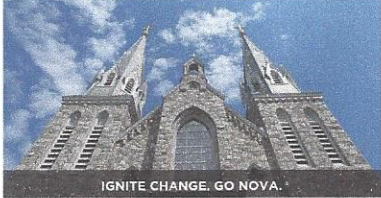


VILLANOVA UNIVERSITY **HealthNEXT**

Corporate Culture of Health & Its Association to Business Performance: Correlation or Causation



IGNITE CHANGE. GO NOVA.

Proprietary & Confidential All Rights Reserved 1

VILLANOVA UNIVERSITY **HealthNEXT**

Agenda Today

- The Evolution of Medical Management
- How do you Build Cultures of Health & Wellbeing?
- What Is The Value in Investing in Health, Safety, and Wellbeing?


With a focus as an educator, employer, researcher, health care provider, and role model



Proprietary & Confidential All Rights Reserved 4

VILLANOVA UNIVERSITY **HealthNEXT**

Synopsis of Today's Presentation



Join Dr. Fabius, an international leader in the culture of health and population health spaces, describe what it takes to build corporate cultures of health and its connection to business performance. He will present his research studying benchmark organizations and he will build a case that a healthy workforce provides a competitive advantage in the marketplace. He will refer to several recently published articles he has written as well as his textbook *Population Health: Creating Cultures of Wellness* now in its second edition. Dr. Fabius will share his company's assessment and improvement process which scores an organization on its culture of health, identifies gaps from benchmark and develops strategic plans to remedy them.

Proprietary & Confidential All Rights Reserved 2

VILLANOVA UNIVERSITY **HealthNEXT**


The Evolution of Medical Management Focusing on Population Health & the Care Continuum

Proprietary & Confidential All Rights Reserved 5

VILLANOVA UNIVERSITY **HealthNEXT**

Ray Fabius MD Honored to be With You Today

- Over 25 years of medical management experience with Thomson Reuters, GE, Walgreens, Aetna, Cigna and others
- Served as front line primary care physician for over a decade
- Published articles, book chapters and three books
- Adjunct Faculty – Harvard, Jefferson, ACOEM
- Distinguished Fellow & Faculty Member of American Association of Physician Leadership
- Co-founder of HealthNEXT
 - Emerging Leader in building organizational cultures of health


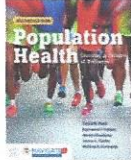


Proprietary & Confidential All rights reserved 3

VILLANOVA UNIVERSITY **HealthNEXT**

THE EVOLUTION OF MEDICAL MANAGEMENT

Leading to Cultures of Health & Well-being

Proprietary & Confidential All Rights Reserved

What is Population Health?
Managing Care Across the Continuum

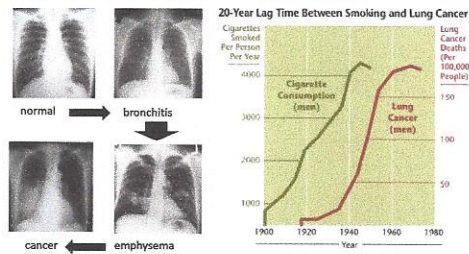


Prevalence of Obesity Among U.S. Adults Aged 20-74

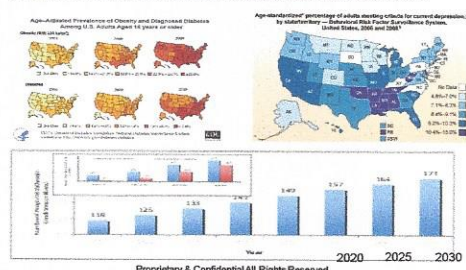


Obesity continues to dramatically increase worldwide.
 Everybody pays the price - the patients, the insurers and the employers

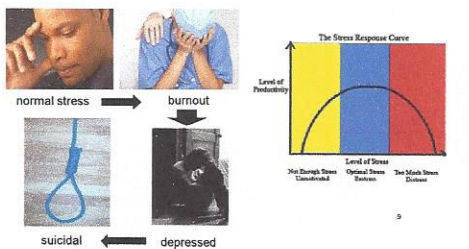
Insidious Progression of Disease:
 SMOKING & ACUTE ILLNESS LEADS TO CHRONIC & CATASTROPHIC ILLNESS



Focusing on illness alone is ineffective & inefficient
 Unhealthy Lifestyles Creates a Tsunami of Disease
 OBESITY > DIABETES > DEPRESSION = INCREASING CHRONIC DISEASE



WHERE SHOULD WE INTERVENE?
 INSIDIOUS PROGRESSION OF DISEASE:
 ANXIOUS & STRESSED, Leads to Chronic and Catastrophic Illness



Health & Wellbeing
 Remarkably Influenced by Your Work

- Education & Training
- Occupational Risks
- Employment
- Income
- Advancement
- Sense of Purpose
- Social Influences



KNOW WHAT ILLS YOUR POPULATION *HealthNEXT*
Comprehensive Population Health Data Review

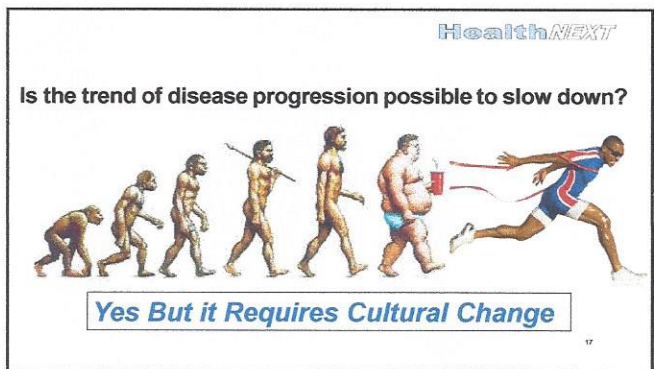
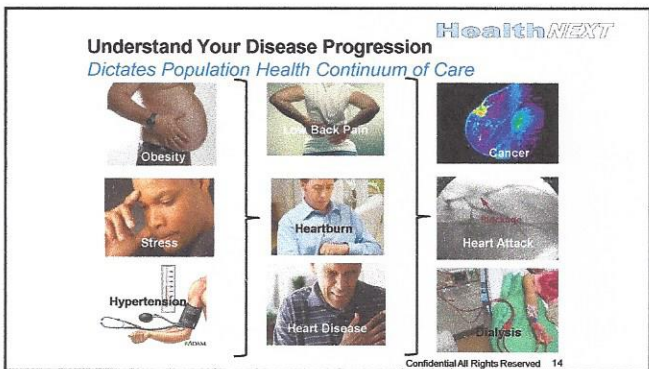
Risk Factors	Episodes of Care	Rx Medicines	Chronic Illness	High Cost	ST Disability
Sedentary 53%	Pregnancy Newborns	Behavioral Mental	Low Back 7%	Cancer	Behavioral Mental
Stress 40%	Muscular Joints	Auto Immune	High BP 6%	Heart Circulation	Pregnancy
Obesity 33%	Diabetes	Gastro Intestinal	Depression 4%	Kidney Dialysis Transplant	Auto Immune
Overweight 32%	Cancer	Diabetes	Diabetes 4%		Respiratory
High CHOL 25%	Heart Circulation	Infertility	Asthma 3%		Gastro Intestinal
High BP 24%	Gastro Intestinal	Cholesterol Lowering	Heart Disease 1%		Cancer
High BS 5%					Diabetes
					Heart Circulation

Confidential All Rights Reserved 13

VILLANOVA UNIVERSITY *HealthNEXT*

How do you Build Cultures of Health & Wellbeing?

Proprietary & Confidential All Rights Reserved 16



HealthNEXT

Building A Culture Of Health

On The Success Of The "Culture Of Safety" Movement



Culture of Safety

- Everyone is accountable
- Trending injuries
- Tracking near misses
- Implement MSE
- Eliminate all disability



Culture of Health

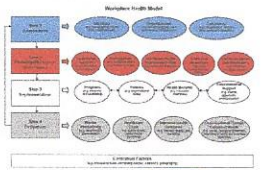
- Everyone is accountable
- Trending ill health
- Tracking health risks
- Implement screenings
- Eliminating all disability

19

HealthNEXT

Culture of Health Measurement & Process

Measurement	Target	Current	Improvement
Healthcare Costs	100	110	105
Productivity	100	105	110
Quality	100	100	105
Access	100	100	105
Population Health	100	100	105



Workplace Health Model

Proprietary & Confidential All Rights Reserved

22

HealthNEXT

Integrated Health & Safety at the Workplace

Building Cultures of Health & Safety



ACQEM




Figure 1: Workplace Health & Safety Continuum

HealthNEXT


OUR RESEARCH BEGINS HERE

Six Sigma Teaches Us to Ask These 3 Questions

1. Is there any place or any organization who has solved the problem you are faced with?
2. If so, can you go there and study what they are doing to solve the problem?
3. By studying what they are doing can a methodology be developed to help others with the same problem?



Taking a page from Jim Collins

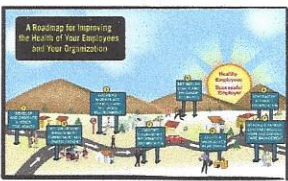


HealthNEXT

TENETS OF A CULTURE OF HEALTH – Becoming a Science

Roadmap for Improving the Health of Your Employees & Organization

1. Embrace a vision for health
2. Senior Management Commitment
3. Policies & Environment
4. Measurement, Data, & Analytics
5. Programs & Goals
6. Evidence Based Benefit Design
7. Population Health
8. Model Against Benchmark Companies



www.ihpm.org/pdf/EmployerHealthAssetManagementRoadmap.pdf

HealthNEXT

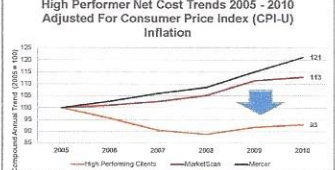
TRUVEN HEALTH ANALYTICS

Medical Cost Reductions

The New Benchmark: Bending the Curve

A Selected Few Employers Whose Healthcare Costs Are Going Down

High Performer Net Cost Trends 2005 - 2010
Adjusted For Consumer Price Index (CPI-U)
Inflation



TRUVEN HEALTH ANALYTICS High Performer Clients: Eight employers, with self-funded plans, spanning multiple industries who also utilize TRUVEN HEALTH ANALYTICS decision support and analytic consulting services. These clients consistently outperformed net pay trends rates for the broader US-based group each year and consistently from 2005 - 2010. As a group, they have consistently made intensive use of healthcare data to support all aspects of population health, productivity and plan management.	MarketScan™: A group of over 50 TRUVEN HEALTH ANALYTICS clients with 5 million members covered in self-funded plans that contributed to MarketScan's consistency since 2005.
2010 Mercer National Survey: A comprehensive survey of 2,854 US employers, reflecting the average reported healthcare trend rates across group size, geographic region and industry type.	

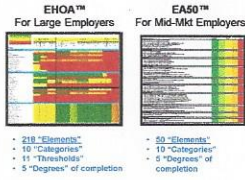
OUR RESEARCH & METHODOLOGY HealthNEXT

ASSESSMENT – GAP ANALYSIS
Single Metric – 700 out of 1000 is Benchmark

10 Weighted Categories

- People & management
- Marketing & communications
- Data warehousing
- Health & wellness plan design
- Environment
- On-site health activities
- Health & wellness activities
- Incentives and benefits design
- Engagement & navigation
- Vendor integration

Two Gaps-From-Benchmark Planning Tools



Health Risk Appraisals (HRA) For An Organization

Employers, Employees/Students & Health Care Delivery System Must Work in Concert HealthNEXT

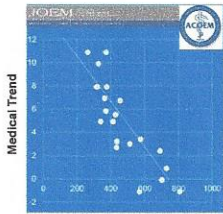
FUTURE STATE : Convergent Services

Many Universities have their own Medical Schools and Hospital / Healthcare Delivery Systems



All Universities are top employers in their communities and have the opportunity to establish the benchmark for others

PROOF OF CONCEPT
High Correlation between HealthNEXT "Culture of Health" Score & Medical Cost Trend – Every 50 points reduces medical trend by 1%

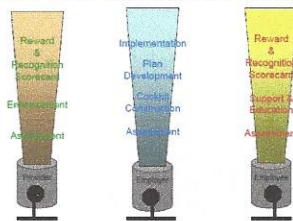


What Is The Value in Investing in Health, Safety, and Wellbeing ? HealthNEXT

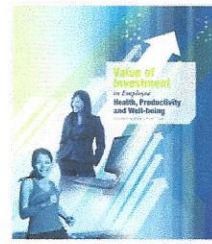
What Is The Value in Investing in Health, Safety, and Wellbeing ?

Employers, Employees & Health Care Delivery System Must Work in Concert HealthNEXT

SILO'd Current State; Employees/Students, Employers & Provider



Value of a Culture of Health HealthNEXT

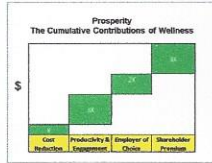


Value of a Culture of Health



Why Invest in A Healthy Workforce?
IT ADDS VALUE 5 WAYS

- Medical Cost Reductions
- Productivity Gains
- Employee Engagement
- Employer of Choice
- Return to Investors

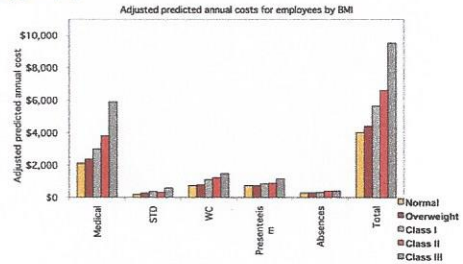


Proprietary & Confidential
All Rights Reserved

31

Obesity Business Costs

Advances Exponentially with Weight
Pepsico Study (N=11,217)



Productivity Gains
The Impact Of Poor Health To Employers
Continuum Of Employee Performance Outcomes



For Every Dollar Spent on Health Care There Are \$3 Lost in Productivity

Proprietary & Confidential

32

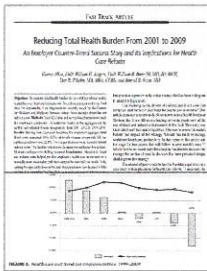
Medical Cost Reductions

Bends the Cost Curve

Demonstrates a Sustainable Culture of Health

Recent Experience in Health Promotion At Johnson & Johnson: Lower Health Spending, Strong Return On Investment

Johnson & Johnson's health promotion programs have resulted in a 10% reduction in medical costs per employee over a 3-year period. This is achieved through a combination of preventive care, chronic disease management, and employee engagement initiatives.



- Demonstrating significant:**
- ☐ Direct cost Reductions
 - ☐ Risk Reductions
 - ☐ Health Status Improvement
 - ☐ Return on Investment
 - ☐ Implied Indirect Cost Savings
 - ☐ Implied Competitive Advantage to Control Group

Proprietary & Confidential

32



Medical Cost Reductions

Greater Return to Keep The Well Well ~ 2.1:

Wellness Score & Medical Costs Over 3 Years



33

Productivity Gains

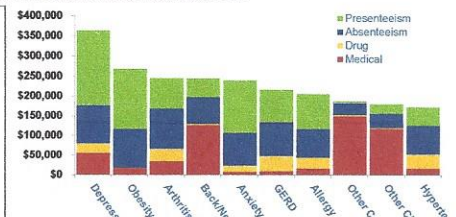
Top 10 Health Conditions

by Full Costs For Employers

(Med + RX + Absenteeism + Presenteeism) Costs/1000 FTEs

Health and Productivity in a Business Strategy: A Multi-Employer Study

For every dollar spent on health care, there are \$3 lost in productivity. This study highlights the top 10 health conditions that drive these costs, including Depression, Obesity, and Back/Neck Pain.



Legg, R., et al. "Health and Productivity in a Business Strategy: A Multi-Employer Study". JGIM, 2004;19(4):411-424.

Employee Engagement
Health & Employee Commitment
Unilever Lamplighter Program

Health Benefits

- 18% increase in the number of employees who exercised
- 5% drop in the number of employees with high BMI
- 13% drop in the number of employees with high blood pressure... (down from 21% to just 8%)
- 8% drop in the number of employees with high cholesterol
- 5% decrease in the number of employees classed as having poor nutrition
- 8% decrease in the number of smokers. Overall the number of employees classed as 'high health risk' dropped by 5%
- Overall the number of employees classed as 'low health risk' increased by 23%

Engagement Enhancement

The Lancaster study showed that employees who participated in Lamplighter:

- Felt significantly more engaged with their work
- Were less likely to take time off work due to health problems
- Were able to perform better in their job
- Were less likely to be adversely affected by pressure at work
- Were more likely to practice healthy behaviors at work

Proprietary & Confidential
 All Rights Reserved 37

Student Engagement
Health, Health Behaviors
Promotes Academic Achievement & Retention

Linking Health to Academic Success and Retention

From George, M.A., M.A., C.M.S., Ph.D. and Michael, M.S., M.S.

Figure 6: Healthy Campus 2010 Retention Indicators (Unilever for Dep. Classes)

Proprietary & Confidential All Rights Reserved

Employee Engagement
Unilever Lamplighter Findings
Better Health – Better Performance

Engaged employees:

- Perform up to 20% better than less-engaged employees
- Are 87% less likely to leave the organisation than employees with low levels of engagement
- Are more innovative
- Are more committed to customer satisfaction
- Contribute more to their organisation than their less engaged peers
- Consistently go the extra mile

Score

Category	Score
Top Performer	72.4
Middle Performer	67.5
Bottom Performer	66.9

Health 72.4

Proprietary & Confidential
 All Rights Reserved 38

Employer of Choice
Investing in Health
Enhances Brand

Health & Wellness Programs are key Reason cited in **Fortune 100 Best Companies to Work For**

Yum! Yum Brands – Wellness Program Reducing Turnover

Goldman Sachs – Retaining & Attracting the Best Talent

Proprietary & Confidential
 All Rights Reserved 41

Student Engagement
Healthy Students Perform Better

- Healthy Students Are Better Learners
- Healthy Students Complete their Education
- Schools / Universities Can Influence Lifestyle Behaviors
- Healthy Successful Students Build Healthy Communities
- All Students Deserve the Opportunity to be Healthy & Successful

HEALTH AND ACADEMIC ACHIEVEMENT

Figure 6: Healthy Campus 2010 Retention Indicators (Unilever for Dep. Classes)

Proprietary & Confidential
 All Rights Reserved 39

Employer of Choice
The Value of "EOC"
Employer of Choice Benefits are Pervasive

The benefits of becoming an "employer of choice" are not easy to quantify due the pervasive effects it has on so many aspects of an organization. However, a focus on reduced turnover can be a good start.

Replacement of an employee normally costs 150% of the salary.

For the mid-sized company of 1,000 employees who has a 10% annual rate of turnover, the annual cost of turnover is \$7.5 million!

Quest EOC Model

Proprietary & Confidential
 All Rights Reserved 42

Investing In Health Return to Investors

HealthNEXT

- I-trax (AMX:DMX) Research (2006)
 - The Connection of Workplace Health Centers and Market Performance
- Towers Watson Study (2011)
 - Business metric advantage for HPM companies
- Our Initial Publication (2013)
 - The Link Between Workforce Health and the Bottom Line – Tracking the Market Performance of Companies that Nurture a Culture of Health
- Three Additional Publications (Jan 2016)
 - HERO, The Health Project and ACOEM

Proprietary & Confidential
All Rights Reserved

43

ACOEM / HealthNEXT Research (September 2013)

HealthNEXT

Marketplace rewards companies who achieve cultures of health:

- Used the ACOEM Corporate Health Achievement Award (CHAA) culture of health award winners as a stock portfolio
- A portfolio of approximately twenty publicly traded award winners; over nearly two decades
- Published September 2013 in the JOEM
- Once again the portfolio outperformed the market significantly; in all four test scenarios



Proprietary & Confidential
All Rights Reserved

46

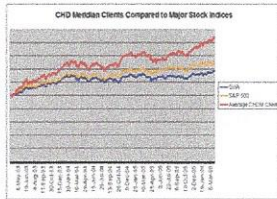
46

I-trax

HealthNEXT

I-trax Research (2006)

- Over 200 onsite health clinics; Over 60 employers; 65% of them publicly traded
- Tracked as an investment portfolio, back-cast to 2003
- For every \$1 invested in the DJIA and S&P 500, our (I-trax) client portfolio yielded at least 2X the growth to their shareholders in less than 3 years



Companies that have workplace health clinics do better in the stock market

Proprietary & Confidential All Rights Reserved

44

3 More Studies

Marketplace rewards companies who achieve cultures of health

HealthNEXT

- Health Enhancement Resource Organization High Scoring Companies
- Health Project Award Winning Companies
- CHAA Award winning companies



Proprietary & Confidential - All Rights Reserved

47

TOWERS WATSON

HealthNEXT

Health Creates Wealth

Healthy Employees Yield Wealthy Employers

Companies with the most effective H&P programs have:



towerswatson.com © 2011 Towers Watson. All rights reserved. Proprietary and Confidential. For Towers Watson and Towers Watson client use only. Financial outcomes

Award Requirements

Provides insight into the Elements of a Comprehensive Culture of Health

HealthNEXT


HERO Key Categories	KOOP Requirements	ACOEM Standards
<ul style="list-style-type: none"> strategic planning leadership engagement program management program comprehensiveness engagement methods measurement & evaluation 	<ul style="list-style-type: none"> Reduce health services need Share health promotion targets Prove health care / productivity cost reductions Must be objective & verifiable Achieved through health status improvement and risk reduction of the workforce / covered lives 	<ul style="list-style-type: none"> Organizational Structure Health Informatics Quality Improvement Leadership / Management Health Promotion Absence Management Health & Productivity Health Benefits Design Occupational Health Traveler Medicine Mental Health Substance Abuse Hazard Abatement Emergency Preparedness
<p>HERO Key Elements</p> <ul style="list-style-type: none"> Integrated their programs Performed health assessments Targeted lifestyle modification Provided chronic care support Educated employees on health consumerism Collected data Analyzed for effectiveness 		

Proprietary & Confidential
All Rights Reserved

48

Research Conclusion
A preponderance of mounting evidence

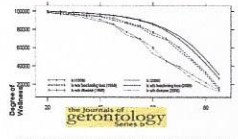

"Though correlation is not the same as causation, the results consistently and significantly suggest that companies focusing on the health and safety of their workforce are yielding greater value for their investors as well. More research needs to be done to better understand the value of building these "cultures of health" in the workplace. Perhaps such efforts as this simply identify "smart" companies that out-perform. But the evidence appears to be building that healthy workforces provide a competitive advantage in ways that benefit their investors."



Proprietary & Confidential
 All Rights Reserved

49

THE ULTIMATE GIFT OF HEALTH:
 Compression Of Morbidity

The Goal Should Be Sudden Death in Overtime


The longer you stay healthy and vital, the shorter your period of morbidity before life ends.

© The Author 2015. Published by Oxford University Press in collaboration with The Gerontological Society of America. All rights reserved.
 Chatters E.M., Rubins-Sanchez H., J. Gerontol. B Psychol. Soc. Sci. 2015; 60: 75-86

About BHAC

The Evidence
 The evidence is irrefutable: **There has never been a more critical moment** in the health and wellness of the American people. **Obesity** will soon surpass tobacco as the number-one cause of preventable death and disease in the United States. The rate of **mental health disorders** among Americans is climbing at a precipitous rate. And unhealthy behaviors – **smoking, overeating, lack of physical activity** – are leading causes of death among Americans.

Although many academic institutions have instituted wellness programs for students and employees, **few have implemented a comprehensive and integrated approach to health and wellness**. The benefits of doing so cannot be overstated. Multiple studies show that wellness programs delivered in the workplace lead to **reductions in health care costs and health insurance premiums** and, more importantly, **healthier and more engaged students, faculty, and staff**.



Proprietary & Confidential All Rights Reserved

50

The Unique Opportunity & Role Academic Communities Can Play in Promoting Population Health & Building Cultures of Health

- **Educator** – teach the emerging science of Population Health & Building Cultures of Health & their connection to performance / health
- **Employer** – save on health care costs and improve the performance of your students and workforce
- **Researcher** – dedicate resources to create a living laboratory – study best practices and innovations
- **Health Care Delivery** – align efforts with your university hospital systems
- **Role Model** - for students and the community



Proprietary & Confidential All Rights Reserved

51