American Academy of Actuaries

Issue Brief

Key Points

- During the COVID-19 pandemic, many long-term care insurance (LTCI) carriers observed increased mortality, particularly disabled life mortality.
- Actuarial experience from the core years of the pandemic, 2020-2022, is now measurable and the short-term economic volatility and disruptions have subsided. However, insurance companies may use varying approaches to developing assumptions, based on the data from this period.
- Several areas of uncertainty may continue to exist, including:
  - long-term morbidity and mortality effects of long-COVID;
  - availability of COVID-19 related data;
  - long-lasting effects of mRNA modifications; capital market uncertainty, including inflation, and its impact on both investment earned rates and cost of care inflation trends; and
  - general uncertainty regarding if and how endemic COVID-19 will impact LTC mortality rates and claim incidence rates over the long-term.

The Impact of COVID-19 on Long-Term Care Insurance Experience—2025

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In January 2021, The American Academy of Actuaries published an issue brief, *Impact of COVID-19 on Long-Term Care Insurance*, which addressed a broad array of issues and questions impacting (or potentially impacting) the long-term care insurance (LTCI) market. Understandably, there was considerable uncertainty in the early months of the pandemic regarding the effect COVID-19 would have on the LTCI market. The brief, therefore, raised many questions:

- How/when would the short-term impact on actuarial experience, especially claim incidence and claim termination, revert to normal?
- Would shifts in care situs (location), away from facilities in favor of home-based care continue?
- How would economic uncertainty impact long-term care (LTC) reserves (from the insurer perspective) and affordability of coverage (from the policyholder perspective)?
- What short-term and long-term regulatory actions or public policy decisions might be undertaken to mitigate the impact of the pandemic, and how would this in turn impact the LTCI market?

With the benefit of time, and an opportunity to observe post-pandemic experience, actuaries are in a better position to answer some of these questions today than several years ago. This issue brief revisits some of the important questions posed in the Academy's earlier brief and offers some responses, where possible. There remains considerable uncertainty about

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the long-term future for a long-tailed product such as LTCI. This issue brief also highlights some of the areas in which material uncertainty remains.

For purposes of this update, it is worth noting three key federal changes that will inevitably impact the landscape.

- As of Sept. 27, 2023, the Centers for Disease Control and Prevention (CDC) no longer updates the datasets, which means new CDC data will no longer be available to compare with updated experience as a reference point.[1]
- The Feb. 19, 2025 Executive Order eliminated the Secretary of Health and Human Services' Advisory Committee on Long COVID, which was tasked with bringing outside perspectives to inform government response.[2]
- On June 9, 2025, all 17 members of the CDC's Advisory Committee on Immunization Practices (ACIP), which vote on COVID-19 vaccine recommendations, were dismissed by the Secretary of the U.S. Department of Health & Human Services (HHS).[3]

Emerging Experience: How has the COVID-19 Pandemic Impacted Long-Term Care?

Active and Disabled Life Mortality

Short-term impacts

The majority of LTCI carriers observed increased mortality due to the pandemic.[4,5] Most reported a larger impact from the pandemic on disabled life mortality (i.e., mortality for those on claim) compared to active (i.e., not on claim) lives. This result was not surprising given community spread in facilities and co-morbidities faced by individuals on claim.

1 *Provisional COVID-19 Deaths by Sex and Age*; Centers for Disease Control & Prevention; accessed June 13, 2025.
2 "Commencing the Reduction of the Federal Bureaucracy;" The White House; Feb. 19, 2025.
3 "RFK Jr. to fire all members of the CDC's vaccine advisory committee;" *Politico*; Sophie Gardner and Lauren Gardner; June 9, 2025; The ACIP meets three times per year in February, June, and October, see Centers for Disease Control and Prevention, Advisory Committee on Immunization Practices, "ACIP Meeting Information," accessed June 3, 2025.
4 *COVID-19 Impact on Long-Term Care Insurance 2020 Survey*; Society of Actuaries; March 2021.
5 *COVID-19 Impact on Long-Term Care Insurance 2021 Survey*; Society of Actuaries Research Institute; October 2021.

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In addition to the industry surveys, the CDC summarized the extent of excess deaths associated with COVID-19.[6] The CDC dashboard indicated that general population mortality experience was elevated during the pandemic and remained elevated into early 2023. However, excess deaths have been trending downward post-pandemic.[7] This provides some evidence that mortality levels are returning to pre-COVID-19 expectations. While the CDC information provides a useful reference point, it is important to recognize potential differences in general population experience and LTCI experience.

Long-term impacts

The long-term impact of COVID-19 on LTCI mortality is much more uncertain and many questions remain:

- Will general population mortality continue to trend to a level that is still higher than pre-COVID-19 levels?
- Will LTCI mortality experience follow patterns similar to general population experience?
- Are there different impacts on active and disabled lives? Do these impacts vary by attained age, issue age/policy duration and/or duration of claim?
- Will the increase in disabled mortality in the short-term create lower disabled mortality long-term because the insureds that persist on claim are healthier?
- What, if any, impacts to mortality will there be from "long COVID"? How can the impacts from "long COVID" be separated from other cases?
- Is future mortality improvement impacted and if so, for how long? Directionally, does it return to pre-COVID levels or remain lower due to long COVID impacts?

Unfortunately, it is not easy to answer these questions. LTCI actuaries may wrestle with these and others as they consider their long-term assumptions. Sensitivity analyses remain the actuary's best course of action when considering possible impacts, whether favorable or unfavorable, on projected experience. This brief does, however, offer some resources and summary commentary to assist LTC actuaries as they consider these and other mortality questions.

The Society of Actuaries (SOA) commissioned two surveys[8,9] to collect views on future mortality from various experts (actuaries, academics/demographers, and other industry professionals). The scope of the surveys is not specific to the LTCI population. Instead, the surveys provide insight into the impact of COVID-19 on mortality for the general population and other insurance product populations. Specifically, estimates are provided for the life

6 *COVID-19 Impact on Long-Term Care Insurance 2020 Survey*; Society of Actuaries; March 2021.
7 *COVID Data Tracker*; Centers for Disease Control and Prevention; accessed May 30, 2025.
8 *COVID-19 Impact on Long-Term Care Insurance 2021 Survey*; Society of Actuaries Research Institute; Mike Bergerson, Andrew Dalton, et al.; October 2021; and *COVID-19 and the Short-Term Impact on Future U.S. Mortality: An Expert Opinion Survey*; Society of Actuaries Research Institute; Ronora Stryker; August 2022.
9 *COVID-19 and the Short-Term Impact on Future U.S. Mortality: An Expert Opinion Survey 2*; Society of Actuaries Research Institute; Ronora Stryker & Max J. Rudolph; August 2023.

insurance industry, annuity industry, and private and public pension plans. The specific industry responses were collected from respondents with expertise in those areas.

In the latest survey report, estimates for excess mortality are provided by age, with 2030 being the latest year for which the experts requested an estimate. For 2030, general population excess mortality is estimated to be 6% higher than expected for ages 25 and 45. For ages 65 and 85, the 2030 excess mortality is estimated to be 4% and 3% higher than expected, respectively. Life insurance insured populations, annuity industry annuitants, and private and public pension plan participants are also projected to have excess mortality that is higher than expected, but by smaller amounts than general population expectations, ranging from 1% to 4% depending on the age and industry. Actuaries and other practitioners have different views on excess mortality, with actuaries having lower estimates and other practitioners believing COVID will contribute to higher levels of excess mortality.

Another reference point is population mortality projections from the Congressional Budget Office (CBO).[10] The CBO projections do not show mortality rates returning to pre-COVID-19 levels for about 20 years. Specifically, the CBO states that "[t]he agency incorporated the effects of COVID-19 on mortality rates through 2043 by increasing those rates for older people, who are more likely to die from that illness."[11] The CBO also acknowledges that the impact of COVID-19 on mortality is "a significant source of uncertainty in the CBO's projections of mortality rates."[12] Finally, future mortality improvement may be impacted by, among other things, the potential health effects of "long COVID-19."[13]

Voluntary Lapse

Short-term impacts

The experience from the SOA LTCI COVID-19 surveys was somewhat mixed on the impacts that LTCI carriers saw on voluntary lapse (e.g., when insureds choose to end coverage, most commonly through non-payment of the premium). Some carriers saw slight decreases in lapse rates while others saw slight increases. Overall, the pandemic did not appear to have a material impact on voluntary lapse experience. Grace period extensions that occurred during the pandemic may have impacted company responses to the surveys.

Long-term impacts

Given that the short-term impacts of COVID-19 on voluntary lapse experience were muted, there does not seem to be a reason to expect material long-term impacts.

10 *The Demographic Outlook: 2023 to 2053*; Congressional Budget Office; January 2023.
11 Ibid 4. [CBO]
12 Ibid. [CBO]
13 "What if mortality stops improving?"; Milliman; Craig Reynolds & Aatman Dattani; March 2023.

The stock market recovered quickly after an initial drop during the early stages of the pandemic in 2020. The economy has been resilient, with unemployment remaining at low levels after higher levels during pandemic shutdowns. While economic conditions could worsen in the future and contribute to voluntary lapse behavior by insureds, that should not be attributed to COVID-19 based on the amount of time that has now passed.

Morbidity—Claim Incidence

Short-term impacts

Based on evidence from the industry surveys commissioned by the SOA, most LTCI carriers observed decreases in claim incidence due to the pandemic. Of those surveyed, more than 40% saw decreases in excess of 10%. From the later survey results, indications are that the incidence rates are trending back toward pre-COVID-19 levels, although they remain below those levels.

The reduction in incidence can be attributed in part to the increase of active life mortality. Additionally, a portion may be attributed to the deferral of formal care, particularly at the height of the pandemic, as perceived risks of nursing homes and/or infected home health workers put downward pressure on LTCI demand. This deferral of claims also impacts mortality as lives that would have been considered disabled would be considered active.

Long-term impacts

It appears that deferrals have lessened as the pandemic has receded and incidence rates are trending toward pre-COVID-19 levels. However, the long-term impact of COVID-19 on LTCI incidence is still uncertain and many questions remain:

- Will LTCI incidence trend all the way back to pre-COVID-19 levels?
- What is the possible impact of deferred claims? Could deferred claims lead to a period of higher levels of incidence?
- What, if any, impacts to incidence will there be from "long COVID"?
- Will future morbidity improvement be impacted and, if so, for how long?

The long-term trends for incidence will continue to be impacted by mortality. If the increased levels of active life mortality among the insured population continue, it would be reasonable to expect that there will be fewer policyholders to file a claim. Increases in disabled life mortality could impact recoveries which would impact the number of re-claimants.

Morbidity—Situs of Care

Short-term impacts

Prior to the pandemic, there was a pattern in place of care shifting from a facility setting to a home care setting. The pandemic helped to continue and accelerate this trend, as evidenced by results in the SOA surveys.[14] Of the companies surveyed, 70% reported a shift toward home health care, which was particularly pronounced for newer claims. Perceived risks of nursing homes due to transmission of COVID-19 and pandemic restrictions may have been part of the cause.[15]

Long-term impacts

The end of the pandemic is not expected to reverse the trend of care shifting from a facility to a home care setting because the trend was occurring before the pandemic. However, there are questions on the long-term impact of the pandemic on situs:

- Will the mortality impact from COVID-19 impact the claim severity and where claimants receive care?
- Will the deferral of claims impact the location selection?
- Will long COVID claims impact the chosen location?
- Will the perceived risks of nursing homes, and the resulting shift, be offset by improved protocols?
- How will the supply of workers and cost of care impact available location options?
- Will some of the LTC facilities' financial difficulties impact the location of care?

Throughout the industry, there are widespread discussions of, and efforts related to, wellness initiatives. Some of these initiatives are geared toward aging-in-place—allowing individuals who need assistance to continue to live in their home—rather than moving to a facility. These efforts and technological advancements will likely help to support ongoing trends toward home care options.

In the traditional health care space, COVID-19 helped to spur the movement toward telehealth, artificial intelligence (AI), and robotics initiatives.[16] However, it is not clear how these developments will impact where/how care is received in the long term.

14 *COVID-19 Impact on Long-Term Care Insurance 2021 Survey*; Society of Actuaries Research Institute; Mike Bergerson, Andrew Dalton, et al.; October 2021, p. 7.

15 "Emerging Challenges and Opportunities for Home Health Care in the Time of COVID-19;" *Journal of the American Medical Directors Association* vol. 21,11, pp. 1517-1518, 2020; Jones, Christine D, and Kathryn H Bowles.

16 "The State of Telehealth Before and After the COVID-19 Pandemic." *Primary Care*, vol. 49, 4, pp. 517-530, 2022; Shaver, Julia; and "Robotics and artificial intelligence in healthcare during COVID-19 pandemic: A systematic review;" *Robotics and Autonomous Systems,* vol. 146, 2021; Sarker, Sujan et al.

Morbidity—Claim Termination Rates

Short-term impacts

In the initial months of the COVID-19 pandemic, LTCI carriers generally experienced higher claim termination rates than they had previously. In particular, and as noted above, higher mortality among the disabled drove higher claim termination rates. Other behavioral factors, such as removing disabled family members from facilities or replacing outside home care providers with family-provided care due to concerns over COVID-19, also increased claim termination rates.

Long-term impacts

The long-term impacts on claim termination have yet to be determined. As noted in the mortality discussion above, there appears to be an expectation that excess mortality due to COVID-19 will continue for some time in the general population among people of advanced age. One could expect that this would at least have some impact on the mortality portion of claim termination rates for LTCI as well.

There are several factors that may impact claim termination rates over future years, such as:

- Will the observed shifts in situs of care impact claim termination rates? Is it possible that termination rates for each situs of care will be impacted with lesser impact to the aggregate claim termination rates? This implies directional differences in the impact on claim termination rates by location of care, (i.e., offsetting impacts).
- What is the impact on claim termination rates for those who survive COVID-19? Are there any residual impacts to survivors' health? Could these residual impacts increase claimant mortality rates? Alternatively, does it increase the need for long-term services and supports (LTSS), effectively lengthening the duration of claim?
- Will a deferral of claims lead to increased future claimant mortality, because insureds may be less healthy upon claim? Correspondingly, would recoveries and benefit exhaustions be lower?

Morbidity—Utilization/Cost of Care

Short-term impacts

The pandemic led to health care workers, particularly hospital workers, being more in demand during COVID-19 which drove higher wages. Among LTC health care workers there has been more demand for home health care workers, which has driven increases in salaries beyond what was seen in prior years.[17] The pandemic also drove wage growth in other front-line industries, such as retail, which created additional upward pressure on wages.

17 Calculate the Cost of Long-Term Care Near You; Genworth/CareScout; May 1, 2025; Genworth Releases Cost of Care Survey Results for 2023: Twenty Years of Tracking Long-Term Care Costs; Genworth; March 2024.

The shifts in situs of care to home health care over facility care may lead to lower overall utilization in the short term. However, these shifts may increase the utilization within the different sites. For example, consider the healthiest individuals in a skilled nursing facility who are able to transfer to a home health care setting. Since these are the healthiest individuals in skilled nursing facilities, they would be more likely to have lower utilization than the average patients in skilled nursing facility settings. Thus, their transfer to home health care leaves the remaining utilizers in the skilled nursing facility setting with higher on-average utilization. Similarly, if the claimants who transfer from a skilled nursing facility to home health care are less healthy than the average home health care claimants and have higher utilization, the transfer will also increase the average utilization in the home health care setting.

Long-term impacts

It is likely that utilization of LTC services will continue to be impacted by both the interaction between the situs of care shift and the cost factors within each situs of care. The largest impacts on utilization are likely to be driven by non-pandemic, long-term factors, such as the performance of the general economy and inflationary impact on wages and other costs of providing LTC. In addition, demand for and availability of health care workers in the general workforce has the ability to significantly impact how quickly wages/costs grow in the future. These factors are discussed later in this brief.

Interest Rates

In March 2020, interest rates dropped sharply. As was noted in the 2021 issue brief, concurrent with the pandemic, interest rates decreased markedly, below rates that were already perceived as being at historical lows. Low interest rates and/or stock market volatility can put pressure on insureds' ability and willingness to continue to pay LTCI premiums. From an insurer perspective, low interest rates can lead to higher LTCI reserve requirements. Given the timing and immediacy of the changes, the interest rate declines observed in 2020 were almost certainly a direct and immediate impact of the onset of the COVID-19 pandemic.

Beginning in early 2022, interest rates began to rise. In March 2022, the Federal Reserve Bank began a series of increases in the federal funds rate which, although not directly linked to yields on U.S. Treasury bonds, was nevertheless highly correlated with U.S. Treasury yields. The table below shows the historical federal funds rate, beginning in March 2022 and continuing through July 2023, at which point rates (both the federal funds rate and U.S. Treasury yields) stabilized.[18]

18 *Federal Funds Effective Rate*; Board of Governors of the Federal Reserve System (U.S.); accessed June 13, 2025.

Federal Reserve Meeting Date	Federal Funds Rate	Rate Change (basis points)
07/26/2023	5.25% to 5.50%	25
05/03/2023	5.00% to 5.25%	25
03/22/2023	4.75% to 5.00%	25
02/01/2023	4.50% to 4.75%	25
12/14/2022	4.25% to 4.50%	50
11/02/2022	3.75% to 4.00%	75
09/21/2022	3.00% to 3.25%	75
07/27/2022	2.25% to 2.50%	75
06/16/2022	1.50% to 1.75%	75
05/05/2022	0.75% to 1.00%	50
03/17/2022	0.25% to 0.50%	25

Unlike the events observed in 2020, the macroeconomic factors driving the interest rate movements observed beginning in early 2022 are more nuanced. Ostensibly, some of the increase in rates can be quite simply attributed to a reversal of these rates' sharp decline in 2020. With the U.S. economy having largely weathered the storm of the early months of the pandemic, consumer confidence increased in late 2021 and, with it, came higher interest rates. However, inflation rates contributed materially to the rising interest rate environment, as well. The annualized U.S. inflation rate was 1.40% in 2020, below the Federal Reserve target of 2%-3%. In 2021, inflation jumped to 7%, the highest inflation rate observed in the U.S. since 1981. In 2022, inflation dropped only modestly to 6.50%, still well in excess of the Federal Reserve target. Increasing the federal funds rate is one of the primary tools the Federal Reserve can use (and did, beginning in early 2022) to fight rising inflation.[19]

Beyond inflation, there are other factors influencing interest rates. Some economists have cited globalism as a driving force behind the period of historically low interest rates that began in the 1990s and continued through the early months of the pandemic. If the early economic gains of implementing more globalist economies have largely been harvested, interest rates could begin to increase to more historically normative levels. More generally, market interest rates will necessarily react to the supply and demand for capital in the economy. With structural changes in the U.S. economy—for example, improvements in productivity associated with broad availability of AI technology—the market may see an increase in demand for capital, driving interest rates higher.

These macroeconomic forces have had a profound impact on the LTCI market. As noted above and in the Academy's 2021 issue brief, low interest rates can lead to higher LTCI reserve requirements. Many LTC insurers experienced stress on their asset adequacy

19 *Historical U.S. Inflation Rate by Year: 1929 to 2025*; Investopedia; Hiranmayi Srinivasan; accessed May 1, 2025.

testing results at year-end 2020 and in 2021, as a result of lower interest rates reflected in discount rates used for gross premium reserves and/or investment earned rates projected for cash flow testing. In this context, the increasing interest rates observed beginning in early 2022 offered welcome relief to insurers. At the same time, however, rising interest rates can lead to unrealized capital losses. Low interest rates, long perceived as a barrier or impediment to insurers pursuing LTC de-risking strategies, such as reinsurance transactions or mergers and acquisitions, have reversed so quickly that some insurers now find unrealized capital losses equally problematic when contemplating a potential business transaction or a de-risking strategy. Is it possible that the capital markets may have quickly skipped over the "just right" economic conditions for transaction consummation?

Further, higher interest rates and high inflation have put upward pressure on the cost of providing LTC. Beginning around 2019–2020, Consumer Price Index (CPI) measures of both nursing home and home health care have trended upward. Market surveys of LTC costs (e.g., the Genworth Cost of Care Survey) show similar results. The growth rate in the cost of providing home health care, which has been trending upward for many years now, increased markedly beginning in 2021. Some of this increase may be driven by a preference for receiving care at home, rather than a facility, in light of pandemic-related fears and, therefore, may be temporary. Other increases in the cost of providing LTC may be more permanent. In general, these supply/demand considerations have been driving LTC costs higher over recent years. For reimbursement-style LTC, which accounts for the majority of the traditional LTCI market, this can have a material, unfavorable impact on claim costs. In this way, the "relief" of higher interest rates could be less than insurers had originally hoped.

LTC policyholders have not been immune from the impact of changing interest rates. In the Academy's January 2021 issue brief, it was noted that low interest rates and/or market volatility may put pressure on insureds' ability and willingness to continue to pay LTCI premiums. To the Academy's knowledge, the industry has not observed any widespread, significant increases in voluntary lapse rates during the pandemic. With current higher interest rates (and, in particular, higher cost of care trends) policyholders potentially face a different challenge. They may see the actual cost of their care exceed the daily or monthly benefit amounts provided under the terms of their policies—especially for policyholders without inflation protection embedded in their policies.

Lessons Learned: Looking Beyond the COVID-19 Pandemic

The COVID-19 pandemic provides an interesting and important case study in how government and regulatory responses to a public health emergency can impact both regulated industries and the broader economy. Both federal and state governments reacted to the pandemic in ways that impacted care for the elderly and the larger economy. Significant amounts of federal funds were infused into the economy to address economic issues related to the management of the pandemic. This increased the money supply at a time when other economic constraints, such as the distribution of imports and exports, were already placing pressure on inflation. In response, the Federal Reserve increased interest rates in an attempt to decrease the demand for money and, therefore, the market-observed inflation as measured by the CPI. Interest rates are not directly linked with the CPI measure, but they represent a higher cost to consumers who borrow, including individuals and businesses that provide care to the elderly.

Elder care organizations, such as nursing homes and home health care agencies, temporarily benefited financially from the federal government's declaration of a public health emergency (PHE).[20] For example, the staff training requirements were reduced, some functions ordinarily performed by physicians could be performed by nurses and other providers, and access to some drugs did not require a physician to meet with the patient face-to-face.[21] The end of the PHE in May 2023 has placed pressure on the ability of health care organizations to remain viable without other adjustments to their financing, their productivity, or the costs borne by the LTC industry.

Secondary effects of government policies may have also created upward pressure on the cost of providing LTC. The expectation and, in many cases, the requirement for individuals to receive the COVID-19 vaccines, may have created short-term disruptions in the supply of labor to skilled nursing facilities and home care agencies. Not receiving the vaccine, due to personal reasons and/or mistrust, may have deterred some individuals from remaining in or entering the elder care workforce especially if their facility required positive vaccination status to continue their employment.[22] Some claim that those who continue to receive the booster treatments may be more susceptible to contracting variants of the COVID-19 virus.[23] These perceptions created an impact on both the workforce and the elderly. Behavioral changes during the pandemic also impacted the supply of skilled care or home care labor. With many people working remotely under

20 *Declaring a National Emergency Concerning the Novel Coronavirus Disease (COVID-19) Outbreak*; Federal Register; March 18, 2020.
21 "The Impact of the Public Health Emergency on Skilled Nursing Facilities," *Provider*; Susan Maupin; February 2023; and *Home Health Agencies Used Multiple Strategies To Respond to the COVID-19 Pandemic, Although Some Challenges Persist*; U.S. Department of Health and Human Services, Office of the Inspector General; Ann Maxwell; October 2022.
22 "Why won't some health care workers get vaccinated?"; *Harvard Health*, David C. Grabowski; Feb. 17, 2021.
23 "Effectiveness of Bivalent Boosters against Severe Omicron Infection;" *New England Journal of Medicine*, Vol. 388, No. 8; Dan-Yu Lin et al.; January 2023; though, some are questioning that on the variant: "Why boosted Americans seem to be getting more COVID-19 infections;" CBS News; Alexander Tin; June 6, 2022.

flexible arrangements during the pandemic, people were willing and able to care for relatives. With a partial return to more formal, in-office work arrangements for many people, the availability of this informal source of care has dwindled. Looking forward, the long-term impact of government policies and public perceptions on the supply of skilled care labor for the elderly remains uncertain. Labor shortages in this field put upward pressure on the cost of providing LTSS.

The COVID-19 pandemic and its immediate aftermath have been a time of rapid advancement in technology. The U.S. now faces potential gains in health from future uses of mRNA technology,[24] which, although not completely new during the COVID-19 pandemic, was certainly prioritized and popularized during the pandemic along with other developments in pharmaceutical research. The U.S. also faces potential increases in productivity in caring for the elderly using technology. An example of technological improvements is the potential for AI and robotics to reduce the physical need for, and emotional demand created by, face-to-face interaction.[25] Along with these advancements in technology, however, come an uncertain impact on the policyholder experience. For example, will more virtual interaction with policyholders impact LTCI claim experience? Will there be an impact of lower social engagement on LTCI claim experience, particularly for cognitive claims? Technology also has the potential to decrease reliance on traditional forms of care. Alternative plans of care, for example, may become more popular to accommodate technological substitutes to additional human care. This could result in short-term claim cost savings for insurers. However, the long-term impact of shifting more care in early claim durations to nontraditional methods remains unclear.

Although the preceding section of this brief answered many of the questions raised in the original issue brief, there remain many areas of uncertainty for how things will emerge in the post-pandemic world, including:

- Future Financial Impacts and Inflation: Currently, there is uncertainty in capital markets, including inflation, and its impact on both investment-earned rates and cost of care inflation trends. In addition, general uncertainty exists regarding if and how endemic COVID-19 will impact LTC mortality rates and claim incidence rates over the long term.
- Long-COVID-19 Infection: According to the CDC, there are still people who suffer from the long-term effects of COVID-19 infection.[26] The Mayo Clinic identifies some specific reasons for long-term effects, such as organ damage for individuals who had severe COVID-19 symptoms.[27] Some researchers have also suggested there may be a

24 "The Application and Future Potential of mRNA Vaccines;" Yale School of Public Health; Swati Gupta; May 7, 2021.
25 "New prosthetic limb allows amputee to move hand, fingers;" *McKnights Senior Living*; Aaron Dorman; July 18, 2023; "As The Society Grows Older, Will Cognitive Robotics Become More Relevant Than Ever?;" *Forbes*; Naveen Joshi; June 6, 2022.
26 "Long COVID and Significant Activity Limitation Among Adults, by Age — United States, June 1–13, 2022, to June 7–19, 2023;" *Morbidity and Mortality Weekly Report* (MMWR); Nicole Ford et al.; Aug. 11, 2023.
27 *Long COVID: Lasting effects of COVID-19*; Mayo Clinic; accessed May 1, 2025.

link between COVID-19 infection and the worsening acute impact on of Parkinson's Disease symptoms.[28]

- Data Availability: During the PHE, there was an abundance of free, publicly available data concerning the pandemic. With the emergency having ended, the sources and availability of COVID-19-related data remain important policy considerations.[29]
- Long-lasting effects of mRNA modifications: Although relatively rare, some individuals have experienced adverse side effects from the mRNA injections. These may have long-term effects,[30] although the impact of such effects, if any, on LTC experience remain unknown.

Conclusion

Over time, actuaries have acquired greater clarity on the specific impacts the COVID-19 pandemic exerted on the LTCI industry. The actuarial experience from the core years of the pandemic, 2020-2022, is now measurable and the short-term economic volatility and disruptions have subsided. Actuaries may now answer the question "what happened?" Actuaries may also observe and comment on the regulatory and policy decisions that impact the LTCI industry although uncertainty remains. The industry may want to continue evaluating particular areas of uncertainty and the resulting context of the uncertainty.

For additional considerations and the current state of LTCI, please refer to the Academy's issue brief, *The State of Long-Term Care Insurance—2025* (February 2025).

28 "Chapter Four - Covid-19 and Parkinson's disease: Acute clinical implications, long-COVID and post-COVID-19 parkinsonism;" *International Review of Neurobiology*, Vol. 165, pgs. 63-89, 2022; Valentina Leta, et al.; and *2023 Update: COVID-19 and Parkinson's Disease*; American Parkinson Disease Association; Jan. 16, 2023.
29 "Long COVID is devastating and far from rare. As infections rise again, why are we still ignoring it?;" *Salon*; Philip Finkelstein Aug. 13, 2023.
30 "In rare cases, coronavirus vaccines may cause Long Covid–like symptoms," *Science;* Jennifer Couzin-Frankel and Gretchen Vogel; Jan. 20, 2022.