

Introduction to Healthcare Reserving

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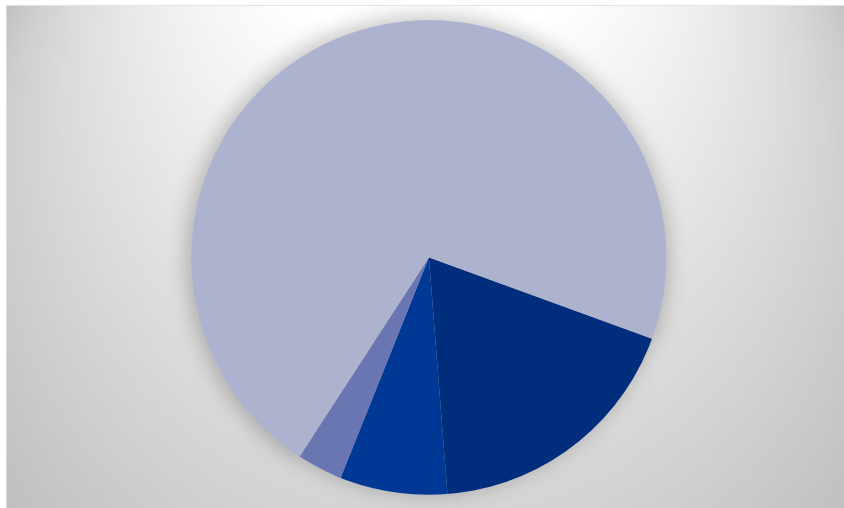
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How Much Do we Spend on Healthcare?

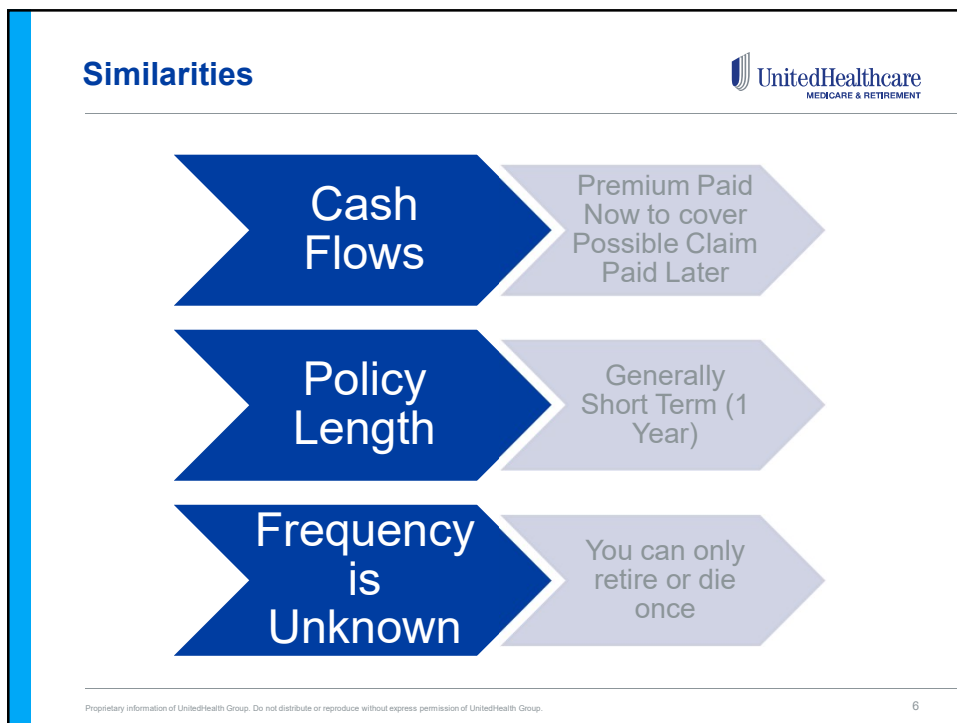
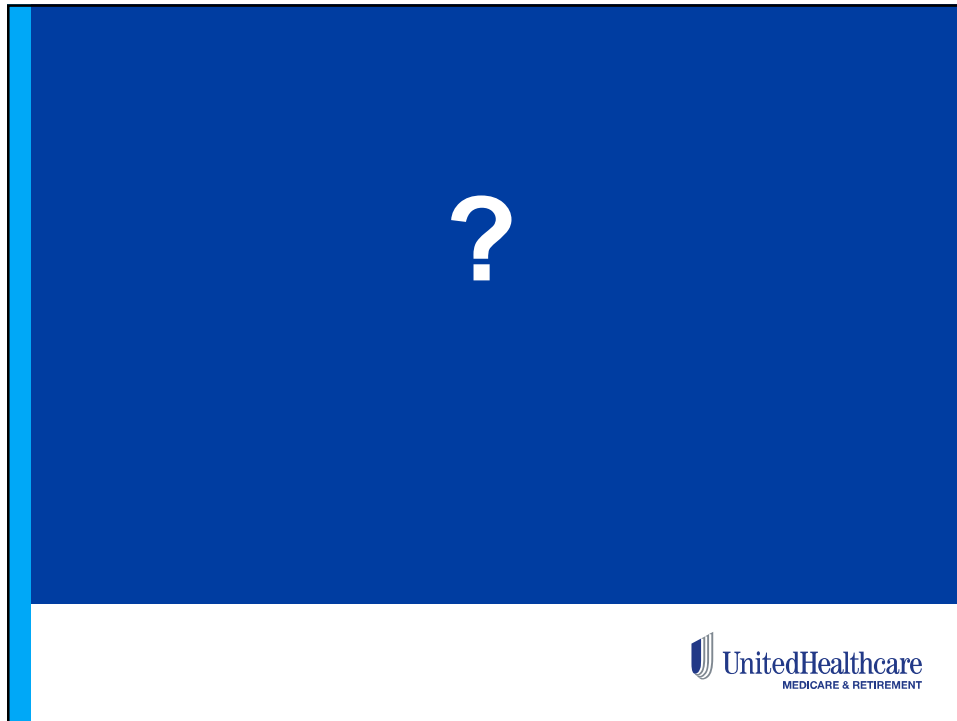


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Why Healthcare at CASUALTY Loss Reserve Seminar?

- 1** Internationally, Health is “General Insurance”
- 2** Eighteen Percent of the US Economy
- 3** You are Better than I am at Reserving!


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ToMayTo or ToMahTo?

UnitedHealthcare
MEDICARE & RETIREMENT

Triangles or Tri Angles?



Factors or Divisors?



Development or Completion?

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Basic Differences

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MEDICARE & RETIREMENT

Health	P/C
Months	Years
Time Value of Money is Immaterial	Time Value of Money is Material
Nearly Continuous Claims	Discrete Claims

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Property-Casualty Reserving Techniques in Healthcare

Bornhuetter-Ferguson
Stanard-Buhlman (Cape Cod)
Mack
Generalized Cape Cod



1972

Bornhuetter-Ferguson

IBNR is independent from Losses to Date
 LDFs are Random
 A priori Expected Ultimate is Correct

1983

Stanard - Bühlmann (Cape Cod)

Variance Proportional to Development Factor
 Uses B-F weights
 Better Expected Ultimate

1994

Mack

Better Development Factors

1997

Generalized Cape Cod (Gluck)

Decay Factor
 Alternative B-F Weights – “Variance Factors”

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Problems With BF Type Methods

- 1** Development Factors are not Random – Self Inflicted
- 2** A’Priori/Leading Indicators not reliable
- 3** Recoveries are high – and not predictable


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Healthcare Claim Processing

An Introduction

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**Payment Integrity,
Robots, ARUs, FWA,
Recoveries, Audits....**

- Front End Review
- Post Payment Audits

Freeway?

Chutes and Ladders!
(But without the Ladders)

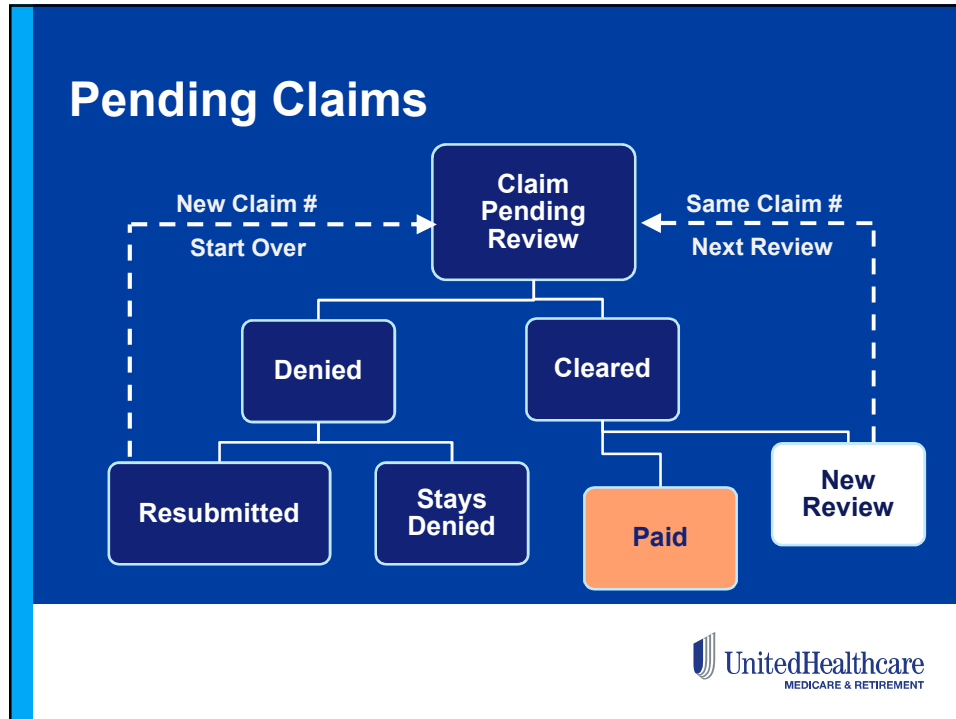
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Reserve for Known Claims 


Health	P/C
Pends	Case Reserve
Resolve Quickly	Persistent
Pay less	Pay More
Complicated Outcomes	Two Outcomes

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Comparison of Reserve Components


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Healthcare		Property-Casualty	
Paid to Date	1,500,000	Paid to Date	1,500,000
Billed on Pends	2,000,000		
Billed that is Denied	800,000		
Billed that is Paid	1,200,000	Case Reserve	250,000
Discount (75%)	900,000	Case Development	250,000
Expected Paid on Pends	300,000	Expected Paid on Case	500,000
Resubmitted	800,000		
Expected Paid	200,000		
True IBNR	1,000,000	True IBNR	1,000,000
Ultimate Losses	3,000,000	Ultimate Losses	3,000,000

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Recap



Three HC Reserving Problems

1. How can we adjust our development factors for the self-inflicted claim processing changes?
2. What leading indicators can we use so that we have a better idea of what we think sooner?
3. How should we weight these two choices given the uncertainty of the tail?

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Recap



1. How can we adjust our development factors for the self-inflicted claim processing changes?
 - » Changing paid development patterns
 - » Changing “Pend Payout” expectations
 - » Changes in denials impact potential for recoveries

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Recap



2. What leading indicators can we use so that we have a better idea of what we think sooner?

- » Unreliable development patterns
- » Nearly continuous flow of claims
- » Time horizon
- » Changing Exposure

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Recap

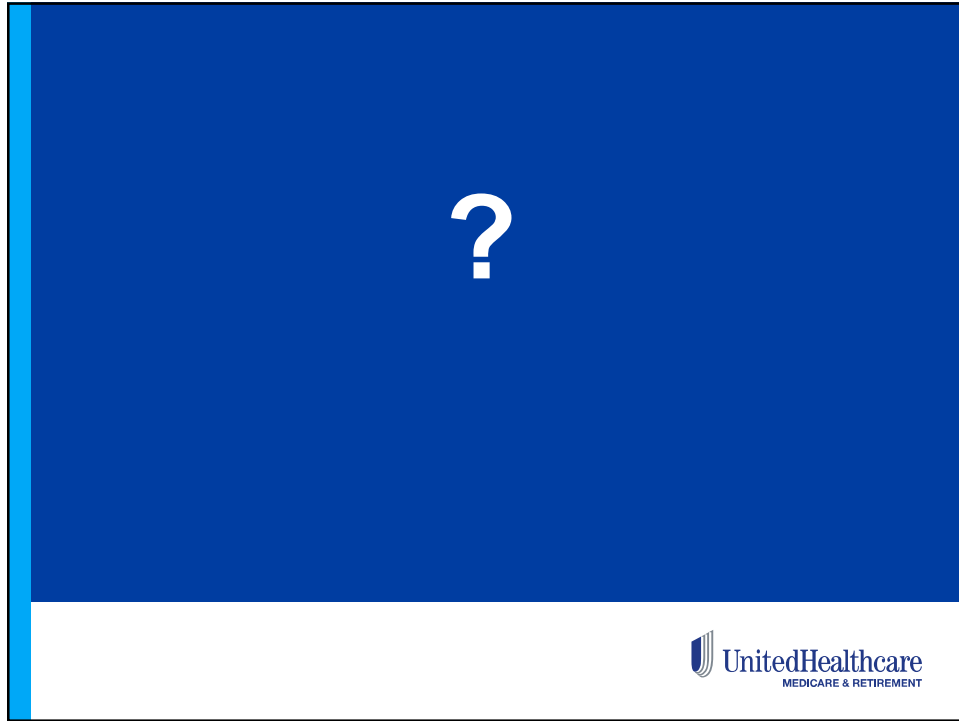


3. How should we weight these two choices given the uncertainty of the tail?

- » Unreliable development patterns
- » Unreliable exposure based method
- » Changing recoveries

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Happy New Year!!!



Perfect Storm of Actuarial Problems

- Increased Claim Processing Errors
- Population change
- Unknown Trend
- Medicare bids due in April
- How do we determine where the New Year is headed in time to plan for the next?



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Money Down the Drain



All Pending Claims Inadvertently Denied!!

- Paid to Date is artificially low
- Incremental paid for the next several months will be high
- Unreliable Claim Linkage
- Unknown Resubmission speed
- What do we do until things stabilize?



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Sources



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