

The Current Situation concerning Occupational Diseases and Disclosure of Government Information in China

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Forward

Using relevant literature, we have been trying to understand the current situation concerning occupational diseases in China and to investigate how to improve the situation. However we have found that the information disclosed by the government is very limited. Additional information can be found in medical literature, although it does not provide more basic data, such as the number of cases of different occupational diseases and the gender, occupation and city of patients who have contracted occupational diseases. With such limited resources, it has only been possible to understand the situation by visiting the victims of occupational diseases in hospital.

A. Overview of occupational diseases in China

a) Official data

The National Health and Family Planning Commission (NHFPC) publishes reports on the prevention of occupational diseases every year¹. However, the data is not detailed. The following table shows data for new occupational disease cases in China in the past five years:

Table 1. 2009-2013 New cases Occupational disease cases (10 Types) in China²

| Year | 2009 | 2010 | 2011 | 2012 | 2013 |
|---|--------|--------|--------|--------|--------|
| New Cases | | | | | |
| Total Number of new Occupational Disease Cases | 18,128 | 27,240 | 29,879 | 27,420 | 26,393 |
| Pneumoconiosis | 14,495 | 23,812 | 26,401 | 24,206 | 23,152 |
| <i>Coal Worker Pneumoconiosis</i> | | 12,564 | 14,000 | 1,163 | 13,955 |
| <i>Silicosis</i> | | 9,870 | 11,122 | 10,592 | 8,095 |
| Chronic occupational poisoning | 1,912 | 1,417 | 1,541 | 1,040 | 904 |
| <i>Benzene poisoning</i> | 208 | 272 | 354 | 329 | 285 |
| <i>Lead and its compounds</i> | 1082 | 499 | 621 | 197 | 231 |
| <i>Arsenic and its compounds</i> | 165 | 157 | 290 | 164 | 232 |
| Acute occupational poisoning | 552 | 617 | 590 | 601 | 637 |
| <i>Significant cases of occupational poisoning accidents</i> | 188 | 215 | 182 | 185 | 230 |
| <i>Number of deaths in significant occupational poisoning accidents</i> | 21 | 28 | 45 | 20 | 25 |

¹ <http://www.moh.gov.cn/jkj/zyfsws/list.shtml>

² According to the List of Occupational Diseases in China 《职业病目录》 卫法监发[2002]108 号, and listed in order based on the number of cases

| Year | 2009 | 2010 | 2011 | 2012 | 2013 |
|---|------|------|------|------|------|
| New Cases | | | | | |
| Occupational ENT and oral diseases | 424 | 347 | 532 | 639 | 716 |
| <i>Noise induced deafness</i> | 348 | 333 | 492 | 597 | 681 |
| Occupational diseases caused by biological factors | 192 | 201 | 146 | 293 | 316 |
| Occupational diseases caused by physical factors | 111 | 225 | 172 | 201 | 233 |
| <i>Heat illness</i> | | 117 | 75 | 54 | 161 |
| <i>Hand-arm vibration disease</i> | | 100 | 82 | 130 | 38 |
| Occupational skin disease | 176 | 226 | 138 | 148 | 141 |
| Occupational eye disease | 161 | 251 | 226 | 94 | 129 |
| <i>Chemical eye burns</i> | | | | 64 | |
| Occupational cancer | 63 | 80 | 92 | 95 | 88 |
| <i>Benzene-induced leukaemia</i> | 22 | 49 | 52 | 53 | 41 |
| <i>Asbestos-induced lung cancer, mesothelioma</i> | 11 | 10 | 8 | 19 | 19 |
| Other occupational disease | 42 | 64 | 41 | 71 | 52 |
| <i>Occupational asthma</i> | | | 31 | 46 | 36 |
| Occupational radiation sickness | 0 | 0 | 0 | 32 | 25 |

b) Overview of occupational poisoning around China

As the government does not publish data for occupational diseases in individual provinces and cities, the following comparative analysis of the occupational disease situation in Guangdong Province, Jiangsu Province and Zhejiang Province is based on literature^{3 4 5 6 7}.

³ 白(瑾),张恒东,丁帮梅等.“十一五”期间江苏省职业病发病情况及趋势分析[J].中华劳动卫生职业病杂志, 2012,30(2):103-105. DOI:10.3760/cma.j.issn.1001-9391. 2012.02.005.

⁴ 温贤忠,李旭东,黄永顺等.2006-2010年广东省新发职业病病谱分析[J].中国职业医学,2014,(2):157-162. DOI:10.11763/j.issn.2095-2619. 2014.02.008.

⁵ 邹华,袁伟明,方兴林等.2001年至2010年浙江省职业中毒情况分析[C].//首届中国卫生应急学术论坛论文集. 2012:485-489.

⁶ 袁伟明,方兴林,张美辨等.浙江省2006至2010年职业病发病分析[J].中华劳动卫生职业病杂志,2013,31(4):279-281. DOI:10.3760/cma.j.issn.1001-9391. 2013.04.009.

⁷ According to the China Labour Statistic Yearbook 《中国劳动统计年鉴》, in 2010, Guangdong, Jiangsu and Zhejiang had the highest urban employment rates of 24 million, 21 million and 16 million respectively.

Table 2. 2006-2010 New Occupational Disease Patient Cases in Guangdong, Jiangsu and Zhejiang

| | Guangdong Province | Jiangsu Province | Zhejiang Province |
|---|--------------------|------------------|-------------------|
| The gender of the workforce aged 16 and above in 2010⁸ | | | |
| Male | 56% | 54% | 58% |
| Female | 44% | 46% | 42% |
| Total number of work injuries identified as due to occupational diseases | 2,335 | 2,552 | 917 |
| Total number of new occupational disease cases | 1,847 | 5,469 | 1,866 |
| Male | 82% | - | 88% |
| Female | 18% | - | 12% |
| Median age of onset of disease | 36 | - | - |
| Male | 37 | - | - |
| Female | 30 | - | - |
| Percentage with age of onset below 45 | 81% | - | 57% |
| Median duration of employment before onset | 4 | - | - |
| Male | 4.6 | - | - |
| Female | 4.1 | - | - |

Table3. 2006-2010 Classification of new cases of occupational poisoning in Guangdong, Jiangsu and Zhejiang

| | Guangdong Province | | Jiangsu Province | | Zhejiang Province | |
|--------------------------------|--|-----|------------------|-----|--------------------|-----|
| Acute occupational poisoning | Number of cases | 148 | Number of cases | 255 | Number of cases | 63 |
| Main diseases | Dimethyl formamide, chloroform, and dichloroethane poisoning | 67% | Carbon monoxide | 12% | Dimethyl formamide | 19% |
| | | | Hydrogen sulfide | 7% | Organic tin | 17% |
| Chronic occupational poisoning | Number of cases | 366 | Number of cases | 713 | Number of cases | 392 |

⁸ Data source: Men and Women in Chinese Society – Fact and data (2012) 《中国社会中的女人和男人—事实和数据(2012)》, women constitute 45% of the working population above 16 in the country.

| | Guangdong Province | | Jiangsu Province | | Zhejiang Province | |
|--------------------------|--|-----|-------------------------------|-----|------------------------|-----|
| Main diseases | Benzene, n-hexane, and lead poisoning | 88% | Carbon disulfide ⁹ | 48% | Lead and its compounds | 64% |
| | | | Hexane | 20% | Benzene | 21% |
| | | | Mercury and its compounds | 12% | Carbon disulfide | 11% |
| | | | Benzene | 6% | | |
| Occupational Dermatology | Number of cases | 157 | Number of cases | 105 | Number of cases | 21 |
| Main diseases | Trichloroethylene dermatitis, chemical skin burns and contact dermatitis | 94% | - | - | - | - |
| Occupational cancer | Number of cases | 116 | Number of cases | 20 | Number of cases | 5 |
| Main diseases | Benzene-induced leukaemia | 96% | - | - | - | - |

Table 4. 2006-2010 Top 3 industries¹⁰ contributing to new cases of occupational poisoning in Guangdong, Jiangsu and Zhejiang

| Region Industry | | Acute occupational poisoning | | | Chronic occupational poisoning | | |
|--------------------|---------------------------|------------------------------|--------------------|-----------------------------|--------------------------------|-----------------------|----------------------|
| | | Guangdong Province | Jiangsu Province | Zhejiang Province | Guangdong Province | Jiangsu Province | Zhejiang Province |
| 1st | Name of industry | Light Industry | Chemical Industry | Light Industry | Light Industry | Light Industry | Machinery Industry |
| | Number of new cases | | 99 | 28 | | 312 | 155 |
| | Constituent ratio | | 39% | 45% | | 44% | 40% |
| 2nd | Name of industry | Electronics Industry | Light Industry | Chemical Industry | Electronics Industry | Electronic s Industry | Electronics Industry |
| | Number of new cases | | 49 | 22 | | 157 | 77 |
| | Constituent ratio | | 19% | 35% | | 22% | 20% |
| 3rd | Name of industry | | Machinery Industry | Building Materials Industry | Machinery Industry | Ordnance industry | Light Industry |
| | Number of new cases | | 37 | 9 | | 65 | 74 |
| | Constituent ratio | | 15% | 14% | | 9% | 19% |
| Total | Total number of new cases | 117 | 185 | 94% | 336 | 534 | 306 |
| | Constituent ratio | 79% | 73% | 59% | 92% | 75% | 78% |

⁹ In industrial use it is yellow in colour and has the smell of rotten turnips. It is mainly used for the production of viscose fibre. During production of cellophane and carbon tetrachloride, vulcanisation, grain fumigation, varnishing and extraction of grease from organic solvent, there can be contact with carbon disulfide.

¹⁰ Industrial classification is based on GB/T 4754 Standard Industrial Classification (SIC) Codes 《国民经济行业分类》.

B. Analysis of information of hospitalised workers with occupational diseases in Guangzhou

As the government only discloses limited information about occupational diseases, we visited hospitalised workers at the Guangdong Prevention and Treatment Centre for Occupational Diseases and the Guangzhou Prevention and Treatment Centre for Occupational Diseases in late March 2014 to conduct research and analysis of occupational diseases.

a) The workers' background

1. Number of hospitalisations: 74 (Male: 46%, Female 54%)¹¹
2. Average age: 37 (Oldest: 55, Youngest: 17)
3. Place of origin: Mainly Sichuan (12%), Guangdong (10%), Henan (10%), Hunan (10%)
4. Education: In general not high, 76% below middle school
5. Working hours and working age: 12 hours a day on average, 74% work 8 hours or more, 45% works 12 hours or more. As they contact highly concentrated toxic and hazardous substances over long hours, 50% workers had contracted an occupational disease after less than 5 years, while 25% workers had contracted an occupational disease after less than 1 year

Table 5. Distribution of diseases among workers being interviewed at the two centres in Guangzhou

| Diseases | Gender | Number | Percentage | Entire work life | | | Years of contact with occupational hazards | | |
|-------------------------------------|--------------|-----------|------------|------------------|----------|-----------|--|------------|-------------|
| | | | | Median | Min. | Max. | Median | Min. | Max. |
| Benzene poisoning | Male | 16 | 22% | 8 | 3 | 26 | 5.8 | 2.8 | 19.1 |
| | Female | 9 | 12% | 5 | 4 | 15 | 5.6 | 3.7 | 14.3 |
| | Total | 25 | 34% | 7 | 3 | 26 | 5.7 | 2.8 | 19.1 |
| N-hexane poisoning | Male | 1 | 1% | | | | | | |
| | Female | 23 | 32% | 3 | 1 | 7 | 1 | 0.6 | 4.8 |
| | Total | 24 | 32% | 3 | 1 | 7 | 1 | 0.6 | 4.8 |
| Pneumoconiosis | Male | 14 | 19% | 7 | 3 | 25 | 5.3 | 1.8 | 23.1 |
| | Female | 0 | 0% | | | | | | |
| | Total | 14 | 19% | 7 | 3 | 25 | 5.3 | 1.8 | 23.1 |
| Benzene-induced leukaemia | Male | 0 | 0% | | | | | | |
| | Female | 5 | 7% | 7 | 2 | 11 | 4.7 | 1.3 | 8.3 |
| | Total | 5 | 7% | 7 | 2 | 11 | 4.7 | 1.3 | 8.3 |
| Occupational noise induced deafness | Male | 2 | 3% | 6 | 5 | 6 | | | |
| | Female | 1 | 1% | 4 | 4 | 4 | | | |
| | Total | 3 | 4% | 5 | 4 | 6 | | | |
| Hand-arm vibration disease | Male | 2 | 3% | | | | | | |
| | Female | 0 | 0% | | | | | | |
| | Total | 2 | 3% | 5 | 4 | 5 | | | |
| Other occupational diseases | Male | 1 | 1% | 7 | 7 | 7 | 7.3 | 7.3 | 7.3 |
| | Female | 2 | 3% | 14 | 14 | 14 | 4.7 | 0.3 | 9 |
| | Total | 3 | 4% | 11 | 7 | 14 | 7.3 | 0.3 | 9 |

¹¹ 2 of the workers had both occupational noise induced deafness and hand-arm vibration disease at the same time.

b) Situation of workers' factories

1. Location: 96% located in Pearl River Delta region¹²
2. Distribution of industry:

| Industry | Percentage |
|---------------------------|------------|
| Electronic | 37% |
| Process and manufacturing | 29% |
| Chemical | 8% |
| Metal | 5% |
| Mining | 4% |
| Ceramics | 4% |
| Construction | 3% |

3. Factory size: the percentages of small, medium and large enterprises¹³ were 48%, 7% and 30% respectively. Small private enterprises are particularly weak in labour protection conditions. The occupational health protection in large foreign enterprises is also not good enough.

| Size of enterprise | Type of enterprise | Percentage |
|--------------------|--------------------|------------|
| Small enterprise | | 48% |
| | Private enterprise | 32% |
| | Foreign enterprise | 10% |
| | Joint Ventures | 2% |
| Medium enterprise | | 7% |
| | Foreign enterprise | 4% |
| | Joint Ventures | 3% |
| Large enterprise | | 30% |
| | Private enterprise | 7% |
| | Foreign enterprise | 16% |
| | Joint Ventures | 3% |
| | State enterprise | 3% |

4. In 2012, there was an outbreak of an occupational disease at an electronics factory in Dongguan. 38 workers suffered from n-hexane poisoning and were sent to Guangdong Prevention and Treatment Centre for Occupational Diseases. 24 out of them were still hospitalised when this research took place.

c) Status of labour protection

1. 60% of workers did not get the appropriate labour protection measures.
2. Only 44% of workers received occupational health examinations, and only 34% of them knew their results.

¹² The Pearl River Delta includes the 9 cities of Guangzhou, Shenzhen, Foshan, Dongguan, Zhongshan, Zhuhai, Huizhou, Jiangmen and Zhaoqing.

¹³ Notice on Classification Standards for Small and Medium Enterprises – Industrial 《关于印发中小企业划型标准规定的通知》：工业。Small and medium enterprises are those which have less than 1,000 employees or an operating revenue of less than 4 billion. Enterprises with 300 or more employees and 200 million operating revenue are medium enterprises. Small enterprises have 20 or more employees and 3 million operating revenue

d) Compensation for occupational injury

1. 77% of workers received wages during injury, however a majority did not receive their full pay. The difference was RMB 1,042 per month on average.
2. The table shows the proportion who received compensation for their occupational injuries

| Compensation | Percentage |
|---------------------------------------|------------|
| Medical expenses | 86% |
| Food subsidies during hospitalisation | 66% |
| Nursing care during hospitalisation | 33% |
| Wages during injury | 77% |

C. Conclusion

Although, at the national level, the number of new occupational disease cases is decreasing according to official statistics, in economically developed regions new occupational disease and occupational poisoning cases are still increasing, particularly in light industry and electronic industry. On the one hand, the supervision role of the government is poor and enterprises do not take responsibility for occupational disease prevention, meaning that workers are more likely to suffer from occupational hazards. On the other hand, in Guangdong, Jiangsu and Zhejiang, the majority of workers work in labour intensive enterprises and labour mobility is relatively high. These workers also lack the channels for understanding occupational hazards and lack the awareness of occupational health and disease prevention. Therefore, this group of workers have a high risk of suffering from occupational diseases.

a) Present sources of information on occupational health and safety in China include:

1. The NHFPC annual report on prevention of occupational diseases for the previous year.
2. China Labour Statistical Yearbook data related to social security information, for example, the working population, numbers of occupational injuries identified.
3. Statistical analysis of occupational diseases around the country from the Chinese Journal Full-text Database.
4. Information from the community collected by NGOs.

b) Difficulties in data collection

1. Authenticity of figures

Diagnosed cases of occupational diseases are generally reported through the 'Occupational hazards monitoring system'. However, there should be errors in the number of cases of occupational diseases due to many workers not undergoing diagnosis, enterprises concealing the workers' cases, unfair diagnosis¹⁴, government concealing information, and error in reporting etc.

¹⁴ For example, the better ear's frequency audiometry is adopted for diagnosis of occupational noise deafness.

If statistical analysis is done based on occupational poisoning according to magazines or mass media, the problem of authenticity is greater as there is no way to check and verify the figures. For instance, there are different figures from various literatures on the number of cases of chronic occupational poisoning in Zhejiang in 2010.

2. Lack of analysis on gender ratio, age of onset and duration of employment before onset

At present, only the total number of different types of occupational disease cases is disclosed, there is no analysis on gender ratio, age of onset and duration of employment before onset. There is a lack of data support when analysing related issues.

3. Lack of community information

At the end of 2012, the employed population in China numbered 0.77 billion, but only 0.19 billion had bought occupational injury insurance. The coverage rate was only 25%. It is common for enterprises not to buy insurance for workers in order to save costs. Occupational injury insurance is less common for migrant workers who have high mobility.

c) Disclosure of information

As an NGO, our support to occupational disease patients not only includes supporting workers to protect their lawful rights, but also includes the voice and empowerment of the entire community. In this process, the group needs to further explore and practice in order to develop open and sustainable ways to improve occupational health and safety in the current environment. One of the alternatives is to demand information disclosure from the government, including the number of various types of occupational diseases around the country, the gender ratio, and high risk enterprises. The research and analysis of civil society organisations can fill the role temporarily.

Related government departments should disclose occupational disease information in detail, so that different parties can use the information to do research and analysis in order to make recommendations for improvement.

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