

## METHODOLOGY

The data required to achieve the project objectives were obtained by a sample survey of the targeted population. "Foreign workers" was herewith defined as recent immigrants with less than five years of continuous residence in this country; it is presumed that longer-term residents would have assimilated in relation to social and health status.

Informed consent was sought from all respondents with assurance of confidentiality and anonymity. As incentives for participation, respondents were provided basic medical treatment for health problems identified in the course of data collection, and a small token in cash or kind.

The project was undertaken in two stages:

1. Pilot phase
2. Cross-sectional prevalence survey

### I. Pilot Phase

A pilot phase was carried out covering a small number of respondents ( $n < 200$ ) to identify potential problems, refine the methodology, gain insights into ways to capture the target population and increase cooperative participation.

Qualitative data using methods such as focus group discussion (FGD) was applied to elicit detailed information useful for refining the problem statement, designing the questionnaire, planning the subsequent phases of the project and the intervention (screening model).

The locations covered for this phase were Klang Valley and one agro-based industry in Selangor. The groups to be included were workers in the construction, service, and domestic service sectors. The workers countries of origin were Indonesia, Philippines and Bangladesh.

Respondents were recruited purposively and by using key persons in the community (by residence or occupational group). Eight to 10 persons grouped by country of origin and gender will form the participants of each focus group discussion (FGD).

The focus group discussion (FGD) was to be followed by a pre-test of the survey instruments, (i.e questionnaire). The sampling and the questionnaires are described below.

### II. Cross-Sectional Survey

The pilot phase was used as a basis for improving the study design and the survey instruments. It was also

used for planning for a larger-scale prevalence survey. During this phase the researchers collected information pertaining to the distribution of the selected health and morbidity indicators, and various aspects of health care services.

Recognizing that this population comprised migrants with and without legal status respondents were recruited using two methods:

- Systematic sampling of legal foreign workers employed in major economic sectors, by region/location, occupational sector and country of origin
- Purposive sampling of migrant groups by residence areas (squatter or low-cost) to capture illegal foreign workers

The data was collected using face-to-face interview utilizing a structured questionnaire which covered the following topics:

- Socio-economic background
- Migration profile – mode of entry; length of stay; mobility
- Occupational and social problems, e.g., safety hazards, exploitation, abuse
- Health history and health care needs
- Health care utilization, expenditure and method of payment (self, employer or state), including preventive care, such as immunization and contraception

The following data was also obtained:

- Blood pressure
- Anthropometric (height and weight)

Blood pressure was measured using a random-zero sphygmomanometer. Height was measured without shoes using a non-stretchable tape measure. Weight was measured using a portable weighing machine.

Samples of stool and blood were obtained and analysed.

#### Stool Collection:

- Faecal containers were given to each person with the instruction that it must be returned to the collection station the next morning
- Faecal material was introduced to the respective culture media that supported the growth of different protozoa and micro-organisms before fixing them in formalin

- Formalin fixed stools were brought back to the laboratory for microscopic examination.

#### **Blood collection:**

- A volume of 15 ml of blood was collected and spun. The serum was stored at  $-20^{\circ}\text{C}$  before bringing it back to the laboratory
- Thin and thick blood smears will be made, on glass slides. These glass slides were brought back to the laboratory for staining.

#### **Analysis of Stools:**

- In vitro cultures were monitored for growth of micro-organisms
- Stools were concentrated using formalin-ether concentration technique
- Smears were made and stained with trichrome, Ziehl Neelsen and modified trichrome stains to look for diarrhoea causing pathogens

#### **Analysis of Blood:**

- The blood smears were stained and examined for the following parasites: malaria, leishmania, trypanosome and filaria
- Serum collected was assessed for antibodies against *Toxoplasma*, *Schistosoma*, *Amoeba*, *Leishmania*, *Filaria*, VDRL, Hepatitis B & C markers and Human Immunodeficiency Virus (HIV) using commercially available diagnostic kits.

### **III. Follow-Up Phase**

The outcome of the first two phases will help to define the subsequent phase of this project. The findings of the two phases will enable the researcher to design an appropriate intervention program in relation to migrant health care.

#### **Sample selection**

For the Pilot and Cross-sectional Phases, preliminary data was obtained from the Department of Statistics and Department of Human Resources, to draw up a

listing of occupational or employment sectors with substantial migrant workers, e.g., agriculture, construction, manufacturing and service industries. Where possible, names of major employers were identified to gain cooperation and access to their workers. As mentioned earlier, the FGD participants were recruited by key person contacts.

For the purposive sample, housing areas with a predominance of migrant residents were identified with the assistance of the City Hall or local councils of relevant urban centres, Department of Statistics and local expertise. The actual number of migrants or migrant-headed households were listed from which a sample of survey respondents were recruited.

The sampling scheme depended on the extent of generalisability and took into consideration the following issues:

- Probability sampling was desirable for precision of various estimates of prevalence
- Expected problem with sampling was the determination of illegal migrants
- Sampling frame was based on representativeness of the study sample, unit of observation (individual or household), and method of stratification (necessitating cluster or multi-stage sampling)
- Sampling size calculation was based on difference in proportions, accounting for an estimated non-response rate and withdrawal or drop-out rate, and level of statistical analysis (univariate or multivariate)

Attempts will be made to map out locations with a predominance of migrant populations using information from multiple formal and informal sources. The use of 'snowball' sampling procedure was applied to overcome problems of identification and accessibility of illegal migrants (purposive rather than random).

#### **Sample size:**

The calculation of the sample size for the cross-sectional survey on prevalence yielded a study population of about 2,610 respondents.