

# 4

## **Chronic Kidney Disease**

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- 4-1 End-stage renal disease
- 4-2 Cardiovascular disease deaths in persons with chronic kidney failure
- 4-3 Counseling for chronic kidney failure care
- 4-4 Use of arteriovenous fistulas
- 4-5 Registration for kidney transplantation
- 4-6 Waiting time for kidney transplantation
- 4-7 Kidney failure due to diabetes
- 4-8 Medical therapy for persons with diabetes and proteinuria



#### **4-1. Reduce the rate of new cases of end-stage renal disease (ESRD).**

<b>National Data Source</b>	U.S. Renal Data System (USRDS), NIH, NIDDK.
<b>State Data Source</b>	U.S. Renal Data System (USRDS), NIH, NIDDK.
<b>Healthy People 2000 Objective</b>	Adapted from 15.3 (Heart Disease and Stroke).
<b>Measure</b>	Rate per million.
<b>Baseline</b>	289 (1997).
<b>Numerator</b>	Number of ESRD Medical Evidence Report Medicare Entitlement and/or Patient Registration forms (HCFA Medical Evidence Form 2728) submitted to Medicare for renal replacement therapy in the past 12 months.
<b>Denominator</b>	Number of persons.
<b>Population Targeted</b>	U.S. resident population.
<b>Questions Used To Obtain the National Data</b>	Not applicable.
<b>Expected Periodicity</b>	Annual.
<b>Comments</b>	<p>Renal replacement therapy includes renal dialysis and kidney transplants. Qualification for renal replacement therapy is based on eligibility for Medicare and the submission of the HCFA Medical Evidence Form (HCFA-2728). More information on HCFA-2728 is available from USRDS.<sup>1</sup></p> <p>This objective is a modification of Healthy People 2000 objective 15.3 which used incident count data on ESRD patients published in the Annual Data Report (ADR) for the numerator.<sup>1</sup> The U.S. resident population, published by the U.S. Census Bureau, was used as the denominator. The Healthy People 2000 measure was an unadjusted rate per 100,000 population. The Healthy People 2010 measure uses age-, race-, and sex-adjusted rates per million population published in USRDS ADR.<sup>1</sup> More information on the analytic methods used to calculate this measure can be found in chapter 13 of the 1999 ADR.<sup>1</sup></p>

The USRDS data, data collection procedures, calculation methods, and other technical information are included in its Annual Data Report.<sup>1</sup>

USRDS uses data collected from Medicare eligible persons with ESRD. Over 96 percent of all ESRD cases are included in the Medicare eligible population. Health care providers of ESRD cases with private health insurance are not required to provide patient information to USRDS, thus these data are not included in USRDS.

See Part C for a description of USRDS and Appendix A for focus area contact information.



#### **4-2. Reduce deaths from cardiovascular disease in persons with chronic kidney failure.**

<b>National Data Source</b>	U.S. Renal Data System (USRDS), NIH, NIDDK.
<b>State Data Source</b>	U.S. Renal Data System (USRDS), NIH, NIDDK.
<b>Healthy People 2000 Objective</b>	Not applicable.
<b>Measure</b>	Rate per 1,000 patient years at risk.
<b>Baseline</b>	70 (1997).
<b>Numerator</b>	Number of deaths among persons with chronic kidney failure (ICD-9 code 585) who also had cardiovascular disease (ICD-9 390-448).
<b>Denominator</b>	Number of persons with chronic kidney failure (ICD-9 code 585).
<b>Population Targeted</b>	U.S. resident population.
<b>Questions Used To Obtain the National Data</b>	Not applicable.
<b>Expected Periodicity</b>	Annual.
<b>Comments</b>	This measure is translated into patient years at risk (instead of a rate per population) in order to obtain a more uniform rate to track over time. Analytical methods for converting the rate into patient years at risk are provided in chapter 13 of the 1999 Annual Data Report. <sup>1</sup>

The USRDS data, data collection procedures, calculation methods, and other technical information are included in its Annual Data Report.<sup>1</sup>

USRDS uses data collected from Medicare eligible persons with ESRD. Over 96 percent of all ESRD cases are included in the Medicare eligible population. Health care providers of ESRD cases with private health insurance are not required to provide patient information to USRDS, thus these data are not included in USRDS.

See Part C for a description of USRDS and Appendix A for focus area contact information.



**4-3. Increase the proportion of treated chronic kidney failure patients who have received counseling on nutrition, treatment choices, and cardiovascular care 12 months before the start of renal replacement therapy.**

<b>National Data Source</b>	USRDS Dialysis Mortality and Morbidity Study (DMMS) Wave 1, U.S. Renal Data System (USRDS), NIH, NIDDK.
<b>State Data Source</b>	USRDS Dialysis Mortality and Morbidity Study (DMMS) Wave 1, U.S. Renal Data System (USRDS), NIH, NIDDK.
<b>Healthy People 2000 Objective</b>	Not applicable.
<b>Measure</b>	Percent.
<b>Baseline</b>	45 (1996).
<b>Numerator</b>	Number of persons with chronic kidney failure who are reported to receive counseling on nutrition, treatment choices, and cardiovascular care at least 12 months prior to starting renal replacement therapy.
<b>Denominator</b>	Number of persons in the study population with chronic kidney failure (ICD-9-CM code 585).
<b>Population Targeted</b>	U.S. resident population.

<b>Questions Used To Obtain the National Data</b>	For the USRDS Dialysis Mortality and Morbidity Study (DMMS) Wave 1 questions, see Data Collection Forms for USRDS Special Studies at <a href="http://www.usrds.org/research_guide.htm">http://www.usrds.org/research_guide.htm</a> .
<b>Expected Periodicity</b>	Annual.
<b>Comments</b>	<p>This measure is being tracked using data from USRDS special study, Dialysis Mortality and Morbidity Study (DMMS). Additional information on USRDS Special Studies is published by USRDS.<sup>2</sup></p> <p>The USRDS data, data collection procedures, calculation methods, and other technical information are included in its Annual Data Report.<sup>1</sup></p> <p>USRDS uses data collected from Medicare eligible persons with ESRD. Over 96 percent of all ESRD cases are included in the Medicare eligible population. Health care providers of ESRD cases with private health insurance are not required to provide patient information to USRDS, thus these data are not included in USRDS.</p> <p>See Part C for a description of USRDS and Appendix A for focus area contact information.</p>



**4-4. Increase the proportion of new hemodialysis patients who use arteriovenous fistulas as the primary mode of vascular access.**

<b>National Data Source</b>	USRDS Dialysis Mortality and Morbidity Study (DMMS) Wave 1, U.S. Renal Data System (USRDS), NIH, NIDDK.
<b>State Data Source</b>	USRDS Dialysis Mortality and Morbidity Study (DMMS) Wave 1, U.S. Renal Data System (USRDS), NIH, NIDDK.
<b>Healthy People 2000 Objective</b>	Not applicable.
<b>Measure</b>	Percent.
<b>Baseline</b>	29 (1997).
<b>Numerator</b>	Number of persons who started hemodialysis in the past year who are reported to use arteriovenous (a-v) fistulas as the primary mode of vascular access.

<b>Denominator</b>	Number of persons in the study population who started hemodialysis in the past year.
<b>Population Targeted</b>	U.S. resident population.
<b>Questions Used To Obtain the National Data</b>	For the USRDS Dialysis Mortality and Morbidity Study (DMMS) Wave 1 questions, see Data Collection Forms for USRDS Special Studies at <a href="http://www.usrds.org/research_guide.htm">http://www.usrds.org/research_guide.htm</a> .
<b>Expected Periodicity</b>	Annual.
<b>Comments</b>	See Comments provided with objective 4-3 for more information.



**4-5. Increase the proportion of dialysis patients registered on the waiting list for transplantation.**

<b>National Data Source</b>	U.S. Renal Data System (USRDS), NIH, NIDDK.
<b>State Data Source</b>	U.S. Renal Data System (USRDS), NIH, NIDDK.
<b>Healthy People 2000 Objective</b>	Not applicable.
<b>Measure</b>	Percent.
<b>Baseline</b>	20 (1994–96).
<b>Numerator</b>	Number of persons under age 70 years registered on the kidney transplant waiting list (see Comments).
<b>Denominator</b>	Number of persons on dialysis under age 70 years.
<b>Population Targeted</b>	U.S. resident population.
<b>Questions Used To Obtain the National Data</b>	Not applicable.
<b>Expected Periodicity</b>	Annual.
<b>Comments</b>	<p>Data on the number of persons on transplant waiting lists include data from the United Network for Organ Sharing (UNOS). A complete description of the transplantation data (including UNOS) used to track this objective is available from USRDS.<sup>2</sup></p> <p>The USRDS data, data collection procedures, calculation methods, and other technical information are included in its Annual Data Report.<sup>1</sup></p>

USRDS uses data collected from Medicare eligible persons with ESRD. Over 96 percent of all ESRD cases are included in the Medicare eligible population. Health care providers of ESRD cases with private health insurance are not required to provide patient information to USRDS, thus these data are not included in USRDS.

See Part C for a description of USRDS and Appendix A for focus area contact information.



**4-6. Increase the proportion of patients with treated chronic kidney failure who receive a transplant within 3 years of registration on the waiting list.**

<b>National Data Source</b>	U.S. Renal Data System (USRDS), NIH, NIDDK.
<b>State Data Source</b>	U.S. Renal Data System (USRDS), NIH, NIDDK.
<b>Healthy People 2000 Objective</b>	Not applicable.
<b>Measure</b>	Rate per 1,000 patient years at risk (since placed on dialysis).
<b>Baseline</b>	41 (1995–97).
<b>Numerator</b>	Number of patients with treated chronic kidney failure who are reported to have received a kidney transplant within 3 years from the date of registering for a donated kidney.
<b>Denominator</b>	Number of ESRD patients who are in treatment for chronic kidney failure and are eligible for a kidney transplant in the past 3 years.
<b>Population Targeted</b>	U.S. resident population.
<b>Questions Used To Obtain the National Data</b>	Not applicable.
<b>Expected Periodicity</b>	Annual.



**Comments**

This measure is translated into patient years at risk (instead of a rate per population) in order to obtain a more uniform rate to track over time. Analytical methods for converting the rate into patient years at risk are provided in chapter 13 of the 1999 Annual Data Report.<sup>1</sup>

A complete description of the transplantation data (including UNOS) used to track this objective is available from USRDS.<sup>2</sup>

The USRDS data, data collection procedures, calculation methods, and other technical information are included in its Annual Data Report.<sup>1</sup>

USRDS uses data collected from Medicare-eligible persons with ESRD. Over 96 percent of all ESRD cases are included in the Medicare eligible population. Health care providers of ESRD cases with private health insurance are not required to provide patient information to USRDS, thus these data are not included in USRDS.

See Part C for a description of USRDS and Appendix A for focus area contact information.

**4-7. Reduce kidney failure due to diabetes.**

<b>National Data Source</b>	U.S. Renal Data System (USRDS), NIH, NIDDK.
<b>State Data Source</b>	U.S. Renal Data System (USRDS), NIH, NIDDK.
<b>Healthy People 2000 Objective</b>	Adapted from 17.10 (Diabetes and Chronic Disabling Conditions).
<b>Measure</b>	Rate per million.
<b>Baseline</b>	113 (1996).
<b>Numerator</b>	Number of reported ESRD patients with diabetes.
<b>Denominator</b>	Number of persons.
<b>Population Targeted</b>	U.S. resident population.
<b>Questions Used To Obtain the National Data</b>	Not applicable.
<b>Expected Periodicity</b>	Annual.

## Comments

This objective is a modification of Healthy People 2000 objective 17.10, which used incident count data on ESRD patients with diabetes published in the Annual Data Report (ADR) for the numerator.<sup>1</sup> The number of persons who report ever being diagnosed with diabetes from the National Health Interview Survey (NHIS), CDC, NCHS, was used as the Healthy People 2000 denominator. The Healthy People 2010 measure uses age-, race-, and sex-adjusted rates per million population published in USRDS ADR. More information on the analytic methods used to calculate this measure can be found in chapter 13 of the 1999 ADR.<sup>1</sup>

USRDS data, data collection procedures, calculation methods, and other technical information are included in its Annual Data Report.<sup>1</sup>

USRDS uses data collected from Medicare eligible persons with ESRD. Over 96 percent of all ESRD cases are included in the Medicare eligible population. Health care providers of ESRD cases with private health insurance are not required to provide patient information to USRDS, thus these data are not included in USRDS.

See Part C for a description of USRDS and Appendix A for focus area contact information.



## **4-8. (Developmental) Increase the proportion of persons with type 1 or type 2 diabetes and proteinuria who receive recommended medical therapy to reduce progression to chronic renal insufficiency.**

### Comments

An operational definition could not be specified at the time of publication.

The proposed national data sources are the National Ambulatory Medical Care Survey (NAMCS), CDC, NCHS and the National Hospital Ambulatory Medical Care Survey (NHAMCS), CDC, NCHS.

The proposed survey questions to be used to obtain the national data are from the 1997 NAMCS/NHAMCS:

- *Physician's Diagnosis for this Visit- As specifically as possible, list diagnoses related to this visit including chronic conditions.*

1. *Primary Diagnosis:* \_\_\_\_\_  
2. *Other:* \_\_\_\_\_  
3. *Other:* \_\_\_\_\_

- *Does Patient Now Have:[Check all that apply]*

1. *Depression*  
2. *Asthma*  
3. *Ischemic heart disease*  
4. *Obesity*  
5. *Hypertension*  
6. *Diabetes*  
7. *Arthritis*  
8. *Hyperactivity/ADD*  
9. *None of the above*

- *MEDICATIONS & INJECTIONS - including Rx and OTC medications, immunizations, allergy shots, anesthetics, and dietary supplements.*

*None - No medications/injections*  
 *Yes - Please record below:*

- *List up to 8 drugs that were ordered, supplied, administered or continued during this visit.*

*Medication/vaccine:* \_\_\_\_\_

*Enter dosage and route information.*

*Strength:* \_\_\_\_\_

*Route:* \_\_\_\_\_

*(For Route enter: O -Oral; E -Eyes; I -Inhalation; T -Topical/transdermal; IV -Intravenous; IM - Intramuscular; J -Other injection; X -Other; U - Unknown/unspecified)*

*Check all that apply.*

*Regimen*  
 *New*  
 *Drug*  
 *From Formulary*  
 *For Dx1*  
 *For Dx2*  
 *For Dx3*

The proposed measure will track physician visits by persons with diabetes (ICD-9-CM code of 250) and have either angiotensin receptor blocker or angiotensin converting enzyme inhibitors medications ordered, supplied, administered or continued during the visit.

See Part C for descriptions of NAMCS and NHAMCS, and Appendix A for focus area contact information.



## References

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1. U.S. Renal Data System (USRDS). *USRDS 1999 Annual Data Report*. Bethesda, MD: National Institutes of Health, National Institute of Diabetes and Digestive and Kidney Diseases, 1999.
2. Researcher's Guide to the USRDS Database. <[http://www.usrds.org/research\\_guide.htm](http://www.usrds.org/research_guide.htm)>April 1999.