Editor's page

Self-reported, nonaudited, multicenter registries

Registros multicéntricos, autorreportados, no auditados

Juan Sanchis,^{a,*} Pablo Avanzas,^b David Filgueiras-Rama,^b Pablo García-Pavía,^b and Laura Sanchis^b

^a Editor-in-Chief, Revista Española de Cardiología ^b Associate Editor, Revista Española de Cardiología

Randomized clinical trials are the most robust source of evidence in clinical medicine. Unfortunately, financial constraints limit the options for conducting these types of studies. In addition, patient selection bias is a well-known drawback, and not all investigations suit a randomized design. Therefore, observational registries constitute another source of evidence, provided their quality is guaranteed. Research groups and the working groups of medical societies undertake many registries. These are good news, reflecting scientific activity. However, methodological quality is essential to provide valuable clinical data and achieve good scientific results in publications. An independent audit that encompasses all or at least some of the data retrieved is the best way to ensure quality. Scientific societies, such as the British Heart Foundation, support the audit of registries.¹ Likewise, local research institutes and foundations may support their investigators in monitoring studies. However, such monitoring is usually restricted to randomized controlled trials and may not be possible for some registries. Nevertheless, minimal quality control is indispensable.

Some registries are based on administrative data.² Unfortunately, diagnostic codes are not uniform among physicians and centers. As a result, the information collected is heterogeneous. However, the heterogeneity of these types of studies is offset by their exhaustivity. All cases, including follow-up, are collected, and there is no physician-related bias.

Self-reported, nonaudited registries are the most common. However, data quality and their independent monitoring remain an important concern in this type of registry. In studies performed in a few centers, usually with a strong research tradition, quality is taken for granted. Notwithstanding the reputation of wellestablished consortia in large multicenter registries, quality control is a standard we must pursue. Large multicenter registries are frequently published in our journal, *Revista Española de Cardiología*, reflecting important research collaborations. This is the case of the activity registries of the Associations and Sections of the Spanish Society of Cardiology, which are highly appreciated by the readership of our journal.^{3–7} These registries achieve a good balance between a pragmatic design and their objectives. Apart from these exceptions, self-reported multicenter registries should be under some control. The ideal system would be an audit,

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although we are aware this is not always possible. However, minimum requirements are mandatory. The STROBE protocol establishes the checklist for cohort registries.⁸ Among the items we consider worth highlighting are the following:

- 1. Eligibility criteria and the sources and methods used to select participants
- 2. Indicate data sources
- 3. Period of recruitment
- 4. Report numbers of individuals at each stage of study (eg, numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analyzed). Give reasons for nonparticipation at each stage. Consider the use of a flow diagram
- 5. Indicate the number of participants with missing data for each variable of interest
- 6. Indicate the number of losses to follow-up

Revista Española de Cardiología will positively appreciate completing STROBE's form⁸ in articles on self-reported, nonaudited, multicenter registries. Moreover, if possible, our journal encourages the auditing of data (at least some of the data selected randomly). Furthermore, we believe all participating centers should explicitly take responsibility for the data gathered and, as such, from now onwards, articles published in *Revista Española de Cardiología* will have to include the participating centers and the principal investigator of each center responsible for the accuracy of the data. The aim is to raise awareness of the importance of data accuracy.

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CONFLICTS OF INTEREST

None declared.

REFERENCES

- 1. Ratneswaren A, de Belder MA, Timmis A. Cardiac audit, data and registries: evolution of a national programme. *Heart.* 2022;108:807–812.
- Anguita Sánchez M, Bonilla Palomas JL, García Márquez M, Bernal Sobrino JL, Elola Somoza FJ, Marín Ortuño F. Temporal trends in hospitalization and in-hospital mortality rates due to heart failure by age and sex in Spain (2003-2018). *Rev Esp Cardiol.* 2021;74:993–996.

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^{*} Corresponding author. *E-mail address:* rec@revespcardiol.org (J. Sanchis). @RevEspCardiol

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- Cózar León R, Anguera Camós I, Cano Pérez Ó; Collaborators of the Spanish Catheter Ablation Registry. Spanish Catheter Ablation Registry. 20th Official Report of the Heart Rhythm Association of the Spanish Society of Cardiology (2020). *Rev Esp Cardiol.* 2021;74:1072–1083.
- Pombo Jiménez M, Chimeno García J, Bertomeu-González V, Cano Pérez Ó. Spanish Pacemaker Registry. 18th Official Report of the Cardiac Pacing Section of the Spanish Society of Cardiology (2020). *Rev Esp Cardiol*. 2021;74:1084–1094.
- Romaguera R, Ojeda S, Cruz-González I, Moreno R. collaborators of the ACI-SEC. Spanish Cardiac Catheterization and Coronary Intervention Registry. 30th Official Report of the Interventional Cardiology Association of the Spanish Society of Cardiology (1990-2020) in the year of the COVID-19 pandemic. *Rev Esp Cardiol.* 2021;74:1095–1105.
- 6. Fernández Lozano I, Osca Asensi J, Alzueta Rodríguez J. Spanish Implantable Cardioverter-defibrillator Registry. 17th Official Report of the Heart Rhythm Association of the Spanish Society of Cardiology (2020). *Rev Esp Cardiol.* 2021;74:971–982.
- González-Vilchez F, Almenar-Bonet L, Crespo-Leiro MG, Gómez-Bueno M, González-Costello J, Pérez-Villa F, et al. Spanish Heart Transplant Registry. 32nd Official Report of the Heart Failure Association of the Spanish Society of Cardiology. *Rev Esp Cardiol.* 2021;74:962–970.
- 8. Vandenbroucke JP, von Elm E, Altman DG, Gøtzsche PC, Mulrow CD, Pocock SJ, et al. Strengthening the Reporting of Observational Studies in Epidemiology (STROBE): explanation and elaboration. *Ann Intern Med.* 2007;147:W163–W194.