

Factors influencing home visits in Slovenian general practice

Igor Švab, Andrej Kravos^a and Gaj Vidmar^b

Švab I, Kravos A and Vidmar G. Factors influencing home visits in Slovenian general practice. *Family Practice* 2003; **20**: 58–60.

Background. There is great variability in home visiting rates in Europe. The European General Practice Research Workshop (EGPRW) has conducted a pilot quantitative international study on home visits and developed a questionnaire, which has not yet been tested on a national level. In Slovenia, home visiting is decreasing, but the factors influencing home visiting by GPs in the country have not yet been examined.

Objectives. The purpose of this study was to test the feasibility of the questionnaire on home visiting developed by EGPRW and to study home visiting in Slovenia.

Methods. A random representative sample of 165 Slovenian GPs were given a questionnaire, developed on the basis of former EGPRW projects. Each of the respondents provided data on 10 consecutive home visits made during office hours, data on his/her practice and number of consultations during the registration period. Multivariate modelling of home visits per working week as the dependent variable was performed.

Results. A 71% response rate was achieved, and the data from 1151 requests for home visits and 1015 completed home visits were analysed. The average number of home visits per working week was 2.5, with wide variation among the respondents (0–10, SD 1.89). Older GPs, trainees, GPs from rural areas and those with a higher proportion of elderly patients carried out more home visits. The selected logistic regression model fits the data well according to established criteria.

Conclusion. It is possible to use the questionnaire developed by EGPRW on a national scale and to obtain representative valid national data. The home visiting rate in Slovenia is low compared with rates in other countries. Rural location of practice, GP's age, trainee status and the number of older patients on the list are the most important predictors of the home visiting rate.

Keywords. GPs, home visits, Slovenia.

Introduction

Home visiting is considered to be important and specific to general practice. The rate of home visits has been declining in most developed countries.^{1,2} There is wide variability in home visiting in Europe.³ Several studies have attempted to explain the decline and variability, but most were not nationally representative.^{4–6}

The European General Practice Research Workshop (EGPRW) conducted a pilot international study of home

visits⁷ and developed a new questionnaire to be tested in one country.

In Slovenia, GPs receive no additional income for performing home visits, which are free for the patients. Statistical data show a decline of home visits. A recent study has shown an association between patient satisfaction and home visiting.⁸ More detailed information is lacking.

This study was performed to test the feasibility of the questionnaire developed by EGPRW, to provide an overview of home visiting in the country and to identify factors that influence it.

Methods

A qualitative approach was used to develop a questionnaire. Based on the results, a set of core variables was selected for potential subsequent studies. Variables that

Received 4 December 2001; Revised 12 June 2002; Accepted 9 September 2002.

University of Ljubljana, Faculty of Medicine, Department of Family Medicine, Poljanski nasip 58, ^bUniversity of Ljubljana, Faculty of Medicine, Institute of Biomedical Informatics, Vrazov trg 2, 1000 and ^aCommunity Health Center Žalec, Prešernova 6, 3310 Žalec, Slovenia. Correspondence to Igor Švab; E-mail: igor.svab@mf.uni-lj.si

turned out to be relevant in Slovenian focus group research were also included.

A random sample of GPs was obtained from national sources. Through multistage random sampling, 180 GPs out of the list of 753 were selected (23.9%). A stratified random sample of GPs from all regions in Slovenia was chosen.

The GPs were asked to register all home visit requests received during regular surgery hours (out-of-hours calls excluded). They were asked to collect data on the home visit requests and the visits performed for 10 consecutive home visits during the 8-week period.

The questionnaires were sent to the GPs in the study sample ~10 days before the start of data collection. All were reminded beforehand of the importance of data collection.

The SPSS statistical package was used for the analysis of the data. The chi-square test was used to analyse the association for qualitative variables, and *t*-tests, ANOVA, Mann–Whitney tests and Kruskal–Wallis tests were performed for numerical variables. Logistic regression was used for multivariate analysis. Stepwise logistic regression was used for choosing and testing the multivariate model.

Results

Fifteen GPs were no longer working in general practice and were ineligible for the study. Eleven GPs (6.7%) did not perform home visits as part of their work. The response rate was 71.5%, since 118 GPs returned the questionnaires.

Fifty-two per cent of GPs were female and 35% were independent (but having their own contract with health insurance). Their mean age was 44.5 years. Female GPs were younger ($P < 0.001$).

The average list size was 1890 patients and the range was from 350 to 2940 patients. There was wide variation in the proportion of elderly patients (i.e. >65 years)

on the lists. The average proportion of patients over 65 years was 21% (4–90%, SD 11.6%).

Only 54% of GPs have an appointment system. Those with an appointment system reported that the majority of the patients were given an appointment the same day (59%). Urban practices accounted for 25% of the sample.

GPs received requests for 1151 home visits and performed 1015. The requests were usually made through patient's family members (60% of cases). The patients themselves made 16% of requests, health workers 7.1% and other people 5.8%. Ten per cent of home visits were planned without an explicit request from the patient or the family.

The rate of visits varied from 0 to 10 per week. The distribution is positively skewed with an arithmetic mean of 2.51 home visits per week and an SD of 1.89.

The mean age of patients was 72 years, and the median value was 75 years. Those up to 20 years of age were visited rarely (0.8%). Home visits were more often (62%) made to female patients ($P < 0.001$).

GPs were divided into high and low home visitors using the median of 2.26 home visits per week. The stepwise method with backward elimination of predictors was used. The final model explains ~25% of variability of home visiting group membership and it fits the data adequately (Table 1).

Discussion

The first aim was to demonstrate the feasibility of the approach. The high response rate and representativeness suggest that the data can be generalized to the entire country. The questionnaire is useful for analysing home visits and meets the first aim of the study.

The second aim was to provide additional descriptive information. The rate of 2.51 per week is lower than in other studies.^{1,3,5,6,9} The majority of requests for home visits are not refused, which suggests that the need for

TABLE 1 Variables that predict a higher home visiting rate: results of logistic regression (n = 106)

Variable	β	<i>P</i>	Odds ratio
Location of practice: 0 = rural and semirural; 1 = urban	-1.110	0.043	0.329
No. of patients over 65 years on list	0.004	0.005	1.004
Education: 0 = trainees; 1 = other GPs	-1.338	0.022	0.262
GP's age	0.079	0.009	1.082
"Home visits are necessary even though adequate nursing aid is assured": 1 = fully agree; 5 = fully disagree	-0.571	0.062	0.565
Constant	-2.909	0.024	0.055

Dependent variable: group membership—home visits per week. 0 = up to 2.2581; 1 = more than 2.2581.

Cox and Snell $R^2 = 0.225$; Nagelkerke $R^2 = 0.299$.

Hosmer and Lemeshow goodness-of-fit-test $P = 0.580$.

Percentage correct in classification table = 70.8.

home visits is not very high. Perhaps home visiting is also performed adequately by others (e.g. community nurses), who are taking over this traditional role of GPs. The few of GPs in this sample who do not consider home visiting to be part of their role may be an indication of this change. Only 10% of home visits were performed without explicit request, which is lower than in other studies.¹⁰

There was wide variation in home visiting. Only five factors have emerged as predictors of higher home visiting rates. The effect of rural and semi-rural location can be explained by the fact that the task of the GP in rural areas is broader and the GP meets the needs of the population with limited support from other sources that are involved in home visiting. Rural GPs usually live where they work, perhaps making them more aware of the needs of the population and acting more proactively. The influence of rural practice on home visiting rates has been found elsewhere.^{1,5,8,9}

The fact that trainees tend to perform more home visits perhaps reflects the effect of training, which stresses the importance of traditional tasks of the GP. Nevertheless, the number of home visits is not high in the group of trained GPs.⁵ It is possible that vocational training has only a limited effect. Co-operation with policy makers may be required to increase the rates of home visiting.

The number of elderly patients is the strongest predictor of the home visiting rate. This influence is a known finding.^{3,8,9} Older GPs perform more home visits. The same association was found in other studies.^{5,9} Older GPs may perform their job in a more traditional manner, may feel closer to their patients and may have personal and/or professional values that make them more inclined to perform home visits. In this study, though, we failed to demonstrate such differences between older and younger GPs.

The attitudes of GPs revealed less than expected from other studies.^{1,4,5,9} Only the statement “Home visits are necessary even though adequate nursing aid is assured”

remained in the final regression model, but was not statistically significant ($P = 0.062$).

Conclusion

Home visiting in Slovenia shares similar characteristics with that in other European countries. Although the requests generally result in a home visit, this task of a GP is declining. Additional research is necessary to understand this phenomenon and its effect on patient care.

Acknowledgements

Yonah Yaphe helped us in preparing the final version of the paper.

References

- Keenan JM, Boling PE, Schwartzberg JG *et al.* A national survey of the home visiting practice and attitudes of family physicians and internists. *Arch Intern Med* 1992; **152**: 2025–2032.
- Bass MJ, McWhinney IR, Stewart M, Grindrod A. Changing face of family practice. *Can Fam Physician* 1998; **44**: 2143–2149.
- Aylin P, Majeed FA, Cook DG. Home visiting by general practitioners in England and Wales. *Br Med J* 1996; **313**: 207–210.
- Weaver FM, Houghes SL, Giobbie-Hurder A *et al.* The involvement of physician in VA home care: results from a national survey. *J Am Geriatr Soc* 2000; **48**: 677–681.
- Ingram CJ, O’Brien-Gonzales A, Barley G, Westfall JM. The family physician and house calls. A survey of Colorado family physicians. *J Fam Pract* 1999; **48**: 62–65.
- Kristiansen IS, Holtedahl K. Effect of the remuneration system on the general practitioner’s choice between surgery consultations and home visits. *J Epidemiol Community Health* 1993; **47**: 481–484.
- Van Royen P, Švab I, Miranda JA. Home visits in European general practice—a qualitative study. *Fam Pract* 1999; **16**: 328–339.
- Kersnik J. Observational study of home visiting in Slovene general practice: patient characteristics, practice characteristics and health care utilisation. *Fam Pract* 2000; **17**: 389–393.
- Keenan JM, Bland CJ, Webster L *et al.* The home care practice and attitudes of Minnesota family physicians. *J Am Geriatr Soc* 1991; **39**: 1100–1104.
- Vinker S, Nakar S, Weingarten MA. Home visits to the housebound patient in family practice: a multicenter study. Israeli General Practice Research Network. *Isr Med Assoc J* 2000; **2**: 203–206.