

## Prescribing in a pandemic:

### Electronic prescribing aids to improve non-specialist adherence to COVID-19 guidelines

M Woodman, J Salkeld, H Nguyen, A Sobti, A Goodman

Department of Infection, St Thomas' Hospital, Westminster Bridge Road, London, SE1 7EH

#### Background:

- Prescribing during the COVID-19 pandemic was a significant challenge – local and national guidance changed as new treatments became available<sup>1,2,3,4</sup>, staff were under significant pressure and prescribers had often been redeployed to unfamiliar areas.
- At GSTT, a 'COVID-19 bundle' collating current guidance initially improved prescribing on the Infectious Diseases wards, though did not show significant improvement when applied to the general medical wards
- An e-prescribing protocol (fig 1) was created to integrate COVID-19 guidance into the existing prescribing program, and streamline the process

Figure 1: the e-prescribing protocol:



#### Results:

- 47 COVID-19 patients were identified in the pre-protocol sample and 33 post-protocol
- Overall adherence to prescribing guidance improved:
  - **Dexamethasone:** Prescription or documented contraindication improved from 85% to 97%
  - **Remdesivir:** Prescription or documented contraindication improved from 74% to 79%
  - **PRN insulin:** Improved from 27% to 48%
  - **Oxygen saturation target:** Improved from 43% to 79%
- 27 doctors responded to our survey:
  - 93% were aware of the protocol
  - 83% had used it
  - Confidence in prescribing to guidance improved from 44% to 96%
  - 94% found the protocol easy or very easy to use
  - 78% agreed it made it easier to adhere to guidance

Figure 2: Adherence to prescribing guidance

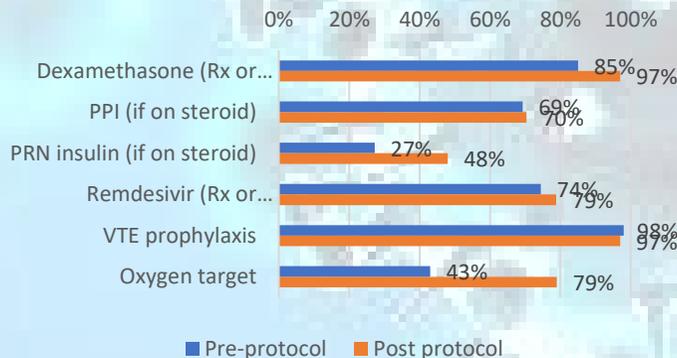
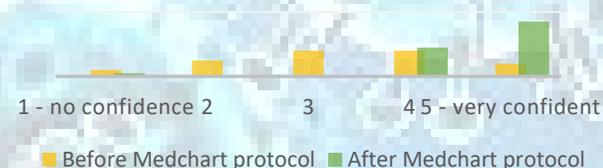


Figure 3: Confidence in adhering to COVID-19 prescribing bundle



#### Discussion

- Aimed to improve adherence to complex and changing guidance through introduction of a dedicated COVID-19 orderset, making process of prescribing as straightforward as possible
- Results demonstrate an improvement, particularly in oxygen prescribing which has been historically difficult to achieve<sup>5</sup>
- Junior Doctors felt the protocol made prescribing easier and improved confidence in adhering to guidance.
- Limitations include risk of 'tick-box exercise' – some situations fall outside protocols and prescribers should be aware.
- Protocol needs to be updated as guidance changes<sup>6</sup> – re-audit underway.

#### References:

1. Dexamethasone in Hospitalized Patients with Covid-19 — Preliminary Report. N Engl J Med. 2020 Jul 17;NEJMoa2021436.
2. The Writing Committee for the REMAP-CAP Investigators. Effect of Hydrocortisone on Mortality and Organ Support in Patients With Severe COVID-19: The REMAP-CAP COVID-19 Corticosteroid Domain Randomized Clinical Trial. JAMA. 2020 Oct 6;324(13):1317–29.
3. Overview | COVID-19 rapid guideline: managing COVID-19 | Guidance | NICE [Internet]. NICE; [cited 2021 Aug 19]. Available from: <https://www.nice.org.uk/guidance/ng191>
4. COVID-19 rapid evidence summary: Remdesivir for treating hospitalised patients with suspected or confirmed COVID-19 | Advice | NICE [Internet]. NICE; [cited 2021 Aug 19]. Available from: <https://www.nice.org.uk/advice/es27>
5. Barrett R, Catangui E, Scott R. Acute oxygen therapy: a cross-sectional study of prescribing practices at an English hospital immediately before COVID-19 pandemic. Expert Rev Respir Med. 2021 Feb;15(2):277–84.
6. COVID-19 rapid evidence summary: Tocilizumab for COVID-19 | Advice | NICE [Internet]. NICE; [cited 2021 Oct 08]. Available from: <https://www.nice.org.uk/advice/es33>

#### Methods:

- Medical inpatients acutely admitted with COVID-19 were identified through positive PCR results over a 48 hour period in December 2020.
- Adherence to COVID-19 prescribing guidance was audited via electronic noting and prescribing systems
- An e-prescribing protocol was created within the existing prescribing software, and information was disseminated to general medical teams.
- A re-audit was performed in mid-January 2021
- A qualitative survey was disseminated to junior doctors to understand awareness of the protocol and views on ease of use.