Towards an Epidemiological Culture in Clinical Practice

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The importance of the report on the methods and first results of the Epi-Cardio Registry (1) hardly needs to be underlined. The progressive establishment and the successful implementation of a large epidemiological outcome oriented network of 100 cardiovascular care units functioning in routine conditions of care must be seen more as a cultural and public health event than a technological and operational achievement.

The context where Epi-Cardio is established can be certainly seen as a specific advantage, as it represents the official recognition that the clinical epidemiological dimension is an integral and permanent component of care.

Routine daily practice becomes not simply the place where existing knowledge and recommendations are applied, but is conceived as an opportunity and a readily and permanently available tool to produce original knowledge of effectiveness. Thus, the hardly representative and controlled evidence is more accessible and easily transferred to the outcome in all unselected populations. Nothing better nor more appropriate for a country like Argentina, which has accumulated over more than 20 years a truly enviable experience of active participation and organization of national and international clinical trials in the area of cardiology, but has only been an occasional though original participant of epidemiological projects aiming not only to describe what happens, but to explore its causes. The series of papers produced by the CARMELA network (2-4) can be seen as a paradigmatic experience.

Epi-Cardio appears specifically interesting as a model not only for cardiovascular care units, but also for other areas of intensive care (ICT) and even more importantly for the care of chronic diseases that need and would greatly benefit from the input of collaboration groups, taking the responsibility of overcoming the highly fragmented situation of a health system in which it is difficult to implement a supervised national health plan.

The results reported in this issue of the RAC are specifically concentrated on the documentation of the methodological background and the operational tools of the Epi-Cardio system. This system appears to be both reliable and flexible due to the spectrum of data which can be collected, as it is a friendly, available software allowing broader participation, as well as real-time analysis and use of data. Therefore, there is little, if anything, to add to the comments made by the authors on the results, which appear to be targeted more to document, in a descriptive fashion, the spectrum of problems that could be monitored and analyzed, than to propose specific topics for discussion.

It is possibly more stimulating to provide some reflections on the potential originality of this prospective database, generated and managed by practicing cardiologists, comparing it with others whose data are increasingly transferred as scientific contributions in major cardiologic journals (see the ad hoc almost regular section in Circulation).

The main purpose of clinical practice-based databases should be the development and precise application of an epidemiological culture in traditionally patient-disease centered clinicians. Epidemiology has to do with what happens to the histories of populations when they go through diseases, and when applied to the real contexts of life and medical care, its specific contribution is to bring to light the variability and heterogeneity of such histories (and their outcomes) as they interplay with the changing life contexts and health care settings.

This vocation of a clinically rooted epidemiology, although it does not oppose, disagrees with the “other” –administrative- epidemiology which is more interested and focused on procedures, appropriateness, cost-benefit analyses, and overall assessment of burdens of care.

Epi-Cardio might and should produce most of all the “administrative” information (and some of the results already point clearly in that direction), as medical teams require management-oriented competence especially in high-cost areas of care. In the general analysis, it is worth asking which are the most relevant and least explored epidemiological and clinical research challenges to become the main focus of a resource where clinicians and patients are the protagonists (and administrators and procedures are the “dependent variables”). The following are a few examples:

Is it possible to assess the impact of differently accessible and affluent care contexts in order to modify it and not just describe and measure it? What is the fraction of “avoidable” morbidity and mortality in
different age and/or disease strata, not simply nationally or globally, but in specific “local” contexts? Could data documenting comparing the degree and the characteristics of epidemiological variability (not of its “mean” indicators) be systematically used to monitor the quality of care in permanent education and information programs for professionals and “users”, instead of awarding good or bad scores?

Could socio-economic variables be included in classical clinical databases (systematically, or periodically, and/or on pre-defined sub-samples of index populations), to use them as tools to improve target strategies of care (i.e. personalize them to be used symmetrically and complementarily to biochemical markers)?

Epi-Cardio was developed in a country which is a model of unequal availability and distribution of human, technological, and economic resources and thus could become a model of collective effort aimed at the re-interpretation of “global” epidemiological scenarios which are still the dominant paradigm in the country and in the international literature, ensuring its objectivity: in fact, the “hard” data of morbidity and mortality are highly misleading for planning in a setting where clinicians and real populations are the protagonists. Epi-Cardio is a great achievement proportional to its ability of promoting culture both inside and outside the area of cardiology.

Conflicts of interest
None declared.

REFERENCES