

and extrapolated it in Mikolajczyk & Stanford's graph (2007) to find out what proportions result from anovulatory or post-fertilisation effects.

**Results** The pregnancy rate was 1.0% taking the pill 1–4 days after intercourse (66 pregnancies in 6,564 women), and 5.2% if it was taken on the fifth day (12 in 230 women). It shows a minimum reduction in the probability of pregnancy of 80.7% (IC95 64.9–89.4%).

In a conservative approach, administering the pill 24 h after intercourse, we obtained an anovulatory effect of 50%. However, taking into account epidemiological data showing lack of effect on pregnancy rates at a population level, we could assume an actual decrease that could be in the lower top of the confidence interval (64.9%). Extrapolating this effect, we obtained a contribution of 65% for the anovulatory mechanism.

**Conclusions** As an alternative pre-fertilisation effect is unlikely, we postulate at least 35% post-fertilisation effects for post-coital levonorgestrel. This is statistically compatible with the previous contradictory Noe *et al*'s data, as they observed only 35 women.

No conflict of interest.

#### CPC-024 ASSESSMENT OF WARD-BASED CLINICAL PHARMACY SERVICES IN JIMMA UNIVERSITY SPECIALIST HOSPITAL, ETHIOPIA: THE CASE OF INTERNAL MEDICINE

doi:10.1136/ejpharm-2013-000276.481

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**Background** Patient-centred clinical pharmacy practise has developed internationally to expand the role of a pharmacist well beyond the traditional roles of compounding, dispensing and supplying drugs, though it is poorly developed in Africa. Implementation of patient-centred practise is an important goal for maximising the utility of the profession. But, studies on the work done by pharmacists in inpatient wards in resource-constrained settings are scarce.

**Purpose** To assess ward-based clinical pharmacy services in an internal medicine ward of Jimma University Specialist Hospital.

**Materials and Methods** The study was carried out on the internal medicine ward from March to April, 2011 at Jimma University Specialist Hospital. It was a prospective observational study. Clinical pharmacy interns providing pharmaceutical care to inpatients twice per week over a 2-month period were documented. Interventions optimising rational drug use and their acceptance were recorded. The clinical significance of interventions was evaluated by an independent team (1 internist, 1 pharmacologist). Results of the study were reported in the form of findings and percentages.

**Results** A total of 149 drug-related interventions for 48 patients was documented. Of these, 133 (89.3%) were clinical pharmacy intern-initiated interventions and 16 (10.7%) were interventions initiated by another health care professional. The most frequent drug-related problems (DRPs) underlying interventions were unnecessary drug treatment 36 (24.2%), additional drug treatment needed 34 (22.8%) and noncompliance 29 (19.5%). The most frequent type of intervention was change of dose/instruction for use, 23 (15.4%). 68.4% of interventions were fully accepted and 29.3% were partially accepted. Interventions with major and moderate clinical significance numbered 46 (49.5%) and 25 (26.9%) respectively.

**Conclusions** A clinical pharmacist contributes to improved inpatient treatment, even with a modest contribution such as

participation in the pre-round meeting and the ward round twice per week.

#### Abstract CPC-024 Table 1 Characteristics of interventions documented by clinical pharmacists, JUSH, Ethiopia, March–April 2011

Category of drug-related problem*	Interventions, n (% of total)
Unnecessary drug treatment	36 (24.2%)
Additional drug treatment	34 (22.8%)
Ineffective drug	4 (2.7%)
Dose too low	18 (12.1%)
Adverse drug reaction	16 (10.7%)
Dose too high	12 (8%)
Noncompliance	29 (19.5%)
Total	149 (100%)

\*Classification according to Polle *et al*, 2004

No conflict of interest.

#### CPC-025 AVERAGE DURATION OF TREATMENT WITH DIFFERENT TNF INHIBITORS

doi:10.1136/ejpharm-2013-000276.482

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**Background** Alpha tumour necrosis factor inhibitors (TNF inhibitors) represent an important advance in immune-mediated inflammatory diseases. The first three drugs marketed and most used nowadays within this family are: infliximab, etanercept, and adalimumab.

There is no apparent superiority between any of these drugs and it is known they often lose their efficacy over time. Therefore, it could be of interest to find out if any of them (under usual clinical conditions) has a longer period of time without loss of efficacy.

**Purpose** To compare the different treatments with TNF inhibitors, in order to find out which has the longest average duration (in days) before loss of treatment response finally requires a change in the treatment.

**Materials and Methods** All patients who began the treatment with TNF inhibitors between March 2007 and March 2012 and who had a change in treatment were analysed retrospectively with pharmacotherapy management software.

Patients who had stopped the treatment after presenting immediate adverse reactions in the first administration were excluded. The mean durations of treatment were compared using the Student's *t*-test for unpaired data

**Results** In total 309 patients were analysed. The three TNF inhibitor drugs most used were etanercept (Average duration 574.47 ± 461.51, N = 125), infliximab (Average duration 470.82 ± 469.64, N = 95) and adalimumab (Average duration 454.92 ± 378.89, N = 95). We found a significant difference between etanercept versus adalimumab (Pvalue = 0.0412), but not in the case of etanercept versus infliximab (Pvalour = 0.0997).

These results are coincident with Dr. Hetland's study in 8074 patients (1). They also agree with the study presented by J.A Markenson in 2418 patients (2). However our study results do not resemble those of G. Lapadula's study (3).

**Conclusions** The average duration of treatment before requiring a change of drug is higher with etanercept than infliximab and adalimumab, but only is statistically significant with adalimumab. These results should be considered in the design of TNF inhibitor prescribing guidelines.

No conflict of interest.