General

Title
Advanced chronic kidney disease (CKD): percent of patients with antihypertensive therapy intensified.

Source(s)

Measure Domain

Primary Measure Domain

Process
The validity of measures depends on how they are built. By examining the key building blocks of a measure, you can assess its validity for your purpose. For more information, visit the Measure Validity page.

Secondary Measure Domain
Does not apply to this measure

Brief Abstract

Description
This measure assesses the percent of patients with antihypertensive therapy intensified among patients with advanced chronic kidney disease (CKD) with blood pressure greater than 130/80 mmHg and on antihypertensive medications.

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 m² 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 m²). 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; antihypertensive therapy

Denominator Description
The number of adult patients with advanced chronic kidney disease (CKD), not currently receiving renal replacement therapy, with blood pressure greater than 130/80 mmHg, and on antihypertensive medications

Numerator Description
The number of patients from the denominator with antihypertensive therapy intensified

Evidence Supporting the Measure

Evidence Supporting the Criterion of Quality
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

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


Utilization

Unspecified

Costs

Unspecified

Institute of Medicine (IOM) 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), blood pressure greater than 130/80 mmHg, and on antihypertensive medications
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 m²), not currently receiving renal replacement therapy, with blood pressure greater than 130/80 mmHg, and on antihypertensive medications

Exclusions
Unspecified

Relationship of Denominator to Numerator
All cases in the denominator are equally eligible to appear in the numerator

Denominator (Index) Event

Clinical Condition

Therapeutic Intervention

Denominator Time Window
Time window precedes index event

Numerator Inclusions/Exclusions

Inclusions
The number of patients from the denominator with antihypertensive therapy intensified*

*Intensification of antihypertensive therapy: increasing medication dosage and/or adding medications

Exclusions
Unspecified

Measure Results Under Control of Health Care Professionals, Organizations and/or Policymakers

The measure results are somewhat or substantially under the control of the health care professionals, organizations and/or policymakers to whom the measure applies.

Numerator Time Window

Episode of care

Data Source

Administrative data
Laboratory data
Medical record
Pharmacy data

Level of Determination of Quality
Individual Case

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 antihypertensive therapy intensified / number of patients with advanced CKD, with blood pressure greater than 130/80 mmHg, and on antihypertensive medications.

Measure Collection Name
Renal Physicians Association Clinical Performance Measures on Appropriate Patient Preparation for Renal Replacement Therapy
Measure Set Name
Clinical Performance Measures for Hypertension Recommendations

Submitter
Renal Physicians Association - Medical Specialty Society

Developer
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Funding Source(s)
Ortho Biotech Products, LP

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Financial Disclosures/Other Potential Conflicts of Interest
There were none disclosed.

Adaptation

Measure was not adapted from another source.

Release Date

2002 Oct

Measure Status

This is the current release of the measure.

Source(s)


Measure Availability

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

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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.

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