Characteristics of service users and provider organisations associated with experience of out of hours general practitioner care in England: population based cross sectional postal questionnaire survey

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Cite this as: *BMJ* 2015;350:h2040
doi: 10.1136/bmj.h2040

This is a summary of a paper that was published on thebmj.com as *BMJ* 2015;350:h2040

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STUDY QUESTION Is the type of organisation providing out of hours general practitioner care associated with service users' experiences of such care, and are sociodemographic characteristics of service users associated with their experiences of such care?

SUMMARY ANSWER Commercial out of hours providers were associated with lower mean scores for overall patient experience of out of hours GP care compared with not for profit providers. Asian service users reported poorer overall experience than white service users; service users unable to take time away from work reported poorer overall experience than non-working service users.

WHAT IS KNOWN AND WHAT THIS PAPER ADDS Patients' sociodemographic characteristics, and the type of provider organisation, have been associated with reported experiences of care in previous research. Compared with not for profit organisations, commercial provider organisations were associated with poorer reports of out of hours GP care for timeliness, confidence and trust in the out of hours clinician, and overall experience of the service.

Participants and setting

Participants were service users (aged 18 or over) who responded to the English General Practice Patient Survey (GPPS) 2012-13 (response rate of 35%; 971 232/2 750 000 returned surveys). Individual service users were mapped through their practice to their provider. The comparison providers were not for profit, NHS, or commercial. Participants who had attempted to contact an out of hours GP provider (for themselves or someone else) within the six months before receipt of the survey, and who were mapped to a provider with known organisation type, were included in the analyses.

Design

The English GPPS was a postal questionnaire cross sectional survey of patients registered with a practice in England. The sociodemographic characteristics of patients included age, sex, ethnicity, deprivation, parent status, and ability to take time away from work during typical working hours.

Primary outcome

Service users' scores of overall experience of care were reported on ordinal scales and linearised to a scale of 0-100 for ease of interpretation (a mean difference of <3 points on this scale is considered to be small). A series of multivariable linear regression models of increasing complexity were used to analyse the data.

Main results and the role of chance

Commercial providers were associated with poorer reports of overall experience of care compared with not for profit providers (mean difference in score for overall experience of care was −3.13, 95% confidence interval −4.96 to −1.30), with adjustment for sociodemographic characteristics described above. There were no significant differences in mean scores for NHS providers compared with not for profit providers. Asian service users reported poorer overall experience of care than white service users (mean difference −3.62, −4.36 to −2.89). Service users who were unable to take time away from work also reported poorer experience of care compared with non-working service users (−4.73, −5.29 to −4.17).

Bias, confounding, and other reasons for caution

We acknowledge the limitations of the survey response rate of 35%, although previous research has indicated that a low response rate in itself does not imply response bias. We also note the possibility for recall bias regarding the timing and experience of the contact.

Generalisability to other populations

We believe this large survey is generalisable to the whole of England.

Study funding/potential competing interests

The study was funded with by the National Institute for Health Research (NIHR) under its Programme Grants for Applied Research funding scheme. GL was supported by a postdoctoral fellowship by the National Institute for Health Research and by a Cancer Research UK Clinician Scientist Fellowship award. MR and JC act as academic advisers to Ipsos MORI for the survey.

Overall experience of out of hours GP care: associations with type of provider organisation, ethnicity, and ability to take away from work during typical working hours

	Mean difference on 0-100 scale (95% CI)	Global P value
Provider type (reference: not for profit):		
NHS	1.07 (−0.77 to 2.90)	<0.001
Commercial	−3.13 (−4.96 to −1.30)	
Ethnicity (reference: white):		
Mixed	−2.01 (−4.03 to 0.01)	<0.001
Asian	−3.62 (−4.36 to −2.89)	
Black	0.13 (−1.14 to 1.40)	
Other	1.29 (0.25 to 2.32)	
Ability to take time away from work during typical working hours (reference: not working):		
Yes	1.29 (0.81 to 1.76)	<0.001
No	−4.73 (−5.29 to −4.17)	

GP=general practitioner.

Use of combined oral contraceptives and risk of VTE: nested case-control studies using the QResearch and CPRD databases

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Cite this as: *BMJ* 2015;350:h2135
doi: 10.1136/bmj.h2135

This is a summary of a paper that was published on thebmj.com as *BMJ* 2015;350:h2135

STUDY QUESTION

What are the risks of venous thromboembolism (VTE) associated with commonly prescribed combined oral contraceptives containing different types of progestogen?

SUMMARY ANSWER

Preparations containing gestodene, desogestrel, drospirenone, or cyproterone were found to be associated with significantly higher risks of VTE than preparations containing levonorgestrel, norethisterone, or norgestimate.

WHAT IS KNOWN AND WHAT THIS PAPER ADDS

Use of oral contraceptive pills has been associated with an increased risk of VTE, but previous studies have had insufficient power to quantify risk for individual drug preparations or have not adjusted for important confounding factors. Our study, based on data from primary care databases in the UK, provides extra information to physicians prescribing combined oral contraceptives.

Participants and settings

Two nested case-control studies based on the research databases Clinical Practice Research Datalink (CPRD) and QResearch, contributing patient information from 618 and 722 UK general practices, respectively. Women with incident VTE diagnoses between 2001 and 2013 were matched to up to five controls by age, general practice, and calendar year.

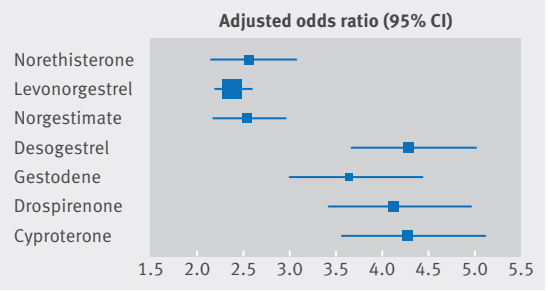
Design, size, and duration

Women aged 15-49 years with at least one year of medical records were included. After exclusions, the final analysis included 5062 cases from CPRD and 5500 from QResearch. All hormonal contraceptive prescriptions in the year before the index date were used for analysis. Current exposure in the last 28 days was assessed with reference to no exposure in the last year. Database results were combined to obtain more precise estimates. To allow for multiple comparisons, a 1% significance level was considered significant.

Main results and the role of chance

Risks of VTE compared with no exposure in the past year varied between different types of oral contraceptives. A risk increase of about two and a half times was seen with current use of levonorgestrel (combined adjusted odds ratio 2.38, 95% confidence interval 2.18 to 2.59), norethisterone (2.56, 2.15 to 3.06), and norgestimate (2.53, 2.17 to 2.96). A risk increase of about four times was seen with desogestrel (4.28, 3.66 to 5.01), gestodene (3.64, 3.00 to 4.43), drospirenone (4.12, 3.43 to 4.96), and cyproterone (4.27, 3.57 to 5.11).The number of extra cases of VTE per year per 10 000 treated women was lowest for levonorgestrel (6, 95% confidence interval 5 to 7) and norgestimate (6, 5 to 8), and highest for desogestrel (14, 11 to 17) and cyproterone (14, 11 to 17).

Risk of venous thromboembolism and current exposure to combined oral contraceptives according to progestogen type



Bias, confounding, and other reasons for caution

Odds ratios for combined oral contraceptive use were adjusted for smoking status, alcohol consumption, body mass index, ethnic group, recognised chronic and acute conditions associated with increased VTE risk, and use of other hormonal contraceptives in the past year. Study limitations included possible uncertainty in VTE diagnosis, hormonal contraceptive use being assessed using prescription information rather than actual use, and a small proportion of women analysed as non-exposed who might have procured oral contraceptives through contraceptive clinics.

Generalisability to other populations

This study was based on large samples from representative primary care data sources, and is generalisable to the general UK population. Its findings are comparable to those of an earlier study based on a Danish national cohort.

Study funding/potential competing interests

This research received no external funding. JH-C is professor of clinical epidemiology at the University of Nottingham; unpaid director of QResearch, a not-for-profit organisation which is a joint partnership between the University of Nottingham and EMIS (commercial IT supplier for 60% of general practices in the UK); and a paid director of ClinRisk, which produces open and closed source software to ensure reliable and updatable implementation of clinical risk algorithms within clinical computer systems to help improve patient care.

Epidural steroid injections compared with gabapentin for lumbosacral radicular pain: multicentre randomised double blind comparative efficacy study

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Cite this as: *BMJ* 2015;350:h1748
doi: 10.1136/bmj.h1748

This is a summary of a paper that was published on thebmj.com as *BMJ* 2015;350:h1748

Full author affiliations are in the version on thebmj.com

STUDY QUESTION

Does a single epidural steroid injection or gabapentin, a first line drug used for nerve related (neuropathic) pain, provide better pain relief and functional improvement for sciatica?

SUMMARY ANSWER

Epidural steroid injection provided better pain relief for some outcomes, but the differences were small and short lived.

WHAT IS KNOWN AND WHAT THIS PAPER ADDS

Both epidural steroid injection and gabapentin are known to provide benefit to people with sciatica. This study shows that the relief provided from the two interventions was similar and suggests that a trial with a first line drug for neuropathic pain is a reasonable option before epidural steroid injections are used.

Design

Patients were allocated by blocks at each study site in a 1:1 ratio via a computer generated randomisation table to receive a single epidural steroid injection plus placebo gabapentin or real gabapentin plus a sham (intramuscular) injection. Patients and evaluators were blinded to treatment allocation. Patients with unilateral pain were suballocated to receive a transforaminal epidural steroid injection, while those with bilateral pain received an interlaminar injection.

Participants and setting

145 people with sciatica for more than six weeks but less than four years in duration who were treated at eight military treatment, civilian academic, or Veterans Administration hospitals in the United States.

Primary outcome(s)

Leg pain one and three months after treatment. Those with a positive categorical outcome (decrease of >2 points in pain and a positive global perceived effect) were followed at three months. Other outcome measures included worst leg pain, average and worst back pain, functional capacity, and satisfaction.

Main results

There were no significant differences for the primary outcome measure at one month (mean pain score 3.3 (SD 2.6) and mean change from baseline −2.2 (SD 2.4) in epidural steroid injection group versus 3.7 (SD 2.6) and −1.7 (SD 2.6) in gabapentin group; adjusted difference 0.4, 95% confidence interval −0.3 to 1.2; P=0.25) and three months (mean pain score 3.4 (SD 2.7) and mean change from baseline −2.0 (SD 2.6) versus 3.7 (SD 2.8) and −1.6 (SD 2.7), respectively; adjusted difference 0.3, −0.5 to 1.2; P=0.43). Among secondary outcomes, one month after treatment those who received epidural steroid injection had greater reductions in worst leg pain (−3.0, SD 2.8) than those treated with gabapentin (−2.0, SD 2.9; P=0.04) and were more likely to experience a positive successful outcome (66% *v* 46%; number need to treat=5.0, 95% confidence interval 2.8 to 27.0; P=0.02). At three months, the differences between groups were no longer significant.

Harms

No serious adverse events were experienced by any participant, and there were no significant differences in any event rates between treatment groups.

Bias, confounding, and other reasons for caution

Because of the nature of the sham injections, the person performing the procedure could not be blinded. In addition, there was no group who did not receive any treatment.

Generalisability to other populations

This study is highly generalisable to a primary care setting, where providers are often faced with how best to manage patients with sciatica.

Study funding/potential competing interests

This study was funded by the Center for Rehabilitation Sciences Research. SPC serves as a consultant for Semnur Pharmaceuticals, which is involved in research into epidural steroid injections.

Trial registration ClinicalTrials.gov Identifier:NCT01495923.

Outcomes in people with lumbosacral radicular pain according to treatment group*

	Epidural steroid injection (n=73)		Gabapentin (n=72)		Treatment comparison	
	Overall mean	Mean change from baseline	Overall mean	Mean change from baseline	Adjusted difference (95% CI)†	P value
Mean (SD) average leg pain						
Baseline	5.4 (2.1)	—	5.4 (1.9)	—	—	—
1 month	3.3 (2.6)	−2.2 (2.4)	3.7 (2.6)	−1.7 (2.6)	0.4 (−0.3 to 1.2)	0.25
3 months	3.4 (2.7)	−2.0 (2.6)	3.7 (2.8)	−1.6 (2.7)	0.3 (−0.5 to 1.2)	0.43
Mean (SD) worst leg pain						
Baseline	7.9 (1.7)	—	7.8 (2.0)	—	—	—
1 month	4.9 (3.1)	−3.0 (2.8)	5.8 (3.0)	−2.0 (2.9)	0.9 (0.0 to 1.9)	0.04
3 months	5.2 (3.4)	−2.7 (3.2)	5.5 (3.4)	−2.3 (3.5)	0.3 (−0.7 to 1.4)	0.54
No (%) with positive composite outcome‡						
1 month	48 (65.8)	—	33 (45.8)	—	—	0.02
3 months	27 (37.0)	—	21 (29.2)	—	—	0.32

* Data for missing 1 month and 3 months outcomes imputed by last observed outcome carried forward. Numerical rating scores for pain based on 0-10 numerical rating scales, with 0 indicating no pain and 10 indicating severe pain.
† Adjusted for baseline outcome values. Negative coefficients favour gabapentin group. Positive coefficients favour epidural steroid injection group.
‡ ≥2 point decrease in average leg pain coupled with positive global perceived effect without additional procedural or non-rescue pharmacological interventions.

Physical activity for smoking cessation in pregnancy: randomised controlled trial

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Cite this as: *BMJ* 2015;350:h2145
doi: 10.1136/bmj.h2145

This is a summary of a paper that was published on thebmj.com as *BMJ* 2015;350:h2145

STUDY QUESTION

How effective is a physical activity intervention for smoking cessation during pregnancy?

SUMMARY ANSWER

At the end of pregnancy, there was no significant difference in rates of smoking abstinence between the physical activity group and control group.

WHAT IS KNOWN AND WHAT THIS PAPER ADDS

Among non-pregnant smokers the evidence for physical activity programmes aiding smoking cessation is mixed. The findings from this study suggest that offering a facilitated physical activity intervention in early pregnancy is unlikely to significantly aid smoking cessation.

Design

Women were randomised to behavioural support for smoking cessation alone or behavioural support for smoking cessation plus a physical activity intervention (supervised treadmill exercise and consultations about physical activity). Randomisation was stratified by recruitment centre, and we used a computer generated sequence to allocate participants using a 1:1 ratio. Neither participants nor researchers were blinded to treatment allocation.

Participants and setting

We randomised 789 pregnant smokers, aged 16-50 years and at 10-24 weeks' gestation, who currently smoked at least one cigarette daily and were prepared to quit smoking one week after enrollment.

Primary outcome

Continuous smoking abstinence from the target quit date until end of pregnancy, validated by exhaled carbon monoxide or salivary cotinine levels.

Main results and the role of chance

785 women were included in the intention to treat analyses (392 in the physical activity group). At the end of pregnancy there was no significant difference in rates of smoking abstinence between the physical activity group and the control group (8% *v* 6%, respectively; odds ratio 1.21, 95% confidence interval 0.70 to 2.10).

Harms

Adverse events and birth outcomes were similar in the two groups, except for significantly more caesarean births in the control group than in the physical activity group (29% *v* 21%, P=0.023).

Bias, confounding, and other reasons for caution

The confidence intervals around the odds ratios for the effect of the intervention imply that at the upper end of the confidence limit we cannot rule out up to a twofold increase in smoking abstinence at the end of pregnancy for the physical activity group compared with control group, although the point estimate suggests an effect of intervention that is unlikely to be clinically meaningful.

Generalisability to other populations

The trial had broad inclusion and few exclusion criteria and therefore results are likely to be generalisable to most pregnant smokers, although, by self report, the women tended to be highly physically active in both groups at baseline.

Study funding/potential competing interests

This study was funded by the National Institute for Health Research, health technology assessment programme. In the past three years PA has done one day of consultancy for Pfizer concerning general smoking cessation advice and not about particular products, and RW has undertaken research and consultancy for companies (Pfizer and GlaxoSmithKline) that develop and manufacture smoking cessation drugs; TC has been paid for speaking at educational events that were sponsored by a company (Pierre Fabre Laboratories, France) that manufactures nicotine replacement therapy; RW is an unpaid trustee of the stop smoking charity QUIT and an unpaid director of the National Centre for Smoking Cessation and Training.

Trial registration number

Current Controlled Trials ISRCTN48600346.

Primary and secondary abstinence outcomes. Values are numbers (percentages) unless stated otherwise

Outcomes	Physical activity group (n=392)	Control group (n=393)	Odds ratio* (95% CI) with basic adjustment	Fully adjusted odds ratio† (95% CI)
Primary:				
Self reported continuous abstinence at end of pregnancy with biochemical validation	30 (8)	25 (6)	1.21 (0.70 to 2.10)	1.37 (0.78 to 2.41)
Secondary:				
Self reported continuous abstinence 4 weeks post-quit day, with validation	50 (13)	61 (16)	0.79 (0.53 to 1.18)	0.87 (0.57 to 1.31)
Self reported continuous abstinence 6 months after birth	24 (6)	16 (4)	1.55 (0.81 to 2.97)	1.66 (0.82 to 3.37)

*Adjusted for recruitment centre only (as a stratification factor).
†Adjusted for recruitment centre, and for baseline Fagerström test of cigarette dependence score, participant age, Edinburgh postnatal depression scale score, age at leaving full time education, and partner's smoking status.