

Provider Chronic Kidney Disease (CKD) Information Tool

Definition (NKF, 2002):

1. Kidney damage for ≥ 3 months, as defined by structural or functional abnormalities of the kidney with or without decreased GFR, manifest by *either*
 - a). Pathologic abnormalities
 - b). Markers of kidney damage including abnormalities in the composition of blood or urine, or abnormalities in imaging tests
2. GFR < 60 ml/min.1.73m² for ≥ 3 months, with or without kidney damage

CKD stages, action plan and ICD-9 Codes

National Kidney Foundation CKD classification and stratification (NKF, 2002)

Stage	Description	GFR (ml/min) ²	Action	ICD-9 Codes
	Increased risk for CKD	> 90	<ul style="list-style-type: none"> Screen for CKD risk factors 	
1	Kidney damage with normal or increased GFR	90	<ul style="list-style-type: none"> Diagnose cause of CKD & treat Screen and treat progression risk factors Treat co-morbid conditions Screen and treat cardiovascular risk factors 	585.1
2	Kidney damage with mildly decreased GFR	60-89	<ul style="list-style-type: none"> Estimate progression of GFR decline 	585.2
3	Moderately decreased GFR	30-59	<ul style="list-style-type: none"> Referral to nephrology, if not already done Minimum bi-yearly GFR assessment Screen for complications every 3 months and treat if present Adjustment of medications to current GFR 	585.3
4	Severely decreased GFR	15-29	<ul style="list-style-type: none"> Refer for preparation for kidney replacement therapy, if not already done 	585.4
5	Kidney failure	< 15	<ul style="list-style-type: none"> Begin replacement therapy if uremic 	585.5
CKD Risk Factors (McClellan, 2005)				
Hypertension		Family history of End-stage renal disease/ dialysis		
Diabetes		Nephrotoxic exposure, including NSAIDS		
Age > 60		Urologic disorders		
Cardiovascular disease		History of acute renal failure		
Autoimmune disease		Cancer		
Systemic infection		Ethnic minority		
Screening				
Serum creatinine to obtain GFR		Assessment of blood pressure		
Urinalysis		Spot urine protein to creatinine ratio		
		<i>In selected cases:</i>		
Renal ultrasound		Serum electrolytes		
Urinary pH		Urinary concentration/dilution		
Indicators of Kidney Damage*** Use GFR rather than serum Creatinine ¹				
GFR < 60 ml/min ²		Hematuria		
Proteinuria		Other urine sediment abnormalities		
Structural {imaging} abnormalities				
¹ GFR calculator www.kidney.org				
Strategies to delay progression				
BP control		DM control		
Use of ACE-I or ARB		Slow proteinuria		
Management of CV risk factors: smoking cessation, lipid control, heart disease				
Management with Nephrology				
<ul style="list-style-type: none"> Early referral to establish etiology and Rx plan Periodic on-going consultation with nephrology during CKD stages 1-3 to assess progression and manage complications Routine follow-up by nephrology during CKD stages 4-5 to prepare for and manage kidney replacement therapy. 				

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References

McClellan, W. M. (2005). Epidemiology and risk factors for chronic kidney disease. *Med Clin N Am*, 89, 419-445.

National Kidney Foundation (2002). National Kidney Foundation, K/DOQI clinical practice guidelines for chronic kidney disease: Evaluation, classification and stratification, 39 (Suppl 1), S17-S31.