CNCD’S AND THE PRIVATE SECTOR: EMPLOYERS AND EMPLOYERS ORGANIZATIONS MUST LEAD.

DR. VICTOR COOMBS.
04TH June, 2015
“Some people change when they see the light others change when they feel the fire.”

Colleen Schrader
The financial crisis and its potential impact on safety and health at work

- Financial Crisis
  - Cutting costs
  - Decreased public spending
  - Decreased production
  - Cutting jobs (downsizing)
  - Shutting down of some facilities

- Re-prioritization of resources
- Reduction of non-productive functions
- Cutting OSH resources
- More part-time temporary work
- More outsourcing/subcontracting
- Dismissing workers

- Loss of OSH professionals in enterprises
- Decline in OSH measures
- Aggravated OSH conditions in informal jobs
- Hazards from overworking in tasks
- Longer working hours for some
- More insecurity
- Psychosocial stress from...

...
Productivity = Potential physical output of the worker or the goods and services generated - process loss (e.g. organizational distress such as the effect of poorly managed downsizing)

Value = \( \frac{\text{Productivity}}{\text{Cost}} \)
### Example of the cost of staff turnover (Johanson – Johren 1996)

<table>
<thead>
<tr>
<th>Cost</th>
<th>Worker/FIM</th>
<th>Office Staff/FIM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrative hours</td>
<td>2,400</td>
<td>2,400</td>
</tr>
<tr>
<td>Work supervisors and line management hour</td>
<td>1,200</td>
<td>1,800</td>
</tr>
<tr>
<td>Interviews and selection</td>
<td>6,000</td>
<td>9,000</td>
</tr>
<tr>
<td>Orientation of a new worker</td>
<td>14,400</td>
<td>108,000</td>
</tr>
<tr>
<td>Guidance of a new worker</td>
<td>14,400</td>
<td>48,000</td>
</tr>
<tr>
<td>Loss of productivity during orientation and training</td>
<td>15,000</td>
<td>34,200</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>53,400</strong></td>
<td><strong>203,400</strong></td>
</tr>
</tbody>
</table>
ORGANIZATIONAL APPROACHES TO INCREASING PRODUCTIVITY

- Re-engineering
- Empowering workers
- Creating high performance teams
- Focusing on total quality
- Investment in human capital
USA Health Care Expenditures and their Percentage of the GDP

Data from Health Care Financing Administration
Companies Around The World Are:

- Decreasing production;
- Cutting jobs;
- Closing factories;
- Laying off workers in large numbers;
- Increasing part-time and temporary work;
- Out-sourcing and subcontracting.
Comparisons of Medical Claims Costs according to Health Risk Levels

Taken from Worksite Health Promotion by Dr. David Chenoweth, 1998
The Integrated Health Management Framework used at the Adolph Coors Company

Human Resources

Health Services

Medical Center

Wellness Center

Psychological Services

External Services

Physical Fitness

“Alcohol: Everybody’s Business”

Stress management

Smoking Cessation

Weight control

Nutrition

Evaluation

Referrals

Referrals

Referrals

Referrals

Referrals

Referrals

Referrals

Referrals

Referrals

Referrals

Referrals

Referrals

Referrals

Referrals
The Staywell process model

Note. From "Control Data's Staywell Program: A Health Cost Management Strategy" by W.S. Jose and D.R. Anderson
Perspectives in Behavioural Medicine: Health at Work by S.M. Weiss, J.E. Fielding, and A. Baum (Eds.), 1991
“If you want to lead the orchestra sometimes you have to turn your back to the crowd.”

Linda Bankoswki
Approximate excess health care costs per risk factor

Source: Health Management Associates database
Economic Burden of Diabetes and Hypertension in Selected Caribbean Countries

Percentage of GDP (%)

- The Bahamas
- Barbados
- Jamaica
- TRT

Legend:
- DIABETES
- HYPERTENSION
- BOTH

These data were provided by Dr. O. Abdullahi Abdulkadri 2001
Age Adjusted Mortality Rates, Selected Caribbean Countries vs USA and Canada

Source: PAHO 2008
% Deaths Due to Selected Risk Factors

- High BP
- High BMI (Obesity)
- Tobacco
- Alcohol
- High Cholesterol
- Physical inactivity
- Low fruit and veg. intake
- Unsafe sex

Source: CAREC / CARICOM 2008
“When the rate of change outside exceeds the rate of change inside the end is in sight”

Jack Welch
Chairman GE
HEALTH SCREENING

- Cardiac Risk Analysis
- Fitness Assessments
- Walk-in Screening
  Worksite Testing
- Group Screenings
“Even if you are on the right track, if you don’t move you're go in’ get run over”.

Will Rogers
HEALTH SCREENING

FITNESS ASSESSMENTS

- Height
- Weight
- Body Mass Index
- Body Measurements
  - Chest
  - Shoulder
  - Waist circumference
  - Hip circumference
  - Waist/Hip circumference
  - Upper/forearm
  - Thigh/calf
- Grip Strength
- Blood pressure
- Cholesterol
- Blood sugar
- Curl ups per minute
- Push ups per minute
- Lung Efficiency (FEV1 & FVC)
- Flexibility
Substance Abusers Have More...

- Behavioural problems
- Divorces
- Family violence
- Anxiety and depression
- Car accidents
- Work related accidents
Substance Abusers Have More... (Cont’d)

- Absenteeism
- Error of judgement
- Missed deadlines
- Loss of productivity
- Health problems
- Days of hospitalization
HEALTH SCREENING

CARDIAC RISK ANALYSIS

Analysis of Risk Levels

- Very low: 2%
- Very high: 0%
- High: 2%
- Moderate: 18%
- Average: 50%

50% of participants were at average risk of attracting Heart Disease
20% of participants were at moderate to High risk of attracting Heart Disease

Source: PETROTIN, VICTOR COOMBS
HEALTH SCREENING

FITNESS ASSESSMENTS -
FINDINGS FOR A TARGET GROUP (104 EMPLOYEES) IN THE REFINERY

**Smoking**

- Non-smoker: 70%
- Cigar and/or pipe: 1%
- 10 Cigs or less/day: 22%
- 11-25 cigs/day: 4%
- 26-39 cigs/day: 2%
- 40 cigs or more/day: 1%
- Grip Strength

- Excellent: 41%
- Needs work: 22%
- Fair: 18%
- Fit: 19%

**Exercise**

- High/Occ/High rec: 6%
- Mod. Occ/Mod. rec: 41%
- Low Occ/Mod. rec: 17%
- Low Occ/Low rec: 25%
- No exercise at all: 8%

**Risk Levels**

- Very low: 0%
- Low: 1%
- Average: 55%
- Moderate: 27%
- High: 3%

**Source:** PETROTRIN, VICTOR COOMBS
HEALTH SCREENING

FITNESS ASSESSMENTS - FINDINGS FOR A TARGET GROUP (104 EMPLOYEES) IN THE REFINERY

**Body Mass Index**
- Excellent (<23): 8%
- Fit 23-25: 22%
- Needs work >28: 45%
- Fair 25-28: 25%

**Blood Sugar Levels**
- <120 mg/dl: 29%
- >121 mg/dl: 71%

**Cholesterol**
- <181 mg/dl: 34%
- 181-205 mg/dl: 22%
- 206-230 mg/dl: 24%
- 231-255 mg/dl: 14%
- >280 mg/dl: 0%

**Blood Pressure**
- <140 mm Hg: 43%
- 140-159 mm Hg: 43%
- >160 mm Hg: 11%
- >180 mm Hg: 5%

**Source:** PETROTRIN, VICTOR COOMBS
## Smoking Cessation Programme

### Summary 2008/2009

<table>
<thead>
<tr>
<th>Category</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of smokers identified</td>
<td>82</td>
</tr>
<tr>
<td>No. of persons on programme</td>
<td>27</td>
</tr>
<tr>
<td>No. of persons quit</td>
<td>22</td>
</tr>
<tr>
<td><strong>Method used</strong></td>
<td></td>
</tr>
<tr>
<td>Patches</td>
<td>6</td>
</tr>
<tr>
<td>Education/ smoking packages /Counselling</td>
<td>21</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>27</td>
</tr>
</tbody>
</table>

Source: PETROTRIN, VICTOR COOMBS
# Health Risk Reduction 2008/2009

Amongst Employees

<table>
<thead>
<tr>
<th>Health parameter</th>
<th>High Risk</th>
<th>Risk Reduction</th>
<th>% Reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blood Pressure</td>
<td>137</td>
<td>27</td>
<td>20</td>
</tr>
<tr>
<td>Blood Glucose</td>
<td>46</td>
<td>8</td>
<td>17</td>
</tr>
<tr>
<td>Cholesterol</td>
<td>51</td>
<td>27</td>
<td>53</td>
</tr>
<tr>
<td>Weight</td>
<td>146</td>
<td>17</td>
<td>12</td>
</tr>
</tbody>
</table>

Source: PETROTRIN, VICTOR COOMBS
# Health Risk Reduction 2008/2009

**NUTRITIONIST INTERVENTION**

## Breakdown Amongst Employees

<table>
<thead>
<tr>
<th>Category</th>
<th>High Risk</th>
<th>Risk Reduction</th>
<th>% Reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blood Pressure</td>
<td>115</td>
<td>87</td>
<td>76</td>
</tr>
<tr>
<td>Blood Glucose</td>
<td>115</td>
<td>93</td>
<td>81</td>
</tr>
<tr>
<td>Cholesterol</td>
<td>135</td>
<td>100</td>
<td>74</td>
</tr>
<tr>
<td>Weight</td>
<td>217</td>
<td>153</td>
<td>71</td>
</tr>
</tbody>
</table>

*Source: PETROTRIN, VICTOR COOMBS*
“Before you can walk in someone else's shoes you must first take off your own.”
# North Karelia Project Outcome

(25 years)

<table>
<thead>
<tr>
<th>Cause</th>
<th>Decline (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CVD mortality 35-64 yr male</td>
<td>68%</td>
</tr>
<tr>
<td>CHD mortality 35-64 yr male</td>
<td>73%</td>
</tr>
<tr>
<td>Cancer mortality</td>
<td>44%</td>
</tr>
<tr>
<td>Lung cancer mortality</td>
<td>71%</td>
</tr>
<tr>
<td>Death from all causes</td>
<td>49%</td>
</tr>
</tbody>
</table>

CNCD Programmes in Developing Countries
(WHO’s Interhealth Programme)

- Mirame Project in Chile
- Tianjin Project in China
- “PROPIA” Project in Argentina
- Interhealth programme in Mauritius
- Interhealth programme in Tanzania
- Interhealth programme in Asia (India, Pakistan, Sri Lanka, Thailand, Malaysia)

Source: Kiangi, G et al, Uusitalo U et al, Dowse, G et al, Tian H-G et al; (BMJ, JHH)
EXAMPLES OF HEALTH PROMOTION

- Healthy Eating
- Smoking Cessation
- Sensible Alcohol Intake
- Exercise
- Weight Reduction
- Stress Management
A risk factor cost appraisal conducted for a large hospital in the Midwest indicated the following risk factor ranking:

<table>
<thead>
<tr>
<th>Rank</th>
<th>Risk factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>Physical inactivity</td>
</tr>
<tr>
<td>2nd</td>
<td>Obesity</td>
</tr>
<tr>
<td>3rd</td>
<td>Family history/genetics</td>
</tr>
<tr>
<td>4th</td>
<td>No pre-work stretching and warm-up</td>
</tr>
<tr>
<td>5th</td>
<td>Age &gt;35</td>
</tr>
<tr>
<td>6th</td>
<td>Poor diet</td>
</tr>
<tr>
<td>7th</td>
<td>High stress</td>
</tr>
<tr>
<td>8th</td>
<td>No job rotation</td>
</tr>
<tr>
<td>9th</td>
<td>Cigarette smoking</td>
</tr>
<tr>
<td>10th</td>
<td>Diabetes</td>
</tr>
</tbody>
</table>

Non-Communicable Diseases in Developed Countries

- North Karelia Project (Finland)
- The Stanford Three-Community Study (USA)
- The Stanford Five-City Project (USA)
- Swiss National Research Programme
- The German Cardiovascular Prevention Study
- Kilkenny Health Project (Ireland)

Source: SBU (The Swedish Council on Technology Assessment in Health Care) 1997 SBU Report no. 134
IHSE MS Elements

- Review the HSEMS
- External/Internal Factors
- Continual Improvement
  - Leadership & Commitment
  - Policy
- Audit
  - Internal audit
  - External Audit
  - Regulatory
- Agencies Audit
- Performance Measurement & Monitoring
- Inspections
- Incident Reporting, Investigation, Correction & Sharing Good Practices
- Check & Correct
  - Structure & Responsibilities
  - Training, Awareness & Competency
  - Consultation & Communication
- Documentation
- Document & Data Control
- Mechanical Integrity
- Operational Control & Restoration
- Implement & Operate
  - Contractor Management
  - Emergency Preparedness and Response
- Plan
  - HSE Policy
  - Strategic Direction
- Risk Management
  - Legal Compliance
  - Objective Setting
  - Occupational Health
  - HSE Programmes
  - Budgeting
  - Process Technology
What has worked

✓ Health Education and media Campaign

✓ Health services intervention: Primary Care

✓ Involvement of community, NGO’s etc

✓ Collaboration with Industry and Businesses

✓ Good liaison between community and national projects

### 4 NCDs, 4 Risk Factors, 4 Pillars

<table>
<thead>
<tr>
<th></th>
<th>Tobacco use</th>
<th>Unhealthy Diets</th>
<th>Alcohol Abuse</th>
<th>Physical Inactivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heart Diseases and Stroke</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Cancer</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Diabetes</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Chronic Lung</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Pillars:
- **Advocacy**
- **MHealth**
- **Capacity Building**
- **Communications**

HCC
“The future belongs to those who are better at getting better.”

Ko Nishimura CEO
Selection, two time Baldridge winner
Thank You