

## Research Round Up- Prescribing Issues in the COVID-19 Pandemic

### Introduction

The last research round up provided you with an overview of recent research around the theme of prescribing and care management during the COVID-19 global pandemic with a focus of prescribing for diabetes. This month we are going to review some disparate prescribing issues that have arisen and been reviewed due to the current pandemic. They are not directly connected to a specific theme, but all relevant to you as prescribers and there should be something there for everyone.

### Trends in Antibiotic Prescribing in Out-of-Hours Primary Care in England from January 2016 to June 2020 to Understand Behaviours during the First Wave of COVID-19

As we know as prescribers, antibiotic stewardship and appropriate prescribing of antibiotic therapy to reduce this incidence of resistance is an often-focussed field of research. In this open access article in the Journal- Antibiotics, the authors look at trends in the prescription of community antibiotics before and during the first wave of the COVID-19 pandemic and focus their review on data available in England. They accessed the records kept at practice level on the following aspects of prescribing;

- Trends in total prescribing volume using a time series analysis
- Prescribing of broad-spectrum antibiotics

They were able to access records from January 2016-June 2020. They looked at antibiotic prescribing in the in-hours and out of hours setting for each year to establish the percentages prescribed in each arena and to review any trends or changes over time. The data showed an overall decline in antibiotic prescribing volume in primary care between 2016 and 2020. Although there appears to be a slight reduction in percentage prescribing overall, the level of out of hours prescribing per 1000 inhabitants per day remains static. With regard to the prescribing of broad-spectrum antibiotics, the authors found that this, along with overall volume of prescribing decreased in the in-hours GP arena but the percentage of the use of broad spectrum as a factor of overall prescribing load was higher in out of hours care (OOH: 10.1%, IH: 8.7%). In OOH, co-amoxiclav and doxycycline peaked in March to May in 2020, which was out of sync with seasonality peaks (Winter) in previous years. While this increase might be explained by the implementation of the national guideline to use co-amoxiclav and doxycycline to manage pneumonia in the community during COVID-19, further investigation is required to see whether the observed reduction in OOH antibiotic prescribing persists and how this reduction might influence antimicrobial resistance and patient outcomes. The authors suggest that monitoring OOH prescribing should receive the same level of scrutiny afforded to IH prescribing to inform antimicrobial stewardship programmes. This is more important since, the boundaries between IH and OOH may have different meanings for the healthcare user in the current and continuing context of COVID-19.

<https://www.mdpi.com/2079-6382/10/1/32>

## Investigating the challenges and opportunities for medicines management in an NHS field hospital during the COVID-19 pandemic

Medicines management is a huge part of prescribers, suppliers and administrator's role in the NHS. The implementation of field hospitals in the COVID-19 pandemic brought up some unique challenges to medicines management in these novel settings. In this piece of original research published in the European Journal of Hospital Pharmacy the authors were instrumental in developing a framework set up a field hospital and ensure a standardisation of medicines management processes that were appropriate for operational implementation in the COVID-19 pandemic. They continuously evaluated their processes throughout the 7-week implementation period. The field hospitals (many known as Nightingale hospitals) were set up in a short space of time as a response to perceived increased volume of beds needed during the pandemic. The authors were mindful that this rapid set up presented challenges and opportunities for optimal medicines management. They sought to evaluate the process with a view to developing a framework to support future deployment of NHS field hospitals in response to medical needs. By using the PESTLE model

([https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/550691/Tool\\_3.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/550691/Tool_3.pdf)) they looked at specific elements of the project environment, namely

- Political
- Environmental
- Social
- Technological
- Legal
- Economic

Some of the fundamental aspects for their consideration were political and legal as the medicines management framework had to be compliant with UK legislation. Environmental aspects such as storage and access were other important considerations. The framework helped identify other internal influencing factors that contributed to the complexity of managing medicines in this arena. These included workforce, governance and policy, and clinical factors such as prescribing, dispensing and administration.

The technological processes the authors had available included an electronic prescribing system but the workforce who were to be deployed were unfamiliar and training was considered to much of a burden so a paper-based system was employed. The authors acknowledged the risk of this having less clinical support for decision making. The article also discusses important logistical aspects as well as issues around controlled drugs, medical gases and formularies.

The authors conclude and recommend a broad team-working approach to any large-scale project such as the field hospital set up, and suggest the identified influencing factors be used as a core framework for development of any future MM processes in NHS field hospitals. They also recommend this be an iterative process and state that no 'off the shelf' model could or should exist.

<https://ejhp.bmj.com/content/28/1/10.abstract>

## Drug Shortages Amid the COVID-19 Pandemic

Many of us will have heard media stories about drug shortage in the global pandemic, and some of you may have experienced drug shortages in your clinical area of practice. In this article published in US Pharmacist Journal the authors investigate the phenomenon of drug shortages and the role of the pharmacist in managing this from a USA perspective. They acknowledge that in some form or another drug shortages have been problematic for decades but the onset of the COVID-19 pandemic created an unprecedented demand for some drugs and an enhanced concern about drug availability. They point out that shortages are not only created by increased demand for certain drugs (the most media notable being hydroxychloroquine) but the significant impact that the pandemic put on production and supply of many drugs. As discussed in the piece, this came down to reduced supply of raw materials, especially those required to be imported from COVID-19 affected countries. This reduction in raw materials impacts on the ability of drug production companies' ability to maintain production levels. This could then be further complicated by disruption to the ongoing supply chain.

The example of hydroxychloroquine shows how media attention and purported use in the treatment of COVID impacted prescribing practice for a drug normally prescribed in relatively small quantities due to the nature of the conditions it is used for. The article cites figures from 2020, post the Emergency Use Authorisation in March of that year for COVID treatment. In February of that year 383,435 prescriptions were issued. This increased to 759,186 the following month, creating immediate shortages in local supplies. This prompted state pharmacy boards to implement new rules to control use to protect supplies as far as possible. This in conjunction with treatment guidelines regarding the drugs use in COVID led to the return to pre pandemic prescribing trends.

In the face of these drug shortages, pharmacy personnel responded by initiating local policy changes and enacting quantity limits for in-demand medications. Pharmacists play a vital role in a drug shortage because of their unique skills and ability to bridge shortage gaps with effective action plans to maintain patient safety.

<https://www.uspharmacist.com/article/drug-shortages-amid-the-covid19-pandemic>

### Conclusion

It is clear that the COVID-19 pandemic continues to impact on many aspects of healthcare provision and this month's focus on some prescribing related publications suggests that this disease burden on our health services extends far beyond the diagnosis, treatment and management of COVID-19 itself. It is likely that this will continue for some time and we can expect many COVID related publications to emerge, new impacts that have been elucidated as well as longer term studies showing effects over time. Never has it been more important to maintain our continued professional development and read evidence around prescribing and our areas of clinical practice.