Non-Communicable Diseases and Occupational Health
Opportunities and Challenges

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Environmental factors cause over 25% of global burden of disease

Source: WHO Burden of Disease statistics
# Global burden of disease due to occupational risks, 2004

<table>
<thead>
<tr>
<th>Disease</th>
<th>Attributable deaths</th>
<th>Attributable DALYs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lung cancer</td>
<td>191,000</td>
<td>1,315,000</td>
</tr>
<tr>
<td>Leukaemia</td>
<td>7,000</td>
<td>101,000</td>
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<tr>
<td>Mesothelioma</td>
<td>43,000</td>
<td>564,000</td>
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<tr>
<td>COPD</td>
<td>375,000</td>
<td>3,804,000</td>
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<tr>
<td>Pneumoconiosis</td>
<td>29,000</td>
<td>1,061,000</td>
</tr>
<tr>
<td>Asthma</td>
<td>38,000</td>
<td>1,621,000</td>
</tr>
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</table>
WHO Global plan of action on workers' health 2008-2017

- Develop & implement policy instruments on workers' health
- Incorporate workers' health into other policies
- Protect and promote health at the workplace
- Improve the performance of and access to OH services
- Provide & communicate evidence for action and practice
"Part of the burden of non-communicable diseases is attributable to occupational risk factors including exposure to chemical, physical, biological, ergonomic and psychosocial hazards at work. Regulation to prevent exposure to such hazards must be implemented as necessary. Multisectoral action, including monitoring by concerned social partners, is critical to reinforce implementation of national policies on health at work."

*Prevention and control of non-communicable diseases. Report of the Secretary-General to the UN General Assembly, 19/05/2011

UN Secretary General
On 16 September 2011 the UN General Assembly called upon the private sector

"to promote and create an enabling environment for healthy behaviours among workers, including by establishing tobacco-free workplaces and safe and healthy working environments through occupational safety and health measures, including, where appropriate, through good corporate practices, workplace wellness programmes and health insurance plans."*

Political Declaration of the High-level Meeting of the General Assembly on the Prevention and Control of Non-communicable Diseases. UN General Assembly, Sixty-sixth session, Agenda item 117, 16/09/2011
On 21 October 2011 in Rio de Janeiro, 120 governments pledged

"To strengthen occupational health safety and health protection and their oversight and encourage the public and private sectors to offer healthy working conditions so as to contribute to promoting health for all."

*Rio Political Declaration on Social Determinants of Health, World Conference on Social Determinants of Health, Rio de Janeiro, Brazil, 19-21 October 2011*
There are effective interventions for prevention and control of occupational ill-health

- **Primary**
  - Legislation and incentives
  - Engineering controls
  - Personal protective equipment
  - Training

- **Secondary**
  - Medical surveillance
  - Screening
  - Recognition of occupational diseases

- **Tertiary**
  - Job modification
  - Return-to-work
  - Rehabilitation

Which interventions are the most effective?
Which interventions can be delivered at the primary care level?
Effective workplace interventions in reducing non-communicable diseases.

• Ban the use of asbestos to reduce cancer
• Raise awareness and introduce more strict regulation for improving the quality of work environment
• Ban tobacco smoking at all indoor workplaces
• Provide active and safe methods of travelling to and from workplaces
• Promote physical activity at the workplace.
Cancer Control
Knowledge into Action
WHO Guide for Effective Programmes

Prevention

http://www.who.int/cancer/modules/Prevention%20Module.pdf
Stepwise approach to prevention of cancer

<table>
<thead>
<tr>
<th>CORE</th>
<th>EXPANDED</th>
<th>DESIRABLE</th>
</tr>
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<tbody>
<tr>
<td>• <strong>Stop using all forms of asbestos</strong></td>
<td>• Assess occupational cancer risks</td>
<td>• Develop programmes for cancer prevention and control in the workplace</td>
</tr>
<tr>
<td>• Develop regulatory standards and enforce control of the use of known carcinogens in the workplace</td>
<td>• Introduce integrated management of carcinogenic chemicals</td>
<td>• Organize registries of occupational exposures to carcinogens and exposed workers</td>
</tr>
<tr>
<td>• Avoid introducing known carcinogens into the workplace</td>
<td>• Train workers and managers in controlling occupational carcinogens</td>
<td>• Conduct assessments for carcinogenic risk of industrial and agricultural chemicals</td>
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<tr>
<td>• Include occupational cancer in the national list of occupational diseases</td>
<td>• Substitute carcinogens with less hazardous substances</td>
<td>• Estimate the national occupational burden of disease from carcinogens</td>
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<tr>
<td>• Identify workers, workplaces, and worksites with exposure to carcinogens</td>
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</table>
Every year at least 107,000 people die from asbestos-related diseases

- Annual deaths attributable to asbestos
  - at least 107,000 from lung cancer, mesothelioma and asbestosis due to occupational exposure (2010 estimates)
  - Additionally at least several thousands deaths can be attributed to other asbestos-related cancers and to non-occupational exposure
- Asbestos is the single most important occupational carcinogen causing one third of all estimated deaths from occupational cancer
WHO recommendations for elimination of asbestos-related diseases

• Elimination of the exposure
  – Recognize that stopping the use of asbestos is the most effective preventive measure
  – Provide information about safer substitutes
  – Develop economic and technological mechanisms to stimulate substitution

• Asbestos abatement
  – Avoid exposure during asbestos removal
  – Develop regulatory and workplace control measures for asbestos abatement

• Medical surveillance
  – Improve early diagnosis, treatment, rehabilitation and compensation of asbestos-related diseases
  – establish registries of people with current and past exposures
1. Prevention of the environmental and occupational exposures that cause cancer must be an integral component of cancer control worldwide. Such prevention will require strong collaboration across sectors - the health, environment, labour, trade and financial sectors and among countries, and also with civil society and the media.

2. WHO to develop a global framework for control of environmental and occupational causes of cancer that concentrates on occupational and environmental causes of cancer identified by IARC as proven or probable carcinogens.

3. WHO to lead development of measurable indicators of exposure and disease to guide cancer surveillance in countries around the world.

4. All countries to adopt and enforce legislation for protection of populations, especially the most vulnerable populations, against environmental and occupational cancers.

5. All countries to develop communication campaigns that educate populations about environmental and occupational causes of cancer and about preventive strategies.

6. Corporations to comply with all rules and regulations for prevention of environmental and occupational cancers and to use the same protective measures in all countries, developed and developing, in which they operate.

7. Research to discover still unrecognized environmental and occupational causes of cancers so as to guide future prevention.
WHO Global Framework of Healthy Workplaces

http://www.who.int/occupational_health/publications/healthy_workplaces_model.pdf
Physical Work Environment
- Introduce smoke-free workplace policies
- Install machine guards or local exhaust ventilation
- Train workers on safe operating procedures
- Eliminate a toxic chemical or substitute with one less hazardous

Psychosocial Work Environment
- Reallocate work to reduce workload
- Zero tolerance for harassment, violence, discrimination
- Respect work-family balance
- Recognize & reward good performance
- Meaningful worker input into decisions that affect them

Personal Health Resources
- Root causes of poor health are identified, recorded and assessed & best practices are promoted
- Provide free/affordable PHC to workers/family members
- Develop company guidelines to avoid occupational risks
- Accommodate workers with disabilities, going beyond regulatory requirements
- Provide fitness facilities, classes or equipment for workers
- Provide healthy food choices (e.g., cafeteria)
- Provide smoking cessation assistance
- Provide information about alcohol and drugs, and employee assistance counseling

Enterprise Community Involvement
- World Health Organization