Session 3 – Pricing insurance in the midst of a pandemic.

Denis Garand, FSA, FCIA, denis@garandnet.net

November 2, 2020 UTC+1 16:00 to 17:30

Outline

- What we can learn from Catastrophic events
  - The impact on survivors post-disaster
  - Why Catastrophes can help us understand impact of COVID-19
- Emerging risk from COVID-19 for the inclusive population
- In extreme uncertainty prevention the best tool not insurance.

Impact of a Catastrophe

- Current Opinion in Psychology [1] review finds that globally, as many as half of the people who survive extreme weather events experience negative mental health outcomes. And the mental health implications of climate change can have social and political consequences, too
    - Need to draw attention to the mental health issues associated with climate change, because awareness is a critical first step in addressing them
    - Need to explain how individuals can reduce their impact and adapt to a changing climate (like this virtual conference is much better for reducing CO2 emmissions)

1 Source:Palinkas, Lawrence A.; Wong, Marleen. "Global Climate Change and Mental Health," Current Opinion in Psychology, 2020. doi: 10.1016/j.copsyc.2019.06.023

Catastrophe and Climate impact

- In our recent history we are observing an **increased frequency and severity of natural hazards/extreme weather events.**
- **Will pandemics become more frequent? Is environmental destruction part of the issue?**

Impact on low income populations

- **Natural disasters and other catastrophes impact is especially hard on low income population.**
- This cost falls disproportionately on poorer sections of the population.
  - Lower-income Latin Americans are more likely to live in flood-prone areas or in buildings that lack the latest anti-earthquake standards.
  - They're also less likely to have an insurance policy to pay for rebuilding.
- NEED Access to insurance!

Source: http://latam-investor.com/2018/11/3340/#

Impact on low income population

Natural disasters and other catastrophes impact is especially hard on low income population.

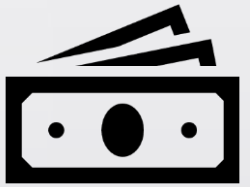
- Developing Asia, 2000 to 2018 had:
  - 84% of the 206 million people affected by disasters globally on average each year

- Nearly 38,000 disaster fatalities per year on average.
- Those who suffer most are poor, marginalized, and isolated

Source: ADB, ASIAN DEVELOPMENT OUTLOOK ,STRENGTHENING DISASTER RESILIENCE, April 2019

Impact on low income populations

- Beyond immediate loss of life and wealth, effects can persist over time.
- Case studies of flooding in Indian cities show that:
  - Without social protection, disaster-hit families deplete their savings or borrow at high interest rates from informal sources, pushing them into indebtedness and poverty traps.
- Recent research reveals that disasters can affect victims for decades
  - Example: reduced household spending on food, medicine, and education can stunt a child's potential well into adulthood.



Source: ADB, ASIAN DEVELOPMENT OUTLOOK ,STRENGTHENING DISASTER RESILIENCE, April 2019

Impact on low income population

- Among rural households surveyed:
  - 90% had suffered in the past decade (loss of life or significant damage to assets from floods)
  - Financial recovery took more than 3 times longer than for urban households.
- Pacific island economies are especially vulnerable to severe hazards, reflecting their isolation, limited economic diversification, and extreme exposure.
- Economists, development experts, and world leaders have long warned that climate change is likely to hurt poor countries more than rich ones(2).

Sources:
1) ADB, ASIAN DEVELOPMENT OUTLOOK ,STRENGTHENING DISASTER RESILIENCE, April 2019
2) https://www.nationalgeographic.com/environment/2019/04/climate-change-economic-inequality-growing/

Recent Example: Hurricane Maria (Sept 2017)

Category 5: 160 mph wind speed and higher gusts.

65,000 people (approx. 80% of the population) were directly affected

More than 90% of roofs were damaged or destroyed

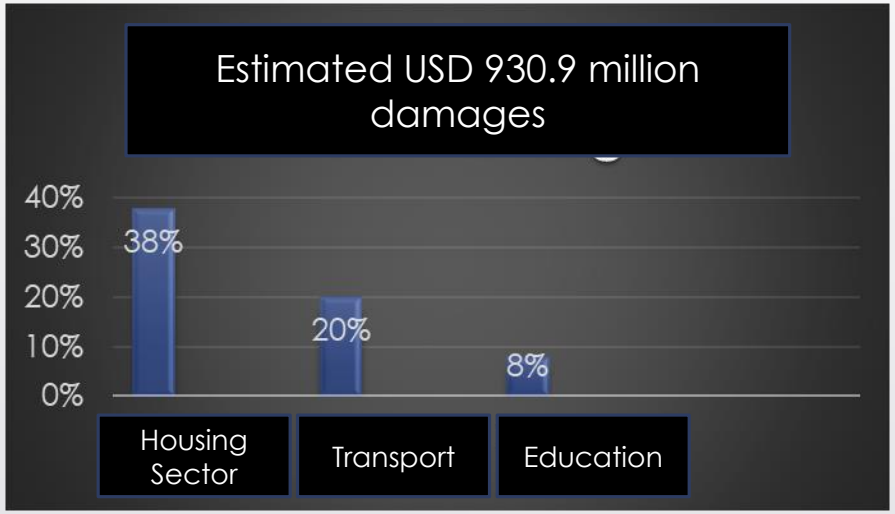
31 people died, 37 missing

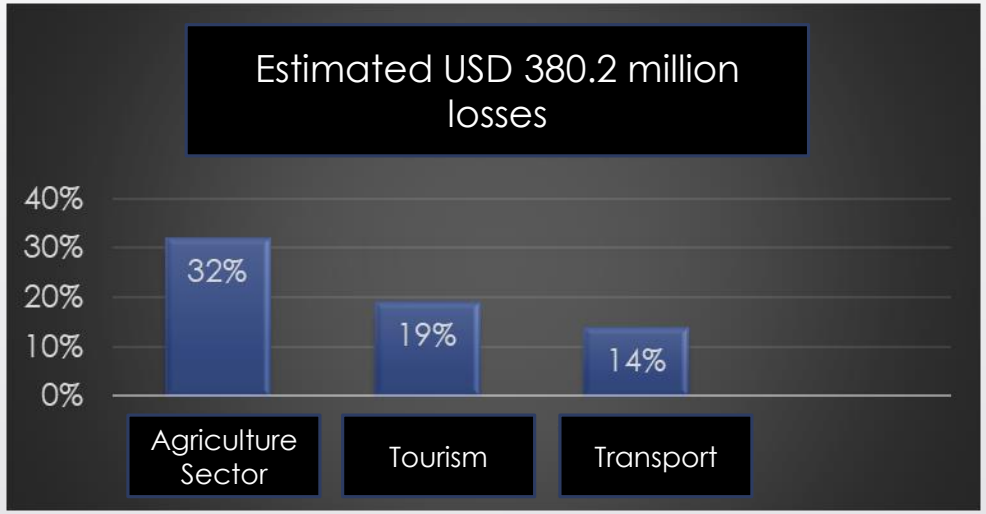
Power and water supplies were disrupted, and entire crops destroyed

Damage after Hurricane Maria.

Source: ACAPS Disaster Profile: Dominica, January 2018
Photo: https://www.ccrif.org/sites/default/files/publications/CCRIF_Annual_Report_2017_2018_0.pdf

Recent Example Hurricane Maria (Sept 2017):





Overall, damages and losses: USD 1.3 billion (estimate) equating to **224% of Dominica's 2016 GDP**

Sources:
1) ACAPS Disaster Profile: Dominica, January 2018,
2) UN 16/11/2017, 18/10/2017, OCHA 26/09/2017

Recent Example Hurricane Maria (Sept 2017):

- Caribbean Catastrophe Risk Insurance Facility (CCRIF SAP) paid to the government, on a parametric policy USD 20.3 Million shortly after the event(1)
- **Unreported….mortality rate has increased by 20% the year following the event…for how long and what other long term impacts. Historically a credit life portfolio is reasonably stable normally.**
- **With damages of this amount, invested assets of financial firms may be impaired**
- **For small countries there is a need for offshore risk vehicles**(2)

Sources:
1) https://www.ccrif.org/sites/default/files/publications/CCRIF_Annual_Report_2017_2018_0.pdf
2) ACAPS Disaster Profile: Dominica, January 2018

How to price.

- Gather emerging data,
  - Swiss Re
  - World Women Bank 6 country study
- Understand context of market
- Understand future long term impacts
  - Will markets be disrupted, will MFI's have the financial strength to continue loans
  - If sales volume declines will expenses increase
  - Will safety protocols require more expensive procedures
- Will efforts to reduce risk provide bigger pay back?
- Take an educated guess, don't over estimate!

Swiss Re preliminary research, impact of COVID-19

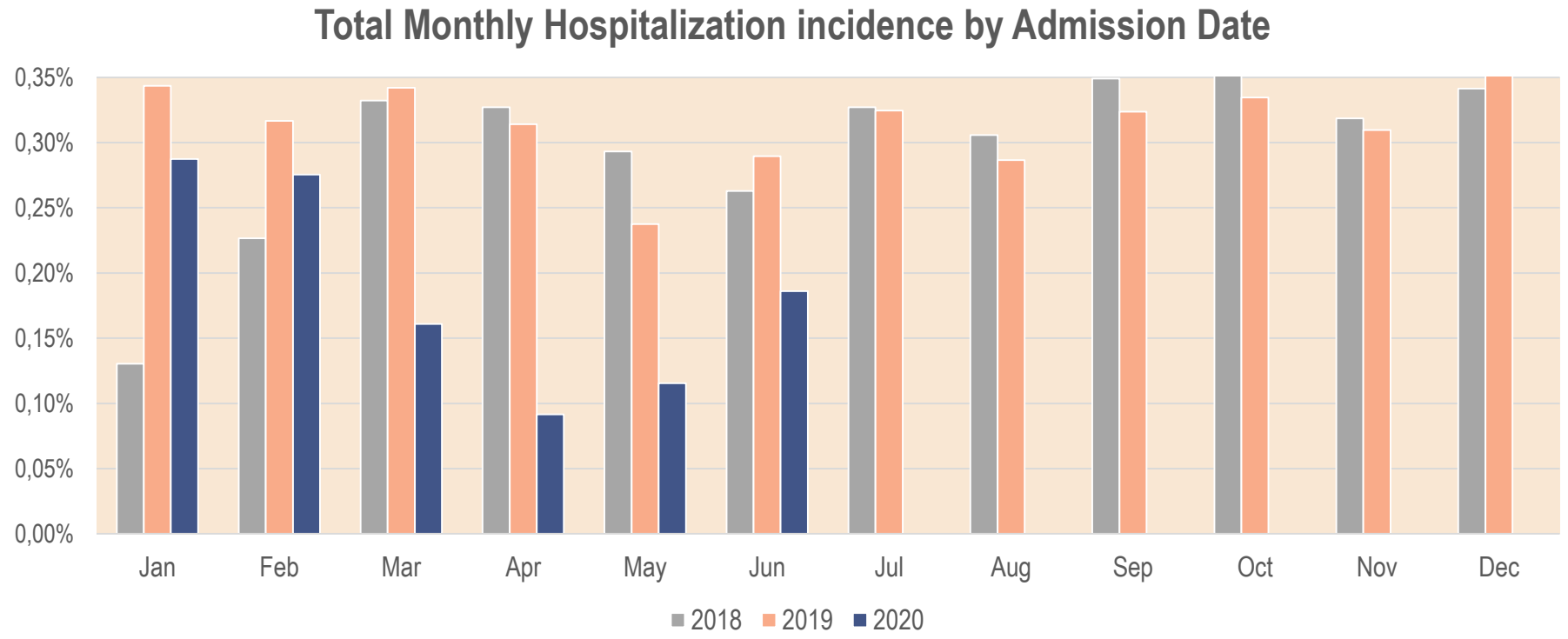
-Mental Health issues will develop
-Financial stressful situations
-Anxiety of infection

-From Ebola impact study, 18 months afterwards 48% of population have 1 indicator of clinical depression, 6% have clinical depression

-Suggestion: Possible long term organ damage and hospital readmission increase for those with COVID.

Source: https://www.swissre.com/dam/jcr:ce7488ab-987d-474c-872f-2309873a1d22/covid-19-likely-long-term-effects-on-survivors.pdf

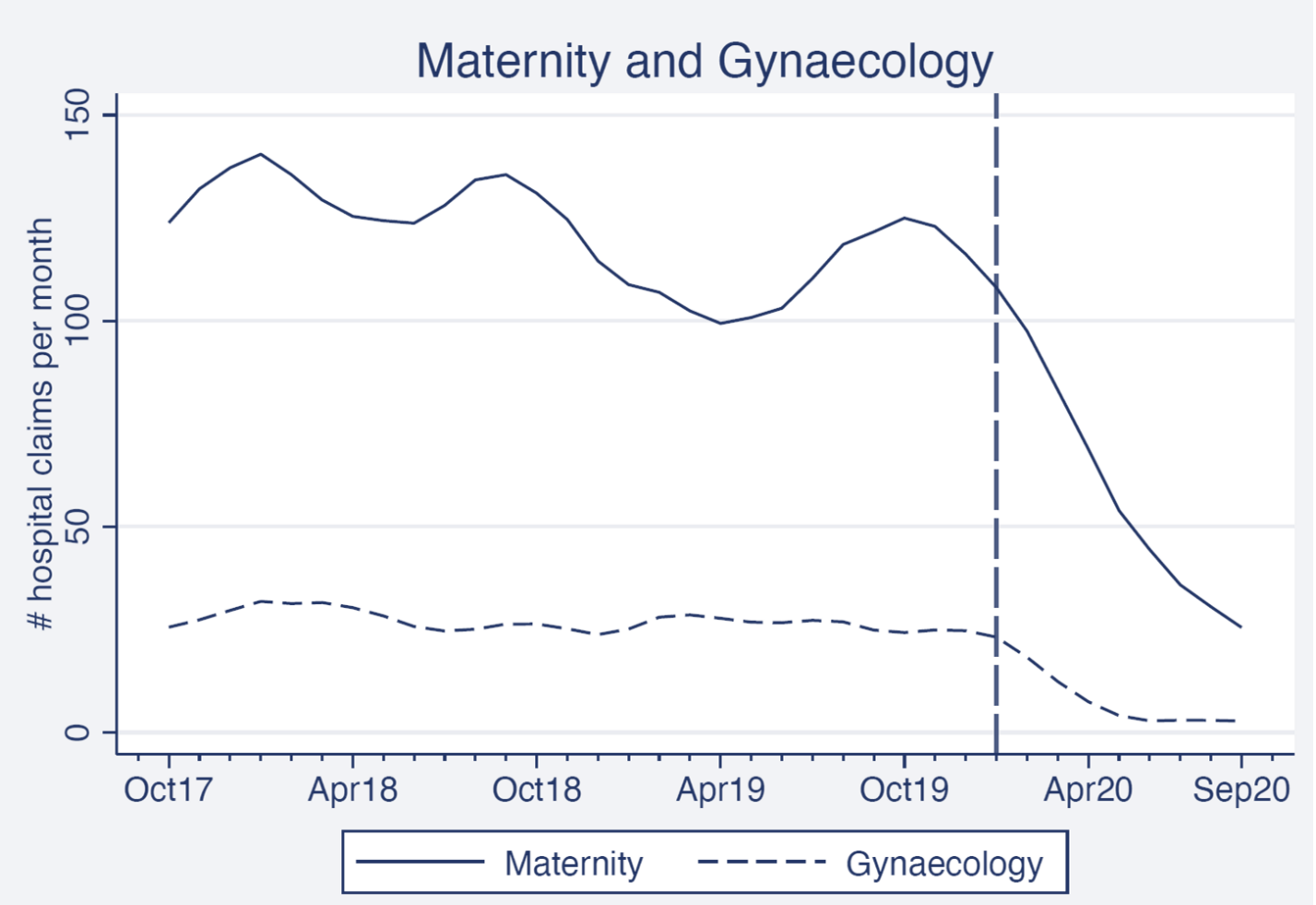
Low incidence of hospitalization observed in 3 microinsurance schemes



The possible causes of the lower incidence rates could be due to reasons such as:

1. low reporting of claims (branch shutdown or customers' movement restricted)
2. customers not going to hospitals for non-covid cases, or
3. delay by the FSP and insurers in approving the claims as they are also working with limited capacity.

Sharp decline observed in maternity and gynecology claims, indicating potential long term effects on maternal and neonatal health (WWB)



Canadian Institute of Actuaries COVID Study Total Exposure and Sum Insured

Total exposure (amount is in millions – sum insured):

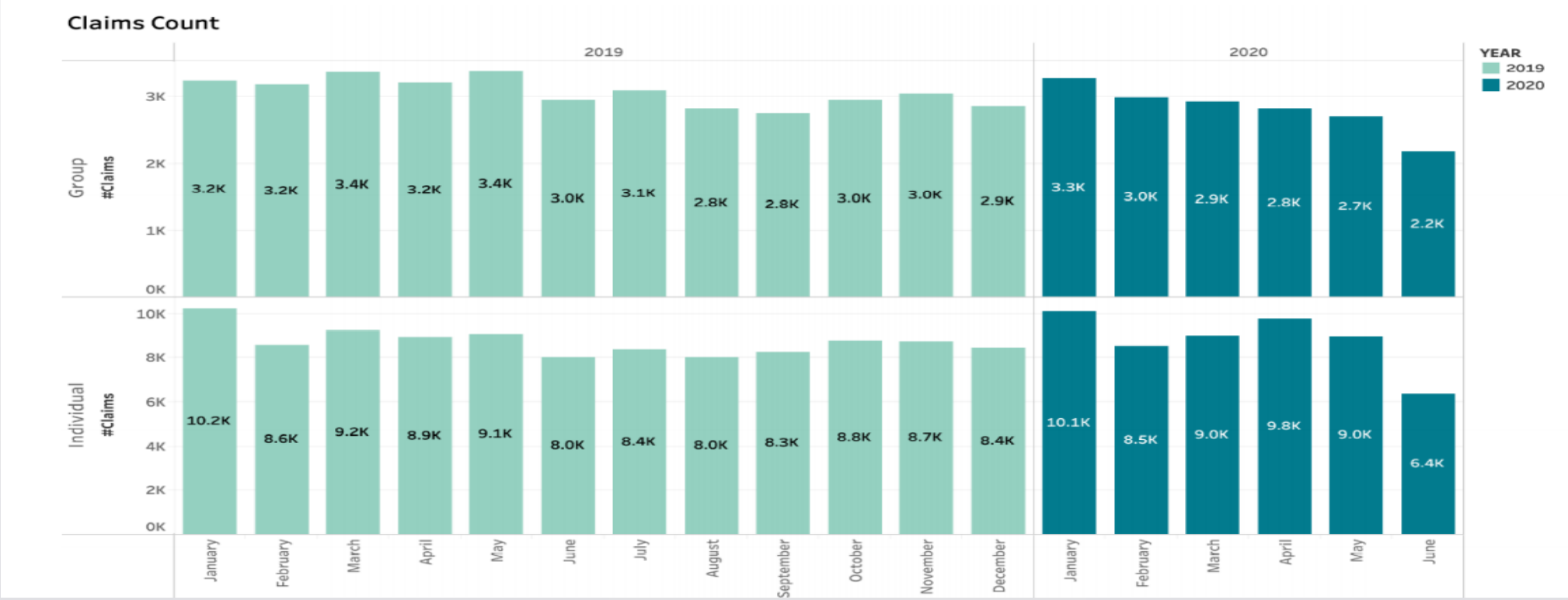
Total Exposure

	2019		2020	
TYPE	Total Exposure Counts	Total Exposure Amount	Total Exposure Counts	Total Exposure Amount
Group	8,077,336	$739,586.46	7,950,756	$745,217.81
Individual	9,703,109	$2,186,310.00	9,821,108	$2,304,219.22

Source:
Report 1: Canadian Insurance Industry Monthly Aggregate Data Analysis, Oct 2020; ©2020 Canadian Institute of Actuaries

Canadian Institute of Actuaries COVID Study

Total Individual and Group Life Insurance Monthly Claims count
Jan 2019- June 2020



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Canadian Institute of Actuaries COVID Study

Total Individual and Group Life Insurance Monthly Claim Amount
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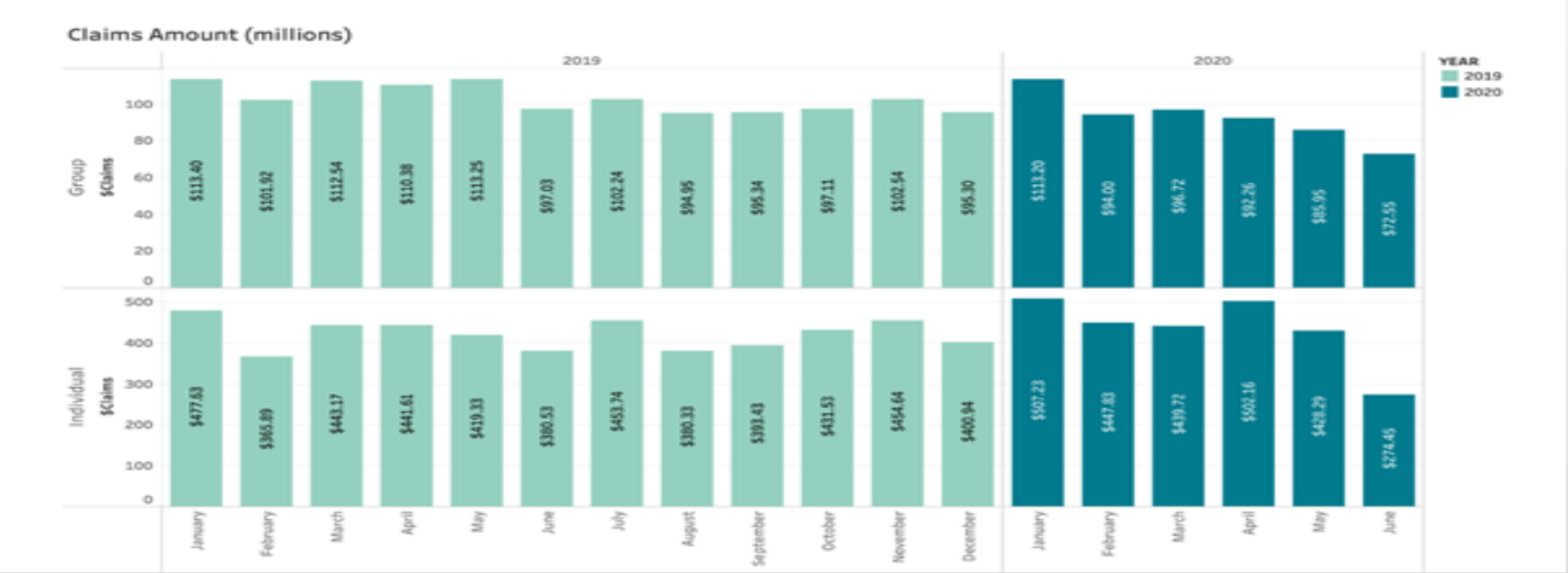
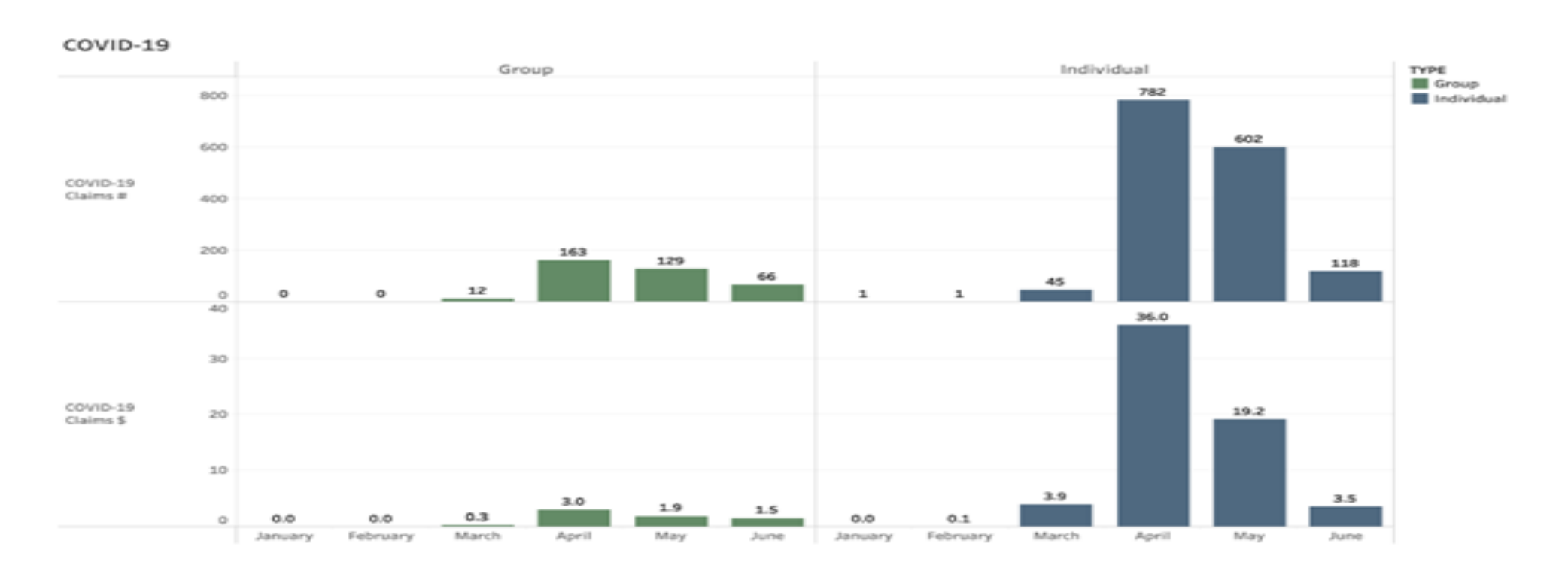


Source:
Report 1: Canadian Insurance Industry Monthly Aggregate Data Analysis, Oct 2020; ©2020 Canadian Institute of Actuaries

Canadian Institute of Actuaries COVID Study

Total Individual and Group Life Insurance Monthly COVID Claim Counts and Amounts Jan 2020- June 2020



Source:
Report 1: Canadian Insurance Industry Monthly Aggregate Data Analysis, Oct 2020; ©2020 Canadian Institute of Actuaries

Summary

- The whole world has changed!
- Still learning about impact of COVID 19
- Other events such as Sars and Ebola point to issues that will emerge
- Distribution systems will be impacted
  - Move to more information technology platforms
- Watch for the flurry of studies coming to adjust.

Conclusion

- All have to participate to increase access to valued products to protect low income populations.
  - Regulators
  - Insurers
  - All potential distribution channels
- Risk mitigation critical to all insurance products and for covered populations
- Monitor results at a reasonable frequency to measure results
- Pricing requires the holistic view of the situation and the future trends.