



**IDAHO** Department of  
Health and Welfare

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**Idaho Hospital Association**

**Director Dave Jeppesen  
Idaho Department of Health and Welfare**

**June 27, 2019**





## **Our Mission**

**Promote and protect the health  
and safety of all Idahoans.**



## Strategic Goals

**Goal 1:** Ensure affordable, available healthcare that works

**Goal 2:** Protect children, youth, and vulnerable adults

**Goal 3:** Help Idahoans become as healthy & self-sufficient as possible

**Goal 4:** Strengthen the public's trust and confidence in the Department of Health and Welfare.



## Focus for today

**Goal 1:** Ensure affordable, available healthcare that works

**Goal 2:** Protect children, youth, and vulnerable adults

**Goal 3:** Help Idahoans become as healthy & self-sufficient as possible

**Goal 4:** Strengthen the public's trust and confidence in the Department of Health and Welfare.



## PEST analysis framework

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**P**OLITICAL

**E**CONOMIC

**S**Ocial-CULTURAL

**T**ECHNOLOGY & **I**NNOVATION



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**P**OLITICAL



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## Social Security (SS), Medicare face long-term financing shortfalls



- Together account for 45% of federal spending
- Over next 10 years, SS and Medicare benefit shortfalls account for 90% of rising deficit
- SS to exceed income in 2020;
  - \$3T trust fund to be depleted by 2035
  - Medicare’s hospital fund by 2026
- The combined cost of SS, Medicare estimated to rise to 11.6% of GDP by 2035

*Trustees of Social Security and Medicare, Apr 2019*

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### **WSJ: Social Security costs to Exceed income in 2020, Trustees Say The Trust Fund to be Depleted by 2035, They Add, Apr 22, 2019**

The new projection, released Monday by the trustees of Social Security and Medicare, is rosier than one made in their 2018 annual report, which anticipated the program would run in the red by the end of last year.

The **improved forecast stems in part from the health of the labor market**, which has boosted workers’ paychecks and fueled higher tax revenue. But the programs’ unsustainable long-term outlook is little changed from last year.

More broadly, **rising Social Security and Medicare costs are also expected to weigh on the federal budget**. Both programs together account for 45% of federal spending, excluding interest payments on the national debt, and have **contributed to higher deficits that are set to exceed \$1 trillion a year starting in 2020**.

**Social Security consists of two programs**, one for retirees and one for people who claim disability benefits. Last year, **52.7 million people received Social**

**Security retirement and survivor benefits, 10.2 million received disability benefits and 59.9 million were covered under Medicare.**

- By 2035, SS will no longer be able to pay its full scheduled benefits,  $\frac{3}{4}$  instead
- Rising SS and Medicare costs expected to weigh on fed budget as both = 45% of fed spending
- Experts estimate in 10 years, SS + Medicare to = 90% of deficit

**Modern HC, Apr 22, 2019**

- Medicare costs expected to growth to 5.9% of GDP by 2038 (3.7% in 2018), increase gradually to 6.5% when all boomers retire
- Medicare's Federal Hosp Insurance Trust Fund (covers Part A) will run out by 2026 due to lower payroll tax revenue + reduced income from taxing SS benefits
- Costs expected to soar as baby boomers retire



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## Implications:

CMS making payment and delivery reform a key initiative as Medicare (and Medicaid) face uncertain future.

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**MedCityNews: CMS's Primary Cares initiative means providers and tech must collaborate, May 29, 2019**

*Eliminating the dependence on billable codes supports innovation in care delivery, but to better mitigate the financial risk, providers and technology suppliers must work better together to target, streamline, and monitor communications.*

Recently, the Centers for Medicare & Medicaid Services announced a **new primary care payment paradigm**—which could be a critical **stepping stone to flip the traditional fee-for-service model on its head and increase the prominence of primary care**. The demonstration, which CMS is calling the **Primary Cares Initiative**, represents a **push to improve the value of care delivered by investing in flexible payment models** for primary care.

Traditional **primary care clinics as well as emerging primary care practices such as retail clinics** run by Walmart and CVS, for example, or other clinics run by health plans or large employers **would be eligible to participate**. In order for providers to successfully compete under these new models and manage new levels

of financial risk, **they must partner** with technology companies to find solutions to manage gaps in outreach, attribution, and preventive care with streamlined, cost-effective technology solutions.

**CMS to launch new direct-contracting pay models in 2020, Modern HC, Apr 22, 2019**

HHS on Monday launched an ambitious, **double-pronged strategy** to shift primary care from fee-for-service payments to a **global fee model where clinicians and hospitals could assume varying amounts of risk.**

HHS Secretary Alex Azar told a crowd of stakeholders at the AMA in Washington **CMS projects the new voluntary programs will shift at least a 1/4 of people in traditional Medicare out of FFS.**

The **first model aims at small primary-care practices**, offering **two options with a flat monthly fee per patient. Bonuses or penalties will depend ability to keep their patients "healthy and at home,"** said Adam Boehler, dir. of the CMS' Center for Medicare and Medicaid Innovation, or CMMI.

There is also a **"geographic option," in which health systems or insurance plans could assume the risk for the total cost of primary care for a swath of communities within a particular region.** Most of the newly announced Innovation Center models **launch in January 2020. The geographic option to begin in mid-2020.**

The administration officials painted the models as a sweeping overhaul of the FFS model, even though the model is voluntary. **Verma said the CMS hopes to incorporate state Medicaid programs** as the policy rolls out across the country.

**MedCity News: CMS opening up options for states to better manage dual-eligible patients, Apr 26, 2019**

**According to data from CMS, while dual-eligible patients make up only 15 percent of Medicaid enrollees, they are responsible for 33 percent of the program's expenditures.**

The CMS is looking to **partner with states to determine better models to treat the 12M dual-eligible Medicaid and Medicare** beneficiaries in the country.

**CMS and states spend more than \$300B annually on this patient population, many of whom suffer from multiple chronic conditions made more difficult to treat by social and economic barriers.**

The **goal** from the agency is to **promote new models which can better integrate Medicare and Medicaid services and create a more seamless experience** for both beneficiaries and providers working across the two programs.

One **major goal** is to allow **states to share in savings and benefits** gained from investment in better care for the dual-eligible population.

In a letter **addressed to state Medicaid leaders**, Verma laid out a **few potential payment approaches to address the issue of dual eligible patients**, including a **capitated payment model** which would **provide the full array of Medicare and Medicaid services with a set dollar reimbursement amount**.

**9 states are currently piloting the model**, which creates a **three-way contract between the state, CMS and Medicare-Medicaid Plans**. So far, **CMS said state savings for states have averaged 4.4%** in these test markets.

**CMS has made payment delivery reform a key initiative**, with the **ultimate goal of moving towards a outcomes-based payment system** and reducing expenditures as Medicare faces an uncertain future.

A few recent initiatives include the launch of the agency's **Primary Cares Model**, as well as the recent expansion of supplementary benefits for MA beneficiaries meant to tackle social determinants of health.

### **Medicare population budget model could spur major pay shift, Modern HC Apr 23, 2019**

The CMS Center for Medicare and Medicaid Innovation's planned push for a **regional population-based budget in traditional fee-for-service Medicare** could launch a **major transformation** in curbing sprawling healthcare costs for the program.

On **Monday they opened the public comment period for five primary-care pay demonstrations**. Their "population-based payment" demonstration—in which a **health system, insurance plan or even a health technology company would bear full**

**risk for at least 75,000 fee-for-service Medicare patients within a targeted geographic region**—raised the most eyebrows. With many details yet to be filled in, it has also raised a lot of hope.

For John Feore, associate principal at the consulting firm Avalere, the **model could spur more widespread adoption of something like the Maryland global budget system**. Feore also said **Medicare Advantage plans could see the prospect as "welcome news," representing a chance to expand** their business.

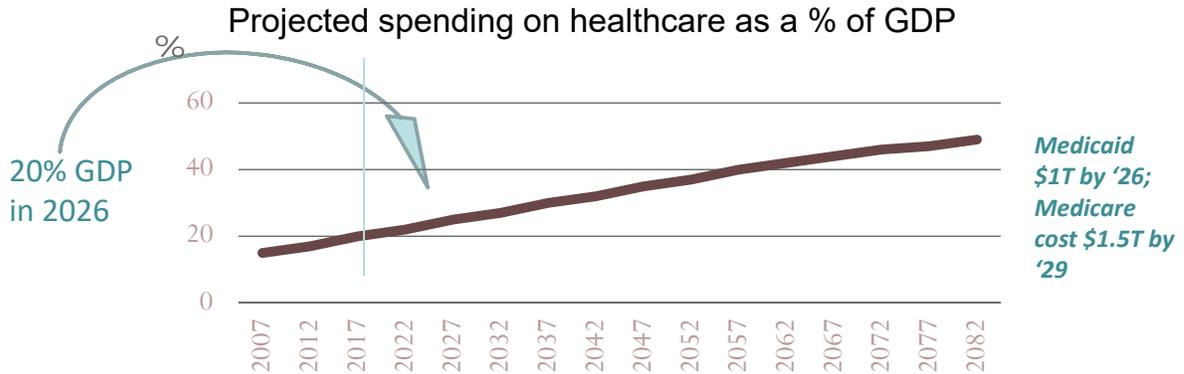


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**E**CONOMIC



**Health spending unsustainable: \$5.7T by 2026**



CMS -- health spending will reach \$5.7 trillion by 2026 as a result of fundamental economic factors such as rising incomes and an aging population

**NYT, Feb 23, 2019 CBO estimates Medicare spending to growth under current law to \$1.5T in 2029**

- 2017 US HC spend topped \$3.5T (17.9% of GDP)
- ~133M US citizens have 1 chronic illness
- 1/3 of all hc spend is driven by hospital care
- Chronic illness tied to 80% of hospital admits
- CBO est Medicare spending to grow under current law to \$1.5T in 2029 (double the projected total for 2019)

**CQ News, Health Spending Projected to Rise More Sharply as Americans Age, Feb. 14, 2018 –**

CMS estimated health spending will reach \$5.7T by 2026 due to fundamental economic factors such as rising incomes and an aging population. Overall, spending on health care will account for 19.7% of the GDP by 2026, with local, state and federal govts paying for nearly 50% of the total. Spending will outpace GDP by 1 percentage point during that timeframe. Health spending made up 17.9% of GDP in 2016. The numbers from CMS mirror a separate analysis released Tuesday, 2/13/18 by Altarum

**Medpage Today, D.C. Week: How Do You Solve A Problem Like Idaho? ; Feb 17, 2018 --**

National health spending grew by an estimated 4.6% in 2017, to \$3.5 trillion, up slightly from a 4.3% increase in the growth rate in 2016, officials from the Centers for Medicare & Medicaid Services (CMS) said Wednesday.

**Source: WSJ, 3.28.18 Why Are States so Strapped for Cash? There Are Two Big Reasons –**

Federal actuaries predict Medicaid annual cost = \$595B in '17, to exceed \$1T by 2026. States and

many localities pay about 38% of tab. Nearly 70M (~1/5) Americans depend on Medicaid

**Fierce Healthcare CBO: Medicare spending expected to reach \$1.2T in the next decade, Apr 17, 2018** -- Starting next year, annual Medicare spending is expected to grow by an average of 7% over the next decade, exceeding \$1.2 trillion by 2028 accdg to CBO. That 7% annual growth will be driven primarily by higher per-beneficiary medical costs, along with increasing enrollment

2017 = \$3.5T (+4.6% to PY, 17.8% of GDP, admin costs alone count for 8% of GDP)

**PwC Medical Cost Trend: Behind the numbers 2019, published June 2018** National health spending has grown from an avg of under 6% of GDP in the 1960s to a projected avg of nearly 18% for decade ending 2020. CMS estimate that this growth will continue, with national health spending projected to be 20% of the economy by 2026

## E Economic burden of chronic disease expected to grow



- **Dementia** tops \$1T by 2050; \$290B in 2019
- 5.8M living with Alzheimer's; rising to ~14M by 2050
- Alzheimer's is the 6<sup>th</sup> leading cause of death in U.S.



- **Obesity** cost the U.S. \$1.72T (\$481B in health care costs)
- 40% of adults & ~20% of children are obese (2016)
- Obesity rates increase for less educated, rural, low income



- **Diabetes** treatment cost \$327B (\$237B medical cost) in 2015
- 30M had diabetes; 84.1M had pre-diabetes in 2015
- Diabetes is 7<sup>th</sup> leading cause of death in U.S.



- **Heart Disease** costs the US \$200B (care costs, meds, lost productivity)
- 47% of all Americans have 1 of 3 risk factors
- Heart disease is leading cause of U.S. deaths (630K)

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### Alzheimers.org, 2019 Quick Facts and Figures

By 2019, Alzheimers cost \$290B, by 2050 \$1.1T; 5.8m living with Alz today, rising to ~14M by 2050; Alz is 6<sup>th</sup> leading cause of death

### Alzheimers blog: The Cost of Dementia care in 2018, Aug 13, 2018

C.A.R.E. report facts and figures: the total lifetime cost of care for someone with dementia is \$341,840; 41% of dementia caregivers have HH income of \$50K or less

### Washington Post: Obesity epidemic costs U.S. economy \$1.72 trillion, Oct 30, 2018

The **obesity epidemic in the U.S. has cost the U.S. economy \$1.72T**, which includes hundreds of billions of dollars in health care costs and more than a trillion dollars in lost productivity, according to a report published Tuesday by the Milken Institute, a California-based economic think tank. The report, titled "*America's Obesity Crisis: The Health and Economic Impact of Excess Weight*," draws on an analysis of data from federal health institutions, the U.S. Agency for Healthcare Research and Quality, and the BLS.

**Americans spent approximately \$480.7B in direct health care costs in 2016 on conditions related to risk factors of obesity and overweight, the authors wrote. Lost economic productivity was calculated at \$1.24T.** Almost 40% of U.S. adults have obesity, defined by the World Health Organization as a body mass index of 30 or higher.

**American Diabetes Association: in 2015, 30.3M Americans, or 9.4% of the population, had diabetes; New Cases: 1.5 million Americans are diagnosed with diabetes every year.**

Prediabetes: In 2015, **84.1 million Americans age 18 and older had prediabetes. Diabetes was the seventh leading cause of death in the United States in 2015** based on the 79,535 death certificates in which diabetes was listed as the underlying cause of death. In 2015, diabetes was mentioned as a cause of death in a total of 252,806 certificates.

**Cost of Diabetes: Updated March 22, 2018 -- \$327B:** Total costs of diagnosed diabetes in the United States in 2017, \$237B for direct medical costs, \$90B in reduced productivity

**CDC: Heart Disease in the United States -- About 630,000 Americans die from heart disease each year—that's 1 in every 4 deaths.<sup>1</sup> Heart disease is the leading cause of death for both men and women. More than half of the deaths due to heart disease in 2009 were in men.<sup>1</sup> High blood pressure, high cholesterol, and smoking are key risk factors for heart disease. About half of Americans (47%) have at least one of these three risk factors.<sup>7</sup> In the United States, someone has a heart attack every 40 seconds. Heart disease costs the United States about \$200 billion each year.<sup>1</sup> This total includes the cost of health care services, medications, and lost productivity.**

**CDC: Adult Obesity Facts:** 39.8% of US adults are obese (2015-16) or 93.3M; the annual medical cost of obesity in US is \$147B in 2008 US dollars. Medical cost for obese is \$1429 higher than non-obese

**aafp: New Report Shows U.S. Obesity Epidemic Continues to Worsen, Oct 15, 2018: Nationally, 39.6 percent of adults and 18.5 percent of children were considered obese in 2015-2016, the most recent period for which NHANES data were available.** These figures represent the highest percentages ever documented. **Seven states (Alabama, Arkansas, Iowa, Louisiana, Mississippi, Oklahoma and West Virginia) had adult obesity rates of 35 percent or higher,** led by West Virginia at 38.1%. In 48 states, the adult obesity prevalence was more than 25%. The lowest adult obesity rates were in Colorado (22.6%), the District of Columbia

(23.0%) and Hawaii (23.8%).

Social Determinants play a role: Education: BRFSS data for 2016 showed that 22.2% of adult college graduates had obesity, compared with **35.5% of adults with less than a high school education.**

Rural vs. urban: The same 2016 BRFSS data showed that **28.7% of adults living in urban or metropolitan areas had obesity, compared with 34.2%** of adults living in rural areas.

Income level: According to NHANES data for 2011-14, **29.7% of adults with incomes at >=400% of FPL had obesity, compared with 42.6% of adults with incomes between 100% and 400% of FPL.**

Many of these socioeconomic factors also affected childhood obesity rates.

**State of Obesity.org, Sep 2018**: According to the most recent Behavioral Risk Factor Surveillance System (BRFSS) data, adult obesity rates now exceed 35% in seven states, 30% in 29 states and 25% in 48 states. West Virginia has the highest adult obesity rate at 38.1% and Colorado has the lowest at 22.6%. The adult obesity rate increased in Iowa, Massachusetts, Ohio, Oklahoma, Rhode Island and South Carolina between 2016 and 2017, and remained stable in the rest of states. Idaho adult obesity rate at 29.8% and growing, ranked 32<sup>nd</sup> of the 50 states.

### **Deloitte, The Future Awakens, Life Sciences and Health Care Predictions 2022**

- In 2018, global cost of dementia tops \$1T (every 3 seconds someone develops dementia, ~50M people worldwide live with dementia)
- In 2014, obesity cost \$2T (2.8%) of global GDP; by 2025, 1.17B adults will be affected by obesity
- The # of people with diabetes globally is 415M, which is expected to rise to 642M by 2040. The cost of treating diabetes globally is over \$673B/year
- The % of communicable diseases is projected to decline from 22.5% in 2015 to 17.1% in 2030 while % of non-communicable diseases may increase from 68.4% to 73.9% during same time period

### **Why Is the USA Only the 35th Healthiest Country in the World? Apr 15, 2019 By ETIENNE DEFFARGES**

**The two leading causes of U.S. deaths are heart diseases (614,000 in 2017) and cancer (592,000). Respiratory diseases come next (147,000), with strokes representing 133,000 deaths. This is fairly typical among developed nations,**

although **our rate of heart diseases is much higher than average**—caused by the diet issues



**Rising demand for long-term care signals looming crisis**



- ~69% of Americans will require LT care services
- ~13% of adults pay out-of-pocket for care
- Medicaid paid > \$63B for in-home health services in 2017
- Nearly 710K people in 40 states on waiting list to receive Medicaid long-term care
- Only 10% of older adults have long-term care insurance (down 83% since 2002)

Kaiser Family Foundation

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**Modern HC: MH: Rising demand for long-term home care signals looming crisis, Jun 3, 2019**

Experts say the **rising costs and demand for home healthcare services will make it less affordable for many older adults to pay** for the services long term. **An estimated 69% of Americans will require long-term care services at some point in their lives for an average of about three years, according to HHS.** Long-term home healthcare services are not traditionally paid for by private medical insurance. That **often forces individuals to either pay out-of-pocket for the support, receive care from an unpaid family caregiver, or purchase separate long-term care insurance.** Approximately **13% of adults pay for their care out-of-pocket**, which will become more difficult to sustain due to the financial burden, according to a *new study Johnson co-authored that was published Monday in Health Affairs.*

**Many individuals end up using Medicaid to pay for their LT home healthcare services. The program paid more than \$63B in home health and personal care services in fiscal 2017, according to the Kaiser Family Foundation. But the level of home healthcare coverage offered under Medicaid varies by state and the demand is high, which has led to long waiting lists. In 2017, more than 707,000**

*people in 40 states were on the waiting list to receive Medicaid home health and community-based care, an 8% increase over 2016, according to the Kaiser Family Foundation.*

In the past **retirement advisers have recommended individuals purchase separate long-term care insurance plans. But only 1 in 10 older adults have such coverage as the market for private long-term care insurance has been steadily shrinking**, with the number of *policies sold falling by 83% between 2002 and 2014, according to the Urban Institute.*

Johnson said the **growing elderly population coupled with rising shortages within the home healthcare workforce means higher demands for long-term home healthcare services** that will be unmet.

What to do about the **impending crisis has led to debates among policymakers over whether the financing of long-term care should be a public right like Social Security or a private responsibility.** While efforts by the federal government to come up with a solution have stalled, there are signs of progress among states. In May, **Washington became the first state in the country to establish a program that will help individuals offset the costs of long-term care beginning in 2025.**

### **MH: House committee eyes expanding Medigap long-term care benefit, Jun 3, 2019**

Rep. Richard Neal (D-Mass.) on Monday **asked the head of the National Association of Insurance Commissioners for specific ideas about how Congress could design a long-term care benefit for supplemental Medicare plans known as Medigap.**

In his letter, **Neal noted that some states have used Medigap for long-term care coverage, and asked Cioppa to give specifics for how a federal policy could work without causing adverse selection.** He is seeking **recommendations on lifetime and daily caps for Medigap enrollees, waiting periods, and other ways to keep the plans affordable while also guaranteeing robust coverage.**

**Last month, Washington Gov. Jay Inslee, a Democrat, signed a law to help subsidize long-term care. The program is slated to start in 2025 and adds a payroll tax to fund a per-person benefit for those who pay into it. The benefit has a lifetime cap of \$36,500 per person.**

**Nationally about one-quarter of people in Medicare purchase Medigap, according to the Kaiser Family Foundation.** But only four states require either continuous coverage or guaranteed issue for people in traditional Medicare. Medigap plans in other states can technically deny applicants who have chronic disease or pre-existing conditions.



**E** While Baby Boomers first to enjoy ‘100 year life’, many face financial insecurity ...

- 67% will have 3 or more chronic conditions
- 60% will have mobility limitations
- 50% of Medicare beneficiaries had income \$26,200
- Only 19% could afford housing, health care

54% could not cover \$60K for assisted-living rent even if they sold their home

NORC at the University of Chicago and funded by the National Investment Center for Seniors Housing & Care; BLS.<sup>13</sup>

**Deloitte: The Future Awakens, Life Sciences and HC Predictions: 2022, Nov 2017**

By 2020, the over 65’s will # 604M or 11% of global population  
Life expectancy continues to climb to 74.4 years (up from 73.5 in 2018)

**Modern Healthcare: More middle income seniors face financial insecurity, Apr 24, 2019: Most middle-income seniors over the age of 75 will not be able to afford housing and healthcare come 2029, new research shows.**

The often-overlooked demographic is **estimated to nearly double in size to 14.4 million people in a decade, 54% of whom could not cover \$60,000 for assisted-living rent and other out-of-pocket medical costs** even if they sold their home and committed all their annual income, *according to a new study conducted by NORC at the University of Chicago and funded by the National Investment Center for Seniors Housing & Care.*

**Only 19% of the middle-income segment is projected to have the financial resources to afford housing and healthcare in 2029** if they don't sell their home.

The **cost to care for a diabetic, for instance, is more than double that of a healthy person's care.** The total **cost of diagnosed diabetes in the U.S. rose from \$245 billion in 2012 to \$327 billion in 2017,** according to the *American Diabetes Association.*

The **NORC study projects that by 2029, 67% of U.S. middle-income seniors will have three or more chronic conditions, 60% will have mobility limitations and 8% will have cognitive impairment.** For middle-income seniors age 85 and older, the prevalence of cognitive impairment nearly doubles.

The **"middle market" is becoming more racially diverse**, has studied more and earns more, according to the study. **Women will make up 58%** of seniors 75 years or older in 2029 compared with 56% in 2014.

How to **most effectively care for the rapidly aging population continues to shape the industry.** The **post-acute sector** is consolidating as **providers and payers look to best direct and deliver care after a hospital stay.** **Private equity investment is rising** as investors aim to reduce operating costs and improve productivity. More **value-based payments targeting that demographic are emerging.**

These **trends are driving policy discussions, many of which are focused on lower-income individuals.** One includes **directing HHS to explore regulatory reforms that would enable states to design benefit packages to consumers at home and in community-based settings.** The *Partnership for Medicaid Home-Based Care is assessing how cost savings that stem from these reforms could be used to expand access to community housing,* said Dave Totaro, chief government affairs officer at Bayada Home Health Care and chair of the partnership.

As the payer of last resort, Medicaid picks up the cost of nursing-home care when seniors and those with disabilities can't afford to stay at home, he said. "Our **current payment system makes nursing homes the 'default' option** for those looking for long-term care," Totaro said. However, **Medicaid is starting to cover long-term services and supports in home and community-based settings,** the study noted.

**Bloomberg – America’s Elderly Are Twice as Likely to Work Now Than in 1985, Twenty percent of those age 65 and up haven’t retired. Many can’t afford to. Apr 22, 2019**

The **typical worker in the bottom 50% of the income distribution, earning less than \$40K a year, has no retirement savings.** Those in the middle 40% of income distribution, earning from \$40K to \$115K, have a median amount of \$60K saved, according to Ghilarducci's research.

**Workers in the top 10% of income distribution making more than \$115K, meanwhile, have a median amount of \$200K saved.** They, too, are **woefully under-saved**, although it's worth noting that *these calculations don't include real estate and other tangible assets, or the chance of an inheritance.*

**Bloomberg – America’s Elderly Are Twice as Likely to Work Now Than in 1985; Twenty percent of those age 65 and up haven’t retired. Many can’t afford to. Apr 22, 2019**

Retirees have undersaved.

Just as single-income families began to vanish in the last century, many of America's **elderly are now forgoing retirement for the same reason: They don't have enough money. Rickety social safety nets, inadequate retirement savings plans and sky high health-care costs** are all conspiring to make the concept of leaving the workforce something to be more feared than desired.

The *BLS expects* the big wave of aging baby boomers **to represent the strongest growth in the labor force participation rate through at least 2024.** "By 2024, **baby boomers will have reached ages 60 to 78,**" a BLS report noted. "And some of them are expected to continue working even after they qualify for Social Security benefits."

The **retirement math is ugly**, even for those who are seemingly well-off. Teresa Ghilarducci, an economics professor at the New School for Social Research, has **estimated that Social Security replaces about 40 percent to 50 percent of one's pre-retirement income.** The general thinking is that **people need around 80 percent of pre-retirement income to get by after they stop working**



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## Implications:

A population that is living longer with more chronic conditions is drive up cost of care

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**Modern HC: MH: Rising demand for long-term home care signals looming crisis, Jun 3, 2019**

Many individuals end up using Medicaid to pay for their LT home healthcare services. The program paid more than \$63B in home health and personal care services in fiscal 2017, according to the *Kaiser Family Foundation*. But the level of home healthcare coverage offered under Medicaid varies by state and the demand is high, which has led to long waiting lists. In 2017, *more than 707,000 people in 40 states were on the waiting list to receive Medicaid home health and community-based care, an 8% increase over 2016, according to the Kaiser Family Foundation.*

In the past **retirement advisers have recommended individuals purchase separate long-term care insurance plans. But only 1 in 10 older adults have such coverage as the market for private long-term care insurance has been steadily shrinking, with the number of policies sold falling by 83% between 2002 and 2014, according to the Urban Institute.**

Johnson said the **growing elderly population coupled with rising shortages**

**within the home healthcare workforce means higher demands for long-term home healthcare services** that will be unmet.

What to do about the **impending crisis has led to debates among policymakers over whether the financing of long-term care should be a public right like Social Security or a private responsibility.** While efforts by the federal government to come up with a solution have stalled, there are signs of progress among states. In May, **Washington became the first state in the country to establish a program that will help individuals offset the costs of long-term care beginning in 2025.**

**Modern HC: Employer health plans pay hospitals 241% of Medicare, May 9, 2019**

**Private employer-sponsored health plans paid hospitals 241% of Medicare prices,** on average, for the same services at the same hospitals in 2017, according to a RAND Health study of prices across 25 states.

That **average price relative to Medicare has increased** since 2015 when it was 236%. The study also found that relative prices in 2017 for outpatient care far exceeded prices for inpatient services.

And while prices paid by employer health plans—which is how most Americans get their health coverage—**increased gradually as a whole, prices varied widely by state and hospital system.** Hospital systems' prices for employer plans ranged from 150% of Medicare to more than 400%, according to the study.

**Consolidation among hospitals across the nation has helped boost their ability to negotiate higher prices from health plans,** studies have shown. If employers and health plans participating in the study paid hospitals Medicare rates, **they would have paid \$7 billion, or about 50%, less** over the study period, researchers concluded.



**IDAHO**

Department of  
Health and Welfare

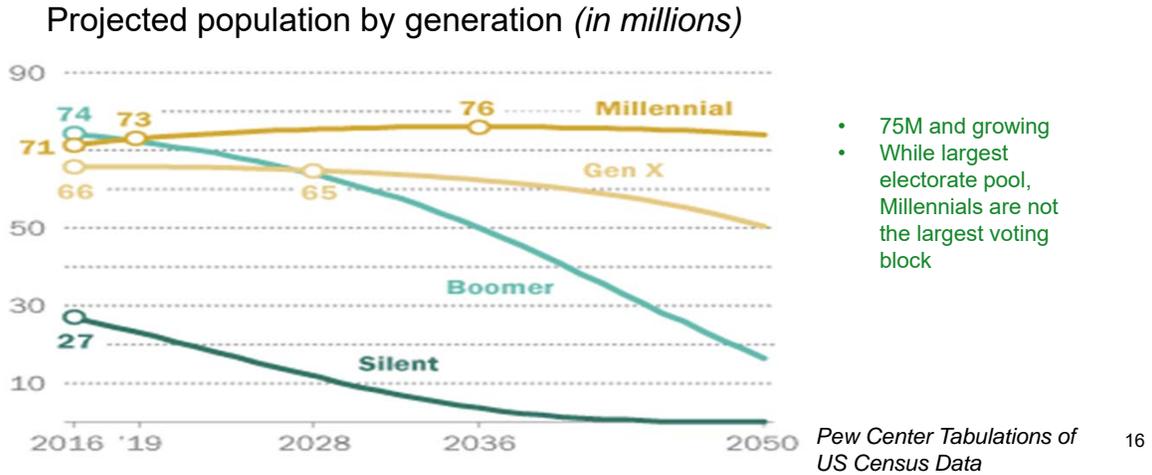
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**S**OCIAL-CULTURAL



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**Millennials largest living generation, 75% of workforce by 2025**



**Source: Pew Research Center – Millennials Projected to Take over Baby Boomers as America’s Largest Generation, March 1, 2018**

**Source: Pew Research Center – 16 striking findings for 2016**

• Now numbering 75.4 million, the Millennial population continues to grow as young immigrants expand its ranks, and this year, the number of Millennials [eligible to vote](#) was about equal to that of the Baby Boomer generation



## Millennials less healthy than Gen Xers were at the same age

- 1/3 do not have a PCP, are less likely to seek preventative care
- 1/3 have a health condition (increased cardiovascular & endocrine conditions) that could reduce their life expectancy
- Millennial women are 20% less healthy than male counterparts driven by major depression, type II diabetes, endocrine conditions

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**BCBS Press Release: Blue Cross Blue Shield Association Study Finds Millennials are Less Healthy than Generation X Were at the Same Age**  
Subtitle, Apr 24, 2019

***One in three millennials do not have a primary care physician and are less likely to seek preventative care on a regular basis***

A third of millennials have health conditions that reduce their quality of life and life expectancy, according to a new study of medical claims by the Blue Cross Blue Shield Health Index<sup>SM</sup> (BCBS Health Index). The report **found that millennials had substantially higher diagnoses for eight of the top 10 health conditions than Generation X**, and based on their current health status, **millennials are more likely to be less healthy when they're older, compared to Gen Xers**. These findings are based off of a study of **millennials who were between the ages of 34 and 36 in 2017 and Gen Xers who were 34 to 36 in 2014**.

Additional findings from the study are:

**Millennial women are 20 percent less healthy** than their male counterparts, specifically **driven by cases of major depression, type II diabetes and endocrine conditions.**

**Millennials in southern states**, particularly Alabama, West Virginia and Louisiana **are the least healthy**, while millennials in western states, such as California, Arizona, Nevada and Colorado are the healthiest.

To identify key drivers of millennial health



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## Implications:

With Millennials as the largest living generation, taking a proactive role in health and wellbeing is required.

**3 Value-based incentives driving care outside hospital walls**

**Imaging service facilities**  
X-rays, MRIs, CT scans & ultrasounds

**Specialized outpatient clinics**  
Cardiology, Urology, etc.

**Ambulatory surgery centers (ASCs)**  
Same-day discharge of patients post-surgery. Can be hospital-associated or freestanding

**Urgent care centers**  
Immediate care for certain low acuity illnesses & injuries that do not require an ED visit

**Home-based care**  
Acute, post-acute care delivered by MDs, RNs in the home

**Emergency Departments**  
Broad range of emergency services to higher-acuity patients

**Primary care clinics**  
Patients seen by primary care physicians

**Retail clinics**  
Walk-in clinics offering preventive health services and treatment for uncomplicated illnesses

**Community health clinics**  
Primary care services to patients with limited access to health care, (i.e. homeless, migrants) and patients with low income or no health insurance

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**Source: Modern Healthcare: Financial Imperative: Payers can't control costs without addressing social determinants, Aug 27, 2018**

HC spending not totals >\$10K/person, reached nearly 18% of GDP, *accdg to CMS*

Payer/providers entering into VBC where hospitals take on more risk for group of patients, dinged by CMS for high readmit rates

Federal policies allow gov't payers to pay more for services outside of hosp/clinic or removing disincentive not to do so

**Many organizations have yet to integrate soc determinants into VBCs**

NC transform FFS Medicaid to state pays for managed care and provider-led orgs a set amount of \$/month to take care of beneficiaries. Plan is pending fed approval.

**Medicaid is testing ground for many initiatives that connect clinical/social needs;** CO and OR via Section 1115 waivers reformed Medicaid pgms to integrate physical, behavioral care and social services

MA covers >1/3 of the 56M Medicare enrollees.

**ACOs, Value-Based Payment Change Care Delivery (synopsis in last PEST doc)**

- Market pressure, social determinants push payers and providers into more value-based payment models

- CMS' Next Generation ACO's ensure downside risk accepted, MA plans have flexibility to address social drivers of poor health in 2019

- Many carriers have yet to integrate social determinants into value-based contracts

### **Deloitte 2019 Global HC Outlook**

New HC model is C2B with data interoperability, security and ownership moving to the forefront

A successful value-based payments strategy requires payer/provider collaboration, sharing patients' health data and IT and analytical support.

New public/private partnership models promote risk-sharing and blended financing will emerge. Given the interdependencies of public/private stakeholders operating in a VBC ecosystem, it is logical to expect that coming years will likely see new and novel public-private partnership models emerge that promote risk sharing, allow for blended financing of critical HC infrastructures and programs, and maintain system sustainability.

HC moving outside of hospital walls – primary types of hospital-based outpatient facilities

### **MedCityNews: Newly merged Dignity-CHI health system offers patients home recovery care services, May 28, 2019**

**CommonSpirit Health**, the Chicago-based health system that formed from the merger between **Dignity Health** and **Catholic Health Initiatives**, has teamed up with a company called **Contessa** to introduce a **new home care** option.

Overall, the goal of **Home Recovery Care** is to **improve patient outcomes**. For instance, at Marshfield Clinic Health System in Wisconsin, the use of Home Recovery Care **reduced readmission rates by 44% and decreased the mean length of a hospital stay by 35%**.

To start, **Home Recovery Care will be offered to selected CommonSpirit Medicare Advantage patients and will initially launch at Phoenix-based Chandler Regional Medical Center**. However, the goal is to **expand the offering to commercial and Medicaid patients and across additional CommonSpirit locations**.



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## Implications:

Value Based care will require changes in both the financial model and the clinical / care model.



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## Basic social needs driving future health care models



HEALTH OUTCOMES

68% of patients have at least one SDoH

- Medical Care
- SDoH = 80%-90% of health outcomes

### Social Determinants of Health (SDoH)

ECONOMIC STABILITY	NEIGHBORHOOD & PHYSICAL ENVIRONMENT	EDUCATION	FOOD	COMMUNITY & SOCIAL CONTEXT	HEALTH CARE SYSTEM
Employment	Housing	Literacy	Hunger	Social Integration	Health Coverage
Income	Transportation	Language	Access to Healthy Options	Support Systems	Provider Availability
Expenses	Safety	Early Childhood Education		Community Engagement	Provider Linguistic and Cultural Competency
Debt	Parks	Vocational Training		Discrimination	Quality of Care
Medical Bills	Playgrounds	Higher Education		Stress	
Support	Walkability				
	Zip Code/ Geography				

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### **MHC: Patients want providers to do more about their unmet social needs, Jun 4, 2019**

OR and SW WA, would be the **first location to launch the new Thrive Local social care network**. The initiative will allow healthcare providers and caregivers to connect patients with community resources that can help them address their social needs. It will roll out across the entire system over the next three years.

**A majority of patients feel providers should do more to identify and address their social needs**, according to a new *Kaiser Permanente* survey released Tuesday. Among the survey's key findings was that **97% of respondents said they felt their medical provider should ask about social needs during visits**. While **80% of patients surveyed reported they would find it helpful for their clinician to provide information on available resources or support to apply for help**, only **42% said they would turn to their provider** for such information.

Approximately **68% of respondents reported having at least one unmet social need over the past year**. More than a **quarter reported having had a social need that served as a barrier to their health within the past year**, with more than **fifth saying they prioritized paying for food or rent over seeing a doctor or getting a medication**.

**Transportation issues were also a big impediment, with 17% reporting they couldn't go to a doctor visit or pick up medications because they didn't have a ride**.

>1/3 of patients reported frequently or occasionally experiencing stress over accessing food or balanced meals, while 35% experienced stress over housing stability issues.

**Geneia White Paper: Social Determinants of Health: From Insights to Action, Making SDOH Scalable with Technology**

**Health outcomes:**

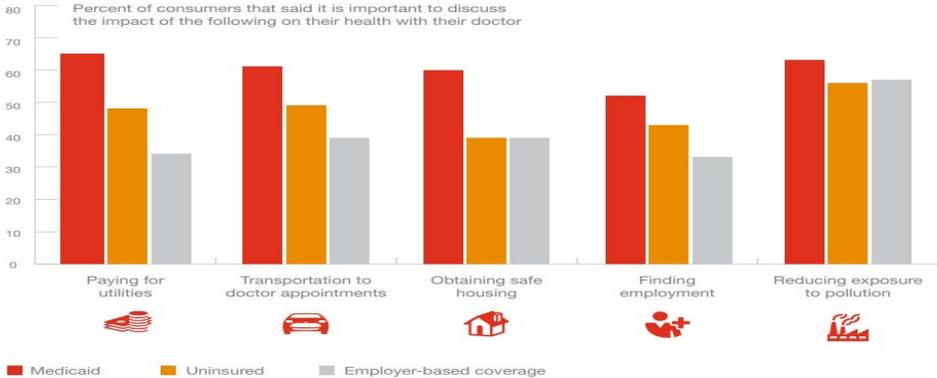
Recent research suggests [medical care accounts for only 10-20 percent of health outcomes](#) while the other 80-90 percent are attributed to demographic, environment and socioeconomic factors.

**Prevalence of social determinants of health:** 68 percent of patients have at least one social determinant of health challenge, according to a study of 500 random patients; 57 percent have a moderate-to-high risk for financial insecurity, isolation, housing insecurity, transportation, food insecurity and/or health literacy.



**3** SDoH impact people across the economic spectrum, esp. low-income individuals

Percent of consumers that said it is important to discuss the impact of the following on their health with their doctor



Factor	Medicaid	Uninsured	Employer-based coverage
Paying for utilities	~68%	~50%	~35%
Transportation to doctor appointments	~63%	~50%	~40%
Obtaining safe housing	~61%	~40%	~40%
Finding employment	~53%	~45%	~35%
Reducing exposure to pollution	~65%	~58%	~58%

Source: PwC Health Research Institute consumer survey, May 2018

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**Geneia White Paper: Social Determinants of Health: From Insights to Action, Making SDoH Scalable with Technology**

Consumers too recognize the impact of SDoH. Medicaid patients, in particular, said it was important to discuss SDoH with their physicians. A **May 2018 PwC Health Research Institute survey** found more than 60% of Medicaid patients recognize the importance of discussing with their doctor the health impacts of paying for utilities, transportation to doctor appointments, obtaining safe housing and reducing exposure to pollution. There is broad agreement among all consumers of the importance of raising the issue of pollution exposure with their doctor.

**MHC: Patients want providers to do more about their unmet social needs, Jun 4, 2019**

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**>1/3 of patients reported frequently or occasionally experiencing stress over accessing food or balanced meals, while 35% experienced stress over housing stability issues.**

### **Deloitte Insights: Addressing the social determinants of health for Medicare and Medicaid enrollees, Feb 27, 2019**

While **SDoH can impact people from across the economic spectrum, low-income individuals are particularly likely** to face challenges related to housing, food, and transportation. Medicaid beneficiaries are low-income by definition, and **one-half of all Medicare beneficiaries had incomes below US\$26,000 in 2016**.<sup>6</sup> Both groups are, therefore, key target populations for addressing social needs.

**Dual-eligible beneficiaries (“duals”)** are also a target population for SDoH interventions. *Duals are beneficiaries who qualify for both Medicare and Medicaid, generally through one of the following eligibility criteria: They are low-income seniors; low-income nonelderly individuals with disabilities; or seniors with high medical costs relative to their incomes.* These individuals are generally in poorer physical and mental health and have lower incomes than other Medicare beneficiaries. They also account for a disproportionate share of both Medicare and Medicaid spending.<sup>7</sup>

**MCOs and MA plans account for a large and growing share of Medicaid and Medicare enrollment** and spending (figures 2 and 3). These plans are, thus, **critical players within an ecosystem of stakeholders** who are focused on addressing SDoH.



**3** **Studies show effectiveness of managing SDoH, esp. among those with chronic conditions**

- 26% reduction in ER spend, 17% decrease in ED use
- 53% decrease in inpatient spend
- 6.9x more likely to have better adult BMI
- 1.7x more likely to schedule and attend annual PCP visit

Since 2016, federal regulations allow insurers to cover additional services that will reduce costs, improve quality

*Robert Wood Johnson Study, 2016  
WellCare Health Plans & Univ. of S FL College College of Public Health*

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## **Geneia White Paper: Social Determinants of Health: From Insights to Action, Making SDoH Scalable with Technology**

Payers, in particular, lead the way with pilots and research studies demonstrating the effectiveness of managing patient social determinants:

← A [2016 study by the Robert Wood Johnson Foundation](#) reported a 17 percent decrease in emergency department use, a 26 percent reduction in emergency spending, a 53 percent decrease in inpatient spending and a 23 percent decrease in outpatient spending as the result of referring 33,000 people to 106,000 community-based programs and services.

← [Research conducted by WellCare Health Plans and the University of South Florida College of Public Health](#) found connecting patients with social services to address SDoH generated a double-digit reduction in healthcare spending. The study reported an additional 10 percent decrease in healthcare costs – equating to more than

\$2,400 per person per year savings – for Medicare and Medicaid members who were successfully connected to social services compared to a control group of members who were not. In addition, patients are [more likely to be engaged in their health when social determinant barriers are addressed](#). Specifically, they were:

6.9 times more likely to have a better adult BMI score

2.8 times more likely to have a better medication assessment score

2.3 times more likely to have a better colorectal cancer screen

1.7 times more likely to schedule and attend their annual PCP visit.

←For some common chronic conditions such as diabetes, hypertension, diabetes and coronary artery disease, a [Moody's Analytics study for the Blue Cross Blue Shield Association](#) showed social determinants drive larger differences in health impacts.

### **Deloitte Insights: Addressing the social determinants of health for Medicare and Medicaid enrollees, Feb 27, 2019**

•*Medicaid and CHIP Managed Care regulation of 2016*, **MCOs can choose to cover additional services**, above those stipulated in their contracts, that they believe **will reduce costs and improve the quality** of care through “in-lieu-of” and “value-added” services.

•*The CHRONIC Care Act of 2018*, Signed into law as part of the Bipartisan Budget Act of 2018, the **CHRONIC Care Act provides Medicare Advantage plans with increased flexibility to cover additional or supplemental services for a target group** of beneficiaries with complex care needs, beginning in January 2020.<sup>14</sup> These **services may include transportation, minor home modifications to help accommodate walkers or wheelchairs, home-delivered meals that are tailored to specific conditions (such as diabetes or chronic heart failure), and other nonmedical health-related benefits.**<sup>15</sup>

### **HealthPayer Intelligence: Medicaid Analytics Support Social Determinant Incentive Payments, Sept 14 2017**

***ICD-10 analytics and provider incentive payments are allowing one Medicaid organization to start addressing the social determinants of health.***

Payers looking for **innovative ways to control the costs** of care have been turning their **attention to the social determinants of health**, the non-clinical factors that often lead to issues with care access, non-adherence, and the development of chronic disease.

### **BCBS Press Release: Blue Cross Blue Shield Association Report Links Social Determinants to the Adverse Health Impact of Specific Diseases**

**Subtitle, Dec 14, 2017**

Moody's Analytics uses the Blue Cross Blue Shield Health Index<sup>SM</sup> to identify **select diseases that are not as impacted by social determinants**

The report, “**Understanding Health Conditions Across the U.S.**,” shows that **social determinants of health drive larger differences in the impacts for common chronic conditions such as hypertension, diabetes and coronary**

**artery disease.** In addition, the analysis shows these determinants **drive smaller differences in the impact of other conditions such as cancer, substance use disorder and mental health,** which are **influenced more by individual factors such as family health history and personal lifestyle** choices.



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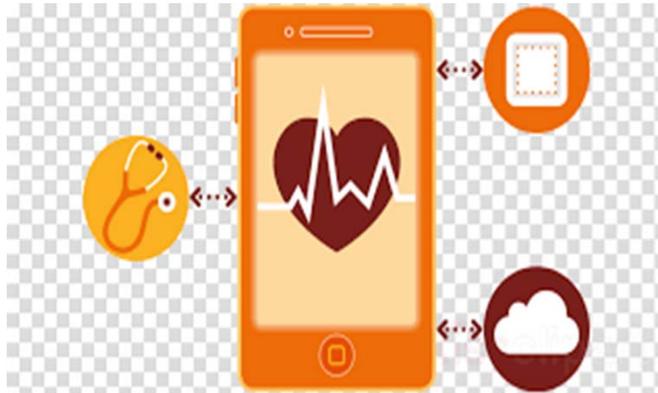
## Implications:

Value Based models will move the healthcare system towards SDoH.



## Technology & Innovation

**T** **New entrants inch closer to point of care, leveraging Data**



- **Amazon**, JPMC, Berkshire Hathaway create healthcare company
- **Apple** offers PHR for real-time consumer, provider data exchange
- **Amazon** developing emotion-sensing wearable device; buys PillPack
- **Google** acquires Apigee to enhance interoperability across ecosystem
- **Microsoft** centralizes health info via HealthVault
- **Facebook** launches Health Support, peer-to-peer group support forums; mapping tools to stay ahead of disease outbreak
- Trump Administration launches MyHealthEData initiative

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**Healthcare Dive, 6.11.16** – Apple Hires Stanford Medicine’s Digital Health Executive Director

**Healthcare Dive, 6.14.16 & CNBC, Vital Intelligence Report 6/12-6/19**, Apple Rumored to be Eyeing Personal Health Records For iPhones

**fiercehealthcare.com, 6.12.17** – Oscar launches Machine Learning Tool to Put Relevant Clinical Insights In-front of Physicians

**CV 2025, Blue Cross of Idaho** – Technology has created new platform-based models that eliminate friction via the structural realignment of an industry.

**FierceHealthcare, 8.18.17** -- Humana, Amgen team up on data-driven research venture

**FierceHealthcare, 8.14.17** -- Aetna reportedly in talks with Apple to bring Apple Watch to 23M members

**Morning Consult Health Care Technology, Jan 26, 2018** -- Plurality of Poll Respondents OK With Amazon Handling Mail-Order Drugs

**AP, 3.6.18: White House Wants User-Friendly Electronic Health Records** -- program called Blue Button 2.0, with the goal of providing Medicare beneficiaries with secure access to their claims data, shareable with their doctors. Software developers are already working on apps, using mock patient data.

**Deloitte 2040:** Google acquired API management company Apigee to create data pipes to enhance interoperability among hosp, MDs and patients

**MedCityNews: Amazon reportedly developing emotion-sensing wearable device, May 23, 2019**

**Amazon has a health-oriented wearable** in the works that has the **potential to use voice recognition technology to sense emotional states**, *according to a report from Bloomberg*. The product (codenamed Dylan) is being **developed by Amazon's hardware development team Lab126 and its Alexa division. Designed to be worn on the wrist, the device seemingly has a form factor similar to a smartwatch.** Amazon rollout of HIPAA-compliant skills for Alexa that facilitates the secure exchange of patient information through voice-based apps. **"The intent is for us to rely and depend on Alexa to help us navigate our needs – whether we know them or not – and to provide us with solutions and options,"** Hanna said.

It is still unclear, however, if Amazon's technology will function as pure research effort or whether the product will eventually be commercialized. So it may be some time before we have a digital shoulder to cry on (and provide retail therapy in the process).

**MedCityNews: Facebook adds former Googler Roni Zeiger as its new Head of Health Strategy, May 28, 2019**

*In a blog post, Zeiger said he will be charged with helping to improve FB's Health Support Groups and boosting the quality of health information across FB.* Health Support Groups was recently launched by FB to allow patient to find and join suitable groups on the platform and ask admins to anonymously post questions. Other health-related efforts from the company include the company's blood donation request feature, which was launched in the U.S. earlier this year. The company's initial markets for the feature suffered from false requests and abuses like black market blood sellers.

More recently, FB **unveiled new mapping tools meant to help public health organizations stay ahead of disease outbreaks and guide disaster response.**



**T** Data is the new health currency



- Health care data is national infrastructure priority
- Pharma, retail, health care system collaborate to develop personalized coverage plans, treatments
- Providers transform care using precise, real-time insights
- Tech, social media players use AI to predict disease outbreak, create precision therapies
- Virtual health moving focus from bedside to bedside

Deloitte Centre for Health Solutions; The Future Awakens, life sciences and health care predictions 2022

UHC-Optum, Aetna-Merck, Humana-Amgen, using data-driven clinical insights to improve outcomes

CVS-Aetna, Cigna-Express Scripts blend medical, shopping and pharma data to personalize treatment/products

Aetna-Apple, UHC bundling wellness data into a broader benefits package while integrating EHR and claims data

FB has three new maps to provide early alerts for disease outbreak



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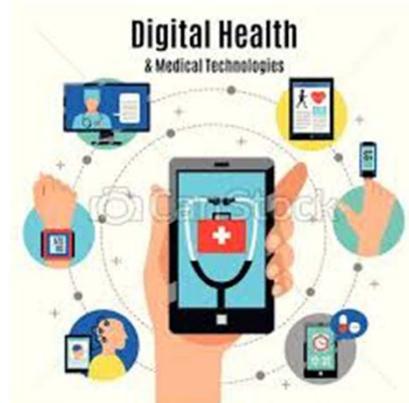
## Implications:

Data is monetized for the benefit all,  
delivering clinical, financial success.



## T Digital health becoming the new frontier in medicine

- Global digital health market to hit \$504B by 2025 as remote monitoring demand grows
- Telehealth expected to grown at 38% CAGR over same period
- Wearable market expected to reach >\$25B by 2024 (\$6.6B in '18)
- Medical apps (93% of docs say improves outcomes)
- Smart tattoos (Microsoft/MIT blood sugar monitoring)
- Subcutaneous implants (remote monitoring)



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**Cision: Worldwide Digital Health Market to Hit \$504.4 Billion by 2025: Global Market Insights, Inc., Mar 6, 2019 -- The U.S. digital health market accounted for largest share in 2018 supported by increasing prevalence of chronic diseases along with growing geriatric population in the country. Global Digital Health Market revenue is anticipated to register 29%+ CAGR from 2019 to 2025 driven by rising demand for remote monitoring services along with favorable government initiatives. Global Digital Health Market value expected to surpass USD 504.4 billion by 2025; according to a new research report by Global Market Insights, Inc. Increasing demand for remote monitoring services owing to rising incidences of chronic diseases worldwide is a major factor.**

**Tremendous rise in the penetration of smartphones, tablets and other mobile apps among physicians to track and access to medical information will further favor industry expansion. Furthermore, growing adoption of various healthcare IT solutions by healthcare providers to meet the heightened regulatory requirements for patient care and safety will augment digital health industry growth.**

**Telehealthcare** business is expected to grow at **29.4% CAGR** over the forecast period. **Rising geriatric population base, increasing demand for home-based remote monitoring systems, rising incidences of chronic disorders and government initiatives** are the some of th

### **Zack.com: Wearable Medical Device Boom Puts These 3 Stocks in Focus, Oct 8, 2018**

**More than half of the American populace uses wearable devices** to track calories, measure oxygen saturation (SpO<sub>2</sub>), monitor sleep, fetal monitoring, pulse rate analysis, maintain blood pressure and self-glucose monitoring. *Per a recent research report by the BrandEssence*, the **wearable medical devices market was valued at \$6.58 billion in 2017 and is expected to reach a worth of \$25.46 Billion before 2024, at a CAGR of about 21.32%.**

### **Zack.com: Growing Wearables Industry Holds These Stocks in Good Stead, Sep 4, 2018**

*Per Allied Market Research*, the **wearable technology market in 2015 was valued at \$19,633 million, at a CAGR of 16.2% to reach \$57,653 million by 2022.** These devices find favor due to factors such as ease of use, flexibility and convenience. Moreover, these provide real time data monitoring, operational efficiency and fitness tracking, which further support market growth. Per the IDC report, the **size of the global wearables market will practically double between 2017 and 2021**, rising from **113.3 million units sold to 222.3 million**, with an average annual growth rate of 18.4%. IDC predicts that, **smartwatches, which have a much wider array of functions**, will grow during the same period, at an average rate of 27% for the models that offer basic functionalities and 22% for the most technologically advanced ones. It also predicts that the popularity of intelligent wristbands will wane over time.

**RealClear Health, June 23, 2017 -- The Digital Health Hope: Transforming Outcomes in Health**

**RealClearHealth, Aug 9, 2017 –**

Arterys, a cloud-based computing platform for medical imaging -- gathers data from hospital equipment globally, processes anonymized patient data and analyzes it against the treatment and results. The Focused Ultrasound Foundation increasingly provides alternative treatments to chemotherapy or radiation. Digital therapeutics -- a method using a digital system as a stand-alone or in combination with conventional therapies to treat a medical condition -- hold the promise to change behavior, one of the most important challenges

in health care, due in part to their relatively low cost.



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## 5G enhances access to care, particularly in underserved areas



5G's quicker speed, lower latency, higher bandwidth could improve patient care:

- Smart hospitals
- Bolster remote **patient monitoring**
- Quicker downloads of **patient data**
- More reliable **telemedicine**
- Robot-assisted surgery** becomes standard practice
- Augmented reality to **train medical staff**

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### Modern HC: Why 5G Matters to HC, May 11, 2019

**One central barrier** stands in the way of reliable, instantaneous telecommunication, according to Dr. Shafiq Rab, chief information officer at Rush University System for Health: **internet bandwidth.**

Five ways 5G internet's quicker speed, lower latency and higher bandwidth might improve patient care, according to hospital executives and healthcare analysts.

- Bolstering remote patient monitoring** by connecting devices at hospitals and off-site
- Enabling **quicker downloads of patient data**, including large files such as MRIs
- Creating **more reliable telemedicine** by reducing video lag and expanding internet access
- Turning **robot-assisted telesurgery into standard practice** through advancements in connectivity and devices
- Allowing physicians to **practice surgical skills and procedures with augmented reality**

There's **certainly a disparity** between those with and without internet. As

evidence of a **digital divide**, the **Federal Communications Commission in a 2018 report found that in rural America 31% of people lacked access to wired broadband that met the FCC's speed benchmark.**

A **5G network could be a boon for rural areas** seeking access to internet-connected healthcare services, thanks to **5G's use of "small cells," or radio equipment** placed on existing structures, such as buildings. "There is the potential to aid some of those that broadband has left behind," Krigstein said. "Because 5G has the potential to be **leveraged at a local level and has a different infrastructure**, we have the hope that we will be able to avoid some of those similar access challenges, particularly in low-income or rural areas."

But Katibeh spoke to sweeping ideas about the potential for 5G internet to improve hospital operations.

**"Rooms then could be intelligently scheduled, patient care enhanced using machine learning and artificial intelligence,"** he said of 5G's possibilities. "And then, one that I'm personally really excited about is how **will virtual reality and augmented reality be used to train medical students** to help them become better doctors, faster?"

The security concern

5G, with its **quick speed and ability to transmit hefty packets of data, is expected to foundationally change the so-called internet of things.**

The **internet of things describes an ecosystem of devices** that can exchange information with one another via the internet. In healthcare, that ecosystem—dubbed the **"internet of medical things"**—includes a wide variety of items, such as **internet-connected medical devices, equipment and wearables, paving the way for constant remote patient monitoring.**

5G "really brings together a lot of the applications that are dependent upon lots of data moving very quickly in a basically real-time environment," said Ben Arnold, the Consumer Technology Association's senior director of innovation and trends. "It's not just about faster speeds to your smartphone. It's about connecting devices and machines to each other."

**Four steps to reduce cybersecurity risks** after deciding to connect devices to a 5G network, according to John Riggi, the American Hospital Association's senior adviser for cybersecurity and risk:

- **Purchase devices with strong security features**, such as password and encryption capabilities
- **Segment your network**, so that noncritical devices aren't connected to core systems
- Keep an **inventory of internet-connected devices and map** how they're connecting to the network
- Monitor the network for abnormalities

But **hooking up these devices to one another comes with its own set of concerns**. Having devices linked up within a hospital—or, in the case of at-home monitoring, between a patient's daily life and the hospital setting—**widens the possible "attack surface"** a hacker can target to gain access to an organization's network, said John Riggi, the American Hospital Association's senior adviser for cybersecurity and risk.



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## Implications:

Digital health transformation enabled by broadband & 5G technology with create personalized vs population-based medicine.



## What does all the PEST analysis say: Medicaid needs a value based model

- Current payment system is not sustainable
  - *Last year's Medicaid budget exceeded \$2.4 billion and next year's is forecast to exceed \$2.5 billion*
  - *Medical costs trending at 9% annually*
- Medicaid in Idaho needs a better system of care that ties payments to quality and cost effectiveness

**Medicaid's goal is to bring Medical Cost trend down to inflation.**



**Percentage of payments in value based**

CALENDAR YEAR	MEDICAID			COMMERCIAL & MEDICARE ADV.			MEDICARE			TOTAL		
	2015	2016	2017	2015	2016	2017	2015	2016	2017	2015	2016	2017
Category 1: FFS without quality	100%	99%	99%	71%	67%	61%	43%	45%	45%	76%	75%	71%
Category 2: FFS with quality and value	0%	1%	1%	19%	20%	18%	37%	37%	39%	16%	16%	17%
Category 3: Methodologies built on FFS architecture.	0%	0%	0%	7%	9%	12%	20%	18%	16%	7%	8%	8%
Category 4: Population-based payment.	0%	0%	0%	3%	4%	9%	0%	0%	0%	2%	2%	4%

- Value based is the tool Medicaid will use.

- Goal is to get 50%+ of Medicaid payments into value based by Jan 2023



# QUESTIONS?