PAHO/WHO Regional and Global Policy Frameworks on Workers’ Health and Occupational Cancer

International Conference on Occupational and Environmental Cancer

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Outline

1. Situational analysis
   - Global
   - Regional

2. Policy
   - Global Plan of Action on Workers’ Health
   - Regional Plan for Cancer Prevention and Control

3. Activities

4. Challenges and opportunities
Global burden of disease

- 2-4% of cancers are due to exposure at work\(^1\)
- 1.6 million DALYs per year\(^2\)

Common carcinogens

- Approximately 160 occupational carcinogens*\(^3\)
  - e.g. pesticides, tobacco smoke, sun, asbestos, benzene, crystalline silica\(^4\)

3 major occupational cancers

- lung cancer
- leukemia
- malignant mesothelioma\(^2\)

*28 definite; 27 probable; 113 possible human carcinogens (3)
1Peto 2001; 2Driscoll et al. 2003; 3Siemiatycki et al. 2004; 4Clapp et al. 2005
Only 5 - 10% of all occupational diseases are reported.

5% of occupational research is conducted in developing countries which possess 90% of the burden of disease.

Rosenstock et al. 2005

Tip of the iceberg
Occupational cancer in the Americas: who is exposed?

- Many jobs are known to expose workers to carcinogens:
  - Agriculture
  - Oil refining
  - Mining
  - Health care
  - Workplaces with indoor tobacco smoke

- The risk of lung cancer among males in New Mexico is approximately 14% for employment in uranium mining, underground mining, and welding\(^1\)

- Deaths due to occupational cancer are 2-4 times higher than deaths due to work-related injury in the USA\(^2\)

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Risk factors in the Americas

**Viral Infections**
The proportion of hepatitis B infection due to contaminated sharps among health care workers is up to 83%

**Silica**
Between 15-22% of miners in Bolivia, Chile, and Colombia suffer from silicosis¹

**Pesticides**
Women working in banana plantation had a significant excess of cervical cancer in comparison to the general population² ³. Childhood leukemia is also increased as a result of maternal exposure.

Risk factors in the Americas

**Tobacco**
Workers heavily exposed to second hand tobacco smoke at their workplaces have **twice the risk** of developing lung cancer than those working in a smoke-free environment\(^1\)

**Asbestos**
is responsible for **50% of all deaths** from occupational cancer\(^2\)

**Solar Radiation**
Sun exposure caused approximately **115,000 new cases** of skin cancer in 2008 in Brazil, mostly among rural workers\(^3\). The **most common carcinogenic exposure** in Costa Rica is solar radiation.

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Trends of occupational cancer in the Americas

Mortality from female lung and breast cancers
Testicular cancer and leukemia

Countries vary in their profiles for occupational cancer due to:
- Main industrial sector
- Occupational health and safety standards
- Social and legal protection of workers
- Access to occupational health care services

1. Bosetti et al 2005
Proportion of lung cancer and leukemia due to workplace exposure

AMR A: CAN, USA, CUB
AMR B: COL, GUY, PAN, SUR, BRA, COR, VEN, ANT, BAR, BLZ, DOM, DOR, ELS, GRE, HON, JAM, St. Kitts & Nevis, St. Lucia, St. Vincent & the Grenadines, MEX, CHL, TRT, BAH, PAR, ARG
AMR D: ECU, PER, GUT, HAI, NIC, BOL, PER

Driscoll et al 2005
Deaths (thousands) from lung cancer, leukemia, and malignant mesothelioma due to workplace exposure

<table>
<thead>
<tr>
<th>Region</th>
<th>Lung Cancer</th>
<th>Leukemia</th>
<th>Mesothelioma</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Males</td>
<td>Females</td>
<td>Males</td>
</tr>
<tr>
<td>Americas-A</td>
<td>6.7</td>
<td>1.6</td>
<td>0.4</td>
</tr>
<tr>
<td>Americas-B</td>
<td>3.6</td>
<td>0.4</td>
<td>0.2</td>
</tr>
</tbody>
</table>

Source: Driscoll et al. 2005

Gender and intra-regional inequities
Preventing occupational cancer is cost-beneficial

- **Treatment, care, and rehabilitation costs**
  - In Chile, treatment for tobacco-related lung cancer accounted for 6% of total health care costs in 2004\(^1\)

- **Workplace cost of diseased workers**
  - Days off work limits productivity and outputs
  - Premature death

- **Social costs of occupational cancer**
  - Loss of household income limits opportunities for growth
  - Housekeeping, care giving, medical treatments, transportation, etc.

- **Aging population**
  - Occupational cancers are chronic with long latency periods

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1. American Cancer Society
WHO Global Plan of Action on Workers’ Health 2008-2017

5 Objectives

• Strengthen the governance and leadership function of national health systems to respond to the specific health needs of working populations

• Establish basic levels of health protection at all workplaces and strengthen health promotion at work

• Ensure access of all workers to preventive health services and link occupational health to primary health care

• Improve the knowledge base for action and linking health and work

• Stimulate incorporation of actions on workers health into other policies
WHO Global Plan of Action on Workers’ Health 2008-2017

Occupational and environmental cancer

• Health promotion and prevention of occupational cancers
• Elimination of asbestos-related diseases
• Hepatitis B immunization for health care workers
• Elimination of second-hand tobacco smoke from all indoor workplaces
• National registries, reporting and information systems
Elimination of asbestos-related diseases

Strategies:
1. Stop the use of all types of asbestos
2. Provide information about safer substitutes, including economic and technologic mechanisms to stimulate its replacement
3. Prevent exposure in place and during removal (abatement)
4. Improve early diagnosis, treatment, social and medical rehabilitation and establish registries
Regional overview

Policy
• Plan of Action for Cancer Prevention and Control

Activities
• PLAGSALUD
• World Day for Safety and Health at Work 2008
• Americas Silicosis Initiative
• Hepatitis B immunization campaign
• Vaccination Week in the Americas 2009
PAHO/WHO Collaborating Centers and Participating NGOs in Occupational Health

- UIC, University of Illinois at Chicago
  Great Lakes Centers for Occupational & Environmental Safety and Health, USA
- IAPA, Canada
- INSAT
- University of Massachusetts Lowell, USA
- NIOSH, USA
- American Organization
- FUNDACENTRO, Brazil
- ISP, Chile
- ISP, Instituto de Salud Pública de Chile
- CCOHS, Canada
- CCOHS, Canadian Centre for Occupational Health and Safety
- FUNDACENTRO, Brazil
- IAPA, Canada
- IOM, Cuba
- IRET, Costa Rica
- ACHS, Chile
- Sesi, Brazil
- CINBIOSE, Quebec
- National Institute of Public Health, Quebec
- Southwest Center for Occupational & Environmental Health, USA
- SESI, Serviço Social de Indústria
- SESI, Brazil
- UNESCO
- UNESCO
- UNESCO
PAHO Plan of Action for Cancer Prevention and Control

Goals:
- Prevent what is preventable
- Cure what is curable
- Provide palliative care for patients in need
- Monitor and manage for measurable results

Lines of Action:
- Policy and advocacy
- Disease management
- Health promotion and disease prevention
- Monitoring and surveillance
Partners’ Forum

Goal
• To discuss how to stimulate environment and policy changes
• To strengthen partnerships to take action on agreed objectives
• To create synergy and address underlying risk factors of chronic diseases, making the healthy choice the easier choice and supporting the regional strategy and related mandates

Workplace wellness component
Programs and policies e.g. smoke-free workplace, healthy food in canteens, lifestyle education, screening to identify high risk employees for intervention
PLAGSALUD

- Central America, 1995-2005

- **Goal**: reduce acute pesticide poisoning and support the implementation of sustainable alternative agriculture
  - National Epidemiological Surveillance System
  - Research
  - Legislation
  - Train on alternatives, risk assessment, proper handling, and effects on human health and the environment
  - Inter-sectoral and inter-agency coordination
  - Implement alternatives (e.g. organic farming, integrated pest management)
“How cancer is caused by our workplace and environment – and what we can do about it”

- 2008 World Day for Safety and Health at Work
- Over 100 participants from more than 20 countries
- Development of an asbestos atlas
Millions of workers in the Americas are exposed to silica at work

The Colombian Government estimates that **1.8 million** workers are at risk of developing silicosis.

In Chile, about **5.4%** of the formal and informal workforce has a high probability of exposure to silica.

At least **1.7 million** workers exposed in the United States.

In Brazil, about **2 million** workers in the formal sector are exposed to silica for as long as **30%** of their working hours.

Frequency of occupational exposure to silica dust in Brazil, 2002-2003
Americas Initiative to Eliminate Silicosis

Goal: global elimination of silicosis by 2030

Partners: WHO, PAHO, ILO, NIOSH, Chile, Brazil, Peru

Components:
- Implementation of control methods
- Laboratory analytical techniques
- Respiratory protection training
- Silicosis surveillance systems
- Training courses on spirometry and radiologic reading using ILO technique
Americas Initiative to Eliminate Silicosis

- **Countries that have joined:** Mexico, Uruguay, Argentina, etc.

- Countries establish National Plans, Action Plans, and National Profiles involving multi-sectoral stakeholders

- Model for other regions to meet global target

Pan American Health Organization
Hepatitis B immunization of health care workers in Peru

Policy Development
- Presidential Mandate
- National Plan for preventing NSI among HCWs

Immunization Campaign Outcomes
- Over 500,000 health care workers vaccinated in 34 regions

Training in Occupational Health & Safety
- 1,200 HCWs trained and 7,300 HCWs reached with the toolkit
Vaccination Week in the Americas 2009

AIDE-MEMOIRE
for an effective approach to the immunization of health workers against hepatitis B

Are health workers at risk of exposure to hepatitis B virus (HBV)?

Yes! HBV is an important occupational hazard for health workers.

Preventively, health workers have a 15 to 25% risk of acquiring HBV from infected blood.

What is hepatitis B?

HBV is a viral infection of the liver that can cause acute and chronic disease. It is transmitted through blood-to-blood or blood-to-skin contact. A vaccine for HBV is highly effective and is recommended for all health workers.

How can health workers be protected against HBV?

• Immunize
• Achieve standard precautions
• Train health workers about modes of transmission and preventive measures
• Foster access to post-exposure management services
• Track and report exposure to blood and body fluids

Do you have immunization procedures for patients at risk for HBV infection?

Yes! Immunization is recommended for all health workers, including those at high risk for HBV infection. Immunization is particularly important for health workers who perform procedures that involve contact with blood or body fluids.

The importance of vaccination includes:

• Reducing the risk of HBV infection
• Reducing the risk of chronic hepatitis B
• Reducing the risk of cirrhosis and liver cancer

Hepatitis B Immunization of Health Workers

A Checklist

Ensuring a Successful Vaccination Campaign Targeting Health Workers

Action Plan for immunizing health workers

• Identify responsible authority (e.g., occupational health unit)
• Implement occupational health and immunization policies and guidelines
• Integrate immunization activities within existing health and safety plans
• Allocate human and financial resources

Effective strategies to increase vaccination coverage:

• Demonstrate management commitment to vaccine programs to the health of employees, including providing resources needed to prevent exposure.
• Provide and promote accessible and free on-site vaccination.
• Expand participation in vaccination by using a variety of communication methods.
• Educate health workers about the importance of vaccination and the protection it provides.
• Use reminders to ensure completion of all three doses of hepatitis B vaccine.
• Integrate immunization into pre-employment orientation for employees and students.
• Monitor immunization coverage regularly.

Who should be immunized?

• Health workers who perform procedures that involve contact with blood or body fluids.
• Health workers who are at risk of exposure to HBV.

Hepatitis B Immunization

• Recommended schedule: 0, 1, and 6 months
• Dose: 10 μl, intramuscular injection
• Serological testing:
  • Pre-vaccination: not indicated
  • Post-vaccination: not required as part of routine program

http://new.paho.org/hq/index.php?option=com_content&task=view&id=750&Itemid=834
Cancer registries

- “No data, no problem”
- Cover 1/6 of the world’s population
- Few countries in the Americas have registries that cover all or part of the national population

Source: American Cancer Society
Challenges and opportunities

- Information systems
  - Exposure history, epidemiology

- Surveillance
  - Sentinel cases e.g. mesothelioma (asbestos)

- Prevention and early detection
  - Prevent exposure to known occupational carcinogens
  - Build capacity of clinicians to diagnose occupational cancer

- Informal sector

- Carcinogenic drugs in the health care sector

- Denmark first country to consider breast cancer an occupational disease
Information dissemination and resources

CCOHS free e-course on Occupational and Environmental Cancer

http://www.ccohs.ca/products/courses/prevent_cancer/

EPNet™
Exposure Prevention Information Network

GeoLibrary.org

Cochrane Occupational Health Field

The reliable source of evidence in occupational health
Thank you
Gracias
Merci
Obrigada

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