# Complete Summary

## TITLE

Advanced chronic kidney disease (CKD): percent of patients with blood pressure less than 130/80 mmHg on index date.

## SOURCE(S)

Renal Physicians Association. Appropriate patient preparation for renal replacement therapy. Rockville (MD): Renal Physicians Association; 2002 Oct 1. 78 p. (Clinical Practice Guideline; no. 3).

# Brief Abstract

## DESCRIPTION

This measure assesses the percent of patients with advanced chronic kidney disease (CKD) with blood pressure less than 130/80 mmHg on index date (i.e., the date blood pressure was measured closest to the time of chart audit).

## RATIONALE

Patients with advanced chronic kidney disease (CKD) are situated at a crossroads between patients with less severe chronic kidney disease, where strict blood pressure control is a well established mainstay of therapy, and patients on dialysis, where blood pressure goals are not well understood. In the absence of strong scientific data to define therapeutic targets, blood pressure goals in dialysis patients remain extrapolated from the general population. Because of significantly increased cardiovascular risk in patients with both advanced CKD and diabetes, management of patients with both conditions deserves special attention.

Based on data from patients with advanced CKD as well as extrapolation from those with less severe CKD, lowering blood pressure is an important goal in the advanced CKD population.

Elevated blood pressure is clearly an important risk factor for rapid progression of kidney disease and for cardiac hypertrophy.

Lifestyle modifications improve blood pressure control in the general population and this evidence was deemed by the measure developer to be applicable to patients with advanced CKD.

Studies that specifically examine the use of pharmacological antihypertensive therapy in patients with glomerular filtration rate (GFR) less than or equal to 30 mL/min/1.73 $m^2$ show that blood pressure can be lowered in this population. In a

small number of studies, reduction in blood pressure with antihypertensive medication has been shown to improve measures of renal disease progression and cardiac hypertrophy in patients with advanced CKD.

This recommendation is also based on extrapolation from patients with less severe CKD (GFR greater than 30 mL/min/1.73 $m^2$). Reduction in blood pressure with antihypertensive medication clearly improves measures of kidney function, slows the progression to end-stage renal disease (ESRD), and improves clinical outcomes such as clinical cardiovascular events and mortality in these individuals.

### PRIMARY CLINICAL COMPONENT

Advanced chronic kidney disease; hypertension

### DENOMINATOR DESCRIPTION

The number of adult patients with advanced chronic kidney disease (CKD), not currently receiving renal replacement therapy

### NUMERATOR DESCRIPTION

The number of patients from the denominator with blood pressure less than 130/80 mmHg on index date (i.e., the date blood pressure was measured closest to the time of chart audit)

## Evidence Supporting the Measure

### PRIMARY MEASURE DOMAIN

Outcome

### SECONDARY MEASURE DOMAIN

Not applicable

### EVIDENCE SUPPORTING THE MEASURE

A clinical practice guideline or other peer-reviewed synthesis of the clinical evidence
A formal consensus procedure involving experts in relevant clinical, methodological, and organizational sciences
A systematic review of the clinical literature

### NATIONAL GUIDELINE CLEARINGHOUSE LINK

- Appropriate patient preparation for renal replacement therapy.

## Evidence Supporting Need for the Measure

NEED FOR THE MEASURE

Unspecified

## State of Use of the Measure

STATE OF USE

Pilot testing

CURRENT USE

Internal quality improvement

## Application of Measure in its Current Use

CARE SETTING

Ambulatory Care
Physician Group Practices/Clinics

PROFESSIONALS RESPONSIBLE FOR HEALTH CARE

Physicians

LOWEST LEVEL OF HEALTH CARE DELIVERY ADDRESSED

Individual Clinicians

TARGET POPULATION AGE

Age greater than or equal to 18 years

TARGET POPULATION GENDER

Either male or female

STRATIFICATION BY VULNERABLE POPULATIONS

Unspecified

## Characteristics of the Primary Clinical Component

INCIDENCE/PREVALENCE

Unspecified

### ASSOCIATION WITH VULNERABLE POPULATIONS

Unspecified

### BURDEN OF ILLNESS

Elevated blood pressure is clearly an important risk factor for rapid progression of kidney disease and for cardiac hypertrophy.

### EVIDENCE FOR BURDEN OF ILLNESS

Foley RN, Parfrey PS, Harnett JD, Kent GM, Murray DC, Barre PE. Impact of hypertension on cardiomyopathy, morbidity and mortality in end-stage renal disease. Kidney Int 1996 May;49(5):1379-85. PubMed

Foley RN, Parfrey PS. Cardiac disease in chronic uremia: clinical outcome and risk factors. Adv Ren Replace Ther 1997 Jul;4(3):234-48. [160 references] PubMed

Mall G, Huther W, Schneider J, Lundin P, Ritz E. Diffuse intermyocardiocytic fibrosis in uremic patients. Nephrol Dial Transplant 1990;5(1):39-44. PubMed

Shiigai T, Hattori K, Iwamoto H, Owada A. Long-term enalapril therapy in patients with chronic renal failure on a low-protein diet. A prospective randomized comparison with metoprolol. Nephron 1998;79(2):148-53. [45 references] PubMed

### UTILIZATION

Unspecified

### COSTS

Unspecified

## Institute of Medicine National Healthcare Quality Report Categories

### IOM CARE NEED

Living with Illness

### IOM DOMAIN

Effectiveness

## Data Collection for the Measure

### CASE FINDING

Users of care only

## DESCRIPTION OF CASE FINDING

Adult patients 18 years and older with advanced chronic kidney disease (CKD)

## DENOMINATOR (INDEX) EVENT

Clinical Condition

## DENOMINATOR INCLUSIONS/EXCLUSIONS

Inclusions
Adult patients age 18 years and older with chronic kidney disease stage 4 or 5 (glomerular filtration rate [GFR] less than or equal to 30 mL/min/1.73 $m^2$), not currently receiving renal replacement therapy

Exclusions
Unspecified

## NUMERATOR INCLUSIONS/EXCLUSIONS

Inclusions
The number of patients from the denominator with blood pressure less than 130/80 mmHg on index date (i.e., the date blood pressure was measured closest to the time of chart audit)

Exclusions
Unspecified

## DENOMINATOR TIME WINDOW

Time window precedes index event

## NUMERATOR TIME WINDOW

Episode of care

## DATA SOURCE

Administrative data
Laboratory data
Medical record

## LEVEL OF DETERMINATION OF QUALITY

Individual Case

## OUTCOME TYPE

Clinical Outcome

PRE-EXISTING INSTRUMENT USED

Unspecified

## Computation of the Measure

SCORING

Rate

INTERPRETATION OF SCORE

Better quality is associated with a higher score

ALLOWANCE FOR PATIENT FACTORS

Unspecified

STANDARD OF COMPARISON

Internal time comparison

## Evaluation of Measure Properties

EXTENT OF MEASURE TESTING

Unspecified

## Identifying Information

ORIGINAL TITLE

Number of patients with blood pressure less than 130/80 mmHg on index date / number of patients with advanced CKD.

MEASURE COLLECTION

Renal Physicians Association Clinical Performance Measures on Appropriate Patient Preparation for Renal Replacement Therapy

MEASURE SET NAME

Renal Physicians Association Clinical Performance Measures for Hypertension Recommendations

DEVELOPER

Renal Physicians Association

## ADAPTATION

Measure was not adapted from another source.

## RELEASE DATE

2002 Oct

## MEASURE STATUS

This is the current release of the measure.

## SOURCE(S)

Renal Physicians Association. Appropriate patient preparation for renal replacement therapy. Rockville (MD): Renal Physicians Association; 2002 Oct 1. 78 p. (Clinical Practice Guideline; no. 3).

## MEASURE AVAILABILITY

The individual measure, "Number of patients with blood pressure less than 130/80 mmHg on index date / number of patients with advanced CKD," is published in "Renal Physicians Association Clinical Practice Guideline #3: Appropriate Patient Preparation for Renal Replacement Therapy."

For more information, contact RPA at 1700 Rockville Pike, Suite 220, Rockville, MD 20852; phone: 301-468-3515; fax: 301-468-3511; Web site: www.renalmd.org; e-mail: rpa@renalmd.org.

## NQMC STATUS

This NQMC summary was completed by ECRI on May 23, 2003. The information was verified by the Renal Physicians Association on June 17, 2003.

## COPYRIGHT STATEMENT

This NQMC summary is based on the original measure, which is subject to the measure developer's copyright restrictions.

For more information, contact RPA at 1700 Rockville Pike, Suite 220, Rockville, MD 20852; phone: 301-468-3515; fax: 301-468-3511; Web site: www.renalmd.org; e-mail: rpa@renalmd.org.

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