Barriers to Making House Calls by Primary Care Physicians and Solutions: A Literature Review

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Abstract

Background: The number of house calls made by physicians has been declining over the years, while the number of people requiring house calls, especially the elderly, is growing.
Aim: To consolidate the literature regarding the barriers faced by primary care physicians in making house calls.
Design of the study: Literature review.
Method: Studies were sourced from PubMed and Embase.
Results: 7 studies were selected to be in the literature review. Barriers to making house calls by primary care physicians include inadequate remuneration, lack of time and training, unconducive home environment, concerns with professional liability and safety, and perceived low value-added in the patient's quality of care.
Conclusion: While primary care physicians do recognize the value of house calls in patient care, the perceived limited standard of care that can be achieved in the home setting, busy clinic practice (large patient loads), coupled with inadequate remuneration make house calls unrealistic for many doctors. These barriers must be addressed to ensure accessibility to primary health care services for the immobile, frail, and sick is not being compromised. One of the solutions may be to expose medical students and residents to house calls early through mentorship.

Introduction

House calls, defined as physicians visiting patients at their homes with the aim of assessing, treating, and giving a follow up,[1] used to be an intrinsic part of physician practice[1] and a tradition of family medicine. A recent study[2] conducted in Switzerland by Mueller et al. (2019) revealed that the number of house calls provided by physicians has been dropping. The study showed that the mean annual number of visits per physician decreased from 125 in 2006 to 75 in 2015, leading to a 40% decline in the absolute number of visits. Although no official statistics are available, it is probably reasonable to assume that a similar situation prevails in Singapore[3] and Malaysia. Part of this phenomenon may be accounted for by advances in hospital- and clinic-based care,[1,4] information technology such as the use of telemedicine, improved transportation, better communication,[4] and an increase in the geographic dispersion of medical practice.[4]

In light of an aging population in several developed countries such as Singapore,[3] the increase in the number of frail, elderly patients with several medical conditions and impaired ability to travel to clinics will likely mean that more medical care will have to be provided in their homes.[3] Physicians going to patients' homes will spare these patients from the physical discomfort[5,6] and psychological distress of travel,[6] which can be expensive as well.[5] House calls are a valuable component of patient care as they allow physicians to better identify and assess the patient's social circumstances and living environment,[1,7] as well as detecting more problems than an office visit would.[7,8] These advantages may allow for a more effective and a holistic treatment plan.[1,7] House calls were also found to reduce hospital stays, delay institutionalization, and improve the physician-patient relationship.[7]

Despite the recognition of the value of house calls in patient care among physicians,[3,6,9] there has been a decline in the number of house calls. This review, therefore, aims to consolidate the literature regarding the barriers to making house calls from the perspectives of primary care physicians.

Methods

Search strategy

Databases PubMed and Embase were used

to find relevant studies. Search terms used for PubMed were (house call[medical subject headings (MeSH) Terms] OR home visit[MeSH Terms] OR home care services[MeSH Terms]) AND (general practitioner[MeSH Terms] OR family physician[MeSH Terms] OR primary care physician[MeSH Terms]) AND (physician practice patterns[MeSH Terms] OR attitude of health personnel[MeSH Terms]). Search terms used for Embase were (house call OR home visit OR home care services) AND (general practitioner OR family physician OR primary care physician) AND (practice patterns OR attitude OR factors). The year of publication was initially restricted from January 2010 to January 2020, so that studies included in this review are relevant to the current situation of practice. However, due to a paucity of articles, the year of publication was then lengthened from January 2000 to January 2020. The language of publication was restricted to English. Results from the searches were manually reviewed by title and abstract, if available, to select possible studies for inclusion. When appropriate, full-text papers were reviewed. The resulting list was then examined in more detail. Additional relevant articles were also hand-searched based on the references in the shortlisted articles. Additional articles were also hand-searched on Google Scholar.

Selection process

Inclusion criteria

Articles discussing reasons for the decline in the number of house calls made by primary care physicians from the primary care physicians' perspectives were shortlisted for review.

Exclusion criteria

Studies were excluded if they met one or more of the following criteria: (a) discusses house calls made by specialists as this paper focuses on the perspectives of primary care physicians; (b) type of article is an editorial or a commentary; (c) only an abstract was available.

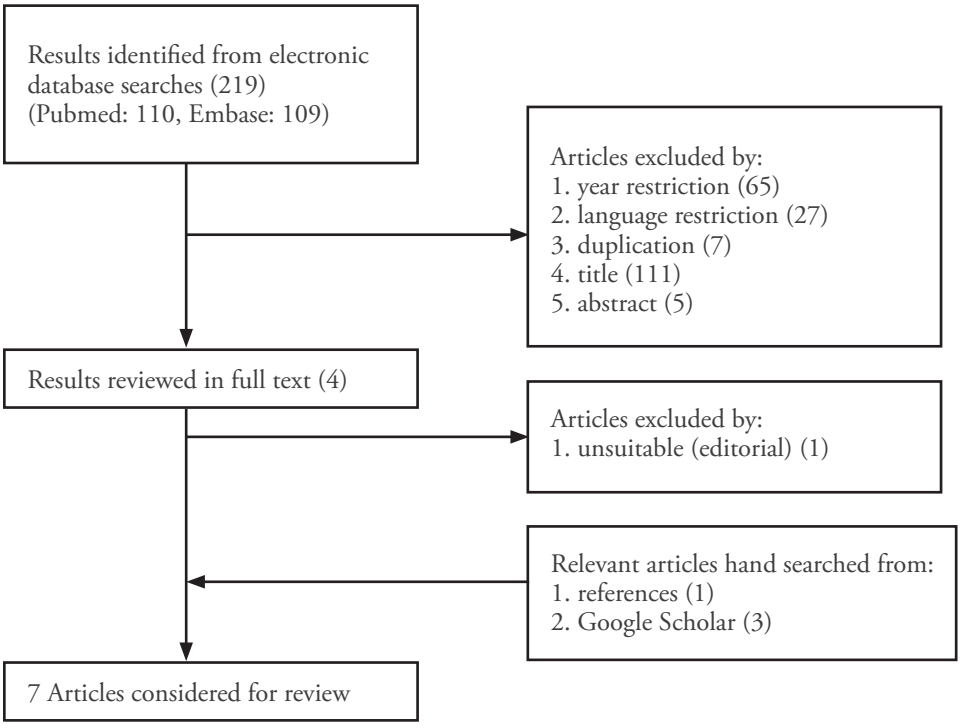

Figure 1. Flowchart of literature included for review.

Results

A total of 7 studies were considered for the final review. A summary of the studies can be found in **Table 1**, and a summary of the barriers faced by primary care physicians in providing house calls can be found in **Table 2**.

Table 1. Summary of studies.

Authors, year	Study design	Country	Sample population and size	Major findings
Weaver et al. (2000)[9]	Cross-sectional mail survey	USA	45 physicians who are active participants in home care	Barriers include physicians being too busy with their own practice, home visits are unnecessary with readily available nurses/aides, and inadequate reimbursement.
Švab et al. (2003)[10]	Cross-sectional questionnaires	Slovenia	118 general practitioners (GPs) from rural, semi-rural and urban areas	Older GPs, trainees, GPs from rural areas, and those with a higher proportion of elderly patients conducted more home visits.
Theile et al. (2011)[11]	Qualitative, semi-structured interviews	Germany	24 GPs in city and rural areas	Barriers include unpleasant or occasionally dangerous situations, restricted diagnostic options, poor controllability of consultations in the patient's homes, time-consuming nature, insufficient reimbursement, and doubting the additional value of home visits.
Hammett et al. (2013)6	Cross-sectional 12-question survey	Canada	73 urban family physicians practicing in Victoria British Columbia	Lack of time, unsatisfactory remuneration, travel distances, lack of equipment or technical support, concern for personal safety and medical liability, and feeling unprepared or untrained were barriers.
Aksoy et al. (2015)[12]	Qualitative, semi-structured interview	Turkey	26 physicians who provide home healthcare services (HCS) in an urban area	Reasons against HCS include excessive workload, a poorly developed legislative background of HCS, training needs of doctors (concerns about the quality of service), displeasure about misuse/abuse of service, unavailability of equipment and staff support, security concerns, and violence against healthcare staff.
Malik et al. (2017)[13]	Cross-sectional mail survey	Canada	295 family physicians and GPs in an urban health region	The most substantial barrier to providing home palliative care was the time needed to provide home visits, provision of home visits during or after office hours, and personal/family commitments.
Soh et al. (2018)[3]	Qualitative, one-to-one interview	Singapore	12 GPs	Concerns about the limitations perceived to be present during a house call and the resultant medico-legal implications was the most common barrier. GPs also struggled with charging appropriately for house calls and found them disruptive to their practices.

Table 2. Barriers to making house calls by primary care physicians.

Time-related concerns
Too busy with own practice (patient load)[3,6,9,12,13]
Time-consuming nature[3,11,13]
Personal/family commitments[13]
Money
Inadequate reimbursement[3,6,9,11]
Struggles on how to charge appropriately[3]
Unconducive home environment
Restricted diagnostic options[11]
Lack of equipment or technical support[3,6,12]
Unpleasant or occasionally dangerous situations[11]
Poor controllability of consultations in patients' homes[3,11]
Inadequate standard of care that can be achieved in the home compared to clinical setting[3]
Uncertainty of an unfamiliar environment[3]
Unnecessary
Nurses or other professionals can make visits[9]
Doubt additional value[11]
Others
Concerns for personal safety[3,6,12]
Concerns for medical liability[3,6,12]
Uncertainty about the job definitions and responsibilities[3,12]
Displeasure about misuse/abuse of service[11,12]
Feeling unprepared or untrained[6]
Lack of specific training in house calls[3,12]

Barriers to making house calls in urban areas versus rural areas

The different practice of providing house calls in different societies and healthcare systems will likely mean that challenges faced by primary care physicians in making house calls will also be different. Two studies (one conducted in Slovenia[10] and the other in Germany[11]) revealed that GPs from rural and semi-rural areas are more likely to conduct house calls compared to GPs from urban areas.

Švab et al. (2003) elucidated the fact that the restricted support from other sources that are otherwise involved in home visiting in rural areas led rural GPs in Slovenia to shoulder this task.[10] This finding was echoed by Theile et al. (2011), where urban GPs in Germany seemed to be more secure regarding the consequences of not providing house calls given the high density of alternative emergency services in urban areas.[11] Regarding home visits of an urgent nature, concerns of dealing with a life-threatening situation were more prevalent among GPs from urban areas, where there is an excellent urban emergency ambulance system.[3,11] Particularly for urban countries such as Singapore, the nearest hospital is usually less than half an hour away.[3] Rural GPs in such situations tend to perceive themselves to be competent first-aiders and feel that no one else knows the medical history of the affected patient as well as they do.[11] Hence, rural GPs were less likely to delegate such emergency house calls to the emergency services.[11]

Studies also found underlying differences in attitude between urban and rural GPs regarding the provision of house calls.[10,11] Švab et al. (2003) postulated that since rural GPs typically live where they practice, they are more attuned to the population needs and thus act more proactively in the provision of house calls. Theile et al. (2011) found that for home visits of a supportive nature, rural GPs tend to view patients as their real companions, not just someone they give medical advice to. Rural GPs are therefore more inclined to provide house calls.

Trends of barriers faced by primary care physicians in the last 20 years

Dissatisfaction with reimbursement among primary care physicians remains a pertinent barrier in the provision of house calls in the last 20 years.[3,6,9,11] Concerns with time,

a home environment unconducive for providing clinically adequate care, and the sentiment that house calls are unnecessary are also barriers that have been consistently faced by primary care physicians in the provision of house calls. Interestingly, concerns with medico-legal issues in the provision of house calls have only surfaced in recent studies.[3,6,9]

Discussion

Summary

Over the years, primary care physicians have generally sharpened their criteria for conditions that warrant a house call[11,14] due to the various barriers mentioned above. Despite the different characteristics and nature of house calls in various countries, the barriers faced by primary care physicians in making house calls were similar across the world. Notably, the barriers are dissatisfaction with the amount of remuneration, lack of time and training, the limited standard of care one can achieve during a house call, professional liability risk, and safety concerns. These barriers are often interlinked with one another.[3] For instance, the dissatisfaction with the amount of remuneration could stem from the amount of effort, time, pressure, medical liability risk and safety being compromised from making house calls.

Strengths and limitations

As studies included for this review were conducted in different countries with different healthcare systems and resources, results from one setting are not always necessarily transferable to another.

The paucity of studies further limits the generalizability of the findings. Literature included in this study for review ranged from 2000 to 2018, hence some of the barriers might be inapplicable to the current situation where the Malaysia and Singapore healthcare system, practice, and accessibility have considerably improved. However, results across the studies were reasonably consistent.

In addition, the number of relevant articles reviewed may be limited by using only the two databases PubMed and Embase. This limitation was addressed through the additional use of Google Scholar to hand-search for possible missed papers.

Implications for future research and recommendations

Despite widespread dissatisfaction with the amount of remuneration given for house calls, a recent study3 conducted in Singapore by Soh et al. found that GPs who were not making house calls did not think that monetary incentives would encourage them to make house calls. Similarly, a study conducted 29 years ago by Boling et al. found that only 49% of occasional house callers would increase the number of house calls made if reimbursement was made adequate.[15] However, some physicians, despite financial disincentives, continued to provide house calls.[16] This suggests that the decision to make house calls is not singly driven by economic reasons, but rather is a decision based on weighing multiple factors. Soh et al. (2018) posited that interest and circumstances are highly likely to play a significant role in deciding whether to make house calls.[3] Given the lack of recent studies investigating the primary care physician's perspectives on house calls, further research can be done to explore the primary care physician's decision-making process in choosing to provide house calls. This research might reveal solutions to address these barriers that can be more relevant and targeted.

Primary care physicians who reported less positive attitudes about house calls were less likely to make house calls,[3,9,12,17] and some found house calls unenjoyable.[15,18] This inherent lack of interest must be addressed. The American College of Physicians, as well as a study by Soh et al. (2018),[3] have pointed to a lack of education in house calls at the medical student and resident level.[3,19] For medical students and family medicine residents, training can be incorporated into the medical curriculum and residency training with a mentoring system to expose students and residents to house calls and provide them with a professional role model. This would address the feeling of a lack of adequate training in providing quality care and role models,[3,6,11] thereby encouraging young physicians to take up the practice when they go out on their own.8 For primary care physicians who are already practicing, training can cover aspects of time, logistics, and manpower management (see **Figure 2** for a suggested house call equipment checklist, adapted from Unwin et al. (2011)).

Figure 2. Suggested house call equipment checklist (subject to patient's needs and doctor's practice).

- ☐ Stethoscope
- ☐ Alcohol swabs/alcohol hand disinfectant
- ☐ Surgical mask
- ☐ Patient medical record card (if any)
- ☐ Thermometer with disposable probes
- ☐ Portable sphygmomanometer set (with various cuff size)
- ☐ Glucometer
- ☐ Gloves
- ☐ Torchlight
- ☐ Tongue depressors
- ☐ Pulse oximeter
- ☐ Medication(if any) and medication labels

Adapted from Unwin BK, Tatum PE. House Calls. Am Fam Physician. 2011;83(8):925-931

As for time-related concerns, strategies can include incorporating house calls into practice, scheduling visits before or after office hours, or incorporating a visit into other business or personal travel.[3,20] A practice in which more than one doctor is present at any point in the clinic will be able to free the other doctor during clinic hours to make house calls.[3] In addition, with the advances in information technology and smart healthcare concepts, the use of telemedicine (particularly teleconsultation and telemonitoring) are possible adjuncts or even substitutes to actual house call visits for busy primary care physicians to cut traveling time and triage patients according to their medical needs.

In relation to payment concerns, some primary care physicians faced the inconvenience of having to bring up issues of payment during a house call. To overcome this, primary care physicians can consider charging patients remotely through online funds transfers such as DBS PayLah or PayNow.[10] Informing the requestors of the house call about the cost at the time of request might also reduce some of the awkwardness that primary care physicians feel when asking for payment.[10]

Recent years have seen concerns with medico-legal issues in the provision of house calls among primary care physicians.[3,6,9] To address this issue, more guidelines are needed for:

1. Medical conditions that can be managed during house calls[3]
2. Lists of equipment to bring for house calls[3]
3. Medical indemnity during a house call[3]

These will offer doctors conducting house calls a guide to consult to prevent any medico-legal issues from arising. These guidelines should be crafted by a group of doctors and nurses who are familiar with the provision of house calls.

Conclusion

This literature review has consolidated the barriers faced by primary care physicians in making house calls. While primary care physicians do recognize the value of house calls in patient care,[3,6,9] the perceived limited standard of care that can be achieved in the home setting, busy clinical practice (large patient loads) coupled with inadequate remuneration might make house calls impracticable for physicians. These barriers must be addressed to ensure primary health care services remain accessible to the immobile, frail, and sick and their health care needs are being attended to. One solution may be to expose medical students and residents to house calls early through mentorship.[3] Recent years have also seen the rise[5,9] of the home-based primary care model in the delivery of medical services due to changes in various demographic and organizational factors.[21] However, such medical services are usually not delivered by physicians.[9] To make care more clinically appropriate, continuous, and cost-effective, physicians should be more involved in house calls.[9,21]

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Competing interests

None.

How does this paper make a difference to general practice?

- This literature review consolidates the barriers to making house calls from the perspectives of primary care physicians. This helps highlight the difficulties primary care physicians face in making house calls and possible solutions that can be undertaken to address these issues so that primary health care services by physicians remain accessible to the frail, immobile, and the sick.

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