



Do You
Know ACS?



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Predictive Modeling in Medicaid

The Story Behind The Success

Presentation Overview

- *When* did it all begin?
- *Why* did it happen?
- *What* is going on?
- *Where* do we go next?
- Discussion

Panel Participants

J.J. Dunn

- Division of Medicaid, Chief Information Officer

Lillie Washington, RN, BSN, MSM, CPC, CMSCS

- Director, Medical Services, ACS Mississippi Medicaid

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When did it all begin?

- Excellence in Service Delivery
- Mississippi's Vision
- COTS Products
Clinical Indicators (CI)
Care Opportunities (CO)
- Enhanced Medical Services

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Why did it happen?

- Value of Predictive Risk Modeling

Process to determine which individuals and groups will develop health problems and at what cost

- Medicaid Information

- Medical Services Efforts

- Areas of Medicaid Focus

What is going on?

- Care Management
- Utilization Review
- Policy Development



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Leveraging Impact Pro to Identify Medicaid Beneficiaries Using Group Information

Impact Pro™ Predictive Modeling Analysis
IDENTIFYING MEMBERS OF HIGHER FUTURE RISK

ACS

Impact Pro

- Welcome
- Members List
- Aggregate Reports ▶
- Public Reports ▶
- Group Reports ▶
- Manage Reports
- Business Rules ▶
- Administration
- Configuration ▶
- Users ▶

Print profile: Print tab: 1 of 1

Group Information

All Population: 0	Member Count: 453,597	Age: 16
Months Enrolled: 11	Male: 39.8 %	Female: 60.2 %

Risk Information

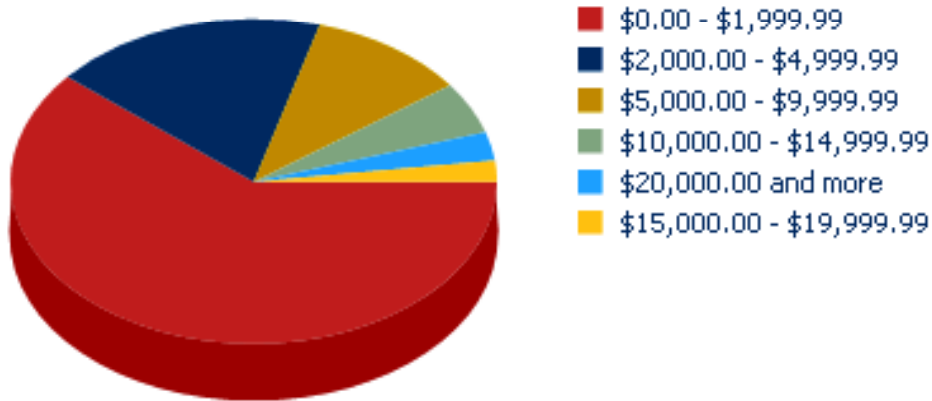
Future Risk, Costs: 1.22	Future Costs: \$3,618	Future Risk, Inpatient: 1.19
Inpatient Stay Probability: 3.3 %	Prior Total Costs (Annualized): \$2,936	Prior Rx Costs (Annualized): \$699
Future Age/Gender Risk, Costs: 0.71	A/U Timing Future Risk, Costs: 1.137	

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Leveraging Impact Pro to Identify Medicaid Beneficiaries Using Risk Distribution

Risk Distribution

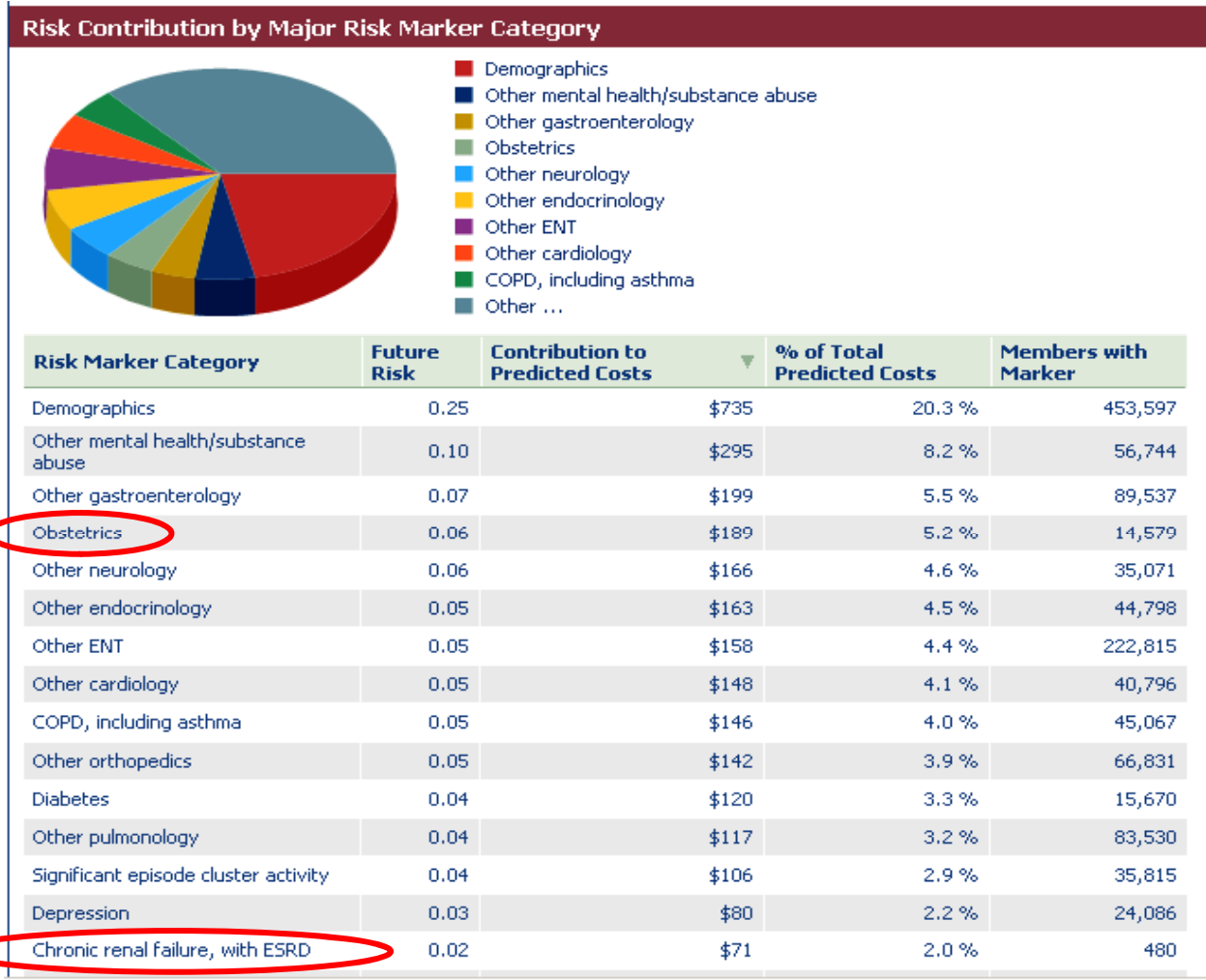


Expected Future Cost Range	Number of Members	% of Members ▼
\$0.00 - \$1,999.99	263,646	58.1 %
\$2,000.00 - \$4,999.99	105,453	23.2 %
\$5,000.00 - \$9,999.99	51,688	11.4 %
\$10,000.00 - \$14,999.99	17,690	3.9 %
\$20,000.00 and more	8,768	1.9 %
\$15,000.00 - \$19,999.99	6,352	1.4 %

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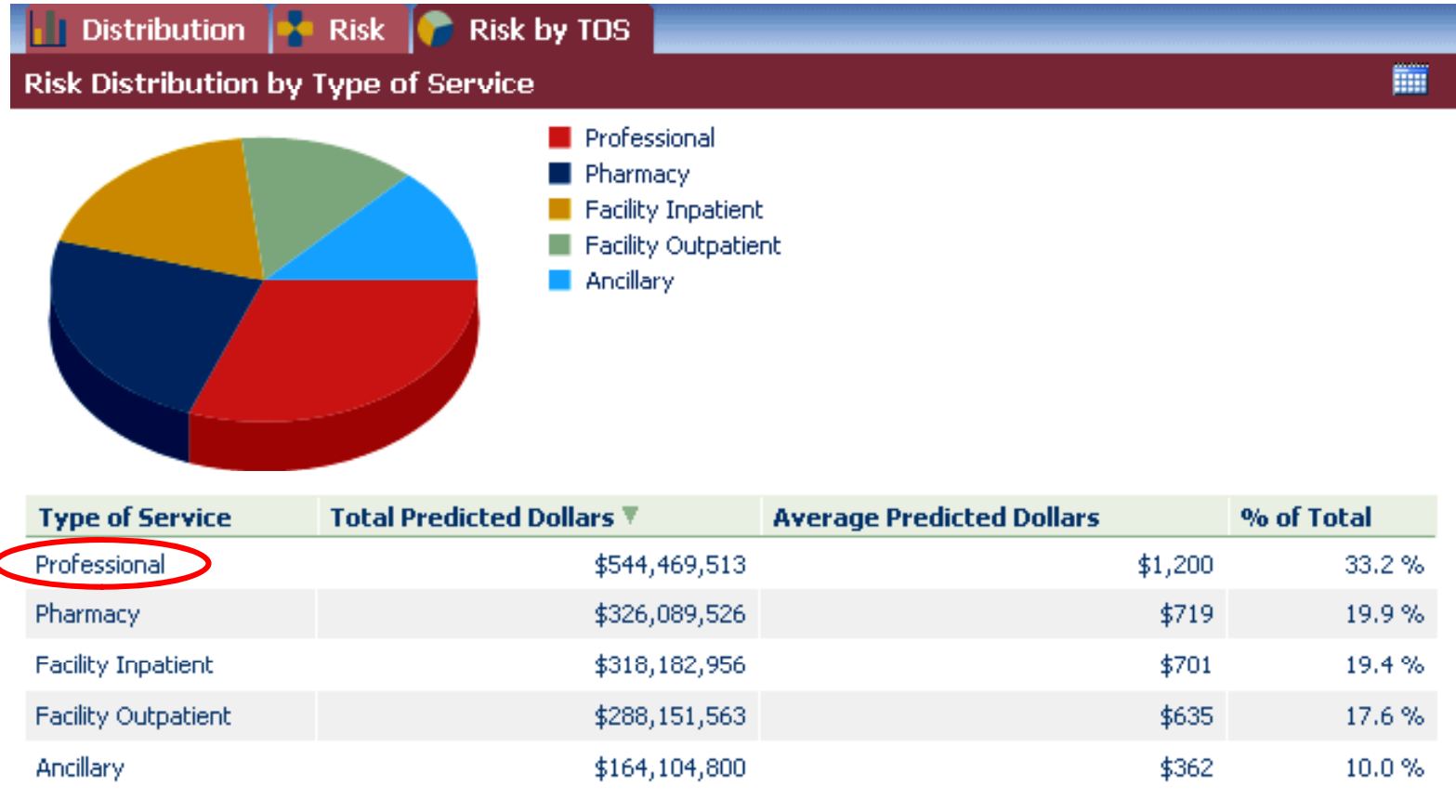
Leveraging Impact Pro to Identify Medicaid Beneficiaries Using Risk Marker Category



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Leveraging Impact Pro to Identify Medicaid Beneficiaries By Type of Service



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Leveraging Impact Pro to Stratify Medicaid Beneficiaries Using Member Level Attributes

↑ ↓	First Name	MEMINFO.frst_nam	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Ascending	String	NotSet	<input type="checkbox"/>	Edit	Delete
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↑ ↓	Last Name	MEMINFO.last_nam	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Ascending	String	NotSet	<input type="checkbox"/>	Edit	Delete
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↑ ↓	County	MEMINFO.COUNTY_DESC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Ascending	String	NotSet	<input type="checkbox"/>	Edit	Delete
↑ ↓	Months Enrolled	MEMINFO.MEMMTS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Ascending	Number, 0	Right	<input checked="" type="checkbox"/>	Edit	
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A MESSAGE FROM GOVERNOR HALEY BARBOUR

The latest in a series of one-page updates on major issues:

A HEALTHY MISSISSIPPI

"We were born in a culture where we were raised to eat wrong." – Governor Haley Barbour

Mississippi's cardiovascular disease mortality rate is the highest in the nation, and is the leading cause of death in our state. Cancer is Mississippi's #2 killer ranking fourth in cancer mortality in the U.S. in 2004. Diabetes contributes to the deaths of 1,600 Mississippians each year. Mississippi also ranks number one – the highest in the nation – in obesity, while 81% of adult Mississippians say they are not physically active on a regular basis.



ISN'T IT TIME TO GET HEALTHY MISSISSIPPI?

Last year, Governor Barbour kicked off his "Healthy Mississippi" initiative to promote disease management and improve health care at a lower cost. Now, more than ever, it is time to focus on living healthier lifestyles and raising awareness of chronic disease prevention.

Wellness Where We Learn:

- Governor Barbour proposed and the Legislature passed the "Mississippi Healthy Students Act" this year, which requires 150 minutes of physical activity-based instruction per week and 45 minutes of health education instruction for K-8th grade students. Costs for a physical activities coordinator were also appropriated. After all, healthy kids have fewer discipline problems and will be more interested in learning.

Wellness Where We Live:

- The Barbour Administration has partnered with Blue Cross Blue Shield to promote the Let's Go Walkin' Campaign to get Mississippians active and raise awareness of the benefits of exercise.
- Nearly 23,000 packets and pedometers have been sent to individuals, churches, schools and businesses in 79 counties to serve as a tool to encourage healthy choices.
- The campaign will provide materials and resources to a network of churches statewide who are dedicated to advocating healthy lifestyles among their congregations.

Wellness Where We Work:

- Offering wellness programs throughout state agencies is the first step in improving the overall health of state employees. To achieve this goal, the Barbour Administration has developed "Healthy Mississippi – A Worksite Wellness Program" for State Employees. It is a comprehensive program that will be customized to meet an agency's specific needs and challenges.
- To improve the health care for nearly 200,000 Mississippians, the state employee insurance plan is now providing 100% pre-deductible coverage up to \$250 for an annual wellness exam and an additional \$50 for the completion of a health risk assessment.

Finally, the Barbour Administration is protecting the solvency of Mississippi's Medicaid program, while serving those who truly need it. Medicaid offers free annual physical exams to recipients, checking for diabetes, high blood pressure, and to make sure their medications are accurate.

**Statistics from the Mississippi Department of Health Web site.*

Haley Barbour
MISSISSIPPI'S GOVERNOR

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Leveraging Impact Pro to Assess Medicaid Beneficiaries: Care Management Examples

- ESRD
- Obesity
- High Risk Pregnancy
- High Risk Infants

Leveraging Impact Pro to Assess ESRD in Medicaid Beneficiaries

- Goal is to ensure beneficiaries are on Medicaid appropriately and verify their Medicare eligibility
- Aggregate report by Primary Risk Factor = Chronic Renal Failure, with ESRD
- Total of 530 Medicaid Beneficiaries
- Financial Impact

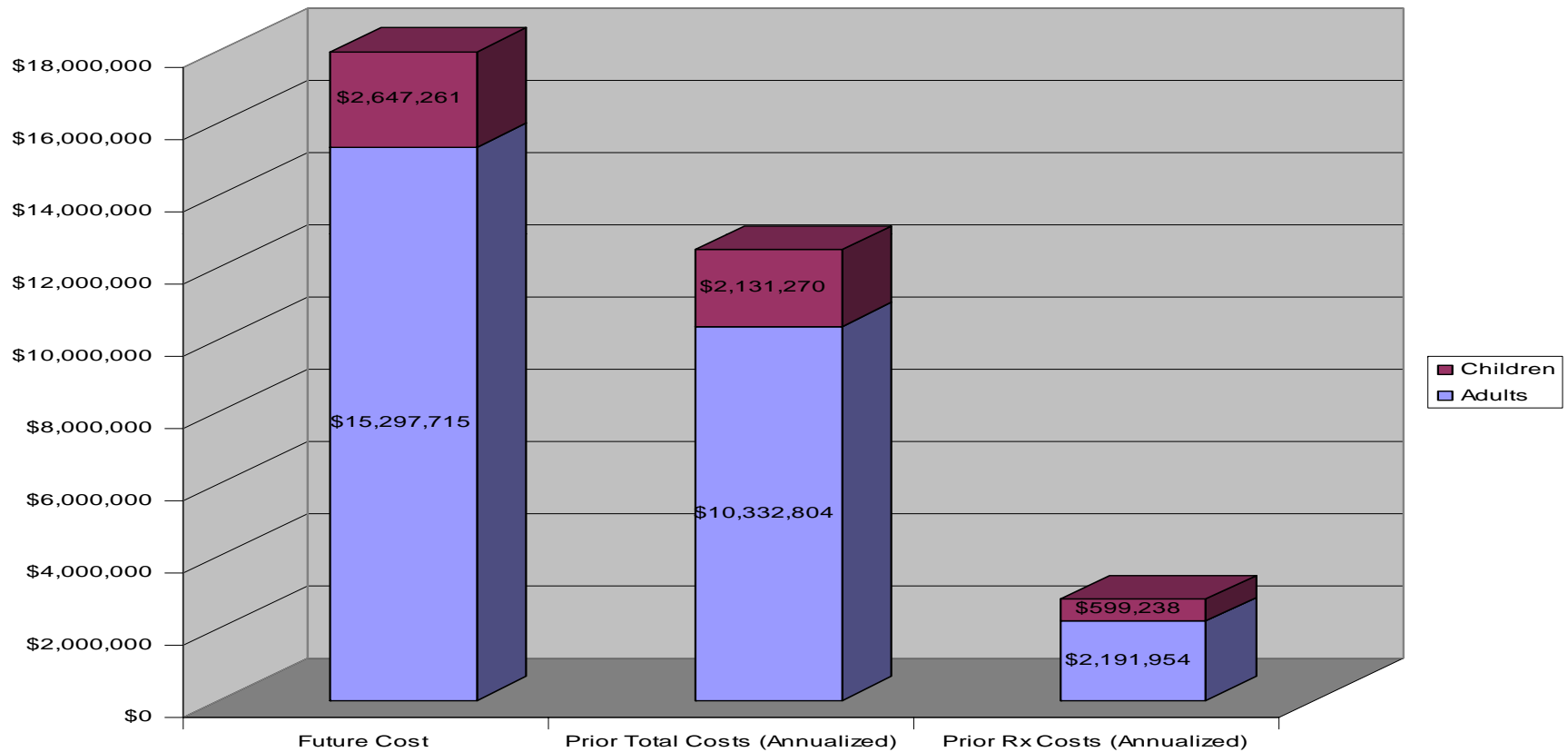
Leveraging Impact Pro to Assess Medicaid Beneficiaries with Obesity Using SQL

Goal is to assess care of obese Medicaid beneficiaries

- Filtering by SQL using CPT Codes
- Filtering by SQL using ICD-9 Codes
- Financial Impact

ICD-9 Dx Code	Adults > 20	Children 0-20
Obesity, Unspec 278.00	998	375
Morbid obesity 278.01	524	167
Overweight 278.02	53	9
Total	1575	551
Combined Total		2126

Combined Cost of Overweight, Obesity, and Morbid Obesity Diagnoses



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Filtering Impact Pro Reporting System Using CI for Obesity

Edit Clinical Indicator ?

Name:

Description: Identifies patients with a diagnosis of obesity. The condition complicates many other diseases and their therapy.

Active

Care Alert

General Category:

Primary Disease:

Master Clinical Indicator:

Applicable Services: **Unique Services**

Number of Occurrences: **Condition Specific**

Dates of Service: **days**

Required Gender: **Rx Required**

Required Age: **Min:** **Max:** **Filter/Output**

Code Type	Code	Description
CPT-4	43842	GSTR RSTCV W/O BYP VER-BANDED GSTP
CPT-4	43843	GSTR RSTCV W/O BYP OTH/THN VER-BANDED GSTP
CPT-4	43845	GSTR RSTCV W/PRTL GSTRCT 50-100 CM
CPT-4	43846	GSTR RSTCV W/BYP W/SHORT LIMB 150 CM/<
CPT-4	43847	GSTR RSTCV W/BYP W/SM INT RCNSTJ LIMIT ABSRPJ
CPT-4	43848	REVISION OPEN GASTRIC RESTRICTIVE PX NOT DEVICE
ICD-9	278	OVERWEIGHT OBESITY AND OTHER HYPERALIMENTATION

Be mindful of criteria

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Leveraging Impact Pro to Assess Medicaid High Risk Pregnancies

- Goal is to assess care of high risk pregnancies
- Utilization of MS DOM Maternity Risk Screening Tool to set up CO/CI
- Total of 5651 Medicaid Beneficiaries
- Financial Impact

MS DOM Maternity Risk Screening

Built 2 CI

1. High Risk Pregnancy: To identify beneficiaries using MS DOM Maternity Risk Screening Tool
2. Delivery – All or termination in most recent 3 months: To identify all deliveries or terminations of pregnancy that have been coded as a procedure

Built 1 CO

High Risk Pregnancy CO built using two CI

- Delivery-All or termination in most recent 3 months
- High Risk Pregnancy

MATERNITY RISK SCREENING	
Name _____	DOB / / _____ Marital Status _____
Beneficiary Address: _____	Telephone Number _____
SS No: _____ Medicaid No: _____	Education: Check highest grade completed
First Prenatal Visit with any provider _____	<input type="checkbox"/> 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9
Positive Risk screen date / / _____	Provider Referred To: _____
Negative Risk Screen Date / / _____	Provider Telephone Number _____
Appointment Date / / _____	Maternity EDC: / / _____
Provider Signature: _____	Provider Telephone: / / _____
Provider Address: _____	_____
<i>See Instructions On Reverse Side</i>	
<p>I Medical or Past Obstetrical History</p> <p><input type="checkbox"/> Cervical or uterine abnormality affecting pregnancy (654.90)</p> <p><input type="checkbox"/> Chronic illness (e.g. Cardiac Class III or IV, Sickle Cell, Seizure Disorder, Genetic Disorder etc.)</p> <p><input type="checkbox"/> Diabetes Mellitus - Insulin dependent (648.00)</p> <p><input type="checkbox"/> Fetal Death no intervening normal pregnancy > 20 weeks, > 500 grams (V23.2)</p> <p><input type="checkbox"/> Habitual abortion after 1st trimester (≥ 3 spontaneous), no intervening pregnancy (V23.2)</p> <p><input type="checkbox"/> Previous Pregnancy: Macrosomy >4500 grams; neurologically damaged neonate; Premature labor requiring tocolysis; Premature labor with infant < 1500 grams (V23.89)</p> <p><input type="checkbox"/> Weight before pregnancy ≤ 80% of standard weight for height. (783.22)</p> <p>II Complications of Current Pregnancy</p> <p><input type="checkbox"/> Anemia ≤ 30 Hct/10 Hgb with no improvement after 1 month (648.20)</p> <p><input type="checkbox"/> EDC < 14 months after previous delivery (V23.5)</p> <p><input type="checkbox"/> Fetal anomaly (by ultrasound or amniocentesis) (655.93)</p> <p><input type="checkbox"/> Fetal death/intrapart fetal death/neonatal death (656.43)</p> <p><input type="checkbox"/> Hydramnios (657.03)</p> <p><input type="checkbox"/> Oligohydramnios (658.03)</p> <p><input type="checkbox"/> Hypertension: chronic or pregnancy induced (642.90)</p> <p><input type="checkbox"/> Incompetent cervix threatened 2nd trimester miscarriage (640.03)</p> <p><input type="checkbox"/> Infection acute Syphilis (647.03)</p> <p><input type="checkbox"/> Infection acute Gonorrhea (647.13)</p> <p><input type="checkbox"/> Infection acute HIV (795.71)</p> <p><input type="checkbox"/> Infection acute Other (647.93)</p>	<p><input type="checkbox"/> Impaired fetal growth/intrauterine growth retardation by ultrasound (656.53)</p> <p><input type="checkbox"/> Multiple gestation twin (651.03)</p> <p><input type="checkbox"/> Multiple gestation triplet (651.13)</p> <p><input type="checkbox"/> Multiple gestation quadruplet (651.23)</p> <p><input type="checkbox"/> Placenta previa after 32 weeks (641.03)</p> <p><input type="checkbox"/> Premature labor requiring tocolysis ≤ 34 weeks (644.03)</p> <p><input type="checkbox"/> Premature ruptured membranes ≤ 34 weeks (658.13)</p> <p><input type="checkbox"/> Pyelonephritis (590.80)</p> <p><input type="checkbox"/> RH sensitization/isoimmunization (656.13)</p> <p><input type="checkbox"/> ABO Isoimmunization (656.20)</p> <p><input type="checkbox"/> Weight gain < 5# at 20 wks or < 10# at 30 wks (646.83)</p> <p><input type="checkbox"/> Age ≥ 40 Primigravida (V23.81)</p> <p><input type="checkbox"/> Age ≥ 40 Multigravida (V23.82)</p> <p>III Factors Complicating Pregnancy</p> <p><input type="checkbox"/> Abuse, neglect family violence (patient or agency report) (V15.41)</p> <p><input type="checkbox"/> Active psychosis severe mental handicap (V40.9)</p> <p><input type="checkbox"/> Physical handicap (V49.89)</p> <p><input type="checkbox"/> Age ≤ 16 Primigravida (V23.83)</p> <p><input type="checkbox"/> Age ≤ 16 Multigravida (V23.84)</p> <p><input type="checkbox"/> Alcohol substance abuse (305.00)</p> <p><input type="checkbox"/> Tobacco substance abuse (305.00)</p> <p><input type="checkbox"/> Other drug abuse (305.90)</p> <p><input type="checkbox"/> Homeless (V60.0)</p> <p>IV Other Significant Risk Woman</p> <p><input type="checkbox"/> Gestational diabetes (648.8)</p> <p><input type="checkbox"/> Insufficient/No prenatal care/Late to care (V23.7)</p> <p><input type="checkbox"/> Weight loss 5# or more during 1st trimester or loss below pregnancy weight at 14 wks. gestation (783.21)</p> <p><input type="checkbox"/> Morbid Obesity (278.01)</p> <p><input type="checkbox"/> Supervision of High Risk pregnancy unspecified (V23.9) _____ specify _____</p>

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Configuring Impact Pro Business Rules for High Risk Pregnancy

Impact Pro™ Predictive Modeling Analysis
IDENTIFYING MEMBERS OF HIGHER FUTURE RISK

Edit Care Opportunity

Name: _High Risk Pregnancy Last 90 Days

Description: Identifies Women who have evidence of high risk in pregnancy and who have not yet delivered.

Active

Care Alert

Rx Required

Primary Condition: OB & GYN

Valid for Months: January February March April May June July August September October November December

Main Category	Category	Description	Presence	Has Contingent	Edit	Delete
Obstetrics	Delivery	_Delivery - All or termination in Last 90 Days	Not Present	No	Edit	Delete
Obstetrics	Pregnancy	_High Risk Pregnancy Last 90 Days	Present	No	Edit	Delete

Clinical Indicator: <Select Clinical Indicator>

Presence: Present Not Present Comparison Dates: None

Number of Gaps: Number of Days in Gap:

Contingent Clinical Indicator: None

Timeframe: None Number of Days:

Add Modify Submit Cancel

Data Source: [4/1/2007 - 3/31/2008] Build Date: [4/15/2008] Product Version: [4.2.3.23570]
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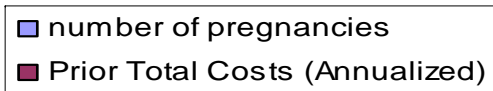
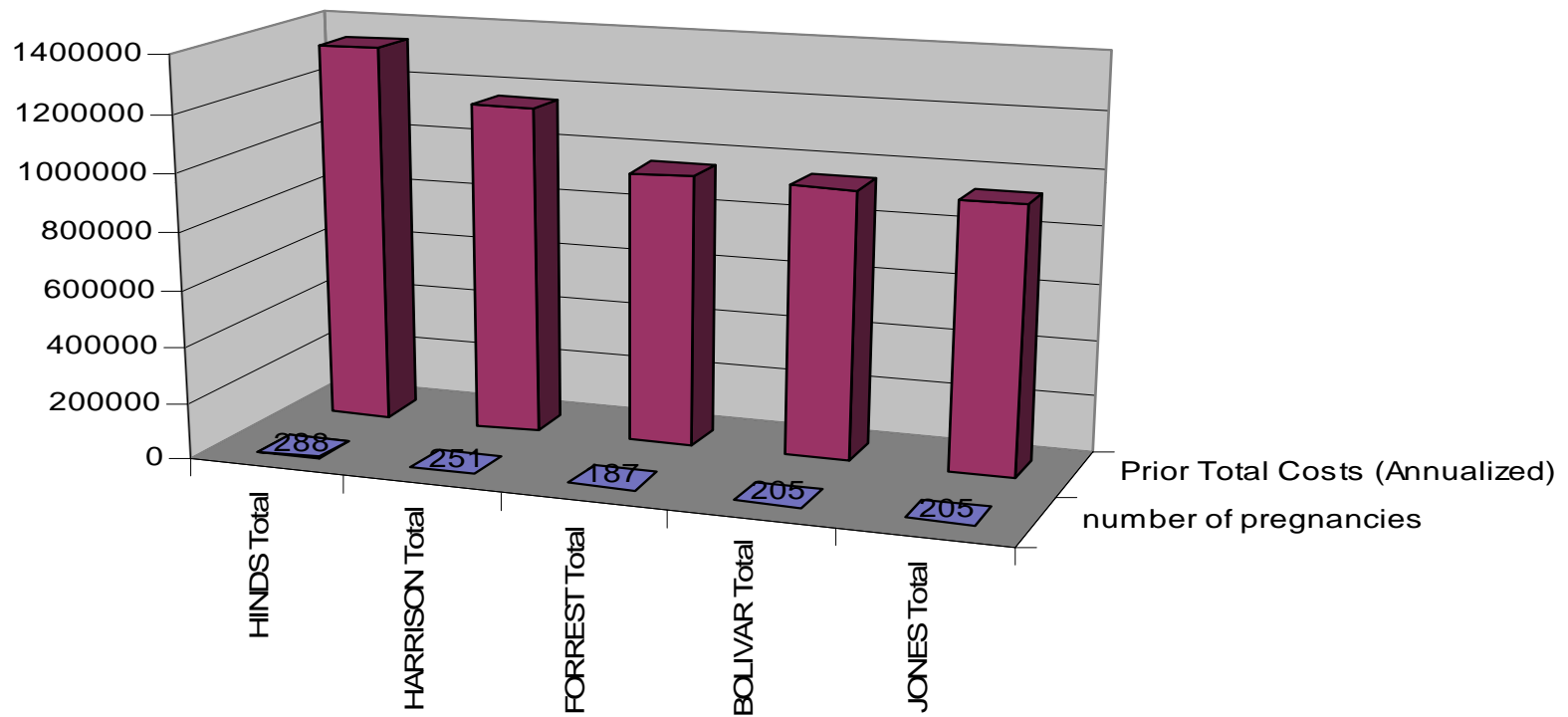
POWERED BY:
IHCS
healthcare information solutions

MS DOM Maternity Risk Screening Tool

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High Risk Pregnancies by County



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Leveraging Impact Pro with Medicaid Utilization Review

- Claims Processing
- Reconsiderations
- Gaps in Care
- Prescription Compliance



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Leveraging Impact Pro with Medicaid Policy Development

- Goal is to identify potential utilization of services, identify county/provider, and financial impact etc...
- Filtering by SQL using CPT Codes, ICD-9 Codes, HCPCS etc...
- Filtering by using Aggregate Reports
- Filtering by using CI/CO



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Where do we go next?

- Medicaid Benefit Management
- Return On Investment
- Identify & Target At-Risk Individuals
- Monitoring Program Health Outcomes
- Strategic Planning to Reduce Expenditures

Discussion



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