

# Estimating the impact of COVID-19 on healthcare costs in 2020

APRIL 29, 2020



# Presenters



**Emma Kramer**  
FSA, CERA, MAAA



**Doug Norris**  
FSA, MAAA, PhD



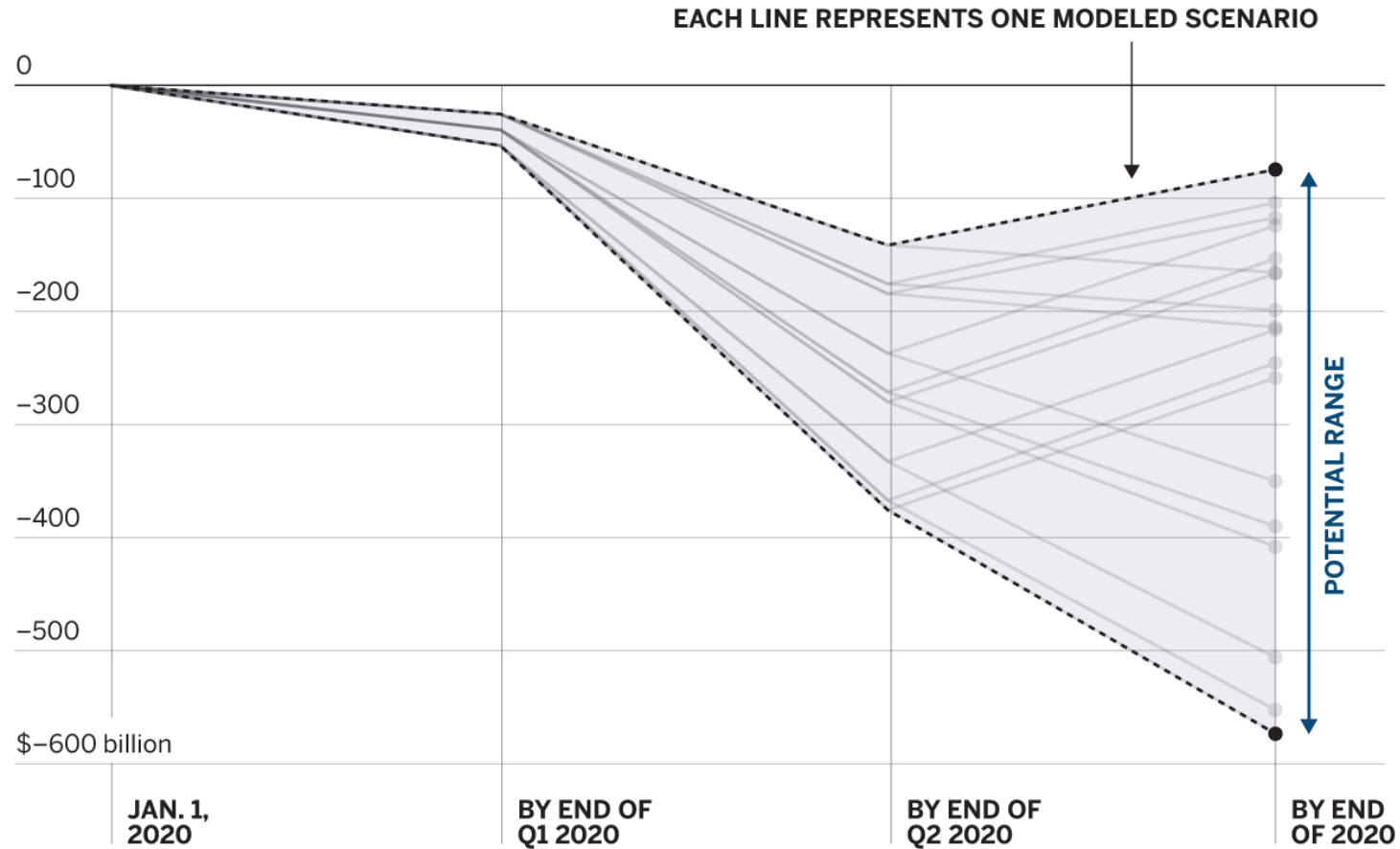
**Hayley Rogers**  
FSA, MAAA

# Milliman projects COVID-19 pandemic could reduce 2020 U.S. healthcare expenditures by \$75 billion to \$575 billion

- If care is deferred through end of June, the national net reduction through end of June would be between \$140B and \$375B.
- If care is deferred through the end of the year, the national net reduction in 2020 would be between \$75B and \$575B.
- While commercial insurance and Medicare are likely to see net decreases in costs, state Medicaid programs could experience a net cost increase as more people who have lost their jobs enroll in Medicaid.
- Almost all of the country faces a net decline in health expenditures, though most COVID-19 hot spots see less of a decline, since they are treating more COVID-19 patients.

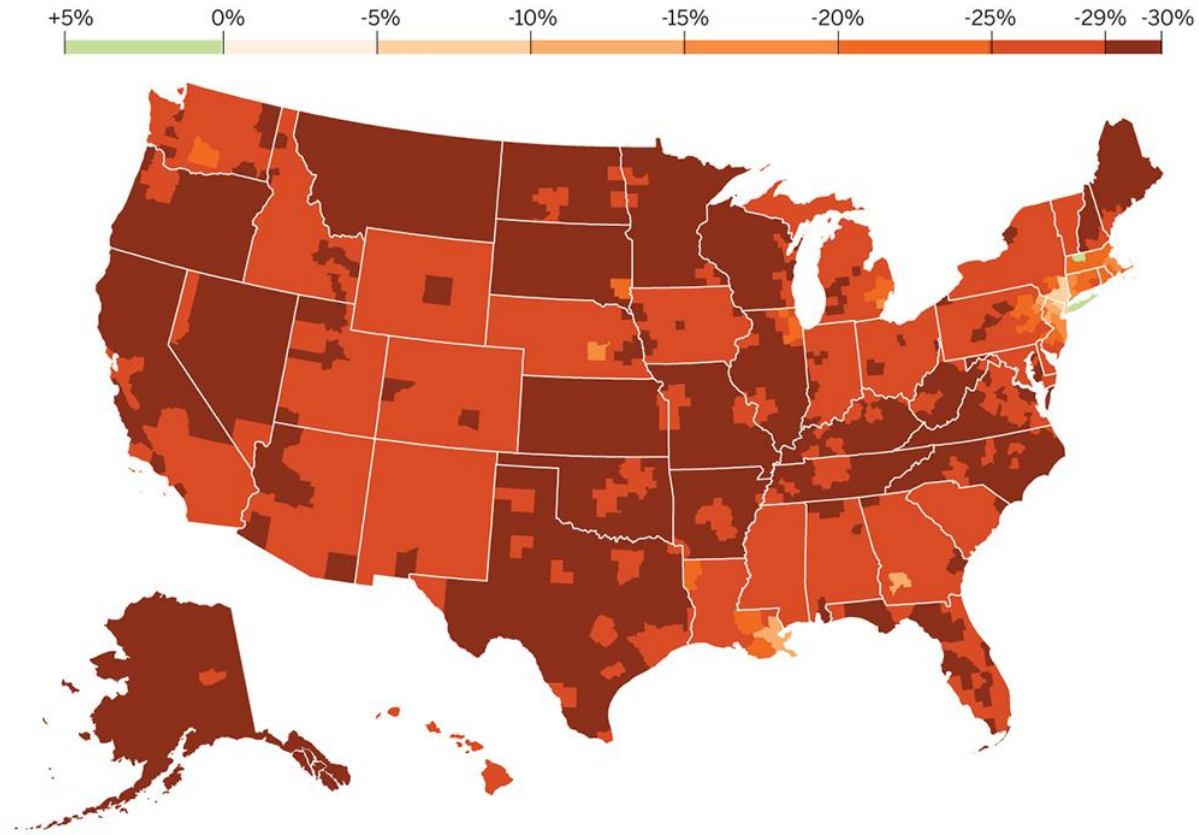
# Total 2020 nationwide net allowed cost impact of COVID-19

Commercial, Medicare, and Medicaid combined



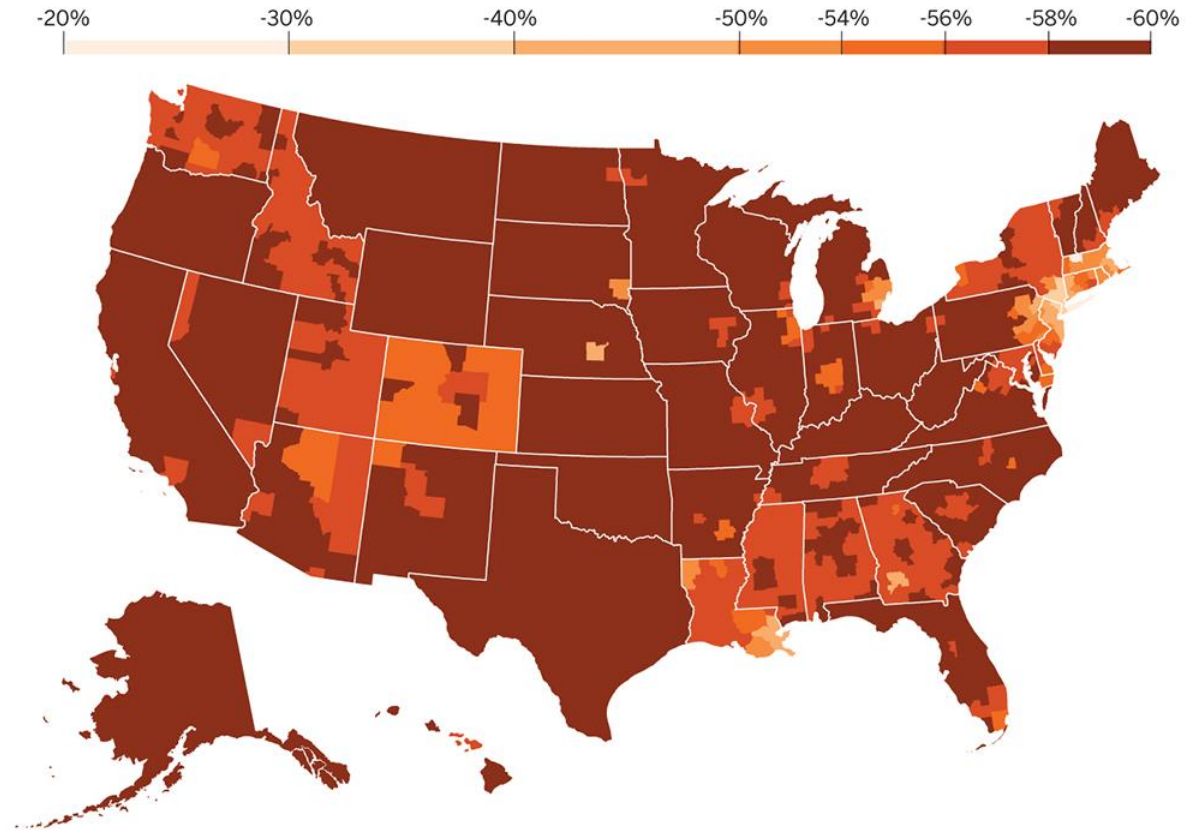
# Estimated net impact of COVID-19 by MSA

Second quarter of 2020 – 30% reduction in medical services

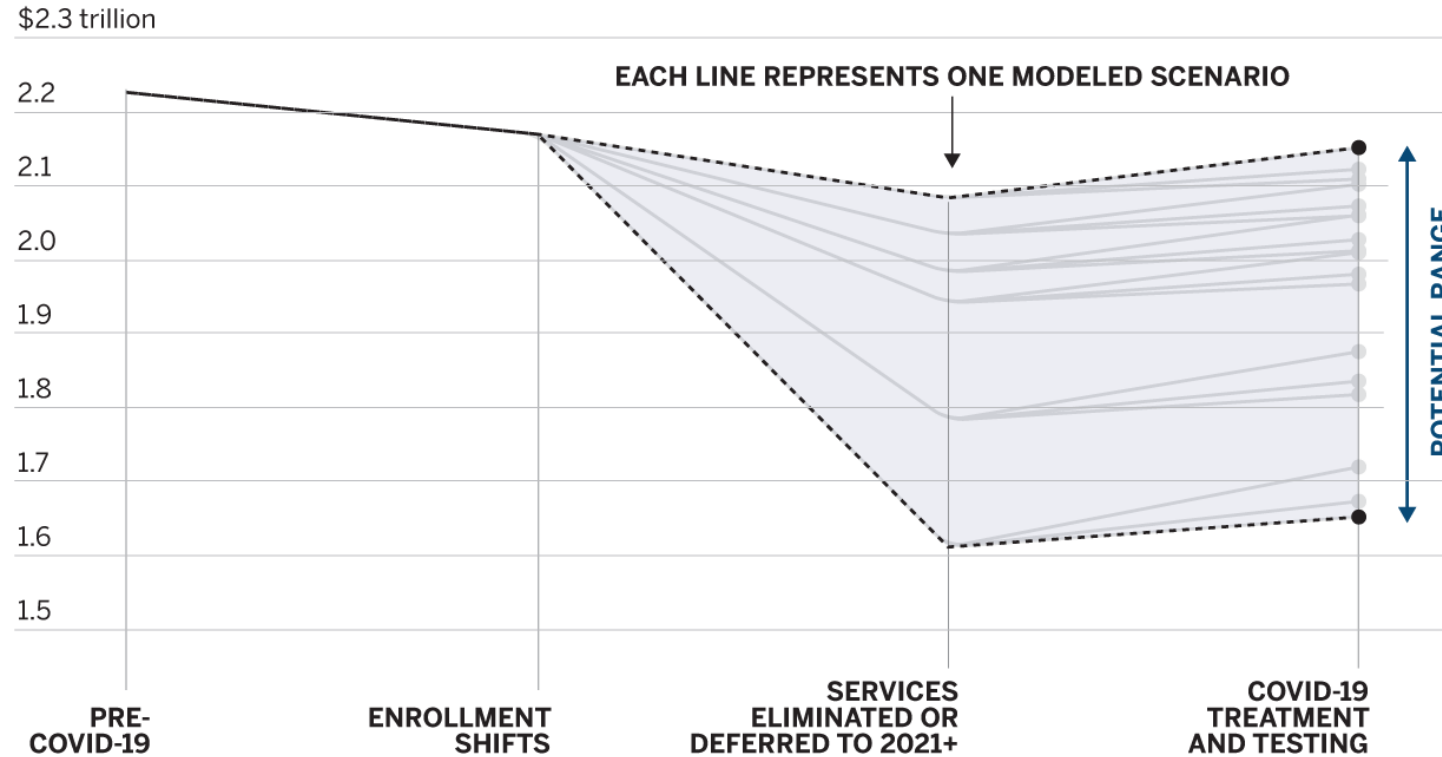


# Estimated net impact of COVID-19 by MSA

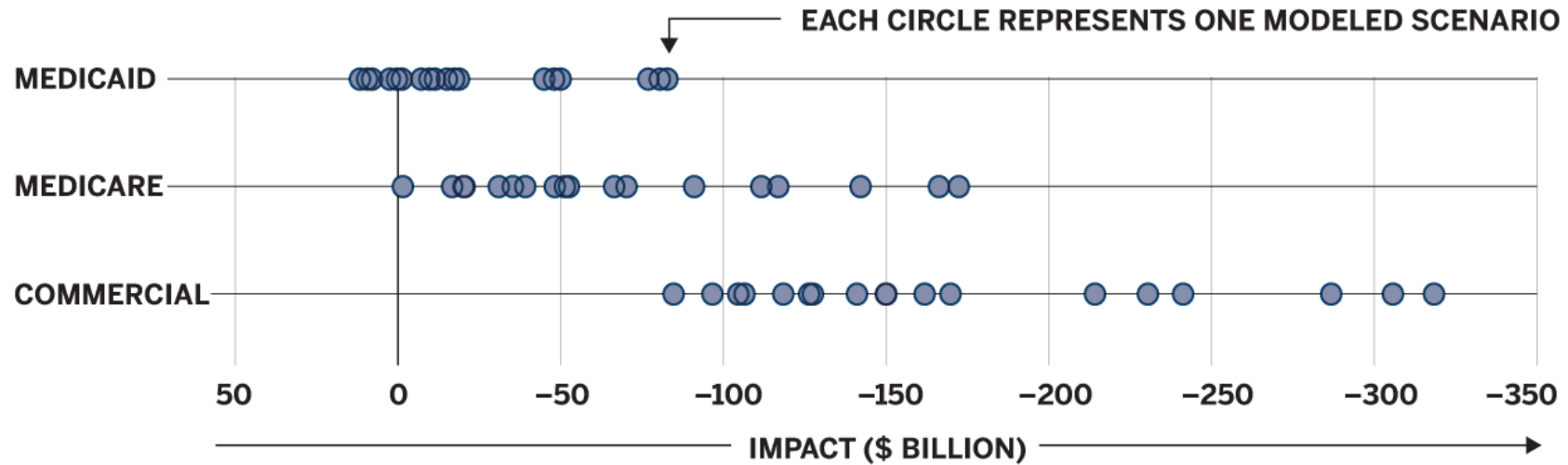
Second quarter of 2020 – 60% reduction in medical services



# Cumulative total expected national medical expenditures for each modeled impact



# Impact by market and scenario





# Scenario Examples: Commercial

**First wave:** Mid-level infections

**Second wave:** 50% Lower than first wave

**Deferral:** Mid-point

JAN-MAR 2020	JAN-JUNE 2020	JAN-DEC 2020	2021+
<ul style="list-style-type: none"><li>-0% Enrollment shift</li><li>&lt;+1% in COVID-19 treatment/testing</li><li>-3% Services foregone</li><li>-5% Services deferred</li><li>-7% Net impact</li></ul>	<ul style="list-style-type: none"><li>-5% Enrollment shift</li><li>+4% in COVID-19 treatment/testing</li><li>-9% Services foregone</li><li>-17% Services deferred</li><li>-27% Net impact</li></ul>	<ul style="list-style-type: none"><li>-7% Enrollment shift</li><li>+3% in COVID-19 treatment/testing</li><li>-8% Services foregone</li><li>-10% Services deferred</li><li>-22% Net impact</li></ul>	<ul style="list-style-type: none"><li>+10% added due to pent-up demand</li></ul>

# Scenario Examples: Medicaid

**First wave:** Mid-level infections

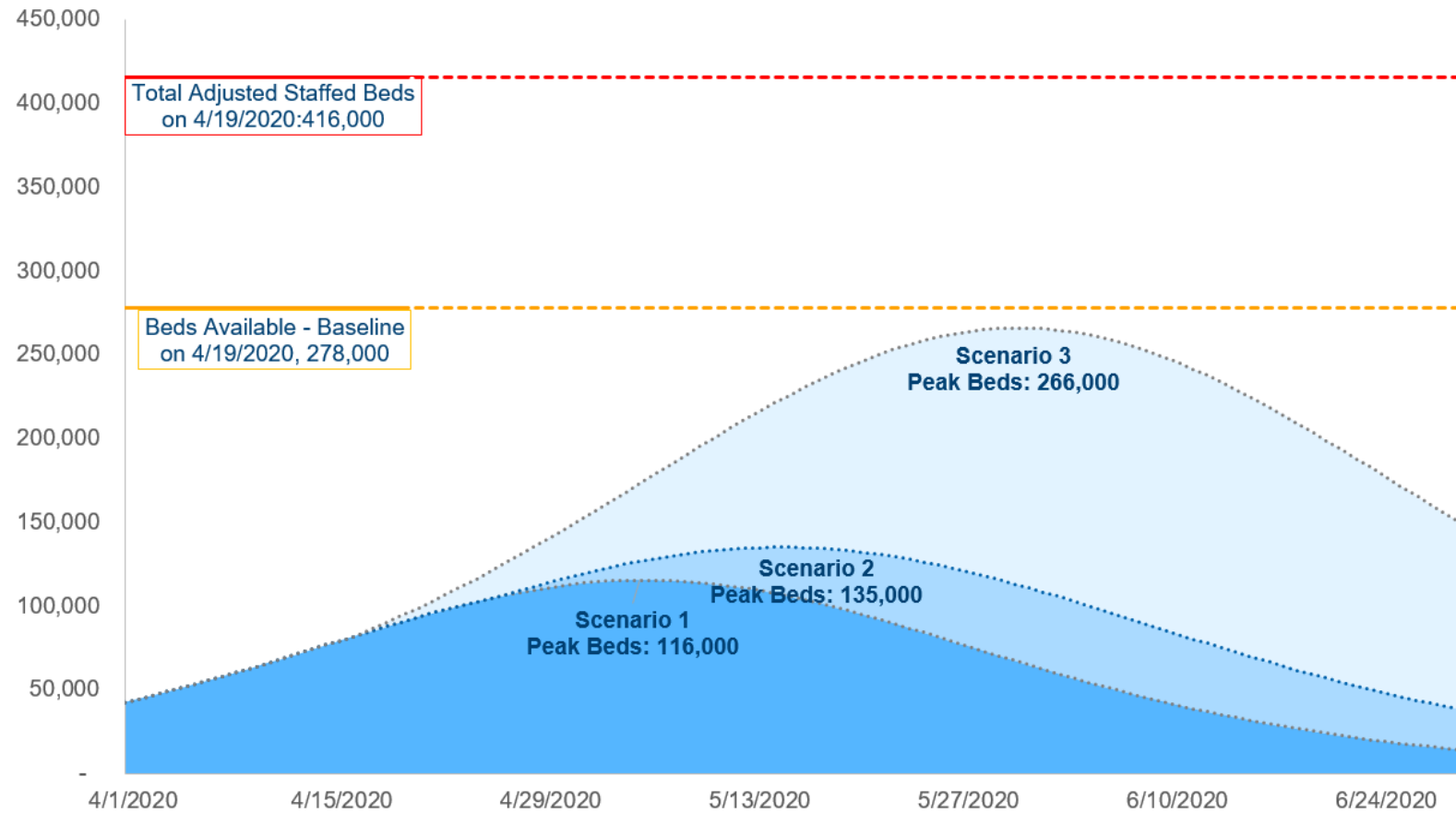
**Second wave:** 50% Lower than first wave

**Deferral:** Mid-point

JAN-MAR 2020	JAN-JUNE 2020	JAN-DEC 2020	2021+
<ul style="list-style-type: none"><li>▪ 0% Enrollment shift</li><li>▪ &lt;+1% in COVID-19 treatment/testing</li><li>▪ -3% Services foregone</li><li>▪ -5% Services deferred</li><li>▪ -7% Net impact</li></ul>	<ul style="list-style-type: none"><li>▪ +4% Enrollment shift</li><li>▪ +2% in COVID-19 treatment/testing</li><li>▪ -9% Services foregone</li><li>▪ -17% Services deferred</li><li>▪ -20% Net impact</li></ul>	<ul style="list-style-type: none"><li>▪ +5% Enrollment shift</li><li>▪ +1% in COVID-19 treatment/testing</li><li>▪ -8% Services foregone</li><li>▪ -10% Services deferred</li><li>▪ -12% Net impact</li></ul>	<ul style="list-style-type: none"><li>▪ +10% added due to pent-up demand</li></ul>

# Scenario Examples

## COVID-19 hospital capacity



# Recent updates

New developments	Potential impact to modeling
<b>Elective services</b>	<ul style="list-style-type: none"><li>▪ Address guidance to start reopening the hospital system to elective services</li><li>▪ Varying deferral assumptions by area</li></ul>
<b>The second wave</b>	<ul style="list-style-type: none"><li>▪ Add new scenarios to our model where the second wave infections exceed the first wave.</li><li>▪ Include a potential flu epidemic in the second wave model, and test for areas where hospitals may exceed capacity</li></ul>
<b>Milliman research</b>	<ul style="list-style-type: none"><li>▪ Economic impact of COVID-19</li><li>▪ In-Depth deferral assumptions</li></ul>

# Q&A

*If you have a question, please add it to the chat.*

# Data reliance and limitations

- Our estimates rely on a number of key assumptions that are subject to extreme uncertainty given the limited experience available at this time. These assumptions include the overall confirmed infection rate for the community, assumed infection rates by age and gender, projected costs by severity, severity distributions by age, the impact of hospital capacity limitations, and the frequency and cost impact associated with deferred or eliminated non-COVID-19 services. The assumptions supporting the conclusions outlined in this presentation are based on a combination of publicly available data and Milliman's proprietary claim data, and represent our best estimates as of April 23, 2020. Many of these assumptions will likely change over the coming weeks as COVID-19 experience manifests.
- Scientific knowledge of these items is incomplete and new data on the spread of COVID-19 in the United States is constantly emerging. In addition, actions taken by governmental authorities and the healthcare system related to the COVID-19 pandemic are rapidly changing. We expect these assumptions to change as more information becomes available, and our team of consultants closely monitor the impact of COVID-19 to ensure our projections are calibrated to the most current information. Due to the limited information available on the pandemic, any analysis is subject to a substantially greater than usual level of uncertainty.
- This presentation examines total medical cost impact to the United States nationwide over calendar year 2020; cost impact for 2021 and beyond are not included in this analysis. Member cost sharing and prescription drug costs are not considered. COVID-19 may cause long-term healthcare issues for survivors, and these costs are not included in this model. The cost and timing of a vaccine is also not estimated in this model, nor are the costs of any disease-modifying therapies that may emerge as treatments for COVID-19.
- Please refer to “Estimating the impact of COVID-19 on healthcare costs in 2020”, published on April 23rd, which summarizes the assumptions and methodology used to develop the results in this presentation.
- The presenters are members of the American Academy of Actuaries, and meet its qualification standards to provide this analysis.



**Thank you**