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Module: Community Care and Management of Longer-Term Conditions

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Lecturer: Dr. Brian Mashumba

TOPIC : Chronic Kidney Disease (CKD) in the UK

Early Detection, Management and Personalised Care

Target Audience: Primary Care Nurses (GP & Community Nurses)

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Welcome

Chronic Kidney Disease (CKD) in the UK

Early Detection, Management, and Personalised Care

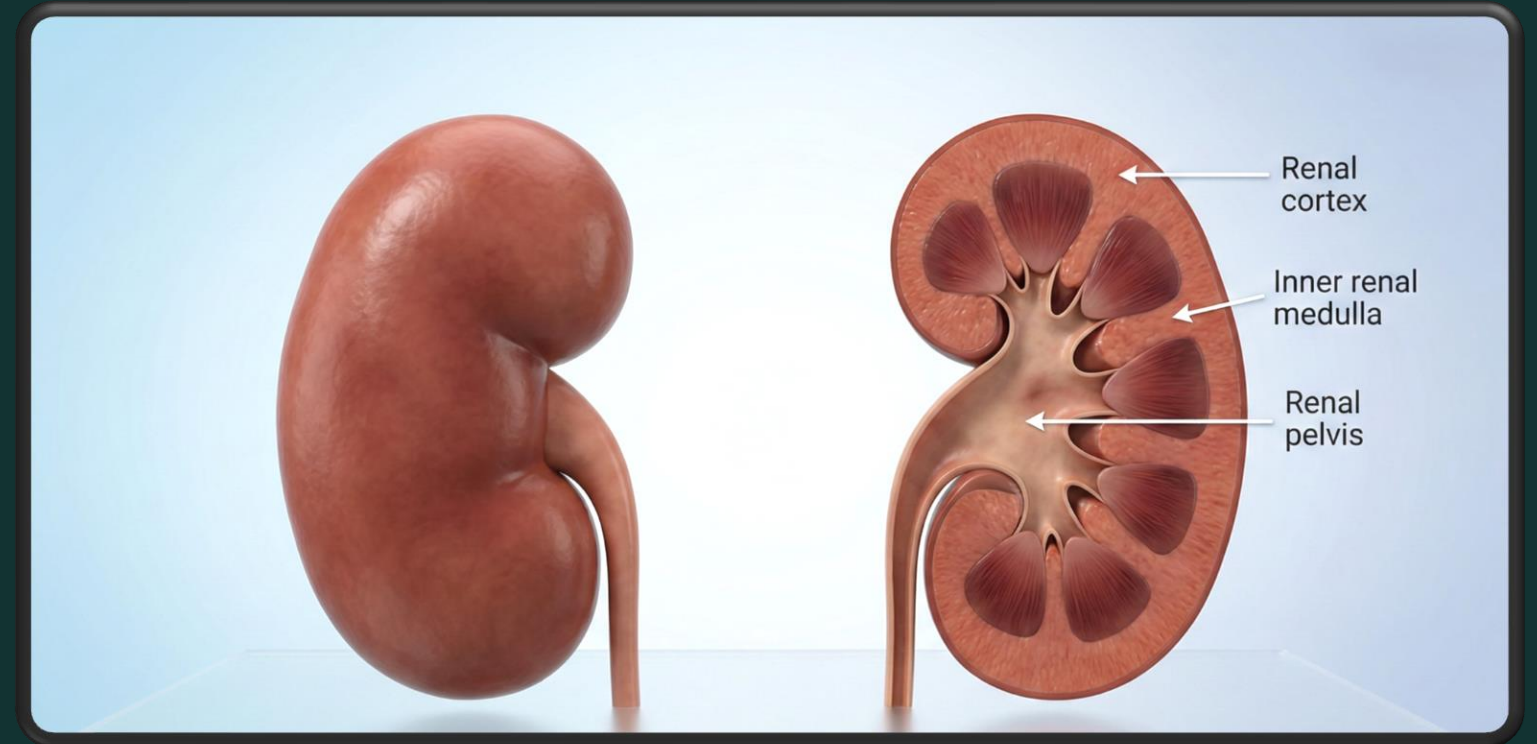
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Table of Contents

1 Introduction to CKD	2 Presentation Overview	3 What is CKD? (Definition)	4 Symptoms of CKD	5 Causes and Risk Factors	6 Is CKD Modifiable or Non-Modifiable?
7 Prevalence of CKD (UK & Global)	8 Economic Burden of CKD	9 Social Burden of CKD	10 Diagnosis (NICE NG203)	11 Initial Assessment in Primary Care	12 Management of CKD (NICE + NHS Guidance)
13 Models & Frameworks for CKD Care	14 Social Prescribing in CKD	15 Treatment Options	16 Comorbidities Associated with CKD	17 Prevention Strategies	18 Skills, Values & Behaviours in CKD Care
18 Skills, Values & Behaviours in CKD Care	19 Personalised Care (Six Components)	20 Recommendations for Improving CKD Outcomes	21 Conclusion		



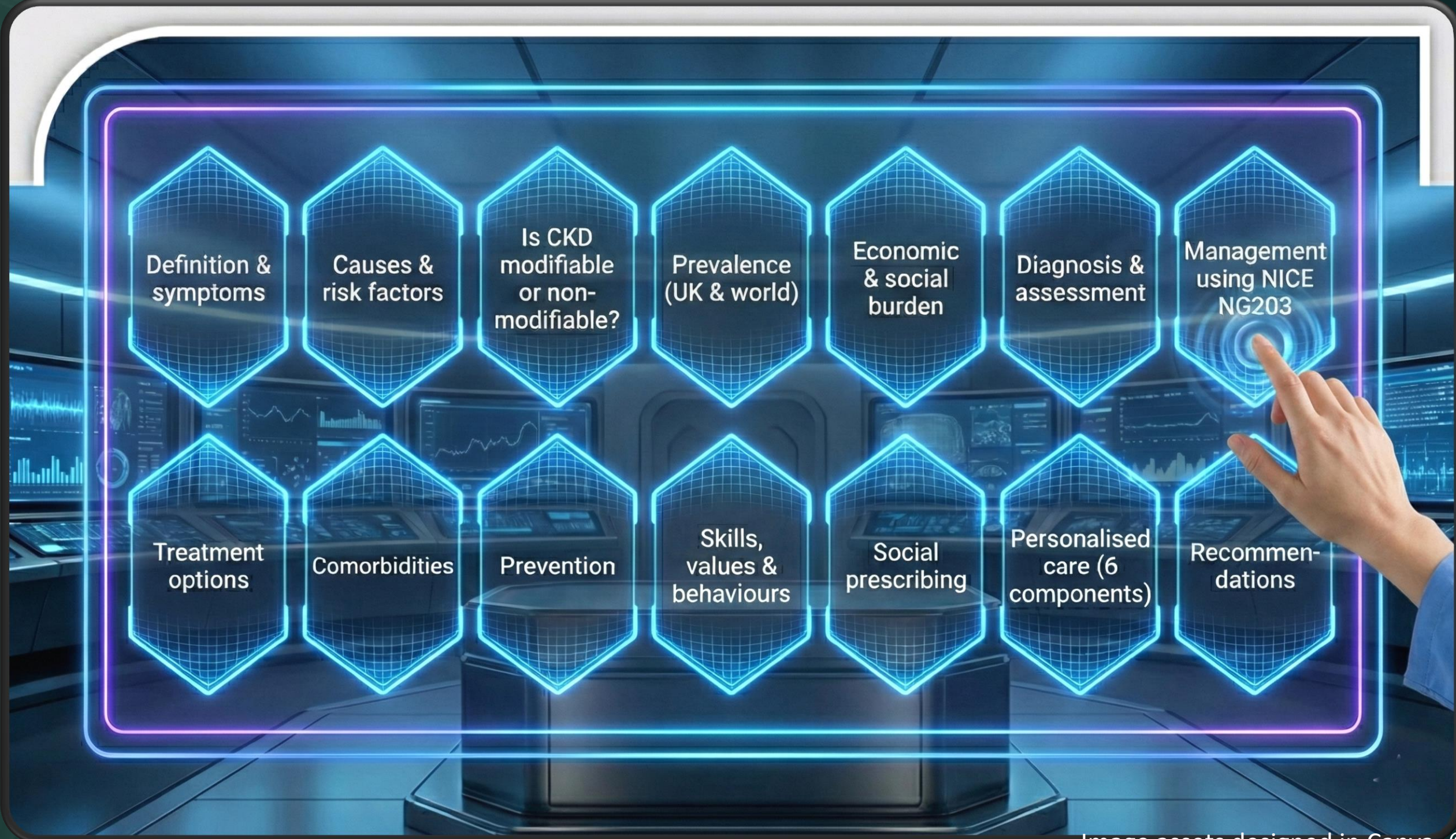
1. Introduction to Chronic Kidney Disease (CKD)

A Major Long-Term Condition in Primary Care

Chronic Kidney Disease (CKD) is a chronic and long term disorder that is marked by the gradual failure of the kidney, which fails to perform its functions of filtering waste in the body. Primary Care is the initial barrier since CKD is usually silent at the initial stages. In this environment, the role of the Primary Care Nurses becomes extremely significant: these professionals identify the at-risk groups, provide access to self-management, and arrange comprehensive patient care.

2. Presentation Overview

What This Session Covers ? This presentation will cover:



3. What is CKD

Damage or loss of function of the kidneys that persist over a period of over 3 months.

Diagnosis: Diagnosed with the help of blood test (eGFR <60) or urine test of protein (ACR ≥3).

Importance: CKD is a silent disease that endangers heart disease. Early detection allows medical issues to be avoided.

“Chronic kidney disease is a progressive disorder in which structural or functional abnormalities in the kidneys persist for at least three months and carry major implications for a person’s health.”

— Kalantar-Zadeh, K., 2021

“Chronic kidney disease represents a long-term loss of kidney function defined by decreased GFR or markers of kidney damage, and it often remains silent until the later stages.”

— Levey, A.S., 2015

What is CKD? (Definition)

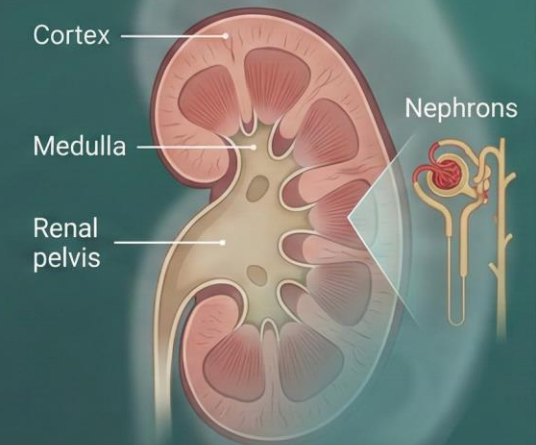
Clinical Definition

Chronic Kidney Disease (CKD) is defined as structural or functional kidney damage lasting more than 3 months.

1. eGFR <60 ml/min/1.73m²

2. Persistent albuminuria (ACR ≥3 mg/mmol)

CKD increases cardiovascular risk, disability, and mortality. Early detection in primary care is essential.



“Chronic kidney disease (CKD) means your kidneys are damaged and can’t filter blood the way they should. The disease is called ‘chronic’ because the damage happens slowly over a long period of time.”

— National Kidney Foundation, 2023

4. Symptoms of CKD

CKD symptoms develop gradually and are often silent in the early stages, making routine monitoring essential. As the condition progresses, patients may experience fatigue, ankle swelling, nocturia, nausea, appetite loss, itchy skin, and cognitive slowing ('brain fog')

CKD Symptoms (Chronic Kidney Disease)



FATIGUE



ANKLE SWELLING



NOCTURIA



NAUSEA



ITCHING



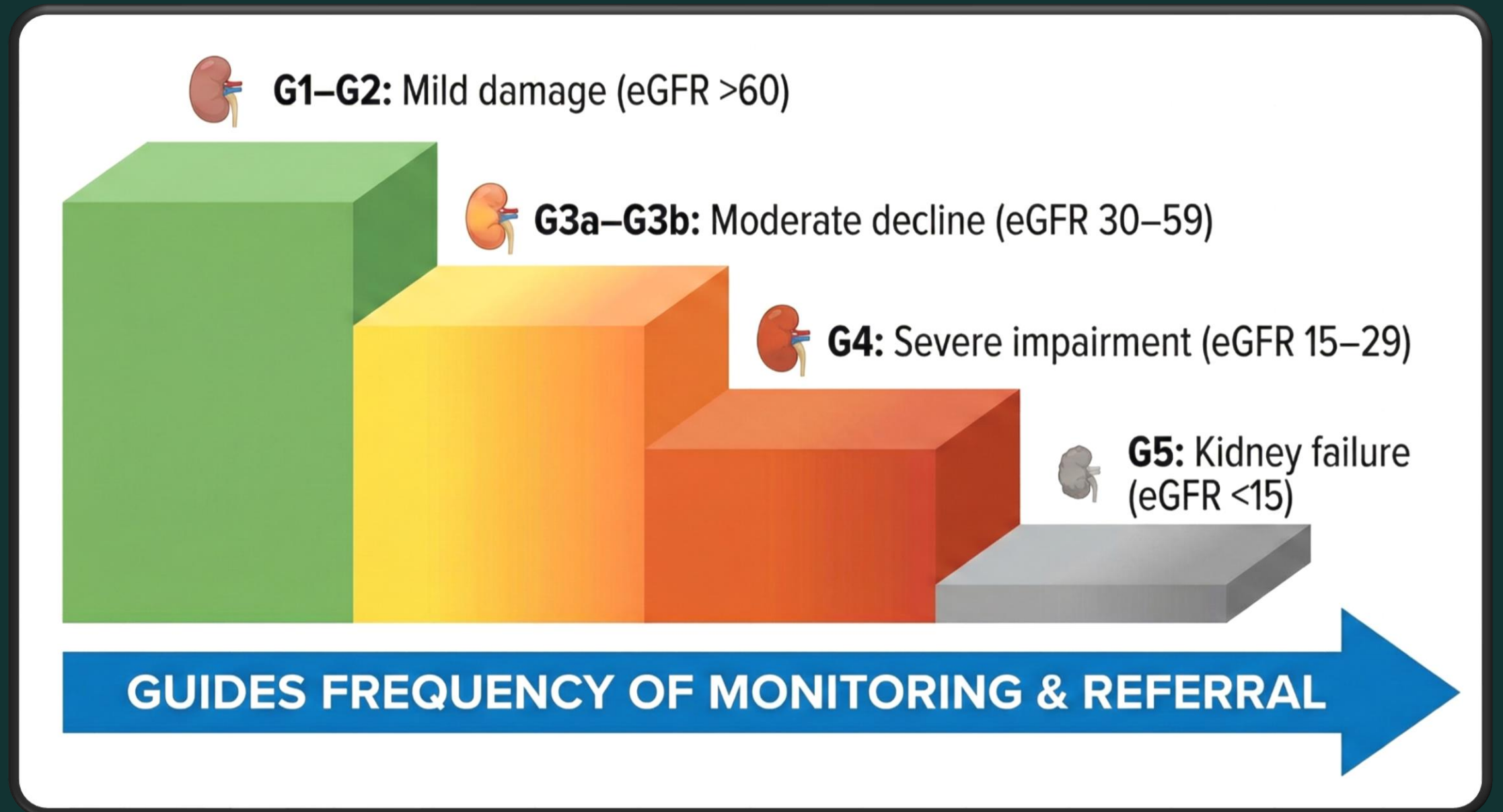
LOSS OF
APPETITE



BRAIN FOG

4a. Stages of CKD

CKD is classified into five distinct stages (G1 to G5) based on eGFR, marking the progression from mild kidney damage to complete kidney failure. This staging system is the clinical foundation for managing the disease, dictating the necessary frequency of patient monitoring and guiding timely referrals to specialist nephrology services.



5. Causes and Risk Factors

Chronic Kidney Disease is mostly caused by the conditions that we come across in our daily lives. The leading cause is diabetes, and damage can be prevented only through constant glucose monitoring. Unchecked Hypertension (High Blood Pressure) gives an extreme mechanical pressure to the kidneys. The lifestyle issues, like Smoking, which limits the blood circulation, and excessive use of nephrotoxic drugs (NSAIDs), tend to compound these risks and lead to cumulative, long-term injury.

Primary Causes (Levey & Coresh, 2012)

- Diabetes mellitus (Type 1 & 2)
- Hypertension
- Polycystic Kidney Disease (PKD)

Additional Common Causes (Jha et al., 2013)

- Glomerulonephritis
- Interstitial nephritis
- Recurrent pyelonephritis

Structural & Obstructive Causes (Murray & Dorman, 2016)

- Prostatic hypertrophy or kidney stones
- Vesicoureteral reflux
- Ureteric or urethral strictures

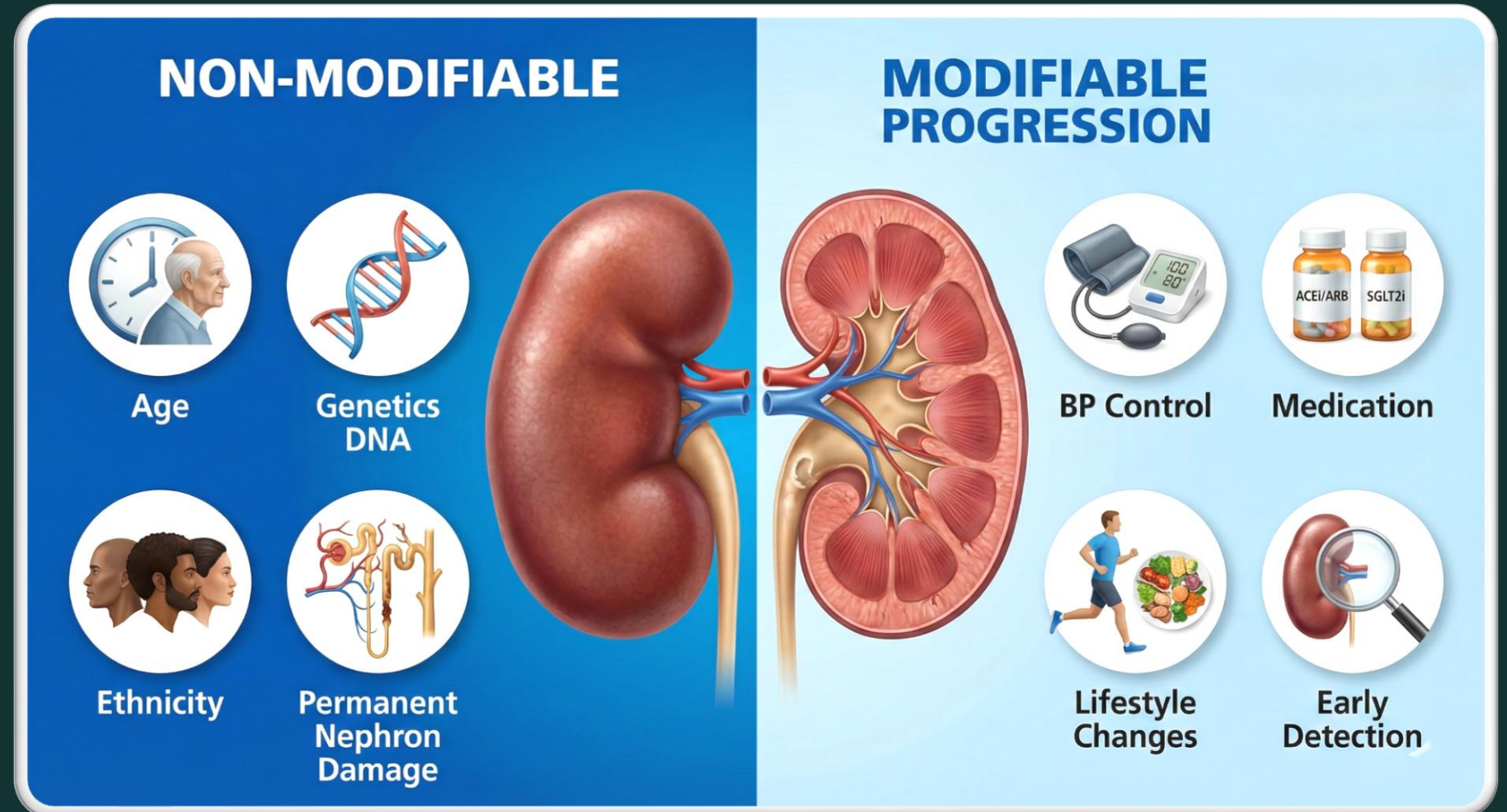


6. Is CKD Modifiable or Non-Modifiable?

Understanding What Can Change

CKD is non-modifiable because nephron loss is irreversible. However, CKD progression IS modifiable through:

CKD is an initiative that is motivated by multiple factors. Clinical management vehemently aims at proscribing modifiable risks, which are principally Diabetes, Hypertension, smoking and obesity, to avoid the initiation of harm. Non-modifiable predispositions should however also be included in risk assessment such as increased age, genetic (PKD), and increased susceptibility among south Asian, African, and Caribbean populations.

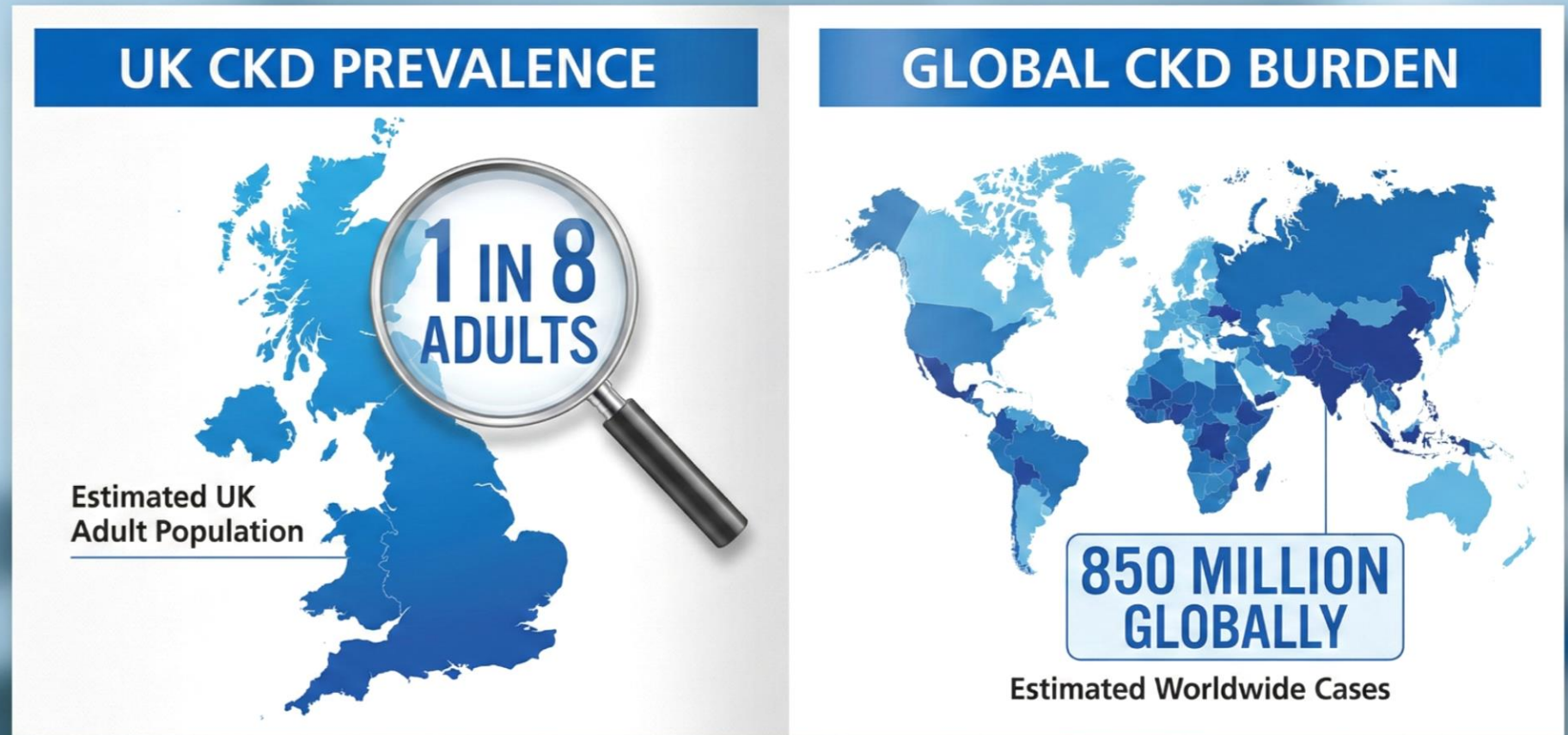


Strong Summary Line: “CKD cannot be reversed, but its progression is highly modifiable through early detection and integrated primary care support.”

7. Prevalence of CKD

UK and Global Statistics

CKD affects 1 in 8 adults in UK with older adults, low-income localities, and ethnic minorities having its highest prevalence. In the world, CKD impacts more than 850 million individuals and is among the leading causes of untimely death.



8. Economic Burden of CKD Impact on NHS Resources

The NHS spends around 7 billion every year on CKD. The dialysis alone costs between £30,000 and 35,000 per patient in a year. The long-term costs are increased because of the management of cardiovascular complications and frequent admissions.

NHS Kidney Disease (CKD) & Dialysis: Cost & Burden

NHS CKD Cost
(Annually)

£7 Billion



Dialysis Cost
(Per Patient/Year)

£30–35k



Rising Long-Term
CKD Costs

Increasing & Significant ↑



CKD Costs
Rising Long-Term

9. Social Burden of CKD Impact on Patients & Families

CKD has an impact on the daily life, mental health, employment, independence and family roles. Carers experience anxiety both financially and emotionally. The deprived communities and minority groups have worse health inequalities.

IMPACT OF CKD ON DAILY LIFE



MENTAL HEALTH
STRESS



EMPLOYMENT
LOSS



FAMILY/CAREGIVER
BURDEN



SOCIAL
ISOLATION



INEQUALITY

Image assets designed in Canva. © Canva

10. Diagnosis (NICE NG203) Primary Care Diagnostic Steps

Diagnosis includes:

- eGFR and creatinine
- Urine ACR
- BP measurement
- Renal ultrasound where needed

Annual screening is recommended for people with diabetes, hypertension, or CVD.

CKD DIAGNOSIS PATHWAY



11. Initial Assessment

Holistic Approach in Primary Care

Primary care assessment involves establishing chronicity, medications and cardiovascular risk, frailty, mental health and social determinants including housing, finances and family support.

HOLISTIC ASSESSMENT



12. Management (NICE + NHS Guidance)

Evidence-Based CKD Care

Effective management combines pharmacological protection—specifically ACEi/ARBs and SGLT2 inhibitors with BP control (<140/90)—and rigorous lifestyle modifications including salt reduction, weight management, and smoking cessation. Clinical practice should integrate the Kidney Failure Risk Equation (KFRE) for risk stratification, while utilizing Integrated Care Systems to ensure coordinated support and improved outcomes



13. Models & Frameworks

Supporting Long-Term Condition Management

"CKD management is significantly optimized by leveraging frameworks such as the House of Care, Year of Care, ICCC, Public Health, and Continuity of Care models, which collectively drive co-production, service integration, and personalized planning."

MODELS OF LONG-TERM CONDITION CARE



House of
Care



Year of Care



NHS & Social
Care Model



ICCC
model



Public Health
Model



Continuity
of Care
Framework

14. Social Prescribing in CKD Non-Clinical Support

Primary care nurses can refer patients to link workers who connect them with exercise groups, peer support, diet programmes, mental health services, and welfare advice. Social prescribing improves confidence, reduces loneliness, and enhances wellbeing.



15. Treatment Options

Clinical & Lifestyle Interventions

Treatment encompasses a wide spectrum—from lifestyle optimisation and medication adjustments to haemodialysis, peritoneal dialysis, transplantation, and conservative management—all underpinned by shared decision-making to ensure clinical choices align with patient values.

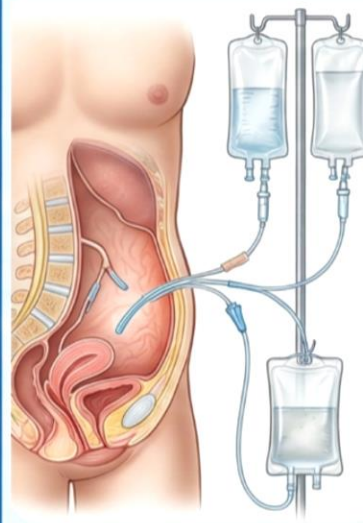
TREATMENT OPTIONS FOR KIDNEY DISEASE

HAEMODIALYSIS



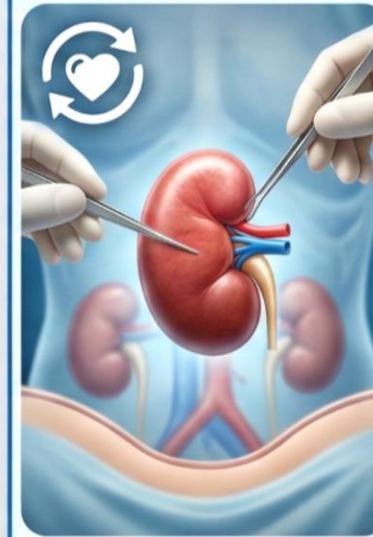
- Blood filtration outside body
- Requires vascular access
- Performed in-center or home
- Typically 3–4 times per week

PERITONEAL DIALYSIS



- Uses peritoneum as filter
- Catheter inserted into abdomen
- Performed at home daily
- Continuous or automated cycling

KIDNEY TRANSPLANT



- Surgical placement of donor kidney
- Living or deceased donor
- Requires lifelong immunosuppression
- Potential for restored function

MEDICATION



- Manages symptoms & complications
- Controls blood pressure
- Balances electrolytes
- Slows disease progression

LIFESTYLE CHANGES

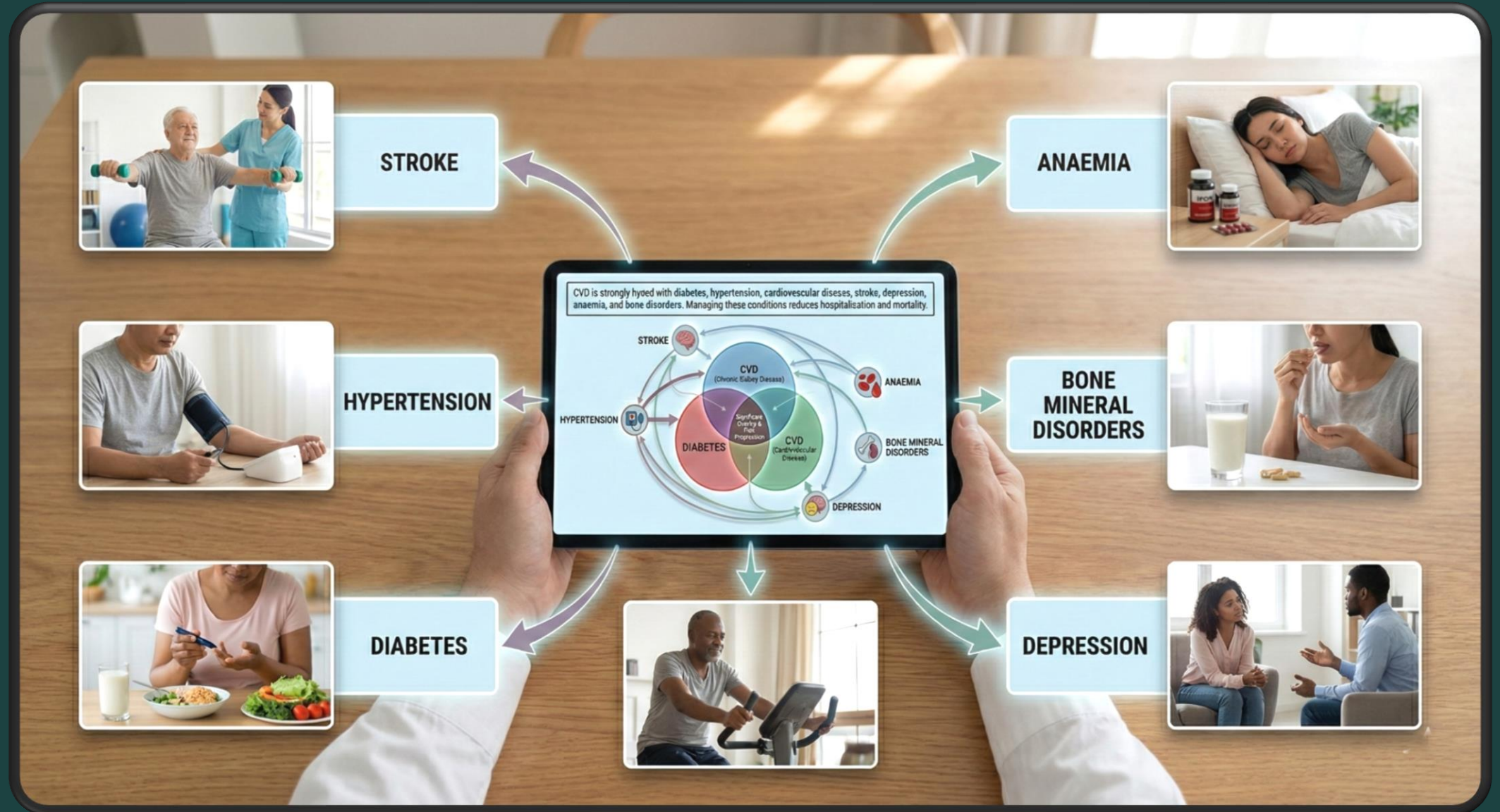


- Regular physical activity
- Heart-healthy diet (low sodium/protein)
- Weight management
- Smoking cessation & limited alcohol

16. Comorbidities

Conditions Linked to CKD

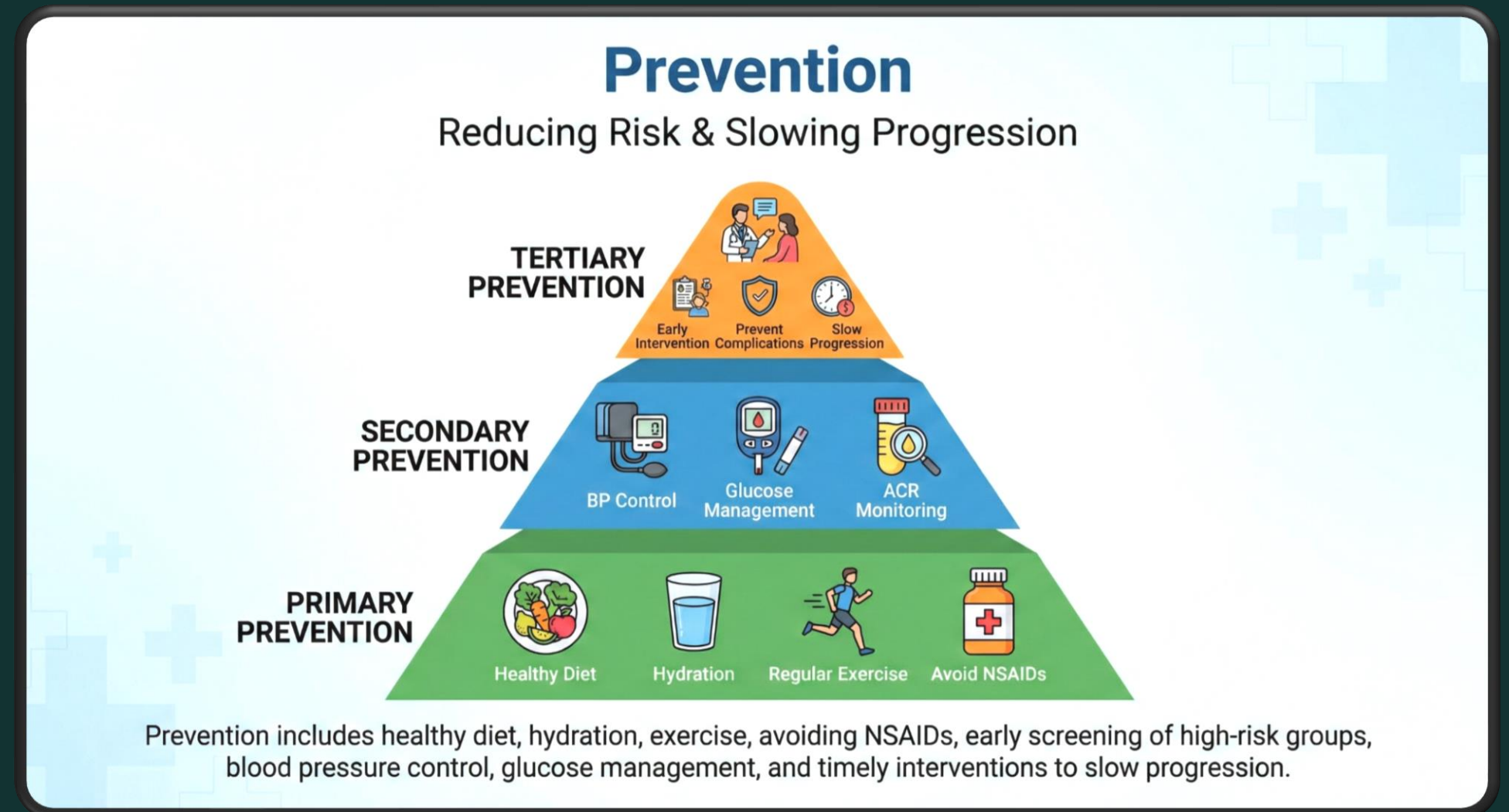
CKD is rarely an isolated condition; it frequently coexists with major systemic drivers like diabetes and hypertension, cardiovascular risks including stroke, and debilitating complications such as anaemia, depression, and bone mineral disorders. Because of this complex clinical picture, treatment must be multifaceted—ranging from lifestyle optimisation and medication to advanced interventions like dialysis (HD/PD), transplantation, or conservative management—all navigated through shared decision-making to ensure alignment with patient values.



17. Prevention

Reducing Risk & Slowing Progression

An overall preventative measure of CKD works on three planes: Primary prevention contains the basis of prevention of lifestyle: diet, hydration, physical activity, and avoidance of nephrotoxins, including NSAIDs. Secondary prevention focuses on risk reduction by means of rigid blood pressure and glucose regulation as well as regular monitoring of ACR. Lastly, Tertiary prevention influences the reduction of severe outcomes by preventing complications and timely and early intervention.



18. Skills, Values & Behaviours

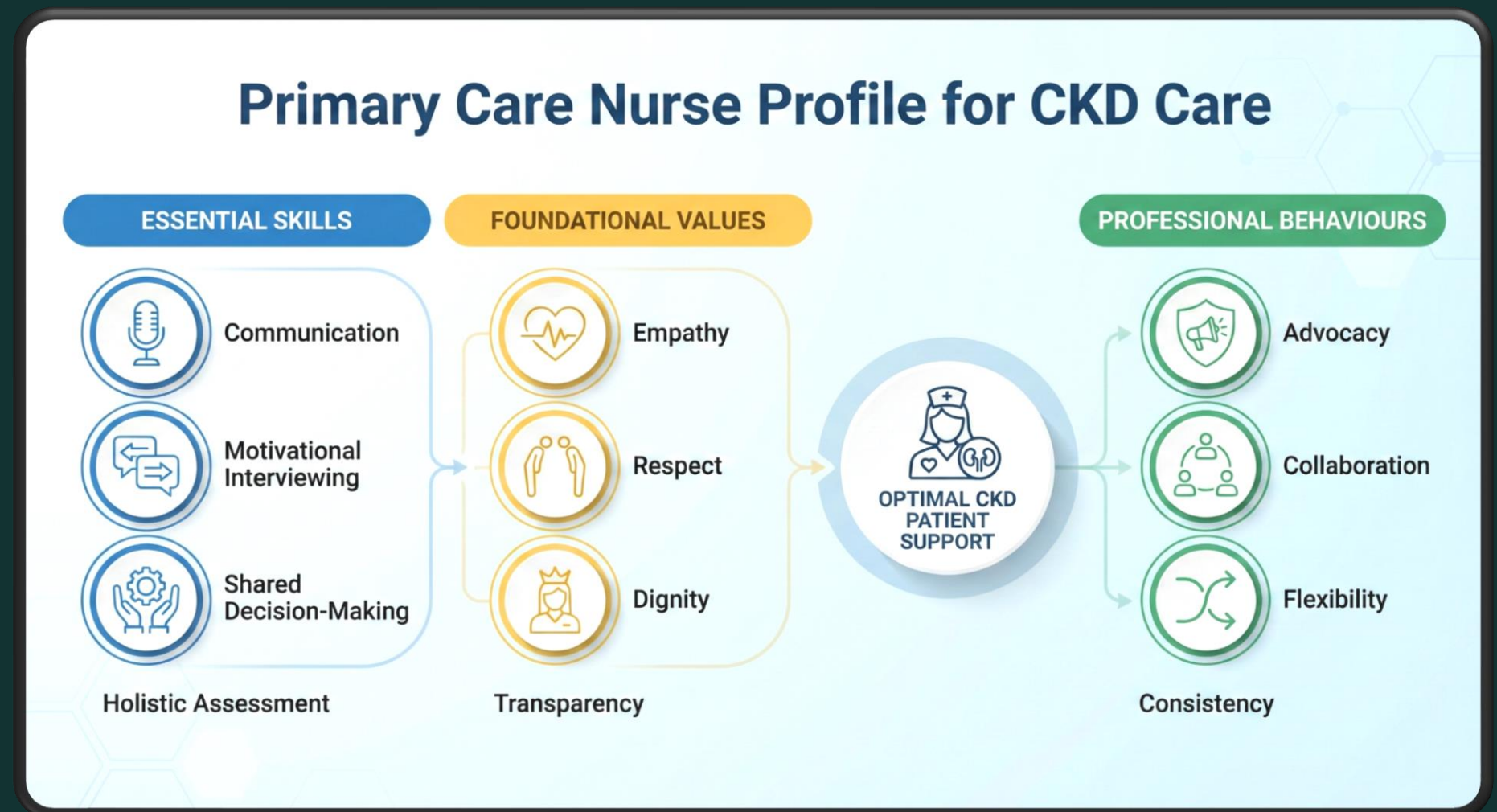
Person-Centred & Co-Productive Care

Essential nursing profile of CKD Care:

Key skills: Nurses should have the enhanced level of skills in communication, motivational interviewing, and shared decision-making, which can help them conduct comprehensive assessment of patients.

Critical Values: The practice should be supported by unwavering spirit of empathy, respect, dignity and transparency in any interactions with patients.

Professional Behaviours: Among primary care, the essential characteristics of success are active patient advocacy, robust inter-team collaboration, and flexibility and consistency in support.



19. Personalised Care (6 Components)

NHS Comprehensive Model

"Patient empowerment and integrated CKD care are achieved through a holistic framework that combines shared decision-making, personalised care planning, and supported self-management with broader resources like social prescribing and personal health budgets."



These elements support patient empowerment and integrated CKD care.

These elements support patient empowerment and integrated CKD care.

20. Recommendations

Improving CKD Outcomes in Primary Care

Key recommendations to improve CKD outcomes include expanding community screening and increasing awareness, alongside integrating crucial mental health support and dietitian access. These efforts should be reinforced by the adoption of digital monitoring tools and strengthened collaboration across Integrated Care Systems

COMMUNITY SCREENING

Expand access to early detection in local settings.



CKD AWARENESS & EDUCATION

Increase health literacy through public campaigns.



MENTAL HEALTH SUPPORT

Integrate psychological care into routine management.



ACCESS TO DIETITIANS

Improve availability of nutritional guidance.



DIGITAL MONITORING TOOLS

Encourage use of apps and devices for self-care.



ICS COLLABORATION

Strengthen coordination across care systems.

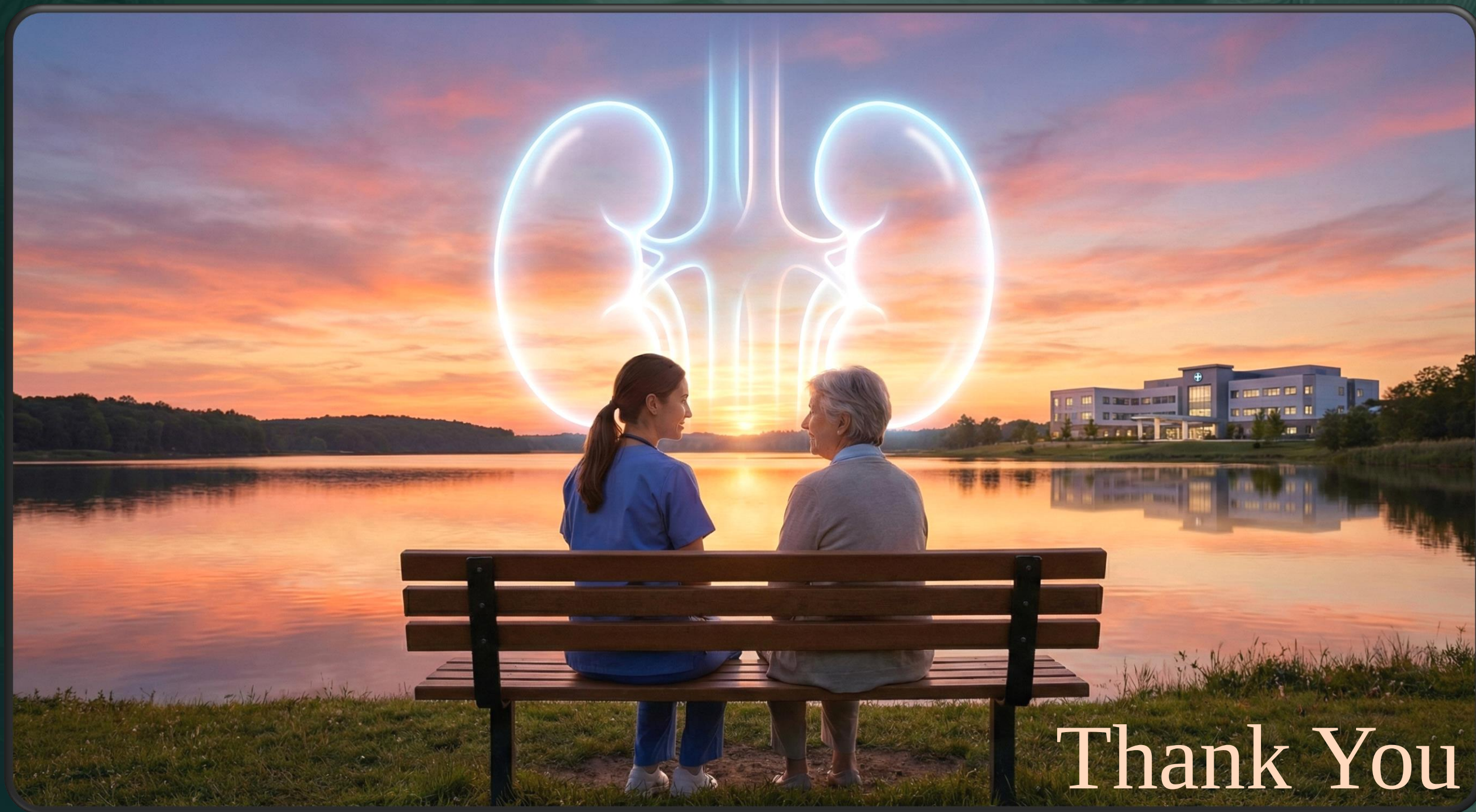


21. Conclusion

Key Takeaway

CKD is a non-reversible and highly modifiable long-term illness in which early intervention plays an important role. The primary care nurses are crucial to this process due to their roles in detection at the early stages, the overall evaluation and individual planning. Nurses can play a key role in supporting disease progression and enhancing the long-term outcomes of patients by organizing combined help related to health and social care services.





Thank You

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