

## Epidemiological surveillance instruments: terminological and conceptual issues

Systematic tools that enable appropriate decisions related to epidemiological surveillance, diagnostics, and treatment are needed to assess health status changes.

According to Law No. 8.080/90, epidemiological surveillance is defined as a series of actions that aim at knowing, detecting, or preventing any changes in factors responsible for or involved in individual or public health. These instruments also aim to recommend and adopt possible prevention and control measures for health problems, thus providing technical information to health professionals and allowing them to establish the procedures required for their identification, diagnosis, intervention, monitoring, and prevention.

One of the main goals of epidemiology relies on the concept of “risk and its determinants.” We define risk as the probability of occurrence of some event (illness, injury, death, or health-related condition, including healing and recovery). Estimating the risk proportion allows for temporal or geographical comparisons. Despite conceptual criticism of the term “factor,” which implies a causal relationship, it is included in the epidemiologic jargon. Therefore, it is necessary to differentiate risk *factors*, whose effect can be controlled (for epidemiological or clinical intervention), from risk *markers*, which are unavoidable attributes that cannot be controlled (gender, ethnicity, and others) but are also relevant to these concepts.

Estimates of risks and determinants allow establishing correlations among health, environment, and inheritance. Therefore, the development of epidemiological surveillance instruments that are able to fit these criteria and identify suspected health changes becomes essential. Several tools are available for this purpose, and most are known as risk indicators. However, it is worth noting that they cannot be defined as real indicators but rather as warning signs (or *red flags*). Accordingly, perhaps this terminology is more appropriate for the current state-of-the-art of this subject in the field of speech therapy.

Two criteria differentiate warning signs from other concepts: (1) warning signs negatively defined by the absence or constraint of what is expected at a certain age or condition; and (2) warning signs assessed in a systematic manner that may represent important surveillance instruments that are linked to the early identification of disease problems or complications, which could possibly be solved during disease evolution.

Nevertheless, the care and concept term relationship ensures that proper conclusions are drawn from what can be observed in these situations, which possibly increases the action effectiveness.

The use of epidemiological surveillance instruments that monitor changes in child development is a promising tool in healthcare, especially with regard to the language deve-

lopment of children up to 4 years of age, and is based on general development principles of perception, cognition, socialization, and education.

This monitoring process may require the establishment of interventions to reorient the flow of development and restore it to normal, thus preventing changes from occurring.

Warning signs generate a state of alert and care, which is important to healthcare treatment. The instruments should be cost-effective, easy to use, and capable of identifying signs that would keep professionals alert and encourage an efficient decision-making process.

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## **REFERÊNCIAS**

1. Ministério da Saúde (BR). Lei nº 8.080, de 19 de setembro de 1990. Dispõe sobre as condições para a promoção, proteção e recuperação da saúde, a organização e o funcionamento dos serviços correspondentes e dá outras providências. Diário Oficial da União; 20 set 1990; p. 18.055.
2. Almeida Filho N, Rouquayrol MZ. Lógica epidemiológica e conceitos básicos. In: Almeida Filho N, Rouquayrol MZ. Introdução à epidemiologia. 4a ed rev ampl. Rio de Janeiro: Guanabara Koogan; 2006. p. 73-85.