

# Indicator development programme

## Consultation report

Indicator area: Chronic kidney disease

Consultation period: 04 October 2022 – 18 October 2022

Date of Indicator Advisory Committee meeting: 07 November 2022

Executive summary.....	2
General comments.....	4
IND2022-136: CKD: ARBs and ACE inhibitors .....	5
IND2022-137: CKD: blood pressure (ACR 70 or more) .....	7
Appendix A: NICE menu indicators.....	10
Appendix B: Consultation comments .....	11

# Executive summary

## Overview

This paper presents proposals for two chronic kidney disease (CKD) indicators potentially suitable for use in the QOF:

- IND2022-136: The percentage of patients on the CKD register and with an albumin to creatinine ratio (ACR) of 70 mg/mmol or more, without diabetes, who are currently treated with an ARB or an ACE inhibitor.
- IND2022-137: The percentage of patients on the CKD register and with an albumin to creatinine ratio (ACR) of 70 mg/mmol or more, without moderate or severe frailty, in whom the last blood pressure reading (measured in the preceding 12 months) is less than 125/75 mmHg if using ambulatory or home monitoring, or less than 130/80 mmHg if monitored in clinic.

The indicators aim to improve outcomes for people with CKD. After committee consideration the indicators may progress to publication on the NICE menu.

## Development

In July 2021, NHS England expressed an interest in CKD indicators suitable for inclusion in QOF. Several CKD indicators were developed following discussion with the NICE indicators advisory committee (IAC) and published on the NICE menu in August 2022. The indicators proposed in this paper are based on proposals and discussions for additional indicators for CKD by stakeholders and IAC in June 2022. They have not been subject to testing because of similarities to indicators already tested and included in QOF.

## Context

The 2021/22 QOF only contains one indicator specific to people with CKD: the register CKD005. Previous indicators on blood pressure reading, treatment with an ACE inhibitor or angiotensin receptor blockers and annual testing for proteinuria have been retired from QOF. Existing NICE indicators relating to CKD are included in [Appendix A](#).

## Potential benefits

Stakeholders supported these indicators for their clinical merit. Stakeholder comments on the indicator consultation in June 2022 supported the development of indicators on treatment with ACE inhibitors and blood pressure management in patients with CKD and an ACR more than 70 mg/mmol.

IND2022-137 would complement the current NICE menu indicator for blood pressure management: IND235 includes blood pressure targets for people with CKD and with an ACR of less than 70 mg/mmol, without moderate or severe frailty.

## Validity concerns

Stakeholders have concerns about the potential increase in workload and how this would impact on access to general practice.

The NICE guideline on CKD includes recommendations for blood pressure measurement in a clinical setting only. The proposed indicator includes home or ambulatory blood pressure monitoring to align with recommendations in NICE's guideline on hypertension and other indicators on the NICE menu.

Stakeholders have raised concerns about measurement and reporting of urine ACR.

## Committee decision

The committee is asked to consider the consultation comments and decide whether the indicators should progress to the NICE menu as suitable for inclusion in the QOF.

## General comments

Stakeholders were supportive of these indicators but were concerned about the amount of work associated with them. There was some uncertainty about the impact on population health and stakeholders felt there would need to be a high number of QOF points to support and incentivise the activity.

### Comments on barriers to implementing care:

- Workforce capacity to undertake new, time-consuming work.

### Potential for differential impact:

- Older patients with urinary incontinence may struggle to collect a urine sample for ACR measurement and so may not be identified for monitoring.
- Home and ambulatory monitoring is less available for older patients.
- People of Black ethnicity have a higher prevalence of hypertension, are less responsive to ACE inhibitors and are less likely to carry out home monitoring meaning that achievement of these targets is more challenging.
- Resources should be offered to facilitate patient driven monitoring to reduce health inequalities.
- A program of education and engagement is essential in groups from ethnic minorities where the risks are highest to reduce health inequalities.

### Considerations for the advisory committee

The committee is asked to consider:

- Is the potential for increased workload as suggested by stakeholders a significant barrier to implementation of these indicators?
- Are there ways to mitigate the risk of introducing the health inequalities suggested by stakeholders?

## **IND2022-136: CKD: ARBs and ACE inhibitors**

The percentage of patients on the CKD register and with an albumin to creatinine ratio (ACR) of 70 mg/mmol or more, without diabetes, who are currently treated with an ARB or an ACE inhibitor.

### **Rationale**

Treatment with renin-angiotensin system antagonists such as ACE inhibitors and angiotensin II receptor blockers (ARBs) can prevent or delay the progression of CKD, reduce or prevent the development of complications and reduce the risk of cardiovascular disease.

### **Specification**

Numerator: The number of patients in the denominator who are currently treated with an ARB or an ACE inhibitor.

Denominator: The number of patients on the CKD register and with an ACR of 70 mg/mmol or more, without diabetes.

Definitions:

- Current treatment is defined as a prescription in the last 6 months of the reporting period.
- The CKD register includes patients aged 18 and over with CKD stages G3a to G5.
- The last recorded reading of ACR should be used for inclusion in the denominator.

Exclusions: People with diabetes have been excluded from the indicator. People with diabetes and with a diagnosis of nephropathy or microalbuminuria are included in NICE menu indicator IND134 on treatment with an ACE inhibitor or ARB.

Personalised care adjustments or exception reporting should be considered to account for situations where the patient declines, does not respond to invite or if treatment is inappropriate.

## Summary of consultation comments

Stakeholders supported the indicator and made the following comments:

- Recommendation to include reference to titration to the maximally tolerated dose.
- Using the last ACR result may flag people with transient proteinuria. Proteinuria may also improve when treated with certain medications and therefore patients would not be included in the denominator. This could be mitigated by looking at the last 2 ACR results or introduce a code for CKD with ACR persistently over 70 mg/mmol.
- Some areas use protein creatinine ratio rather than ACR.
- The threshold of 70 mg/mmol is too high. All people at risk of CKD should have an ACR measurement and if any albuminuria they should be optimised with maximally tolerated ACE inhibitors or ARBs and SGLT2 inhibitor.

## Considerations for the advisory committee

The committee is asked to consider:

- The indicator does not specify titration to the maximally tolerated dose as this is poorly coded and difficult to extract. Is there a risk of under-treatment with the indicator as written?
- Is there a risk of under- and over-treatment if we use the last ACR result in the indicator? Can we define persistent proteinuria for the indicator specification and is it feasible to include this?

## Committee decision

The committee is asked to decide whether the indicator should progress to the NICE menu as suitable for inclusion in the QOF.

## **IND2022-137: CKD: blood pressure (ACR 70 or more)**

The percentage of patients on the CKD register and with an albumin to creatinine ratio (ACR) of 70 mg/mmol or more, without moderate or severe frailty, in whom the last blood pressure reading (measured in the preceding 12 months) is less than 125/75 mmHg if using ambulatory or home monitoring, or less than 130/80 mmHg if monitored in clinic.

### **Rationale**

Chronic kidney disease (CKD) is a long-term condition characterised by abnormal function or structure (or both). Optimal blood pressure control can slow progression of CKD and reduce the risk of cardiovascular disease. A focus on people without moderate or severe frailty allows for an individualised management approach that adjusts care according to frailty status.

### **Specification**

**Numerator:** The number of patients in the denominator in whom the last blood pressure reading (measured in the preceding 12 months) is less than 125/75 mmHg if using ambulatory or home monitoring, or less than 130/80 mmHg if monitored in clinic.

**Denominator:** The number of patients on the CKD register and with an ACR of 70 mg/mmol or more, without moderate or severe frailty.

**Definitions:**

- The CKD register includes patients aged 18 and over with CKD stages G3a to G5.
- The last recorded reading of ACR should be used for inclusion in the denominator.

Personalised care adjustments or exception reporting should be considered to account for situations where the patient declines, does not respond to invite or if the blood pressure target is inappropriate.

## Summary of consultation comments

Stakeholder supported the indicator and made the following comments:

- The indicator should include any clinically appropriate setting rather than restricting to clinic.
- Frailty coding is subjective and variable and guidance is needed to ensure a consistent approach.
- There are other contraindications to aggressive blood pressure treatment and stakeholders questioned why only frailty has been included.
- Stakeholders were concerned about the personalised care adjustments in the indicator specification and suggested it should include those on maximally tolerated treatment.
- The recommendations in the NICE guideline for CKD for blood pressure are based on clinic readings and this is the case for management of hypertension in CKD in clinical practice, the clinic target should come before the ambulatory or home monitoring target.
- Using the last ACR result may flag people with transient proteinuria. Proteinuria may also improve when treated with certain medications and therefore patients would not be included in the denominator. This could be mitigated by looking at the last 2 ACR results or introduce a code for CKD with ACR persistently over 70 mg/mmol.
- Some areas use protein creatinine ratio rather than ACR.

## Specific question included at consultation

Is it achievable and acceptable to use tighter targets for ambulatory or home monitoring of blood pressure in this population?

- Stakeholders generally agreed that the indicator is achievable and acceptable but made the following comments:
  - General practice would require support to achieve this. Tighter control of blood pressure in older people puts them at risk of polypharmacy and risk of falls. There should be a low threshold



for 'maximum tolerated therapy based on a risk of too tight a control'.

- It should be measured in a standardised environment.

## **Considerations for the advisory committee**

The committee is asked to consider:

- Whether the exclusion of people with moderate or severe frailty should remain and any other exclusion criteria that could be added.
- Is there a risk of under- and over-treatment if we use the last ACR result in the indicator? Can we define persistent proteinuria for the indicator specification and is it feasible to include this?

## **Committee decision**

The committee is asked to decide whether the indicator should progress to the NICE menu as suitable for inclusion in the QOF.

## Appendix A: NICE menu indicators

Indicators on the NICE menu that are suitable for inclusion in QOF are listed below.

ID	Indicator wording	QOF status
IND129	The contractor establishes and maintains a register of patients aged 18 years or over with CKD with classification of categories G3a to G5 (previously stage 3 to 5).	Current QOF CKD005.
IND130	The percentage of patients on the CKD register who have hypertension and proteinuria and who are currently being treated with an angiotensin-receptor blocker or an angiotensin-converting enzyme inhibitor.	Collected as part of Indicators No Longer in QOF.
ID144	The percentage of patients on the CKD register whose notes have a record of a urine albumin:creatinine ratio (or protein:creatinine ratio) test in the preceding 12 months.	Collected as part of Indicators No Longer in QOF.
ID174	The practice establishes and maintains a register of all patients who have had an episode of AKI.	Not in QOF
IND231	The percentage of patients with CKD, on the register, who are currently treated with a lipid lowering therapy	Not in QOF
IND232	The percentage of patients (excluding those on the CKD register) prescribed long-term (chronic) oral non-steroidal anti-inflammatory drugs (NSAIDs) who have had an eGFR measurement in the preceding 12 months	Not in QOF
IND233	The percentage of patients with a new diagnosis of CKD stage G3a-G5 (on the register, within the preceding 12 months) who had eGFR measured on at least 2 occasions separated by at least 90 days, and the second test within 90 days before the diagnosis	Not in QOF
IND234	The percentage of patients with a new diagnosis of CKD stage G3a-G5 (on the register, within the preceding 12 months) who had eGFR and ACR (urine albumin to creatinine ratio) measurements recorded within 90 days before or after diagnosis	Not in QOF
IND235	The percentage of patients on the CKD register and with an albumin to creatinine ratio (ACR) of less than 70 mg/mmol, without moderate or severe frailty, in whom the last blood pressure reading (measured in the preceding 12 months) is less than 135/85 mmHg if using ambulatory or home monitoring, or less than 140/90 mmHg if monitored in clinic	Not in QOF

## Appendix B: Consultation comments

Question 1: Do you think there are any barriers to implementing the care described by these indicators?

ID	Question	Stakeholder	Comment	NICE response
1	1	British Cardiovascular Society	No.	Thank you for your comment.
2	1	British Medical Association	With respect to barriers, respondents reiterated previous concerns about workforce capacity to undertake new, time-consuming work.	Thank you for your comment.
3	1	UK Kidney Association	The main barrier to implementation is resource and engagement of the public with proactive treatment in a timely fashion after lifestyle measures.	Thank you for your comment.

Question 2: Do you think there are potential unintended consequences to implementing/ using any of these indicators?

ID	Question	Stakeholder	Comment	NICE response
4	2	British Cardiovascular Society	No.	Thank you for your comment

Question 3: Do you think there is potential for differential impact (in respect of age, disability, gender and gender reassignment, pregnancy and maternity, race, religion or belief, and sexual orientation)? If so, please state whether this is adverse or positive and for which group.

ID	Question	Stakeholder	Comment	NICE response
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5	3	British Cardiovascular Society	No.	Thank you for your comment.
6	3	British Medical Association	With respect to differential impact, some respondents noted that elderly patients with incontinence will mean practices struggle to collect an ACR, which means patients in this group risk not being identified for monitoring.	Thank you for your comment. Personalised care adjustments could be used in situations when the indicator is not appropriate.
7	3	UK Kidney Association	The greatest challenge will be in the older patient where ambulatory and home monitoring is less available and used. CKD increases with age and affects ethnic minorities with greater impact. In addition those from black ethnicity have a higher prevalence of hypertension and are less responsive to ACEi. This population is also less likely to carry out home monitoring making achievement of these targets more challenging. Resources should be offered to facilitate patient driven monitoring rather than relying on GPs.	Thank you for your comment. The indicators do not exclude based on age or ethnicity and aim to improve outcomes in all people with CKD.

Question 4: If you think any of these indicators may have an adverse impact in different groups in the community, can you suggest how the indicator might be delivered differently to different groups to reduce health inequalities?

ID	Question	Stakeholder	Comment	NICE response
8	4	British Cardiovascular Society	No	Thank you for your comment.
9	4	UK Kidney Association	The purpose of guidelines is to ensure there is a levelling in care and reduction in health inequalities. Therefore in order to achieve this a program of education and engagement is essential in those groups from ethnic minorities where the risks are highest.	Thank you for your comment.

General comments

<b>ID</b>	<b>Question</b>	<b>Stakeholder</b>	<b>Comment</b>	<b>NICE response</b>
10	General	British Medical Association	Respondents saw clinical merit in these indicators. As with other proposed indicators, much of the feedback was concerned with the significant amount of work entailed, with a degree of uncertainty in terms of how much impact it will have on population health. Respondents said that this indicator would need to be tagged with a high number of QOF points to support and incentivise the associated activity	Thank you for your comment. NICE have no role in negotiations for inclusion in QOF.
11	Additional indicators	Renal Services Transformation Programme	Please create an indicator for SGLT2i for patients with urine ACR > 30 (or at least 70) irrespective of eGFR. This is probably the single indicator that the renal community wants to see.	Thank you for your comment. The NICE indicator programme are developing an indicator for prescribing SGLT2 inhibitors in CKD.

IND2022-136

<b>ID</b>	<b>Question</b>	<b>Stakeholder</b>	<b>Comment</b>	<b>NICE response</b>
12	General	CaReMe-UK	We support this indicator but strongly recommend adding 'titrated up to the maximum tolerated recommended dose'	Thank you for your comment. The NICE IAC heard that this is poorly coded and difficult to extract from patient records. They agreed that it was appropriate for the indicator to assume people in the denominator would have appropriate titration.

13	General	IND1	<p>IN this indicator you recommend using the last ACR as the trigger that will flag people with high proteinuria. This causes some significant problems.</p> <p>ACR can be falsely raised in transient conditions such as UTI – causing a false rise in the denominator.</p> <p>Proteinuria sometimes improves with treatment (e.g., ACEi/A2RB/SGLT2i) and will drop under 70 lowering the denominator.</p> <p>To get around problem 1. It might be sensible to look for the last 2 ACRs being &gt;70.</p> <p>The only way to get around problem 2 would be to introduce a code for 'CKD with ACR persistently &gt;70' so these patients remain in the denominator even when successfully treated.</p> <p>An additional problem is that some areas use PCR, especially when proteinuria is as high as this. You might need to factor that into the discussions.</p>	<p>Thank you for your comment. Personalised care adjustments could be used if a patient is not suitable for inclusion in the denominator. NICE guidance notes that initial urine ACR measurements of 70 mg/mmol or more do not need to be repeated (NG203, recommendation 1.1.12).</p>
14	General	NHS England	<p>If we are going to get the CKD back into the QOF, then it would make sense to have this indicator also there as well.</p> <p>The risk is as highlighted above, the impact of this on general practice especially access.</p>	<p>Thank you for your comment.</p>
15	General	Primary Care Cardiovascular Society	<p>This indicator is in line with the NICE CKD guidance. However, it does not take into account whether the dose has been titrated to the maximum tolerated dose. There is a risk that a low dose will be started but not titrated.</p> <p>Although it may be challenging to meet the blood pressure targets – the target blood pressures in this patient group should reflect the NICE guidelines - for clinic, ambulatory and home blood pressure monitoring.</p>	<p>Thank you for your comment.</p> <p>The NICE IAC heard that 'maximally tolerated dose' is poorly coded and difficult to extract from patient records. They agreed that it was appropriate for the indicator to assume people in the</p>

			<p>The threshold of 70mg/mol is too high. We would expect all people at risk of CKD to be looked for, all of these patients should have an uACR and if any degree of albuminuria, patients should be optimised with max tolerated ACEi/ARB and SGLT2i, statins etc</p>	<p>denominator would have appropriate titration of medication. The NICE indicator programme are developing an indicator for prescribing SGLT2 inhibitors in CKD.</p>
16	General	IND6	Agree	Thank you for your comment.
17	General	Renal Services Transformation Programme	<p>The numerator and denominator are appropriate. The focus on CKD stage 3a to 5 misses an opportunity to prevent disease progression at an early stage. The DAPA-CKD study highlighted that patients with an eGFR between 25 -75 ml/min and urine ACR &gt;25 had improved outcomes with treatment. The focus on CKD 3 -5 misses opportunities to prevent disease. The LTP has an emphasis on prevention. Future indicators should focus on identifying patients with proteinuria regardless of eGFR (ie include CKD stage 1 - 2) as well as CKD 3-5. An indicator that includes this may be more beneficial in the long run as it highlights the importance of proteinuria. The uACR is the strongest predictor of outcomes as reflected in the KFRE. There needs to be a fundamental paradigm shift towards urine ACR rather than eGFR/CKD staging based on eGFR if we are to identify disease early and prevent progression. The proposed indicator will do for now in the absence of an alternative but NICE should consider an overhaul of assumptions based on emerging data and the LTP/prevention agenda.</p> <p>Recommendations: Develop register for CKD 1- 5</p>	<p>Thank you for your comment. The NICE indicator development programme currently do not plan to develop an indicator on a register for people with CKD stages 1 and 2. The indicator advisory committee in June 2022 discussed the potential for large workloads associated with stage 1 and 2 CKD. The Quality and Outcomes Framework guidance also notes that people with GFR less than 60 ml/min/1.73m2 are more likely to have hypertension, diabetes and CVD compared to people with GFR more than 60 ml/min/1.73m2.</p>

18	General	Renal Services Transformation Programme	<p>Patients with urine ACR in the absence of diabetes may have an underlying glomerulonephritis such as IgA. Emerging therapies mean that these patients would potentially benefit from a diagnosis ie a C as part of the CGA classification recommended by KDIGO. There are emerging therapies that these patients may benefit from beyond ACE/ARB. The concern is that this indicator may delay referral to specialist service while primary care physicians attempt to uptitrate ACE/ARB. Clinical inertia remains a challenge with many patients remaining on sub-therapeutic doses</p> <ol style="list-style-type: none"> <li>1) Recommend including “maximally tolerated dose of ACE/ARB” to avoid ramipril 1.25 mg scenario.</li> <li>2) Ensure clear documentation of why patients are unable to uptitrate to the evidence-based dosage</li> <li>3) Remind colleagues to seek advice in cases of diagnostic uncertainty</li> </ol>	<p>Thank you for your comment. The NICE IAC heard that ‘maximally tolerated dose’ is poorly coded and difficult to extract from patient records. They agreed that it was appropriate for the indicator to assume people in the denominator would have appropriate titration of medication. NICE indicators are supported by evidence-based recommendations and measure outcomes that reflect quality of care; they are not advisory products. Users should follow clinical guidance.</p>
19	General	Renal Services Transformation Programme	<p>Current treatment of 6 months may be challenging as NICE guidelines recommend that patients with CKD 3a A3 only need testing 1 -2 times every 12 months. The last recorded ACR within 6 months and the treatment defined as 6 months may be contradictory. More achievable target may be within 12 months.</p>	<p>Thank you for your comment. The indicator specification uses the last recorded ACR which may not be within the last 6 months.</p>
20	General	Renal Services Transformation Programme	<p>Ideal indicator:</p> <ol style="list-style-type: none"> <li>1. Any patient with urine ACR &gt; 70 within 12 months on a maximally tolerated ACE/ARB</li> </ol>	<p>Thank you for your comment.</p>



			2. Current proposed indicator acceptable in the absence of the alternative	
21	General	Royal College of General Practitioners	We feel this is a well targeted and well evidenced indicator and would be a good indicator to be included in the indicator menu.	Thank you for your comment.

IND2022-137

ID	Question	Stakeholder	Comment	NICE response
22	General	British Medical Association	Respondents suggested that 'if monitored in clinic' be amended to 'if monitored in clinically appropriate setting', to avoid unnecessarily prescriptive conditions for this proposed indicator.	Thank you for your comment. The validity assessment has been amended to reflect your comment.
23	General	British Medical Association	Respondents noted the subjective and variable nature of frailty coding and suggested significant guidance will be required to ensure a consistent approach.	Thank you for your comment.
24	General	British Medical Association	Some respondents noted that frailty is not the only contraindication to aggressive blood pressure control and queried the evidential basis on which it has been elevated without regard to other factors.	Thank you for your comment. Frailty coding was specified in this indicator for consistency with other indicators on the NICE menu. NICE indicators are supported by evidence-based recommendations and measure outcomes that reflect quality of care; they are not advisory products. Users should follow clinical guidance.

25	General	British Medical Association	Respondents expressed concern about the narrow PCA specification in this proposed indicator. One respondent suggested that it be expanded to factor in maximum tolerated treatment.	Thank you for your comment. Personalised care adjustments included in the indicator specification are suggestions and are not exhaustive.
26	General	CaReMe-UK	We agree with this but would suggest moving '<130/80 mmHg if monitored in clinic' before '<125/75 mmHg if using ambulatory or home monitoring'. The NICE CKD guideline 2021 recommendation is based on clinic readings and in clinical practice the management of hypertension in most CKD patients is based on clinic readings. The target BP in CKD of <130/80 mmHg by standardised clinic BP is also supported by the UKKA. <a href="https://ukkidney.org/sites/renal.org/files/Commentary%20on%20NICE%20guideline%20%28NG136%29%20HypertensionFINAL.pdf">https://ukkidney.org/sites/renal.org/files/Commentary%20on%20NICE%20guideline%20%28NG136%29%20HypertensionFINAL.pdf</a>	Thank you for your comment. The indicator wording is consistent with similar indicators on the NICE menu.
27	General	IND1	This indicator suffers from the same problems as above.	Thank you for your comment.
28	General	NHS England	As above The risk of this is more as compared to above as this would mean number of GP appointments both Nursing and GP to help get the BP below these targets. Although I agree that this is critical we have this BP control, we will have to consider a way which does not compromise access into general practice.	Thank you for your comment. The indicator includes both clinical and ambulatory or home monitoring to reflect NICE guidance and current practice.
29	General	IND6	Is this just about hypertension? Would ACR also be considered if used as diagnostic?	Thank you for your comment. The indicator aims to improve blood pressure management in CKD to impact overall outcomes. The indicator

				specification uses the last recorded ACR but is not specific on why this was measured. Users should follow clinical guidance.
30	General	Renal Services Transformation programme	I think there will be pushback from primary care and multiple exceptions in the older cohort but I still think this is a good indicator.	Thank you for your comment.
31	General	Royal College of General Practitioners	The evidence behind this recommendation is not as strong as we would expect for an indicator to be developed on the basis of it. The weakness of this evidence is even acknowledged within the NICE committee discussion of the most recent guidance. We believe that QOF indicators should be reserved for areas of clinical practice that have high value, high quality evidence.	Thank you for your comment. The indicator reflects recommendations in NICE's guidelines.
32	General	UK Kidney Association	The recommended Bp target in CKD of <130/80 clinic or <125/75 ambulatory is a reasonable starting point based on the increasing wealth of data and more recent publications which have been detailed in the NICE guidelines.	Thank you for your comment.

IND2022-137 question: Is it achievable and acceptable to use tighter targets for ambulatory or home monitoring of blood pressure in this population?

ID	Question	Stakeholder	Comment	NICE response
33	General	British Cardiovascular Society	Yes	Thank you for your comment.
34	General	British Medical Association	With respect to the question 'Is it achievable and acceptable to use tighter targets for ambulatory or home monitoring of blood pressure in this population?', respondents said:	Thank you for your comment. Personalised care adjustments could be used if

			<p>This has clinical merit but general practice would need to be supported to achieve it. CKD registers will tend to be weighted to patients in their later years, and a tighter control of patients' BP in this cohort puts them at risk of polypharmacy, as well as the risks of falls if they have postural hypertension, leading to fractures, reduced confidence at home, and mental health impacts. If this is introduced, there should be a low threshold for 'maximum tolerated therapy based on a risk of too tight a control'.</p>	<p>a patient is not suitable for inclusion in the denominator</p>
35	General	CaReMe-UK	<p>NICE guidance for the management of hypertension in CKD, and the management of most CKD patients in practice, are based on clinic BP. A 'routine' clinic BP of 130/80 is generally believed to correspond to a home or ambulatory BP of 125/85 and as such this is acceptable. However, it is now well established that the 'routine' clinic BP is often inaccurate; in CKD patients the difference between systolic BP measured by in a standardised way may be 12.7 mmHg ( -46.1 to 20.7) lower than 'routine' clinic BP (Agarwal, Hypertension 2017). Therefore, we would suggest 'standardised' clinic BP &lt;130/80 mmHg should be the main indicator of BP management in the CKD register. This is supported by the UK Kidney Association (<a href="https://ukkidney.org/sites/renal.org/files/Commentary%20on%20NICE%20guideline%20%28NG136%29%20HypertensionFINAL.pdf">https://ukkidney.org/sites/renal.org/files/Commentary%20on%20NICE%20guideline%20%28NG136%29%20HypertensionFINAL.pdf</a> ). ABP and HBP may be used where available in which case a BP&lt;125/75 mmHg is an acceptable target.</p> <p>Standardised BP measurement - How to measure Blood Pressure - <a href="https://bihsoc.org/resources/bp-measurement/measure-blood-pressure/">https://bihsoc.org/resources/bp-measurement/measure-blood-pressure/</a></p>	<p>Thank you for your comment. The indicator reflects recommendation in NICE's guidelines.</p>