

Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active. **Results:** Four-hundred-thirteen patients were admitted for COVID-19 infection during this period. After assessment, 55 (13.3%) patients were categorised as 'low risk' (Figure 1) and were discharged with outpatient HD sessions at DWM. The average hospital stay was shortened to 4 days. Self-monitoring of oxygen saturations and symptoms were carried out with daily teleconsultation with Nephrology team HKL (Figure 2). The majority were female (60%) with mean age of  $50.9 \pm 14.7$  years. About 38% reside outside Kuala Lumpur area. Nearly half of these HD patients (47.3%) have both diabetes mellitus and hypertension.

In the 'low risk' group of 55 patients, 76.4% (n=42) were symptomatic of COVID-19 infection and 38.2% (n=21) had abnormal chest radiograph findings such as ground glass appearance, consolidation and pulmonary oedema. Mean C-reactive protein was  $12.9 \pm 10.8 \text{ mg/L}$ . One-fifth (n=12) of the patients were readmitted for hypoxia and worsening of general condition and 3.6% (n=2) died due to severe organising pneumonia.

Thirty-eight patients responded to a feedback questionnaire regarding this initiative (Table 2). Most (94.7%) of them favoured DWM facility and 97.4% were satisfied with the service provided. In addition, 97.4% of patients (n=37) scored 8-10 for the coordination between DWM and HKL.





CRP C-reactive protein; DWM partner private dialysis centre; HKL Hospital Kuala Lumpur; HD haemodialysis

#### Figure 2: COVID-19 HD patients outpatient assessment



BP blood pressure; DWM partner private dialysis centre; HKL Hospital Kuala Lumpur; HD haemodialysis

#### Table 1: Characteristics of patients

Characteristic	Outsourced patients (N=55)
Mean age - year	$50.9 \pm 14.7$
Gender - no (%)	
Male	22 (40)
Female	33 (60)
Area of residence - no (%)	
Kuala Lumpur	37 (62.3)
Outside Kuala Lumpur	18 (37.7)
Presence of symptoms - no (%)	42 (76.4)
Comorbid disease - no (%)	
Diabetes mellitus	28 (50.9)
Hypertension	47 (85.5)
Diabetes mellitus and hypertension	26 (47.3)
Dyslipidaemia	35 (63.6)
Ischaemic heart disease	8 (14.5)
Chest x-ray findings - no (%)	
Normal	34 (61.8)
Ground glass appearance	14 (25.5)
Consolidation	3 (5.5)
Pulmonary oedema	4 (7.2)
Mean C-reactive protein - mg/dL	$12.9 \pm 10.8$
Clinical progression - no (%)	
Recovered	43 (78.2)
Desaturated and readmitted	12 (21.8)
Mortality - no (%)	2 (3.6)

**Conclusions:** This is the first public-private initiative in the provision of haemodialysis in Malaysia during the COVID-19 pandemic. It has reduced the pressure for hospital beds and mobilised manpower to other critical areas in the hospital.

Conflict of interest

Potential conflict of interest:

Dr Seow Yeing Yee is the Nephrologist in Charge of DWM

## POS-968

COVID-19 PANDEMIC IDENTIFIES SIGNIFICANT GLOBAL INEQUITIES IN HEMODIALYSIS CARE IN LOW AND LOWER MIDDLE INCOME COUNTRIES - AN ISN/DOPPS SURVEY



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**Introduction:** The COVID-19 pandemic has caused significant disruption to chronic hemodialysis (HD) care across the globe. Patients receiving chronic hemodialysis (HD) are highly vulnerable in all settings. It is unknown whether the COVID-19 pandemic has disproportionately affected the care of the vulnerable chronic hemodialysis (HD) patients, particularly in low- and lower-middle income (LLMIC) settings. We aimed to identify global inequities in HD care delivery during the COVID-19 pandemic.

**Methods:** The International Society of Nephrology (ISN) and Dialysis Outcomes and Practice Patterns Study (DOPPS) conducted a global online-survey of HD units in late 2020 to ascertain practice patterns and resources relevant to dialysis care during the COVID-19 pandemic. Sample HDUs included: (1) DOPPS sites in China (April – May 2020), (2) a random sample (20 HDUs if > 40 / country; all HDUs if < 40) stratified by region and HDU population (November 2020 – March 2021), and (3) an open invitation via ISN's membership list and social media (March 2021). In May 2020, DOPPS and ISN agreed in revising and extending the survey to countries not participating in DOPPS, including low- and middle-income countries. Responses were stratified by country income according to the World Bank classification.

**Results:** Surveys were returned from 412 facilities in 78 countries: 15(4%) in Low Income Countries (LIC), 111(27%) in Lower-middle Income Countries (LMIC), 143 (35%) in upper-middle income countries (UMIC) and 139(34%) in high income countries (HIC). Respondents reported that diagnostic tests were not available or of limited availability in LIC (62%) and LMICs (68%) as compared to UMIC (33%) and HIC (20%). Severe shortages of PPE were reported in higher proportions in LIC (43%) and LMIC (24%) as compared to UMIC (4%) and HIC (10%). Patients missed HD treatment in LIC (64%) and LMIC (66%) as compared to UMIC (30%) and HIC (66%). Restrictions in access to HD, ICU care and mechanical ventilation among hospitalized patients testing positive for SARS-CoV-2 were reportedly higher in LIC and LMIC as compared to UMIC (Figure 1)

Figure 1: Medical interventions that were restricted or prohibited for chronic dialysis patients admitted to the hospital with COVID-19, by World Bank country income

Medical interventions that where restricted/prohibited:



ported in 20% of HDUs in HICs compared with 50% of HDUs in LICs. Staff reported paying out-of-pocket for PPE more frequently in LIC (58%) and LMIC (76%) as compared to UMIC (53%) compared to HIC (21%).

Patients were more likely to pay out-of-pocket for diagnostic tests in LMIC (40.2%) compared to LIC (14%), UMIC (6%) and HIC (2%).

**Conclusions:** Striking global inequities were identified in HD care during the pandemic. Higher reported mortality in patients treated with chronic HD in LLMIC is likely multifactorial, reflecting poorer access to diagnosis and care of COVID-19, as well as greater disruptions to HD delivery. Urgent action is required to address these inequities which disproportionately affect LLMIC settings thereby exacerbating pre-existing vulnerabilities which may contribute to poorer outcomes. Conflict of interest

Potential conflict of interest:

% of facilities

100

80

60

40

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# **POS-969**

# IMPACT OF VACCINATION ON CLINICAL OUTCOME OF HOSPITALISED END STAGE KIDNEY DISEASE PATIENTS WITH COVID-19 INFECTION. A SINGLE CENTRE EXPERIENCE

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**Introduction:** Severe acute respiratory syndrome coronavirus-2 (Covid-19) was first identified at Wuhan, China in 2019. Since then it has become a pandemic and poses a huge threat to global health. In order to curb this, the Malaysian government has implemented the National Covid-19 Immunisation Programme since February 2021, prioritising high risk individuals including the end stage kidney disease (ESKD). However, the efficacy of Covid-19-vaccination in this population has limited evidence. Thus, the objective of this study is to evaluate the clinical effectiveness of Covid-19-vaccination amongst ESKD.

**Methods:** This is a single centre prospective observational study, reviewing data of adult ESKD patients with covid-19 infection admitted to nephrology ward in Hospital Selayang, Malaysia from  $15^{th}$ July 2021 till  $14^{th}$ August 2021. Demographic and clinical information were extracted from electronic medical records. Disease severity is classified as mild disease (category 1-3) and severe disease (category 4-5). Clinical outcome is defined as alive or death upon discharge. NHS Covid-19 Decision Support Tool score (NHS Score) developed to assist triaging and resource allocation based on age, gender, frailty scale and comorbidities; score of more than 8 is associated with poor prognosis. Clinical frailty scale of 1 to 3 is classified as fit and more than 3 as frail. Multiple logistics regression was performed to identify the odds of full vaccination in disease severity and in-hospital mortality. Data were analysed using IBM SPSS Statistic version 26 with p<0.05 considered as significant.

**Results:** A total of 95 patients were identified, with mean age of 57  $\pm$  12.5 years and 68.4% of them are fit (1-3) based on clinical frailty scale. Majority on haemodialysis as renal replacement therapy (RRT) (n=88, 92.6%), predominated by male (n=56, 58.9%) and 60% were Malay (n=57).

For vaccination status, 36.8% (n=35) of this cohort completed 2 doses of vaccination, 28.4% (n=27) received 1<sup>st</sup> dose and 34.7%(n=33) were vaccination-naïve. Upon admission, 65.3%(n=62) were in severe disease and 36.8% (n=35) has NHS Score of more than 8. None of the severe disease received immunomodulator.

Full vaccination status was found to be significantly associated with mitigation of severe Covid-19 disease after adjusting for possible confounding factors (adjusted Odds ratio [aOR] 0.167, 95% confidence interval [CI] 0.066-0.421), equivalent to vaccine effectiveness of 83.3%. Age, gender, ethnicity, clinical frailty scale, mode of RRT and NHS score are not significantly associated with disease severity.

In-ward mortality was significantly associated with Covid-19 disease severity (aOR 0.107, CI 0.028-0.408) with p=0.001 and vaccination status (aOR 0.209, CI 0.066-0.668) with p=0.008. Full vaccination had reduced risk of death by 79%. ESKD with mild disease had a lower risk of death by 89% compared with those with severe disease. Age, frailty score, NHS score, ethnicity, mode of RRT and gender are not significantly associated with mortality.

**Conclusions:** Adult ESKD patients whom completed 2 doses of vaccination has significant good clinical outcome with mild disease and lower risk for in-hospital mortality.

No conflict of interest

### **POS-970**

## PREVALENCE OF SARS-COV-2 INFECTION IN HAEMODIALYSIS PATIENTS- A RETROSPECTIVE STUDY



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**Introduction**: Although SARS CoV-2 infection primarily causes respiratory illness with variable clinical presentation; other organs are also damaged by the virus, kidney being one of the major site of complication. Haemodialysis patients are a major risk group to contract the infection and often associated with high morbidity and mortality. In this study we describe the clinical characteristics and outcomes of SARS

