OPAT has significantly increased since the implementation in 2015 of HaH unit. This increase was largely due to the versatility of one daily OPAT administration, advances in vascular access and infusion devices, high acceptance by patients and healthcare professionals. Proving also decreased cost, safety and efficacy in a large number of infectious diseases.¹ In 2018, an OPAT working group at HaH unit was formed to optimize intravenous antimicrobial (IA) therapy, developing therapeutic protocols, and improving OPAT administration procedures at the patient’s home.

### AIM and OBJECTIVES

Assessing the importance of integrating a pharmacist into the HaH OPAT working group to optimize parenteral antimicrobial therapy.

### MATERIAL and METHODS

Bibliographic review and analysis of summary of products characteristics of IA therapy existing in the hospital to evaluate the properties, dosage, dose, administration routes and stability after reconstitution and/or dilution.

Assessment of patients profile treated with OPAT at the HaH during the first semester of 2017 and identification of the main differences compared to patients admitted to the conventional medicine service who refused to be admitted to the HaH during the same period.

### RESULTS

The literature review allowed the elaboration of a summary table with the most relevant information: reconstitution, dilution, stability, administration routes, incompatibilities, interactions and alerts.

Table 1 – Example of relevant information collected for the stability of parenteral antimicrobial therapy used at Hospital Garcia de Orta

<table>
<thead>
<tr>
<th>Antibiotic</th>
<th>Brand</th>
<th>Reconstitution</th>
<th>Dilution</th>
<th>Administration</th>
<th>Stability</th>
<th>Incompatibility</th>
<th>Warnings</th>
<th>CADD® Amikacin solution</th>
<th>Isotonic pump</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amoxicillin</td>
<td>GNC Limited company, UK 100 mg</td>
<td>10 mL, WFI</td>
<td>5% Glucose with pH range 4.2</td>
<td>8h room temperature and 24h in the refrigerator</td>
<td>Stability of 10 days kept in the refrigerator (2°C to 8°C)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Special Use Authorization</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In April 2018, HaH therapeutic protocols were implemented according to IA selection and administration routes, as well as the use of programmable infusion devices that allow continuous or intermittent infusion according to the stability of each IA.

An assessment was made 6 months after the implementation of these measures demonstrating that the use of 3rd generation cephalosporins have been successfully substituted to 2nd generation in 30% of patients.

### CONCLUSION and RELEVANCE

The literature review contributed to optimize the selection and use of IA promoting its rational use, a fact proven by the decrease of 3rd generation cephalosporins use. Study of the administration routes and stability after reconstitution and/or dilution allows minimization of adverse effects. Therefore, the integration of a pharmacist into the HaH OPAT working group contributed to increase the effectiveness of OPAT and patient safety.

### REFERENCES