

11SG-024 **BIOLOGICAL DRUGS IN THE TREATMENT OF IMMUNE MEDIATED INFLAMMATORY DISEASES: MONITORING OF PRESCRIPTION APPROPRIATENESS**

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**Background and importance** The introduction of biological drugs in clinical practice represents a new goal for the treatment of highly disabling inflammatory immune mediated diseases. Our region adopted the guidelines for the use of biological drugs in the rheumatology, dermatology and gastroenterology departments; specialists need to draw up the therapeutic plan to implement the prescriptive appropriateness. The Italian Drug Agency has issued a position paper recommending the prescription of biosimilars where possible.

**Aim and objectives** To evaluate the prescriptive trend and appropriateness of biological drugs for inflammatory immune mediated diseases in our health district also to implement the use of biosimilars.

**Material and methods** We analysed the therapeutic plan for biological drugs received by the territorial pharmacy of our health district (about 164 000 inhabitants). We extracted from the company database data relating to biological drugs dispensed in the period January 2018 to August 2019 and subsequently processed using an electronic worksheet, paying attention to therapeutic shifts and biosimilar drugs.

**Results** 556 patients underwent therapy with biological drugs, of whom 61.15% had rheumatological diseases, 29.32% had dermatological diseases and 9.53% had gastrointestinal diseases. The number of patients increased by 6.64% in the January–August 2019 period compared with 2018; similarly, the use of these medicines in terms of units in the first eight months of 2019 increased by 22.72% compared with the same period in 2018. For 11.15% of patients, there was a shift to another biological drug; in 88.71% of cases, the change was attributable to therapeutic ineffectiveness while the remaining 11.29% were passed to the relative biosimilar ( $\Delta\%$  2019–2018 = +33.33%).

**Conclusion and relevance** Access to biologics has led to a significant improvement in patients' quality of life. Given the complexity of immune mediated inflammatory pathologies, identification of the correct therapy represents a critical issue at the first diagnosis. The use of biosimilar drugs increased during the analysis period; we therefore propose to promote the prescriptive appropriateness and to start a biosimilar drug prescription awareness programme, according to regional and national legislation, with a view to the sustainability of the health system, guaranteeing effectiveness, safety and quality for patients. At the same time, therapeutic efficacy will be evaluated in patients receiving biosimilars.

**REFERENCES AND/OR ACKNOWLEDGEMENTS**

**Conflict of interest** No conflict of interest

11SG-025 **BUDGET IMPACT ANALYSIS OF BIOSIMILAR ADALIMUMAB VERSUS REFERENCE ADALIMUMAB**

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**Background and importance** Biological treatments represent a great opportunity but their increasing and widespread use is causing sustainability problems in health systems due to their high cost. Emergence of biosimilars can lead to significant savings for health systems.

**Aim and objectives** The aim of this study is to analyse the impact of the introduction of the biosimilar adalimumab (BA) (Hyrimoz) in three different scenarios, to choose the most convenient.

**Material and methods** Firstly, we took into account all patients treated with the reference adalimumab (RA) between 2013 and 2018 to calculate the average incidence for every quarter. Also, we calculated prevalence on 31 December 2018. We then made a quarterly consumption forecast for the next three years (2019–2021). Secondly, we created an excel model for three possible scenarios: (1) all patients treated with RA, (2) the introduction of BA only in new patients with old patients continuing with RA or (3) all patients treated with BA. In every scenario, we calculate costs of buying adalimumab in each year. Finally, to assess the robustness of the data, different deterministic sensitivity analyses were conducted changing  $\pm 10\%$  the three variables considered to have more impact in our model (price of adalimumab, incidence and prevalence). Also, an extreme analysis was performed for the best and worst conditions.

**Results** Despite the increasing costs in all scenarios due to a growing incidence, costs would vary from 4 million in 3 years (scenario 1), 3.5 million (scenario 2), to 2.7 million (scenario 3). The choice of the different scenarios would mean savings of 11.5–31.8%, depending on the number of patients who were treated with BA. Sensitivity analyses showed that the cost of adalimumab was the most important factor in the final cost results. Analysis of extreme conditions showed a 20% variation from base case with savings of about 11.5% (scenario 2) and 30% (scenario 3). The most convenient was scenario 3 (change patients already treated with RA and treat new patients with BA).

**Conclusion and relevance** Despite scenario 3 providing the greatest savings (making it possible to treat a large number of patients), the authorities decided not to change patients currently treated with RA, losing savings of about 20.33%.

**REFERENCES AND/OR ACKNOWLEDGEMENTS**

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11SG-026 **MULTIDISCIPLINARY DOCTOR–PHARMACIST COLLABORATION IN THE MANAGEMENT OF REFUNDS POLICIES FOR OPHTHALMIC DRUGS AT SANT'ANDREA HOSPITAL, VERCELLI**

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**Background and importance** The study, launched in November 2018 and still ongoing, was conducted by the ophthalmology department and the hospital pharmacy, involving all patients undergoing treatment with ranibizumab. This collaboration included weekly meetings, during which pharmacists presented data relating to the therapies and discussed problems encountered.

**Aim and objectives** We started this retrospective prospective study about ophthalmic treatments to verify any non-refunds or incorrect prescriptions and to guarantee a better allocation of available resources and prescriptive appropriateness.

**Material and methods** We created an Excel file to compare data extracted from AIFA's registers and medical records, and to verify the correct request for reimbursement of prescribed treatments.

**Results** 400 prescriptions were paper based (not web based as should be the case) with no AIFA registration. Use of paper based AIFA requests: failure to register the new therapy in patients already signed in for other diseases or drugs, failure to transfer four patients from other centres. Of 179 patients treated, 175 dispensations were identified and registered ex novo, involving: 43 requests for reimbursement (obtained from paper based requests), registration of four patients and inclusion of six previously unsolicited treatments. During meetings, incorrect data from a few patients emerged (personal data or treated eye) with consequent correction in six medical records and registers. All folders were registered on the AIFA platform with consequent request of 43 refunds as payment by result, equal to 26 337 586€ (1 531 255€ derived from 25 dispensing requests not previously made and emerged because of the retrospective control carried out in November 2019).

In the Official Gazette No 45 (23 February 2017), a capping agreement was introduced, for each eye, of a refund of the drug's cost following the seventh treatment in naïve patients. The team agreed to continue monitoring prescriptions and this resulted in a saving of about 40 500€ from the request for 90 refunds as a bonus. On 8 October 2019, the AIFA introduced a simplified multi-drug monitoring register so the pharmacist does not have to dispense drugs and there are no refunds.

**Conclusion and relevance** Collaboration between clinicians and pharmacists is ongoing, monitoring the correct transfer of patients from the old to the new register. It can be concluded that a figure dedicated to the management of drugs can guarantee clinical and economic drug administration, ensuring greater appropriateness and better allocation of resources.

## REFERENCES AND/OR ACKNOWLEDGEMENTS

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### 11SG-027 CARBON FOOTPRINT OF A STERILISATION UNIT

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**Background and importance** Preparation of the Greenhouse Gas Emission Balance (GGEB) has become mandatory in hospitals but is not yet carried out in healthcare services.

**Aim and objectives** The objectives were to carry out the GGEB of a sterilisation unit, to calculate the carbon cost of a central sterile services department (CSSD) and to propose improvements to limit these emissions.

**Material and methods** Three aspects were selected from a document carried out on one of the establishments of our hospital group (GH): environment, staff and equipment. The data relating to the carbon cost of staff transport, waste produced, consumables used, equipment maintenance and energy consumption, as well as the water consumed by the unit

were calculated or measured and related to 1 year of activity. They were then associated with the carbon emission factor created to produce the GH GGEB. The carbon balance obtained was applied to the CSSD national production indicators (S point).

**Results** The GGEB unit was 88 tons of CO<sub>2</sub> produced per year. Energy (electricity, steam from the Parisian District Heating Company (PDHC) network) and water consumption accounted for 75% of emissions and equipment maintenance for 18%. Waste and staff transport generated 3.5% and 3.0% of the carbon footprint, respectively. The carbon cost related to consumables could not be defined due to a lack of information from the main suppliers. In 2019, the unit treated 7 565 710 S points, so the treatment of 1 S point released 12 g of CO<sub>2</sub>.

**Conclusion and relevance** Energy and water constituted the first emitting item in this balance sheet, which remained underestimated due to a lack of data. The methodology remains to be validated and the emission factors used to be confirmed, in the absence of a bibliography on this subject. Nevertheless, this work can serve as a basis for calculating the carbon cost of any surgical operation. Finally, to limit these emissions, the use of the PDHC network and the installation of a chilled water system on the autoclaves have been implemented in the unit. This work initiates a reflection on the carbon footprint of this activity and the development of actions to reduce these emissions.

## REFERENCES AND/OR ACKNOWLEDGEMENTS

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### 11SG-028 BECOMING A GRADUATE HOSPITAL PHARMACIST: A FRENCH NATIONAL SURVEY

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**Background and importance** Currently, in France, pharmacy students undergo 5 years of pharmacy studies at the university. To be able to work in a hospital pharmacy, they must complete 4 additional years of specialisation 'residency'. In Europe, the Common Training Framework (CTF), drawn up by the European Association of Hospital Pharmacy (EAHP), recommends this specialisation to improve the quality of pharmacy education and thus comply with the European Statements of hospital pharmacy.

**Aim and objectives** The objectives of our study were: (1) to assess the areas of activities of pharmacists in French hospitals and (2) to describe their training during the residency.

**Material and methods** A 52 question survey was written by the French National Federation of Hospital Pharmacy Residents (FNSIP-BM). It was sent to 297 graduate pharmacists from March 2019 to June 2019. The questions concerned their type of internship completed during the 4 years of specialisation, their training and also their first job.

**Results** Over the study period, 154 (51%) graduate pharmacists responded to the survey. Among them, 137 (89%) were hospital pharmacists and 17 (11%) worked in pharmaceutical industries or health agencies. For their first job, pharmacists worked mainly in various departments as clinical pharmacists