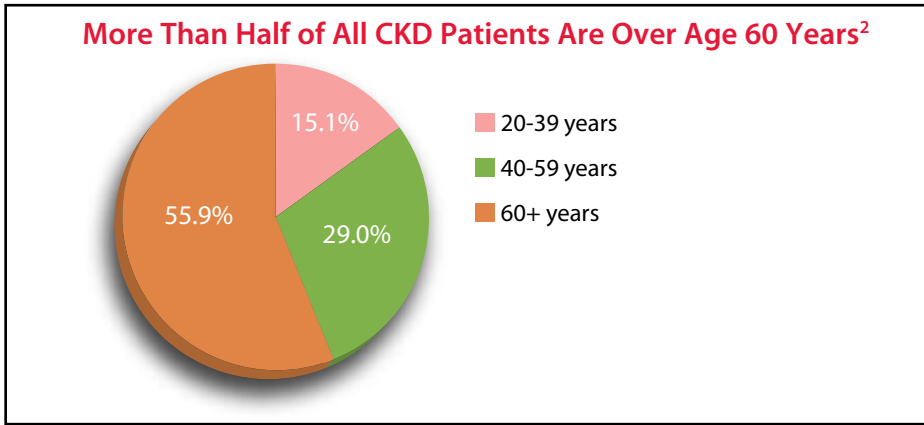


# Chronic Kidney Disease (CKD) and Anemia Facts for Long-Term Care (LTC)

## Prevalence of CKD in the Elderly

Older age is a risk factor for CKD.<sup>1</sup>



- Patients age 60 years and older are more than 3 times as likely to have CKD than people under age 40 years<sup>2</sup>
- Based on a retrospective, cross-sectional analysis of 9931 LTC residents age 65 years and older<sup>3</sup>
  - Approximately 40% of LTC patients had CKD, with a glomerular filtration rate (GFR) of < 60 mL/min/1.73 m<sup>2</sup><sup>3</sup>

## CKD Assessment

- The National Kidney Foundation (NKF) has published clinical guidelines for the evaluation, classification, and stratification of CKD<sup>4</sup>
- The NKF recommends staging CKD based on GFR<sup>4</sup>
- GFR is the best overall indicator of kidney function<sup>4</sup>
  - Serum creatinine levels should not be relied upon as the sole index of renal function<sup>4</sup>

## CKD STAGING AND CLINICAL ACTION PLAN<sup>4</sup>

Stage	Description	GFR (mL/min/1.73 m <sup>2</sup> )	Clinical Action (Includes Actions From Preceding Stages)	Estimated Number of US Adults in 2006 <sup>5</sup>	Prevalence (%) NHANES 1999-2006 <sup>*6</sup>
I	Kidney damage with normal or ↑ GFR	≥90	<ul style="list-style-type: none"> <li>• Diagnosis and treatment</li> <li>• Treatment of comorbid conditions</li> <li>• Slowing progression</li> <li>• Cardiovascular disease risk reduction</li> </ul>	9,580,751	3.2
II	Kidney damage with mild ↓ GFR	60-89	<ul style="list-style-type: none"> <li>• Estimating progression</li> </ul>	12,275,338	4.1
III	Moderate ↓ GFR	30-59	<ul style="list-style-type: none"> <li>• Evaluating and treating complications</li> </ul>	25,353,082	7.8
IV	Severe ↓ GFR	15-29	<ul style="list-style-type: none"> <li>• Preparation for kidney replacement therapy</li> </ul>	1,496,992	0.5
V	Kidney failure	<15 (or dialysis)	<ul style="list-style-type: none"> <li>• Replacement (if uremia present)</li> </ul>		

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\*Prevalence data for stages 1 through 5 were taken from the 1999-2006 National Health and Nutrition Examination Surveys (NHANES). The NHANES, conducted by the National Center for Health Statistics, provide a nationally representative sample of institutionalized United States citizens.

# CKD and Anemia Facts for LTC

## Prevalence of Anemia (Hemoglobin [Hb] <12 g/dL for women; Hb <13 g/dL for men) in the LTC Setting

- Prevalence of anemia increases with age<sup>7,8</sup>
- More than 20% of people age 85 and older were reported to be anemic<sup>9</sup>
- The highest rates of anemia among the elderly occur in hospitalized patients or those in LTC settings<sup>7</sup>
- Prevalence of anemia among LTC residents was reported to range from 56% to 74%<sup>10,11</sup>

## Anemia Was Reported to Be Underdiagnosed in LTC

In a retrospective analysis of data from a large, vertically integrated healthcare system in which patients (N=723) were 65 years or older with Hb <12 g/dL for women and Hb <13 g/dL for men:<sup>12</sup>

- Anemia was reported to be undiagnosed in approximately two-thirds of elderly CKD patients
- Additionally, only 9% of patients who were diagnosed with anemia received treatment

## NKF Recommendations for Evaluation of Anemia<sup>13</sup>

**Assess for anemia in all CKD patients regardless of stage or cause.**

- Workup when Hb is <13.5 g/dL in adult men and <12 g/dL in adult women

Initial evaluation should include:

- Hb and/or hematocrit
- CBC
- Absolute reticulocyte count
- Iron parameters
  - Serum ferritin
  - Serum transferrin saturation (TSAT)
- Evaluation for GI bleed<sup>14</sup>

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