

Healthcare policy for COVID-19 patients on haemodialysis: Adapting to the changing needs of the Omicron variant

Singapore's COVID-19 healthcare policies strive for resource-efficient ways to ensure safety of the community and individual patient groups- including the 7500 people here on Haemodialysis (HD).¹ These have higher COVID-19 infection and mortality risk than the general population² and operationally-demanding healthcare needs.

Delta (dominant October 2021) was a COVID-19 variant of concern due to its 60% greater hospitalization rate and higher mortality compared to its predecessors.³ The policy then was therefore hospital-based recovery for all HD patients.

Omicron then overtook Delta as the dominant strain in January 2022- its lower virulence allowing safe management of HD patients in lower acuity COVID-19 Treatment Facilities (CTFs) providing 24-h medical care and COVID-19 therapeutics, instead. These patients would undergo dialysis at 2 designated National Dialysis Centres (NDCs).

Pre-pandemically, the NDCs could serve 40 patients daily, but the policy to dialyse all COVID-19 HD patients at NDCs during Omicron resulted in excess demand despite tripling their capacity. The missed HD sessions increased hospitalization rate among COVID-19 HD patients from 8 February to 21 February 2022 (Figure 1).

Evidence of Omicron's milder disease,⁴ however, allowed for a policy change on 21 February 2022-where clinically-well HD patients without immunocompromising co-morbidities recover at home while receiving HD at their original Regional Dialysis Centre (RDC) under a Home Recovery

Programme (HRP). HRP is part of the larger COVID-19 care model in Singapore, where a national triaging system determines if patients recover in hospital, a CTF, or at home with Telemedical support (HRP).

Decentralization of care to RDCs saved 367 CTF beds, 1431 CTF bed-days and 645 NDC dialysis slots. HRP also allowed patients to recover under the support of familiar RDC staff and avoided logistical issues. After 21 February 2022, only HD patients unsuitable for HRP (i.e., unable to isolate from high-risk residents within the same home), were admitted to CTFs.

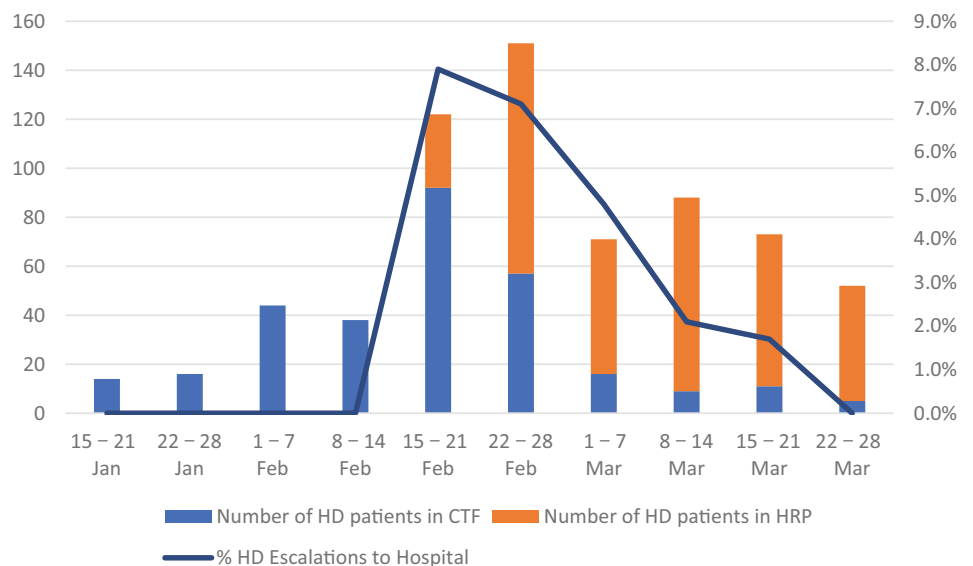
One concern was infection control, since RDCs provide HD to both COVID-19 and non-COVID-19 patients. Cohorting COVID-19 HD patients and allocating them the last HD session for the day followed by full decontamination helped achieve zero RDC COVID-19-infection clusters.

This policy allowing HD patients without immunocompromising comorbidities home recovery and dialysis at their RDC saved resources and was safe for them and community, in the context of an Omicron-like (lower virulence, higher infectivity) variant and highly vaccinated population.

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FIGURE 1 The number of COVID-19-infected HD patients increased throughout January and February 2022, along with that of the general population. Admitting HD patients into the Ministry of Health's Home Recovery Programme (HRP) reduced demand on CTF beds and NDC dialysis slots. The safety of HRP for HD patients is evidenced by the decline hospital escalations

Disposition and Escalation Rates for C+ HD Patients



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