

**Table S1.** Drug-related problems (DRPs) according to pharmacotherapy indications in intervention group implemented clinical pharmacist service during hospitalization.

Indication	MEM service		dPCT service		Main contents of indication-specific recommendation by clinical pharmacists
	DRPs, n (%)	Resolved DRPs, n (%)	DRPs, n (%)	Resolved DRPs, n (%)	
Mineral bone disease	36 (19.8)	31 (86.1)	7 (15.6)	3 (42.9)	<ul style="list-style-type: none"> <li>- Addition, discontinuation, or dosage adjustment of phosphate-binding agents, vitamin D or calcimimetics according to blood phosphorus, calcium, PTH, or 25(OH)D levels;</li> <li>- Change the administration time of phosphate-binding agents;</li> <li>- Blood test for the evaluation of phosphate-binding agents or calcimimetics use;</li> <li>- Dosage reduction of phosphate-binding agents based on the maximum daily dose of calcium.</li> </ul>
Hypertension/ cardiovascular disorders	34 (18.7)	28 (82.4)	5 (11.1)	2 (40.0)	<ul style="list-style-type: none"> <li>- Addition, discontinuation, or dosage adjustment of antihypertensive drug therapy according to the blood pressure level;</li> <li>- Change the administration time of antithrombotic agents owing to surgery or procedure.</li> </ul>
Anemia	24 (13.2)	18 (75.0)	7 (15.6)	3 (42.9)	<ul style="list-style-type: none"> <li>- Blood test for the evaluation of ESA, or iron preparation use;</li> <li>- Start, or discontinue ESA or iron supplement based on the hemoglobin levels, transferrin saturation or serum ferritin levels;</li> <li>- Dosage adjustment of ESA according to hemoglobin level.</li> </ul>
Hyperuricemia	13 (7.1)	11 (84.6)	4 (8.9)	3 (75.0)	<ul style="list-style-type: none"> <li>- Addition, discontinuation, or dosage adjustment of xanthine oxidase inhibitors based on the serum uric acid or CrCl levels;</li> <li>- Discontinue colchicine based on patient symptoms.</li> </ul>
Gastrointestinal disorders	15 (8.2)	12 (80.0)	1 (2.2)	0	<ul style="list-style-type: none"> <li>- Start laxatives for the prevention or treatment of constipation;</li> <li>- Start, or discontinue acid suppression therapy, promotility agents or digestive enzymes;</li> <li>- Start proton-pump inhibitors owing to high-dose corticosteroid use;</li> <li>- Renal dosing of histamine H<sub>2</sub> antagonists.</li> </ul>
Metabolic acidosis	11 (6.0)	11 (100.0)	0	NA	<ul style="list-style-type: none"> <li>- Addition, discontinuation, or dosage adjustment of sodium bicarbonate based on plasma total CO<sub>2</sub> level.</li> </ul>
Infections	8 (4.4)	8 (100.0)	3 (6.7)	3 (100.0)	<ul style="list-style-type: none"> <li>- Renal dosing of antimicrobial agents.</li> </ul>
Fluid retention	8 (4.4)	6 (75.0)	2 (4.4)	0	<ul style="list-style-type: none"> <li>- Start or discontinue diuretics based on patient symptoms such as oedema or urine output;</li> <li>- Change thiazide diuretics to loop diuretics in patients with CrCl &lt;30 mL/min;</li> <li>- Hold diuretics before a coronary angioplasty procedure.</li> </ul>
Dyslipidemia	6 (3.3)	3 (50.0)	8 (17.8)	5 (62.5)	<ul style="list-style-type: none"> <li>- Addition or dosage adjustment of an HMG-CoA reductase inhibitor based on blood lipoprotein concentrations.</li> </ul>
Nutritional disorders	6 (3.3)	4 (66.7)	1 (2.2)	0	<ul style="list-style-type: none"> <li>- Start multivitamins with an insurance coverage in patients receiving dialysis.</li> </ul>
Disorders of electrolyte	5 (2.7)	5 (100.0)	0	NA	<ul style="list-style-type: none"> <li>- Addition, discontinuation, or dosage adjustment of potassium chloride or a potassium-lowering agent</li> </ul>

homeostasis						
Hyperglycemia	3 (1.6)	3 (100.0)	0	NA	-	according to the blood potassium level.
					-	Change to antidiabetic drugs that do not require dosage adjustment according to kidney function;
Immune disorders	3 (1.6)	2 (66.7)	1 (2.2)	NA	-	Resume or discontinue metformin according to S <sub>cr</sub> level.
					-	Blood test for TDM of calcineurin inhibitors;
					-	Discontinuation or dosage adjustment of calcineurin inhibitors according to TDM.
Neurological disorders	2 (1.1)	1 (50.0)	1 (2.2)	0	-	Renal dosing of pregabalin or gabapentin.
Others	8 (4.4)	6 (75.0)	5 (11.1)	4 (80.0)	-	Discontinue adsorptive carbon based on S <sub>cr</sub> level owing to insurance coverage;
					-	Start or discontinue dermal corticosteroids or oral antihistamines based on the symptom of pruritus;
					-	Renal dosing of histamine H <sub>1</sub> antagonists or analgesics.
Total	182 (100.0)	149 (81.9)	45 (100.0)	23 (51.1)		

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Abbreviation: CrCl, creatinine clearance; dPCT, discharge pharmaceutical care transition; ESA, erythropoiesis-stimulating agents; MEM, medication evaluation and management; NA, not applicable; PTH, parathyroid hormone; Scr, serum creatinine; TDM, therapeutic dose monitoring.