COVID19 audit
Parirenyatwa Hospital:
1st-24th July 2020

The Clinical Team

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COVID Centre: Parirenyatwa Hospital

- Admissions started 1st July 2020
- Centre admits patients with COVID19
- Individuals with asymptomatic SARS-COV2 infection admitted for self-isolation not included in audit
- Over the current audit period (1-24th July 2020)
  - -unit staffed by 2 SRMOs and 1 senior physician
  - -2 nurses and 1 nurse aide

Demographic characteristics of patients

- 47 patients admitted (with outcome available)
- Median age 48 years (range 20-82 years)
- 32 (68%) were male
- 3 patients were transferred from Mashonaland Central province
- 42/47 (89%) admitted within 3 days of PCR result

- Note: 9/47 (19%) were admitted with a positive COV2 PCR and acute medical problems but no COVID19-but would not be accepted by other medical specialties because of a positive COV2 PCR result

Clinical characteristics of patients

- 9 (19%) overweight or obese
- 5 (11%) with HIV infection
- 27 (59%) had 1 or more chronic co-morbidities
  - Hypertension: 23 (49%)
  - Diabetes : 7 (15%)
  - Chronic kidney disease 8 (17%)
  - Cardiovascular disease 5 (11%)
  - HIV: 5 (11%)
  - Other* 3 (6%)

**other chronic co-morbidities: asthma/COPD, sleep apnoea, stroke*

Labs and treatment

- Saturation on air at admission (n=42):

≥90%:	13 (31%)
80-89%:	16 (38%)
70-79%:	2 (5%)
<70%:	11 (26%)

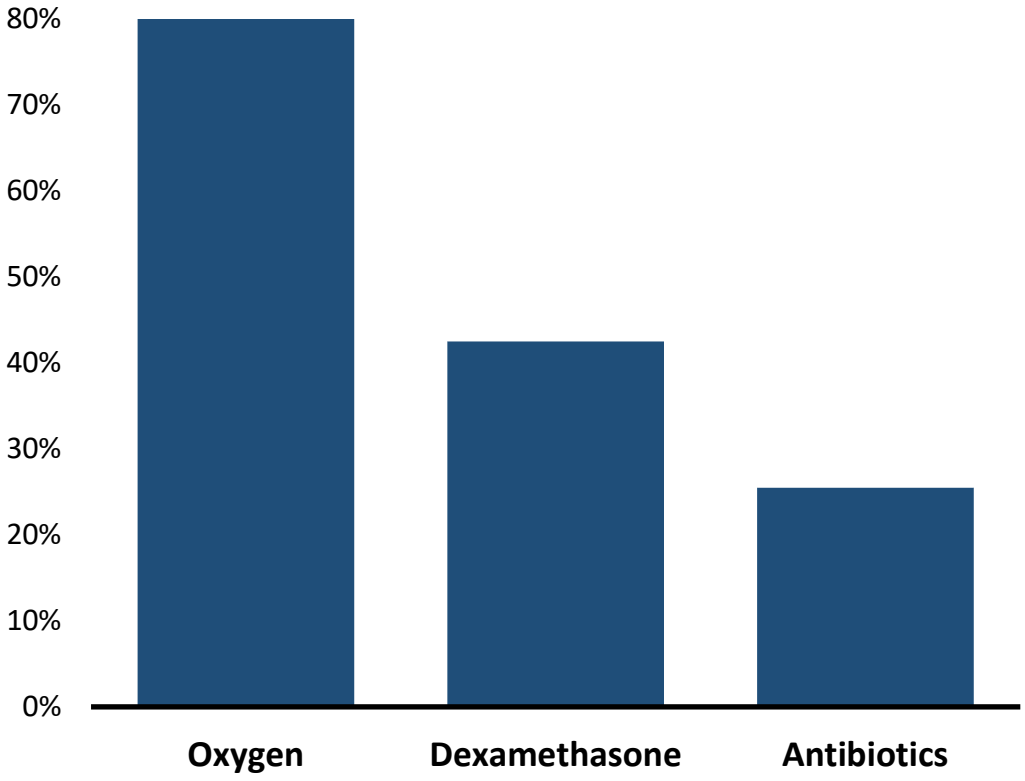
- Creatinine >200mmol/L: 10 (22%)
- CRP: median 16 (range 4-48)

Clinical Management of COVID19

- Pronation
- Prophylactic heparin
- Dexamethasone 6mg od for severe disease (defined by oxygen sats <86-88% / respiratory distress /confusion or reduced level of consciousness)
- IV fluids (if dehydrated)
- Antibiotics (if sign of bacterial infection- pyrexia, raised white cell count, high CRP, clinical signs, critically ill)
- Supportive treatment as required:
  - Insulin for hyperglycaemia
  - Haemodialysis
  - Treatment of thromboembolic disease
  - Blood transfusion
  - Non-invasive ventilatory support

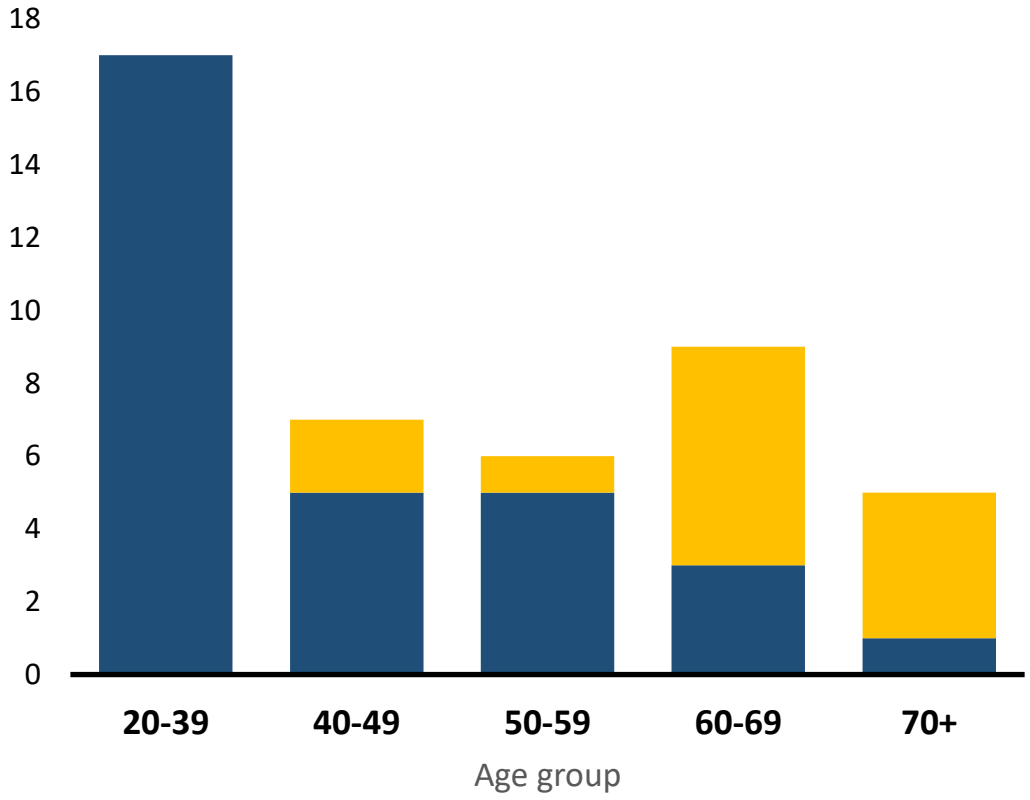
Treatments given

Other treatments:
4 dialysed
2 had blood transfusions
1 had high flow nasal cannulation (HFNC)

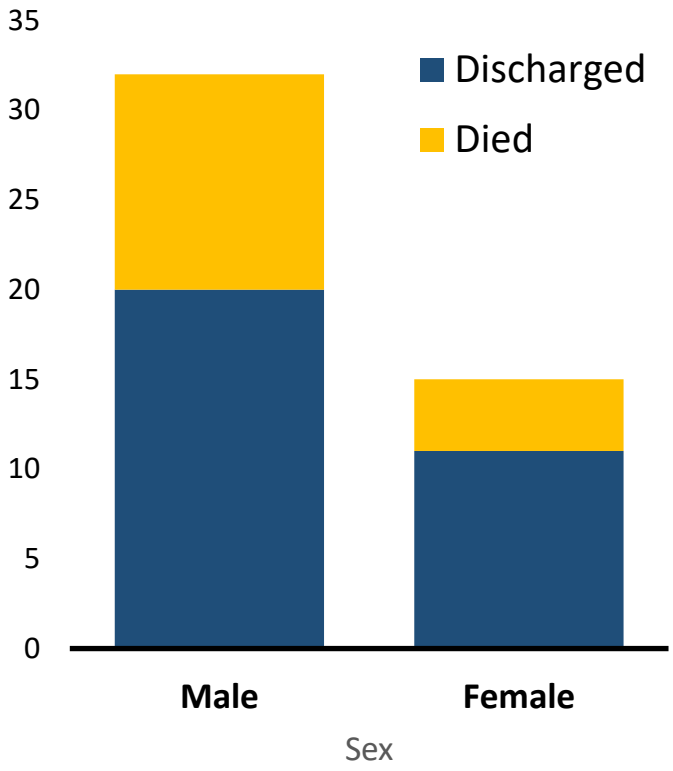


HFNC for a 30yr old patient

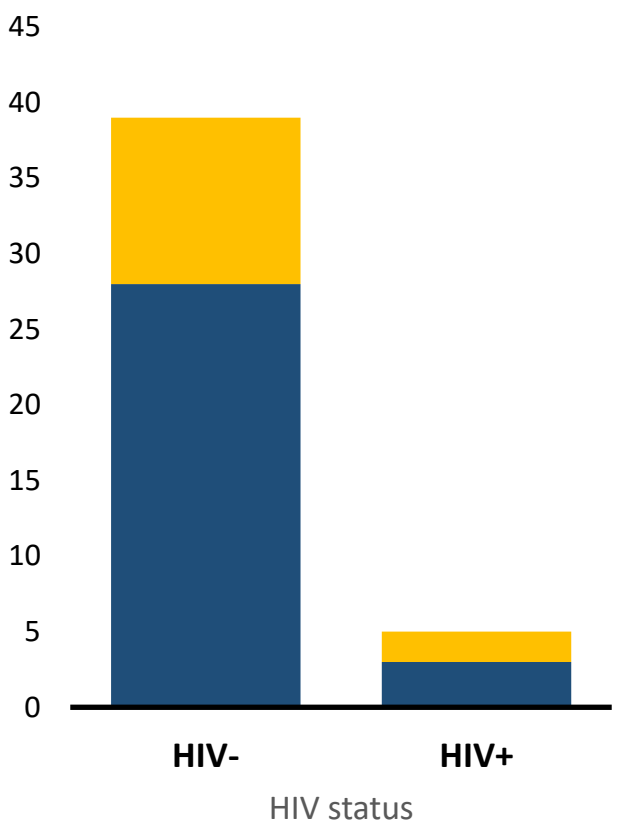
Age, sex and COVID-19 mortality

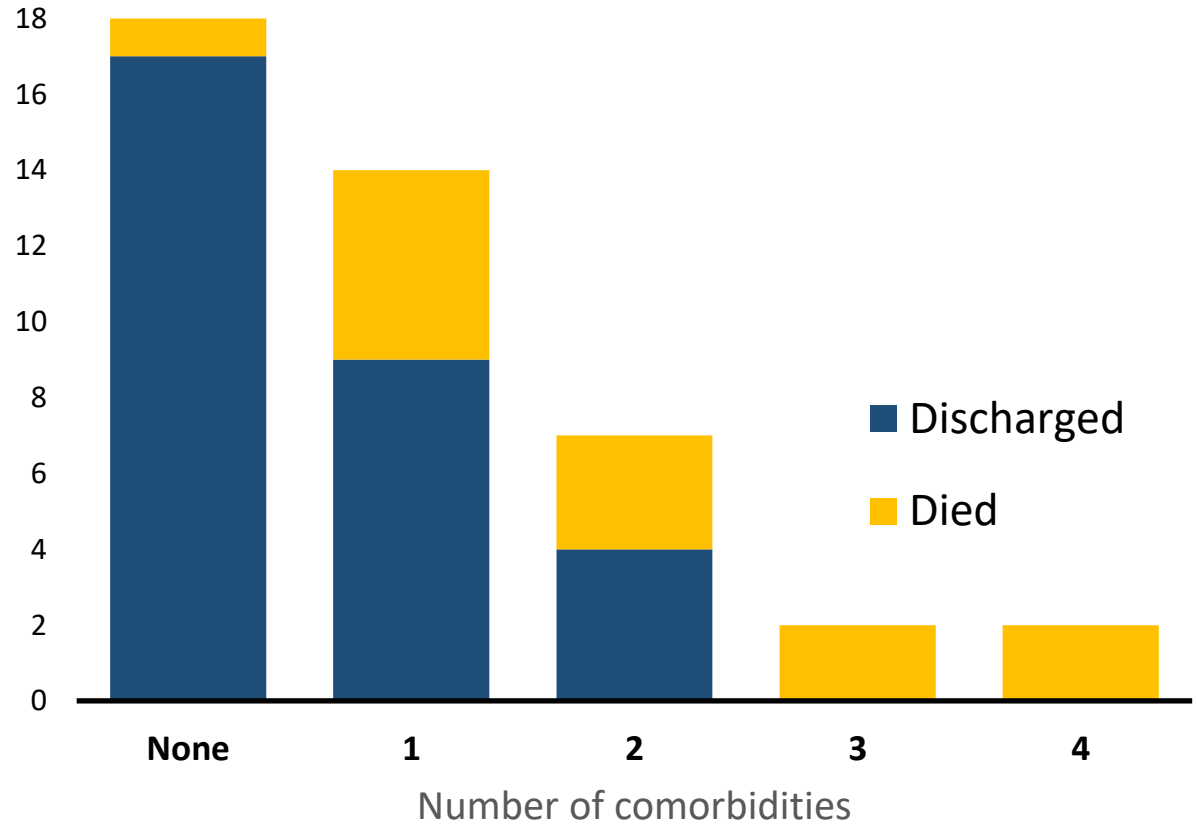


38% male vs 27% female died



Co-morbidities and COVID-19 mortality





Outcomes

- Median length of hospital stay:
  - 5 days for people discharged alive
  - 1.5 days for people who died
- 16/47 (34%) died
- Complications (n=6; 13%):

  5 had renal failure (4 /5 had pre-existing renal disease)

  1 had hyperglycaemia (no previous diabetes) and renal failure

  ---all 6 died

Key findings and lessons learnt

- Most patients present late
- Age and comorbidities strong risk factor for severe disease and death
- Hyperglycaemia and renal failure are common complications
- Patients require intensive monitoring:

-BP, Oxygen sats, fluid status, blood sugar, conscious level

- Oxygen therapy is critical component of care
- Essential components of care:
  - Good fluid management & management of comorbidities
  - Palliation of patients with end-stage disease, communication with relatives and prompt burial arrangements

Challenges

- Extremely short-staffed: not possible to achieve the level of monitoring of patients required
- No of admissions has been rising substantially- not enough beds
- Unit has treated patients who don't have COVID19 (disease) and are only COV-2 positive (and parent with another health problem) because many health facilities unwilling to treat patients who are COV2 positive
- Drug shortages- even of essential drugs (heparin, morphine, diazepam, 5% dextrose, insulin)
- Need basic equipment to optimally manage patients-eg insulin syringe pumps, monitoring equipment (glucometers, pulse oximeters)
- Delay in collection of deceased patients & returning bodies to bereaved relatives
- Challenges with getting portable Chest X-rays and blood tests (fear of contact with "red Zone"
- PPE supply is limited

Successes and opportunities

- Availability of piped oxygen
- Possible to increase capacity if there was more staff..currently restricted to 30 beds due to lack of staff
- Excellent response to treatment in majority of patients
- Possible to provide non-invasive ventilatory support (CPAP and HFNC) on the wards (if consumables made available)
- Dedicated and committed junior doctors
- Potential for the Centre to support peripheral services
- Expert advice on management of renal disease, diabetes, haematological complications and ventilation provided by senior colleagues*
- Patients relatives strong appreciate communication and updates whilst unable to see their relatives

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