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# Crown Equipment Corporation

## HealthWise Program Review

12 March 2008

# Crown Equipment Corporation

## Facts and Figures



- Located in New Bremen, Ohio
- Approximately 6,000 employees in the USA
- Manufactures battery powered material handling equipment
- \$1.5 billion privately owned business
- 8 Manufacturing Plants in the New Bremen Area
- 3 Manufacturing Plants outside of Ohio (IN & NC)
- 40 Branches located in 20 States



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# Learning Objectives

1. Provide understanding about our HealthWise Program, a next generation HMP.
2. Demonstrate a reduction in risk factors within the Crown population.
3. Demonstrate an improvement in medical costs within the Crown population.
4. Allow time for Q&A to insure that all attendees understand the success of HealthWise.

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# Key Factors for Success

1. Senior Management Support
2. Cross-functional Committee
3. Alignment with HMRC
4. Appropriate Incentives
5. Alignment of Benefits
6. Development of Key Measurements
7. Manager & Support Staff

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# Components of HealthWise

1. Appropriate Incentives
2. Health Risk Appraisal (HRA)
3. Wellness Screening
4. Health Advisor
5. HealthWise Website
6. Vending improvements

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# 1. Appropriate Incentives

- a. Health Benefit Credit (annual): \$520
  - Employee - \$325
  - Spouse - \$195
  
- b. Cash Award for Health Advising: \$100
  - Estimate 35% of our population
  - Roughly 2,700 employees & spouses
  
- c. Subway Card for the Healthy: \$10
  - About 1,500 employees

# Facts About Other Components

## Health Risk Appraisal

[University of Michigan – 56 questions]

## Wellness Screenings

[BP, cholesterol profile, FBS, waist circumference]

[4 manufacturing & 40 branch locations]

## Health Advisor – Stratification Criteria

[HRA follow-up call and 35% total at risk calls]

[Smoker, BMI  $\geq$  35, Metabolic Syndrome, or  $\geq$  4 risks]

## HealthWise Website

[Resources – VFC, Online Coaching, Global Fit]

## Vending Improvements



# HealthWise

HealthWise resources are offered to Crown Equipment Corporation employees and family only.



## Welcome... to the Crown HealthWise Resource Center

Here you will find the many resources available to you and your family for a healthier, happier life. Just click on any of the resources listed for additional information.

### Featured Healthwise Resources

#### Virtual Fitness Center

The Virtual Fitness Center (VFC) is an interactive health and fitness tool. Visit the many "rooms" within the VFC including activity logging and "Ask Our Pros". As a member, you can take part in three health and fitness challenges offered throughout the year.



[Click To Enter](#)

#### Gordian Health Solutions

The Healthy Living Programs offered by Gordian Health Solutions and Miavita offer a personalized experience to help you meet your health needs and objectives. Here you can select a program to help you manage your weight, lower your cholesterol levels, boost your metabolism, reduce the affects of stress, or reduce your risk of disease.



[Click To Enter](#)

### HealthWise Resources

- **myUMR**  
Access your personal healthcare benefit information including Baby & Me - a Healthy Pregnancy Program.
- **Express Scripts**  
This site helps you lower your out of pocket costs for drugs by making wise healthcare choices. You can also transfer your prescriptions to mail order without leaving your home.
- **Behavioral Health System**  
This site offers information and service to help you make and sustain changes that benefit your behavioral health and well-being.
- **BHS WorkLife**  
Part of the BHS website, this section provides information on a variety of work life issues such as child care, elder care, legal planning and financial planning.
- **GlobalFit Network**  
This benefit helps you find join fitness clubs at reduced rates and offers discounts on home exercise equipment. Explore GlobalFit's full range of healthy living programs.
- **HealthWise Benefit Credit**  
Find out all you need to know about the 2008 requirements to earn the HealthWise Benefit Credit.
- **HealthWise Success**  
Read stories on how individuals have made positive health changes by participating in Crown's HealthWise Program. Share your story to help motivate and inspire others to make healthy choices.
- **Health Tip Of The Month**  
These quick tips are designed to help you and your family stay healthy.

Need more information or have another question?  
Contact [healthwise@crowncorp.com](mailto:healthwise@crowncorp.com) , 419-629-6330  
or fill out the [online form](#).



# Facts About Other Components

## Health Risk Appraisal

[University of Michigan – 56 questions]

## Wellness Screenings

[BP, cholesterol profile, FBS, waist circumference]

[4 manufacturing & 40 branch locations]

## Health Advisor – Stratification Criteria

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## HealthWise Website

[Resources – VFC, Online Coaching, Global Fit]

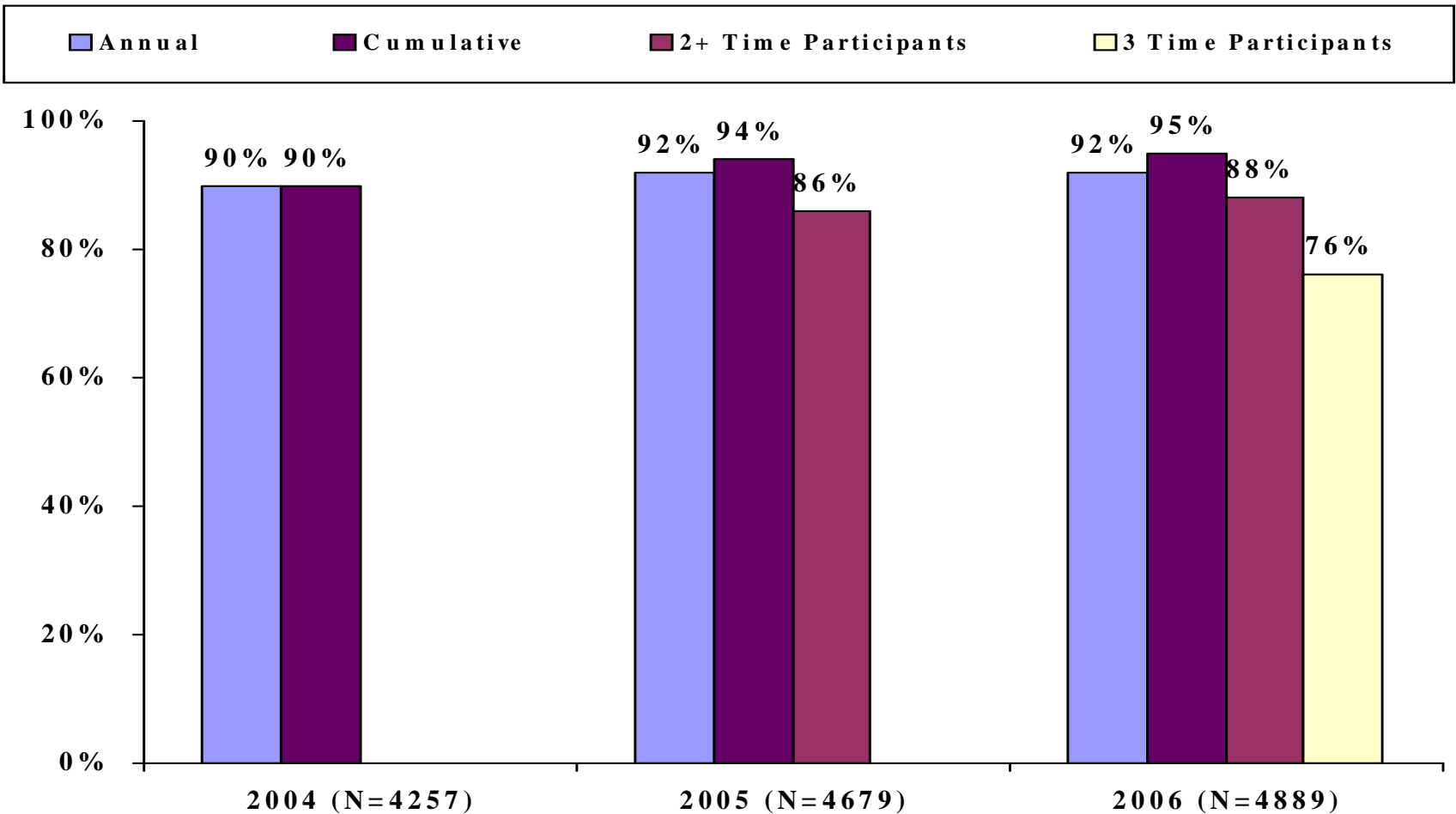
## Vending Improvements

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# Program Participation

1. HRA/Wellness Screening
2. HRA Follow-Up Call
3. Additional Health Advising
4. YMCA Initiative
5. Risk Status/Transition

# Cumulative HRA Participation



# Health Advising Statistics - 2007

HRA Completers	7641	
Completed HRA Follow-Up Call	7301	(95.6%)
Enrolled in 6 Month Program	2151	(29.5%)
Completed 6 Month Program	1751	(81.4%)
Average Contacts/Participant	3.7	
Average Contacts/6 Month Participant	5.1	
Number of Contact Range	1 to 25	

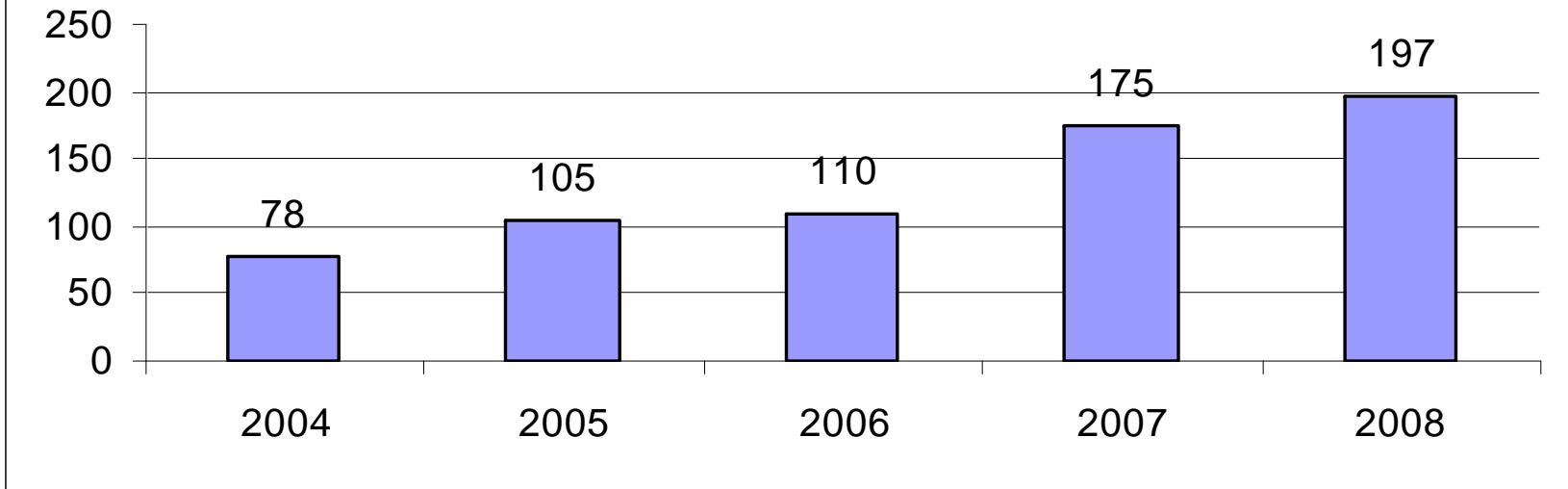
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# Health Advising Outcomes (self-reported)

Goals – made progress or achieved	85%
Weight – maintained or reduced	72%
Activity – maintained or increased	70%
Nutrition – maintained or improved	64%
Perception– maintained or improved	19%
Stress – maintained or improved	12%

## YMCA Initiative Comparison

# of employees free 2 month membership  
(2004-2006 Jan/Feb, 2007-2008 Dec/Jan)



2005 – 4 new memberships

2006 – 12 new memberships

2007 – 32 new memberships

2008 – 25 new memberships

*YMCA requesting November/December as free months*

# HRA Risk Status 2004 – 2007: #1

## Each Year HRA Participants

<b>Risk Status</b>	<b>Year 2004</b> (N=4,498)	<b>Year 2005</b> (N=4,865)	<b>Year 2006</b> (N=5,241)	<b>Year 2007</b> (N=7,641)
<b>Existing Medical Conditions</b>	7.0%	7.3%	6.9%	8.0%
<b>Smoking</b>	20.9%	21.0%	20.8%	18.1%
<b>Physical Activity</b>	17.7%	14.4%	13.6%	14.9%
<b>Body Weight</b>	50.3%	50.3%	50.4%	49.8%
<b>Blood Pressure</b>	38.0%	34.7%	35.5%	33.1%
<b>Perceived Health</b>	12.4%	11.8%	11.3%	11.2%
<b>Stress</b>	30.2%	26.6%	24.8%	21.4%
<b>Alcohol</b>	7.0%	5.9%	5.1%	3.6%
<b>Cholesterol</b>	15.9%	16.3%	13.4%	12.2%
<b>Life Satisfaction</b>	20.9%	17.4%	15.4%	13.3%
<b>Illness Days</b>	5.4%	5.2%	5.1%	4.8%
<b>Safety Belt Use</b>	41.7%	36.1%	32.5%	26.9%
<b>Health Age Index</b>	10.1%	7.3%	7.2%	5.7%
<b>Medication/Drug for Relaxation</b>	11.1%	11.5%	11.2%	13.1%

# HRA Risk Status 2004 – 2007: #2

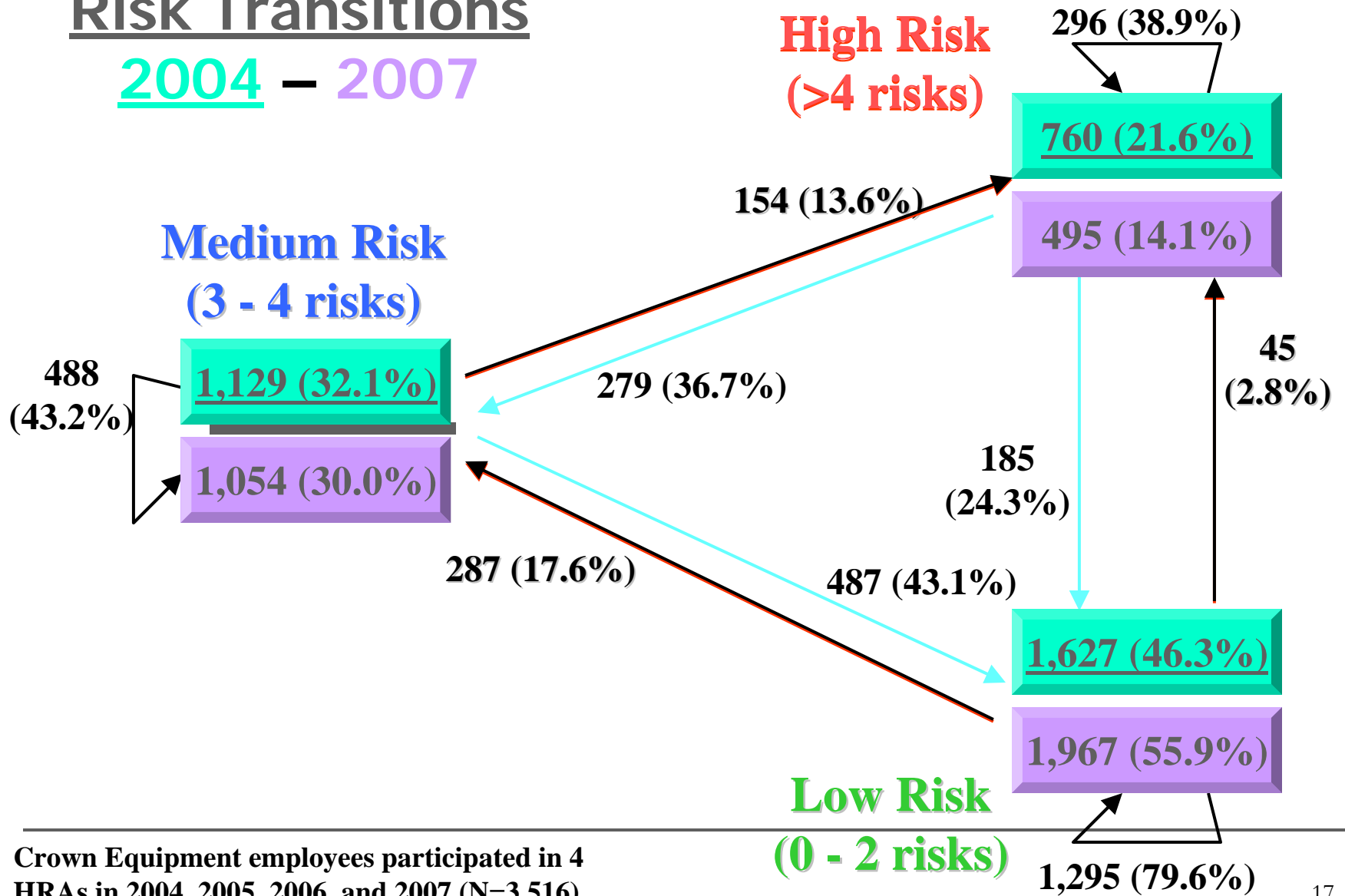
## Each Year HRA Participants

	Year 2004 (N=4,498)	Year 2005 (N=4,865)	Year 2006 (N=5,241)	Year 2007 (N=7,641)
<b>Job Satisfaction</b>	17.1%	12.9%	11.0%	9.7%
<b>0 risk</b>	7.1%	9.5%	10.9%	12.8%
<b>1 risk</b>	16.7%	17.9%	19.4%	22.1%
<b>2 risks</b>	21.4%	22.7%	23.1%	23.5%
<b>3 risks</b>	18.8%	18.7%	18.3%	17.1%
<b>4 risks</b>	13.6%	13.6%	12.4%	10.9%
<b>5 risks</b>	10.2%	8.3%	7.9%	6.7%
<b>6+ risks</b>	12.2%	9.2%	8.0%	7.0%
<b>Risk Levels</b>				
<b>Low Risk (0-2 risks)</b>	<b>45.2%</b>	<b>50.1%</b>	<b>53.4%</b>	<b>58.3%</b>
<b>Medium Risk (3-4 risks)</b>	32.4%	32.3%	30.7%	28.0%
<b>High Risk (5+ risks)</b>	<b>22.4%</b>	<b>17.5%</b>	<b>15.9%</b>	<b>13.7%</b>
<b>Average Risk</b>	3.1	2.8	2.6	2.5
<b>Average Wellness Score</b>	77.3	80.7	80.9	82.3
<b>Average Age</b>	40.1	40	39.8	40.3



# Crown Equipment Risk Transitions

2004 – 2007



Crown Equipment employees participated in 4 HRAs in 2004, 2005, 2006, and 2007 (N=3,516).

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# Crown Data 2004-2007

1. Metabolic Syndrome
2. Health Care Cost Trends
3. Potential Cost Savings





# Identification of Metabolic Syndrome

Any 3 of the following:

## Risk Factor

## Defining Level

### 1. Waist Size

Men

> 40 in (>102 cm)

Women

> 35 in (>88 cm)

### 2. Triglycerides

$\geq$  150 mg/dL

### 3. HDL

Men

< 40 mg/dL

Women

< 50 mg/dL

### 4. Blood Pressure

$\geq$  130 / 85 mm Hg

### 5. Fasting Glucose

$\geq$  110 mg/dL

# Metabolic Syndrome #1

## Metabolic Syndrome Risks Factors 2004

<b>Risks</b>	<b>Number of people at risk</b>	
<b>0 risk</b>	772	23.5%
<b>1 risk</b>	789	24.0%
<b>2 risks</b>	741	22.6%
<b>3 risks</b>	552	16.8%
<b>4 risks</b>	316	9.6%
<b>5 risks</b>	115	3.5%
<b>Without Metabolic Syndrome</b>	2,302	70.1%
<b>With Metabolic Syndrome</b>	983	29.9%
<b>Totals</b>	3,285	100.0%

\*significantly different ( $p < .05$ ) than those without metabolic syndrome, after controlling for age, gender and ethnicity.

# Metabolic Syndrome #2

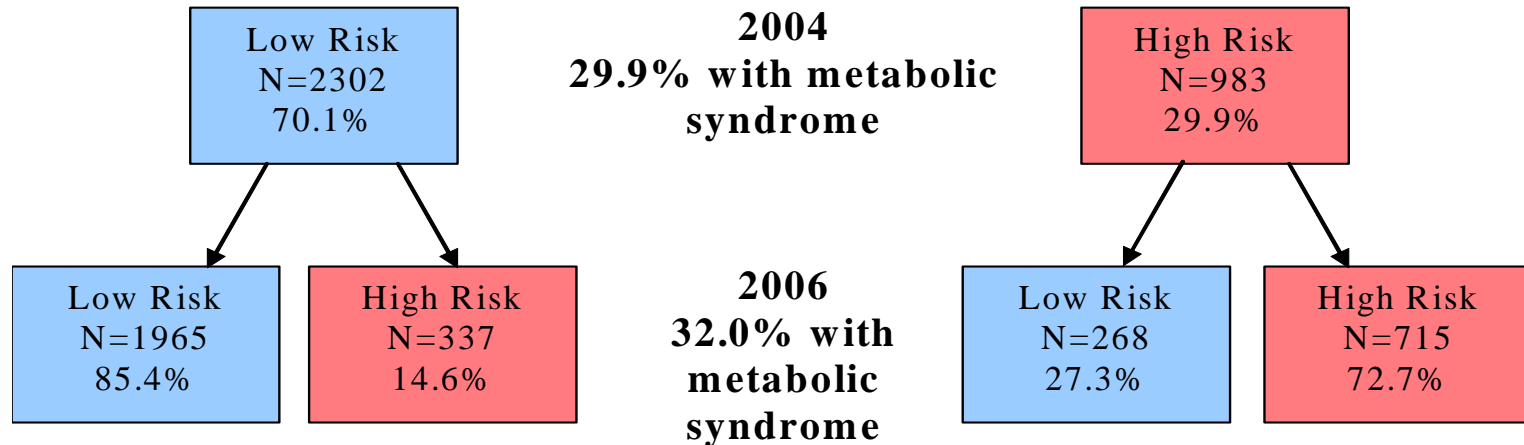
## Metabolic Syndrome Risks Factors 2006

Risks	Number of people at risk	
0 risk	770	21.3%
1 risk	813	24.7%
2 risks	720	21.9%
3 risks	580	17.7%
4 risks	355	10.8%
5 risks	117	3.6%
<b>Without Metabolic Syndrome</b>	2,233	68.0%
<b>With Metabolic Syndrome</b>	1,052	32.0%
<b>Totals</b>	3,285	100.0%

\*significantly different ( $p < .05$ ) than those without metabolic syndrome, after controlling for age, gender and ethnicity.

# Metabolic Syndrome #3

## Metabolic Syndrome Prevalence from 2004 to 2006



The prevalence of metabolic syndrome increased from 29.9% in 2004 to 32.0% in 2006. Among those who were low risk in 2004, 15% of them moved to high risk in 2006. On a positive note, among the 983 individuals who were high risk in 2004, 27.3% of them reduced enough risks to be considered low risk in 2006.



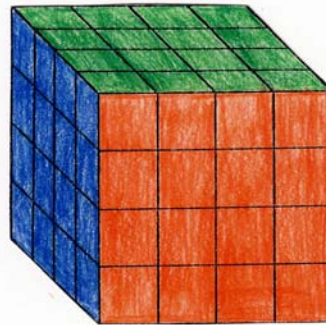
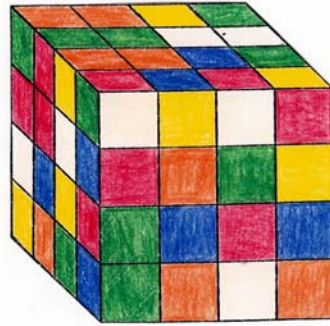
# Metabolic Syndrome #4

## Metabolic Syndrome By Risk Factors 2004 to 2007

<b>Risk Factors</b>	<b>2004</b>	<b>2007</b>
<b>0 risk</b>	772	1,911
<b>1 risk</b>	789	2,182
<b>2 risks</b>	741	1,725
<b>3 risks</b>	552	1,103
<b>4 risks</b>	316	470
<b>5 risks</b>	115	109
<b>Without Metabolic Syndrome</b>	2,302 (70.1%)	5,818 (77.6%)
<b>With Metabolic Syndrome</b>	983 (29.9%)	1,682 (22.4%)
<b>Totals</b>	3,285 (100.0%)	7,500 (100.0%)

**RUBIK's REVENGE REALIZED**

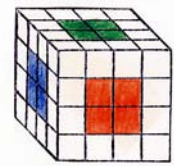
[Mastered in 5 Easy Steps]



by James R. Heap, M.D.

THE JRH SOLUTION

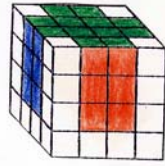
A. CENTER PIECES



A

B. TOP EDGE PIECES

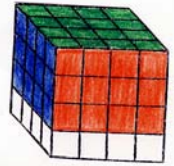
1. Pair up top edge pieces
2. Position top edge pieces



B

C. MIDDLE EDGES & TOP CORNERS

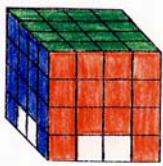
1. Pair up middle edge pieces
2. Position top corners
3. Position middle edge pieces



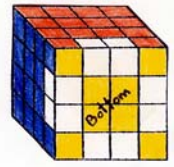
C

D. BOTTOM CORNERS

1. Position bottom corners
2. Orient bottom corners



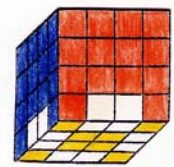
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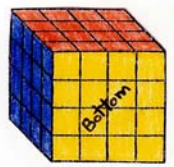
D

E. BOTTOM EDGE PIECES

1. Pair and position bottom edge pieces
2. Orient bottom edge pieces



→

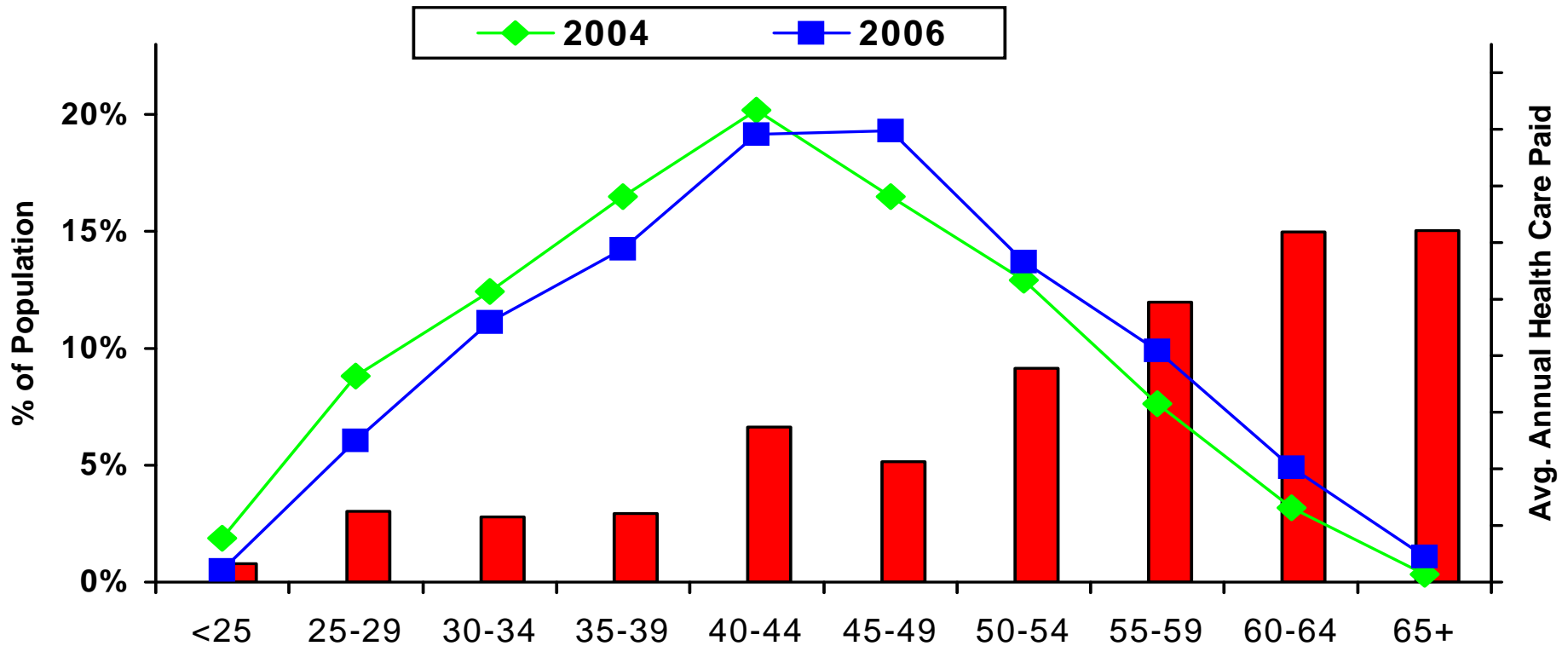


E



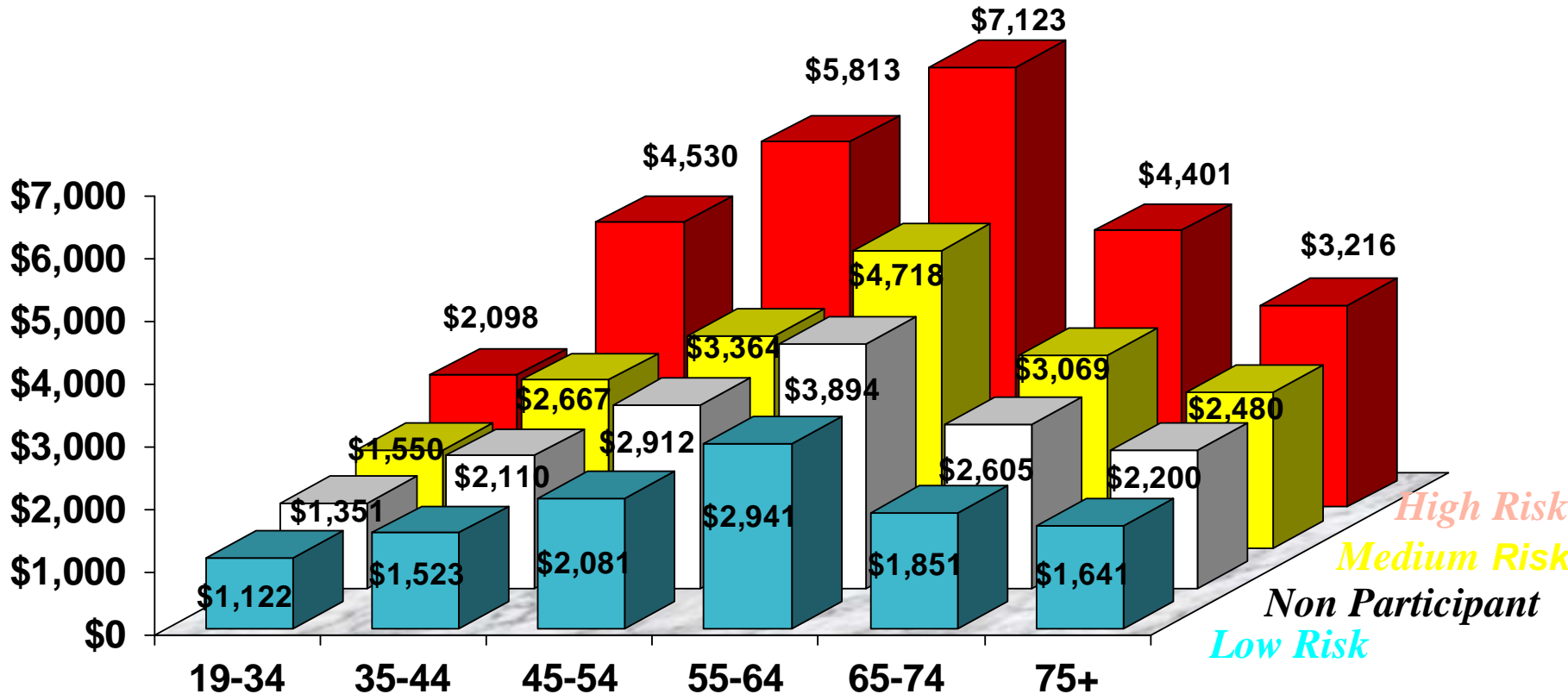
# Health Care Cost Trends

Distribution of Average Annual Health Costs by Age

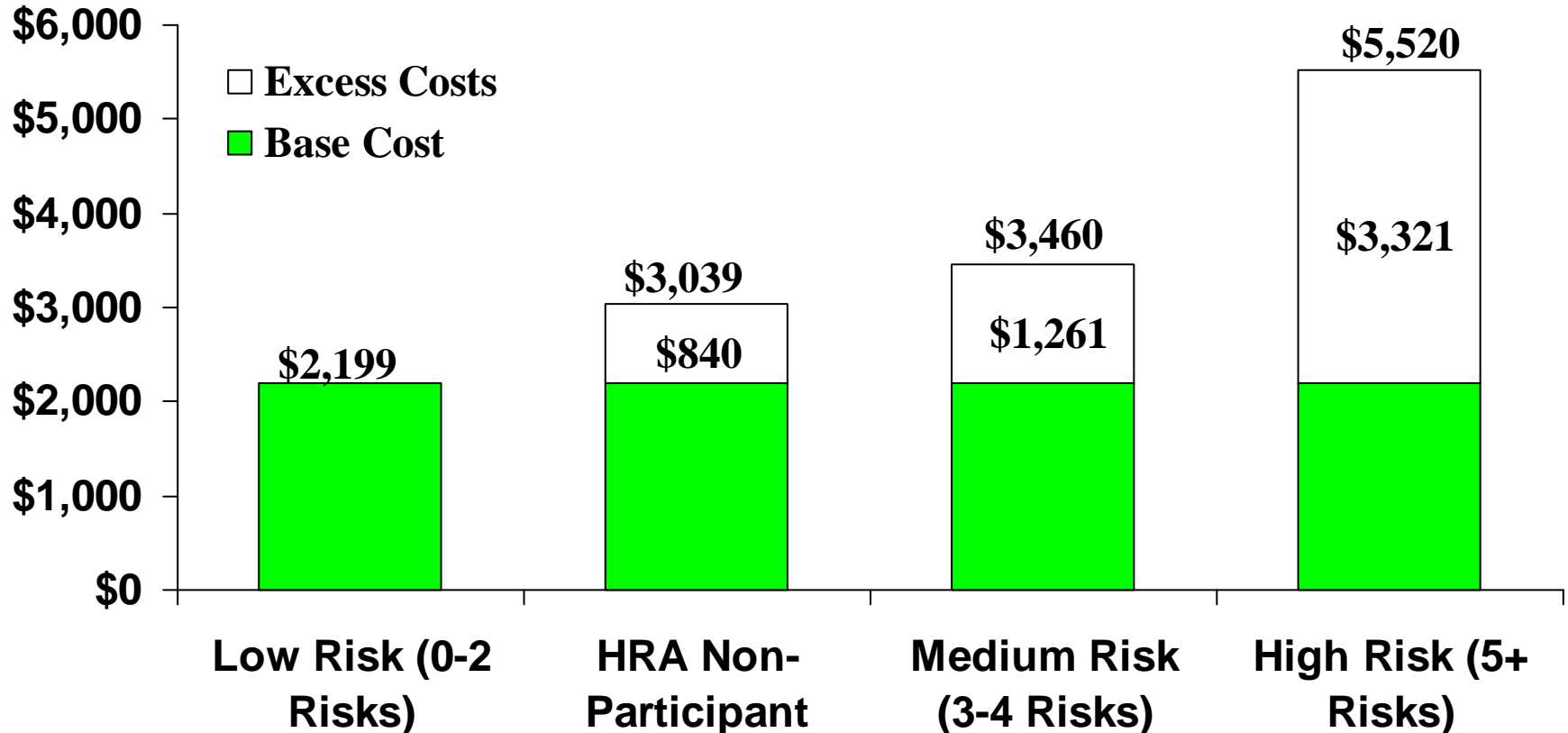


# Costs Associated with Risks

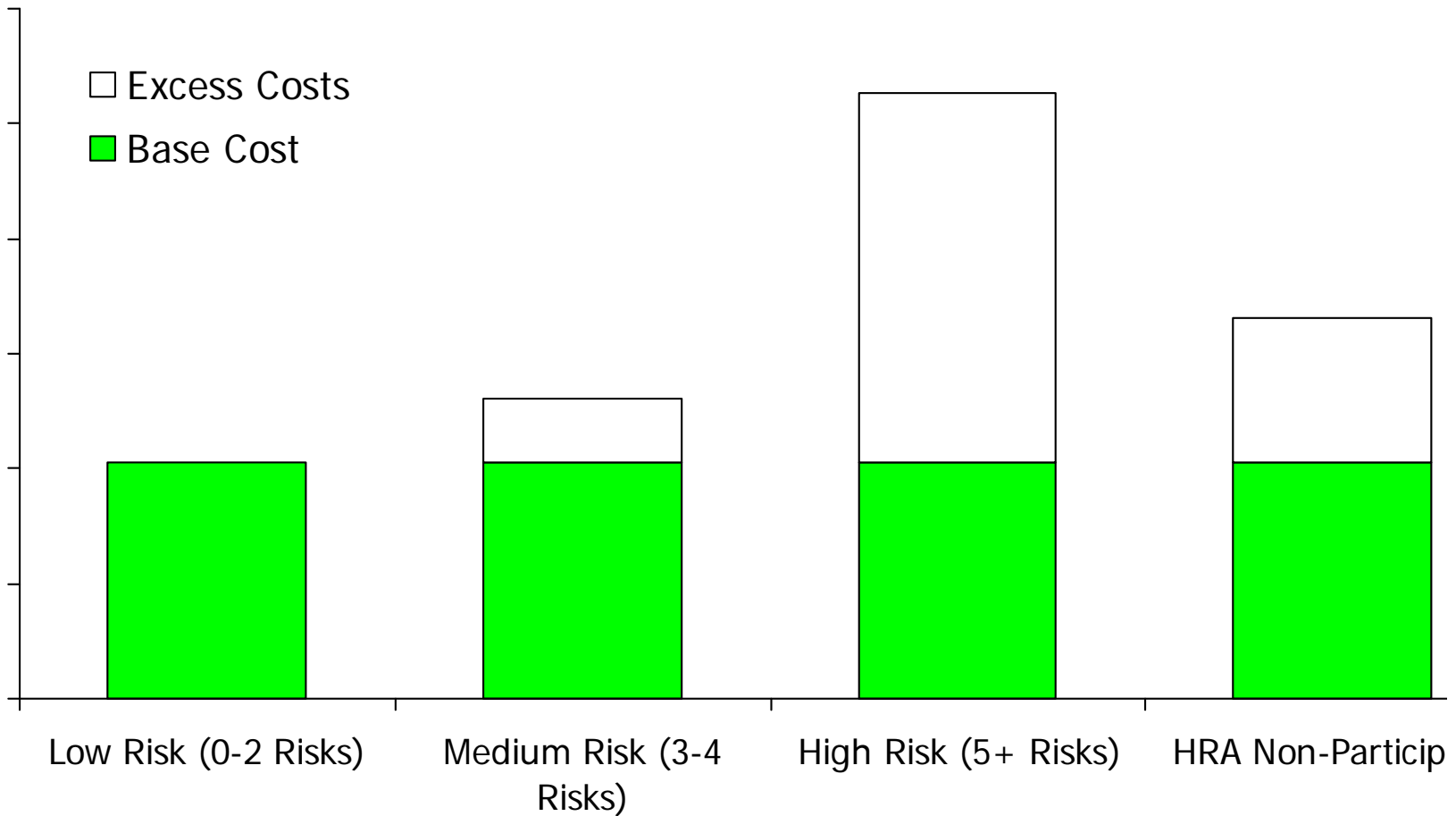
## Medical Paid Amount x Age x Risk



# Excess Medical Costs due to Excess Risks



# Excess Health Care Costs due to Excess Risks



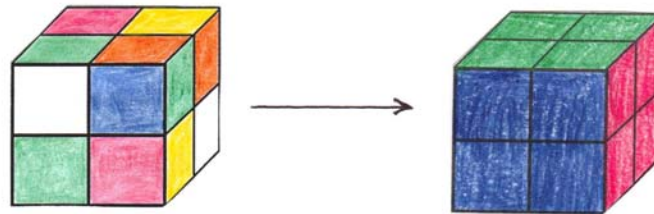


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Mini

Rubik's

Solution



James R. Heap  
November 2007

### C. The JRH Solution

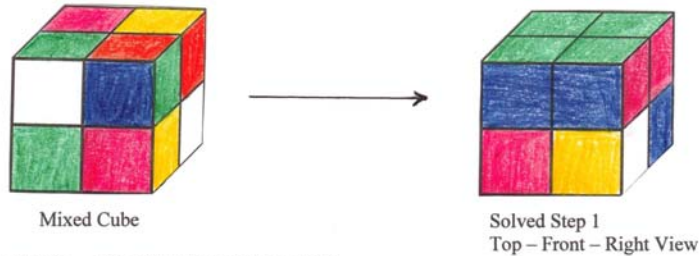
Now we will look at the 3-step solution for the Mini Rubik's Cube. Each step is merely a combination of moves. The written 3-step solution is:

1. **Step 1:** Position and orient top 4 corners
2. **Step 2:** Position bottom 4 corners
3. **Step 3:** Orient bottom 4 corners

Next I will provide the moves associated with each step and some illustrations.

#### 1. **Step 1:** "Position and orient top 4 corners"

Most of you are familiar with the Rubik's Cube (3x3). Therefore, you already know how to complete this step for the Mini Rubik's Cube. For those that are not familiar with the Rubik's Cube, I am confident that you will be able to solve this step on your own as you experiment with the Mini Rubik's Cube.



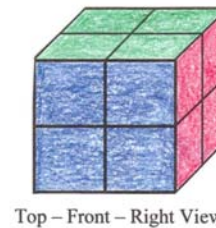
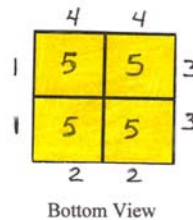
#### 2. **Step 2:** "Position bottom 4 corners"

Before listing the moves associated with step 2, I would like to explain how I look at the cube to determine the best move(s) to complete steps 2 and 3. To complete steps 2 and 3 you must fully understand how to analyze the corner pieces on the bottom face. In my illustrations below, we are looking at the bottom face. The numbers around the cube bottom indicate colors as follows:

- 1 = Left face color
- 2 = Back face color
- 3 = Right face color
- 4 = Front face color
- 5 = Bottom face color

In a solved Mini Rubik's Cube, if green is the top face and blue is the front face, then the numbers represent the following colors:

- 1 = orange
- 2 = white
- 3 = red
- 4 = blue
- 5 = yellow





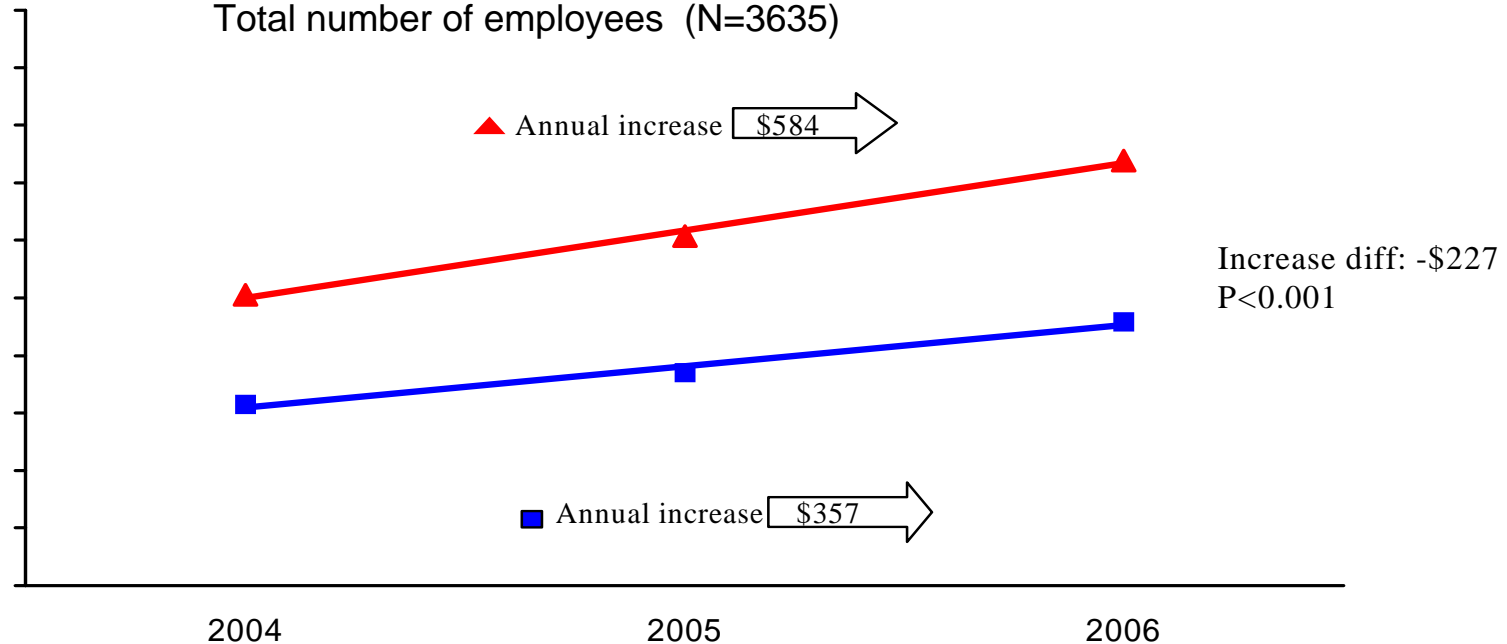
# Adjusted Average Annual Health Care Paid

## Adjusted\* Average Annual Health Care Paid By Changes in overall risk status

▲ Remain High/Medium Risk or Move to Higher Risk Status (N=1247)

■ Remain Low Risk or Move to Lower Risk Status (N=2388)

Total number of employees (N=3635)

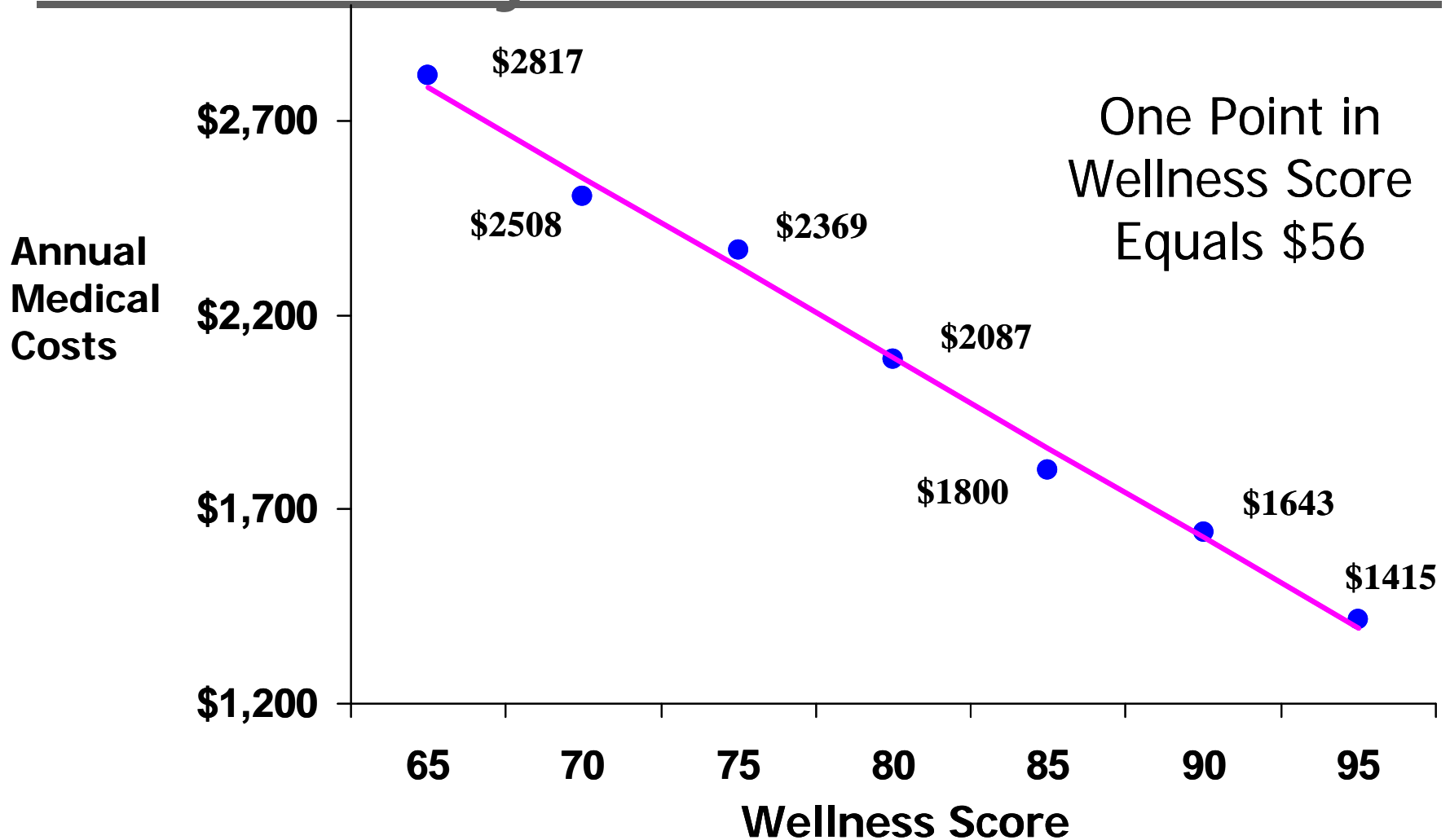


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# Potential Cost Savings from Movement to Low Risk

- 1) Difference in cost between high/medium risk and low risk employees at Crown Equipment Corporation:
  - a) 2004: \$949 / employee
  - b) 2005: \$1,181 / employee
  - c) 2006: \$1,402 / employee
  - d) 2007: \$1,629 / employee (estimated)
  
- 2) Number of employees who moved to low risk:
  - a) Risk Transitions 2004-2007: 340 employees
  - b) Natural Flow 2004-2007: 81 employees  
[Natural flow over 3 years is -5.0%]
  - c) Total number: 421 employees
  
- 3) Potential Cost Savings:
  - a) Conservative number = 340 x \$1,629 = **\$553,860**
  - b) Approximate number = 421 x \$1,629 = **\$685,809**

# Relationship Between Annual Medical and Pharmacy Costs and Wellness Score



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# Crown Average Wellness Score

## Four Time HRA Participants

<u>Year</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>
Average Wellness Score	77.2	80.7	80.9	81.4
Number of Employees	3,516	3,516	3,516	3,516
Average Age	40.7	41.6	42.6	43.5

### Statistics

- 1) One point in wellness score = \$56 / employee
- 2) Improvement of 4.2 points between 2004 and 2007
- 3) Potential cost savings = \$56 x 4.2 x 3,516 = **\$826,963**

# Summary Questions & Answers

1. Are we making a difference at Crown?
  - a. Risk Factors
  - b. Health Care Costs
2. Is there more work to be done at Crown?
  - a. Keep participation at > 90%
  - b. Move the low risk group to 80%
  - c. Improve the overall wellness score
  - d. Keep the low risk people low risk
3. Who benefits from our HealthWise Program?
  - a. Employees
  - b. Employer





C

Questions & Answers

or

Preguntas y Respuestas

C

Thank You!

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# Health Risks and Behaviors

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## Health Risk Measure

## High Risk Criteria

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**Alcohol**

**More than 14 drinks/week**

**Blood Pressure**

**Systolic >139 mmHg or Diastolic >89 mmHg**

**Body Weight**

**BMI  $\geq$  27.5**

**Cholesterol**

**Greater than 239 mg/dl**

**Existing Medical Problem**

**Heart, Cancer, Diabetes, Stroke**

**HDL**

**Less than 35 mg/dl**

**Illness Days**

**>5 days last year**

**Life Satisfaction**

**Partly or not satisfied**

**Perception of Health**

**Fair or poor**

**Physical Activity**

**Less than one time/week**

**Safety Belt Usage**

**Using safety belt less than 100% of time**

**Smoking**

**Current smoker**

**Stress**

**High**

## OVERALL RISK LEVELS

**Low Risk**

**0 to 2 high risks**

**Medium Risk**

**3 to 4 high risks**

**High Risk**

**5 or more high risks**

# Disability Trends Related to Change in Risks

*(Among two time HRA Participants, N=3281)*

