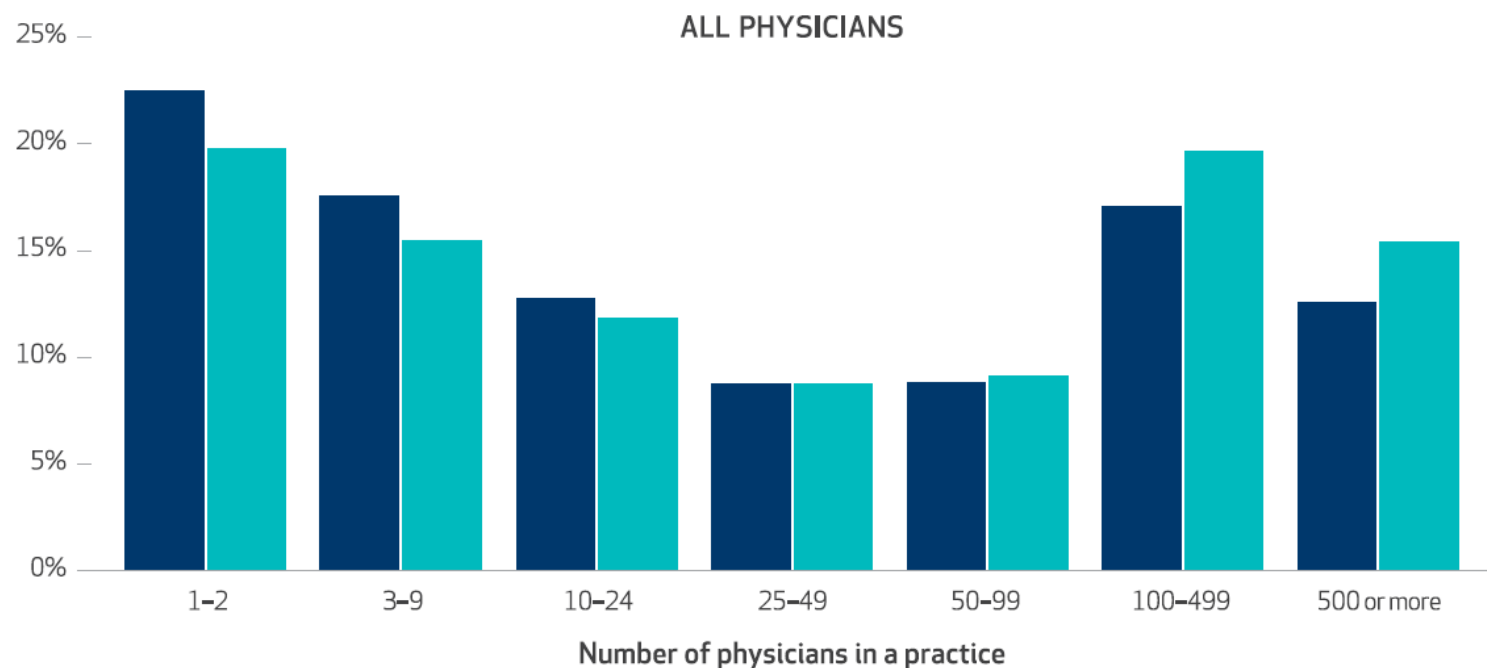
Source: Physician Consolidation: Rapid Movement From Small To Large Group Practices, 2013–15Muhlestein and Smith: Health Affairs 35, NO. 9 (2016): 1638–1642

MGMA®

More physicians are employed by hospitals

Distribution of Physicians by Practice Owner
2012 and 2014

- 2012: Hospital employee or practice is wholly or partially owned by hospital 29.0%; Wholly owned by physicians 60.1%; Not-for-profit 6.5%; Other 4.4%
- 2014: Hospital employee or practice is wholly or partially owned by hospital 32.8%; Wholly owned by physicians 56.8%; Not-for-profit 6.4%; Other 4.0%

■ Hospital employee or practice is wholly or partially owned by hospital
■ Wholly owned by physicians
■ Not-for-profit
■ Other

Policy Research Perspectives: Updated Data on Physician Practice Arrangements: Inching Toward Hospital Ownership, 2015, Carol K. Kane, PhD, American Medical Association

MGMA

MGMA's organizational profile reflects the national trends

MGMA ORGANIZATIONS BY OWNER
JULY 2018

- Provider owned 39.5%
- Hospital or IDS 15.5%
- IDS owned practice 23.0%
- Insurance company or HMO owned 0.2%
- MSO or PPMC owned 1.2%
- Private investor(s) owned 1.8%
- Medical school department or medical group...
- Government 1.4%
- Other ownership 5.7%

MGMA

Hospitals are not the only entity acquiring physician practices

Denver's DaVita selling its physician network for $4.9 billion
Company plans stock buyback with proceeds

By Joe Rubino | jrubino@denverpost.com | The Denver Post

PUBLISHED: December 6, 2017 at 4:46 am | UPDATED: December 6, 2017 at 10:22 am

Denver-based DaVita Inc. is selling its physician network arm for $4.9 billion, with aims to use some of that cash to buy back stock. The sale, to multifaceted health services company Optum, was to be announced early Wednesday

Optum is part of UnitedHealth Group, one of the largest health insurers in the United States.

For $4.9 billion, Optum gets about 300 primary care and specialist clinics DaVita Medical Group operates, as well as 35 urgent-care centers and six outpatient surgery facilities. The group serves about 1.7 million patients each year. It will be combined with Optum's OptumCare division, a network of about 30,000 affiliated doctors who serve millions of patients each year, according to the company.

Health insurers are integrating physicians and health facilities

BECKER'S
ASC REVIEW

Sponsored by VMG Health | info@vmghealth.com | 214.369.4888

Optum has 50,000 employed, affiliated physicians and a vision for the future

Written by Laura Dyrda | September 17, 2019 | Print | Email

Share — Optum has grown considerably in the past two years through acquisitions and has plans for continued growth in the future.

During the Wells Fargo Securities Healthcare Conference in Boston, Optum CEO Andrew Witty said the company expects to report $110 billion in revenue for 2019 after acquiring both Advisory Board in 2017 and DaVita Medical Group in June. He also touched on the company's strategy and where it sees big opportunities in the coming years. He noted that there are 30 million Americans with three or more diagnosed chronic diseases, and that number is expected to hit 80 million by 2030. Patients in that category are associated with 10 times higher costs than patients with one chronic disease.

"What we are going to see is a growth of the aging population, so severity of illness and cost of illness is going to go up," he said. "That's why we are so focused on resolving fundamental changes in the model moving forward."

https://www.beckersasc.com/asc-transactions-and-valuation-issues/optum-has-50-000-employed-affiliated-physicians-and-a-vision-for-the-future.html?oly_enc_id=1461F1018534C8V

- 16 -

MGMA

Consolidation is across healthcare organizations

BECKER'S HOSPITAL REVIEW

Advocate, Aurora Health Care to merge into $11B health system: 5 things to know

Written by Ayla Ellison (Twitter | Google+) | December 04, 2017 | Print | Email

Advocate Health Care, a 12-hospital system based in Downers Grove, Ill., and Aurora Health Care, a 15-hospital system based in Milwaukee, plan to merge to create the 10th largest nonprofit health system in the U.S.

MGMA®

Consolidation is not just hospitals and physicians

2019 YEAR IN PREVIEW

Why vertical mergers will continue to dominate health care

Insurers are busy merging with retailers and providers in vertical integration deals after attempts at horizontal combinations hit antitrust roadblocks.

January 1, 2019
SUSAN LADIKA

https://www.managedcaremag.com/archives/2018/12/why-vertical-mergers-will-continue-dominate-health-care

Technology is disrupting the healthcare system

- Technology already has changed how healthcare services are provided
- The technology cost curve is peaking – delivering the same product for a lower cost or an improved product at the same cost
- Technology will substitute for expensive capital investments and labor
- As technology lowers costs and improves accessibility healthcare delivery will move :
  - from centralized bricks and mortar institutions to
  - distributed facilities
  - then directly to the patient

MGMA

Technology will change healthcare in ways we cannot imagine

Patient Room 2020 by NXT Health

The hospital room of the future by Eric J. Topol, MD, Director of Scripps Translational Science Institute

https://partners.wsj.com/athenahealth/the-future-of-hospitals/

MGMA®

What foresightful hospital CEOs are thinking

The Wall Street Journal
A Health-Care Model in Coal Country
By Christopher Weaver
Sept. 27, 2015 10:32 p.m. ET

Dr. David Feinberg, CEO Geisinger Health System

DR. FEINBERG: I think my job ultimately is to close every one of our hospitals. Because we should take care of you at home. We should take care of you at school. Nobody wants to go to the hospital. We really need to work to keep people healthy. Now, people will still get hit by cars, and there'll be complex surgeries that require hospitalizations. But I'm trying to put myself out of business.

http://www.wsj.com/articles/a-health-care-model-in-coal-country-1443407522.

MGMA®

When payment is not an issue, virtual visits replace face-to-face encounters

Kaiser Permanente was selected by Fast Company as #5 in Health on 2017 World's Most Innovative Companies. "The health system has now conducted 59 million telehealth visits in the past year"

https://www.fastcompany.com/most-innovative-companies/2017/sectors/health

MGMA

Telemedicine is disrupting healthcare services around the world
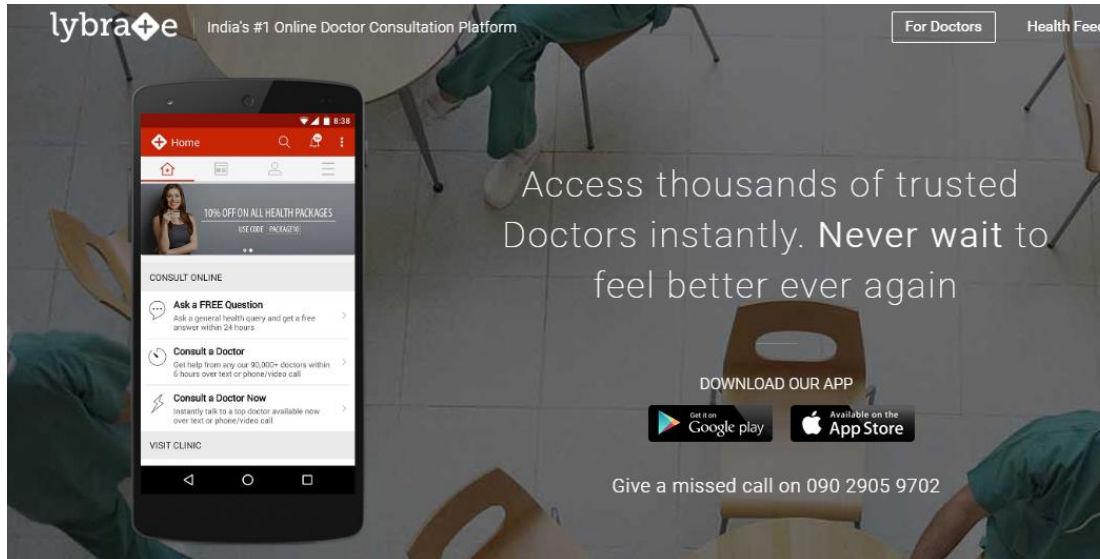
Lybrate, # 7 in Healthcare on Fast Company's 2016 World's Most Innovative Companies "The website and app, which the company says have been downloaded more than 3 million times since its January 2015 launch connects people with 150,000 closely-vetted, high-quality doctors"

https://www.lybrate.com/

Telemedicine requires special skills

JAMA Network™

VIEWPOINT

Is It Time for a New Medical Specialty?
The Medical Virtualist

Michael Nochomovitz, MD
New York Presbyterian, New York, New York.

Rahul Sharma, MD, MBA
New York Presbyterian, Weill Cornell Medicine, New York, New York.

Medicine has seen a proliferation of specialties over the last 50 years, as scientific discovery and care delivery advanced. Diagnoses and treatments have become more complex, so the need for formal training for specialty competence in cognitive and surgical disciplines has become clear. There are currently 860 000 physicians with active certifications through the American Board of Medical Specialties and 34 000 through the American Osteopathic Association.[1]

Drivers of Specialty Expansion

Specialty development has been driven by advances in technology and expansion of knowledge in care delivery. Physician-led teams leverage technology and new knowledge into a structured approach for a medical discipline, which gains a momentum of its own with adoption. For instance, critical care was not a unique specialty until 30 years ago. The refinement in ventilator techniques, cardiac monitoring and intervention, anesthesia, and surgical advancements drove the development of the specialty and certification, with subsequent subspecialization (eg, neurological intensive care). The development of laparoscopic and robotic surgical

---

> *Medical virtualists could be involved in a substantial proportion of health care delivery for the next generation.*

---

ing an estimated value of $12.1 billion.[2] Some recent market surveys show that more than 70% of consumers would consider a virtual health care service.[3] A preponderance of higher income and privately insured consumers indicate a preference for telehealth, particularly when reassured of the quality of the care and the appropriate scope of the virtual visit.[3] Telemedicine is being used to provide health care to some traditionally underserved and rural areas across the United States and increased shortages of primary care and specialty physicians are anticipated in those areas.[4]

A New Specialty

Digital advances within health care and patients acting more like consumers have resulted in more physicians and other clinicians delivering virtual care in almost every medical discipline. Second-opinion services, emergency department express care, virtual intensive care units (ICUs), telestroke with mobile stroke units, telepsychiatry, and remote services for postacute care are some examples.

In the traditional physician office, answering services and web-based portals focused on telephone and email communication. The advent of telehealth has resulted in incremental growth of video face-to-face communication with patients by mobile phone, tablet, or other computer devices.[2,3,5] In larger enterprises or commercial ventures, the scale is sufficient to "make

MGMA®

Self-insured employers can drive change

BECKER'S
HOSPITAL REVIEW

Teladoc Health, the world's largest and most trusted provider of virtual care has announced its collaboration with **Microsoft**.

LEARN MORE

Print Issue	E-Weeklies	Conferences	Webinars	White Papers	Multimedia	Lists

Physicians   Leadership   Strategy   Executive Moves   Transaction & Valuation   Human Capital & Risk   Patient Flow   Facil

Patient Engagement   Pharmacy   Population Health   Legal & Regulatory   Compensation   Payers   Opioids   Rankings

Walmart drops price of virtual visits from $40 to $4

Emily Rappleye (Twitter | Google+) - Monday, February 18th, 2019 Print | Email

in SHARE   Tweet   Share 4

Walmart is offering employees a 90 percent discount on telemedicine, dropping the price of a virtual visit from $40 to $4, *The Denver Post* reports.

The retailer reduced the cost of telemedicine services Jan. 1 to increase options for employees seeking care, a spokesperson confirmed to *Becker's Hospital Review*. Walmart's health benefits currently cover more than 1 million people enrolled it its Associates' Medical Plan. Through this plan, virtual visits through the Doctor On Demand app are covered like a normal physician's office visit.

Walmart is one of many employers to offer telemedicine benefits to workers. Eighty percent of large and midsize companies offered the benefit in 2018, according to the report. However, factors like emotion, forgetfulness and preference have kept utilization down. Just 8 percent of employees at large and midsize companies used telemedicine benefits in 2017, according to the report.

https://www.beckershospitalreview.com/telehealth/walmart-drops-price-of-virtual-visits-from-40-to-4.html?origin=rcme&utm_source=rcme

MGMA

Telemedicine is not the only disruption to "brick and mortar" facilities

https://www.dispatchhealth.com/#
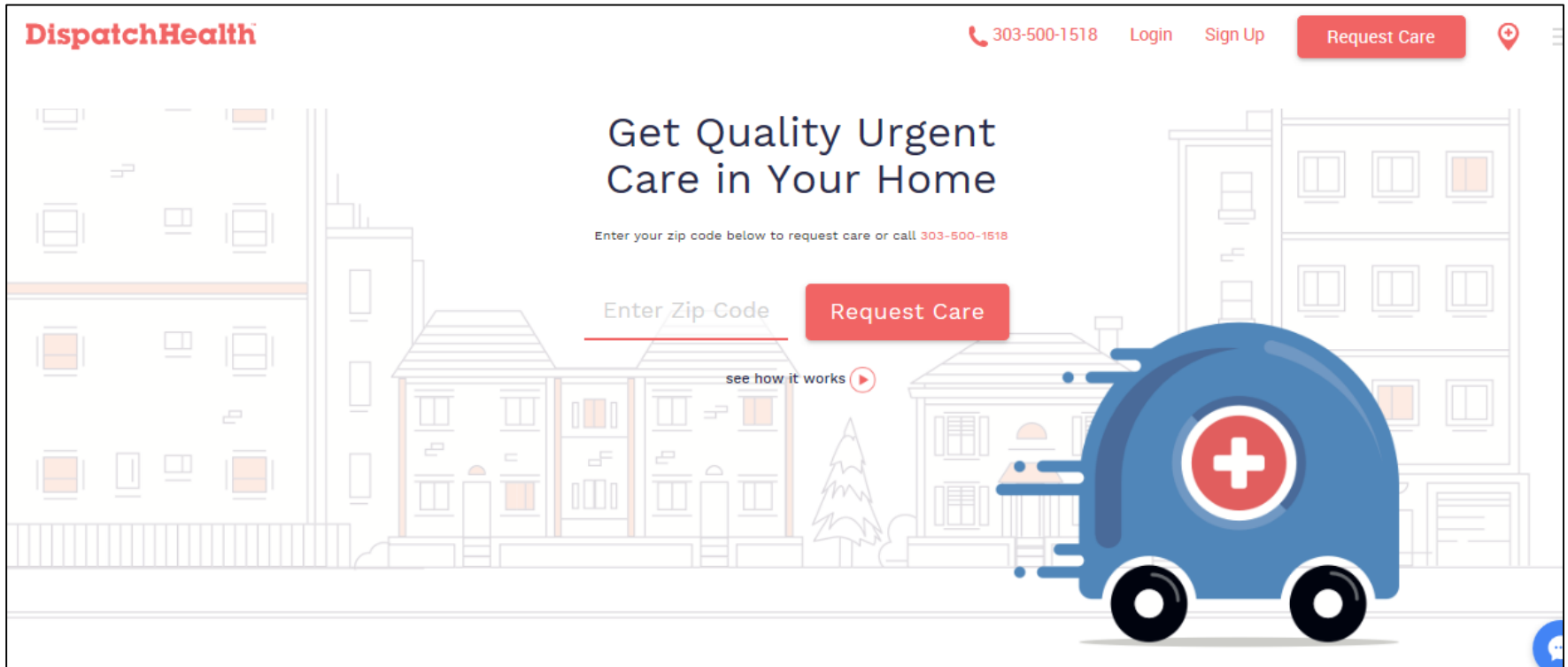
Even "disrupters" can be disrupted

Metro Urgent Care clinics close abruptly, leaving employees and patients in a lurch

State investigating unpaid wage claims

Posted: 11:21 PM, Aug 18, 2019   Updated: 5:33 AM, Aug 19, 2019

By: Lance Hernandez

360 Stories: Multiple perspectives

"Following the money" on venture capital's investment in health

TOP SIX FUNDED VALUE PROPOSITIONS
YTD 2018

ROCK HEAL+H

41 Deals, $1.27B
Largest Q3 deal:
American Well
($291M)

ON-DEMAND HEALTHCARE SERVICES
The delivery of immediate, or near real-time, healthcare services (e.g., physician house-calls, telemedicine)

42 Deals, $1.18B
Largest Q3 deal:
PELOTON
($550M)

FITNESS AND WELLNESS
General health maintenance and promotion, including fitness, nutrition, and sleep

27 Deals, $1.10B
Largest Q3 deal:
BUTTERFLY Network, Inc.
($250M)

DIAGNOSIS OF DISEASE
Enables the diagnosis of a specific clinical condition (e.g., diabetes)

34 Deals, $900M
Largest Q3 deal:
23andMe
($300M)

CONSUMER HEALTH INFORMATION
Empower consumers to understand their own health, general healthcare concepts, and the healthcare system

38 Deals, $781M
Largest Q3 deal:
INFOBIONIC
($50M)

MONITORING OF DISEASE
Enables the monitoring of a specific clinical indication (e.g., diabetes)

21 Deals, $630M
Largest Q3 deal:
.Outset
($132M)

TREATMENT OF DISEASE
Delivers and/or enables the treatment and/or management of a specific clinical condition

Source: Rock Health Funding Database
Note: Only includes U.S. deals >$2M; data through September 30, 2018
Each company in the Rock Health Digital Health Funding Database is tagged with at least one and up to three "value propositions." Since each company may fall into multiple value propositions, the sum of the funds raised across value propositions does not sum to the total funds raised.

https://rockhealth.com/reports/q3-2018-an-entrepreneurs-market-leads-to-digital-healths-biggest-quarter-yet/

MGMA

The nation's largest businesses view healthcare are their future market

HEALTH PAYER INTELLIGENCE
xtelligent HEALTHCARE MEDIA

Amazon-Backed Health Venture Reveals Name: Haven Healthcare

Amazon, Berkshire Hathaway, and JPMorgan Chase have announced that their secretive health venture will be called Haven Healthcare. The company will tackle issues of affordability and care access.

MGMA®

Technology firms are looking to consumer healthcare

BECKER'S HOSPITAL REVIEW
2nd Annual Health IT + Clinical Leadership + Pharmacy 2019
May 2 - 4, 2019

125+ SPEAKERS FROM HOSPITALS AND HEALTH SYSTEMS

80+ SESSIONS FEATURING A GREAT COMBINATION OF HEALTH IT'S IMPACT ON CLINICAL AND BUSINESS ISSUES

CELEBRITY KEYNOTES BY

TERRY BRADSHAW   BOBBI BROWN

Apple could make $313B in healthcare by 2027, analysts say

Emily Rappleye (Twitter | Google+) - yesterday Print | Email

in SHARE   Tweet   Share 9

Apple is likely to emerge as the leader in consumer healthcare, according to analysts from Morgan Stanley, who projected the tech firm's healthcare revenues to hit anywhere from $15 billion to $313 billion by 2027, *Bloomberg* reports.

The U.S. healthcare market opportunity is projected to be three times the size of the global smartphone market. Analysts believe Apple has a competitive advantage over Google and Amazon, both of which excel in artificial intelligence, due to its loyal consumer base.

The report suggests a few potential moves for Apple: It could acquire a healthcare company to boost efforts in the space, or it may expand its current wearables to include more medical-grade options. AirPods could be evolved into hearing aids; Apple Watch could add blood pressure, glucose and sleep monitoring.

https://www.beckershospitalreview.com/healthcare-information-technology/apple-could-make-313b-in-healthcare-by-2027-analysts-say.html

MGMA

Technology firms are funding medical research (for their benefit)

Apple will oversee new medical studies focusing on women's health, hearing, and mobility

PUBLISHED TUE, SEP 10 2019 · 5:02 PM EDT

Christina Farr
@CHRISSYFARR

SHARE f 𝕏 in ✉ •••

KEY POINTS

- Apple released a slew of new medical studies at its WWDC event on Tuesday.

- The focus areas ranged from women's health to mobility.

- That might be a signal of product focus areas for the company, but that isn't necessarily the case as Apple does not know if the studies will show that wearable devices are meaningful tools for monitoring patients in these specific ways.

MGMA

Remote monitoring is coming to consumer products

Promotion to earn free Apple Watch with UnitedHealthcare rolling out to all eligible customers

Michael Potuck - Nov. 14th 2018 1:01 pm PT @michaelpotuck

UnitedHealthcare Offers Apple Watches to Wellness Program Participants Who Meet Fitness Goals; Clinical Laboratories Can Participate and Increase Revenues

Feb 15, 2019 | Instruments & Equipment, Laboratory Instruments & Laboratory Equipment, Laboratory Management and Operations, Laboratory News, Laboratory Operations, Laboratory Pathology

https://9to5mac.com/2018/11/14/free-apple-watch-with-unitedhealthcare/

https://www.darkdaily.com/unitedhealthcare-offers-apple-watches-to-wellness-program-participants-who-meet-fitness-goals-clinical-laboratories-can-participate-and-increase-revenues/

Patients are using technology whether it is approved or not

DIY Tech Gives People More Freedom In Managing Diabetes

Using instructions freely available online, do-it-yourselfers — who belong to what's known as the "open-source community" — close the loop between an insulin pump and a continuous glucose monitor. It creates a new system that connects the two separate devices, allowing them to talk to each other with the help of a transmitter, and deliver insulin to the body automatically. They call that "looping."

https://khn.org/news/diy-tech-gives-people-more-freedom-in-managing-diabetes/
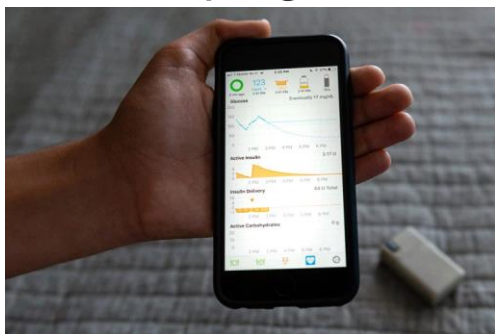
Technology can be very simple and still disrupt traditional care delivery
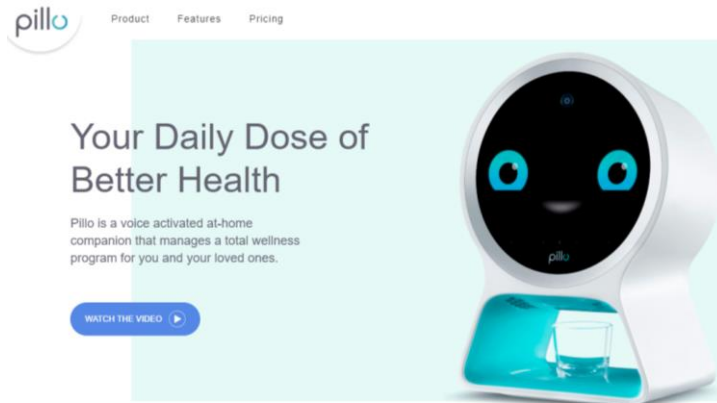
ConsumerReports

Priya by Prima-Temp, presented by CEO Dr. Lauren Costantini, was selected as one of eight winning presentations at the 2015 Colorado Digital Health Challenge.

Many women trying to conceive take their temperature at the same time every morning to predict their most fertile days. The Priya intravaginal ring is a continuous temperature sensor that automatically transfers information to the iOS Priya App and sends an alert to the user's cell phone when she is most fertile.

http://www.prima-temp.com/
http://www.consumerreports.org/cro/news/2015/01/bloom-cervical-ring-helps-women-pinpoint-their-most-fertile-days/index.htm

MGMA

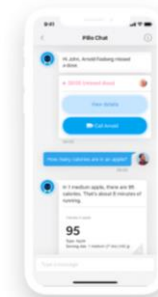# Technology can change how patients take their medications and obtain healthcare information

https://www.pillohealth.com/

MGMA

Artificial Intelligence is seen as the future of computing and medicine

A Glimpse of A.I.'s Future? MIT-IBM Research Lab Sees Early Progress

Jeff Engel
March 6th, 2019

@JeffEngelXcon   @xconomy   Like Us

The capabilities of artificial intelligence technologies have increased significantly in the past decade, but there's a growing sense that new breakthroughs are needed for the field to continue delivering on its promise.

David Cox and his colleagues have dedicated themselves to identifying and breaking down "the fundamental core barriers" to advancing A.I., he says. In February 2018, IBM (NYSE: IBM) hired Cox—then a Harvard University associate professor—to **direct its efforts in a new, joint A.I. research lab with MIT**. For its part, **IBM is investing $240 million over 10 years** into the "MIT-IBM Watson AI Lab."

https://xconomy.com/boston/2019/03/06/a-glimpse-of-a-i-s-future-mit-ibm-research-lab-sees-early-progress/?itx[idio]=6213266&ito=792&itq=1c4a417c-0ae3-45ef-817b-cc547768c456

MGMA

Artificial Intelligence (AI) will change how physicians care for patients and "do business"

Augmented clinical intelligence (a much more acceptable term for AI) allows a practice to leverage data found in images, vital signs, blood tests, biopsy results, medical histories, medication histories, physician notes, genomic profiles, epidemiological data, and even medical research papers to better:

- Diagnose (faster, more accurate, more accessible!)
- Predict outcomes (who's at most risk)
- Provide follow-up care (reducing readmissions and optimizing patient flow!)
- Tailor treatments to the needs of the patient
- **With better outcomes, more convenience, and at a lower cost**

MGMA.

AI has the opportunity to benefit both physicians and patients

DEEP MEDICINE
↓ Burnout
↑ Empathy, Human Touch, Care

Breakthrough

CLINICIANS
Improved Efficiency,
Productivity,
Accuracy, Workflow;
Keyboard-Liberated

PATIENTS
Generating Data
Algorithm-Supported
Co-Production of Care
Empowered
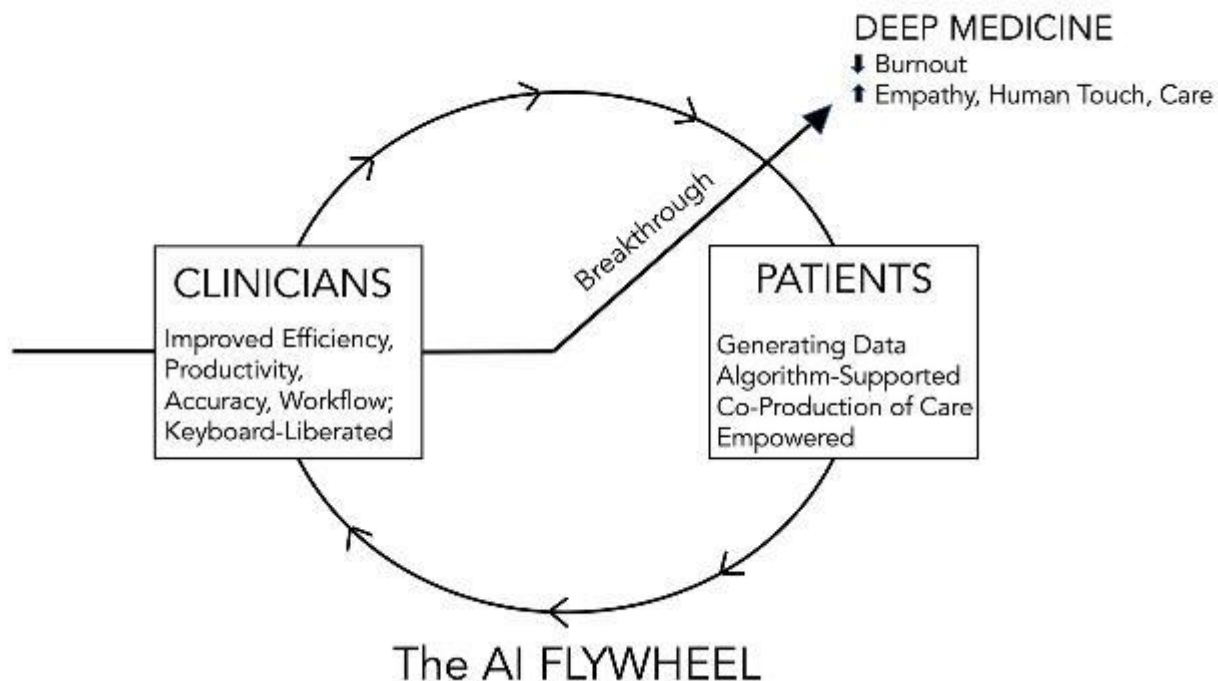
The AI FLYWHEEL

@EricTopol Feb 17 What I call—"The #AI Flywheel"—when both clinicians and patients are augmented, the chance to move from current fast and shallow medicine with the gift of time, restoring care and the mission of medicine.
https://twitter.com/EricTopol/status/1097171247467655169

MGMA

AI includes hardware as well as software solutions: The XPRIZE Tricorder

Detect health conditions:
- HIV Screen, Hypertension, Melanoma, Shingles and Strep Throat.

$10 MILLION

Prize Purse

The Qualcomm Tricorder XPRIZE was a $10 million global competition to incentivize the development of innovative technologies capable of accurately diagnosing a set of 13 medical conditions independent of a healthcare professional or facility, ability to continuously measure 5 vital signs, and have a positive consumer experience.

Accurately diagnose:
- Anemia, Atrial Fibrillation, Chronic Obstructive Pulmonary Disease, Diabetes, Leukocytosis, Pneumonia, Otitis Media, Sleep Apnea, Urinary Tract Infection, absence of conditions

https://tricorder.xprize.org/prizes/tricorder

MGMA

What a "real" Tricorder looks like

1. iPad Mini
2. DxtER Chest Sensor
3. DxtER Wrist Sensor
4. DxtER Orb
5. DxtER Blood Pressure Unit
6. DxtER Spirometer

1. Smartphone
2. Scope tests
3. Blood tests
4. Urine test
5. Breath test
6. Glucose test
7. Exam tray
8. Monitoring set
9. Calibration set
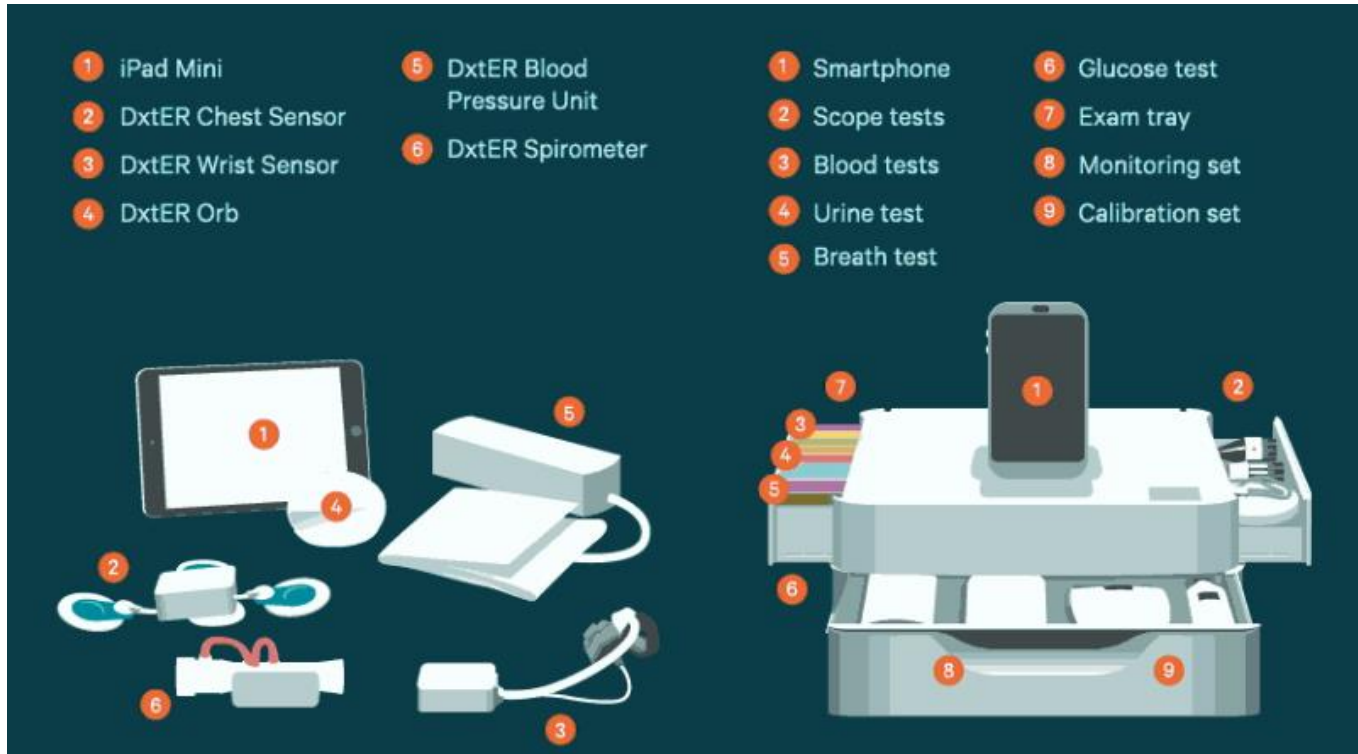
24th Century Star Fleet Tricorder used by Dr. Beverly Crusher in *Star Trek Nemesis*

MGMA

"Medical Device Manufacturers" include high technology companies

December 3, 2015

Google blood draw patent

"Such an application might be used to draw a small amount of blood, for example, for a glucose test"

FIG. 1A

http://www.theverge.com/2015/12/3/9846088/google-needle-free-blood-draw-patent
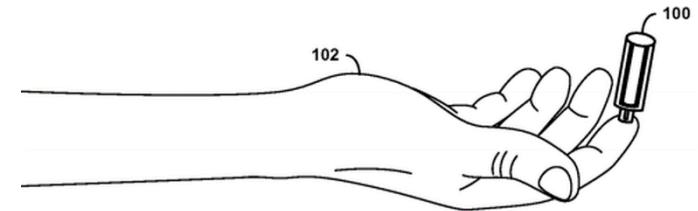
MGMA
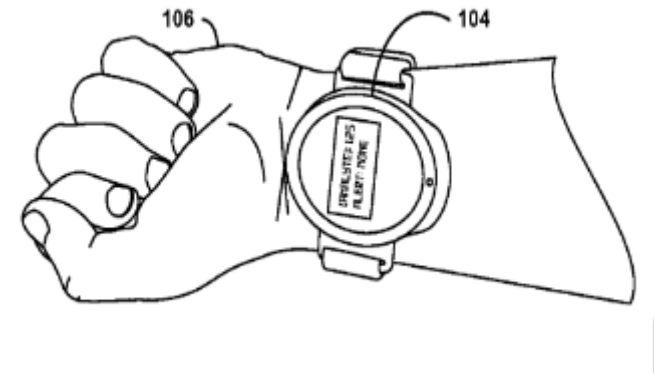
U.S. patents show where invention is occurring

Competing headlines tell a story

Bloomberg Markets | Markets Tech Pursuits Politics Opinion Businessweek

Artificial Pancreas Approved by FDA Marks a Global First

by **Anna Edney** and **Michelle Cortez**
September 28, 2016 11:59 AM *Updated on* September 28, 2016 4:47 PM

DexCom Drops After Medtronic Approval
The company makes a device that could be displaced

DexCom Inc ■ Close on 09/27 ---- 93.72

FDA announced Medtronic device
approval at about 1:12 p.m.

-6.175
-6.59%

87.545

10:00 11:00 12:00 13:00 14:00 15:00 16:00
28 Sep 2016

Source: Bloomberg   Bloomberg

Market Summary > DexCom, Inc.
NASDAQ: DXCM

118.03 USD +1.42 (1.22%) ↑
Closed: Apr 23, 4:29 PM EDT · Disclaimer
After hours 118.03 0.00 (0.00%)

https://www.bloomberg.com/news/articles/2016-09-28/artificial-pancreas-approved-by-fda-is-first-such-device-in-u-s

- 43 -

MGMA®

Learning Objective 2

Describe the advantages physician practices will have over larger healthcare institutions in the future healthcare delivery system

MGMA

The healthcare environment is complex

"Nobody knew health care could be so complicated."

Donald J. Trump

President, United States of America

MGMA

Disruptive technologies are often overlooked by market dominate businesses

Organizations who listen to their best customers and focus on products that promise greater profitability and growth rarely invest in disruptive technologies until it is too late.

Being simpler, cheaper, more reliable, and convenient does not necessarily translate to profitability
- Lower profit margins discourage mainstream business from adopting the technology
- The most profitable customers generally don't want, and initially may not use products based on disruptive technologies
- Disruptive technologies are often initially embraced by the least profitable customers in a market

MGMA

Why healthcare is susceptible to disruptive innovation

Factors that have historically discouraged disruptive innovation	Factors that will increase disruptive innovation in the future	Stakeholders influenced
Low price sensitivity, due in part to third party payment	Increasing price sensitivity due to higher patient cost sharing	Patients, Providers, Payers
Fee-for-service payment mechanism	Move to bundled payments and value-based payment	Providers, Payers
Provider profit incentives	Decline in physician private practice	Providers
Regulations which protect professional turf	Decreasing influence of professional societies	Providers
Lack of transparency	Increasingly transparent prices, quality and outcomes	Patients, Providers, Payers

The Coming Golden Age of Disruptive Innovation in Health Care, Zimlichman, and Levin-Scherz.
J Gen Intern Med, January 2013. 28(7):865–7

MGMA®

Which organizations are most vulnerable in a changing healthcare environment

Organizations with:
- Large investments in "brick and mortar" infrastructure
- Antiquated technologies
- High cost
- Low productivity
- Constrained by payment rules and regulation
- Tradition bound management
- Inflexible staff
- Financial emphasis on current profits
- No strategic plan
- Insular attitude
- Lack of patient focus

MGMA®

Advantages a physician practice has over a larger health system

- Low capital investment
- Direct patient involvement
- Access to outside capital
- Flexibility
- Quick decision making
- Reputation
- Staff loyalty
- Can serve "micro markets"
- Patient loyalty

MGMA

Learning Objective 3

Recommend strategies a physician practice can use to leverage these technologies to benefit itself and its patients

MGMA

Healthcare is changing, are you prepared for what lies ahead?

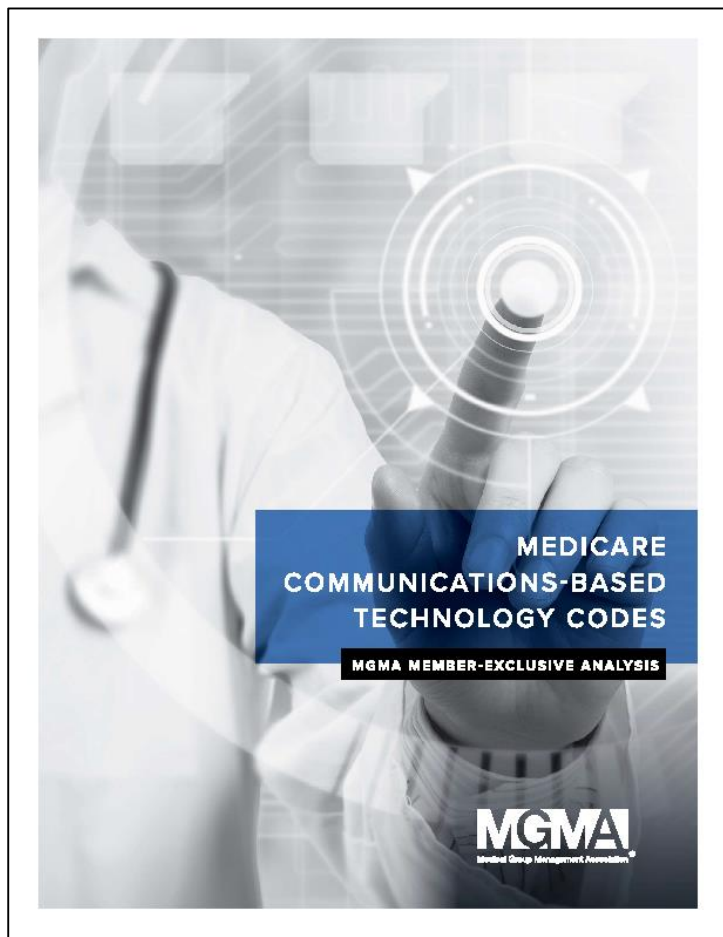*The future ain't what it used to be.*

Yogi Berra

Baseball Hall of Fame Player, Coach, and Manager

MGMA®

What is delaying adoption of technology

- Financial factors
  - Lack of reimbursement
  - Questionable return on investment
- Uncertainty about the technology and if it will work as promised
- Insufficient internal capital to fund purchase
- Reluctance by practice physicians to adopt new processes
- Concern if patients will use technology

MGMA

Getting paid for using technology

MEDICARE
COMMUNICATIONS-BASED
TECHNOLOGY CODES

MGMA MEMBER-EXCLUSIVE ANALYSIS

CONTENTS

https://www.mgma.com/resources/government-programs/medicare-communications-based-technology-codes

Technology Medicare billing codes

- **G2012: VIRTUAL CHECK-INS**
  - A remote communication service furnished to evaluate whether or not an in-office visit is necessary
  - Qualifying technology includes audio only (telephone) or two-way audio enhanced with video or other data transmissions
- **G2010 STORE AND FORWARD TECHNOLOGY**:
  - The remote evaluation of patient-submitted technology, such as a picture or video
- **99446, 99447, 99448, 99449, 99451: INTERPROFESSIONAL CONSULTATIONS**
  - Phone, internet, or EHR consultation furnished when a patient's treating physician requests the opinion or treatment advice of a consulting physician
- **99453, 99454, 99457: REMOTE PATIENT MONITORING**
  - Remote monitoring physiologic parameters (e.g. weight, blood pressure, pulse oximetry, respiratory flow rate)

MGMA®
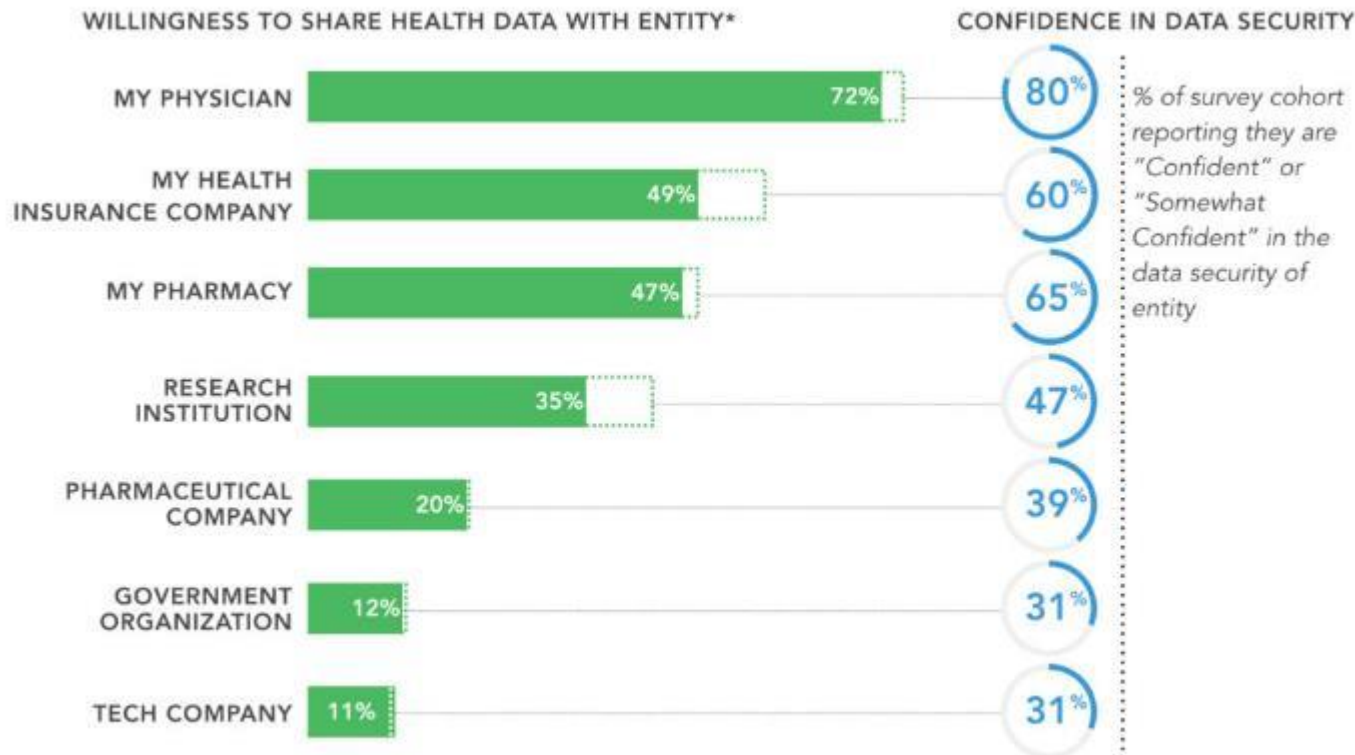
Many practices have already adopted new technologies
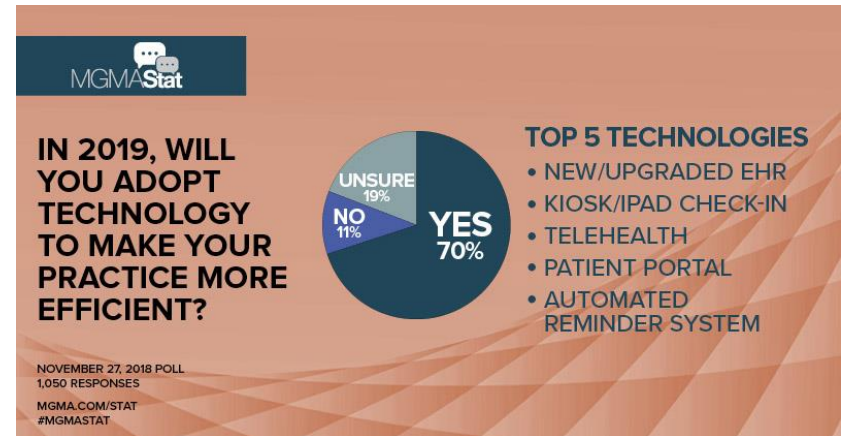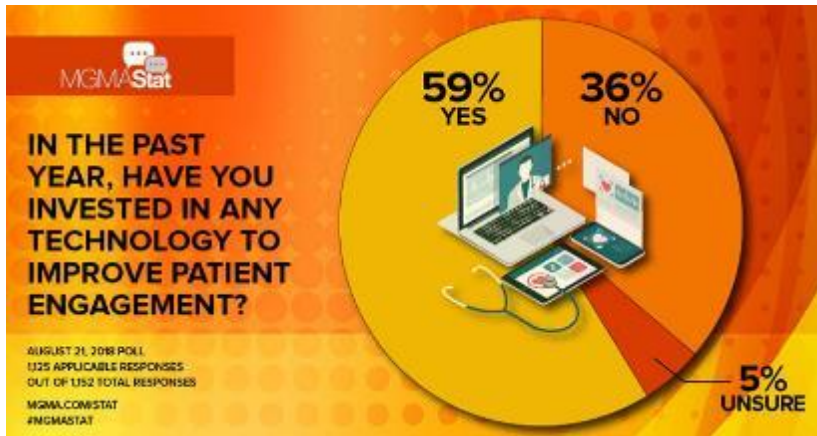
Patients are more willing to share data with their doctor than any other entity

CONSUMER SENTIMENT ON DATA SHARING AND SECURITY
By entity, 2017-2018

ROCK HEAL+H

WILLINGNESS TO SHARE HEALTH DATA WITH ENTITY*

CONFIDENCE IN DATA SECURITY

MY PHYSICIAN	72%	80%
MY HEALTH INSURANCE COMPANY	49%	60%
MY PHARMACY	47%	65%
RESEARCH INSTITUTION	35%	47%
PHARMACEUTICAL COMPANY	20%	39%
GOVERNMENT ORGANIZATION	12%	31%
TECH COMPANY	11%	31%

% of survey cohort reporting they are "Confident" or "Somewhat Confident" in the data security of entity
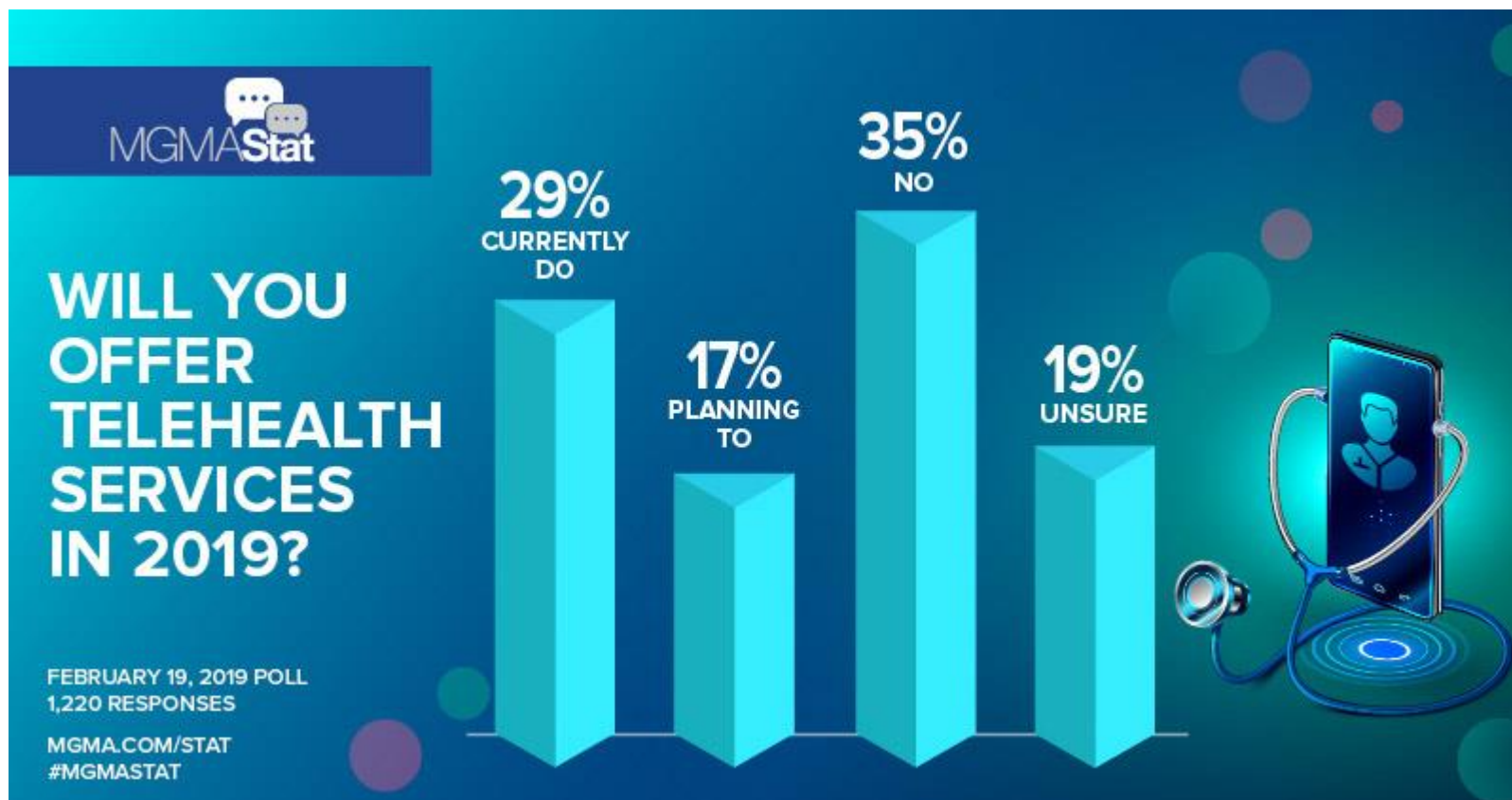
Note: *"Health data" includes medical records, genetic information, and physical activity data.
Dashed lines show 2017 responses.
Source: Rock Health Digital Health Consumer Adoption Survey (n₂₀₁₈ = 4,000; n₂₀₁₇ = 3,997; n₂₀₁₆ = 4,015; n₂₀₁₅ = 4,017)

https://rockhealth.com/reports/beyond-wellness-for-the-healthy-digital-health-consumer-adoption-2018/

MGMA

Do you offer telehealth?

https://www.mgma.com/data/data-stories/will-you-offer-telehealth-services-in-2019

MGMA

DNA sequencing is becoming a routine part of primary care

Geisinger Caring

Search

Leadership Our Pillars Diversity and Inclusion Environmental Impact News and Media Geisinger Health Foundation Community Connect

News Releases

Program is first to use the patient's DNA in routine healthcare to better treat or prevent disease

DANVILLE, Pa. – Geisinger President and Chief Executive Officer David T. Feinberg, M.D., MBA, today became the first patient to sign up for a new healthcare system DNA screening program that will become part of routine health checkups. The program, a first-of-its-kind in the nation, was announced by Dr. Feinberg ⧉ in May at the HLTH Conference in Las Vegas.

Under the program, patients will be routinely screened to see if they have any gene variations linked to certain diseases. This information will help doctors better treat or even prevent diseases in their patients.

"Understanding our genome's warning signals will become an essential part of

Geisinger President and CEO Dr. David T. Feinberg meets with Dr. Greg Burke to sign up as the first patient in the new clinical DNA sequencing program.

https://www.geisinger.org/about-geisinger/news-and-media/news-releases/2018/07/10/12/36/geisinger-ceo-david-t-feinberg-signs-up-as-1st-patient-in-new-clinical-dna-screen

MGMA®

Voice recognition has consumer and clinical applications

'Alexa, find me a doctor': Amazon Alexa adds new medical skills

PUBLISHED THU, APR 4 2019 • 9:00 AM EDT UPDATED THU, APR 4 2019 • 12:15 PM EDT

Christina Farr@CHRISSYFARR

KEY POINTS

• Amazon Alexa is now HIPAA compliant, meaning it can work with health developers that manage protected health information.

https://www.cnbc.com/2019/04/03/amazon-alexa-hipaa-compliant-adds-medical-skills.html

MGMA

Additive manufacturing customizes prosthesis and builds transplantable organs

Additive manufacturing (3-D printing)
- Scaffolding build of orthopedic prostheses to the exact dimensions of the patient
- Customized medical devices
- Builds human tissue and transplantable organs
- Enables integration of electronics and manufactured body parts and devices
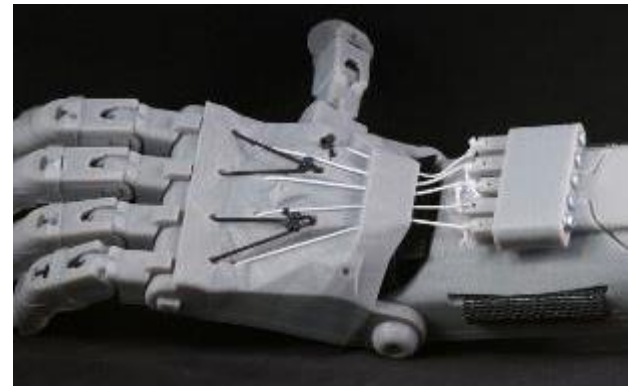
Additive manufacturing disrupts traditional industries

The e-NABLE Community
- open source 3D printable designs for hands and arms
- Uses 3D printing to build prosthetic devices for children at **no cost** To their families

http://enablingthefuture.org/

http://www.helpinghandproject.org/

https://3dprint.nih.gov/collections/prosthetics

MGMA®

Some technologies offer unique opportunities to improve patient care and benefit practice

Conformis Announces the first 3D Total Hip Replacement Surgeries performed at JFK Medical Center in Florida

SHARE f 𝕏 in

The most advanced, patient conforming hip replacement system designed to enhanc operational efficiency for the surgeon and improve patient outcomes

Billerica, Mass. – August 1, 2018 (GLOBE NEWSWIRE) – Conformis, Inc. (NASDAQ:CFMS), a medical technology company that offers patient conforming joint replacement implants, today announced completion of the first two

https://www.conformis.com/

MGMA

Future opportunities for physicians are endless

engadget

Scientists print first 3D heart using a patient's own cells

It has working cells, blood vessels, ventricles and chambers.

AJ Dellinger, @ajdell
04.15.19 in Medicine

https://www.engadget.com/2019/04/15/tel-aviv-university-3d-printed-heart/?itx[idio]=6213266&ito=792&itq=8fa726c8-91a3-47f1-95a4-9e628532c424

MGMA

Practice strategies for adopting technology

- Have a strategic plan that addresses how technology will benefit the practice in the future
- Understand the full capabilities of your current technologies
- Assess new technologies in the context of improving patient experience or reducing cost
- Evaluate if a technology can be used to market the practice or benefit patients even if it is not reimbursed by insurers
- Recognize that some technologies are favored by some patients and avoided by others
- Study early adopters to identify common mistakes and pitfalls to avoid
- Obtain full buy-in of providers and staff before adoption
- Educate patients how the technology will benefit their convenience or care
- Recognize that change is difficult and takes much longer than planned
- Don't be too early or too late to adopt technologies

MGMA®

Elements for future success

- Be aware of innovations in and out of healthcare
- Don't be constrained by payment rules
- A sound infrastructure is critical
- Enforce data standardization across your organization
- Choose the right partners
- Get the right data tools
- Have a strategic plan that recognizes change
- Patient engagement is critical
- Transformation is hard and slow
- Timing is everything, don't be too early or too late to adopt new technologies

MGMA

Healthcare will never be the same again

Will you adopt or become obsolete?

Paul Fürst, Der Doctor Schnabel von Rom

Last thoughts

It is not the strongest of the species that survive, nor the most intelligent, but the one most responsive to change.

Charles Darwin

We are confronted with insurmountable opportunities.

Pogo
Opossum, philosopher, and Okefenokee Swamp resident
Walt Kelly
Cartoonist

Change is inevitable—except from a vending machine.

Robert C. Gallagher
Sportswriter

MGMA

Are there any questions?

David N. Gans, MSHA, FACMPE
Senior Fellow, Industry Affairs
Medical Group Management Association
877.275.6462 X 1270
dgans@mgma.com

MGMA®

About MGMA

- The Medical Group Management Association (MGMA) equips practice administrators and executives with the knowledge and tools to lead high-performance physician group practices in a complex and evolving healthcare environment. As the leading association for practice administrators for nearly 90 years, MGMA provides the education, advocacy, data and resources that healthcare organizations need to deliver the highest-quality patient care. MGMA also produces the most credible medical practice economic data in the industry and provides industry-leading board certification and Fellowship programs through the American College of Medical Practice Executives (ACMPE).

- MGMA and its 50 state affiliates comprise more than 33,000 administrators and executives in 18,000 healthcare organizations in which 385,000 physicians practice. MGMA represents physician groups of all sizes, types, structures and specialties, and has members in every major healthcare system in the nation. MGMA is headquartered in Englewood, Colo., with a Government Affairs office in Washington, D.C.

David Gans, MSHA, FACMPE

Mr. Gans is a national authority on medical practice operations, patient safety, quality, payment methodologies, and health systems organization. He advises the Medical Group Management Association staff and members on all areas of medical group practice, sharing expertise through personal communications, workgroups, presentations, webinars, member community postings, and journal articles.

Mr. Gans received his Bachelor of Arts degree in Government from the University of Notre Dame, a Masters of Science degree in Education from the University of Southern California, and a Master of Science in Health Administration degree from the University of Colorado. Mr. Gans retired from the United States Army Medical Service Corps in the grade of Colonel, U.S. Army Reserve, is a Certified Medical Practice Executive and a Fellow in the American College of Medical Practice Executives.

Address: MGMA, 104 Inverness Terrace East, Englewood, CO 80112
Phone: (303) 799-1111, ext. 1270
E-mail: dgans@mgma.com

MGMA®