

IMPACT OF COVID-19 TREATMENT OPTIONS ON HOSPITAL PHARMACY'S WORKLOAD: LESSONS LEARNED

Sandrina von Winckelmann¹, Julie Michaux², Griet Van den bergh¹, Véronique Verheyen¹

¹Pharmacy Department, Imelda Hospital Bonheiden, Belgium

²Faculty Pharmaceutical Sciences, Catholic University Leuven, Belgium

Contact: sandrina.von.winckelmann@imelda.be

BACKGROUND

Treatment guidelines for COVID-19 have rapidly been evolving. Different drugs against COVID-19 have urgently emerged to control the pandemic, challenging hospital pharmacies to make these antiviral and immunomodulatory therapies timely available for admitted patients.

AIM

To analyze the prescribing patterns of COVID-19 drugs in our hospital and its impact on the pharmacy's workload.

METHODS

- Imelda Hospital is a 502-bed regional hospital
- Retrospective analysis of drug registration data from January 1st 2020 until March 16th 2022 of COVID-19 drugs (dexamethasone, remdesivir, baricitinib, casirivimab/imdevimab and sotrovimab) for hospitalized patients.
- Consumption data were expressed as number of patients and number of preparations.
- Pharmacy's workload was determined by measuring the average time for drug ordering, preparation and dispensing.

Hydroxychloroquine and baricitinib were excluded as these are commercially available oral drugs which are distributed according to standard procedures.

RESULTS

The volume of dispensed COVID-19 drugs fluctuated along with the hospitalization waves of the COVID-19 epidemic.

Oral dexamethasone was the most frequently prescribed drug throughout the whole period, which is consistent with the strong recommendation in the national guideline (*Sciensano, Interim clinical guidance for adults with confirmed COVID-19 in Belgium, July 2022, Version 29*)

Remdesivir, introduced in our practice since October 2020, was the second most prescribed drug despite low quality of evidence. From October 2021 until December 2021, 41 infusions remdesivir were administered, compared to 381 infusions from January 2022 until March 2022 (ten-week period).

Compared to dexamethasone and remdesivir, monoclonal antibodies (casirivimab/imdevimab and sotrovimab) were less commonly used: 48 prepared infusions between September 2021 and March 2022. Most drugs were being given in combination.

Remdesivir and monoclonal antibodies were manually ordered to fulfill urgent needs as the supply is managed nationwide by the government. Infusions are prepared extemporaneous due to unpredictable demand and limited stability.

Ordering, preparation and dispensing required an average of 35 minutes per patient to complete.

CONCLUSIONS

The COVID-19 pandemic impacted hospital pharmacy's workload.

We could have made more timesaving decisions such as the use of commercially available methylprednisolone instead of dexamethasone and batching remdesivir preparations.

Hospital pharmacists should be involved in developing national guidelines and take into account the impact on daily practice.

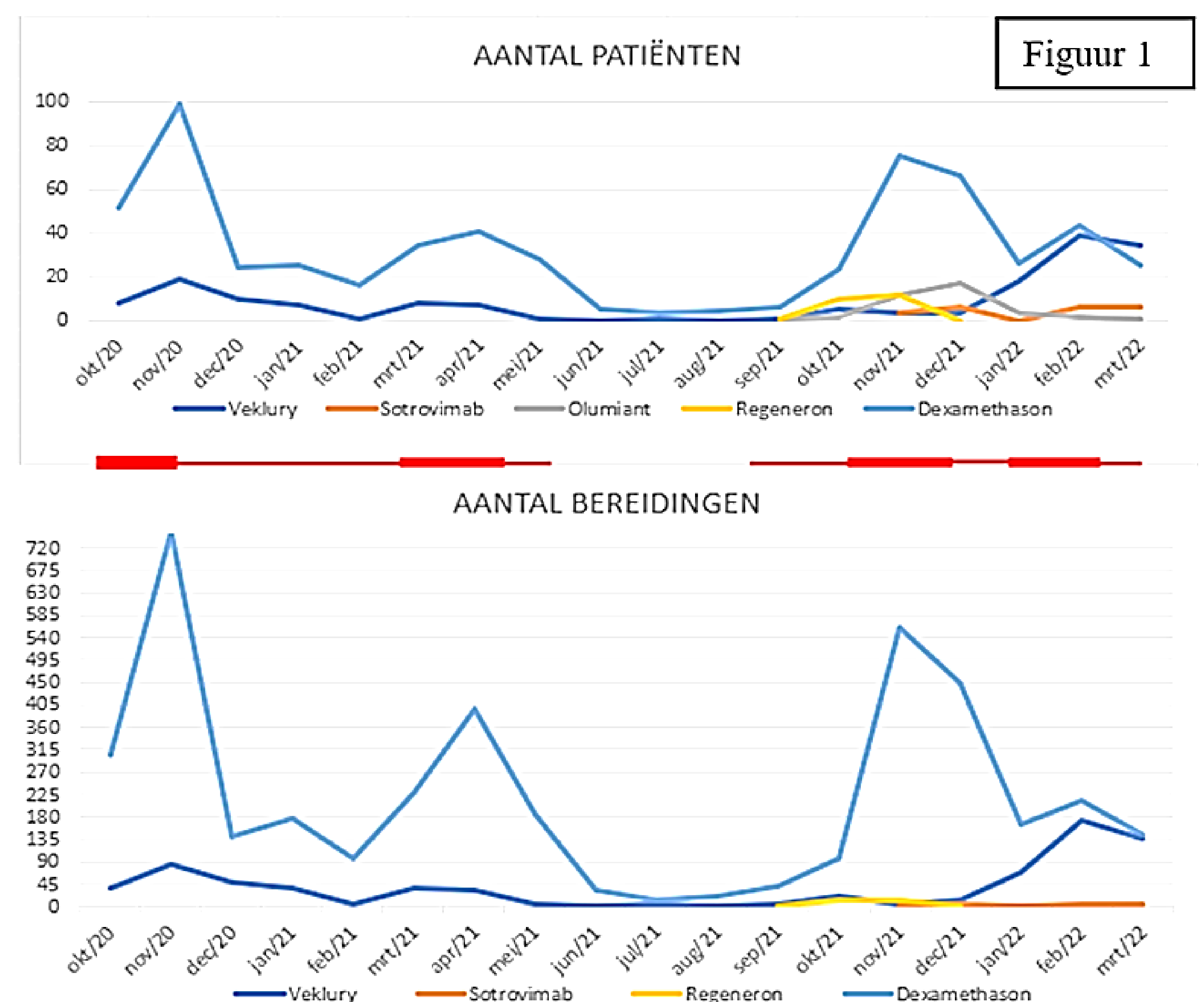


Figure 1: Volume of dispensed COVID-19 drugs: Veklury (remdesivir) – Sotrovimab – Olumiant (baricitinib) – Regeneron (casirivimab/imdevimab) – Dexamethasone, expressed as number of patients (upper graph) and number of preparations (lower graph). Red lines represent the hospitalisation waves of the COVID-19 epidemic in Belgium.

