



Complete Summary

TITLE

Advanced chronic kidney disease (CKD): percent of patients with serum bicarbonate measured within the last 3 months.

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 serum bicarbonate measured within the last three months among patients with advanced chronic kidney disease (CKD).

RATIONALE

Renal osteodystrophy is a complex and multifaceted disease process that begins early in the course of chronic kidney disease (CKD) and is a major, long-term complication associated with high rates of morbidity. The metabolic and skeletal derangements associated with renal osteodystrophy are not easily reversed and, therefore, early interventions are crucial.

Subjects with CKD are susceptible to developing acidosis. Acidosis may cause increased risk for bone disease as well as multiple other complications (i.e., cardiovascular disease and malnutrition). The risk associated with such treatment is low and may reduce the occurrence of other metabolic disturbances associated with CKD such as hyperkalemia. Since the serum bicarbonate level can fluctuate over days or weeks, three months was chosen as a convenient monitoring interval.

PRIMARY CLINICAL COMPONENT

Advanced chronic kidney disease; renal osteodystrophy; metabolic acidosis; serum bicarbonate

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 serum bicarbonate measured within the last 3 months (90 days)

Evidence Supporting the Measure

PRIMARY MEASURE DOMAIN

Process

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

Subjects with chronic kidney disease (CKD) are susceptible to developing acidosis. Acidosis may cause increased risk for bone disease as well as multiple other complications (i.e., cardiovascular disease and malnutrition).

EVIDENCE FOR BURDEN OF ILLNESS

Bushinsky DA. The contribution of acidosis to renal osteodystrophy. *Kidney Int* 1995 Jun; 47(6): 1816-32.

Lin YF, Shieh SD, Diang LK, Lin SH, Chyr SH, Li BL, Lu KC. Influence of rapid correction of metabolic acidosis on serum osteocalcin level in chronic renal failure. *ASAIO J* 1994 Jul-Sep; 40(3):M440-4.

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 m²), not currently receiving renal replacement therapy

Exclusions

Unspecified

NUMERATOR INCLUSIONS/EXCLUSIONS

Inclusions

The number of patients from the denominator with serum bicarbonate measured within the last three months (90 days)

Exclusions

Unspecified

DENOMINATOR TIME WINDOW

Time window precedes index event

NUMERATOR TIME WINDOW

Fixed time period

DATA SOURCE

Administrative data
Laboratory data
Medical record

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 serum bicarbonate measured within the last 3 months / 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 Bone Disease 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 serum bicarbonate measured within the last 3 months / 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.

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