Drug-related problems in a general internal medicine service

Guignard B 1, Samer C 2, Perrier A 3, Bonnabry P 1, Dayer P 2, Desmeules J 2
1 Pharmacy, Geneva University Hospital, 2 Division of Clinical Pharmacology and Toxicology, 3 Division of General Internal Medicine, Geneva University Hospital, Geneva, Switzerland

Objectives
- To detect suboptimal drug use in 2 wards of a general internal medicine service
- To offer a pharmacological and pharmaceutical evaluation to improve drug prescription

Method
- Review of medical charts and analyse of prescriptions with an assessment grid
- Attribution of a level of intervention
- Interventions during medical round
- Follow up of application of the suggestion

Results
- 145 patients
- 1523 drugs
- 383 drug related problems (DRPs)

1 Drug related problems
- Drug interactions 21%
- Untreated indication 8%
- Overdosage 8%
- No valid indication 9%
- Adverse drug reactions 10%
- Subtherapeutic dosage 16%
- Improper drug selection 9%
- Others 10%

2 Involved drugs and classes
- Drug interactions
  - Tramadol
  - Metoprolol
- Untreated indication
  - Calcium + Vit D
  - Statins
- Overdosage
  - Proton pump inhibitors
  - Paracetamol
- No valid indication
  - Proton pump inhibitors
- Adverse drug reactions
  - Antipsychotics
  - Anticoagulants
- Subtherapeutic dosage
  - Paracetamol
  - Opioids
- Improper drug selection
  - Antihypertensive Agents
  - ACE inhibitors/sartans

3 Types of interventions
- Interventions are time-consuming
- Priorization!

4 Acceptance and application
- 84% Accepted
- 16% Not accepted

Conclusions
- The most frequently identified DRPs were drug interactions.
- 50% of the identified DRPs required a treatment optimization.
- Suggestions were accepted and applied by prescribers in most cases.