Current Status of Worldwide Use of Patient-Reported Outcome Measures (PROMs) in Spine Care

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■ OBJECTIVES: **Patient-reported outcome measures (PROMs) are the most widely accepted means of measuring outcomes after spine procedures. We sought to determine the current status of worldwide use of PROMs in Latin America (LA), Europe (EU), Asia Pacific (AP), North America (NA), and Middle East (ME) to determine the barrier to its full implementation.**

■ METHODS: **A questionnaire survey was sent by e-mail to members of AOSpine to evaluate their familiarity and use of PROMs instruments and to assess the barriers to their use in spine care practice in LA, EU, AP, NA, and ME.**

■ RESULTS: **A total of 1634 AOSpine members from LA, EU, AP, NA, and ME answered the electronic questionnaire. The percentage of spine surgeons who were familiar with the generic health-related quality of life questionnaire was 71.7%. In addition, 31.9% of respondents did not use any PROMs routinely. The main barriers to implementing PROMs were lack of time to administer the questionnaires (57%) followed by lack of staff to assist in data collection (55%), and the long time to fill out the questionnaires (46%). The routine use of questionnaires was more frequent in NA and EU and less common in LA and ME ($P < 0.001$).**

■ CONCLUSIONS: **We found that 31.9% of spine surgeons do not use the PROMs questionnaire routinely. This appears to occur because of lack of knowledge regarding their importance, absence of reimbursement for this extra work, minimal financial support for clinical research, the cost of implementation, and lack of concern among physicians.**

INTRODUCTION

Among all the advancements in spine care over the last years, the recognition of importance and incorporation of patients' interpretation of their care are arguably among the most important. The use of prospective clinical registries based on patient-reported outcome measures (PROMs) is an important component of medical care because it has the potential to narrow the gap between the clinician's and patient's view of clinical reality and help tailor treatment plans to meet the patient's preferences and needs.[1,2] PROMs quantify patients' perspectives about the frequency and severity of their symptoms, how their disease impacts their functioning, and the degree to which it limits their health-related quality of life.[2,3]

The incorporation of PROMs in a prospective clinical registry can help the spinal surgeon to 1) quantify the impact of disease in patients, 2) clarify the relation between costs and the rate of patient recovery, 3) enhance physician education, 4) improve understanding of the patient needs, and 5) have feedback regarding their performance.[4] It is important for physicians to be active from

Key words
- Outcomes research
- Quality of life measures
- Registries
- Spine surgery

Abbreviations and Acronyms
AP: Asia Pacific
CI: Confidence interval
EU: Europe
LA: Latin America
ME: Middle East
NA: North America
OR: Odds ratio
PCR: Prospective clinical registry
PROM: Patient-reported outcome measure

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the inception of the prospective clinical registry design to build very complete, objective, and effective registries and to be able to discern true outcomes during the execution.[5] The direct consequences of physician noninvolvement can be the execution of the registry by persons or organizations who are not specialized in treating the pathology, with conflicting results.[5] To have the treating physician actively involved, it is necessary to recognize and overcome the barriers to the implementation of clinical registries, which may differ in different regions of the world.[2]

The objective of this paper is to expand on a previous publication involving spine surgeons from Latin America (LA)[6] and to assess the current status of knowledge and barriers to the routine use of a registry in North America (NA), Europe (EU), Middle East (ME), and Asia Pacific (AP). This is a unique opportunity to analyze the relationship between different lifestyles, training, and cultures and provide a guide for educational activities.

MATERIAL AND METHODS

Population Studied

A questionnaire survey was created by the authors to evaluate knowledge about PROMs instruments, their current use, and to identify potential barriers to their implementation in routine spine care among different regions. An e-mail request to participate in the survey was sent to members of AOSpine with a cover letter explaining the objectives of this study, with a link to Survey Monkey. AOSpine is an internationally recognized professional community with a total of 6403 spine surgeon members in LA ($n = 1445$), EU ($n = 1528$), AP ($n = 2263$), NA ($n = 530$), and ME ($n = 637$), with a clinical and research interest in spine care. The Portuguese-language and Spanish-language version was applied to Latin American members and the English-language version to the rest of the regions. This link was available for 10 days, and reminders were sent 3 times during this period. The Latin American results were reported partially in 2016.[6]

Assessment

The electronic questionnaire contained questions regarding demographic features of participants, familiarity with PROMs instruments, perception about the usefulness of PROMs in spine care, and barriers to implementing PROMs and clinical registries in routine practice. The average time to complete the questionnaire was 5–10 minutes.

Statistical Analysis

Continuous variables were described with mean and standard deviation. Categorical data were presented as counts and percentages. Means were compared with analysis of variance followed by Tukey's post hoc test. Categorical data were compared with the χ^2 test. In addition, odds ratios (ORs) and their respective 95%

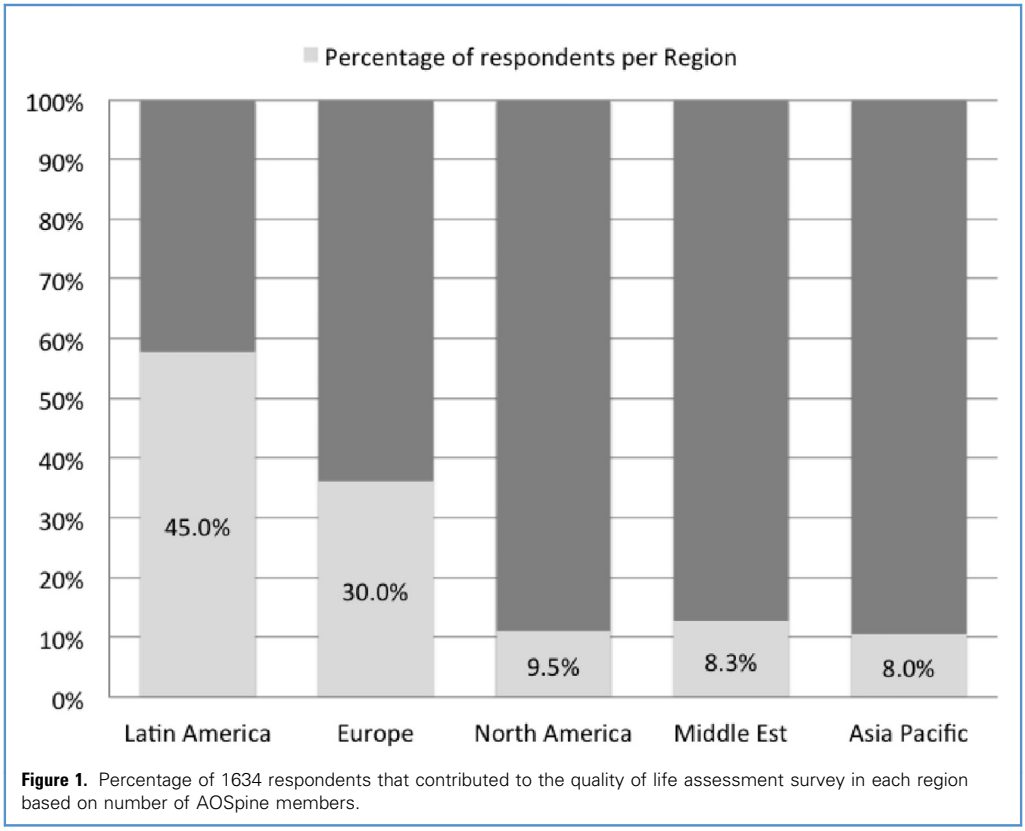

Figure 1. Percentage of 1634 respondents that contributed to the quality of life assessment survey in each region based on number of AOSpine members.