

Managing Risk & Reward During Uncertain Times

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Agenda

1. Impact of COVID-19
2. How Risk Has Changed in 2020
3. Responses to COVID-19
4. Lessons Learned From Around The World
5. Mental Health Considerations
6. Claims Considerations
7. Insurance Opportunities
8. Q&A

Impact of COVID-19

Why were the estimated impacts so varied?

Considerations:

- Case Fatality Rate
- Infection Fatality Rate
- Infection Rate
- Hospital capacity
- Rate of transmission
- Impact of social distancing measures
- Impact to the economy

Polling question #1

Reaction to COVID-19 in the United States was:

- A. Inadequate
- B. Appropriate
- C. An overaction
- D. I'm still not sure

Polling question #2

The product lines that will experience the biggest material impact will be:

- A. Life Insurance products (Term, UL, WL, etc.)
- B. Disability products (Short-term disability, Long-Term Disability)
- C. Hospital Indemnity products
- D. Critical Illness products
- E. Another unlisted product
- F. I am not sure

Direct & Indirect Impacts

Morbidity (Short-Term Disability, Long-Term Disability)

- We do not expect a large number of persons to become directly disabled from COVID-19
- Likely increase in mental nervous claims
- Likely slowdown in recoveries for those currently on disability claim (LTD & IDI)
- Impact of a COVID-19 induced recession

Mortality (Term, UL, WL)

- Carriers with larger concentrations of business in the New York City metro area could see early increase in incidence
- To date, mortality volatility has remained within historical deviations outside of New York City metro area
- Difference in impact on insured population vs. general population

Assessing Disability Risk

Considerations

- Key industries to watch: physicians/medical/dental groups, law firms, investment firms, real estate, oil, various small businesses
 - Including groups at high risk for mental/nervous and other “soft” claims: hospitality and travel industry, retail and restaurants, clergy, personal services (spas, salons)
- Potential for withdrawn applications and lapse in premium, despite extended grace periods
- Potential slow down in claim recoveries
- Likely increase in mental/nervous claims
- Likely increase in physician burnout (IDI & LTD impact)
- Additional impacts to the legal and medical industries

Assessing Mortality Risk

Considerations

- People who are at higher risk for severe illness from COVID-19 (per CDC):
 - Older adults (>65 and those in nursing homes, in particular)
 - People with underlying conditions especially:
 - Chronic lung disease or moderate to severe asthma
 - Those with serious heart conditions
 - Those who are immunocompromised
 - People with severe obesity (BMI \geq 40)
 - People with diabetes
 - People with chronic kidney disease undergoing dialysis
 - People with liver disease

Impact to Products with Shorter Waiting Periods (STD, PFL, Critical Illness, Hospital Indemnity, etc.)

Impacts

Anticipate carriers will see a higher percentage of STD/PFL claims from certain industries and regions:

- Industries likely to see spikes in incidence include healthcare, manufacturing, hospitality, retail and transportation (airlines, auto, and rail)
- Other claim trends may likely include an increase in mental/nervous and drug/alcohol diagnoses
- Increase in claim incidence by industry will likely be driven in large part by a carrier's specific book of business, geographic penetration and contract definitions
- To date, few STD COVID-19 related claims are moving to LTD claims; although individuals with underlying health conditions and few alternative job opportunities are more likely to continue on claim

How Risk Has Changed in 2020

Job Losses

Considerations

- Unemployment was up to 14.7% as of April 30, 2020, then fell to 13.3% in May as the U.S. added 2.5 million new jobs
- A growing minority of employees are earning more from unemployment benefits than they did from wages
- Many employers seek to continue benefits for furloughed employees, and carriers are extending benefits for as long as premiums are paid (Voluntary and Employer Paid)
- Jobs that require client contact are at risk because:
 - Social distancing may require fewer employees to be available at any given time
 - Employers who can afford to do so will accelerate investments in automation

Layoffs and Bankruptcies

Layoffs –40 significant U.S. Layoffs announced during the month of May, 2020.

Furloughs & Temporary Layoffs - 11 significant U.S. Furloughs & Temporary Layoffs announced during the month of May, 2020.

Bankruptcies - 14 significant U.S. Bankruptcies announced during the month of May, 2020.

COMPANY NAME	CITY	STAT	STANDARD INDUSTRIAL CLASSIFICATION DIVISION	STANDARD INDUSTRIAL CLASSIFICATION (SIC) MAJOR INDUSTRY	# LAID OFF EMPLOYEES	ANNOUNCEMENT DATE	EFFECTIVE DATE (MONTH)	DETAILS	LINK
Thumbtack	San Francisco	California	Services 70	Major Group 73: Business Services	250	31-Mar-20	Mar-20	The local services that Thumbtack showcases in its marketplace are also seeing anything from a "dramatic decline" to an "outright collapse." Apparently the company's business has fallen 61% in San Francisco, 55% in Detroit and 50% in New York City.	https://techcrunch.com/2020/03/31/thumbtack-layoffs/
Simon Properties	Indianapolis	Indiana	Finance Insurance Real Estate 60	Major Group 67: Holding And Other Investment Offices	1,000+	31-Mar-20	Mar-20	30% of workers furloughed as all of its properties are being temporarily shut because of the coronavirus pandemic.	https://www.cnbc.com/2020/03/31/simon-property-furloughs-30percent-of-
Angel Oak	Atlanta	Georgia	Finance Insurance Real Estate 60	Major Group 61: Non-depository Credit Institutions	200	31-Mar-20	Mar-20	Angel Oak Mortgage Solutions, which specializes in so-called non-qualified mortgages that can't be sold to Fannie Mae or Freddie Mac, cut almost 200 of its 275 employees amid the coronavirus pandemic	https://www.bloomberg.com/news/articles/2020-03-27/mortgage-lender-angel-oak-axes-70-of-staff
La-Z-Boy	Monroe	Michigan	Manufacturing 20	Major Group 25: Furniture And Fixtures	6,800	30-Mar-20	Mar-20	La-Z-Boy Inc. is temporarily closing its U.S. manufacturing facilities, 155 stores as well as distribution centers, slashing salaries and laying off about 70 percent of its global workforce as the coronavirus outbreak affects operations.	https://www.craigslist.com/manufacturing/la-z-boy-lays-6800-slashes-salaried-workers-pay-closes-stores

Interest Rates

Considerations

- U.S. Fed Funds rate, presently at 0.25%, fell by 150 basis points since January 29, 2020
- A drop in interest rates impacts both a company's assets and liabilities

Morbidity Risk

- For every 1.0% interest rate drop, LTD Disabled Life Reserves increase by roughly 5%
- While interest income for disability carriers drops, a carrier's obligation to pay benefits remains unchanged

Mortality Risk

- With Life insurance a drop in interest rates decreases interest income. Some products allow for a decrease in credited interest, but policies may already be at their contractual minimums.

Healthcare Industry: Hospitals

Hospitals

- Plunging revenues from canceled non-emergency medical appointments have forced hospitals to furlough or cut pay for doctors, nurses and other staff
- Rural, non-profit hospitals and private medical practices were facing financial and existential threats even prior to the COVID-19 pandemic
- Hospital staff working in the hot zones are facing long hours of treating patients, often without protective gear deemed necessary for personal safety and cross-patient transmission
- Other segments of the healthcare industry experiencing potentially dire consequences from COVID-19 are residential nursing care, including home health and assisted living facilities

Healthcare Industry: Hospitals

May 2020 study

Results from a recent study of over 2 million patient visits from 228 hospitals across 40 states

(Strata Decision Technology, Mar-Apr 2020)

- The impact of the coronavirus pandemic is pushing many hospitals to the brink of a financial collapse
 - Even before COVID-19, hospitals were operating with razor thin margins of 2% and close to one-third of them were operating at a loss
 - The 228 hospitals surveyed lost an estimated \$1.3 billion in revenue compared to the prior year—the **equivalent of \$60.1 billion per month in revenue loss** for hospitals nationwide

Source: https://www.stratadecision.com/wp-content/uploads/2020/05/National-Patient-and-Procedure-Volume-Tracker-and-Report_Weekly-Update_May18_2020.pdf

Healthcare Industry: Physician Practices and Specialties

Physician practices, dentists, optometrists, other specialties

- Doctors and physician practices are experiencing difficulty; many have shut down or limited operations
- Underwriters should pay close attention to the type of practices seeking coverage and whether standard job duties have changed
- As healthcare embraces video appointments with fewer face-to-face interactions, jobs may become less physically stressful, more pandemic-proof, and more technical
- Some specialty practices may be more financially at risk including gastroenterology and pharmaceutical laboratories, both of which are not currently eligible for federal stimulus funding
- Dentists, dental hygienists and chiropractors, which have historically been difficult disability risks, and other specialties should continue to be handled conservatively due to financial pressure placed on them from lost patient revenue

Healthcare Industry: Physician Practices and Specialties

May 2020 study

- The massive drop in patient visits and procedures, which account for most of hospital revenue, during the pandemic has also led directly to unprecedented financial losses

- There was an average **54.5% decrease** in the number of unique patients who sought care in a hospital setting during the study period
- The top ten procedures account for over 50% of the total payments made to hospitals

Impact to Top 10 Inpatient Procedures and Surgeries

Primary Knee Replacement	- 99%	Percutaneous Coronary Intervention	- 44%
Lumbar/Thoracic Spinal Fusion	- 81%	Fracture Repair	- 38%
Primary Hip Replacement	- 79%	C-Section	+ 2%
Diagnostic Catheterization	- 65%	Regular Delivery	+ 1%
Diagnostics	- 60%	Mechanical Ventilation	+ 24%

© Strata Decision Technology
Data current as of 5/11/2020

Model examined YoY comparison for a 2 week period
(March 24 - April 6, 2019 and March 22 - April 4, 2020)

- Additionally, health screenings that are designed to provide early detection were down significantly in volume, increasing the risk of undiagnosed disease
- Preventive wellness visits, gynecologic wellness and screenings, and GI benign neoplasms and polyps all saw volumes drop by over 75% in the cohort group

Healthcare Industry: Government Response

Government response to healthcare industry

- Federal government passed legislation that includes more than \$100 billion in emergency funds
 - Compensate hospitals and other health care providers for lost revenue and other costs associated with the pandemic
 - Bill calls for spending up to \$16 billion to replenish the nation's depleted stockpile of medical gear such as ventilators, medicines, personal protective equipment (PPE)

Responses to COVID-19

Impact on New Business

Considerations

- Carrier workarounds to underwrite new business
 - Inability to obtain APS's and collect fluids
 - Urgency to incorporate new tools and protocols into underwriting to acquire more comprehensive health and financial information
 - LabPiQture
 - Electronic Health Records
 - Statements verifying applicant is currently working minimum required hours
 - Current financial records in addition to previous years' tax returns
- Some carriers seeing higher volume of applications for individual products
 - Potential for increased sales – heightened awareness of need for coverage
- Temporarily ceasing to sell products with very short elimination periods
- Some tightening and/or price increases on products with shorter-term rate guarantees (Group Life, LTD)

Impact on Inforce Business

Considerations

- Grace period extensions
 - Required by certain jurisdictions
 - Goodwill towards policyholders
 - Cost to insurance companies
- Insured payment plans
 - Required by certain jurisdictions
- Impact on claims adjudication
 - Increased incidence across mortality and morbidity products - including non-compensable claims
 - Increased inquiries by claimants to understand coverage
 - Difficulty in acquiring medical information for claims adjudication
 - Potential for delayed recoveries due to inability to acquire “non-essential” surgeries and services

Munich Re Response to Risk Considerations

Sharing risk in order to explore new ideas and concepts

- Munich Re collaborating with consortium of leading healthcare companies to launch a COVID-19 secure research database

- HIPAA-compliant
- De-identified and limited patient-level data set
- Available to public health and policy researchers
- Pro bono, cross-industry collaboration includes

Munich Re Life US
 Berkeley Research Grp
 Change Healthcare
 Health Care Cost Institute
 Mirador Analytics
 Prognos Health
 Sumitomo Dainippon Pharma
 Symphony Health
 Verana Health

Advarra
 Aetion
 AnalyticsIQ
 Arcadia.io
 BHE
 Datavant
 Elsevier
 Glooko
 Healthjump

Helix
 Medidata
 Office Ally
 OMNY
 Parexel
 QIAGEN
 SAS
 Snowflake
 Veradigm



COVID-19 Research Database

Lessons Learned From Around the World

Disability: Mental Nervous Claims

Effects from around the world

- Mental Nervous is the #1 cause of disability claims in many markets
 - Harder to adjudicate
 - Less stigma regarding mental health conditions
 - Is there an incentive to be disabled?

Critical Illness: Thyroid Cancer in South Korea

Impacts to incidence

- Conditions with historically low incidence may increase suddenly

Headlines from around the world

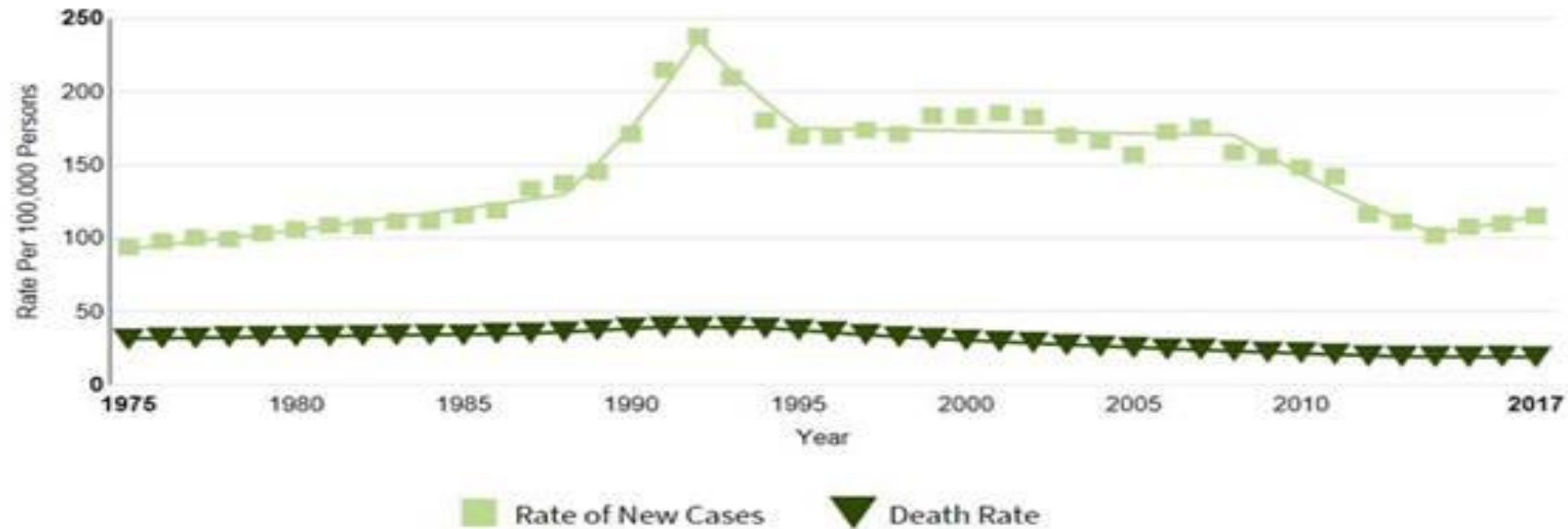
*“**South Korea** has the highest incidence rate **of thyroid cancer** in the world. Between 1999 to 2009, rates **of thyroid cancer** increased by more than sevenfold, from 6.3 per 100,000 to 47.5 per 100,000 people.”*

“The current “epidemic” of thyroid cancer in South Korea is due to an increase in the detection of small tumours, most likely as a result of over-detection by screening, finds a study published by The BMJ today. “

“Overdiagnosis refers to the detection of harmless cancers that will not cause symptoms or death during a patient's lifetime. But because it is not possible to distinguish between lethal and harmless cancers, all cancers detected mainly by screening are treated.”

Critical Illness: Prostate Cancer

New Cases, Deaths and 5-Year Relative Survival



New cases come from SEER 9. Deaths come from U.S. Mortality.
 All Races, Males. Rates are Age-Adjusted.
 Modeled trend lines were calculated from the underlying rates using the Joinpoint Trend Analysis Software.

Critical Illness: Prostate Cancer

Headlines from around the world

According to research by Queen Mary University of London published in September 2019:

“Prostate cancer is the most common cancer in Western men, with 1.3 million new cases being diagnosed each year worldwide. It is currently detected using a blood test that measures PSA levels. Although it provides early diagnosis, the PSA blood test has a low specificity (high false positives) with about 75 per cent of all PSA positive results ending up with negative biopsies that do not find cancer.

When a high PSA level in the blood is detected, the patient undergoes a tissue biopsy of the prostate gland, which is invasive and carries a significant risk of bleeding and infection. On biopsy, the majority of patients with elevated PSA levels are found not to have cancer.

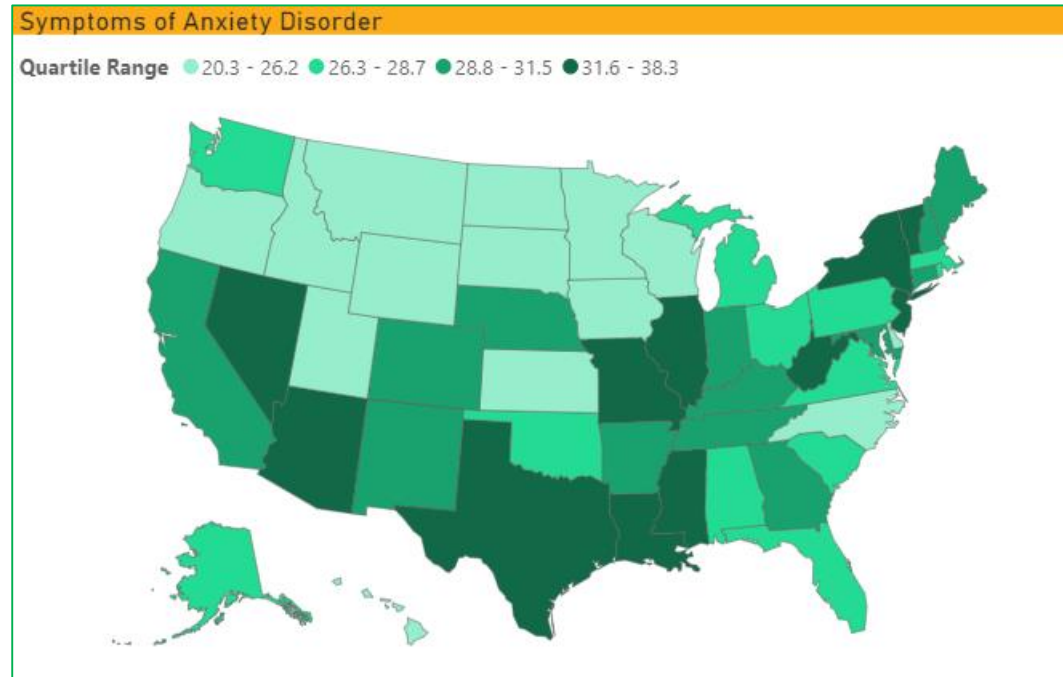
Additionally, most diagnosed early-stage prostate cancers are not fatal if left untreated. The current practice of the combined PSA test and biopsy for prostate cancer therefore results in unnecessary biopsies and over-diagnosis and overtreatment of many men.”

Mental Health Considerations

Likely Increase in Mental/Nervous Claims, Anxiety

Considerations

- National Center for Health Statistics, Census Bureau & CDC study: Coronavirus pandemic has taken a toll on mental health in the United States
 - One-third of Americans now show signs of **clinical depression or anxiety** - rates twice as high as before the pandemic



Likely Increase in Mental/Nervous Claims, Anxiety

Considerations

- In 2019, the leading cause of anxiety among adults in the U.S. was *family safety and personal health*
- Impacts to the Disaster Distress Helpline (a federal crisis hotline managed by DHHS)
 - March 2020 saw a **338%** increase in calls volume over the prior month
 - Calls in April registered more than **1,000% increase** over the prior year
 - In April, roughly 20,000 people texted a hotline run by the Substance Abuse and Mental Health Services Administration
- A recent study showed that patients with mental health conditions have been reporting relapses in their mental state, such as fear-triggered panic attacks or resurface of psychosomatic symptoms

The coronavirus pandemic is pushing America into a mental-health crisis

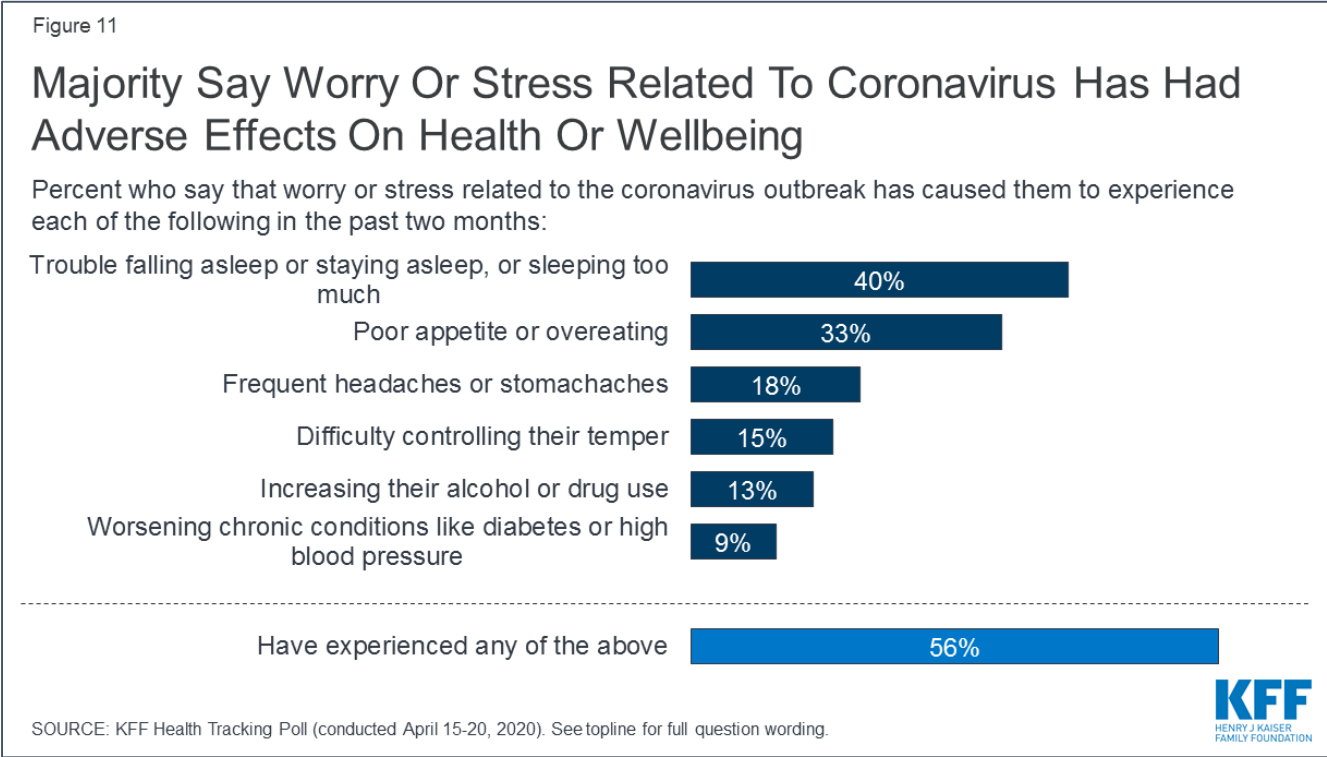
Anxiety and depression are rising. The U.S. is ill-prepared, with some clinics already on the brink of collapse.

Washington Post
May 2020

Likely Increase in Mental/Nervous Claims, Anxiety

KFF poll results

- In the latest KFF poll, over half of U.S. adults (56%) report that worry or stress related to the coronavirus outbreak has caused them to experience at least one negative effect on their mental health and wellbeing

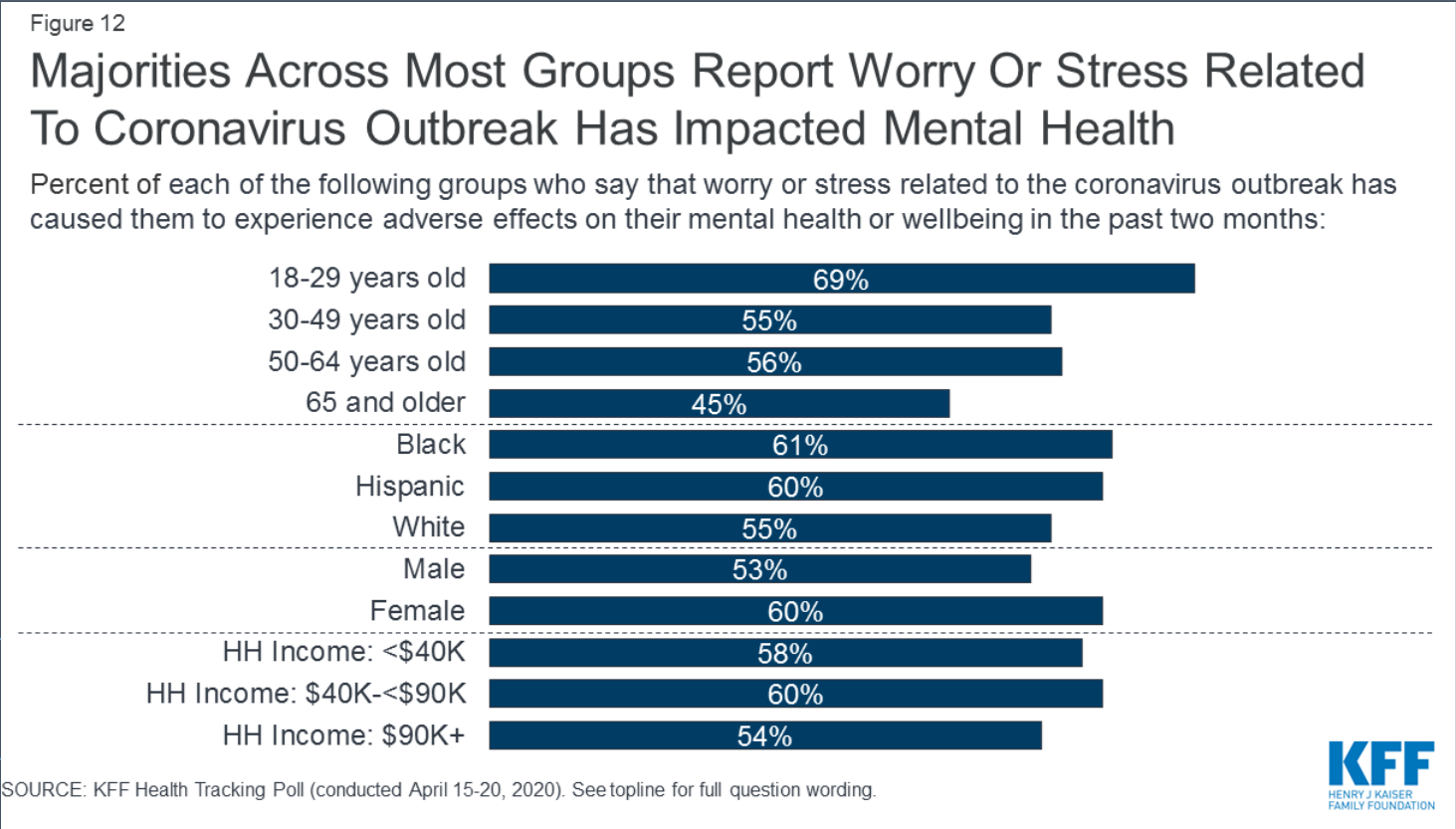


Sources: KFF Health Tracking Poll – Late April 2020: Coronavirus, Social Distancing, and Contact Tracing https://www.kff.org/report-section/kff-health-tracking-poll-late-april-2020-economic-and-mental-health-impacts-of-coronavirus/?utm_campaign=KFF-2020-polling-surveys&utm_source=hs_email&utm_medium=email&utm_content=2&_hsenc=p2ANqtz-8KSn9UJj6wPt-IGk137z48_bhzs6whyIQGc6YokOoxB5Vb6fd5Hnm1yEITv0iw3W-NsTQr5_Psgyz-XUyfXspN1ddD4A&_hsmi=2 Released April 24, 2020.

Likely Increase in Mental/Nervous Claims, Anxiety

KFF poll results

Stress-related impacts from Coronavirus know no boundaries / Kaiser Family Foundation poll, late April edition



Mental health impacted for majority, regardless of income

Sources: KFF Health Tracking Poll – Late April 2020: Coronavirus, Social Distancing, and Contact Tracing https://www.kff.org/report-section/kff-health-tracking-poll-late-april-2020-economic-and-mental-health-impacts-of-coronavirus/?utm_campaign=KFF-2020-polling-surveys&utm_source=hs_email&utm_medium=email&utm_content=2&_hsenc=p2ANqtz-8KSn9UJj6wPt-IGkl37z48_bhzs6whyIQGc6YokOoxB5Vb6fd5Hnm1yEITv0iw3W-NsTQr5_Psgyz-XUyfXspN1ddD4A&_hsmi=2 Released April 24, 2020.

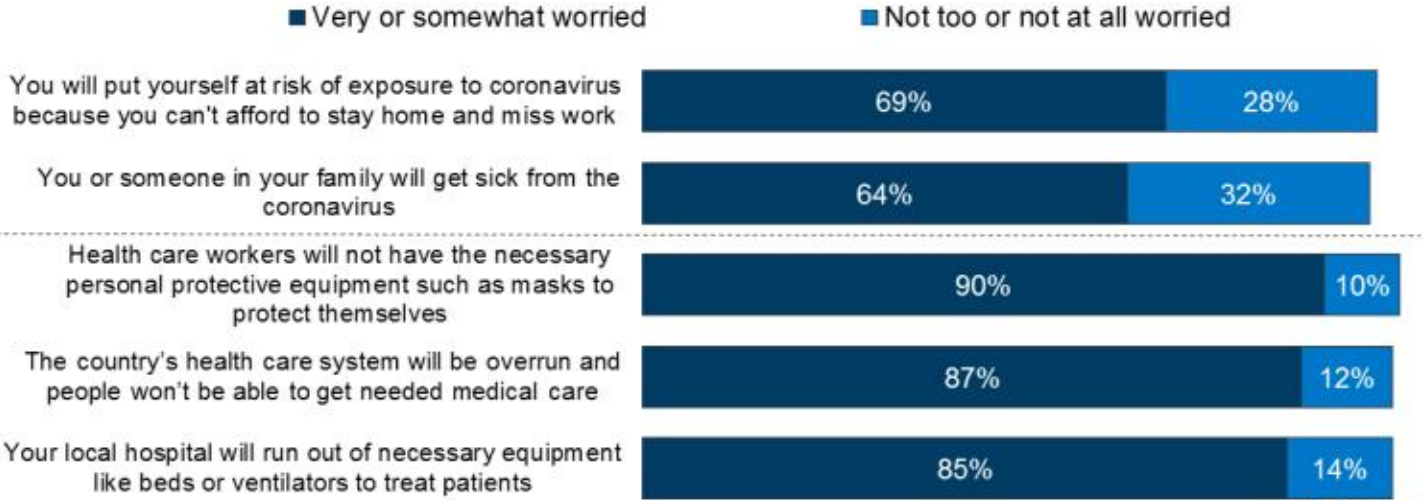
Likely Increase in Mental/Nervous Claims – Homes with Healthcare Workers

KFF poll results

Figure 11

Majorities Of Health Care Worker Households Worry About Their Own Safety And Impact On Health Care System

AMONG HEALTH CARE WORKER HOUSEHOLDS: How worried, if at all, are you about each of the following?



NOTE: Among those who are health care workers or have a health care worker in their family.
SOURCE: KFF Health Tracking Poll (conducted March 25-30, 2020). See topline for full question wording.



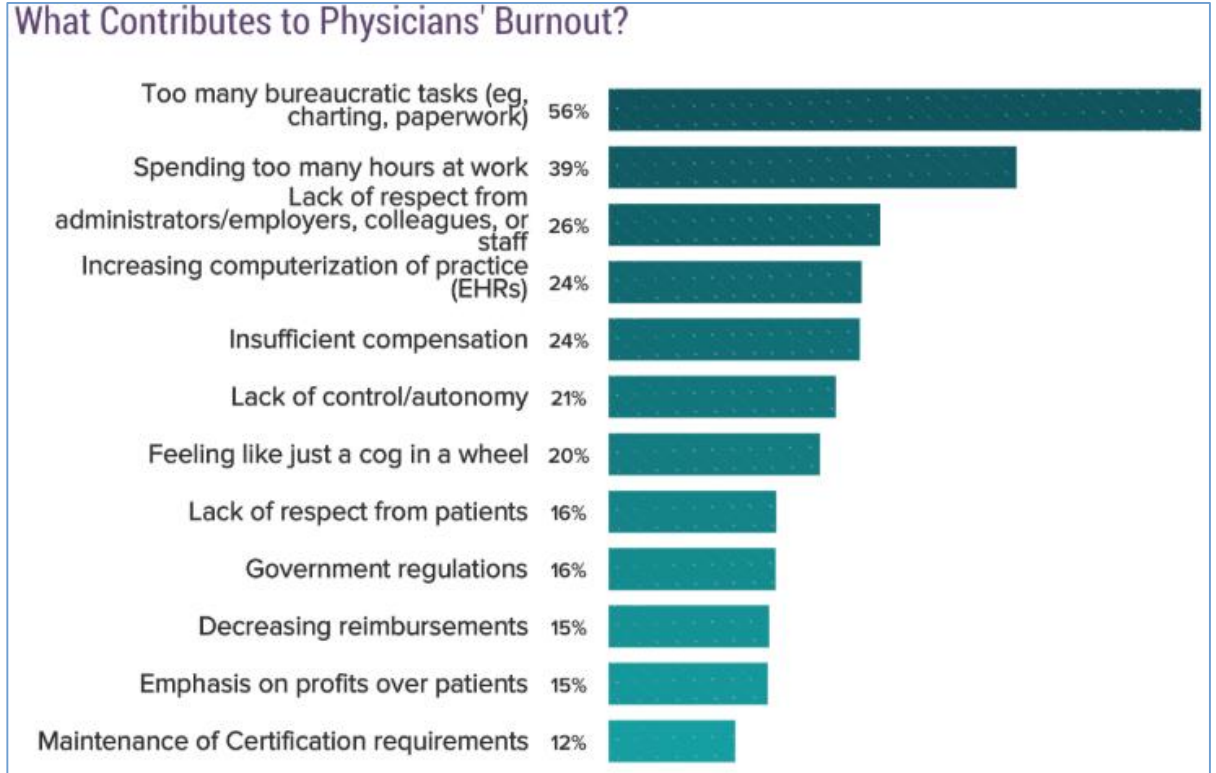
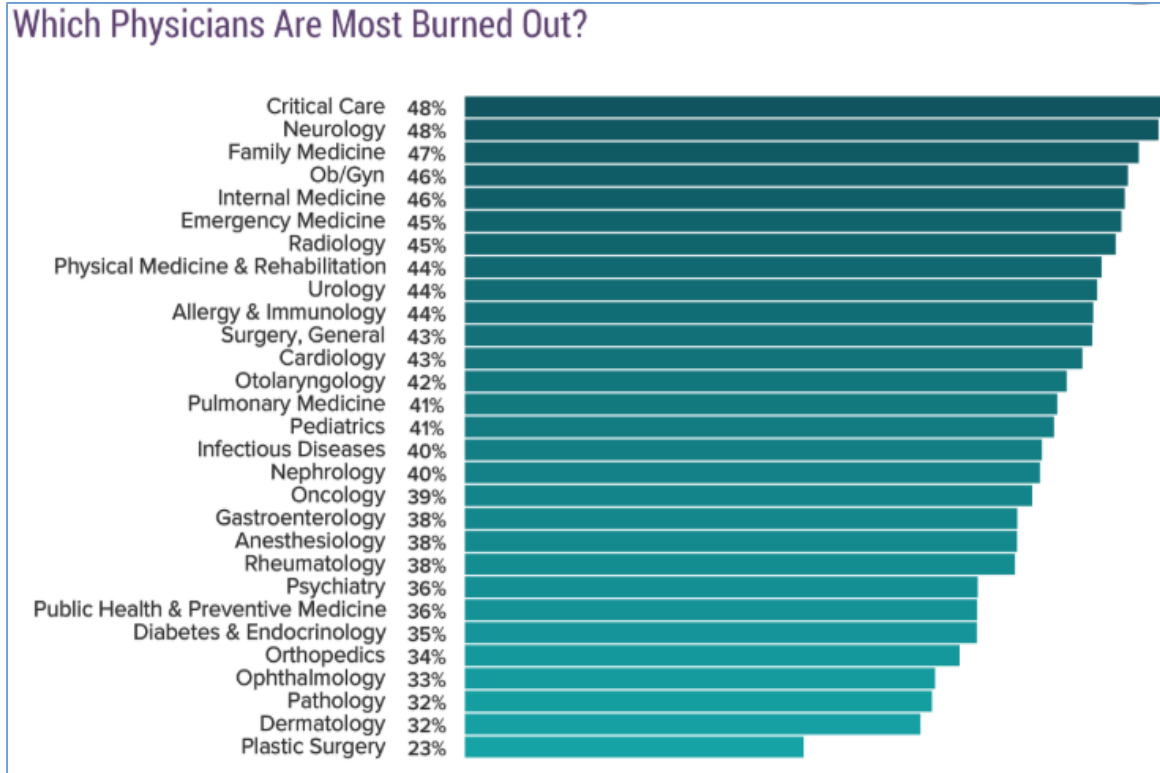
Sources: *The Implications of COVID-19 for Mental Health and Substance Use*, Kaiser Family Foundation, Apr 2020; <https://www.kff.org/health-reform/issue-brief/the-implications-of-covid-19-for-mental-health-and-substance-use/>

Physician Burnout

Likely Increase in Physician Burnout

Study results

A 2018 Medscape study indicates that burnout is prevalent among physicians



Source: Medscape National Physician Burnout & Depression Report 2018 <https://www.medscape.com/slideshow/2018-lifestyle-burnout-depression-6009235#1>

Likely Increase in Physician Burnout

Before COVID-19

- In October 2019, the National Academy of Medicine reported that:
 - an estimated 35% to 54% of U.S. nurses and physicians have substantial symptoms of burnout
 - the range for medical students and residents is between 45% and 60%
- A survey published in the Archives of Internal Medicine reported that U.S. physicians suffer more burnout than other American workers

Current

- A 2020 survey of healthcare workers treating COVID-19 patients in China details the potential pandemic impact to healthcare workers in the U.S.

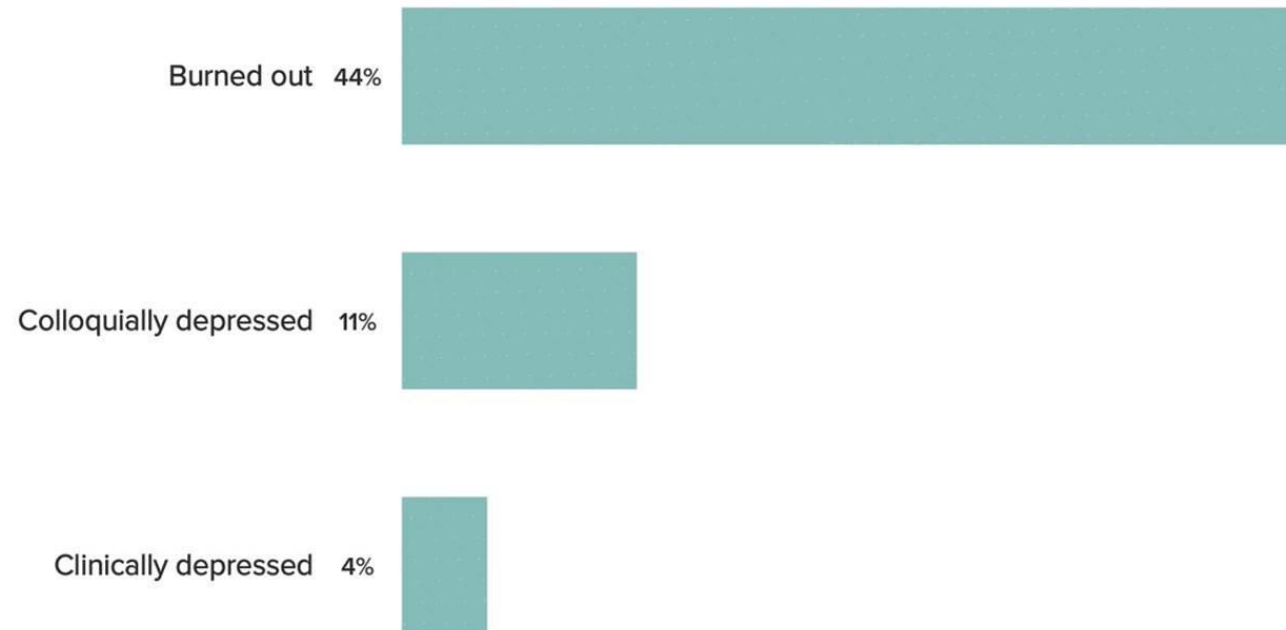
Rate of mental disorder symptoms:

- 71.5% psychological distress
- 50.4% depression
- 44.6% anxiety
- 34.0% insomnia

Likely Increase in Physician Burnout

Study results

Are Physicians Burned Out or Depressed?



"Medscape National Physician Burnout, Depression & Suicide Report 2019," by L. Kane, Medscape, January 2019 (<https://www.medscape.com/slideshow/2019-lifestyle-burnout-depression-6011056>). In the public domain.

Claims Considerations

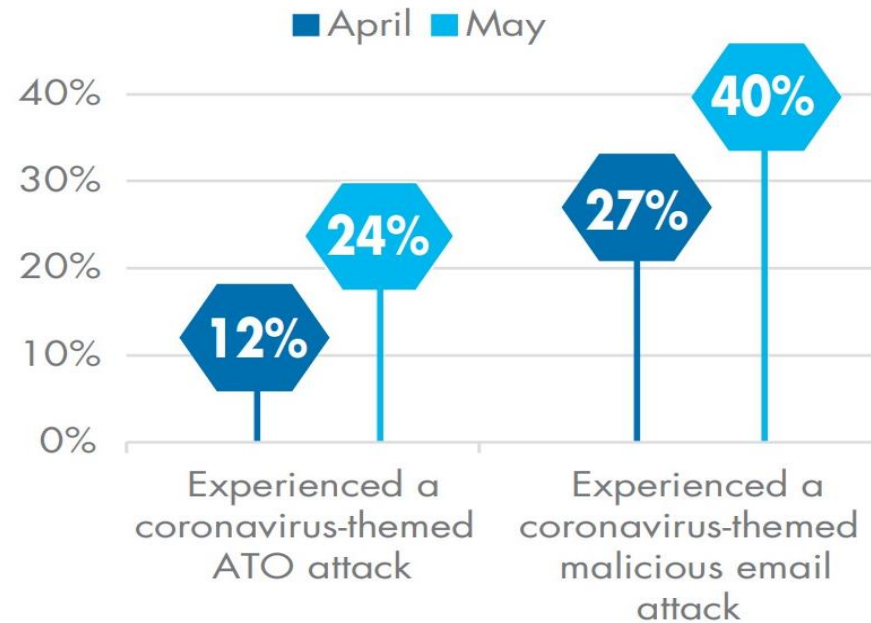
Claims Impacts

Considerations

- Staying current on state and federal legislation affecting timeframes and leniency
- Preparing for an expected increase in claims volume
- COVID-19 adds to claim complexity
 - Underlying health conditions
 - Older insureds
 - History of previous mental health claims
 - Immunocompromised
- The pandemic has changed the landscape of work and, for many, their perspective on employment
- Difficulty accessing independent medical exams (IME)
 - Many states, including NY, ruled IME's a non-essential service and an in-person IME will not be held while the order is in place

Claims Impacts (cont.)

Fraud is on the rise. Within the last 60 days 42% of financial services companies have experienced an increase in overall fraudulent activity



- Higher risk of questionable and fraudulent claims, many unintentional, given the number of overlapping and contradictory state/federal laws regarding family leave, stay-at-home, and business closures

Source: LIMRA: *How COVID-19 Brought an Increase in Fraud in Financial Services* 6/15/2020

Claims Impacts (cont.)

- Do you pay claims caused by quarantine? Most group contracts do not allow for payment due to the risk of illness or infection, but market goodwill must be considered too
- Furloughed employees
 - Can you identify simultaneous claims for unemployment and disability?
 - More investigation required around reinstatement provisions
- State laws
 - CA disallows the imposition of claim filing deadlines
 - CA also presumes a person who tests positive and works outside the home as a workers comp claim

Claims Impacts (cont.)

- Incidence
 - STD incidence is down, possibly due to delayed surgeries, although we will continue to monitor
 - Fewer accidents and people staying away from physician offices – will this lead to a flood of applications for STD benefits when the country reopens?
- Owners and employees of businesses shut down or with reduced operations due to pandemic
 - The “working disabled”
 - Downtime to seek medical care or surgeries previously delayed

Insurance Opportunities

What Have We Learned?

Lessons

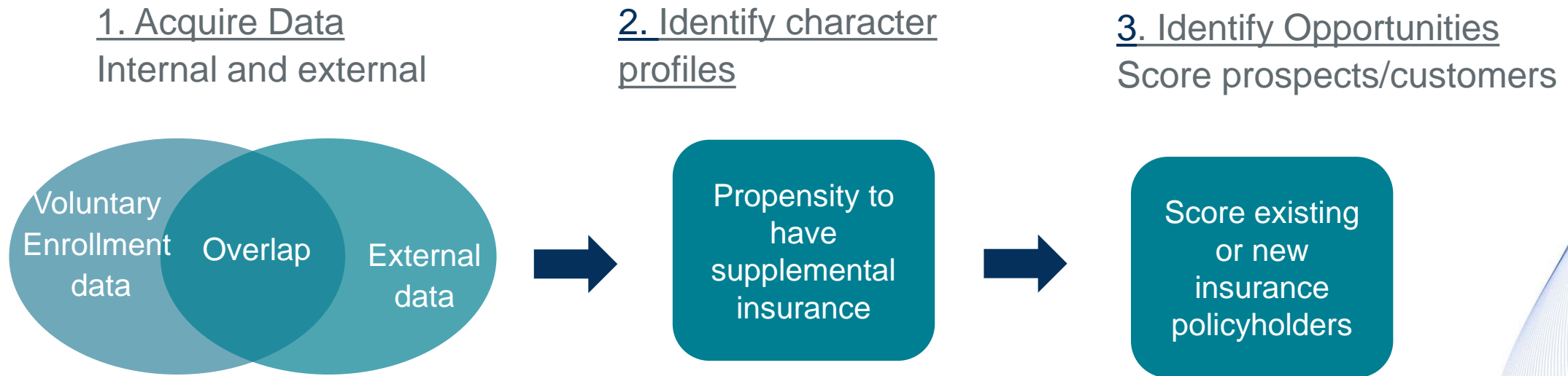
- With every crisis comes opportunity
 - Identifying gaps in underwriting practices – such as no “actively at work” question on individual product applications that offer coverage increases
- Increased consumer awareness around the need for coverage
 - Critical Illness, Hospital Indemnity, Disability, STD, Life Ins, etc.
 - Desire for “off cycle” enrollment to increase participation in voluntary coverages
- Increased work from home capabilities
- Development and leverage of underwriting practices and tools
- Improved communication
 - Across claims and underwriting departments
 - Across product lines to better understand claim trends and identify “early indicators”

Potential for Growth

- COVID-19 may highlight the need for insurance
- The underpenetrated small case market
- The GIG economy workers
- Continuation of coverage
- Use of data analytics such as propensity to buy models

Propensity to Buy

Target industries and increase enrollment by identifying individuals most likely to buy



- Assist carriers in increasing enrollment of voluntary products with current customers/employers
- Assist carriers in targeting industries and/or segments of employees who are most likely to purchase

Munich Re Industry Expertise and Leadership

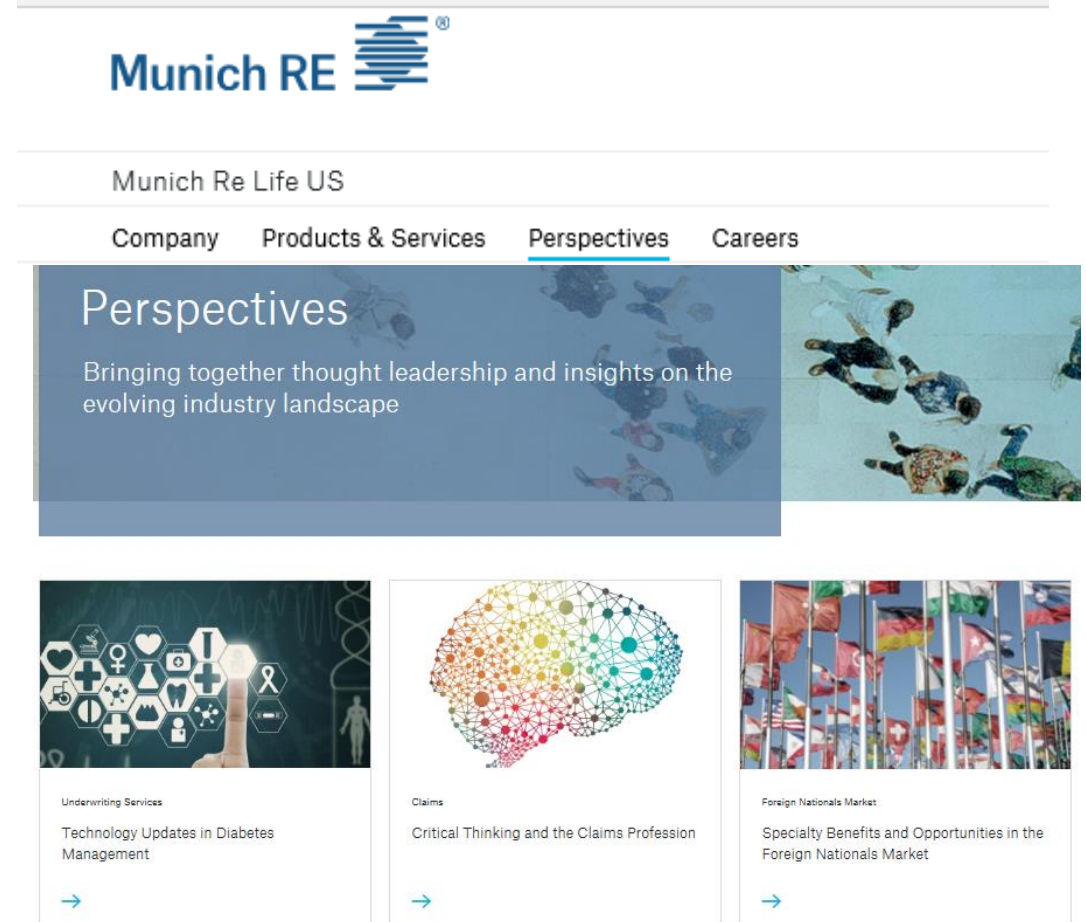
Resources


Choose [Perspectives](#) from our Munich Re [homepage](#) to access thought leadership and industry insights

- Accelerated Underwriting
- Alternatives for Stratifying Risk
- Claims
- Group & Individual Disability
- Opioids
- Suicide
- COVID-19

Homepage: <https://www.munichre.com/us-life/en.html>

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Critical Thinking and the Claims Profession

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Foreign Nationals Market

Specialty Benefits and Opportunities in the Foreign Nationals Market

→

Closing Thoughts

Munich Re stands strong and continues to:

- Price effectively in this environment
- Manage risk and share risk mitigation practices/insights
- Partner with other organizations to deepen insights into the near and long-term impacts of COVID-19
- Leverage technology to increase efficiency and increase insurability
- Seek to write business and support our client's growth targets

Q&A Time