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GUIDELINES FOR MONITORING CARDIOVASCULAR DISEASE AND ITS RISK FACTORS

Report on a WHO Consultation

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EUR/HFA target 9

TARGET 9
REDUCING CARDIOVASCULAR DISEASE

By the year 2000, mortality from diseases of the circulatory system should be reduced, in the case of people under 65 years by at least 15%, and there should be progress in improving the quality of life of all people suffering from cardiovascular disease.

ABSTRACT

In order to improve the planning and evaluation of cardiovascular preventive programmes it is planned to develop guidelines on cardiovascular disease and its risk factors monitoring.

To this end a consultation was arranged to outline the content of the guidelines. The guidelines will consist of the following chapters: health information systems, CVD mortality and morbidity data collection, risk factors information and assessment of health services.

Keywords

CARDIOVASCULAR DISEASES – prevent/control
RISK FACTORS
HEALTH INFORMATION SYSTEMS
HEALTH STATUS INDICATORS
EUROPE

CONTENTS

1. Introduction

In order to assist countries in developing expertise in collecting necessary health information for planning and evaluation of CVD preventive programmes it is planned to elaborate a document on how to assess CVD trends and their risk factors in the population.

The participants of the Consultation outlined the content and the structure of the guidelines.

Professor Williams was elected as Chairman of the Consultation, Dr Wielgosz as Rapporteur.

It was agreed that Dr Wielgosz would prepare an outline for the Guidelines as a summary of the meeting, based on the discussions of the 2-day meeting as well as any written submissions and also would prepare a first draft of the Guidelines by the end of 1993. This draft would be submitted to WHO/EURO for circulation amongst the participants and would be followed by a meeting sometime in the spring of 1994 to consider revisions, enhancements and further steps.

2. Outline of the Guidelines:

It was agreed that the Guidelines will consist of 6 sections:

I. Introduction

II. Information Systems

III. Mortality

IV. Morbidity

V. Risk Factors

VI. Health Service/Medical Care

The essential contents of each section are described as follows:

I. Introduction

The introduction should address the following points (not exclusively and not necessarily in this order):

- the scope of the document
- why this document
- why have an information system
- for whom this document is being prepared, i.e. general practitioners, health professionals, health administrators and planners
- how this document was prepared, i.e. the strategy and rationale for its preparation
- how to use this document including its layout and the range of applications it covers

II. Information System (Important considerations in their development)

- steps to undertake when considering a system
- possible sources of data - national versus local, available versus desirable
- data quality and training
- cost/benefits of different approaches
- paradigms and frameworks
- management of information systems
- software
- hardware
- compatibility of databases for linkage and for comparability of data over time and place
- analyses and information applications, i.e. broadening the team
- evaluation questions - initiation or culmination of a database

III. Mortality

- introduction
- the setting, e.g. national versus local, hospital versus out-of-hospital
- time frame: static versus dynamic
- evaluation issues (these will be stratified by key issues and groups e.g. general practitioners, health professionals, etc.). Typically the evaluation questions should challenge the information system. For example, can the general/community practice information system be used to:

  - complement community-wide health promotion programmes (smoking, exercise, diet, etc.);
  - screen for modifiable risk factors e.g. high blood pressure;
  - ensure coordinated management of persons with clinical CHD, Stroke etc.;
  - ensure effective aftercare of persons with previous MI, CABG, etc.

Additional questions will address how general practice records can be adapted (alone or with hospital mortality data) to provide reliable prevalence data on heart disease and cerebrovascular disease.

- for each surveillance approach there will be a list of advantages and disadvantages including cost considerations
- measurement techniques, taking into consideration various types of information systems such as surveys versus timelimited special studies, versus registries. The use of record linkage will be addressed. Issues related to ongoing collection of data will also be addressed.
- examples of mortality data
- training and quality control

IV. Morbidity

- introduction
- the setting, e.g. national versus local, hospital versus out-of-hospital
- time frame: static versus dynamic
- evaluation questions (these will be stratified by key issues and groups e.g. general practice, health professionals, etc.)
- typically the evaluation questions will challenge the information system. For example, can general practice/ community information systems be used to:

    - complement community-wide health promotion programmes (smoking, exercise, diet, etc.)
    - screen for modifiable risk factors e.g. high blood pressure
    - ensure co-ordinated management of persons with clinical CHD, CBVD, etc.
    - ensure effective aftercare of persons with previous MI, CABG, etc.

- How can general practice records be adapted (alone or with hospital morbidity data) to provide reliable prevalence data on CHD and stroke and their treatment.

A hospital morbidity system may be challenged to:

- measure reliably incidence, case-fatality, and the prevalence of persons who have had contact with the hospital system because of CHD (AMI, angina, other symptoms or having had procedures) or CBVD.
- monitor changes in survival following cardiac procedures, Stroke, AMI, etc.
- assess equity issues - access to hospital care for different population subgroups.

More comprehensive registries, because they contain more clinical detail than is available from routinely collected hospital morbidity data, may be used to address more complex matters - for example, precise diagnostic criteria, admissions to CCU's, the use of cardio-active drugs before, during and after admission as contained in the acute coronary care dataset of MONICA. Registries may be free standing or grafted onto an existing health management information system - for example, the MONICA *cold pursuit* registries.

Examples of evaluation questions:

1. Can changes in case-fatality (in hospital) be related to changes in severity of disease (prognostic scores created from the MONICA variables) - for example, in levels of treatment, with increasing use of aspirin, thrombolysis, etc.

2. What proportion of cases of definite AMI is admitted to CCU's?

    - the approach to be taken will identify advantages and disadvantages including cost considerations
    - measurement techniques, taking into consideration various types of information systems such as surveys versus time-limited special studies, versus registries. The use of record linkage will be addressed. Issues related to on-going collection of data will also be addressed.

Linkage of routinely collected data - hospital morbidity and mortality ± special registry data, will greatly enhance the value of each set. Linkage allows for

- better estimates of "incidence" and "prevalence"
- survival analyses of various kinds (re-admission, death, etc.)
- a sampling frame for further special studies (cohort or case-control).

- examples of morbidity data
- training and quality control

V. Risk Factors

- introduction - modifiable versus nonmodifiable; biological versus behavioural
- the setting, e.g. national versus local, hospital versus out-of-hospital
- time frame: static versus dynamic
- evaluation issues (these will be stratified by group interests, for example, addressing general practitioners, health professionals, etc., and by key issues)
- the approach to be taken will identify advantages and disadvantages including cost considerations
- measurement techniques, taking into consideration various types of information systems such as surveys versus time-limited special studies, versus registries. The use of record linkage will be addressed. Issues related to on-going collection of data will also be addressed.
- examples of risk factor data
- training and quality control

VI. Health Service/Medical Care

- introduction
- the setting, e.g. national versus local, hospital versus out-of-hospital
- time frame: static versus dynamic
- evaluation issues (these will be stratified by group interests; for example, addressing general practitioners, health professionals, etc. and by key issues).
  Evaluation questions (such as the following examples) could be considered as pertaining to:

1) Structural issues:

Human resources

Does the level of health personnel (doctors, nurses, etc.) meet national standards?

Are health care professionals adequately educated in relevant aspects of prevention and treatment?

Facilities and Services

Does the population have reasonable access to department of cardiology and cardiovascular surgery?

Are the ambulance services appropriate? (supply, equipment, training)

Does the supply of special services meet national standards?

Are there adequate ambulance, emergency and coronary care facilities to meet population needs?

Are the main treatment modalities available to the population?

2) Performance measures

Is there efficient use of hospital facilities for CHD and CBVD, including allocation of beds, etc. versus for other conditions?

How do median lengths of stay compare?

What are the hospital procedure (angiography, angioplasty, CABG) rates and how do they compare across communities and over time?

Is there an equitable distribution of hospital bed days for sub-populations?

- each surveillance approach will identify advantages and disadvantages including cost considerations

- measurement techniques, taking into consideration various types of information systems such as surveys versus timelimited special studies, versus registries. The use of record linkage will be addressed. Issues related to ongoing collection of data will also be addressed.

3) Epidemiology

What is the contribution of medical care to trends in CVD and CBVD mortality and morbidity?

- measurement techniques, taking into consideration various types of information systems such as surveys versus timelimited special studies, versus registries. The use of record linkage will be addressed. Issues related to ongoing collection of data will also be addressed.
- examples of health service/medical care data
- training and quality control

It was further agreed that the Guidelines would not be a compendium of methodological instructions; however, relevant references would be provided. The main objective of the Guidelines would be to sensitize the interested reader to important issues related to the development and maintenance of a surveillance system. While all examples would apply to the cardio- and cerebrovascular systems, the Guidelines should be useful for any non-communicable disease application. The Guidelines would draw from the MONICA experience at the same time recognizing that the potential users will be in rapidly industrializing and developing countries where resources and experience are very limited.

ANNEX

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