

# 4CPS-115 - DEVELOPMENT AND IMPLEMENTATION OF A REVIEW PROGRAMME ASSISTED BY THE PHARMACIST TO IMPROVE THE ADEQUACY OF TREATMENT IN POLYMEDICATED PATIENTS IN HOSPITAL OUTPATIENT SETTING

A. ALCALA SOTO<sup>1</sup>, M. VÁZQUEZ REAL<sup>1</sup>, D.S. RUIZ PÉREZ<sup>1</sup>, C.M. CUADROS MARTÍNEZ<sup>1</sup>, J.F. SIERRA SÁNCHEZ<sup>1</sup>.  
<sup>1</sup>HOSPITAL UNIVERSITARIO JEREZ DE LA FRONTERA, PHARMACY SERVICE, JEREZ DE LA FRONTERA-CÁDIZ, SPAIN.

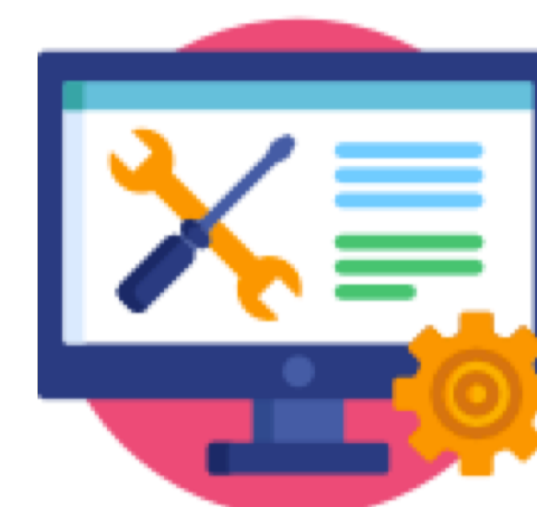


### Background and importance:

A high number of polymedicated patients pass through outpatient consultations and prescribers often don't have the time or capacity to deal with their polypharmacy.

### Aim and objectives:

Development of a **web tool** for the review and **analysis of polymedicated patients (>15 drugs/month)** who attend outpatient consultations in order to **improve the prescription** of polymedicated patients and increase the presence of the pharmacist in outpatient consultations.



### Material and methods:

A web application named VIGÍA was developed (Viewer of Potentially InAdequate Pharmacotherapeutic Groups). It can **calculate adherence** to treatment according to pharmacy dispensing record and **detect inadequacies in pharmacotherapy**: duplicities, prescribing cascades, drugs with low therapeutic value, drugs that prolong the QT-interval and drugs contributing to anticholinergic burden, giving a score named Potential Inadequacy Index (PII).



| Potential Inadequacy Index (PII) |            |
|----------------------------------|------------|
| Duplicity                        | 1 point    |
| Low therapeutic value            | 1 point    |
| Prescribing cascades             | 0,5 points |
| QT interval prolongation         | 0,5 points |
| Anticholinergic burden           | 0,5 points |

VIGIA can filter patients by consultation date. Doctors have the reviews available online with the pharmacist recommendations, being able or not to modify the prescription at their choice.



PII before and after the study was calculated, comparing the means through Student's t-test for two means of the same population (two tails, significance at 5%).

### Results:

After a study period of **120 days**, we elaborated **486 review reports** from rheumatology and digestive consultations, achieving to **reduce the PII score from 1.58 to 1.46**, and **average number of medications went from 18 to 17.3**. Student's t test for the PII value before and after the study period was significant ( $p < 0.05$ ).



| Inadequacies                                 | Before pharmacist review | After pharmacist review |
|--|--------------------------|-------------------------|
| Duplicities                                  | 0.84                     | 0.75                    |
| prescribing cascades                         | 0.15                     | 0.13                    |
| drugs with low therapeutic value             | 0.31                     | 0.28                    |
| drugs that prolong the QT interval           | 0.33                     | 0.33                    |
| drugs contributing to anticholinergic burden | 0.41                     | 0.38                    |
| PII  | 1.58                     | 1.46 ** ( $p < 0.05$ )  |
| Average number of medications                | 18                       | 17.3                    |

### Conclusion and relevance:

Review of polymedicated patients by the pharmacist seems to reduce inadequacies of their pharmacotherapy. This PII score, made up of different situations considered to be at risk, can give an idea of the benefit of its reduction, not only in terms of patient safety but also economic, by reducing the average number of drugs.

