



# Trends in US Population and Insured Morality Improvement

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September 13, 2019

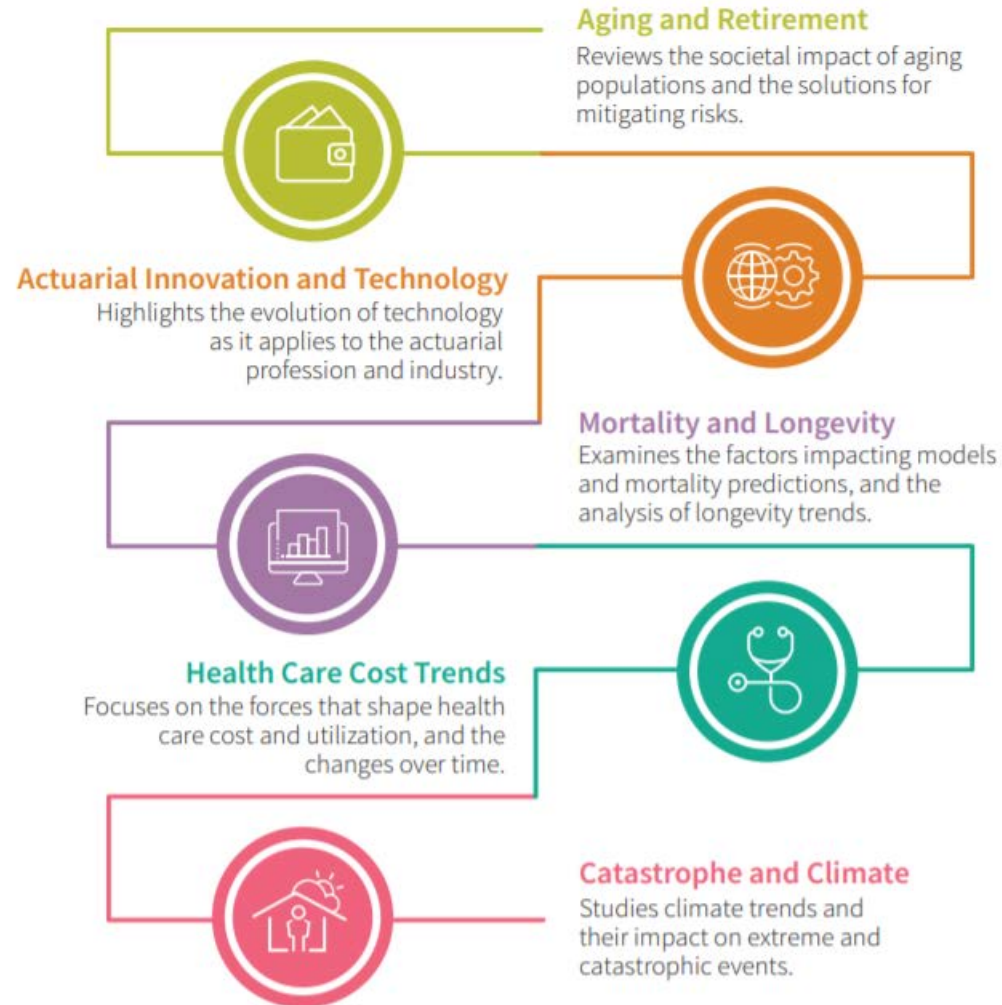


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# SOA Research Overview

- History of SOA Research
- Broad across Actuarial Practice Research, Experience Studies and Academic Research Programs
- Strategic Initiative to increase focus on key Actuarial Research areas in to Strategic Research Programs

# SOA Strategic Research Programs



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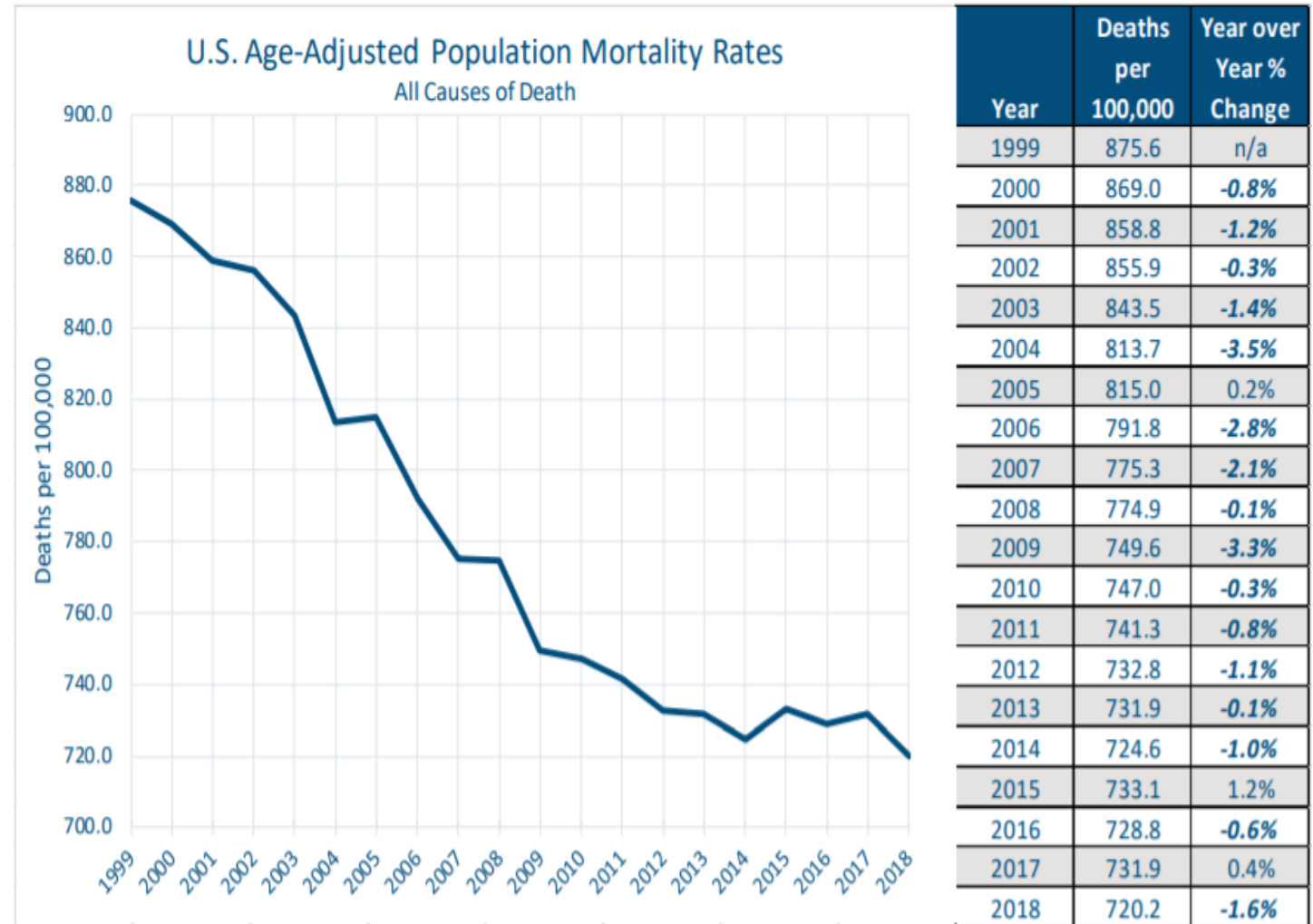
# Mortality and Longevity

Examines the factors impacting models and mortality predictions, and the analysis of longevity trends.



# Mortality Improvement Research

- Recent U.S. Trends of slowing / declining mortality improvement
- August 2019:
  - *U.S. Population Mortality Observations - Preview of 2018 Experience*



# Mortality Improvement Research

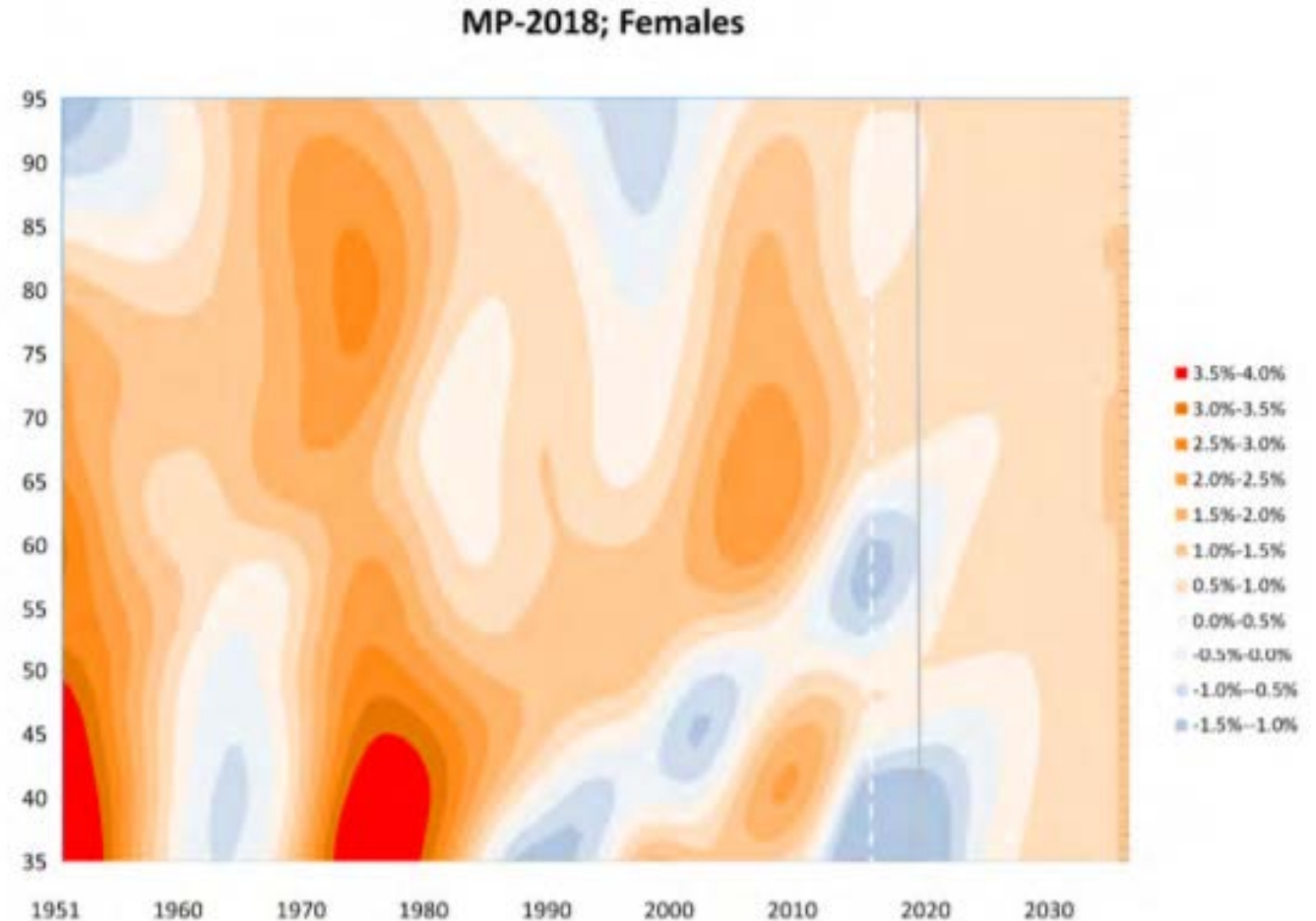
- Pulls on mortality improvement across many different causes of death
- January 2019:
  - *U.S. Population Mortality Observations - Updated with 2017 Experience*

2017 U.S. POPULATION MORTALITY BY COD

Cause of Death	Deaths	%	Age-Adjusted One Year Change	Attribution to All CODs*
Heart Disease	647,457	23.0%	0.2%	0.1%
Cancer	599,108	21.3%	2.1%	0.5%
Alzheimer's/Dementia	239,585	8.5%	-1.3%	-0.1%
Accidents	169,936	6.0%	-4.1%	-0.3%
Pulmonary	160,201	5.7%	-1.0%	-0.1%
Stroke	146,383	5.2%	-0.8%	0.0%
Diabetes	83,564	3.0%	-2.1%	-0.1%
Suicide	47,173	1.7%	-3.9%	-0.1%
Liver	41,743	1.5%	-1.4%	0.0%
Assault	19,510	0.7%	-0.2%	0.0%
Other	658,843	23.4%	-1.5%	-0.3%
<b>All COD</b>	<b>2,813,503</b>	<b>100%</b>	<b>-0.4%</b>	<b>-0.4%</b>

# Mortality Improvement Research

- Moving from “just recording” to analyzing and using as a source of modeling and forecasting
- Look at Drivers of Mortality Improvement and expansion of Mortality Improvement Modeling



# Mortality Improvement Research

- Drivers of Mortality Improvement
  - Andres Villegas study
  - SOA Expert Panel
  - Current RFP on Mortality Improvement Trend Analysis
    - – RFP deadline Sept 20. See SOA Website for Details
- Future: Analysis by Deprivation Categories

# Mortality Improvement Research

- Mortality improvement insurance company practice survey
- Assumptions insurers/reinsurers are using for future mortality improvement for life insurance and annuities
- How insurers/reinsurers future mortality improvement assumptions might vary assumptions by product, birth cohort, gender or other characteristics

# Mortality Modeling Research

- Modeling, Measurement, and Management of Longevity Risk
- Cause of Death Research current and future project with Milliman (Alexandre Boumezoued)
- Support development and enhancement of USMDB and HMD



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# Public Interest Mortality Research

- Economic Impact of Opioid Abuse
- Public Perception of Longevity Survey
- Actuaries Longevity Illustrator



## Enter Your Information

In the chart below, under "Person 1," enter your name and date of birth. If you want the illustrations to start later than blank and the illustrations will start at your nearest current age. Also enter your gender, whether you smoke and your ; the same information (except for the age at which the calculations are to start) in the "Person 2" column. The age for y time the illustrations will start. If you are single or do not wish to use the joint-life features in the program, leave the "P

You can always come back to this page to see how a change in what you enter affects the subsequent answers. In fact, change when you enter different ages and/or health statuses.

	Person 1	Person 2
First Name	<input type="text" value="First Name"/>	<input type="text" value="First Name"/>
Date of Birth	<input type="text" value="mm/dd/yyyy"/>	<input type="text" value="mm/dd/yyyy"/>
Age for Illustration to Start	<input type="text" value="Illustration Age"/>	
Gender	<input type="text" value="Select"/>	<input type="text" value="Select"/>