

Specialized emergency telephone consultation: improving the use of hospital Emergency Department

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None

Background and objective: Urgent telephone consultation integrated into a hospital's patient care routines can be a useful tool in the management of urgent cases. The objective of this study was to analyze the setting up of a 24-hour call center (ICO24horas) to attend urgent hematologic and oncologic consultations.

Patients and methods: Prospective, descriptive study including all consultations to ICO24horas between October 1 and December 31, 2007. Social, demographic, and clinical variables were recorded; call details were also registered. All calls underwent a quality and satisfaction audit within 24 to 72 hours.

Results: There were 656 calls concerning 498 patients. The main reasons for consultation were fever (12%), pain (8%), and doubts about treatment (8%). At the end of the call, 60% were considered resolved, with no need for the intervention of other care services. In the survey, all patients stated they felt well attended by the ICO24horas staff and 79% considered that the problem about which they had rung had been resolved.

Conclusions: ICO24horas is an effective and efficient tool in the initial response to urgent oncologic problems, providing access to immediate consultation, avoiding unnecessary journeys, and contributing to improving the use of hospital emergency services. [Emergencias 2009;21:117-120]

Key words: Call center. Urgent oncologic consultations.

Introduction

The "Instituto Catalán de Oncología (ICO)" is a public institution serving a network of hospitals; its objective is to attend patients with onco-haematological diseases. Our patients all have serious underlying disease with numerous complications, and dependence on their habitual medical teams creates a setting that encourages them to consult for any worrying new symptoms. In these circumstances, they expect immediate solutions and very often resort to the most easily accessible hospital resource, which is the Emergency Department (ED). Depending on the severity of the symptom leading to the ED visit, these patients are attended by ED physicians who may not be able to access the relevant clinical history but are nevertheless required to take decisions without all the information about the oncological treatment protocol.

Patients experience this process as discouraging and feel unprotected, which may mean that

on future occasions they prefer to delay seeking help until their next standard appointment. In our setting, we consider it especially important to provide guidance to such patients with an emergency hotline service, which acts as a screening mechanism, helping to avoid unnecessary ED visits but also reduces the risk of potentially critical staying at home. Based on these considerations, ICO has implemented a 24-hour "Servicio de Atención Continuada" (SAC), to co-ordinate all emergency activity generated by such patients being treated at any of our hospital centres. SAC comprises three main services: ICO24h, a 24-hour call centre; EDSU, a mobile Emergency Department Support Unit performing home visits for non-critical medical emergencies; and the ED, which attends critical medical and surgical emergencies arising during a particular day or at any time at night, including holidays and weekends. The EDSU timetable is from 8am to 9pm weekdays.

ICO24h has been implemented in phases, initially offered by the Hospital Duran y Reynals (HDiR). This is an ICO centre for integral cancer treatment situated in the Hospitalet de Llobregat, serving 1.3 million inhabitants. During 2007, it received 10,300 first visits and 70,000 follow up visits. HDiR works in conjunction with the Hospital Universitario de Bellvitge, where the other specialities and the ED are situated. In addition, HDiR collaborates with 6 other hospitals in the region regarding onco-haematological patient attention. In the first phase, from October to December 2007 inclusive, calls from 4 selected groups of patients were accepted: upper gastrointestinal cancer, lung cancer, clinical haematological external consultation and emergency consultation. These patients were given the ICO24h telephone number and instructed to call first before leaving home if their problem was not an emergency situation: they would be attended by a physician who, following established protocols and/or consultation with medical specialists at our centre, would provide the most appropriate advice on what action to take. When a particular case was identified that warranted a medical visit, the ICO24h physician passed the case on to the mobile EDSU to arrange a visiting time, thus avoiding ED waiting time delay.

The main objective of this study was to analyze the implementation of the ICO24h service, user profiles, the degree of case resolution, and the degree of user satisfaction with the system.

Method

We performed a prospective, observational study of all consecutive calls attended by the ICO24h service between October 1 and December 31, 2007. All were attended by family physicians, who registered each call on a database including socio-demographic, clinical data and reasons for calling. These data were sent daily to EDSU, in accordance with the law on personal identity data protection (LOPD 15/1999). Data audit was performed to control the registry quality, application of established protocols, user satisfaction, and to rapidly detect any modifications required in decision taking. This audit was performed daily by the EDSU nursing team with consulting physician support, including analysis and telephone control of all the cases registered by the ICO24h service in the preceding 24-72 hour period. Registry quality was rated by analysis of the data recorded, and protocol applica-

tion by concordance between diagnoses and final destination. Finally, user satisfaction was measured by telephone interviews asking users to rate the resolution of their problems. Qualitative variables are expressed as percentages and quantitative variables as means and standard deviation (SD). Statistical analysis of proportions was performed using Chi2 test or Fisher exact test

Results

Of 656 calls, 498 were medical cases (Table 1). Mean patient age was 59 ± 13 years, and 52% were male. Seventy percent had cancer and the rest had haematological disease. The most frequent reasons for calling were: fever (12%), pain (8%) and doubts about therapy (8%). Most calls (77%) were made between 8am and 8pm. Daily call rate per week was similar, the highest being for Wednesdays (17%) and the least on Saturdays (12%).

Figure 1 shows the degree of case resolution attended by ICO24h, with a notable 60% direct telephone discharge. EDSU staff made 498 control calls; 9 patients could not be contacted and the rest of the cases were excluded from the study for repetition of the same patient within a 24-hour period. To the question about whether they considered they had been well attended, 100% answered affirmatively. Asked whether they felt the reason for their consultation had been resolved, 80% answered affirmatively (Table 2). Of 37 patients reporting the same state, 78% were given an appointment for an emergency visit within 24 hours; of these, the reason for the initial call was febrile syndrome in 31% of the cases. There were 3 cases of death at their homes, all expected due to the advanced stage of disease.

Discussion

According to previous publications, call centres present a mean 50% rate of telephone resolution^{1,2}. Regarding oncological patient attention, one study in the literature described an emergency help-line for patients with possible toxic oncological treatment reactions, and the mean rate of telephone resolution was 48%³. In our study, this was 60%, which we attribute to the fact that the cases were directly dealt with by physicians. Recently, Weaver et al. published a report on their telephone monitoring of secondary

Table 1. Epidemiological characteristics of patients attended by the ICO24h call centre

	n = 498	(%)
Age (years)		
< 45 years	77	(15)
> 45 years	421	(85)
Sex		
Male	261	(52)
Female	237	(48)
Reason for calling		
Fever	66	(13)
Pain	49	(10)
Doubts	40	(8)
Vomiting	27	(5)
General malaise	20	(4)
Diarrhoea	11	(2)
Other	285	(58)
Disease group		
Breast cancer	89	(18)
Upper digestive tract cancer	87	(17)
Lung cancer	51	(10)
Lymphoma	56	(11)
Other	215	(44)
Treatment with chemotherapy		
Yes	289	(58)
No	209	(42)
Known metastasis		
Yes	218	(44)
No	280	(56)

effects, which we consider of great interest but hardly viable in our setting since it requires certain socio-cultural conditions for implementation⁴.

The implementation of the ICO24h emergency telephone service facilitates patient access to information and physician advice, avoids unnecessary visits and contributes to reducing the number of ED visits. At the same time, patients feel well attended, consider their problem resolved in most cases, and evaluate follow up calls positively in all cases.

A notable finding was that 10% of the patients expressed surprise that the ICO24h staff did not have direct access to their clinical histories. This lack of access to clinical histories could be considered a limitation, but in our opinion is not an obstacle to the correct evaluation of the emergency involving assessment of symptom severity given the context of the case. In those cases when this lack of information could hamper decision-making by the physician being consulted, a special communication protocol allows the physician to make direct contact with ICO specialists.

Data from another study performed at our centre indicate that 68% of ICO24h callers would otherwise have made a direct visit to a hospital emergency department⁵. Bearing in mind this result and the fact that, since implementation, the ICO24h service has referred only 20% of 656 callers to an ED, we have effectively

Table 2. Patient evaluation of the service 24-72 hours after being attended by the ICO24h call centre

Evaluation	n	(%)
Problem resolved	397	(80)
Patient still in an ED	51	(10)
Same state	37	(7)
Not located	9	(2)
Exitus	3	(1)
Worse condition	1	(0)

ED: emergency department.

“saved” around 300 visits to an ED. Not only does this mean reduced pressure on ED services, but also unnecessary journeys for the patients.

Regarding the high degree of user satisfaction, there is a slight selection bias: during the first months of the implementation phase, ED attention numbers were given to cases of moderate complexity. Furthermore, although the interview professionals identified themselves as EDSU staff, patients often did not know if they were talking to EDSU staff or ICO24h staff, which means that they may have been under pressure to respond favourably when interviewed.

Given these results, we consider that the implementation of the centralized and specialized ICO24h service, acting according to established protocols and in contact with reference hospital specialists, is a key element in emergency patient attention. Oncological patients included in this study, with a complex history and highly dependent on their habitual physicians, seem to have shown a very positive attitude to this service, knowing that any issue of concern can be consulted and will be dealt with by a qualified physician or transmitted to specialists at a reference hospital. In addition, our centre offers another service – that of programming emergency visits to an ED on the same day as the call. This means no waiting time on arrival, and gives the attending physician time to check the patient’s clinical record and even consult with that patient’s own specialist if necessary. All this clearly favours positive results.

Based on this experience, we have consolidated the ICO24h service at HDiR and other municipal hospitals included in the network, as well as establishing a follow up protocol with daily analysis of calls received and control of patients at risk (relapse within 24 hours and/or febrile syndrome). Although a definitive long-term analysis is yet to be performed, we believe the system could be extended to other groups of patients requiring specific clinical management, thus helping to improve patient quality of life and the use of ED services.

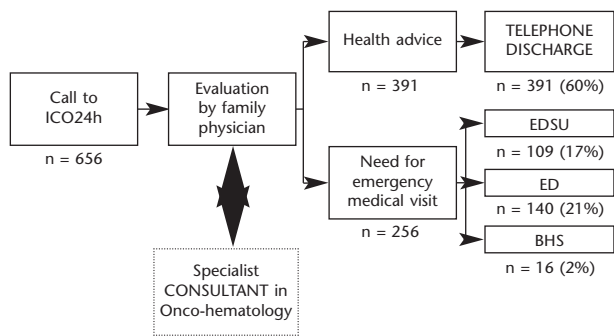


Figure 1. Degree of resolution of cases managed from the ICO24h call centre. ED: Emergency Department, EDSU: ED Support Unit, BHS: Basic Health Area.

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La atención telefónica urgente especializada una manera de mejora en la utilización de los servicios de urgencias hospitalarios

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Fundamento y objetivo: La consulta telefónica urgente integrada dentro del funcionamiento de cada centro podría ser una herramienta útil en la gestión de las urgencias. El objetivo de este trabajo ha sido analizar la implementación de una central de llamadas (ICO24horas) para la atención de urgencias onco-hematológicas.

Método: Estudio descriptivo y prospectivo de las consultas atendidas por ICO24horas desde el 1 de octubre al 31 de diciembre del 2007. Para todas las llamadas se registraron variables socio-demográficas, clínicas y relacionadas con la consulta telefónica, y a las 24-72 horas se realizó una auditoría de calidad y satisfacción.

Resultados: Se atendieron 656 llamadas, las cuales correspondieron a 498 casos médicos. Entre los motivos de consulta destacan: fiebre (12%), dolor (8%) y dudas terapéuticas (8%). El 60% fueron dados de alta telefónicamente, sin intervención de ningún otro nivel asistencial. En el control, el 100% de los pacientes afirmaron haberse sentido bien atendidos, y el 79% consideró que les habían resuelto el problema por el cual habían llamado.

Conclusiones: ICO24horas es una herramienta eficaz y eficiente en la atención inicial de las urgencias oncológicas, que facilita el acceso a la consulta inmediata, evita desplazamientos innecesarios y contribuye a mejorar el uso de los servicios de urgencias hospitalarios. [*Emergencias* 2009;21:117-120]

Palabras clave: Central de llamadas. Urgencias oncológicas.