



Quality Improvement Scenario 4: CKD Clinical Action Plans

Evidence-based care guidelines state that CKD Clinical Action Plans should be completed in a timely fashion.

[CKD-Management-in-Primary-Care handbook 2020.1.pdf \(kidney.org.au\)](#)

Patients diagnosed with Chronic Kidney Disease must have selected clinical items reviewed as per appropriate timing in Clinical Action Plans to follow-up on missing clinical items or address clinical items not at treatment targets.

Yellow clinical action plan

eGFR ≥ 60 mL/min/1.73m² with microalbuminuria or eGFR 45-59 mL/min/1.73m² with normoalbuminuria

Goals of management

- Investigations to determine underlying cause.
- Reduce progression of kidney disease.
- Assessment of Absolute Cardiovascular Risk.
- Avoidance of nephrotoxic medications or volume depletion.

Management strategies

- Frequency of review**
- Every 12 months
- Clinical assessment**
- Blood pressure
 - Weight
 - Smoking
- Laboratory assessment**
- Urine ACR (see page 27)
 - eGFR (see page 25)
 - Biochemical profile including urea, creatinine and electrolytes
 - HbA1c (for people with diabetes)
 - Fasting lipids

Other assessments

- Assess absolute cardiovascular risk (see page 41 for criteria on who to assess including age groups)
- Blood pressure reduction (see page 45)
- Lifestyle modification (see page 36)
- Lipid lowering treatment (where appropriate for risk factor reduction) (see page 75)
- Glycaemic control (see page 43)
- Avoid nephrotoxic medication or volume depletion (see page 51)
- Whole of practice approach to CKD (see page 34)

Orange clinical action plan

eGFR 30-59 mL/min/1.73m² with microalbuminuria or eGFR 30-44 mL/min/1.73m² with normoalbuminuria

Goals of management

- Investigations to determine underlying cause.
- Reduce progression of kidney disease.
- Assessment of Absolute Cardiovascular Risk.
- Avoidance of nephrotoxic medications or volume depletion.
- Early detection and management of complications.
- Adjustment of medication doses to levels appropriate for kidney function.
- Appropriate referral to a Nephrologist when indicated.

Management strategies

Frequency of review

- Every 6-8 months

Clinical assessment

- Blood pressure
- Weight
- Smoking

Laboratory assessment

- Urine ACR (see page 27)
- eGFR (see page 25)
- Biochemical profile including urea, creatinine and electrolytes
- HbA1c (for people with diabetes)
- Fasting lipids
- Full blood count
- Calcium and phosphate
- Parathyroid hormone (6-12 monthly if eGFR <45 mL/min/1.73m²)

Other assessments

- Assess absolute cardiovascular risk (see page 41 for criteria on who to assess including age groups)
- Blood pressure reduction (see page 45)
- Lifestyle modification (see page 36)
- Lipid lowering treatment (where appropriate for risk factor reduction) (see page 75)
- Assess risk of atherosclerotic events and consider treating with an anti-platelet agent in keeping with existing cardiovascular guidelines
- Glycaemic control (see page 43)
- Avoid nephrotoxic medication or volume depletion and adjust doses to levels appropriate for kidney function (see page 51)
- Assess for common issues (see pages 68-79)
- Appropriate referral to nephrologist when indicated (see page 61)
- Whole of practice approach to CKD (see page 34)

Red clinical action plan

Macroalbuminuria irrespective of eGFR or eGFR <30 mL/min/1.73m² irrespective of albuminuria

Goals of management

- Investigations to determine underlying cause.
- Reduce progression of kidney disease.
- Assessment of Absolute Cardiovascular Risk.
- Avoidance of nephrotoxic medications or volume depletion.
- Early detection and management of complications.
- Adjustment of medication doses to levels appropriate for kidney function.
- Appropriate referral to a Nephrologist when indicated.
- Prepare for kidney replacement therapy if appropriate.
- Prepare for non-dialysis supportive care if appropriate.

Management strategies

Frequency of review

- Every 3 months

Clinical assessment

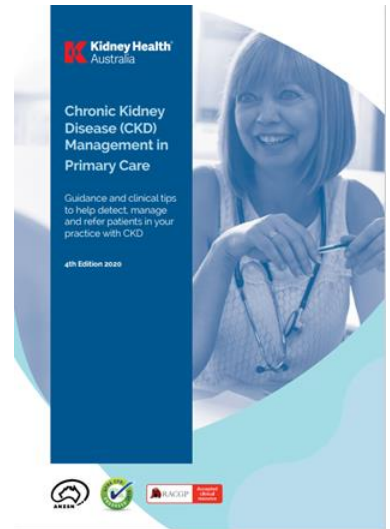
- Blood pressure
- Weight
- Smoking
- Oedema

Laboratory assessment

- Urine ACR (see page 27)
- eGFR (see page 25)
- Biochemical profile including urea, creatinine and electrolytes
- HbA1c (for people with diabetes)
- Fasting lipids
- Full blood count
- If oedema, see page 79)
- Calcium and phosphate
- Parathyroid hormone (6-12 monthly if eGFR <45 mL/min/1.73m²)

Other assessments

- Assess absolute cardiovascular risk (see page 41 for criteria on who to assess including age groups)
- Blood pressure reduction (see page 45)
- Lifestyle modification (see page 36)
- Lipid lowering treatment (where appropriate for risk factor reduction) (see page 75)
- Assess risk of atherosclerotic events and consider treating with an anti-platelet agent in keeping with existing cardiovascular guidelines
- Glycaemic control (see page 43)
- Avoid nephrotoxic medication or volume depletion and adjust doses to levels appropriate for kidney function (see page 51)
- Assess for common issues (see pages 68-79)
- Appropriate referral to nephrologist when indicated (see page 61)
- Whole of practice approach to CKD (see page 34)
- Discuss treatment options, including dialysis, transplant and non-dialysis supportive care if eGFR <30 and progressing to kidney replacement therapy
- Discuss advance care plan if appropriate (see page 66)



Management Item Targets		
Item	Target	Timeframe
Blood Pressure	If ACR in last 12 months > 3.5 mg/mmol female or > 2.5 mg/mmol male: BP <= 130/80 mmHg Otherwise: BP <= 140/90 mmHg	BP in last 12 months ACR in last 12 months (Note if ACR is not recorded or older than 12 months then BP is checked against 140/90 target value)
BMI	18.5 – 24.9	Weight in last 12 months Height recorded
HbA1c	If Diabetic: < 7%	HbA1c in last 12 months
LDL	< 2.5 mmol/L	LDL in last 12 months
Total Cholesterol	< 4.0 mmol/L	Total Cholesterol in last 12 months
Smoking	Non smoker, never smoked or ex smoker	Smoking recorded

(PenCS)

The practice's Quality Improvement Team choose Chronic Kidney Disease Clinical Action Plan completion as its Quarterly QI PIP topic and creates a **Model for Improvement**.

SMART goal: 100% of patients with Chronic Kidney Disease will have all Clinical items in their Clinical Action Plan reviewed or completed in appropriate timing by the end of the QI PIP quarter.

Numerator: Number of patients with an outstanding CKD Management Item = 300

Denominator: Number of Patients diagnosed with CKD = 600

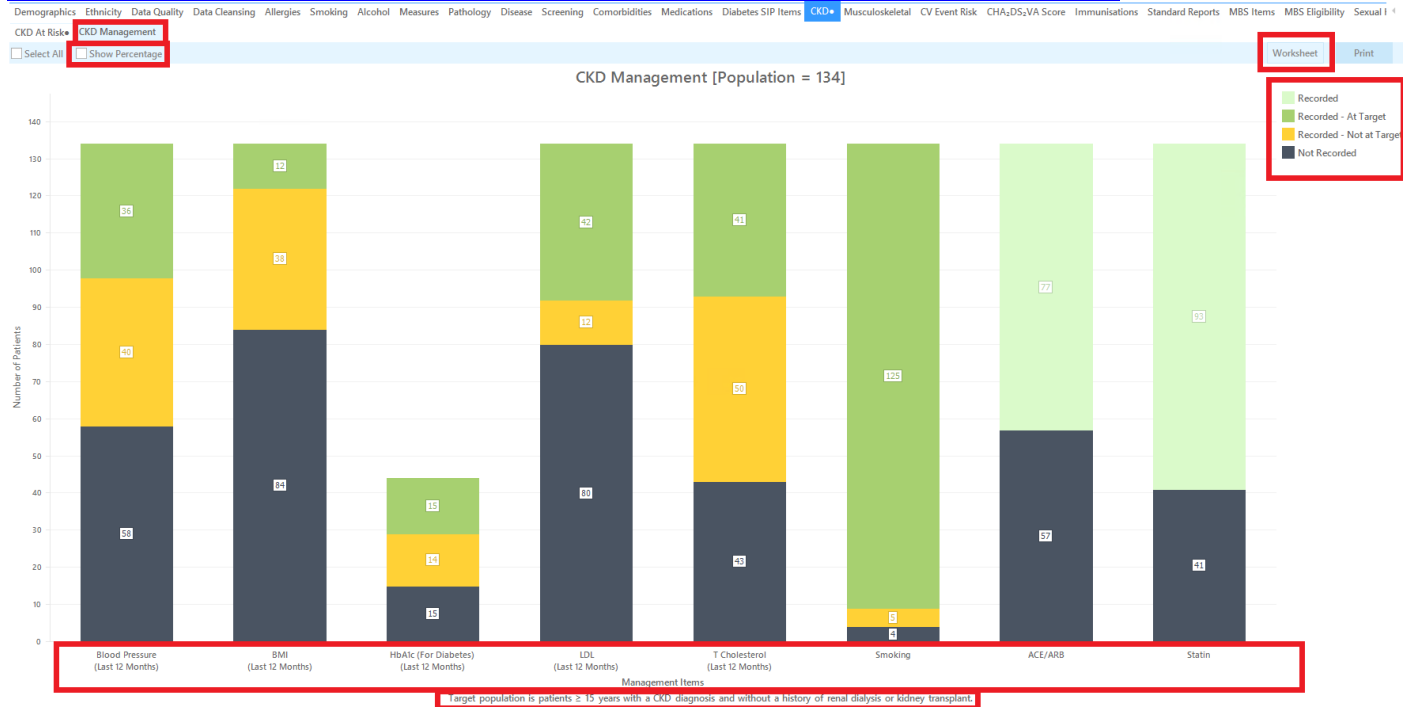
Data Baseline Example: 300/600 = 50% completion

Review Date: End of QI PIP quarter



PLAN:

Idea 1: Run **PenCS CAT4 CKD Management Report** to show status of each clinical management item for patients with coded CKD. Toggle between number or percentage of patients. [CAT CKD \(Chronic Kidney Disease\) Management and Risk Quick reference Guide - CAT GUIDES - PenCS Help](#)



TIPS: The worksheet will show some additional items of relevance including ACR, eGFR and Diabetes diagnosis. Patients with a history of renal dialysis or kidney transplant are not included.

Idea 2: Use **Clinical Information System** tools to complete Clinical items in a patient’s record.

TIP: BP: Use **Observations** fields to record height, weight so that BMI will automatically be calculated.

TIP: BP: Assess **smoking status** in Alcohol and Smoking History < Tobacco.
MD: Assess **smoking status** in Patient Details < Smoking Tab.

Idea 3: Use **TopBar** to opportunistically display missing and completed items from the patients record related to their clinical information, particularly of CKD Clinical Action Plans, when patient is present.

[Clinical Tab Cleansing App - USER GUIDES TOPBAR - PenCS Help](#)

Idea 4: Make sure pathology is coded correctly. [Pathology Data Mappings All Systems - Data Mapping - PenCS Help](#)

TIP: Contact your supplier to ensure **Pathology Results** are sent to practice in HL7 format.

By end of quarter, the Quality Improvement Team complete the Improvement Cycle:

DO: What did you do?

STUDY: What were the reviewed results?

ACT: What can be added, continued, and/or removed from process?