General

Title

Advanced chronic kidney disease (CKD): percent of patients who are anemic, iron deficient and on iron therapy.

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 advanced chronic kidney disease (CKD) who are anemic, iron deficient and on iron therapy.

Rationale

Anemia is common in patients with advanced chronic kidney disease (CKD) and can lead to a variety of detrimental effects. In addition to the direct effects of anemia on performance and ischemic symptoms, it has also been suggested that mortality and major complications during end-stage renal disease (ESRD) are associated with anemia that develops early in the course of CKD. Correcting anemia before the initiation of renal replacement therapy (RRT) may improve health outcomes.

Iron deficiency is treatable and failure to replete iron stores may result in resistance to erythropoietin.
Primary Clinical Component

Advanced chronic kidney disease; anemia; iron deficiency; iron therapy

Denominator Description

The number of adult patients with advanced chronic kidney disease (CKD) for at least three months, not currently receiving renal replacement therapy who are anemic and are iron deficient

Numerator Description

The number of patients from the denominator who are on iron therapy

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
Two studies have identified anemia as being prevalent in patients with advanced chronic kidney disease and it is also clear that the severity of anemia increases considerably with worsening renal function.

Evidence for Incidence/Prevalence


Association with Vulnerable Populations
Unspecified

Burden of Illness
Anemia is associated with increased mortality, detrimental effects on cardiac function, exercise capacity, quality of life, and cognitive function.
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) who are anemic and are iron deficient

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) for at least three months not currently receiving renal replacement therapy who are anemic* and are iron deficient**.

*Hemoglobin (Hb) level less than 12 g/dL for women and less than 13 g/dL for men

**Percent transferrin saturation (TSAT) less than 20% or ferritin less than 100 mcg/mL

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

Denominator Time Window

Time window precedes index event

Numerator Inclusions/Exclusions

Inclusions
The number of patients from the denominator who are on iron therapy

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 who are anemic, iron deficient and on iron therapy / number of patients with advanced CKD, are anemic and are iron deficient.

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

Measure Set Name
Clinical Performance Measures for Anemia Recommendations

Submitter
Renal Physicians Association - Medical Specialty Society

Developer
Renal Physicians Association - Medical Specialty Society

Funding Source(s)
Ortho Biotech Products, LP

Composition of the Group that Developed the Measure

W. Kline Bolton, MD, Working Group Chair, University of Virginia School of Medicine, Charlottesville, VA; William F. Owen, Jr., MD, President, RPA, Duke University School of Medicine Durham, NC; Baxter Healthcare Corp., McGaw Park, IL; Dale Singer, MHA, Executive Director, RPA.

Content Experts: Jack Coburn, MD, UCLA School of Medicine, West Los Angeles V.A. Healthcare Center, West Los Angeles, CA; William Hailey, MD, Mayo Clinic, Jacksonville, FL; Annamarie Kausz, MD, New England Medical Center, Boston, MA; Adeera Levin, MD, St. Paul's Hospital, Vancouver, BC; William Mitch, MD, University of Texas Medical Branch, Galveston, TX; Patricia Painter, PhD, University of California, San Francisco, CA; Michael Rocco, MD, MSCE, Wake Forest University School of Medicine, Winston-Salem, NC.

Association Representatives: Carolyn Atkins, RN, BS, CCTC, National Kidney Foundation, Medical City Dallas Hospital, Dallas, TX; Shelley Clark, RN, National Renal Administrators Association, FMC North Roanoke Dialysis, Roanoke, VA; Paul Eggers, PhD, National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), Bethesda, MD; Lori Fedje, RD, LD, NKF Council on Renal Nutrition, Pacific Northwest Renal Services, Portland, OR; Richard Goldman, MD, Renal Physicians Association, Renal Medicine Associates, Emeritus Albuquerque, NM; Joel Greer, PhD, Centers for Medicare and Medicaid Services, Baltimore, MD; Richard Lafayette, MD, American Society of Nephrology, Stanford University School of Medicine, Stanford, CA; Eugene Z. Oddone, MD, American College of Physicians - American Society of Internal Medicine, Durham VA Medical Center, Durham, NC; Victoria Norwood, MD, American Society of Pediatric Nephrology, University of Virginia, Charlottesville, VA; Paul M. Palevsky, MD, Forum of ESRD Networks, University of Pittsburgh School of Medicine, VA Pittsburgh Health Care System, Pittsburgh, PA; Sandy Peckens, MSW, NKF Council of Nephrology Social Workers, Merrimack Valley Nephrology, Methuen, MA; Venkateswara Rao, MD, American Society of Transplantation, Hennepin County Medical Center, Minneapolis, MN; Charlotte Thomas Hawkins, PhD, RN, CNN, American Nephrology Nurses Association, Rutgers, The State University of New Jersey, Burlington, NJ; Joseph White, American Association of Kidney Patients.

Methodologists: David B. Matchar, MD, FACP, Director, Duke Center for Clinical Health Policy Research and Co-Director, Duke Evidence-based Practice Center, Durham, NC; Douglas C. McCrory, MD, MHS, Co-Director Duke Evidence-based Practice Center, Durham, NC; Joseph A. Coladorato, MD, Duke Institute of Renal Outcomes Research & Health Policy, Durham, NC; Preston S. Klassen, MD, MHS, Duke Institute of Renal Outcomes Research & Health Policy, Durham, NC; Meenal B. Patwardhan, MD, MHSA, Duke Center for Clinical Health Policy Research and Duke Evidence-based Practice Center, Durham, NC; Doral N. Reddan, MD, MHS, Duke Institute of Renal Outcomes Research & Health Policy, Durham, NC; Olivier T. Rutschmann, MD, MPH, Duke Center for Clinical Health Policy Research, Durham, NC; William S. Yancy, Jr., MD, MHS, Duke University Medical Center, Durham, NC.

Medical Editor: Rebecca N. Gray, DPhil, Duke Evidence-based Practice Center, Durham, NC.

Project Manager and Editor: Emily G. Shurr, MA, Duke Evidence-based Practice Center, Durham, NC.
There were none disclosed.

Measure was not adapted from another source.

2002 Oct

This is the current release of the measure.


"Number of patients who are anemic, iron deficient and on iron therapy / number of patients with advanced CKD, are anemic and are iron deficient," 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.

This NQMC summary was completed by ECRI on May 2, 2003. The information was verified by the Renal Physicians Association on May 27, 2003.

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

The National Quality Measures Clearinghouse® (NQMC) does not develop, produce, approve, or endorse the measures represented on this site.
All measures summarized by NQMC and hosted on our site are produced under the auspices of medical specialty societies, relevant professional associations, public and private organizations, other government agencies, health care organizations or plans, individuals, and similar entities.

Measures represented on the NQMC Web site are submitted by measure developers, and are screened solely to determine that they meet the NQMC Inclusion Criteria.

NQMC, AHRQ, and its contractor ECRI Institute make no warranties concerning the content or its reliability and/or validity of the quality measures and related materials represented on this site. Moreover, the views and opinions of developers or authors of measures represented on this site do not necessarily state or reflect those of NQMC, AHRQ, or its contractor, ECRI Institute, and inclusion or hosting of measures in NQMC may not be used for advertising or commercial endorsement purposes.

Readers with questions regarding measure content are directed to contact the measure developer.