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Milliman GRx

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Agenda


- Milliman IntelliScript Practice
- GRx Overview
- De-identified Rx Histories
- Predictive Power of GRx



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IntelliScript Overview

Founded as IntelRx in 2001	Acquired by Milliman in 2005	Primary focus on Rx-history solutions	More than 200 insurance company clients (7 million queries in 2015)
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GRx was originally designed for the mid-size group market.

Group Size (employees) 25 50 100 300

Individual applications GRx Valid claim experience available

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Other Markets Where GRx has Proven Value

- Small Group Self-Funded
- Associations
- Professional Employer Organizations (PEO's)
- Virgin Groups – Large Group Employer Mandate

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GRx Overview

Insurance Company De-identified Rx data

List of Individuals GRx score

IntelliScript GRx Predictive Model

Data Source Data Source Data Source

Rx records

- No authorization is required
- It's fast – results within 15 minutes
- Brings medical information where none exists
- Integrates with your rating system
- Shown to deliver significant predictive power
 - Multiple client studies

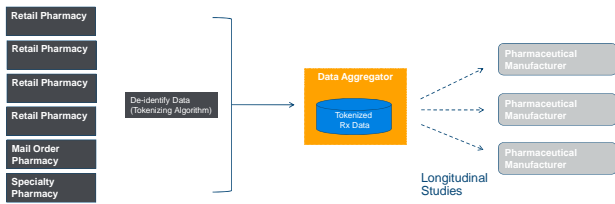
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What information is needed for GRx?

- 1 First name
- 2 Last name
- 3 Date of birth
- 4 Gender
- 5 Zip code – home



Why do Data Aggregators hold de-identified Rx data?



What's the status of GRx today?

- 30+ live clients and 5 clients in pilot mode
 - Blue plans, regional plans and national insurers
 - TPA's, PEO's, Associations, MGU's and reinsurers



Pilot Approach

- Designed to address two key questions
 - How effective is GRx?
 - How do we quantify the value of GRx?
- Case study - large regional plan
 - 1,021 groups
 - Census, issue date, 12-month claim experience
 - Group sizes 10-250

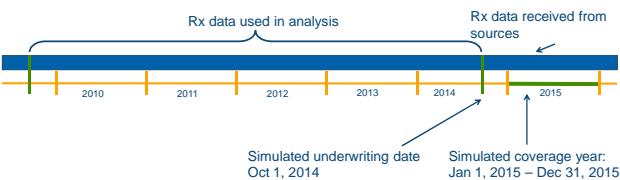


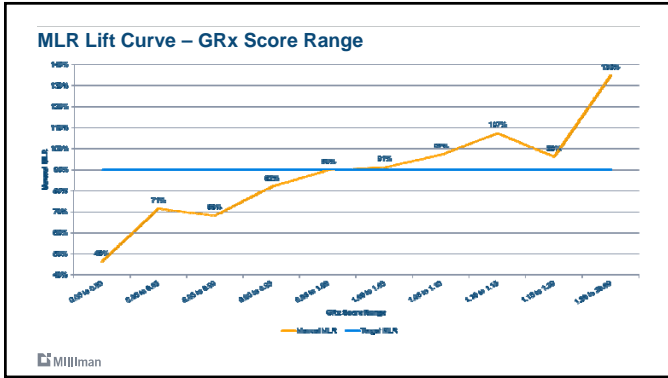
Pilot Overview

Pilot Data	Obtain Individual Rx Histories	Risk Score Compared to Claims
-1,021 groups -113,895 members -55,486 employees -54 avg case size	-5 years of data -82.2% hit rate -20.9M fills -Rx histories scored by predictive modeling tool	-MLR Lift Curves -Correlation analysis -Bidding simulation



Simulating the Underwriting Process





Bidding Simulation

- Idea: Simulate two insurers in a closed market
 - One player uses GRx
 - One player uses Manuals
 - Players "bid" on groups using a fixed set of dollars
 - Low bid "wins" the case
- For this study
 - Each player starts with \$382 million in claims
 - Players bid on 1,021 groups

Bidding Simulation

Group	Manual Rating Method		GRx Method		Winner	Actual Claims	Manual Uw'g Gain	GRx Uw'g Gain
	Claim Estimate	Gross Premium	Claim Estimate	Gross Premium				
1	\$900,000	\$1,000,000	\$720,000	\$800,000	GRx	\$700,000	..	\$100,000
2	\$360,000	\$400,000	\$450,000	\$500,000	Manual	\$450,000	(\$50,000)	..
3	\$810,000	\$900,000	\$900,000	\$1,000,000	Manual	\$875,000	\$25,000	..
..
..
	\$382M	\$382M / 90%	\$382M	\$382M / 90%		\$382M	\$4.3M	\$25.4M

Bidding Simulation Results

- GRx "wins" about 55% of the groups
- GRx beat manuals by **\$21M** in underwriting gain

	Groups	Member Months	Premiums	Claims	Premium PMPM	Claim PMPM	Uw'g Gain	LR	Uw'g Gain PMPY
GRx Wins	559	738,024	\$213,182,748	\$187,735,918	\$288.86	\$254.38	\$25,446,830	88.1%	\$413.76
Manual Wins	462	645,780	\$198,130,197	\$193,810,330	\$306.81	\$300.12	\$4,319,866	97.8%	\$80.27
Difference							\$21,126,963		\$333.48



Five Recent GRx Pilots

	Study ₁	Study ₂	Study ₃	Study ₄	Study ₅
Groups	965	1,041	1,021	2,146	2,596
Members	109,628	319,255	113,895	380,720	274,520
Hit Rate	87.0%	82.4%	82.2%	76.8%	82.3%
R ² Manual	0.062	0.353	0.219	0.191	0.135
R ² GRx	0.122	0.467	0.317	0.314	0.244
R ² Lift	0.060	0.115	0.098	0.123	0.109
UW'g gain/member	\$264	\$505	\$333	\$631	\$353





Thank you

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