

**GRP-107 IS WEAKNESS IN OLDER PATIENTS CAUSED BY INAPPROPRIATE DRUG USE?**

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**Background** The use of potentially inappropriate medicines (PIMs) is common among the older population. Inappropriate drugs as well as polypharmacy expose older people to a greater risk of adverse drug reactions, and may cause hospitalizations. Only a few studies have examined the potential influence of the use of PIMs on functional status, cognitive status, quality of life, visual acuity and handgrip strength in older people.

**Purpose** To evaluate the relationship between the use of PIMs and weakness measured by functional status, cognitive status, quality of life, visual acuity and handgrip strength.

**Materials and Methods** A longitudinal study of patients aged  $\geq 65$  years admitted to an Acute Medical Ward in Denmark. Data was collected from October–December 2011, at admission and at a follow-up visit 30 days after discharge. Data included information on social status, home care, functional status, cognitive status, handgrip strength, quality of life, visual acuity and medicines at time of follow-up, both over-the-counter medicines and those from the general practitioner. In addition data about days of hospitalisation, age, gender and comorbidities was also collected. PIMs were evaluated by a Danish list of PIMs, and polypharmacy was defined as a regular use of  $\geq 5$  drugs. The Charlson Comorbidity Index was used to categorise comorbidities.

**Results** Seventy-one patients (55% men) with a median age of 79 years participated. The median number of drugs was eight per person. Eighty percent were exposed to polypharmacy. PIMs occurred in 85% of the participants, and PIMs were associated with low function status ( $\beta: -1.88$ ,  $p = 0.032$ ), low handgrip strength ( $\beta: -9.82$ ,  $p = 0.006$ ) and reduced quality of life ( $\beta: -0.19$ ,  $p = 0.0005$ ), but not with morbidity as assessed by Charlson Index. Social status, home care and visual acuity were not associated with PIMs.

**Conclusions** PIMs are common among older people. The use of potentially inappropriate drugs has a negative impact on functional status, handgrip strength and quality of life.

No conflict of interest.

**GRP-108 LEAN CULTURE: AN OPPORTUNITY IN THE HOSPITAL PHARMACY PRODUCTION DEPARTMENT**

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**Background** Since 2009, the executive management of CHU Mont-Godinne has chosen to implement the LEAN methodology in our institution. Considering the multiple issues arising in our hospitals, a fundamental reorganisation of our processes and changing our behaviour is a matter of survival. Production accounts for about 30% of the work of the CHU Mont-Godinne hospital pharmacy. Constraints in a production facility are many: consistent quality, inventory management, delivery in time, productivity, teamwork.

**Purpose** To optimise resources using the LEAN tools.

**Materials and Methods** LEAN Tools

1. The 5S Philosophy focuses on effective workplace organisation. The objective is to achieve higher goals and thus improve the work done. There are five primary 5S phases: sorting, straightening, systematic cleaning, standardising, and sustaining.

2. 'Spaghetti diagram'  
Visual method
  - o to depict the information flow.
  - o to determine the physical flow and distance that information and people travel to process work.
3. Standardisation of practise  
The process is filmed; a discussion takes place on this movie to define best practise.  
This best practise is written as a standard and constitutes a training tool. The standard process is regularly revised in the context of continual improvement. Training improves the versatility of assistants in production.
4. Visual management  
Improved communication through the implementation of short meetings:  
What is the idea or problem? What is the action to perform? Who is responsible for it? When? Status?

**Results** We obtained an improvement in

- productivity: time required for preparation decreased, for example a 28% decrease for Tazocin 4g diluted in glucose
- communication: two daily meetings
- standardisation of processes: 20 to 60%
- versatility of assistants in production: 10 to 40%

**Conclusions** Teamwork and standardisation of processes are now the keys elements to coping with the constraints of a production department of a hospital pharmacy and to obtaining continual quality improvement and optimising resources.

No conflict of interest.

**GRP-109 LENALIDOMIDE: HAEMATOLOGICAL SAFETY PROFILE**

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**Background** Lenalidomide was authorised in 2007 by EMA for the treatment of multiple myeloma (MM). It is also used off-label for myelodysplastic syndrome (MS). The drug is given orally at 25 mg on days 1:21 (28-day therapeutic cycle) associated with dexamethasone. Dose modifications or cessation of treatment may be necessary in the event of haematological adverse events (HAEs).

**Purpose** To evaluate lenalidomide dose modifications in MM and MS patients due to haematological toxicity, as recommended in the EMA's drug specifications.

**Materials and Methods** Retrospective observational study involving 16 patients who started treatment with lenalidomide between May 2008 and September 2010. Information was collected from the clinical and pharmacotherapeutic history. If neutropenia or thrombocytopenia arose, modifications made in treatment were analysed.

**Results** 16 patients were found, 14 treated for MM and 2 for MS. Male/female ratio was 8/8 and median age was 68.3 years (CI95%: 63.1–73.4).

Median number of cycles per patient was 6 (2–21). Considering all cycles, 98 were studied.

Pre-cycle neutropenia and thrombocytopenia were the main dose-restricting toxicities. Platelet counts  $<30 \times 10^9/L$  were found in 9 cycles; the dose was reduced in 2 patients, spaced out in 1 and both adjustments in another patient.

Neutrophil counts  $<0.5 \times 10^9/L$  were found in 12 cycles; the dose was reduced in 4 patients and spaced out in 3. No modifications were made in 55% and 41.6% of thrombocytopenic and neutropenic patients, respectively. No records were kept about support measures such as platelet pools or granulocyte-stimulating colony-growth factors.