

women appears to be even lower in the spine surgery field. We intend to determine this prevalence on the editorial boards of spine, neurosurgery, and orthopedic journals. **Material and Methods:** The gender of editorial board members of Medline indexed spine, neurosurgery, and orthopedic journals was systematically analyzed during 2019, and female representation was compared among these fields. **Results:** In the 34 journals included (5 spine, 13 neurosurgery, and 16 orthopedic journals), women represented 8.84% (N = 185/2,094) of editors. Their representation was 5.53% (N = 30/542) in spine, 8.58% (N = 47/548) in neurosurgery, and 10.77% (108/1,003) in orthopedic journals. Only 5.4% (N = 2/37) of the Editors-in-Chief were female. The likelihood of having female editors was higher in orthopedic than in spine journals (OR = 2.06; 95% CI = 1.35-3.13;  $P = .001$ ). Neurosurgery journals were more likely to have female editors than spine journals (OR = 1.60; 95% CI = .99-2.57;  $P = .058$ ), although this was not statistically significant. There was no correlation between the representation of women on spine journals and their 5-Year impact factor (Spearman's rho = .30;  $P = .624$ ). Instead, in neurosurgery and orthopedic journals there was a positive correlation (Spearman's rho = .58;  $P = .036$  for neurosurgery and Spearman's rho = 0.61;  $P = .012$  for orthopedic journals). **Conclusion:** The representation of women on editorial boards of spine, neurosurgery, and orthopedic journals is very low. This proportion seems to be lower for spine journals, which is consistent with the lower proportion of women among spine surgeons when compared to their presence among neurosurgeons and orthopedic surgeons, according to prior censuses and surveys.

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### P274: Perceived Impact of Gender on Spine Surgery in Latin America

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**Introduction:** female physicians rarely choose spine surgery as their specialty. While the specialty's nature and its associated lifestyle are important barriers, gender-related issues

may play an important part. We aim to evaluate the perceived impact of gender among spine surgeons. **Material and Methods:** a web-based survey was sent to *AO Spine Latin America (AOSLA)* members. Data collected included personal and professional demographics, and gender-related objective and subjective experiences regarding career and personal life. **Results:** 223 members answered the survey, 196 (87.96%) being male and 27 (12.11%) female. Most were orthopedic surgeons (64.13%),  $\geq 40$  years (55.16%), and had  $< 20$  years of experience (69.95%). Gender discrimination was more frequent among women than among men (66.67% vs 1.02%), as did discouragement from becoming a spine surgeon, orthopedic surgeon, or neurosurgeon (81.48% vs .51%). Females reported higher rates of sexual harassment (44.44% vs 7.65%) and more often felt disadvantaged because of gender (55.56% vs 2.55%). Working harder than men to achieve the same prestige and lack of female mentorship were the main obstacles reported by women (55.56%). Residency/fellowship influenced the decision to postpone/avoid having children for 66.67% of women but only for 37.75% of men. Creation of a Women's Committee in *AO Spine* was supported by 74.07% of women and 38.78% of men. **Conclusion:** gender-based discrimination affects women more frequently than men in spine surgery. These experiences likely contribute to the low prevalence of female spine surgeons. Efforts to combating bias and support the professional development of women in neurosurgery, orthopedics and spine communities are encouraged.

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### P275: Research Frontiers in Spine Surgery - A Scientometric Analysis of Rcts Published From 1990 to 2019

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**Introduction:** Spine surgery is evolving and in the due course of its evolution, it is often essential to have a comprehensive summary of the process to have a greater understanding in order to refine our future directives. With the multiplying domains of research in the spine, it has become difficult for a surgeon to find the potential hotspots in research or identify the emerging research frontiers. With the technological developments like data mining, graphic drawing, information analytics combined with the computational statistics, visualization of scientific metrology has become a reality. Scientometrics is a quantitative method of analyzing such an evolutionary process through various parameters like citation metrics, keyword and author networks. Scientometrics can visualize this panorama of information through knowledge maps to explore hotspots in research. Hence, we aim to assess the potential research domains of

randomized controlled trials (RCTs) for the past three decades (1990-2019) along with their research networks and identify the hot topics for future research. **Methodology:** A comprehensive and systematic analysis of all the RCTs published on Spine Surgery from 1990-2019 retrieved from the Web of Science Core Collection database. Scientometric and visual analysis of their characteristics, co-operation networks, keywords and citations were made using CiteSpace software. CiteSpace was used to visualize the structure, regularity and distribution of research domains in the spine surgery and analyze the article co-citation data to mine the knowledge clustering and citation space distribution. We also analyzed the co-occurrence between the additional research units such as cooperation among various authors, institutions and countries in the field of spine surgery. Consolidating the results of the analysis we built a comprehensive knowledge map elaborating on the emerging research trend with the potential research domain from RCTs published in spine surgery. **Results:** A total of 696 RCTs were published in spine surgery from 1990-2019 of which the USA(n = 263) and China(n = 71) made a significant contribution. Thomas Jefferson University(n = 16) was the leading contributor to RCTs in spine surgery. Weinstein JN was the most cited author in the field followed by Deyo RA. Spine(n = 559) remained the top-cited journal among RCTs in spine surgery. On literature co-citation analysis, “spinal stenosis”, “anterior cervical discectomy and fusion”, “degenerative disc disease” and “minimally invasive decompression” were identified as the hotspots and potential research frontiers. **Conclusion:** Research cooperation among developed and developing nations remains crucial and needs to be strengthened. It was evident from the identified hotspots that extending the frontiers in the management of degenerative disorders of spine through further research holds the potential for advancement in spinal care.

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## **P276: Predictors of Hospital Discharge Disposition Following Single-Level Lumbar Fusion Surgery**

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**Introduction:** Ongoing management of patients receiving single-level lumbar fusion emphasizes reduction of inpatient length of stay (LOS) and postoperative complication rates. Oftentimes, patient discharge dispositions are utilized as a proxy for patient health following surgical intervention. However, literature evaluating predictors of discharge location and status are limited, and those available are often outdated or

utilize small patient cohorts for analysis. Here, we implement multivariate modeling in a large contemporary cohort to identify patient predictors of discharge location. **Material and Methods:** Using the 2016-2017 Nationwide Readmission Database (NRD), we conducted a retrospective cohort analysis of 339,597 patients admitted for lumbar spinal fusion. All patients admitted to the hospital for trauma or malignancy were excluded to minimize confounding. Predictors for discharge status included patient frailty, body mass index (BMI,  $\text{kg}/\text{m}^2$ ), hospital characteristics, and inpatient LOS. Routine discharges were defined as a routine discharge to a patient's home, while non-routine discharges included transfer to a short-term hospital, skilled nursing facility, home health care, and death. Patient frailty was defined through the Johns Hopkins adjusted clinical groups frailty-defining diagnosis indicator. Statistics were conducted using RStudio, and gaussian-fitted multivariate regression models were developed with patient age, sex, and Charlson Comorbidity Index (CCI) scores as covariates. **Results:** The average age of all patients was  $58.8 \pm 14.4$  years with 54.5% being female and an average CCI of  $2.8 \pm 1.6$ . A total of 116,134 (34.2%) patients experienced a non-routine discharge. Patient frailty was found to be a significant predictor of non-routine discharge (OR:1.26, 95% CI:1.25-1.27,  $P < .0001$ ). In addition, patient BMIs between 40-45 (OR:1.07, 95% CI:1.06-1.08,  $P < .0001$ ), 45-50 (OR:1.10, 95% CI:1.08-1.12,  $P < .0001$ ), and 50-60 (OR: 1.14, 95% CI:1.10-1.17,  $P < .0001$ ) were found to increase the odds of non-routine hospital discharges with incremental increases in BMI. Further, hospital bed size and hospital teaching status were both found to independently predict discharge disposition, with rural hospitals (OR:1.032, 95% CI: 1.028-1.037,  $P < .0001$ ) and hospitals with larger bed sizes (OR:1.023, 95% CI:1.020-1.026,  $P < .0001$ ) having higher non-routine discharges. Lastly, higher patient LOS significantly predicted non-routine discharges in our patient cohort ( $P < .0001$ ), with each additional day spent in the hospital increasing the risk of non-routine discharge by 2.45%.

**Conclusion:** Contemporary management of patients receiving lumbar fusion should focus on minimizing postoperative complications with hopes of achieving high rates of routine discharges. In order to achieve this goal, a thorough understanding of perioperative predictors of non-routine discharge dispositions. Patient frailty, BMI, hospital characteristics, and LOS all independently influence discharge disposition, and further research is necessary to identify additional predictors of poor patient outcomes.

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## **P277: Spine Trauma Epidemiological Profile in a Tertiary Neurosurgery Hospital in South Brazil**

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