Learning objectives

• Understand the importance of global occupational health & the limited resources provided by industry and governments
• Understand prominent positions UN agencies have in occupational health & limitations imposed by member states
• Appreciate complexity of the global workforce & the inadequacy of laws and enforcement to protect workers
• Appreciate importance of major industries such as agriculture, construction, and electronics & role that labor plays in occupational health
• Appreciate difficulty of interpreting global programs when industry asserts such commanding control over occupational health
Global Occupational Health

- Global occupational health is largely ignored
- Occupational Injuries and diseases are increasing
- Working conditions are not improving
- Access to care and benefits is very limited
- United Nations agencies are politically obstructed
- Agency funding is inadequate at all levels

**Important Note**: Most of the 49 content slides in this module are backed up by extensive notes, references and suggested readings, and some slides are supplemented by detailed case studies. These resources are on a separate file with ~111 pp. of notes, each one of which is linked to a specific numbered module slide. The notes are then followed by 17 quiz questions and their answers. The notes filename is: *Global Occupational Health Supplementary Notes*
Global Working Conditions

The present-day upheaval is fundamentally similar to the great industrial revolutions of the past, yet distinctive in its size and scope. The current revolution counts recruits in the billions.

William Greider, One World, Ready or Not, 1998

Although many countries have developed laws and enforcement activities, working conditions for the majority of the world’s workers do not meet the minimum standards and guidelines set by the World Health Organization (WHO) and the International Labor Organization (ILO).

United Nations, 2005
Small and Medium-sized Enterprises*

• 19 million small and medium-sized enterprises (SMEs) in the European Union. They…
  – Operate in hugely different sectors
  – Employ nearly 75 million people

• SMEs account for ~82% of all occupational injuries, even rising to about 90% for fatal accidents.

• European Agency for Safety and Health at Work, 2005
Informal Sector*

- In developing, transitional, and developed countries, bulk of new employment is in the informal economy (ILO, 2005)
  - Informal economy is unrecognized and unprotected by legislation
  - Jobs are not being created by a dynamic new sector, pushing more people into survival and subsistence activities.

*Informal sector is all economic activities by workers and economic units that are—in law or in practice—not covered or insufficiently covered by formal arrangements…or are operating outside the formal reach of the law.
Migrant Workers

• Migrant workers are assets to every country where they bring their labor. Let us give them the dignity they deserve as human beings and the respect they deserve as workers.

Juan Somavia, Director-General, ILO, 2006
Women Workers

Often the decision to seek employment abroad is not made by the individual woman herself, but rather by her family, especially by the male members. It is the family that makes the decision to send daughters and wives overseas to “earn well, save and give their family a bright future.”

ILO, 2006
Child Labor

- Child labor is widespread
- Prevention is difficult in developing countries
- Perverse economic incentives prevail
- Child workers are compliant and cheap
- Injuries and illnesses go unreported
- No real social benefit is achieved
Globalization

Globalization is the process of corporations moving their money, factories and products around the planet at ever more rapid rates of speed in search of cheaper labor and raw materials and governments willing to ignore or abandon consumer, labor and environmental protection laws. As an ideology, it is largely unfettered by ethical or moral considerations.

Mark Ritchie, Globalization vs. Globalism, 2005
Multinational Corporations

Corporations are like the feudal domains that evolved into nation-states; they are nothing less than the vanguard of a new Darwinian organization of politics. Multinational corporations are the most powerful political institutions of our time. Of the world’s hundred largest economies, fifty-one are not countries but corporations. General Motors’ annual sales are greater than the gross national products of Denmark and Norway. Phillip Morris has a bigger economy than Singapore.

Robert D. Kaplan, Atlantic Monthly, 2004
International Agencies

• With rare exception, the developed countries defer to the United Nations or one of its units to assume responsibility for international occupational health and safety (OHS).
  – World Health Organization
  – International Labor Organization
  – International Program for Chemical Safety
World Health Organization (WHO)

- WHO is responsible for…
  - Technical aspects of occupational safety and health
  - Promotion of medical services and hygienic standards
- WHO encourages national occupational health policies and strategies through annual World Health Assembly Resolutions.
WHO Collaborating Centers

- WHO collaborating centers play a strategic role by carrying out one or more of the following functions:
  - collection and dissemination of information
  - participation in collaborative research
  - education and training, including research training
  - coordination of multi-institutional activities
  - provision of information and advice on scientific, technical and policy issues
Occupational Disease

• Annual job-related injuries, diseases and deaths
  – 100 million cases
  – Over 2 million deaths
  – Cases appear to be rising due to rapid industrialization in some developing countries
  – Occupational disease causes about four times as many deaths (1.7 million/year) as occupational injuries

WHO, 2006
Protective Standards

The standard setting process is very open to manipulation by business interests, and this is not limited to just a few chemicals. A health standard is a government’s way of telling workers what is acceptable, if not quite safe, and the only honest thing for public health workers to do with unsupportable standards is to remove them as the official illusions they are.

Barry Castleman, 2006
International Labor Organization

The ILO is an international coordinating body that plays an important role in promoting uniform policies for occupational health and safety in all countries. The ILO sets minimum standards in the field of occupational health and safety that have a strong ethical component. The ILO reports that occupational health and safety laws cover only 10 percent of the population in developing countries, omitting many major hazardous industries and occupations. These omissions include agriculture, fishing, forestry, and construction, small-scale enterprises, and the informal sector.
Occupational Injury

The global challenge of providing for worker health and safety is ever greater today. The magnitude of the occupational health burden in the world is overwhelming, and the causes and mechanisms are multiple and complex.

ILO, 2005
Occupational injuries and diseases, if accurately reported, would be among the five leading causes of morbidity and mortality throughout the world. While international standards obligate employers to pay for occupational injury and disease, inadequate prevention, detection, and compensation make a mockery of these standards.

WHO, 2000
ILO Conventions

The ILO Conventions are intended to guide all countries in the promotion of workplace safety and in managing occupational safety and health programs. ILO Conventions are international agreements that have legal force only if they are ratified by ILO member states. The most important ILO Convention on Occupational Safety and Health has been ratified by only 42 of the 179 ILO member States.
<table>
<thead>
<tr>
<th>Instrument</th>
<th>Ratifications (as at 01.03.04)</th>
</tr>
</thead>
<tbody>
<tr>
<td>White Lead (Painting) Convention, 1921 (No. 13)</td>
<td>62</td>
</tr>
<tr>
<td>Marking of Weight (Packages Transported by Vessels) Convention, 1929 (No. 27)</td>
<td>65</td>
</tr>
<tr>
<td>Underground Work (Women) Convention, 1935 (No. 45)</td>
<td>97</td>
</tr>
<tr>
<td>Labour Inspection Convention, 1947 (No. 81)</td>
<td>130</td>
</tr>
<tr>
<td>Protocol of 1995 to the Labour Inspection Convention, 1947 (P. 81)</td>
<td>10</td>
</tr>
<tr>
<td>Radiation Protection Convention, 1960 (No. 115)</td>
<td>47</td>
</tr>
<tr>
<td>Guarding of Machinery Convention, 1963 (No. 119)</td>
<td>50</td>
</tr>
<tr>
<td>Hygiene (Commerce and Offices) Convention, 1964(No. 120)</td>
<td>49</td>
</tr>
<tr>
<td>Maximum Weight Convention, 1967 (No. 127)</td>
<td>25</td>
</tr>
<tr>
<td>Labour Inspection (Agriculture) Convention, 1969 (No. 129)</td>
<td>41</td>
</tr>
<tr>
<td>Benzene Convention, 1971 (No. 136)</td>
<td>36</td>
</tr>
<tr>
<td>Occupational Cancer Convention, 1974 (No. 139)</td>
<td>35</td>
</tr>
<tr>
<td>Working Environment (Air Pollution, Noise and Vibration) Convention, 1977 (No. 148)</td>
<td>41</td>
</tr>
<tr>
<td>Occupational Safety and Health (Dock Work) Convention, 1979 (No. 152)</td>
<td>20</td>
</tr>
<tr>
<td>Occupational Safety and Health Convention, 1981 (No. 155)</td>
<td>41</td>
</tr>
<tr>
<td>Occupational Health Services Convention, 1985 (No. 161)</td>
<td>22</td>
</tr>
<tr>
<td>Asbestos Convention, 1986 (No. 162)</td>
<td>27</td>
</tr>
<tr>
<td>Safety and Health in Construction Convention, 1988 (No. 167)</td>
<td>17</td>
</tr>
<tr>
<td>Chemicals Convention, 1990 (No. 170)</td>
<td>11</td>
</tr>
<tr>
<td>Prevention of Major Industrial Accidents Convention, 1993 (No. 174)</td>
<td>9</td>
</tr>
<tr>
<td>Safety and Health in Mines Convention, 1995 (No. 176)</td>
<td>20</td>
</tr>
<tr>
<td>Safety and Health in Agriculture Convention, 2001 (No. 184)</td>
<td>3</td>
</tr>
<tr>
<td>Protocol of 2002 to the Occupational Safety and Health Convention, 1981 (P. 155)</td>
<td>2</td>
</tr>
</tbody>
</table>
Consultation with Local Governments

The ILO's Tripartite Consultation (International Labor Standards) Convention (No. 144) requires governments to operate procedures which ensure effective consultation of employers' and workers' representatives on measures to give effect to ratified Conventions.

ILO, 2003
 Developed Country OSH Models

A convincing government OSH policy, and close cooperation between social partners and the government are critical factors that guarantee sustainable OSH programs in a developing country over a long-term basis.

Finnish Institute of Occupational Health, 2004
International Programme on Chemical Safety

WHO is the Executing Agency of the IPCS, whose main roles are to establish the scientific basis for safe use of chemicals, and to strengthen national capabilities and capacities for chemical safety.
Funding of International Agencies

Lately practically all major donors have said that they will provide funding only to the priority areas: child labor and the ILO Core Conventions. We (SafeWork) have established about half of all ILO Conventions and numerous Codes of Practices and Guidelines, but implementation is poor. Ratification campaigns concentrate almost exclusively on the Core Conventions.

Jukka Takala, ILO, 2002
Case Study: Industry Infiltration of International Agencies

See supplementary notes Word file about how industry infiltrated and guided the work of the United Nations’ International Program on Chemical Safety (IPCS).
Bhopal Disaster

The Bhopal disaster shocked the world and raised fundamental questions about government and corporate responsibility for industrial accidents that devastate human life and local environments.

Amnesty International, 2005
Bhopal Cleanup

Despite determined efforts by survivors to secure justice, they have been denied adequate compensation and appropriate and timely medical assistance and rehabilitation.

Amnesty International, 2005
Agriculture

Agricultural workers account for a particularly high proportion of unprotected workers, especially in developing countries. Their work is generally heavy, their working hours can be very long, they are often exposed to difficult climatic conditions, and many are exposed to hazardous chemicals, especially pesticides. These problems are compounded by poverty: living conditions are often extremely poor, and many have limited access to clean water, fuel and power, adequate shelter and nutrition. Literacy is often low.

ILO, 2006
Pesticide Exposure

In the agricultural sector, which employs half the world’s workforce and is predominant in most underdeveloped countries, the use of pesticides causes at least seven million cases of acute and long-term non-fatal illnesses.

ILO, 2006
Occupational Cancer

Workers continue to be exposed to known human carcinogens, especially rampant in the developing countries. Chemical and associated industries, such as asbestos, are opposed to spending money on “needless” safety and exposure reduction improvements and innovations.

James Huff, NIEHS, 2006

See Tables 1 and 2 in the notes
International Agency for Research on Cancer

The IARC is part of the World Health Organization. IARC's mission is to coordinate and conduct research on the causes of human cancer, the mechanisms of carcinogenesis, and to develop scientific strategies for cancer control.
Asbestos

- Asbestos exposure affects 20-40% of workers
- Asbestos cancer may cost 10 million lives
- Asbestos accounts for 5-7% of all lung cancers
- The epidemic is worst in developing countries
- Canada exports 200,000 tons of chrysotile asbestos
- Without technological solutions, a ban on use of asbestos is essential

See on the Word file the detailed case study: The Finnish Institute of Occupational Health (FIOH) and misleading reporting on asbestos
Current Asbestos Bans and Restrictions, 2006

- Argentina
- Australia
- Austria
- Belgium
- Chile
- Croatia
- Cyprus
- Czech Republic
- Denmark
- Egypt
- Estonia
- Finland
- France
- Gabon
- Germany
- Greece
- Honduras
- Hungary
- Iceland
- Ireland
- Italy
- Japan
- Kuwait
- Latvia
- Lithuania
- Luxembourg
- Malta
- Netherlands
- Norway
- Poland
- Portugal
- Saudi Arabia
- Seychelles
- Slovakia
- Slovenia
- South Africa
- South Korea
- Spain
- Sweden
- Switzerland
- United Kingdom
- Uruguay
Ban Support by UN Agencies

To this day, WHO and ILO have played only minor roles in the international campaign to end the asbestos cancer epidemic. These new statements on the health hazard of asbestos may be late, but they are nonetheless milestones on the path to an international ban on asbestos supported by all United Nations agencies. The WHO states categorically that all forms of asbestos cause cancer, including chrysotile.

See on the Word file the detailed Case Study: Asbestos and the UN Agencies
Stakeholder Movements

Canada’s support for the asbestos industry has gone virtually unnoticed by the Canadian public. They were not asked and were certainly not told of their Government’s generosity to the asbestos industry. Since 1984, Ottawa spent $20 million supporting the Chrysotile Institute (CI), the asbestos industry’s trade association. The current level of federal funding for the CI is $250,000 a year.

Ban Asbestos Secretariat, 2005
Electronics Industry

• Electronics industry is important to the world economy
• Worker health problems have not been adequately studied
• Industry migration to developing countries hides OSH problems
• Reproductive and cancer cases are numerous
• Chronic health problems have not been addressed
• Industry has sought to block, or obfuscate research

See detailed Case Study: Cancer Risk in the Semiconductor Industry on the Word file
Printed Circuit Board Industry

- Printed circuit boards (PrCB) are found in virtually all electronics products
  - PrCBs are crucial to annual manufacture and sales of about $1 trillion in electronic products
  - PrCBs are found in virtually all weapons systems and aerospace hardware
- PrCBs are platform for mounting semiconductor chips, capacitors, etc., providing electrical interconnections between components
- PrCBs are increasingly complex, many are multilayer, high-speed products that compete with semiconductor technology

See Case Study: Regulation of Migrating Industries
Construction Industry

The construction industry accounts for at least 60,000 fatal workplace accidents each year worldwide – or about one death every 10 minutes. About 17 per cent of all fatal workplace accidents occur in this sector, while construction workers also face a number of health risks, including exposure to asbestos-laden dusts, silica and hazardous chemicals.

ILO, 2006
Future Needs in Industrializing Countries

- Government support of OHS
- OHS Standards
- Access to Benefits
- Training of OHS personnel
- International Labor Rights
Government Support

Implementation of occupational health and safety practices in South Africa is impeded not only by lack of funds, expertise, and technologic sophistication, but also by worker apathy and employer ignorance, such that there is no pressure on government even to enforce existing regulations.

D. M. Joubert, South Africa
OSH Standards

“Major developing countries do not want to highlight OSH and are afraid of possible World Trade Organization sanctions if any of the OSH standards is classified as "fundamental". Equally they are afraid of the consumers if OSH shortcomings would be more public.”

Jukka Takala, ILO
Access to Benefits

At present, only 16 percent of workers in Africa, 43 percent in Latin America, and 23 percent in Asia enjoy protection from social security schemes.

WHO, 2003
OSH Standards

“Major developing countries do not want to highlight OSH and are afraid of possible World Trade Organization sanctions if any of the OSH standards is classified as "fundamental". Equally they are afraid of the consumers if OSH shortcomings would be more public.”

Jukka Takala, ILO
Workers’ Compensation Insurance

Only 5% to 10% of workers in developing countries and 20% to 50% of those in industrialized countries have access to adequate occupational health services.

WHO, 2004
World Trade Organization (WTO)

Ultimately, the only goal of the WTO is to expand the freedoms of corporations to act beyond the reach of any national regulations and to diminish the rights of national governments to regulate commerce on behalf of human beings or nature. In the end, the WTO amounts to a kind of global deregulation authority, and it is appalling that sovereign governments have so enthusiastically signed their constitutional rights over to this process.

International Forum on Globalization, 1999
Training of OSH Personnel

It is difficult to predict the number of industrial hygienists that will be required, since their role has not been stressed by government agencies. It will be some time before the discipline realizes its full potential in India.

T. K. Joshi, New Delhi, India
International Labor

Labor sought to incorporate universal labor rights in the global trading system, a social clause in trade agreements that would allow workers everywhere to organize their own collective power and to punish exports from those nations that did not honor the new rules. Political opposition to this approach was overwhelming. Many leading politicians lent rhetorical support to labor’s goal, but, in reality, most were aligned, one way or another, with the imperative of the multinationals.

William Greider, One World, Ready or Not, 1998

Risks to safety and health are reduced where there is real social dialogue and community consciousness and when workers and employers can organize freely and bargain. -- ILO, 2002
Conclusion

The desired outcome of industrial expansion and prosperity through trade is peaceful coexistence. Occupational health must be seen as a small dividend in this much larger equation.
Global Information Sources: Occupational Health & Safety

Suggested Readings
• Rantanen J, Lehtinen S, Savolainen K. The opportunities and obstacles to collaboration between the developing and developed countries in the field of occupational health. Toxicology. 2004;198:63-74.

Lists of international meetings are available at:
– http://www.cdc.gov/niosh/exhibits.html
Global Information Sources: Occupational Health & Safety

Internet Resources for Occupational Health Professionals

- World Health Organization (WHO) Occupational Health:  
  http://www.who.int/occupational_health/en/
- International Labor Office (ILO)  
- English version of the ILO Encyclopedia of Occupational Health and Safety  
  http://www.ilo.org/encyclopaedia/
- WHO/ILO Joint Effort on Occupational Health in Africa -- http://www.sheafrica.info/
- Association of Societies for Occupational Safety and Health (ASOSH) --  
  http://www.asosh.org/index.htm
- European Agency for Safety and Health at Work  
  http://agency.osha.eu.int/news/events/index_en.htm
- Occupational and Environmental Medicine Resource Index (Links to OSH Agencies) --  
  http://links.occhealthnews.net
- NIOSH, EPA, ATSDR, Chemfinder, NLM, teaching materials  
Global Information Sources: Occupational Health & Safety

Internet Training Modules for OSH Professionals

- ILO. Introduction to Occupational Health and Safety
  www.itcilo.it/english/actrav/telearn/osh/intro/introduc.htm
Credits

Joseph LaDou, M.D., Director
International Center for Occupational Medicine
Division of Occupational and Environmental Medicine
University of California School of Medicine
San Francisco, CA 94143-0924, USA
(415) 476-4951
FAX (415) 476-6426
E-mail: joeladou@aol.com
The Global Health Education Consortium and the Consortium of Universities for Global Health gratefully acknowledge the support provided for developing teaching modules from the:

**Margaret Kendrick Blodgett Foundation**
**The Josiah Macy, Jr. Foundation**
**Arnold P. Gold Foundation**

This work is licensed under a [Creative Commons Attribution-Noncommercial-No Derivative Works 3.0 United States License](https://creativecommons.org/licenses/by-nc-nd/3.0/us/).