QI project: Development of a new COVID-19 acute care bundle

Dr Sam Talbot (Core Trainee, ACCS, NHS Lothian), Dr Devesh Dhasmana (Consultant Respiratory Medicine, NHS Fife)

Background

- COVID-19 can cause severe illness and patients may deteriorate rapidly.
- Early identification and treatment of high-risk patients is crucial to improve their outcomes.
- Inpatient interventions with proven mortality benefits include corticosteroids, anti-IL6 agents (e.g. tocilizumab), neutralising monoclonal antibodies or nMABs (e.g. Ronapreve).
- Familiarity with these treatments is less in the setting of the general medical wards.
- In NHS Fife, guidance on these are available on the intranet (Blink); however from personal experience these can be difficult to access, are scattered in location, and can be difficult to use.

Aims

- To assess current standard of care for patients admitted with COVID-19 illness compared to local guidelines
- Create a bundle for acute COVID-19 management in Fife.

Methods

- Cross-sectional audit of patients admitted to a general medical COVID ward assessing the following measures:
    - proportion of eligible patients that received key COVID-19 interventions (steroids, tocilizumab, anti-S testing for Ronapreve, conscious proning)
    - proportion of patients that were given appropriate escalation plans
- Development of a COVID-19 acute care bundle in collaboration with the local respiratory team.

Results

- Audit of 20 patients with a primary diagnosis of COVID-19 over a 2-week period on ward 53 (general medicine/COVID ward)
- Figure 1 shows the proportion of eligible patients that received key interventions from date of eligibility:
    - 100% received steroids; 71-80% received tocilizumab/Anti-S testing; 18% received conscious proning
- 20% had no formal escalation status or an inappropriate escalation status following respiratory/critical care team review.

- A COVID-19 acute care bundle (Figure 2-3) was developed including:
    - flowchart to help determine illness severity
    - ward triage based on severity
    - prompt for appropriate escalation steps/ceilings of care
    - consideration of further specific investigations
    - overview table of current treatment guidelines and considerations
    - appendices with ISARIC-4C mortality score, references to full local guidelines, outpatient management, patient information sources and key contact details
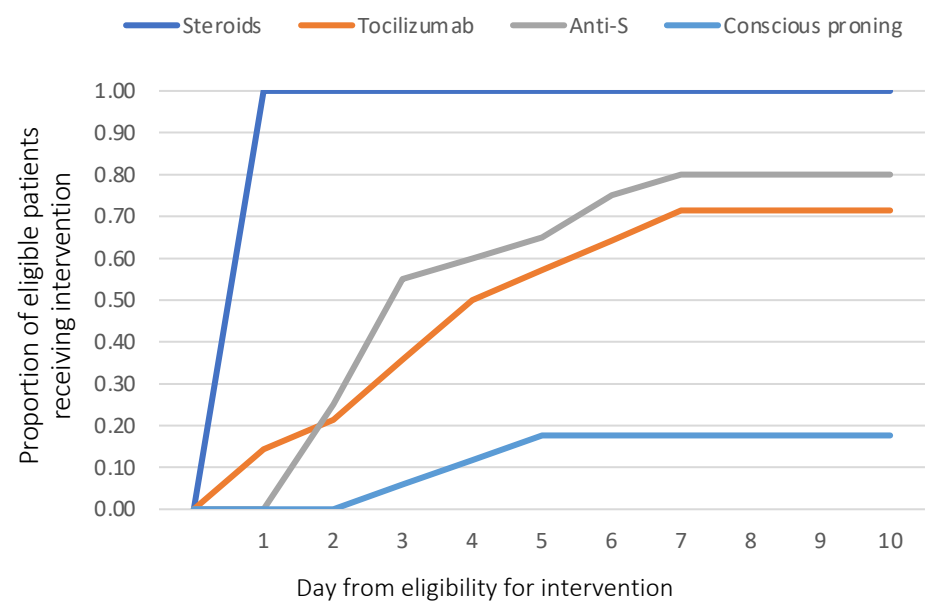

Figure 1: Proportion of eligible patients that received key interventions from date of eligibility
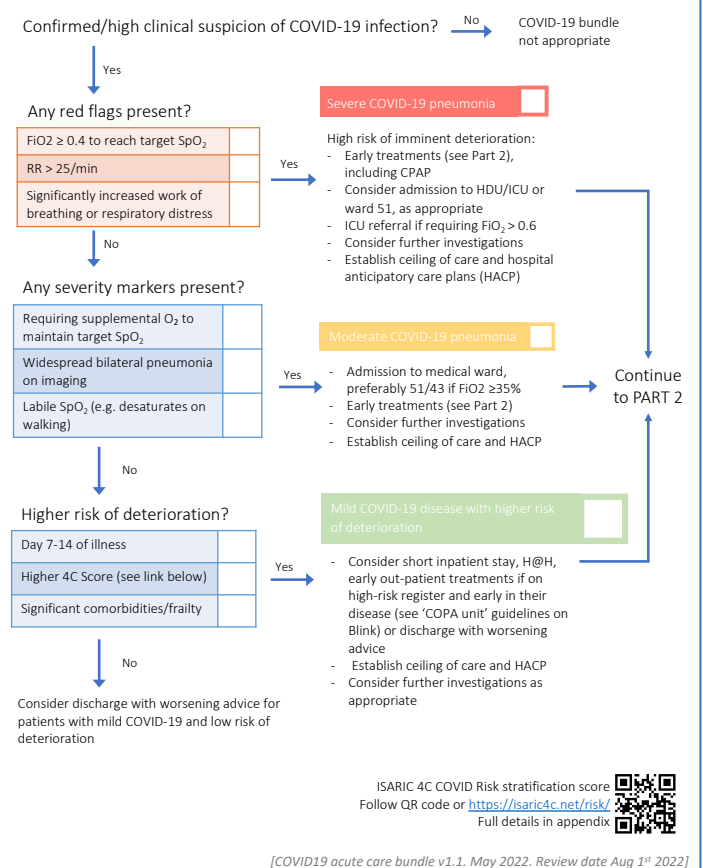

Figure 2: Excerpt from the acute COVID-19 care bundle

Scan to see full bundle

Figure 3: QR code link to full COVID—19 care bundle – feedback welcome

Discussion and Conclusions

- Treatment with dexamethasone was appropriately and quickly given to all eligible patients.
- Non-specialist teams were less likely to initiate all other important therapies, and when given there was often a significant delay.
- This falls short of local and national guidance and probably reflects a lack of awareness of up-to-date guidance

- We have now created a COVID-19 acute care bundle to address these key issues, and has been approved for trial use in NHS Fife.
- Next steps: complete the audit cycle with a repeat 2-week assessment, followed by a user questionnaire to guide further development.