

**A Survey on Intradialytic Parenteral Nutrition (IDPN) Practice at Malaysian Hospitals
Haemodialysis (HD) Centres**

Name: _____ Hospital: _____

A. Demographics of IDPN practice

1. Type of Hospital: ☐ Government ☐ University ☐ Private

2. Is there a Nephrologist (Renal Specialist) at your centre?

☐ Yes ☐ No

If Yes please state the number: _____

3. Total number of patients at your HD centre?: _____

4. Does the Nephrologist prescribe IDPN for outpatient HD patients at the hospital?

☐ Yes ☐ No

B. IDPN Use by Prescribers and Stakeholders

May tick more than one.

5. Patients who are prescribed on IDPN by the doctor are usually

☐ warded patients

☐ outpatients

6. Who determines to start or initiate IDPN at your hospital?

☐ Nephrologist/Doctor

☐ Nurse

☐ Pharmacist

☐ Dietitian

☐ Others please specify _____

7. Who selects or determines the IDPN bag to be used in patients?

☐ Doctor

☐ Pharmacist

☐ Dietitian

8. IDPN bags are provided as

☐ compounded bags by hospital pharmacy

☐ standard 3 chamber bags

☐ lipid-free standard bags

☐ others please specify _____

9. Which of the following IDPN bag is commonly prescribed for your patients?

- ☐ Nutriflex lipid special
- ☐ Kabiven Peri & central
- ☐ Nutriflex lipid peri & plus
- ☐ Smof Kabiven
- ☐ Others please specify _____

10. Is compounding individualized IDPN bag common ($\geq 50\%$ of IDPN prescribed at the HD unit are compounded regimes) for patients at your centre?

(If yes proceed to question 11 , if No proceed to question 12)

- ☐ Yes ☐ No

11. Why is compounding preferred compared to standard formula for IDPN bag?

C. IDPN prescription and delivery

May tick more than one.

12. Which of these markers are used as a criteria by the nephrologist before initiating IDPN?

- ☐ BMI $< 23 \text{ kg/m}^2$
- ☐ serum albumin $< 38 \text{ g/L}$
- ☐ weight loss of 10% over 6 months
- ☐ dietary intake $< 25 \text{ kcal/kg/day}$
- ☐ others please specify _____

13. IDPN is recommended when maintenance HD patients have at least 20 kcal/kg/day of established oral spontaneous intake. **Is this true?**

- ☐ Yes ☐ No

14. Is there specific IDPN prescribing protocol in place at your centre?

eg. specific IDPN order form ☐ Yes ☐ No

15. Who calculates the macronutrients (carbohydrate, protein and lipid) prescribed to patients on IDPN?

- ☐ Nurse
- ☐ Doctor
- ☐ Pharmacist
- ☐ Dietitian
- ☐ No calculation, use standard formula

16. Who administers IDPN at your HD centre?

- ☐ Nurse
- ☐ Doctor
- ☐ Medical Assistant
- ☐ Patient
- ☐ Others please specify _____

17. How many hours is IDPN administered in HD patients at your centre?

- ☐ 3.5 hours or less
- ☐ 4 hours
- ☐ 6 hours
- ☐ 12 hours
- ☐ 24 hour
- ☐ Others please specify _____

18. What are other infusions commonly given concurrently with IDPN?

- ☐ IV saline
- ☐ IV Antibiotics (e.g. IV Vancomycin)
- ☐ IV Iron
- ☐ Blood products
- ☐ Insulin
- ☐ None
- ☐ Others please specify _____

19. Are there drug or blood products infusions given via the same IV line as IDPN?

- ☐ Yes ☐ No
- ☐ If yes, please specify drug/blood product given _____

D. IDPN Monitoring & Evaluation of treatment

May tick more than one.

20. Are baseline biochemical parameters done **before commencing** IDPN at your centre? (if yes, please proceed to question 21)

- ☐ Yes ☐ No

21. Which are the routine biochemical test done on outpatient HD patients while on IDPN?

- | | |
|---|--|
| <input type="checkbox"/> Serum electrolytes | <input type="checkbox"/> Total cholesterol |
| <input type="checkbox"/> Liver function tests | <input type="checkbox"/> Serum triglycerides |
| <input type="checkbox"/> Renal function tests | <input type="checkbox"/> Total bilirubin |
| <input type="checkbox"/> Blood glucose levels | <input type="checkbox"/> Dextrostix |
| <input type="checkbox"/> Serum Albumin | <input type="checkbox"/> Hemoglobin |

- ☐ CRP
- ☐ Serum Iron

- ☐ Fluid status

22. What are the common complications reported in IDPN patients.

- | | |
|--|---|
| <input type="checkbox"/> Fever | <input type="checkbox"/> Hypotermia |
| <input type="checkbox"/> Hypotension | <input type="checkbox"/> Hyperglycemia |
| <input type="checkbox"/> Electrolyte imbalance | <input type="checkbox"/> Sepsis |
| <input type="checkbox"/> IV line infection | <input type="checkbox"/> Thrombophlebitis |
| <input type="checkbox"/> Hepatic Steatosis | <input type="checkbox"/> Hypertriglyceridemia |
| <input type="checkbox"/> Hypercholesterolemia | <input type="checkbox"/> Refeeding Syndrome |
| <input type="checkbox"/> Fluid overload | |

E. Pharmacists role and tasks in IDPN delivery

May tick more than one.

23. Does the dialysis center have access to a pharmacist/dietitian?

- ☐ Yes, full time pharmacist only
- ☐ Yes, full time dietitian only
- ☐ Yes, both
- ☐ No

24. Are you aware of Protein Energy Wasting (PEW) in CKD patients?

- ☐ Yes
- ☐ No

25. Did you receive any formal training or continuous medical education on managing PEW patients on HD?

- ☐ Yes
- ☐ No

Thank you for your time!