

# Medication use review (MUR) in community pharmacies in Romania

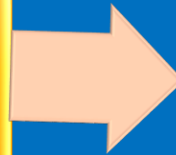
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NCPC Conference, November 28-30th, 2019  
Narva-Jõesuu, Estonia

# Background

**Compounding  
Dispensing**



**Identifying  
Preventing  
Resolving  
DRP**



**Promoting proper  
use of medicines,  
and health  
education**

## Aims of MUR pilot project in Romania

- improve patients' knowledge about their medication
- enhance pharmacists' communication competencies, as part of the health care team

# Methodology

3 community pharmacies,  
3 GPs,  
5 pharmacists

Patients filling prescriptions -  
**general health situation, self-health**  
assessment and knowledge on the prescribed medication

Pharmacists collected the data and **analysed** it - percentages and Likert scales

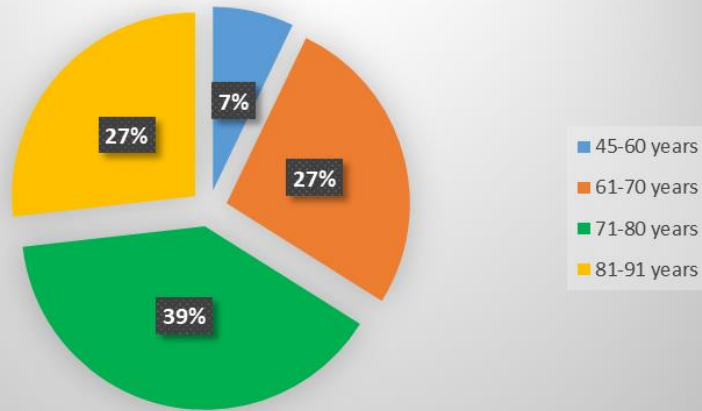
- identified **poly-pharmacotherapy problems**,
- proposed **relevant solutions**,
- set up a **visit to evaluate the treatment progress**,
- pharmacists **communicated** their findings **to GPs**
- pharmacists asked for **GP's opinion on MUR service**

## Results

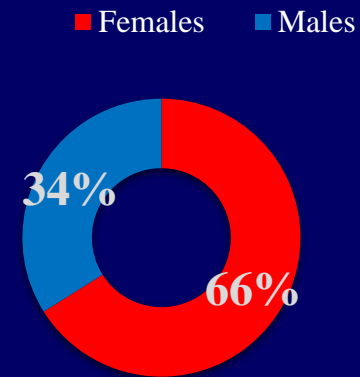
- 70 questionnaires of which 56 were validated
- **causes for invalidity:**
  - 1) **prescriptions with < 5 medicines,**
  - 2) **doctor's specialization other than GP,**
  - 3) **insufficient information**

# Patient information (I)

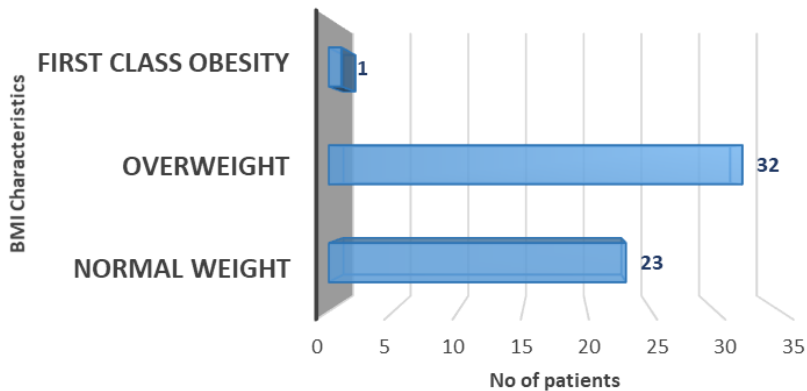
### Distribution of patients by age



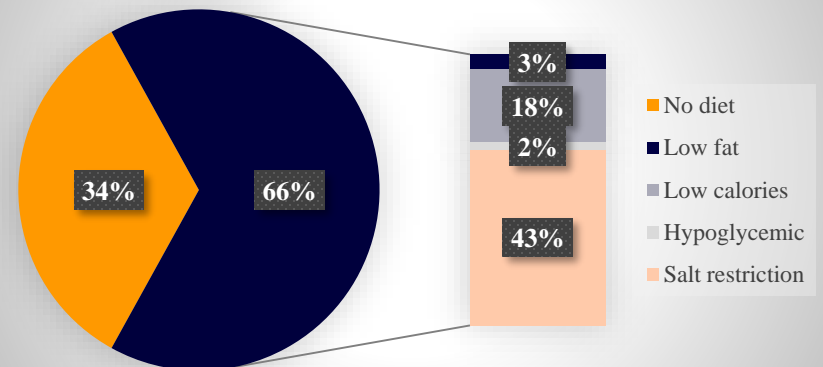
### Gender distribution



### Types of patients after BMI



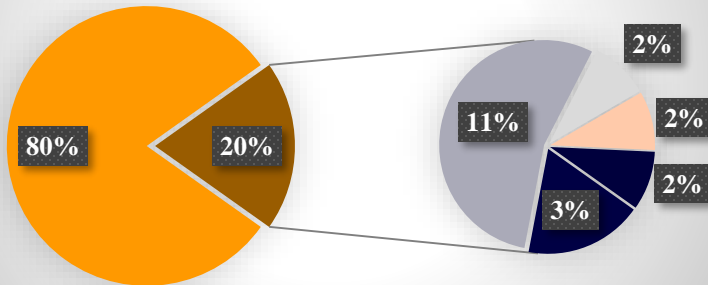
### Frequency of patients on dietary requirements



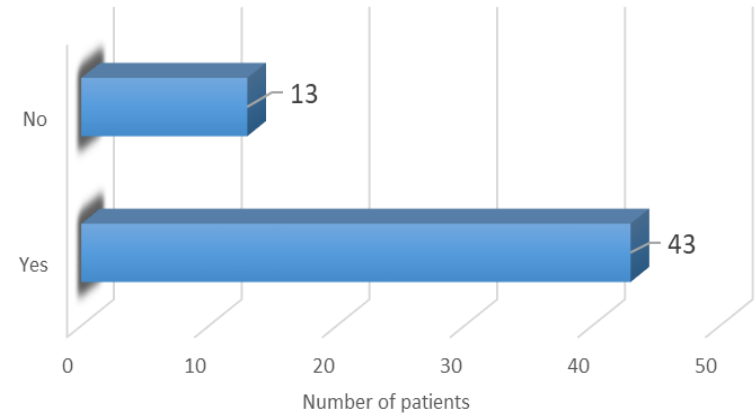
## Patient information (II)

### Frequency of patients' allergies

■ No ■ Unspecified etiology ■ Ambrosia ■ Pollen ■ Dust ■ Salicylates

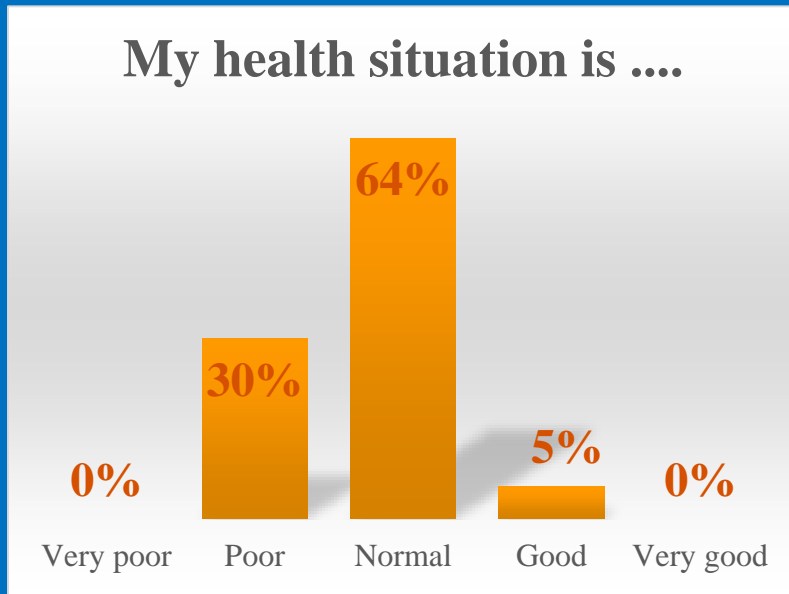


### Distribution of respondents by physical activity



- 43 patients do physical activity by walking
- more than 90% declared they are not smokers or alcohol users

## Patient self-evaluation about personal medication use and general perception related to medications (I)



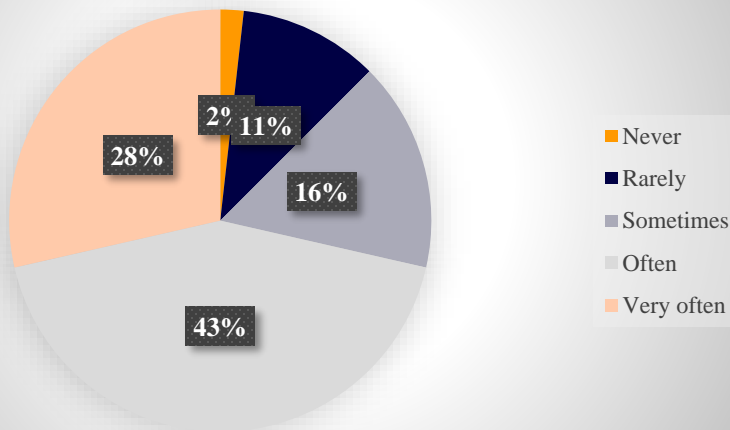
Patients strongly agree that the following are very important for them:

- 1. My health depends on medicines*
- 2. I am often concerned about the use of drugs*
- 3. I understand my illness*
- 4. My health is*
- 5. I do not understand how medicines improve my health statements*



# Patient self-evaluation about personal medication use and general perception related to medications (II)

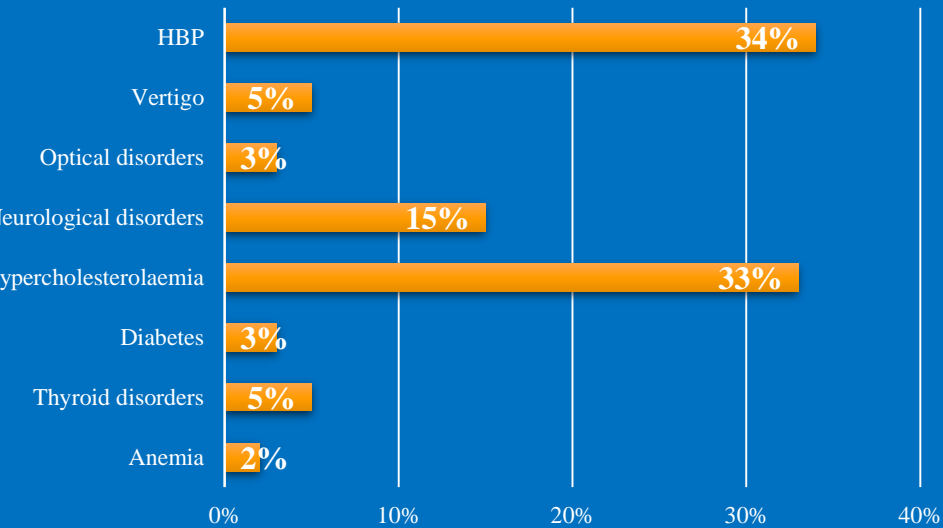
Taking tablets is easy



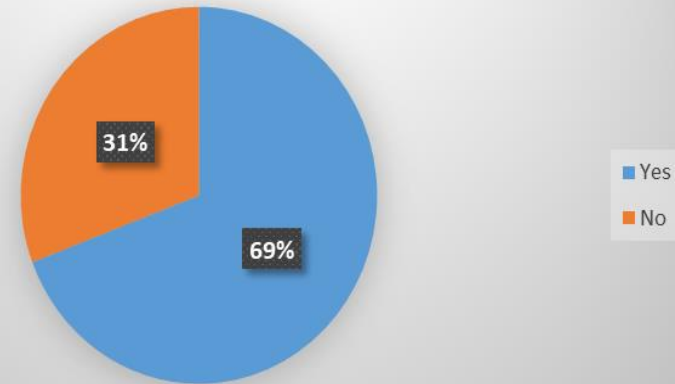
Rank	Statements
I	I <i>rarely</i> have difficulties getting my medication out of jar/blister
II	I <i>rarely</i> have problems to find my medications
III	I <i>rarely</i> don't have enough money to pay for my medications
IV	I <i>rarely</i> have difficulties swallowing medications
V	I <i>rarely</i> mix up different medications
VI	I <i>rarely</i> have experienced adverse effects
VII	Taking medications has <i>sometimes</i> caused other problems
VIII	I <i>sometimes</i> forget to take my medications
IX	I <i>sometimes</i> have difficulties remembering dosages of my medications
X	I am <i>often</i> concerned about the consequences of long term use of medications

# Documentation for MUR service (I)

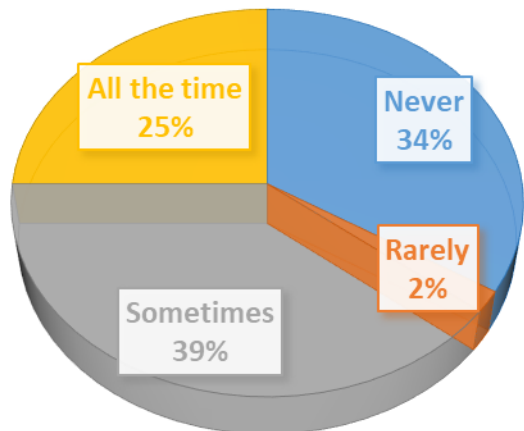
## Frequency of diseases



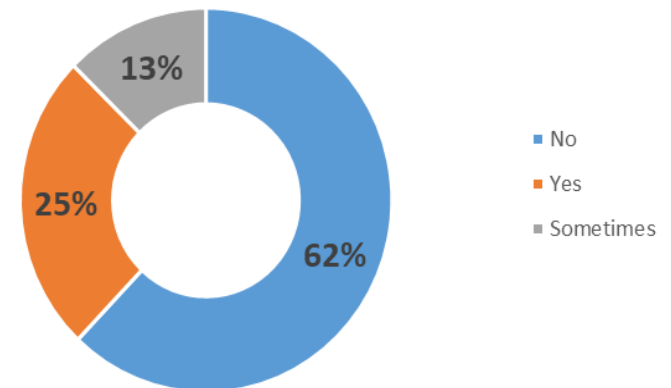
## Patient doesn't know the indications for the medication



## PATIENT OMITTS DOSES

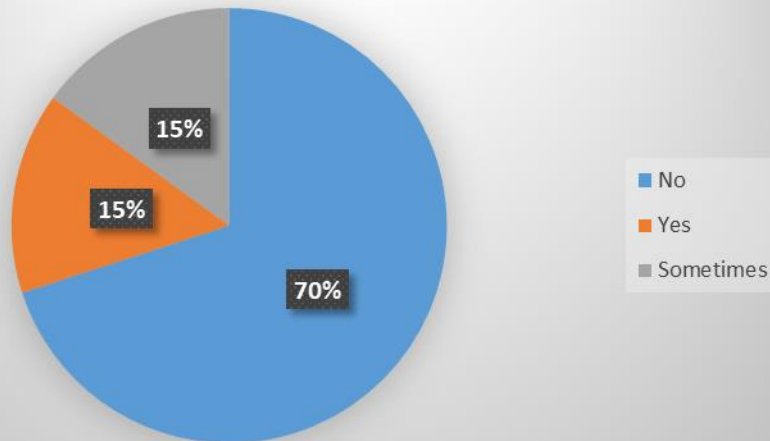


## Medication is taken at a wrong time



## Documentation for MUR service (II)

Difficulties with swallowing



Insomnia

Hyperexcitability

Gastric reflux

Cough

Hypokalemia

Hyperacidity

Muscle pain

Vertigo

Confusion

Nausea

Decreased blood pressure

Sedative effect

Side effects

# Documentation for MUR service (III)

Nr.crt.	Interaction/Side effect	Solution
1	Grimodin + Stilnox	Grimodin with Stilnox potentiates the sedative effect when the two drugs are combined
2	Mirzaten administered in the morning	It would be preferable for Mirzaten to be given in the evening -has a sedative effect
3	Sortis adminstered in the morning	Sould be taken in the evening
4	Sotalol + Coprenesa	Sotalol interacts with Coprenesa via indapamide (K and Mg elimination); decrease of BP
5	Actonel + Antiacids or Calcium supplements	Antacids, calcium supplements are given at least 2 hours apart from Actonel
6	Increased transaminases	Awareness of the risks if the drug is not administered
7	Atoris takenn the morning or at noon	Should be taken at night
8	Dizziness, confusion after treatment with Doreta	Patient awarness
9	Vimovo + Lokren / Sevikar	Vimovo contains an NSAID that reduces the Lokren / Sevikar hypotension effect. Lokren can induce hypoglycemia and mask hypoglycemia - remote administration. Vimovo is allowed 30 minutes before the meal. Roswera is omitted or administered during the day.
10	Indapamid	Indapamid decreases the level of K and Mg
11	Celebrex + Nebilet	Celebrex decreases the antihypertensive effect of Nebilet - should be taken at a distance - one in the morning, one in the afternoon
12	Sevikar + Klacid, St Jonhn's wort extract	Klacid increases potency of amlodipine -should be administered separately (especially because the patient has undergone two treatments with Klacid this year) St Jonhn's wort extract decreases amlodipine
13	Milgamma administered in the evening	It causes agitation, insomnia - it should be taken
14	Theophyllin +Glurenorm	May cause hyperglycemia - should be taken hours apart
15	Trittico, Alventa and Duloxetin	Should be administered apart to prevent Serotonin syndrome. In addition, all cause hypotension - at a distance

## Pharmacist self-evaluation after MUR service

Interview and preparation took on average 20 to 30 minutes.

Pharmacists didn't have difficulties (no additional training required) explaining the services to patients – effect, dosing, adverse reactions and communicate the findings to the doctors.

In 10% of the cases the patients didn't want to know more about the medication.

## **MUR service feedback**

In average there were prescribed 6-7 Rx + 2-3 OTC + 2-3 supplements.

15% of the patients were prescribed more than 8 Rx medicines.

The pharmacist prepared notes for GP if he/she identified drug related problems and also informed the patients.

The pharmacist proposed solutions to patients and helped them to organize their medication.

## Conclusions

Patients declared they were satisfied with the MUR service considering that explanations were understandable and taking into account the pharmacists advice.

Physicians are reticent, for the time being, but generally in agreement with applying of MUR service.

MUR project is ongoing.

**THANK YOU FOR YOUR KIND ATTENTION !**