

## Better, Faster and More Affordable

June 7, 2012  
Employee Benefits Planning Association  
Kathy Shingleton, Ed.D., SPHR  
Vice President  
Human Resources

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## Virginia Mason Medical Center

- Seattle-based integrated system
- 500 employed physicians
- 800,000 outpatient visits;  
17,000 hospital visits
- Graduate medical education
- Research Center
- Virginia Mason Institute



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## Virginia Mason Medical Center Hospital of Decade: Efficiency and Effectiveness



Source: The Leapfrog Group, 2009



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## Virginia Mason Named Top Hospital



Virginia Mason was named a 2011 Top Hospital at the Leapfrog Group's annual meeting in Washington D.C. in December, the second consecutive year Virginia Mason has received the honor.

To be named a Top Hospital, Virginia Mason:

- Fully met Leapfrog's standard for computer physician order entry (CPOE);
- Fully met Leapfrog's intensive care unit (ICU) staffing standard;
- Met Leapfrog's standards for complex procedures, such as heart bypass surgery, resection of the pancreas, resection of the esophagus, etc.;
- Ranked among the top 10% of all hospitals measured for efficiency, according to the Leapfrog Hospital Recognition Program.



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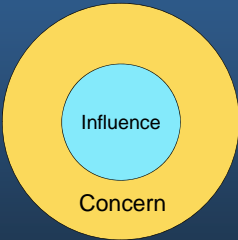
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## Two Circles and a Choice Proactive or Reactive?



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## Circle of Concern For Providers

1. Recession and job losses
2. Reduced funding of health care benefits
3. Downward pressure on Medicare payment
4. Dysfunctional national politics
5. Fragmented health care delivery system
6. Aging, overweight population
7. Regulatory uncertainty



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### Circle of Influence for Providers

Remove Waste From Health Care Delivery

1. Produce appropriate, quality health care
2. Eliminate needless variation
3. Eliminate waits and delays
4. Reduce cost of producing health care



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### A Decade of Change at VM

Becoming a Quality Leader

1. Strategic plan  
to define ourselves and our decision rules
2. Physician compact and reorganization  
to ensure accountability
3. Reliable production systems  
to reduce variation in care
4. Marketplace Collaboratives  
to redesign care with customers



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### 1. Strategic Plan

Our Decision Rules



Our Strategic Plan

Quality Leader requires efficient, effective systems.

Transforming health care requires collaboration.

**Patient**

Plan  
To be the Quality Leader and Transform Health Care

MISSION  
To improve the health and well-being of the patients we serve.

Values  
Transparency | Integrity | Excellence | Respect

**Strategies**

Health  
We deliver and improve the patient experience.

Quality  
We measure the quality of care and patient experience.

Operational  
We improve the efficiency of our operations and resources.

Financial  
We ensure the financial sustainability of our organization.

Virginia Mason Found Mission and Transformational Elements

Strong Performance Integrated Enterprise Research Virginia Mason

Virginia Mason Production System



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## 2. Physician Compact

### Defining Mutual Accountability

**VIRGINIA MASON MEDICAL CENTER PHYSICIAN COMPACT**

<p><b>Organizational Responsibilities:</b></p> <p><b>Practice Environment:</b></p> <ul style="list-style-type: none"> <li>• Provide resources required for practice and staff</li> <li>• Support career development and professional self-fulfillment</li> <li>• Administrative responsibility for practice and for engagement</li> <li>• Create opportunities for practice team support network</li> </ul> <p><b>Support and Enablement:</b></p> <ul style="list-style-type: none"> <li>• Assess and improve existing practice system, organization, structure and resource allocation</li> <li>• Offer opportunities for continuing education</li> <li>• Provide ongoing practice evaluation and feedback</li> </ul> <p><b>Education:</b></p> <ul style="list-style-type: none"> <li>• Support and facilitate continuing, CME and CPE</li> <li>• Provide continuing and self-assessment to improve practice</li> </ul> <p><b>Research:</b></p> <ul style="list-style-type: none"> <li>• Provide CME opportunities with national and local community, aligned with organizational goals</li> <li>• Create an environment that supports research and self-fulfillment</li> </ul> <p><b>Staff:</b></p> <ul style="list-style-type: none"> <li>• Monitor and staff accountability with integrity and accountability</li> </ul>	<p><b>Physician's Responsibilities:</b></p> <p><b>Direct the Practice:</b></p> <ul style="list-style-type: none"> <li>• Practice owner of the practice operation</li> <li>• Develop practice to enhance service and treatment outcomes</li> <li>• Enhance and maintain operational practice success</li> <li>• Build the practice culture</li> </ul> <p><b>Establishment and Enablement:</b></p> <ul style="list-style-type: none"> <li>• Develop self-assessment and assessment to team</li> <li>• Lead all operational self-assessment</li> <li>• Develop practice for high level of clinical and professional performance</li> <li>• Monitor all practice activities to ensure goals</li> <li>• Develop an ongoing learning</li> </ul> <p><b>Learn and Communicate:</b></p> <ul style="list-style-type: none"> <li>• Communicate clinical performance to other levels of practice</li> <li>• Request information, resources needed to provide care consistent with goals</li> <li>• Develop and manage feedback</li> </ul> <p><b>Self-Improvement:</b></p> <ul style="list-style-type: none"> <li>• Maintain CME required clinical standards of care</li> <li>• Engage in self-improvement programs</li> <li>• Focus on the personal growth of the practice</li> </ul> <p><b>Other:</b></p> <ul style="list-style-type: none"> <li>• Support leadership and continuing development</li> <li>• Participate in important organizational issues</li> </ul>
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## 3. Seeking a Management Method To

### Achieve Zero Defects



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## New Attitudes and New Tools



VM Board Member at Hitachi

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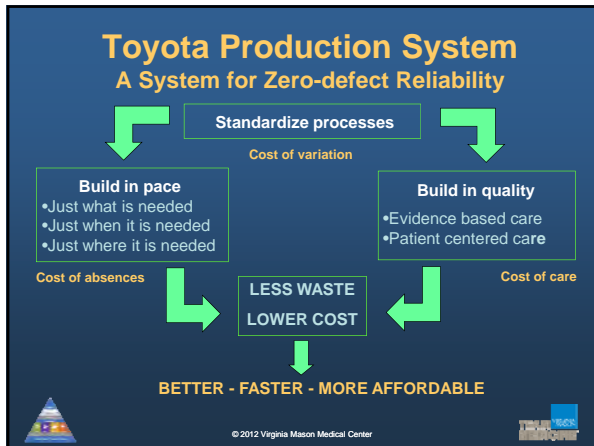
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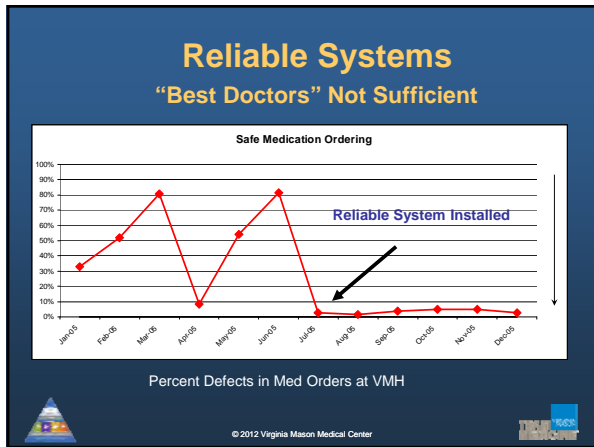
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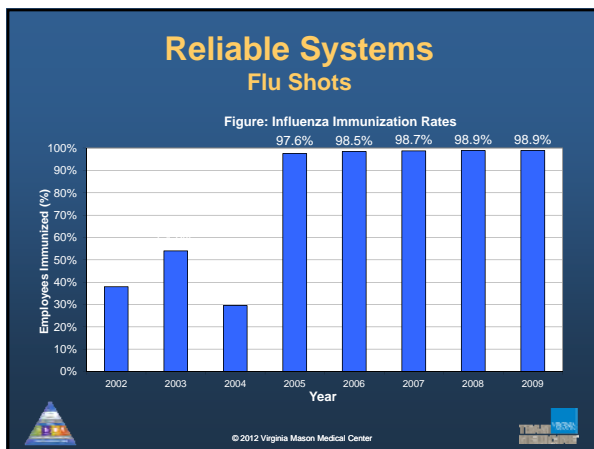
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### Reliable Systems Mistake-proofing Health Maintenance

Computer screen: status of health screening tests for a VM patient

Expectation	Status	Satisfy Type	Administration Date
CA Breast Cancer Screening	Refused	Manual	05/30/08
CA Cervical Cancer Screening	Cancelled	Manual	05/30/08
CA Colon Cancer Screening	Cancelled	Manual	05/30/08
CV Diabetes HbA1c not at goal (18-100yrs)	Satisfied	Result	05/30/08
CV Diabetes HbA1c not at goal (18-100yrs)	Satisfied	Result	03/07/08
CV Diabetes Monofilament Foot Exam (18-100...	Satisfied	Result	05/30/08
CV Diabetes Nephropathy Microalbumin Scee...	Satisfied	Result	05/30/08
CV Lipids NOT AT GOAL <100 High Risk (18-1...	Satisfied	Result	05/30/08
CV Lipids NOT AT GOAL <100 High Risk (18-1...	Satisfied	Result	01/18/08
CV Smoking Status must be updated (18-100y...	Satisfied	Result	09/28/08
IMM Influenza Vaccine	Refused	Manual	01/18/08
IMM Tetanus Vaccine (19+ yrs)	Satisfied	Result	05/01/08

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### When VM Made Quality a Priority Our Circle of Influence Enlarged

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### Virginia Mason Medical Center Our Circle of Influence: Efficiency and Effectiveness

Source: The Leapfrog Group, 2009

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### A Decade of Change at VM Transforming Health Care with Employers

1. Strategic plan  
to define ourselves and our decision rules
2. Physician compact and reorganization  
to ensure accountability
3. Reliable production systems  
to reduce variation in care
4. Marketplace Collaboratives  
to redesign care with customers



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### Affordability: Three Challenges



1. Failed process for delivering quality
2. Failed process for paying for quality
3. Failed process for purchasing quality

**Affordability requires correcting all three.**



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### A Marketplace Collaborative



1. Employer uses purchasing power to define products and quality specifications.
2. Provider produces product to quality specs.
3. Health plan pays for delivery of quality specs.
4. Employer purchases product.



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## Employer Defines Products

### Doing the Right Thing: High Cost Conditions

1. Screening and prevention
2. Back pain
3. Shoulder, knee and hip pain
4. Headache
5. Respiratory symptoms
6. Breast symptoms
7. Depression
8. Diabetes
9. Abdominal pain
10. Chest pain

High volume, low per-capita cost conditions



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## Employer Defines Quality Specs

### Doing Things Right

**Better**

1. Evidence-based care: what works
2. 100% patient satisfaction

**Faster**

3. Same-day access
4. Rapid return to function

**More Affordable**

5. Affordable price for employer and provider



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## Direct and Indirect Costs


JOEM, 7/07

**IBI Top 10 Medical, Drug & Productivity Costs**  
-- per 1000/FTEs --



Condition	Medical	Drug	Absence	Presenteeism
Back/Neck Pain*	High	Low	High	Low
Depression*	Low	Low	High	Low
Fatigue*	Low	Low	High	Low
Other Chronic Pain	High	Low	High	Low
Sleeping Problems*	Low	Low	High	Low
High Cholesterol*	Low	Low	High	Low
Arthritis*	Low	Low	High	Low
Hypertension*	Low	Low	High	Low
Obesity*	Low	Low	High	Low
Anxiety dx*	Low	Low	High	Low

\* Change in order of conditions from medical + drug costs



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## Redesigning Health Care Right Providers and Right Process

1. Value-stream mapping  
Care from the patient's perspective
2. Evidence-based medicine  
Care that works
3. Skill-task alignment  
The right provider for the clinical task
4. Lead time reduction  
No waits or delays



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## 1. Value Stream Mapping Right Process: Patient Perspective for Back Pain

PCP    PCP    MRI    PCP    Neurosurg    Physiatry    PT visits 1-15

TIME →

■ Waits and delays  
■ Non value-added  
■ Evidence-based value

Waiting has indirect cost to employer of over \$18/hr



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## Value Stream Mapping Right Process: Care of Back Pain Redesigned

Wait for appt    Spine Clinic    PT: 2.8 visits

TIME →

■ Waits and delays  
■ Non value-added  
■ Evidence-based value

Waiting has indirect cost to employer of over \$18/hr



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## 2. Evidence-Based Medicine

### Right Process: Just the Care that Works



Doing just what works can reduce health care costs by 30%.

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## Evidence-Based Medicine

### Right Process: Mistake-Proofing Imaging

**MRI Back Exam**

Exam Requested\*  mr spine  mr spine contrast  mr spine w/ w/o contrast

Current Weight\*  # lbs  kg Mac Table Weight 200 lb

ICD9 Code(s)

Indications (select all that apply)\*\*

- Motor deficit (781.99)
- Unrelenting pain despite 6 weeks of appropriate medical treatment (722.70)
- Document in relevant history field and apply appropriate ICD 9 code
- Strong suspicion of systemic disease
- Document in relevant history field and apply appropriate ICD 9 code
- Neurogenic Claudication(425.9)
- Cauda Equina(344.66)
- Upper motor neuron findings: use myelopathy codes
  - Unspecified region (722.70)
  - Cervical (722.71)
  - Thoracic (722.72)
  - Lumbar (722.73)
- Significant trauma or fall
- Document in relevant history field and apply appropriate ICD 9 code
- Consult has been performed by physical medicine.

NOTE: A spine MRI will likely not be helpful for the patient with back or neck pain if none of these indications are present. The spine clinic physician on call will provide help by phone and offer a same day visit to assist in care of the patient. Text page (some clinic page number) on V-net and enter the following message: "Go" -> write to speak with you about a patient with neck/back pain in whom an MRI is not indicated. Please call (pager number of ordering provider).

**GO/NO GO MRI ORDER**

Order must fit evidence based indication for imaging

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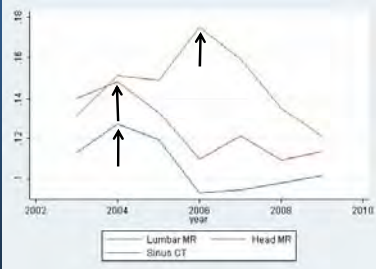
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## Evidence-based Imaging

### No Costly Vendor-based Inspection Steps



Mistake-proofing Implemented ↑

Reduction in imaging

Headache: -23%

Low back pain: -23%

Sinusitis: -27%

J Am Coll Radiol 2011;8: 19-25.

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### 3. Skill-Task Alignment Right Provider for the Clinical Task

1. 65% of cost of production at VM is labor
2. Labor cost and skill/task alignment
  - a. Proceduralist MD \$4/minute
  - b. Non-proceduralist MD \$2/minute
  - c. Nurse practitioner \$1/minute



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### 4. Lead Time Reduction Right Process: Reducing Costly Absenteeism

Example: VM as an employer  
15% of FTEs are nurses

Daily replacement cost of a nurse \$400  
Cost of 3-day wait for appointment \$1200



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### Spine Clinic Rapid Return to Function

CARE CONNECTION		STANDARD - OUTCOMES BY PROGRAM AREA									
		Actual	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target
<b>Non-proceduralist</b>		16	11	10	10	2102	2020				
Proceduralist	49.44%	40.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%
Non-proceduralist	50.56%	60.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%
Proceduralist	76.28%	72.00%	75.00%	75.00%	75.00%	75.00%	75.00%	75.00%	75.00%	75.00%	75.00%
Non-proceduralist	23.72%	28.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
Work Days Lost	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Lower Extremity</b>		15	8	11	40	4024	3824				
Proceduralist	53.33%	40.00%	42.86%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%
Non-proceduralist	46.67%	60.00%	57.14%	60.00%	60.00%	60.00%	60.00%	60.00%	60.00%	60.00%	60.00%
Proceduralist	75.00%	70.00%	71.43%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%
Non-proceduralist	25.00%	30.00%	28.57%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%
Work Days Lost	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
<b>Lower</b>		32	18	28	100	4028	3824				
Proceduralist	46.88%	33.33%	35.71%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%
Non-proceduralist	53.12%	66.67%	64.29%	66.67%	66.67%	66.67%	66.67%	66.67%	66.67%	66.67%	66.67%
Proceduralist	73.13%	70.00%	71.43%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%	70.00%
Non-proceduralist	26.87%	30.00%	28.57%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%
Work Days Lost	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Seven fewer work days lost: **4.50 vs. 12.02**  
 Five fewer PT visits: **4.13 vs. 9.04**



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## Headache Clinic Rapid Return to Function

**Self-reported loss of productive time: 115 patients**

Quarter	New Patients (Days)	Return Patients (Days)
Q1	3	2
Q2	6	3
Q3	3	2

**Q1:** How many days in the last month did you miss work or school because of your headaches?  
**Q2:** How many days in the last month was your productivity at work or school reduced by half or more because of your headaches?  
**Q3:** How many days in the last month did you miss family, social, or leisure activities because of your headaches?

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## Breast Clinic Rapid Return to Function

Evaluation complete in hours for 90% of patients.

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## A Business Plan that Works A Cost Reduction Model for All Stakeholders

1. Patients
  - a. 50% less work loss
  - b. Better functional improvement
  - c. Satisfaction: would you recommend? 4.9/5.0
2. Employers and other purchasers
  - a. 23% less imaging
  - b. 50% less Physical Therapy
  - c. 50% less absenteeism
3. Providers: lower cost of producing care
4. Health plans: savings for plan and clients

VM Spine Clinic  
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### The Business Case for Quality Back Pain: a High Cost Condition

	Efficient Spine Clinic
<b>1. Lower cost</b>	
FTE	↓29%
Area, ft <sup>2</sup>	↓78%
<b>2. Greater revenue</b>	
RVU/MD/day	↑76%
New patients /yr	↑64%
<b>3. Greater margin/year</b>	<b>↑56%</b>
<small>Estimated from VM BSR &amp; direct costs</small>	

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### Testing the Model for Chronic Care The Most Costly Patients

A challenge from Boeing:

1. Improve health status of most costly patients
2. Decrease per capita spend for costly patients by 15%



Low volume, high per capita cost patients

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### Prevalence of Diseases

Hypertension	52%
Depression	46%
Chronic pain	40%
Chronic GI disease	34%
Diabetes	32%

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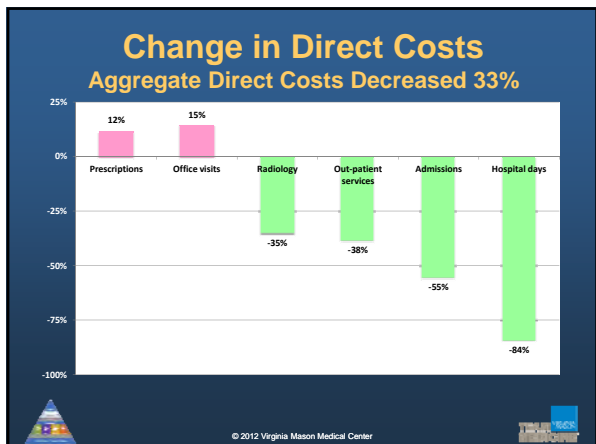
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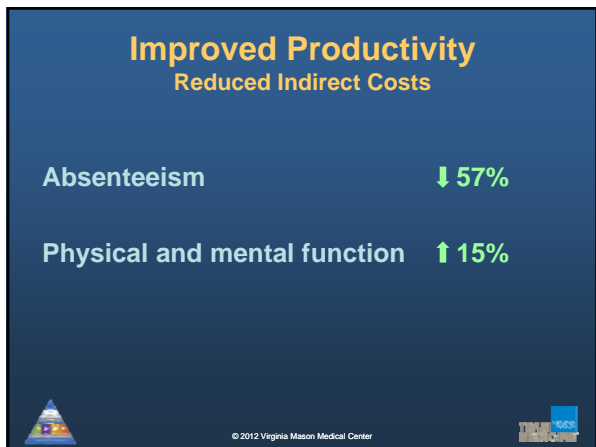
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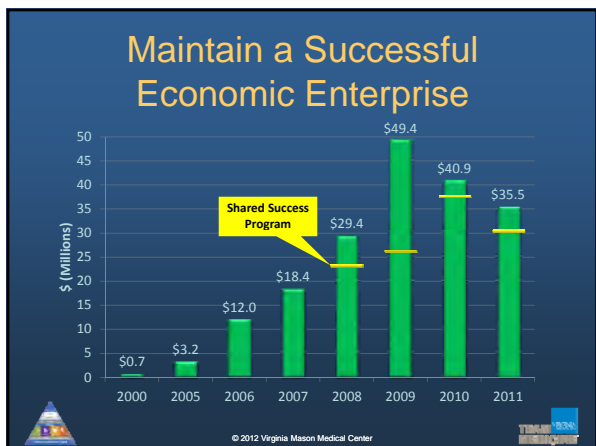
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## Providers Also Win VM Professional Liability Premiums



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## Conclusion

1. The right providers using the right systems can reduce cost and improve quality for both high cost conditions and high cost patients.
2. Cost reduction benefits buyers and sellers alike.
3. Employers and providers can collaborate to create health care that is better, faster and more affordable.

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Reactive people focus their efforts in the circle of concern.

Proactive people focus their efforts in the circle of influence.

- Stephen Covey

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### VMMC Quality Awards

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### Affordable Health Care

#### Seven Steps for Employers

1. Use purchasing power
2. Define health care quality
3. Set priorities for providers
4. Choose providers using reliable systems
5. Pay for quality
6. Purchase quality
7. Incent a healthier workforce

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### Questions?

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