

Epidemiology Bulletin

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Health Conditions of Foreign Laborers — Preliminary Findings

1. Introduction

To meet the labor demands of the Six-Year National Development plans and to sustain the continuing development of economy, the government began to bring in foreign laborers since October 1989. Foreign laborers brought in for employment following the legal procedures specified by the authorities concerned are called "legal foreign laborers"⁽¹⁾.

Thailand, Malaysia, the Philippines and Indonesia are the major sources of foreign laborers and also endemic areas of certain infectious diseases. These diseases can be imported into Taiwan by the laborers. To prevent the importation of disease, the Department of Health has formulated regulations to control the health status of the foreign laborers. These regulations are derived from the relevant regulations speculated in the guidelines concerning the permit for employment and management of foreign laborers promulgated by the Council of Labor Affairs of the Executive Yuan. The regulations require that foreign laborers should be physically examined at home country prior to their departure and examined again after arrival, and thereafter, be registered with the local health authorities for follow up. However, preliminary findings of the re-examinations upon arrival still disclose some health defects. This fact deserves serious concern.

2. Subjects and Items of Examination

(1) Subjects: information on health status of foreign laborers entering into Taiwan between January 1992 and February 1993 has been collected from health bureaus for statistical analysis.

(2) Items: the items for the physical examination of foreign laborers regulated by the Department of Health include: general physical examination, chest X-ray examination, testing for HIV antibody, serum test for syphilis, test for hepatitis B surface antigen,

blood test for malaria, fecal examination for intestinal parasites, pregnancy test, urine test for morphine and amphetamine, etc.

(3) Places of examination: public and private regional and teaching hospitals designated by the Department.

(4) Readings of test findings: for foreign laborers to be qualified, all laboratory testings must be negative.

3. Findings

Health conditions upon re-examination of foreign laborers from Thailand, Malaysia, the Philippines, and Indonesia are:

(1) Health conditions upon re-examination after arrival of all foreign laborers (including house-maids and supervisors) are shown in Table 1. For the period January 1992 and February 1993, 12,946 foreign laborers were re-examined physically; of them, 893 (6.9%) have failed: 723 Thais (7.1% of 10,194 Thai laborers), 74 Malaysians (5.2% of 1,413 Malaysian laborers), 78 Filipinos (9.0% of 866 Philippine laborers), and 18 Indonesians (3.8% of 473 Indonesian laborers).

(2) Items that are failed in the laborers are shown in Table 2. Of 12,946 persons examined, 42 (0.32%) are positive for pulmonary tuberculosis, 19 (0.15%) positive for AIDS, 35 (0.27%) positive for syphilis, 197 (1.52%) positive for hepatitis B, 2 (0.02%) positive for malaria, 593 (4.58%) positive for intestinal parasites, 3 (0.02%) pregnant, and 2 (0.02%) positive for morphine in urine. Intestinal parasites are the most prevalent. The health conditions of foreign laborers by country are summarized as follows:

(a) Of the 10,194 Thais examined: 33 (0.32%) are positive for pulmonary tuberculosis, 17 (0.17%) positive for AIDS, 27 (0.26%) positive for syphilis, 115 (1.13%) positive for hepatitis B, 2 (0.02%) positive for malaria, 526 (5.16%) positive for intestinal parasites, 1 (0.01%) pregnant, and 2 (0.02%) positive for morphine in urine. Intestinal parasites are the most prevalent among the Thais.

(b) Of the 1,413 Malaysians examined: 4 (0.28%) are positive for pulmonary tuberculosis, 1 (0.07%) positive for AIDS, 3 (0.21%) positive for syphilis, 54 (3.82%) positive for hepatitis B, 12 (0.85%) positive for intestinal parasites. Hepatitis B is the most prevalent among the Malaysians.

(c) Of the 866 Filipinos examined: 4 (0.46%) are positive for pulmonary tuberculosis, 1 (0.12%) positive for syphilis, 24 (2.77%) positive for hepatitis B, 47 (5.43%) positive for intestinal parasites, 2 (0.23%) pregnant. Intestinal parasites are the most prevalent among the Filipinos.

(d) Of the 473 Indonesians examined: 1 (0.21%) is positive for pulmonary tuberculosis, 1 (0.21%) positive for AIDS, 4 (0.85%) positive for syphilis, 4 (0.85%)

positive for hepatitis B, 8 (1.69%) positive for intestinal parasites. Intestinal parasites are the most prevalent among the Indonesians.

3. Infection of Intestinal Parasites

As shown in Table 2, of all intestinal parasite infections, whipworm (*Trichuris trichiura*) is most common among the Filipinos; among the Thais, hookworm and Thai liver fluke (*Opisthorchis viverrini*) are popular; among the Malaysians, the pear-shape flagellate (*Giardia lamblia*) is common; among the Indonesians, hookworm and whipworm are more common.

4. Discussion and Recommendations

The findings of the present survey are discussed as follows:

(1) Diseases that could be brought in by foreign laborers are: pulmonary tuberculosis, parasites, hepatitis B, AIDS, and STD (sexually transmitted diseases). Their entry to Taiwan could bring about adverse effects on the health of the population, and also outbreaks of some infectious diseases that have been eradicated from Taiwan.

(2) From Table 1, 17 Thais have been infected with AIDS. This finding corresponds with the report from Thailand⁽²⁾ and deserves serious concern. Thais should be carefully examined for their HIV antibodies.

(3) From Table 1, only 2 Thais have been infected with malaria. From the Weekly Epidemiological Surveillance Report of Thailand⁽²⁾ which gives an accumulated total up to 20 March 1993 of 5,023 malaria cases, at an average of 457 cases per week, there should be more than 2 cases. Whether it is because that cases do not show symptoms or that the examinations are not strict enough deserves further investigation.

(4) From Table 2, of all intestinal parasite infections, the Thais with 295 hookworm and 238 Thai liver fluke infections, and the Filipions with 24 whipworm infections are the most serious.

(5) From Table 2, the 238 Thais infected with Thai liver fluke may have some implications on Taiwan as there are some endemic areas of Chinese liver fluke (*Clonorchis sinensis*) infections in Taiwan⁽³⁾. Whether the importation of Thai laborers would lead to outbreaks of the fluke in Taiwan remains to be carefully observed.

(6) The importation of foreign labor may to some extent relax the problems of labor shortage in Taiwan. However, as some communicable diseases are still prevalent in those labor exporting countries, their prevention and control should be further strengthened, and the physical examination of foreign laborers should never be relaxed in order to ensure that every foreign laborer brought in is healthy.

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References:

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2. Weekly Epidemiological Surveillance Report (Thailand). 1993;24:161-176.
3. Department of Health the Executive Yuan (R.O.C.). Epidemiological Survey and drug therapy of *Clonorchis sinensis* in Kuo-Hsing Township, Nantou County, Taiwan. Epidemiol Bull 1993;9;55-63 (English ed.).

Table 1. No. and % Positive for infectious diseases in Foreign Laborers Upon Re-examination (January 1992 - February 1993)

| Item | Thailand | | Malaysia | | Philippines | | Indonesia | | Total | |
|----------------------|------------|-------------|-----------|-------------|-------------|-------------|-----------|-------------|------------|-------------|
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| Pulmonary TB | 33 | 0.32 | 4 | 0.28 | 4 | 0.46 | 1 | 0.21 | 42 | 0.32 |
| AIDS | 17 | 0.17 | 1 | 0.07 | | | 1 | 0.21 | 19 | 0.15 |
| Syphilis | 27 | 0.26 | 3 | 0.21 | 1 | 0.12 | 4 | 0.85 | 35 | 0.27 |
| Hepatitis B | 115 | 1.13 | 54 | 3.82 | 24 | 2.77 | 4 | 0.85 | 197 | 1.52 |
| Malaria | 2 | 0.02 | | | | | | | 2 | 0.02 |
| Intestinal parasites | 526 | 5.16 | 12 | 0.85 | 47 | 5.43 | 8 | 1.69 | 593 | 4.58 |
| Pregnancy | 1 | 0.01 | | | 2 | 0.23 | | | 3 | 0.02 |
| Morphine | 2 | 0.02 | | | | | | | 2 | 0.02 |
| Total | 723 | 7.09 | 74 | 5.24 | 78 | 9.01 | 18 | 3.81 | 893 | 6.90 |

Table 2. Parasite Infections of Foreign Laborers

| Positive for | Thailand | | Malaysia | | Philippines | | Indonesia | | Total | |
|------------------------------------|------------|-------------|-----------|-------------|-------------|-------------|-----------|-------------|------------|-------------|
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| <i>Ascaris lumbricoides</i> | 7 | 0.07 | 2 | 0.14 | 22 | 2.54 | | | 31 | 0.24 |
| Hookworm | 295 | 2.89 | 4 | 0.28 | 5 | 0.58 | 3 | 0.63 | 307 | 2.37 |
| <i>Trichuris trichiura</i> | 1 | 0.01 | 2 | 0.14 | 24 | 2.77 | 3 | 0.63 | 30 | 0.23 |
| <i>Strongyloides stercoralis</i> | 22 | 0.22 | | | 1 | 0.12 | | | 23 | 0.18 |
| <i>Trichostrongylus orientalis</i> | | | | | 2 | 0.23 | | | 2 | 0.02 |
| Tapeworm | 2 | 0.02 | | | | | | | 2 | 0.02 |
| <i>Opisthorchis viverrini</i> | 238 | 2.33 | | | 1 | 0.12 | 2 | 0.42 | 241 | 1.86 |
| <i>Giardia lamblia</i> | 3 | 0.03 | 5 | 0.35 | | | | | 8 | 0.06 |
| Malaria parasite | 2 | 0.02 | | | | | | | 2 | 0.02 |
| Total | 528 | 5.18 | 12 | 0.85 | 47 | 5.43 | 8 | 1.68 | 595 | 4.60 |

Remark: A person infected with more than two parasites is counted as one case in the Total