

Intravenous-to-oral antibiotic switch practices in adult inpatients accross Belgian hospital network : a multicenter observational study and development of an educational intervention

M. Germai¹, L. Berger¹, F. Fripiat², S. Largana³, J-P. Limelette⁴, J. Descy⁵

¹Clinique André Renard, Pharmacy Department, Herstal, ²CHU de Liège, Infectious Diseases Department, Liège, ³Hôpital de la Citadelle, Pharmacy Department, Liège, ⁴CHU de Liège, Pharmacy Department, Liège, ⁵Clinique André Renard, Clinical Microbiology, Herstal

Background

Switch intravenous (IV) - oral (PO) antibiotic therapy = key priority for optimizing antibiotic prescribing
→ Part of Antimicrobial Stewardship (AMS) programs



Objectives

- To evaluate prescribing practices regarding IV-to-oral switch (rate and timeliness of conversion)
- To offer an educational intervention to optimize and harmonize prescribing practices

Methods

Audit of prescribing practice

Prospective multicenter study conducted

- Hôpital de la Citadelle
- CHU de Liège
- Clinique André Renard

Study period

October - November 2025

Parameters assessed

- IV-to-oral switch rate
- Timeliness of switch implementation:
 - Optimal** switch : performed within 24h after eligibility criteria were met
 - Delayed** switch : performed > 24h after eligibility criteria were met

Population

- Hospitalized adult patients
- Receiving IV antibiotic therapy with an available oral alternative
- Eligibility criteria for IV-to-oral switch:
 - Adequate gastrointestinal function** : oral intake (normal or modified) or tolerated enteral nutrition; absence of fasting, malabsorption, obstruction, severe diarrhea, or repeated vomiting
 - Safe medication administration** : patient awake; oral or enteral tube administration possible; no documented refusal or non-adherence
 - Clinical stability** : temperature < 37.8 °C for > 24h; documented clinical improvement or absence of deterioration/hemodynamic instability

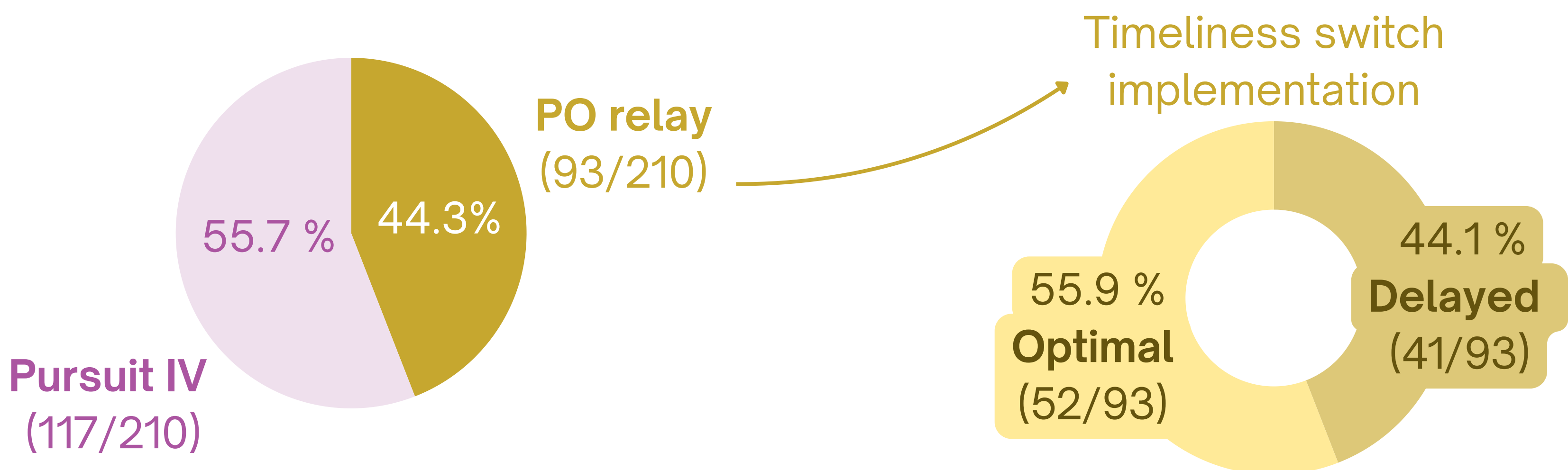
Development of the e-learning program

- Literature review
- Development of a narrated training module including interactive questions and clinical cases
- Pilot testing and content validation by a multidisciplinary interhospital working group
(3 hospital pharmacists, 1 clinical microbiologist, 3 infectious disease specialists, 1 infection control physician, 1 intensive care physician)

Results

IV-PO switch prescribing practices

- IV-to-oral switch eligibility : 210/394 prescriptions (53.3% of IV antibiotic) (202/367 patients)
- Oral switch : 93/210 eligible prescriptions (44.3%)
- Continued IV therapy : 117/210 eligible prescriptions (55.7%)



E-learning dissemination

December 2025 - January 2026

103 participants, including 54 physicians from the 3 participating institutions



Discussion and conclusion

- Substantial room for improvement in the implementation of IV-to-oral switch, both regarding the proportion of eligible patients not converted and the timeliness of the switch
- Planned assessment of the impact of e-learning: post-intervention audit scheduled for February - March 2026