

BMJ Open Understanding people who self-referred in an emergency department with primary care problems during office hours: a qualitative interview study at a Daytime General Practice Cooperative in two hospitals in The Hague, The Netherlands

Rosa Naomi Minderhout,¹ Pien Venema,¹ Hedwig M M Vos,¹ Jojanneke Kant,² Marc Abraham Bruijnzeels,¹ Mattijs E Numans¹

To cite: Minderhout RN, Venema P, Vos HMM, *et al.* Understanding people who self-referred in an emergency department with primary care problems during office hours: a qualitative interview study at a Daytime General Practice Cooperative in two hospitals in The Hague, The Netherlands. *BMJ Open* 2019;**9**:e029853. doi:10.1136/bmjopen-2019-029853

► Prepublication history and additional material for this paper are available online. To view please visit the journal (<http://dx.doi.org/10.1136/bmjopen-2019-029853>).

Received 20 February 2019
Revised 15 April 2019
Accepted 15 May 2019



© Author(s) (or their employer(s)) 2019. Re-use permitted under CC BY-NC. No commercial re-use. See rights and permissions. Published by BMJ.

For numbered affiliations see end of article.

Correspondence to

Rosa Naomi Minderhout;
r.n.minderhout@lumc.nl

ABSTRACT

Objective To provide insight into the motives for hospital self-referral during office hours and the barriers deterring general practitioner (GP) consultation with a primary care request.

Setting People who self-referred at a Daytime General Practice Cooperative (GPC) in two hospitals in The Hague, The Netherlands.

Participants A total of 44 people who self-referred were interviewed in two hospitals. The average age of interviewees was 35 years (range 19 months to 83 years), a parent of a young patient was interviewed, but the age of patients is shown here. There were more male patients (66%) than female patients (34%). Patients were recruited using a sampling method after triage. Triage was the responsibility of an emergency department (ED) nurse in one hospital and of a GP in the other. Those excluded from participation included (a) children under the age of 18 years and not accompanied by a parent or legal guardian, (b) foreign patients not resident in the Netherlands, (c) patients unable to communicate in Dutch or English and (d) patients directly referred to the ED after triage by the GP (in one hospital).

Results People who self-referred generally reported several motives for going to the hospital directly. Information and awareness factors played an important role, often related to a lack of information regarding where to go with a medical complaint. Furthermore, many people who self-referred mentioned hospital facilities, convenience and perceived medical necessity as motivational factors. Barriers deterring a visit to the own GP were mainly logistical, including not being registered with a GP, the GP was too far away, poor GP telephone accessibility or a waiting list for an appointment.

Conclusion Information and awareness factors contribute to misperceptions among people who self-referred concerning the complaint, the GP and the hospital. As a range of motivational factors are involved, there is no straightforward solution. However, better dissemination of

Strengths and limitations of this study

- The study included an interview topic list that covered the entire I-Change Model.
- Our preliminary analysis allowed us to conduct later interviews in a more in-depth manner.
- The first study based on a wide range of interviews conducted in Daytime General Practice Cooperatives in the Netherlands.
- Non-Dutch-speaking patients and some immigrants, mainly of eastern European origin, declined our invitation to participate which limits the generalisability of the results.
- As this was an interview study, patients might have given socially acceptable answers.

information might alleviate misconceptions and contribute to providing the right care to the right patient in the right setting.

BACKGROUND

Emergency departments (EDs) are often overcrowded in the western industrialised world.¹ The consequences of high ED crowding are greater inpatient mortality, increased length of hospital stay and increased hospital costs.²

The Netherlands also faces the problem of ED crowding.^{3,4} In the Netherlands, the general practitioner (GP) acts as a gatekeeper at the primary care level, deciding whether to refer a patient to secondary healthcare. This important role generally results in lower healthcare costs for the society.⁵ With a referral from their GP, patients are able to utilise secondary healthcare and will be

eligible for reimbursement.⁶ Patients with medical problems usually visit their own GP during office hours, even when problems are perceived as urgent or threatening.⁷ After office hours, patients with an acute care request can report to an out-of-hours GP service or, when a request is very urgent, they can call an emergency telephone number (112). Nevertheless, some patients, termed people who self-referred, go directly to the ED without first consulting a GP.⁸ Self-referral often results in the improper use of an ED due to a care request that in retrospect could be better treated in a primary care setting. Here, we refer to such cases as 'primary care problems', cases that can be reasonably regarded as 'inaccurate people who self-referred' as these patients should have first consulted their own GP during office hours rather than the ED.⁹ Some studies have reported that approximately half of all people who self-referred at the ED were eligible for GP care.^{8 10 11}

Due to perceived overcrowding and unnecessarily high costs at ED due to a high number of people who self-referred, the need arose to reduce people who self-referred by implementing a policy of 'the right care for the right patient in the right setting'.¹² This means generalist (primary) care when possible and specialist (secondary) care when necessary. Nowadays, many hospitals in the Netherlands have an integrated system with a General Practice Cooperative (GPC), located close to or within the hospital ED, to ensure that people who self-referred with primary care problems can be seen by a GP out of office hours.^{13 14} This approach to ED self-referral resulted in a decrease from 30% nationwide in 2012,^{15 16} with outliers of 47% in Rotterdam and 61% in The Hague,⁸ to 17.4% nationwide in 2015. Consequently, the proportion of patients referred by a GP or GP services increased by 7.8%.¹⁶ With this aim in mind, GP organisations, health insurance companies and two hospitals in the highly urbanised Dutch city of The Hague together developed a scheme to improve care for people who self-referred visiting an ED. This scheme involved establishing GPCs at both hospitals, to which people who self-referred in need of primary care could be reassigned.

The unique feature of the two GPCs in The Hague is not their location within the hospital, but the fact that they are open during office hours, hence the name 'Daytime GPC'. These GPCs are the first to open during office hours in The Netherlands. The benefits of Daytime GPCs include relief of pressure on the ED during office hours, a need for fewer medical staff and lower costs for the hospital. Furthermore, general health costs reduce because a visit to a Daytime GPC is much cheaper than an average ED visit. As an example, stitching a small wound costs at least €245 at the ED¹⁷ but only €95 at a Daytime GPC.¹⁸ Cost-wise, GP care is also preferable from a patient's perspective because it is always covered by health insurance, whereas hospital care, including ED visits, falls under health insurance deductible cost which can vary between €385 and €885 annually.¹⁹

Daytime GPC is a new phenomenon and as such the motivation of users is not always clear. Several studies have investigated the characteristics of people who self-referred to an ED. Most patients are male, aged between 15 and 40 years, single, have a musculoskeletal injury or trauma, do not have children and live in a city.^{8 10 11 20–23} Many people who self-referred felt that their symptoms were too severe for a GP visit.^{17 24–26} Other motives included expectations regarding a need for radiological or laboratory tests, an advice from a friend or someone else and the convenience of the ED (closer, faster, no need to make an appointment).^{8 21 25 26} Other factors influencing the number of people who self-referred were the availability and telephone accessibility of GPs and the likelihood of an appointment on the same day.^{24 27–29}

A potential disadvantage of a Daytime GPC is that people who self-referred may be encouraged to go to a hospital rather than their own GP. As a visit to a Daytime GPC is 10 times more expensive than a visit to a family GP,³⁰ it is important that inaccurate people who self-referred are redirected to their own GP first. To fill gain better insight into the motives of users of a Daytime GPC in particular, this study focused on people who self-referred at the two Daytime GPCs in The Hague. The aim of this qualitative study was to answer two questions: (1) What motivates people who self-referred to choose a hospital rather than their GP? and (2) What deters people who self-referred from going to their own GP with a daytime acute care request?

METHODS

Patient and public involvement

Patients were not actively involved in the development of the research question and outcome measures. The results of the study will be shared with the two Daytime GPCs in The Hague and are therefore accessible to patients.

Procedure

We performed a qualitative study involving semistructured interviews with 44 people who self-referred who visited an ED of one of two hospitals in The Hague during office hours and were seen at the Daytime GPC. Patients were recruited using a sampling method, patients who had been living in the Netherlands for at least 2 months were asked. Triage was the responsibility of an ED nurse in one hospital and of a GP in the other. After triage, all people who self-referred attended one of the two Daytime GPCs in The Hague between 8:00 am and 5:00 pm, at a time when the interviewer was also present. Altogether, 81 candidates were asked to participate in the study and were given an information leaflet. Those excluded from participation included (a) children under the age of 18 years and not accompanied by a parent or legal guardian, (b) foreign patients not resident in the Netherlands, (c) patients unable to communicate in Dutch or English and (d) patients directly referred to the ED after triage by the GP (in one hospital). In both hospitals, some patients did not wish to participate, mainly due to time constraints that precluded an interview. Following a preliminary analysis of

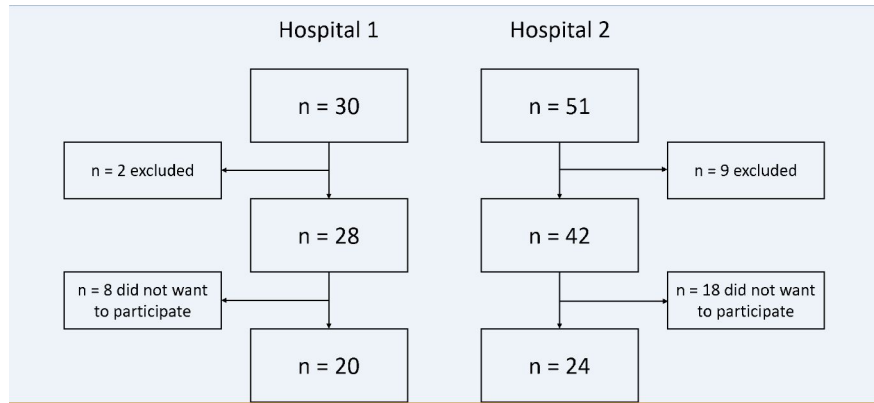


Figure 1 Recruitment of people who self-referred in two hospitals in The Hague.

the first 32 interviews, we focused on obtaining more in-depth information on five topics from our list. Patients interviews were terminated after 44 interviews, the point at which no new information was forthcoming regarding the research questions. The study was designed to continue to a saturation point, represented by the moment during data analysis when the same themes continually recur. At this point, additional interviews provide no new insights.³¹ For further details on the recruitment of participants, see figure 1. Patients provided written informed consent and all interviews were audio-recorded. Patients could withdraw at any time without explanation. The interviews were transcribed and anonymised. The study was registered and approved by the medical research ethics committee of Leiden University Medical Centre.

Interviews

The 44 interviews took place in two Daytime GPCs in The Hague during October 2018 and were conducted in Dutch or English. Patients were interviewed in a separate room to guarantee privacy, and after a short introduction audio-recording began. The recordings ranged from 4:32 to 14:50 min. The first questions were designed to provide baseline knowledge, after which topics from the interview guide were discussed. The topic list (see appendix A) was based on literature research and the integrated model for explaining motivational and behavioural change (I-Change Model) of de Vries *et al* (figure 2).³² This model offers insight into the motivational factors underlying a patient’s decision to go directly to a hospital

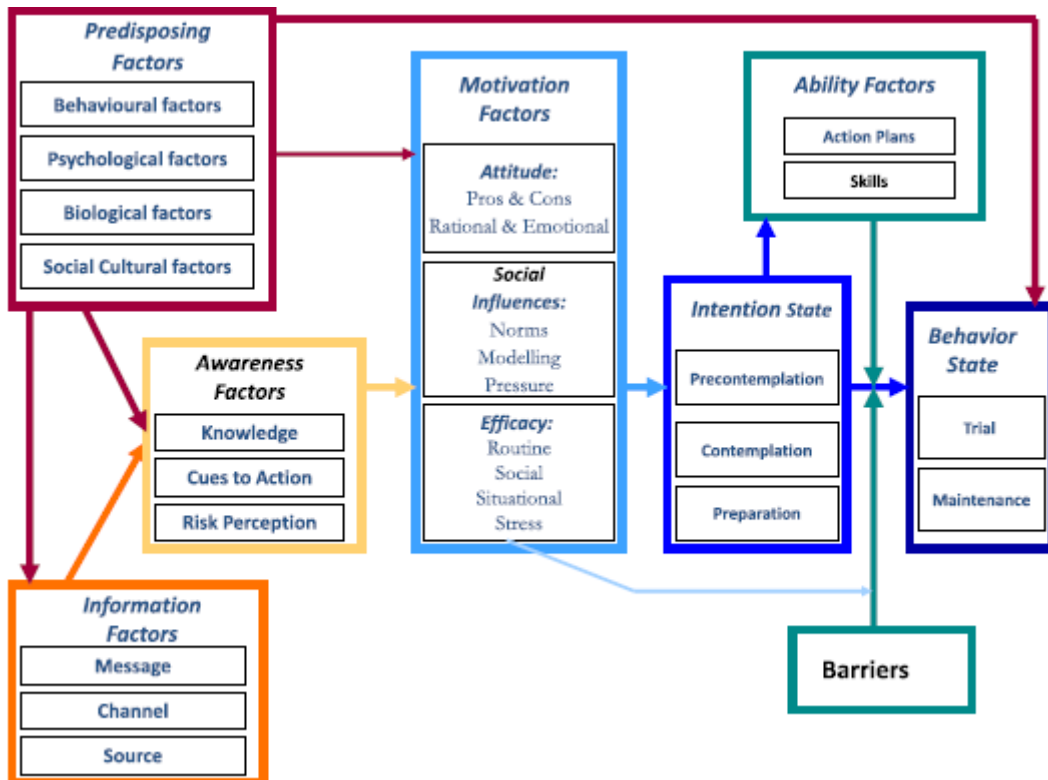


Figure 2 The I-Change model.³⁷

and the barriers deterring patients from going to their own GP. After a preliminary analysis of the first 32 interviews, six topics were chosen for more extensive discussion in the following interviews. These topics were as follows: the accessibility of the GP, perception of urgency, being encouraged by another person, knowledge about healthcare, possibilities of the GP and when a patient did not have a GP, the barriers preventing him or her from registering with a GP. The audio-recorded interviews were anonymised and transcribed verbatim by the researcher.

Qualitative analysis

The transcribed interviews were analysed using the Atlas.ti (V.7) software programme for qualitative data analysis. First, a pre-set code tree based on the literature, the research question and the I-Change Model was prepared before starting the official coding process.³² Segments of text (quotes) were labelled with a code from a pre-set code tree in a deductive approach to coding. However, if there was no code that suited the segment, a new code was developed using an inductive approach, whereby passage content provides the basis for the code. The researcher PV first coded the interviews, after which the codes chosen and certain adjustments were discussed with a second researcher RNM. Following the initial coding of the interviews, some codes that defined the same concept were merged together and other codes were grouped into 'families' (main themes), which were then used for data analysis.

RESULTS

Sample

A total of 44 patients were interviewed in two hospitals, with 20 interviews conducted in hospital 1 and 24 in hospital 2. The average age of interviewees was 35 years (range 19 months to 83 years). A parent of a young

patient was interviewed, but the age of patients is shown here. There were more male patients (66%) than female patients (34%). Table 1 shows the characteristics of all patients. Further detailed information about each interview can be found in appendix B.

Information and awareness factors

Information and awareness factors played an important role in a patient's decision to either go to hospital directly or to first go their own GP. There is currently a lack of patient information, and consequently patient awareness, regarding the appropriate type of care in the appropriate location, leading to patients making decisions that are often not fully considered.

Regarding the lack of information, the first problem facing patients in relation to many health problems is when to go to their GP and when to go to an ED. Even when patients have received information on healthcare procedures, they often cannot remember it or do not take the time to refer to it in a semiacute medical situation. The result is that many patients are unaware that the optimal course of action is to first discuss a semiacute medical situation with their own GP, followed by GP referral to the ED when necessary. Migrants and expats living in The Hague for short periods are particularly likely to be unaware of procedure, but Dutch patients are also often unaware of the correct procedure. Their first exposure to the correct procedure may be when they appear at the ED without a GP referral and are redirected to a GP at the Daytime GPC. Lack of clarity regarding where to go with a medical complaint is often due to patients being unaware of the competencies and facilities at their GP practice. For example, patients often think that it is only possible to get stitches in a hospital, whereas most GPs are perfectly able

Table 1 Patient characteristics

Characteristics of the patients interviewed (n=44)

| Age in years | n | Sex | | Hospital | | Migration background | | Educational level* | | |
|--------------|----|------------|--------------|--------------|--------------|----------------------|---------------|--------------------|----------|--------|
| | | Male n (%) | Female n (%) | Hospital 1 n | Hospital 2 n | Western n | Non-western n | Low n | Middle n | High n |
| 0-9 | 5 | 3 (60%) | 2 (40%) | 4 | 1 | 0 | 3 | 1 | 2 | 2 |
| 10-19 | 5 | 4 (80%) | 1 (20%) | 4 | 1 | 1 | 1 | 0 | 1 | 4 |
| 20-29 | 9 | 8 (89%) | 1 (11%) | 4 | 5 | 3 | 4 | 2 | 4 | 3 |
| 30-39 | 10 | 6 (60%) | 4 (40%) | 3 | 7 | 4 | 2 | 5 | 2 | 3 |
| 40-49 | 5 | 4 (80%) | 1 (20%) | 1 | 4 | 1 | 1 | 2 | 1 | 2 |
| 50-59 | 4 | 2 (50%) | 2 (50%) | 1 | 3 | 1 | 2 | 3 | 0 | 1 |
| 60-69 | 5 | 2 (40%) | 3 (60%) | 2 | 3 | 1 | 2 | 3† | 1 | 0 |
| >70 | 1 | 0 (0%) | 1 (100%) | 1 | 0 | 0 | 0 | 1 | 0 | 0 |
| Total | 44 | 29 (66%) | 15 (34%) | 20 | 24 | 11 | 15 | 17† | 11 | 15 |

* The educational level is based on CBS criteria: <https://www.cbs.nl/nl-nl/artikelen/nieuws/2013/40/onderwijsniveau-bevolking-gestegen/onderwijsniveau>

†The educational level of one participant in the group 60-69 years is unknown.

to do this as well. All quotes can be found in appendix C. See quotes 1–5.

A second aspect of this lack of information related to the GP's emergency telephone number. Many patients did not know when a GP's emergency number should be used and had received no information on the subject. Many did not know whether their GP had an emergency number, mostly because they rarely call their GP practice. Some GP practices play a tape to a caller that explains when to use the emergency number, often including instructions such as 'press one in life-threatening situations'. However, these descriptions may discourage patients when their complaint is not life-threatening and can push them towards going to the ED directly. See quotes 6 and 7.

A lack of awareness about the healthcare system and the costs incurred can have important consequences. Almost all patients are aware that they have to pay an annual personal contribution for hospital care, but they do not know the exact amount and when they have to pay. Patients with both high and low educational backgrounds did not fully understand the healthcare system. See quote 8.

Motivational factors

Numerous motivational factors stimulate patients to go to a hospital directly instead of going to their own GP during office hours. Most patients cited more than one reason.

One motivational factor was based on the perception that healthcare in a hospital is of higher quality. The presence of medical specialists and broader options for easily performed examinations such as X-rays were given as the main reasons for this perception. See quotes 9–11.

Other motivational factors often reported by patients were the shorter distance to a hospital in relation to their GP practice or the idea that they would be helped more quickly in a hospital. When patients think they will eventually be referred to a hospital, for example, because they think they need an X-ray, they may consider it a waste of time and effort to arrange two journeys that include an initial visit to the GP. The motivation underlying going to the ED directly is to get help faster. See quotes 12–15.

The urgency of a complaint was an important motivational factor. Many people who self-referred experience anxiety and worry regarding their complaint and may think their symptoms too urgent for a GP. A sense of urgency was especially apparent in cases with trauma. A first reaction when someone has a cut, bruise or suspected fracture is to go to the ED. When patients go to a hospital, they expect to be seen in the ED and not by a GP in a Daytime GPC. See quotes 16–20.

Parents' concern for children was also a motivational factor. In our interview cohort, six of the nine children interviewed suffered trauma at school. The parents reported worry and a state of panic by the time they arrived at school. The combination of these feelings and

the recommendations of teachers motivated them to visit a hospital. See quote 21.

Social factors and upbringing also influenced the choice to go directly to a hospital. In their country of origin, some patients became accustomed to hospital visits when they were young and have not yet adapted to the concept of first visiting a GP. See quotes 22 and 23.

Suggestion by another person may also influence a patient. Due to the stress resulting from a medical problem, patients often ask for advice. Family members, friends, colleagues or a boss may sometimes encourage a patient to go to a hospital. When a trauma occurs at work, patients are inclined to listen to their boss because the visit to a doctor takes place during work time. See quotes 24 and 25.

Barriers

The barriers deterring patients from visiting their own GP rather than the hospital were mainly logistical. Of the 44 patients interviewed, six were not yet registered with a GP. All were first-generation migrants, aged between 25 and 43 years, and resided in The Netherlands for between 2 months and 17 years. An often-mentioned reason for not having a GP was that they were young and healthy, and as such had little need or inclination to spend time searching for a GP. See quote 26.

Another barrier for patients was the distance to their GP at the time of the medical complaint, for example when a person was only in The Hague for a visit or for work. Four interviewees had GP's outside The Hague or in suburbs of The Hague. See quote 27.

Telephone accessibility of a GP was also mentioned as a barrier by some patients. A number of patients could not reach their GP due to a lunch break, house visits, a holiday or due to a GP maintaining strict times for phone contact. See quotes 28–31.

The thought of a long waiting list was also mentioned as a barrier to first visiting a GP. Patients want to see a doctor quickly and often think their GP will be unavailable. Many people who self-referred with a non-traumatic complaint called their own GP to make an appointment before going to hospital. Those patients, in this study all first-generation migrants, were unable to get an appointment on the same day and wanted to be seen at short notice. People who self-referred often feel that the only way to see a doctor quickly is to go to a hospital. See quotes 32–34.

Ideas for the future

During the interviews, people who self-referred mentioned various ideas that might help them to make a more considered choice in future. According to patients, the biggest problem is information about the Dutch healthcare system. Interviewees had some suggestions for the dissemination of information, such as a letter with information, a poster at the GP practice, a television advertising campaign or commercials on YouTube. Some expats mentioned that information should be provided

by the expat associations of which many are members so that those unfamiliar with healthcare organisation in the Netherlands will also be reached. The information should describe the healthcare system and the 'GP first' procedure, the costs of healthcare and the options at a GP practice, together with some explicit examples of medical complaints and indications for using the emergency number. Many patients stated they did not take cost into account when deciding where to go because they consider health more important than money. However, if patients were made aware of the huge difference in costs of a visit to a GP or the ED, they might reconsider their choice next time. See quotes 35–38.

DISCUSSION

In this qualitative study, we aimed to identify the motives driving patients with a primary care request to go directly to an ED during daytime and the barriers deterring a visit to their own GP. A better understanding of this problem is essential to maintaining emergency care during daytime hours, and our results should help direct interventions that encourage the right care for the right patient in the right setting.

Strengths of the study included an interview topic list that covered the entire I-Change Model. Our findings therefore include insights concerning information and awareness factors. Furthermore, our preliminary analysis allowed us to conduct later interviews in a more in-depth manner. This is the first study based on a wide range of interviews conducted in Daytime GPCs in the Netherlands, and thus reveals the motives and barriers relevant to this relatively new service. The primary limitation of this study was the entirely voluntary nature of participation. Some patients, mainly of eastern European origin, declined our invitation to participate because they wanted to get back to work. In hospital 1 especially, GPs mentioned that they treat many Polish construction workers who did not participate in the study. Second, as this was an interview study, patients might have given socially acceptable answers. We attempted to limit this potential bias by emphasising the anonymous character of the interviews and by avoiding judgemental questions.

Previous questionnaire or interview studies of people who self-referred at an ED focused only on motives, ignoring information factors.^{21 23 24} We found that in most cases people have multiple reasons for going to a hospital rather than their GP. Patients' reasons are mainly based on misconceptions about their complaint, the GP and the hospital. A lack of information about the Dutch healthcare system also played an important role in these misconceptions. Other notable motives were convenience, perceived medical necessity and prompting by another person. People who self-referred tend to think that their complaint is urgent and that they are justified in going to the hospital directly, concurrently avoiding the trouble of arranging transport to their GP. Suggestions regarding a hospital visit are often due to a lack of familiarity with the

transition of EDs over the past decennia from a 'first aid post for accidents' to specialised hospital departments.³³ In the past, many patients grew accustomed to 'accident departments' and this popular concept is still noticeable in many interviews.

While interviewees sometimes mentioned the perceived poor telephone accessibility of GPs as a barrier, due to wide variation we cannot safely conclude that poor accessibility results in more ED self-referral. Nonetheless, a relationship between GP accessibility and the number of people who self-referred has been described in earlier literature.^{27 28} Another factor that discourages patients from first consulting their GP is a long waiting period for an appointment. However, this problem was only mentioned in our study by first-generation migrants, a finding in line with a study by Scheppers *et al* and a study by Keizer *et al* who suggested that some migrants are experience problems accessing their own GP and are less willing to wait.^{34 35} Therefore, more easily understandable information should be provided for migrants, explaining both the urgency of complaints and the Dutch healthcare system.

The wide variety of motives and barriers among people who self-referred attending hospital indicates that there is no straightforward solution to the high level of self-referral. Additionally, as patients reported that a variety of factors contributed to their decision, the same patient may require several different interventions. Providing clearer information through a variety of channels might influence the factors that contribute to patient self-referral to an ED, thereby improving patient knowledge and avoiding misconceptions regarding their own complaints and GP competencies. Better information about a GP's emergency telephone accessibility and providing examples of the types of emergencies that can be handled by a GP might help improve the image of GP accessibility. The Easy, Attractive, Social and Timely framework is a model for applying behavioural insights to encourage specific behaviour. This model could be used to define more interventions and provide more information. Information that is easy to understand, attracts attention, uses the power of social networks and prompts people at a time they are more likely to be receptive, might help encourage patients to visit their own GP before visiting a hospital.³⁶ Information should be made available to the entire population, but to reach specific target groups the source and channels of information should be focused on migrants, expats and males aged between 20 and 40 years.

It is still not entirely clear whether GPs in The Hague themselves play a significant role in the problem of ED self-referral. Our recommendation is that the characteristics of GP practices should be further investigated to identify possible weaknesses.

CONCLUSIONS

Our findings show that the most important motives behind ED self-referral during office hours were convenience,

perceived medical necessity and the prompting of another person. Barriers were mainly logistical, including not being registered with a GP, having a GP elsewhere, waiting times for appointments and the poor availability or telephone accessibility of the GP, including confusion regarding the purpose of an emergency telephone number. We also gained insight into information and awareness factors that influence motivation factors. There is no clear solution to reducing the number of people who self-referred. However, better provision of information could be a first step in increasing health literacy and reducing misconceptions. By setting up interventions for specific target groups such as migrants, expats and young males, we will eventually approach our goal of providing 'the right care to the right patient in the right setting'.

Author affiliations

¹Department of Public Health and Primary Care/ LUMC-Campus, Leiden University Medical Centre, The Hague, Netherlands

²SMASH, a General Practice Service, The Hague, Netherlands

Correction notice This article has been corrected since it was published online.

Author name Rosa Naomi (Naomi) Minderhout has been updated to Rosa Naomi Minderhout.

Contributors RNM and HMMV designed the study. PMV did the interviews with help from RNM. RNM wrote the manuscript and together with PMV conducted analyses on the data. MAB, JK and MEN contributed to discussion. HMMV, JK, MAB and MEN reviewed and edited the manuscript.

Funding This study was sponsored by SMASH (a GP service in The Hague, the Netherlands).

Competing interests None declared.

Patient consent for publication Not required.

Ethics approval The study was registered and approved by the medical research ethics committee of Leiden University Medical Centre (LUMC).

Provenance and peer review Not commissioned; externally peer reviewed.

Data sharing statement Data are not routinely available, but interested researchers should enquire with RNM.

Open access This is an open access article distributed in accordance with the Creative Commons Attribution Non Commercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited, appropriate credit is given, any changes made indicated, and the use is non-commercial. See: <http://creativecommons.org/licenses/by-nc/4.0/>.

REFERENCES

- Moskop JC, Sklar DP, Geiderman JM, *et al.* Emergency department crowding, part 1--concept, causes, and moral consequences. *Ann Emerg Med* 2009;53:605-11.
- Sun BC, Hsia RY, Weiss RE, *et al.* Effect of emergency department crowding on outcomes of admitted patients. *Ann Emerg Med* 2013;61:605-11.
- Gaskeer MS. *ea. Drukke op de SEH vergt integrale aanpak. Medisch contact*, 2018.
- (NZa) NZ. Monitor acute zorg 2018. 2018. https://pucoverheid.nl/nza/doc/PUC_260889_22/1/
- Starfield B. Is strong primary care good for health outcomes. *The future of primary care: Papers for a symposium*, Office of Health Economics, 1996.
- Kulu-Glasgow I, Delnoij D, de Bakker D. Self-referral in a gatekeeping system: patients' reasons for skipping the general-practitioner. *Health Policy* 1998;45:221-38.
- Van der Maas JRM, Smits M, van Boven K. Spoedzorg in de huisartsenpraktijk: onderzoek naar de contactfrequentie, patiënten zorgkenmerken. *Huisarts en Wetenschap* 2018;61:36-43.
- van der Linden MC, Lindeboom R, van der Linden N, *et al.* Self-referring patients at the emergency department: appropriateness of ED use and motives for self-referral. *Int J Emerg Med* 2014;7:28.
- Reitsma-van Rooijen M, Brabers A, de Jong J. *Selectie aan de poort: onterechte zelfverwijzers op de SEH terugdringen.*, 2013;91, 41-3.
- Giesen P, Franssen E, Mokkink H, *et al.* Patients either contacting a general practice cooperative or accident and emergency department out of hours: a comparison. *Emerg Med J* 2006;23:731-4.
- Kraaijvanger N, Rijpsma D, van Leeuwen H, *et al.* Self-referrals in a Dutch Emergency Department: how appropriate are they? *Eur J Emerg Med* 2016;23:194-202.
- Zorgautoriteit N. *Markscan acute zorg 2017*, 2017.
- Giesen P, Smits M, Huibers L, Grol R, *et al.* Quality of after-hours primary care in the Netherlands: a narrative review. *Ann Intern Med* 2011;155:108-13.
- Smits M, Rutten M, Keizer E, *et al.* The Development and Performance of After-Hours Primary Care in the Netherlands: A Narrative Review. *Ann Intern Med* 2017;166:737-42.
- Gaakeer MI, Van den Brand CL, Veugelers R, *et al.* Inventarisatie van SEH-bezoeken en zelfverwijzers. *Nederlands Tijdschrift Voor Geneeskunde* 2014;158.
- Gaakeer MI, Van den Brand CL, Gips E, *et al.* Landelijke ontwikkelingen in de Nederlandse SEH's: aantallen en herkomst van patiënten in de periode 2012-2015. *Nederlands Tijdschrift Voor Geneeskunde* 2016;160.
- Nederlandse Zorgautoriteit. Open data van de Nederlandse Zorgautoriteit. 2018. <http://www.opendisdata.nl/>
- SMASH Huisartsenpost Den Haag. <https://www.smashaaglanden.nl/>
- Rijksoverheid. *Eigen risico zorgverzekering*.
- Rutten M, Vrieling F, Smits M, *et al.* Patient and care characteristics of self-referrals treated by the general practitioner cooperative at emergency-care-access-points in the Netherlands. *BMC Fam Pract* 2017;18:62.
- de Valk J, Taal EM, Nijhoff MS, *et al.* Self-referred patients at the Emergency Department: patient characteristics, motivations, and willingness to make a copayment. *Int J Emerg Med* 2014;7:30.
- Rutten M, Vrieling F, Giesen P. Zelfmelders op de huisartsenpost. *Huisarts Wet* 2013;56:558-62.
- Rassin M, Nasie A, Bechor Y, *et al.* The characteristics of self-referrals to ER for non-urgent conditions and comparison of urgency evaluation between patients and nurses. *Accid Emerg Nurs* 2006;14:20-6.
- Kraaijvanger N, Rijpsma D, van Leeuwen H, *et al.* Self-referrals in the emergency department: reasons why patients attend the emergency department without consulting a general practitioner first—a questionnaire study. *Int J Emerg Med* 2015;8:46.
- Andrews H, Kass L. Non-urgent use of emergency departments: populations most likely to overestimate illness severity. *Intern Emerg Med* 2018;13:893-900.
- Ragin DF, Hwang U, Cydulka RK, *et al.* Reasons for using the emergency department: results of the EMPATH Study. *Acad Emerg Med* 2005;12:1158-66.
- Smits M, Peters Y, Broers S, *et al.* Association between general practice characteristics and use of out-of-hours GP cooperatives. *BMC Fam Pract* 2015;16:52.
- Baker R, Bankart MJ, Rashid A, *et al.* Characteristics of general practices associated with emergency-department attendance rates: a cross-sectional study. *BMJ Qual Saf* 2011;20:953-8.
- Agarwal S, Banerjee J, Baker R, *et al.* Potentially avoidable emergency department attendance: interview study of patients' reasons for attendance. *Emerg Med J* 2012;29:e3.
- Nederlandse Zorgautoriteit. *Prestatie- en tariefbeschikking Huisartsenzorg en multidisciplinaire zorg 2018*, 2018.
- Baarda DB, De Goede MPM, Teunissen J. *Basisboek Kwalitatief Onderzoek*. Groningen/Houten: Wolters-Noordhoff, 2005.
- De Vries H, Mudd AN, Dijkstra A. The attitude-social influence- efficacy model applied to the prediction of motivational transitions in the process of smoking cessation. In: Norman P, Abraham C, Conner M, eds. *Understanding and Changing Health Behaviour: From Health Beliefs to Self-regulation*. Amsterdam: Harwood Academic, 2000:165-87.
- de Haan P, Breuer J. Van EHBO naar spoedeisende hulpafdeling. *WCS nieuws* 2009;25:30-2.
- Scheppers E, van Dongen E, Dekker J, *et al.* Potential barriers to the use of health services among ethnic minorities: a review. *Fam Pract* 2006;23:325-48.
- Keizer E, Bakker P, Giesen P, *et al.* Migrants' motives and expectations for contacting out-of-hours primary care: a survey study. *BMC Fam Pract* 2017;18:92.
- Hallsworth M, Halpern D. *EAST Four simple ways to apply behavioural insights*, 2014.



37. Ketterer F, Symons L, Lambrechts MC, *et al*. What factors determine Belgian general practitioners' approaches to detecting and managing substance abuse? A qualitative study based on the I-Change Model. *BMC Fam Pract* 2014;15:119.