

SOA/DMAA Risk Adjustment and
Predictive Modeling Applications

Introduction to Disease Management Predictive Modeling

Presented by:

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Overview

- Introduction to Predictive Modeling
- So why isn't this Risk Assessment?
- Classification of Vendor Products
- How is it Used?
- Outlook for future applications
- Q&A

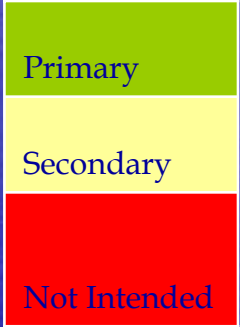
What is Predictive Modeling?

- Robust claims data driven analysis process to identify prospective claims on known individuals based upon their recent claims activity
- Objective process based upon observed claim patterns or episodes of care patterns
- Emerging science, little standardization yet although quickly improving

So why isn't this risk assessment?

- Risk assessment could be characterized as the overall financial risk assessment of a population with a strong focus on the composite risk score (i.e., this population is 105% of the norm, or 95% of the norm, or this individual is 105% of the norm, etc.)
- Predictive modeling gives names and addresses of individuals with specific issues that could lead to high risk
- Predictive modeling is micro risk assessment where traditional risk assessment is macro risk assessment
- Predictive modeling and risk assessment should be comparable and the industry is recognizing this.

Classification of Vendor Products

	<u>Classification</u> <u>Status:</u>	<u>Risk</u> <u>Status</u> ¹	<u>Treatment</u> <u>Status</u> ²	<u>Health</u> <u>Status</u> ³	
	<u>Product</u> <u>(Company):</u>				
1.	ACG (John Hopkins)	Secondary	Not Intended	Primary	<u>Legend:</u> 
2.	Active Health Management	Not Intended	Primary	Not Intended	
3.	CareSteps (American Healthways)	Primary	Primary	Not Intended	
4.	MMIQ (American Healthways)	Primary	Primary	Not Intended	
5.	Click4Care	Not Intended	Not Intended	Primary	
6.	DxCG (DCG)	Primary	Secondary	Secondary	
7.	ETG (Symmetry)	Secondary	Not Intended	Primary	
8.	Risk Screen R (Future Health)	Primary	Primary	Secondary	
9.	ERG and PRG (IHCIS)	Primary	Not Intended	Secondary	

Multiple level screen accomplishes both

Classification of Vendor Products

<u>Classification Status:</u>	<u>Risk Status</u> ¹	<u>Treatment Status</u> ²	<u>Health Status</u> ³	
<u>Product (Company):</u>				
10. Maxys II (Landacorp)	Not Intended	Primary	Secondary	<u>Legend:</u> <div style="display: flex; flex-direction: column; align-items: center;"> <div style="width: 20px; height: 10px; background-color: #90EE90; border: 1px solid black; margin-bottom: 5px;"></div> Primary <div style="width: 20px; height: 10px; background-color: #FFFF99; border: 1px solid black; margin-bottom: 5px;"></div> Secondary <div style="width: 20px; height: 10px; background-color: #FF0000; border: 1px solid black; margin-bottom: 5px;"></div> Not Intended </div>
11. DS Miner (Landacorp)	Primary	Not Intended	Secondary	
12. MedAI	Primary	Not Intended	Not Intended	
13. MediSave (Medical Scientists)	Primary	Not Intended	Not Intended	
14. Hybrid (Medical Scientists)	Primary	Secondary	Not Intended	
15. The Health Profile (One Care Street)	Not Intended	Not Intended	Primary	
16. The Predictive Model (One Care Street)	Primary	Not Intended	Not Intended	
17. SF-12 / SF-36	Not Intended	Not Intended	Primary	

Classification of Vendor Products

<u>Classification Status:</u>		<u>Risk Status</u> 1	<u>Treatment Status</u> 2	<u>Health Status</u> 3	
<u>Product (Company):</u>					<u>Legend:</u>
18.	GCAT (Health Technis)	Red	Green	Red	Primary
19.	APG (3-M)	Green	Yellow	Red	Secondary
20.	Predictive Model (Ingenix)	Green	Red	Red	Not Intended
21.	CRG (3-M)	Green	Yellow	Red	

- 1 Risk Status: Concentrates on a patient's likelihood for specific clinical or financial outcomes with a focus on the probability of the future risk that such clinical or financial outcomes are realized.
- 2 Treatment Status: Assessment of type and intensity of care a patient is currently receiving in comparison to best practices or evidence-based medicine protocols.
- 3 Health Status: A patient's current clinical, physical and mental health standing, addressing the likelihood of treatment needs or certain resource consumption for a current episode of care.

How Is It Used?

- “Case/patient finders” by Disease Management companies
 - DM companies are often paid based upon the number of patients they interact with
 - Helps identify the patients they should be managing
 - The more accurate the identification, the more good that can be done to impact behavior, and the greater chance for high quality/cost effective care

How Is It Used?

continued

- Medical management applications are most common
 - for disease management purposes as described above
 - For early intervention on other medical management patients beyond traditional DM
 - Prioritization of medical management resources (i.e., medical management triage)
 - Resource planning based upon activities

How Is It Used?

continued

- Underwriting applications are becoming more prevalent
 - Enhance knowledge of past claims to better predict future claims
 - Helps answer questions such as:
 - “So where is this bad experience coming from?”
 - “Will this experience repeat itself?”
 - “Do we really need a larger rate increase?”
 - Applies primarily to renewal of existing business
 - Advantage for carrier with the business
 - Requires significant data

How Is It Used?

continued

- Potentially controversial since dealing with health conditions of current insureds (i.e., black listing, HIPAA, underwriting at time of claim, small group regs, etc.)
- Tends to be a small and small to medium sized group play (i.e., <25, 25 – 150 lives) where groups have limited experience rating or partial experience rating
- Best applications seamlessly integrated into underwriting process, not just another step in a traditional process.

How Is It Used?

continued

- Many still believe it is “before its time”, or nothing more than “smoke & mirrors”
- Proponents claim improved profit margins resulting from strategic play on experience (e.g., 0.5% - 1.0% increase in target margins of 3 - 5%)
- Most vendors focused on medical management play

Outlook For Future Applications

- Evaluating provider reimbursement levels as they related to capitation rates, health budgets, etc.
- Multiple option pricing (selection bias)
- IBNR “recent period” analysis in lieu of trend only adjusted PMPM values
- Consumer behavior modeling for consumer driven health care products
- Pricing theory applications

Illustrative DM Vendor Description of their Predictive Model Applications

- Client specific approach
 - Customer population size
 - Customer benefit design
 - Customer's data mix
 - UB-92
 - Form 1500
 - Pharmacy
 - Lab
 - Patient reported data (i.e.. HRAs)
 - Data gathered through DM company member interventions

Illustrative DM Vendor Description of their Predictive Model Applications *continued*

- Predictive Model
 - Incorporates traditional data sources
 - Incorporates data from other predictive tools (ETGs, ACGs, client developed models)
 - Next generation models seeking more efficacious methods for directing health care resources to members who have the greatest potential for benefit

Illustrative DM Vendor Description of their Predictive Model Applications

continued

- Extending models beyond commercial to Medicare populations
- Using models for building and tailoring products to specific health plans and their employer customers



Q&A

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