IMPLEMENTATION OF A PHARMACEUTICAL CARE SERVICE IN COMMUNITY PHARMACY: Evaluation of 1 year of activity

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INTRODUCTION

In order to provide a wider range of services to its patients, a community pharmacy located in Lisbon district developed and validated a pharmaceutical care service in the year 2014/2015.

The service was implemented based on the recommendations of the ANF 2006 Manual “How to provide an advanced service in community pharmacy”. It was decided that the service would have the following characteristics:

- Being provided by trained pharmacists with experience on pharmaceutical care;
- The SOAP method should be used as well as pharmaceutical intervention flowcharts developed by ANF;
- A comprehensive approach to the patient would be followed;
- DRPs should be classified according to the second Granada Consensus of 2012;
- It should consist of free of charge appointments programmed according to the individual situation and convenience.

AIM

TO ASSESS

CLINICAL OUTCOMES

with a PHARMACEUTICAL CARE SERVICE

METHOD

STUDY DESIGN

Prospective cohort study of patients with therapy for one or more of the following diseases: hypertension, diabetes, dyslipidaemia, asthma or chronic obstructive lung disease. The main outcomes evaluated were: adherence, blood pressure (SBP and DBP), glycaemia, total cholesterol, triglycerides, DRPs, pharmacist interventions and patient satisfaction.

POPULATION AND SAMPLE

The studied population consisted of patients registered in the pharmacy database and a convenience sample was used. Patients who met the following inclusion criteria were selected:

a. Patients who had their therapeutic record in Simfarma® (pharmacy database);

b. Patients who were taking medicines for one or more of the following conditions: hypertension, diabetes, dyslipidaemia, asthma or COPD;

c. Patients who regularly consumed pharmaceutical services provided by the pharmacy.

After identifying the patients, the recruiting process was established according to:

- A number of pathologies (3 or more concomitant diseases);
- The number of medicines (highest number);
- Frequency (highest number of pharmacy visits during the last 12 months).

Recruitment was done by telephone in order to include 130 patients on the study.

STATISTICAL ANALYSIS

A descriptive analysis was conducted with SPSS Statistics 23 and an adequate test was used to compare results after checking the conditions of applicability and 95% grade confidence.

RESULTS

During the first year 125 patients were integrated in the pharmaceutical care service and 351 appointments were performed which corresponded to a 2.81 ± 0.5 visits per patient.

107 users completed the 3 appointments program, 12 users had 2 appointments, and 6 users had only the first appointment.

Female gender predominated, 24.9% versus 44.8% of male users, and the age ranged from 47 to 89 years. The average age was 69.31 ± 8.69 years.

Most users, (83.72%) had less than 9 years of schooling, 120 users were not professionally active (85%).

Patients declared on average 3.21 ± 1.03 diseases including hypertension (118), dyslipidaemia (106), diabetes (81), COPD (7) and asthma (3). It should be noted that some of the patients with therapeutic record for a chronic respiratory disease were unaware of the respiratory disease they had been diagnosed with, thus they failed to report on the first appointment, the reason for their therapy.

The percentage of patients “non-adherent to therapy” was as follows:

- 62.79% of the 107 patients who completed the 3 appointments, 49 were initially classified as noncompliant. After the 3 appointments, 39 patients (79%) IMPROVED THEIR ADHERENCE TO THERAPY.

- All biochemical and physiological parameters evaluated SHOWED REDUCTION when compared the initial and final values. The reductions were statistically significant for all parameters (Chart 1).

- Amongst the various pharmaceutical interventions (Table 2) the most frequent was “therapeutic counselling” (which included an approach to increase adherence) and “non-pharmacological counselling”, although their frequency declined along the appointments.

- The overall classification of the pharmaceutical care service ranged from “Very Good” and “Excellent”.

CHART 1: AVERAGE SCORES OBTAINED IN THE INITIAL AND FINAL DETERMINATIONS OF THE PARAMETERS, ITS VARIATION AND COMPARISON (Wilcoxon test)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Initial Average</th>
<th>Final Average</th>
<th>Variation</th>
<th>Comparison</th>
</tr>
</thead>
<tbody>
<tr>
<td>SBP (mmHg)</td>
<td>135,13</td>
<td>128,17</td>
<td>-7.27</td>
<td>Statistical significance (p=0.013)</td>
</tr>
<tr>
<td>DBP (mmHg)</td>
<td>78,12</td>
<td>71,58</td>
<td>-6.72</td>
<td>Statistical significance (p=0.013)</td>
</tr>
<tr>
<td>COL total (mg/dL)</td>
<td>168,8</td>
<td>159,33</td>
<td>-9,56</td>
<td>Statistical significance (p=0.010)</td>
</tr>
<tr>
<td>Triglycerides</td>
<td>173,13</td>
<td>159,33</td>
<td>-13,80</td>
<td>Statistical significance (p=0.013)</td>
</tr>
<tr>
<td>Fasting glycaemia</td>
<td>73,13</td>
<td>66,33</td>
<td>-6,80</td>
<td>Statistical significance (p=0.013)</td>
</tr>
</tbody>
</table>

- The pharmacist interventions identified 117 DRPs (Table 1), mostly of Effectiveness (78%). 35% of DRPs were solved at the end of the 3-year.

- The overall classification of the pharmaceutical care service ranged from “Very Good” and “Excellent”.

- The net of 3 (APPOINTMENTS) of the pharmaceutical care service and the necessary study time after each visit, took an average 91.96 ± 44.9 MINUTES.

- Half of the patients assigned a value to each appointment between 3€ and 50€ (Chart 2), and the average value assigned was 9.33€/APPOINTMENT. The patients who didn't assign a value expressed the following: “any price is necessary to take care of my health”, “it is priceless” and “any value”.

- The patients would recommend it to others: 99.9%.

CHART 2: DISTRIBUTION AND FREQUENCY OF THE VALUES ASSIGNED TO THE SERVICE (n=52)

<table>
<thead>
<tr>
<th>Value (€)</th>
<th>Distribution</th>
<th>Frequency (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;3</td>
<td>18</td>
<td>34.6</td>
</tr>
<tr>
<td>3-5</td>
<td>25</td>
<td>48.1</td>
</tr>
<tr>
<td>5-10</td>
<td>8</td>
<td>15.4</td>
</tr>
<tr>
<td>&gt;10</td>
<td>1</td>
<td>1.9</td>
</tr>
</tbody>
</table>

CONCLUSIONS

THE PHARMACEUTICAL CARE SERVICE MODEL IMPLEMENTED INCREASES THE ADHERENCE AND REDUCES THE CLINICAL PARAMETERS.

Regarding DRPs, more appointments are needed to evaluate their resolution. The satisfaction levels achieved motivate the pharmacy to continue with the defined strategy. Future research should be conducted to demonstrate the cost-effectiveness of this service.