Exploring the Views of Parents of Children Following Telephone Advice from Nurses Working in a GP Out-of-Hours in Ireland

Abedallah Kasem

Faculty of Nursing, Jordan University of Science and Technology (JUST), Ramtha, Jordan
Email: aykasem@just.edu.jc

Abstract

This paper focuses on parents’ use and experiences of general practitioner (GP) out-of-hours (OOHs) services in Ireland. The progress in the establishment of GP OOHs services is considered by the Health Service Executive (HSE) to be a highly significant quality initiative for patient care, and the health service as a whole. Outside of normal GP surgery hours, parents of children can call a dedicated telephone number, to have their urgent health concerns assessed and to be advised about the appropriate level of care. Experienced nurses, who are often based in a GP OOHs centre, assess the call over the telephone and provide advice to the callers. The spur for conducting this study arose from my personal and professional experience which, I believe, underscores the need for exploring and understanding parents’ views of GP OOHs services, in order to bring about change in nurses’ practice of delivering advice over the telephone. The overall aim of the study is to explore and understand the views of parents of children, aged two years and under, following telephone advice received from nurses in the context of a GP out-of-hours service. A qualitative, exploratory, and descriptive design was used to examine the views and experiences of parents of children aged two years and under, who used a GP out-of-hours service provider in Ireland. Nine parents who had received phone advice from a nurse were purposively sampled to take part in the study. Data were collected using semi-structured interviews by telephone. Data were transcribed and analysed thematically. Themes included parents’ perceptions of illness in children with the need to be heard, parents’ views about accessibility to GP OOHs, parents’ expectations that the service would offer guidance and reassurance, parents’ satisfaction with the nurse’s advice, and parents’ experiences of hospital emergency departments (EDs). Suggestions for improving the GP OOHs service were...
made across these themes. The suggestions include: higher staffing levels, wanting a quicker call back, preference for face-to-face assessment over telephone advice and a preference for a children's area in the GP OOHs. The study revealed that parents are satisfied with the GP OOHs service and the parental decision-making model has the potential to provide an opportunity to continue the progress of the establishment of GP OOHs services in Ireland.

**Keywords**

Telephone Advice, GP Out-of-Hours, Patients' Experiences or Views, Telephone Consultation, Parents' Views or Experience, Parents of Children, Telephone Information Service, Clinical Decision Support Software

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1. Introduction

“Telephone Advice Nursing (TAN),” “Telephone Advice Line Nurse (TALN),” and “Telephone Consultation and Triage (TCT)” are terms that have been used interchangeably to refer to the use of information and communication technology (ICT), especially the telephone, to deliver nursing services such as: triage, health information and advice, follow up and referral [1]-[8]. In this paper, the term telephone advice nursing will be used throughout this paper to refer to the use of telecommunication technology, by nurses working in GP OOHs health services, and to deliver remote health information and advice. Nurses are employed to assess the seriousness of a call, to provide self-management advice where appropriate and to refer callers to the appropriate level of care. This could include receiving a GP home visit, attending the GP OOHs centre, attending a hospital’s emergency department (ED) or contacting an emergency ambulance [8] [9] [10]. Nurses working in GP OOHs services typically use some form of electronic communication such as wireless headset connected to a computer and use a call management system to assess the caller’s need for urgent care, as well as to log the details of that call [11] [12].

The literature indicates that parents use a range of actions and strategies in response to illness in children. Initially, many parents will “wait and see” [13] [14] [15]. If symptoms persist, parents will then make every effort to treat the child themselves using over-the-counter remedies, and call a family and friends for practical advice or the use of other sources of information such as books and leaflets, the internet, and health service web sites (such as NHS Direct) to look for information on illness management [15] [16] [17] [18]. The literature also shows that parents tend to employ reasonable strategies and have a strong sense of responsibility for managing their children’s illness at home before seeking help from a health care provider [13] [14] [19] [20] [21]. These strategies usually involve taking the child’s temperature, checking for rash, and giving over the counter medication. However, strategies that parents establish for managing their children’s illness were strengthened by their strong belief in self-management...
and a desire to cope and to take responsibility for caring for their sick children.

Ingram et al. [16] found that all parents sought information and advice about coughs from a range of sources and parents often referred to multiple sources before deciding what to do. However, when assessing the trustworthiness of information sources, parents felt that “professional” sources were more credible than other sources of health information such as the internet [16]. Keatinge [18] used qualitative content analysis and descriptive statistics to analyse telephone survey data. The researcher found that parents’ preferences in child health information sources varied according to the perceived severity of their child’s illness. However, in a non-urgent situation when children were sick a total of 170 decisions were made by parents, with “telephone advice line” the source most frequently selected (n = 58), followed by general practitioner (n = 27). However, in an emergency situation a total of 129 decisions were made by parents and the most frequently selected information source categories were telephone advice line (n = 74); “other” (n = 31) and GP (n = 16) [18]. Parents’ decisions about using some of the above information sources was influenced by the level of comfort they felt using the source, the accessibility of the knowledge, as well as the trust in the knowledge or expertise of the source [18]. Moreover, in a qualitative interview study of 20 parents presenting to a GP OOHs service in the Netherlands with a febrile children less than 12 years, De Bont et al. [22] found that parents consulted other parents as well as the internet as source of information before consulting the GP OOHs.

In Ireland, the practice of providing health information and advice by telephone was first established by the National Poisons Information Centre in 1966 (National Poisons Information Centre). Since then, advice delivered by telephone has become common place through the establishment of GP cooperatives. In addition, significant increases in the Irish birth rate have placed increasing demand on GP OOHs services. In 2011, 74,650 babies were born compared to 53,969 babies in 1998 [23]. The Department of Health and Children suggest that, the increase in birth rate has led directly to an increase in the number of calls to GP OOHs centres in Ireland, with a corresponding increase in the number requiring paediatric emergency department care [24] [25]. A recent report by the Health Service Executive [26] shows that the GP OOHs service covering the south eastern rural area of Ireland and providing a service to a total population of 1,413,000, managed approximately 390,000 calls in 2011 [26]. In this context, one possible way of achieving the goals of the national health strategy and decreasing attendances at emergency departments (ED) in Ireland, is the implementation of TAN across the country. The broad aim of the study is to explore and understand the views of parents of children aged two years and under, following the receipt of telephone advice from nurses working in GP OOHs services in Ireland. A specific question which the study address is: what are the views of parents following telephone advice from nurses working in GP OOHs service?
2. Materials and Methods

2.1. Research Design

Understanding how to select a research design is a crucial step in conducting meaningful research, as each design offers a unique plan or approach to best answer the research question(s) [27]. This study uses an exploratory qualitative design to answer the question of what are the views of parents of children aged two years and under, following telephone contact with a nurse working in GP OOHs services. The reasons for choosing this design were inspired, in part, by Strauss and Corbin’s discussion on exploratory qualitative studies. The reasons for my choice are: my personal experience of giving advice over the telephone, my philosophical orientation that encourages me to use a qualitative design (see next section) and the nature of the research problem under investigation.

2.2. Setting

A large GP OOHs service in Ireland was chosen as the setting for this study. The service covers the south eastern rural area of Ireland and provides a service to a total population of 1,413,000. It managed approximately 390,000 calls in 2011 [28]. The setting was chosen for a number of reasons. Firstly, the service operates longer hours and receives a large number of calls per year in comparisons to other GP services across the country. This call volume, in turn, should increase chances of recruiting parents with a diversity of experiences about the service of GP OOHs. Secondly, the service employs a large number of nurses who are trained to deliver advice to patients over the telephone; the quality of which has an impact on parents’ use of the GP OOHs service. Thirdly, the service integrates seamlessly between the community-based health care providers and the hospital multidisciplinary team. The importance of this integration is to give clear guidance for parents and patients who are calling the service of GP OOHs for advice which, in turn, impacts their expectations and satisfaction with the call’s outcome.

2.3. Sampling Parents for Interview and Case Identification

To select a sample of the parents of children aged two years and under who used the GP OOHs service, a retrospective data analysis of anonymised calls to the GP OOHs service between January-May 2014 was provided by a manager for the GP OOHs service. Between January and May 2014, 194 calls were made to the GP OOHs service by parents of children aged two years and under. Of these, 123 parent-initiated calls contacted the service for coughs symptoms, 53 calls were about diarrhoea, 18 calls about a child with a fever and one parent called about abdominal pain. To secure a sample of 20 participants, I invited 123 parents of children aged two years and under and who rang the service during the months of January-May 2014 for the reason of cough to take part in the study, because they were the most frequent users of the GP OOHs service. Based on the information gained from the initial identification of the user population during Janu-
ary-May 2014, I adopted a purposive sampling technique to select a sample who met a set of criteria (see below). Purposive sampling was used to select potential participants on the basis of time of year, age of children and number of parents who used the service. January to May was chosen because of the high demand for advice and health information from parents of children who are vulnerable to cold-related illness. Potential participants were excluded if they did not meet the following inclusion criteria:

1) Must speak and understand English language.
2) Must be a parent of a child aged two years and under and live in the geographical area covered by the call centre.
3) Must be registered with the GP OOHs service.
4) Must be available to be contacted during the period of the study.
5) Parents of children aged two years and under who contacted the GP OOHs service between the 1st January and 31st May 2014 for obtaining advice.

2.4. Recruitment Process

To improve the process of recruitment, a retrospective data analysis of anonymised calls to the GP OOHs service between January and May 2015 was provided by a manager for the GP OOHs service, following the second ethical approval from the ICGP. These data identified the number of calls relating to children aged two years, and under and the reasons for calling, which provided a second sampling frame. A total of 184 parents were identified and contacted by a manager working at the call centre to take part in the study (see Figure 1). Of the 184 parents, 9 responses were received by post to the call centre and then were re-sent to my home address. Interviews took place during August and September 2015. Consequently, estimating adequate sample size in qualitative studies is directly related to the concept of saturation. The concept of data saturation, which is applicable to all qualitative research that employs interviews as the primary data source, demands bringing new participants continually into the study until the data set is comprehensive, as indicated by data replication or redundancy; in other words, no new information is gained. Therefore, recruitment for my study was stopped when saturation was reached: that is, at the point when nothing new is being added.

2.5. Ethical Considerations

Ethical approval for this study was reviewed and approved by the Irish College of General Practitioners (ICGP) and the out-of-hours service Ethical Committee in Ireland. Embedded in this study are ethical considerations that include the appropriateness of the research design and methodology, participants’ rights, and how to manage data obtained from participants. A written consent form was obtained from potential participants before the interview took place. I provided an information letter to potential participants to fully inform them about the nature of the study, what they are being asked to do, as well as outlining any
benefits of the study. Participants were initially contacted by telephone once they signed the consent form and had returned it to the researcher. I then contacted the IT manager in the GP OOHs for those who agreed to take part in the study to decide on an interview date and time. At the start of the interview, participants were asked if they have any concern about the study, or their participation in the study, before taking part. The researcher informed participants of their right to fair and equitable treatment during the period of the study. Participants were informed of their right to be anonymous and that all data obtained from them would be treated in a confidential manner.

2.6. Data Collection and Conduct of Interviews

Semi-structured interviews, either by telephone or face-to-face, were used depending on each participant’s preference. The first reason for adopting the semi-structured approach is that the researcher has a preconceived view of the information to be gathered and the questions to be asked. Second, a semi-structured interview format allows the researcher’s role to be structured, so that it encourages the researcher to ask about certain topics; however, such a structure also allows the participants to talk freely about relevant views and experiences that the topic guide may not cover. I conducted 9 telephone interviews with the 9 parents who agreed to take part in the study. All the interviews lasted between 30 - 45 minutes and were arranged at a time which suited the participants. Interviewees were given a time to feel comfortable and express any concerns they may have about the study. Interviewees were given a time to reflect on their role as a participant. Recorded data were transcribed after each interview, and proof read by the researcher to ensure the accuracy of the transcripts. All
recorded interviews were labelled with anonymised identification numbers, time, date and type of data collected.

2.7. Data Analysis

Data collected using telephone interviews was transcribed and analysed through the steps of thematic analysis. Thematic analysis can be defined as an analytical approach to qualitative data and a method of identifying and reporting themes within that data [29] [30]. This approach was adopted because a review of existing literature, relating to patients’ experiences of out-of-hours care, provided a relevant basis for an initial framework within which the parents’ views could be coded. Other reasons for adopting this approach are: firstly, its ability to directly represent the descriptions of participants’ views or experiences; secondly, the analysis also allows the researcher to identify themes, or common threads, that occurred in more than one participants’ account and those emerged from interpretation and description of the data.

3. Results

The nine parents who agreed to take part were all mothers of children aged two years and under, registered with the GP OOHs service and met the criteria identified in the purposive sampling strategy. At the start of the interview, questions about demographic characteristics were asked. These included questions about gender, employment status, and the number of children in the family, as well as asking participants to describe their geographical location (e.g. travel time by car to both the GP OOHs service and to the ED), to understand how this could affect parents’ decision-making process.

This section presents the following central themes (and sub-themes) that were identified from the data analysis. These are summarised in Table 1. The first theme that is presented is that of parents’ perceptions of illness in children: parental voice and the need to seek help (sub-themes: parental anxiety and children are special: they cannot speak for themselves). This theme is typically the starting point of a parents’ decision to seek help from a GP OOHs service. The second, third and fourth themes are aspects of parent perceptions of what services can offer and how accessible they are. The second theme relates to parents’ perceptions of what GP OOHs offers and incorporates two main sub-themes (guidance and reassurance). Parents’ perception of the ED and its impact on their decision-making is the third theme which includes two main sub-themes including 1) experiences and perceptions of the ED, 2) time and distance to travel to the ED. The fourth theme is linked with parents’ perception of accessibility of the GP OOHs service. This theme combines a number of sub-themes including: familiarity with the GPOOHs service telephone number, geographically convenient location of the GP OOHs service, economic factors and the use of telephone nurse advice, and leaving other family member at home. The final theme presented is what parents have experienced following a contact with the
Table 1. Summary of the themes and sub-themes identified from the data analysis.

<table>
<thead>
<tr>
<th>Central themes</th>
<th>Sub-themes</th>
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<tr>
<td>Parents’ perceptions of illness in children: parental voice and the</td>
<td>• Parental anxiety</td>
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<td></td>
<td>• Children are special: they cannot speak for themselves</td>
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<tr>
<td>Parents’ perception of what the GP OOHs service would offer</td>
<td>• Guidance</td>
</tr>
<tr>
<td></td>
<td>• reassurance</td>
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<tr>
<td>Parents’ perceptions of the ED and its impact on their decision making</td>
<td>• Experiences and perceptions of the ED</td>
</tr>
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<td></td>
<td>• Time and distance to travel to the ED</td>
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<td></td>
<td>• Familiarity with the GP OOH service telephone number</td>
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<tr>
<td>Parents’ accessibility of the GP OOHs service</td>
<td>• Geographically convenient location of the GP OOHs service</td>
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<td></td>
<td>• Economic factors and the use of nurse telephone advice</td>
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<td></td>
<td>• Leaving other family members at home</td>
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<td>Parents’ satisfaction with the nurse’s advice</td>
<td>• Nurse’s manner and trust in their clinical skills</td>
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<td>• Parents adherence to the nurse’s advice</td>
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GP OOHs service and is linked with parents’ satisfaction with the telephone nurse advice service (incorporating two main sub-themes: nurse’s manner and trust in their clinical skills, and parents’ adherence to the nurse’s advice). Following the presentation of these themes parents’ suggestions of how GP out-of-hours services might be improved is discussed.

4. Discussion

Several emerging themes and sub-themes were identified from the analysis of the nine interviews. These themes and sub-themes are brought together here in a model, as illustrated in Figure 2. This model shows the common interlinking factors that affect parents’ decisions when seeking help for their sick children with the GP OOHs service. The model explains that parents of children aged two years and under first have a tendency to call the GP OOHs service whenever a child’s health causes concern out of GP hours. This decision is based on a set of factors that are linked together, as indicated in the model by arrows and connectors to inform a semi-linear process of help-seeking behaviour that necessitates parents to establish a call to the GP OOHs service. These factors comprise the main themes of the analysis.

Available models identified from the literature which relate to parents’ decision-making when using the service of the GP OOHs service, have focused on factors affecting parents’ access to the service and factors affecting the outcome of the telephone consultation [31] [32] [33]. Previous research that has examined the nature and the extent of help-seeking behaviour among parents of children show that these models tend to focus on the parents’ major role in monitoring their child’s development of sickness and how they may seek help or advice from a variety of sources including friends, mothers, professional nurse, GPs and the internet [34] [35]. Anderson’s [34] Behavioral Model of Health Service
Figure 2. Parental decision-making and their tendency to call GP OOHs services when seeking telephone advice for a child.

Use, developed to identify determinants of acute care use suggests that health service use is determined by a combination of individual factors, social factors, and health service factors, but may oversimplify or not entirely capture the decision-making process on behalf of children (further discussed in section 5.3). My model elucidates factors related to parental help-seeking behaviour for sick children specifically and proposes that parental help-seeking behaviour is a function of five interrelated constructs or themes that characterise parents’ use of GP OOHs services. This model developed here seeks to show what it is about a child that influences the tendency to call GP OOHs services. These key factors are presented in a semi-linear process of seeking help from the GP OOHs, where one stage is an outcome of the proceeding one. These are presented and numbered in the order of 1, 2 and 3 (see Figure 2). The proposed model also describes parents’ intention or potential to re-use the service in the future as indicated with the dotted arrows.

The first stage in parents’ tendency to call the GP OOHs is the parent’s perceptions of illness in children (and included parental anxiety, and children are special cases and cannot speak for themselves) that led parents using the GP OOHs service. Parents presented children as “special cases” and what was particularly important here was that very young children were unable to articulate their symptoms. This led to parents wanting to voice their concerns on behalf of the child and wanting to be heard by a health professional and receive advice, guidance, and reassurance. Typically, once a parent has perceived a need to be heard, the parent is faced with some choices and decisions to make about the availability and accessibility of health services (particularly the choice between
the GP OOHs service and the ED). These decisions are influenced by what parents know and may have previously experienced (for example if the parent is a first-time user or a previous user of the service). Parents make complex decisions and the perceptions of what different services offer—and how accessible they are—are likely to be considered together in the decision-making process of parents and are numbered as 2 in Figure 2. Previous use of services is likely to mediate this process and parents may make a decision on what they experienced previously (rather than directly as a result of their perception of the child’s symptoms). The three interconnected factors which constitute the ‘second stage’ of parental decision-making process were all considered as factors that increased parents’ tendency to use the GP OOHs service. The final theme, parents’ satisfaction with the telephone nurse advice—is the result of parents experiencing the service—which in turn, may influence parent’s tendency to call GP OOHs services on future occasions. Within this theme, parents particularly valued the manner of the nurse and trusted in their clinical skills which encouraged parents to adhere to the nurse advice.

5. Conclusion

In conclusion, this study suggests that parents of children aged two years and under are generally aware of the existence and availability of the GP OOHs service, and that this service is being actively promoted to these groups of users in accordance with GP OOHs services’ national health policy in Ireland. The research has identified several ways in which the service could be improved, so parents could access an enhanced quality of care over the telephone. The findings of this study have revealed that the performance of the GP OOHs service is influenced by certain factors, such as parents’ satisfaction with the advice received from the nurses, the nurses’ attitudes and telephone manners and accessibility to the GP OOHs service. The study has also shown that parents of children aged two years and under, in both urban and rural areas, are aware of and familiar with the GP OOHs service. The results of this study were brought together to develop the useful parental decision-making model that indicates understandings of involving parents’ voices to improve the quality of nursing advice, and the performance of the GP OOHs service model in Ireland. The recommendations of this study are challenging and will require a significant level of commitment to implement.

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Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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