

Research Article

Telepharmacy and Home Delivery Program in Spain

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Abstract

Aim: Telepharmacy covered remote care that arose out of necessity during the COVID-19 pandemic, but its usefulness goes further.

Material and Method: Descriptive retrospective study on a sample of 220 Spanish patients over two years. Description of the care process of Telepharmacy and home delivery of medication in the health area of Talavera de la Reina, which faces challenges such as distance and population aging.

Results: The total number of deliveries made was 2,234, 80.600 km of journeys have been avoided in rural areas, which translates into 2,100 hours of travel avoided for patients. The perceived satisfaction of patients with the program was greater than 95%.

Conclusion: Telepharmacy applied as telephone patient care, hospital dispensing, and home delivery, has been a useful tool during the pandemic, but it has also been shown to provide quality patient care and solve demographic problems for the health system.

Keywords: Telepharmacy; Home-Delivery; Pharmaceutical Dispensing; Quality Care; Equity

Introduction

During 2020, due to the COVID-19 pandemic, healthcare facilities began to experience an increase in the population of patients testing positive for COVID-19 and an increase in hospitalization rates [1]. Elective surgeries and non-critical medical services were postponed or limited [2]. Anxiety and fear were widespread, especially among those who needed to seek medical attention for emergencies unrelated to COVID-19 [3-5]. Patients avoided seeking hospital care due to stay-at-home orders or fear of increased contagion [6]. Faced with this

situation, health systems around the world sought alternatives for patient care. That is why the use of telehealth was promoted. Pharmaceutical dispensing was not exempt from this situation either and therefore also joined the use of telecare.

Telehealth is defined as the “use of electronic information and telecommunications technologies to support and promote long-distance clinical medical care, health-related education of patients and professionals, public health, and health administration” [7]. Telepharmacy is defined as a method used in pharmacy practice in which a pharmacist uses telecommunications technology to oversee aspects of pharmacy operations or provide patient care services [8]. Telepharmacy operations and services include medication review and monitoring, dispensing, sterile and non-sterile compounding verification, drug therapy administration, patient assessment, patient counseling, clinical consultation, outcome evaluation, decision support and drug information [8]. This telepharmacy service can also be completed with an individualized delivery to the patient at home.

Added to this public health problem, it happens in Castilla-La Mancha, located in the center of Spain, that the population is aging and is not distributed in a homogeneous way throughout the territory. This implies several problems: greater health problems due to ageing, technologies underused by this age group, distances of more than one hour to reach the hospital and lack of regular transportation to reach urban centers. Therefore, some of the challenges of the health system in this region are:

1. The aging demographic trend
2. The low density and dispersion of the population
3. Epidemiological patterns tending to increase chronicity and multiple pathologies
4. The need for a more efficient management of resources [9]

For all these reasons, in the health area of Talavera de la Reina, it was decided to establish the hospital Telepharmacy service in January 2021, consisting of telephone care with patients before, during and after the dispensing and delivery of the medication in domicile patients.

Material and Methods

The Talavera health area serves 149.620 inhabitants, distributed over an area of 5.170 km² [10]. Descriptive retrospective study was conducted (January 2021 to January 2023) in patients included in a telepharmacy and home-delivery program. Electronic clinical history and prescription program Farmatools® were used to record data: sex, age, pathology, number of shipments per patient, locality and transport conditions of the medication.

The inclusion criteria for entry into home delivery of hospital medication were those related to the possibility of displacement by the patient or their family/caregiver:

- Fragile and/or dependent patients, whose clinical and biopsychosocial characteristics limit them from making a trip to the face-to-face external consultation of the Hospital Pharmacy (HP)
- Patients with locomotor/physical-psychic limitations
- Immunocompromised patients
- Distance and time to get to the hospital

The care process consisted of selecting patients who met some of these criteria to include them in the program. The pharmacist contacted the patient by telephone in the week before his dispensation corresponded. In that week, the PH sent to the distribution company the list of addresses and deliveries to be carried out in an anonymous way, providing the medication. In the week corresponding to the delivery, the distribution company was in charge of contacting all the patients by telephone and agreeing on the day and time of delivery. Once the medication was delivered, the data of the person receiving the order was collected. In the following 24-48 hours, the pharmacist contacts the patient again to verify the delivery and administration of the medication.

In addition, HP has conducted a patient satisfaction survey consisting of 4 questions about: satisfaction with telepharmacy program (yes/no), adequate pharmaceutical telephone support (yes/no), medication delivery conditions (correct/incorrect) and global assessment [1-10]. Comments and suggestions were also requested.

Results

In these two years, 2.568 patients have been treated by the PH, of which 220 have been included for at least one delivery in the telepharmacy program, 207 have stipulated regular deliveries, 20 are punctual deliveries (we consider punctual less than 6 deliveries to anus). 93 patients have left the process, 90 due to treatment changes (their medication no longer had to be dispensed at the hospital, but could be dispensed from their outpatient pharmacy), 2 due to successes and 1 due to poor pharmacological adherence.

The total number of deliveries made was 2.234 with a mean of 8 (2-24) per patient. The shipments were distributed among 31 different localities in the same health area. The medication for 48% patients required refrigerated transport and 52% room temperature. 80.600 km of journeys have been avoided in rural areas (sum of km from the town to the hospital* number of deliveries from that town, which translates into 2,100 hours of travel avoided for patients (sum of isochrone from the town to the hospital * number of deliveries from that town).

63% were women and 37% men. Mean age was 65 (37-90) years. The pathologies involved were: 20% infectious diseases, 18% respiratory, 16% rheumatic, 14% neurological, 12% renal, 9% haematological, 5% ophthalmological, 4% digestive and 2% allergic.

All patients (100%) were satisfied with the telepharmacy program and reported an adequate pharmaceutical telephone support. Medication delivery conditions were considered correct to 96% patients. Mean global assessment score was 9.6 [8-10].

1. The improvement of the quality of care.
2. Promote accessibility by avoiding displacements of both the patients themselves and their families.
3. Improve the safety of the drug dispensing process for patients.
4. Humanize the dispensation and delivery of treatments.
5. Comprehensive assessment of the patient's biopsychosocial context and not only of his clinical context.
6. Individualize the clinical process, from the prescription of the drug to home delivery.
7. Extend the care process to the patient's own home according to their conditions.
8. To improve the autonomy of the patient by not tying him to the aforementioned care appointments, but by being the one who decides when to agree to receive his treatment.

Table 1: Objectives achieved with Telepharmacy.

The involvement of the staff is maximum with this project, both on the part of the health workers and the service providers. Throughout the time that this process works, one year: the outpatient consultation registry has been implemented, as well as those included in the telepharmacy, (improvement in the electronic medical record with the creation of an own agenda for telepharmacy); the distribution of medication has been optimized based on the needs of the patients and not on the basis of pre-established routes; Each case is attended to individually, delivering urgent medication in less than 6 hours, on the same day, if the clinical case has required it and this process has been included in the quality audit of the ISO 9001 standard that It has been successfully passed in the past month of November 2022.

Discussion

Access to telehealth services during the pandemic allowed for greater social distancing and reduced potential infectious exposures. In addition, the pressure on health centers was reduced by minimizing the demand of patients to enter the centers [11]. But also, apart from the pandemic, this process is aligned with the different components of the strategic lines of the Health Plan of Castilla La Mancha, Horizon 2025, such as [9]:

- Sustainability of the health system
- Humanization of assistance
- Professionals as an essential value of the system
- Change of the organizational model

It is also based on the Basic Principles of the Plan, since it has people as the central axis of the health system, it seeks integration between the care, public health, community and socio-health areas, it tries to guarantee the sustainability of the health system public and the equity of the system, as well as promoting the quality and safety of care within the framework of the humanization of care [11]. Telepharmacy is a tool that can be used to reach underrepresented populations and thereby ensure equitable pharmaceutical services [12]. However, there are limitations in the application of this assistance service. The use of the telephone has been the tool that we have considered easiest to use in the elderly population, but it has traceability limitations. We hope that over the next few years, we can develop a tool that is friendly for use in the elderly population. Another of the drawbacks of this process is that there is no specific legislation in Spain that regulates telepharmacy, therefore there are pharmacists who are not in favor of this form of care considering that dispensing is an act solely of the pharmacy and that there may be controversies in home delivery. We hope that soon there will be regulation of telemedicine and that since the benefits are greater than the damages, this service will be established homogeneously within the health system, since currently, each health area is developing the project independently.

Conclusion

Telepharmacy applied as telephone patient care, hospital dispensing, and home delivery, has been a useful tool during the pandemic, but it has also been shown to provide quality patient care and solve demographic problems for the health system.

Conflict of Interest

The authors have no conflict of interest to declare.

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