



# SoonerCare Health Management Program

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2<sup>nd</sup> National Predictive Modeling Summit. Washington, DC.

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# Agenda

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- Background
- SoonerCare Health Management Program
- Behavioral Health Grant

# Background

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- Oklahoma Medicaid Reform Act of 2006
  - Mandated a Disease Management Pilot
    - Decrease cost for chronic conditions
    - Increase quality of care

# Background

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- Rising provider and state administrative costs led Oklahoma on a search for a new Medicaid Management Information System (MMIS) capable of processing claims more efficiently.
  - EDS transitioned the Oklahoma Health Care Authority's mainframe-based MMIS to a fully integrated Web presence.
- Powered by EDS' interChange system, the regulation-compliant MMIS enables automated claims processing and payment, as well as telephony-based call tracking.
- A 98 percent data-entry accuracy rate ensures 29.2 million claims are processed correctly and quickly.
  - It once took as long as seven days to process an individual claim. Now most claims are handled the same day.

# Background

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- EDS
  - Contracted by Oklahoma's Medicaid Agency (OHCA) to provide claims processing, information systems and strategic technical support
  - Provides OHCA with integration and service-oriented architecture (SOA) solutions
  - MEDai selected as predictive modeling vendor

# Background

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- Oklahoma Health Care Authority (OHCA)
  - Oklahoma's Medicaid Agency
- SoonerCare
  - Oklahoma's Medicaid Coverage Product
  - ≈600,000 covered lives per month

# Member Statistics

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- Oklahoma Ranks:
  - **50<sup>th</sup>** in deaths due to heart disease
  - **46<sup>th</sup>** in deaths due to stroke
  - **46<sup>th</sup>** in deaths due to diabetes

Source: United States Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics, Compressed Mortality File compiled from 1999-2004, Series 20 No. 2J, Accessed 7/23/2007 via the CDC Wonder On-line Database.



# Member Statistics

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- 80% of expenditures are for chronic disease
- 40% of members have a chronic disease
- 10% of members account for 70% of cost
- 5% of members account for 50% of the cost



# Top Chronic Condition Diagnosis By Cost

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1	HTN	6	CKD
2	COPD	7	Asthma
3	CHF	8	HIV
4	DM	9	Hepatitis
5	CAD	10	Hyperlipidemia

\*excludes members in institutional settings and pregnancy related diagnosis

# SoonerCare Health Management Program (SoonerCare HMP)

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- Unique and progressive program
- Dual Focus
  - Patient
  - Provider
- Truly comprehensive
- Utilizes state-of-the-art predictive modeling
- Holistic



# Truly Comprehensive

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- Members are selected by risk, not disease
  - *Treat the person not the condition*
- Active behavioral health component
- Active community resource support component
- Aggressive case management
- Aggressive provider education and practice re-design



# Member Intervention Nurse Case Management

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- Health risk assessment
- Health literacy assessment
- Behavioral health screening
- Medication list
- Aggressive education and self-management training



# Member Intervention

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- Behavioral health referral
  - Full time FTE (OHCA) dedicated to receiving calls from NCMs
- Community resource referral
  - Full time FTE (HMP Vendor) dedicated to receiving referrals
- HMP interfaces with OHCA care management unit



# Member Selection and Stratification

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- Tier 1 – Face to Face Intervention
  - Top 1000 at **very high** risk
  
- Tier 2 – Telephonic Intervention
  - Top 4000 at **high** risk



# Member Selection & Stratification

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- Predictive Modeling
  - Based upon risk score, not disease
  - Focus on those with the greatest opportunity to impact



# Why Predictive Modeling?

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Oklahomans rely on predictions every day.

Vendor of Choice: MEDai, Inc.



# About MEDai

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Orlando-based Information Technology  
Company since 1992

## Unique Core Technology

Multiple Intelligent Tasking Computer Heuristics  
(MITCH)

Most Accurate

Blended technology

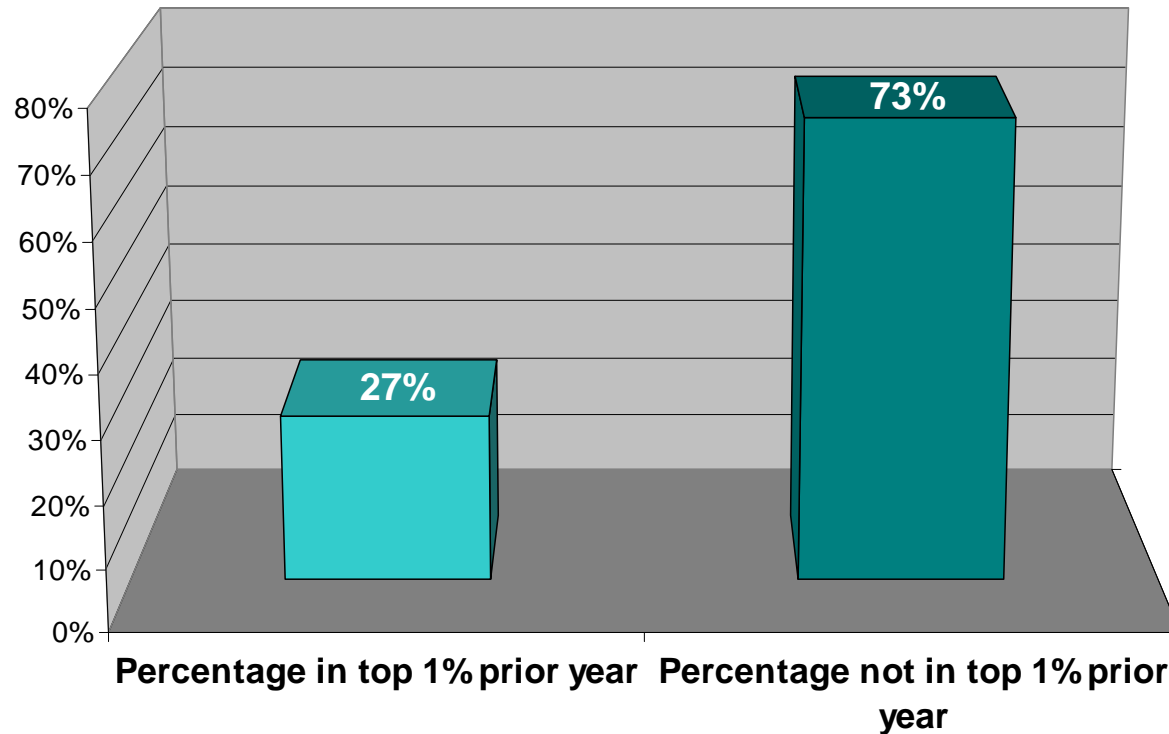
World Renowned Scientist



# Prior Cost Identification Results

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## Members in Top 1% Current Year



# So...What Do We Need?

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## ***Provide Care Managers with Appropriate Information to Identify the Right Member at the Right Time***

- **Identify appropriate members for interventions**
  - Prioritize members for intervention
    - Identify High Cost members and “Movers”
    - Evaluate “Impact Index” – Members with most impactable gaps in guidelines or forecasted acute care and assessment of cost impact
  - Risk stratification (1-5) assists in development of appropriate interventions
  
- **Access member-specific actionable information**
  - Member Clinical History
  - Member Risk Profile
  - Member Specific Guideline Gap report
  
- **Conduct summary and detailed reporting**
  - Provider Profiling
  - Employer Reporting
  - Disease Profiling

# The Solution Should...

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- **Provide High-Risk Identification**
  - Only Step 1
  - Catastrophic members often not high impact
- **Identify Movers**
  - Helps with “regression to the mean” issues
- **Forecast Inpatient Days, ER Visits and Rx\$**
  - Individualized action plans per member
- **Forecast High Chronic Impact Members**
  - Best opportunity for chronic care savings
  - Best opportunity to impact cost by intervening with evidence based guidelines
- **Implement Forecast via Impact Index**
  - Acute & Chronic Impact Index
  - Easily ranks members
- **Allow for Workflow Integration**
  - Detailed member profiles



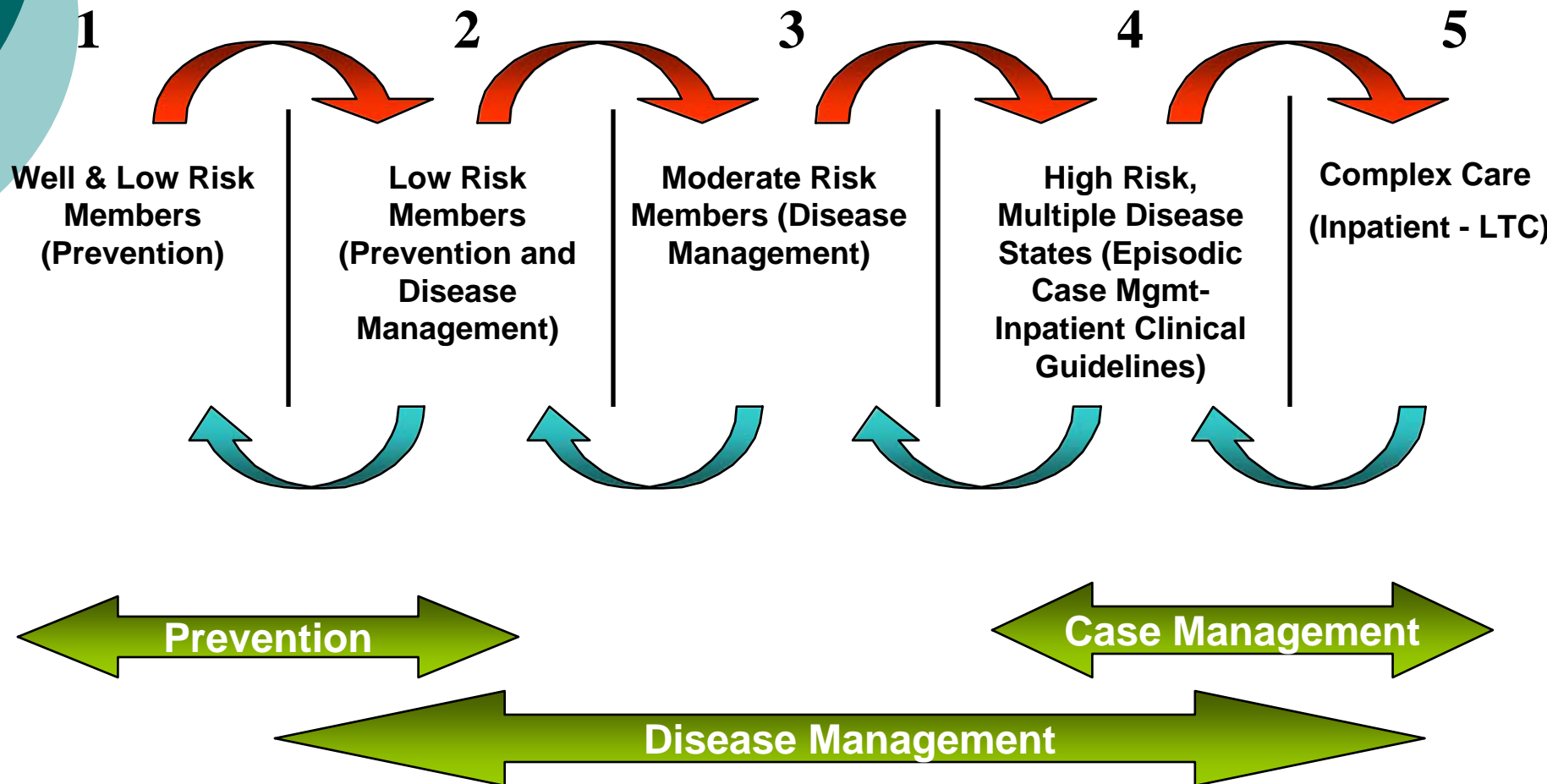
# Insights are Leveraged in Multiple Functional Areas

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- **Care Management** – Identify and stratify patients for focused interventions
- **Physician Integration** – Engage physicians with support for disease management and guideline compliance
- **Actuarial and Underwriting** – Enhance rate setting capabilities and support actuarial processes

# Care Management Insights are Generated Around the Population and Members are Stratified Accordingly

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# ROI: Acute and Chronic Impact Indices

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## Disease Focus: Diabetes

Total Population: 925,407 members  
Diabetic Population: 50,847 members  
Savings Potential: \$62,643,504

### High-Risk Population Risk Levels 4 & 5

14,250 Members  
Forecasted Cost: \$14,634  
Prior Year Cost: \$14,527

Savings Potential:  
**\$1,524,750**

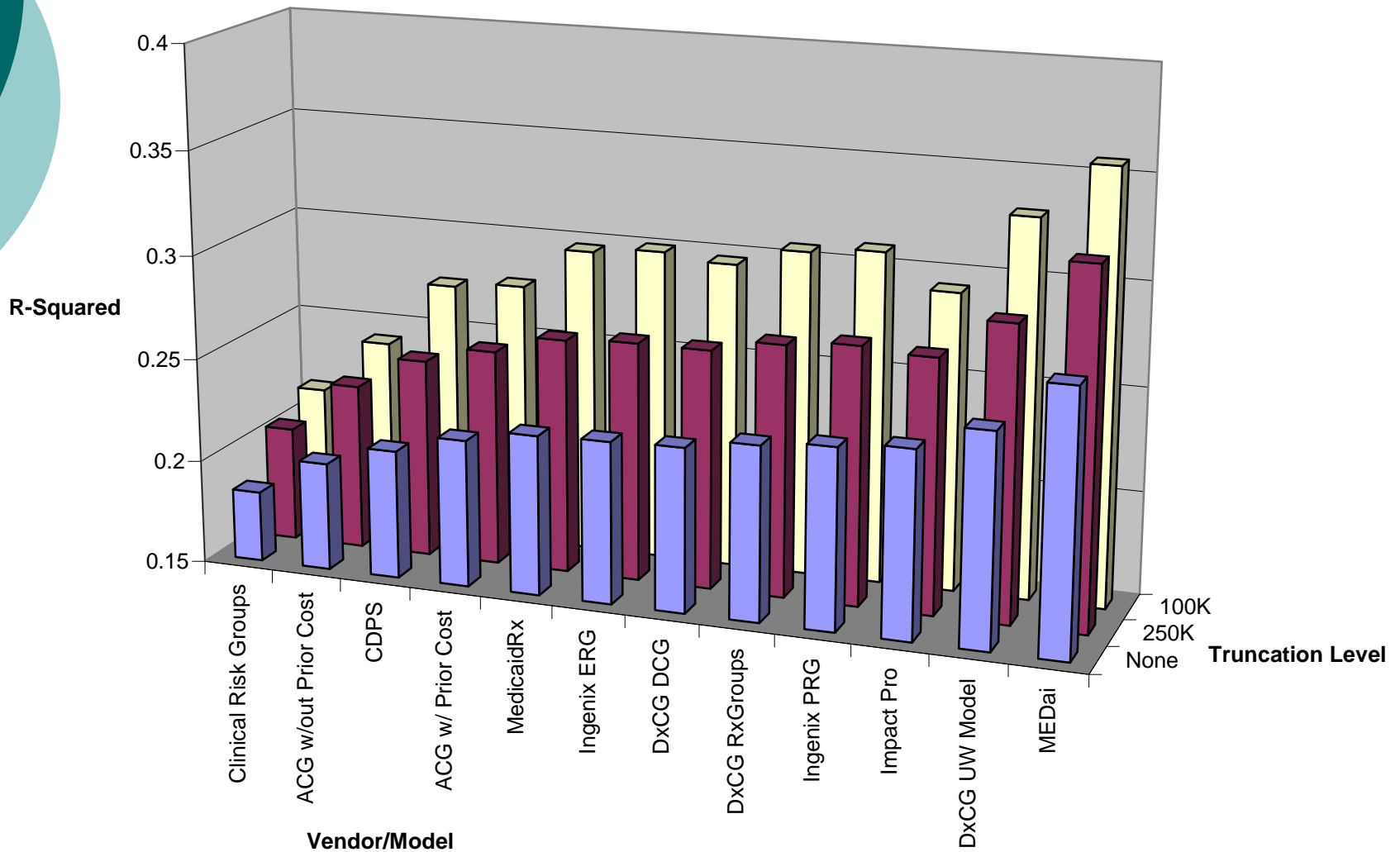
### High Acute & Chronic Impact Population

13,872 Members  
Forecasted Cost: \$8,698  
Prior Year Cost: \$5,089

Savings Potential:  
**\$50,064,048**

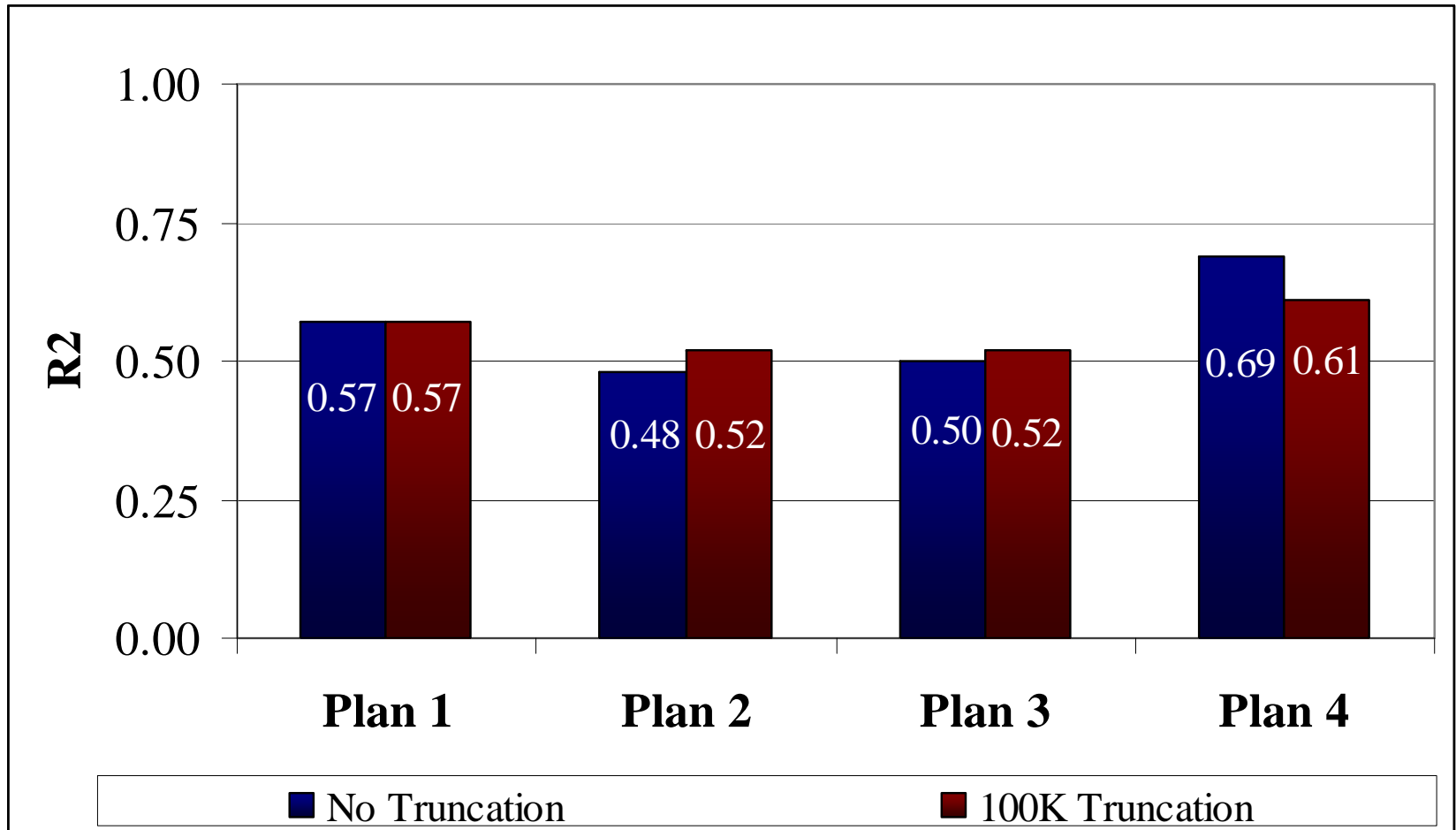
# Accuracy is Important!

2007 SOA Results





# Medicaid Modeling Results



# Some using models

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Some not!

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## ***Big 12 South – Oklahoma***

**Consensus prediction: 1st place in the Big 12 South** (only *College Football News* failed to pick the Sooners 1st, predicting Oklahoma to finish 2nd)





# Why Predictive Modeling

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- The goal of the SoonerCare HMP is to help people
  - The whole person, not the disease
- Predictive modeling identifies and ranks people who need that help.



# Solutions

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- **Risk Navigator *Clinical*<sup>®</sup>**
  - Designed for use by the medical management team
  - Identifying and stratifying high risk members
  - Providing actionable information such as guideline gaps and medication compliance
- **Risk Navigator *Provider*<sup>™</sup>**
  - Designed to push data to physicians through the web
  - Provides compliance summary to evidence-based medicine treatment guidelines
  - Reporting and display of information designed to be physician-friendly
- **Risk Navigator *Performance*<sup>™</sup>**
  - Designed to profile cost and utilization patterns of physicians
  - Incorporating detailed reports on past performance and risk using ETGs

# Predictive Modeling

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- Members selected for actionable risked-based information based on their entire health profile
  - Acute Risk Score
    - Ranks individuals by opportunity to avoid high-cost acute care
    - Reflects IP and ER component of overall prediction

Deliverable Date Range : 06/01/2007 - 05/31/2008

## Member Profile

Member Information			
<b>Member ID</b>	9999	<b>Total Cost</b>	\$153,117
<b>Member Name</b>	SoonerCare, Suzie	<b>Forecasted Cost</b>	\$144,000
<b>Member SSN</b>	9999999	<b>Forecasted IP LOS</b>	40.00
<b>Group Name</b>	SOONERCARE CHOICE ABD	<b>Forecasted ER Visits</b>	8.00
<b>Age/DOB</b>		<b>Forecasted Rx Cost</b>	\$1,911
<b>Gender</b>		<b>Forecasted Risk Index</b>	47.26
<b>Months Enrolled</b>	12	<b>Forecasted Risk Category/Percentile Ranking</b>	Category 5 / Rank 100
<b>Active (Y/N)</b>	Y	<b>Impact Score</b>	Acute=98.00/Chronic=98.00
<b>Rx Benefits (Y/N)</b>	Y	<b>Line Of Business</b>	Choice ABD
<b>Rx Type</b>	FULL	<b>Care Mgmt Program</b>	DM2 - CLOSED
<b>Active PCP Name</b>	Clinic 1	<b>Primary Diagnosis</b>	Infectious Disease
<b>DEA #</b>		<b>Phone Number(s)</b>	(home) 0007942584
<b>Address</b>			

<b>Diagnosis Groups Summary</b>					
<b>Diagnosis Category</b>	<b>Rx</b>	<b>Mgmt</b>	<b>Facility</b>	<b>Ancillary</b>	<b>Total Diagnosis Cost</b>
<b>Burns, Skin Trauma</b>	\$4	\$546	\$0	\$0	\$550
<b>Central Nervous System</b>	\$5	\$359	\$0	\$0	\$564
<b>Degenerative Ortho disease</b>	\$15	\$0	\$0	\$23	\$38
<b>Dermatology</b>	\$127	\$85	\$0	\$43	\$255
<b>Diabetes</b>	\$608	\$557	\$0	\$143	\$1,308
<b>Hypertension</b>	\$7	\$0	\$0	\$7	\$14
<b>Infectious Disease</b>	\$26	\$885	\$138,863	\$269	\$140,043
<b>Metabolic Disorders</b>	\$0	\$256	\$0	\$0	\$256
<b>Miscellaneous Disorders</b>	\$6	\$0	\$0	\$0	\$6
<b>Orthopedics</b>	\$22	\$0	\$0	\$0	\$22
<b>Pneumonia</b>	\$137	\$207	\$0	\$328	\$1,164
<b>Psychiatric Disorders</b>	\$119	\$315	\$0	\$381	\$815
<b>Pulmonary Disorders</b>	\$0	\$47	\$0	\$0	\$47
<b>Skin inflammation</b>	\$15	\$1,461	\$0	\$2,947	\$4,877
<b>Trauma</b>	\$87	\$331	\$0	\$39	\$657



Therapeutic Class	Last Fill Date	Count	Total Cost
ANTI-ULCER PREPS/GASTROINTESTINAL PREPS	03/26/08	1	\$15
ANTIARTHRITICS	11/20/07	2	\$17
ANTINAUSEANTS	10/13/07	1	\$5
ATARACTICS-TRANQUILIZERS	03/09/08	2	\$10
CEPHALOSPORINS	07/09/08	1	\$4
DIABETIC THERAPY	05/109/08	6	\$586
LIPOTROPICS	02/26/08	2	\$19
MUSCLE RELAXANTS	05/07/08	8	\$88
NARCOTIC ANALGESICS	02/01/08	6	\$28
OTHER ANTIBIOTICS	05/0/08	2	\$124
OTHER HYPOTENSIVES	03/26/08	1	\$7
PSYCHOSTIMULANTS-ANTIDEPRESSANTS	05/09/08	8	\$108
SEDATIVE NON-BARBITURATE	01/07/08	1	\$6
SULFONAMIDES	06/09/08	4	\$42
URINARY ANTIBACTERIALS	02/15/08	1	\$120

Provider Information - Professional Summary				
	Physician Name	Specialty	Total Cost	# Services
	Doc 1	FAMILY PRACTICE	\$250	2
	Doc 2	INTERNAL MEDICINE	\$132	2
	Doc 3	FAMILY PRACTICE	\$112	2
	Doc 3	FAMILY PRACTICE	\$34	1
	Doc 5	INTERNAL MEDICINE	\$557	8
	Doc 6	CARDIOLOGY	\$63	3
	Doc 7	DIAGNOSTIC RADIOLOGY	\$105	3
	Doc 8	INTERNAL MEDICINE	\$170	2
	Doc 9	DIAGNOSTIC RADIOLOGY	\$61	2
	Doc 10	GENERAL SURGERY	\$1,049	4
	Doc 11	DIAGNOSTIC RADIOLOGY	\$59	4
	Doc 12	DIAGNOSTIC RADIOLOGY	\$40	4
	Doc 13	DIAGNOSTIC RADIOLOGY	\$15	2
	Doc 14	DIAGNOSTIC RADIOLOGY	\$7	1
	Doc 14	DIAGNOSTIC RADIOLOGY	\$61	1
	Nurse 1	CERTIFIED REGISTERED NURSE ANESTHETIST	\$327	1
	Nurse 1	CERTIFIED REGISTERED NURSE ANESTHETIST	\$302	1
	DME 1	MEDICAL SUPPLY COMPANY	\$1,890	5

	AMB 1	AMBULANCE SERVICE	\$382	2
	Doc 8	INTERNAL MEDICINE	\$242	2
	Clinic 1	CLINIC	\$256	5
	Clinic 1	CLINIC	\$9	1

Provider Information - Inpatient Summary				
Provider ID	Provider Name	Specialty	LOS (days)	Total Cost
	Hosp 1	HOSPITAL	35	\$129,426

Provider Information - Outpatient Summary				
Provider ID	Provider Name	Specialty	Total Cost	# Services
	HOME HEALTH 1	HOME HEALTH AGENCY	\$939	3
	HOSP 1	HOSPITAL	\$1,745	18
	Home Health 1	HOME HEALTH AGENCY	\$1,617	42

Case Management	
Case Manager	
Initial Implementation Date	
Comments	

# Today

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- Giving Risk Navigator *Clinical* and provider access to contracted HMP staff
- Printing a PMPs' panel profile for practice facilitators to discuss with providers



# What would we do different

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- Select a larger initial group to stratify
- Categorize data by Institutional Levels of Care
- Re-consider including Medicare Members



# Lessons Learned

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- System of care delivery must change
  - It takes a team
- Patients have to take responsibility
  - We have to show them how
- We help people
  - The whole person, not the disease
- The Health Management Program is the right thing to do

# Evaluation

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- Independent (Non-biased)
- RFP Released
  - Reduce Utilization
  - Satisfaction Surveys
    - Provider
    - Member
  - Improved health status



# Behavioral Health Grant

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- Behavioral Health at risk for becoming inpatient
- Highest \$ diagnosis is Behavioral Health
- Predicted to have more than 4 Inpatient Days



# Behavioral Health

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- Specialized Case Management to align member with outpatient services
- Alignment with community partners
- Statistical analysis of outcomes





# Vendor Client Support

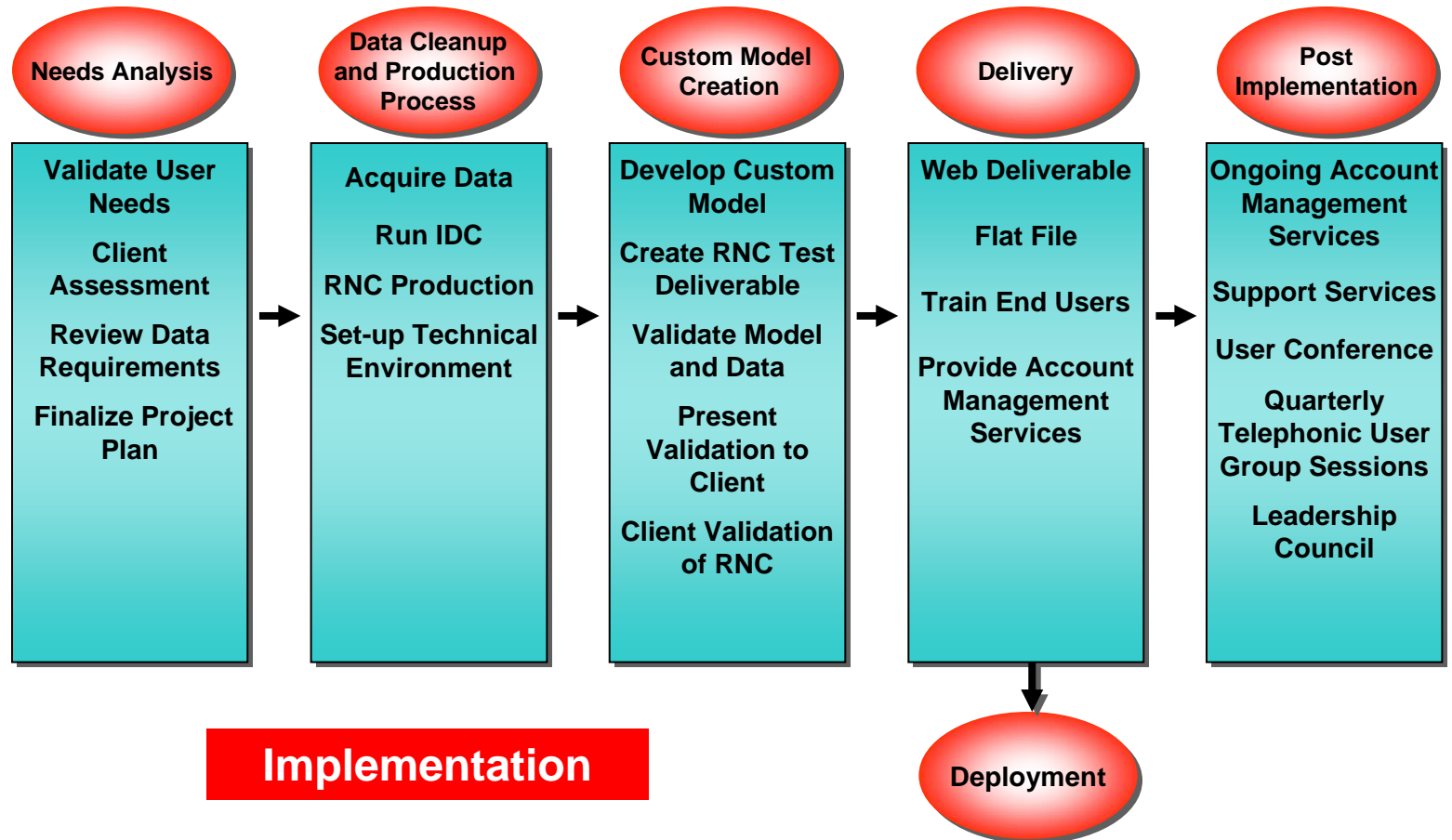
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# MEDai Implementation Process





# Account Management

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- Needs Assessment
  - Clinical, actuarial, network management
  - Understand current processes, business needs, goals, and success criteria
- Project Manager
  - Ensure milestones are met in accordance with timeline and business goals
- End User Training
  - Customized with focus on needs and business goals



# Production/Client Services

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- Implementation
  - Data validation and mapping
  - Build analytic files
  - Customize and deploy model
- Production
  - Maintain model and database
- Help Desk
- Technical Support



# Product Management

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- Needs Assessment
  - Document business requirements
  - Develop specifications
  - Maintain and enhance application
- Project Management
  - Ensure milestones are met in accordance with timeline and business goals
  - Oversee development
  - Test and validate system
  - Develop documentation



# MEDai Customer Focus

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- Well-defined SLAs and Help Desk Processes
- Consultative, Proactive Account Management
- User Interaction Opportunities
  - Annual Users' Conference
  - Two (2) Physician Conferences per year
  - Two (2) Leadership Council meetings per year
- Formal Product Management Function to Manage Customer Requests
  - Two (2) releases per year



# Summary

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- Team approach to care delivery.
- Predictive modeling identifies and ranks people who need care delivery coordination.
- We help the whole person, not the disease.
- We have to show patients how they have to take responsibility.

# Contact Information

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