

STANDARD TREATMENT WORKFLOW (STW)

Chronic Kidney Disease (CKD)

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Standard Treatment Workflow (STW) for the Management of

CHRONIC KIDNEY DISEASE (CKD)

ICD-10-N18.3

WHEN TO LOOK FOR CKD

- History of long-standing nocturia, or constitutional symptoms
- Edema, hematuria, proteinuria or renal stones
- Long-term intake of painkillers or herbal medicines
- Family history of kidney disease
- Growth retardation, rickets, or proximal myopathy
- Unexplained hypertension or anemia
- Longstanding diabetes, hypertension, CVD, stroke, PVD
- Systemic diseases (e.g. connective tissue disease)

EVALUATION OF NEWLY DIAGNOSED PATIENT WITH CKD

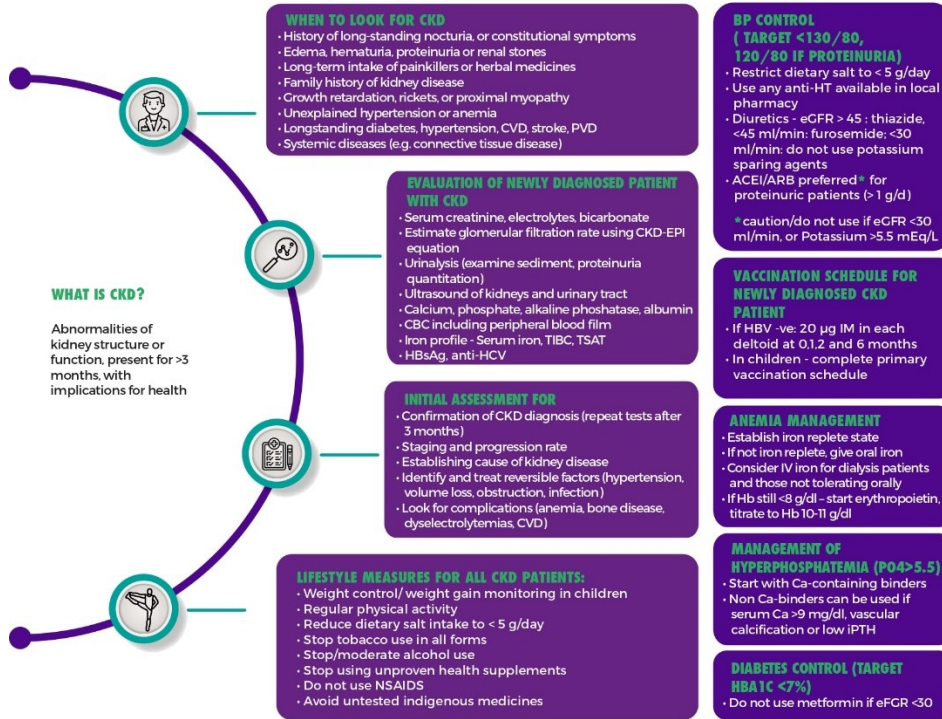
- Serum creatinine, electrolytes, bicarbonate

BP CONTROL

- (TARGET <130/80, 120/80 IF PROTEINURIA)
- Restrict dietary salt to < 5 g/day
 - Use any anti-HT available in local pharmacy
 - Diuretics - eGFR > 45 : thiazide, <45 ml/min: furosemide; <30 ml/min: do not use potassium sparing agents
 - ACEI/ARB preferred* for proteinuric patients (> 1 g/d)

*caution/do not use if eGFR <30

Standard Treatment Workflow (STW) for the Management of CHRONIC KIDNEY DISEASE (CKD) ICD-10-N18.3



NUTRITION

- Salt restriction < 5g/d. Protein 0.6-0.8 g/kg/day.
- DO NOT restrict proteins unless documented high protein user (dairy, white meat are good protein sources, mix different types of dal).
- Restrict green leafy vegetables if eGFR <30 ml/min
- Avoid fruit juices, coconut water and carbonated beverages
- For children: ensure adequate protein intake appropriate for age.

LOW POTASSIUM FRUITS/VEGETABLES:

Apple, pineapple, papaya, pear, tangerine, watermelon, grape, plum, cabbage, carrot, cauliflower, onion, radish, peppers, chillies, brinjal, cucumber, green beans, peas, rice, bread

VITAMIN D THERAPY

- Supplement 60,000 units cholecalciferol q2w
- Correction of acidosis with oral sodium bicarbonate
- Activated vitamin D if hyperparathyroidism

MANAGEMENT	
<p>PRIMARY CARE</p> <ul style="list-style-type: none"> Detailed history and physical examination Identify and correct reversible factors Stop nephrotoxic agents Referral after stabilization 	<p>INDICATIONS FOR REFERRAL</p> <ul style="list-style-type: none"> Initial evaluation of all newly diagnosed cases Rapid disease progression New complication Discussion for Renal Replacement Therapy (RRT)
<p>ADMISSION CRITERIA</p> <ul style="list-style-type: none"> Initial evaluation or when patient presents with specific problems - like acute worsening, development of a new complication For creation of vascular access For PD catheter placement or initiation Initiation on HD and for kidney transplant 	<p>DISTRICT HOSPITAL</p> <ul style="list-style-type: none"> Detailed history and physical examination Investigate to ascertain cause of CKD Tailor treatment to cause Identify and manage complications Vaccination Identify and correct acute factors Counseling: nutrition, lifestyle, pregnancy in women of child-bearing age Discussion regarding RRT Vascular access creation or PD Catheter insertion Send patient back to community with treatment plan
<p>TERTIARY CARE</p> <ul style="list-style-type: none"> Detailed history and physical examination Investigate to ascertain cause of CKD (imaging/biopsy/genetic studies) Tailor treatment to cause Identify and manage complications Vaccination Counseling: nutrition, lifestyle, pregnancy in women of child-bearing age Discussion regarding RRT Vascular access creation/PD catheter insertion Work-up for transplantation Send patient back to community with treatment plan 	<p>PREPARATION FOR RENAL REPLACEMENT THERAPY</p> <ul style="list-style-type: none"> eGFR < 30 : Preserve veins in the non-dominant arm for AV Fistula eGFR < 30 : discuss RRT options. eGFR < 15 : May need dialysis soon, counsel for AV fistula, list for transplant Dialysis start : depends on symptoms or eGFR <5 ml/min Look for contraindications to HD or PD : discuss choice in those suitable for either <p>CONSERVATIVE CARE</p> <ul style="list-style-type: none"> If life expectancy limited, multiple comorbidities/personal preference Decision-making should be shared with patient/family

KEEP A HIGH THRESHOLD FOR INVASIVE PROCEDURES

This STW has been prepared by national experts of India with feasibility considerations for various levels of healthcare system in the country. These broad guidelines are advisory, and are based on expert opinions and available scientific evidence. There may be variations in the management of an individual patient based on his/her specific condition, as decided by the treating physician. There will be no indemnity for direct or indirect consequences. Kindly visit our web portal (stw.icmr.org.in) for more information.
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