



Infection Control Challenges in Dialysis Units in Developing Countries during COVID-19 Pandemic

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The importance and strategies to implement infection control measures in dialysis units during COVID-19 pandemic have been discussed previously [1,2]. In this editorial, we would like to discuss the limitations to implement the appropriate infection control measures in dialysis units in developing countries with limited resources and how to overcome them. These limitations include limited availability of masks, limited spots in dialysis units in isolation hospitals for confirmed severe acute respiratory syndrome corona virus-2 (SARS-CoV2) infected cases, lack of clear plans to deal with suspected cases and limited availability of swabs.

It is worth to mention that it is not uncommon in developing countries to find patients with limited education in government hospitals. Medical team members need to be meticulous during providing health education to these patients about infection control measures like social distancing, repeated washing of hands and early reporting of any suspicious symptoms. Health education needs to be done clearly, thoroughly and repeatedly and in layman language avoiding jargons.

Healthcare personnel and dialysis patients usually wear masks in dialysis units. Centers for disease control and prevention (CDC) provided special guidance to optimize the supply of facemasks [3]. Contingency capacity measures especially extended use and limited reuse of facemasks strategies are widely implemented in developing countries.

In developing countries, suspected and confirmed corona virus disease 19 (COVID-19) cases may face difficulty finding a dialysis spot. Suspected cases may find themselves trapped in the dilemma of being rejected by their original dialysis units and in the same time, they are ineligible to join dialysis units in isolation hospitals because they are not confirmed cases yet. Confirmed cases may be unable to find spots in dialysis units in isolation hospitals. Actually, two strategies were implemented to deal with suspected cases. In large dialysis units with multiple rooms, a separate room is assigned for suspected cases and once their swabs are confirmed to be positive, they are referred to isolation hospitals. Another strategy, is to assign certain hospitals for suspected cases. If hospitalization is indicated, suspected cases can be admitted to these hospitals till their swab results are available and till a place is available in an isolation hospital if the swab is positive. Suspected dialysis patients can receive dialysis as outpatients or inpatients in dialysis units in these hospitals. Surely, home haemodialysis (HHD) and peritoneal dialysis (PD) programs could help dealing with shortage of dialysis spots for COVID-19 suspected and confirmed cases. However, HHD and PD programs are limited or unavailable in many developing countries.

Another great limitation is the limited availability of swabs. CDC provided special guidance for discontinuation of transmission-based precautions and disposition of COVID-19 patients [4]. COVID-19 infected end-stage renal disease (ESRD) patients can re-

turn to their original dialysis units based on the symptom-based strategy rather than test-based strategy. The test-based strategy is not practical in developing countries due to limited availability of swabs and because it results in prolonged isolation of patients who continue to shed detectable SARS-Cov-2 RNA while they are no more infectious.

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