

Mental Health Trends and COVID-19



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AUTHOR R. Dale Hall, FSA, CERA, MAAA, CFA
Managing Director of Research
Society of Actuaries

With the pandemic outbreak of coronavirus disease (COVID-19) through the world in the first part of 2020, many resulting outcomes have triggered the potential to see an increase in the use of mental health benefits in health care insurance systems. With governments around the world issuing “stay at home” orders, and workers transitioning to a work-from-home environment, individuals may quickly begin to feel a higher degree of social isolation. As businesses slow down production and many retail outlets are forced to close or convert to carry-out or delivery services, unemployment claims and the overall unemployment rate have increased in most markets. In addition, even in cases where individuals still hold employment, many households may perceive a lower security of income, and face a more uncertain financial future. All of these items combine to raise a new awareness of mental health within the work of the actuarial profession, and in a much different world situation than has been previously considered. Health actuaries will be increasingly more interested in the utilization of mental health benefits in their insured population through the coming months. Life insurance actuaries will want to revisit the mortality patterns that could unfortunately evolve through depression and anxiety, and an increasing potential for new suicide claims.

This Society of Actuaries Research Brief has been constructed to highlight some of the key continuing and new features of the COVID-19 pandemic on mental health conditions for the actuarial profession to consider in their work.

MENTAL HEALTH

Mental health is an integral and essential component of an individual’s overall health. Often the public will think of a “healthy individual” more simplistically as someone without physical ailments, but a completely healthy individual is often looked upon as someone in a state of complete physical, mental and social well-being. In addition, being in good mental health is much more than just the absence of mental disorders or disabilities.¹ A wide variety of social, biological, and psychological factors are strong determinants of the level of mental health of an individual. External influences are often a part of the equation, such as the exposure to stress, socioeconomic conditions, discrimination and violence. Individuals who have strong mental health often exhibit the ability to work productively, cope with normal stresses they encounter day-to-day and have the ability to make contributions to family and community.

By comparison, mental illnesses are often described as situations that impact an individual’s behaviors, mood as well as how they feel, think or react. Common mental illnesses, which can clearly have a large range of severity include anxiety disorders, psychotic disorders, eating disorder, substance abuse disorders, depression or bipolar disorders that impact an individual’s mood, trauma-related disorders, personality disorders and eating disorders.² Increasing the importance of maintaining positive mental health is the downstream impact that mental illness can have on physical conditions. Depression, for example, increases the risk for many physical illnesses such as heart disease,

¹ World Health Organization. (2018, March 30). “Mental Health: Strengthening Our Response.” <https://www.who.int/en/news-room/fact-sheets/detail/mental-health-strengthening-our-response>.

² Centers for Disease Control and Prevention. “Learn About Mental Health.” <https://www.cdc.gov/mentalhealth/learn/index.htm>.

stroke and diabetes. Conversely as well, the existence of physical health problems can lead to an increased risk of developing a mental illness.³

Mental health conditions additionally can vary by type and intensity by age. In the current COVID-19 environment, the mental health of older individuals in retirement communities or health care-oriented senior facilities may suffer because of reduced activities and socialization, as required to lessen the spread of the disease. Many senior living facilities, nursing homes and assisted-living communities have banned all visitors during the outbreak and have tended to eliminate group activities. Many facilities have also needed to require residents to stay in their rooms with meals being delivered in place of large gathering at meals for socializing. Socialization and exercise are very important components to the physical, mental and emotional well-being of this population.⁴ Younger individuals, such as those who are high school or college-aged, can have unique mental health issues as well. Many times, any mental health issues are prevented or reduced by having a normal routine and structure, interaction with others and a clear and definite picture of what the near-term future will hold. When these routines are interrupted, and in severe situations replaced by the isolation of virtual learning environments amongst the stress of family dysfunction, mental health issues can grow.

Strong mental health is a critical component for having both longevity and quality of life. As one example, the Blue Cross Blue Shield (BCBS) Health Index compiles information on over 200 health conditions to be used in identifying key drivers of healthy lifestyles. For the entire United States, the health driver of Major Depression makes up 9.6% of adverse health for the population, second only to the driver of Hypertension. In addition, New York County, which has been the leading center of both COVID-19 cases and deaths, has over a 38% greater prevalence and impact from depression than the national average in the BCBS Health Index data.⁵

Fortunately, the opportunity for individuals to receive mental health diagnoses and treatment has expanded in recent years. In the U.S. the Mental Health Parity and Addiction Equity Act (MHPAEA) was passed in 2008 and became effective for group and individual health insurance plans for plan years that started on or after July 1, 2014. MHPAEA ensures plans provide mental health benefits and substance abuse benefits at parity with surgical and medical benefits. Financial requirements for plan participants must be at parity on items such as copays, deductibles, coinsurance, and out of pocket limitations. Treatment limits are required to be at parity as well, such as the number of visits or days of coverage allowed. Nonquantitative treatment limitations may be those things that limit the scope or duration of benefits such as medical necessity review, or the way a plan reviews an appeal.⁶

In the current environment of COVID-19, the overwhelming slowdown of economic activity may bring a higher focus on mental health conditions. With the dramatic increase in unemployment claims seen in many countries over recent weeks, there is concern that current events could lead to worsening mental health conditions. Decreases in individual or household standards of living have been identified to affect overall physical and mental health.⁷ Even prior to a strict unemployment event, anxiety about the possibility of having less secure income can create feelings that the financial and mental aspects of an individual's life are no longer under their own personal control. Individuals also thrive more when they are interactive with their peers and colleagues, and unemployment may bring a dramatic shrinking of an individual's social networks. A decline in engagement can often lead to a lower

³ Mayo Clinic. "Mental Illness." <https://www.mayoclinic.org/diseases-conditions/mental-illness/symptoms-causes/syc-20374968>.

⁴Rappaport, Anna and Steven Siegel. "Impact of COVID-19 on Retirement Risks." Society of Actuaries. <https://www.soa.org/globalassets/assets/files/resources/research-report/2020/covid-19-retirement-risk.pdf>.

⁵ Blue Cross Blue Shield. "Impact of Major Depression." <https://www.bcbs.com/the-health-of-america/health-index/impact-major-depression>.

⁶ Blue Cross Blue Shield of Illinois. https://www.bcbsil.com/employer/mental_health_parity.htm.

⁷ Unemployment and Mental Health: Some Evidence from Panel Data, Anders Björklund, The Journal of Human Resources, Vol. 20, No. 4 (Autumn, 1985)

mental health state.⁸ Finally, personal self-esteem is often driven by the activities and purpose of employment, and unemployment often causes a sense of stigma with friends, family and in the larger community for an individual.⁹

Mental health also tends to deteriorate more as unemployment continues in length (Table 1). With the current economic projections surrounding COVID-19, one fear is that the level and degree of unemployment may last for many months. In general, mental health is poorest for those who have been unemployed for at least six months.¹⁰

Table 1
UNEMPLOYMENT IMPACT ON DEPRESSION TREATMENT

Length of Unemployment	Proportion of Group that have been / currently are being treated for depression
Unemployed 2 weeks or less	11.1%
Unemployed 3 to 5 weeks	10.0%
Unemployed 6 to 11 weeks	13.0%
Unemployed 12 to 26 weeks	15.7%
Unemployed 27 to 51 weeks	17.0%
Unemployed 52 weeks or more	19.0%

A final consideration for mental health wellness in the current environment is that often the best initial and private source of early detection and realization of disorders may be through services provided by an employer. Many employers will offer a mix of benefits to help with emotional and financial stress, including employee assistance programs (EAPs), health and financial wellness programs, and other benefits such as telemedicine. EAPs have been noted to be helpful when confronting issues of mental health and financial challenges. Some employers may continue these types of benefits for a short period post-employment, but the availability to access these services on a routine basis can be challenging for an individual who has a long-duration separation from employment.¹¹

MENTAL HEALTH CARE COST TRENDS

An important aspect of the evolution of mental health insurance coverages is to review the trends in commercial health care claims stemming from categories such as behavioral health, inpatient hospital mental health treatments and professional psychiatry services offered by physicians. These trends can give insights as to where health insurers may see higher utilization within their plans, especially in areas more heavily impacted by COVID-19. The passing of the Mental Health Parity and Addiction Equity Act (MHPAEA) and integration of requirements into the overall Patient Protection and Affordable Care Act (ACA) became noticeable in health care cost trends beginning with the formal implementation of the ACA for markets and plan requirements in 2014 (Table 2). With MHPAEA requiring mental health parity with other services, trends shifted towards more insurance coverage of inpatient stays.

⁸ Unemployment and Mental Health: Some Evidence from Panel Data, Anders Björklund, The Journal of Human Resources, Vol. 20, No. 4 (Autumn, 1985)

⁹ Social Psychology, Unemployment and Macroeconomics, Darity, William and Arthur Goldsmith, Journal Of Economic Perspectives, Volume 10, Winter 1996

¹⁰ Gallup-Healthways Well-Being Index, 2013

¹¹ [shrm.org/resourcesandtools/hr-topics/benefits/pages/employers-enhance-emotional-wellbeing-benefits-for-2020.aspx](https://www.shrm.org/resourcesandtools/hr-topics/benefits/pages/employers-enhance-emotional-wellbeing-benefits-for-2020.aspx)

Table 2
COMMERCIAL LARGE GROUP INPATIENT BEHAVIORAL HEALTH CLAIM TRENDS ¹²

Year	Allowed Costs Per Member Per Month	Average Day Length of Inpatient Hospital Stay
2012	\$1.35	6.59 days
2013	\$1.40	6.34 days
2014	\$2.46	9.31 days
2015	\$2.75	8.12 days

Overall Per Member Per Month costs for Behavioral Health in Commercial Large Group plans have remained steadier in the transition timeframe, as even with a noticeable increase in the number of prescriptions written the cost per prescription came noticeably down as the coverage became much more focused on generic prescriptions.

The trend in prescription usage has also been seen in industry data. A recent study by GoodRx noted that since the introduction of the new parity law, the percentage of nationwide prescriptions focused on anxiety and depression has increased from approximately 6.6% of all prescriptions in 2015 to over 7.5% in more recent years. ¹³

A more recent review of data available from the Health Care Cost Institute continues to show the trends for coverage and utilization of mental health care services in recent years (Table 3). Across many types of services, ranging from inpatient hospital stays to prescriptions to professional services offered in a doctor’s office setting, mental health care costs are growing as covered services. In the current COVID-19 environment, health care plans may look to evaluate how these services will growing in demand and utilization, as well as how the services will be provided. Many health care providers have already switched their focus for professional psychiatry services to be offered through telemedicine methods, which could impact the utilization and associated costs that plans will incur as they see any increase in mental health needs.

¹² Health Care Cost Institute and Society of Actuaries. (2019, July). “Commercial Health Care Cost and Utilization Trends from 2009–2015.” <https://www.soa.org/resources/research-reports/2019/commercial-health-care-cost-utilization-trends/>.

¹³ Marsh, Tori. (2019, May 2). “Depression and Anxiety Prescriptions Are Climbing Nationwide.” Good Rx. <https://www.goodrx.com/blog/depression-and-anxiety-prescriptions-are-climbing-nationwide/>.

Table 3
 COMMERCIAL LARGE GROUP HEALTH CARE COST TRENDS FOR MENTAL HEALTH ¹⁴

Year	Mental Health Inpatient Hospital Allowed Costs Per Member Per Year	Inpatient Admissions Per 1000 Members Per Month	Anti-Depressant Prescriptions Per 100 Members Per Year	Professional Psychiatry Allowed Costs Per Member Per Year
2014	\$23.49	2.79	724.1	\$43.75
2015	\$24.29	2.77	727.2	\$46.11
2016	\$25.53	2.78	755.6	\$50.31
2017	\$27.84	2.98	802.9	\$54.49
2018	\$31.17	3.15	815.8	\$62.62

SUICIDE TRENDS

A final area where life and health insurance companies will be monitoring is the potential increase for suicide or suicide attempts due to mental health disorders or other stresses caused by the COVID-19 environment. Nearly every state has seen an increase in the suicide rate since the start of the 21st century, with some states such as Vermont, New Hampshire and North Dakota showing increases well over 40%.¹⁵ Unemployment over the past decades has been an indicator of the higher tendency towards suicide in many high economic countries, and past research reports have shown that the relative risk of suicide increases between 20% to 30% due to unemployment, and is fairly consistent to this magnitude across all regions of the world.¹⁶

The increasing trend in the United States becomes apparent by studying the U.S. Population mortality trend evaluation on data from the Centers for Disease Control and Prevention (CDC) performed by researchers at the Society of Actuaries (SOA). Figure 1 notes the overall trend in suicide as a cause of death, with absolute deaths per 100,000 of population being higher for males, but also with a higher growth trends being observed for females since the start of the time series in 1999.¹⁷

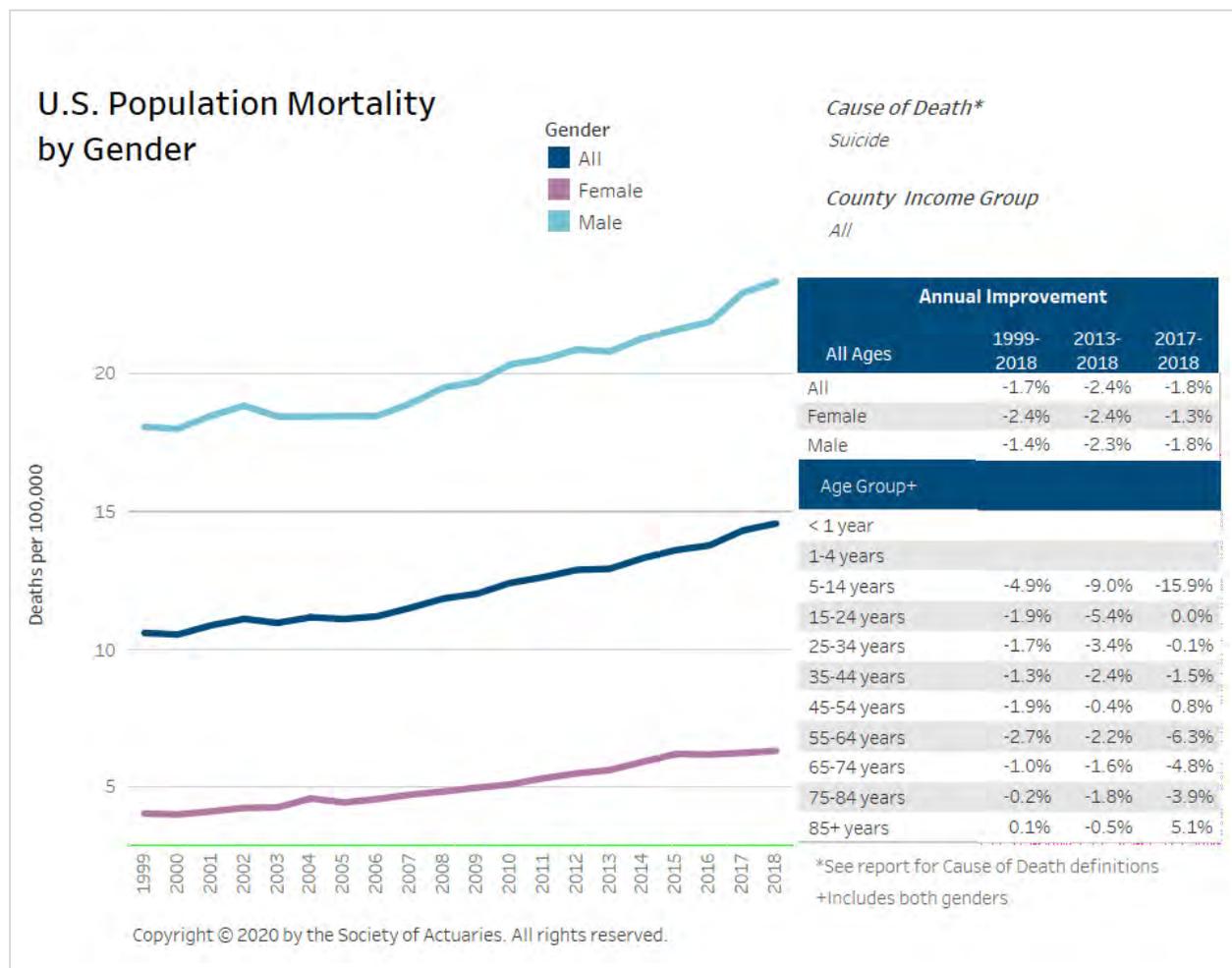
¹⁴ Health Care Cost Institute. (2018). "Health Care Cost and Utilization Report." <https://healthcostinstitute.org/health-care-cost-and-utilization-report/annual-reports>. (2020, April 1). "Compared to What? Baseline Understanding of the Distribution of Hospital Care." <https://healthcostinstitute.org/hcci-research/inpatient-admissions-by-diagnosis-in-2018>.

¹⁵ Greenfieldboyce, Nell. (2018, June 7). NPR. "CDC: U.S. Suicide Rates Have Climbed Dramatically." <https://www.npr.org/sections/health-shots/2018/06/07/617897261/cdc-u-s-suicide-rates-have-climbed-dramatically>.

¹⁶ Cummins, Ian. (2015, February 13). World Economic Forum. "The Link Between Unemployment and Suicide." <https://www.weforum.org/agenda/2015/02/the-link-between-unemployment-and-suicide/>.

¹⁷ Holman, R. Jerome, et al. Society of Actuaries. "U.S. Population Mortality Observations: Updated with 2018 Experience." <https://www.soa.org/resources/research-reports/2020/population-mortality-observations/>.

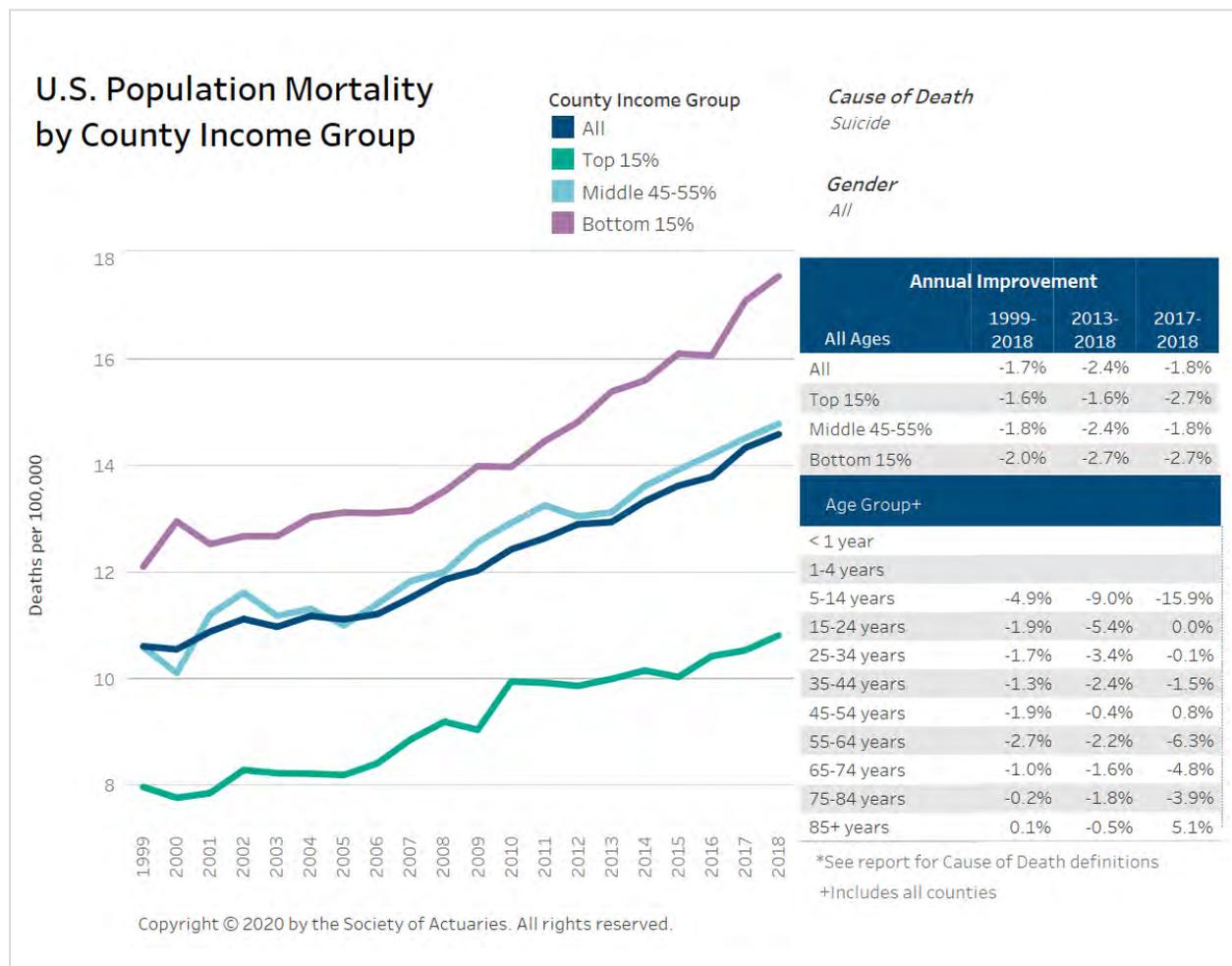
Figure 1
U.S. POPULATION MORTALITY FROM SUICIDES, 1999-2018



Suicides in the United States also tend to be noticeably different depending on socioeconomic variables. A further slice of the CDC data by the SOA grouped the deaths by the median income level of each county, with a subgroup comprising of the Top 15% of counties, Bottom 15% of counties and the Central 45–55% range of all counties. As seen in Figure 2, all subgroups have risen between 1.5%–2.0% annually over the time period studied, but with noticeable difference in the mortality rates. The Bottom 15% of counties have more recently exhibited a 50% to 70% higher mortality rate than the Top 15% counties. Of note as well across this data is the higher increase over the time period and in recent years in the age group of ages 55 to 64. This age group’s mortality rate from suicide increased 2.7% across the study.¹⁸

¹⁸ Holman, R. Jerome, et al. Society of Actuaries. “U.S. Population Mortality Observations: Updated with 2018 Experience.” <https://www.soa.org/resources/research-reports/2020/population-mortality-observations/>.

Figure 2
U.S. POPULATION MORTALITY FROM SUICIDES, COUNTY INCOME SUBGROUPS, 1999-2018



FUTURE CONSIDERATIONS

With the constantly evolving environment of COVID-19, mental health issues may likely grow as an important consideration for the work of actuaries in their analysis of health care cost trends and the potential impact on insured mortality due to suicides. Many government programs across countries are coming into play to assist with providing some level of financial security of income, either by offering benefits to companies to keep employees on the payroll or providing stimulus packages that include direct payments to individuals who might be most in need of cash. Future reports will focus on trends emerging from data to add to considerations for the actuarial profession.

About The Society of Actuaries

With roots dating back to 1889, the [Society of Actuaries](#) (SOA) is the world's largest actuarial professional organizations with more than 31,000 members. Through research and education, the SOA's mission is to advance actuarial knowledge and to enhance the ability of actuaries to provide expert advice and relevant solutions for financial, business and societal challenges. The SOA's vision is for actuaries to be the leading professionals in the measurement and management of risk.

The SOA supports actuaries and advances knowledge through research and education. As part of its work, the SOA seeks to inform public policy development and public understanding through research. The SOA aspires to be a trusted source of objective, data-driven research and analysis with an actuarial perspective for its members, industry, policymakers and the public. This distinct perspective comes from the SOA as an association of actuaries, who have a rigorous formal education and direct experience as practitioners as they perform applied research. The SOA also welcomes the opportunity to partner with other organizations in our work where appropriate.

The SOA has a history of working with public policymakers and regulators in developing historical experience studies and projection techniques as well as individual reports on health care, retirement and other topics. The SOA's research is intended to aid the work of policymakers and regulators and follow certain core principles:

Objectivity: The SOA's research informs and provides analysis that can be relied upon by other individuals or organizations involved in public policy discussions. The SOA does not take advocacy positions or lobby specific policy proposals.

Quality: The SOA aspires to the highest ethical and quality standards in all of its research and analysis. Our research process is overseen by experienced actuaries and nonactuaries from a range of industry sectors and organizations. A rigorous peer-review process ensures the quality and integrity of our work.

Relevance: The SOA provides timely research on public policy issues. Our research advances actuarial knowledge while providing critical insights on key policy issues, and thereby provides value to stakeholders and decision makers.

Quantification: The SOA leverages the diverse skill sets of actuaries to provide research and findings that are driven by the best available data and methods. Actuaries use detailed modeling to analyze financial risk and provide distinct insight and quantification. Further, actuarial standards require transparency and the disclosure of the assumptions and analytic approach underlying the work.

Society of Actuaries
475 N. Martingale Road, Suite 600
Schaumburg, Illinois 60173
www.SOA.org