

MEDICATION-RELATED PROBLEM (MRP)	EFFECT ON THE PATIENT	INTERVENTION
Lack of analgesic effect of tramadol due to inhibited activation by arbiraterone and amiodarone	Patient still suffers from pain.	Switch to opioid with no pharmacokinetic interactions!
Patient refuses to take tablets as they look different than those at home.	Patient is insecure and confused.	Talking with the patient and explaining generics and reassuring efficacy and safety!
QT-prolongation (500ms) due to combination of amiodarone and risperidone	Patient is at high risk of arrhythmia.	Stop of risperidone, as unclear indication!
Patient with renal insufficiency and diclofenac 50mg t.i.d for pain control	Patient's kidney function worsens: risk for AKI	Switch to non-nephrotoxic metamizol for pain control!

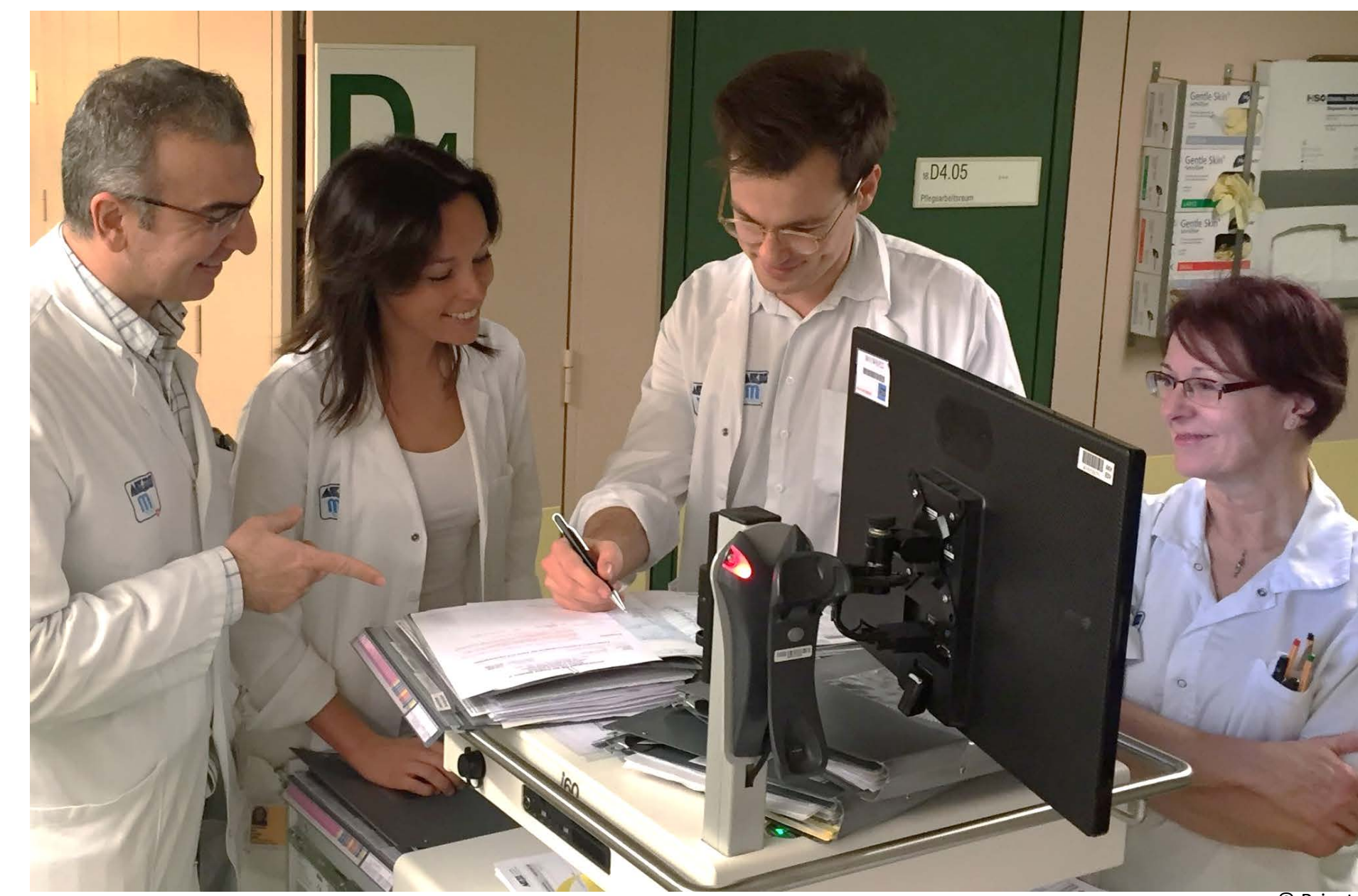
Table 1: Examples of MRPs and interventions

Continuous **clinical pharmacy services** have considerably contributed to the **resolution of medication-related problems** in oral surgery patients.

This is illustrated by the **high number of interventions** performed and the **high acceptance rate**.

Counselling at discharge was well received by patients and helped to further resolve MRPs.

Based on the project results the political decision to extend funding has been taken.



THE CLINICAL PHARMACIST RESOLVES MEDICATION RELATED PROBLEMS IN CRANIO, MAXILLOFACIAL AND ORAL SURGERY PATIENTS

CP-055

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BACKGROUND

Within the framework of the Austrian health care reform, a publicly funded project with the aim of resolving medication-related problems (MRPs) by means of in-hospital clinical pharmacy services (CPS) was conducted.

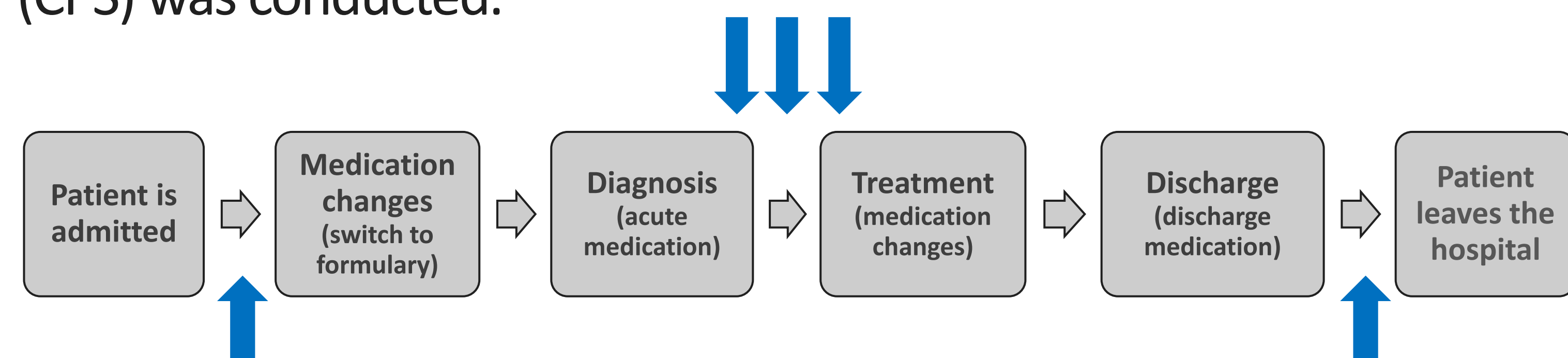


Figure 1: Process of in-hospital CPS with moments of interventions (arrows)

PURPOSE

The aim of the study was to detect and resolve MRPs and to analyse the clinical pharmacists' interventions.

MATERIALS and METHODS

Setting: Maxillofacial surgery ward (40 beds) in a large academic teaching hospital (2000 beds) (See also Infobox 1)

Period: 12 months (10/2014 – 9/2015), 6 months patient counselling (start from 04/2015)

Intervention: On weekdays, three pharmacists alternately provided CPS, comprising medication reviews (MRs) of newly admitted patients, ward round participation twice weekly, and patient counselling at discharge (Fig.1).

Outcomes: O1 and O2: Number/types of MRPs and interventions, **O3:** Physicians' acceptance rate, and **O4:** Number of interventions reducing medicines' costs

Documentation: Adapted classification system¹

Head and neck squamous cell carcinomas # Bisphosphonates/Denosumab-related osteonecrosis of the jaw (B/DON) # Oral surgery in haemophilia patients # Fractures of facial bones # Plastic and reconstructive surgery of the face # Orthognatic surgery

Infobox 1: Common diagnoses and/or surgical interventions

ATC code group	%	Examples of commonly affected medicines
Alimentary tract and metabolism (A)	27,0	pantoprazole, esomeprazole
Nervous system (N)	19,9	tramadol, metamizol, paracetamol
Antiinfectives for systemic use (J)	13,0	amoxicillin/clavulante, moxifloxacin
Musculo-skeletal system (M)	12,7	diclofenac, dexibuprofen
Cardiovascular system (C)	11,0	atorvastatin, simvastatin, antihypertensives

Table 2: TOP 5 affected ATC code groups and examples (total N=1.304)

RESULTS

Demographic data	Patients with MRPs	Patients w/o MRPs
N (%)	1.362 (62,7)	809 (37,3)
Number of MRPs	1.477	
Age (years) (\bar{x} \pm SD)	56,4 \pm 18,4	45,2 \pm 18,6
Sex σ (%)	732 (53,7)	460 (57)
Daily medicines (\bar{x} \pm SD)	8,1 \pm 4,6	4,8 \pm 2,9
Medical diagnoses/type of surgeries	See infobox 1	

O1: MEDICATION-RELATED PROBLEMS

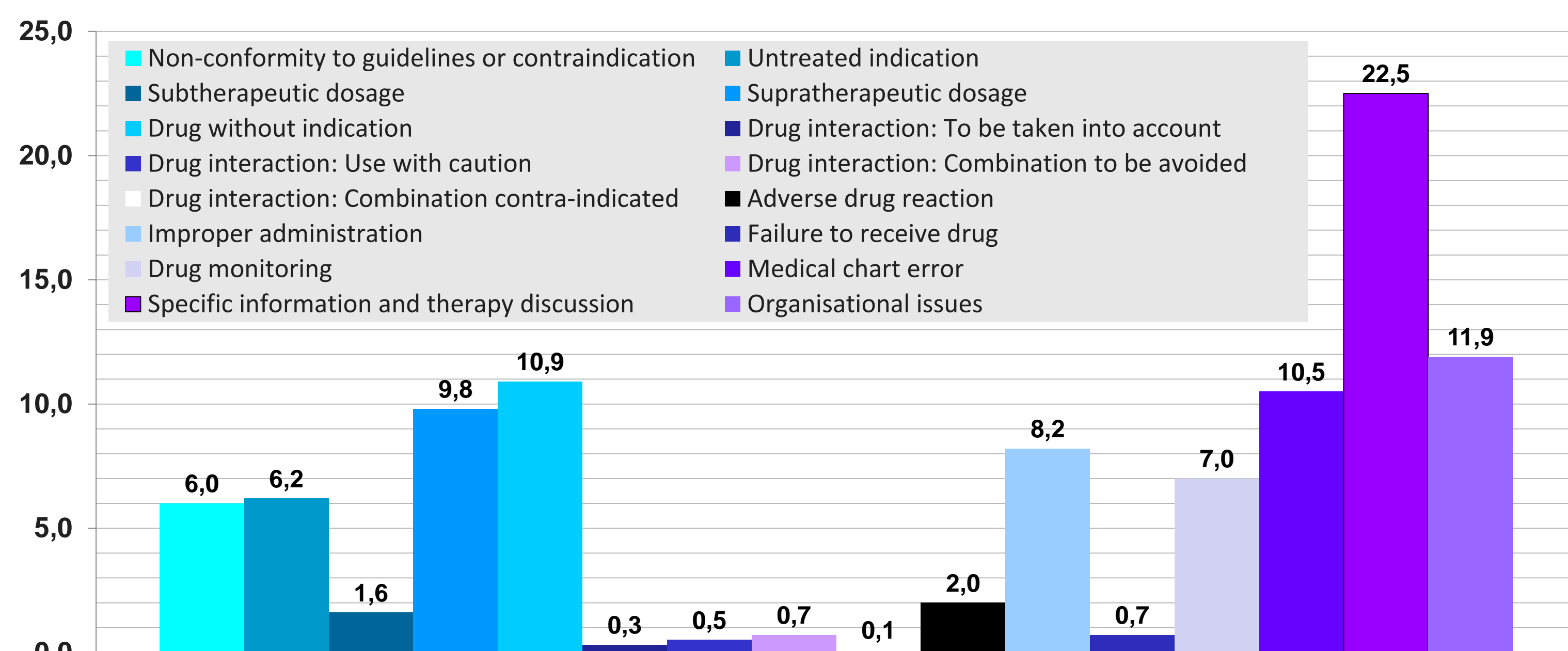


Figure 2: Numbers and types of medication-related problems (%)

O2: INTERVENTIONS

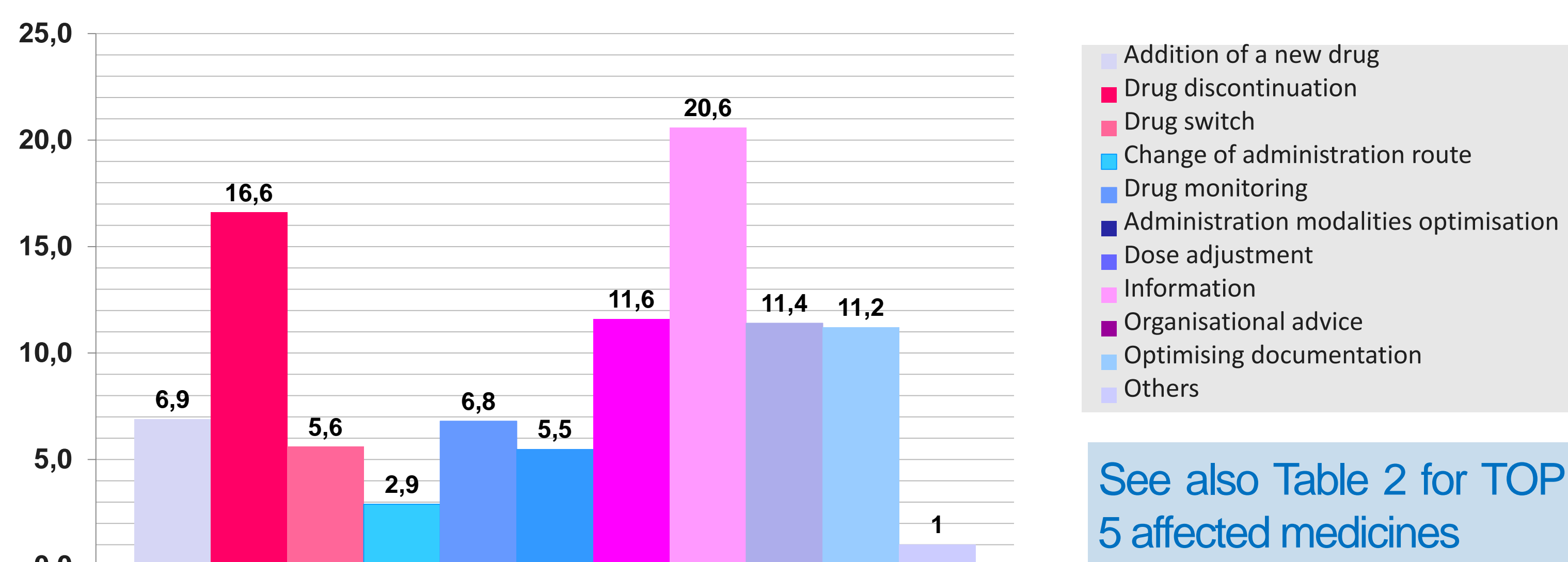


Figure 3: Numbers and types of interventions (%)

O3: PHYSICIANS' ACCEPTANCE RATE: 93,7%

O4: INTERVENTIONS REDUCING MEDICINES' COSTS

Cost increasing	Cost neutral	Cost decreasing	Not applicable
11,5%	10,2%	37,3%	41%

Cost decreasing interventions: discontinuation of unnecessary medicines (45,7%), dose reductions (27,0%), switch to oral (11,6%), or switch to a cheaper medicine (15,6%).

DISCHARGE MANAGEMENT

459 patients were counselled at discharge.

MRPs could be prevented in 41% of those patient talks.

The average counselling took 9 minutes.

Study on phone call follow ups to be finished in 04/2016