NCD Risk Factor Surveillance in the South-East Asia Region

Report of the Regional Statistical Support Group Workshop
Pattaya, Thailand, 22-24 November 2004

WHO Project: ICP NCD 001 (II)

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1. **INTRODUCTION**

Evidence shows that the epidemiological transition in WHO’s South-East Asia Region (SEAR), has reached a stage when the burden of noncommunicable diseases (NCDs) is higher than that of communicable diseases. The rapid changes in the economic, social and demographic determinants of health as well as adoption of unhealthy lifestyles (tobacco and alcohol consumption, unhealthy diet, physical inactivity) by large segments of the population are contributing to this shift.

In order to support Member Countries in improving the evidence base for developing and evaluating NCD prevention and control programmes, surveillance activities need to be strengthened.

The STEPwise approach to NCD Risk Factor Surveillance was developed by WHO to provide a standardized methodology for data collection and analysis.

STEPS is a sequential process, starting with gathering information on key risk factors by using a questionnaire (Step 1) then moving to simple physical measurements (Step 2), and finally to collection of blood samples for biochemical assessment (Step 3). At each Step, mandatory core information is collected, with the potential to collect expanded information, and also information on discretionary optional variables. For surveillance to be sustainable, the STEPwise approach advocates that a small amount of comparable, good quality data is more valuable than a large amount of poor quality data.

In 2003, countries in the South-East Asia Region agreed on a Regional Strategy for NCD Surveillance. The strategy calls for adoption of STEPS approach and targets NCD risk factors surveillance for early integration with national health information systems. Following a series of regional workshops and trainings on planning and implementation of NCD risk factor surveillance,
eight SEAR countries (Bangladesh, India, Indonesia, Maldives, Myanmar, Nepal, Sri Lanka and Thailand) adapted the WHO STEPS approach.

In order to provide support to Member Countries on statistical issues related to implementation of STEPS surveys, an advisory group comprising experts from four SEAR countries was constituted. Establishment of this body, known as the Regional Statistical Support Group, was endorsed by the Regional Director. The group, at the request of Member Countries, provides assistance in developing sampling plans, proposal writing, and in data management and analysis issues. It plays an important role in compiling and sharing regional experience gained during implementation of STEPS surveys and contributes to the ongoing process of global review of the STEPS approach.

2. OBJECTIVES OF THE WORKSHOP

2.1 General Objective

To strengthen collection and utilization of NCD data in SEAR.

2.2 Specific Objectives

(1) To review implementation of NCD risk factor surveillance in SEAR;

(2) Using experience gained during the implementation of standard STEPS surveys to identify and address statistical issues in the context of planning for national NCD surveillance;

(3) To identify methodological constraints in implementing NCD risk factor (STEPS) surveys in SEAR countries and propose solutions; and

(4) To develop plan of action for Regional Statistical Support Group.

3. ORGANIZATION OF THE WORKSHOP

The workshop was inaugurated by Dr Jerzy Leowski, Regional Adviser, Noncommunicable Diseases, WHO SEARO, on behalf of Dr Samlee
Plianbangchang, Regional Director, WHO South-East Asia Region. The text of the Regional Director’s address is at Annex 1.

The workshop was attended by 15 participants from the countries of the Region as well as one participant from Vietnam. In addition, staff from WHO Headquarters, the Eastern Mediterranean Regional Office, the South-East Asia Regional Office and the WHO country offices in Maldives and Nepal participated in the workshop (see List of the Participants at Annex 2).

The programme of the workshop is at Annex 3.

4. GLOBAL AND REGIONAL NCD SURVEILLANCE ACTIVITIES

In her presentation, Dr. Ruth Bonita, Director, Surveillance, WHO HQ highlighted the need of good quality, comparable, country level data on NCDs and their risk factors to facilitate the policy and programme development process. The new tools for NCD surveillance such as WHO’s STEPwise Framework for Surveillance, WHO’s/NCD InfoBase and the WHO/CDC Global School-based Health Survey have been made available recently. Surveillance activities using Verbal Autopsy approach, Behavioural Risk Factor Surveys and World Health Survey had been implemented in many Member Countries with WHO support.

NCD surveillance should have a hierarchical system for coordination of various activities, use standard definitions and apply a common yet flexible approach. It needs to be easily adaptable in different settings. STEPwise approach satisfies many of these requirements. The Global School-based Health Survey provided a useful framework for collecting NCD risk factor data in schoolgoing children and youth. WHO NCD InfoBase had become a one stop source of data on risk factors. It was being expanded to include data on diseases (e.g. stroke database). The future focus of WHO NCD surveillance programme would be on application of standard surveillance tools and methods in countries and on utilization of data, she added.

Dr. Jerzy Leowski, Regional Adviser, Noncommunicable Diseases, SEARO reported on the NCD surveillance activities in the Region. He indicated that the poor quality and low coverage of medical certification of
deaths and inadequate utilization of verbal autopsy were among the major barriers in improving information on NCD related mortality. Morbidity data on NCDs generated in some public hospitals did not reflect the epidemiological situation in the population. Therefore collection of representative information on risk factors had an important role in strengthening NCD surveillance in the Region.

The Regional NCD Surveillance Network was established in October 2002 with the participation of Bangladesh, India, Indonesia, Nepal, Sri Lanka and Thailand. The network had contributed to development of a Regional Strategy for NCD Surveillance. The Strategy proposed NCD surveillance targets and strategies for 2003-2010. It called for collection of standardized data on NCD risk factors using WHO STEPS approach. The initial target to adapt the approach in at least eight SEAR countries by 2005 was likely to be fully achieved. SEARO had established various mechanisms to support Member Countries in conducting NCD risk factor surveys. These include conducting training programmes, loaning of equipment from the Regional Pool of Equipment and establishment of a Regional Statistical Support Group (RSSG) to provide appropriate statistical advice at the request of Member Countries, Dr Leowski said.

Another target specified in the Regional Strategy for NCD Surveillance pertained to establishing sustainable databases for NCDs and their risk factors at the regional and country levels by 2010. Some progress had been made by the establishment of Regional NCD InfoBase. It was proposed to deploy NCD InfoBases in selected SEAR countries of the Region.

Dr. Bela Shah, Senior Deputy Director-General, Indian Council of Medical Research, New Delhi, discussed the process of developing the Regional NCD Risk Factor Profile initiated recently by SEARO. The document would describe methods and strategies applied in the Region for collection of data on risk factors and compile available information on levels and patterns of NCD risk factors in the Member Countries. Current regional efforts to strengthen NCD risk factor surveillance would be described. She highlighted that adequate information on major NCD risk factors was not available in many SEAR countries and referred to the limitations pertaining to the available data.
Dr. Oussama Khatib, Regional Adviser, Noncommunicable Diseases, Regional Office for the Eastern Mediterranean (EMRO), shared information on the status of NCD surveillance activities. The countries of EMRO reported high rates of smoking, obesity and physical inactivity. Diabetes prevalence was also very high, ranging from 7% to 25%. NCDs were recognized as a major public health problem in the Region. Thirteen countries were applying STEPS approach for NCD surveillance. They had also established an NCD Prevention Network - Eastern Mediterranean Approach to NCDs (EMAN). Many community-based intervention projects had been initiated.

5. COUNTRY PRESENTATIONS

The Principal Investigators of STEPS surveys attending the workshop shared their experiences. The basic information on the surveys conducted in countries of the Region is shown in Table 1. Table 2 provides information on major difficulties and problems encountered during the implementation of STEPS surveys. It shows also how data are being utilized and outlines plans for follow-up. Two countries have incorporated components of STEPS approach into national NCD risk factor surveys. Other countries have conducted surveys at one or more sub-national level sites. Two countries dropped the section on alcohol for religio-cultural reasons. All the countries faced some difficulty in translating the instrument into local languages.

Table 1. Implementation of NCD Risk Factor Surveys Applying STEPS Approach in SEAR Countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Site</th>
<th>Population coverage</th>
<th>Sample size</th>
<th>Implementation Stage</th>
<th>Linkage to Ministry of Health Programme</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh</td>
<td>Dhamrai</td>
<td>Rural</td>
<td>400 000</td>
<td>4127</td>
<td>Completed</td>
</tr>
<tr>
<td></td>
<td>Dhaka</td>
<td>Urban</td>
<td>1 352 337</td>
<td>7282</td>
<td></td>
</tr>
<tr>
<td>India</td>
<td>Ballabhgarh</td>
<td>Urban</td>
<td>150 000</td>
<td>2587</td>
<td>Completed</td>
</tr>
<tr>
<td></td>
<td>Rural</td>
<td>50 000</td>
<td>2828</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Slum</td>
<td>187 458</td>
<td>2556</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Chennai</td>
<td>Urban</td>
<td>30 000</td>
<td>2566</td>
<td></td>
</tr>
<tr>
<td>Implementation Site</td>
<td>Population coverage</td>
<td>Sample size</td>
<td>Implementation Stage</td>
<td>Linkage to Ministry of Health Programme</td>
<td></td>
</tr>
<tr>
<td>---------------------</td>
<td>---------------------</td>
<td>-------------</td>
<td>----------------------</td>
<td>----------------------------------------</td>
<td></td>
</tr>
<tr>
<td>**Country</td>
<td>Site</td>
<td>Type</td>
<td>Size</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rural</td>
<td>24 000</td>
<td>2712</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Slum</td>
<td>15 000</td>
<td>2569</td>
<td></td>
</tr>
<tr>
<td><strong>Dibrugarh</strong></td>
<td></td>
<td>Urban</td>
<td>110 000</td>
<td>2538</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rural</td>
<td>100 000</td>
<td>2931</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Periurban</td>
<td>85 000</td>
<td>2795</td>
<td></td>
</tr>
<tr>
<td><strong>Nagpur</strong></td>
<td></td>
<td>Urban</td>
<td>26 758</td>
<td>2513</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rural</td>
<td>24 338</td>
<td>2508</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Urban Slum</td>
<td>28 697</td>
<td>2640</td>
<td></td>
</tr>
<tr>
<td><strong>Trivandrum</strong></td>
<td></td>
<td>Urban</td>
<td>24 901</td>
<td>2500</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rural</td>
<td>28 742</td>
<td>2537</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Slum</td>
<td>13 328</td>
<td>2500</td>
<td></td>
</tr>
<tr>
<td><strong>Indonesia</strong></td>
<td>Depok</td>
<td>Sub Urban</td>
<td>40 000</td>
<td>1855</td>
<td>Completed National Institute of Health Research and Development</td>
</tr>
<tr>
<td><strong>Indonesia</strong></td>
<td>Purworejo</td>
<td>Rural</td>
<td>751 871</td>
<td>3025</td>
<td>Purworejo District Health Office</td>
</tr>
<tr>
<td></td>
<td></td>
<td>National Urban/Rural</td>
<td>219 883 000</td>
<td>13 131</td>
<td>Planning Bureau, MOH (Healthy Indonesia 2010)</td>
</tr>
<tr>
<td><strong>Maldives</strong></td>
<td>Male</td>
<td>Urban</td>
<td>72 927</td>
<td>2036</td>
<td>Data Analysis Implemented by MoH</td>
</tr>
<tr>
<td><strong>Myanmar</strong></td>
<td>Yangon Division</td>
<td>Urban</td>
<td>5 927 000</td>
<td>2285</td>
<td>Data Analysis Implemented by National Diabetes Programme in collaboration with Dpt. Medical Research (Lower Myanmar)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rural</td>
<td>2163</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Nepal</strong></td>
<td>Kathmandu</td>
<td>Urban</td>
<td>671 846</td>
<td>2030</td>
<td>Completed Implemented by MoH</td>
</tr>
<tr>
<td>Implementation Site</td>
<td>Population coverage</td>
<td>Sample size</td>
<td>Implementation Stage</td>
<td>Linkage to Ministry of Health Programme</td>
<td></td>
</tr>
<tr>
<td>---------------------</td>
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<td>----------------------</td>
<td>----------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Country</td>
<td>Site</td>
<td>Type</td>
<td>Size</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>Western Province</td>
<td>Urban/Rural</td>
<td>189 400</td>
<td>3000 Completed</td>
<td></td>
</tr>
<tr>
<td>Thailand</td>
<td>National</td>
<td>Urban/Rural</td>
<td>62 833 000</td>
<td>42 120 Data Analysis</td>
<td></td>
</tr>
</tbody>
</table>

Table 2: Challenges and opportunities in applying STEPS approach in SEAR countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Major Problems Encountered</th>
<th>Utilization of Data &amp; Follow-up Plans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh</td>
<td>• Low response rate in urban areas</td>
<td>• Results of urban middle class survey utilized to plan demonstration project on community-based prevention of major NCDs</td>
</tr>
<tr>
<td></td>
<td>• Age determination</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Cultural acceptability</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Diet and physical activity measurements</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Use of anthropometry equipment in field</td>
<td></td>
</tr>
<tr>
<td>India</td>
<td>• Inability to maintain privacy</td>
<td>• Including NCD component in Integrated Disease Surveillance Programme (IDSP)</td>
</tr>
<tr>
<td></td>
<td>• Poor response from urban areas</td>
<td>• Participating centers to be designated as nodal regional centers under IDSP</td>
</tr>
<tr>
<td></td>
<td>• Use of anthropometry equipments</td>
<td>• Methods/Manuals for MPW use</td>
</tr>
<tr>
<td></td>
<td>• Cultural acceptability</td>
<td>• Used as evaluation tool by demonstration project on community-based integrated NCD prevention at urban Ballabgarh</td>
</tr>
<tr>
<td></td>
<td>• Provision of curative services by field staff</td>
<td></td>
</tr>
<tr>
<td>Indonesia</td>
<td>• Translation</td>
<td>• Evaluation of community-based integrated</td>
</tr>
<tr>
<td>Country</td>
<td>Major Problems Encountered</td>
<td>Utilization of Data &amp; Follow-up Plans</td>
</tr>
<tr>
<td>---------</td>
<td>---------------------------</td>
<td>-------------------------------------</td>
</tr>
<tr>
<td></td>
<td>problems. For example, “typical week” • Poor response among younger men</td>
<td>NCD prevention project in Depok • Advocacy to local government in Depok • Demonstration area for program implementation in other provinces • Step 1 incorporated into National Socioeconomic Survey • Step 2 &amp; 3 incorporated into National Household Health Survey</td>
</tr>
<tr>
<td>Maldives</td>
<td>Poor response rate • Limited resources for data management</td>
<td>Use as the baseline data to design community-based intervention study • Implementation of STEPs surveys in 2 other regions • Incorporating other risk factors into tobacco surveys/DHS</td>
</tr>
<tr>
<td>Myanmar</td>
<td>Poor response rate • Limited resources for data management • Cultural acceptability • Anthropometry equipment • Lack of privacy • Diet &amp; physical activity measurement</td>
<td>NCD InfoBase - use for primary prevention of NCDs • Planning and evaluating National Health Plan • Conducting Data Dissemination Workshop • More surveys in different regions of Myanmar</td>
</tr>
<tr>
<td>Nepal</td>
<td>Provision of curative services by field staff • Diet &amp; physical activity measurement • Anthropometry equipments</td>
<td>Planning of national NCD surveillance programme • The data will be used for the development of preventive strategies in the next 10 years Health Master Plan 2006 – 2015 • Action oriented interventions – advocacy</td>
</tr>
</tbody>
</table>
6. CRITICAL REVIEW OF THE STEPS METHODOLOGY

Dr. Leanne Riley, STEPS Coordinator, WHO HQ presented an overview of the STEPS methodology. Thereafter, participants were divided into two groups. While one group discussed the STEPs Instrument and the Field Manual, the other discussed the Data Management and Data Analysis Manuals and Statistical Resources document. Both the groups then reviewed the Planning and Co-ordination Manual and Report Preparation Manual separately. The salient features of these discussions were presented at a plenary session and are summarized below. A more detailed feedback was provided to the WHO team to facilitate revision of the documents. The group discussions were facilitated by RSSG Members and concerned WHO staff.

6.1 STEPS Instrument

It was recognized that different countries have used different versions of the STEPS instrument as they have conducted surveys at different times in the development of the instruments. Version 1.3 was the one most commonly used. The most recent version, 1.4, has only minor changes compared to version 1.3. Also, it is not desirable to change the instrument further as this would make the data already collected non-comparable to future data.

STEP 1

The participants noted the difficulty in age and income determination. Many countries in the Region had included a question on oral tobacco use. Quantification of alcohol, fruits and vegetable consumption was difficult as there were a lot of local and cultural variations. Physical activity was
particularly difficult as the perception of time (10 minute-units proposed in the instrument) was not that definitive. Women’s activities at home, like washing, seem to be underestimated. The same activity may be vigorous for some (i.e. induce breathlessness) but not for others. Leisure time concept was difficult to explain especially in rural areas and among women.

**STEP 2**

Most of the countries had used a household approach for collection of data. Applying a household approach requires special set of equipment. For example, weighing machines were not robust enough and machines to measure height which needed to be fixed to the wall were unusable. Flat surfaces were often not available at homes. It was difficult to follow the protocol for blood pressure measurement as there may be not tables / stools etc. to keep the instrument. The participants also noted that use of electronic blood pressure apparatus should not be made mandatory.

**STEP 3**

Only four countries had done STEP 3 which required much higher resources but provided important and convincing data for advocacy purposes. There were significant problems in standardization (dry chemistry) and transport (wet chemistry). WHO should reconsider its recommendation to restrain application of STEP 3 in developing countries and advice for preferential use of dry chemistry. Each country needs to make its own choice depending upon its resources and needs.

**6.2 Planning and Coordination Manual**

The STEPS Planning and Co-ordination Manual is intended for the project incharge and provides information on the planning process required before moving to the field for data collection.

As many of the countries are conducting surveys at sub-national level it may be better to replace country by Surveillance Site. Advantages and disadvantages of dry and wet chemistry should be detailed to assist the investigator in making appropriate decision. The approach implicit in the document that WHO, at all levels, must “approve” the site plans should be
dropped altogether and replaced with terms implying a consultative process. Many of the appendices were not required as they were very specific, like procedure for ethical clearance. A list of different equipments with specification for STEPS 2 and 3 along with cost estimates, may be added as an appendix. The need for ethical clearance was also discussed and it was suggested that necessary guidelines for ethical practice may be prepared and added.

6.3 Field Manual

The Field Manual provides detailed information for those who collect data in the field. The consistency of language (supervisor/ team leader etc.) should be maintained. The section on the role of supervisor needs to be strengthened with reference to calibration of equipment, monitoring targets by age and sex group etc. and documentation of the deviation from protocol. The section on training should have more details. In general, the manual only uses a clinic-based approach whereas it was noted that the countries in SEAR have used a household-based approach. The instructions should be either generic (applicable to both the settings) or a separate section on household-based approach be added. The choice of equipment for STEP, 2 and 3 should be left to countries and recommendations for any specific equipment made. The details of specific equipment, as currently given in the manual, should be revised. Generic instructions to follow the instruction manual that come with the equipment should be added. The field staff should be provided with a one-page handout on the “normal values” of the parameters being tested. As a good ethical practice the results of the actual measurements should be shared with the individuals participating in the survey together with “normal values” and an indication of the action that needs to be taken.

6.4 Data Management Manual

The Data Management Manual provides detailed information on designing and developing databases for storage and analysis of data. It was suggested that one of the variables could be taken from the instrument and its path traced through different stages of data management and analysis to highlight the role of different manuals and procedures. Each section should be
preceded by a summary and then followed by a more detailed description to prevent different interpretations. A section on Data cleaning should be added.

6.5 Data Analysis Manual

The Data Analysis Manual is designed for persons undertaking statistical analysis of data. Participants felt that as a systematic sampling approach is often used in Member Countries because of lack of a sampling frame, this needs to be adequately described. Handling of “others” category and missing data was not adequately described. Describing skewed distribution needs further elaboration. Weighting issues are important and require more elaboration. This section could be shifted to the statistical resources.

6.6 Report Preparation Manual

The Report Preparation Manual focuses on report production and dissemination. The group felt that the InfoBase report and country report have a lot of commonalities and one report should serve both purposes. The importance of the fact sheet for dissemination of data to different stakeholders was appreciated. The template provided could be modified by countries as per their needs.

6.7 Statistical Resources Document

The Statistical Resources Document provides background information and theoretical concepts underlying different aspects of the survey. It is meant only for reference. Different software that can be used for data management and analysis should be detailed so that users of software other than EPI INFO (included in all manuals) are not at a disadvantage.

There were a number of conceptual issues related to application of the theory of sample survey and the theory of statistical inference which needed clarification. The utilization of the survey data, particularly from a complex survey design, for descriptive and analytic purposes requires careful consideration and therefore needs further description. The discussion on the development of estimators and their properties, including the variance function of estimators for each of the specific fundamental sampling plans, is essential and needs to be focused rather than emphasizing only on weighting
(which, again, does not reflect precise understanding of the concepts and theoretical grounds of stratification and clustering or sub-sampling technique) as presented. Definitions of important statistical terms, such as variable, random variable, probability function, parameters of a probability function, population characteristics of a finite population, and so on, must be quoted with respect to statistical theory and also be in a form understood by non-statisticians. It was suggested that this document be reviewed by independent experts involved in large-scale health surveys so as to be technically correct as well as use a language understood by non-statisticians.

7. REGIONAL STATISTICAL SUPPORT GROUP ACTIVITIES

Dr. R.M. Pandey, Coordinator RSSG traced the establishment of RSSG in 2003. He pointed out its role in facilitating the conduct of NCD risk factor surveys using STEPS approach especially in relation to statistical issues of sampling, data management and analysis. The members had reviewed the STEPS surveys’ proposals submitted to WHO and provided feedback. They were also actively involved in field visits and data management and analysis in their own countries.

Dr. Pandey subsequently presented regional guidelines on sampling plan, data entry and analysis. These were based on experience of working with the Member Countries and in consonance with the guidelines in the STEPS documents.

The role played by RSSG was appreciated by the participants. It was also felt that, as countries move up from surveys to surveillance, the support of RSSG would be more crucial. These were reflected in the Action Plan for 2005-2006 presented during the workshop. RSSG could provide support to countries wishing to perform advances analysis of data beyond what is required in the STEPS approach. SEARO is also in the process of deploying WHO NCD InfoBase at national level. RSSG members could assist in training activities, preparation of guidelines and manuals related to InfoBase.

8. CONCLUSIONS

The participants reviewed the process of implementation of the NCD risk factor surveillance activities in SEAR countries.
The strengths and limitations of the approaches and methodologies adopted in SEAR countries were discussed. The participants of the workshop noted:

- That Member Countries are in different stages of implementation of NCD Surveillance programmes/activities, and have different mechanisms of utilization of NCD surveillance data;
- In most SEAR countries, NCD risk factors surveillance is yet to be incorporated as a part of national health information systems;
- The considerable progress achieved in building national capacity for conducting NCD risk factor surveillance;
- The significant role of regional NCD networking process in building foundations for NCD surveillance systems development;
- The important role played by the Regional Statistical Support Group in facilitating NCD risk factor surveillance activities being implemented in SEAR;
- The persisting methodological limitations and constraints in collecting standardized and valid NCD surveillance data on risk factors related to diet and physical inactivity;
- That WHO STEPS approach provides an appropriate framework for planning and implementation of NCD risk factor surveillance programmes as appropriate in SEAR countries context; and
- That STEPS framework is also useful in evaluating the impact of community-based intervention in demonstration projects.

8. RECOMMENDATIONS

The Regional Statistical Support Group should:

(1) Facilitate WHO SEARO to provide, on request of Member Countries, technical support and expert advice in the process of implementation of NCD surveillance activities;

(2) Strengthen its capacity in fulfilling assigned tasks through involving experts from other SEAR countries;
(3) Assist WHO and Member Countries in development and application of standards and norms for NCD surveillance;

(4) Consider developing appropriate technical instruments to facilitate implementation of NCD surveillance activities in SEAR; and

(5) Finalize its proposed plan of action for the period 2005-2006.

**Member Countries should:**

(1) Enhance utilization of available information on NCD risk factors for adjusting health policies and strategies and for development of NCD prevention and control programmes;

(2) Strengthen national capacity for planning and implementing NCD surveillance programmes/activities;

(3) Consider integration or establishment of appropriate linkages of NCD risk factor surveillance activities with national health information systems; and

(4) Consider adoption/adaptation of WHO approach for NCD risk factor surveillance as appropriate to their needs.

**WHO should:**

(1) Provide continued technical support in planning and implementing national NCD risk factor surveillance programmes/activities;

(2) Encourage adoption of NCD risk factor surveillance within the context of national health information systems, and where feasible, by applying integrated disease surveillance approach;

(3) Utilize experience gathered by SEAR countries that are implementing NCD risk factor surveillance activities in providing inputs for revision and finalization of global instruments and accompanying resources/manuals for conducting STEPS surveys;

(4) Further evolve methodology on risk factor surveillance in the area of diet and physical activity to facilitate monitoring and evaluation of the impact of global/regional/national/subnational activities contributing to implementation of the Global Strategy on Diet and Physical Activity;
(5) Fully utilize the advisory capacity of the Regional Statistical Support Group in evolving and strengthening global, regional and national NCD surveillance programmes/activities; and

(6) Provide further support and facilitate activities of the Regional Statistical Support Group in fulfilling its mandate.
Annex 1

INAUGURAL ADDRESS BY DR SAMLEE PLIANBANGCHANG, REGIONAL DIRECTOR, WHO, SOUTH-EAST ASIA REGION

Noncommunicable diseases account for more than half of all deaths in the South-East Asia Region. Further increases in disease burden and age-specific incidence and mortality rates are expected due to the demographic and socio-economic transition and subsequent profound lifestyle changes occurring in the Region. These changes are enhanced by globalization and result in unfavourable shifts in the distribution and in the mean population level of major risk factors for NCDs. These include high blood pressure, tobacco use, high blood cholesterol level, low fruit and vegetable intake, physical inactivity, overweight, alcohol consumption as well as indoor and outdoor air pollution.

Recognizing the need for improving the availability, validity and accessibility of core information on major chronic diseases, a Regional Strategy for NCD Surveillance was adopted in 2003. Collection of standardized data on NCD risk factors is an important target of this strategy. As a follow-up, the regional capacity for conducting epidemiological surveillance of NCDs with particular focus on sustainable collection of standardized information on major risk factors has been strengthened. Member Countries have been supported in adapting and implementing NCD surveillance approaches promoted by WHO. Standard surveys adopting WHO STEPS approach have been carried out recently in eight countries of the Region. In addition to providing valid information for advocacy and programme planning, the surveys are also being used as an evaluation tool to assess the impact of community-based intervention projects implemented in the Region.

Facilitating mechanisms were established at regional and global levels to assist Member Countries in implementing STEPS-related activities. These included production of tools and guidelines, conducting training, establishing a regional pool of equipment, and establishing the Regional Statistical Support
Group (RSSG). RSSG is an advisory body comprising experts in the area of statistics from the Region providing advice on statistical issues related to NCD surveillance activities.

During this workshop, participants will identify and address statistical issues in the context of planning for future national NCD surveillance activities. They will also identify and address methodological constraints in implementing NCD risk factor surveys in the context of the Region. In addition, a plan of action for RSSG will be developed.

I am confident that the collective knowledge, experience and commitment of experts attending this important workshop will ensure that these important objectives are achieved.

I wish you all success in your deliberations. Thank you
Annex 2

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Annex 3

PROGRAMME

Monday, 22 November 2004
0830 – 0900  Inaugural Session
0900 – 1000  Global NCD Surveillance Activities – Dr Ruth Bonita
1015 – 1045 Implementing Regional Strategy for NCD Surveillance in SEAR – Dr J. Leowski
1045 - 1115 Experience in Implementation of NCD- RF Surveys in EMRO – Dr O. Khatib
1115 – 1200 RSSG – Its Role in Implementing NCD Surveillance Programme in SEAR – Dr R.M. Pandey
1300 – 1400 STEPS – Overview of the Methodology & current status of implementation – L. Riley
1400 – 1700 Country Presentations on Experience in Adapting STEPS Approach

Tuesday, 23 November 2004
0830 – 0915 Critical Review of STEPS Methodology; STEPS Approach
0915 – 1045 Critical Review of STEPS Methodology: Working Group Session 1
  Group A Steps Instrument – Step 1
  Group B Data Management Manual
1045 – 1200 Critical Review of STEPS Methodology: Working Group Session 2
  Group A Steps Instrument – Step 2& 3
  Group B Data Coding and Analysis
1300 – 1400 Critical Review of STEPS Methodology: Working Group Session 3
  Group A Steps Field Manual
  Group B Data Reporting Manual
1515 – 1645 Working Group Presentations
1645 – 1700  Adapting STEPS in SEAR  
(General discussion moderated by Dr J. Leowski)

Wednesday, 24 November 2004

0830 – 0930  Developing Regional Guidelines on Sampling Plan, Data Entry and Analysis – Dr. Pandey
0930 – 1000  Regional NCD Risk Factor Profile – Dr. Bela Shah
1130 – 1200  Global STEPS Strategic Plan – Dr. Ruth Bonita
1300 – 1500  Drafting Conclusions and Recommendations – Group Work
1600 – 1700  Adoption of Conclusions and Recommendations