

8. Validation and quality of data

A measure of health status must not only be reliable but also valid. An indicator is valid if it measures the disease or condition it claims to measure. Validation evaluates the sensitivity and specificity. To validate coronary events collected within registers, the WHO diagnostic criteria, or the MONICA diagnostic criteria or the New Criteria of the Joint ESC/ACC, described later in this report (10.3), are applied as golden standard.

Validation can be carried out in all or in a sample of suspected cases; the choice will depend on factors such as the type and the frequency of the disease and the precision desired. Examples of validation procedures are: first 500 cases identified in one year; all cases during one month; or a randomly selected sample. In order to produce validated indicators, a *conditio sine qua non* is to allow the epidemiological teams involved in the validation access to relevant medical records and routine raw data of health statistics.

Quality of data depends on:

- completeness of coverage in terms of cases and place of treatment (hospitals, nursing homes, clinics, etc.);
- completeness of records and information (date of admission, date of discharge, ID, gender, hospital discharge diagnostic codes, intervention/procedure codes, department/ward, date of birth);
- methods for checking duplicate records;
- methods for record linkage between different sources of data;
- consistency of coding with the diagnosis;
- autopsy rate, especially for out-of-hospital events;
- consistency of coding/comparability of the information for different areas of the country;
- consistency of coding over time;
- representativeness of the different areas in the country.