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What can we expect in 2019?

If you ignore the Sword of Damocles hanging over the industry in the form of a Texas federal judge’s ruling the entire ACA unconstitutional, 2019 could shape up as a relatively chaos-free year with little chance of legislative or regulatory upheaval. Despite the fact that the number one issue on voters’ minds during the 2018 election was healthcare, it’s unlikely that the extremely divided Congress will be able to address it in any meaningful way. Cue the 2020 election.

The biggest issues healthcare industry leaders foresee include:

1. **Addressing social drivers of health**
   
   Although it’s become clear that a person’s zip code has more impact on their health than their DNA, dealing with the social determinants (or social drivers) of health that relate to where a person lives are often far outside of the scope of most health plans’ operations. That’s rapidly changing. Whether it’s food or housing insecurity, economic stability, social or environmental safety or literacy, the impacts these social drivers have on health outcomes and costs are significant. Spurred by state Medicaid agencies and CMS, finding and deploying tools to measure and address the underlying issues that drive much of the cost and utilization in healthcare will be a focus during the year.

2. **Provider consolidation**
   
   As hospital systems extend their reach with acquisitions, mergers and alliances (for example the $28 billion Catholic Health Initiatives and Dignity Health merger), health plans will be faced with much less leverage in rate negotiation and greater challenges in establishing competitive product differentiation as providers will have more power to dictate terms for products and rates. On the other hand, plans aligned with providers will face a more favorable environment and may see significant growth over their unaligned competition.

3. **Medicaid work requirements**
   
   Adding work requirements for “able-bodied adults” to Medicaid expansion waivers has allowed Republican states that opted out of this ACA option (and the significant federal dollars that go with it) to find a way to participate that aligns with their stated conservative values. Unfortunately, work requirements are much easier to put in place than to administer as some of the early-implementing states like Arkansas are finding out. Expect more non-expansion states to use this mechanism to expand their Medicaid coverage and for the health plans involved to be inundated with a whole new set of administrative requirements and challenging enrollment issues.

4. **Personal healthcare technologies**
   
   The Dick Tracy watches are here and are way more than cool communication devices. Measuring pulse and blood sugar, breathing rate, simple ECGs, and providing emergency alerts for falls are only the beginning of what appears to be a host of clinical monitoring and alerts coming from these personal technologies. Whether and how health plans address and incorporate the application of these new capabilities to their membership will make a significant difference in the MCO’s market presence and competitive stance.

   While these were a some of the more frequently mentioned challenges, obviously other issues resonated a higher level for some execs based on their geography and product lines. Here’s hoping that 2019 sees the industry better serve the diverse healthcare needs of the country by meeting consumers’ demands for quality, affordability, and access.

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**Don Hall, MPH,** is principal of DeltaSigma LLC, a consulting practice specializing in strategic problem solving for managed care organizations. He most recently served as president and chief executive officer of a nonprofit, provider-sponsored health plan.
New Trends Move Healthcare to the Home

Innovative care solutions bring the health system and medical procedures to patients’ homes by AINE CRYTS

There are myriad factors driving interest in home health. For one, there are 46 million people who are 65 years of age and older in the United States. That number will jump to more than 98 million in 2060 when this age group will represent 24% of people in the United States.

Add to that the soaring cost of treating chronic conditions—Diabetes alone cost $327 billion in 2017. The CDC projects the cost to treat chronic obstructive pulmonary disease (COPD) will reach $50 million each year by 2020.

Preventing hospital-acquired conditions such as sepsis is also on the mind of healthcare executives. For example, severe sepsis impacts more than 1 million Americans each year—and 15% to 30% of those people die.

And all of this is taking place in a country where as much of one-third of healthcare spending may be wasteful.

Frail, sick patients increase healthcare costs
Approximately 5% of patients drive 40% of a provider’s costs, says Michael Le, MD, co-founder and chief medical officer at Huntington Beach, California-based Landmark Health, which contracts with payers to provide home health services.

Who’s helping to drive that spend? It’s older patients with mobility challenges who can’t travel to their physician’s office for follow-up appointments. These are patients, says Le, who stay home and “tough it out.” Then it gets so bad that they call 911 and get admitted to the emergency room, instead of getting care from their primary-care provider.

Repeated visits by very sick and frail patients to the emergency room are bad for continuity of care. That’s why it’s valuable to determine those patients who are frailest and in the most need of support and to bring the health system and medical procedures to patients’ homes, he adds.

Bringing care to sickest patients
Landmark Health employs a variety of clinicians, including nurse practitioners, physician assistants, and behavioral health specialists (such as psychiatrists and social workers), to provide around-the-clock home-based care to 26,000 patients on an urgent or scheduled basis. Landmark Health contracts with payers to provide this care to members.

The majority of its patients are aged 80 years or older, but Landmark Health also serves very sick patients in their 20s and 30s, says Le. On average, patients have eight chronic conditions, such as congestive heart failure, COPD, and chronic kidney disease. Many of its patients are considered frail.

Most patients receive a home visit once a month and three phone calls per month; the initial visit lasts an hour and follow-up visits run about 45 minutes. That’s in addition to visits by care team members to respond to urgent medical events around the clock.

Landmark Health provides coverage—and is 100% at risk for—82,000 patients across 13 states. In some of its more established markets, the organization is engaging with 55% to 60% of covered patients. Since the company was started in 2013, it has worked with more than 30,000 patients.

Here’s how their care approach works: Care providers can test patients’ blood-glucose levels, do an inventory of their medicine cabinets, measure blood pressure, draw blood, check labs, and administer antibiotics and steroids in the home. Landmark Health partners with local imaging providers for X-rays and ultrasounds to provide imaging services within patients’ homes.

Invisible patients
According to a study published in the Journal of the American Geriatrics Society, the majority of eligible home-limited individuals have not received medical care at home, particularly rural residents and those living in underserved states. For more go to bit.ly/InvisiblePatients
These are patients who have a medical-loss ratio of more than 100%, adds Lee. That means payers are losing money on them, largely because they’re going to the hospital so often. The patients served by Landmark Health typically have a 20% to 30% medical-loss ratio, and they have a 50% lower mortality rate than patients who aren’t engaged.

Piloting home health delivery
One of the biggest challenges with home health is getting paid for that care. But that doesn’t mean providers aren’t working hard to figure it out.

Case in point: Newton-Wellesley Hospital, a suburban hospital that’s part of Boston’s Partners HealthCare. It’s piloting a program that brings clinicians into patients’ homes. The pilot is financed by the hospital.

“Proof of concept is our current goal [and] focusing on providing high-quality care while the patient is at home … as well as progress in improving total medical expense as a system,” says Louis Jenis, MD, chief medical and innovation officer.

Patients are selected for home health for two reasons: they’re “super utilizers” of the emergency room or they don’t show up for follow-up appointments with their primary care providers regularly.

The pilot, which began in April, serves 60 patients—some of whom are on their third scheduled home visit. The average patient is aged 85 years and most patients are women. It involves sending a nurse practitioner into the patient’s home. The patient’s primary care physician refers the patient to the practice’s nurse practitioner for home visits.

Its home health program is still in a pilot phase, which means cost and quality measurements are currently unavailable. But Jenis says the home care program is a fundamental part of the hospital’s primary care strategy. “Our [primary care providers] are relieved to have patients seen and chronic conditions are now being managed in the home. Our patients are extremely grateful,” he adds.

Technology can help
Many older patients, in particular, prefer to be home and surrounded by their families, says David Levine, MD, MPH, a physician and researcher in the division of general internal medicine at Boston’s Brigham and Women’s Hospital, which is also part of Partners HealthCare. Thus, providing home health can translate to a better patient experience.

It also helps patients avoid adverse events such as falls or hospital acquired infections. Levine adds that there’s a finite number of beds for sick patients, and that’s why sending clinicians into patients’ homes—aided by technology—can help. In this program, a doctor and nurse team travel to the patient’s home.

When a patient is stabilized in Brigham and Women’s Hospital’s emergency room, their care team then decides—based on the patient’s needs and proximity to the hospital—that they’re a candidate for home-based visits. That entails regular monitoring and home visits between two and five times a week. Supplementing that care is VitalPatch, a patch that monitors patients’ vital signs, such as heart rate, skin temperature, fall detection, and respiratory rate. That data is shared with Brigham and Women’s Hospital’s care team.

Here’s how that works: There’s an 85-year-old patient with the flu, who requires oxygen and antibiotics, in addition to regular monitoring. If the patient experiences a faster heart rate, it would trigger the team to adjust their treatment plan, says Levine.

His team has used this device and conducted home visits with 300 patients since 2016. A pilot study including 20 patients—nine of whom were treated at home and the remainder were treated in the hospital—was published in Journal of General Internal Medicine. The result was a 52% reduction in direct care costs while maintaining quality and patient experience. The home health program is financed through a combination of payer and internal hospital funding.

Extending best practices to the health network
Increasingly, providers are reworking pre-operative education and post-surgical recovery for joint replacement patients. Oakland, California-based Kaiser Permanente has created a playbook that allows providers in each of its different markets to select from one of three post-surgical recovery paths, based on the individual patient’s needs.

Leading Kaiser Permanente’s National Total Joint Replacement Initiative is Kate Koplan, MD, MPH, associate medical director for quality and patient safety. One of the key drivers behind getting patients home after their surgeries is patient satisfaction, she says. Other drivers are patient safety and infection risk, both of which are inherent with being in the hospital. Affordability is also important, since care provided in patients’ homes costs less.

Still, Koplan acknowledges that falls, in particular, can be an issue in patients’ homes. That’s why a
safety care plan is done in patients’ homes before the surgery, to assess uneven floor surfaces that could cause falls.

Her work to provide best practices for orthopedic teams for total joint surgery started about three years ago. And the different approaches, which range from no nights in the hospital to one night to two or more nights after the surgery came from the health network’s orthopedic surgeons.

The number of nights a patient stays in the hospital after their surgery depends on a variety of factors, which include number of comorbidities, support within the home, and the home safety evaluation. The decision is ultimately the result of shared decision-making between the patient and their surgeon and the rest of the clinical team.

Koplan adds that care planning is an integral part of each of the three paths. For example, patients will need access to follow-up appointments and some patients will receive that follow-up care in their homes.

Because Kaiser Permanente operates in seven markets—each of which has access to different resources—these steps may happen differently, she says. For example, a home safety assessment may be done in person or by phone by a nursing care coordinator, who also assesses the family and social support the patient will have in the home environment.

Still, the variables that help orthopedic surgeons and their patients to choose the appropriate post-surgery path are laid out in a playbook that’s shared throughout the network. The playbook was created by a multidisciplinary team that includes orthopedic surgeons, anesthesiologists, nurses, care coordinators, physical therapists, and home health service providers, in addition to patient input.

Practices outlined in the playbook range from pre-operative care (such as patient and family health education), to perioperative care (such as blood management protocols), to post-operative care, which can include home physical therapy visits.

Koplan says her role is to extend best practices throughout Kaiser Permanente. As a result of this work, the average length of stay in the hospital for patients is trending downward, while quality and safety have been maintained. The feedback from clinicians has been “fantastic,” she says.

Payment challenges and the future
Getting paid for care provided in the home is a challenge. That’s why Newton-Wellesley Hospital is financing its pilot and Brigham and Women’s Hospital is sharing the payment burden with a payer.

The difficulty stems from providers getting paid less for care when it’s delivered outside the hospital. That’s according to Michael Brookshire, a Dallas-based partner at consulting firm Bain. Thus, there are “odd incentives” for providers to not offer home health services to patients. Provider organizations that are successful with home health have been making investments in value-based care for a long time; that’s the case with Kaiser Permanente, he says.

Landmark Health has been successful because their model of caring for sick and frail patients in the home is paid for by the payer, he adds. “That kind of model is very difficult for a traditional hospital system to create. It’s just a very different payment structure.”

Delivering home health well is another challenge. Brookshire points again to Landmark Health’s ability to build home health as its core business.

Levine acknowledges that lack of payer support for home health makes this work difficult. But he believes payers will receptive once more research is done on the cost and quality impacts of home health. For example, if an emergency room visit costs a payer $10,000 and care in the home costs $9,500, the payer may be willing to share the savings with the provider.

Levine hopes to see more payers embrace home health within the next five years—or even sooner.

Aine Cryts is a writer based in Boston.
Experts agree that forecasting the future of healthcare technology isn’t difficult—machine learning, artificial intelligence (AI), cloud technologies that apply to clinical, workplace, and financial processes will have better and richer incorporation into the industry.

But to get there, healthcare executives need to be laying the cultural foundation today for upcoming technology changes in the next decade.

For example, investing in AI over the next five years could cost, on average, more than $30 million per organization, according to a survey of 500 healthcare executives by OptumIQ published in November 2018. However, 38% of employers and 20% of health plans believe they would see a return on that investment in four years or less. Ultimately, 94% of respondents see investments in technologies, such as AI, as the clearest route to affordable, accessible and equitable healthcare in the future.

But in order to realize those future possibilities, a culture shift needs to happen in healthcare today, says Tom Lawry, director of worldwide health for Microsoft. He adds that the future of healthcare technology relies more on the culture and framework being created by clinical and business leaders today.

“What really is going to be needed in the future is not just the breakthroughs in technology, but breakthroughs in creative thinking and the ability of leaders to think differently when redeveloping their processes to leverage the power of the technologies rather than trying to insert these new technologies into a framework,” Lawry says.

Anil Jain, MD, vice president and chief information officer for Watson Health at IBM, says healthcare organizations will need to shake the stigma of being bureaucratic and slow to adapt in order to be agile enough to adopt future technologies.

“Healthcare organizations need to start to push the agenda that says that innovation is important to healthcare. People outside of healthcare view the industry as very conservative, very slow to adapt,” Jain says. But when you talk to people inside the industry, we all think we’re moving very, very quickly. The key is for these healthcare organizations to get involved in the national debate, at the advocacy level and advising others on what the industry needs, so that movement is made collectively.”

Although it is difficult to predict, these experts have given their insights on where health-
Better Cloud Integration with Existing Technologies

Although devices collecting digital data are important to healthcare, how that data is shared is the most essential part of the equation, Lawry says.

More than 90% of healthcare organizations are widely utilizing the cloud to host applications, according to a 2017 Healthcare Information and Management Systems Society (HIMSS) survey on cloud use. However, the industry is still using the cloud for separate functions, such as clinical apps, data hosting, and backup, and not in a holistic fashion. The HIMSS survey found that though there is a high level of cloud usage at healthcare organizations, the functionality is still limited.

Use of cloud integration has allowed for data from different healthcare silos to be shared, and as more organizations continue to connect those dots, Lawry says that it will transform the industry.

"Everyone’s digitizing their data, whether that’s electronic medical records or X-rays. But digitizing data doesn’t do anything other than that. It changes data from one form to another instance,” Lawry says. “The transformation that’s brought about by the cloud and bringing that data together, allows for all kinds of interesting things. That to us is the number one transformational aspect going forward for the next few years.”

Deeper AI Infusion

Artificial intelligence has been a part of the healthcare for years, but experts believe in the next decade it will be a regular part of the industry.

A survey of 200 healthcare professionals by Intel Corporation, released in July 2018, found that 37% of respondents were using AI in limited ways, and 54% believe that there will be widespread AI adoption in the next five years.

John Doyle, director of business strategy for Worldwide Health Industry at Microsoft, says that moving forward we should expect to see AI infused into all aspects of clinical and operational workflow.

"We are early in the journey for cloud and AI adoption today, but we are already starting to see some amazing progress being made and we expect this continue and with a broader adoption of applied AI in areas such as the clinical interpretation of complex datasets, intelligent medical images, voice integration, and real-time insight of streaming medical devices and sensors data,” Doyle says.

As a new generation of consumer-focused services aim to merge patients and consumer journeys, applied AI will disrupt how patients engage with healthcare providers today, Doyle says.

"Applied AI has the potential to reduce the complexity of how healthcare data is captured and analyzed, examples of this include how intelligent voice integration and bot technologies are being used during virtual consultations to reduce the time spent entering data by both patients and clinicians, and how pre-trained clinical knowledge can be applied at the point of care,” Doyle says.

Infrastructure Upgrades That Make Healthcare More Accessible

The ability for clinicians to meet with patients via web and mobile portals is essential for chronic care management, says Rhonda Collins, DNP, RN, chief nursing officer at Vocera, and founder of the American Nurse Project.

"A majority of this country is still rural. So, we
need to rely on technology to fill gaps in human connections in healthcare—telehealth will be more important going forward, as infrastructure and technology continue to improve. Hospitals and clinics will need to prepare for a world that technology is making smaller,” Collins says.

A 2017 report issued by the Federal Communications Commission found that 50% of U.S. counties house people who both have high occurrences of chronic diseases and a greater need for broadband connectivity. The commission coined this, “double burden,” and incidents can be as high as 60% in rural counties.

“That makes a remote consultation with a doctor or video chat very difficult, but the situation is improving, and over time, I think at-home, remote care will be most valuable in rural areas, where technology use is far more practical than a long drive to see a doctor,” Collins says.

As telehealth expansion continues through Medicare reimbursements, patients are still unclear about its availability and use. A survey released by Healthline in August 2018 found that 46% of Medicare Advantage members were unsure if telehealth was an option, and 37% stated telehealth was not offered, even though it is.

Collins adds that hospitals are still lacking full-scale Wi-Fi and consistent cellular service, which impedes integration of telehealth and other mobile health offerings.

“These basic issues make it very difficult to bring technology in to provide extraordinary care and connectivity to all patients everywhere. Infrastructure upgrades are a must, and that should be the focus of many hospitals, so they can leverage great technologies that improve the lives of patients and clinicians alike,” Collins says.

### Investing in AI today for future ROI

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<td>75%</td>
<td>Of healthcare organizations are actively implementing or have plans to execute an AI strategy.</td>
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Source: November 2018 OptimIQ survey of 500 healthcare executives

### SMARTER THERAPIES

“By and large, many healthcare solutions lack meaning. They are not smart,” Patel says. “The data from them is either not collected at all or it is collected, and it stays in some type of local environment which inherently limits the value you can derive from that.”

He says that in the next decade drug delivery devices such as insulin pens, biologic auto injectors, inhalers, and smart packaging for pills will be commonplace to enhance both clinical and business operations in healthcare. The goal of tracking this data is to add to the landscape of behavioral insights that can help enhance patient care. Patel says that the ability to observe how patients use chronic therapies both inside clinical settings and at home or inpatient care settings is enhanced by integrated cloud and artificial intelligence use.

“The biggest thing is going to be our ability to use these advanced technology enablers to get much better at doing personalized medicine and personalized healthcare with our patients.”

— ANIL JAIN, MD, WATSON HEALTH AT IBM

“Investing in AI today for future ROI”

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Source: November 2018 OptimIQ survey of 500 healthcare executives
intelligence and machine learning within those data sets,” Patel says.

Jain says that IBM Watson is currently studying concepts around prescribing digital therapies that can be powered by blockchain and artificial intelligence and be tailored to patients’ behavior.

“Wouldn’t it be really interesting if I prescribed an anti-diabetes tablet, and I’m also prescribing an app on the patient’s smartphone that makes sure that they stay somewhat adhering to the medication? If they have any side effects, they’re educated about when they should see the doctor or when they could just simply ignore them,” Jain says.

He says smarter therapies could also prescribe diets that work in conjunction with medications and give patients more feedback on their progress.

“The idea is that we have to go beyond the pill,” Jain says. “As a physician, there has to be a better way to virtually have eyes on the patient even when they’re not in my exam room four times a year for 15 minutes.”

**ENHANCED PERSONALIZED MEDICAL CARE**

In the next decade, clinicians will have the ability to use blockchain, machine learning, and artificial intelligence seamlessly to provide specialized care to patients, says Jain.

“The biggest thing is going to be our ability to use these advanced technology enablers to get much better at doing personalized medicine and personalized healthcare with our patients,” Jain says. “Because the back-end healthcare technology is crunching all of their clinical data and administrative data, looking at their genomic profile, looking at their social determinants of health much faster than any human physician or clinician could, and combining that information in a trusted way.”

Jain says that fitness trackers are currently collecting siloed data, but are an important part of the equation when the data can be integrated along with other health determinants. Ultimately, he says more personalized treatments, especially for chronic conditions, would increase adherence to care plans.

“Essentially a clinician will have the ability to say, instead of just practicing in an evidence-based way, we’re going to combine evidence and personalized choices to give patients a much higher likelihood of being successful at the first set of treatments that are offered, instead of going back and forth a few times trying to figure things out,” Jain says.

**WORKFLOW THAT MIMICS CONSUMER TECHNOLOGY**

Collins says she is hopeful that the workflow technology that the healthcare field adopts over the next 10 year will match and adapt to technology that people are used to in other areas of their lives.

“Before a hospital shift, someone can sit in their cars and buy movie tickets, make dinner reservations, and chat with friends—all from their smartphones. They then enter the hospital for a day’s work, and many times, the technology landscape is entirely different,” Collins says.

She fears that the antiquated processes and devices in healthcare workplaces will be a deterrent to tech-savvy millennials.

“When millennials go to work at a hospital, we are asking doctors, nurses and care teams to step back 20 years and use landline phones, fax machines, pagers, and overhead calls—all of which downgrade and add complexity to our millennial workforce. They carry a heavy burden every day working with patients in stressful hospital environments, and the very basic technology they’re using only adds to the stress,” Collins says. “Furthermore, we are adding to cognitive loads by forcing them to remember procedures and how to use outdated technologies they are not naturally accustomed to using. So, over time, antiquated technology that doesn’t mirror what is used in our personal life and is not secure will be eliminated. As younger people continue to enter the workforce, many hospitals will be forced to modernize.”

— RHONDA COLLINS, VOCERA, AND THE AMERICAN NURSE PROJECT

Donna Marbury is a writer in Columbus, Ohio.

“Over time, antiquated technology that doesn’t mirror what is used in our personal life and is not secure will be eliminated. As younger people continue to enter the workforce, many hospitals will be forced to modernize.”

— RHONDA COLLINS, VOCERA, AND THE AMERICAN NURSE PROJECT
The Impact of Big Data on Medical Decisions

Data analytics offer potential to assist in effective end-of-life care  by MARK ROWH

End-of-life decisions are inherently difficult for all concerned. Fortunately for healthcare providers, and in turn the patients they serve, increasingly robust options offer support for data-driven decisions.

Clinical technology and data analytics have tremendous potential to overcome the obstacles to effective end-of-life care, according to Srinivasa Vegi, PhD, president of data analytics and artificial intelligence for Bethesda, Maryland-based IT services provider DMI.

"Not only will these tools help doctors and patients determine whether treatment is the best course of action, but they also help to better identify appropriate patients for palliative intervention as part of their end-of-life care," he says. "Moreover, clinical tools and analytics can help to reduce the length of stay for palliative care patients and decrease costs whether or not treatment is sought."

In fact, data analytics, particularly machine learning solutions that use big data, are radically transforming how physicians deal with palliative care, says Sapan Desai, MD, PhD, MBA, a Chicago-based vascular surgeon and CEO of Surgisphere, a firm offering an advanced healthcare data analytics platform.

Desai says that data analytics will change how physicians approach end-of-life care. Not only can machine learning and artificial intelligence pinpoint the causes for death, but depending on how the algorithm is set up, it can even make calculations regarding which of those causes will impact the quality of life the most.

"Good analytics can help direct the conversation with a patient by targeting specific medical problems and the projected efficacy of treatment," he says. "It can help them understand, and come to terms with, how their quality of life will look in the near future."

For example, Desai describes an 83-year-old patient who has moderate kidney disease, poor leg circulation, and heart failure.

"Machine learning may tell me that he is likely to suffer kidney failure leading to dialysis if I do any major intervention for his circulation problems," Desai says. "Armed with this information, my discussion with the patient may guide him toward palliative care rather than spending his last few months on dialysis, separated from his family."

Strong argument
One of the strongest arguments for the use of data analytics in this area is improved efficiency.

"Machine learning and data science can help make end-of-life care services more efficient and accessible," says Gabriel Bianconi, founder of Scalar Research, a New York AI and advanced analytics consulting firm. He notes that these tools can increase efficiency by automatically predicting which patients could most benefit from end-of-life care, without necessarily requiring referrals, inbound interest, or manual data reviews.

"Automated predictions can help healthcare professionals proactively reach out to more patients and do so at the ideal time for addressing end-of-life needs."

Bianconi says that machine learning could help patients and professionals make more informed decisions. "For example, the tools can help give more accurate estimates of survival rates and times for different interventions," he says. "With this information, both parties can better make a decision and plan accordingly."

In addition, machine learning could in theory be leveraged to make more accurate end-of-life predictions, Bianconi says. He points out that hybrid approaches..."
have already outperformed health-care professionals on a number of diagnostics tasks, and a similar approach could be applied to end-of-life situations.

At the same time, these tools have the potential to give insights that are tailored specifically for the patient. Instead of giving general information about survival rates, for example, a data-driven approach could leverage the patient’s medical history, and other personal data, to give more accurate survival rate predictions for different treatments or conditions, according to Bianconi.

**Real-world applications**

Such applications have moved beyond the theoretical to significant real-world applications.

With better communication about advanced illness care options and end-of-life planning, physicians have the potential to make significant improvements in healthcare access, utilization, cost and outcomes, says Brentwood, Tennessee-based Kurt Merkelz, MD, senior vice president and chief medical officer of Compassus, a national provider of hospice, palliative, and home healthcare services. He notes that to improve communication, there needs to be a better understanding of the goals and preferences of an individual patient, and these discussions can only meaningfully occur by way of shared decision making.

“An informed discussion occurs when information is fully disclosed, a patient’s values, beliefs, and preferences are top of mind and a recommendation is made based on an accurate estimation of a patient’s prognosis,” Merkelz says. “However, a lack of quality prognostic markers is a potential barrier to fruitful shared decision making.”

Thanks to advances in analytics, a productive way to address this gap is to use electronic medical record data extraction and improved predictive analytics to estimate probability outcomes. According to Merkelz, past algorithms have utilized non-clinical data and manually extracted data for calculations, limiting their usefulness. Enhanced data analytics, on the other hand, offer the opportunity to better identify patients who are at risk for hospitalization and offer other insights into a patient’s care needs.

“This allows patients to better plan for the type of care they would like to receive throughout their health care continuum,” he says. “Having these important goals of care conversations with patients helps them access beneficial services like home health, skilled therapy, and hospice and reduce unwanted hospitalizations, procedures and treatments, creating a better quality of life for them and their families.”

Sadly, 75% of patients are unable to make some or all decisions at end of life, according to Amy Berman, RN, a senior program officer with the John A. Hartford Foundation.

“Data analytics offer the possibility of identifying populations at greater mortality risk at a point when advance care planning can be initiated, or decisions can be reviewed,” Berman says.

In addition to helping address the concerns of individual patients, these tools offer potential for positive change on a large-scale basis. “We can use data analytics to root out disparities around access to palliative care, advance care planning, and the provision of unwanted care,” Berman says. “Data analytics offer the possibility of addressing what matters as our nation ages.”

At the same time, another reality is that the potential for such analysis is often misunderstood, says Greg Horne, principal health analytics strategist at software and analytics provider SAS. “This is one of those minefields where people are afraid that computers will one day decide whether you get to live or die,” he says. “That’s a gross mischaracterization, of course, but a real fear for many.” He says that those who express such worries are putting the emphasis in the wrong place. The real potential is not about

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**Analytics Adoption**

The Healthcare Analytics Adoption Model, which provides a structure for evaluating adoption of analytics, measuring progress toward analytic adoption and evaluating vendor products, describes eight levels organizations can attain:

- **Level 0**: Fragmented Point Solutions
- **Level 1**: Enterprise Data Warehouse
- **Level 2**: Standardized Vocabulary and Patient Registries
- **Level 3**: Automated Internal Reporting
- **Level 4**: Automated External Reporting
- **Level 5**: Waste and Care Variability Reduction
- **Level 6**: PHM and Suggestive Analytics
- **Level 7**: Clinical Risk Intervention and Predictive Analytics
- **Level 8**: Personalized Medicine and Prescriptive Analytics

Source: University of South Florida
the data or analytics, but how data and analytics can inform the real human decisions that happen around end of life.

“Doctors, patients, and families are often forced to make end-of-life decisions based on limited knowledge, guided more by gut reactions than actual evidence,” Horne says. He suggests instead imagining an artificial intelligence-based decision support system that helps these key stakeholders understand potential options and the likely outcomes associated with each.

“Data analytics offer the possibility of identifying populations at greater mortality risk at a point when advance care planning can be initiated, or decisions can be reviewed.”

— AMY BERMAN, RN, JOHN A. HARTFORD FOUNDATION

Horne notes that given all the complexities involved, the primary opportunity is in the centralization and aggregation of all relevant data. Then insights extracted from that data available can be provided to key decision makers via customizable reports and dashboards.

“Effectively, analytics could provide the framework for an end-of-life care workflow and related care management coordination,” he says. Aggregated historical data could serve as a means for using analytic approaches to develop dynamic, patient-specific guidelines for recommended “paths of care.”

At the same time, cost/expense insights could help guide both administrative considerations and patient and family decision making.

Despite the advantages offered by data analytics, its application can also generate unanticipated levels of complexity. While a strength of many tools is their capacity for streamlining the process of reviewing and interpreting large volumes of information, it still takes time for healthcare providers to absorb relevant details and translate them into terms that can be readily understood by patients and their families.

Consider the challenges

Indeed, the basic functions of collecting and sharing data may generate some challenging situations, according to Manali Patel, MD, assistant professor of oncology at the Stanford University School of Medicine and staff oncologist at the VA Palo Alto Health Care System. While she agrees that the use of analytics can bring real value, she also points to potential challenges. More data in itself may not be as useful as some would hope.

“We struggle to make decisions easier with the data we have now,” she says. “I’m concerned analytics will provide more information but not knowledge that’s actionable.”

She also poses questions related to ethical concerns. Have patients consented to use of data? Who will have access? Other questions range from insurance considerations to making sure patient’s fundamental concerns are not overshadowed by numbers.

Patel points out that while analytics can support efforts to prevent unnecessary use of acute care, approximately 20% of patients with terminal illnesses would still choose aggressive treatment even if data analysis doesn’t support their decision.

The bottom line is the imperative for applying information in a meaningful way.

“We need to make sure the data we have is going to lead to better patient care,” Patel says. “It’s all about quality care.”

In the future, the medical community can anticipate even more robust capabilities in this area, Vegi predicts.

“Data mining algorithms successfully digest and synthesize complex data into usable information for both doctors and patients,” he says. “There’s going to be a big change in the availability of that kind of predictive information in the next few years. More systems need to be developed that can cross reference data to help empower clinicians to have these conversations with patients and their families earlier, when appropriate.”

Currently, algorithmic modeling helps to synthesize and digest complex information into usable chunks to be leveraged by doctors, patients, and families to inform decision making, Vegi says. He adds that risk-scoring based on a patient’s diagnosis, severity, clinical condition, medication, and hospitalization history can help clinicians offer objective data to families about future hospitalizations, as well as decisions to withdraw care. “Though the concept of scoring a patient’s life expectancy based on a numerical figure may not seem optimal, it actually can help doctors and medical staff compare cases to justify treatments and specific care programs,” he says.

While interpreting such numbers may seem like something out of a dreary dystopian film, the reality is much more promising.

“Ultimately these remain human decisions, freely chosen by the patient and family, alongside their physician,” Horne says. He notes that exploring options customized to the patient—and rationalized by data related to end-of-life care outcomes and costs—simply provides a better starting point. “Such an evidence-based approach would certainly give families tremendous peace of mind as they face some of life’s most difficult decisions.”

Mark Rowh is a Virginia-based freelance writer whose interest areas include healthcare, business, and higher education.
Marc Harrison

President and CEO of Intermountain Healthcare by KEITH LORIA

Having grown up in a “medical family,” Marc Harrison, MD, never had much doubt that he would follow in the footsteps of his father and grandfather and carry on the legacy as a third-generation physician.

“My dad’s a general surgeon and a really good dad. I didn’t see very much of him when I was young, so I used to go on rounds with him on Saturday mornings at one of the small hospitals in Pittsburgh, where most of the poor people got taken care of in his practice,” Harrison says. “I got to see him interact with these patients and it inspired me. So, all I ever wanted to do was be like my dad and be a good doctor.”

Today, Harrison serves as president and CEO of Intermountain Healthcare, an innovative, not-for-profit system that operates 22 hospitals and nearly 200 clinics in Utah and Idaho.

“Healthcare as a field is rewarding because you truly make a difference in the lives of people,” he says. “Not only can we help people get better, we have the opportunity to help them stay well. In fact, Intermountain’s mission statement is ‘Helping people live the healthiest lives possible.’

Making a difference

Harrison is an influential leader in healthcare and is responsible for the creation and execution of Intermountain’s strategy to transform healthcare through best clinical and operational practices designed to advance its mission.

Under his lead, Intermountain is doing a number of interesting things to not only advance the healthcare industry, but to continue to provide their patients with the highest quality care at the lowest possible cost.

For example, Intermountain Healthcare has launched one of the nation’s largest virtual hospital services—Intermountain Connect Care Pro—bringing together 35 telehealth programs and more than 500 caregivers to enable patients to receive the medical care they need, regardless of where they are located.

Additionally, to help patients by addressing the often-unwarranted shortages and high costs of lifesaving generic medications, Intermountain Healthcare initiated a collaboration of other leading health systems to form a new, not-for-profit generic drug company called Civica Rx, which will bring products to market in 2019.

“Dan Liljenquist, the brilliant chief strategy officer for Intermountain, was the one who conceived this idea several years ago,” Harrison says. “With all health systems facing chronic shortages of vital life-saving drugs, and often capricious increases in the cost of these medications, we saw that action was needed to remedy the situation.”

It was back in August 2017 that Intermountain committed to cutting the number of opioids prescribed for acute pain across its entire system by 40% by the...
end of 2018 and Harrison notes it was close to achieving this goal. He attributes the success to a comprehensive, 360-degree approach that includes public education, and physician training and education regarding prescribing and payer limits.

“This means that there will be about two million fewer pills prescribed in 2018 for acute conditions,” he says. “Utah is one of only a handful of states that has seen a decrease in opioid deaths in 2018.”

There’s also a new collaborative called the Utah Alliance for the Determinants of Health (The Alliance), formed to promote health, improve healthcare access and decrease healthcare costs. The Alliance—a collaboration in Ogden, Utah, and St. George, Utah—is led by Intermountain Healthcare and involves a number of community organizations.

“It seeks to improve health by focusing on non-medical factors that affect health, such as housing instability, utility needs, food insecurity, interpersonal violence, and transportation,” Harrison says. “Intermountain will be investing $12 million over three years—$2 million annually in both Ogden and St. George—which will sustain the three-year demonstration project.”

The road to Utah
Harrison holds a medical degree from Dartmouth Medical School. Upon graduating from medical school, he was a resident at Intermountain Primary Children’s Hospital in Salt Lake City, then went to Maine to run a small PICU in Bangor, before heading back to Utah to complete a fellowship in pediatric critical care.

“I then joined the Cleveland Clinic as a pediatric intensivist,” he says. “I was then offered the chance to become the CEO of Cleveland Clinic’s hospital in Abu Dhabi, which was still under construction when I got there.”

While there, he oversaw the establishment of 12 Institutes, five centers of excellence, and more than 30 medical and surgical specialties.

In 2016, after nearly five years in Abu Dhabi, Harrison returned to Utah as the president and CEO of Intermountain Healthcare, where he has thrived.

“There are leadership principles I follow,” he says. “Be purposeful—leadership is a high calling, advance the greater good.”

Be courageous.
“Do what’s right, even in the face of adversity.”

Be agile.
“Focus relentlessly on the goal and be ready for anything.”

Approach for the future
Intermountain has a long history of bold moves and innovation and that’s not expected to stop anytime soon.

In 1983, Intermountain created its own health insurance plan called SelectHealth, which covers approximately 850,000 lives in Utah and Idaho, something that has expanded under Harrison's leadership.

In 1994, the Intermountain Medical Group was formed, and now employs about 2,300 physicians and advance practice clinicians. It also created an IRxMatch program, where patients and their providers have the opportunity to use a patient’s DNA to guide the prescribing of medications. Its Partners in Healing program helps patients recover quicker so that they can go home earlier, by allowing family members to be a part of the care and recovery.

“As an integrated system, we can effectively coordinate best care for patients,” Harrison says. “Intermountain’s focus will always be on doing what’s right for the patient. We are embracing consumerism, as many patients are becoming more price sensitive because of high-deductible plans. Providing high-quality care at the lowest appropriate cost is always going to be a winning strategy and is best for patients.”

Keith Loria is an award-winning journalist who has been writing for major newspapers and magazines for close to 20 years, on topics as diverse as sports, business, and healthcare.
Is your organization on pace with the biggest healthcare technology trends? Here’s your chance to find out. During the fourth quarter of 2018, 100 executives from provider organizations, benefit management organizations, health plans, long-term care organizations, and more took Managed Healthcare Executive’s annual Technology Survey. Their responses reveal the top technology trends and challenges you should be watching.

Q: Which of the following represents your most pressing information technology problem?

- Keeping patient data secure: 8%
- Securing funding for IT initiatives: 14%
- Interoperability: 21%
- Turning data into actionable information: 28%
- Compliance issues: 5%
- Training staff and/or physicians on new technology: 19%
- Other: 5%

Other responses include: “Updating technology with EHR/PM systems,” “Resources to keep pace with IT needs,” and “Keeping up with consumer tech needs for health navigation.”

Q: Respond to the following statement: “The federal government should mandate that payers pay for telemedicine services.”

- Agree: 68%
- Disagree: 32%

Q: Which of the following technology tools does your organization use?

- Health information exchanges to share data with other organizations: 72%
- Remote health monitoring/telemedicine/wearable devices: 46%
- Organization-specific apps for patients: 48%
- Artificial intelligence/cognitive computing: 20%
Q: How would you grade your organization’s use of big data to reduce costs and improve quality?

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There is an accelerating abundance of data being generated in healthcare every day. Having a clear strategy using this data to generate actionable insights is critical to achieve better results. It’s not surprising that many organizations represented in the survey see continued opportunity in this space and likely are balancing that with data privacy concerns. At the same time it’s encouraging, in an era of increased personalization, consumerism, and fast-growing technology capabilities to see the number as high as it is.

—Kevin Ronneberg, MD, vice president and associate medical director for health initiatives, HealthPartners

Q: Has your organization successfully used remote monitoring devices to improve patient care?

Yes 38%
No 62%

There is a lot of excitement in healthcare around the potential of wearables and other remote monitoring devices, but few organizations have been able to successfully implement these technologies due to factors like the cost associated with the necessary infrastructure to collect and monitor the streams of data. I think it takes a strong partnership, whether that is payer/provider or provider/third-party, to really drive the potential of these technologies within the healthcare sector.

—Cynthia Hundorfean, president and CEO, Allegheny Health Network

Q: Does your organization provide patients with tools to help them estimate the cost of healthcare services?

Yes 34%
No 66%

Undoubtedly, those of us in the industry acknowledge that these tools are important and what we have today is not enough. We need to do more. We need better tools and we need to invest in (and promote) a broader understanding by our constituents of how their true cost is actually determined.

—Hundorfean

Costs of healthcare is a critical issue to American consumers, especially low-income consumers. Helping members understand their out-of-pocket costs is one more way that plans that focus on the low-income population can address not just members healthcare needs but their financial security needs as well.

—Margaret Murray, MPA, founding chief executive officer, Association for Community Affiliated Plans
**Q:** How much do you expect to invest in technology in 2019?

18%  The same amount we invested in 2018
47%  More than we invested in 2018
8%  Less than we invested in 2018
27%  Not sure

**Q:** What technology has had the most positive impact on your organization in the past year?

42%  Data analytics tools
34%  EHRs
3%  Artificial intelligence/cognitive computing tools
16%  E-prescribing
2%  Remote monitoring tools/wearable devices
3%  Other  Including: “Proprietary field case management information system,” and “Updated RIS (Radiology Information System).”

**Q:** How is your organization doing when it comes to exchanging information with other plans/providers?

31%  We are exchanging very little information in real time
50%  We are exchanging some information in real time
12%  We are exchanging most information in real time
7%  We are exchanging all information in real time

For us to achieve the healthcare Triple Aim of better affordability, better health outcomes, and a better customer experience, we need to be able to turn data into actionable insights in real time. Emerging technologies—like artificial intelligence, machine learning, and advanced analytics—help us understand what the massive amounts of data are telling us. But more importantly, they can provide insights that can be acted upon for the benefit of individuals. This is definitely a good trend.

—Mark Boxer, executive vice president and global chief information officer, Cigna
Q: What technology initiative is your organization most focused on?

- 29% Data analytics
- 31% EHR improvements
- 13% Interoperability
- 10% Cybersecurity
- 6% Price transparency/patient payment tools
- 5% Patient portals
- 0% Artificial intelligence
- 5% Other

Q: What is the biggest leadership challenge health IT executives face?

- 40% Lack of resources (time, money, staff) to accomplish what they need to accomplish
- 10% Difficulty securing buy-in for initiatives from staff and other leadership
- 12% Dealing with unreasonable expectations (from their own organization or outside entities such as the government or payers or other partners)
- 35% Navigating a changing environment (value-based care, policy changes, new government mandates, population health management)
- 3% Other including: “Compliance with Meaningful Use Stage 3,” “Anti-fraud technology,” and “RIS improvements.”

Q: Have you created new technology roles at your organization in the past 12 months?

- 40% Yes
- 60% No

**THE NEW TECHNOLOGY ROLES YOU ARE HIRING:**

- Project manager for a new EHR
- Data scientists
- Outcomes coordinator
- Population tech to monitor the populations that we serve
- Member experience officers
- Specialty principal programmers
- System integration specialist
- Director of interfaces and project management
- RIS administrator
- Pharmacist IT superuser
Q: What new Health IT project is your organization working on this year?

**EHR**
- “Implementation of new EHR”
- “EHR process improvement”
- “Pulling accurate data from EHR on quality measures”
- “Upgrade of EHR platform”
- “EPIC upgrade”
- “Maximizing EHR functionality”
- “Implementing an effective yet affordable EHR system”

**Cybersecurity**
- “Enhanced security initiatives”
- “Technology upgrades and security”
- “Security issues related to remote access”
- “Mobile apps for claims integrity”
- “Fraud, waste, and abuse”

**Information gathering**
- “Business analytics software”
- “New clinical information system for all hospitals in the system”
- “More data analytics to impact cost and quality”
- “Data analytics associated with utilization”
- “Identifying a better information technology support system than the proprietary system we assembled using components from multiple vendors”
- “Scanning records and other documentation”
- “Value-based care measurements”
- “New RIS (radiological information system)”

**Remote healthcare**
- “Secure submission of information via mobile devices”
- “Expansion of telemedicine opportunities in our subspecialties”
- “Remote monitoring”
- “Wearables”

**AI**
- “Evaluating AI”
- “AI for genetic uveal melanoma”

**Patient access/communication**
- “Training providers on how data can improve patient outcomes”
- “Patient portal”
- “Coordinating with physician rating software to allow consumers to review options in healthcare”
- “Trying to find ways to reach patients through technology in a HIPAA-compliant manner”
- “Population health”
- “New applications for patient access initiatives”
- “Palliative care activation”

**Work flow**
- “Improving data integration with far providers”
- “Linking our wellness centers to physicians”
- “Building a prior-authorization work flow software”

Q: How will your IT staff numbers change in 2019?

- Decrease 1%
- Stay the same 50%
- Increase 30%
- I don’t know 19%

Q: Does your organization employ data scientists whose sole job is to analyze and interpret data, spot trends, and provide feedback to your organization?

- Yes 33%
- No 67%

Q: How closely does your health IT leadership work with the rest of the leadership in your organization?

- Very closely 57%
- Somewhat closely 32%
- Not closely at all 11%
Nursing leaders at West Des Moines, Iowa-based UnityPoint Health, a network of hospitals, clinics, and home care services in Iowa, Illinois, and Wisconsin, wanted to know why patients were being readmitted within 30 days. So they asked patients, “Why do you think you’re back?”

This approach allowed patients to speak openly, which gave nursing leaders insight into patients’ greatest challenges. Patients can struggle with a lack of access to follow-up appointments, food insecurity, or an inability to pay for medications, says Rhiannon Harms, executive director of strategic analytics at the health system.

Open-ended questions are important. It’s difficult to ask a question such as “Can you pay for your medications?” says Harms.

UnityPoint Health combines the patient narrative with retrospective data on readmissions to create a readmission risk score for the patient—and that information is communicated to the patient’s care team.

For example, Patricia Newland, MD, a family medicine physician, used the tool to determine that her patient was likely to experience an onset of symptoms within the next 13 to 18 days. She shared this information with the patient and told her to call the practice at the onset of symptoms, which could include shortness of breath, wheezing, and coughing.

The patient called the practice in that timeframe complaining of those symptoms. Newland got the patient in for a same-day appointment, consulted with her patient’s pulmonologist, and changed her patient’s medications—and thus prevented a hospital readmission.

Newland relies on her practice’s clinical care coordinator to highlight the patients who are at highest risk of being readmitted. It also helps that her practice keeps same-day appointment slots open.

Team huddles, which take place at her practice three or four times a week, allow the team to coordinate patient care. Newland, who also serves as a physician leader in the health system, is responsible for educating clinical care coordinators across the health system about the use of predictive analytics to prevent readmissions.

Once physicians realize that access to this information can help their patients, they embrace this tool, she says. In fact, Newland considers the readmission risk score as the “fifth vital sign” in her patients’ follow-up care.

Payers can support this work by paying for home-based health providers and devices to monitor a patient’s vital signs in the home, says Newland. “If we could do those things, it might keep a patient out of the hospital.”

UnityPoint Health has reduced all-cause readmissions by 40% within 18 months of using the predictive analytics tool. The health system’s home health team also used it to determine their most vulnerable patients when the community was hit by a blizzard. With this insight, home health providers could tailor their visit schedules to see patients who were in most need of care, says Harms.

Preventing readmissions for diabetes patients

In his quest to reduce readmissions at Kansas City-based University of Kansas Health System, David Wild, MD, vice president of lean promotion, discovered that patients with diabetes were more likely than other patients to be readmitted three times within 90 days at the nonprofit, academic medical center.

Wild used predictive analytics to comb through variables such as total length of stay, number of...
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The Impact of Predictive Analytics on Hospital Readmissions

Nearly one in five of all hospital patients covered by Medicare are readmitted within 30 days.

Cost of readmitting Medicare patients within 30 days is $15 billion dollars a year.

There were nearly 500,000 readmissions totaling $6.8 billion in aggregate hospital costs for four conditions in 2013. These conditions were congestive heart failure, chronic obstructive pulmonary disease, heart attack, and pneumonia.

Source: AHRQ

Continued from page 22
chronic conditions, whether the hospital admission was planned or unplanned, smoking history, the age of the patient, and payer type (public or private).

Inability to access follow-up care, patient discharge disposition (the presence of a family member in the home or a stay at a skilled nursing or rehabilitation facility), and the total number of chronic conditions were the biggest drivers of readmissions for diabetes patients, he says.

With this insight, all patients who have been readmitted to the hospital three times in 90 days—not just those with diabetes—are connected with a case manager who helps them secure follow-up care. On an average day, five to nine inpatients meet that criteria, says Wild.

In May, when Wild started this project, the readmission rate for diabetes patients was 25%.

Currently, the readmission rate for diabetes patients is 13.9%

Wild attributes University of Kansas Health System’s success to improved engagement with nurses on inpatient units and incorporating diabetes educators for daily information sessions with patients on medications.

He welcomes support from payers. For example, coverage of diabetes education in the outpatient setting could help prevent readmissions.

Physician engagement helps reduce readmissions

Flagler Hospital, a nonprofit healthcare facility in St. Augustine, Florida, has 400 physicians, according to Michael Sanders, MD, its chief medical information officer. With that number of physicians, wide variation in clinical practice is likely. That’s a pet peeve for Sanders, who also laments the impact of waste on healthcare spending in the United States. (Wasteful spending in healthcare exceeds $1 trillion each year, an amount that two experts writing in Health Affairs say “could fund the entire Medicaid program twice over.”)

Sanders had the proof in hand, but changing how physicians practice medicine is tough. To tackle this, he taps his longstanding relationships with physicians involved in Flagler Hospital’s EHR deployment, which started in 2012. These physicians act as “ambassadors” for adhering to the care path designed for pneumonia patients, says Sanders.

Flagler Hospital has reduced pneumonia-related readmissions from 2.9% to .4% since March. In addition, the hospital has saved $1,350 per patient and reduced the length of stay for pneumonia patients by two days. Going forward, Sanders expects the hospital to save $726,300 annually because of this work.

Payers should care about this, he says. They’ll benefit from the elimination of unnecessary tests and the reduction in cost.

“They should be looking at ‘same cause’ readmissions and rewarding hospital systems that can not only reduce cost, but also readmission and mortality as well. They must recognize that this effort costs hospital systems in dollars and work effort, and reward them accordingly.”

Insurance companies could also pass on those savings to members who use hospital systems that reduce cost while improving outcomes, adds Sanders.

 “[Payers] should be looking at ‘same cause’ readmissions and rewarding hospital systems that can not only reduce cost, but also readmission and mortality as well. They must recognize that this effort costs hospital systems in dollars and work effort, and reward them accordingly.”

—MICHAEL SANDERS, MD, FLAGLER HOSPITAL

Aine Cryts is a writer based in Boston.
The Trends Health Execs Need to Follow

These four trends will impact you in 2019

BY KAREN APPOLD

As the new year marches on, four trends that are helping to shape healthcare stand out. These include consolidation of payers and providers, a rise in consumerism, technological advances, and integrating care based on population health. Managed healthcare executives will need to embrace these trends in order to survive in the healthcare landscape.

Here, experts discuss what these trends entail, what’s giving them momentum, and how executives can get on board with these trends.

1 **CONSOLIDATION OF PAYERS AND PROVIDERS**

The trend of health insurance companies and providers such as health systems, hospitals, and pharmacy chains consolidating began in 2013 with the passage of the ACA. “This legislation initiated a massive industry shift away from volume-based reimbursement toward value-based reimbursement,” says Ben Kraus, CEO and founder of Stellar Health, which helps insurers and providers improve the long-term health of managed care beneficiaries. The number of practices owned by big health systems rose by approximately 80% since 2012; many would have gone out of business otherwise due to financial pressures. Similarly, health insurers have been buying up providers to consolidate vertically rather than horizontally, at an historical rate.

“For the first time ever, insurers (and indirectly, providers) are on the hook for keeping people healthy (i.e., avoiding additional medical services) rather than encouraged to provide more services.”

— BEN KRAUS, STELLAR HEALTH

“... insurers (and indirectly, providers) are on the hook for keeping people healthy (i.e., avoiding additional medical services) rather than encouraged to provide more services.” — BEN KRAUS, STELLAR HEALTH

— BEN KRAUS, STELLAR HEALTH
Players to reinvent themselves. 

Furthermore, “Providers are consolidating to create an integrated clinical network that is more coordinated and well-positioned to keep a large population of members healthy, and therefore perform well financially in the new system or because they lack capital and scale to survive in an industry that requires a fundamental overhaul of the provider business,” Kraus says.

Similarly, health insurers are buying up providers because from the insurers’ perspective, everything has changed—their business is no longer an underwriting exercise that they price and then passively observe outcomes. Their new business model is actually impacting the risk, rather than simply pricing and managing it. “The health insurers that will win this new game are companies that can increase their provider networks’ efficiency and make their populations healthier. Post 2013, insurers rely heavily on providers managing their members in a certain way (i.e., focusing on prevention, coordinating transitions, avoiding expensive over-hospitalization) in order to remain profitable as insurance companies.

Despite the benefits, the combined integration of insurers and providers has not, and will not, be easy, says Steve Jackson, president, NRC Health, a healthcare customer experience solutions provider. For most of the last 60 years, the two entities have been on opposing sides. “For these new combinations to truly achieve their desired potential, it requires a focus on consumers,” he says.

Consumers want ease: 80% reported that they would switch providers for convenience factors alone. “Benefits will be achieved if healthcare is made more affordable, accessible, and cost transparent as well as less administratively burdensome for clinicians, affording them more time to spend serving patients and families.”

A starting point for any insurer looking to partner with a health system would be to understand the hospital’s current and historical focus on customers. “Health systems that already deliver a great customer experience will be predisposed to build upon that foundation through a vertical integration with insurance partners,” Jackson says.

“Measuring progress against these efforts must extend beyond a segmented, episodic view of patient experiences to one that more holistically encompasses the consumer relationship with the healthcare organization and measures their loyalty. The NRC Healthy Loyalty Index gives healthcare organizations a single metric to assess consumer loyalty—taking into account brand awareness, Net Promoter Score, access, needs, engagement, motivation, and experience.

A RISE IN CONSUMERISM

Today’s consumers increasingly want to interact with the healthcare industry as more than just passive patients. “Just like any other purchasing decision they make—from cars, to clothing, to hotel choices—they want to be in control and are demanding more choice than ever,” says Ross Goldberg, president, Kevin/Ross Public Relations, an agency that helps healthcare clients with marketing communications challenges.

“This trend has emerged because of the rise in digital tools and the incredible amount of data that is now available at the click of a button to help consumers make intelligent decisions and better manage their health,” Goldberg says. “Access to information gives consumers a feeling of empowerment and a belief that not only can their opinions be heard, but that they can also have the ability to influence matters more than ever before.”

Furthermore, health plans are accountable for achieving financial outcomes for Star Ratings and HEDIS reporting, and receive financial incentives when they attain certain population health outcomes, says Paul Meyer, president of the public and com-
munity market at Welltok, a software as a service company for consumer health.

The ACA played a key role in the rise of consumerism when it launched the online marketplace. "More than ever, consumers are shopping for their health insurance and are weighing their options and purchasing decisions," Goldberg says. Non-traditional players entering the market are also giving the trend momentum, because they offer consumers even more choices on how they will access and pay for their healthcare.

Another reason that consumerism is growing is that consumers have lost trust in the healthcare system. "This is because costs continue to soar, defining quality remains mysterious, moral debates have morphed into political rhetoric, reports on medical errors continue to emerge, and unencumbered access remains elusive to many," Goldberg says. "Consumers don't believe that those steering the healthcare ship—including health plans—put members first. Until trust is restored, consumers will want more control over decision making."

To embrace this trend, Meyer says that healthcare executives need to continue to employ technology. "Consumers expect a digital experience first, but healthcare is still largely relying on paper and the postal service in an attempt to reach members," he says. Using ingrained communication channels such as texting to engage Medicaid beneficiaries in their health and well-being has been successful. For example, 90% of consumers read text messages within three minutes and nearly 60% of low-income Americans have used their phone to access health information.

Along these lines, Goldberg says, "Healthcare organizations will need to embrace digital health, telemedicine, wearable monitoring and fitness devices, online resources, social media, and other technologies to develop effective consumer engagement strategies."

One example of consumerism at the federal level is the newly proposed HHS rule requiring drug companies to give list prices for their products in television ads. "The HHS proposal will require direct-to-consumer television advertisements for prescription drugs and biological products paid for by Medicare or Medicaid to include the list price in certain situations," says Carolyn L. Mitchell, JD, MHA, senior counsel, Jackson Walker LLP, a law firm that advises businesses, including healthcare entities. "If a manufacturer's list price for a prescription drug is greater than $35 for a one-month supply, or the usual course of therapy, then TV ads must include the price."

**3 TECHNOLOGY ACCELERATION**

As an industry that's often viewed as antiquated, the opportunity for digital transformation in healthcare is great. In 2015, administrative burdens accounted for up to 30% of the $3 trillion healthcare spend; much of this was caused by inefficient data entry processes, says Peter Kirk, CEO, SERMO, a global social network for physicians. A recent JAMA study found that despite the United States spending about twice what other high-income nations do on healthcare, U.S. health outcomes are still inferior.

In light of this, health insurers face immense pressure with rising costs, evolving consumer demand, and changing industry dynamics. Out-of-pocket costs are growing, with 63% of employees seeing single-coverage deductibles rise from 2011 to 2016. Growing complexity has resulted in half of consumers struggling to navigate the health system on their own. "When you combine that with demographic shifts—an older population and more chronic disease—the cost and complexity of healthcare is only expected to increase," says Kaveh Safavi, MD, JD, head of global health practice, Accenture, a global professional services provider.

Consumers' expectations are also changing, driven by experiences and perceptions outside of healthcare. This is evidenced by observations such as 37% of millennials being willing to switch a health plan to get personalized benefit options. "People expect a personal touch—round-the-clock service, easy-to-use, wherever they are, on their terms—in all areas of their lives," Safavi says. "Healthcare is no exception. This means transparent pricing, more frequent communications, and personalizing service options to individual needs."

In order to lower a healthcare company's costs while meeting consumer expectations, companies must tap into digital technologies to increase productivity while making care more personalized, Safavi says. "To make care more productive, we must find ways to move elements of care to machines..."
“These strategies demonstrably improve patient engagement, resulting in higher member satisfaction and retention, and they also yield better clinical outcomes.”

- JEFF BROWN, CAREPORT HEALTH

as well as on to the patients themselves,” he says.

By staying on top of how other industries leverage technology to solve key pain points, Kirk says healthcare executives can be better equipped to implement technological solutions into their own organizations or be inspired to build technology that meets specific needs.

The biggest obstacle to technological adoption can often be an organization’s company culture, as employees may be reluctant to adopt new technologies for fear of change. “When rolling out new technology and processes company-wide, it’s crucial to highlight not only the benefits for the business, but also for each individual,” Kirk says.

“Sermo has seen success by emphasizing how technology will free up time spent on manual tasks and allow employees to focus on business initiatives which may have fallen by the wayside, therefore empowering talent to rise through the ranks.”

4 INTEGRATING CARE BASED ON POPULATION HEALTH

Integrated care involves complementary care and coordination across a patient’s entire care needs and provider network, starting with the primary care provider (PCP) and extending across all specialists. “It is a vehicle to treat the whole patient, comprehensively addressing their care needs, while aligning financial incentives to do the right thing for the patient,” says Hank Schlissberg, president, DaVita Health Solutions, which provides comprehensive, integrated care for high-risk, poly-chronic patients. Those care needs often vary and span clinical, social, palliative, and behavioral, among others.

Comprehensive, coordinated care might include transportation assistance, social services, support navigating multiple doctors and care plans, medication management, and after-hours support. “The additional resources built into integrated care models help time-limited PCPs ensure that their patients receive the extra attention needed to successfully manage their health,” Schlissberg says.

As the industry moves to value-based arrangements, many health systems are evolving their approach to care. “This includes managing populations to keep them healthy, aligning incentives for everyone who has a stake in healthcare, creating care process models that further define how care and services should be provided, improving access to care by addressing the social determinants of health, and working to make care more affordable,” says Steven Barlow, MD, senior medical director, SelectHealth, an insurance company in Murray, Utah.

Schlissberg expects this trend to gain momentum because as healthcare costs continue to skyrocket, they are unsustainable. “Savvy healthcare leaders are finding success with integrated care models that deliver high-quality care and generate lower costs,” he says. “Keeping patients healthy and out of the hospital or emergency room is the goal.”

Jeff Brown, vice president of payers, CarePort Health, an Allscripts company that provides care coordination software solutions, says there’s a huge upside to payers investing in population health and creating tighter financial and clinical alignment with providers, particularly around their high-risk patient populations. “These strategies demonstrably improve patient engagement, resulting in higher member satisfaction and retention, and they also yield better clinical outcomes,” he says. The tremendous growth of Medicare Advantage—an entire insurance program developed around appropriately meeting the needs of the Baby Boomers in a cost-efficient way—is clear validation of population health approaches.

At a high level, the primary thing that health insurers need to do is set reasonable and achievable population health goals that are calibrated over time. “For some, it’s a significant change to deliver integrated care and to enter into risk-sharing agreements with providers,” Brown says. “Population health should be viewed as an ongoing process, not a one-time event.”

As plans set their population health strategies, they should be mindful of the need to build integrated processes that scale, Brown cautions. “Today we see plans sending case workers into post-acute care settings to check on patients and when necessary, intervene, and redirect their care,” he says. “The intention is good, but it’s not scalable. Insurers that are offering Medicare Advantage plans need to devise strategies that support the exponential growth of that population.”

Karen Appold is a medical writer in Lehigh Valley, Pennsylvania.
Top Advice from Executive Coaches

When you are at the top or close to the peak in the leadership hierarchy, sometimes it’s hard to get good advice. After all, with rank comes power, and many of your colleagues may be unwilling to speak the truth because they are protecting their own interests.

Here are some valuable tips from executive coaches that will help any healthcare executive succeed.

1. Build resiliency muscles

Resiliency is a catch phrase in many workplaces today—particularly in the healthcare arena because of the inevitable challenges in the work. More than ever, healthcare executives need to thrive through change and make peace with the unknown.

Carol Vernon, certified executive coach with Communication Matters, an executive coaching and training company in Washington, D.C., says in the high-stakes world of healthcare, building strong “resiliency muscles” is absolutely necessary.

“We all know a few of those people who sail through tough times more easily than the rest of us,” she says. “This means they show up better—often projecting more calm and confidence in the face of uncertainty and adversity than those who allow the stresses of work and life to impact their presence.”

Executives may also be juggling multiple priorities: trying to balance work, family, friends, and hobbies. They often also deal with complex work issues and relationships, realities of time constraints, unrealistic expectations, limited resources, and limited control on the outcomes.

“My advice is to take time to focus on building resiliency by identifying and focusing your energy on those things that you have control or influence over, rather than things or situations out of your control, and accept circumstances that cannot be changed,” Vernon says. “Nurture your relationships and rely on others for support during times of stress and adversity, both at work and home, and protect yourself from work and personal relationships that drain you, and ultimately, reduce joy and pleasure in your life.”

Resiliency can dramatically impact your executive presence. If you allow the stresses of your work to impact your health and well-being, this will lead to poor concentration and lack of focus, anxiety, impaired decision making, a lack of creativity, and self-doubt.

2. Concentrate on development needs

Most healthcare executives carry hefty loads that are often too heavy to bear alone. Carrie A. L. Arnold, PhD, principal coach and consultant of Denver-based The Willow Group, says it is difficult for many leaders who find themselves in executive roles and still wrestle with basic leadership issues, as it is hard for them to ask for help as there is an assumption they should know things by now.

What happens is these leaders become great champions and supporters of development op-
opportunities for their direct reports and emerging leaders, but they sacrifice their own development needs.

“They should not scrimp on their own needs for success,” Arnold says. “They should maintain mentors, work with coaches, be part of communities of practice, and above all else, have a strong network of friends who are also executives. They need to have a shared context with their network of support.”

Arnold has worked with numerous executives who have admitted they have few friends, something she especially finds true with women execs.

“They need to ensure they are feeling connected, as the absence of this will create stress creep that jeopardizes their self-care and efficacy as leaders,” she says.

**3 Adopt a general manager mindset**

Gone are the days when an executive was solely responsible for the profit-loss of their silo. No longer does running successful projects simply require managing by checklists and repeatable processes. That’s why Ted Beasley, lead instructor for the consultancy firm Emergent Execs, says strong leaders need to develop a general manager (GM) mindset.

“The profile of the modern general manager is shifting due to the speed of change and the interconnectedness of business units in healthcare,” he says. “The GM mindset of that past required healthcare execs to excel in long-term strategic planning, aligning people around priorities through positional power, using metrics to manage, and getting the systems and processes right.”

While those skills will always be needed, the application of them is changing due to digital transformation, the unpredictable regulatory environment, the collaborative nature of the new economy, and modern technology. More and more, Beasley notes, success is determined by one’s ability to adapt to the uniqueness of every project—embrace ambiguity to drive innovation and process improvement, exercise influence and collaboration in a matrix environment, and be more thoughtful about what type of leadership is required in each situation.

**4 Put people in the right jobs**

“Get the right people on the bus!” says Liz Callahan, executive and team coach for Full Spectrum Coaching. She explains this means having people in positions in whom you have the highest level of trust and confidence, in terms of the ability to execute in their jobs.

The problem she has found in the healthcare space is that many C-suite execs spend too many hours doing things that aren’t part of their job. A lot of this is oversight—checking in, monitoring, second-guessing, reviewing what someone has done. While all of this is important, she notes this is not what they were hired for and leads to burnout.

“Get the right people that you are confident in so there’s not a need for constant oversight and second-guessing,” Callahan says. “When you can do that, you can stop doing their jobs and start doing yours.”

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**Hiring the Right People**

Even the best leaders can’t manage a team of bad members. We asked health execs their favorite interview questions for finding the right employee—here’s what they told us:

“If you had the power to change one thing in our healthcare system, what would it be?”

— Don Hall, MPH, principal, DeltaSigma LLC Healthcare Consulting

“What current trends or recent innovations provide the greatest opportunities for positively impacting healthcare improvement?”

— Virginia Gurley, MD, MPH, chief medical officer, AxisPoint Health

“What mistakes have you made and what would you have done differently?”

— Peter Wilderotter, president and CEO of The Christopher & Dana Reeve Foundation

“How are you equipping yourself and others to not just stay on top of market events, but stay involved in market events?”

— Dan Renick, president of Precision Value & Health

“What makes a job satisfying to you? How do you build a high-performance team? What does success in this position look like to you?”

— Edmund Sabanegh, Jr, MD, MBA, president of Regional Hospitals at Cleveland Clinic

To see more, along with why execs love their questions, visit bit.ly/InterviewMHE
The U.S. biosimilars market gained momentum over 2018, as more of the agents were submitted for FDA review and more regulatory approvals were granted, including additional immunosuppressive and cancer-treatment biosimilars.

Sandoz's biosimilar adalimumab, Hyrimoz (adalimumab-adaz) injection was approved in October 2018, and Celltrion's Truxima (rituximab-abbs), the first biosimilar to be approved in the U.S. for non-Hodgkin lymphoma and the first approved biosimilar to Rituxan, was approved in November 2018.

"We’re just seeing the cusp or initial wave of these cancer-treating biosimilars," says Gary H. Lyman, MD, MPH, FASCO, FRCP, professor of medical oncology at the University of Washington School of Medicine, in Seattle. Lyman also serves as chair of the American Society of Clinical Oncology (ASCO) Biosimilars Work Group.

In May 2018, the FDA approved a biosimilar version of epoetin alfa (Epogen/Procrit), called Retacrit (epoetin alfa-epbx), for treatment of chemotherapy- and kidney disease-associated anemia, as well as for anemia resulting from zidovudine among HIV-positive patients. In June, the FDA approved Mylan and Biocon’s application for Fulphila (pegfilgrastim-jmdb), the first biosimilar to Neulasta (pegfilgrastim) for reducing infection risk in some patients with non-myeloid cancers who are administered myelosuppressive chemotherapy.

There are now 15 FDA-approved biosimilar products, up from nine in 2017. Of the four oncology biosimilars approved in 2018, three have already gone to market, says Rick Lozano, vice president of biosimilars and integrated business development, AmerisourceBergen.

Additional biosimilars approvals are coming in 2019 and more applications will be submitted, as more brand-name biologics’ patent protection periods expire.

"The regulatory framework is pretty well settled now," Lyman says. "We’re still waiting for the final rules for some of the other aspects of biosimilar approval, such as substitution and interchangeability."

Biosimilars do not have to be declared interchangeable with their reference brand-name biologics to be prescribed, but an interchangeability determination would allow substitution by pharmacists.

"While it will take time for us to fully benefit from recent regulatory updates, the changes and communications we saw coming from policy makers in 2018 were incredibly promising and present great opportunities for 2019," Lozano says. "Looking ahead, policy makers are seriously exploring the interchangeability between biosimilars and their reference products as part of the blueprint for lowering drug prices."

Congress and the FDA made it clear in 2018 that biosimilars “will be part of the solution” for controlling healthcare costs, Lozano says. “That alignment is starting to better pave the way for more products to come to market, as...
evidenced by this year’s uptick in approvals.”

The FDA is also preparing new guidelines on biosimilar product labels, which Lozano hopes will create a “more level playing field” between biosimilars and biologics by helping to reassure healthcare providers that biosimilars are safe and effective.

**Will the U.S. catch up to Europe?**

The U.S. has lagged behind Europe on biosimilars approvals and uptake, and some analysts have pointed to uncertainty about anticipated cost savings, regulatory and legal issues, contracting mechanisms, and physician unfamiliarity with biosimilars as potential barriers to uptake.

Because biosimilars are “highly similar” but not identical on a molecular level to originator biosimilars, some clinicians have had concerns about the idea of switching patients from well-known biologics to less familiar biosimilars.

“Europe has been ahead of the United States on biosimilar approvals for years but the good news is this: none of them have been withdrawn from the [European] market or seen red flags with major safety or efficacy issues,” Lyman says. “Nevertheless, recently, a submission for a biosimilar for rituximab for lymphoma was turned down by the FDA, for reasons they know and I don’t, and the company has decided not to challenge or resubmit.”

**Cancer biosimilars take center stage**

“Over the past year, for the first time, we have had a number of oncology biosimilars FDA-approved for cancer treatments as opposed to supportive care agents like growth factors,” Lyman says, citing approvals since September 2017 for the biosimilars Mvasi (bevacizumab-awwb), Ogivri (trastuzumab-dkst), Ixifi (infliximab-qbtx), Hyrimoz, and Truxima.

The first biosimilar approval was for Zarxio (filgrastim-sndz), a biosimilar G-CSF myeloid growth factor used in supportive cancer care, which was approved back in March 2015. In 2018, three more filgrastim and pegfilgrastim biosimilar products were approved.

But Lyman cautions that biosimilars are still in their early days.

“Biosimilar trastuzumab and bevacizumab were approved in December 2017, but both of these met with delays and even now they are just beginning to enter the marketplace, so we really don’t yet have data on their uptake,” he says.

Oncology biosimilars have been “mainly a good-news story,” Lyman says.

“We have multiple new approvals and the approval process seems to be going smoothly—with perhaps one glitch that was part of the growing pains of a new process,” he says.

As the FDA weighs the evidence for a new approval, the agency often asks an oncology drug advisory committee to review that evidence and make a recommendation, Lyman explains.

“Usually the FDA decision is in line with the recommendation of the advisory committee,” Lyman says. “There’s public comment, a whole transparency process.”

But the agency recently skipped that step in 2018 when approving Fulphila (pegfilgrastim-jmdlb), a biosimilar long-acting growth factor used in the supportive care of cancer patients, Lyman says.

“They chose not to do that this time, probably because they felt this is just another growth factor and they’ve done this before,” he says. “So, there was no public display of the evidence.”

That move may slow its uptake, Lyman says.

**Cost-saving expectations: Will biosimilars deliver?**

Lyman and Lozano agree that as FDA biosimilar approvals accumulate, they should increase competition between biosimilar products to bring down cost.

“Pfizer most recently launched Retacrit at a substantial discount to the reference product Epogen,” Lozano says.

A second Neupogen biosimilar, Pfizer’s Nivestym (filgrastim-aafi), is now on the market, for example.

“Pfizer launched Nivestym at a wholesale acquisition cost [WAC] that is 30.3% lower than that of the reference product and is 20.3% lower than that of Sandoz’s Neupogen biosimilar,” says Lozano.

Biosimilar filgrastim is on the market at 10% less than the brand-name originator, Lyman says.

“That’s with very early data and very little competition,” he says.

“With time, we’d like to see that become 20% or 30% price reduction. It’s never going to be 80% like with generics. These are more complex molecules. But it seems to be an early trend toward a reduction in pricing.”

“In 2019, we’re hoping to see the oncology biosimilars that haven’t launched yet due to pending patent expirations and litigation—such as [biosimilar] bevacizumab—come to market as quickly and efficiently as possible,” Lozano says. “We will also continue to watch [biosimilar] pegfilgrastim and neupogen products, which are currently filing for FDA approvals.”

But there are still headwinds that will likely slow the widespread adoption of oncology biosimilars. Chief among these are concerns about reimbursement under the current “buy and bill” payment system, Lozano says.

“It’s also important to keep in mind that oncologists’ familiarity with and confidence in using biosimilars is critical to a successful formula,” Lozano says.
PATIENTS WARY OF HOSPITAL PHYSICIANS

69% the share of patients who want government action to stop the trend of hospital M&A, and

36% think Congress should do more to incentivize independent physicians

“Consumers expect a digital experience first, but healthcare is still largely relying on paper and the postal service in an attempt to reach members.”
— Paul Meyer, president of the public and community market, Welltok. For more on consumerism, see page 25.

Telemedicine use increases
From 2005 to 2017, telemedicine use increased from 0.020 to 6.57 per 1,000 members.
Source: JAMA

Value-based care adoption still slow
In 2018, Net Patient Service Revenue “increased, highlighting that the majority of hospitals still operate on a majority fee-for-service basis.”
Source: Kaufman Hall

The value of value-based care:
42% of health leaders say value-based contracts lower care costs
46% say value-based contracts significantly improve care quality
42% say value-based contracts will become the primary U.S. healthcare revenue mode
36% are uncertain that value-based contracts will become the primary U.S. healthcare revenue mode

Source: NEJM Catalyst
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