

Typhoon & Disaster Preparedness for Dialysis

Philippine typhoon season (June–November) poses life-threatening risks for dialysis patients. Covers: **missed sessions, emergency protocols, go-bag essentials, fluid management**, and safe evacuation.



williamriveromd.com

20+
Typhoons/Year in PH

48 hrs
Max Safe Missed HD

Go-Bag
Always Ready

Call First
Dial Center

1 PAGASA Typhoon Signal — Action Guide for Dialysis Patients

PAGASA Signal	Wind Speed	Action Required
Signal 1	30–60 km/h	Prepare go-bag; confirm next dialysis schedule; stock 2-day emergency food
Signal 2	61–120 km/h	Call dialysis center now — confirm if open; fill fluid allowance bottles; charge phone
Signal 3	121–170 km/h	Go to pre-arranged evacuation point if center is closed; do NOT attempt travel in flood
Signal 4	171–220 km/h	Shelter in place; contact Red Cross or DSWD for emergency dialysis; restrict fluids strictly
Signal 5	>220 km/h	Catastrophic — follow emergency broadcast; restrict all fluid and potassium intake

⚠ If Your Dialysis Center is Closed

Do NOT skip meals to compensate. Instead: restrict fluids to absolute minimum, avoid ALL high-potassium foods (buko water, banana, kamote tops), and seek emergency dialysis at the nearest open facility.

PAGASA TYPHOON SIGNAL LEVELS AND PREPARATION ACTIONS

1 PAGASA TYPHOON SIGNAL LEVELS WHAT EACH MEANS FOR DIALYSIS PATIENTS

PAGASA uses a 5-level system to warn the public. Your dialysis plan should match the signal level.



SIGNAL LEVEL	WHAT IT MEANS	POTENTIAL IMPACT	WHAT YOU SHOULD DO (DIALYSIS PATIENTS)
SIGNAL 1 30–60 km/h winds 	Strong winds may be experienced within the next 36 hours.	Light to moderate rain Some areas may experience flooding	<ul style="list-style-type: none"> Monitor weather updates. Confirm your next dialysis schedule. Refill maintenance medicines. Check transportation options. Start preparing your emergency bag.
SIGNAL 2 61–120 km/h winds 	Strong to gale force winds expected within 24 hours.	Heavy rain possible flooding Power interruptions may begin	<ul style="list-style-type: none"> Secure important documents. Ensure you have enough supplies for at least 3–7 days. Coordinate with your dialysis center about possible schedule changes. Avoid postponing preparations.
SIGNAL 3 121–170 km/h winds 	Gale to storm force winds expected within 18 hours.	Intense rain Flooding in low-lying areas Possible landslides Widespread power and water outages	<ul style="list-style-type: none"> Do not wait for higher signals. Go to dialysis as scheduled if safe. If not safe, contact your center immediately for instructions. Consider rescheduling early if travel risks increase.
SIGNAL 4 171–220 km/h winds 	Storm to violent storm force winds expected within 12 hours.	Very heavy to intense rain Severe flooding Widespread damage Evacuations likely	<ul style="list-style-type: none"> Follow instructions from your dialysis center. Do not travel if winds are strong or flooding is present. If in an evacuation area, inform your center where you are. Bring your emergency bag.
SIGNAL 5 >220 km/h winds 	Very destructive typhoon conditions expected within 12 hours.	Catastrophic damage Severe flooding Long-term power and water interruption Roads impassable	<ul style="list-style-type: none"> Evacuate early if advised. Do not attempt to go to dialysis. Wait for advisories from your center. Your safety is the priority. Conserve supplies. Stay calm and stay safe.

GENERAL REMINDERS FOR ALL SIGNAL LEVELS

- Stay updated with official PAGASA alerts.
- Keep contact numbers of your dialysis center and nephrologist.
- Know your nearest evacuation centers that can support dialysis patients.
- Inform your family or caregiver of your dialysis schedule and location.



Early preparation saves lives. Plan ahead. Stay informed. Stay safe.

2 WHAT TO PREPARE RIGHT NOW — NOT WHEN A STORM IS COMING

Prepare today so you and your dialysis care are not interrupted.

MEDICAL ESSENTIALS	DIALYSIS INFORMATION	EMERGENCY BAG (GO BAG)
<ul style="list-style-type: none"> Prescription and maintenance medicines (at least 7–14 days) Phosphate binders Blood pressure and diabetes meds Dialysis ID and medical records List of allergies and conditions 	<ul style="list-style-type: none"> Dialysis center contact numbers Nephrologist contact Regular dialysis schedule Alternative centers (if possible) Insurance and PhilHealth info 	<ul style="list-style-type: none"> Waterproof bag Flashlight + extra batteries Battery-powered radio Power bank Whistle Face masks, alcohol, wet wipes Extra clothes, blanket
FOOD & WATER SUPPLIES	IMPORTANT DOCUMENTS	HOME PREPARATION
<ul style="list-style-type: none"> Drinking water (enough for 3–7 days) Low-sodium, renal-friendly foods Canned goods, ready-to-eat meals Biscuits, crackers, noodles (low sodium) Avoid high-potassium foods in emergencies (banana, orange, avocado) 	<ul style="list-style-type: none"> IDs (with 2 valid IDs) PhilHealth/insurance cards Medical certificates Emergency contact list Address of evacuation center 	<ul style="list-style-type: none"> Secure windows and doors Bring in loose items Unplug appliances Store water Check your generator or alternative power source

SPECIAL REMINDERS FOR DIALYSIS PATIENTS

- Do not skip dialysis without medical advice.
- Fluid and diet control are even more important during disasters.
- If you experience symptoms (swelling, shortness of breath, chest pain), seek medical help immediately.
- Travel only if safe. Your life is more important than your schedule.



BE READY. BE SAFE. BE PREPARED.

Disasters are unpredictable. Your preparation doesn't have to be.

- Plan
- Prepare
- Protect
- Survive

Prepared kidneys. Stronger you. Safer tomorrow.

Your health is precious. Preparation today protects your life and your dialysis tomorrow.

Fig. 1. PAGASA typhoon signal levels and corresponding actions for dialysis patients. Begin preparing at Signal 1 — do not wait until Signal 3 to identify an alternative dialysis center and evacuation route before typhoon season (June–November). williamriveromd.com Page 2

2 Dialysis Go-Bag — What to Pack

Medical

- ✓ 3-day supply of all medications (labeled by dose/time)
- ✓ Copy of prescription and lab results (most recent)
- ✓ Emergency contact: dialysis center + nephrologist number
- ✓ Dialysis schedule card (next 3 sessions with dates/times)
- ✓ Medical alert bracelet or card stating "Dialysis Patient"
- ✓ BP monitor (manual preferred — no batteries needed)
- ✓ AV fistula care: sterile gauze, medical tape, gloves (in case of bleeding)
- ✓ PD patients: 2 extra bags of PD solution + transfer set + cap

Food & Fluid

- ✓ 500 mL water (within your daily fluid allowance)
- ✓ Low-potassium snacks: 1 cup cassava, plain crackers (low-sodium), hard-boiled egg
- ✗ **AVOID packing: buko water, banana chips, dried fruits, nuts**

Essentials

- ✓ Fully charged power bank + phone charger
- ✓ Small flashlight + batteries
- ✓ Cash (₱500 minimum — ATMs may be offline)
- ✓ Extra dry clothing in waterproof bag
- ✓ Copy of PhilHealth ID and dialysis center membership card

⚠ PD Patients — Power Outage Warning

If power is out for >4 hours, keep your PD solution at room temperature — do NOT use solution that has been exposed to extreme heat or flood water. Use backup manual exchanges if cyclor is unavailable.

For educational use only. Medications, go-bag contents, and emergency plans should be reviewed with your nephrologist before typhoon season. Keep your go-bag packed June–November at all times.

williamriveromd.com

Page 3 of 8

DIALYSIS GO-BAG CONTENTS AND DURING-TYPHOON PROTOCOL

3 BUILDING YOUR DIALYSIS EMERGENCY GO-BAG

Prepare your go-bag now and keep it ready at all times. Store in a waterproof bag and keep it near the door.



1. MEDICAL ESSENTIALS	2. DIALYSIS INFORMATION	3. SUPPLIES & EQUIPMENT
<ul style="list-style-type: none"> ✔ Prescription and maintenance medicines (at least 7-14 days) ✔ Phosphate binders ✔ Blood pressure and diabetes meds ✔ Pain relievers (avoid NSAIDs) ✔ Vitamins / supplements ✔ Thermometer ✔ Alcohol, hand sanitizer, masks ✔ Small first aid kit 	<ul style="list-style-type: none"> ✔ Dialysis information card ✔ List of your dialysis center contacts ✔ Nephrologist contact number ✔ Usual dialysis schedule ✔ Blood type and allergies ✔ PhilHealth / insurance information ✔ Recent lab results (if available) 	<ul style="list-style-type: none"> ✔ Flashlight + extra batteries ✔ Power bank + charging cable ✔ Battery-powered radio ✔ Whistle ✔ Multi-tool / pocket knife ✔ Plastic bags / ziplock ✔ Tissues, wet wipes, trash bags ✔ Notebook and pen
4. FOOD & WATER	5. PERSONAL NEEDS	6. IMPORTANT DOCUMENTS (KEEP IN WATERPROOF POUCH)
<ul style="list-style-type: none"> ✔ Drinking water (at least 1-2 liters per day per person, for at least 3 days) ✔ Renal-friendly ready-to-eat foods ✔ Low-sodium canned goods ✔ Biscuits / crackers ✔ Rice / oatmeal ✔ Oral rehydration salts 	<ul style="list-style-type: none"> ✔ Toiletries ✔ Bath soap, shampoo, toothbrush ✔ Toilet paper ✔ Sanitary pads / adult diapers ✔ Change of clothes ✔ Blanket or light jacket ✔ Eyeglasses / hearing aid (if used) 	<ul style="list-style-type: none"> ✔ Valid IDs ✔ PhilHealth ID / insurance cards ✔ Medical certificates ✔ List of maintenance medicines ✔ Emergency contact list ✔ Address of evacuation centers

ADDITIONAL TIPS

Check and restock your go-bag every 3 months.

Involve your family so everyone knows where it is.

Have a childproof version if you have children.

Keep a smaller pouch with you during dialysis sessions.

4 WHAT TO DO WHEN THE TYPHOON IS HAPPENING

STAY CALM. STAY SAFE. FOLLOW YOUR PLAN.

BEFORE THE WORST HITS

Stay indoors and monitor updates from PAGASA and local LGUs.

Charge all devices and power banks. Keep your radio on.

Secure windows, doors, and loose items that can be blown away.

Prepare food, water, and take your medicines on time.

Review your dialysis plan and possible changes with your center.

IF YOU CANNOT GO TO DIALYSIS

Do not miss dialysis if possible. Contact your dialysis center immediately.

Follow instructions from your nephrologist. They may adjust your fluid and diet.

Limit your fluid intake. Follow your dry weight goal and fluid restriction.

Follow a low-sodium, low-potassium, low-phosphorus diet. Avoid processed foods.

Monitor for symptoms: shortness of breath, swelling, chest pain, confusion, nausea, vomiting.

GO TO THE NEAREST EMERGENCY ROOM IF:

- Severe shortness of breath
- Chest pain
- Persistent vomiting
- Severe swelling
- Confusion or drowsiness
- Very high blood pressure

Do not wait. Seek help.

IF EVACUATION IS NEEDED

Bring your emergency go-bag.

Inform your dialysis center where you are going.

Go to the nearest identified dialysis center in the evacuation area.

Bring your ID, PhilHealth card, and medical information.

Travel with a family member if possible.

AFTER THE TYPHOON

Check on your dialysis center before going.

Avoid floodwaters and areas with downed electrical wires.

Practice good hygiene. Wash hands and use safe water.

Resume your medicines and dialysis as soon as it is safe.

Seek medical help if you have any new or worsening symptoms.

Fig. 2 — Dialysis go-bag contents and during-typhoon protocol. Keep this bag packed and accessible at all times during June–November typhoon season. The medical pouch (medications, records, contacts) is the most critical component — physical items can be replaced, but missed dialysis from a lost prescription or closed center can be life-threatening. williamriveromd.com Page 4

3 Missed Hemodialysis Session — Protocol by Hours

Hours Missed	Risk Level	Actions
0–12 hrs	Low	Restrict fluids to 500 mL total; avoid all high-K+ foods; contact center for rescheduling
12–24 hrs	Moderate	Same as above + check for symptoms: swelling, shortness of breath, palpitations → ER
24–36 hrs	High	Seek emergency dialysis at any open facility; if symptomatic → ER immediately
36–48 hrs	Very High	Medical emergency — any functioning hospital with hemodialysis
>48 hrs	Critical	Life-threatening — emergency services (911 / Red Cross: 143)

Signs Requiring IMMEDIATE ER Visit — Regardless of Typhoon

Chest pain or pressure · Severe difficulty breathing · Confusion or extreme weakness · Puffy face/severe leg swelling · Urine output suddenly stopping

4 Emergency Diet Restrictions When Dialysis is Missed

Fluids

Limit to 500 mL/day total (includes soup, ice, medicine water). No buko water, no juices, no softdrinks.

Signs of fluid overload: shortness of breath, inability to lie flat.

Potassium

Avoid ALL: banana, saging na saba, kamote tops, avocado, buko water, monggo, kalabasa.

SAFE: rice, cassava, kamote (small amount), boiled sayote/upo.

Phosphorus & Protein

Minimize protein portions. No processed food. No cola drinks (phosphoric acid).

Small portion of egg or tofu only.

5 Emergency Resources — Philippines

Organization	Contact	Service
Red Cross Philippines	143	Emergency medical transport
NDRRMC Hotline	911 / 02-8911-5061	National disaster coordination
DOH Emergency	1555	Health emergencies
PhilHealth	02-8441-7444	Coverage during emergencies

For educational use only. These protocols supplement — but do not replace — your nephrologist's individual guidance. The 48-hour threshold is a general guideline; some patients may decompensate faster depending on residual kidney function and fluid status.

williamriveromd.com

Page 5 of 8

MISSED DIALYSIS DECISION TREE

WHAT HAPPENS TO YOUR BODY WHEN YOU MISS DIALYSIS

Dialysis removes waste, extra fluid, and toxins that your kidneys can no longer clear. When you miss treatments, these substances build up quickly and can be dangerous.

THE TIMELINE: WHAT BUILDS UP WHEN YOU MISS DIALYSIS

WITHIN 24-48 HOURS	WITHIN 2-3 DAYS	WITHIN 3-5 DAYS	MORE THAN 5-7 DAYS
Fluid begins to accumulate	Waste products start to rise	Toxins and fluid continue to build	Severe complications can occur
<ul style="list-style-type: none"> Bloating and swelling start Blood pressure begins to rise 	<ul style="list-style-type: none"> Uremic toxins increase (urea, creatinine, phosphorus) Nausea, loss of appetite, fatigue begin 	<ul style="list-style-type: none"> Shortness of breath from fluid in the lungs Itching, trouble sleeping, confusion 	<ul style="list-style-type: none"> Dangerous electrolyte imbalance (high potassium) Risk of heart rhythm problems or heart failure Uremia (toxin overload) can be life-threatening

COMMON SYMPTOMS WHEN YOU MISS DIALYSIS

HEAD	HEART	LUNGS	FACE & EYES	STOMACH	SKIN
<ul style="list-style-type: none"> Headache Confusion Trouble concentrating 	<ul style="list-style-type: none"> Chest pain Irregular heartbeat Fluid around the heart 	<ul style="list-style-type: none"> Shortness of breath Fluid in the lungs 	<ul style="list-style-type: none"> Puffiness Swelling around eyes 	<ul style="list-style-type: none"> Nausea Vomiting Loss of appetite 	<ul style="list-style-type: none"> Itching Dry skin Pale skin

The longer you miss dialysis, the more toxins and fluid build up, putting your life at serious risk.

HOW MISSED DIALYSIS CAN HARM YOUR BODY

HEART & BLOOD VESSELS	LUNGS	BRAIN	ELECTROLYTES	BONES & BLOOD	IMMUNE SYSTEM
Fluid overload and high blood pressure strain the heart and can cause heart failure or sudden cardiac arrest.	Extra fluid can fill the lungs (pulmonary edema), causing severe shortness of breath and low oxygen levels.	Toxin buildup (uremia) can cause confusion, seizures, or even coma in severe cases.	High potassium levels can cause dangerous heart rhythm problems or sudden death.	High phosphorus and low calcium weaken bones and increase the risk of fractures and vascular calcification.	Toxin overload weakens your immune system, making infections more likely and more severe.

Dialysis is life-sustaining. Missing even a few sessions can lead to serious complications or death.

If you think you will miss dialysis due to a storm or emergency, contact your dialysis center AS SOON AS POSSIBLE. They may be able to help you find an alternative.

WHAT YOU CAN DO

- CALL YOUR DIALYSIS CENTER IMMEDIATELY**
Let them know if you cannot make your treatment. They may have other schedules or centers available.
- MONITOR YOUR WEIGHT AND SYMPTOMS**
Rapid weight gain, swelling, or shortness of breath means fluid is building up.
- FOLLOW YOUR MEDICATIONS**
Especially those for blood pressure, potassium binders, and phosphate binders.
- SEEK EMERGENCY CARE IF NEEDED**
Go to the nearest hospital if you have severe shortness of breath, chest pain, confusion, or persistent vomiting.

Do not miss dialysis. Your life depends on it.

Stay prepared. Stay connected. Stay alive.
Your health is precious. Protect it.

Every session keeps you alive.

Fig. 3 - Missed dialysis decision tree: the critical threshold is 48 hours without hemodialysis. At 24 hours with symptoms, go directly to the ER. Do not attempt to "save" a missed session by restricting diet alone — uremia and hyperkalemia accumulate rapidly without dialysis. williamriveromd.com Page 6

6 AV Fistula Emergency Needle Disconnection

①

Apply Pressure

APPLY FIRM PRESSURE immediately with thumb or any clean cloth — do not remove

②

Hold 10–15 min

Maintain pressure for at least 10–15 minutes without checking

③

No Tourniquet

Do NOT apply a tourniquet under any circumstances

④

Call for Help

Call someone to help — do not drive yourself to the hospital

⑤

ER if Persistent

Go to ER or call emergency services if bleeding does not stop after 15 minutes

Life-Threatening: Dislodged Fistula Needle

A dislodged fistula needle can cause life-threatening blood loss in minutes. Practice this response with your family BEFORE an emergency occurs.

7 PD Patient Specific Guidance

Manual Exchanges if Cycler Fails

Use your manual exchange training — 4 exchanges of 2L per day minimum; set phone alarms for exchange times. Practice manual exchanges before typhoon season.

Flood Water Contamination

If your PD exit site or bags were exposed to flood water — do NOT use contaminated solution; contact your PD nurse immediately for guidance.

Cloudy Effluent

Cloudy effluent during/after typhoon may indicate peritonitis — culture effluent and start empiric antibiotics per your center's protocol; go to ER.

8 Post-Typhoon Recovery Checklist

- ✓ Resume normal dialysis schedule **as soon as center reopens**
- ✓ Check serum K+, phosphorus, and BUN at your **first post-typhoon session**
- ✓ Report all medications taken during the emergency to your **nephrologist**
- ✓ Check AV fistula or PD catheter exit site for **signs of infection**
- ✓ Gradually return to normal fluid allowance over **1–2 days**
- ✓ Inform your dialysis nurse about **any symptoms** experienced during the typhoon

POST-TYPHOON RECOVERY FOR DIALYSIS PATIENTS

RECOVERY – GETTING BACK ON DIALYSIS SAFELY

After a typhoon, your body needs dialysis to remove built-up waste, extra fluid, and toxins. Returning too soon or too late can be dangerous.

YOUR SAFETY IS THE PRIORITY. TAKE IT ONE STEP AT A TIME.

1 CHECK BEFORE YOU GO

Do not go to your dialysis center unless you are sure it is safe and operating.

- Contact your dialysis center**
Call ahead to confirm schedules, capacity, and any new instructions.
- Check road conditions**
Avoid flooded roads, downed wires, and unstable areas.
- Arrange transportation**
Coordinate with family, neighbors, or rescue services if needed.
- Bring your emergency documents**
ID, PhilHealth card, recent labs, and medication list.

⚠️ If your center is not available, ask about alternative centers.

2 WHAT TO EXPECT WHEN YOU RETURN

You may need adjustments after missing treatments.

ASSESSMENT	TREATMENT ADJUSTMENTS	MONITORING	DIET & FLUID REVIEW
<ul style="list-style-type: none"> Weight and fluid status check Blood pressure Symptoms review Lab tests (if needed) 	<ul style="list-style-type: none"> You may need longer or more frequent dialysis Lower blood flow at first if needed Ultrafiltration (fluid removal) adjusted gradually 	<ul style="list-style-type: none"> Watch for low blood pressure, cramps, or dizziness Heart rhythm monitoring if you feel weak, short of breath, or have chest pain 	<ul style="list-style-type: none"> Follow fluid and sodium restrictions strictly Avoid eating outside food Ask your dietician for guidance

🛡️ Your body needs time to rebalance. Do not skip or shorten treatments.

3 WATCH FOR WARNING SIGNS

Seek medical help immediately if you have:

🚰 Rapid weight gain (> 2-3 kg in a day)	🫁 Shortness of breath or trouble breathing	🩸 Chest pain or irregular heartbeat	🧠 Severe headache, confusion, or difficulty speaking
🦶 Severe swelling (legs, face, abdomen)	🤢 Persistent vomiting or inability to eat or drink	💧 Very little or no urine output	😴 Extreme fatigue, drowsiness, or fainting

📞 When in doubt, call your doctor or go to the nearest emergency room.

4 TAKE CARE OF YOUR ACCESS

Your access is your lifeline. Protect it.

HEMODIALYSIS (AV FISTULA / GRAFT)	PERITONEAL DIALYSIS (PD CATHETER)
<ul style="list-style-type: none"> Check for bruit (thrill) daily. Watch for redness, swelling, warmth, or pain. Keep the access site clean and dry. Do not allow blood draws or BP measurement on that arm. 	<ul style="list-style-type: none"> Keep the exit site clean and dry. Watch for redness, discharge, or pain. Use only sterile supplies. Do not cloudy effluent immediately.

5 RESTORE YOUR ROUTINE GRADUALLY

Recovery is not just about dialysis.

🛌 REST Get enough sleep. Your body is recovering.	🥗 EAT WISELY Choose fresh, renal-friendly foods. Avoid high-salt and processed meats.	🥛 CONTROL FLUIDS Follow your fluid allowance to prevent overload.	🧠 STAY CALM It's normal to feel stressed. Talk to your family or a counselor if needed.	👥 KEEP IN TOUCH Stay connected with your care team, family, and fellow patients.
---	---	---	---	--

REMEMBER

Getting back on dialysis safely protects your heart, brain, and life.

RECOVER SMART. STAY STRONG. YOU CAN GET THROUGH THIS. **Dialysis is life-sustaining. Do not miss. Do not delay.** **We are here for you. Together, we will get through this.**

Keep this guide and share it with other dialysis patients.

Fig. 4 — Post-typhoon recovery checklist for dialysis patients. Resume dialysis as soon as your center reopens; do not wait. Post-disaster labs (K+, BUN, phosphorus) are essential at your first session. Report any symptoms experienced during the typhoon to your dialysis team — fluid overload, hyperkalemia, and infection complications may not be immediately apparent. williamriveromd.com