



Social determinants of health as barriers to care for vasculitis: perspectives of patients and healthcare providers

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Abstract

Objective This study examined patient and healthcare provider (HCP) perspectives on the impact of unmet social needs on healthcare barriers for patients with vasculitis.

Methods Two surveys were developed to gather perspectives from patients with vasculitis, and HCPs specializing in vasculitis care. The patient survey also included a 20-question social needs assessment. The data were analyzed using descriptive statistics.

Results One hundred patients and 31 HCPs completed the surveys between September 2022 and June 2023. Fifty-six percent of patients reported unmet social needs, with poor social and mental health (30%) being the most common. Sixty-three percent of patients with vasculitis perceived unmet social need(s) as barriers to healthcare access. Financial insecurity (30%), poor mental health (29%), and poor health knowledge (25%) were the most common barriers identified. Overall, HCPs perceived SDOH have a greater impact on healthcare access than the patients surveyed. Most patients (82%) and HCPs (90%) believed rheumatologists should help in the management of SDOH, specifically health knowledge and mental health. Few HCPs (10%) felt well-positioned to address patients' mental health. Suggested interventions that address social needs and improve healthcare access included referrals to community-based resources, providing educational materials, and virtual visits.

Conclusion Through patient and HCP perspectives, the impact of SDOH on healthcare access for patients with vasculitis was explored. Understanding the positive experiences and challenges faced by patients is crucial for developing targeted interventions to enhance healthcare access. These findings underscore the importance of ongoing efforts to improve the healthcare experience for patients with vasculitis.

Key Points

- *The impact of unmet social needs on healthcare access for patients with vasculitis, illustrates the complex relationship between SDOH and healthcare outcomes.*
- *Unmet social needs among patients with vasculitis, included poor social and mental health, financial and food insecurity, and a lack of health literacy, which may exacerbate challenges leading to poor health outcomes.*
- *The differences in perspectives between patients and healthcare providers regarding the impact of certain SDOH on healthcare access, necessitates the importance of co-production in the development of interventions to improve healthcare delivery.*
- *The importance of patient-centered care and tailored solutions was highlighted by the need for various interventions to address social needs and improve healthcare access, such as referrals to community-based resources, educational materials, and interprofessional collaboration.*

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Introduction

Vasculitis refers to a group of rare diseases resulting in inflammation of blood vessels, often characterized by the size of the blood vessel involved, resulting in a wide range of clinical manifestations that significantly impact patients' quality of life and may be life-threatening [1]. While advancements in diagnosis and treatment have improved outcomes, patients may face ongoing physical, psychological, social, and financial consequences due to the often chronic nature of the disease [2, 3]. Therefore, access to quality healthcare is imperative for patients with vasculitis to preserve and improve their health. Barriers to achieving this quality of care can result in poor health outcomes for patients [4]. Disparities in health outcomes among individuals are influenced by social determinants of health (SDOH), which are defined by the World Health Organization as the “conditions in which people are born, grow, work, live, and age, and the wider set of forces and systems shaping the conditions of daily life” [5–7]. Unmet social needs, which stem from disparities in SDOH, may pose additional challenges for patients in accessing care [8–10]. However, there has been limited research exploring the relationship between unmet social needs and access to care, particularly in the context of vasculitis. Understanding the barriers to accessing care and the impact of unmet social needs is crucial to address healthcare disparities and poor health outcomes [10–13].

The objectives of this study were to examine the perspectives of both patients and healthcare providers (HCPs) to identify barriers to healthcare access and explore the association between unmet social needs and healthcare access for patients with vasculitis. Gaining insight into these barriers, this research can be used to inform interventions and contribute to improving access and healthcare delivery for individuals affected by vasculitis.

Materials and methods

Study design

The study employed a quantitative descriptive design utilizing a patient (Appendix A) and a healthcare provider survey (Appendix B) to capture the experiences of both patients and HCPs regarding the impact of SDOH on vasculitis care. The surveys were developed through a collaborative

effort by co-authors who specialize in the field of vasculitis and survey methodology. The team followed a systematic process for developing these surveys [14–16]. A thorough literature review was conducted to identify potential obstacles in accessing healthcare for individuals with vasculitis [3, 5, 6, 8, 10, 11, 17]. Subsequently, selection of survey domains and topics were informed by group discussion and insights from the literature review. These domains included patient and healthcare provider demographics, unmet social needs, barriers to accessing care, and potential interventions to address SDOH. The team collectively determined the specific content, type, relevance, and other criteria for the questions to be included in the surveys, ensuring comprehensive coverage of relevant issues. Questions were selected, adapted and/or developed to align with the domains identified and appropriate Likert response scales were chosen. Additionally, the surveys were designed to be easily comprehensible, employing language and readability at a Grade 8 reading proficiency level. To ensure face and content validity as well as question clarity, the surveys were first piloted with a sample of four patients and HCPs. Feedback from these initial participants was used to refine the questions, resulting in the final survey.

More specifically, both surveys consisted of closed-ended and open-ended questions to capture quantitative and qualitative data. Closed-ended questions were designed using multiple-choice options, ‘select all that apply’ checklists, and Likert scales related to barriers to healthcare access (i.e., rank SDOH from “Major Barrier”, “Somewhat of a Barrier” and “Not a Barrier”). Open-ended questions allowed participants to provide additional comments or disclose barriers not covered in the predefined response options. Additionally, the patient survey included a 20-question social needs assessment adapted from validated questionnaires [18–21].

Participant recruitment and inclusion criteria

Participants were identified and recruited through convenience and purposive sampling methods, distributing the surveys through specific organizations. The patient survey was distributed to all existing members and related contacts of the Vasculitis Foundation Canada (VFC) through the VFC email server list and VFC Facebook group. The healthcare provider survey was distributed to all existing members of the Canadian Rheumatology Association and CanVasc, the Canadian network for research on vasculitides. Given the survey's distribution across third-party email servers, public social media channels, and two groups with overlapping memberships, determining a precise total sample size was a challenge. As such, survey response rate was calculated based on the number of participants who met the inclusion criteria described below and initiated the survey.

Study participants for the patient survey included adults (aged ≥ 18 years) of any gender who were diagnosed with vasculitis. Participants were asked to self-confirm their diagnosis when initiating the survey. Participants of the healthcare provider survey were healthcare professionals involved in the care of patients with vasculitis, as determined by a self-declaration question at the beginning of the survey. Incomplete survey responses that were not submitted by the participants were excluded from the data analysis.

Data collection

The study data were collected and managed using RedCap electronic data capture tools hosted at the University of Alberta [22, 23]. The survey was administered online using RedCap with a unique survey link. Participants were provided with an explanation of the study's purpose, design, potential risks and benefits, and intent to publish the results. To ensure anonymity and confidentiality, no personally identifiable information was collected during the survey. Participant consent was implied when individuals willingly completed and submitted the survey, indicating their agreement to participate. The data were saved as an encrypted file on a password-protected device to be used for analysis.

Data analysis

The data were analyzed using Microsoft Excel software. Descriptive statistical analysis, specifically frequencies and percentages, was used to describe the data of the two groups of participants including demographics, their views/experiences of barriers to accessing/providing care, and their views/experiences of unmet social needs.

Ethics approval

This study received ethics approval from the University of Alberta Research Ethics Board (Pro00122345) on August 3, 2022.

Results

Participants

The patient survey was conducted from September 27, 2022 to March 31, 2023 during which time it was emailed to 375 members of the VFC and related contacts as well as distributed online via VFC social media accounts. The patient survey was initiated by 139 individuals and

completed by 100 participants, resulting in an estimated response rate of 72%. Of those who responded, the majority were female (80%), between the age of 40–64 (46%), White (88%), household income between \$70,000–\$99,999 (33%) and had post-secondary education (62%). More than half (57%) were from Ontario, Canada and 55% resided in an urban community (Table 1). Thirty-eight percent of participants noted being diagnosed with granulomatosis with polyangiitis. Other common types of vasculitis among participants included microscopic polyangiitis (15%), Behcet's disease (8%) and giant cell arteritis (7%). Many participants also noted having co-morbid health conditions (63%). Thirty nine percent of individuals rated their health as fair, 40% as good or very good, and 21% as poor or very poor (Table 2).

The healthcare provider survey was conducted from February 21, 2023 to June 9, 2023. This survey was initiated by 41 members of the Canadian Rheumatology Association and CanVasc, of whom 31 completed the survey, for an estimated response rate of 76%. One-third (33%) of the HCPs were from Ontario, Canada and 87% resided in an urban community (Table 1). The HCP were primarily rheumatologists (94%) with a wide spectrum of professional experience ranging from rheumatology residents to attending physicians with > 20 years' experience.

Social needs assessment

The social needs assessment completed by patient participants revealed that a significant proportion reported experiencing various unmet social needs. As shown in Fig. 1, 56% of participants had at least one unmet need. The most frequently reported unmet need was poor social and mental health (30%), based on participants' self-reported absence of social supports and experiences of anxiety or depression. Financial insecurity (18%), food insecurity (17%), and poor health literacy (15%) were also reported by participants.

Social determinants of health as barriers to accessing care for patients with vasculitis

Participants were asked to rate each SDOH as “Not a Barrier”, “Somewhat of a Barrier”, or “A Major Barrier”. Sixty-three percent of patients reported at least one SDOH as a barrier to accessing care for the management of their vasculitis. Figure 2 displays the responses of patients on the extent to which specific SDOH act as barriers in accessing care for vasculitis. Amongst the SDOH assessed, 30% of patients rated financial insecurity as the most substantial barrier. Poor social and mental health

Table 1 Demographics of Patients and Healthcare Providers

<i>Characteristics</i>	<i>% of patients (n)</i>	<i>% of healthcare providers (n)</i>
<i>Gender</i>	N=100	N=31
Female	80 (80)	55 (17)
Male	20 (20)	42 (13)
Prefer not to say	0 (0)	3 (1)
<i>Age</i>	N=100	
18–24	3 (3)	-
25–39	9 (9)	-
40–64	46 (46)	-
65 and over	42 (42)	-
<i>Race and Ethnicity</i>	N=99	N=31
Black or African American	1 (1)	0 (0)
East Asian	2 (2)	7 (2)
Latino	2 (2)	3 (1)
Middle Eastern	0 (0)	10 (3)
South Asian	1 (1)	16 (5)
Southeast Asian	1 (1)	0 (0)
White/Caucasian	88 (87)	61 (19)
Other	5 (5)	3 (1)
<i>Community</i>	N=99	N=31
Urban or city	55 (54)	87 (27)
Sub-urban or near city	17 (17)	19 (6)
Rural	28 (28)	7 (2)
<i>Province of Residence</i>	N=97	N=31
British Columbia	2 (2)	17 (5)
Alberta	14 (14)	13 (4)
Saskatchewan	7 (7)	3 (1)
Manitoba	2 (2)	3 (1)
Quebec	7 (7)	20 (6)
Ontario	57 (55)	33 (10)
Atlantic Provinces (NS, PEI, NB, NL)	9 (9)	10 (3)
Northern Territories (NT, YT, NU)	1 (1)	0 (0)
<i>Income</i>	N=91	
Under \$5000	2 (2)	-
\$5,000—\$19,999	11 (12)	-
\$20,000—\$39,999	23 (25)	-
\$40,000—\$69,999	22 (24)	-
\$70,000—\$99,999	33 (36)	-
\$100,000 and over	0 (0)	-
<i>Education</i>	N=99	
Less than high school	3 (3)	-
High school	9 (9)	-
Postsecondary education	62 (62)	-
Graduate or Professional degree	25 (25)	-
<i>Medical Specialty</i>		N=31
Rheumatology	-	94 (29)
Nephrology	-	3 (1)
Internal Medicine	-	3 (1)
<i>Level of Training/ Years in Practice</i>		N=31
Resident	-	3 (1)
<5 years	-	26 (8)

Table 1 (continued)

<i>Characteristics</i>	<i>% of patients (n)</i>	<i>% of healthcare providers (n)</i>
5–10 years	-	16 (5)
11–20 years	-	32 (10)
> 20 years	-	22 (7)
<i>Practice Type</i>		N=31
Hospital Based	-	74 (23)
Community	-	13 (4)
Other	-	13 (4)
<i>Vasculitis Patients Seen in Practice/ Year</i>		N=31
Less than 5	-	7 (2)
5–20	-	45 (14)
21–50	-	16 (5)
> 50	-	32 (10)

and health knowledge followed closely, with 29% and 25% of patients indicating them as barriers to healthcare access, respectively. Experiences of discrimination in the healthcare setting (14%), lack of transportation (13%), and environmental risk factors (11%) were also notable barriers.

Similarly, HCPs were asked the extent to which specific SDOH act as barriers in patient access to care. Consistent with patient perspectives, HCPs identified financial insecurity (90%), poor health knowledge (90%), and poor social and mental health (87%) as common barriers, with 32% indicating these as significant barriers. Lack of transportation was noted as a barrier by a significant number of HCPs (90%) in comparison to patients (13%). HCPs also highlighted housing instability, food insecurity, discrimination, lack of personal safety, and environmental concerns as barriers to varying degrees.

Healthcare providers' role in managing and screening for SDOH

Amongst the patients surveyed, 62% indicated that they have engaged in conversations with their HCPs regarding various social needs and barriers to healthcare access. Eighty-four percent of these participants reported having these conversations with their family physicians, 58% with their rheumatologists, 31% with other specialists, 22% with social workers, and 15% with their pharmacists. Other HCPs involved included physiotherapists (10%), nurses (10%), and emergency physicians (5%). Patients' discussions with HCPs covered a range of SDOH topics. The most discussed topics included social supports/mental health (63%) and level of health knowledge (42%). Finances (19%), discrimination (11%), environmental concerns (8%), housing (7%), safety (7%), food security (5%), and transportation (5%) were reported to be discussed less often.

Among the HCPs surveyed, 68% reported discussing social supports, mental health, and transportation with their patients. Other common topics of discussion included patients' finances (55%), housing situation (49%), and health knowledge (45%). Safety (19%), food security (13%), discrimination (13%), and environmental concerns (7%) were less commonly discussed. Furthermore, 58% of HCPs reported screening for social needs routinely in their practice. Screening was performed by physicians (72%), nurses (44%), social workers (17%), or other office managers/assistants (11%). Among HCPs who perform SDOH screening in their clinics (n=18), various methods were employed to assess patients' social needs. Discussions during patient visits (50%) were the most prevalent method, followed by questionnaires completed by patients prior to the visits (33%) and electronic health record prompts (28%).

The survey also assessed the perceptions of patients and HCPs on the role of rheumatologists in the management of SDOH. Among patients, 82% believe their rheumatologist should be involved in managing at least one of the listed SDOH. Similarly, 90% of rheumatologists expressed their belief in the importance of their involvement in helping manage patients' social needs. Moreover, 65% of rheumatologists indicated that they feel well positioned to manage at least one of these SDOH. Figure 3 illustrates the comparison between patients' and HCPs' perspectives on rheumatologists' involvement in managing specific SDOH for patients with vasculitis. Patients and HCPs were asked to select from a list of SDOH, which SDOH they believe rheumatologists should help patients manage (i.e., by screening for, counseling on, giving referrals to other resources, etc.). Among the categories included in the survey, both patients and rheumatologists agreed with the importance of the rheumatologists' role in the management of patients' health knowledge and mental health. There was general agreement between patients and HCPs on which SDOH should be managed by

Table 2 Patient-Reported Health Information

Health Information	% of patients (n)
<i>Type of Vasculitis</i>	N=98
Granulomatosis with polyangiitis (GPA) (formerly called Wegener's)	38 (37)
Microscopic polyangiitis (MPA)	15 (15)
Other	9 (9)
Behçet disease	8 (8)
Giant cell arteritis	7 (7)
Eosinophilic granulomatosis with polyangiitis (EGPA) (formerly called Churg-Strauss)	7 (7)
Takayasu's arteritis	6 (6)
I do not know	4 (4)
Hypocomplementemia urticarial vasculitis (HUV)/ anti-C1q vasculitis	2 (2)
Polyarteritis nodosa	1 (1)
IgA vasculitis	1 (1)
Cryoglobulinemic vasculitis (CV)	1 (1)
<i>Comorbidities</i>	N=98
Yes	63 (62)
No	37 (36)
<i>Comorbid Conditions (grouped by organ system)</i>	N=62
Kidney diseases (e.g., kidney cancer, kidney failure)	26 (16)
GI diseases (e.g., Inflammatory Bowel, Crohn's, ulcer, GERD)	26 (16)
Autoimmune Conditions (e.g. Celiac disease, IBD, Graves, Hashimotos, Psoriasis, Multiple Sclerosis)	24 (15)
Hypertension (High blood pressure)	24 (15)
Diabetes (Type 1, Type 2)	19 (12)
Lung diseases (e.g., asthma, COPD, lung cancer)	18 (11)
Other Rheumatoid diseases (e.g., Rheumatoid arthritis, Lupus, Sjogren's)	16 (10)
Heart diseases (e.g., heart failure, heart defects)	8 (5)
Neurological diseases (e.g. Alzheimer's, Parkinson's, multiple sclerosis, epilepsy)	6 (4)
Liver diseases (e.g., cirrhosis, liver cancer)	5 (3)
Metabolic syndrome	5 (3)
Depression/Anxiety	3 (2)
Other	32 (20)
<i>Self-Rated Overall Health Condition</i>	N=100
Very Poor	3 (3)
Poor	18 (18)
Fair	39 (39)
Good	34 (34)
Very Good	6 (6)

rheumatologists. There was a significant difference in the percent of HCPs who believed rheumatologists should be involved in the management of social and mental health, transportation needs, discrimination and food security of patients and the percent of HCPs who believed rheumatologists are well positioned to assist in the management of these social factors. Notably, 58% of HCPs and 49% of patients reported that rheumatologists should be involved in addressing patients' social and mental health, while 10% of HCPs believed they are well positioned in managing patients' social and mental health.

Possible interventions to improve the management of social determinants of health

The survey explored what healthcare practices are used by HCPs to help address SDOH. Among HCPs surveyed, 52% indicated referring patients to community-based resources. Twenty five percent of HCPs noted offering resources/tools in their practice. The findings also revealed that 16% of HCPs actively engage patients in discussions around overcoming challenges associated with SDOH. A significant proportion of HCPs (42%) noted not offering any resources

Fig. 1 Unmet Needs of Patient Participants (N=100)

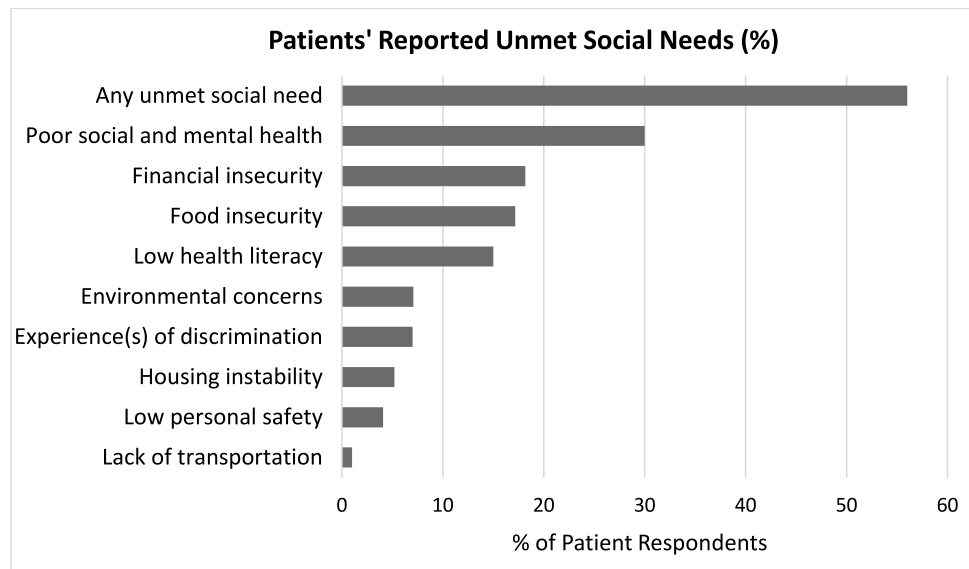
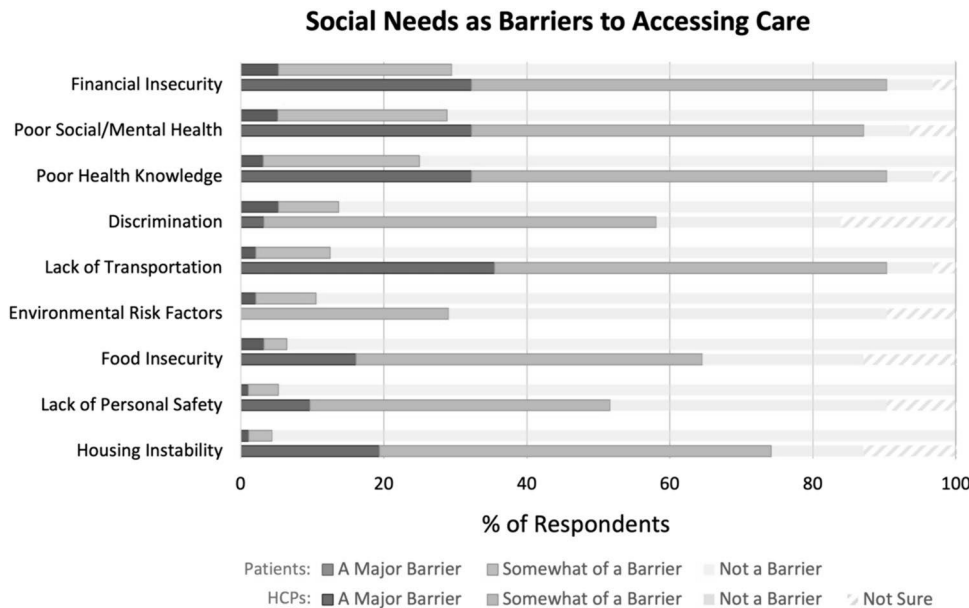


Fig. 2 Patient (N=100) and Healthcare Provider (N=31) perspectives of specific SDOH as barriers to access to care for patients with vasculitis



or not being able to focus on addressing social needs in their practice.

The survey also sought to understand patients' and HCPs' perspectives on possible interventions to address social needs. The participants were provided with a list of potential interventions to address various social needs and asked to select which of the following would help patients overcome challenges in accessing care. Among the patients who responded (n=94), 54% of patients would like clinics to offer virtual visits for follow-up appointments, and 22% of patients would like physicians to work in their communities to improve healthcare access (Fig. 4). Forty-eight percent of participants would also like educational material provided to them regarding their medical condition and medications.

Additionally, 33% of patient participants agreed that referrals to community services by rheumatologists would aid in overcoming unmet social needs.

Among HCPs surveyed, 74% selected referrals to community services and provision of assistance with transportation as helpful actions to address barriers related to unmet social needs. Furthermore, similarly to patients, many HCPs recognized the need for providing educational materials about patients' health conditions and medicines (61%) and offering virtual visits for follow-ups (65%) to enhance healthcare access.

While the surveyed interventions are prevalent, patient participants identified other innovative approaches to address social needs such as increased prevalence of patient

Fig. 3 Patient (N = 100) and HCP (N = 31) perspectives of the role of rheumatologists in the management of SDOH for patients with vasculitis

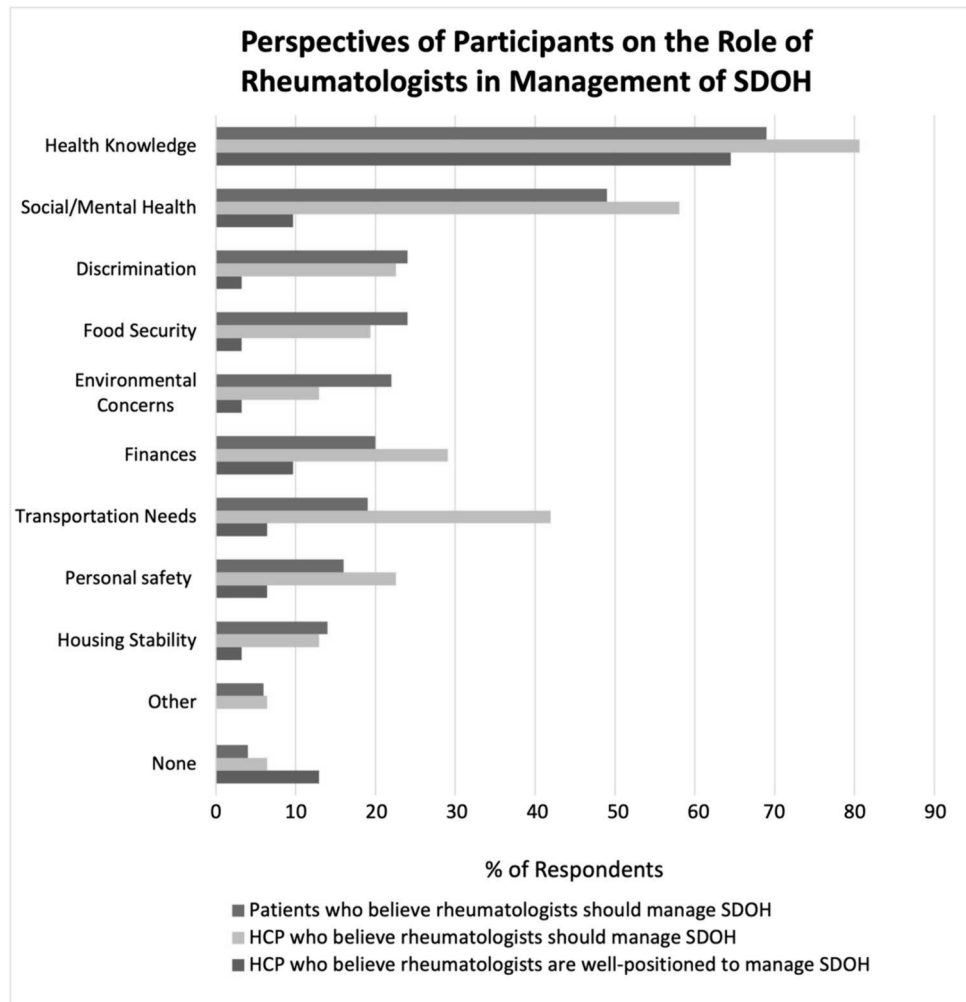
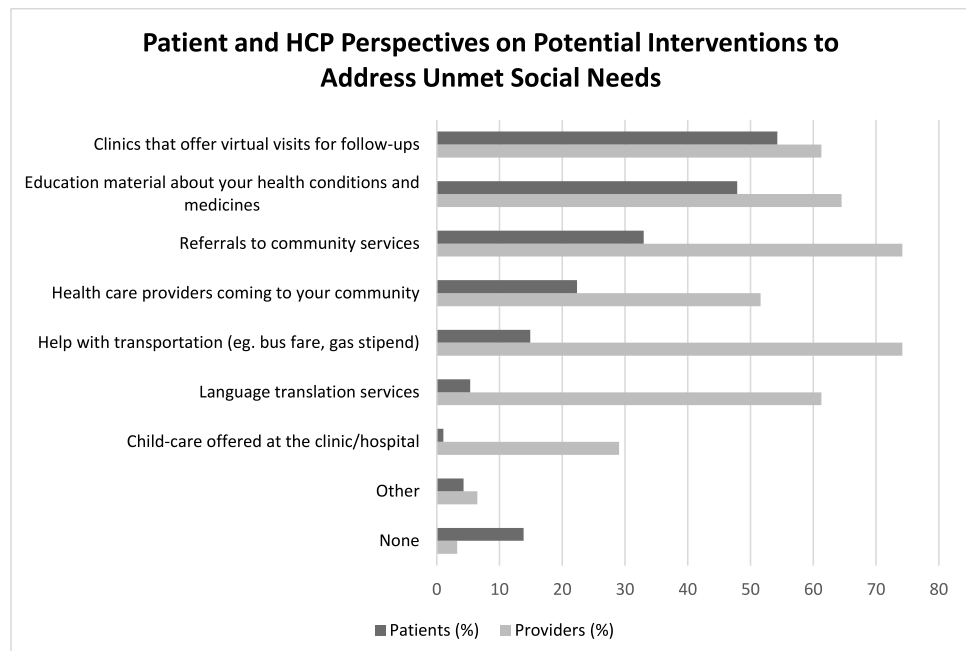


Fig. 4 Percent of patient (N = 94) and HCP (N = 31) participants who selected the following actions and resources as possible interventions to address unmet social needs for patients with vasculitis



advocacy groups to “help navigate the system”, “screening for SDOH in clinic through intake surveys” and referral to specific community supports, and the use of “information kits” or resource contacts for patients.

Suggestions to address SDOH by HCPs included– “presence of social workers in their practice to help address social needs of patients”, “identifying vulnerable/marginalized patients in EMR of the practice and allowing them to ‘drop-in’ instead of booking appointments”, as well as “utilizing government-based resources such as those provided through Jordan’s Principle [a needs-based principle used in public policy and administration in Canada to ensure equitable access to government funded resources for First Nations children]” [24].

Discussion

While existing literature acknowledges the significance of social factors in affecting the quality of life and health outcomes of vasculitis patients [3, 25, 26], there is limited research examining the link between unmet social needs and access to care for patients with vasculitis. This study aimed to determine how unmet needs affect patients’ access to care through a comparison of the experiences and perceptions of both patients and HCPs thus offering a comprehensive view of the influence of SDOH on healthcare access for patients with vasculitis.

The social needs assessment included in the patient survey revealed 56% of patients with vasculitis experienced at least one unmet social need. Interestingly, 63% of patients reported that unmet social need(s) were barriers to accessing care for their vasculitis, highlighting a discrepancy where some patients without identified/reported unmet needs still perceived barriers to access to care. HCPs also perceived SDOH as more significant barriers for patients compared to the patients themselves. This difference in perception could be attributed to several factors, including HCP exposure to a broader range of patients with varying healthcare challenges and potential communication gaps between patients and providers.

Financial insecurity, poor mental health, and inadequate health knowledge were identified as the primary barriers by both patients and healthcare providers. These findings underscore the complex relationship between SDOH and healthcare access [27]. Financial barriers can restrict patients’ ability to afford necessary healthcare services and medications, while poor mental health and inadequate health knowledge can hinder their ability to navigate the healthcare system effectively [27–30].

Sixty-two patients reported engaging in discussions with their HCPs about various social needs and barriers to healthcare access. These discussions were mostly initiated

with family physicians and rheumatologists. Patients and HCPs exhibited a shared understanding of the importance of rheumatologists’ involvement in addressing SDOH, particularly in the domains of health knowledge and mental health. Rheumatologists, and other specialists in vasculitis care, have a crucial role in understanding and addressing the unique challenges faced by vasculitis patients.

The survey indicated that while respondents recognize the important role of rheumatologists and other HCPs in addressing SDOH for patients with vasculitis, there is room for improvement in their capacity to do so effectively. A substantial proportion of HCPs felt ill-prepared to address patients’ mental health needs and exhibited varying degrees of implementation in screening and managing SDOH. A considerable number of providers (42%) noted not screening or being unable to focus on addressing social needs in their practice. These findings suggest a need for further exploration of obstacles faced by HCPs in incorporating SDOH management into routine patient care as well as a continued need for awareness and education about the impact of SDOH on healthcare outcomes.

Both patients and HCPs expressed support for several interventions to address social needs in clinical practice, such as referrals to community-based resources, providing educational materials about patients’ health conditions and medications, and conducting virtual visits for follow-up appointments. Other creative solutions offered by patients included incorporating community-based programs and support services in clinics. Several HCPs emphasized the importance of interprofessional collaboration and leveraging existing resources by utilizing social workers and government-based resources in clinical settings. These creative solutions underscore the importance of ‘co-production’ in developing effective, patient-centered interventions that promote equitable healthcare access for vasculitis patients [31].

To successfully implement these suggestions, policy reform and increased funding is crucial to developing targeted interventions that translate these research findings into tangible improvements in healthcare delivery. Policies could include the provision of financial assistance programs, improved access to mental health services, and the enhancement of health literacy through community education programs. Furthermore, health authorities should consider developing frameworks that facilitate collaboration between healthcare providers, community organizations, and governmental agencies to create a cohesive support network for patients with vasculitis. Future efforts should be directed by policymakers towards implementing and evaluating interventions to address social determinants of health in vasculitis care, with the goal of achieving more equitable healthcare outcomes for patients.

While this study successfully examined patient and HCP perspectives about unmet social needs as healthcare

barriers for patients with vasculitis, there are limitations that should be acknowledged. SDOH are influenced by various interconnected factors, such as socioeconomic status, education, and cultural contexts [6, 9, 19]. While efforts have been made to capture relevant information, some variables might have been excluded or inadequately measured, limiting the comprehensiveness of the study's findings. Due to the online nature of the survey, limitation to English-speaking participants, and the recruitment methods used, the sample of participants may not represent the broader population. Further research with larger and more diverse samples is warranted to corroborate and expand upon these findings.

Although this study is unique in its aim to investigate the impact of unmet social needs on accessing care, insights from studies conducted in other diseases managed by subspecialists can improve the understanding of the impact of SDOH in patients with vasculitis. Research in conditions such as rheumatoid arthritis [32, 33], diabetes [34, 35], and inflammatory bowel disease [36] has shown the significant impact of SDOH on healthcare outcomes. These studies revealed common themes of limited health literacy, financial insecurity, and inadequate social support adversely affecting patient care [32–36]. It is also important to acknowledge that nuances exist across disease contexts due to differences in patient demographics, disease severity, and treatment modalities [9, 10]. Futures studies can focus on comparing findings from these diverse disease populations such that the unique challenges faced by patients with vasculitis can be better appreciated and interventions can be tailored to effectively address specific needs.

In conclusion, this study identified the critical role of SDOH on healthcare access for patients and management of vasculitis. Although it is encouraging to note that many patients indicate no barriers in healthcare access, a substantial number viewed several unmet social needs as barriers to accessing care for vasculitis. Financial insecurity, poor mental health, and inadequate health knowledge were identified as the primary barriers by both patients and healthcare providers. Potential interventions and future directions for research highlighted in this study can be used by clinicians, researchers and healthcare policymakers to guide the development of healthcare improvements to better address SDOH and fostering health equity for patients with vasculitis.

Supplementary Information The online version contains supplementary material available at <https://doi.org/10.1007/s10067-024-07082-4>.

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Declarations

Conflict of interest None.

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