

# 7<sup>th</sup> Webinar on Health Care Insurance

12th October 2021

1600 – 1730 IST

## Impact of Covid-19 on Pricing and Reserving

Ms. Anuradha Sriram, Member, Health Advisory Group, IAI

Mr. Anshul Mittal, Vice President, HDFC ERGO General Insurance Co.



# Housekeeping Points



Mute



Q&A



IAI support



Recording



Feedback

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P  
D

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## Impact of Covid-19 on Pricing and Reserving

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# Topics to be covered

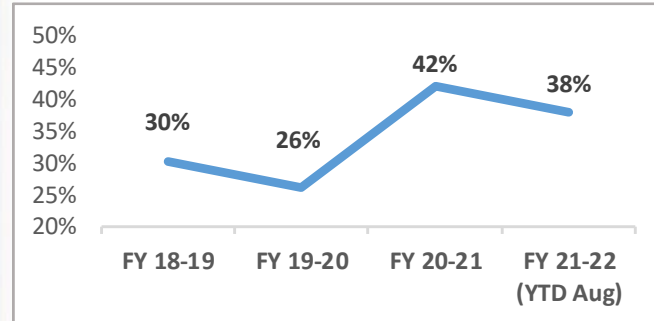


- Industry Overview
- Impact of Covid-19
- Reserving for Covid-19
- Pricing Impacts
  - Retail
  - Group

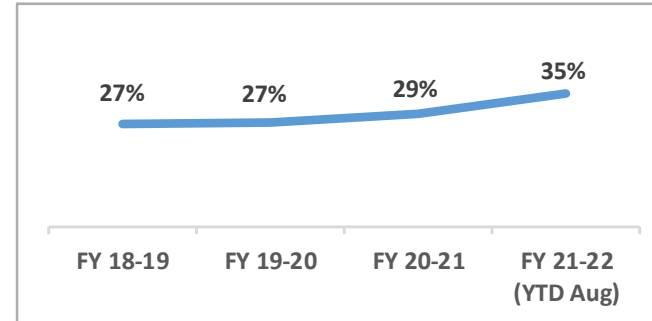
**Disclaimer: Data is for illustration and may not represent the actual trend**

# Industry Overview

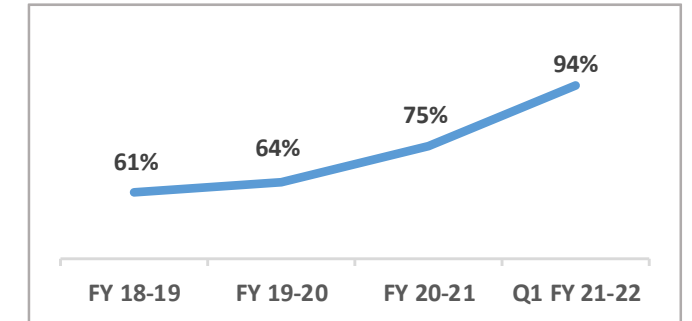
## SAHI Growth %



## Health Share in Industry



## LR%



- Increased awareness of Health Insurance
- Boost in revenues
- Covid-19 claims ~ 20,500 Cr settled so far
- Surge in Covid-19 claims

*Data Source: GIC Council. LR% is for SAHI only*

# Covid-19 Impacts



- Change in claims pattern
  - Cashless & Reimbursement mix
  - Reporting and Settlement delays
  - Disease mix
- Lockdown reduced accident related claims
- Reduction in Non Covid-19 related claims
- Deferred hospitalizations/planned surgeries
- Volatility in claims inflation

# Covid-19 Impacts (Cont.)



- Difficult to estimate ultimate claims
- Surge in claims reduces profitability
- Surge in claims to be priced or not ?
- Does reduction in non covid-19 claims reduces premium ?
- Changes in claim handling cost ?
- Tele Underwriting vs Pre Policy Medical Test etc.

# Reserving for Covid-19



- No historical data/trends for quantum of ultimate covid-19 liability
- Major change in claims reporting/settlement
- Delay in reporting and distortion in triangle
- Hospitals denying cashless facilities etc.

All these factors have made reserving difficult by using Traditional methods



# Reserving for Covid-19 (Cont.)



- Frequency-Severity method can be used
- Frequency is Covid-19 claims as a proportion of Covid-19 cases
  - India reported 26.2 lakh covid-19 cases in Sep'20
  - 5000 Covid-19 cases were reported eventually for Sep'20 occurrence (Accident period)
  - Frequency will be 0.19%
  - Diff Freq. for Insurer depending on market share, state mix etc.....Frequency need adjustments
- Severity is easier to estimate basis recent trend

# Reserving for Covid-19 (Cont.)

Covid-19 cases	Loss Year	Loss/Intimation Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
33,231	2020-21	Apr	0.03%	0.05%	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.15%	
1,55,783		May	0.04%	0.07%	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.22%
3,95,146		Jun	0.09%	0.13%	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.44%
11,11,273		Jul	0.04%	0.05%	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.18%
19,90,885		Aug	0.03%	0.05%	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.17%
26,22,323		Sep	0.03%	0.04%	.	.	.	.	.	.	.	.	.	.	.	0.15%	.	.	.	.	.
18,73,041		Oct	0.03%	0.04%	.	.	.	.	.	.	.	.	.	.	0.14%	.	.	.	.	.	.
12,79,861		Nov	0.04%	0.07%	.	.	.	.	.	.	.	.	.	0.22%	.	.	.	.	.	.	.
8,23,056		Dec	0.04%	0.06%	.	.	.	.	.	.	.	.	.	.	0.21%	.	.	.	.	.	.
4,72,317		Jan	0.05%	0.08%	.	.	.	.	.	.	.	.	0.25%	.	.	.	.	.	.	.	.
3,53,427		Feb	0.04%	0.06%	.	.	.	.	.	.	0.19%	.	.	.	.	.	.	.	.	.	.
11,08,656		Mar	0.05%	0.07%	.	.	.	.	.	0.20%	.	.	.	.	.	.	.	.	.	.	.
69,36,345	2021-22	Apr	0.09%	0.14%	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
90,16,687		May	0.04%	0.06%	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
22,36,883		Jun	0.04%	0.07%	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
12,43,973		Jul	0.05%	0.08%	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
11,56,001		Aug	0.05%	0.07%	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	
9,54,756	Sep	0.05%		.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.		

10 Claims were intimated in Apr'20 for hospitalizations occurring in Apr'20  
 $0.03\% = 10/33231$

5 more claims intimated in May'20 for Hospitalizations occurring in Apr'20  
 Cumulative % =  $15/33231$

# Reserving for Covid-19 (Cont.)

Loss Year	Loss Month	Covid Cases	Covid-19 Claims Reported	Ultimate Frequency
<b>2020-21</b>	Apr	33,231	50	0.15%
	May	1,55,783	350	0.22%
	Jun	3,95,146	1,750	0.44%
	Jul	11,11,273	1,950	0.18%
	Aug	19,90,885	3,300	0.17%
	Sep	26,22,323	3,850	0.15%
	Oct	18,73,041	2,600	0.14%
	Nov	12,79,861	2,850	0.22%
	Dec	8,23,056	1,700	0.21%
	Jan	4,72,317	1,200	0.25%
	Feb	3,53,427	700	0.20%
	Mar	11,08,656	2,500	0.23%

- Historical developed frequency can be used for frequency assumptions
- Triangulation of frequency to allow for further development (Loss to Intimation Triangle)

# Reserving for Covid-19 (Cont.)



Loss Year	Loss Month	Covid Cases	Ultimate Frequency Assumed	Ultimate Covid Intimations
2021-22	Apr	69,36,345	0.15%	10,405
	May	90,16,687	0.10%	9,017
	Jun	22,36,883	0.18%	4,026
	Jul	12,43,973	0.25%	3,110
	Aug	11,56,001	0.25%	2,890
	Sep	9,54,756	0.25%	2,339

- Ultimate Frequency can be selected
- Frequency needs to be adjusted for various factors related to company's exposure
- Frequency also dependent on country's approach and hospitals capacity

# Reserving for Covid-19 (Cont.)



## Reserving for Q2'21

Covid Cases	Ultimate Frequency Assumed	Ultimate Covid Intimations	Covid Claims Intimated	IBNR Counts	Assumed Severity	Ultimate Intimations (Cr's)
33,54,730	0.25%	8,219	4,000	4,219	1,00,000	42

- Adjust Ultimate for expected rejections
- Reserves can be held for balance as IBNR
- Frequency needs to be adjusted for various factors related to company's exposure
- Frequency also dependent on country's approach and hospitals capacity

# How to Adjust Frequency ?



- Frequency is expressed as a proportion of covid-19 cases
  - Need to adjust for change in exposure
  - Active lives seem to be a good proxy
- Historical data can be used to estimate frequency for each state, example
  - State A frequency is 0.30%
  - State B frequency is 0.10%
- Company's exposure of active lives in each state can be used along with Covid-19 case load

# How to Adjust Frequency ?



- Separate triangulation for cashless & reimbursement...combining with assumed mix
- Corona Kavach may be excluded
- Homogenous clusters
- As vaccination increases frequency should reduce
- Vaccination % can be used to adjust exposure
- Different frequency can be chosen for vaccinated or unvaccinated portfolio
- Or, simply can be adjusted by a broad based factor

# How to Adjust Severity ?



- Accident month severities
- State wise severity settlement can be studied
- Important to look at recent settlement pattern to pick severity assumptions
- Change in government regulations regarding covid-19 hospitalizations
- Different products could have different severities
- Active lives exposure to different products/portfolios can be used to adjust



# POLL QUESTION

# Impact on Pricing



- Pricing is based on expected future claim cost
- Surge in Covid-19 claims
- Historical data needs adjustment
- Short and long term impact on pricing
- Different impact on Retail & Group Health
- Change in economic factors influence ability to pay by customer/corporate client

# Impact on Pricing



- Higher Inflation on Non Covid-19 claims
  - Hospitals charging higher for increase in expenses
  - Extra protocol and test for Non Covid-19 hospitalization
  - Regulation restrict the allowable deductions
  - Preference of single room over shared
  - Change in disease mix
- Some part of inflation might reduce once covid-19 protocols are further relaxed
- Increase in Inflation should be priced

# Short Term Contracts Pricing



- Short term contracts like Group Employer Employee are priced using historical data of past one year
- Distorted data may not be representative of future
- Appropriate adjustments should be made in Pricing
  - Month on Month trend should be observed
  - Non Covid-19 and Covid-19 may priced separately
  - Inflation assumption should be updated
  - Pre-Covid-19 data may be considered and adjusted for change in assumptions

# Long Term Contracts Pricing



- Mix of business (Geography, Age, Gender etc.)
- Is increase in Non Covid-19 claim cost temporary ?
- Vaccination to impact disease mix ?
- Future outlook of pandemic ?
- Covid-19 claim recovery over next few years ?
- Are customer willing to pay more ?
- Important to study the long term impact on claims
- Heavily influenced by company's strategy and positioning in market

# Long Term Contracts Pricing



- Competitor actions
- Exposure based pricing (Retail) involve filing time and effort

# CPD QUESTION

# Thank You

## Any Questions ?