Case 1:

A 58-year-old female with CKD 4 due to diabetic nephropathy presented to the hospital with CHF and AKI. Due to worsening kidney function, hemodialysis was initiated in the hospital. She was discharged to the outpatient hemodialysis unit with a tunneled HD catheter, received dialysis education, and decided to change to PD. The PD catheter was placed and now she is ready for training.

Weight: 90kg

24h urine volume 800mL

Current HD prescription: 3x/week HD, 3.25 hours, Qb 300 mL/min, Qd 500mL/min, DW 90.2kg

Average interdialytic weight gain- 1.5kg

spKt/V=1.43, HD nPCR 1.6, residual kidney GFR 1 mL/min

She is euvolemic on exam and BP is controlled. She takes bumetanide 3mg bid and metolazone 2.5mg daily, losartan 25mg daily.

Suggest initial PD prescriptions for this patient for both CAPD and APD.

Case 2:

A 60yo man on peritoneal dialysis presents for his monthly clinic visit. Events since last month include developing a community acquired pneumonia, which was treated with azithromycin (oral) with resolution. While he had pneumonia, his oral intake was poor, and he had several days of hypotension despite using all 1.5% dextrose solution, which resolved.

Today he reports that since the infection he has been feeling nauseated often, more than 4 days per week. He has no diarrhea but did have vomiting once. He has also developed edema for the past week, with higher blood pressure than usual.

On exam, his BP is 150/80, HR 78, weight 88kg. Lungs are clear, heart rhythm regular, abdomen soft and non-tender, PD catheter exit site clean and dry, and legs show 1+ edema bilaterally.

Monthly labs

Na 138, K 3.9, Cl 102, CO2 23, BUN 90, Creat 15.2, Calcium 9.2, Phos 6.5

WBC 5,800, Hgb 10.3, Platelet 180,000

Assessment of small solute clearance shows Kt/V 1.45 (was 1.90), 24h urine volume 300mL (previously 1100mL)

4h D/P creatinine = 0.7

His current PD prescription: NIPD, 4 cycles over 9 hours, 2L inflow. He uses a mix of 1.5% and 2.5% most nights.

How could his PD prescription be adjusted?

Case 3:

A 50 y/o man with CKD 5 due to FSGS begins to develop uremic symptoms. He has previously had a PD catheter placed by the Moncrief- Popovich technique. You mutually agree that you will externalize the catheter and he will start PD the following Monday morning. He would like to do the minimum amount of dialysis needed to alleviate his symptoms.

The patient weighs 80 kg, has a plasma urea of 50 mg/dl, and still produces 1 L of urine daily with a urea concentration of 240 mg/dl.

1. What is his residual daily Kt/V_{urea}?
2. Suggest an initial PD prescription.

Case 4:

A 34 y/o man who has been on CCPD for 3 years develops an inguinal hernia for which surgical repair is planned.

Current CCPD prescription: Cycler x 9.5 hours, fill volume 2000mL x 4 cycles, last fill 2000mL icodextrin.

Current Kt/V 2.1, urine volume 400mL/day, 4 hour D/P creatinine 0.7. Weight 82kg.

Discuss strategies to adjust his PD regimen in order to keep him on PD post-operatively (without having to change to HD).