

ANNOTATED BIBLIOGRAPHY

BIOLOGICAL AND CLINICAL MARKERS OF HEALTH AND DISEASE WITH SPECIAL REFERENCE TO DEVELOPING COUNTRIES

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Biological and clinical data collection in national surveys — potential and issues
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Background

During the last decade rapid progress has been made in the field of biological assessment of the health status of individuals and populations. Technological advances are making the collection of specimen (usually body fluids) more feasible and laboratory tests have become easier and cheaper and are covering a much broader spectrum of diseases and conditions.

The advent of the HIV/AIDS epidemic has accelerated the debate about biological and clinical data collection in surveys. HIV infection is symptomless for a prolonged period of time, while a simple low-cost test is available to detect antibody. The measurement of the spread of HIV is a global concern. In the wake of the AIDS epidemic other sexually transmitted diseases have moved up on the international health agenda and considerable progress has been made in recent years with regard to the biological measurement of other STDs.

Important new developments can also be observed in many other health fields. Micronutrient deficiencies have become a priority issue for health programmes and biological and clinical assessment is of utmost importance. Following two decades of great success of vaccination programmes eradication, elimination and control of vaccine-preventable diseases need better measures to assess efficacy and effectiveness of immunization programmes. In addition, the range of vaccine-preventable diseases is expanding with the development of new vaccines. New laboratory techniques allow better assessment of the immunologic status of individuals and populations. Recent examples, such as the onchocerciasis and guinea worm eradication programmes, have shown that the battle against tropical diseases can be successful. 'Roll back Malaria' is a new WHO-initiated global initiative and biological and clinical assessment of populations is an essential tool for advocacy, surveillance, and monitoring and evaluation.

To a varying extent a health transition has occurred in developing countries. Adult health issues are becoming more important in international and national health programmes. In that context, measurement of health status of adults through biological and clinical data collection in surveys will also become more important.

The advances in technology present an important challenge to public health. The risk of rapid technological advances is that the agenda becomes 'technology-driven'. The emphasis of such an agenda is on measurement opportunities rather than on the relevance of the condition for public health. For example, asymptomatic infections may or may not play a role in the spread of disease, in terms of individuals perception of illness they are insignificant. Costs of measurement of certain conditions need to be proportional to the budget available for prevention and control of such conditions.

During the next century there will be increased emphasis on measurement of the health impact of population, health and nutrition interventions. There is a wider range of interventions available to improve human health, but cost effectiveness should guide the ultimate choice of mix of interventions. International donors and national programmes are increasingly concerned with achievement and demonstration of actual health impact. Behavioural data will continue to be collected, but validation or correlation with biological and clinical data is important.

USAID has been sponsoring nationally representative surveys on population and health for more than four decade. In the context of the World Fertility Survey (WFS), Contraceptive Prevalence Surveys (CPS) and Demographic and Health Surveys (DHS) well over 100 national surveys have

been carried out in developing countries. The focus has largely been on family planning and maternal and child health. The main mode of data collection has been recall questions to the household and the individual respondent - initially women of reproductive ages and more recently also men. The clinical and biological assessment component has however been expanding. Initially, anthropometric data (weight and height) were collected from all children under five year of age, later mothers of under fives were added and more recently collection of capillary blood from mothers and children through a finger prick for on-the-spot anemia testing. There are many opportunities to expand biological and clinical data collection in DHS surveys.

The inclusion of clinical and biological data collection in surveys raises a series of ethical concerns. In particular, this debate has been very lively for HIV data collection in surveys. There is however a need for a much broader consideration of ethical issues related to clinical and biological data collection in surveys.

This annotated bibliography presents a selection of recent articles concerned with biological and clinical markers of health and disease with a focus on developing countries. It is not complete but will provide the reader with some useful background information for a range of health problems of children and adults in developing countries. The bibliography has been prepared by MEASURE *Evaluation* research assistants Sara Holtz, Katrin Kreisel and Maria Khan.

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