

**Bills Committee on  
Occupational Deafness (Compensation)  
(Amendment) Bill 2009**

**Administration's Response to Issues Raised  
at the Bills Committee Meeting Held on 22 June 2009**

**Introduction**

This paper provides information requested by Members of the Bills Committee at its meeting held on 22 June 2009 for examining the Occupational Deafness (Compensation) (Amendment) Bill 2009 (“the Bill”).

**A. Information on how other jurisdictions determine the percentage of permanent incapacity of a claimant and calculate the amount of compensation payable to him**

2. Members requested the Administration to provide information on the practices of other places in determining the percentage of permanent incapacity of a claimant with occupational deafness and calculating the amount of compensation payable to him. Pursuant to this request, the Administration has studied the practices in major jurisdictions, such as the United State of America (USA), Canada, Australia, and the United Kingdom (UK). We have also looked into the practices of nearby jurisdictions, including the Mainland and Singapore. The information obtained is mainly based on desktop research on the Internet and major documentations such as the *Guides to the Evaluation of Permanent Impairment* (the AMA Guide) by the American Medical Association. A summary of the findings is given below.

3. In the jurisdictions we have looked into, noise-induced deafness sustained as a result of working in noisy occupations is classified as an

occupational disease. As far as the determination of the percentage of permanent incapacity is concerned, different practices are adopted in these places. In UK and Hong Kong, employees' compensation for the permanent incapacity of an employee is determined by the degree of his loss in earning capacity. In Canada and certain states of the USA, the incapacity of an employee is determined by making reference to his "whole-person impairment". Under the concept of "whole-person impairment", compensation is provided for the permanent impairment of any body part or function to the extent to which it permanently impairs the employee as a whole person. In awarding compensation, some jurisdictions pay in a lump sum while others pay by way of periodic payments. Some of these payments are funded by social security while others are paid out of collective compensation funds or individual insurance covers. Since there are basic conceptual differences among various compensation systems, there are limitations in making direct comparisons in their ways of determining the amounts of compensation for occupational deafness in these jurisdictions.

4. In USA, most states treat noise-induced hearing loss at work as an occupational disease. Where noise-induced hearing loss is compensable, the calculation of compensation is usually based on the degree of hearing loss. In Washington, workers who have contracted occupational deafness are entitled to a lump sum compensation called the Partial Permanent Disabilities Award under the Industrial Insurance (Workers' Compensation) Benefits to compensate for their permanent loss of bodily function. The amount of compensation for any physical loss is laid down in a "Permanent Partial Disability" Award Schedule. Under this Permanent Partial Disability Award Schedule, disabilities are classified into different types of bodily loss and instead of a percentage, each type is assigned a specific compensation amount. In 2009, the maximum amount of lump-sum compensation for complete loss of hearing in both ears is US\$87,065. To put this compensation level in perspective, it would be useful to note that the lump sum compensation for total bodily impairment in Washington is US\$181,386, i.e. compensation for total hearing loss is about 48% to that of total bodily impairment. If the hearing loss is partial rather than total,

the amount of the award would be determined proportionally.

5. In California, the degrees of impairment are consolidated by body part and converted to a whole person impairment rating. Injured workers who are permanently disabled are entitled to receive compensation in the name of permanent disability benefits. The amount of disability benefits depends on the worker's degree of permanent disability as stipulated in the fifth version of the AMA Guide, and a number of other variables such as occupations. Adopting the AMA Guide, the maximum percentage of permanent disability for hearing loss in both ears is 35%. A worker who has permanent partial disability receives compensation on a weekly basis for a period ranging from four to 694.25 weeks, depending on his degree of disability.

6. In Australia, a worker who has a permanent impairment arising out of work is entitled to a lump sum compensation called an "impairment benefit". The degree of permanent incapacity is determined on a whole person impairment basis. In Victoria, the maximum percentage of whole person impairment for calculating the compensation for workers suffering from hearing loss in both ears is 35%, while that in New South Wales is 50%.

7. In British Columbia (BC) of Canada, a worker suffering from occupational deafness is entitled to a permanent disability award. The award is calculated with reference to the percentage of total disability of the injured worker. Hearing loss sustained by the employee to each of the ear is converted into a percentage of total disability according to a table specified in the Workers' Compensation Act. In BC, the complete loss of hearing in both ears is set at 15% of total disability. The permanent disability award is usually paid by monthly instalments up to the worker's retirement at the age of 65.

8. In Ontario of Canada, workers suffering from occupational hearing loss are entitled to permanent impairment benefits paid in a lump sum. The lump sum is calculated by an annually fixed amount set by the

law and the percentage of the workers' permanent impairment is determined with reference to the revised third version of the AMA Guide. The maximum percentage of permanent disability award for noise-induced total deafness in both ears is 35%.

9. In UK, a worker who suffers from occupational deafness would be entitled to the Industrial Injuries Disablement Benefit (IIDB) which compensates workers who have become disabled as a result of an industrial disease or accident at work. The IIDB is paid as part of the social security system and is non-contributory. The benefit is paid weekly and its amount depends on the extent of the disablement of the worker. For an employee who sustains occupational deafness, his level of hearing loss is converted into a disablement percentage. In UK, the maximum degree of disablement for occupational deafness is 100%.

10. In the Mainland, a worker who is injured at work or sustains occupational disease would be entitled to an amount of compensation which is determined according to his level of permanent incapacity. Instead of percentages, permanent incapacity is categorized into ten levels, ranking from level ten at the lowest to level one at the highest. The maximum permanent incapacity level for a worker who sustains hearing loss to both ears is level four. Compensation is paid in either lump sum or monthly payment, depending on the level of disability.

11. In Singapore, a worker who is injured at work and suffers from an occupational disease would be entitled to a lump sum payment of compensation for his loss of earning capacity. The maximum percentage of loss of earning capacity of a worker suffering from noise-induced deafness to both ears is 60%. Compensation is calculated with reference to the worker's monthly earning and percentage of loss of earning capacity.

**B. Information on the practices of other jurisdictions in determining the percentage of permanent incapacity of a person suffering from monaural hearing loss and calculating the amount of compensation payable to him**

12. Members also requested for information on the legislation and practices of other jurisdictions in determining the percentage of permanent incapacity of a worker suffering from monaural hearing loss (MHL). A research on Internet was also conducted in this respect. The following is the summary of the findings

13. Among the jurisdictions surveyed, MHL is compensable in some states of the USA and some provinces in Canada where the concept of “whole person impairment” rating is adopted to determine the extent of an individual’s impairment. This method of determination is fundamentally different from that of Hong Kong. Despite the fact that Canada and certain states in USA determine the incapacity/impairment with reference to whole person impairment, different methods are adopted to determine the percentages. In the USA, some states, like California, determine the percentage based on the AMA Guide, while in Canada, some provinces, like BC, have their own standard for determining the percentage of impairment for each part of the body under the law. As for the payment of compensation, some places pay in a lump sum while others pay in the form of weekly or monthly payment. In view that different practices are adopted in these places/jurisdictions, there is practical difficulty in making a direct comparison in their ways of determining the amount of compensation for MHL.

14. In Washington, USA where MHL is compensable, workers suffering from noise-induced hearing loss at work are entitled to the Partial Permanent Disabilities Award, which is paid in the form of a lump sum to compensate for the permanent loss of bodily function. Specific amounts of compensation, instead of percentages, for each type of bodily loss are laid down in a “Permanent Partial Disabilities” Award Schedule. In the case of total hearing loss to one ear, the maximum amount of compensation

is US\$14,510. This amount is 16.6% of the compensation for total hearing loss to both ears, and 8% of that for total bodily impairment.

15. In California, USA, the calculation of permanent disability rating is based on the AMA Guide and a number of other variables. Each rating corresponds to a fixed number of weeks of compensation and compensation is paid basing on the number of weeks and the weekly compensation rate. For the complete loss of hearing to one ear, the maximum percentage of permanent disability is 6%, as against 35% for complete hearing loss to both ears according to the AMA Guide.

16. In Australia, though the determination of hearing loss level for the purpose of compensation is made with reference to binaural hearing impairment, persons suffering from MHL are also entitled to compensation. In Victoria and New South Wales, the maximum percentages of whole person impairment for workers suffering from complete hearing loss in one ear are around 12% and 9% respectively, as against 35% and 50% for both ears in each of the provinces.

17. In Canada, MHL is compensable in BC. A worker suffering from occupational deafness is entitled to a permanent disability award which is calculated with reference to the percentage of total disability of the injured worker. The award is usually paid in monthly instalments up to the worker's retirement at the age of 65. According to the Workers' Compensation Act, the highest disability award for complete loss of hearing in one ear is 3%, as against 15% for complete loss of hearing in both ears. The rationale of the BC to adopt this level of award for MHL is that hearing loss in both ears is considered much more of a disability than hearing loss in one ear.

18. On the Mainland, the maximum permanent incapacity level for MHL is level 8. According to information available to us, UK and Singapore do not compensate MHL.

**C. Information on research studies conducted locally or overseas on the hearing loss of persons exposed to different levels of noise in their working environment and developed noise-induced hearing loss**

19. The ear is a complex organ which comprises the outer, middle and inner ear. The inner ear contains hair cells that are responsive to sound stimuli. Nerve impulses so generated are transmitted to the hearing centres of the brain, allowing us to hear sound. Prolonged exposure to excessive noise can result in irreversible damage of the hair cells, leading to noise-induced hearing loss. However, researches have shown that the damage will not progress if noise exposure is stopped.

20. The causal relationship between noise exposure at work and hearing loss has been well established in the medical literature. The main factors determining the level of noise-induced hearing loss are the intensity of the noise and the duration of exposure to such noise. In general, the higher the noise intensity and the longer the duration of exposure to the noise, the higher the consequent level of hearing loss. An example is the exposure to noise at more than 90dB(A) for over 10 years will likely cause significant hearing loss affecting communication.

**D. Reason(s) for setting a minimum of five-year interval for re-assessing the degree of hearing impairment for providing further compensation for additional hearing loss sustained as a result of continued employment in a noisy occupation**

21. It is well established that prolonged exposure to excessive noise can cause noise-induced hearing loss. However, the rate of hearing loss varies depending on the years of noise exposure. According to the document "Hearing Surveillance in the Workplace" published jointly by the Australasian Faculty of Occupational Medicine and the Australian Association of Audiologists in Private Practice, the hearing loss is maximal in the first few years of noise exposure, and then slows down significantly,

e.g. in case of exposure to 90dB(A) of noise for a period of 40 years among the 5% most sensitive individuals, about 64% of the total hearing loss occur in the first 10 years; about 10% in the 11th to 15th year; about 7% in the 16th to 20th year and in the 21st to 25th year; about 5% in the 26th to 30th year and in the 31st to 35th year; and about 2% in the 36th to 40th year. The details are given in the following table:

<b>Year of exposure to 90dB(A) of noise</b>	<b>Percentage of total hearing loss over 40 years of exposure</b>
0- 10	64.3%
11- 15	9.5%
16 - 20	7.2%
21 - 25	7.1%
26 - 30	4.8%
31 - 35	4.7%
36 - 40	2.4%

22. As about 64% of the total hearing loss occur in the first 10 years of noise exposure, while a decreasing percentage, i.e. from 9.5% to 2.4% occurs in each of the following 5-year period, it is considered reasonable to set a five-year period for re-assessing the degree of hearing impairment for the purpose of providing further compensation due to continued exposure to noise.

Labour and Welfare Bureau  
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