Recognition of Inflammatory Back Pain by US Healthcare Providers and Barriers to Specialist Referral

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BACKGROUND

- Ankylosing spondylitis (AS) is a chronic, systemic inflammatory disease that primarily affects
 the sacroiliac joints and spine and can cause irreversible damage¹
- Inflammatory back pain (IBP) is a distinguishing pattern of back pain in AS, with an estimated prevalence of 0.2% to 0.5% among adults in the United States²⁻⁴
- IBP is characterized by an insidious onset, duration of pain > 3 months, improvement of pain with exercise, pain at night with improvement upon waking, and no improvement with rest⁵
- The presence of 4 of these 5 parameters has a sensitivity and specificity of 80% and 74%, respectively, for AS in a population of patients presenting with chronic back pain in primary care⁶
- Diagnosis of AS in the United States remains challenging due to the significant delay in diagnosis and underrecognition of the disease⁷
- Barriers to AS diagnosis and early rheumatology referral include difficulty in identifying IBP from other prevalent forms of low back pain in the general population, lack of accessibility or long waiting time for rheumatology consults, and lack of referral guidelines among primary care specialties⁸⁻¹⁰
- Delay in AS diagnosis adversely affects disease prognosis and contributes to greater economic burden and worse patient health-related quality of life^{7,11,12}

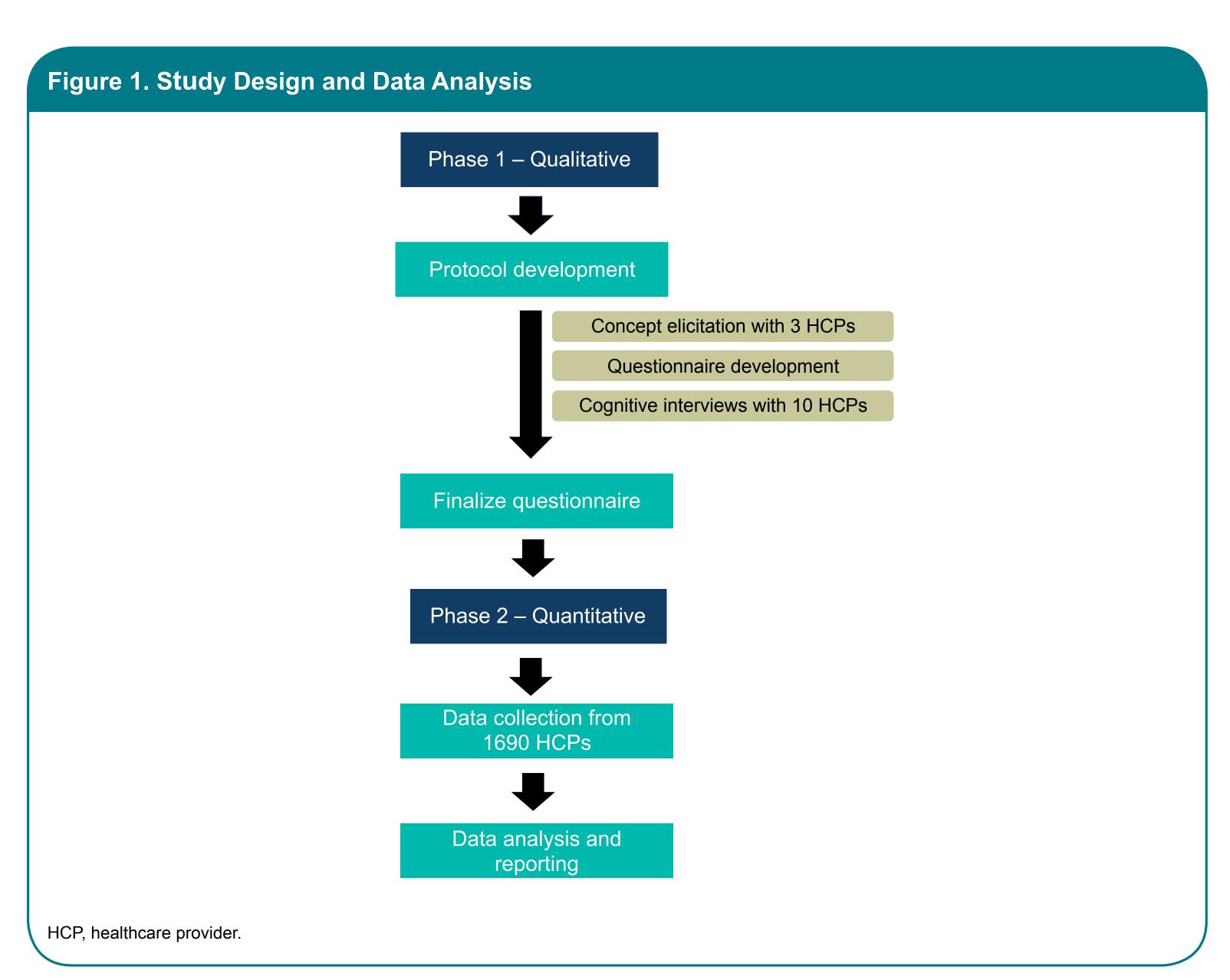
OBJECTIVE

• To assess the referral processes of healthcare providers (HCPs) and identification of barriers of referrals to rheumatologists for patients with putative IBP

METHODS

Data Source and Study Population

This was a 2-phase observational study (Figure 1)

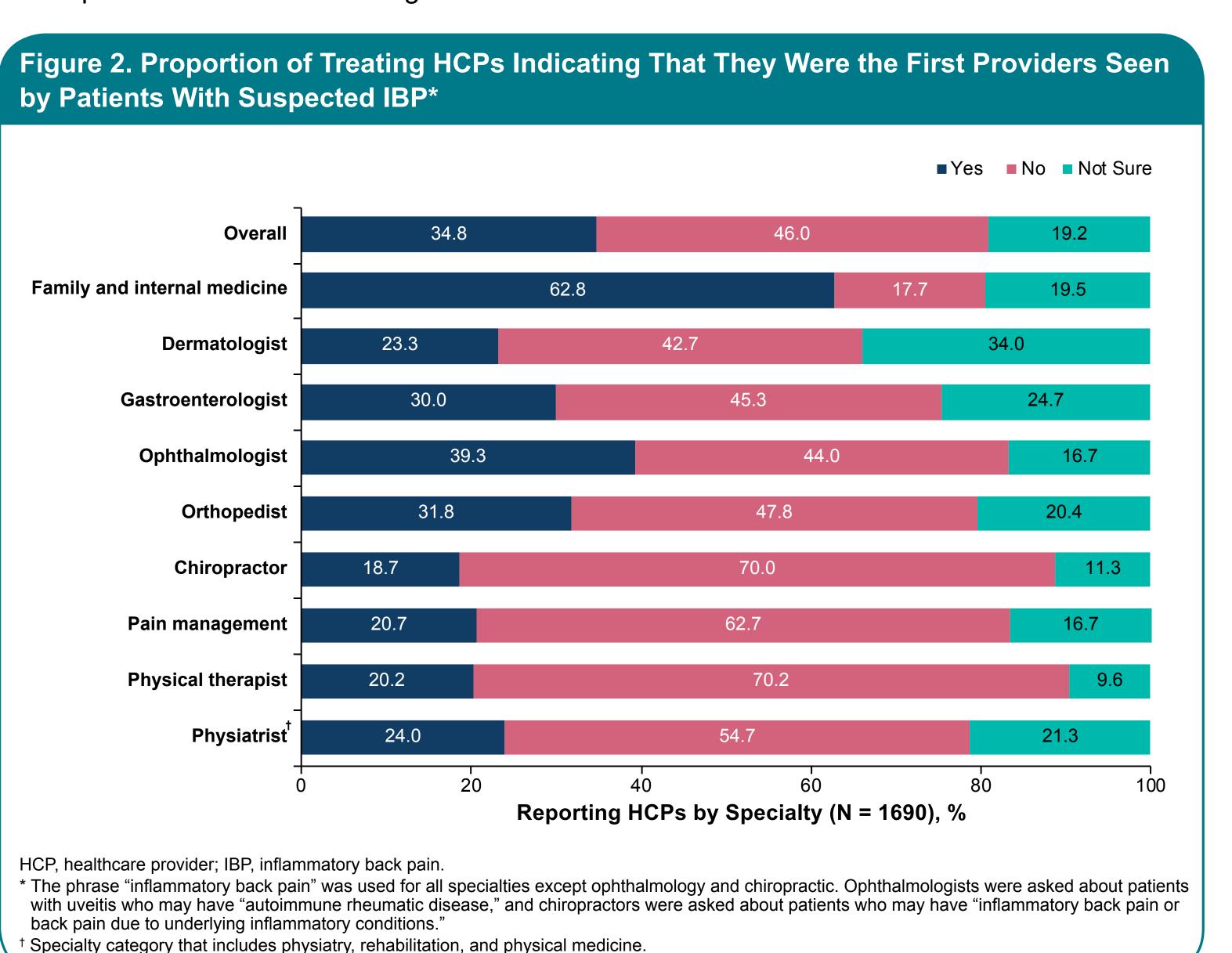


- HCPs from 10 specialties (family medicine, internal medicine, dermatology, gastroenterology, ophthalmology, orthopedics, chiropractic, pain management, physical therapy, and physiatry) were invited to participate in a cross-sectional, web-based survey from June 27 to July 20, 2018
- To be eligible for this study, HCPs must have been actively practicing in the United States and have referred a patient with suspected IBP (except ophthalmologists) or uveitis/iritis (ophthalmologists only) within the past 12 months
- Informed consent was obtained electronically after screening
- For continuous variables, the mean, SD, median, interquartile range, and range were presented
- Frequencies and percentages were reported for categorical data
- Data for each question were summarized by specialty and overall
- HCPs' rankings of referral attributes and educational materials by importance were analyzed per question using the surface under the cumulative ranking curve (SUCRA), a simple numerical summary expressed by a percentage that describes an overall ranking of choice among available choices being ranked; its values range from 0% to 100%¹³
- A value of 100% indicates that the respective choice was unanimously ranked first of n choices by all HCPs, and a value of 0% indicates that the respective choice was unanimously ranked last of n choices by all HCPs
- The higher the value in reference to the other n 1 choices, the higher the ranking of that choice

RESULTS

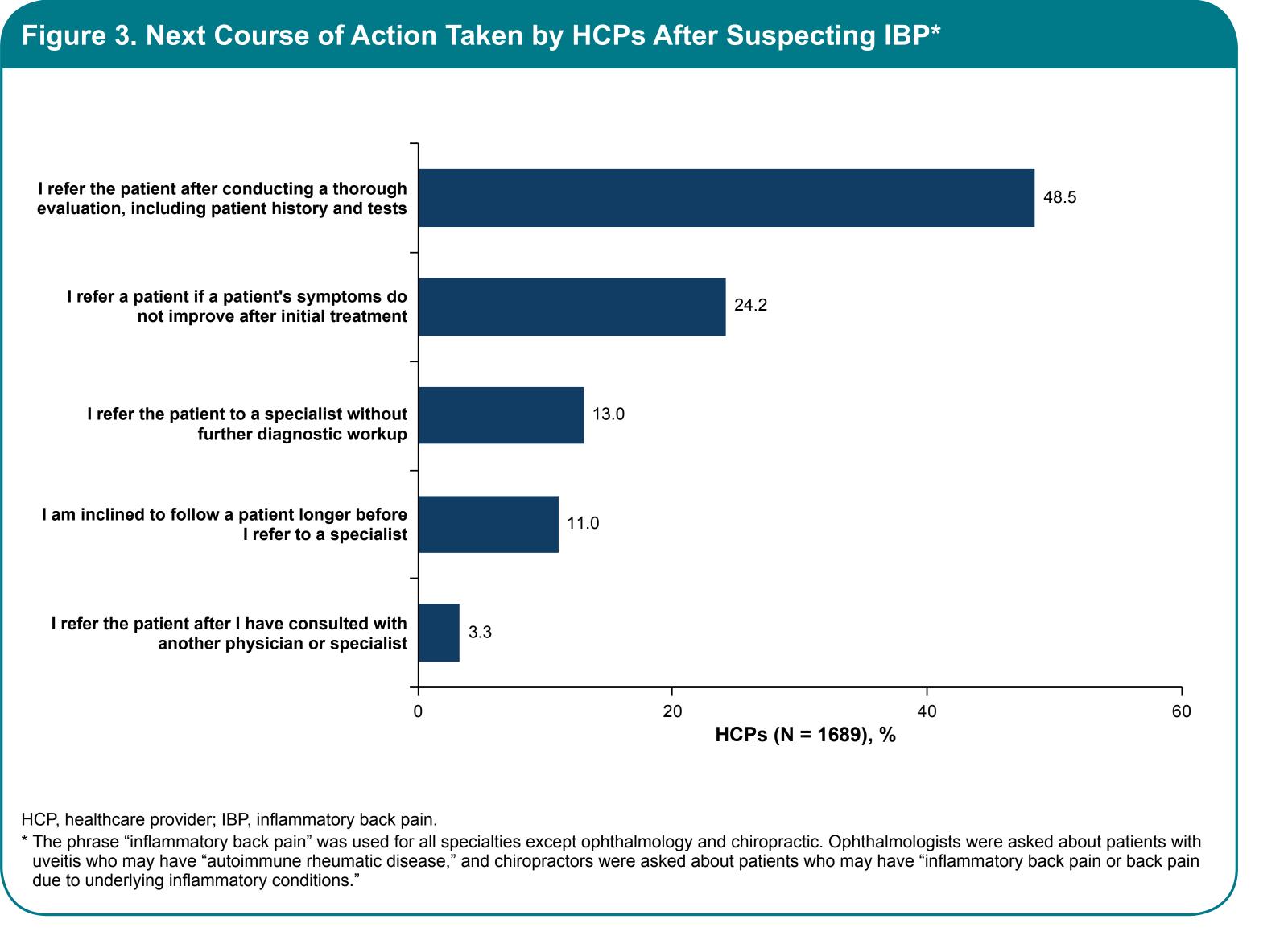
Patient Presentations

- Of 2395 HCPs screened, 1690 were eligible and were included in our study
- Overall, HCPs saw a median of 100 patients with chronic back pain within the past 12 months
- HCPs reported an average time of 3 to 4 months before a patient decided to see them (18.2%), whereas 17.1% reported a wait time of 1 to 2 years
- Almost one-third of the primary care HCPs (family and internal medicine; 62.8%) reported that they were the first HCPs seen by their patients (**Figure 2**)
- Almost half of HCPs surveyed (46.0%) indicated that their patients had seen other specialists before consulting them

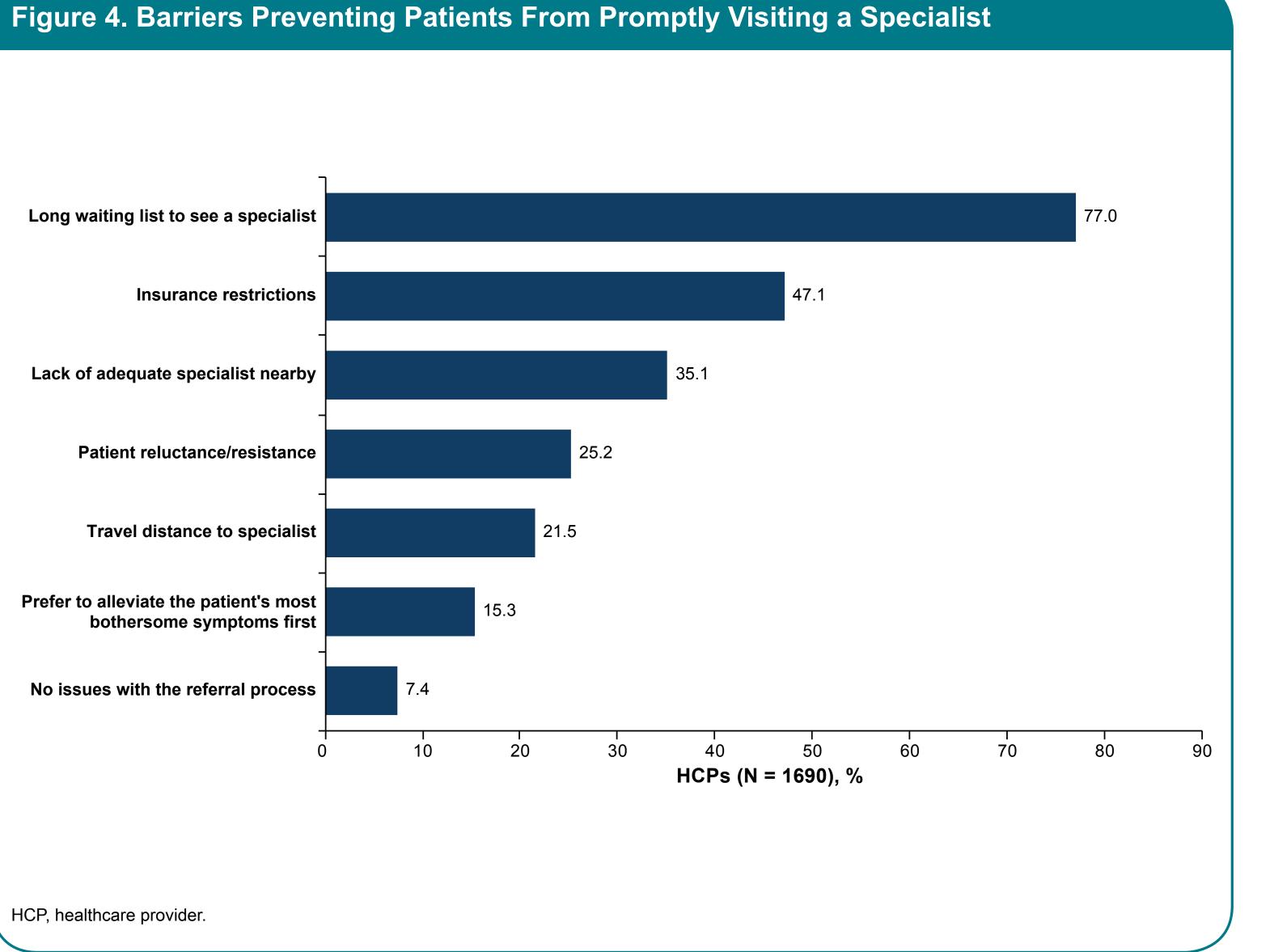


Patient Referral Process

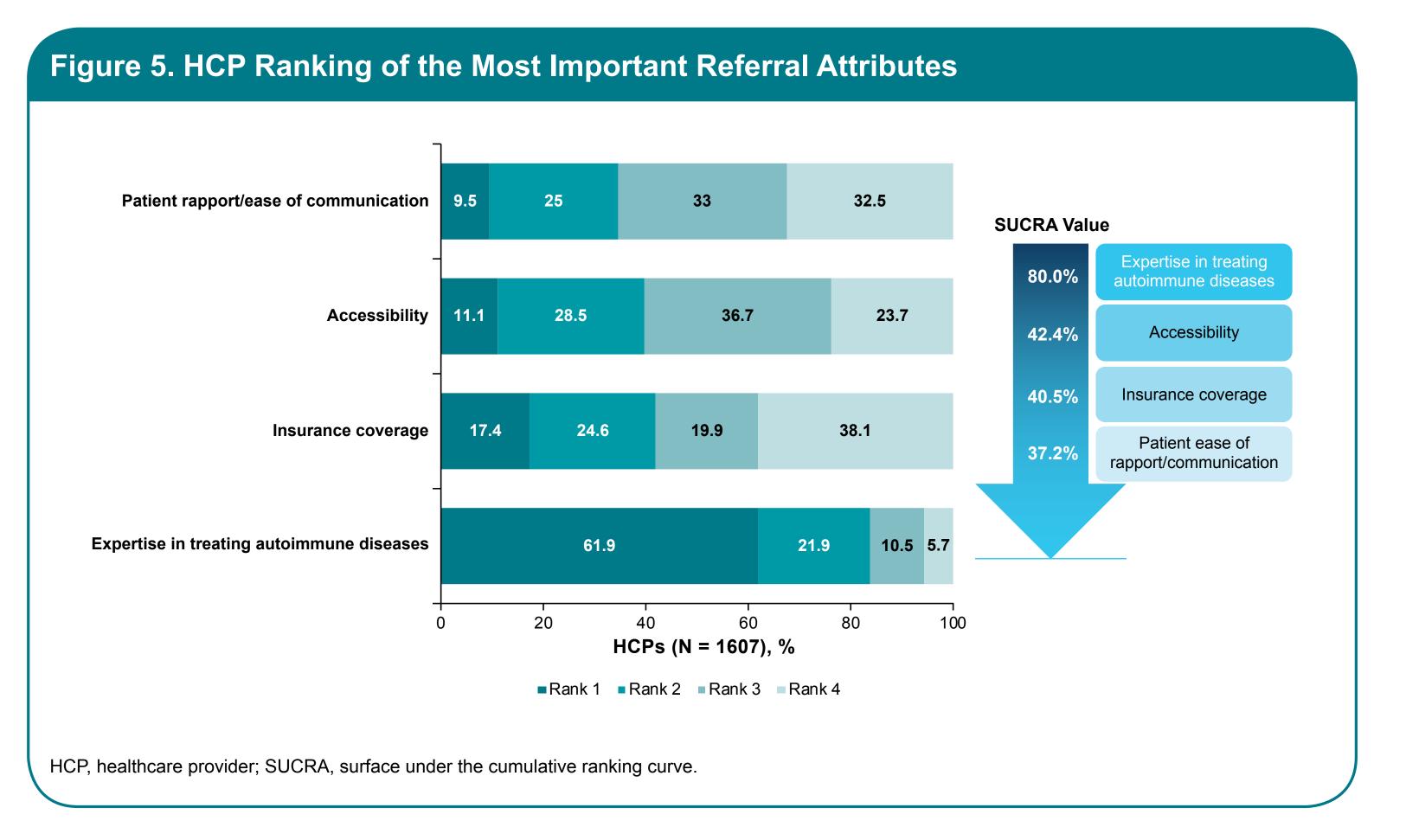
• Once IBP was suspected, approximately half of the HCPs (48.5%) would refer the patient after conducting a thorough evaluation, and 13.0% would refer the patient to a specialist without further diagnostic workup (**Figure 3**)



- Upon referral, 90.2% of HCPs estimated a wait time of up to 2 months for their patient to see a rheumatologist, 9.1% estimated a wait time of 3 to 6 months, and 0.7% estimated a wait time of 7 months to > 1 year
- HCPs indicated that long waiting time (77.0%) and insurance restrictions (47.1%) were the primary reasons that may prevent patients from being able to see a specialist right away (Figure 4)

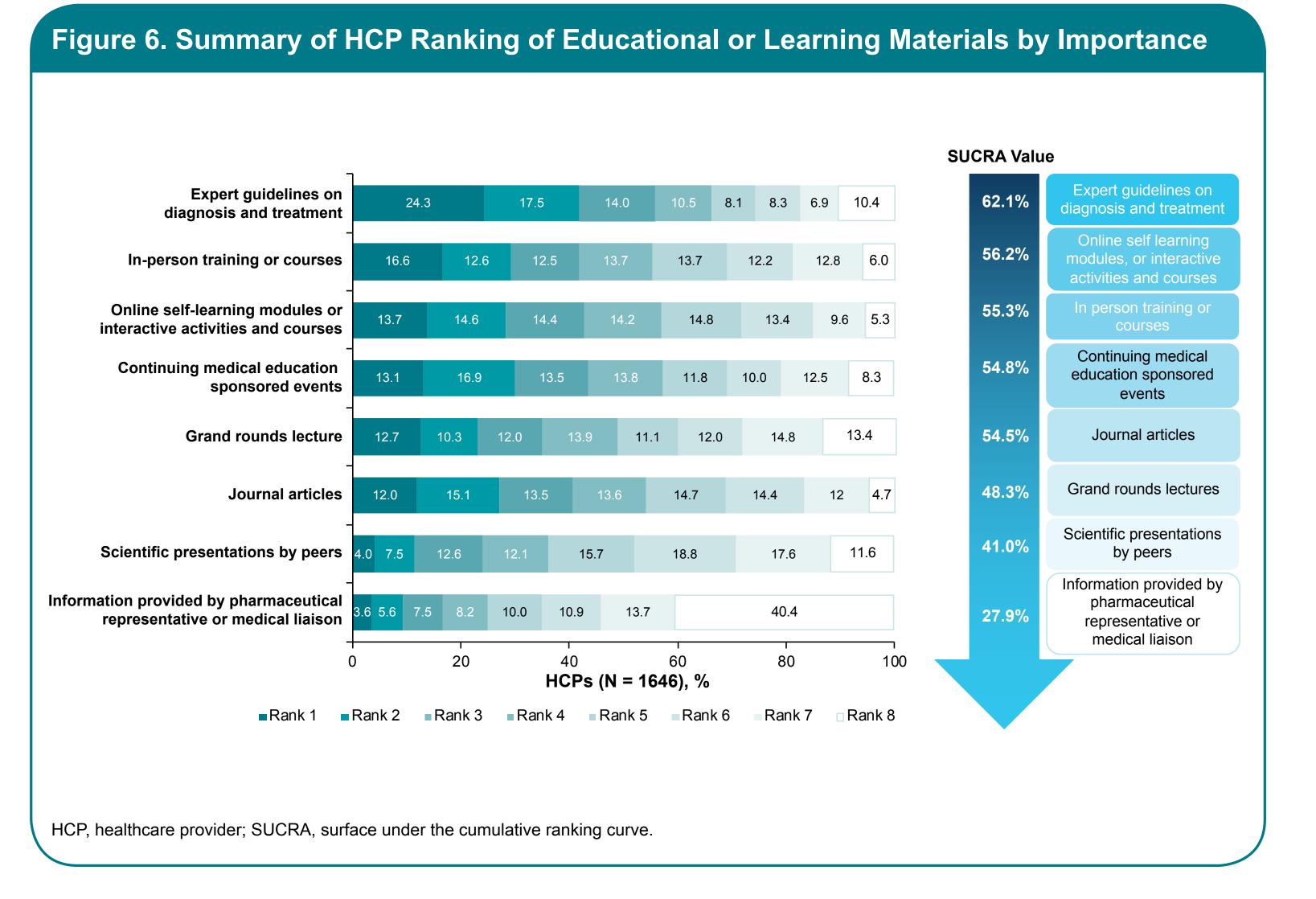


- Next, HCPs were asked to rank the following attributes by order of importance when deciding
 to refer patients to a specialist: accessibility (distance, waiting times), patient rapport and ease
 of communication with a specialist, specialist's expertise in treating autoimmune diseases,
 and insurance coverage
- Based on SUCRA values, the most important ranked attribute was expertise (80.0%), followed by accessibility (42.4%), insurance (40.5%), and patient rapport/ease of communication (37.2%) (Figure 5)



Additional Education Needs to Enhance Knowledge on Rheumatologic Conditions

- HCPs provided their opinion regarding educational means or materials that would be helpful
 for them to better recognize IBP symptoms in order to improve their knowledge of
 rheumatologic conditions and referral practices
- Overall, 62.3% of HCPs wanted to learn about the clinical course of disease, 58.8% wanted more information on clinical evaluations, and 50.3% indicated that education about new and emerging treatments would be helpful
- Most (62.1%) ranked expert guidelines on diagnosis and treatment as the most important education means/materials based on SUCRA values (Figure 6)



LIMITATIONS

- Although the study included a large sample size of HCPs representing the spectrum
 of specialties who encounter patients with IBP-associated symptoms, the results were
 based on the participants' self-reported answers, which were not corroborated with patients'
 medical records
- HCPs were recruited through a panel, and their feedback may be different from those who
 do not participate in panels
- Our study may be subject to potential participant/volunteer bias, which may lead to an underestimation or overestimation of results

CONCLUSIONS

- Nearly two-thirds of primary care HCPs reported that they were the first HCPs consulted by patients with suspected IBP suggestive of rheumatic disease, suggesting that targeted education of primary care HCPs may yield earlier referrals and a more timely diagnosis of AS
- Most HCPs (90.2%) estimated a wait time of up to 2 months for their patient to see a specialist after a referral was made; long wait times may prevent patients from being able to see a specialist right away
- Our study highlights the potential barriers to referral of patients with suspected IBP to a rheumatologist, including long waiting list, insurance restrictions, lack of adequate specialists nearby, patients' reluctance to see a specialist, and the HCP's preference to treat first before referring

8. Deodhar A, et al. *Clin Rheumatol*. 2016;35(7):1769-76.

10. Proft F. Poddubnyy D. Ther Adv Musculoskelet Dis.

11. Khan MA. *Ann Rheum Dis.* 2002;61(Suppl 3):iii3-7.

12. Ogdie A, et al. Rheumatol Ther. 2019;6(2):255-67.

13. Salanti G, et al. *J Clin Epidemiol*. 2011;64(2):163-71.

2018;10(5-6):129-39.

 Our results suggest areas of focus to improve the assessment, diagnosis, and referral of patients with IBP suggestive of rheumatic disease

REFERENCES

- 1. Rudwaleit M, et al. *Ann Rheum Dis*. 2009;68(6):770
- 1. Radwalett W, et al. Ami Micam Dis. 2005,00(0).1
- 3. van den Berg, R, et al. *Ann Rheum Dis*. 2013;72(10):1646-53.
- 4. Weisman, MH. Rheum Dis Clin North Am.
- 2012;38(3):501-12.

 5. Sieper J, et al. *Ann Rheum Dis.* 2009;68(6):784-8.
- 6. Poddubnyy D, et al. *RMD Open*. 2018;4(2):e000825
- 7. Reveille JD. *Am J Med Sci.* 2011;341(4):284-6.

DISCLOSURES

M. Magrey is a consultant for Novartis Pharmaceuticals Corporation. E. Yi and Y. Park are employees of Novartis. D. Wolin, M. Price, C. Chirila, and E. Davenport are employees of RTI Health Solutions.

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