

## Importance of pharmacotherapeutic patient follow-up during the Personalised Dosage System Service

### Importancia del seguimiento farmacoterapéutico del paciente durante el Servicio del Sistema Personalizado de Dosificación

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#### 1. Background information

Among the Professional Pharmaceutical Services, Personalised Dosage Systems (PDS) is one of the most demanded as it is very useful for patients with difficulties in self-administering medication, which implies lack of compliance.

#### 2. Purpose

To evaluate the interventions carried out by the pharmacist in the patients included in the Service and to verify their usefulness in them.

#### 3. Methods

Data from patients from a community pharmacy in Seville (Spain) seen between May 2021 and May 2022 were documented. Each week a blister pack was prepared with the corresponding medication distributed according to the prescribed dosage regimen following the protocol proposed by the Andalusian Council of Official Associations of Pharmacists (ACOAP). The first time they came to collect their medication, they were referred to the personalised care area where they (or their careers) were instructed on how to use the blister pack and the importance of strict adherence to the treatment. This information was repeated at each collection visit to confirm all treatment-related data and to verify its effectiveness and safety (pharmacotherapeutic follow up, PTF), for which they underwent regular checks of blood pressure (BP), baseline glycae-

mia, weight (Body Mass Index, BMI) and, if required by the patient, more specific clinical parameters were analysed: glycosylated hemoglobin (HbA1c), total cholesterol (TC), high and low density cholesterol (HDL-c, LDL-c) and triglycerides (TGC). If a problem with the treatment was detected, the pharmacist informed the physician for evaluation, always with the patient's consent.

#### 4. Results

During the established period, 24 patients were attended, 50 % of each sex and of advanced age (76.7±6.7) of whom 20.8 % (n=5) had a caregiver. All were multi-pathological and polymedicated with an average of 12.2 drugs/patient and the majority were overweight or obese. 80.2 % of the medicines were collected in blister packs, but 20.8 % had to be dispensed directly (syrups, creams, sachets...). Throughout the follow-up, an average of 3.6 BP measurements/patient (maximum 19 - minimum 0), 1.7 baseline blood glucose measurements/patient (maximum 7 - minimum 0) and only 3 patients requested HbA1c, TC, HDL-c, LDL-c and TGC tests. Some patients learned to manage their disease and treatment, performing self-testing, which they always communicated to the pharmacist during blister pack collection visits. A total of 39 referrals to the doctor were necessary to solve drug therapy problems, 46 % of which were written reports by the pharmacist and 13 % via the intranet that links the Primary Health Care Centre with the pharmacy. In these

cases, the physicians' responses were: 8 changes in dosage, 24 changes in dosage regimen and 68 changes in treatment. Finally, of the total sample, only 2.9 % remained non-compliant.

The PDS service has proven to be highly effective in chronic polymedicated patients as it contributes to solving problems with pharmacotherapy and facilitates adherence to treatment by considerably reducing the complexity of administration.

## **5. Conclusions**



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## 1. Introduction

Among the Professional Pharmaceutical Services, Personalised Dosage Systems (PDS) is one of the most demanded as it is very useful for patients with difficulties in self-administering medication, which implies lack of compliance.<sup>1</sup>



Sistema Personalizado de Dosificación

## 2. Aims

To evaluate the interventions carried out by the pharmacist in the patients included in the Service and to verify their usefulness in them.



## 3. Methods

- ❖ Period under study: May 2021- May 2022
- ❖ Each week a blister pack was prepared with the corresponding medication distributed according to the prescribed dosage regimen following the protocol proposed by the Andalusian Council of Official Associations of Pharmacists (ACOAP).<sup>2</sup>
- ❖ The first time they came to collect their medication, they were referred to the personalised care area where they (or their carers) were instructed on how to use the blister pack and the importance of strict adherence to the treatment.
- ❖ This information was repeated at each collection visit to confirm all treatment-related data and to verify its effectiveness and safety (pharmacotherapeutic follow up, PTF)<sup>3</sup>, for which they underwent regular checks of blood pressure (BP), baseline glycaemia, weight (Body Mass Index, BMI)
- ❖ If required by the patient, more specific clinical parameters were analysed: glycosylated haemoglobin (HbA1c), total cholesterol (TC), high and low density cholesterol (HDL-c, LDL-c) and triglycerides (TGC).
- ❖ If a problem with the treatment was detected, the pharmacist informed the physician for evaluation, always with the patient's consent.

## References

1-Martin Oliveros A, Aliaga Gutiérrez L, Abadías Guasch M, Iracheta Todó M, Olmo Quintana V. Consensus document on the use of personalized dosing systems (PDS). Ed. SEFAC-SEMERGEN. Madrid, 2020.

2- Standard Operating Procedure (SOP) for Personalized Dosage Systems (PDS) of the Andalusian Council of Official Colleges of Pharmacists. (CACOF). June 2021.

3- Forum of Pharmaceutical Care -Community Pharmacy (PC-CP Forum). Practical Guide for Professional Pharmaceutical Care Services in Community Pharmacy. Madrid: General Council of Official Colleges of Pharmacists of Spain. 2019.

## 4. Results

N= 24 patients.

Figure 1- Distribution of the sample by sex.

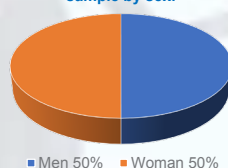


Figure 2- Number of drugs used per patient.

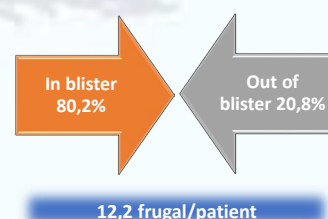


Figure 3- Pharmaceutical Interventions.

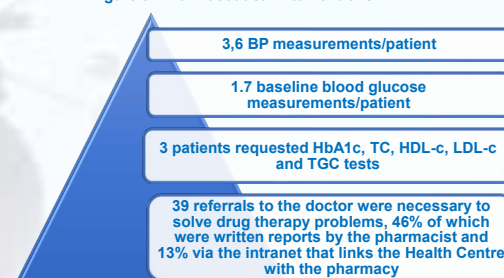
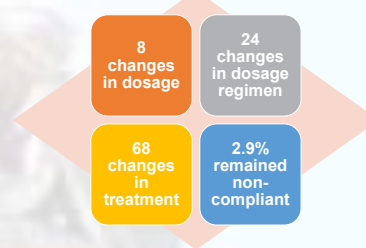


Figure 4- Results after Pharmaceutical Interventions.



## 5. Conclusion

The PDS service has proven to be highly effective in chronic polymedicated patients as it contributes to solving problems with pharmacotherapy and facilitates adherence to treatment by considerably reducing the complexity of administration.



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