



Global Health Action >

Volume 2, 2009 - [Issue s4: Special Issue: Risk factors for chronic non-communicable disease: the burden in Asian INDEPTH Health and Demographic Surveillance Sites \(Supplement 1\)](#)



Open access

2,278 0

Views | CrossRef citations to date | Altmetric

0

Supplement 1, 2009

Using the INDEPTH HDSS to build capacity for chronic non-communicable disease risk factor surveillance in low and middle-income countries

Nawi Ng , Hoang Van Minh, Sanjay Juvekar, Abdur Razzaque, Tran Huu Bich, Uraiwan Kanungsukkasem, ... [show all](#)

Article: 1984 | Received 06 May 2009, Published online: 28 Sep 2009

 Cite this article

Sample our
Health and Social Care
Journals



>> [Sign in here](#) to start your access
to the latest two volumes for 14 days

 Full Article

 Figures & data

 References

 Citations

 Metrics

 Licensing

 Reprints & Permissions

 View PDF

 Share

Background

Chronic non-communicable diseases (NCDs) are the leading cause of morbidity, mortality, and disability worldwide. More than 80% of chronic disease deaths occur in low-income and middle-income countries. Epidemiological data on the burden of chronic NCD and the risk factors which predict them are lacking in most low-income countries. The INDEPTH Network (<http://www.indepth-network.org>) which includes the Health and Demographic Surveillance System (HDSS) with many surveillance sites in low-middle income countries provided an opportunity to establish surveillance of the major chronic NCD risk factors in 2005 using a standardised approach.

Objective

This paper presents the conceptual framework and research design of the chronic NCD risk factor surveillance within nine rural INDEPTH HDSS settings in Asia.

Methods

This multi-site study was designed as a baseline cross-sectional survey with sufficient sample size to measure trends over time. In each of nine HDSS sites in five Asian countries, a sample of 2,000 men and women aged 25–64 years, using the WHO STEPwise approach to Surveillance (<http://who.int/chp/steps>), was selected using stratified random sampling (in each 10-year interval) from the HDSS sampling frame.

Results

A total of 18,494 men and women from the nine sites were interviewed with an overall response rate of 98%. The major NCDs risk factors included self-reported information on tobacco and alcohol consumption, fruit and vegetable intake, physical activity patterns, and measured body weight, height, waist circumference, and blood pressure. A series of training sessions were conducted for research scientists, supervisors, and surveyors in each site. Data quality was ensured through spot check, re-check, and data validation procedures, including accuracy and completeness of data obtained. Standardised data entry programme, created using the EPIDATA software, was used to ensure uniform database structure across sites. The data merging and analysis were done using STATA Version 10.

Conclusion

This multi-site study confirmed the feasibility of conducting chronic NCD risk factor surveillance in the low and middle-income settings by integrating the chronic NCDs risk factor surveillance into an existing HDSS data collection and management setting. This collaborative work has provided reliable epidemiological data as a basis for developing chronic NCD prevention and control activities.

chronic non-communicable diseases risk factor surveillance INDEPTH Network
low-middle income countries WHO STEPS

Acknowledgements

The authors would like to acknowledge the INDEPTH Network for financing this work, Dr. Anand Krishnan and Dr. S.K. Kapoor from Ballabgarh HDSS for organising training workshop for this project, the Umeå Centre for Global Health Research, Umeå University, Sweden for supporting the coordination of this supplement, and Dr. Ruth Bonita, who as guest editor for this series of papers, provided substantial and critical scientific input into earlier drafts of this paper.

[Download PDF](#)

Related research

People also read

Recommended articles

Cited by
18

Information for

Authors

R&D professionals

Editors

Librarians

Societies

Opportunities

Reprints and e-prints

Advertising solutions

Accelerated publication

Corporate access solutions

Open access

Overview

Open journals

Open Select

Dove Medical Press

F1000Research

Help and information

Help and contact

Newsroom

All journals

Books

Keep up to date

Register to receive personalised research and resources by email

 Sign me up

