

**Results** 109 patients (43% men; 57% women) met inclusion criteria. Mean age was  $54 \pm 13.5$  years and mean BMI  $26.5 \pm 4.8$  kg/m<sup>2</sup>. 58.7% had Rheumatoid Arthritis, 19.3% Ankylosing Spondylitis, 1.8% Juvenile Idiopathic Arthritis, 16.5% Psoriatic Arthritis and 3.7% Psoriasis. 82% self-administered the pen, and 71% the syringe. The median pain with the syringe was 3 [interquartile range (IQR): 2–6] and with the pen was 4 [IQR: 2–5] ( $P = 0.008$ ). 65% reported the same pain with both devices. 35% reported differences in pain and most of them (71%) had much pain ( $>5$ ) with the pen and little pain ( $<5$ ) with the syringe.

There was a statistically significant association of pain with gender: women had more pain with the pen ( $P = 0.03$ ), but less with the syringe ( $p > 0.05$ ). There was no association with BMI, age or diagnosis. 59% preferred the pen, 25% the syringe, and 16% did not mind.

**Conclusions** An association of pain with pen device and female gender was found. However there was no association with BMI, age or diagnosis. Acceptance of the pen and self-administration were higher even though pain was greater, so it is necessary to maintain both devices to assure adherence.

No conflict of interest.

### OHP-038 EVALUATION OF QUALITY OF LIFE IN PATIENTS WITH MULTIPLE SCLEROSIS

doi:10.1136/ejhp-2013-000276.412

<sup>1</sup>MC Izquierdo Navarro, <sup>1</sup>C Matallana Martín, <sup>1</sup>V Martínez Santana, <sup>2</sup>MA Calleja Hernández, <sup>1</sup>AM López González, <sup>1</sup>MT Sánchez Sánchez. <sup>1</sup>Hospital Clínico Universitario, Pharmacy Department, Valladolid, Spain; <sup>2</sup>Hospital Virgen de la Nieves, Pharmacy Department, Granada, Spain

**Background** Several studies have evaluated quality of life (QoL) by filling in the EuroQoL-5D. In most of them, it is found that the two dimensions of EuroQoL-5D most associated with a poor QoL are pain/discomfort and anxiety/depression.

**Purpose** To find the dimensions of EuroQoL-5D that are more frequently associated with QoL in patients diagnosed with Relapsing-Remitting Multiple Sclerosis (RRMS).

**Materials and Methods** Observational, four-month, cross-sectional study (January–April 2012) to assess QoL in patients diagnosed with RRMS.

Sex, age and Expanded Disability Status Scale (EDSS) were gathered from Pacientes Externos (Farmatools programme 2.4 version).

Patients who filled in the EuroQoL-5D returned it to the pharmacy service.

**Results** 84 patients were included; 62 completed the questionnaire.

Mean age was  $36.94 \pm 8.67$ . 65.47% of patients were women, 34.52% were men. The mean EDSS was  $2.03 \pm 1.50$ .

The survey results of the questionnaire broken down by items were:

Abstract OHP-038 Table 1

|                           |  | Number | %    |
|---------------------------|--|--------|------|
| Mobility                  | I have no problems walking                             | 42     | 67.7 |
|                           | I have some problems                                   | 20     | 32.3 |
|                           | I am confined to bed                                   | 0      | 0    |
| Personal Care             | I have no problems with self-care                      | 56     | 90.3 |
|                           | I have some problems                                   | 6      | 9.7  |
|                           | I am unable to wash or dress myself                    | 0      | 0    |
| Usual activities          | I have no problems with performing my usual activities | 42     | 67.7 |
|                           | I have some problems                                   | 20     | 32.3 |
|                           | I am unable to perform my usual activities             | 0      | 0    |
| Pain/discomfort (P/D)     | I have no P/D  | 28     | 45.2 |
|                           | I have moderate P/D                                    | 33     | 53.2 |
|                           | I have extreme P/D                                     | 1      | 1.6  |
| Anxiety/Depression (A/De) | I am not anxious or depressed (A/De)                   | 28     | 45.2 |
|                           | I am moderately A/De                                   | 28     | 45.2 |
|                           | I am extremely A/De                                    | 5      | 9.6  |

The mean value obtained in the questionnaire was  $0.71 \pm 0.19$ .  
**Conclusions** As has been shown in previous studies, the two dimensions of EuroQoL-5D that most affected the QoL were pain/discomfort and anxiety/depression.

No conflict of interest.

### OHP-039 EXPANDING THE INVOLVEMENT OF PHARMACY SERVICES VIA COMPUTERISED MEDICAL FILES

doi:10.1136/ejhp-2013-000276.413

<sup>1</sup>N Mansur, <sup>1</sup>T Gruenewald, <sup>2</sup>E Sporta, <sup>3</sup>M Shindler, <sup>3</sup>D Lavi. <sup>1</sup>Beilinson Hospital, Pharmacy services, Tel Aviv, Israel; <sup>2</sup>Beilinson Hospital, Computer Services/Elad Software Systems, Tel Aviv, Israel; <sup>3</sup>Beilinson Hospital, Computer Services, Tel Aviv, Israel

**Background** Pharmacists are essential for the safe use of medicines, and have a very important role in providing comprehensive drug management. Their crucial responsibilities in medicines management and promoting quality control necessitate developing a computerised tool to improve their communication with other medical team members.

**Purpose** To develop a pharmacist interface, as a part of the computerised medical file 'Chameleon', to display all the information required by pharmacists for preparing and documenting their intervention.

**Materials and Methods**

Step 1: mapping the processes required for implementation of the system

Step 2: preparing a dedicated tool with two components:

1. A pharmacist interface: a screen designed to show all related data required for a clinical pharmacist to form his opinion regarding the medicinal treatment. The pharmacist intervention is documented in an assigned field 'pharmacist follow up', which is also displayed beside the 'physician follow up' field in the physician interface to save switching screens.
2. The pharmacy services as an advisory ward: the pharmacists' team is defined as an advisory ward that can be invited by the physicians. Requests for advice are displayed in a pharmacist work list.

**Results** The pharmacist interface was integrated into the 'Chameleon' and is used regularly. It is a convenient tool that displays all the information required for a professional pharmacist's opinion, and improves medical team communication by allowing this opinion to be viewed by other staff members. There is an ongoing process of assimilation and dissemination of the computerised availability of pharmacy advisory services. There are two topics in development: (a) physician feedback and reference regarding the pharmacist advice, and (b) the ability to monitor all revised cases.

**Conclusions** The computerised tool satisfies the pharmacist work process and improves communication with the medical staff. The final tool will generate statistics about its contribution to medical personnel and improve the quality of pharmacy services in this medical care hospital.

No conflict of interest.

### OHP-040 FINANCIAL ASSESSMENT OF INTRAVENOUS MIXTURE PREPARATION

doi:10.1136/ejhp-2013-000276.414

M Uriarte, MJ Agustín, V Gimeno, I Larrodé, O Pascual, P Palomo, MR Abad. Miguel Servet Hospital, Pharmacy Service, Zaragoza, Spain

**Background** Intravenous treatment is expensive so we studied two different working options.

**Purpose** To evaluate the savings that preparing intravenous mixtures centrally in the pharmacy service hypothetically made in 2011 in our hospital.

**Materials and Methods** We compared the real observed costs incurred by preparing the intravenous mixtures in the pharmacy service and the expected cost if the mixtures were prepared on the wards by using complete vials for each patient and dose, discarding the remainder of the dose.

We have focused the study on the intravenous mixtures area selecting those drugs which need to be prepared individually for the correct dose and those used in the paediatric and neonatology area due to the low dose needed and its variability; however we excluded drugs used in oncology and nutrition from this study.

**Results** During 2011, 4053 intravenous mixtures were prepared.

The centralised preparation of liposomal amphotericin B (1017 treatments) made an estimated hypothetical saving of €15,226; infliximab preparation (894) hypothetically saved €122,856.

Romiplostim (234) generated savings of €59,551 and tocilizumab (174) €11,280.

In the neonatology area the standard preparation of 200 IU epoetin beta from NeoRecormon 500 IU hypothetically saved €603 with 1623 treatments.

Agalsidase alfa, a high financial impact drug used in Fabry's disease, hypothetically made savings of €62,253 with 111 preparations.

Total savings generated by centralising the preparation of intravenous mixtures with these 6 drugs amounted to €271,770.

The median saving exceeded €67/treatment and €744/day. We achieved this situation by sharing vials and using the dose remaining from one treatment to prepare the next one.

**Conclusions** Centralization of intravenous mixtures allows us to increase efficiency and generate important financial savings, but in addition to increase the quality of healthcare, because it also involves us in pharmacotherapeutic monitoring and avoiding medicines errors. This practise also ensures drugs are handled correctly, which helps maintain their physicochemical and microbiological stability.

No conflict of interest.

#### OHP-041 FORMULARY DECISION-MAKING FOR BIOSIMILARS: CONSIDERATIONS FOR HOSPITAL PHARMACISTS

doi:10.1136/ejhp-2013-000276.415

<sup>1</sup>L Green, <sup>2</sup>Krämmer. <sup>1</sup>Amgen Inc., Scientific Affairs, Thousand Oaks, USA; <sup>2</sup>Johannes Gutenberg-Universität Mainz, Department of Pharmacy, Mainz, Germany

**Background** It has been 6 years since the first biosimilar was approved for use in the European Union (EU). Given the likelihood that biosimilar monoclonal antibodies will be approved in Europe in the near future, it is timely to review the formulary selection criteria for biologicals and biosimilars.

The European Medicines Agency (EMA) has issued guidelines that define the regulation of biosimilars in Europe and recommend approaches to establish biosimilarity. However, several questions regarding the assessment of biosimilars for formulary inclusion remain unanswered, including those related to manufacturing and drug supply.

**Purpose** To aid hospital pharmacists in developing evaluation criteria for biosimilars under consideration for formulary inclusion.

**Materials and Methods** EU and United States biosimilar legislation, peer-reviewed literature, public data, EMA guidelines and formulary decision-making practises were reviewed to identify key considerations and evaluation criteria for including biosimilars in a formulary.

**Results** Biosimilars may differ in certain characteristics from their reference product and, therefore, require more extensive evaluation during formulary consideration than small-molecule generics. Recent drug shortages and stockouts throughout Europe underscore the need to evaluate manufacturer reliability and supply chain considerations in formulary reviews of biosimilars. Indications

approved for the reference product may not be approved for the biosimilar and should be considered during formulary review. Therefore, we propose a checklist that includes criteria for product evaluation and manufacturer-related parameters, such as differences in administration devices, drug availability, inventory turns, history of shortages, recalls, inventory levels, manufacturing redundancy and supply chain security.

**Conclusions** Ensuring a stable, reliable supply of quality products is a critical component of healthcare. Product, manufacturer, and pharmacoeconomic information should be considered in formulary decision-making for biosimilars. A checklist of key product- and manufacturer-related information will be promoted through evaluation of biosimilars, permitting educated decisions regarding formulary inclusion.

No conflict of interest.

#### OHP-042 HEPARIN-INDUCED THROMBOCYTOPENIA (HIT): PRE-TEST CLINICAL SCORE (4TS) TO JUSTIFY DANAPAROID PRESCRIPTIONS? WHAT ELSE?

doi:10.1136/ejhp-2013-000276.416

G Baussant, F Loeuillet-Moreau, A Le Joubiou, B Frimat. *Lens Hospital Center, Pharmacy, Lens, France*

**Background** HIT is a prothrombotic adverse drug reaction caused by heparin and requires an alternative anticoagulant: danaparoid. Because of its cost and the specific indication, the physicians must request two laboratory tests with prescriptions (LT: Platelet Aggregation Test, Anti PF4H) and a 4Ts assessment, in order to have danaparoid dispensed.

**Purpose** To find out whether prescriptions are justified and if we can use the 4Ts score as a basis for HIT detection.

**Materials and Methods** We analysed 5 years of prescriptions: 4Ts score results (the 4Ts assessment is used to arrive at a high (score 6 or more), intermediate (score 4–5) or low (score 3 or less) probability of HIT).

Of 72 hospitalised patients followed (LT and/or prescription), 34 had a LT score without danaparoid prescription (32 negative and 2 positive results). 38 had a prescription that had been dispensed. 32 patients of these 38 had a 4Ts score. Looking at the 4 Ts' results:

- 3.12% (1/32) patients had low score (LT not requested).
- 62.5% (20/32) came into the intermediate category (LT: 8/20 negative – 4/20 positive – uncertain 3/20 – not requested 5/20).
- 34.4% (11/32) came into the high-score group (LT: 4/11 negative – 4/11 positive – 1/11 uncertain – not requested 2/11).

In 60.5% of the cases (23/38), the prescription was justified by a high score or a positive LT test or HIT diagnosed before. In 39.5% of the cases (15/38), a danaparoid prescription wasn't justified: 7 patients still received danaparoid after negative LT results and 8 without a 4Ts score.

**Conclusions** In our hospital, positive predictive value doesn't match like it's written in the literature. The 4Ts score doesn't seem to favourably correspond with HIT laboratory testing results. A new scoring HIT Expert Probability Score is right now in validation. Will it be more suitable for our practise?

No conflict of interest.

#### OHP-043 HIP AND KNEE PROSTHESES IN REPLACEMENT SURGERY: REVIEW OF USE

doi:10.1136/ejhp-2013-000276.417

<sup>1</sup>A Luna Higuera, <sup>1</sup>M Toca Muñoz, <sup>2</sup>Martín Rodríguez, <sup>3</sup>S García Agudo, <sup>1</sup>IM Muñoz Castillo. <sup>1</sup>HRU Carlos Haya, Pharmacy, Malaga, Spain; <sup>2</sup>HRU Carlos Haya, Traumatology and Orthopaedic Surgery, Malaga, Spain