

Painful Diabetic Peripheral Neuropathy: Results of a Survey Characterizing Perspectives and Misperceptions of Patients and Healthcare Practitioners

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BACKGROUND

- Diabetic peripheral neuropathy (DPN) is a late complication of Type 1 and Type 2 diabetes that is characterized by nerve damage
- DPN may manifest as painful symptoms that result in the condition known as painful diabetic peripheral neuropathy (pDPN)
 - Estimates suggest that the overall prevalence of pDPN in the diabetic population is 15%¹
- pDPN is associated with a substantial patient and economic burden²⁻⁷
 - Reductions in patient function, quality of life, and productivity
 - Greater healthcare resource utilization and costs relative to both the general population and patients with diabetes without pDPN
- Despite the numerous studies evaluating quality of life and other patient-reported outcomes in pDPN, no published studies have characterized patient knowledge and perceptions of their symptoms, nor is there much information on gaps in the dialogue between patients and their healthcare practitioners (HCPs)
 - A previous study suggested some disparity between the perspectives of patients and their HCPs, especially with regard to rating pDPN severity⁷

OBJECTIVE

- To identify gaps in patient and HCP knowledge of pDPN, and disparities in perceptions of DPN symptoms

METHODS

- Versta Research conducted an online survey in the United States during 2012 on behalf of Pfizer and the American Chronic Pain Association
 - Patients (N = 1004) diagnosed with Type 1 or 2 diabetes were recruited via the Survey Sampling national consumer research panel, and for inclusion, patients were screened based on self-report for experiencing symptoms consistent with DPN in the feet, hands, legs, or arms
 - HCPs (N = 500) were recruited from Epocrates' national research panel
 - Because patient and HCP populations were independent, the HCPs were not necessarily providing care to patient survey participants
- Survey questions focused on understanding of the cause and management of DPN symptoms, and interactions between patients and their HCPs
- Survey results reflect an unweighted population,

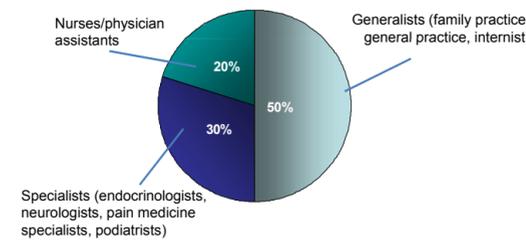
RESULTS

Figure 1. Survey populations.

A) Patients (N = 1,004)

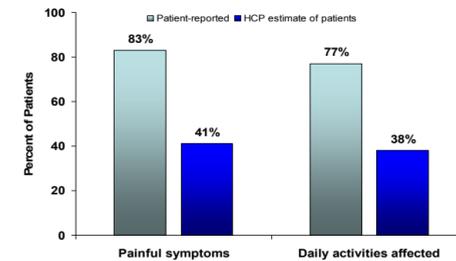
Variable	Value
Gender, n (%)	
Male	468 (47)
Female	536 (53)
Mean age, years	55
Region, n (%)	
North	384 (38)
South	315 (31)
West	304 (30)
Missing	1 (1)
Mean duration of diabetes, years	12

B) Healthcare Practitioners (N = 500)



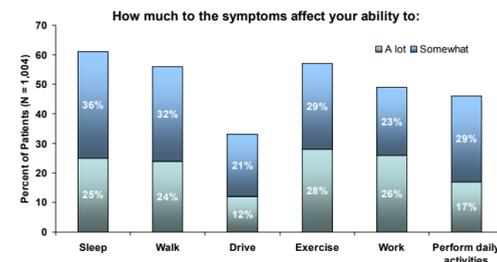
- The patient population consisted of 1,004 adults in the US diagnosed with Type 1 or Type 2 diabetes (Figure 1A)
 - Slightly more women than men (53% vs 47%)
 - Mean age was 55 years and mean time since diabetes diagnosis was 12 years
 - Similar representation of North, South, and West regions of the US
- The HCP survey encompassed a cross-section of HCPs who treat patients with diabetes (Figure 1B)
 - However, the HCPs were not necessarily providing care to the patient survey participants

Figure 2. Patient (N = 1,004) and HCP (N = 500) perspectives on the presence of DPN symptoms and their impact.



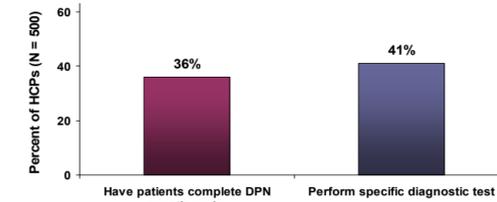
- There was considerable disparity between patient and HCP perspectives with regard to the presence of DPN symptoms and their impact on daily activity, with HCPs substantially underestimating the patients' perspective by approximately 50% (Figure 2)
 - Among the diabetes patients with any DPN symptoms, 83% (n = 832) reported that their symptoms are painful, but HCPs estimated that only 41% of DPN patients experience pain
 - Only 41% of the 832 patients with painful symptoms reported being actually diagnosed with DPN
- Similarly, while 77% of patients reported that DPN symptoms affected their daily activities, HCPs estimated that only 38% of patients had their daily activities affected by these symptoms

Figure 3. Patient-reported impact of DPN symptoms on daily functioning (N = 1,004).



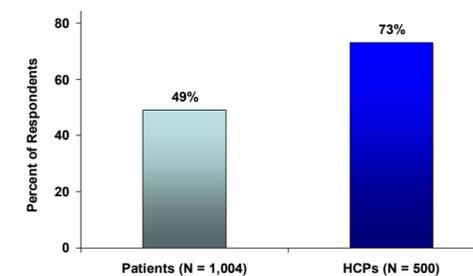
- Substantial proportions of patients reported that DPN symptoms impact their daily function "a lot" or "somewhat" (Figure 3)
- The most frequently affected function was sleep (61%), followed by exercise (57%) and the ability to walk (56%)

Figure 4. Healthcare practitioner (N = 500) DPN symptom evaluation.



- Despite the substantial presence of DPN symptoms and their impact on daily activity, the majority of HCPs do not adequately evaluate patients for the presence of DPN (Figure 4)
 - 64% of HCPs never had their patients complete a DPN assessment questionnaire
 - Only 41% performed specific diagnostic tests on all patients who report DPN symptoms

Figure 5. Respondents reporting speaking about DPN symptoms at "every" or "most" appointments



- There was disparity between patients and HCPs regarding the frequency with which DPN symptoms are discussed (Figure 5)
 - While only 49% of patients reported they spoke about their DPN symptoms at "every" or "most" appointments with their HCP, 73% of HCPs reported discussing DPN symptoms at "every" or "most" visits
- Among the 344 patients who reported being reluctant to talk about DPN symptoms with their HCP, several reasons were cited for this reluctance
 - While 38% were worried that the HCP would think they were not adequately controlling their diabetes, 40% thought that nothing could be done

Table 1. Proportion of respondents reporting diabetes issues discussed at "most or all" visits; italics indicate DPN-related issues.

Issue	Percent	
	Patients (N = 1,004)	HCPs (N = 500)
Blood sugar (glucose) levels	82	93
Medications for your diabetes	71	84
Eating habits and diet	53	82
Heart, lungs, and potential cardiovascular problems including high blood pressure	53	74
Exercise and lifestyle	49	83
<i>The symptoms in your feet, hands, arms, or legs that you described earlier</i>	46	73
<i>Foot-related issues</i>	42	68
<i>How the symptoms in your feet, hands, arms, or legs interfere with daily activities</i>	38	60
<i>Potential nerve damage</i>	36	61
Kidney function and the potential for problems	38	57
Eye and potential vision problems	36	60
The emotional toll of having diabetes	24	29

- HCPs believe that discussions related to diabetes, especially issues related to DPN, occur more frequently than reported by patients (Table 1)
 - While 61% of HCPs reported that they discuss nerve damage with their patients, only 36% of the patients reported discussing such damage with their HCP
 - Specific symptoms in the extremities, generally related to DPN, were also reported as being more frequently discussed by HCPs than by patients

Table 2. Key misperceptions about DPN among surveyed patients and HCPs.

Patients (N = 1,004)	
51% believe that controlling blood sugar will help DPN symptoms go away, and another 31% are unsure	
47% believe that symptom flaring is a sign that blood sugar is getting out of control, and another 35% are unsure	
18% believe that nerve damage from DPN is reversible, and another 43% are unsure	
HCPs (N = 500)	
92% tell patients that more effort to control blood sugar will help manage pain	
76% believe that patients can alleviate DPN symptoms by maintaining low glucose levels	
53% believe that patients can reverse DPN by maintaining low glucose levels	

Table 3. Request for more learning.

Issue	Percent wanting more information	
	Patients (N = 1,004)	HCPs (N = 500)
The link between diabetes and DPN	51	50
Cause of DPN	54	64
Difference between nerve pain and other types of pain	58	60
How DPN causes pain or numbness	58	64

- More than half of the HCPs as well as the patients expressed a desire for more information on issues that could help them understand and treat DPN and its painful symptoms (Table 3)
 - These issues included the relationship between diabetes and DPN, and the causes and manifestations of pDPN that distinguish it from other types of pain
- Additionally, the majority of HCPs also expressed a desire for more information on
 - Non-medication strategies for managing pDPN (87%)
 - Ways to alleviate pDPN (71%)
 - When medication for pDPN can be effective (68%)
 - Medications approved by the FDA for pDPN (63%)

CONCLUSIONS

- Misperceptions regarding the cause and management of DPN and its painful symptoms are common among patients as well as HCPs
- There is discordance between the patients' and HCPs' perspectives not only on the presence and impact of these symptoms, but also on how often they are discussed during clinical visits
- These results suggests a need for:
 - Educational initiatives on DPN and its painful symptoms on that target patients and HCPs
 - Initiating improved dialogue between patients and their HCPs for discussing appropriate management of DPN that is distinct from treatment of the underlying diabetes

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