Philippine Society of Nephrology (PSN)
Philippine Society for Microbiology and Infectious Diseases (PSMID)
Philippine Hospital Infection Control Society (PHICS)

PSN-PSMID-PHICS Interim Guidelines in the Prevention and Control of COVID-19 Infection in Hemodialysis Facilities

Version 2.0 as of 16 October 2020

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I. BACKGROUND

Patients undergoing regular hemodialysis are considered vulnerable and thus require specific guidelines in the context of COVID-19. The goal is to minimize the risk of transmission of SARS-CoV-2 in facilities that provide routine hemodialysis services to this specific group of immunocompromised individuals. This document will guide nephrologists, physicians and other healthcare professionals practicing in hemodialysis units as they attend to patients seeking hemodialysis services in their facilities. Recommendations in this rapid guidance are based on best available evidence and will be updated as new evidence becomes available.

II. General Guidelines:

All medical directors and/or dialysis unit heads of hemodialysis facilities/centers (HDC) all over the Philippines should implement the provisions of the following DOH issuances in their units:

A. Department Circular 2020-0080 on the revised decision tool as of February 26, 2020 for the assessment and management of Corona virus disease (COVID-2019)

B. Department Memorandum 2020-0072-Interim Guidelines for 2019 novel corona virus Acute respiratory disease response in hospitals and other facilities

C. Department Memorandum 2020-0090 on the interim guidelines on the management of Persons Under Monitoring (PUMs) suspected with coronavirus disease 2019.

D. Administrative Order No. 2020-0013 on Revised Administrative Order No. 2020-0012: Guidelines for the inclusion of the Coronavirus disease 2019(COVID-19) in "List of Notifiable Diseases for Mandatory Reporting to the Department of Health

E. Department Circular No. 2020-0162: Directive for the Continuous Operation of Dialysis Facilities in the Philippines During the Enhanced Community Quarantine in the light of the COVID-19 Outbreak

F. Department Memorandum No. 2020-0168: Interim Guidelines for Dialysis Centers Catering to Suspect, Probable and Confirmed COVID-19 Cases

G. DOH Department Memorandum No. 2020-0162: Interim Guidelines on the Accomodation Arrangement for Health Care Workers during COVID-19 Health Emergency Response Period

III. Specific Guidelines:

A. COVID-19 Classification of Patients in Hemodialysis Facilities *(Adapted from WHO Public health surveillance for COVID-19 Interim Guidance dated 7 August 2020)*

1. **Suspect case**

   a. A person who meets the clinical AND epidemiological criteria:

   Clinical criteria:

   1. Acute onset of fever AND cough;

   OR

   2. Acute onset of **ANY THREE OR MORE** of the following signs or symptoms: fever, cough, general weakness/fatigue[1], headache, myalgia, sore throat, coryza, dyspnea, anorexia/ nausea/ vomiting, diarrhea, altered mental status.

   AND

   Epidemiological Criteria:

   1. Residing or working in an area with high risk of transmission of the virus: for example, closed residential settings and humanitarian settings, such as camp and camp-like settings for displaced persons, any time within the 14 days prior to symptom onset;

      OR

   2. Residing in or travel to an area with community transmission[2] anytime within the 14 days prior to symptom onset;

      OR

   3. Working in health setting, including within health facilities and within households, anytime within the 14 days prior to symptom onset.

   b. A patient with severe acute respiratory illness (SARI: acute respiratory infection with history of fever or measured fever of ≥ 38C°; and cough; with onset within the last 10 days; and who requires hospitalization).

1. Signs and symptoms separated with slash (/) are to be counted as one sign.
2. Community transmission: Countries /territories/areas experiencing larger outbreaks of local transmission defined through an assessment of factors including, but not limited to: large numbers of cases not linkable to transmission chains, large numbers of cases from sentinel lab surveillance or increasing positive tests through sentinel samples (routine systematic testing of respiratory samples from established laboratories), multiple unrelated clusters in several areas of the country/territory/area.

2. **Probable case**

   a. A patient who meets clinical criteria above AND is a contact of a probable or confirmed case, or epidemiologically linked to a cluster of cases which has had at least one confirmed case identified within that cluster.
   b. A suspected case (described above) with chest imaging showing findings suggestive of COVID-19 disease*****

      ***** Typical chest imaging findings suggestive of COVID-19 include the following (Manna 2020):

      - chest radiography: hazy opacities, often rounded in morphology, with peripheral and lower lung distribution
      - chest CT: multiple bilateral ground glass opacities, often rounded in morphology, with peripheral and lower lung distribution
      - lung ultrasound: thickened pleural lines, B lines (multifocal, discrete, or confluent), consolidative patterns with or without air bronchograms

   c. A person with recent onset of anosmia (loss of smell) or ageusia (loss of taste) in the absence of any other identified cause.
   d. Death, not otherwise explained, in an adult with respiratory distress preceding death AND who was a contact of a probable or confirmed case or epidemiologically linked to a cluster which has had at least one confirmed case identified within that cluster.

3. **Confirmed case** – any individual, irrespective of the presence or absence of clinical signs and symptoms, who is laboratory-confirmed for COVID-19 in a test conducted at the national reference laboratory, a subnational reference laboratory, and/or officially accredited laboratory testing facility.

***Close Contact* -** is a person who experienced any one of the following exposures during the 2 days before and the 14 days after the onset of symptoms of a probable or confirmed case:

a. Face-to-face contact with a probable or confirmed case within 1 meter and for more than 15 minutes;
b. Direct physical contact with a probable or confirmed case;
c. Direct care for a patient with probable or confirmed COVID-19 disease without using proper PPE
d. Receiver of dialysis treatment at the same time and in the same place and shift of the patient with suspected or confirmed COVID-19 Infection.
e. Receiver of dialysis treatment who come into direct or indirect contact with a patient with suspected or confirmed COVID-19 infection at a distance of under 2 meters and for more than 15 minutes;
f. Receiver of dialysis in the same bed that has not undergone proper disinfection measures after the dialysis treatment of suspected or confirmed COVID-19 infection.

B. COVID-19 Infection Prevention and Control Guidance for Hemodialysis Facilities

1. Prompt detection and effective isolation of potentially infectious patients are essential in the prevention of unnecessary exposure among patients, health care personnel and visitors or caregivers in healthcare facilities which should include hemodialysis centers.

> ***Healthcare personnel or worker (HCP/HCW)*** *as all persons, paid and unpaid, working in healthcare settings engaged in patient care activities, including:*
>
> a. *patient assessment for triage*
> b. *entering examination rooms or patient rooms to provide care or clean and disinfect the environment*
> c. *obtaining clinical specimens*
> d. *handling soiled medical supplies or equipment*
> e. *coming in contact with potentially contaminated environmental surfaces.*

2. Minimize exposures to SARS-COV-2 by adopting measures that should be implemented before and upon patient arrival and in the hemodialysis facility;

1. Scheduling hemodialysis appointments:

When scheduling appointments, the dialysis staff in charge of schedule should instruct patients and persons who will accompany them to call and inform ahead or inform the dialysis center upon arrival:

i. A health and travel declaration checklist should be given to all maintenance hemodialysis patients and caregiver to be filled up on the day of hemodialysis treatment.
ii. If the hemodialysis (HD) patient have fever and symptoms of any respiratory infection (e.g., cough, runny nose, fever) at home, they must take appropriate preventive actions (e.g., wear a facemask and face shield upon entry to contain cough) and proceed to the ER/hospital, COVID-19 triage area, designated referral center;
iii. If the HD patient is asymptomatic but has exposure to a caregiver or household member who have symptoms may still continue with his/her dialysis schedule under strict surveillance.
iv. If a patient's caregiver or any member of the household have symptoms, patient or caregiver must inform the dialysis center immediately for proper advise and triaging.
v. If with respiratory symptoms and fever and but is already within the vicinity of the hemodialysis center (HDC), patients should be requested to wait in a personal vehicle or outside the healthcare facility where they can be contacted by mobile phone and be given an appropriate schedule dedicated for COVID-19 suspects.

3. Patients with symptomatic caregiver or family members

If ever the HD patient has a symptomatic caregiver or family members, the physician on duty or nurse in charge should do the following:

a. Patient should be placed in the designated isolation room or area or:
b. In an area of the waiting room of the dialysis center where patient is 2 meters apart from other patients in all directions.
c. Immediately implement respiratory hygiene and cough etiquette for the patient: placing a facemask and face shield over the patient's nose and mouth if that has not already been done.
d. Coordinate their immediate transfer to the emergency room or hospital for further work-up.

4. Dialysis center screening and triage area

a. A screening and triage room or area should be set up in all free standing dialysis centers.
b. The area must allow waiting patients to be separated by 6 or more feet with easy access to hand hygiene facilities and other supplies for respiratory etiquette including 60%-70% alcohol or alcohol-based sanitizer, tissues, no touch receptacles for disposal, and facemasks.

5. Secondary Screening before HD treatment

If ever the patient was able to breach screening protocols at the triage area and was able `to enter the main dialysis unit with fever and respiratory symptoms, the physician on duty `or nurse in charge should do the following:

a. The area must allow waiting patients to be separated by 2 or more meters with easy access to respiratory hygiene supplies for respiratory hygiene and cough etiquette, including 60%-70% alcohol or alcohol-based sanitizer, tissues, no touch receptacles for disposal, and facemasks
b. patient should be placed in the designated isolation room or area or:
c. in an area of the waiting room of the dialysis center where patient is 2 meters apart from other patients in all directions
d. immediately implement respiratory hygiene and cough etiquette for the patient: placing a facemask and face shield over the patient's nose and mouth if that has not already been done.
e. Coordinate with the attending nephrologist for immediate transfer to the emergency room or hospital for further work-up.

6. Triage Nurse and Medical Personnel

a. Must wear personal protective equipment (PPE), including a gown, gloves, eye protection (e.g., goggles, a disposable face shield that covers the front and sides of the face), surgical mask.
b. Must stay 6 feet away from the patient If the triage or medical personnel must interview a COVID-19 suspect or confirmed patients.

7. Common Areas like Patient Waiting Area or Staff Pantry

Implement the following in the waiting area of patients and in staff pantry room:

a. Wearing of facial masks at all times
b. Physical distancing at least 6 feet apart
c. Frequent hand washing
d. Use hand hygiene using 70% ethyl alcohol
e. Respiratory and cough etiquettes
f. No eating allowed in the waiting and HD area
g. HD staff should not eat together
h. Consider use of HEPA filter If the unit has poor ventilation

8. Companions and Visitors Policy

a. No companions or visitors are allowed to stay with the patient in the dialysis unit.
b. All companions should undergo the standard COVID-19 screening checklist (***see annex A***)

9. COVID-19 Infection, Prevention and Control Policy

a. Free standing dialysis centers must have an infection prevention and control policy for COVID-19 and should designate an officer who will ensure compliance with the policies.
b. Hospital based HDC must work closely with the infection control and prevention unit to fomulate policies for COVID-19.
c. An HDC infection prevention and control officer (IPCO) must be designated in each HDC who will be in charge of the implementation of its own dialysis COVID-19 infection control policies and close coordination with the hospital's IPCC and the local RESU in the city whenever there are COVID-19 outbreaks in the HDC or identified COVID-19 patients.

10. Hemodialysis Screening and Triaging of Patients

STEP 1: Temperature Check and Symptom Check

a. Patient's temperature should be taken at the waiting area using non contact thermometer or their own digital axillary thermometer or center's thermal scanner and recorded
b. Patients with temperature equal to or greater than 37.8 will be immediately placed in the isolation room
c. Physicians on Duty (POD) or triage nurse will evaluate the patient for COVID-19 related symptoms and exposure.
d. Patient will be evaluated using the standard COVID-19 screening checklist (***see annex A***)

STEP 2a: Patients without Symptoms:

Proceed with hemodialysis treatment.

STEP 2b: Patients with Symptoms

a. Patient should be placed in the designated isolation room, tent or:
b. Placed in an area of the waiting room of the dialysis center where patient is 2 meters apart from other patients in all directions.
c. Immediately implement respiratory hygiene and cough etiquette for the patient: placing a facemask over the patient's nose and mouth if that has not already been done.
d. Coordinate with the attending nephrologist for immediate transfer to the emergency room or hospital for further work-up for COVID-19 infection.

STEP 3: Clearance for Hemodialysis

If the patient has been assessed to be a non-COVID-19 case by ER/IDS consultants, he/she may go back to HDC, he/she may proceed with hemodialysis but must submit the clearance form issued by the ER/hospital.

STEP 4: Referrals from ER/Hospital for continuation of HDC as COVID-19 suspect or confirmed patients of the HDC

a. If the patient from ER/Hospital was referred back for continuation of outpatient hemodialysis pending swabbing or release of results:

i. The patient must have an ER medical certificate or abstract from the ER or hospital for continuation of outpatient dialysis treatment indicating the COVID-19 status of the patient and swab test results (either positive or still pending) or schedule.
ii. The attending nephrologist and/or the patient should inform the HDC of such return to mother dialysis unit referral so that patient can be scheduled properly in the isolation room or in cohort isolation shift for suspect or confirmed patients.
iii. The attending nephrologist should endorse the COVID-19 status/diagnosis to hemodialysis unit for patients admitted and eventually discharged.
iv. The HDC should apply the recommended transmission-based precautions (as described in subsection xii below) based on the assessment and endorsement of the ER/COVID-19 triage or referral center.

11. **Monitoring of Patients for COVID-19 Symptoms During Hemodialysis Treatment**

Hemodialysis nurses and physicians on duty must- monitor the patient for fever, chills and other respiratory symptoms that the patient may develop during hemodialysis.

12. **Dedicated Isolation Room or Dialysis Shift/s for COVID-19 Suspect and Confirmed Patients**

Hemodialysis facilities are required to do following:

a. Build dedicated isolation room/s or allocate dialysis shift for COVID-19 suspect OR confirmed patients.
b. Prioritize and accept their regular dialysis patients into their own dedicated isolation room/s or COVID-19 shifts after they are discharged from the hospital
c. Institute engineering controls in dialysis units to minimize risk of spread of COVID-19 to patients and dialysis staff.

13. Aerosol Generating Procedures in Hemodialysis Facilities

a. Aerosol Generating procedures (AGPs) should be performed cautiously and avoided if possible.

a. Open suction of airways
b. Sputum induction
c. Cardiopulmonary resuscitation
d. Endotracheal intubation and extubation
e. Non-invasive ventilation (BIPAP, CPAP)
f. Manual ventilation
g. Bronchoscopy

b. If the performance of AGPs (like CPR, intubation, non-invasive ventilation) are unavoidable, the following interventions must be done:

i. AGPs should ideally be performed in an isolation room or airborne infection isolation room (negative pressure room);
ii. If a patient needs an urgent or emergent AGP and cannot be moved to an isolation room, ensure that other patients in the room are moved out for the period of the procedure;
iii. If movement is not possible, ensure that other patients in the room should wear surgical mask and face shield and physical distancing is maintained 6 feet apart from all directions of the patient undergoing AGP.
iv. HCWs in the room should wear an N95 mask or equivalent or higher, eye protection, gloves, and a gown;
v. The number of HCW present during the procedure should be limited to those essential to patient care and procedure support;
vi. Clean and disinfect the room surfaces promptly after the procedure.

14. Standard and Transmission Based Precautions in Hemodialysis Facilities

a. **Standard Precautions**- are minimum infection prevention and control practices that must be used at all times for all patients in all situations.

i. Perform hand hygiene
ii. Use Personal Protective Equipment (PPE) whenever there is an expectation for possible exposure to infection material (Face masks, eye protection goggles or face shield, Gloves and isolation gowns)
iii. Follow respiratory hygiene and cough etiquette principles
iv. Ensure appropriate patient placement
v. Properly handle and properly clean and disinfect patient care equipment and instruments/devices
vi. Clean and disinfect the environment appropriately
vii. Handle textiles and laundry carefully
viii. Follow safe injection practices
ix. Ensure HCW safety including handling of needles and sharps

b. **Transmission Based Precautions-** are second tier of infection control and are used in addition to standard precautions for patients who may be infected with certain infectious agents with identified mode of transmission.

1. **Contact Precautions-** used for patients with known or suspected infections that represent increased risk for contact transmission.
    i. Appropriate patient placement
    ii. Use of Personal Protective Equipment (PPE) appropriately
    iii. Limit transport and movement of patients
    iv. Use of disposable or dedicated patient-care equipment
    v. Prioritize cleaning and disinfection of rooms of patients on contact precautions

2. **Droplet Precautions**-used for patients known or suspected with pathogen transmitted by respiratory droplets that are generated by a patient who is coughing, talking or sneezing
    i. Source control by putting a mask on patients
    ii. Ensure proper placement
    iii. Use of Personal Protective Equipment (PPE) appropriately
    iv. Limit transport and movement of patients

3. **Airborne Precautions**-used for patients known or suspected to be infected with pathogen transmitted by airborne route.
    i. Source control by putting a mask on patients
    ii. Ensure appropriate patient placement in an airborne infection isolation room (AIIR) constructed in accordance with guidelines for isolation precautions.
    iii. Use of Personal Protective Equipment (PPE) appropriately
    iv. Limit transport and movement of patients
    v. Restrict susceptible HCWs from entering the room
    vi. Immunize susceptible persons as soon as possible when vaccine is available for a particular preventable infection.

15. Dialyzer Reuse for COVID suspect or confirmed patients

Based on contact precaution recommendations, dialysis supplies designed for single use by the manufacturers, particularly dialyzers, should be not reused.

16. Placement of COVID-19 close contact, suspect or confirmed hemodialysis patients

a. Close contact, suspected or COVID-19 confirmed patients with moderate to severe symptoms should be admitted in a hospital and should undergo hemodialysis treatment either of the following area, with doors closed:

i. patient's own room using portable RO machine
ii. Single room isolation in the dialysis complex

b. Only patient with confirmed COVID-19 infection can be cohorted together at the COVID floor or ward using portable RO machine or in the last shift in the dialysis complex. They should however maintain at least 2 meters of separation from other patients at all times.
c. COVID-19 suspect or confirmed patients who are asymptomatic or with mild symptoms should undergo home or facility quarantine and undergo hemodialysis treatment on an outpatient basis in dedicated COVID-19 area or shift of the hemodialysis facility.
d. Patient with different etiology of respiratory symptoms (non-COVID) should not be cohorted together with COVID-19 suspect or confirmed patients.
e. COVID-19 suspect or confirmed patients being transferred to the hemodialysis facility for dialysis treatment should be transported via designated vehicle provided by the local RESU, an ambulance or in a private vehicle and monitored for symptoms.

C. Placement of COVID-19 Suspect and Confirmed Hemodialysis Patients After Hospital Discharge

1. Patients who will be dialyzed in the Main Dialysis Unit using Standard Precautions

a. NON-COVID Cases

b. COVID-19 Confirmed Symptomatic Patients, recovered who fulfilled all of the following:

i. At least 14 days have passed *since symptoms first appeared;*

ii. At least 3 days (72 hours) have passed *since recovery* defined as resolution of fever without the use of fever-reducing medications **and** improvement in respiratory symptoms (e.g., cough, shortness of breath);

iii. One (1) negative result of an FDA Emergency Use Authorized COVID-19 molecular assay for detection of SARS-CoV-2 RNA taken on day 10 from onset of symptoms.

c. COVID-19 Confirmed Asymptomatic Patients who fulfilled all of the following:

i. 14 days have passed since the date of their first positive COVID-19 rt-PCR test, assuming that they have not subsequently developed symptoms since their positive test.

ii. <u>One</u> (1) negative result of an FDA Emergency Use Authorized COVID-19 molecular assay for detection of SARS-CoV-2 RNA taken on day 10 from the first positive RT PCR result.

d. COVID-19 Probable, clinically recovered who fulfilled the following**:**

i. At least 14 days have passed *since symptoms first appeared;*

ii. At least 3 days (72 hours) have passed *since recovery* defined as resolution of fever without the use of fever-reducing medications **and** improvement in respiratory symptoms (e.g., cough, shortness of breath);

iii. One (1) negative result of an FDA Emergency Use Authorized COVID-19 molecular assay for detection of SARS-CoV-2 RNA taken on day 10 from onset of symptoms

e. COVID-19 suspects (placed on an empiric transmission-based precautions), clinically recovered who, after work-up and evaluation, has been assessed to be a NON-COVID case and with one (1) NEGATIVE RT PCR results.

ii. Patients who will undergo hemodialysis treatment in the isolation room or in the same section of the unit and/or on the same dedicated shift (e. g. last shift) in cohort isolation with other patients with <u>confirmed COVID-19</u> while maintaining at least 2 meters separation from each other in all directions.

a. Active COVID-19 confirmed case (until recovered)
b. Active COVID-19 probable case (until recovered)

iii. Patients who will undergo hemodialysis treatment ideally in an isolation room or if not readily available, <u>at a corner or end of row station of the dialysis unit, away from the main flow or traffic</u> and separated by at least 2 meters from the nearest patient in all directions:

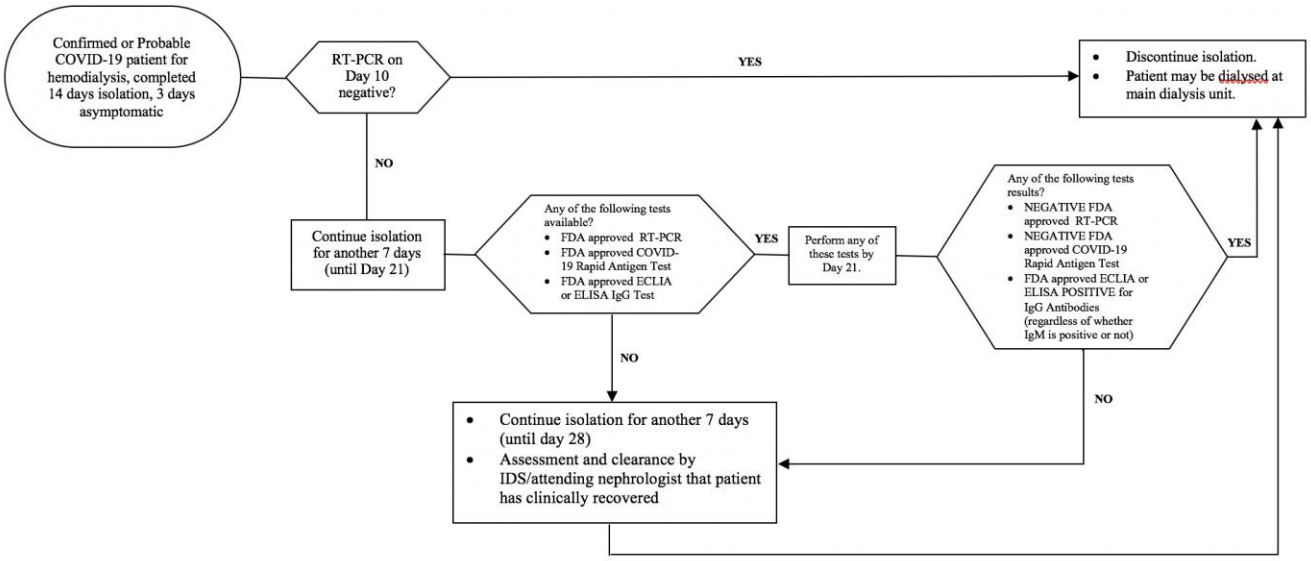
a. COVID-19 suspect
b. Close contact of confirmed, probable or suspect case

iv. Patients who will be dialyzed in Dedicated COVID-19 Dialysis Centers

Active COVID-19 confirmed or probable case with mild symptoms or asymptomatic (until recovered)

D. Assessment and Placement of Hemodialysis patients with persistently positive rt-PCR result on Day 14

For COVID-19 patients with persistently positive rt-PCR result on Day 14 (from onset of symptoms or from the first positive test for asymptomatic patients) who are clinically improved stable may be allowed to undergo dialysis treatment following this algorithm:



E. Hemodialysis Patients' Transfer to Another Hemodialysis Facility

Hemodialysis patients that are transferred to another hemodialysis facility due to the closure (temporary or permanent) of their mother dialysis center will be required the of following:

a. Referral letter or medical certificate from attending nephrologist or the medical director of the transferring unit indicating the COVID-19 status/diagnosis of the patient.
b. Patient will be evaluated by the receiving dialysis center using the standard COVID-19 screening checklist (***see annex A***). Symptomatic patients should be worked up for COVID-19
c. Patient placement will follow recommendations mentioned in Section II-C.

F. Risk Assessment of Exposures and Monitoring of Health Care Workers (HCW) in Hemodialysis Facilities

1. HCW in any of the following risk exposure categories who develop signs or symptoms compatible with COVID-19 must contact their established point of contact (public health authorities or their facility's occupational health program) for medical evaluation prior to returning to work.

a. *High-risk* exposure refer to HCW:
   i. who have had prolonged close contact with a patient, visitor or another HCW with confirmed COVID-19
   ii. HCW not wearing a facemask or respirator
   iii. HCW not wearing eye protection if the patient with COVID-19 is not wearing a face mask
   iv. HCW is not wearing all the recommended PPEs while performing an aerosol generating procedure

b. *Low-risk* exposure generally refer to HCW other than those with exposure risk described above.

2. HCW in any of the following risk exposure categories who develop signs or symptoms compatible with COVID-19 must contact their established point of contact (employee's clinic or infection control officer) for medical evaluation prior to returning to work.

a. **High Risk HCW** should go to the ER or Employee's Clinic for the following:
   i. Undergo rt-PCR testing at least 3 days from last exposure
   ii. Excluded from work while undergoing evaluation and work up
   iii. May return to work if the RT-PCR test is negative and the HCW is asymptomatic with the following guidelines
      1. Wear at least a surgical mask and face shield/goggles at all times
      2. Strict hand hygiene, cough etiquette and physical distancing
      3. Temperature monitoring before and after the shift.
      4. Self-monitoring of symptoms until 14 days from last exposure
      5. Once with signs and symptoms within 14 days from last exposure, must self-isolate and report to supervisor or employee's clinic or ER.

b. **Low risk HCWs** without symptoms should return to work with the following guidelines:

   i. Wear at least a surgical mask and face shield/goggles at all times
   ii. Strict hand hygiene, cough etiquette and physical distancing
   iii. Temperature monitoring before the start and after the end of his/hershift.

iv. Self-monitoring of symptoms until 14 days from last exposure
v. Once with signs and symptoms within 14 days from last exposure, must self-isolate and report to supervisor or employee's clinic or ER.

G. Work Restrictions for Hemodialysis Facility Health Care Workers (HCWs) with *Confirmed* COVID-19 infection.

1. Symptomatic HCWs – Excluded from work until:

i. At least 14 days have passed *since symptoms first appeared;*
ii. At least 3 days (72 hours) have passed *since recovery* defined as resolution of fever without the use of fever-reducing medications and improvement in respiratory symptoms (e.g., cough, shortness of breath);
iii. One (1) negative result of an FDA Emergency Use Authorized COVID-19 molecular assay for detection of SARS-CoV-2 RNA taken on day 10 from onset of symptoms.

2. Asymptomatic HCWs- Excluded from work until:

i. 14 days have passed since the date of their first positive COVID-19 rt-PCR test, assuming that they have not subsequently developed symptoms since their positive test.
ii. One (1) negative result of an FDA Emergency Use Authorized COVID-19 molecular assay for detection of SARS-CoV-2 RNA taken on day 10 from the first positive RT PCR result.

H. Return to work guidelines for Hemodialysis Facility Health Care Workers (HCWs) with *Confirmed* COVID-19 infection AND a persistently positive second rt-PCR test done on day 14 from onset of illness or first positive results (for asymptomatic HCW):

COVID-19 confirmed HCWs will be allowed to return to work until completion of an additional 7 days quarantine (day 21) after the second positive rt-PCR test results taken on Day 10, provided he/she was evaluated and cleared to have clinically recovered from COVID-19 infection by an IDS consultant or attending physician.

I. Risk Assessment and Response to COVID-19 Infection Outbreak in the Hemodialysis Facility

1. Outbreak investigation must be initiated by the designated infection control staff if there is at least one (1) patient currently undergoing treatment or HCW presently working in a hemodialysis facility who is/are confirmed to have COVID-19.

2. The designated staff in charge of infection and prevention control must immediately inform the following:
    1. Officers and/or owners
    2. Medical Director
    3. Infection Prevention and Control Unit of the hospital
3. The hemodialysis facility must conduct general cleaning and disinfection of the unit, after the outbreak was reported, prior to the next treatment shift.
4. After the last shift of the day the outbreak was reported, the hemodialysis facility must clean again and do terminal disinfection of the whole facility using appropriate cleaning solution (sodium hypochlorite) for COVID-19.
5. Immediately perform contact tracing and identify the following patient/s or HCW's who were close contacts of the confirmed COVID-19.
    i. Patients who were dialyzed on the same shift as COVID-19 positive patient in the last 3 dialysis sessions.
    ii. HCWs who treated the confirmed COVID-19 patient for the last 3 dialysis sessions
6. After contact tracing, refer the close contacts to the ER/hospital or to the local RESU for COVID-19 rt-PCR testing
7. Resume full operations after the terminal disinfection if the unit has still adequate manpower
8. Resume skeletal or limited operations if with the unit will experience manpower problems due to the outbreak
9. Refer all patients who will be displaced during the limited operations to other dialysis centers

J. Dedicated Dialysis Centers for Confirmed COVID-19 Hemodialysis Patients

It is recommended that dedicated dialysis centers for confirmed COVID-19 patients be set-up in cities, municipalities or provinces to cater to the increasing number of confirmed COVID-19 patients in close coordination with the local government unit heads (governors and mayors).

K. Acceptance of Displaced hemodialysis Patients to Their Mother Hemodialysis Facility

All dialysis centers must accept back their regular patients that were:

1. Displaced due to temporary closure
2. Displaced due to COVID-19 status (i.e. admitted to the hospital or temporarily treated in dedicated COVID dialysis center or shift in another unit) and has since recovered

L. Minimum Personal Protective Equipment in Hemodialysis Facilities

1. To implement source control measures, the following should implemented:

a. Patients and relatives should be required to wear surgical masks and face shield at all times during the entire duration of their stay in the facility.
b. Healthcare workers should wear at least surgical mask and face shields/goggles at all times while in the hemodialysis facility, including in their breakrooms or other spaces where might encounter their co-workers.

2. To reduce the number of times that the face will be touched and the potential risk for contamination, all HCWs should wear at least facemask or respirator and face shield all the times.
3. Implement universal use of Personal Protective Equipment (PPE) among HCWs in the dialysis unit by wearing the following:
    1. At least surgical mask
    2. N95 or higher-level respirator when performing aerosol generating procedure
    3. Use Eye protection (goggles, face shields that cover the front and side of the face) to ensure eyes, nose and mouth are all protected from exposure to respiratory secretions
    4. Gloves
    5. Isolation Gown

M. Targeted SARS-COV-2 Testing of Dialysis Patients

1. In coordination with LGUs and DOH, targeted testing for SARS-Cov-2 of all hemodialysis patients without signs and symptoms should be highly considered to identify the "silent spreader" or the asymptomatic or pre-symptomatic carriers and further reduce risks of exposures to COVID-19 of the rest of the dialysis patients in a particular hemodialysis facility..

2. Targeted testing results will allow the frontliners in the hemodialysis facility inform to prepare the unit for additional transmission based precautions when caring for dialysis patients to prevent COVID-19 outbreaks in the facility.

3. Hemodialysis facilities must be cognizant of the limitations of targeted testing like obtaining negative results when the swabbing was done during the incubation period and false negative results.

N. Engineering Controls and Indoor Air Quality Optimization

1. Physical barriers, construction of isolations and provision for separate or dedicated pathways for symptomatic suspected or confirmed COVID-19 patients
2. Construction or designation of remote triage facilities to patient intake areas
3. Optimize air handing systems to ensure appropriate air directionality, filtration, and air exchange
4. In areas where air handling systems are not feasible, consider the addition of portable solutions like HEPA filtration units.

O. Environmental Infection Control

1. Dedicated medical equipment should be used when caring for suspected or confirmed COVID-19 patients

2. Ensure environmental cleaning and disinfection procedures are implemented as recommended by the manufacturers.
3. Routine closure of HDC for at least one (1) hour in between dialysis shift for cleaning and disinfection procedures of the unit using EPA registered hospital grade disinfectants
4. After the last shift of each operating day, terminal cleaning must be done and be performed by housekeeping personnel
5. The cleaner should wear mask, eye protection, isolation gown and gloves when performing terminal cleaning

P. Use of telemedicine during Hemodialysis Patients' Rounds

i. To limit spread of COVID-19 infection, it is recommended that telemedicine be utilized in lieu of frequent face-to-face daily or weekly rounds.
ii. Attending nephrologists should utilize telemedicine dialysis rounds strategies by using telecommunication technologies to deliver health-related services to dialysis patients remotely.
iii. HDC owners, medical directors and attending nephrologists must ensure that the key components of telemedicine dialysis rounds be in place:

    1. Audiovisual device (1 for nephrologist and 1 for dialysis unit / HD nurse) Smartphones, Computer (laptop or desktop), Tablet
    2. A video conferencing / communications platform (e.g. Zoom, MS Teams)
    3. Stable internet connection (preferably high bandwidth for both parties, e.g. DSL, fiber internet)
    4. Electronic Medical/Hospital Records (EMR/HER) system (for those equipped with this)
    5. Printer (for tele-prescriptions or orders)
    6. Dedicated speakers / earphones /headphones

iv. The HDC head or medical directors must ensure the following:
    1. that the dialysis unit staff is informed beforehand of the schedule of telemedicine rounds.
    2. that the patient is informed beforehand that their attending nephrologist will be conducting a telemedicine rounds.
    3. that both you and the dialysis staff are in a location with good ambient lighting.
v. The following activities can be done among others during the telemedicine dialysis rounds:
    1. Video endorsement of patient by the nurse or the physician on duty
    2. Visual inspection of patient by attending nephrologist
    3. Relaying of vital signs and laboratory results (through video, messaging or EMR)
    4. Relaying of the nephrologist's dialysis orders / endorsements through messaging, video or messaging
vi. Hospital-based dialysis units with a pre-existing telemetry or telehealth platform / software can use the system in conducting telemedicine dialysis rounds.

vii. HDCs and attending nephrologists can use HIPAA-based EMR / HER software with video conferencing capabilities (e.g. Cisco Webex, Zoom for Healthcare, GoToMeeting, Microsoft Teams, Doxy.me, SeriousMD) subject to individual nephrologist's preferences.
viii. HDCs and attending nephrologists Health can utilize popular social media applications that allow for video conferencing (e.g. FaceTime, Facebook Messenger, Skype, Viber) provided patients are notified of potential privacy risks. Both parties should enable available encryption and privacy settings when using the said applications.
ix. Patients must sign a written consent for the use of telemedicine dialysis rounds during the pandemic.
x. Individual HDCs must formulate their own guidelines on telemedicine dialysis rounds before starting this new consultation platform.

Q. REFERENCES

1. Interim Guidance on the Clinical Management of Adult Patients with Suspected or Confirmed COVID-19 Infection (Version 3.1), Philippine Society for Microbiology and Infectious Diseases. https://www.psmid.org/interim-management-guidelines-for-covid-19-version-3-1/

2. Interim U.S. Guidance for Risk Assessment and Work Restrictions for Healthcare Personnel with Potential Exposure to COVID-19. https://www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-risk-assesment-hcp.html

3. Guidelines for Environmental Infection Control in Health Care Facilities (2003), https://www.cdc.gov/infectioncontrol/guidelines/environmental/appendix/air.html

4. Interim Additional Guidance for Infection Prevention and Control Recommendations for Patients with Suspected or Confirmed COVID-19 in Outpatient Hemodialysis Facilities https://www.cdc.gov/coronavirus/2019-ncov/healthcare-facilities/dialysis.html

5. Discontinuation of Transmission-Based Precautions and Disposition of Patients with COVID-19 in Healthcare Settings (Interim Guidance) https://www.cdc.gov/coronavirus/2019-ncov/hcp/disposition-hospitalized-patients.html

6. Infection Control Guidelines for Aerosol Generating Procedures. Massachusetts General Hospital. https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwi36faYpIPrAhWCy4sBHUDQCgkQFjABegQIAhAB&url=https%3A%2F%2Fwww.massgeneral.org%2Fassets%2FMGH%2Fpdf%2Fnews%2Fcoronavirus%2Flist-of-aerosol-generating-procedures.pdf&usg=AOvVaw2lVLn3pjdRajFiZgid2rB7

7. ASN Information for Screening and Management of COVID-19 in the Outpatient Dialysis Facilityhttps://www.asn-online.org/g/blast/files/DIALYSIS%20COVID%202019%20Update%2003.04.2020FINAL.pdf

8. Standard Precaution for all Patient Care, US CDC https://www.cdc.gov/infectioncontrol/basics/standard-precautions.html

9. Transmission Based Precaution, US CDC https://www.cdc.gov/infectioncontrol/basics/transmission-based-precautions.html

Annex A: Sample Screening Form for COVID-19

In the past two weeks did the patient have any of the following:	YES	NO
1. Respiratory symptoms A. Cough B. Shortness of breath C. Colds D. Anosmia E. Muscle or joint pains F. Throat pain G. Other respiratory symptoms H. Influenza-like symptoms (headache, diarrhea, lack of taste)		
2. Fever more than 38		
3. History of COVID-19 infection		
4. Household member diagnosed with COVID-19		
5. Travel or Residence in an area reporting local transmission of COVID-19		
6. Contact or exposure to someone with recent travel to an area with local transmission of COVID-		

If the patient answers YES to ANY of the questions, refer to any facility capable of further assessment and testing for COVID-19.