face many difficulties in providing age appropriate medicines regarding dose, suitability of the dosage form or excipient content. Compounding is the main solution.

REFERENCES AND/OR ACKNOWLEDGEMENTS
Acknowledgements to all pharmacy staff.
No conflict of interest.

3PC-049 IMIPENEM–CILASTATIN FORTIFIED EYE DROPS FOR THE TREATMENT OF CORNEAL ULCERS CAUSED BY CONTACT LENSES: DEVELOPMENT AND CHARACTERISATION
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10.1136/ejhpharm-2020-eahpconf.96

Background and importance Corneal ulcers are a common problem that may appear more frequently in patients with inappropriate use of contact lenses. Unfortunately, it can be difficult to diagnose; its cause can be elusive and the consequences of an error in diagnosis or treatment can be severe.

Aim and objectives To describe the development of 0.5% imipenem–cilastatin eye drops and to evaluate the effectiveness and safety of this master formula.

Material and methods In February 2019, a 41-year-old woman presented to the emergency department for severe pain in the right eye. Commercial eye drops (0.3% tobramycin and 0.5% moxifloxacin) were being applied. The ophthalmology department diagnosed an infiltrated corneal ulcer with an epithelial defect. Microbiological culture of the contact lenses was requested and Enterococcus faecalis and Achromobacter xylosoxidans were isolated. The antibiogram revealed sensitivity to β-lactams and resistance to tobramycin and quinolones. The ophthalmologist contacted the pharmacy service to select the most appropriate treatment, deciding on the development of 5% ceftazidime and 0.5% imipenem fortified eye drops (1 drop every 2 hours). A corneal scraping was also carried out where growth of Fusarium spp was found. Therefore, therapy was completed with 1% voriconazole (1 drop every 2 hours) and 5% natamycin (1 drop every 4 hours).

A bibliographic search was made in PubMed and in the Spanish Society of Hospital Pharmacy, focusing on organoleptic characteristics, stability and pH. Effectiveness and safety were evaluated in the medical history (Selene).

Results We manufactured 5 mg/mL imipenem–cilastatin eye drops from the vial for intravenous use and water for injection, working in a horizontal laminar flow cabinet and following the standardised work procedure. A 0.22 µm filter was used. We established stability at 2–8 °C for 2 days, protected from light. It was verified that a completely transparent liquid with pH 7 had been obtained.

Conclusion and relevance Imipenem–cilastatin 0.5% eye drops proved to be a novel alternative in the treatment of corneal ulcers caused by Enterococcus faecalis and Achromobacter xylosoxidans. It produced a rapid and intense antibiotic effect that resulted in a reduction in eye inflammation. It was also easy to apply, which facilitated therapeutic compliance and contributed to a shorter hospital stay. Its safety and tolerance profiles were adequate.

REFERENCES AND/OR ACKNOWLEDGEMENTS
No conflict of interest.

3PC-050 IMPORTANCE OF COMPOUNDING IN THE PAEDIATRIC HOSPITAL PHARMACY
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10.1136/ejhpharm-2020-eahpconf.97

Background and importance Paediatric pharmacy often faces a lack of commercially available medicines suitable or even licensed for use in children. Children cannot be regarded as small adults or as a homogeneous group in themselves. As a consequence, paediatric medicines should be appropriately designed for the target age group. Compounding is the main solution to this problem, so the compounding area becomes essential in this type of centre. Given the high number of requests for these formulations, including the most commonly used compounded preparations in the pharmacy formulary as standard preparations (SP) is a possible solution.

Aim and objectives To highlight the importance of compounding for obtaining child friendly dosage forms and formulations in a referral paediatric hospital.

Material and methods All SP included in the pharmacy formulary were identified and research was conducted to ensure that a suitable or licensed commercial product for paediatric patients was unavailable nationally and internationally. Using our compounding software, we quantified all SP made in 2017 due to the lack of a commercially available product and classified these according to their route of administration.

Results Our formulary included 99 SP compounded in our pharmacy department (table 1). Oral liquid compounded formulations (52) represented 35% of the total oral liquid drugs available in our formulary (148).

Abstract 3PC-050 Table 1

<table>
<thead>
<tr>
<th>Compounding form</th>
<th>Different active substances formulated</th>
<th>Prepared units per year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral liquid</td>
<td>62</td>
<td>8300</td>
</tr>
<tr>
<td>Solid</td>
<td>16</td>
<td>25000</td>
</tr>
<tr>
<td>Parenteral</td>
<td>12</td>
<td>1879</td>
</tr>
<tr>
<td>administration</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ocular topical</td>
<td>5</td>
<td>524</td>
</tr>
<tr>
<td>Topical</td>
<td>13</td>
<td>1535</td>
</tr>
<tr>
<td>Rectal</td>
<td>1</td>
<td>22</td>
</tr>
</tbody>
</table>

Table 2 describes the reasons for compounding our 99 SP.

Abstract 3PC-050 Table 2

<table>
<thead>
<tr>
<th>Commercially available with no child friendly formulation</th>
<th>Inappropriate excipient for children</th>
<th>Available for a different treatment indication</th>
<th>For stability/sterility requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>(dosage forms, administration volume, dosage form size)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>81</td>
<td>2</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

No conflict of interest.

No conflict of interest.
Conclusions and relevance The development of age-appropriate and acceptable paediatric dosage forms is a complex and challenging process, as it is necessary to consider children’s acceptability and preferences for different formulations as well as the use of adequate excipients in this population. In our hospital, about one-third of the oral liquid preparations, the most adequate in paediatrics, are SP.

REFERENCES AND/OR ACKNOWLEDGEMENTS
No conflict of interest.

**3PC-051**
CIRCUIT TO PREPARE AND CONDITION ORAL HAZARDOUS MEDICINES
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10.1136/ejhpharm-2020-eahpconf.98

Background and importance Current recommendations from the National Institute for Occupational Safety and Health (NIOSH) require hospitals to ensure the safety of hospital workers when handling hazardous drugs (HD).

Aim and objectives To design a circuit to prepare and condition oral HD in a pharmacy service (PS).

Material and methods The HD included in the hospital documented by the NIOSH were selected, as well as those that due to their structure, mechanism of action and toxicity were similar to some HD or that some dangerous characteristic reflected in their data sheet.

Using Farmatools (electronic PS prescription) and electronic medical record programmes, the HD were identified by adding HD or HD-RR (if reproductive risk) to their description, and recommendations for their preparation and administration were incorporated in the file for each HD (this information was integrated into the nursing pharmacological activity sheet where they register the medication administered to patients).

Labels were designed to identify HD boxes in the PS.

The following ‘observations on the dispensation’ were defined and included in Farmatools:
- Solid drugs: repackaged in blister, fractionated and repackaged in blister, dosed in capsule and repackaged in blister. Solid drugs administered by tube or for patients with swallowing problems: tablet packaged in syringe, crushed tablet and repackaged in syringe, powder repackaged in syringe, dosed and powder repackaged in syringe.
- Liquid drugs: solution/suspension repackaged in syringe.

A guide was prepared for the administration by tube or for patients with swallowing problems (possibility of disintegrating or diluting in water, volume and time required, need to crush, etc).

Results Identification and recommendations from the computer programmes have allowed the location of the HD treatments in the PS to dispense them prepared, and nurses can differentiate them when necessary. With the pharmaceutical validation of the prescription, the most appropriate pharmaceutical forms were adapted and the corresponding observation was selected for each prescribed HD. Generating a ‘treatment location list according to observations’, which facilitates Farmatools, has allowed PS personnel to determine the relationship, pharmaceutical form and conditioning of the prescribed HD that have to be prepared.

Abstract 3PC-052 Figure 1

Conclusion and relevance Changes in computer programmes have allowed the design of a circuit to prepare and condition oral HD and improve the safety of hospital workers.

REFERENCES AND/OR ACKNOWLEDGEMENTS
No conflict of interest.

**3PC-052**
HAZARDOUS MEDICINES IN A PAEDIATRIC HOSPITAL
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10.1136/ejhpharm-2020-eahpconf.99

Background and importance According to the European Commission, every year more than 20 million workers in Europe are exposed to carcinogenic, mutagenic, reprotoxic hazardous drugs, including cytotoxic drugs.

Aim and objectives To review the safety of handling hazardous drugs in our paediatric referral hospital, according to the national guidelines included in the ‘technical document on hazardous medicines, preventive measures for their preparation and administration’ (TDHM), published on 2016 by the Spanish National Institute for Safety and Hygiene at Work.

Material and methods Medicines included in our pharmacy formulary labelled as hazardous were identified, listed and classified into three groups according to the proposed model of the National Institute for Occupational Safety and Health (NIOSH). We categorised each group in two according to the route of administration (parenteral/oral). Those administered orally were divided according to their need for reconstitution or manipulation before administration. Also, we noted if drugs were currently prepared in the pharmacy department (PD).

Results (Figure 1).

Conclusion and relevance After analysing our hazardous medicines handling protocols, we found that there is still room for improvement. We describe the actions planned for each drug group:

A. Requesting compounded intravenous products to be stored in vials instead of ampoules would allow preparing them using enclosed systems.

B. Regarding the five parenteral route group (three hazardous medicines currently prepared by nurses), three could be prepared in the PD and, for the remainder, an accurate handling protocol could be developed to ensure utilisation of the enclosed systems for their preparation.