

## Supplementary Material

### Methods

We put in place the following interventions at all inpatient and outpatient dialysis units;

1. *Symptom Monitoring* – Patients were contacted before their regular HD sessions and encouraged to report any symptoms consistent with COVID-19 (cough, fever, myalgia, flu-like symptoms, shortness of breath etc) to the dialysis unit or transport staff.
2. *Active triage on dialysis units* – Any patients presenting to their usual dialysis units with symptoms consistent with infection or in whom staff had a high degree of suspicion of infection (including those with isolated raised Ferritin or C-reactive protein on routine blood tests), were promptly tested for COVID-19 using two-step real-time PCR (AusDiagnostics, Orf1a and ORF8 gene SARS-Cov-2 target) on nasal and throat swab. All patients with suspected COVID-19 infection were isolated in side rooms for HD as a priority (except over Hepatitis B positive patients) until the swab result was made available within 24-48 hours. Due to insufficient testing capacity, asymptomatic patients, including patients who came into contact with a positive case, were not routinely tested as per Trust policy.
3. *Use of separate transportation* – We ensured the isolation of patients with suspected or confirmed COVID-19, who would usually attend HD in shared transportation, by utilising the resources provided by the British Emergency Ambulance Response Service (BEARS) transportation, to reduce transmission to other patients.
4. *Dedicated COVID-19 positive HD unit* – we dedicated an entire satellite dialysis unit providing for 40 patients with confirmed COVID-19 infection, with a contingency plan to increase to a capacity of 80 patients as needed. All patients with positive swab results had their dialysis sessions transferred to this COVID-19 positive unit.
5. *Repeat swabs to confirm absence of infection* – Patients remained at the COVID-19 positive HD until 2 repeat swabs, checked more than 7 days after the initial positive swab result, confirmed the absence of infection.
6. *Personal Protective Equipment (PPE)* – We ensured all staff had access to PPE, including face masks, eye protection, gloves and protective gowns. Patients were also advised to wear face masks during their transport and the haemodialysis session.
7. *Dedicated Renal physician at COVID-19 positive HD unit* – multiple senior physicians were allocated to the COVID-19 unit to ensure adequate monitoring of patients and timely referral to hospital if any signs of deterioration.
8. *Proactive follow up of patients not attending HD* – HD staff were advised to be proactive in following up on patients who did not attend their HD session, to ensure they did not have symptoms consistent with COVID-19 that may warrant admission to hospital

From 14/03/2020 until 20/04/2020, we collected clinical data retrospectively for our cohort of HD patients who were found to be COVID-19 positive. Data collected included; demographics, hospital admissions, admissions to intensive care, length of hospital stay and deaths. This data included information regarding admissions to, and deaths in, hospitals other than our own. Variables are expressed as median (range). We used Chi-square and Mann-Witney U for the statistical analysis. Fisher exact test was used, when 20% of cells have expected frequencies <5. P-values of <0.05 was considered significant. IBM SPSS Statistics for Macintosh, Version 25.0 was used for the statistical analysis.

Service planning was informed by projected case numbers predicted by inserting local observations into a dialysis-specific Susceptible-Infectious-Removed (SIR) model developed at Imperial College London. This model assumed a basic reproduction number ( $R_0$ ) of 2.0, based on the number of cases reported in Wuhan and Italy. The model utilised Microsoft Excel. Clinical data was compared to SIR model predicted data retrospectively.

### Supplementary References

- S1. Birrell, P.J., et al., *Real-time modelling of a pandemic influenza outbreak*. Health Technol Assess, 2017. **21**(58): p. 1-118.
- S2. Weissman, G.E., et al., *Locally Informed Simulation to Predict Hospital Capacity Needs During the COVID-19 Pandemic*. Ann Intern Med, 2020.
- S3. Dudreuilh, C., et al., *De-isolation of COVID- positive haemodialyssi patients in the outpatient setting: a single centre experience*. . KI, 2020.
- S4. Wang, H., *Maintenance Hemodialysis and Coronavirus Disease 2019 (COVID-19): Saving Lives With Caution, Care, and Courage*. Kidney Med, 2020.
- S5. Obi, Y. and K. Kalantar-Zadeh, *Incremental and Once- to Twice-Weekly Hemodialysis: From Experience to Evidence*. Kidney Int Rep, 2017. **2**(5): p. 781-784.