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Respiratory Care Quality Indicators in the Community of Madrid[☆]



Indicadores de calidad asistencial en patología respiratoria en la Comunidad de Madrid

Dear Editor,

Quality management, measurement, and improvement have been prioritized in all healthcare settings, and health indicators are key tools for monitoring these variables.^{1–3}

Some scientific societies have suggested that more focus should be placed on specific aspects of diseases,^{4–6} and in our area, SEPAR has called for standards in the accreditation of respiratory units.⁷ However, none of these documents specify in any detail the indicators that should be used to analyze the care process implemented for any given disease. In the absence of documented indicators, Neumomadrid developed a Respiratory Disease Quality Guideline⁸ that was endorsed by the Spanish Society of Quality in Healthcare, the aim of which is to measure indicators for analyzing our ability to determine the real situation of respiratory care quality in our community.

We report a retrospective, cross-sectional study of 13 indicators from this guideline⁸ selected by the members of each Neumo-

Madrid working group under the supervision of the Quality Group. These indicators were considered representative and reproducible for each of the diseases that form the underlying structure of the Guideline (Table 1, Annex, supplementary material).

The Quality Group developed a data collection form, that, together with the corresponding guidelines, was distributed to all heads of department who had previously been invited to participate.

Recruitment took place between October 15 and November 15, 2017, and the number of participants reflected the degree of complexity of each hospital. Fourteen of the 23 hospitals with a respiratory medicine department participated and provided data on certain indicators, representing a total of 4.7 million inhabitants; 4 hospitals provided data on 12 of the 13 indicators; and 3 collected data on all 13, representing a population of 2.5 million inhabitants.

The results reflect measures from the total number of participating hospitals, reported by relative frequencies (%) and the degree of participation for each of the indicators.

The 13 selected indicators were broken down as follows: 1 referred to structure (nursing), 4 to processes (fiberoptic bronchoscopy, pleura, sleep-NIMV, and lung cancer), and 8 to outcomes [cystic fibrosis (CF), pulmonary thromboembolism (PTE), pediatrics, diffuse interstitial pulmonary disease (IPD), chronic obstructive pulmonary disease, asthma, infections, and smoking].

Analysis of the data (Table 1, Annex, supplementary material) showed favorable results, with the target reference value⁸ being achieved for 41% of the indicators: lung cancer, nursing, pediatrics,

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IPD, and smoking. Of the remaining 59%, 3 indicators (fiberoptic bronchoscopy, COPD and asthma), showed a deviation from the reference value of <5%,⁸ whereas the other 4 (sleep-NIMV, CF, infections, and pleura), showed a deviation of more than 35% from the reference value.⁸ Data on PTE could not be obtained, since it was only reported in 3 of the hospitals due to difficulty in obtaining this information from the Admissions Department.

When the degree of participation of the different hospitals was assessed, we found a rate of 47% for the COPD indicator, followed by asthma with 43%, cancer and nursing with 39%, fiberoptic bronchoscopy, infections, tobacco, sleep-NIMV with 34%, and 30% for pediatrics, IPD, and pleura. The CF indicator was recorded in 3 hospitals, 60% of which were CF units in the Community of Madrid. Although the participation of all hospitals would have been desirable, the catchment area that these centers represent allows the intervention to be analyzed in a large proportion of the population, since the number of more common cases, such as COPD or asthma, would be as high as 4.7 million inhabitants, and in less common areas, such as pediatrics, IPD and pleura, the population would be up to 2.5 million. Notwithstanding, the outcomes may have been more relevant if the participation of all hospitals had been achieved.

In view of the need to measure quality and establish areas for improvement in our specialty, we aimed to evaluate 13 indicators selected from the Neumomadrid guideline,⁸ and found that the established standard for quality⁸ was achieved for 41% of our indicators, while significant areas for improvement were detected in the remaining 59%.

Many advances have been made since the first publications on the evaluation of quality appeared,⁹ and interest among clinicians in improving quality and participating in clinical management under the aegis of regulations and guidelines is growing, underlining the need for specific indicators in each specialist area. The RECALAR study,¹⁰ recently published by SEPAR, depicts the resources and the organizational structure of the pulmonology specialty in the Spanish National Health System. This document draws attention to the lack of standards and indicators specifically applicable to respiratory medicine, with the exception of some indicators for a few highly specialized processes.^{7,11,12}

The problem with published respiratory indicators lies in the fact that they tend to be excessive for a few organizations and virtually non-existent for others, wording is ambiguous, and they are unreproducible and impracticable. They are also difficult to determine because they are not part of the measurement systems used in our hospitals and healthcare structures.

The Neumomadrid project arose to address these shortcomings and to assess the quality of our specialty. This document forms the basis⁸ for measuring the selected indicators, and will be regularly updated.

In conclusion, quality of care needs to be backed up by measurable indicators. In the absence of homogeneous studies in our specialty, Neumomadrid has developed the first guideline for quality indicators, and has measured 13 of these indicators. This study was conducted on around 40% of the Community of Madrid, and

found that 41% of the indicators exceed the reference value⁸ but that there is room for improvement in the remaining 59%, including computer systems, which, if available, could facilitate the participation of a greater number of centers.

Appendix A. Supplementary data

Supplementary data associated with this article can be found, in the online version, at [doi:10.1016/j.arbr.2019.01.008](https://doi.org/10.1016/j.arbr.2019.01.008).

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