



Korean Experience on Occupational Health Services

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Legal system and Social security

Legal system	Civil law, continental law	Common law, Anglo-American law
	Complexity Follow the process Generous on the result	General, comprehensive Autonomy in the process Responsibility at the result
Workers' Compensation	Separate insurance	Integration in social security
	Causal – relationship	Social agreement

- Korean system for OHS rely on detailed legal Statement, Specify every obligation of relevant subjects

Government Agency responsible for OHS

Ministry of Labor
Ministry of Health & Welfare
Ministry of Environment
MOL and MOH (MOE)

Korean OHS

- Ministries for Workers' Health Service
 - Ministry of Employment and Labor
 - Work related matters : prevention (health promotion), early diagnosis, compensation, rehabilitation
 - Ministry of Health and Welfare
 - Promotion, prevention, treatment, national insurance
 - Ministry of Environment
 - Environmental hazard control, compensation

Government Agencies Responsible for OHS

- Safety (Accident Protection)
 - Occupational
 - Ministry of Labor
 - Non-occupational:
 - Ministry of Public Admin and Security
 - National Emergency Management Agency
 - Ministry of Land, Transport and Maritime Affairs
- Health (Disease Protection)
 - Occupational
 - Ministry of Labor
 - Non-Occupational
 - Ministry of Health
 - Ministry of Environment

Two Aspects of Occupational Health

- Environmental Issues
 - Ministry of Labor
 - Ministry of Environment Protection
- Health Issues
 - Ministry of Health
 - Ministry of Labor (workers)

General Status of OHS

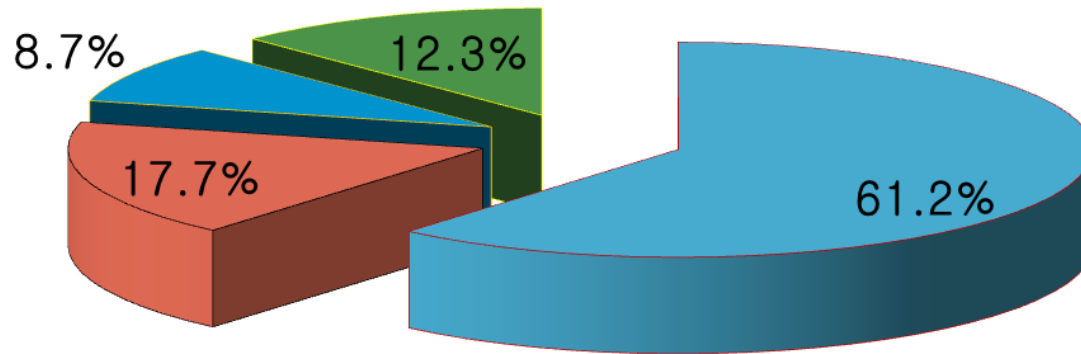
Major Events in Occupational Health

- Late 1980s to early 1990s
 - Poisoning by heavy metal (Pb, Hg, Cd) and Solvents
 - Carbon disulfide poisoning at a viscose rayon factory
- 1990s'
 - Reproductive problem caused by 2-bromopropane
 - Fulminant hepatitis caused by dimethylformamide
 - Parkinson syndrome in welders by manganese exposure
 - Job-related cardio-cerebrovascular diseases
- 2000s'
 - Benzene exposure in petrochemical industry
 - Work-related musculoskeletal disorders
 - Peripheral neuropathy caused by n-Hexane in IT industry
 - Death by cardiovascular diseases at a tire manufacturer
 - Leukemia in a semi-conductor factory
- 2010s'
 - Carcinogenic substances and Occupational Cancer

Korean Economy in 2013 (World Bank)

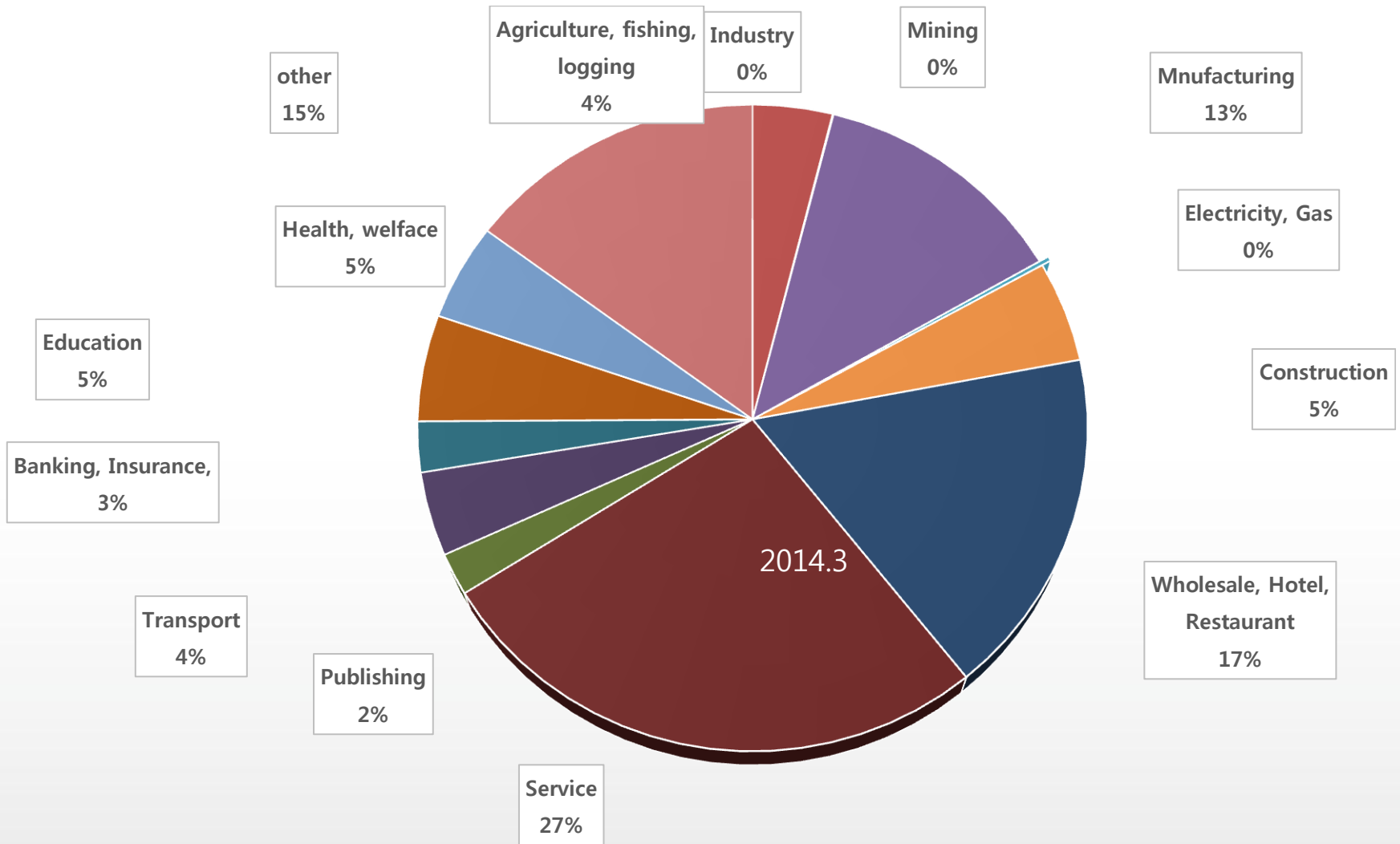
- Population
 - Total population: 50.9 million (26th in world ranking)
 - Economically Active Population: 25.8 million (2013)
 - Wage Workers: 18.4 million
 - Employees under Workers' Compensation: 15.5 million
- Economy (high-income, OECD)
 - GDP USD 1,014 billion (13th in world ranking)
 - GNI per capita USD 19,890 (ppp USD 29,010)
 - Proportion of the trade amounts of world: 2.7 % (9th)

Wage Workers (17.05 million 2019. 3.)

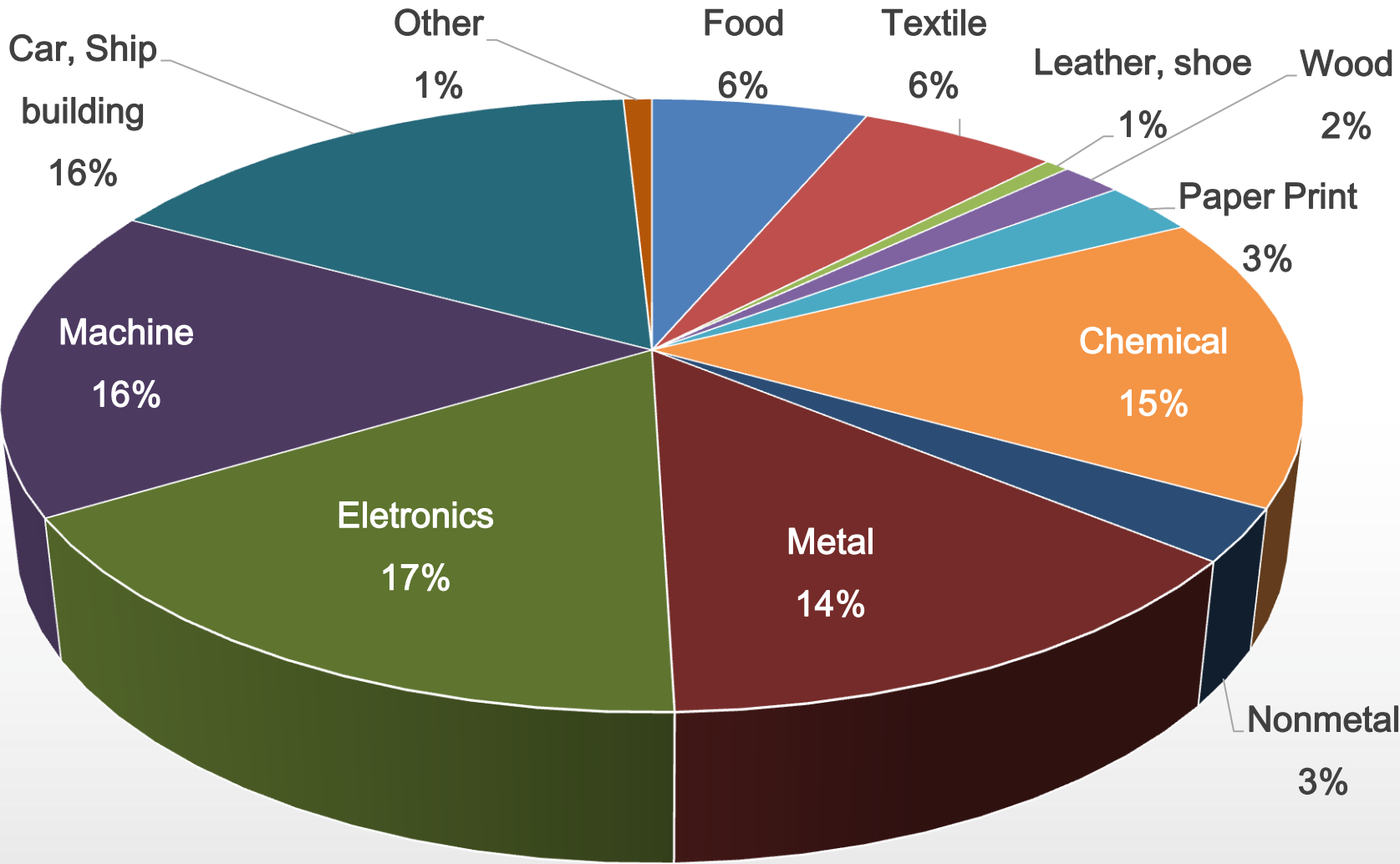


■ Regular ■ Contractor ■ Part-time ■ Atypical

Distribution of Industry (2010)



Distribution of Manufacturing Industry (2012)



Classification of Occupational Accidents and Diseases

- Occupational Accidents
 - Traumatic injuries: fracture, amputation, bruise etc
 - Traffic accidents: commuting, TA during business trip
 - Non-traumatic injuries
 - overexertion, asphyxia, burn, violence, animal bites, sports activities
- Occupational Diseases
 - Occupational Diseases
 - Diseases caused by chemical, physical and biological agents
 - Pneumoconiosis, NIHL, Poisoning, cancer, asthma, dermatitis
 - Work-related Diseases
 - Diseases aggravated by work condition or job stress
 - WRMDS, Cardio-cerebrovascular diseases

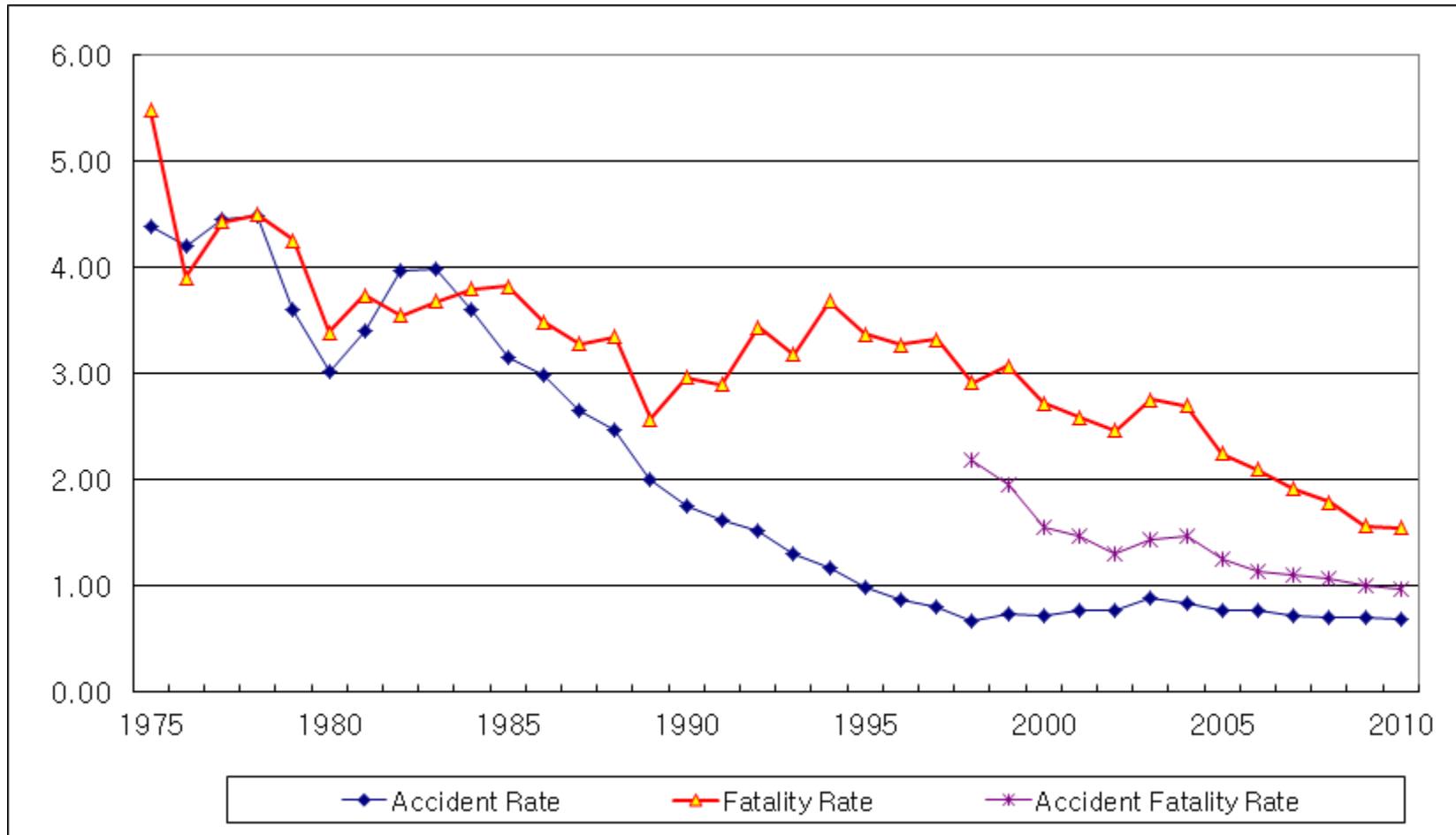
OHS Statistics and its Limitation

Targets for OHS service

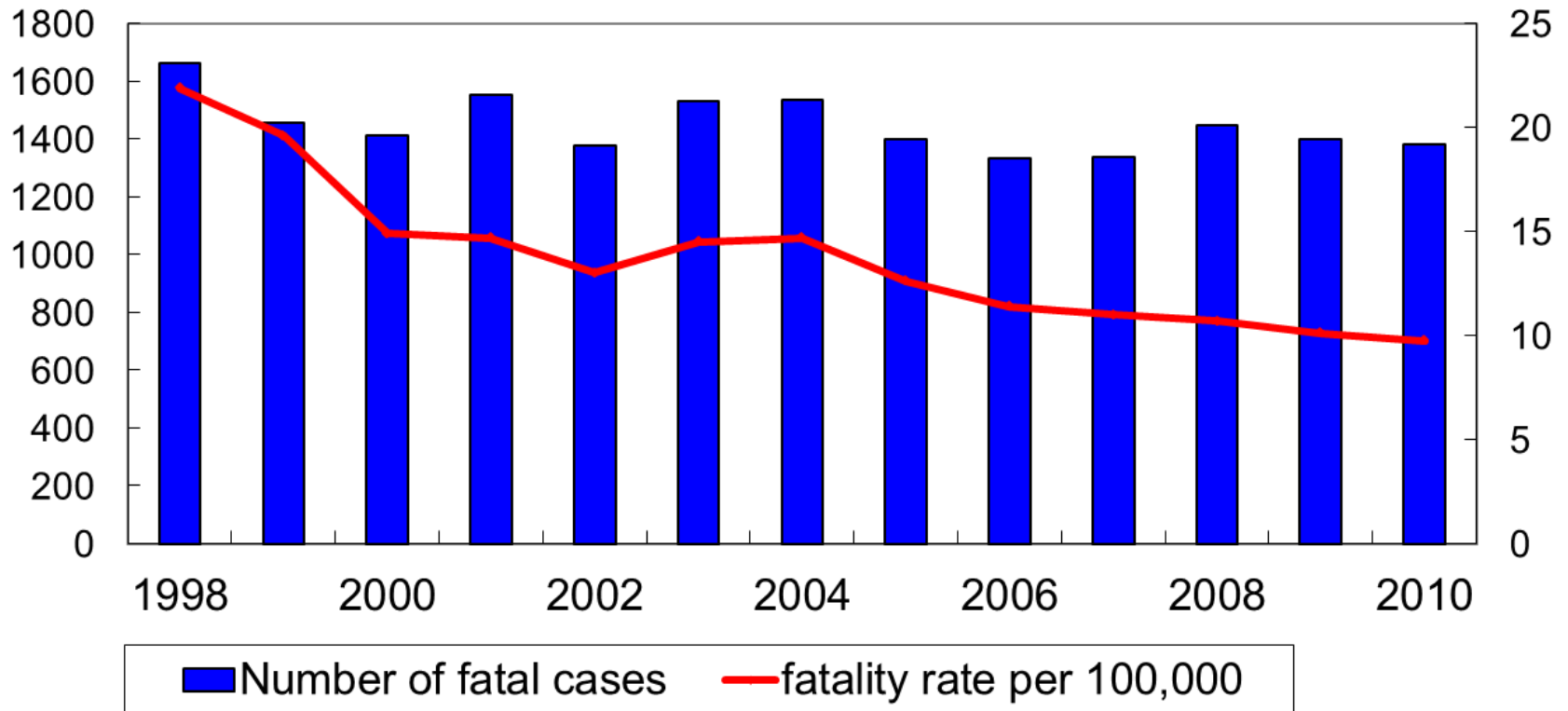
Statistics of Occupational Safety and Health

- Official Statistics of Occupational Injuries and Diseases
 - Data from the workers' compensation claims (Most)
 - Cases reported to the MOL (approximately 1% of all cases)
 - ❖ The number of unclaimed cases are unknown
- Occupational injuries (2012)
 - Non-fatal : 83,349 (requiring 4 or more days of medical treatment)
 - Fatal : 1,134 cases (including 94 cases of traffic related fatalities)
- Occupational Diseases (2012)
 - Non-fatal: 6,742 cases (mostly MSDS)
 - Fatal: 730 cases (including 301 cerebro-cardiovascular diseases)

Occupational Accident and Fatality Rate



Occupational Fatalities by Accidents



※ Included fatalities by commuting accidents

Limitation of the Statistics

- ❖ Lower injury rate, higher fatality rate than EU countries
- Numerator
 - Unclaimed cases
 - Non-serious, non-fatal injuries
 - Compensated as a part of social welfare
 - Commuting accidents : doubled
 - Sports activities: increased up to 1,500 cases per year
- Denominator
 - Long working hours
 - May increase the possibility of accidents

Factors affecting to the Statistics (denominator)

- Working hours
 - Korea has the longest working hours among OECD countries
 - Longer working hour raises the possibility of an accident.
 - Should be adjusted by FTE(Full time equivalent)

- Number of workers in the construction industry
 - May be counted more than once
 - 70% of construction sites finish less than 6 months
 - Is 43.7% of workers in manufacturing industry according to EAPS data, but 100.7% according to compensation insurance data.

Occupational Safety and Health Service

OHS Service

- Prevention
 - Accidents : Occupational Safety Engineers
 - Diseases : Industrial hygienists, Occupational Physicians
- Treatment
 - Injuries : Clinicians (Surgeon, Orthopedic physician)
 - Diseases : Various specialties /Occupational physicians
- Rehabilitation
 - Medical Rehabilitation
 - Work or social rehabilitation

Role of Occupational Physician

- Prevention
 - Special Health Examination (特殊健康診斷)
 - 186 items (169 chemicals and others)
 - Health management (Surveillance, follow-up)
 - In-house physician or physician of agencies (保健管理代行機關)
 - Out-patient clinic (職業環境醫學科 外來)
 - Not legally supported yet
- Compensation claim
 - Consulting physician (諮問醫) at the local office of COMWEL
 - Members of the Occupational Disease Award Commission (業務上疾病判定委員會) of Regional Office or Re-Review Commission for Compensation(産業災害補償保險再審査委員會) of the Ministry of Employment and Labor
- Treatment of injuries and diseases
 - No specific roles except for some cases of poisoning

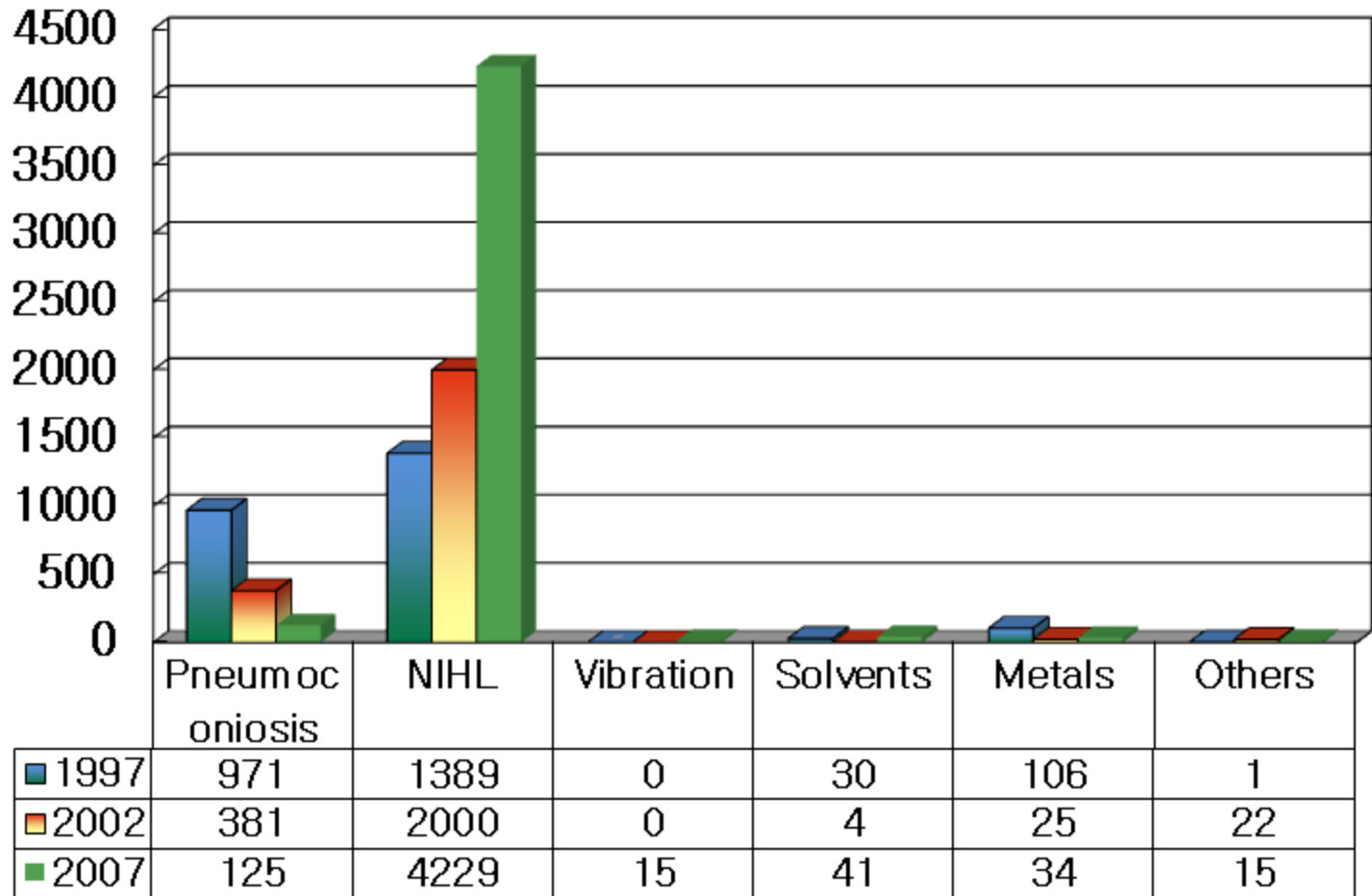
Treatment

- General Hospital
 - Relevant clinics of university hospitals or other hospitals
 - Injured workers can be treated at any medical facilities.
- Korea Workers' Compensation and Welfare Service
 - Responsible agency for workers' compensation
 - Provides medical services through 9 Workers' Compensation Hospitals (産災醫療院)
 - Similar to Japanese Rosai hospitals (mostly clinical physicians)
 - But, not much different from private hospitals except caring pneumoconiosis patients and bed-blockers

Special Health Examination (特殊健康診斷)

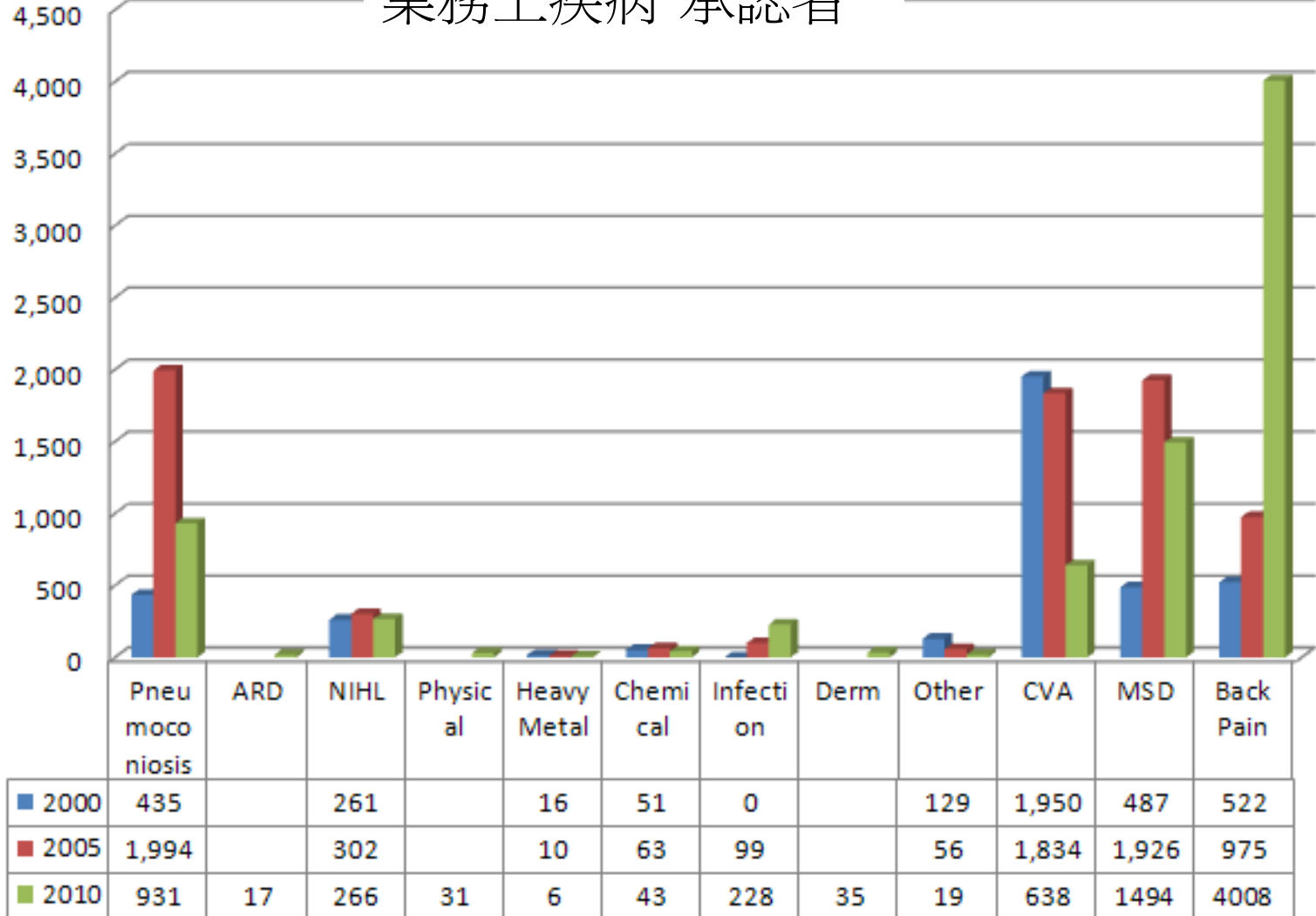
- Performed annually for a million workers
- Only certified occupational physicians are eligible to perform.
- 148 agencies across the country
 - 150 – 200 occupational physicians are involving
- Expense: paid by employers
 - KOSHA provides a subsidy to workplaces with less than 10 employees.

Suspected Cases by SHE (職業病有所見者)

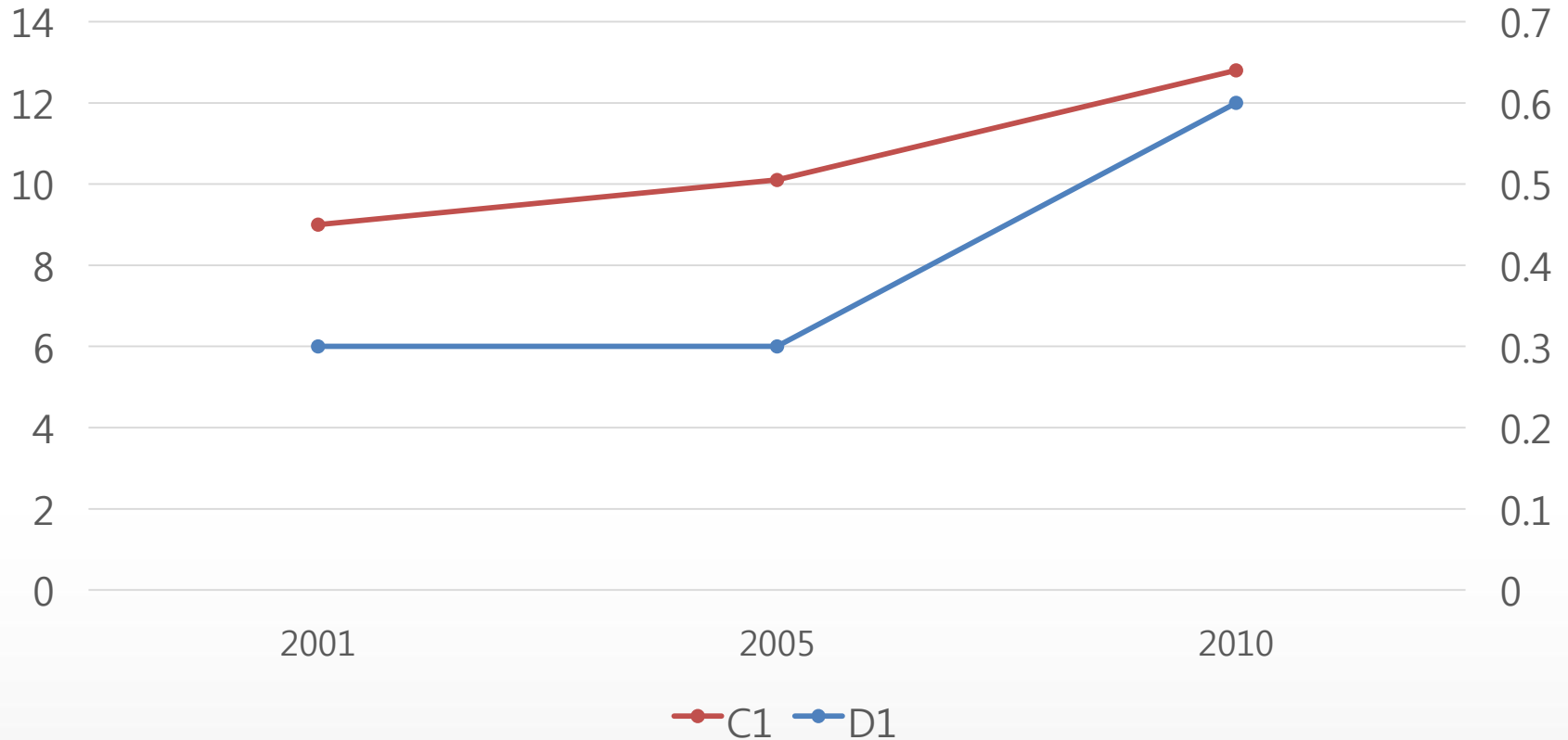


Compensated Occupational Diseases (2010)

業務上疾病 承認者



Detection rate of special medical examination



C1: Workers who have findings need to be observed

D1: Workers who have findings related with occupational diseases

Challenge of Special Health Examination

- Effectiveness
 - Good for detecting asymptomatic occupational diseases such as pneumoconiosis and NIHL
 - Less effective to detect symptomatic occupational diseases
 - Occupational cancer, asthma, musculoskeletal diseases, cardiovascular diseases , skin diseases have not been detected by this system
 - few cases of occupational diseases have been detected through this system because of improved work environment
- Advantage
 - Increasing workers' awareness for the toxicity of hazardous substances they are being exposed to

Occupational Safety Manager

Occupational Health Manager

Management

- Accident prevention
 - Safety Manager (安全管理者) : safety engineer (職業安全技士)
- Disease prevention
 - Health manager (保健管理者) : industrial hygienist, occupational health nurse, occupational physician
 - ❖ But the obligation of hiring occupational physician is incapacitated by the Deregulation Act (企業活動規制緩和特別措置法)

Duty of Occupational Health Manager

- Duty recommended by the OHS Committee and the regulation
- Work management for preventing health effects
- Selection of safety equipment and PPEs
- MSDS related work
- **Medical management**
- Health education and health promotion
- **Medical treatment**
- **Ventilation (local and general)**
- Walk-around inspection
- Occup disease investigation and prevention plan
- Maintaining OH statistics
- Appropriate measure to workers violated the regulation
- Others things related to work environment control

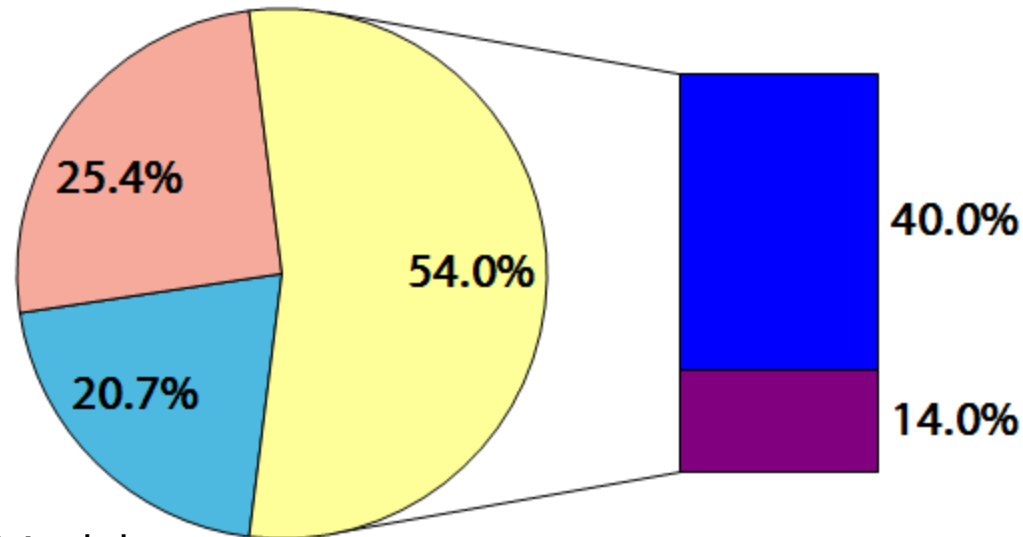
Occupational Health Management Model

- In-Company Model
- OHS Agency Model
- Small Scaled Enterprises Model

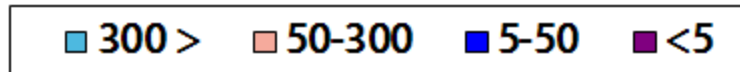
OH Service Model

OHS Agency Model

Public Service Model



In-Company Model



In-Company Model

- Multidisciplinary approach
 - Occupational Health(and/or Safety) Team
 - Physician, nurse, hygienist, ergonomist etc
 - Safety Management Team
- Single Professional
 - ※ Legal requirement: at least one occupational health manager depending on the number of workers and type of industry
 - Occupational Health Manager
 - Industrial hygienists, nurses
 - Occupational Safety Manager
 - Industrial safety engineers
- Enterprises with more than 300 employees

OHS Agency Model

- Purchase service from OHS agencies
- OHS agencies
 - Provide service regularly (at least one visit per month)
 - By contract basis
 - Occupational physicians, nurses, hygienists, ergonomists etc
- Enterprises with more than 50 employees

Public Service Model

- OHS services to Small-scaled enterprises(SSEs)
 - Select high risk workplaces or workers
 - Provide service through OHS agencies
 - Duty of OHS managers
 - Provide education and information
- Workers' Health Center
 - Started since 2007 (Industrialized complex)
 - 3 units (plan to expand up to 20 units)
 - Initially operated by KOSHA and transferred to OHS agencies
- Third party payment
 - Health Examination and Work Environment Measurement of extremely SSEs

KOSHA Subsidies for OHS Service (2011)

- Subsidies to SSEs (<50 employees)
 - Safety agencies : 10.6 billion KRW
 - Health agencies: 5.9 billion KRW
 - 2009: 14,000(3.2 billion)/ 2010: 25,000(5.9 billion)
 - Construction agencies: 3.7 billion KRW
- Third party payment (<10 employees)
 - Work Environment: 30 billion KRW
 - Health Examination: 49 billion KRW
- Workers Health Center
 - 0.5 billion KRW per unit

Revenue of OM Clinic at University Hospital

- Legal program
 - Income from Health Examination
 - Income from OH management service
 - Subsidy for OH management from KOSHA
- Autonomous activities
 - Grant for Occupational Diseases Surveillance
 - Disease (4 items) and Regional (2 areas)
 - Out-patient clinic
 - Follow-up workers,
 - Work compatibility assessment