and trastuzumab. Infliximab biosimilar was introduced in September 2015 and rituximab and trastuzumab in August 2018. The results were analysed with Excel.

**Results** We identified 203 patients treated with infliximab, 16.2% for rheumatoid arthritis (RA) and its derivatives, 80.3% for inflammatory bowel disease (IBD) and 3.5% for other pathologies. A total of 54.7% of patients were treated with a biosimilar, 46.8% as the initial treatment and 7.9% as a switch. All (100%) switches were in patients treated for IBD.

Rituximab was used in 158 patients, 60.8% for different types of haematological cancer, 13.9% for RA, 5.1% for lupus and 20.2% for other diseases. A total of 51.3% of patients were treated with a biosimilar, 36.7% as the initial treatment and 14.6% as a switch. Most (65%) of the switches were found in haematological pathologies. Subcutaneous BRP were given to 29.7% of the total patients.

There were 77 patients treated with trastuzumab, 92.2% for breast cancer and 7.8% for gastric cancer. Of the 71 patients with breast cancer, 59.1% were treated with a biosimilar, 22.5% as the initial treatment and 36.6% as a switch. The remaining 40.9% were treated with subcutaneous BRP. In gastric cancer, 100% of patients were treated with a biosimilar, 22.5% as the initial treatment and 36.6% as a switch. All (100%) switches were in patients treated for breast cancer and 7.8% for gastric cancer. Of the 71 patients with breast cancer, 59.1% were treated with a biosimilar, 22.5% as the initial treatment and 36.6% as a switch. The remaining 40.9% were treated with subcutaneous BRP.

**Conclusion and relevance** The use of biosimilar drugs is more consolidated in new patients and switching is a slower dynamic. The arrival of new biosimilars in the coming years will increase their use. Some medical specialties are more likely to use biosimilar drugs. The presence of a subcutaneous BRP can make the use of biosimilar drugs more difficult as a switch or in new patients as physicians will prescribe a subcutaneous BRP instead of an intravenous biosimilar.

**REFERENCES AND/OR ACKNOWLEDGEMENTS**

https://ejhp.bmj.com/content/26/Suppl_1/A133.2

No conflict of interest.

**4CPS-158**

**PRESCRIBING TRENDS OF ADALIMUMAB AND ETANERCEPT BIOSIMILAR DRUGS IN A THIRD LEVEL HOSPITAL**

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**Background and importance** Adalimumab and etanercept are two of the most used biologic drugs worldwide in a variety of chronic diseases. The introduction of biosimilar drugs (BS) for both has revolutionised the market and may enable more patients to access these treatments.

**Aim and objectives** To measure the use of etanercept and adalimumab biosimilars since their introduction in a third level hospital.

**Material and methods** We studied the number of patients treated with biological reference products (BRP) and with their corresponding biosimilars since the introduction of etanercept (April 2018) and adalimumab BS (January 2019) in our hospital until September 2019. The results were analysed with Excel.

**Results** There were 211 patients treated with etanercept, 36.7% for spondyloarthritis, 35.1% for rheumatoid arthritis, 14.8% for psoriatic arthritis and 13.4% for psoriasis. In 41.7% of patients, treatment was with a BS the, 38.4% as a new treatment and 3.3% as a switch. Of the 3.3% who switched, 43% were patients with psoriasis, 29% with psoriatic arthritis, 14% with rheumatoid arthritis and 14% with spondyloarthropathy. We found that 4.9% of the total number of patients started with the BRP.

We identified 452 patients being treated with adalimumab, 46.2% for arthropathies, 31.0% for inflammatory bowel disease, 16.4% for psoriasis and 6.4% for other diseases. In 18.9% of patients, treatment was with a BS, 17.0% in new patients and 1.9% as a switch. Every switch was done in psoriatic patients. We found that 1.3% of the total number of patients started treatment with the BRP.

**Conclusion and relevance** The use of the biosimilars of etanercept and adalimumab was highly accepted when initiating a new treatment and switching is starting to increase, especially in psoriasis. It is important to design a strategy that could enhance switching from the BS to the biosimilar drug in pathologies other than psoriasis where patients have chronic conditions and will need treatment for a long period of time.

**REFERENCES AND/OR ACKNOWLEDGEMENTS**

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**4CPS-159**

**MANAGEMENT OF COMMUNITY ACQUIRED PNEUMONIA AT A TERTIARY CARE TEACHING HOSPITAL**

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**Background and importance** The implementation of community acquired pneumonia (CAP) guidelines has led to shortening the duration of antibiotic treatment, reducing costs and improving pneumonia related morbidity and mortality. Adherence to CAP guidelines is varied in multiple international studies. This study aimed to evaluate the rate of adherence to the 2007 guidelines from the Infectious Diseases Society of America (IDSA) and the American Thoracic Society (ATS) for the diagnosis and treatment of CAP in hospitalised patients. We also wanted to identify patient related factors that may influence adherence to treatment guidelines at our tertiary care teaching hospital.

**Aim and objectives** The aims of the study were to evaluate adherence to IDSA guidelines for the management of CAP.

**Material and methods** Patients admitted with CAP had their charts prospectively reviewed from 1 April to 31 July 2018. Patients were eligible to participate in the study if they were >18 years of age and the admitting diagnosis was CAP. Demographic data, comorbid conditions, smoking history, antibiotic culture and sensitivity, duration of antibiotic therapy, relevant laboratory data and diagnostic procedures were retrieved from the medical records. The proportion of patients who were treated according to CAP guidelines were recorded and compared with the most widely referenced guideline, IDSA/ATS for the treatment of CAP.

**Results** During the study period, 138 eligible patients were identified, 51.4% were women, mean age was 59 ± 20 years and 49.3% had diabetes. Only 8% of patients received a
single initial empirical antibiotic whereas 92% received combination antibiotics. A total of 122 patients received appropriate initial empirical therapy on the first day of hospitalisation: 9.4% of patients received broad spectrum antibiotics that were not warranted. Eighty-one (58.7%) of the patients had a change in antimicrobial regimen during hospital admission. Overall appropriateness of CAP management based on the composite of initial empirical treatment, duration of treatment and switching antibiotics according to culture and sensitivity during the admission period was 58.0%. Severe respiratory illness was the most significant independent risk factor.

Conclusion and relevance The study showed that adherence to CAP guidelines for an initial empirical therapy on the first day of hospitalisation was optimal whereas overall adherence to CAP management throughout the hospital stay was low.

REFERENCES AND/OR ACKNOWLEDGEMENTS
No conflict of interest.

4CPS-160 MANAGEMENT OF DRUGS IN PATIENTS WITH SWALLOWING DIFFICULTIES IN A PUBLIC RESIDENTIAL CARE HOME: ROLE OF THE HOSPITAL PHARMACIST
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Background and importance Institutionalised people in a nursing home have a profile characterised by advanced age, multiple pathologies and many also suffer from swallowing problems. This not only affects nutrition but can also affect many treatments, as patients may need their medicines manipulated, or with altered administration. It is vital to provide compounding pharmaceutical preparations to these patients. We conducted a prospective longitudinal study in a public residential care home and to establish possible complications related to swallowing and medication manipulation.

Aim and objectives The aim of the study was to assess medication administration to patients with swallowing problems in a public residential care home and to establish possible commercialised alternatives or develop compounding pharmaceutical preparations.

Material and methods A prospective longitudinal study was performed (1 month) in a public nursing home. Data collected were: patients with swallowing difficulties and oral treatments which had to be subdivided or crushed for administration, nasogastric tube use, age, sex, number of drugs and pharmaceutical forms. We also did a literature search for drugs and use in this manner (small therapeutic windows, slow release, enteric coats, etc) to look for alternatives that might facilitate administration and in many cases the stability of the drugs under these conditions is not known.

Aim and objectives The aim of the study was to evaluate medication administered to patients with swallowing problems in a public residential care home and to establish possible commercialised alternatives or develop compounding pharmaceutical preparations.

Results Eighty-five institutionalised elderly patients lived in the nursing home and 20% had dysphagia or difficulty taking their oral treatment. Mean age of the patients with swallowing difficulties was 90.35 (SD=4.27) years. None had a nasogastric tube. Fifty-three different medications were identified and 53) had an alternative of the same composition but of a different pharmaceutical form commercialised as syrups, oral solution, drops or powder. In 47 cases the drugs could be crushed and diluted and administered immediately. In five cases the drugs were being crushed and should not have been. The pharmacist proposed other alternatives, such as drinking

parenteral ampoules (5/53), sublingual administration (1/53) or elaborate compounding pharmaceutical preparations (8/53). The possibility of preparing eight compounding pharmaceutical preparations was facilitated.

Conclusion and relevance Most of the treatments that were analysed did not facilitate swallowing and were manipulated, which can provoke errors in medicine administration. Hospital pharmacists should assess the suitability of compounding medication formulations and propose solutions to guarantee stability and safety of medicines.

REFERENCES AND/OR ACKNOWLEDGEMENTS
No conflict of interest.

4CPS-161 PHARMACIST INTERVENTIONS IN A HOSPITAL AT HOME UNIT
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Background and importance Hospital at home (HaH) units provide hospital level care at home to patients who would otherwise remain hospitalised. A HaH unit is hospital based with a multidisciplinary team in which the pharmacist role is essential to provide pharmaceutical care in potential medication related problems.1 Our HaH unit was started in 2015 and 1340 patients were admitted up to August 2019.

Aim and objectives To analyse pharmacist interventions (PIs) in HaH admitted patients.

Material and methods This was a retrospective study conducted between December 2018 and August 2019. All patients admitted to the HaH unit were included, except those <65 years of age or with <5 drugs prescribed. PIs made by email and by electronic notification were recorded. Telephone PIs were excluded. PIs were classified by intervention type (medication review, pharmacokinetics monitoring, prescription validation, information and therapeutic reconciliation), reason for intervention and therapeutic recommendation.

Results During the study period there were a total of 80 PIs in 53 patients from a total of 425 patients admitted to the HaH unit. Most patients (63.5%) had more than 10 drug prescriptions, and mean age was 74.7 years.

The major PI related to pharmacokinetic monitoring (45.0%), medication review (28.8%) and prescription validation (23.8%). The principal pharmaceutical recommendations were related to dose adjustment, low therapeutic index (34.6%), blood analysis for monitoring (23.5%) and alterations in prescribed drugs (16.0%). Thirteen cases of severe interactions were detected, of which 69.2% led to drug alteration and 30.8% to de-prescription. The acceptance rate of the pharmacist recommendations was 96.3%.

Conclusion and relevance PIs were mainly in polyanalgesed patients, reinforcing the need for pharmaceutical care in these high risk patients. Although the study population was small, compared with the total number of patients admitted to the HaH, the PIs showed a high impact, reducing potential harm to patients (antibiotics with low therapeutic index, detection of severe or moderate interactions). The high acceptance rate of the interventions by physicians revealed their importance and significance. Participation of a pharmacist in the HaH team contributes to improve patient safety and avoids drug-related problems.