

Participation in general practice health screening by people with multiple sclerosis

Katherine MacLurg, Philip Reilly and Stanley Hawkins

SUMMARY

We examined the effect of mobility on health screening for people with multiple sclerosis. General practice records were searched for blood pressure and cholesterol measurements, lifestyle advice, cervical smears, and mammograms. Blood pressure measurement decreased with decreasing mobility ($P < 0.001$). Lifestyle advice was also related to mobility ($P < 0.01$), with those with a moderate disability most likely to receive lifestyle advice. Overall, wheelchair users received fewer preventative services. Findings were similar for men and women.

Keywords: health services accessibility; lifestyle risk reduction; multiple sclerosis; screening.

Introduction

THERE is a perception that patients with a disability are inhibited from participation in health screening.¹ It has been shown that mobility is related to use of preventative services by women in the United States (US).^{1,2} People with multiple sclerosis have almost normal life spans and therefore need access to preventative services in the hope of preventing premature mortality.² Multiple sclerosis is the most common cause of chronic neurological disability in young adults, with a local prevalence of almost 1 in 600.³ The aim of this study was to audit how a representative, community-based sample of patients with multiple sclerosis complies with a range of National Health Service screening standards.

Method

Approval was obtained from the Queen's University of Belfast Ethics Committee. General practitioners (GPs) in a representative network of practices across Northern Ireland were asked to identify all of their patients with multiple sclerosis. Consent to their general practice records being examined was obtained from participants. The diagnosis of multiple sclerosis was verified using Poser *et al*'s criteria.⁴ Notes for the 5 years before January 2002 were examined for evidence of blood pressure measurement and advice on smoking, alcohol, diet, and exercise. As 45 years is the youngest age at which cholesterol measurement alone appears to be relevant on the coronary risk prediction charts, records of participants over 45 years of age were searched for evidence of this. Records of women under 65 years of age were searched for cervical smear results, and those of women aged 50–65 years were searched for mammogram results. Patients' assessment of their mobility was recorded.

Results were analysed by dividing the sample into three groups, depending on mobility:

- patients with no mobility problems — able to walk 100 metres without aid or rest;
- patients with a moderate disability — needing a cane, crutch or brace, and;
- patients confined to a wheelchair — unable to walk beyond 5 metres, even with aids.

Once this had been done, χ^2 statistics were calculated and referred to standard probability tables.

Results

The results are shown in Table 1. From a population of approximately 190 000 patients, the GPs identified 178 people with multiple sclerosis. Of these, 170 agreed to

K MacLurg, MSc, MRCP, DRCOG, research fellow; P Reilly, MD, FRCP, MRCP, professor of general practice, Department of General Practice; S Hawkins, BSc(Hons), MRCP(UK), FRCP(LON), consultant neurologist/reader, Department of Medicine, Queen's University of Belfast, Belfast.

Address for correspondence

Dr Katherine MacLurg, Department of General Practice, Queen's University of Belfast, Dunluce Health Centre, Belfast BT9 7HR.
E-mail: k.maclurg@qub.ac.uk

Submitted: 11 September 2003; Editor's response: 9 January 2004; final acceptance: 5 April 2004.

©British Journal of General Practice, 2004, 54, 853–855.

HOW THIS FITS IN*What do we know?*

Many people with multiple sclerosis have virtually normal life spans and therefore require appropriate preventative services. Participation in health screening has been shown to be related to mobility in women with multiple sclerosis in the United States.

What does this paper add?

Wheelchair users of both sexes are significantly disadvantaged by the current provision of preventative services. People with a moderate disability were most likely to receive lifestyle advice.



have their general practice records examined. Two-thirds were women, 38% had no mobility problems, 33% had a moderate disability, and 29% were confined to a wheelchair.

General preventative health services

Participants who were confined to a wheelchair were less likely to receive preventative services. We found recent blood pressure measurements in 82% of records and a significant relationship ($\chi^2 = 21.98$, degrees of freedom [df] = 2, $P < 0.001$) between blood pressure measurement and the mobility group.

Those with moderate mobility problems were the most likely to receive lifestyle advice or have their cholesterol

measured. There was a statistically significant difference between the three groups with regard to advice on smoking ($\chi^2 = 9.68$, df = 2, $P < 0.01$), alcohol ($\chi^2 = 9.67$, df = 2, $P < 0.01$), or diet and exercise ($\chi^2 = 9.99$, df = 2, $P < 0.01$).

Women's health screening

Uptake of cervical screening in eligible women decreased with decreasing mobility, but failed to reach statistical significance. Only 23% of the female participants were eligible for mammography.

Discussion

Overall, our findings reflect a good uptake of health screening. Of participants, 82% had had recent blood pressure measurements, and 84% of eligible women had had recent cervical screening. People with multiple sclerosis sometimes feel that doctors focus on their multiple sclerosis to the detriment of wider issues, but these results provide evidence against that.

In this study, mobility is related to participation in health screening. However, despite the perception that women in wheelchairs are unable or unwilling to participate in health screening,^{1,2} 67% had had an up-to-date cervical smear result. The finding that those with moderate mobility problems were most likely to receive lifestyle advice fits with reports that GPs prefer to offer such advice opportunistically⁵ and that it may be seen as a package. Those with moderate mobility problems attend their general practice more often than people with no mobility problems. GPs may feel

Table 1. Uptake of screening in people with multiple sclerosis.

Type of screening	All participants (n = 170)		No mobility problems		Moderate mobility problems		Confined to a wheelchair		χ^2 test
	Number eligible	Percentage recorded in last 5 years	Number eligible	Percentage recorded in last 5 years	Number eligible	Percentage recorded in last 5 years	Number eligible	Percentage recorded in last 5 years	
Blood pressure measurement									
Females	112	88	51	96	35	94	26	62	$P < 0.001$
Males	58	72	14	86	21	76	23	61	
Total	170	82	65	94	56	88	49	61	
Cholesterol check									
Females	60	42	24	38	22	55	14	29	NS
Males	44	48	10	50	14	64	20	35	
Total	104	44	34	41	36	58	34	32	
Smoking advice									
Females	112	45	51	47	35	57	26	23	$P < 0.01$
Males	58	38	14	43	21	48	23	26	
Total	170	42	65	46	56	54	49	24	
Alcohol advice									
Females	112	46	51	49	35	57	26	23	$P < 0.01$
Males	58	36	14	36	21	48	23	26	
Total	170	42	65	46	56	54	49	24	
Dietary and exercise advice									
Females	112	46	51	51	35	54	26	23	$P < 0.01$
Males	58	38	14	36	21	52	23	26	
Total	170	43	65	48	56	54	49	24	
Cervical smear	82	84	41	90	26	85	15	67	NS
Mammogram	26	77	12	83	8	63	6	83	NS

NS = not significant.

that lifestyle advice is inappropriate in some consultations with wheelchair users.

The practices participating in this study aim to reflect the population profile and are organised; for example, they all met their higher targets (80% for cervical screening). Record keeping is unlikely to vary with disability; however, these practices may also have addressed access issues.

There are gaps in the provision of preventative services for patients confined to a wheelchair. Awareness of the need for people with mobility problems to access preventative services and to know about the accessible services already in place could improve uptake. Services might also be improved by a shared approach from the primary healthcare team. Further research could explore the differences between actual and perceived barriers to preventative services and the priority given to health screening by doctors and patients.

Although we could have expected up to 300 patients from these practices, as our participants had similar characteristics to those in other studies³ we feel they are representative of such patients. This study is limited by its small size and possible under-representation of wheelchair users. As blood pressure recording is done more frequently with increasing age, it is of note that in the group of those with the most disability, whose average age is higher, the percentage of people with recent blood pressure measurements is unexpectedly lower. A larger sample could explore trends that did not reach statistical significance but could be clinically important for people with mobility problems accessing health services.

We have shown that wheelchair users are disadvantaged by the current provision of preventative services, which was found in previous studies of American women.^{1,2} This study suggests that men and women in wheelchairs have equal difficulty in accessing health screening within the current provision of services.

References

1. Iezzoni LI, McCarthy EP, Davis RB, *et al.* Use of screening and preventive services among women with disabilities. *Am J Med Qual* 2001; **16**(4): 135-144.
2. Cheng E, Myers L, Wolf S, *et al.* Mobility impairments and use of preventive services in women with multiple sclerosis: observational study. *BMJ* 2001; **323**(7319): 968-969.
3. McDonnell GV, Hawkins SA. An assessment of the spectrum of disability and handicap in multiple sclerosis: a population-based study. *Mult Scler* 2001; **7**(2): 111-117.
4. Poser CM, Paty DW, Scheinberg L, *et al.* New diagnostic criteria for multiple sclerosis: guidelines for research protocols. *Ann Neurol* 1983; **13**(3): 227-231.
5. Coleman T, Murphy E, Cheater F. Factors influencing discussion of smoking between general practitioners and patients who smoke: a qualitative study. *Br J Gen Pract* 2000; **50**(452): 207-210.

Acknowledgements

The authors would like to thank the patients and GPs involved for their help in completing this study, and the Multiple Sclerosis Society (Great Britain and Northern Ireland) for funding.