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Health Insurance – Concurrent Session 3
Risk Adjustment in Health Insurance

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Waves of Reforms…Oceans of Opportunities

2013 AGFA & 15th Global Conference of Actuaries

17th – 19th Feb, 2013 | Mumbai, India

Health Risk Adjustment

Topics to be Discussed Today

- What is Risk Adjustment?
- History of Risk Adjustment
- Developing a System of Risk Adjustment
- Risk Adjustment Under the Affordable Care Act
- Impact of Risk Adjustment Under the Affordable Care Act
- Evaluation of Risk Adjustment Under the Affordable Care Act
- Questions

What is Risk Adjustment?

Normalizing the claims cost

of a population

based on

each individual's health conditions, age and gender

Purposes of Risk Adjustment

Adjust payments to bearers of risk so that:

- They are indifferent to health conditions, age and gender of their population
- They are incented to lower the cost of care for individuals in their population
- They are incented to improve the health of individuals in their population
- Underwriting and pre-existing condition exclusions are not necessary

What Risk Adjustment Does Not Do

- Adjust for cost differences among payors
- Eliminate cost of outliers
- Eliminate variations in intensity of treatment among health care providers
- Eliminate variations in cost within a condition or condition category
- Pay for outcomes
- Risk prediction

Typical Risk Adjustment Formula

Risk Adjustment Payment =

Benchmark Cost

x Risk Adjustment Factor

x Geographic Cost Adjustment

x Adjustment Factor to Balance to 0

History of Risk Adjustment in USA

Medicare DRG System

- Not really a risk adjustment system, but significant move away from paying based on volume of services
- Prospective payment system for hospital claims introduced in 1983
- Changed basis of payment from billed charges to diagnosis based groups
- No normalization

History of Risk Adjustment in USA

Adjustment of physician capitation rates based on severity of illness

- Physicians being paid per member per month capitation complained their patients were older and sicker than average
- Payors developed adjustment process based on severity of illness

History of Risk Adjustment in USA

Medicare Advantage Risk Adjustment

- Medicare Advantage plans were attracting younger and healthier populations than Medicare fee for service program
- System of adjusting payments to plans based on hierarchial condition categories was developed and phased in
- Prospective system of risk adjustment

History of Risk Adjustment in USA

Medicaid Risk Adjustment

- Many states adopted a risk adjustment program for managed medicaid plans
- Condition categories first developed based on drug claims, diagnosis codes added later

History of Risk Adjustment in USA

Risk Adjustment Under Affordable Care Act

- 3 R's – 3 Programs:
  - Risk Adjustment - permanent for individual and small group, normalize risk among carriers
  - Reinsurance – 2014-2016 – buffer individual market conversion to guaranteed issue
  - Risk Corridors – 2014 -2016 – stabilize rating and financial results in individual and small group market as carriers implement exchanges and other reforms

Developing a Risk Adjustment System

- Data Collection
- Condition Groupers
- Model Selection
- Payment Calculations
- Payment Process
- Transparency
- Fraud, Abuse, Gaming

Data

- Enrollment Data
- Product & Premium Data
- Physician Claims
- Hospital Claims
- Pharmacy Claims
- Coding: Diagnosis, Procedure, Revenue, HCPCS, Place of Service, Specialty
- Billed, Allowed, Paid Charges

Modeling

- Methods: linear regression, generalized linear, quantile regression, neural networks etc.
- Validation: hold out sample, time period sample, permutation test
- Test criteria: R-squared, MAPE, RMSE, other statistical tests
- Concurrent vs. Prospective

Payment Methodology

- Centralized aggregation of data and funding, distributed data repositories
- Establish the normalized benchmark payment amount
- Collect input data from all participants
- Payment timing including payment adjustments

Risk Mitigation Under ACA

ACA will create three new, important regulations aimed to transfer risk fairly among payors

Risk transfer mechanisms	Description	Implications
1 Risk adjustment (Permanent)	▪ Enables transfer of funds from lower risk plans to higher risk plans to protect payors against adverse selection ▪ *Small Group and Individual*	▪ Shifts margin from lower to higher risk members
2 Reinsurance (2014 – 2016)	▪ Provides funding to insurers that incur high claims costs for enrollees for all non-grandfathered individual market plans (on and off Exchange) ▪ *Individual only*	▪ Substantially offsets claims on the highest claimants through 2016 ▪ However, the floor and cap on reinsurance leaves the ~1% of the population that receives reinsurance remains unprofitable ▪ As reinsurance expires, rate increases of ~13% total beyond trend will be required over 2015-17
3 Risk corridors (2014-2016)	▪ Limits insurer losses (and gains) by protecting against inaccurate rate setting at a state, legal entity and segment level ▪ *Small Group and Individual*	▪ Can mitigate but not eliminate losses – initial pricing will be very important

Risk Mitigation Under ACA - Reinsurance

- Temporary 2014-2016
- Individual market only
- Payment Targets $20 billion, $10b, $6b & $4b in 2014, 2015 & 2016
- Aproximately 13%, 8%, 5% of premium
- Attachment point: $60,000
- Cap: $250,000
- Coinsurance: 80% in 2014
- Funded by pmpm fee on all market segments

Risk Mitigation under ACA – Risk Adjustment

- Permanent – small group & individual
- Concurrent, at state and segment level
- Payments based on state average premium
- 15 sets of risk adjustment coefficients based on adults, children, infants for each of 5 different product types
- 127 HCC payment categories, reduced to 100 by grouping & using same coefficients
- Infant risk adjustment based on severity and degree of premature birth

Risk Mitigation under ACA – Risk Adjustment

- Age and gender factors in addition to condition
- Approximately 20% of adults, 10% of children, 45% of infants have a scored & paid condition
- Payments are made based on average gross premiums in a market, not expected claims
- Concurrent system based on claims reported in current year
- Effectively marks up claims by expected administration costs and profit built into premium

Impact on margins

Illustrative shift in margins with risk adjustment

Profitability shifts to members with conditions that have risk adjustment payments

Example: $10m in total margins

		2017 margin	
Population	**% of population**	**Pre-risk adjustment**	**Post-risk adjustment**
Without any risk-adjusted conditions	80%	$95m	($20m)
With one or more risk-adjusted conditions	20%	($85m)	$30m
Total	**100%**	**$10m**	**$10m**

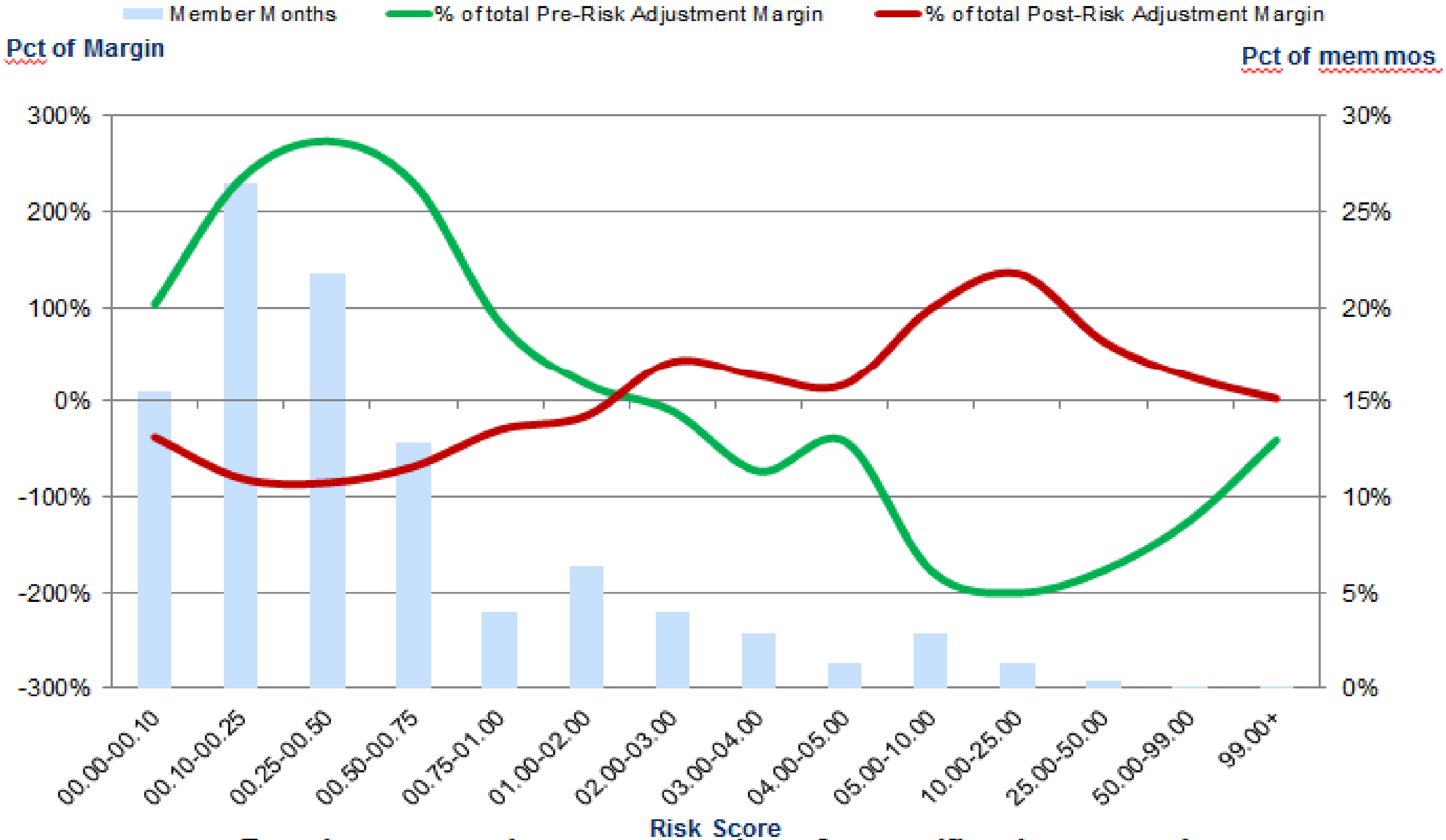
Depending on overall margins, local book/market populations, relative cost vs. market, etc., the profitability of those without conditions may vary but the direction of shift from majority of margins in those without conditions to the majority of margins in those with conditions has been consistent in populations we have tested to date

Results may not be representative of a specific plan or market

Impact on total value

With risk adjustment most total margin is driven by higher risk segments

Percent of TOTAL 2017 margin by risk score segment



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Risk mitigation of high cost claimants

Illustrative mitigation of high claimants by risk adjustment and reinsurance

Percent of total net 2014 claims expense in book

	Paid Claims	Claims Net of risk adjustment	Claims Net of risk adjustment and reinsurance
Top 1% of claimants	37%	20%	8%
Top 5% of claimants	67%	35%	23%

Results may not be representative of a specific plan or market

Reinsurance Population

Illustrative shift in margins in those receiving reinsurance

Example: $10m in total margins

		2014 margin	
Population	**% of population**	**Pre-risk adjustment and reinsurance**	**Post-risk adjustment and reinsurance**
Does not get Reinsurance Payment	99.1%	$100m	$25m
Gets Reinsurance Payment	0.9%	($90m)	($15m)
Total	**100%**	**$10m**	**$10m**

Members who receive reinsurance payments are a small percentage of the population They remain unprofitable despite double payment of risk adjustment and reinsurance but the losses in this group are substantially mitigated

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Operational Implications

- Coding
- Provider Evaluation
- Care Management
- Analytics

Questions?