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Project Title: A Collaborative Strategy by Pharmacist & Dietitian in Optimizing Serum Phosphorus Concentration for Newly Started CAPD Patients in POH

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Background:

- Hyperphosphatemia: \( \rightarrow \) increase mortality and morbidities
- CAPD alone provide inadequate phosphate (PO\(_4\)) removal
- \( \therefore \) dietary control & phosphate binders needed
- But PO\(_4\) binder not match PO\(_4\) content in each meal

**Objective:** Optimize serum PO\(_4\) control by collaboration between pharmacist and dietician in counselling patients

**Method:**

**Step 1:**
Referral to Dietitian & Pharmacist for Counselling during CAPD training by Renal Nurse
\( \rightarrow \) Serum Phosphorus (PO\(_4\)) level taken as Baseline

**Step 2:**
Dietitian Consultation
1. Provided Dietary Advice
2. Estimated Patient’s PO\(_4\) Intake per Meal

**Step 3:**
Pharmacist Consultation
1. Counselling Medication Use
2. Advised to take the prescribed PBs in proportion to PO\(_4\) Content in Each Meal where Appropriate.
3. Identified Drug Related Problems

**Step 4:**
1. Consultation by MO ~One Month after Starting CAPD
2. Serum PO\(_4\) Measured

*Services in addition to standard of care are printed in red in the flow chart
Primary Outcome: A significant reduction in serum Phosphorus level was seen at 1 month

(Mean Baseline PO₄ = 1.93±0.5 Vs 1-Month = 1.45±0.31, p<0.001)

70% of patient achieving KDOQI target for PO₄ at 1 month
Secondary Outcome:

(a) Calcium-Phosphorus Product (Ca x P)

Patients with Ca x P > 4.44 mmol^2/L^2 at baseline (n=6) were all reduced to <4.44 mmol^2/L^2 at 1-month*
Conclusions:
This joint counselling service by pharmacist and dietitian could:
1) Optimizing serum $\text{PO}_4$ level in newly started CAPD patients
2) Additional benefit in optimizing medication management as a whole, which was reflected by the identification of various DRPs during pharmacist’s counselling.