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Research Paper Review

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Surgeon attitudes toward non-physician screening of low back or low back-related leg pain patients referred for surgical assessment

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ABSTRACT

STUDY DESIGN: Questionnaire survey.

OBJECTIVE: To explore spine surgeons' attitudes toward the involvement of non-physician clinicians (NPCs) to screen patients with low back or low back-related leg pain referred for surgical assessment.

SUMMARY OF BACKGROUND DATA: Although the utilization of physician assistants is common in several healthcare systems, the attitude of spine surgeons toward the independent assessment of patients by NPCs remains uncertain.

METHODS: We administered a 28-item survey to all 101 surgeon members of the Canadian Spine Society, which inquired about demographic variables, patient screening efficiency, typical wait times for both assessment and surgery, important components of low back-related complaints history and examination, indicators for assessment by a surgeon, and attitudes toward the use of NPCs to screen patients with low back and leg pain referred for elective surgical assessment.

RESULTS: Eighty-five spine surgeons completed our survey, for a response rate of 84.1%. Most respondents (77.6%) were interested in working with an NPC to screen patients with low back-related complaints referred for elective surgical assessment. Perception of suboptimal wait time for consultation and poor screening efficiency for surgical candidates were associated with greater surgeon interest in an NPC model of care. We achieved majority consensus regarding the core components for a low back-related complaints history and examination, and findings that would support surgical assessment. A majority of respondents (75.3%) agreed that they would be comfortable not assessing patients with low back-related complaints referred to their practice if indications for surgery were ruled out by an NPC.

CONCLUSION: The majority of Canadian spine surgeons were open to an NPC model of care to assess and triage non-urgent or emergent low back-related complaints. Clinical trials to establish the effectiveness and acceptance of an NPC model of care by all stakeholders are urgently needed.

ANALYSIS

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Background Information

It is known that 50-80% of the adult population will experience low back pain (LBP) in their lifetime (1). For those patients whose symptoms fail to resolve in a timely manner, or who present with neurological involvement, referral for surgical assessment is common. Wait times for surgical consult are exceedingly long in many jurisdictions (2, 3); however, the problem is worsened by the fact that the majority of patients who consult with a spinal surgeon will not ultimately require surgery. As a result, patients who are good candidates for surgery have longer waits to see surgeons. Complicating this is the observation that longer delays for decompressive surgery are associated with worse outcomes, including less pain relief (4, 5) and reduced likelihood of return to work (6).

One possible solution to this problem is to have non-physician clinicians (NPCs) such as chiropractors, physiotherapists and/or nurse practitioners with training in spinal complaints screen waiting list patients, identify those who are not surgical candidates so that surgeons could restrict their assessments to patients more likely to benefit from surgical procedures. Unanswered, though, are the questions of surgeons' perceptions of current wait-times and the efficiency of their current screening methods, whether they would be agreeable to non-physician clinicians assessing their patients and if so, are there core components of a patient history and examination that most surgeons would require and support.

To address these questions, the authors designed and distributed a survey to Canadian spine surgeons to determine their attitudes towards NPCs assessing potential surgical candidates with a primary complaint of low back or low back-related leg pain.

PERTINENT RESULTS

Survey Response

- 91/105 Canadian Spine Society members responded to the survey; 85 (84%) provided responses.
- The vast majority of respondents were male (97.6%) and close to half (48.2%) had been practicing for over 20 years.

Practice Characteristics

- The majority of respondents (69.4%) dedicated more than half their practice to elective spine surgery, and reports of inefficiency were common – over 30% of surgeons turned away more than 20% of potential patients.
- Wait times typically exceeded 6 months.
- 41.6% screened more than 10 patients before identifying a single surgical candidate.
- For surgical candidates, 43.5% of surgeons reported wait times greater than 6 months; only 16% of surgeons characterized their surgical wait times as optimal.

Willingness to Have Non-physicians Screen Patients

- 77% of surgeons were willing to have NPC screen their patients.
- Surgeons who agreed that outpatient wait times were not optimal and those that acknowledged that their current screening methods were not efficient were most likely to be agreeable to NPC assessments.

Desired Components of a Patient History Obtained by LBP Clinicians

- 4 features of history/exam were endorsed by 90% of surgeons: location of dominant pain, history of presenting complaint, and symptoms of "red" (symptoms associated with cauda equina syndrome, fracture, infection, or cancer) or "yellow" (receipt of disability benefits, ongoing litigation, current smoker, or high emotional stress) flags.
- 86% of surgeons agreed that if the items they endorsed in the patient history could be reliably captured in an assessment by a NPC, it would facilitate triaging of their patients with low back or low back–related leg pain.

Desired Components of a Patient Examination Conducted by LBP Clinicians

- More than 60% of surgeons endorsed each of the 8 patient examination components that were proposed, including: Standard orthopedic tests for low back or low back–related leg pain, straight leg raise (supine), lower limb vascular examination, orthopedic hip examination, lumbar spine range of motion, straight leg raise (seated), measurement for lower limb atrophy, and Waddell's signs for nonorganic pain.
- A clear majority (89.4%; 76 of 85) agreed that if the items they endorsed in the patient examination could be reliably captured in an assessment by a NPC, it would facilitate triaging of their patients with low back or low back–related leg pain.

History and Examination Findings Requiring Surgical Assessment

- Signs or symptoms associated with a "red flag" condition, leg dominant pain, and low back or low back–related leg pain that was consistent with either neurological findings or imaging resulted in a majority of surgeons advising that they would want to confirm an indication for surgery themselves, whether the indication was clearly identified or suspected by a NPC (88.2% and 89.4%), respectively.
- A majority of respondents (75.3%, 64 of 85) also agreed that they would be comfortable not assessing a patient with low back or low back–related leg pain referred to their practice if clear indications for surgery were ruled out by a NPC.

CLINICAL APPLICATION & CONCLUSIONS

In an effort to reduce wait times, system-level changes to the current approach of managing patients with low back or low back–related leg pain who are referred for surgical assessment are desperately needed.

One promising approach is the use of non-physician clinicians to screen waiting list patients, and the authors' findings suggest that the majority of Canadian spine surgeons would participate in this model of care. The authors also identified core screening procedures for both history and examination that would satisfy surgeons' triage requests.

Essential components of the successful implementation of such a system include standardized history and examination approaches and overall acceptance by patients.

STUDY METHODS

A 28-item questionnaire to examine current practices for spine surgeons' assessment and management of patients with low back or low back–related leg pain, and their attitudes toward the involvement of NPCs to screen such patients referred for surgical assessment was developed and tested on a group of 3 spine surgeons for content and face validity. The study utilized 5-point Likert scale questions (strongly agree, agree, undecided, disagree, strongly disagree).

The survey was administered using SurveyMonkey to facilitate online completion. The membership of the Canadian Spine Society (CSS) was surveyed, with the society's permission and assistance.

Frequencies were generated for all collected data. All comparisons were 2 tailed and a variable was considered statistically significant if it had a $P < 0.05$ in the final multivariable model. Unstandardized regression coefficients were reported, representing the change in response score on the dependent variable, which was measured as a continuous variable on a 5-point Likert scale from 'strongly disagree' to 'strongly agree'.

STUDY STRENGTHS/WEAKNESSES

Strengths

1. A comprehensive sampling of Canadian spine surgeons from both academic and community practices was surveyed;
2. the survey design and conduct consistent with best practices; and
3. there was a high survey response rate.

Limitations

1. Results may have limited application in non-Canadian jurisdictions, due to differences in health care systems; and
2. the list of variables evaluated is not exhaustive and other variables are likely important in influencing decisions on patient assessment and triage.

Additional References

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