

IMPROVING INTRAVENOUS TO ORAL SWITCH BY IDENTIFYING AND TACKLING BARRIERS PERCEIVED BY PHYSICIANS AND NURSES

4CPS-214

Sandrina von Winckelmann, Eline Boey, Véronique Verheyen
Pharmacy Department, Imelda Hospital Bonheiden, Imeldalaan 9, 2820 Bonheiden, Belgium
contact: sandrina.von.winckelmann@imelda.be



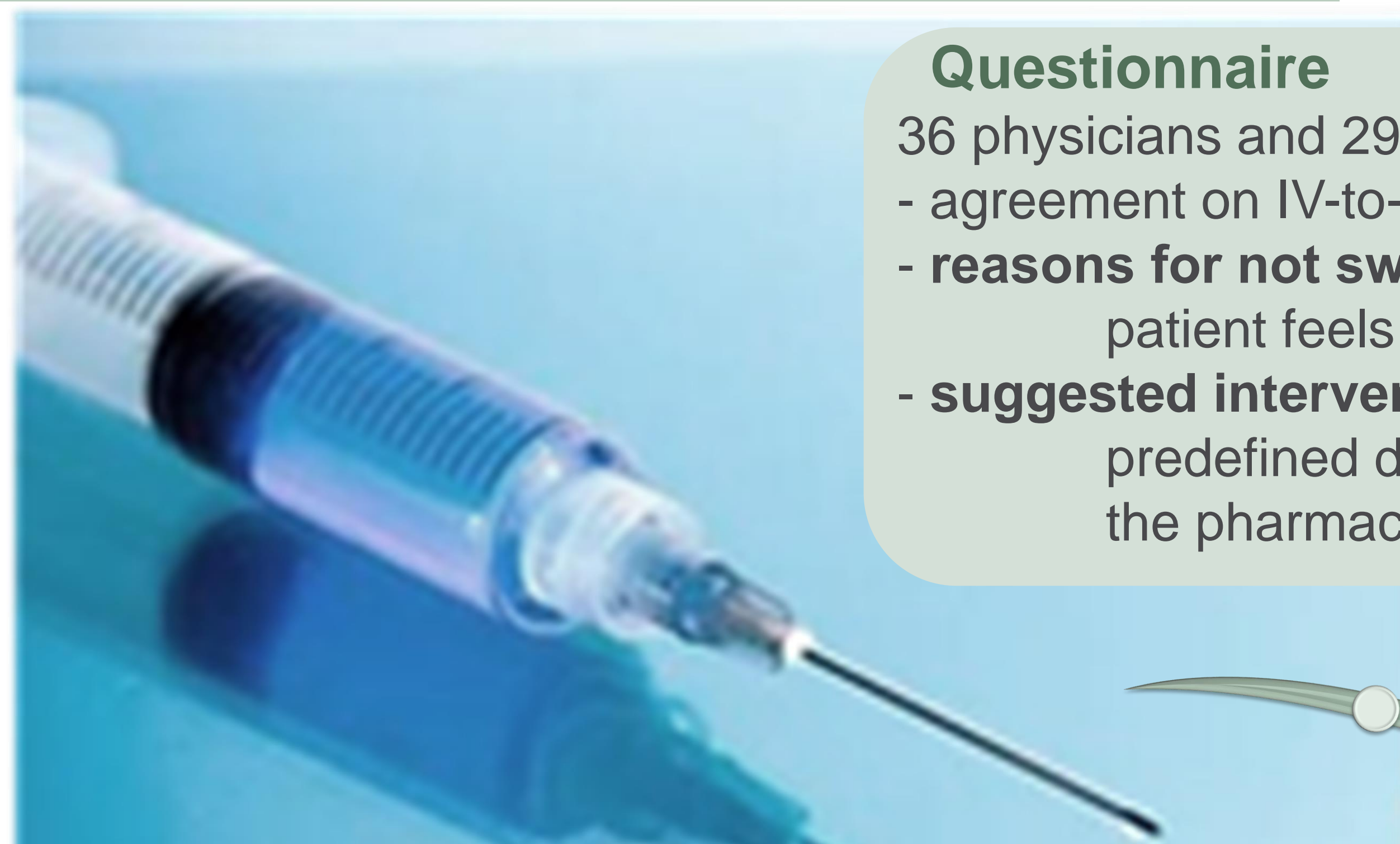
BACKGROUND & AIM

Appropriate and timely switching drugs from intravenous (IV) to oral administration is a good, safe and cost-effective intervention. However, IV-to-oral switch guidelines are not always well adhered to. The aim of this study is to identify barriers to switch and to investigate how hospital pharmacists can promote IV-to-oral switches.

METHODS

- An interventional before-after study performed in a 502-bed regional hospital
- **Validation of switch criteria & identification of barriers to switch:**
Physicians and nurses completed a structured questionnaire asking about switch criteria, main barriers for not switching and interventions to improve switch practice
- **Intervention:**
A bundle of tailored interventions on an orthopedic and geriatric ward
- **Retrospective chart review** of data from 6-months periods before and after intervention
- **Outcome measures:**
 - mean duration of non-appropriate IV-therapy
 - number of IV-to-oral switches

RESULTS



Questionnaire

- 36 physicians and 29 nurses responded (overall response rate = 27%)
- agreement on IV-to-oral switch criteria ($\kappa = 0.87$)
- **reasons for not switching despite patient's eligibility:**
patient feels ill (60%), patient's non-adherence (55%) and swallowing difficulties (54%)
- **suggested interventions to promote IV-to-oral switch:**
predefined drug orders in the electronic prescribing system (59%) and the pharmacist contacting the prescriber in case of a possible switch (40%)

Interventions to overcome barriers

- **poster campaign** concerning IV-to-oral switch for acetaminophen and antibiotics
- adjustment **predefined drug orders** and addition of **powder formulation** of acetaminophen in these orders
- hospital **pharmacist contacting physician by phone** to switch or stop IV acetaminophen, pantoprazole, antibiotics: 79% of interventions accepted (100 out of 127 advices given)



Retrospective chart review before and after intervention

- respectively 227 and 226 patients treated with IV acetaminophen and/or antibiotics with high bio-availability
- **reduction of the mean duration of non-appropriate IV-therapy**
total reduction of -7.25 hour, $p = 0.002$
for acetaminophen: reduction of -9.3 hour, $p = 0.001$
- **increase of number IV-to-oral switches with 8.9%**, $p = 0.027$

CONCLUSIONS

Structural and proactive interventions by the hospital pharmacist result in a reduction of the duration of non-appropriate IV-therapy and an increase of IV-to-oral switches. However the cost-effectiveness and sustainability of these interventions is questionable in a setting with limited clinical pharmacy resources.



<https://www.eaap.eu/>
25-4CPS-214

imelda omringt u met zorg