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# Minimizing Lost Productivity Through Benefits Assessment and Economic Modeling

NBGH IBI Joint Forum

October 24, 2007



# Speakers

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# Agenda

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- ↳ Overview of International Truck & Engine
- ↳ Study Methods
- ↳ Study Results
- ↳ Interventions
- ↳ Discussion
- ↳ Questions & Answers

# Overview of International Truck & Engine

# Current Lineup = Best in the Industry

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**3000 IC Integrated  
Conventional  
School Bus**



**4000  
Series  
Medium  
Class 6/7**



**7000 Series,  
Severe Service Class 8**



**8000 Series Regional Haul  
Class 8**



**9900ix Series, Hvy.  
Prem. Conv. Class 8**

# Great New Products: Unconventional Innovation

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# International Invests Strategically in Health

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## ↳ Demographic factors

- Stable population
- Average age 45
- 3.5:1 male-to-female ratio
- 3:1 retirees/surviving spouses-to-active employees ratio
- 12.5 years average length of service

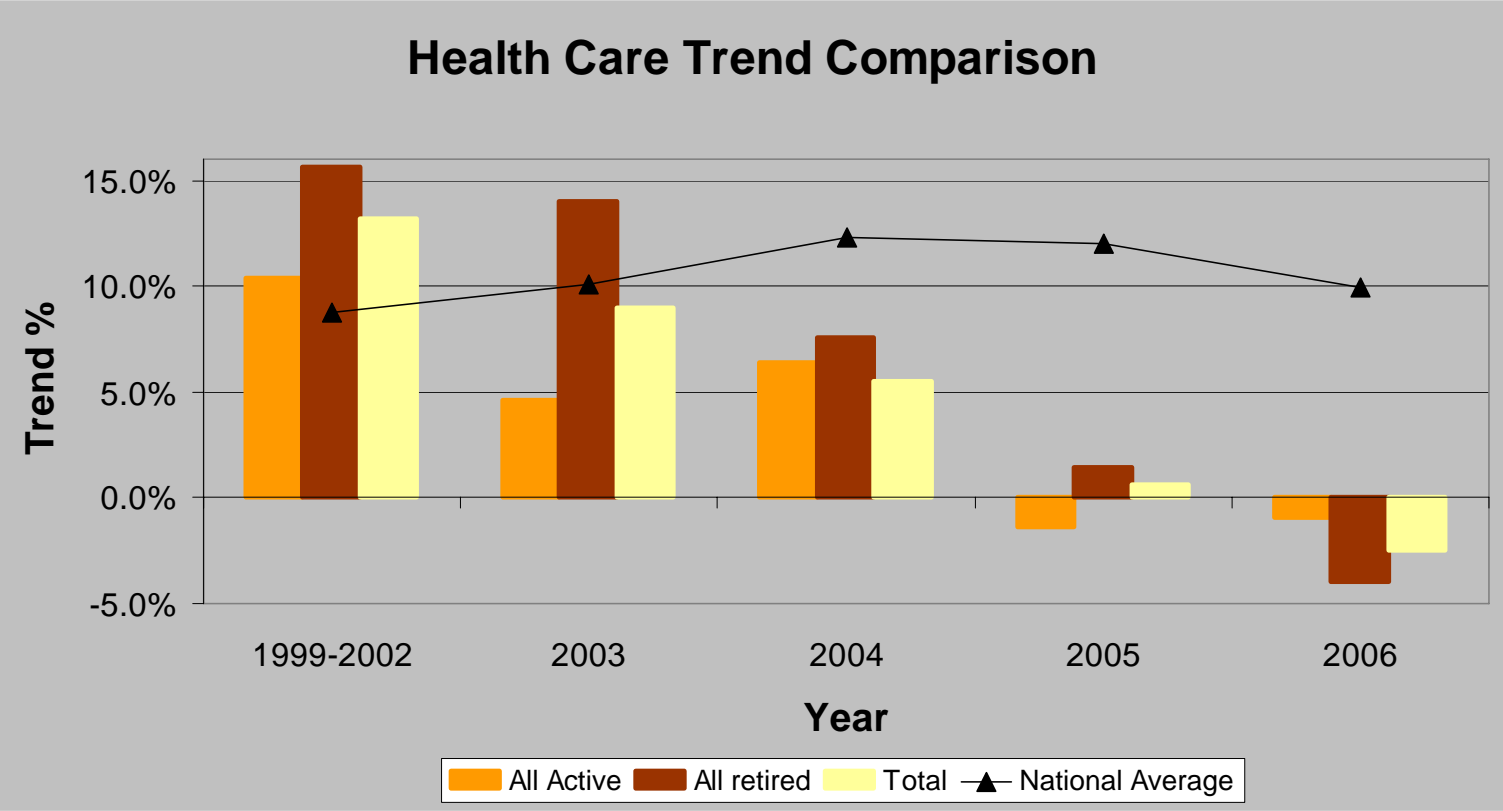
# International Invests Strategically in Health (cont'd)

## → Health and Productivity factors

- Top cost drivers (MedStat)
  - cardiovascular and musculoskeletal disease
- Leading risk factors by cost (HRA)
  - weight, stress, and lack of physical activity
- Health care costs and absence rate above manufacturing benchmarks



# Healthcare Trends



➔ Achievement reached without major cost shifting.

# Study Methods

# Objectives

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- Measure cost differences between employees with Chronic Obstructive Pulmonary Disease (COPD) and those without
- 2 year study to uncover the “real world” impact of COPD on a large employer

# Data Collected

Medical	↳ Claims files
Pharmacy	↳ Claims files
Absence	↳ IT&E HR files for all absences, including sick time, vacation, holidays, STD, LTD, etc.
Short term disability (STD)	↳ IT&E HR files
Long term disability (LTD)	↳ IT&E HR files
Workers' Compensation (WC)	↳ IT&E HR files
Health survey (HRA)	↳ HRA vendor

# Population

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- Active full time employees (so costs other than health care could be included).
- Employees with both medical and prescription coverage for at least 11 months of 2005.

# Study Results: Demographics

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	Employees	Mean Age	Percent Male
<b>Employees with COPD</b>	298	53.8	78.5%
<b>Employees without COPD</b>	8,494	45.0	78.3%
<b>All Employees</b>	8,792	45.3	78.3%

# Study Results



# Costs

	Mean Amount per Employee without COPD	Mean Amount per Employee with COPD	Mean Amount Ratio to All Employees	Mean Amount Ratio to non COPD Employees
Medical	\$3,919	\$12,067	3.08	3.32
Prescription Drugs	\$1,018	\$2,770	2.72	2.90
Total Medical + Rx	\$4,937	\$14,837	3.01	3.23
Inpatient Admissions	0.07	0.28	3.99	4.46
STD Claims with Absence	0.21	0.44	2.09	2.18
STD Days	4.39	10.98	2.50	2.64
STD Absence Cost	\$919	\$2,298	2.50	2.64
WC Claims	0.14	0.18	1.24	1.25
WC Indemnity Paid	\$169	\$114	0.67	0.66
WC Restricted Days	1.38	1.26	0.91	0.91
WC Medical Paid	\$321	\$272	0.85	0.84
WC Claims with Absences	0.04	0.03	0.73	0.72
WC Absence Days	0.49	0.65	1.33	1.35
WC Absence Cost	\$102	\$136	1.33	1.35
Absence Days net of STD & WC	9.50	9.79	1.03	1.03
Absence Days net of STD & WC Cost	\$1,987	\$2,049	1.03	1.03
<b>Total Medical, Rx, WC, Absence Cost</b>	<b>\$8,435</b>	<b>\$19,705</b>	<b>2.34</b>	<b>2.45</b>

# Key Findings

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Compared with the average employee, employees with COPD have:

- Medical costs that are three times higher
  - STD claims and absences that are double
  - WC and general absence costs that are not very different
- Majority of cost impact of COPD is related to medical expenses and STD.

# Health Risk Appraisal

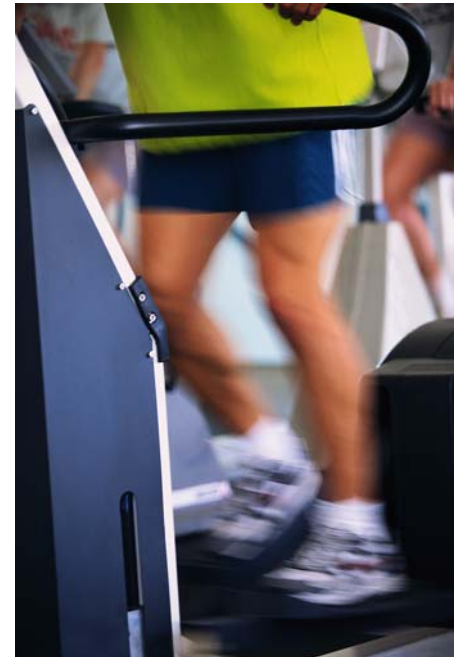
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- Employees with COPD reported missing more days of work
  - 9% reported missing 11 days or more, compared with 3.5%
- Employees with COPD felt less productive at work
  - 2.7% reported reduced productivity most or all of the time, compared with 1.2%
- Unexpectedly – 24.1% of employees with a medical claim for COPD reported they had no health problems!
  - This is lower than the 38.0% reported by employees without COPD.

# Interventions: What does International have in place to address COPD?

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- ↳ Wellness programming for smoking cessation
- ↳ Disease management for employees with the condition



# 2005 Program Launch and Results

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- ↳ Smoking policy integral component of health strategy
- ↳ HRA was required to define smoking status
  - Non-represented population only
  - 8-month grace period to quit smoking
- ↳ Results
  - 90% participation
  - 10% of employees identified themselves as smokers
  - 53% enrolled in the company-paid smoking cessation program
  - 85% quit
  - 80% remain smoke-free after one year
- ↳ \$50 monthly premium differential for smokers



# After Program Launch...

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## → Smoke-free campuses

- Local and state ordinances have been instrumental in establishing smoke-free workplaces



## → Ongoing smoking cessation support

- Quit Plus International
- Chantix smoking cessation program
- On-site medical and behavioral support

# Smoking Policy Today

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- ↳ Smoking status assessed during open enrollment
  - 10 - 15% in 2005
  - 9 - 10% in 2006 and 2007
- ↳ Monthly smoking premium for non-represented employees
- ↳ Continue to offer a variety of smoking cessation options to employees
- ↳ Provide supportive smoke-free environments
- ↳ Represented employees: next targeted population

# Healthy Behavior Incentive Program

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- ↳ Introduced for 2006
- ↳ Employees stratified based on risk
- ↳ Goals
  - Encourage participation in corporate-wide HRA
  - Encourage employees to take action to improve overall health status
  - Reward employees for taking personal accountability for their health
- ↳ HRA linked to internal programs, lifestyle management and disease management programs

# Disease Management COPD Program Intervention Components

## **PARTICIPANT**

### **Education**

Medication adherence, smoking cessation, weight gain, appropriate antibiotic utilization, flu and pneumonia vaccination, Spirometry, *CareLetter, News and Notes*

### **Tools/Resources**

COPD Resource Guide, written action plan, record book

### **Assessments/Summaries**

Plan Participant Goal and Education Summary Letter, Quality of Life, Depression Screener semi-annually

## **PHYSICIAN**

### **Treatment Algorithm**

### **GOLD Guidelines**

### **MD Interventions**

*Influenza & Pneumonia Vaccination*  
*Appropriate Pharmacological Therapy (SABA, anti-cholinergics)*  
*Spirometry Testing*

### **MD Assessment Summaries**

*Initial and Annual Assessments*

## **CLINICAL INDICATORS**

Lung Infection

Smoking

BMI

Flu and Pneumonia Vaccine

Spirometry Testing

# Discussion

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- Sizeable economic burden of COPD is meaningful and relevant
  
- Consider investing in programs for reducing risk factors for COPD and treating COPD
  - Smoking cessation
  - Disease management
  - Ensure supportive benefit design (e.g., explore low co-pays to support medication adherence)

# Discussion

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## ↳ Credible data and modeling allows:

- Identification of the key drivers of higher costs, such as absences vs. health care claims, to focus management efforts.
- ROI calculations before entering into DM or other interventions.
- Tracking savings and other benefits of interventions.
- Tracking changes in the cost of a condition or disease.

## ↳ Methodology applicable to most conditions or disease states.



**Questions?**



Note: Funding for this research was provided by Pfizer and Boehringer-Ingelheim.