

CS12: Healthcare Reserving, Including COVID-19 Considerations

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Agenda

- Accounting Basics
- Claim Reserves versus Claim Liabilities
- Types of Unpaid Claim Liabilities for Health Plans
- Estimating Unpaid Claim Liabilities for Health Plans
- Retrospective Review for Health Claim Liabilities
- Other Related Liabilities
- IBNR Liabilities for Other Coverages
- Accounting and Actuarial Guidance for Claim Liabilities
- Audit Considerations

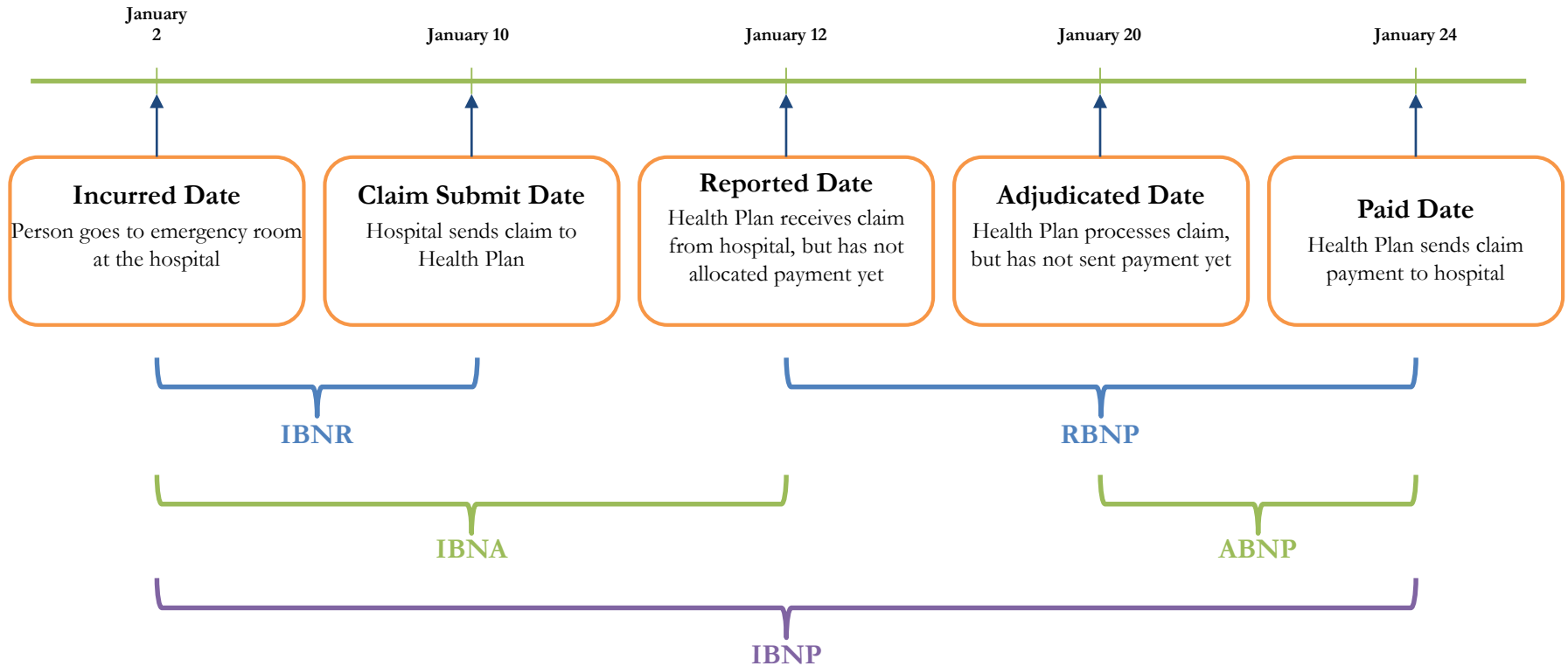
Accounting Basics

- Accrual accounting measures the financial performance and financial position of a company by recognizing economic events regardless of when cash transactions occur.
- From *ASC 944-40 (previously FAS60)*:
 - 25-1 “Both of the following shall be accrued when insured events occur: (a) A liability for unpaid claims (including estimates of costs for claims relating to insured events that have occurred but have not been reported to the insurer), and (b) A liability for claim adjustment expenses; that is a liability for all costs expected to be incurred in connection with the settlement of unpaid claims.”
 - 25-2 “The estimated liability for unpaid claims includes the amount of money that will be required for future payments on both of the following: (a) Claims that have been reported to the insurer, and (b) Claims relating to insured events that have occurred but have not been reported to the insurer as of the date the liability is estimated.”
- Similar Guidance exists in Statement of Statutory Accounting Principles (SSAP) No. 55.

Claim Reserves versus Claim Liabilities

- ***Claim Reserves:***
 - Commonly referred to as Present Value of Amounts Not Yet Due (PVANYD)
 - Future benefit amounts related to claims already incurred but for which payment are contingent on future events (i.e., a claimant remaining disabled)
- ***Claim Liabilities:***
 - Benefit payments which are due upon receipt and successful adjudication
 - Includes both reported and unreported claims
- ***Companies that file the NAIC Blue Blank put Claim Reserves in Exhibit 6 and Claim Liabilities in Exhibit 8***

Types of Unpaid Claim Liabilities for Health Plans



$$\text{IBNP} = \text{IBNR} + \text{RBNP}$$
$$\text{IBNP} = \text{IBNA} + \text{ABNP}$$

Estimating Unpaid Claim Liabilities for Health Plans

Some Basic Considerations:

- There are numerous methods to estimate incurred claims, and subsequently unpaid claim liabilities, for Health Plans.
- Unpaid claim liabilities are the incurred claim estimate for a given incurred date (or Date of Service) minus claims already paid for that incurred date.
- The methodology chosen to estimate incurred claims will be dictated by the data available, reporting requirements, the level of precision needed for management and other stakeholders (e.g., regulators), etc.
- Accounting conventions at a given company, along with the level of data available, will determine what type of unpaid claim liabilities (e.g., IBNP vs IBNA) are recorded in the company's general ledger.
- The incurred claim estimate is most likely going to be wrong, but the actuary's 50/50 Best Estimate will, on average, be correct.

Estimating Unpaid Claim Liabilities for Health Plans (con't)

Common Methodologies Used for Health Plans:

- Development Method (a.k.a., Lag Triangle Method, Chain-Ladder Method, Completion Factor Method)
- Expected Loss Method
- Projection Method
- Bornhuetter-Ferguson Method

Estimating Unpaid Claim Liabilities for Health Plans (con't)

Development Method

- Most common method used at health plans for estimating Unpaid Claim Liabilities.
- Relies on historical claims data organized into “triangles” by paid date and incurred date.
 - Could alternatively be on an adjudicated or reported basis
- Most health plans include 36 or 48 months of paid and incurred data in their lag triangles.
- Assumes the historical payment data exhibit consistent runout patterns and can be used to predict runout for incomplete incurral months.

Estimating Unpaid Claim Liabilities for Health Plans

(con't)

Development Method: Calculating Age-to-Age Completion Ratios

# Months	Incurral Date											
	<u>Following</u>	<u>Jan-17</u>	<u>Feb-17</u>	<u>Mar-17</u>	<u>Apr-17</u>	<u>May-17</u>	<u>Jun-17</u>	<u>Jul-17</u>	<u>Aug-17</u>	<u>Sep-17</u>	<u>Oct-17</u>	<u>Nov-17</u>
0	76,439	72,721	89,123	74,415	78,671	73,344	66,979	76,331	69,204	72,897	64,131	70,786
1	110,744	105,497	117,139	108,016	102,705	92,096	95,822	109,453	90,134	97,981	101,171	
2	119,285	110,908	125,578	112,785	107,270	97,483	96,835	114,901	94,282	105,734		
3	119,873	112,948	128,541	114,135	110,527	100,785	97,474	117,937	95,592			
4	123,240	114,169	129,497	116,277	112,914	101,387	98,731	118,249				
5	124,601	114,373	130,390	118,129	113,388	103,314	99,104					
6	124,601	114,993	130,796	118,378	113,645	104,658						
7	125,334	113,993	132,528	118,378	114,057							
8	126,036	114,993	132,556	118,541								
9	126,130	115,144	132,556									
10	126,395	115,233										
11	126,395											

# Months	Incurral Date											
	<u>Following</u>	<u>Jan-17</u>	<u>Feb-17</u>	<u>Mar-17</u>	<u>Apr-17</u>	<u>May-17</u>	<u>Jun-17</u>	<u>Jul-17</u>	<u>Aug-17</u>	<u>Sep-17</u>	<u>Oct-17</u>	<u>Nov-17</u>
1	1.4488	1.4507	1.3144	1.4515	1.3055	1.2557	1.4306	1.4339	1.3024	1.3441	1.5776	
2	1.0771	1.0513	1.0720	1.0442	1.0444	1.0585	1.0106	1.0498	1.0460	1.0791		
3	1.0049	1.0184	1.0236	1.0120	1.0304	1.0339	1.0066	1.0264	1.0139			
4	1.0281	1.0108	1.0074	1.0188	1.0216	1.0060	1.0129	1.0026				
5	1.0110	1.0018	1.0069	1.0159	1.0042	1.0190	1.0038					
6	1.0000	1.0054	1.0031	1.0021	1.0023	1.0130						
7	1.0059	1.4348	1.0132	1.0000	1.0036							
8	1.0056	0.6970	1.0002	1.0014								
9	1.0007	1.0013	1.0000									
10	1.0021	1.0008										
11	1.0000											

Estimating Unpaid Claim Liabilities for Health Plans (con't)

Development Method: Lag factor development using normal averaging and averaging excluding high and low

6 Months of Averaging

# Months	Incurral Date											Average CF	Lag Factor
	Following	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17		
1	1.4488	1.4507	1.3144	1.4515	1.3055	1.2557	1.4306	1.4339	1.3024	1.3441	1.5776	1.391	0.648
2	1.0771	1.0513	1.0720	1.0442	1.0444	1.0585	1.0106	1.0498	1.0460	1.0791		1.048	0.901
3	1.0049	1.0184	1.0236	1.0120	1.0304	1.0339	1.0066	1.0264	1.0139			1.021	0.944
4	1.0281	1.0108	1.0074	1.0188	1.0216	1.0060	1.0129	1.0026				1.012	0.963
5	1.0110	1.0018	1.0069	1.0159	1.0042	1.0190	1.0038					1.009	0.975
6	1.0000	1.0054	1.0031	1.0021	1.0023	1.0130						1.004	0.983
7	1.0059	1.4348	1.0132	1.0000	1.0036							1.092	0.987
8	1.0056	0.6970	1.0002	1.0014								0.926	1.078
9	1.0007	1.0013	1.0000									1.001	0.998
10	1.0021	1.0008										1.001	0.999
11	1.0000											1.000	1.000

6 Months of Averaging excluding High and Low (4 of 6)

# Months	Incurral Date											Average CF	Lag Factor
	Following	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17		
1	1.4488	1.4507	1.3144	1.4515	1.3055	1.2557	1.4306	1.4339	1.3024	1.3441	1.5776	1.378	0.656
2	1.0771	1.0513	1.0720	1.0442	1.0444	1.0585	1.0106	1.0498	1.0460	1.0791		1.050	0.903
3	1.0049	1.0184	1.0236	1.0120	1.0304	1.0339	1.0066	1.0264	1.0139			1.021	0.948
4	1.0281	1.0108	1.0074	1.0188	1.0216	1.0060	1.0129	1.0026				1.011	0.968
5	1.0110	1.0018	1.0069	1.0159	1.0042	1.0190	1.0038					1.008	0.979
6	1.0000	1.0054	1.0031	1.0021	1.0023	1.0130						1.003	0.986
7	1.0059	1.4348	1.0132	1.0000	1.0036							1.008	0.990
8	1.0056	0.6970	1.0002	1.0014								1.001	0.997
9	1.0007	1.0013	1.0000									1.001	0.998
10	1.0021	1.0008										1.001	0.999
11	1.0000											1.000	1.000

Estimating Unpaid Claim Liabilities for Health Plans

(con't)

Development Method: Estimating ultimate incurred claims and IBNR using lag factors

# Months Following	Cumulative Paid In Jan-17	Completion Ratio	% Complete
0	76,439	1.449	60.5%
1	110,744	1.077	87.6%
2	119,285	1.005	94.4%
3	119,873	1.028	94.8%
4	123,240	1.011	97.5%
5	124,601	1.000	98.6%
6	124,601	1.006	98.6%
7	125,334	1.006	99.2%
8	126,036	1.001	99.7%
9	126,130	1.002	99.8%
10	126,395	1.000	100.0%
11	126,395		100.0%

Calculated as the subsequent lag factor divided by the completion ratio

$$\frac{94.8\%}{1.005} = 94.4\%$$

Assumes January (the incurral month with 12 months of runout) is 100% complete

	Incurral Date											
	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17
Paid to date	126,395	115,233	132,556	118,541	114,057	104,658	99,104	118,249	95,592	105,734	101,171	70,786
Lag Factor	1.000	1.000	0.998	0.997	0.992	0.986	0.986	0.975	0.948	0.944	0.876	0.605
Ultimate	126,395	115,233	132,835	118,879	115,023	106,165	100,531	121,276	100,793	112,036	115,469	117,048
IBNR	0	0	279	338	966	1,507	1,427	3,027	5,201	6,302	14,298	46,262

Estimating Unpaid Claim Liabilities for Health Plans (con't)

Development Method: Other Considerations

- Exposure basis (e.g., membership, premium, inpatient days)
- Manual picks/adjustments for the most recent months
- Large claims and case reserves
- Outlier payments/recoveries and triangle “smoothing”
- Claim processing issues
- Granularity of data and conservatism bias
- Rx versus Medical
- Claims data reconciliations

Estimating Unpaid Claim Liabilities for Health Plans (con't)

Development Method: Other Technical Considerations

- Number of months of CF averaging
- Different CF averaging methods (e.g., arithmetic, geometric, harmonic)
- Recoveries and Lag Factors > 1.000 (i.e., negative IBNR amounts)
- Frequency of claim payments (e.g., daily vs. one day a week)
- Immature lines of business (ultimate completion factor)

Estimating Unpaid Claim Liabilities for Health Plans (con't)

Expected Loss Method

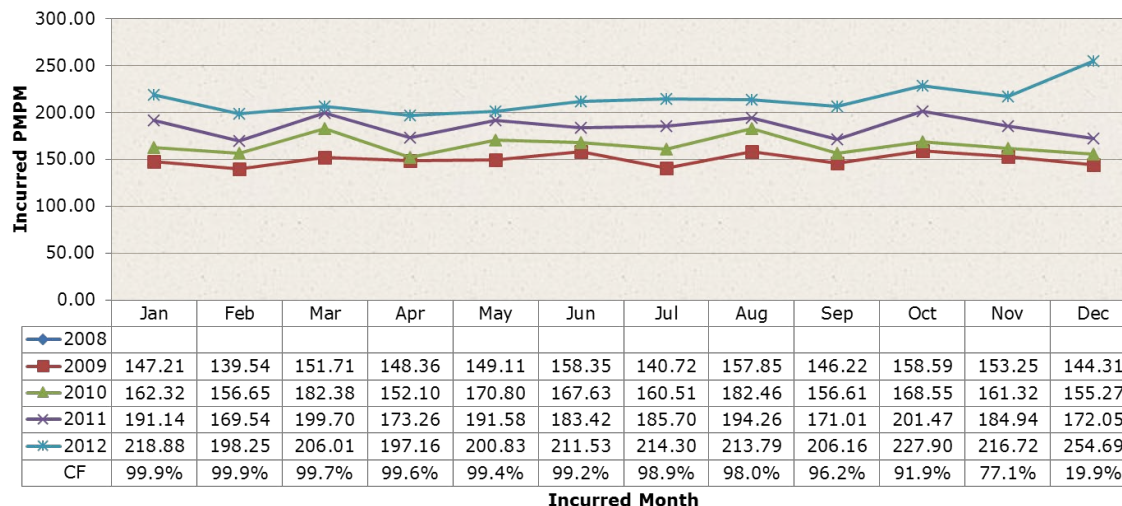
- Often used with new lines of business where there is not enough claims data to develop claims triangles.
- Relies on an *a priori* loss ratio, typically from a pricing or forecasting department.
 - Alternatively, one could use expected loss PMPM.
- Unpaid claim liabilities equal expected losses minus paid claims, where the expected losses are equal to the expected loss ratio multiplied by earned premiums.
- As claim payments are made, may need to increase (decrease) the expected loss ratio if the resultant IBNR appear too low (high).

Estimating Unpaid Claim Liabilities for Health Plans (con't)

Projection Method

- Complete (or mostly complete) incurral periods are used to project expected ultimate losses for incomplete periods.
- Relies heavily on trend assumptions.
- May need to make adjustments for change in the exposure basis (e.g., membership growth).
- May need to make adjustments for seasonal claims incurral patterns.

Incurred PMPMs By Calendar Year (No Seasonality Adjustment, without Manual Adjustment)



Estimating Unpaid Claim Liabilities for Health Plans (con't)

Bornhuetter-Ferguson Method

- The B-F method is a blend of the Development Method and the Expected Loss Method
- Development methods are used to determine how complete claims payments are for each incurred date
- Future claims runout payments are based on expected loss amounts
- Most appropriate with lines of business with sporadic claim payments and/or longer payment lags
- As claim payments are made over time, expected losses grade to ultimate losses as actual payments deviate from expected
- May make sense to switch to pure development method at some level of completion
- May need to adjust expected loss ratio if the resulting claim liabilities are unreasonable (e.g., negative IBNR)

Estimating Unpaid Claim Liabilities for Health Plans (con't)

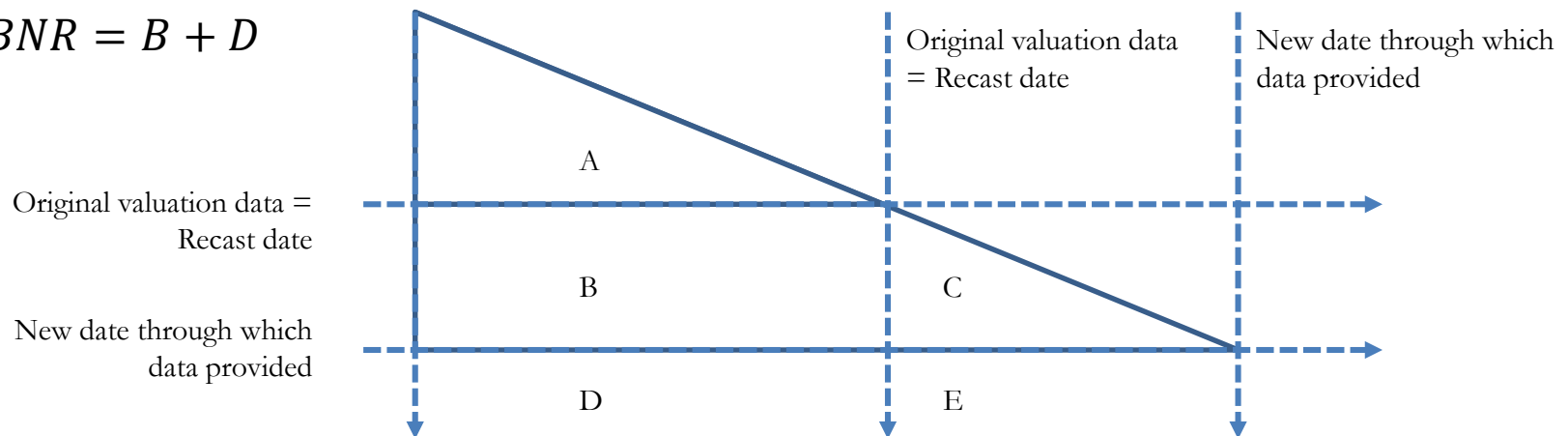
Bornhuetter-Ferguson Method Example

- The Completion Ratio from the Development method is determined to be 45%.
- Paid claims to date = \$50,000
- Total Expected Losses = \$100,000
- Expected IBNR = $(1 - 45\%) * \$100,000 = \$55,000$
- B-F Expected Ultimate Losses = $\$50,000 + \$55,000 = \$105,000$

Retrospective Review for Health Claim Liabilities

Calculates the IBNR for a date prior to the valuation date by incorporating run-out experience

$$IBNR = B + D$$



- Also known as Recast Analysis or Lookback Analysis
- Tests the adequacy of a prior period IBNR Estimate and potentially incorporate adjustments to the current period estimate
- Useful in determining if the IBNR model is biased

Other Related Liabilities

Provision for Adverse Deviation

- GAAP accounting generally precludes the use of risk margins.
- Actuarial and Statutory accounting guidance generally require that IBNR Claim Liabilities include a level of prudence.
- ASOP 28: *“When the actuary opines that the liabilities make good and sufficient provision, the actuary should include a provision for adverse deviation. The provision should result in amounts that, in the actuary’s professional judgment, are sufficient to cover obligations under moderately adverse conditions.”*
- Very rare to see GAAP vs. Statutory differences for Health Plan claim liabilities.

Other Related Liabilities

Provision for Adverse Deviation (con't)

- PADs can be an implicit, explicit, or somewhere in between, e.g.,
 - Implicit PADs could be due to inherent conservatism in the IBNR model
 - Explicit PADs could be to add **X%** to the base IBNR amount
 - Setting incurred claim estimates above the 50/50 estimate could be considered implicit or explicit
- Explicit PADs that are expressed as a percent of the base IBNR amount should have some basis for how they were determined, e.g.,
 - The base IBNR is a true 50/50 best estimate
 - With an additional **X%** added to the base IBNR, the total liability is expected to be sufficient **Y%** of the time
 - **X%** is determined based on statistical analysis
 - **Y%** is based on the company's risk appetite

Other Related Liabilities

Claims Adjustment Expense (CAE) Liability

- Also known as Loss Adjustment Expense (LAE)
- Both GAAP and Statutory guidance require CAE
- The CAE liability is intended to fund claim operations to pay run-out claims in the event of company insolvency
- Typically expressed as a percent of the base IBNR amount
- The CAE percent can be determined based on internal expense studies, e.g.,
 - The ratio of claims department expenses in a given calendar year divided by the total paid claims for the year

Accounting and Actuarial Guidance for IBNR Claim Liabilities

- ASC 944 (*previously FAS60*)
- SSAP 55
- NAIC Health Reserves Guidance Manual
- NAIC Annual Statement Instructions
- ASOP 5 (*Incurring Health and Disability Claims*)
- ASOP 42 (*Health and Disability Actuarial Assets and Liabilities Other Than Liabilities for Incurred Claims*)
- ASOP 28 (*Statements of Actuarial Opinion Regarding Health Insurance Liabilities and Assets*)

IMPACT OF COVID-19 ON HEALTH PLAN CLAIM LIABILITIES



Impact of COVID-19 on Health Plan Claim Liabilities

Claims volume, mix, patterns and cost-sharing

- As members are infected with COVID-19, utilization of some essential medical services will increase
- Health plans have also waived cost sharing associated with COVID-19 claims
- Conversely, non-essential medical services experienced significant decreases in volume as these services were prohibited during the stay-at-home period
- Health provider and individual behavior will change, causing a change in mix of business, examples include increases in telemedicine and less specialist referrals for elective procedures
- There could also be downstream impacts on claim adjudication and payment speed. Due to stay-at-home orders in many states, claim payors may be slower with claim adjudication and payment

Impact of COVID-19 on Health Plan Claim Liabilities (con't)

Membership Changes

- COVID-19 and the resulting economic impact will result in changes in overall membership levels and mix.
- Some members may lose their employer-based coverage or lapse their individual coverage.
- Others will likely qualify for Medicaid.
- Others may become part of the Affordable Care Act (ACA) retail population or the uninsured population.
- Expected incurred claim levels may be changing as the current mix of members could change.

Impact of COVID-19 on Health Plan Claim Liabilities (con't)

Product/Service Specific Impacts

- **Pharmacy** – Pharmacy claims did not decrease. Many members are on long-term maintenance medications. Pharmacy mail order continues through stay-at-home periods. Retail pharmacies continued to operate.
- **Dental and Vision** – the Centers for Disease Control and Prevention (CDC) recommended that all dental and vision facilities postpone elective procedures, surgeries, and non-urgent dental visits. Services for Dental and Vision effectively went to zero during the stay-at-home periods.

Impact of COVID-19 – Pent Up Demand

- As States stay-at-home orders have been lifted, it is unclear whether higher claims are expected in the later months of 2020 due to pent-up demand (PUD).
- It is expected that some services will have a “backlog” (e.g. orthopedics), but others will likely resume back at lower levels and then ramp back to pre-pandemic levels (e.g. cardiac rehab, PT / OT, etc.). Some may have never truly died down (e.g. cardio, neuro-strokes, maternity, etc.).

Impact of COVID-19 – Pent Up Demand (con't)

Some ways to attempt to treat the impact of PUD (not all of which may fall squarely within the bounds of permissibility of statutory and GAAP guidance):

Premium Deficiency Reserve (PDR)	Some health plans may establish or increase a PDR in order to recognize that future premiums may be deficient due to high cost COVID-19 claims.
Medical Loss Ratio (MLR) Rebate Liabilities	Some health plans may establish or increase an MLR rebate liability (considered in light of changes made to any other reserves or liabilities to avoid redundancy) in order to recognize current low incurred claims levels that would result in refunds of premium to members if claim levels do not recover.
IBNP Provision for Adverse Deviation (PAD)	An explicit or implicit additional PAD within IBNP claim liability estimates could be established as a result of new known environment factors (i.e., COVID-19) that contribute to the uncertainty in the IBNP estimate.
PUD Reserve	An explicit reserve, similar to a contract reserve, could be established to balance out currently low claims levels and anticipate high claims levels in the later part of 2020.
Unearned Premium Reserve	For coverages where it has been determined that plans were unable to provide coverage (e.g., Dental, Vision) as providers were not accepting patients.
Status Quo	Some health plans may choose to make none of the above changes and let the resulting changes in IBNP claim liability flow through the financial statements period-by-period.

