

# A Summary of the 2023 Wall Street Journal Health Forum



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On March 6, 2023, *The Wall Street Journal* (WSJ) hosted its Health Forum, a hybrid all-day event. This WSJ Health Forum was attended by experts across the health care space and health care technology companies. The broad spectrum of attendees included physicians, payers, academics, consultants, etc. from various organizations, and the panel included experts from Google, Apple, Mayo Clinic, etc. Meeting sessions were generally headlined by CEOs or other senior leadership team members from various health care entities. The meeting itself included a dozen separate time slots with sessions generally running between 25 and 35 minutes each. The virtual meeting featured 11 different events. This white paper focuses on those events. The sessions were informative and fast-paced, with each one providing a quick hit of relevant and cutting-edge information around health care.

Achilles Natsis from the Society of Actuaries (SOA) Research Institute staff attended this forum virtually.

Included below is a summary of the different sessions offered, with a focus on those relevant for actuaries. With each summary, the SOA has provided insights on the actuarial implications of this information. Key sessions from the WSJ Health Forum included the following:

- Better by the Day: How Staying Healthy Changes Health Care
- Moderna's Next Moves
- Drugstores of the Future
- The Evolution of Primary Care
- Health Care VC: A Look Ahead
- Public Health and the Private Sector
- Spotlight on Hospitals: COVID, the Economy and Beyond
- What's Next for Virtual Care?
- Breakthroughs in Aging Research
- A Biotech's Plans for a Turnaround
- The View from Washington

In addition to summarizing the sessions, this paper will look to offer an actuarial perspective on these topics as they pertain to short-term and long-term impacts on health care delivery and costs.



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## Session 1: Better by the Day: How Staying Healthy Changes Health Care

The first session featured the head of Health Care and Life Science from Simon-Kucher, a health care consulting firm.

The speaker emphasized that focus on health habits can reduce lifestyle risk. He noted that growth potential in the health care space includes vaccines, dietary supplements, health data, and the monitoring of health data to help change a patient's habits. By keeping individuals informed, health care can be personalized.

Payers have traditionally focused on larger costs. Now, they are more interested in preventive health care. There is a special emphasis on obesity and diabetes management.

Some strategies to help overcome obstacles around staying healthy include:

- Demonstrating value based on meaningful clinical evidence on the effectiveness of interventions.
- Determining the use case for a technology.
  - How does it plug into a daily routine?
  - Can the payer determine the amount of potential savings?
- Convincing payers about how to monetize added value for a solution and determine who pays.

Other things to consider include:

- Understanding the value being delivered.
- Determining who benefits.
- Determining appropriate groups to target for interventions.
- Guiding providers and patients into the use of technologies and strategies.
- Addressing different needs and expectations.
- The need for compelling clinical evidence is key.
- Non-traditional players only do as much as is needed.
- Exploring innovative pricing models.

### ACTUARIAL IMPLICATIONS

The use of strategies that enhance the health of members can contribute to healthier individuals with lower health care costs to health plans and employers. However, this needs to be offset by the costs of the programs and a positive ROI needs to be ensured. Ultimately, successful programs will help drive down chronic lifestyle diseases, which can reduce costs both in the present and the future.

## Session 2: Moderna's Next Moves

This session featured the CEO of Moderna discussing the future of his company. Regarding COVID and the vaccines, Moderna's outlook includes the following:

- COVID will soon be in the endemic phase – if it isn't already.
- The virus will continue to evolve – most likely not to kill, but to infect faster.
  - Some mutations will be more severe, similar to what we see with the flu.
  - Vaccines will continue to be adapted to different strains of COVID.
- Moderna will know by May what to target for the fall vaccines.
- Moderna is looking to combine vaccines into a single dose for respiratory viruses. (COVID + Flu + RSV)
  - These can be customized by region to address upcoming public health directives.

In addition, the COVID vaccine will be transitioning into a commercial model with pricing at \$110 - \$130 per dose. The previous price for the government was at a huge discount due to large volumes and assistance with distribution. However, these vaccines will be covered under preventive care so the out-of-pocket cost to insured consumers will be \$0. Also, Moderna spent 10 years developing the mRNA platform and lost money every year as a result, so their CEO cited the need to recoup development costs.

Moderna is also exploring the following key areas for deploying the mRNA technology:

- Combining respiratory vaccines into a single offering.
- Attacking latent viruses such as mononucleosis and chicken pox to prevent the onset of those diseases and future conditions.
- Applying mRNA to teach immune systems to identify cancer cells to attack them right away before they multiply and become a problem.
  - Moderna is conducting trials on melanoma. They will look to customize products for people.
  - They are looking to combine Keytruda with mRNA to try to improve delivery.
  - They hope to attack cancer early with the goal of saving lives and reducing health care costs.
- Helping to treat or cure rare genetic diseases.
  - Use the platform to fix intracellular issues.
  - Look to code correct genes in mRNA for missing proteins.

Finally, audience questions focused on these items:

- Rapid vaccine deployment is constrained by ramp-up capacity, speed of phase studies and constructing safety databases all to speed up time to market.
- Discussions around the cost of the vaccine emphasized the need to pay back investors, manufacture in bulk from scratch and pay manufacturers up front.
- The limited (3-6 month) duration of vaccine actions may be enhanced by continuing to improve the platform. It is also subject to the evolution of the virus, which is difficult to predict.
- Vaccine access for low-income countries was deemed to be non-viable due to the relative lack of use and difficulty of storage.

### **ACTUARIAL IMPLICATIONS**

Vaccine costs that were previously paid for by the US government will increasingly show up in commercial, Medicare and Medicaid claims going forward. This will have an inflationary effect on health care costs. The development of other mRNA applications through specialty drugs for treatments of rare diseases will likely also cause costs to rise. Benefits from these developments are likely to be increases in quality-adjusted life years, with potentially some reductions to future health care costs if treatments developed are less expensive than current protocols.

## Session 3: Drugstores of the Future

This session featured the Chief Medical Officer (CMO) of CVS Health discussing the evolution of drugstores, as well as the company's efforts in preventative health, primary care, talent retention and recent acquisitions.

Over the years, CVS has increased the breadth of its footprint in the health care space. In 2018, they acquired AETNA<sup>1</sup>, establishing a foothold in the health insurance space to go along with its position as a market leader in pharmacy. Subsequent to that, in 2023, CVS acquired Oak Street Health<sup>2</sup>, moving into the primary care provider space. This activity brought up the question of how insurers and doctors can be under the same ownership, despite the inherent conflict of insurers wanting lower reimbursements, and providers seeking higher reimbursements for medical services. The CMO of CVS responded by stating that primary care is the front door for health care with provider referrals taking place downstream from primary care. He stated that primary care works better under a team-based care model. More primary care into the center of health care, rather than as a gatekeeper, can improve health care outcomes.

Further investments and improvements in primary care can help to make the team-based model more effective. CVS's goal is to usher patients through a journey that includes onboarding of AETNA and Caremark members with the goal of improving population health. Care managers would help navigate both medical and drug benefits. CVS will focus on retail health, primary care, and home care, which are strategic choices looking to achieve the quintuple aim. The quintuple aim seeks to optimize cost, quality, access, experience, and equity in health care. CVS will partner to get downstream referrals as well, and will include embedded clinical pathways for minute clinics. They will look to integrate electronic medical records (EMR) and will continue those pathways as they extend into primary care, home care and physician support services.

The discussion also touched on greater integration of providers with drugstores, such as the use of minute clinics, as well as drugstores onsite in primary care facilities. Overall, CVS is looking to integrate pharmacy and medical care delivery more with less emphasis on the retail aspects of the pharmacies.

CVS saw significant increases in medical customers into their drugstores through the administration of COVID-19 testing and vaccinations. CVS administered 56 million COVID-19 tests and 90 million vaccinations.

On the cost of care side, CVS is working with vaccine manufacturers to create marketplace competition and optimize competition in order to lower health care costs.

Due to the tight pharmacy labor market, CVS is looking to provide more support during core hours, while also seeking to maintain constant pharmacist support. They are targeting virtual support of medication through technology, tools, and culture. Some of these efforts will carry over beyond the pharmacy to all areas of CVS health. They could potentially use robots or automated pharmacy fulfillment – especially in the mail order area. Finally, analytics could be used to better predict workflow.

Finally, CVS will look to embed mental health services into primary care to improve it. Their goal is to have specialists to support PCPs and minute clinics. Social work and mental health are critical to the model CVS Health is looking to create. They will seek to reduce the burden of mental health and navigate patients to the right spot for care on behavioral health support. A team-based model of social work and mental health is critical.

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<sup>1</sup> <https://www.cvshealth.com/news/company-news/cvs-health-completes-acquisition-of-aetna-marking-start-of.html#:~:text=Including%20the%20assumption%20of%20Aetna's,to%20the%20health%20insurance%20products>

<sup>2</sup> <https://www.cvshealth.com/news/company-news/cvs-health-to-acquire-oak-street-health.html>

## ACTUARIAL IMPLICATIONS

CVS Health is looking to provide greater integration of health care services to its members and patients. This points to the potential for more efficient and effective health care, which should drive down costs in the long run. However, there may be increased short-term costs as CVS builds up its infrastructure and processes to improve integration. If successful, CVS should be able to drive down costs, improve practices of care and increase quality to patients.

## Session 4: The Evolution of Primary Care

This session featured the CEO of One Medical, an operator of primary-care clinics, which was recently acquired by Amazon for \$4 billion. He discussed his company's dealmaking strategy, new areas of business growth and the role of technology in health care delivery.

One Medical's CEO viewed the Amazon acquisition as an opportunity to build on a human-centered and technology approach to health care. This includes the integration of an in-person subscription-based model with focus on consumer experience, logistics, and technology. He even mentioned the possibility of leveraging prime membership to provide opportunities for participants to access physician services through a direct primary care type model.

Despite not having a lot of "big data," the CEO of One Medical emphasized the use of technology to improve outcomes, while still protecting against Amazon's use of consumer data. Rather, the focus is on a use of data to make for a good longitudinal health experience. Some specific applications of technology through artificial intelligence (AI) include:

- Using machine learning to help deal with simple responses to take some of the burden off routine inquiries.
- Identifying and focusing on individuals with the greatest needs.
- Doing outbound outreaches to identify high-needs individuals and helping to intervene in their population health.
- Creating a worry score to measure the most complex members or members with acute conditions.
- Exploring whether Chat GPT or similar technology could take on the role of a PCP.
- Using AI to sort through and handle less urgent items and matters.
- Looking to augment providers by feeding them information that could help them with their jobs.
- Using medical signals that incorporate claims data and then providing suggestions based on prior claims or complications to help providers save time.

Additionally, the purchase of One Medical by Amazon is part of a growing trend of health care entities buying and integrating primary care. This is seen as an avenue for the following:

- Getting access to a key entry point in the health care system.
- Implementation of value-based care (VBC) more directly.
- Better serving members by creating models that are more favorable to patients and doctors including:
  - Increasing accessibility to patients.
  - Increasing length of visits for patients.
  - Decreasing physician hours to prevent burnout.
  - Paying physicians salaries to better align incentives.
  - Decoupling organizational payments from underlying physician reimbursements.
  - Providing home care for more complex patients.
  - Integrating telehealth or virtual care for routine interactions and check-ins.

## ACTUARIAL IMPLICATIONS

Overall, the acquisition of One Health by Amazon, along with other acquisitions of primary care practices should help facilitate more efficient care and better outcomes. Through better communications among providers and a greater emphasis on preventive care and maintenance, one can anticipate a shifting of costs from acute and emergent hospital care to more preventive care. This should help drive lower costs down the road as patients are better cared for and less likely to require more expensive unanticipated care. While prices may go up in the short run due to higher primary care utilization, as well as recouping the costs of acquisition, this should ultimately lead to lower health care costs in the future.

## Session 5: Health Care VC: A Look Ahead

This session featured two leading venture capitalists discussing their investment rules and goals in the midst of economic challenges, the technologies and business models that are piquing their interest and the funding outlook for the year ahead.

In prior years, very large pools of venture capital (VC) were raised. Capital still exists poised to invest in new technologies, but not as much due to the threat of economic downturn. Current investors are looking to direct capital into areas of innovation, while also seeking to attract follow-on capital. Smaller companies are viewed as opportunities as well.

In general, there is an overall shift into more health care capital. This is due to aging populations and the demand for biotech developments. However, in the current environment, more sensible valuations prevail and there remains a focus on quality science and individuals.

Biotechnology companies have been an area of focus for a while. The main activity in that space is heavily influenced by returns to more rational financing. Restructuring in that sector has resulted in human resources and platforms finding a home elsewhere. There will be more focus on best opportunities now and less willingness to take chances. However, good science will always get funded and long-term structural items will always be there. The panelists also advised biotech companies to seek a NASDAQ listing. In addition, many biotech firms are also considering mergers. In fact, large pharmaceutical companies are currently seeking both merger and licensing opportunities with biotech companies since they view biotech as a necessary engine for new technologies.

As far as the companies with the greatest appeal within the pharmaceutical life cycle, investors are generally looking at the very beginning and very end of the development process. The parts in the middle are the hardest and that is where some of the most help from outside capital is needed. Pharmaceutical companies are losing a lot of immediate revenue from declining vaccines. Pharmaceuticals that have capacity can focus on delivery platforms (such as mRNA) in the late stage. However, they also need to generate new drugs in order to keep the pipeline moving.

Determining good science is key for investors. While clinical trial data is key for late stages, you need a good methodology set up in the early stages, as well as knowledge in how trials and studies are conducted. High quality methodologies and qualified individuals are critical to the development of new drugs. Aspects of the pharmaceutical industry attracting attention include:

- New modalities
- New biology
- New platforms
- Better manufacturing
- Better data science

- New emerging diseases, particularly neurodegenerative

While other areas of need in the medical space are attracting venture capital, including rural care delivery, the bulk of this session focused on investments into pharmacy.

### ACTUARIAL IMPLICATIONS

Venture capital can be a disruptive force where it manifests itself and health care is no different. The field of health care tends to be reluctant to pursue new innovations and methodologies. Since VC is an investment, it requires a return. Thus, there will always be a VC component that drives costs up. That said, if a new treatment or methodology can save costs, then there will be greater uptake and part of the savings will be offset by paying the investors. On the pharmacy side, the expectation would be for venture capital to drive up costs as new drugs are introduced into the marketplace. Like the pharmaceutical companies, venture capitalists also need to recoup potential losses from other failed efforts, so they are likely to drive higher prices for new drugs hitting the market. On the other hand, as the innovations and improvements kick in, these efforts may help to flatten the cost curve in the future.

## Session 6: Public Health and the Private Sector

This session featured public health advocate, Chelsea Clinton, offering a global perspective on some of health care's biggest issues, ranging from childhood obesity to maternal health. The session discussed how business leaders across the private sector can become more aware of global issues in health equity.

In this session, the speaker discussed other public health concerns as COVID becomes endemic. The speaker cited complacency towards adequate progress and apathy towards inadequate progress as one key item. In addition to that, she emphasized a goal of a more non-partisan view on public health, which got away from us during the pandemic. Examples of public health topics with bi-partisan support include:

- Addressing the HIV / AIDS pandemic
- Maternal and child health - particularly childhood immunizations
- Addressing anti-vaccine activism and vaccine hesitancy

The speaker addressed some other examples of pressing public health initiatives that she was focused on including:

- Addressing the growing maternal health crisis
  - Focusing on midwife-based and physician-supported birthing efforts.
  - Addressing needs in the US and the rest of the world.
  - Incorporating best practices to areas that are underperforming.
  - Addressing social determinants of health on a systemic level.
  - Ensuring clean water and nutrition.
  - Banning child marriage and child trafficking.
- Improving health care access
  - Ensuring that Medicaid benefit packages and networks are in line with those in commercial insurance.
  - Including lactation consultants and other assistive services into basic benefit packages.
  - Getting Medicaid Managed Care Organizations (MCOs) involved since they administer 50% of all births in the US.
- Improved navigation of health care options for those in need

- Creation of an accompaniment model to assist individuals through their health care journeys.
  - Having a reliable primary point of contact / navigator.
  - Moving away from reliance on high cost and high intensity care.
  - Building more medical care infrastructure including facilities and clinics.
  - Building more medical, nursing and dentistry schools to train health care workers.
- Provisions for increasing homeless populations
    - Invest in affordable housing and support of housing for the homeless.
      - Individuals will be more able to get assistance.
      - Individuals will be better able to pay for things.
      - Address the addictions that frequently accompany homelessness.

### ACTUARIAL IMPLICATIONS

Public health issues can contribute to suboptimal medical states of individuals leading to worse outcomes and higher acute costs despite lower preventive costs. Addressing these public health concerns would result in a shifting of health care spending away from acute and emergency care and into community care often provided in a non-medical setting. Some of these services are frequently provided by MCOs to Medicaid populations resulting in better medical outcomes and lower costs downstream. Greater implementation of these recommendations could help to shift costs from acute settings to community care and preventive services in the short run, while also driving lower costs and better outcomes in the longer term – often for other insurance carriers.

## Session 7: Spotlight on Hospitals: COVID, the Economy and Beyond

This session featured the CEO of a prominent academic health care system in the US discussing the role of nonprofit hospital systems in communities. She tackled emerging challenges ranging from hospital capacity issues to cost inflation, and why she prioritizes the future of academic medicine.

The CEO discussed the important role of nonprofit hospital systems in communities, including addressing emerging challenges ranging from hospital capacity issues to cost inflation, and the future of academic medicine.

A significant area of focus in this discussion centered around the attempted acquisition of community hospitals and construction of outpatient ambulatory sites by a teaching hospital system<sup>3</sup>. While this attempted acquisition was not approved by regulators, the pros and cons of this type of activity, as well as the justification, provide some good insights into ways that the health care system can become more efficient and effective. The concerns that a dominant market share for this system could lead to monopolistic pricing of services are valid. However, this acquisition would also allow the acquirer to better triage their patients by steering lower acuity members to lower cost facilities that can meet their needs just as well as the teaching hospitals.

Per the hospital system CEO, academic research centers are the future for research and cutting edge of care. These areas need investments in order to maintain the level of research needed to continually spur innovation, while also maintaining a gap between revenues and expenses that is being eroded by inflation. The CEO argued for a system where your highest acuity care goes to academic centers and lower acuity care goes to community hospitals.

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<sup>3</sup> <https://commonwealthmagazine.org/health-care/tracing-the-origins-of-the-mass-general-brigham-fight/>



Technology-enabled patient-centric care can help increase home care, which results in a lower cost of care. Patients remaining in a teaching hospital setting when better alternatives exist will drive up the cost of care.

Labor costs are another significant obstacle being faced by providers. There are certain strategies that can be implemented to help keep costs down and drive more efficient care. The CEO cited an 8% inflation rate, with labor accounting for 63% of costs. Traveling nurse costs were high during COVID, but those have now leveled off. Increases in wages are not matched by revenue. Keeping, retaining and recruiting individuals is critical.

Capacity is one component of inflation that is separate from labor costs. For example, a shortage of capacity to handle lower acuity care can result in higher emergency room (ER) visits and costs, especially for conditions that are not true emergencies. Virtual care is being used and is incredibly important, especially in behavioral health. Nursing home capacity and post-acute settings also contribute to these shortages. The entire continuity of care needs to be reviewed.

There are not enough beds in the ER. Thousands of patients in the state of Massachusetts are being transferred to Mass General, which they can no longer accommodate due to other capacity constraints. Sick patients need to be able to go to a place that serves their needs but is also appropriate from a cost perspective. Taking population health into account is important with more work needed upstream and more spending needed in prevention.

Academic hospitals have an increasing number of patients with more of them in risk contracts. Complex patients need different types of management, such as those that show up in the ER more than 20 times a month. Improved management with more case managers is needed to make sure the right care and continuity of care is available for a better allocation of resources.

Finally, infusion drug volumes are also contributing to higher costs at the teaching hospitals. These types of complex services tend to be done at higher cost facilities that are equipped to handle them. In addition to the teaching hospitals often being the situs of care, they are also often the location where the research is done, and the infusion therapies are developed.

## ACTUARIAL IMPLICATIONS

There is an argument to be made that provider consolidation generally results in higher costs due to an improved bargaining position for the newer and larger entity and higher unit costs per service. However, if the result is a more efficient use of care, then the mix of services could shift to lower cost settings and lower acuity treatments, which could offset some of the higher unit costs. Similarly, more appropriate and effective treatments through better communication and integration of provider data could result in lower overall utilization of services and better health care outcomes. These are all things for actuaries to consider when evaluating the cost impacts of provider consolidations.

## Session 8: What's Next for Virtual Care?

Per the session description, telehealth saw a surge in demand and investor interest during the pandemic, but can that last? Some lawmakers are calling for stricter regulations on telehealth advertising, and the Justice Department is investigating allegations of improper prescribing at telehealth companies like Cerebral. Meanwhile, on May 12<sup>th</sup>, the White House ended the public health emergency that allowed remote appointments to flourish. A telehealth entrepreneur and a health care policy expert share their thoughts on what to expect from virtual care in the year ahead.

First, the presenters discussed the future of telehealth in light of the end of the Public Health Emergency (PHE). The first point was that it was not wise to build a business around the PHE. That being said, aspects of telehealth that will

remain post-PHE are those that will work in that environment. Maternal health is one area where telehealth can be useful. Mental health and substance abuse have also benefitted from the availability of telehealth. Some key benefits include:

- Improved access to care
- Opportunity for quick touchpoints
- Less stigma
- Better adherence
- Fewer cancellations due to traffic or childcare events

Some concerns around telehealth include the prescription of drugs without an in-person encounter, particularly for controlled substances. The Drug Enforcement Administration (DEA) has issued new rules in order to better control the prescribing of controlled substances. Some justifications and ramifications of these rules are listed below.

- Justifications include:
  - The desire to prevent fraud, waste and abuse.
  - Having prescribers meet with patients in person to better assess their condition and the need for a particular prescription.
  - Too many people are seeking prescriptions based on drug advertising.
  - Excessive off-label prescribing was taking place.
  - A quick response was needed to fix loopholes in PHE policies.
- Ramifications include:
  - Removal of full carte blanche prescribing through telehealth.
  - Loss of convenience.
  - Abuse by certain prescribers has made it more difficult for others who continued to follow the rules.

Overall, there is a need for balance between utilizing in-person appointments for certain conditions and the option of telehealth for less complex cases. Finally, telehealth can also improve coordination of care, as better communication is possible along with real time consultations with specialists, particularly in the areas of behavioral health, which ordinary PCPs may not be as well-versed in. Ultimately, the goal is to preserve in-person resources for more critical cases, while telehealth can take care of less complex individuals and cases.

## **ACTUARIAL IMPLICATIONS**

The continued use of telehealth post-PHE will lead to greater volumes of services due to access barriers being removed. If telehealth pricing is less expensive than the in-person alternative, there could be some cost reductions for services shifting to telehealth. Telehealth is also a means for providers to better monitor the status and condition of more complex patients. Greater use in this area could help act as preventive care and drive down emergency room visits, hospital encounters and other high acuity health events. Going forward, telehealth is a tool that can be used to more effectively triage care and manage costs. The overall cost impact is ultimately dependent on the post-PHE levels of reimbursements for telehealth relative to in-person visits.

## Session 9: Breakthroughs in Aging Research

This session featured three individuals who are actively involved in aging research. They examined the possibility of reversing aging. This included exploring whether the lives of people can be extended based on recent scientific breakthroughs that could help us better understand the process of aging.

First of all, the goal of this research was discussed. This included the concepts of extending life span vs. health span. Since aging is not a disease, but the main risk factor for major causes of death, maximizing a healthy period of life is the main goal of this research.

One of the researcher's areas of focus was on the ultra-rare childhood disease of progeria. The question was how to connect this disease to other conditions. A toxic protein called progerin is produced much faster in children with progeria. A blood test to measure progerin was created to help gauge the progression of aging. Using that blood test can also help inform on the effectiveness of products that are intended to slow or reverse aging conditions. This is because studies have shown that hundreds of downstream proteins are affected by progerin. Studying the effects of progerin treatments on these downstream proteins are another measure of the effectiveness of those treatments.

One group of proteins called sirtuins are being studied to help determine their effectiveness in slowing down aging. Research indicates that a molecule called Nicotinamide adenine dinucleotide (NAD) is key to maintaining sirtuin proteins. The initial product was used to boost NAD proteins to levels typically seen at younger ages. Some data has come in to imply that NAD may be able to impact aging itself, as well as stressful conditions in health.

Another discussion topic was around the concept of biological age. Tests that measure the components of biological age are only for that purpose. Biological age is an imperfect proxy for aging, which can theoretically be used to measure the effectiveness during clinical trials.

Lastly, the idea of gene editing came up as a potential pathway to counteract aging and aging-related diseases. This could be a possible way to fight progeria. Recent developments of the mRNA platform provide additional opportunities for treating some of these conditions, although their development and implementation costs are deterrents against widespread use. The use of animal testing is another possibility since some animals – like dogs – age much faster than human beings.

### ACTUARIAL IMPLICATIONS

Aging has always been one of the most significant drivers of medical costs. The potential to study and develop pharmacological tools to help fight aging or the effects of aging could have very large impacts on medical cost trends in the future. The development of such drugs could drive up medical costs in the short term as people seek treatment. However, this would be offset by savings in future medical costs and, ultimately, a slowdown in age-related medical cost trends. Nevertheless, the timing of those impacts is not imminent, so most of the potential effects would occur several years down the road.

## Session 10: A Biotech's Plans for a Turnaround

This session featured the CEO of Biogen, one of the world's biggest biotech firms. The company won early approval for a new Alzheimer's treatment after the failed launch of a prior drug. He discussed what's next for the company, and how it is planning to find new growth.

Biogen's CEO talked about the Food and Drug Administration's (FDA) drug approval process for his company's Alzheimer's drug, Lecanemab. He discussed how their studies so far have shown statistically significant improvement in mental cognition associated with the reduction of plaque, which is the primary mechanism of their drug. Biogen is seeking accelerated approval for their drug due to an urgent unmet medical need.

The Biogen CEO also talked about some potential lessons learned from the failures of other Alzheimer's drug launches. Prior Alzheimer's drug makers made some misjudgments associated with the data that they presented from their clinical trials. The result was limited acceptance in the marketplace due to lack of clear efficacy. Biogen's CEO also drew some parallels between older Alzheimer drugs and the HIV drug, AZT. AZT was an earlier, less effective treatment for HIV and AIDS, which ultimately led to more research and the development of current antiretrovirals.

The current goals of Biogen center around two priority review launches. They are the aforementioned Lecanemab for treating Alzheimer's and Zuranolone for major depressive and postpartum treatment. Biogen is also looking at Lupus, ALS, and Parkinson's. All of those diseases progress slowly with long and expensive studies being needed to prove the efficacy of treatments.

Per their CEO's comments, Biogen is not as profit oriented as some other pharmaceuticals, but they do seek to be more efficient. They need to manage the risk profile of their R&D pipeline. Neurodegenerative drugs have a long timeline and are riskier. Biogen is looking to reduce some of these risks and costs. Autoimmune diseases in the immunology area are another area of opportunity where focus could be shifted to balance some of the risks. Finally, Biogen is looking at more rare disease research and offerings.

Mergers and deals are important elements in Biogen's business plan. Biogen is examining the pipeline and considering new research working with other entrepreneurial companies to help those companies accelerate their processes. Biogen has become very skilled at building business partnerships. The work that Biogen did with Spinraza is evidence of this<sup>4</sup>. Biogen continues to seek out partnerships that help in the development of new expensive drugs.

Per Biogen's CEO, Lecanemab will be priced at \$26,500 per year<sup>5</sup>. Biogen spent billions on the development of this drug, and, to that end, their CEO emphasized the need for ROI in general for drugmakers to invest in further improvements on disease treatments. In addition to that, there are high medical and long-term care costs associated with Alzheimer's, which could be alleviated with the use of this new therapy. In addition to that, lower doses of the drug may be needed to clear up plaque at earlier stages of the disease.

The FDA's evaluation of risk/benefit was similar to treatments for oncology or rare disease - with small populations and higher prices. Alzheimer's drugs are similar in terms of potential costs, but there is an expectation of much higher potential volume. There is a need to balance innovation with affordability.

Lastly, there was discussion around using data, artificial intelligence (AI) and technology to augment or impact clinical trials. There are indications that technology through the use of radio waves can be used to detect symptoms

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<sup>4</sup> <https://investors.biogen.com/news-releases/news-release-details/biogen-announces-first-patient-treated-respond-study-evaluating>

<sup>5</sup> <https://www.bmj.com/content/380/bmj.p628#:~:text=Treatment%20is%20estimated%20to%20cost%20%2426%20500%20per%20year>

much earlier than what is happening currently. Data may be used to pinpoint who may be most likely to respond to drugs. Also, virtual consents for clinical trials helped during the pandemic. Finally, the means of innovating at clinical trials are big opportunities.

### ACTUARIAL IMPLICATIONS

The prospect of another, more effective Alzheimer's drug (Lecanamab) coming to market has huge potential implications to actuaries. There were a lot of concerns and potential pitfalls associated with its prior Alzheimer's drugs. Given the early signs of clinical efficacy related to Lecanamab mentioned above, there is likely to be a much greater uptake of this medicine if it clears FDA hurdles, not to mention acceptance into drug formularies. Actuaries also need to consider the impact of an effective Alzheimer's treatment on future costs for Alzheimer's patients. While the \$26,500 annual cost for Lecanamab is steep, there are potentially considerable savings out there related to the medical costs of treatment and the long-term care costs associated with Alzheimer's. Furthermore, the impacts could be felt in life expectancy if this new treatment is able to extend life span. This could affect life insurance, annuity, pension, and social security costs for the broader population. It is difficult to say what could be the overall cost effect, but actuaries need to consider all possible implications as they model the potential effects of this drug or other similar game changers. Lastly, the use of technology to enhance clinical trials could lead to a shorter travel time from development of new drugs to their appearance in the marketplace, which is another thing for actuaries to take into account when projecting medical and pharmacy cost trends.

## Session 11: The View from Washington

This session featured the head of the Food and Drug Administration (FDA) discussing a wide variety of topics including the following below:

- Fighting Disinformation
- Food Safety
- Tobacco Alternatives
- Generic Drug Shortages
- Digital Health Care
- Rare Disease Treatments

On the topic of fighting misinformation, the FDA head noted that they have some tools at their disposal, but also that there is no magic bullet. While medicine and biology are key, 90% of advisory panel findings are based on best opinion and 10% are based on scientific fact. Human opinion and messiness are part of the process.

Regarding food safety, the topic of infant formula supply came up in light of recent contamination and recall issues. The FDA head noted that a team of experts is working on this, applying frequent interventions to help get formula distributed to the right places. He expressed a need for an industrial policy to help the issue of key food shortages to get fixed in the long run. He also mentioned that all commodities except tobacco are at risk of shortages and emphasized that companies need to guard supply chain information as trade secrets.

The topic of tobacco alternatives came up with a focus on the relative danger of vaping. While combustible tobacco causes obvious damage, nicotine addiction is still very strong, and vaping is a pathway to greater nicotine addiction. In addition, there are no long-term studies on vaping, so its true effects are still being determined. On a similar note, Cannabidiol CBD products were also discussed. While CBD is not a dietary supplement or food, people are using it frequently at varying degrees of legality. Approaching CBD like tobacco seems to be a reasonable approach. CBD may have beneficial or harmful effects so the vulnerable need to be protected due to these safety concerns.

Generic drug shortages were attributed to drug companies not being able to afford selling their products at low prices. Thus, they are constraining supply to drive up prices, which ends up hurting consumers. The FDA head stressed a need for a different generic company policy to help intervene before shortages occur. It's also important to note that CMS has different guidelines than the FDA. To help improve the results of government agency reviews, drugmakers need help to better design studies to address questions from these agencies.

Digital health was addressed from the perspective of physicians prescribing drugs. Currently, the use of digital health to prescribe drugs is a work in progress. Digital health can add flexibility to more quickly diagnose illnesses and prescribe treatments. However, a good balance needs to be achieved between in-person and remote visits in order to optimize the competing priorities of patient flexibility vs. the risk of fraud, waste and abuse.

Rare disease treatments present a unique challenge to the FDA. The goal is to get treatments out to the public as expeditiously as possible while preserving the guardrails of safety and efficacy. There is a need for long-term follow-up studies to ensure that initially observed successes continue into the future. In addition, they are needed to study the effectiveness of new medications in treating new diseases.

### ACTUARIAL IMPLICATIONS

The FDA plays a very important role in ensuring the safety of agricultural products as well and regulating the issuance of new pharmaceutical treatments. They are under pressure to quickly approve new drugs while also ensuring their safety and efficacy. However, there are many aspects of pharmacy costs that they cannot control. Actuaries have the challenge of interpreting the likelihood and timing of FDA drug approvals, which can significantly impact future pharmacy trends, as well as overall medical trends. They need to be able to understand the FDA's perspective in order to extrapolate the likelihood of drugs in the pipeline making it to market, particularly brand-new treatments for certain diseases. Lastly, actuaries need to be able to interpret and anticipate policy changes which can end up affecting the regulatory environment of already approved drugs, as well as newly legalized substances.

## Closing Summary

Overall, these sessions from the WSJ Health Forum provided actuaries with many insights into emerging health care topics and some key related actuarial considerations. They include the following:

- Focusing on healthy habits can reduce an individual's lifestyle risks. There are ways to introduce individually tailored preventive actions which can lead to healthier outcomes and lower future health care costs for participating individuals.
- With the end of the Public Health Emergency (PHE) and COVID-19 moving into an endemic phase, Moderna is looking to leverage its mRNA platform into other uses. These include combining COVID, Flu and RSV in a single injection, as well as treatments of cancer and other rare genetic diseases.
- Through its acquisition of Oak Street Health, CVS has taken a step to better integrate pharmacy and primary care. Integration creates the opportunity for greater communications between different medical functions, leading to more efficient care and potentially better outcomes and lower future costs, despite higher up-front costs associated with the merger.
- The movement of Amazon into the primary care space through their acquisition of One Medical represents their attempt to integrate their superior use of technology, logistics, and their subscription-based model to help improve the delivery of services and reduce cost of care. This deal focuses on the use of data to focus on individuals with greater needs and to give providers better tools to serve their patients.

- Chelsea Clinton’s discussion around public health sought to raise awareness of key public health issues, including HIV/AIDS, maternal issues and child health. She pointed out the opportunities that Medicaid has to address many of these concerns by assisting individuals to obtain appropriate preventive and emergency care. She noted that addressing social determinants of health is another way of tackling the challenges of underprivileged populations that often lead to unfavorable health outcomes and higher health care costs.
- The efficient use of hospital resources is key to addressing excessive health care costs. Guiding patients to an appropriate situs of care can reduce overall health care costs, regardless of who owns the facility. While the consolidation of hospital systems may raise costs initially, it can help provide savings through more efficient care. Nevertheless, due to recent disruptions in the labor market and facility capacity, hospital costs are expected to rise, regardless of more economical uses of resources.
- While virtual care saw a huge spike during the COVID-19 pandemic, it was based on the Public Health Emergency (PHE) and the related volumes were largely not sustainable. Mental health and substance abuse are showing the most staying power as the PHE winds down. Concerns around the use of telehealth for the prescribing of controlled substances are being weighed against the relative goals of quick response vs. fraud prevention. However, the use of telehealth for check-ins is a convenient and effective way to maintain good health and manage chronic conditions.
- While tangible results are likely years away and there’s difficulty around quantifying results, aging research offers a unique opportunity to extend lives and help fight biological and chemical agents that lead to more rapid aging. Successful research could lead to products that help delay the effects of aging and could extend the quality of life for older individuals.
- Lessons from the failed launch of other Alzheimer’s drugs are top of mind to Biogen as they prepare for the launch of their next generation drug, Lecanemab. The need for strong and clean clinical results demonstrating safety and efficacy are critical for both FDA approval and to help convince health plans to include it on their drug formularies once it is approved. While the \$26,500 projected annual cost of this drug is significant, it can significantly reduce the costs of paying for caregivers and other medical expenses, while also increasing the healthy life spans of impacted individuals.
- There are many issues currently occupying the FDA’s focus. The ones that revolve around health care concentrate on addressing safety issues related to new substances, dealing with generic drug shortages, new challenges related to telemedicine prescriptions and rare disease treatments. The FDA’s main role is to ensure the safety of food, controlled substances and pharmaceuticals. They also engage in trying to help with supply shortages for key food items and drugs. Finally, the FDA works with drug manufacturers to help expedite the approval of lifesaving drugs by guiding them as they conduct appropriate trials, while still maintaining their standards of safety and efficacy.
- Most of the topics discussed at the 2023 Future of Health Forum were associated with higher up front health care costs. However, the implementation of these policies and techniques can lead to long-term cost savings in some cases, as well as longer healthy lifespans for impacted individuals.



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