

Telephone and Hot lines: a Tool Delivering Clinical Care

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Abstract. Telephone lines are now a widespread way of communication between patients and physicians. Nevertheless opinions about their effectiveness and efficacy are rather inconsistent. Aim of this study is to review medical literature in order to assess how and when telephone lines have been described as a good or a bad way to help health care, looking for different experiences and opinions, reviews and guidelines about the use of telephone as a tool for delivering health care. We compared what we have found, particularly about Diabetes, with our previous experience. Medline from Pub Med from National Library of Medicine has been consulted using “telephone”, “hot line” or “hotline” as key words. Among the 20 thousands references found in the literature, 2051 of them we considered relevant. The most frequently recurrent topics concern pediatrics (19.2%), while diabetes is not very frequent (0.6%). Analyzing more in details, we noticed that the application fields of hotlines are emergency management, secretary tasks, preventive health care, acute episodes and chronic conditions. Different models of telephone help lines and guidelines in training and running help lines have been found as well. Examining diabetes help lines, we noticed that they are mainly used in case of intercurrent illness, doubts about insulin dose, hypoglycemia. Parents of the youngest patients and with the shortest duration of diabetes are the most frequent users, regardless of HbA1c. Most calls came during holidays and weekend, especially early in the morning or during the night. (www.actabiomedica.it)

Key words: Hotline, telephone, help line, diabetes

Introduction

Communication technology is now becoming more and more an everyday tool for delivering health care. Telephone is the most common and familiar device, for both patients and physicians.

People used telephone as a way to keep in touch with physicians immediately after its invention in 1876: Alexander Graham Bell's first recorded telephone call was for medical help after he had spilled sulphuric acid on himself (1). So even in medical literature it is possible to find a lot of works talking about telephone and health care, particularly since '60s and '70s.

Our Regional Service of Pediatric Diabetology since 1995 has given the opportunity to the patients' families to resort to a 24-h 7-day-a-week toll-free telephone service. We evaluated after five years the effectiveness of this campaign in a previous work (2).

In this paper we aimed at looking for different experiences and opinions, reviews and guidelines about the use of telephone as a tool for delivering health care.

Then we focused our attention on how people with diabetes and their families use hotlines, comparing what is shown in literature and our previous experience in managing free toll lines for patients and families in charge of our clinic.

Material and methods

In November 2003 we found almost 20 thousands references including words as “telephone”, “hot line” or “hotline”. We considered only 2051 of them as actually talking about delivering health suggestions and care using telephone lines, and analyzed them with the aim of finding which key words come with “telephone” or “hot line” and how frequently they recur.

Then we picked out the main fields in which telephone had been used, paying particular attention to retrieve suggestions or guidelines about how to manage a telephone care service.

Bibliographic references have been searched in Medline from Pub Med from the National Library of Medicine. Resulting references have been downloaded and elaborated with specific software (Biblioscope 5.4, CG® Information) and outcomes have been further worked out with statistic package (VisualStat, Professional® VisualStat Computing).

Results

Key words analysis

As a first step we performed a statistical analysis of the recurrence of different keywords in the downloaded references, and represented it as percentage among all references.

The frequency of the keywords is shown in figs. 1 and 2

The most frequent (25.4%) keyword is of course “Health”, but the other words most often associated with telephone are about pediatric subjects: “Child” (12.4%) and “Adolescent(s)” (6.8%). Moreover, we found a lot of other recurrent arguments related with pediatrics: “Nursing” (11.6%) and “Education” (6.4%). Rather frequently “AIDS” (5.6%), “Psychiatric” (4.6%), “Pregnancy” (3.5%) and “Drug Information” (2.9%) also recur. A considerable number of keywords (17.1%) were gathered in the group “Others”. Among them the most frequent are “Sex Counselling” (2.3%), “Smoking” (2.0%), “Poison” (1.7%), “Information Services” (1.5%). The keyword “Diabetes” appears in 0.6% of the references.

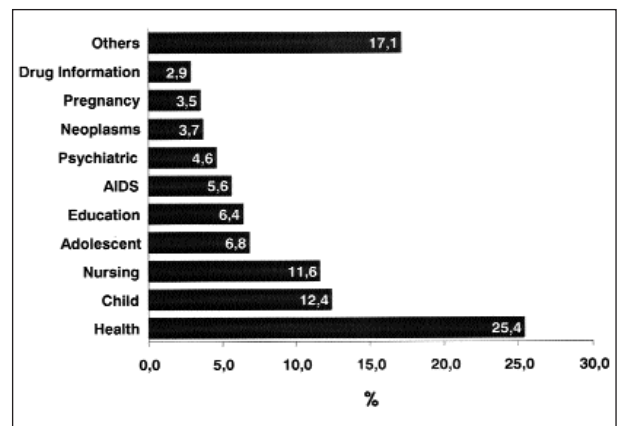


Figure 1. 2051 References

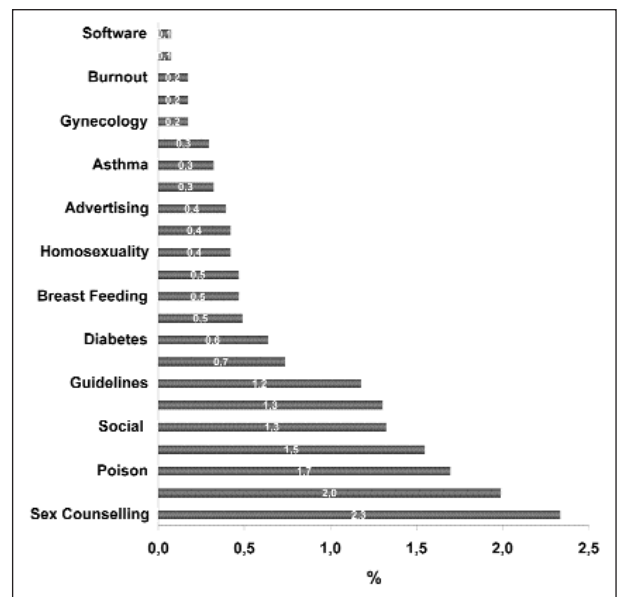


Figure 1. Among “Others”

Aim of telephone lines

A closer examination let us to define the field of interest of the hotlines described in each reference. They can be gathered in the following main topics:

Emergency Management: Triage by nurses or doctors are offered by many National Health Services, for instance NHS Direct in the United Kingdom (3) or single Hospitals, in order to speed up access to consultations and reduce recourse to emergency room.

The first purpose has been frequently attained, while the second one in many cases failed (4).

Secretary tasks: Telephone is the best way to handle appointments quickly and efficiently, changing date or time. Missed appointments can be avoided or reduced by telephone reminder or confirmation (5-7).

Result of diagnostic tests can be communicated by telephone saving time for patients, particularly if a further diagnostic or therapeutic intervention is promptly needed, although people do not like at all this way of being notified of results (8, 9).

Preventive health care: Influenza immunization (10, 11) and Childhood vaccination (12-14) have been demonstrated to benefit from telephone reminders, as well as screening campaigns for hypertension (15), mammography or other cancer early diagnosis tests (16-18) and for smoking cessation (19, 20).

Acute episodes: Telephone is used for monitoring and encouraging home treatment of many acute occurrences: asthma (21, 22), respiratory tract infections (23), back pain (24, 25), urinary tract infections (26), headache and fever. Timeliness and quickness are the most appreciated features of telephone as a tool for keeping in touch with patients and medical staff.

Chronic conditions: After discharge many chronic illnesses need frequent contacts between patient's family and care team: heart failure (27, 28); psychiatric (29) and psychological help in case of multiple sclerosis (30), depression (31, 32), eating disorders (33); asthma (34); management of anticoagulation (35); diabetes and obesity such as insulin and drug therapy (36-38), foot care, diet (39, 40); lupus erythematosus (41, 42); neoplasias (43-45). Telephone lines have been used with efficacy and cost effectiveness in these pathologies.

How to build a telephone "hot" line

Literature gives many hints for people who want to create a telephone service. Many features must be taken into consideration: the model of help line, which

skills are needed to train your answering staff to approach a consultation, to receive the calls and to give an answer.

Three models of help line are proposed depending on how the incoming calls are faced: (46) with the Miniswitchboard system all calls are taken by experienced switchboard operators, who allocate them to appropriate helpline workers, while using Follow on system, incoming calls go to the first telephone in the row; if it is busy the call is diverted to the next phone, continuing until a non-occupied line is reached. Adopting Multitier system, finally, calls are dealt with by a group of first line workers who can pass complex calls on to specialized workers if required.

Important skills should be delivered: active listening and detailed history taking, frequent clarifying and paraphrasing (to ensure that the messages have been got across in both directions), picking up cues (such as pace, pauses, change in voice intonation), offering opportunities to ask questions, patient education and documentation. Since the evaluation of seriousness of the case is exclusively established on what the conversational partner says, without the help of non-verbal messages, each issue above mentioned should be carefully followed. Some practical recommendations can be found in table 1 (1).

In addition, talking with the interlocutor is very important to try to transmit calmness and protection

Table 1. Practical recommendations

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- Answer the telephone promptly
 - State your name
 - Obtain the caller's name and telephone number (in case the patient has to be called back by another member of the team or the call is disconnected)
 - Possibly speak directly with the person who has a problem
 - Record date and time of the call
 - Record the person's name, sex, and age (obtain medical record, if available)
 - Take a detailed and structured history
 - Provide advice on treatment or disposition
 - Advise about follow up and when to contact a doctor (for example worsening symptoms despite treatment, symptoms failing to improve within a week, onset of new symptoms)
 - Summarize the main points covered
 - Request the caller to repeat the advice given (several times throughout the consultation)
 - Ask if the person has any outstanding questions or concerns
 - Let the caller disconnect first
-

in order to contrast caller's anxiousness: to take part without being too involved. The staff has to drive the calling person to give the main information, making questions if needed, or asking for fax or email and has to give positive and synthetic suggestions, providing the right explanation, always supplying the same advice to the same problems in order to avoid leading to further insecurities (47).

It has been suggested as particularly useful the role playing in order to understand the impact of the different pattern of answers (48).

Hot lines in Pediatric Diabetes

Telephone is described as a useful tool in helping diabetes management in children and adolescents. Usually experiences have been carried out using hotlines to cope with problems such as intercurrent illness, insulin dose, hypoglycemia, and hyperglycemia (49-51). The calls come from parents of the youngest patients, particularly less than 12 months old or/and from parents of patients with less duration of diabetes. Usually there is no difference about HbA1c. They call more frequently during weekends and on holidays, early in the morning (06.00-10.00 am) or early in the night (6.00-10.00 pm)

Our experience

In a previous work (2) we described our experience with a toll-free line for children and adolescents with Type 1 diabetes followed in our center from 1995 to 2000. The line was instituted as help for parents to cope with intercurrent illnesses. We received 9,125 calls, 2,190 of them were emergency calls. They came from parents of 767 children with mean age of 10.8 ± 3.8 years (min 4.8-max 2.3), mean duration of diabetes of 4.5 ± 3.5 years (min 1/12-max 16.1) and mean HbA1c of 7.2 ± 1.5 % (min 4.8%-max 12.3%). They called mainly in the afternoon (59%), then in the morning (25%) and in the night (16%); 25% of the calls came in on Saturday and Sunday or on holidays. The main topic of the calls was, of course, intercurrent illness (89%), but also hypoglycemia (11%).

Another experience that demonstrated efficacy and cost effectiveness of the hot line regarded our prevention program for ketoacidosis occurring in children at diabetes onset: hot line facilitated family pediatricians, teachers and parents to keep in touch with our center and have an early diagnosis of diabetes avoiding ketoacidosis (52).

Conclusions

Sometimes physicians are not completely satisfied in using telephone: they fear about potential risk of missing serious conditions, absence of visual communication, impossibility to have an examination, anonymity, medico-legal risks. Nevertheless our and other experiences demonstrated the usefulness of hot lines. Public satisfaction with telephone consultations is high, and patients increasingly wish to have this option (1). Particularly diabetic children and their families take advantage from the use of telephone lines (50).

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