

# Contents

Sponsors .....	iii
Foreword, 2nd Edition Editor .....	vi
Foreword .....	vii
Contributors .....	viii
Reviewers .....	xii
Style Guide for 3rd Edition .....	xvi
Preface .....	xvii

## **1 Nature and Scope of Nephrology Nursing** 1

<b>1 Professional Nephrology Nursing</b> .....	3
Beth Ulrich	
<b>2 The Evolution of Nephrology and Nephrology Nursing</b> .....	25
Caroline S. Counts	

## **2 The Kidney** 57

<b>3 Physiology of the Kidney</b> .....	59
Sally S. Russell	
<b>4 Diseases of the Kidney</b> .....	79
Lori E. Mahaffey	
<b>5 Chronic Kidney Disease: Diagnosis, Classification, and Management</b> .....	101
Deborah H. Brooks	
<b>6 Nutrition and Chronic Kidney Disease</b> .....	131
Janelle Gonyea	

## **3 Dialysis Therapies** 151

<b>7 Hemodialysis</b> .....	153
Alice Hellebrand, Donna Allen, Madelyn Hoffman	
<b>8 Peritoneal Dialysis</b> .....	209
Elizabeth Kelman, Diane Watson	
<b>9 Home Dialysis Therapies</b> .....	287
Lori Harwood, Catherine Dominski	

## **4 Dialysis Access** 315

<b>10 Arteriovenous Fistula</b> .....	317
Michele Inglese	

<b>11 Arteriovenous Graft</b> .....	335
Michelle Gilliland	
<b>12 Central Venous Catheter</b> .....	349
Lillian A. Pryor, Deborah Brouwer-Maier	
<b>13 Peritoneal Dialysis Access</b> .....	363
Jennifer Payton, Sara K. Kennedy	
<b>14 The Role of the Interventional Nephrology Nurse</b> .....	377
Michelle R. Carver	

## **5 Comorbidities and Complications of CKD: Nursing Management** 385

<b>15 Anemia</b> .....	387
Elizabeth C. Evans	
<b>16 Disorders of Calcium and Phosphorus Metabolism</b> .....	403
Molly Cahill, Mary S. Haras	
<b>17 Hypertension</b> .....	425
Sally Campoy	
<b>18 Diabetes Management and Implications of Care for Individuals with Diabetic Kidney Disease</b> .....	451
Kathryn McDougall	
<b>19 Alterations in Fluid, Electrolyte, and Acid-Base Balance</b> .....	465
Sandra M. Bodin, Timothy Ray	
<b>20 Heart Failure and Atrial Fibrillation</b> .....	479
Linda L. Wick	
<b>21 Hemodialysis-Induced Myocardial Stunning</b> .....	495
LaVonne Burrows	
<b>22 Cardiorenal and Hepatorenal Syndromes</b> ..	511
Cynthia L. Russell, Dana Aholt	
<b>23 Pulmonary Hypertension</b> .....	527
Zorica Kauric-Klein	
<b>24 Lipid Disorders in Chronic Kidney Disease</b> ..	537
Annette Hood	
<b>25 Depression in Chronic Kidney Disease</b> .....	543
Carol S. Lieser	
<b>26 Sleep Disorders</b> .....	563
Kathleen Tocco, Cheryl Rowder, Mary VanNoord	

# Contents

<b>6</b>	<b>Kidney Disease Across the Life Span</b>	<b>571</b>	<b>10</b>	<b>Advocacy</b>	<b>803</b>
27	The Child with Kidney Disease . . . . .	573	39	Creating a Culture of Safety . . . . .	805
	Kimberly Windt, Elisha Rampolla Pavlick, Cindy Richards			Roboam R. Aguirre	
28	Older Adults with Chronic Kidney Disease .	597	40	Nursing-Sensitive Quality Indicators . . . . .	825
	Debra Hain			Charlotte Thomas-Hawkins, Carolyn Latham, Debra J. Hain	
29	Supportive Care of Patients with Chronic Kidney Disease . . . . .	625	41	Cultural Safety in Nephrology Nursing . . . .	841
	Anita E. Molzahn, Kara Schick-Makaroff			Colleen Varcoe, Karen Mahoney	
<b>7</b>	<b>Acute Kidney Injury</b>	<b>637</b>	42	Related to Teaching and Learning . . . . .	851
30	Acute Kidney Injury . . . . .	639		Lubia Oxhorn, Brian C. Oxhorn	
	Barbara Odom		43	Health Literacy . . . . .	863
				Brad Huit	
<b>8</b>	<b>Pharmacology of Kidney Disease</b>	<b>679</b>	44	Infection Prevention and Control . . . . .	871
31	Pharmacology of Kidney Disease . . . . .	681		Loretta Jackson Brown, Karen Wiseman, Kerri Holloway, Sandra M. Bodin	
	Kristine Schonder		45	Psychosocial Issues in Nephrology Nursing	917
32	Medication-Related Nephrotoxicity . . . . .	703		Teri Browne, Stephanie Johnstone	
	Mary Schira		46	Sexual Health . . . . .	935
				Kasey J. Bosco, Megan O'Donnell	
<b>9</b>	<b>Regenerative Medicine and Innovations in Nephrology Nursing</b>	<b>711</b>	47	Healthcare Informatics . . . . .	939
33	Kidney Transplantation: Organ Donation . .	713		Emel Hamilton	
	Amy Woodard, Emily Arnold		48	Public Policy and the Legislative Process . .	953
34	Kidney, Pancreas, and Liver Transplantation: The Procedures and Nursing Management .	723		Sheila Leander, David Walz	
	Sharon Longton		49	Evidence-Based Nephrology Nursing Practice . . . . .	967
35	Pharmacology of Transplantation . . . . .	761		Tamara Kear	
	Ruth-Ann Lee		50	Research Priorities for Nephrology Nursing: Challenges and Recommendations . . . . .	979
36	Regenerative Medicine . . . . .	781		Charlotte Thomas-Hawkins, Glenda M. Payne, Lesley C. Dinwiddie	
	LaTonya J. Hickson, Dana G. Kontras, Karen P. Krucker, Thomas A. Gonwa				
37	The Wearable Artificial Kidney . . . . .	787			
	Nancy Colobong Smith				
38	The Implantable Artificial Kidney . . . . .	795			
	Courtney Cawthon, William Fissell, Shuvo Roy				
				<b>Continuing Nursing Education</b>	<b>993</b>
				<b>Index</b>	<b>1003</b>