

# Roles and challenges of a Swiss interhospital pharmacy during the COVID-19 pandemic

Laurence Schumacher<sup>1,2</sup>, Cédric Blatrie<sup>1</sup>, Séverine Krähenbühl<sup>1</sup>, Camilla Pasteur<sup>1</sup>, Anne-Laure Blanc<sup>1</sup>, Charline Pellaton<sup>1</sup>, François Rouiller<sup>1</sup>, Nicolas Widmer<sup>1,2</sup>

<sup>1</sup> Pharmacy of Eastern Vaud Hospitals, Rennaz, Switzerland, <sup>2</sup> Specialised Centre for Emergency and Disaster Pharmacy, Institute of Pharmaceutical Sciences of Western Switzerland, University of Geneva, Geneva, Switzerland

## BACKGROUND

From March 16 to June 18, 2020, because of the COVID-19 pandemic, the Swiss Federal Council declared an “extraordinary situation” in terms of the Epidemics Act.

In this context, the roles of an interhospital pharmacy in the fight against SARS-CoV-2 were assessed.

## METHODS

- All missions performed by our pharmacy, The “Pharmacie des Hôpitaux de l’Est Lémanique (PHEL)”, were systematically collected and evaluated.
- They were also compared to its official duties.

## RESULTS

### MISSIONS

The specific missions carried out by the various pharmacy sectors during spring 2020 are summarized in Table I and illustrated in Pictures 1-5.

**Table I.** Specific missions of the pharmacy during the first COVID-19 wave

Missions	Examples of actions
Guarantee continuity of human resources	<ul style="list-style-type: none"> <li>• Creation of a continuity planning</li> <li>• Request for civil defence support</li> </ul>
Internal infrastructure securing (especially in terms of hygiene)	<ul style="list-style-type: none"> <li>• Elaboration of a protection plan (incl. hygiene procedure)</li> </ul>
Specific drug supply (e.g. anaesthetics, sedatives, antivirals, incl. for clinical trials)	<ul style="list-style-type: none"> <li>• Close monitoring of stocks</li> <li>• Pharmaceutical management of the Solidarity trial</li> </ul>
Hand sanitizers production and supply	<ul style="list-style-type: none"> <li>• Restriction of deliveries</li> <li>• Own production of hand sanitizers</li> </ul>
Clinical assistance (especially in the critical care units, ICU)	<ul style="list-style-type: none"> <li>• Systematic treatment reviews</li> <li>• Definition of therapeutic alternatives</li> <li>• Elaboration of support documents</li> </ul>
Individual drug manufacturing	<ul style="list-style-type: none"> <li>• Fabrication of unavailable forms</li> <li>• Preparation of kits in wards</li> </ul>
Management of ward pharmacies	<ul style="list-style-type: none"> <li>• Management of stocks</li> <li>• Daily medicine trays preparation</li> </ul>
Hygienic masks distribution to healthcare professionals	<ul style="list-style-type: none"> <li>• Distribution of the national strategic stock of hygienic masks</li> </ul>

### DRUGS

A particular challenge was the management of the shortage of various drugs products and the identification of alternative therapeutic options (Table II).

## REFERENCES

L. Schumacher, et al. *Méd Catastrophe Urg Collectives* 2020; 4(3): 223-32.

## CONTACT

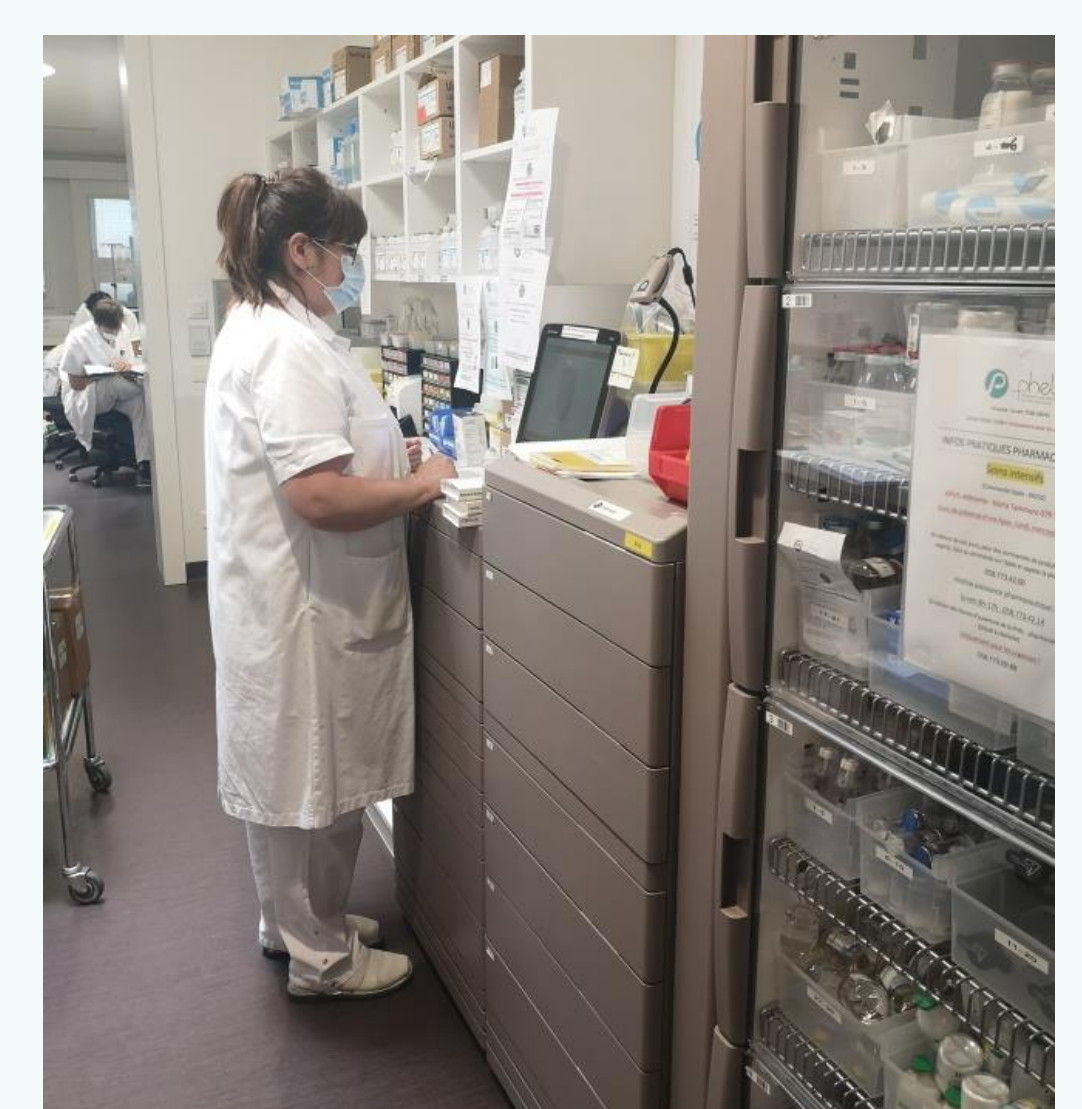
[nicolas.widmer@pHEL.ch](mailto:nicolas.widmer@pHEL.ch)



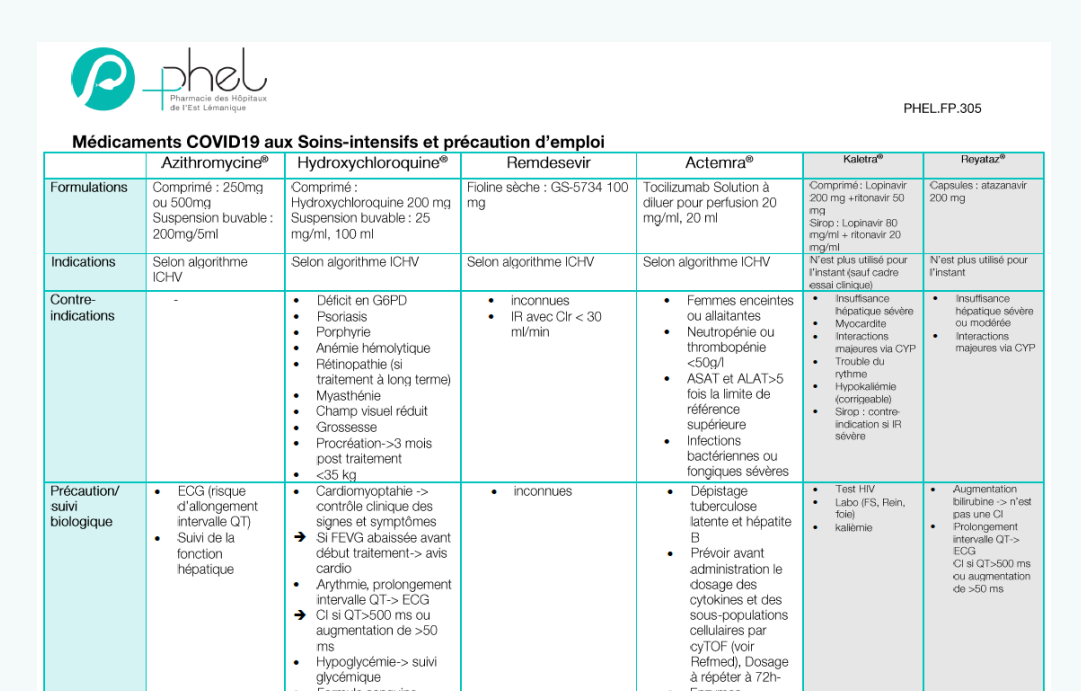
**Figure 1.** Supply of rocuronium originally dedicated to Korea



**Figure 2.** Production of hand sanitizers



**Figure 3.** Management of the ICU pharmacy



**Figure 4.** Elaboration of pharmaceutical assistance documents

**Table II.** Examples of specific drugs close to shortage in our pharmacy

Drugs	Example of alternatives
Propofol	<ul style="list-style-type: none"> <li>• Sedation based on ketamine and midazolam</li> </ul>
Atracurium	<ul style="list-style-type: none"> <li>• Rocuronium discontinuously</li> </ul>
Remdesivir	<ul style="list-style-type: none"> <li>• None</li> </ul>

## CONCLUSION

- Our pharmacy has faced various challenges during the first wave of the COVID-19 pandemic in Switzerland.
- Some missions performed were even beyond its traditional duties and have been achieved with the support of the Swiss civil protection (hand sanitizers production and hygienic masks distribution).
- Based on the lessons learned from this extraordinary situation, the disaster plan of our pharmacy, as well as the associated staff training, have been further developed.