



IT TAKES VISION

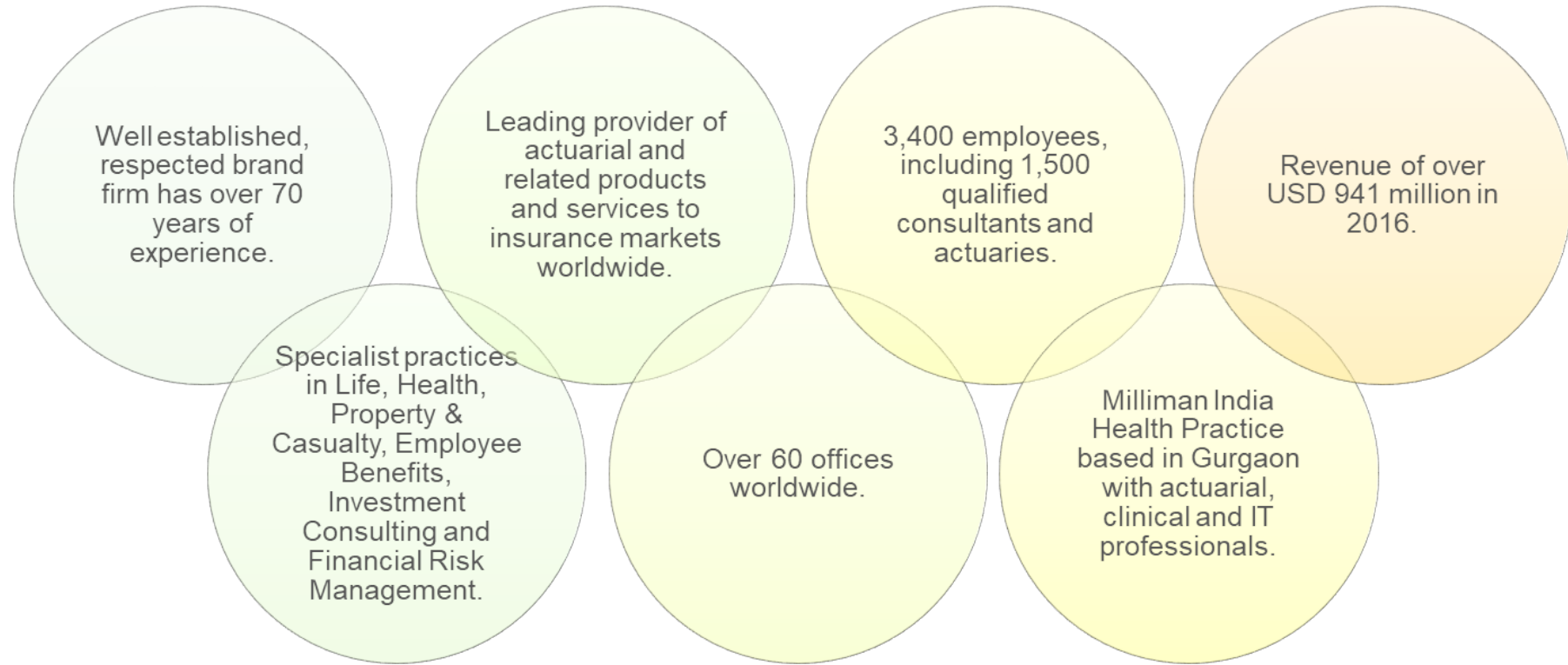
Retail Medical Underwriting

Concepts, Approach and Emerging Opportunities

Lalit Baveja, Principal & Sr Health Management Consultant

IAI Conference, Gurugram 2017

Milliman Overview



One of the largest global firms in health and risk management consulting.

High credibility amongst all our clients



High recognition of our quality in the industry worldwide



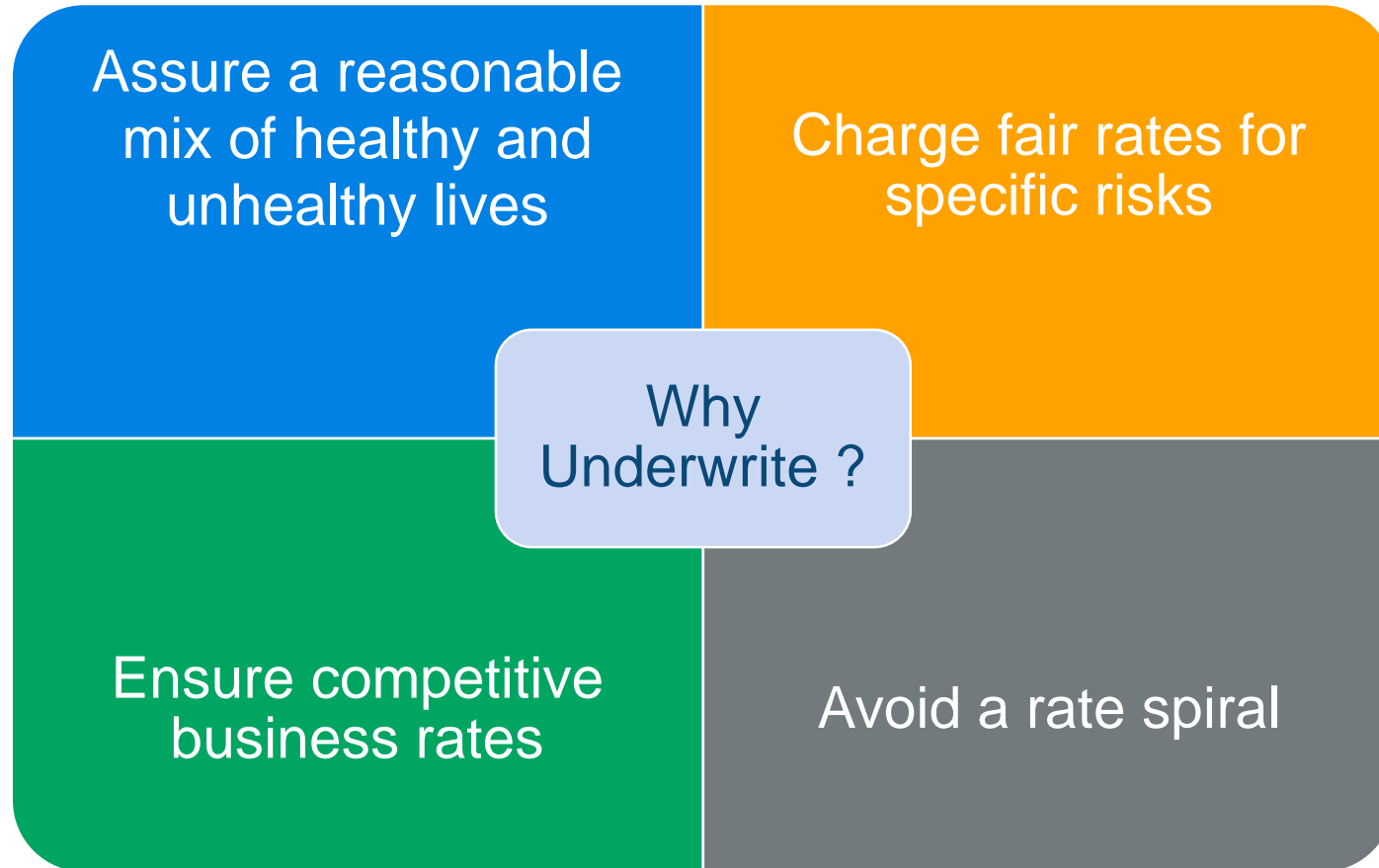
Overview of medical underwriting

Integral part of actuarial control cycle





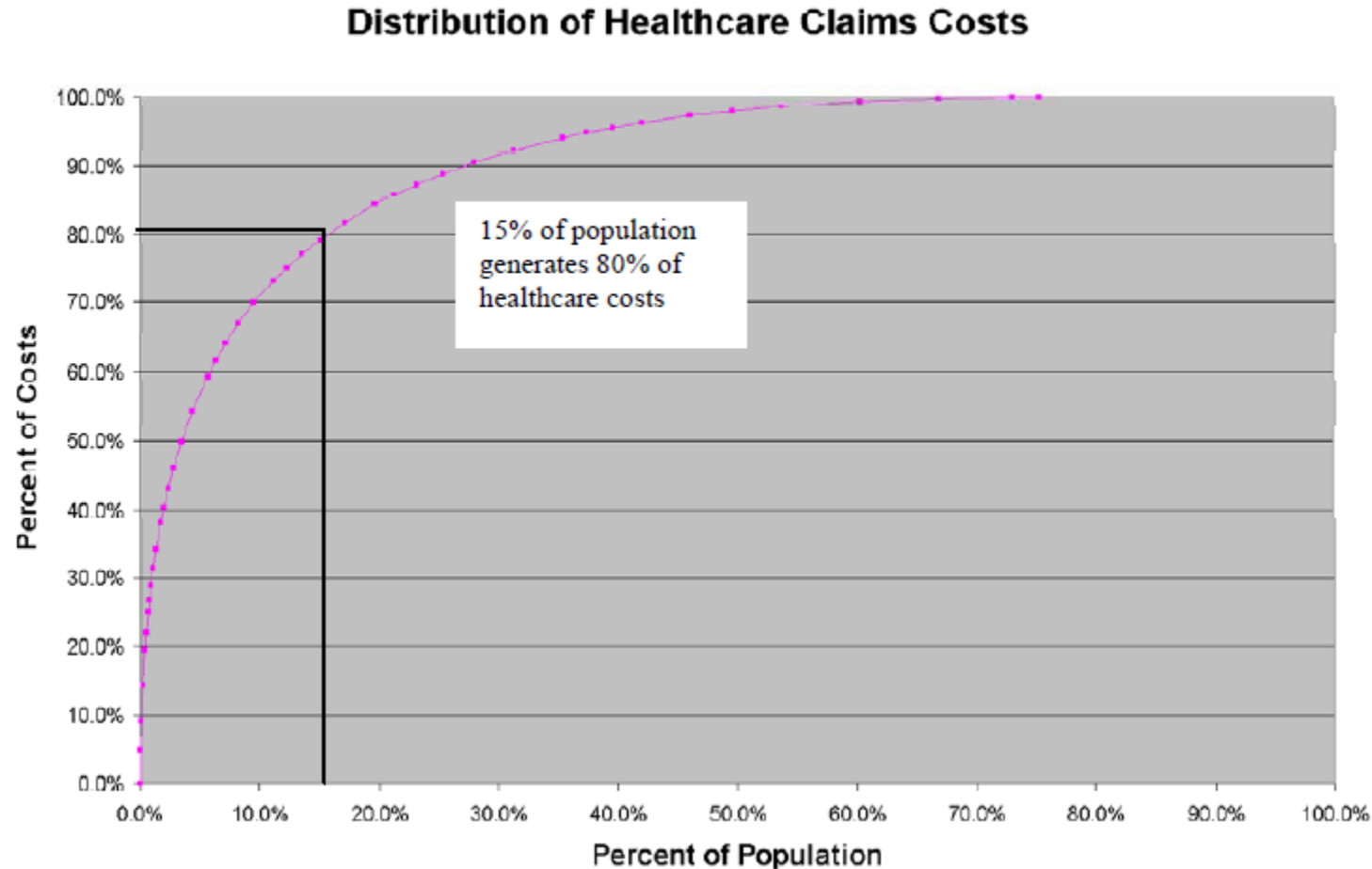
Overview of medical underwriting



Need for medical underwriting

Health costs vary within a population

- Most costly 15% of individuals generate 80% of healthcare costs





Need for medical underwriting

Assure a reasonable mix of healthy and unhealthy lives

Standard distribution

- 850 low-cost members, 150 high-cost members

	Number	Cost - % of Average
Low – Cost	850	24%
High - Cost	150	533%
	1,000	100%



Need for medical underwriting

Assure a reasonable mix of healthy and unhealthy lives

Large proportion of high-cost members

- 700 low-cost members, 300 high-cost members

	Number	Cost - % of Average
Low – Cost	700	24%
High - Cost	300	533%
	1,000	156%



Need for medical underwriting

Assure a reasonable mix of healthy and unhealthy lives

Small proportion of high-cost members

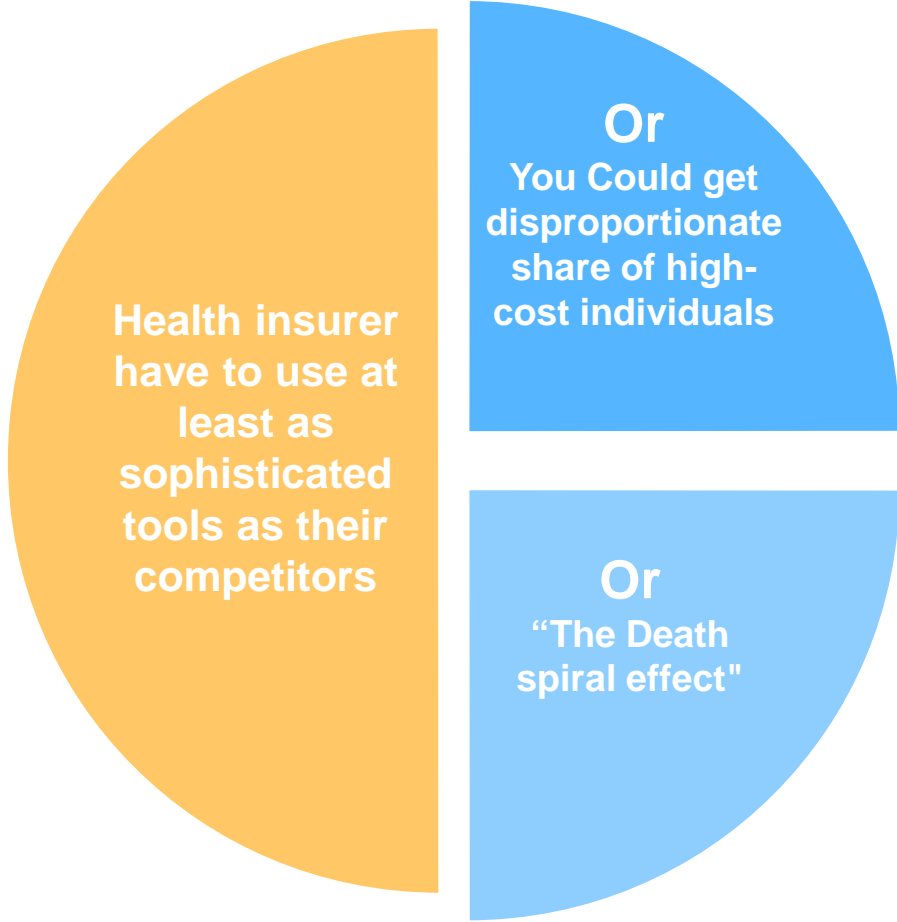
- 925 low-cost members, 75 high-cost members

	Number	Cost - % of Average
Low – Cost	925	24%
High - Cost	75	533%
	1,000	65%



Need for medical underwriting

Competitive need



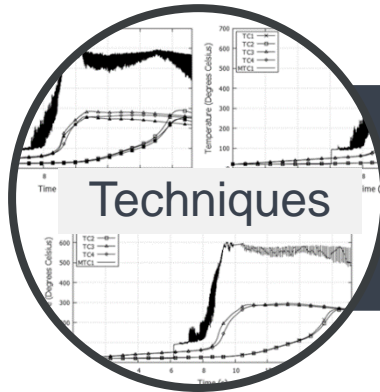


Underwriting process

Tools and Techniques



Used to gather information



Use to apply the underwriter's decision



Underwriting process

Tools for Risk Assessment

Objective

- Measure and quantify health risk of applicant in line with organizations risk appetite

Information sources

- Demographic: Gender, location, marital status, family size
- Health status
- Lifestyle/ Habits
- Other insurance/ claims History
- Financial: Income

Approach

- Proposal form
- Agents Report
- Attending Physician Report
- Full Medical Underwriting
 - Medical questionnaires
 - Teleunderwriting
 - Medical Tests



Underwriting process

Decision Making

Objective

- Establishing selection standards in line with the insurer's underwriting philosophy
- Reduce potential adverse selection
- Uniformity in portfolio.

Risk stratification

- Preferred Risk
- Healthy Risk
- Sub Standard Risk
- Poor risk
- Very Poor Risk

Decisions

- Standard terms
- Decline
- Exclusion riders
- Premium loading
- Defer



Underwriting process

Underwriting techniques



Accept on Standard terms



Decline coverage



Apply premium loading



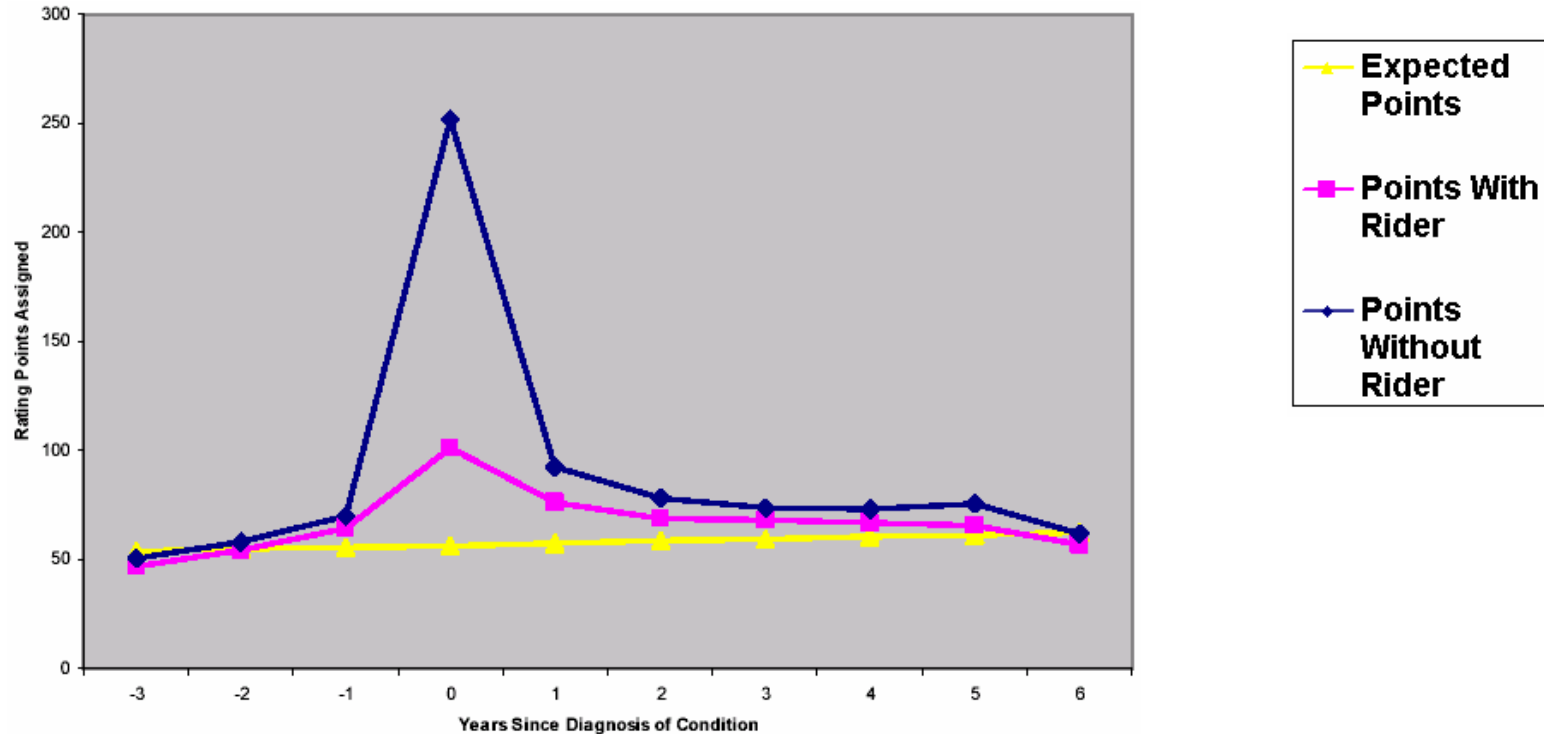
Use of Exclusion Riders – when do they work?

Underwriting process

Technical (Decision Making)

Impact on decision making

Scenario 1 (Acute Condition): Cholelithiasis (The presence of stones in the gallbladder).





Underwriting process

Technical (Decision Making)

Impact on decision making

Scenario 1: Acute Condition: Cholelithiasis (The presence of stones in the gallbladder).

Decision:

- Rider useful: if applied in year of diagnosis, risk is acceptable because increase in cost is limited
- Underwriting decision: application of rider would allow coverage to be written

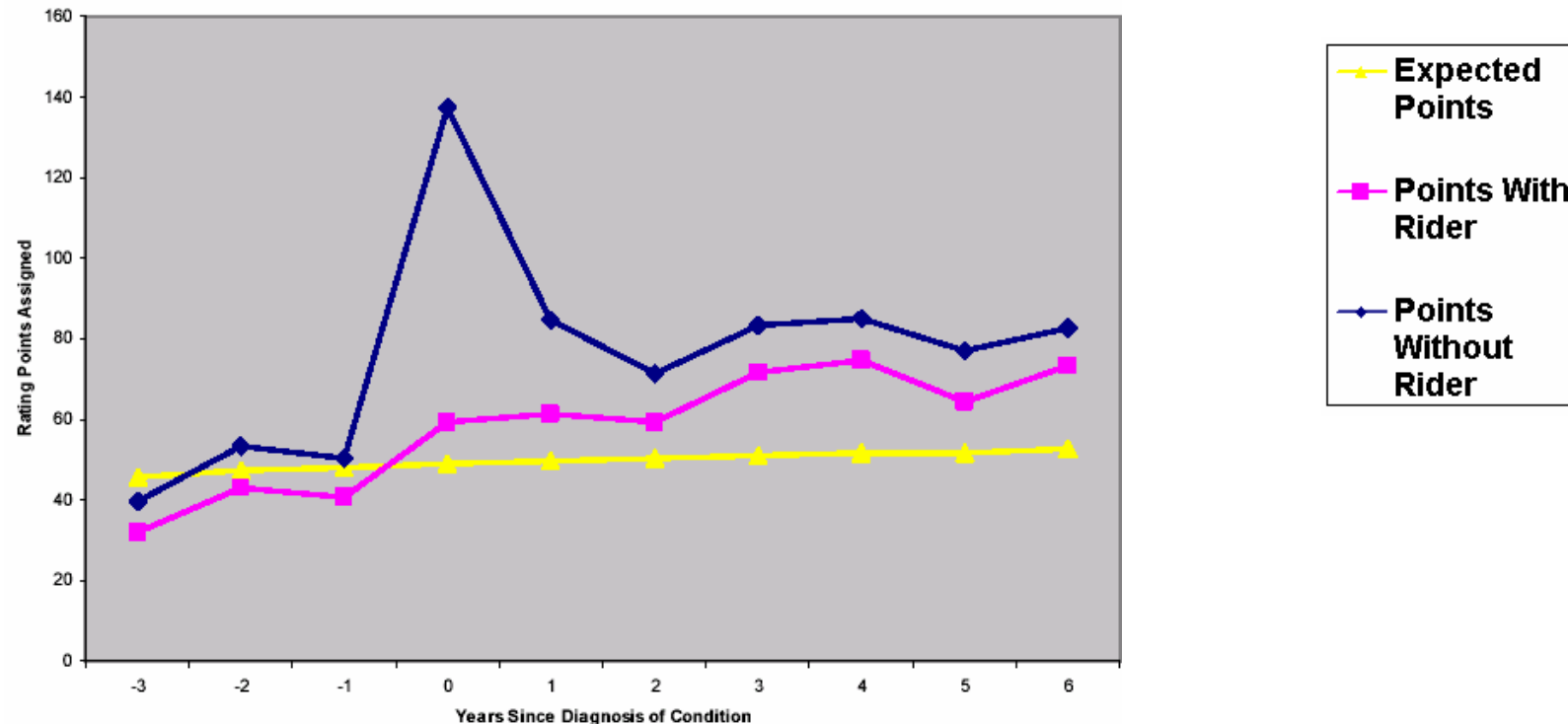


Underwriting process

Technical (Decision Making)

Impact on decision making

Scenario 2 (Acute Chronic Condition): Cystocele/Rectocele (Hernia of bladder or rectum)



Underwriting process

Technical (Decision Making)

Impact on decision making

Scenario 2 (Acute Chronic Condition): Cystocele/Rectocele (Hernia of bladder or rectum)

Decision:

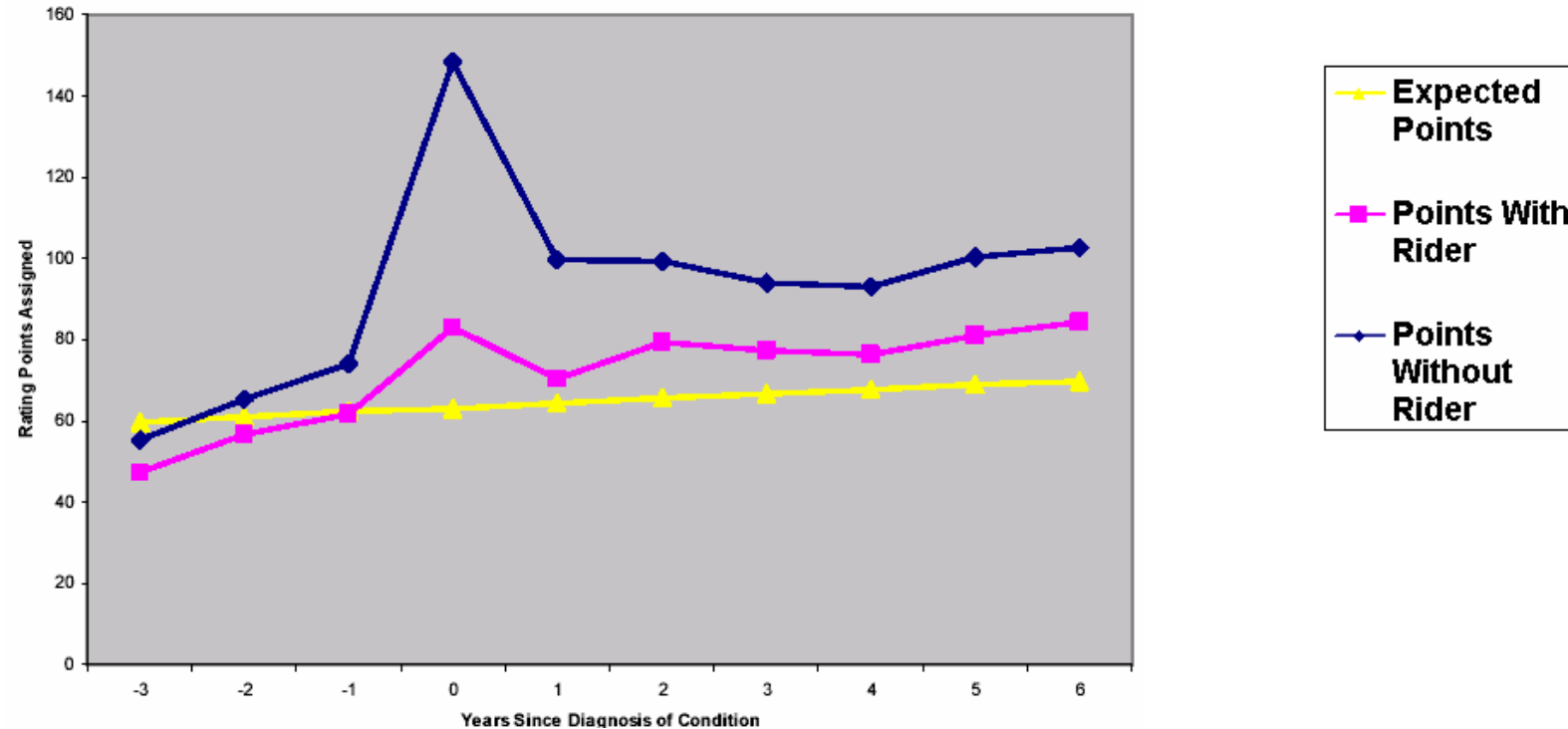
- High costs maintained over long period of time
- Rider not useful: does not significantly reduce costs
- Underwriting decision: would likely decline

Underwriting process

Technical (Decision Making)

Impact on decision making

Scenario 3 (Chronic Condition): Spondylolisthesis (Forward slippage of a lumbar vertebra)



Underwriting process

Technical (Decision Making)

Impact on decision making

Scenario 3 (Chronic Condition): Spondylolisthesis (Forward slippage of a lumbar vertebra)

Decision:

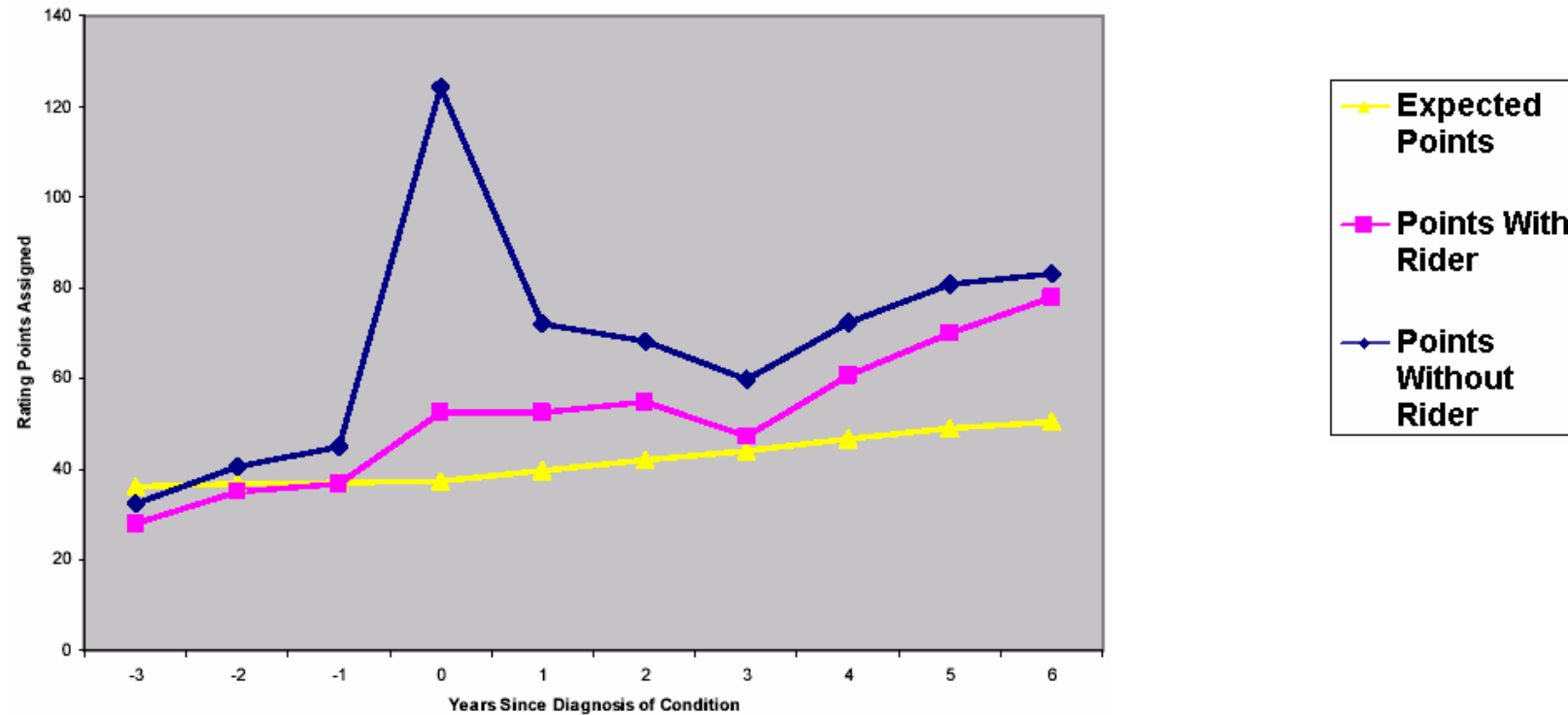
- Rider useful: removes a meaningful portion of excess claim costs
- Underwriting decision: application of a rider would allow coverage to be written

Underwriting process

Technical (Decision Making)

Impact on decision making

Scenario 4 (Relapsing Condition): Alcoholism



Underwriting process

Technical (Decision Making)

Impact on decision making

Scenario 4 (Relapsing Condition): Alcoholism

Decision:

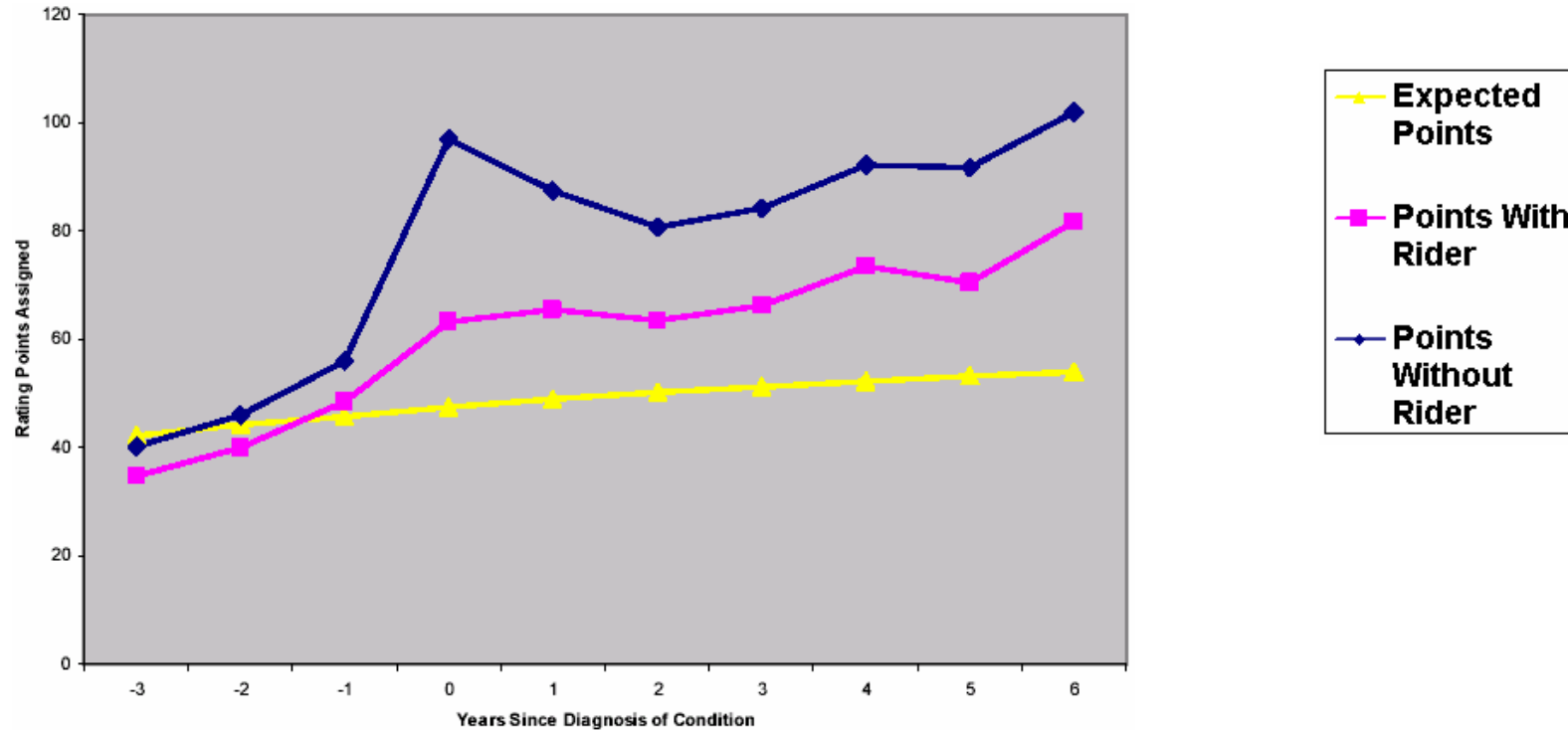
- Costs increase after an apparent recovery
- Rider useful: only in early years, not during relapse
- Underwriting decision: pay special attention to these conditions

Underwriting process

Technical (Decision Making)

Impact on decision making

Scenario 5 (Progressive Condition): Osteoarthritis





Underwriting process

Technical (Decision Making)

Impact on decision making

Scenario 5 (Progressive Condition): Osteoarthritis

Decision:

- Small cost decrease for a couple of years after diagnosis, then begins to increase steadily
- Rider: does remove a portion of costs
- Underwriting decision: long-term effects due to the steady increase may cause decline instead



Other underwriting challenges

Regulations, Sales and Efficiency

Regulations



Mandated compliance and member safeguards

Sales



Volume priority Vs UW diligence

Cost



Cost and efficiency of UW process



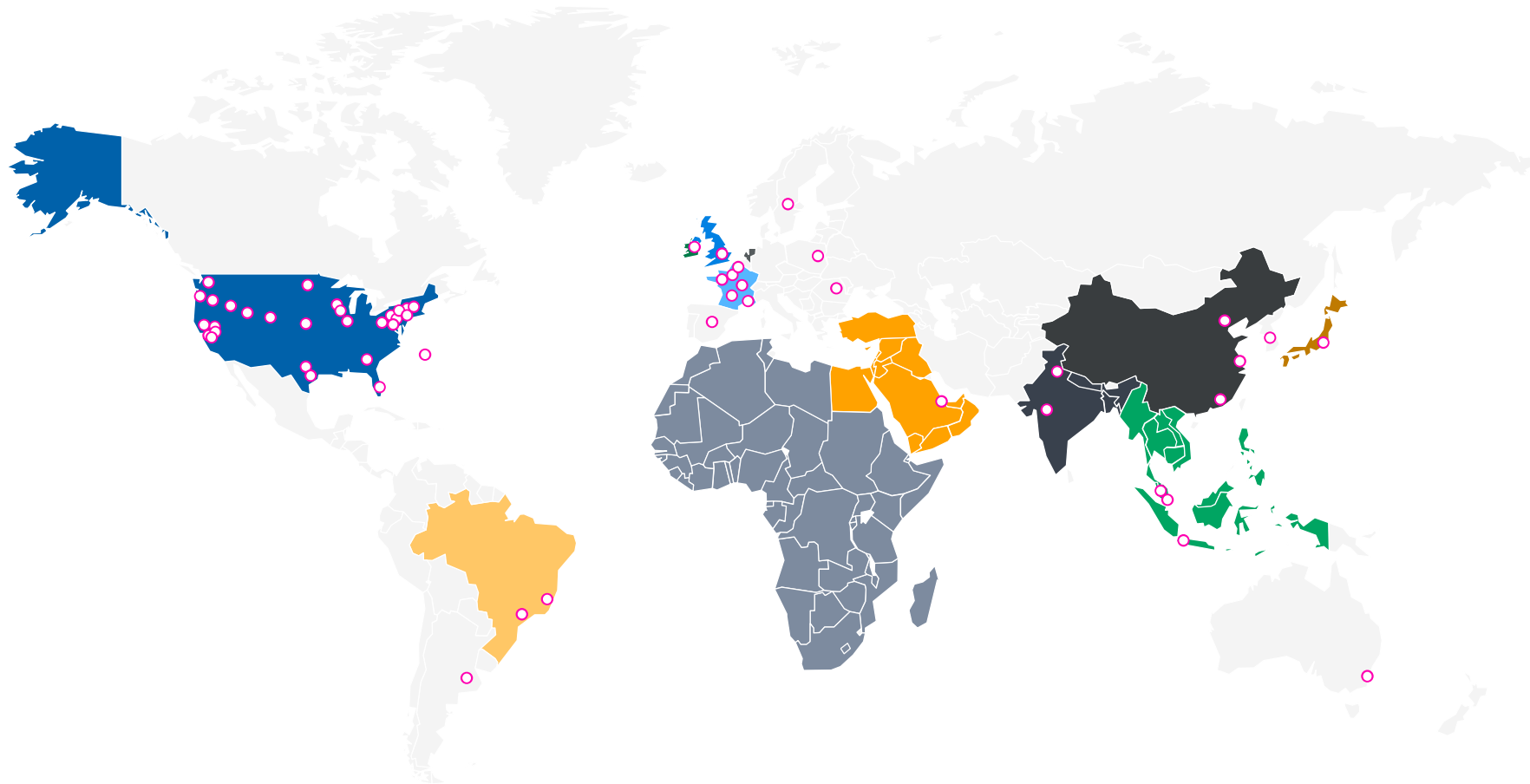
Impact of regulation

- Guranteed renewability
- No maximum age
- Limitations on permanent exclusions
- Lack of consensus on pre existing disease interpretation
- Portability

Tension between avoiding undesirable risk and maximising enrolment without spending too much money or time

- Loosen underwriting to maximise volume...at what risk?
- Cost of UW process and implications of delays or long processes
- Retail applications have more administration costs
 - Teleunderwriting
 - Medical tests
 - UW assessment process costs and time
- Low member tolerance for decision delays – lapsed proposals
- Critical to monitor and manage efficiency opportunities in the process

Emerging underwriting practices and opportunities




Underwriting process


Emerging opportunities

Smart real time dynamic workflows important to avoid process holdups

HUMS



Dashboard Guidelines UW Queue Closed Queue Common Queue

 Test1 [Go to Renewal](#) [Logout](#)

Queue															Export to Excel
Policy No	Proposer Name	Inward Type	Policy	Date	Channel	Business	Product Code	Plan Code	SubPlan Name	Sum Insured	Decision	Status	Priority	Portable Case	Members
PHEL0000001	RAKESH ARORA	Sales (New Business)	Individual	09/03/2015	Direct	Urban	HEALTH	HPR01	Health Preferred	15.00 Lacs		Add Info Pending	High	Yes	+
PHEL0000006	MUNISH R	Sales (New Business)	Family Floater	09/03/2015	Direct	Urban	HEALTH	HPR01	Health Preferred	15.00 Lacs		UW Pending	Normal	No	+
PHEL0000007	ROY S	Sales (New Business)	Family Floater	09/03/2015	Direct	Urban	HEALTH	HPR01	Health Preferred	15.00 Lacs		UW Pending	Normal	No	+
PHEL0000008	SAMITA SHARMA	Sales (New Business)	Family Floater	09/03/2015	Direct	Urban	HEALTH	HPM01	Health Premier	1.00 Cr		UW Pending	Normal	No	+
PHEL0000009	GANESH K	Sales (New Business)	Family Floater	09/03/2015	Direct	Urban	HEALTH	HPR01	Health Preferred	15.00 Lacs		UW Pending	Normal	No	+

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Underwriting process

Emerging opportunities

Structured Teleunderwriting process for a standard objective approach

Dashboard Guidelines UW Queue Closed Queue Common Queue Test1 Go to Renewal Logout

Member: MR ARMAN SHARMA Upload Document High Priority Possible Duplicates

PF Questions Medical Questions Medical Test Medical Test Summary IRA UW Decision History

Questions

S.No	Question
1.	High or Low Blood Pressure / Chest
2.	do you have gastro pain ?
3.	Diabetes or Pre-diabetes condition
4.	peerreview
5.	Arthritis/Gout, Spondylosis, Joint P
6.	Cardiology Question
7.	Tuberculosis, Asthma, Bronchitis o
8.	Kidney Failure, Dialysis, Stones in k reproductive organs
9.	Liver Disease/Ulcers/Gall bladder d
10.	Thyroid/Pituitary Disorder or any o
11.	Any type of Skin Allergies or Diseas
12.	Cancer /Tumour (Swelling)-benign

Add Condition

Condition:
Hyperthyroidism

Medical Questions

Question	Response
Have you taken any surgical or radioactive iodine treatment for your condition?	Yes
Are your thyroid test results WNL? Please send results of your TSH level test.	Controlled
Do you suffer from hypertension/ high blood pressure ?	None
Is this under control (on regular medication/ under medical review and normal test results) ?	NA

Additional Medical Information:

Underwriting process

Emerging opportunities

Intelligent claims data analysis based risk scoring / assessment engines

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Dashboard Guidelines UW Queue Closed Queue Common Queue Test1 Go to Renewal Logout

Member: MR ARMAN SHARMA Upload Document : High Priority Possible Duplicates

PF Questions **Medical Questions** **Medical Test** **Medical Test Summary** **IRA** **UW Decision** **History**

Pre-Existing Conditions

Condition	Additional Information	Base Risk Score	Risk Score	Risk category	Details	Delete
Cervical Spine Fracture		1.16	1.2	L1	Details	
Acute Bronchitis		1	1	L1	Details	
Hyperthyroidism		1.3	1.39	L1	Details	
		Base Risk Score	1.62	Final Risk Score	1.75	

Exclusions

Condition	ICD Code	Description	Exclusion Period	Select
Cervical Spine Fracture	M50	Cervical disc disorders	1	<input type="checkbox"/>
Cervical Spine Fracture	M96	Postprocedural musculoskeletal disorders, not elsewhere classified	1	<input type="checkbox"/>
Cervical Spine Fracture	S14	Injury of nerves and spinal cord at neck level	1	<input type="checkbox"/>
Cervical Spine Fracture	S19	Other and unspecified injuries of neck	1	<input type="checkbox"/>

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Underwriting process

Emerging opportunities

Data analytics for informed decision making using your own experience

Top 10 conditions

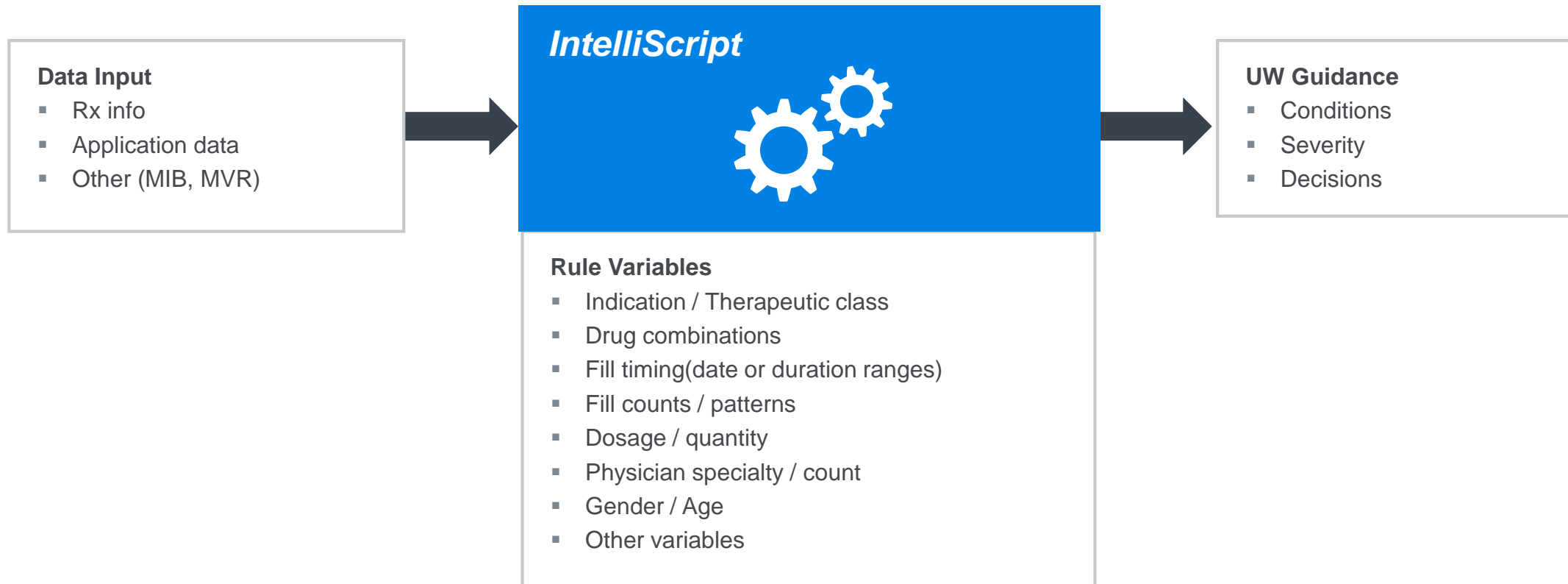
CCHG category	Unique members	% Distribution chronic disease	Inpatient admits/ 1000	Day case admits/ 1000	Average cost per year	Average premium per year	Loss ratio	Average age
Active cancer	76	6%	12.1	6.7	18,950	22,500	84%	57
Both CAD and diabetes	69	6%	4.3	2.5	16,580	26,200	63%	69
CAD without diabetes	278	22%	3.0	1.6	19,800	19,800	100%	63
Diabetes without CAD	179	14%	0.2	0.0	14,800	15,600	95%	53
Hypertension (incl. stroke and peripheral vascular disease)	61	5%	0.4	0.2	13,650	14,800	92%	63
COPD	54	4%	0.2	0.0	18,700	28,200	66%	75
Asthma	132	11%	0.1	0.1	14,680	10,200	144%	42
Chronic musculoskeletal	165	13%	1.1	0.4	12,680	14,600	87%	53
Other chronic diseases (aggregated)	232	19%	1.4	0.5	8,650	9,680	89%	46
Health male (16-40)	5,730		3.3	1.4	1,468	6,100	24%	28

Underwriting process

Emerging opportunities

Integrating multiple data sources for informed decision making

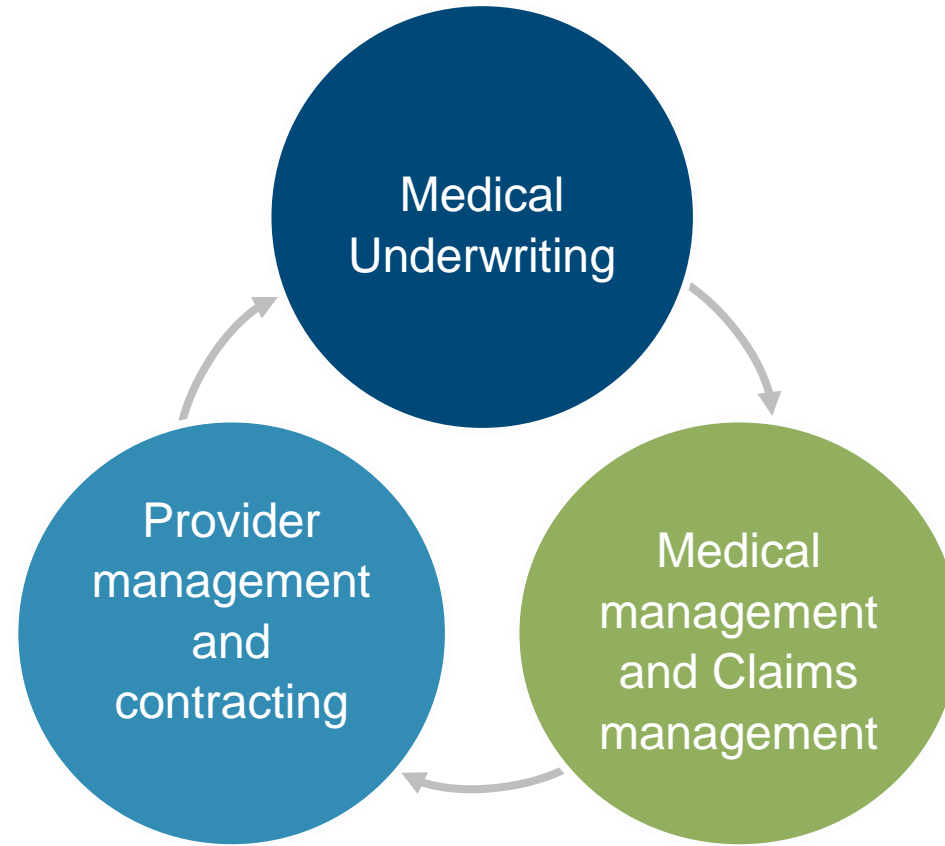
Prescription driven UW risk assessment



Underwriting process

Emerging opportunities

Ongoing close collaborations between core operations





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Thank you

Lalit Baveja, Principal & Sr Healthcare Management Consultant
December 4, 2017