AMCHAM T&T- Launch of the Annual HSSE Conference and Exhibition

CASE MANAGEMENT

Technology. Culture. Results

Dr. Victor Coombs
Chairman, Occupational Safety & Health Authority
BA., MBBS, MSc CHDC, DPH, DIH, AFOM,

Date: 13th July, 2018
OVERVIEW
Relative Areas of Action for Occupational Physicians and Hygienists.
OCCUPATIONAL HEALTH AND SAFETY HAZARDS

1. Physical
2. Chemical
3. Biological
4. Psychosocial
5. Ergonomic
6. Safety
<table>
<thead>
<tr>
<th>PHYSICAL HAZARDS</th>
<th>CHEMICAL HAZARDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Extremes of Temperature</td>
<td>1. Gases</td>
</tr>
<tr>
<td>2. Excessive Noise Levels</td>
<td>2. Fumes</td>
</tr>
<tr>
<td>3. Inappropriate Illumination</td>
<td>3. Vapours</td>
</tr>
<tr>
<td>5. Radiation</td>
<td>5. Liquids</td>
</tr>
<tr>
<td>6. Abnormal Pressures</td>
<td>6. Dusts</td>
</tr>
</tbody>
</table>
### BIOLOGICAL HAZARDS
1. Insects
2. Mites
3. Moulds
4. Yeasts
5. Fungi
6. Bacteria
7. Viruses
8. Biological Dusts

### PSYCHOSOCIAL HAZARDS
1. Stress
2. Boredom
3. Monotony
4. Fatigue
5. Work Pressure
6. Worry
### OCCUPATIONAL HEALTH AND SAFETY HAZARDS (cont’d)

#### ERGONOMIC HAZARDS

1. Body position in relation to work  
2. Repetitive motion  
3. Body Fatigue  
4. Posture  
5. Human Engineering

#### SAFETY HAZARDS

1. Unsafe Acts  
2. Unsafe Conditions  
3. Caught between  
4. Struck by  
5. Struck against  
6. Falling  
7. Contact with  
8. Over exertion/lifting
OCCUPATIONAL DISEASES
Schedule 1 of the Occupational Safety and Health Act Chapter 88:08
DISEASES CAUSED BY AGENTS

Diseases caused by chemical agents

1.1.1  Diseases caused by beryllium or its toxic compounds
1.1.2  Diseases caused by cadmium or its toxic compounds
1.1.3  Diseases caused by phosphorus or toxic compounds
1.1.4  Diseases caused by chromium or its toxic compounds
1.1.5  Diseases caused by manganese or its toxic compounds
1.1.6  Diseases caused by arsenic or its toxic compounds
1.1.7  Diseases caused by mercury or its toxic compounds
1.1.8  Diseases caused by lead or its toxic compounds
1.1.9  Diseases caused by fluorine or its toxic compounds
1.1.10 Diseases caused by carbon disulphide
1.1.11 Diseases caused by the toxic halogen derivatives of aliphatic or aromatic hydrocarbons
1.1.12 Diseases caused by benzene or its toxic homologues
1.1.13 Diseases caused by toxic nitro- and amino-derivatives of benzene or its homologues
1.1.14 Diseases caused by nitroglycerin or other nitric acid esters
1.1.15 Diseases caused by alcohols, glycols, ketones
1.1.16 Diseases caused by asphyxiants; carbon monoxide, hydrogen cyanide or its derivatives, hydrogen sulphide
DISEASES CAUSED BY AGENTS

Diseases caused by chemical agents (continued)

1.1.17 Diseases caused by acrylonitrile
1.1.18 Diseases caused by oxides of nitrogen
1.1.19 Diseases caused by vanadium or its toxic compounds
1.1.20 Diseases caused by antimony or its toxic compounds
1.1.21 Diseases caused by hexane
1.1.22 Diseases of teeth caused by mineral acids
1.1.23 Diseases caused by pharmaceutical agents
1.1.24 Diseases caused by thallium or its compounds
1.1.25 Disease caused by osmium or its compounds
DISEASES CAUSED BY AGENTS

Diseases caused by chemical agents (continued)

1.1.26 Diseases caused by selenium or its compounds
1.1.27 Diseases caused by copper or its compounds
1.1.28 Diseases caused by tin or its compounds
1.1.29 Diseases caused by zinc or its compounds
1.1.30 Diseases caused by ozone, phosgene
1.1.31 Diseases caused by irritants: benzoquinone and other corneal irritants
1.1.32 Diseases caused by any other chemical agents not mentioned in the preceding items 1.1.1 to 1.1.31, where a link between the exposure of a worker to these chemical agents and the diseases suffered is established
DISEASES CAUSED BY AGENTS

Diseases caused by physical agents

1.2.1 Hearing impairment caused by noise
1.2.2 Diseases caused by vibration (disorders of muscles, tendons, bones, joints, peripherals blood vessels or peripherals nerves)
1.2.3 Diseases caused by work in compressed air
1.2.4 Diseases caused by ionizing radiations
1.2.5 Diseases caused by heat radiation
1.2.6 Diseases caused by ultraviolet radiation
1.2.7 Diseases caused by extreme temperature (e.g. sunstroke, frostbite)
1.2.8 Diseases caused by any other physical agents not mentioned in the preceding items 1.2.1 to 1.2.7, where a direct link between the exposure of a worker to these physical agents and the diseases suffered is established
DISEASES CAUSED BY AGENTS

Diseases caused by biological agents

1.3.1 Infectious or parasitic diseases contracted in an occupation where there is a particular risk of contamination
2.1.1 Pneumoconioses caused by sclerogenic mineral dust (silicosis, anthracosilicosis, asbestosis) and silicotuberculosis, provided that silicosis is an essential factor in causing the resultant incapacity or death

2.1.2 Bronchopulmonary diseases caused by hard-metal dust

2.1.3 Bronchopulmonary disease caused by cotton, flax, hemp or sisal dist (byssinosis)

2.1.4 Occupational asthma caused by recognised sensitising agents or irritants inherent to the work process

2.1.5 Extrinsic allergic alveolitis caused by the inhalation of organic dusts, as prescribed by national legislation
DISEASES BY TARGET ORGAN SYSTEMS

Occupational respiratory diseases (continued)

2.1.6 Siderosis
2.1.7 Chronic obstructive pulmonary diseases
2.1.8 Diseases of the lung caused by aluminium
2.1.9 Upper airways disorders caused by recognised sensitising agents or irritants inherent to the work process
2.1.10 Any other respiratory disease not mentioned in the preceding items 2.1 to 2.1.19, caused by an agent where a direct link between the exposure of a worker to this agent and the disease suffered is established
DISEASES BY TARGET ORGAN SYSTEMS

Occupational skin diseases

2.2.1 Skin diseases caused by physical, chemical or biological agents not included under other items

2.2.2 Occupational vitiligo
DISEASES BY TARGET ORGAN SYSTEMS

Occupational musculo-skeletal disorders

2.3.1 Musculo-skeletal diseases cause by specific work activities or work environment where particular risk factors are present.

Examples of such activities or environment include:

a) Rapid or repetitive motion
b) Forceful exertion
c) Excessive mechanical force concentration
d) Awkward or non-neutral postures
e) Vibration

Local or environmental cold may increase risk.
OCCUPATIONAL CANCER
CANCER CAUSED BY THE FOLLOWING AGENTS

3.1.1 Asbestos
3.1.2 Benzidine and its salts
3.1.3 Bis chloromethyl ether (BCME)
3.1.4 Chromium and chromium compounds
3.1.6 Coal tars, coal tar pitches or soot
3.1.7 Beta-napthylamine
3.1.8 Benzene or its toxic homologues
3.1.9 Toxic nitro- and amino-derivatives of benzene or its homologues
3.1.1 Ironizing radiations
3.1.11 Tar, pitch, bitumen, mineral oil, anthracene, or the compounds, products or residues of these substances
3.1.12 Coke oven emissions
3.1.13 Compounds of nickel
3.1.14 Wood dust
3.1.15 Cancer caused by any other agents not mentioned in the preceding items 3.1.1 to 3.1.14, where a direct link between the exposure of a worker to this agent and the cancer suffered is established.
DISEASES BY TARGET ORGAN SYSTEMS

OTHER DISEASES

4.1 Miners’ nystagmus
DEFINITIONS

Toxicology is the study of the adverse effects of chemicals in humans and other living organisms. It plays a fundamental role in chemical risk assessment.

Dose-Response Relationship
The dose-response relationship refers to the correlative relationship between exposure to a chemical (dose) and the effect that occurs (response)
CURRENT MEDICAL SURVEILLANCE

<table>
<thead>
<tr>
<th>Activity</th>
<th>Target Group</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Blood testing for kidney,</td>
<td>Refinery workers</td>
<td>Annual</td>
</tr>
<tr>
<td>liver, blood diseases</td>
<td>E &amp; P workers</td>
<td>Annual</td>
</tr>
<tr>
<td></td>
<td>Others baseline</td>
<td>2 yearly or prn</td>
</tr>
<tr>
<td>2. Audiometric testing</td>
<td>All workers</td>
<td>Baseline</td>
</tr>
<tr>
<td></td>
<td>Noise exposed</td>
<td>Annual</td>
</tr>
<tr>
<td></td>
<td>Minimal exposure</td>
<td>3 yearly</td>
</tr>
<tr>
<td>3. Lung function testing</td>
<td>All workers</td>
<td>Baseline</td>
</tr>
<tr>
<td></td>
<td>R &amp; M</td>
<td>1 to 2 yearly</td>
</tr>
<tr>
<td></td>
<td>E &amp; P</td>
<td>1 to 2 yearly</td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td>As necessary</td>
</tr>
</tbody>
</table>

Coombs 04/05
### CURRENT MEDICAL SURVEILLANCE (cont’d)

<table>
<thead>
<tr>
<th>Activity</th>
<th>Target Group</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. Fitness testing</td>
<td>All workers</td>
<td>Baseline</td>
</tr>
<tr>
<td></td>
<td>R &amp; M</td>
<td>1 to 2 yearly</td>
</tr>
<tr>
<td></td>
<td>E &amp; P</td>
<td>1 to 2 yearly</td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td>As necessary</td>
</tr>
<tr>
<td>5. Cardiac Risk Analysis</td>
<td>All workers</td>
<td>Baseline</td>
</tr>
<tr>
<td></td>
<td>High risk</td>
<td>6 monthly</td>
</tr>
<tr>
<td></td>
<td>Medium risk</td>
<td>Annually</td>
</tr>
<tr>
<td></td>
<td>Low risk</td>
<td>2 to 3 yearly</td>
</tr>
</tbody>
</table>
### CURRENT MEDICAL SURVEILLANCE (cont’d)

<table>
<thead>
<tr>
<th>Activity</th>
<th>Target Group</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>6. Occupational Medicals</td>
<td>All workers</td>
<td>Baseline</td>
</tr>
<tr>
<td></td>
<td>Asbestos workers</td>
<td>prn</td>
</tr>
<tr>
<td></td>
<td>Fire/Security</td>
<td>prn</td>
</tr>
<tr>
<td></td>
<td>Chemical workers</td>
<td>prn</td>
</tr>
<tr>
<td></td>
<td>Radiation workers</td>
<td>prn</td>
</tr>
<tr>
<td></td>
<td>Transport drivers</td>
<td>prn</td>
</tr>
<tr>
<td></td>
<td>Lead workers</td>
<td>prn</td>
</tr>
<tr>
<td></td>
<td>Organic solvent workers</td>
<td>prn</td>
</tr>
<tr>
<td></td>
<td>Based on occupations</td>
<td>prn</td>
</tr>
<tr>
<td></td>
<td>Based on risk/hazard analysis</td>
<td>prn</td>
</tr>
</tbody>
</table>

Coombs 04/05
HIERARCHY OF HAZARD CONTROL

- Elimination
- Substitution
- Isolation
- Administrative Controls
- Engineering Controls
- P.P.E
- Medical Surveillance
Case Management

• What is your view on reporting of “Medical Attention” – What’s the interpretation and expectation of companies/employers/Medical Practitioners?

• What is planned (if anything) to address: the absence of a definition of “Medical Attention” the ambiguity of the definition of “Critical Injury”, the appointment of a “Medical Inspector” and what is OSHA’s approach to informing Medical Practitioners of their Duties and Responsibilities under the Act.

• Section 48 (1) How is a Medical Practitioner to “form an opinion...”, on his own, in the absence of an investigation by the company to reasonably conclude that the disease was a result of workplace exposure?
What is your view on reporting of “Medical Attention”

Section 46 A of the OSH Act provides:

“What an accident causes injury to a person at a workplace whereby the person is unable to perform his usual work or requires medical attention, and such occurrence does not cause death or critical injury leading to disability, the employer shall give notice in the prescribed form within four days of the occurrence, to the Chief Inspector, containing information and particulars of the accident.”

The term “Medical Attention” is not defined under the OSH Act.
- In 2017 OSHA held four (4) National Tripartite Stakeholder Consultations in Port-of-Spain, Macoya, San Fernando and Tobago regarding the identification of areas for amendment under the OSH Act. The purpose of the Consultations was to obtain feedback from all stakeholders in order to inform proposed amendments to the OSH Act.
What is planned to address: the absence of a definition of “Medical Attention”

- Clarity is required as to what constitutes medical attention. This will provide clearer guidelines for employers and the Agency as to what constitutes a reportable injury.

- The Agency currently interprets the term to mean “attention by a medical practitioner which exceeds diagnostic, or observation purposes and requires more serious treatment than what is or can be covered by the first aid facilities.”

- The opinion was arrived at by examining the ILO Codes of Practice and the OSHA Labour Codes that govern organisations in the US and UK legislation in the form of Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR).

- The general consensus is that medical treatment to be reported to the relevant authority excludes first-aid treatment. “First Aid” may have to be defined.
“Critical Injury”

“Critical injury” is defined in Section 4 of the OSH Act as an injury that:

“(a) places life in jeopardy;
(b) produces unconsciousness;
(c) results in substantial loss of blood;
(d) involves the fracture of a leg or arm, but not a finger or toe;
(e) involves the amputation of a leg, arm, hand or foot, but not a finger or toe;
(f) consists of burns to a major portion of the body; or
(g) causes the loss of sight in an eye;”
“Critical Injury”

• There is consensus among stakeholders and OSHA that the current definition is not broad enough and is not in alignment with modern legislation.

• It is proposed that the specified injuries in Regulation 4 (1) of Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR) be considered for expansion of the definition.

• The categorisation of an injury is important as it impacts on the time period within which the accident is required to be reported under the OSH Act as well as the priority with which the accident is investigated by OSH Inspectors.
“Critical Injury”

OSHA has proposed to replace the current definition with the list of specified injuries stated at Regulation 4 of RIDDOR:-

Where any person at work, as a result of a work-related accident, suffers-

(a) any bone fracture diagnosed by a registered medical practitioner, other than to a finger, thumb or toe;
(b) amputation of an arm, hand, finger, thumb, leg, foot or toe;
(c) any injury diagnosed by a registered medical practitioner as being likely to cause permanent blinding or reduction in sight in one or both eyes;
(d) any crush injury to the head or torso causing damage to the brain or internal organs in the chest or abdomen;
(e) any burn injury (including scalding) which-
   (i) covers more than 10% of the whole body’s total surface area; or
   (ii) causes significant damage to the eyes, respiratory system or other vital organs;
(f) any degree of scalping requiring hospital treatment;
(g) loss of consciousness caused by head injury or asphyxia; or
(h) any other injury arising from working in an enclosed space which-
   (i) leads to hypothermia or heat-induced illness; or
   (ii) requires resuscitation or admittance to hospital for more than 24 hours
The appointment of a “Medical Inspector”

Section 71 (1) (b) of the OSH Act provides that:

The Minister may-

(b) on the advice of the Chief Medical Officer-
(i) designate a suitably qualified medical officer as a medical inspector; or
(ii) appoint a suitably qualified medical practitioner as a medical inspector on such terms and conditions as he sees fit.
What is planned to address the appointment of a “Medical Inspector”

- Although there is a position of Medical Inspector on the organisational structure, OSHA is in the process of reviewing the terms and conditions of the post.

- The Agency is exploring the possibility of engaging a suitably qualified medical practitioner on a consultancy basis so that when a case is referred to the Agency, we can begin investigations within the shortest possible timeframe.

- In the absence of a Medical Inspector, the Agency will refer any reported case of Occupational Illness to the Chief Medical Officer (CMO) of the Ministry of Health who will assign the case to a suitably qualified and experienced Medical Practitioner in the area of Occupational Safety and Health.
What is OSHA’s approach to informing Medical Practitioners of their Duties and Responsibilities under the Act?

- The Agency has recognised that the reporting of Occupational Illnesses and disease from Medical Practitioners (MPs) through the CMO requires significant improvements.

- Our database reflects that there has been less than 5 reports of occupational disease over the last 5 years.

- Revised Form 4 developed for use by MPs to report to the CMO any Occupational Illness and disease.

- Once the review of the form is finalised OSHA will formally share the document with all MPs.

- Increased awareness and sensitisation of MPs’ duties and responsibilities under Section 48 of the Act in collaboration with the CMO.
Existing Occupational Safety and Health Form 4 prescribed by the OSH Act.
Revised Form 4 (Notice of Occupational Disease)

<table>
<thead>
<tr>
<th>A. PARTICULARS OF EMPLOYER/ OCCUPER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of Employer/ Occupier:</td>
</tr>
<tr>
<td>Address of Industrial Establishment where Exposure Occurred:</td>
</tr>
<tr>
<td>Address of Industrial Establishment different from above:</td>
</tr>
<tr>
<td>Nature of Industry:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B. PARTICULARS OF AFFECTED PERSON</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of Affected Person:</td>
</tr>
<tr>
<td>Age/ Ext Birthday:</td>
</tr>
<tr>
<td>Address of Affected Person:</td>
</tr>
<tr>
<td>Occupation/ Job Description:</td>
</tr>
<tr>
<td>Phone: __________________ Fax: __________</td>
</tr>
<tr>
<td>Email: __________________________</td>
</tr>
<tr>
<td>Description of work done by employee:</td>
</tr>
<tr>
<td>Hours of work:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>C. DETAILS OF ILLNESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagnosis of Occupational Disease:</td>
</tr>
<tr>
<td>Confirmed [ ] Suspected [ ]</td>
</tr>
<tr>
<td>Symptoms:</td>
</tr>
<tr>
<td>Part of the body affected:</td>
</tr>
<tr>
<td>Date of first symptoms:</td>
</tr>
<tr>
<td>Suspected agent/ cause/ agent:</td>
</tr>
<tr>
<td>Date of Diagnosis:</td>
</tr>
<tr>
<td>Exposure to agent containing [ ] Yes [ ] No [ ] Not sure</td>
</tr>
<tr>
<td>Certainty of relation to work:</td>
</tr>
<tr>
<td>[ ] High [ ] Moderate [ ] Low</td>
</tr>
<tr>
<td>Are other employees likely to be affected [ ] Yes [ ] No [ ] Not sure</td>
</tr>
<tr>
<td>Length of employment in Occupation of concern:</td>
</tr>
</tbody>
</table>

| Name and Address of Hospital or Clinic: |
| Contact Details: |

<table>
<thead>
<tr>
<th>D. REPORTING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has this case entered into the Company Register [ ] YES [ ] NO</td>
</tr>
<tr>
<td>Was the Chief Medical Officer (CMO) notified [ ] YES [ ] No</td>
</tr>
<tr>
<td>Date of Notification to CMO:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>E. PARTICULARS OF PERSON REPORTING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name: ____________________________</td>
</tr>
<tr>
<td>Occupation/ Job Description:</td>
</tr>
<tr>
<td>Phone: __________________ Fax: __________</td>
</tr>
<tr>
<td>Email: ____________________________</td>
</tr>
<tr>
<td>Signature: ________________________</td>
</tr>
<tr>
<td>Date: ____________________________</td>
</tr>
</tbody>
</table>
Section 48 (1) How is a Medical Practitioner to “form an opinion...”, on his own, in the absence of an investigation by the company to reasonably conclude that the disease was a result of workplace exposure?

Section 48 (1) of the OSH Act provides:

“Where a medical practitioner who, having attended to a patient, forms the opinion that the patient is suffering from an occupational disease contracted in any industrial establishment or in the course of his employment, he shall within forty-eight hours of having formed that opinion send to the Chief Medical Officer a notice stating the disease from which the medical practitioner is of the opinion that the patient is suffering and the industrial establishment in which the patient is and was last employed.”
Draft Regulations under the Occupational Safety and Health Act

Approved by the OSH Authority:
1. Lifting Operations and Lifting Equipment Regulations (“LOLER”)
2. Provision and Use of Work Equipment Regulations (“PUWER”)
3. The Gas Safety (Use, Conveyance and Storage) Regulations (“GSR”)
4. Safety of Pressure Systems Regulations

Under review by the OSH Authority:
5. Personal Protection and Equipment Regulations (PPE)
6. Blasting and use of Explosives Regulations

Prioritised for under process for development:
7. The Welfare Regulations
8. Control of Substances Hazardous to Health (COSHH)
9. Maternity
10. Working from Heights
Vision for the OSH Agency

“To ensure the highest level of occupational safety, health and welfare for all persons in Trinidad and Tobago.”
Thank you
Questions?