

Group Life Insured Mortality Trends: The Covid-19 Pandemic and Beyond

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Group Life COVID-19 Survey High Level Results





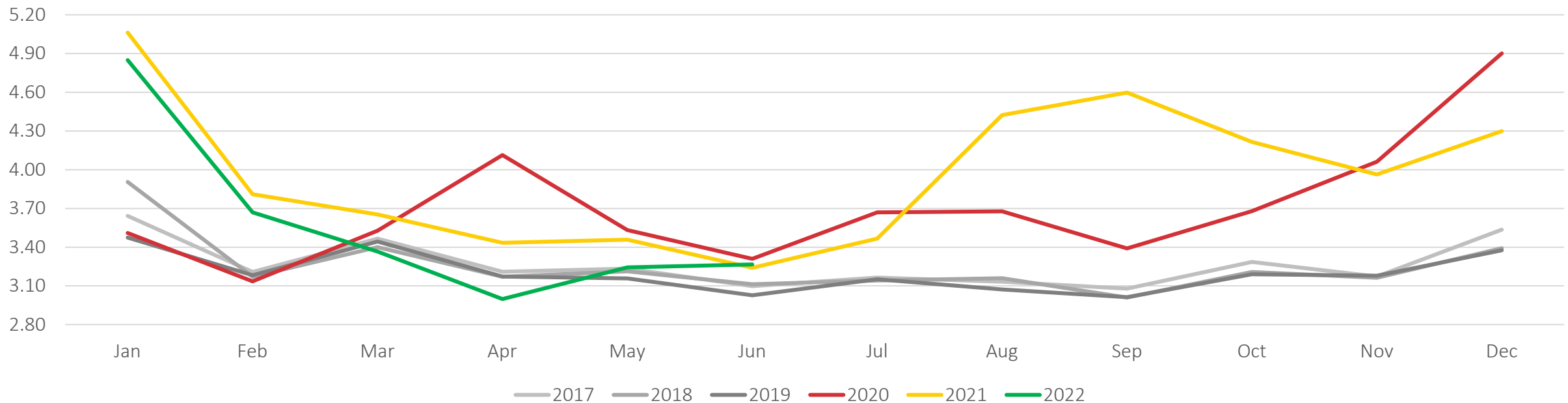
SOA COVID-19 Group Life Mortality Survey

- Monthly data collection from 20 top Group Term Life carriers in the U.S.
 - This is life insurance purchased by or through the employer.
- Survey collects summarized monthly exposures, death counts and amounts by cause of death, incurred date, and reported date.
 - Adjusted for monthly seasonality (higher deaths at beginning/ending of year).
 - Optional segments: Age; Gender; Industry; State
- Expectation comparison “Baseline”: 2017-2019 Group Life mortality results.
- Detailed report published bi-annually on SOA website
 - <https://www.soa.org/resources/experience-studies/2022/group-life-covid-19-mortality-03-2022/>
- Data in this presentation includes deaths reported through June 2022, **with 2Q22 data considered preliminary.**

SOA COVID-19 Group Life Survey Results: *Incurred Incidence*

- 4/20 – 3/22 Incurred Incidence up 21% vs. 2017-2019
- 4/22 – 6/22 Incurred Incidence is in line with 2017-2019
 - *April-June 2022 should be viewed as preliminary as claim completion is volatile.*

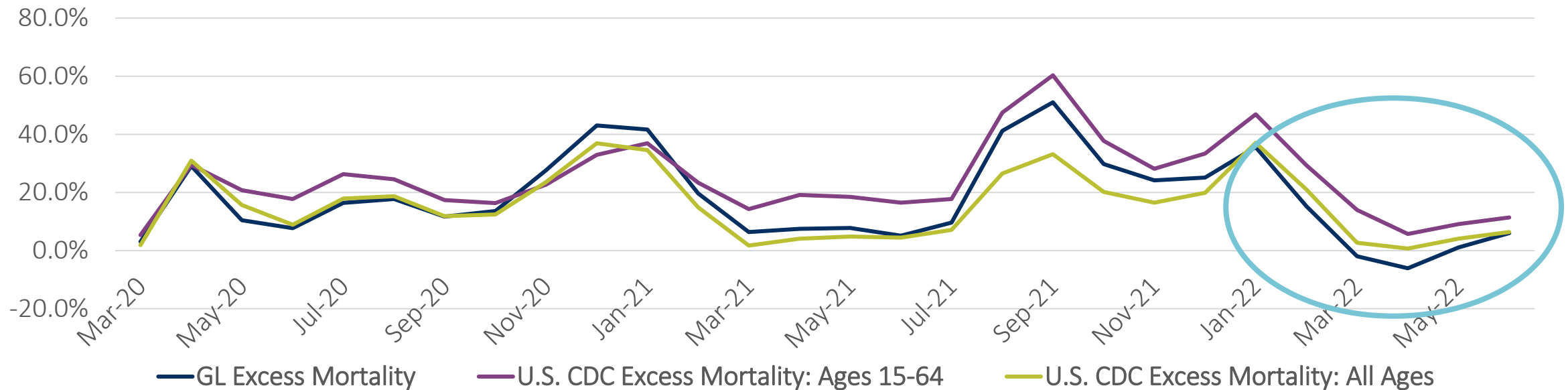
AGGREGATE INCURRED CLAIM INCIDENCE PER 1000 BY CALENDAR YEAR AND MONTH



Excess Mortality: Group Life vs. CDC

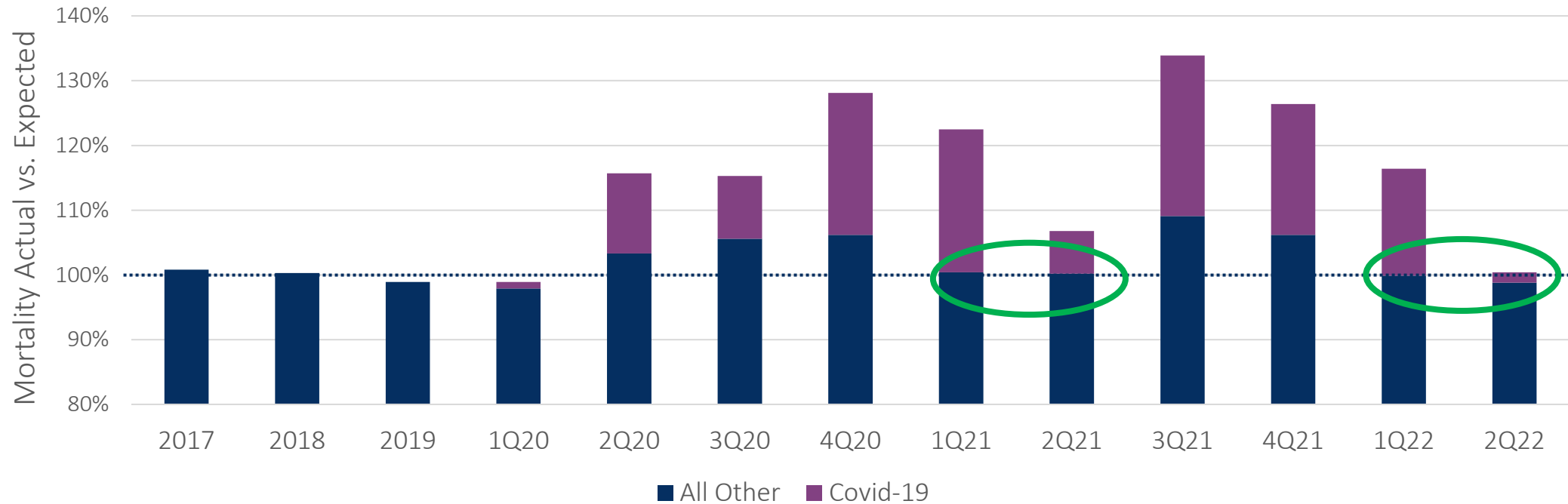
- Group Life excess mortality has tracked well directionally with U.S. population data provided by the CDC.
- The U.S. CDC Excess mortality for All ages and Ages 15-64 have generally bounded the Group Life result, but this has not been the case for most of 2022.

PROPORTIONAL EXCESS MORTALITY: GROUP LIFE INCURRED VS U.S. CDC*



*Full documentation can be found here: <https://www.soa.org/resources/research-reports/2021/excess-deaths-gen-population/>

Incurred GL Mortality – Covid-19 vs. All Other

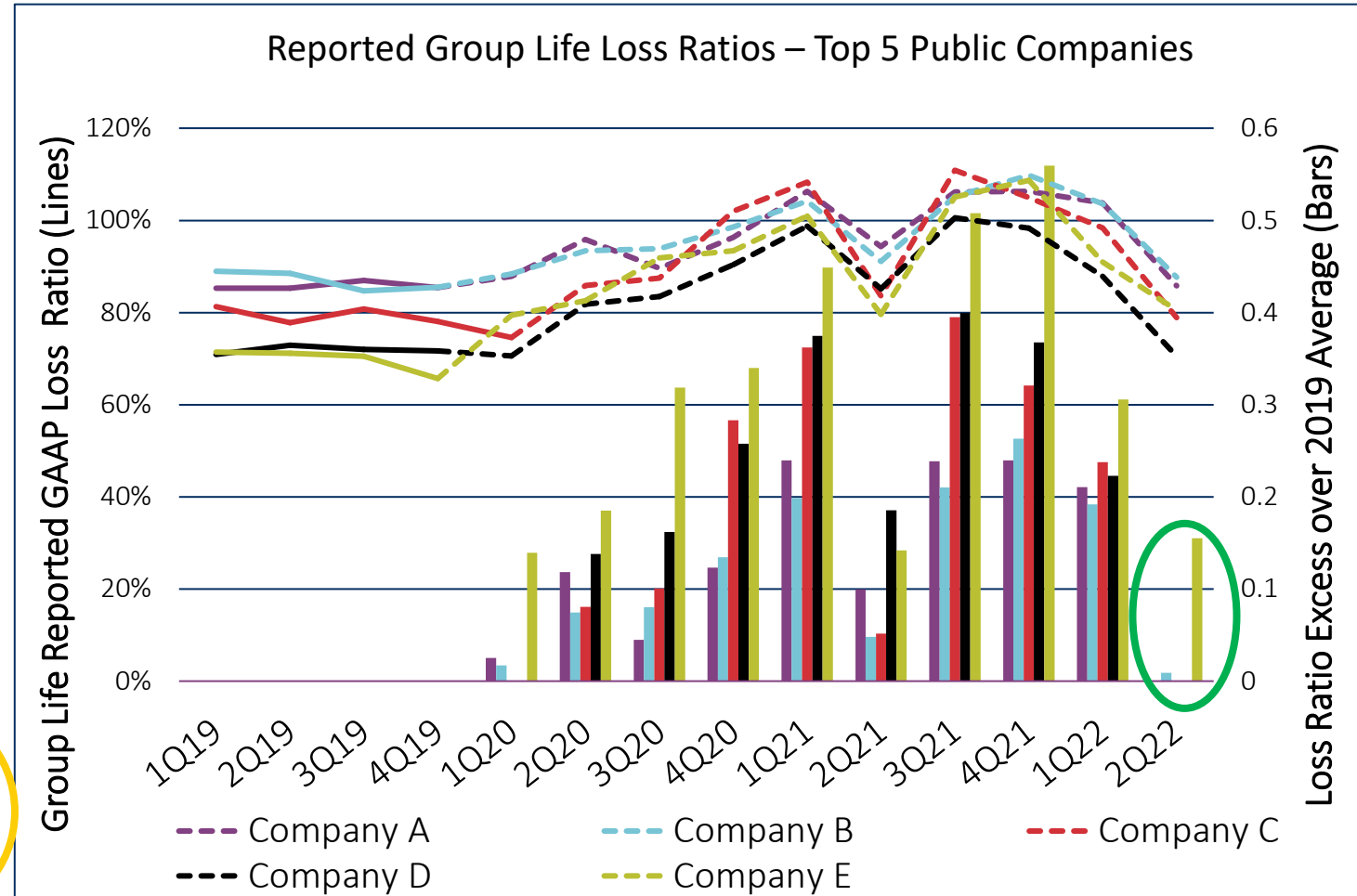


- Seasonally adjusted Group Life incidence vs. “expected” (2017-2019 baseline)
- Known COVID-19 deaths only explain ~ 85% of excess mortality since April 2020.
 - *In 2022, 100% of Group Life excess mortality is currently attributable to COVID-19.*

Group Life Carriers' Reported Financial Results

- GAAP financial results from the five largest publicly traded Group Life carriers show, on average, excess loss ratio results in line with Group Life survey data excess measures.
- Like the quartile analysis, the difference between these companies' excess loss ratio extrema tightened in 2022 compared to 2021.

Group Life Excess Measures	2020 - 2021 Ratio	1Q22 Ratio	2Q22 Ratio
GL Survey Excess Incurred Mortality	18%	16%	0.3%
Top 5 Public Companies' GL Loss Ratio vs. 2019 Average	16%	22%	1.0%





Group Life COVID-19 Survey Detailed Results



Incurring GL Mortality A/E by Age & Gender

- Males have about 5 more points of excess mortality relative to females, driven by the 45-64 age band which had 10 points higher excess mortality for males, over the 2Q20-2Q22.
 - The other age bands had only 3 points higher excess mortality for males compared to females.
 - 65% of deaths have come from the age 65+ groupings, for both females and males.

Mortality A/E: Ages 0-44



Mortality A/E: Ages 45-64



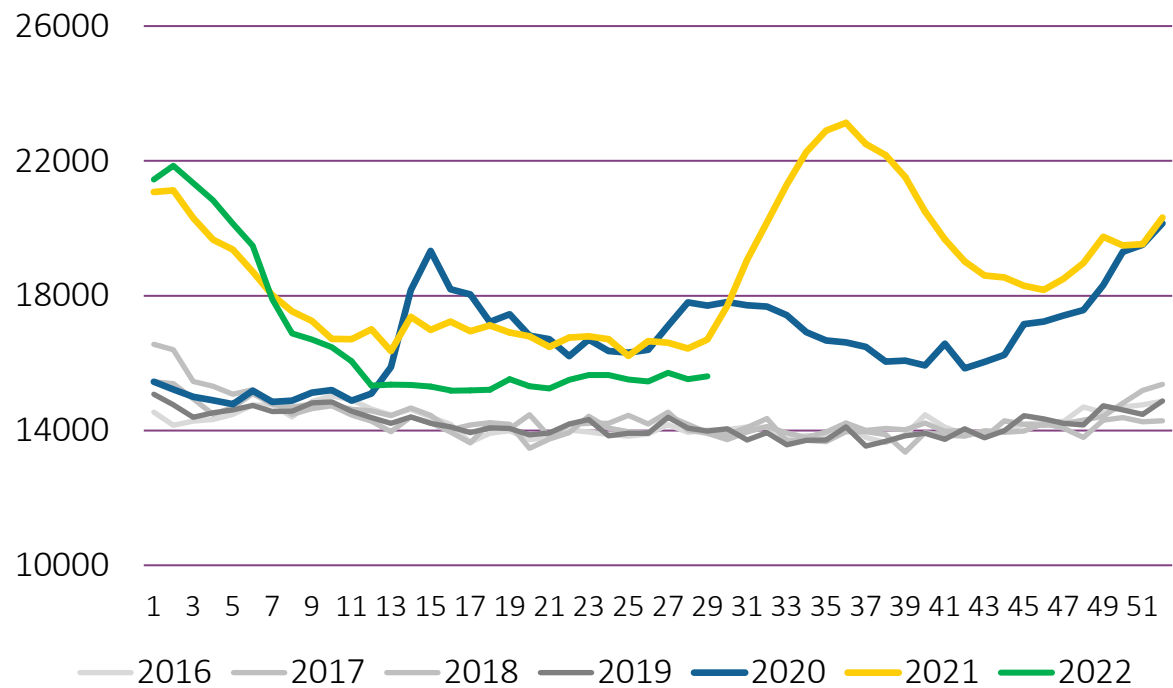
Mortality A/E: Ages 65+



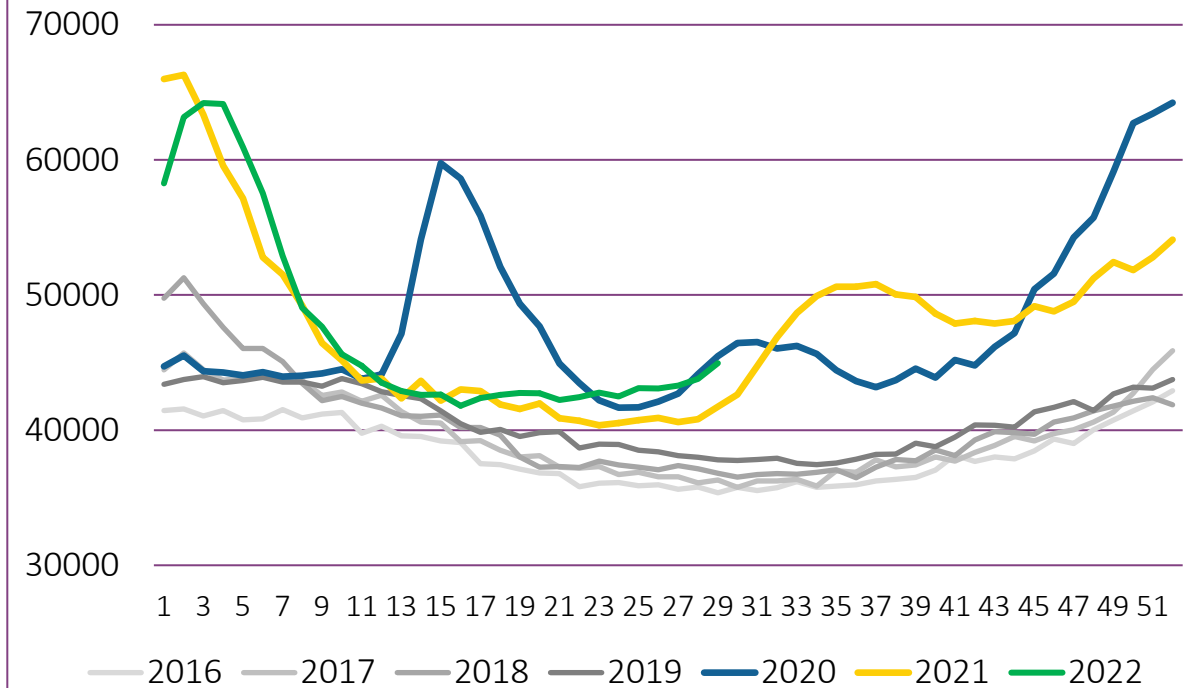
U.S. CDC Weekly Death Data as of 9/7/2022**

- Weekly excess deaths are within ~10% of pre-pandemic levels for the 0-64 age group.
- For 65+, excess deaths were close to 0 in March 2022, but in July have reached closer to 20%.

Death Counts (through July 2022): Ages 0-64



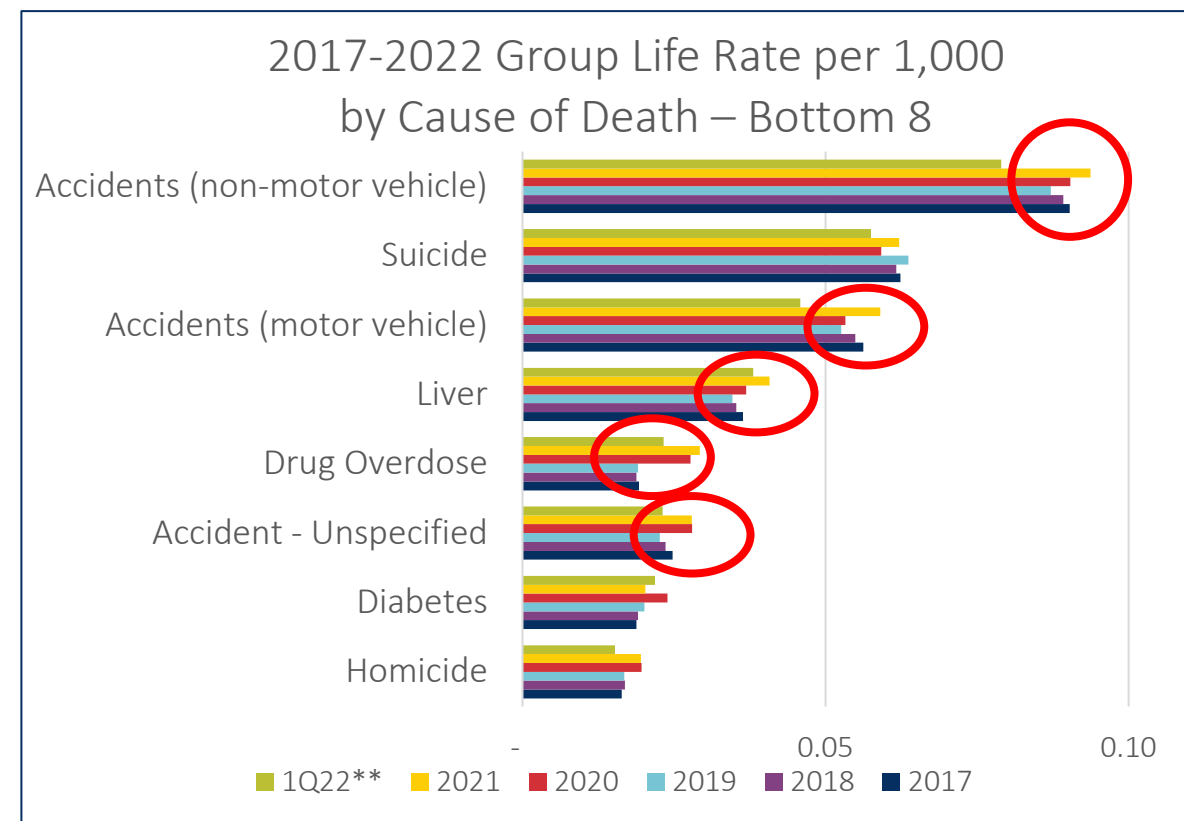
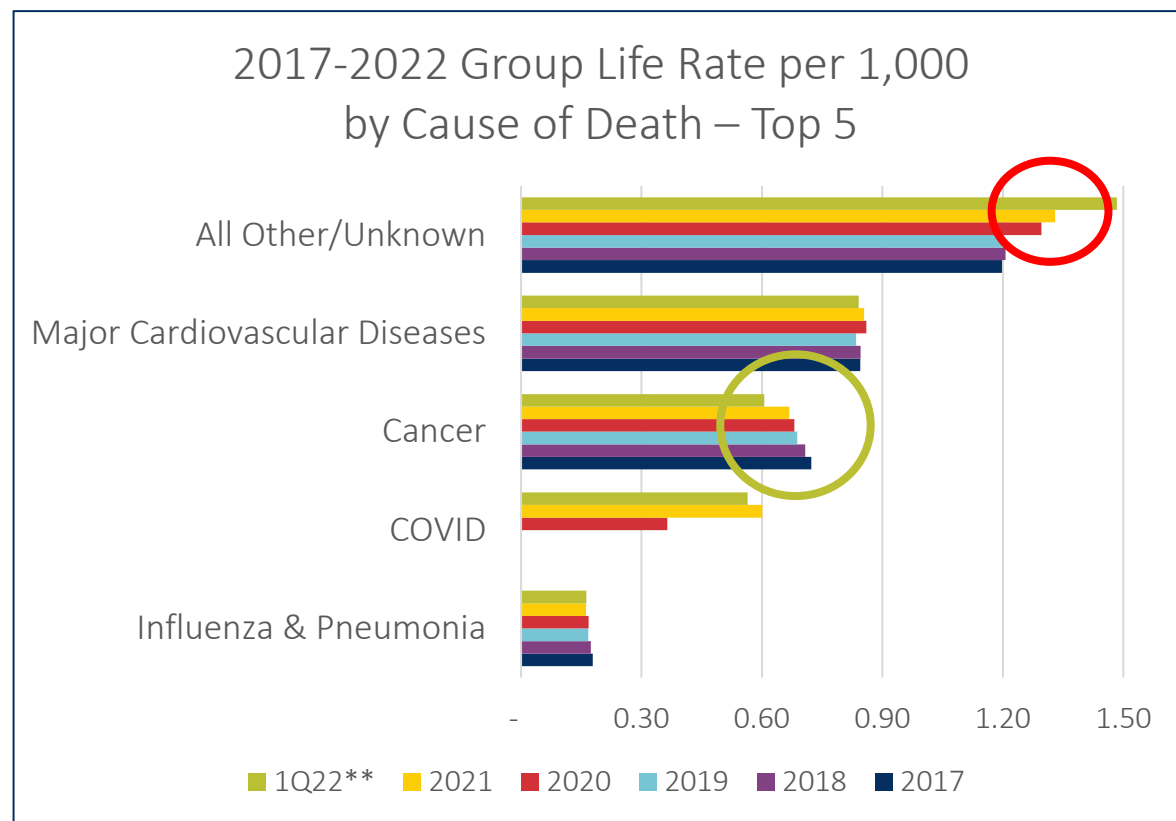
Death Counts (through July 2022): Ages 65+



**Sourced from https://www.cdc.gov/nchs/nvss/vsrr/covid19/excess_deaths.htm

Cause of Death Analysis – Group Life

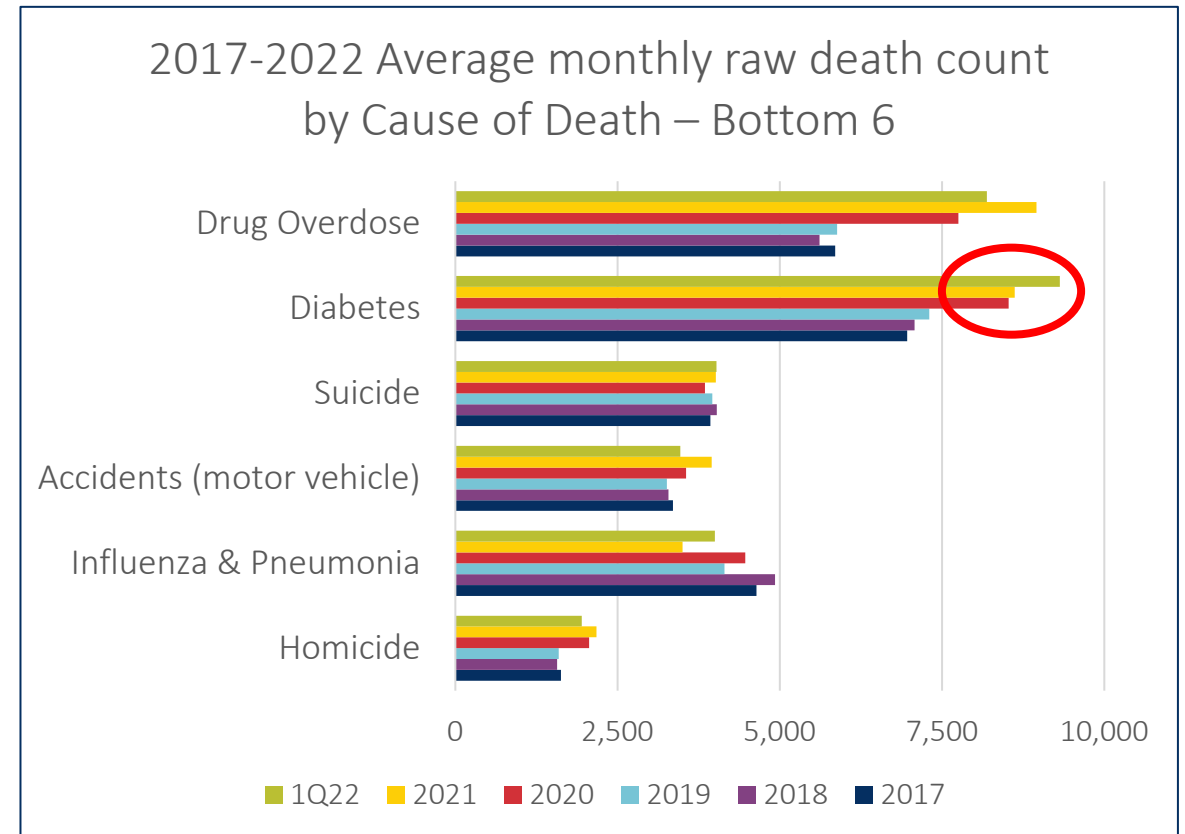
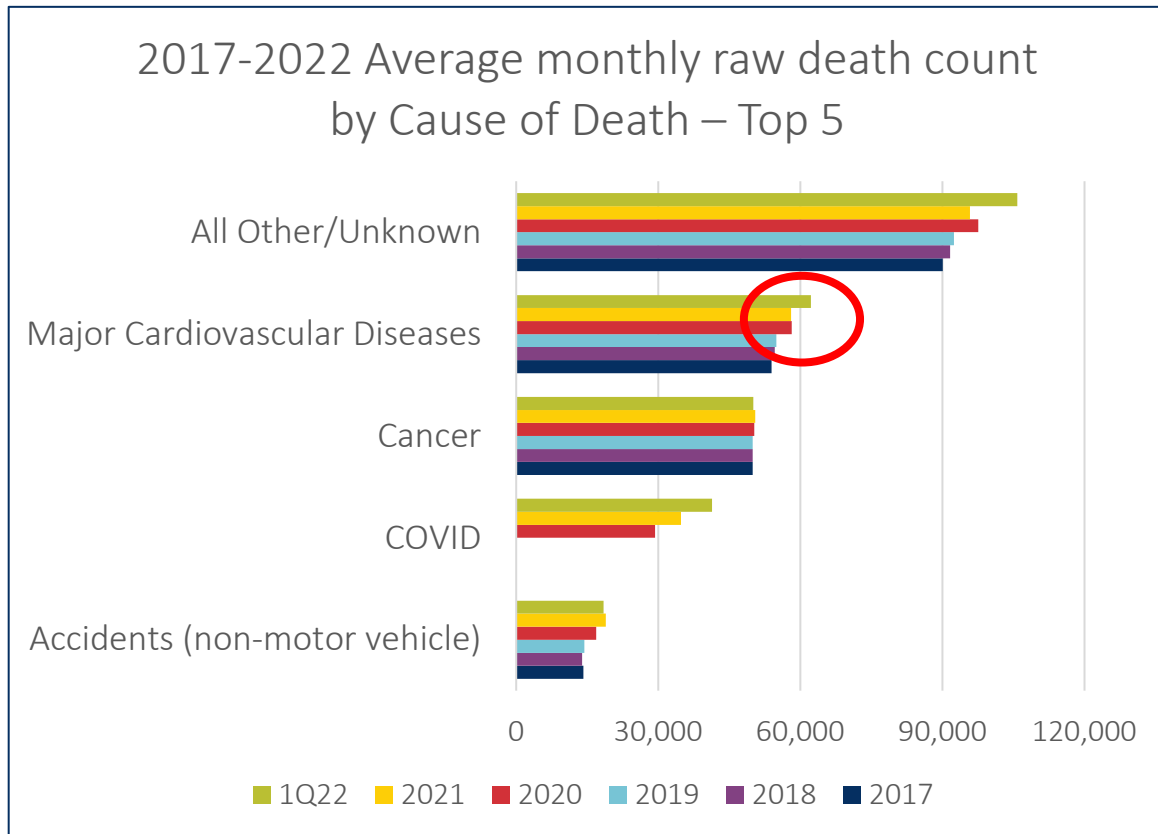
- Cancer deaths have decreased over the pandemic period
- Accidents and drug overdoses have notably increased over the pandemic period.



** 1Q22 Cause of Death data may still be incomplete. 2Q22 has been omitted as Cause of Death is notably incomplete.

Cause of Death Analysis – U.S. CDC

- Like the Group Life experience, Cancer deaths have not climbed during the pandemic period.
- Diabetes and cardiovascular deaths have climbed more in U.S. population than in Group Life.

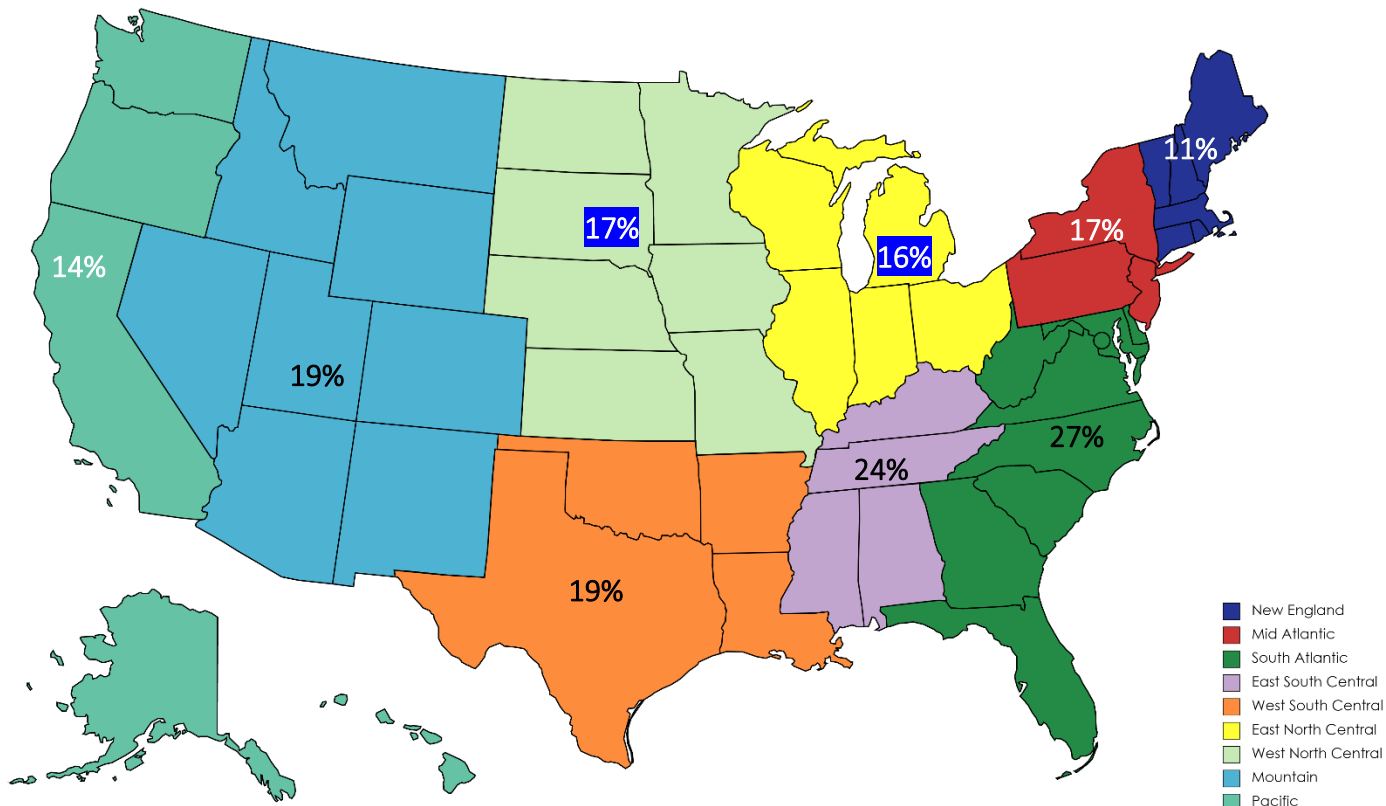


*2020+ data sourced from US CDC provisional data as of 8/17/2022: <https://data.cdc.gov/NCHS/Monthly-Provisional-Counts-of-Deaths-by-Select-Cau/9dzk-mvmi>

**2017-2019 data sourced from US CDC data: Monthly Counts of Deaths by Select Causes, 2014-2019 | Data | Centers for Disease Control and Prevention (cdc.gov)

9 – Region Group Life Mortality Results

- The Southern and Mountain regions have experienced the highest excess mortality over the pandemic period, with New England and Pacific regions with the lowest.



GROUP LIFE COVID-19 SURVEY DEATH A/E PERCENTAGE

Region	Q2-Q4 2020	2021	Q1 2022	Q2 2022	2Q20 to 2Q22	% of COVID Deaths
New England	116%	109%	115%	99%	111%	4%
Mid Atlantic	125%	117%	114%	96%	117%	10%
South Atlantic	123%	137%	122%	106%	127%	21%
East South Central	119%	132%	125%	107%	124%	8%
West South Central	123%	125%	113%	87%	119%	16%
East North Central	118%	116%	117%	107%	116%	20%
West North Central	120%	116%	121%	111%	117%	6%
Mountain	122%	125%	112%	94%	119%	7%
Pacific	118%	121%	109%	83%	114%	8%
Total	120%	122%	116%	100%	118%	



Group Life Mortality Outlook for 2022 and Beyond



Group Life Mortality Outlook 2022+

Potential Tail Winds

Vaccinations, Drug Therapies, and Herd Immunity

Mortality displacement

- Accelerated (“pulled forward”) deaths that would have occurred in the next few years, likely to be most seen in older ages

“Symptom/health” awareness

- Less severe flu seasons (like in 2021)
- More voluntary masking/distancing when sick

Medical advances from COVID-19 research

Potential Head Winds

Vaccine effectiveness & Participation

- Viral mutations, booster uptake

COVID-19 “Long Haulers” (Long COVID)

- Myocarditis (inflammation of heart muscle)
- Additional vulnerabilities to other diseases

Deferred healthcare

- Cancer: delayed detections
- Diabetes: mis-management of care

Fatigued Healthcare Workers

- Staffing shortages, workplace discontent, etc.

Mental Health and Economic Hardship

- Suicides & deaths of despair
- Poorer populations with less purchasing power for good food and healthcare

Questions?

