

HP



Zion National Park, Utah

HEALTHY PEOPLE 2020

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The Healthy People program, now in its third decade, was established to improve the health of all Americans through the development and evaluation of national health objectives. HP2020, launched on December 2, 2010, is the next step in the continuum of care, with its foundation based on the success of the four previous HP initiatives.

One of the major goals of the HP2020 program is to “reduce new cases of chronic kidney disease (CKD) and its complications, disability, death, and economic costs.” The development and progression of CKD, which results in reduced quality of life, is a major health concern. The HP2020 CKD objectives are designed to further reduce the long-term burden of kidney disease, improve the quality of life among those with the condition, and eliminate disparities — racial or otherwise — within the healthcare system. To accomplish these goals, the HP2020 program developed 14 objectives related to CKD, along with targets designed to evaluate the program’s success. We provide data for ten of these objectives, plus information on urine albumin testing in non-CKD patients diagnosed with diabetes. Because we use the Medicare 5 percent data to evaluate objectives related to CKD patients not on dialysis, results are limited to those age 65 and older.

In 2010, 11.9 percent of hospital patients with acute kidney injury had a follow-up renal evaluation six months post-discharge, a slight increase from the 11.4 percent seen in 2009, but below the objective’s modest goal of 12.4 percent.

Patients with diabetes are at increased risk of CKD. HP2020 has set a goal that 37 percent of persons with diagnosed diabetes obtain an annual urine albumin measurement. The percentage of elderly patients with diabetes receiving this measurement rose from 12.3 in 2000 to 38.8 in 2010, just over the suggested HP2020 target, but less than would be expected from clinical guidelines.

Serum creatinine and urine albumin are important laboratory markers for monitoring the presence and progression of CKD, and lipid tests are important for assessing cardiovascular risk in this population. In 2010, 29.1 percent of patients received these recommended medical evaluations, an increase from 28.1 percent in 2009, and just below the minimal recommended HP2020 target of 28.4 percent.

Patients with either Type 1 or Type 2 diabetes and CKD require more comprehensive laboratory monitoring. The hemoglobin A1c test is used to assess blood glucose control over prolonged periods of time in patients with diabetes, while diabetic retinopathy can be detected through regular eye examinations. Slightly over one in four elderly diabetic patients receives A1c and eye testing along with serum creatinine, lipid, and urine albumin tests, almost meeting the HP2020 target of 25.4 percent, but a level certainly in need of further improvement.

Use of angiotensin-converting enzyme (ACE) inhibitors or angiotensin II receptor blockers (ARBs) is a recommended medical treatment to slow the progression of CKD in patients with diabetes and CKD. In 2010, 72.6 percent of fee-for-service beneficiaries age 65 and older and enrolled in Medicare Part D received these medications, well above the now outdated HP2020 target of 60 percent.

A major HP2020 health objective is targeted at reducing new cases of ESRD, a disease which greatly affects an individual’s quality of life, and is an enormous burden on the healthcare system, accounting for approximately 6.3 percent (\$33

How like fish we are: ready,
nay eager to seize upon
whatever new thing some
wind of circumstance shakes
down upon the river of time!
Even so, I think there is some
virtue in eagerness, whether
its object prove true or false.

ALDO LEOPOLD,
A Sand County Almanac

billion) of total Medicare costs. In 2010, the rate of new ESRD cases stood at 349.7 per million population, 9.8 percent above the new HP2020 target of 318.5, but showing relatively little improvement over the past ten years.

Patients with diabetes are at increased risk of ESRD. The rate of kidney failure due to diabetes fell to 150.6 per million population in 2010, yet remains 8.2 percent above the HP2020 target of 139.2.

In past ADRS the USRDS raised concerns that late referral to a nephrologist prior to ESRD, or the lack of such referral, may contribute to higher morbidity and mortality in the first year of treatment. HP2020 has set a target referral rate of 29.8 percent — a conservative goal that should be updated. Rates have increased since 2005, from 25.6 percent to 29.4 percent in 2010.

We have reported on the high use of catheters at the first outpatient hemodialysis session, and on the associated risks. Among patients who have seen a nephrologist for more than a year, fewer than half use a catheter during their first outpatient dialysis session; they also have the greatest likelihood at initiation of having an arteriovenous (AV) fistula or maturing internal access. In an effort to improve vascular access for hemodialysis patients, HP2020 has developed objectives designed to increase the use of AV fistulas. In 2007, 49.6 percent of prevalent hemodialysis patients had an AV fistula as their primary vascular access, just under the 50.6 percent HP2020 target. The proportion of prevalent patients using a catheter as the only mode of vascular access stood at 27.7 percent in 2007, slightly above the target of 26.1 percent. And in 2010, 33.6 percent of incident hemodialysis patients used an AV fistula or had a maturing fistula for their primary mode of vascular access, nearly reaching the HP2020 target of 34.5 percent.

ESRD patients who receive a kidney transplant have lower mortality and hospitalization rates than those on dialysis. First-year all-cause mortality rates in hemodialysis patients, for example, are nearly four times higher than rates among transplant patients. HP2020 has set a goal of 18.8 percent of dialysis patients younger than 70 being wait-listed and/or receiving a deceased donor kidney transplant within one year of ESRD initiation. In 2009, 17.3 percent of patients met this criterion. Additional goals call for 19.7 percent of patients with treated chronic kidney failure to receive a transplant with three years of registration on the waiting list (the number was 16.2 for 2007 patients), and for increasing the number who receive a transplant at the start of ESRD; of 2010 incident patients younger than 70, only 3.3 percent received a preemptive transplant.

Expanded HP2020 objectives call for reductions in total death rates for persons on dialysis, reduced death rates in the first three months of renal replacement therapy, and a reduced cardiovascular death rate in dialysis and transplant patients. The most impressive gain toward achieving an HP2020 objective is the continued decline in cardiovascular mortality rates in prevalent dialysis patients, from 116.2 deaths per 1,000 patient years at risk in 2000 to 79.9 in 2010, and, for the first time, below the HP2020 goal of 81.3. There have also been positive developments in reducing the death rate in dialysis patients in the first three months after initiation of therapy, from 377.2 in 2000 to 353.5 in 2010; this remains far, however, from the target of 319.9.

Additional information on the HP2020 program objectives can be found at www.healthypeople.gov.

Many HP2020 targets were set 2–3 years before release of the goals, & may need to be updated.

HP2020 CKD-3

Increase the proportion of hospital patients who incurred acute kidney injury who have follow-up renal evaluation in six months post discharge

TARGET: 12.4%

In 2000, just 2.1 percent of patients age 65 and older who were hospitalized for acute kidney injury had a follow-up renal evaluation during the following six months. By 2010 this had increased to 11.9 percent, close to the Healthy People 2020 goal of 12.4 percent.

The lowest rate of follow-up evaluation occurs in the oldest patients, with just 6 percent of those age 85 and

older receiving such care, compared to 16.4 percent of those age 65–74. By race and ethnicity, rates range from 9.6 percent among American Indians/Alaskan Natives to 14.6 percent in Hispanics and Latinos. » [Table HP2020 CKD-3](#); see page 428 for analytical methods. *Medicare patients age 65 & older (5 percent Medicare sample) with a hospitalized AKI event in given year.*

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
All	2.1	2.5	3.3	4.5	8.4	9.0	10.4	11.2	10.4	11.4	11.9
American Indian or Alaskan Native only	5.9	0.0	0.0	3.3	14.3	5.2	11.3	12.3	12.9	6.7	9.6
Asian only	4.8	3.2	2.4	4.0	7.3	12.3	20.8	14.3	11.6	17.4	14.4
Black or African American only	2.3	3.1	2.6	4.2	8.1	9.9	9.3	11.0	10.3	12.1	10.9
White only	2.0	2.4	3.3	4.5	8.4	8.7	10.5	11.1	10.3	11.1	11.9
Hispanic or Latino	2.5	1.6	7.3	7.7	13.2	13.0	10.2	11.2	14.8	12.6	14.6
Male	1.7	2.2	2.9	4.4	8.0	8.2	9.7	10.0	9.3	10.4	11.3
Female	2.5	2.9	3.7	4.7	8.9	9.9	11.3	12.5	11.6	12.4	12.7
65-74	2.8	4.0	4.4	6.4	11.8	12.9	14.9	16.0	14.4	15.8	16.4
75-84	2.0	2.1	3.4	4.4	8.6	8.6	10.4	11.2	10.7	11.3	12.5
85+	1.0	0.7	1.2	2.1	3.1	4.4	5.0	5.0	5.0	6.3	6.0

HP2020 D-12

Increase the proportion of persons with diagnosed diabetes who obtain an annual urine albumin measurement

TARGET: 37.0%

In the diabetic population age 65 and older, the percentage of patients receiving an annual urine albumin measurement has increased from 12.3 in 2000 to 38.8 in 2010, exceeding the HP2020 target of 37 percent.

Rates fall with age, from 43 percent among those age 65–74 to 25 percent among those 85 and older. By race and ethnicity, rates range from 23 percent among American Indians/Alaskan

Natives to 42 percent in the Asian population. Testing may, however, be under-reported in Native Americans, as the Indian Health Service does not report claims through the Medicare system.

Rates vary little by gender, at 40 percent for men and 38 percent for women in 2010. » [Table HP2020 D-12](#); see page 428 for analytical methods. *Medicare patients with diabetes, age 65 & older.*

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
All	12.3	15.4	18.4	21.4	25.8	28.7	31.3	33.6	35.6	37.3	38.8
American Indian or Alaskan Native only	8.8	11.6	12.1	13.0	15.5	19.4	19.7	21.1	21.1	24.1	23.4
Asian only	13.1	16.9	20.8	24.1	29.0	30.7	33.8	35.2	37.5	39.9	42.1
Black or African American only	10.2	13.3	15.8	18.9	23.8	26.7	29.5	31.9	33.7	35.7	37.1
White only	12.6	15.7	18.7	21.8	26.0	28.9	31.4	33.8	35.8	37.4	38.9
Hispanic or Latino	11.8	15.4	18.0	20.7	25.9	29.8	31.4	33.6	35.6	38.1	40.4
Male	12.8	16.1	19.1	22.1	26.7	29.6	32.2	34.6	36.6	38.2	39.8
Female	11.9	15.0	17.9	20.9	25.1	28.1	30.6	32.7	34.8	36.6	38.0
65-74	14.5	18.2	21.4	24.8	29.5	32.6	35.2	37.7	40.0	41.9	43.3
75-84	10.9	13.7	16.7	19.6	23.8	26.8	29.6	31.8	33.7	35.3	37.1
85+	5.5	7.2	9.0	10.9	13.9	16.1	18.1	20.5	22.2	23.5	25.1

HP2020 CKD-4

Increase the proportion of persons with diabetes and chronic kidney disease who receive recommended medical evaluations

In the Medicare CKD population age 65 and older, 29.1 percent of patients received serum creatinine, lipid, and urine albumin testing in 2010 — a considerable increase from the level of 6 percent in 2000, and for the first time meeting the Healthy People 2020 goal of 28.4 percent. Testing rates by race range from 21 percent among American Indians/Alaskan Natives to 37 percent among Asians. Rates by gender are 28 percent in women compared to 31 percent in men, and by age are lowest among the oldest patients, at 15 percent.

In the diabetic CKD population age 65 and older, 26.6 percent of patients

in 2010 received serum creatinine, urine albumin, glycosylated hemoglobin (A1c), and lipid testing, as well as an eye examination; this also reaches the HP2020 goal, set at 25.4 percent. The reported percentage of patients receiving comprehensive diabetic testing is lowest among American Indians/Alaskan Natives, at 15 percent (care provided by the Indian Health Service, however, is not reported to Medicare), and highest among Asians, at 30 percent. Rates vary little by gender, and decrease with age. » **Tables HP2020 CKD-4;** see page 428 for analytical methods. *Medicare patients age 65 & older with CKD (4.1-2) & diabetes (4.2).*

HP2020 CKD-4.1 TARGET: 28.4%

Increase the proportion of persons with chronic kidney disease who receive medical evaluation with serum creatinine, lipids, and urine albumin

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
All	6.0	7.3	9.1	10.6	19.8	22.1	23.4	25.7	26.7	28.1	29.1
American Indian or Alaskan Native only	5.7	8.2	5.5	7.0	13.7	19.2	15.6	16.9	16.8	18.4	20.5
Asian only	8.3	8.4	14.3	14.2	27.5	28.1	32.7	35.3	34.1	37.6	37.1
Black or African American only	5.3	6.6	8.7	10.0	20.8	22.8	24.4	26.7	27.9	30.1	30.8
White only	5.9	7.1	8.8	10.4	19.3	21.6	22.9	25.1	26.3	27.4	28.4
Hispanic or Latino	11.5	13.1	17.3	17.7	26.8	30.5	31.1	33.1	32.1	36.1	36.9
Male	6.3	7.5	9.3	11.3	21.1	23.4	24.5	27.1	28.3	29.6	30.7
Female	5.8	7.0	8.9	10.0	18.6	20.9	22.4	24.4	25.3	26.7	27.7
65-74	8.3	10.3	12.6	14.2	26.1	29.2	31.4	33.9	35.1	36.7	37.8
75-84	5.5	6.2	8.0	9.8	18.5	20.8	22.6	24.9	26.2	27.7	29.0
85+	1.7	2.3	3.1	4.0	8.2	10.0	10.1	12.1	13.1	14.0	14.8

HP2020 CKD-4.2 TARGET: 25.4%

Increase the proportion of persons with type 1 or type 2 diabetes and chronic kidney disease who receive medical evaluation with serum creatinine, urine albumin, HbA1c, lipids, and eye examinations

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
All	7.4	9.0	10.4	12.1	18.4	20.0	21.1	23.0	23.7	25.1	26.6
American Indian or Alaskan Native only	5.1	7.3	2.4	5.7	5.6	15.8	12.1	10.2	10.9	11.0	15.3
Asian only	7.4	8.3	12.3	12.8	25.2	21.9	26.2	26.8	25.2	26.9	29.6
Black or African American only	5.6	6.7	7.2	9.9	16.3	17.9	18.8	19.8	21.2	22.4	23.9
White only	7.8	9.4	11.0	12.5	18.6	20.3	21.4	23.4	24.1	25.6	27.0
Hispanic or Latino	8.8	10.4	11.8	11.8	20.4	20.4	19.8	22.3	21.9	24.8	24.3
Male	7.9	9.3	10.6	12.4	18.8	20.3	21.4	23.5	23.7	25.6	26.8
Female	7.1	8.7	10.3	11.8	18.0	19.7	20.9	22.5	23.6	24.7	26.4
65-74	9.0	10.9	12.3	14.3	22.0	23.4	24.6	26.6	27.2	28.5	30.1
75-84	7.0	8.1	9.9	11.7	16.9	18.9	20.7	22.6	23.3	25.2	26.8
85+	2.4	4.0	4.2	4.9	9.5	11.6	11.3	13.0	14.2	15.5	16.7

HP2020 CKD-5

Increase the proportion of persons with diabetes and chronic kidney disease who receive recommended medical treatment with angiotensin-converting enzyme inhibitors or angiotensin II receptor blockers

TARGET: 60.0%

In 2010, 73 percent of patients age 65 and older with diabetes and CKD received recommended medical treatment with angiotensin-converting enzyme inhibitors (ACEIs) or angiotensin II receptor blockers (ARBs), considerably higher than the Healthy People 2020 target of 60 percent.

By race, Hispanics/Latinos and Asians are most likely to receive this treatment, at 79–81 percent compared

to 71, 73, and 75 percent among whites, American Indians/Alaskan Natives, and blacks/African Americans, respectively.

Use varies little by gender, at 71–74 percent. And by age, 77, 71, and 66 percent, respectively, of patients age 65–74, 75–84, and 85 and older received ACEIs/ARBs in 2010. » [Table HP2020 CKD-5](#); see page 428 for analytical methods. *Fee-for-service beneficiaries enrolled in Medicare Part D, age 65 & older.*

	2006	2007	2008	2009	2010
All	71.8	73.6	73.5	73.3	72.6
American Indian or Alaskan Native only	65.4	71.0	78.5	75.3	73.3
Asian only	77.4	79.7	80.5	79.9	81.2
Black or African American only	75.6	77.0	74.8	76.1	75.0
White only	70.2	72.3	72.5	72.0	71.2
Hispanic or Latino	78.5	77.3	77.4	77.6	79.3
Male	68.3	70.5	71.2	71.1	70.7
Female	74.2	75.7	75.1	74.9	74.0
65-74	75.7	77.6	77.5	77.2	76.5
75-84	70.3	72.4	72.3	72.0	71.2
85+	64.5	65.2	65.3	66.2	65.6

HP2020 CKD-8

Reduce the rate of new cases of end-stage renal disease (ESRD)

TARGET: 318.5 new cases per million population

At 350 per million population, the rate of new cases of ESRD is now slightly more than 2 percent greater than in 2000, and remains considerably higher than the HP2020 goal of 318.5.

There is substantial variation by race in the rate of new ESRD cases. Among whites and Asians, for example, the rates are 283 and 332, respectively. But the rate among blacks/African Americans is 956, and for Native Hawaiians/Pacific Islanders it reaches 2,453. By ethnicity, the rate ranges from 343 among those who are not Hispanic

or Latino to 519 among those who are. And the rate of 443 cases per million population among men is 60 percent greater than the rate of 278 among women. » **Table HP2020 CKD-8**; see page 429 for analytical methods. *Incident ESRD patients. Adj: overall, age/gender/race; rates by age adjusted for gender/race; rates by gender adjusted for age/race; rates by race/ethnicity adjusted for age/gender. Ref: 2005 patients. “.” Zero values in this cell. *Values for cells with ten or fewer patients are suppressed.*

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
All	342.4	350.8	351.7	353.1	355.0	358.4	365.9	358.9	355.1	357.7	349.7
American Indian or Alaskan Native only	1,481.5	646.0	615.4	567.8	580.7	560.9	481.8	497.0	502.2	489.1	451.7
Asian only	322.9	293.6	288.4	281.3	264.5	315.4	331.5	332.6	330.8	337.8	331.6
Native Hawaiian or other Pacific Islander only	3,104.2	3,148.4	3,222.6	3,254.0	3,416.3	2,697.3	2,635.1	2,235.2	2,007.1	2,256.9	2,453.4
Black or African American only	1,008.2	1,036.1	1,045.6	1,045.5	1,014.4	1,025.5	1,034.6	1,014.1	997.5	994.4	955.6
White only	254.8	267.8	268.8	270.3	276.4	280.1	290.4	285.4	283.3	286.7	282.8
2 or more races	*	.	*	*	*	115.2	136.4	139.6	144.8	133.6	129.0
Hispanic or Latino	650.4	561.7	571.8	578.2	566.5	552.4	555.1	538.5	534.3	527.2	518.6
Not Hispanic or Latino	330.5	342.9	343.5	345.3	348.2	350.7	356.3	350.3	347.3	350.9	343.3
Black or Af Am only, not Hisp/Latino	1,024.4	1,055.6	1,065.4	1,067.0	1,033.5	1,046.4	1,056.5	1,038.8	1,022.5	1,020.5	981.9
White only, not Hispanic or Latino	237.6	248.0	247.1	247.8	254.1	255.8	261.7	256.4	253.5	256.5	251.8
Male	411.9	423.6	429.6	430.2	439.9	446.0	456.8	449.7	447.1	451.5	443.0
Female	289.0	294.8	292.2	294.5	290.1	291.3	295.7	289.4	284.5	285.5	277.5
<18	11.3	11.5	11.9	12.0	12.8	12.7	11.8	12.5	12.7	13.0	13.0
0-4	9.2	9.4	8.1	9.4	11.1	10.3	9.3	11.3	10.5	13.7	14.9
5-11	8.1	7.3	8.9	7.5	7.9	8.0	6.7	7.1	7.8	7.4	7.4
12-17	16.8	18.0	18.5	19.6	19.8	20.2	19.7	20.0	20.1	19.0	17.9
18-44	111.5	111.6	110.8	110.8	113.2	118.4	122.4	121.2	120.7	124.3	120.0
18-24	42.0	43.6	41.5	42.4	41.0	44.1	44.8	44.4	43.2	42.4	41.0
25-44	135.8	135.4	135.1	134.7	138.5	144.4	149.6	148.0	147.8	153.0	147.7
45-64	599.2	605.1	594.9	599.1	596.7	598.0	608.4	594.2	589.0	587.6	570.0
45-54	381.4	383.8	382.0	385.3	386.2	384.2	402.2	389.8	385.4	386.8	371.4
55-64	817.1	826.4	807.8	813.0	807.2	811.8	814.7	798.6	792.6	788.3	768.6
65+	1,544.6	1,561.0	1,603.8	1,598.2	1,602.7	1,622.1	1,643.1	1,610.5	1,586.0	1,593.9	1,578.9
65-74	1,381.4	1,417.7	1,404.3	1,390.4	1,390.9	1,377.8	1,405.0	1,371.3	1,340.9	1,345.0	1,332.6
75-84	1,743.2	1,735.2	1,830.1	1,825.8	1,832.5	1,882.0	1,898.0	1,860.5	1,837.9	1,847.7	1,835.4
85+	1,190.0	1,252.2	1,336.5	1,399.9	1,422.9	1,467.0	1,474.4	1,504.1	1,519.0	1,544.9	1,476.4

HP2020 CKD-9

Reduce kidney failure due to diabetes

The rate of kidney failure due to diabetes has varied little in the last decade, with a range of 151–160 cases per million population; the rate of 151 seen in 2010 was 1.6 percent lower than the rate in 2000. The HP2020 goal of 139.2 is met only by whites, by women, and by patients 44 and younger. The highest rate of diabetic ESRD occurs among Native Hawaiians/Pacific Islanders, at 1,525; the rate among blacks/African Americans reaches 427.

In 2010, the adjusted rate of kidney failure due to diabetes among diabetic patients was 2,364 per million population, 10.6 percent lower

than in 2007 and slightly below the HP2020 target of 2,374. In whites and black/African Americans, rates have fallen 11.1 and 11.6 percent, respectively, and 13.4 percent in those of Hispanic or Latino ethnicity. By gender rates fell 13.4 and 8.1 percent in males and females, at 2,557 and 2,162 per million. » [Tables HP2020 CKD-9](#); see page 429 for analytical methods. *Incident ESRD patients. Adj: age/gender/race; ref: 2005. NHIS 2006–2011 used to estimate diabetes prevalence; SUDAN used for national estimates (9.2). “.” Zero values in this cell. *Values for cells with ten or fewer patients are suppressed.*

HP2020 CKD-9.1 TARGET: 139.2 per million population

Reduce kidney failure due to diabetes

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
All	153.1	157.3	155.1	155.1	155.8	156.0	159.7	154.6	152.3	153.1	150.6
American Indian or Alaskan Native only	846.4	475.5	447.9	425.6	431.7	389.8	333.3	348.5	358.0	356.1	320.5
Asian only	150.1	137.3	129.2	126.2	118.5	146.2	162.7	158.5	164.6	163.9	158.9
Native Hawaiian or other Pacific Islander only	1,871.7	1,971.0	1,770.8	1,810.0	2,042.1	1,542.6	1,575.1	1,368.5	1,188.6	1,404.5	1,524.6
Black or African American only	449.8	473.0	469.4	462.3	450.0	452.4	457.5	437.3	432.8	430.9	417.2
White only	115.0	120.6	119.5	120.3	122.8	123.4	128.5	125.4	123.4	124.6	124.0
2 or more races	.	.	*	*	*	56.6	70.1	73.3	71.4	68.9	61.8
Hispanic or Latino	399.5	356.1	359.0	363.0	356.5	339.7	339.9	330.1	330.9	321.4	318.6
Not Hispanic or Latino	143.2	149.2	146.9	147.0	148.1	148.2	151.0	146.2	144.1	145.7	143.2
Black or Af Am only, not Hisp/Latino	456.1	481.3	477.1	470.2	457.3	460.6	465.6	446.7	442.4	441.0	427.2
White only, not Hispanic or Latino	100.6	104.5	102.6	102.5	104.9	104.8	107.4	104.0	100.8	102.1	100.7
Male	166.6	173.3	174.2	174.8	180.5	182.0	187.3	183.4	181.8	184.1	182.2
Female	142.1	144.0	139.6	139.1	135.8	134.9	137.2	131.4	128.4	128.0	124.8
<18	0.1	0.1	0.1	*	0.1	0.1	0.1	0.1	0.1	0.4	0.6
0-4	0.4	*	*	*	*	0.3	0.2	*	*	1.3	1.6
5-11	.	*	0.2	.	.	.	.	.	*	*	*
12-17	.	*	*	*	*	0.2	*	*	0.2	0.2	0.3
18-44	34.3	33.6	32.6	33.6	34.6	35.4	38.7	38.2	38.2	40.5	40.0
18-24	3.3	3.6	3.0	3.0	2.2	3.3	3.2	2.8	2.6	2.7	2.6
25-44	45.1	44.1	43.0	44.3	45.9	46.7	51.1	50.7	50.7	53.7	53.1
45-64	333.1	337.3	326.8	324.0	320.6	320.4	321.0	307.6	305.5	303.6	292.3
45-54	190.6	188.2	185.4	184.4	184.0	181.4	188.8	178.7	177.8	179.3	175.0
55-64	475.7	486.4	468.2	463.5	457.2	459.3	453.2	436.5	433.2	427.8	409.6
65+	648.0	665.0	675.2	671.7	681.5	685.4	698.5	683.0	664.7	664.4	666.8
65-74	714.7	734.7	720.0	716.5	713.8	704.8	718.0	691.7	669.8	666.2	656.4
75-84	620.8	634.6	668.4	662.7	683.5	702.0	713.2	706.3	688.5	690.4	705.7
85+	252.6	271.7	295.6	313.8	337.8	325.6	356.1	362.9	375.9	386.6	381.9

HP2020 CKD-9.2 TARGET: 2,374.1 per million population
 Reduce kidney failure due to diabetes among persons with diabetes

	2007	2008	2009	2010
All	2,643	2,512	2,425	2,364
American Indian or Alaskan Native only	2,582	2,951	2,949	2,610
Asian only	2,100	2,208	2,217	2,144
Native Hawaiian or other Pacific Islander only	.	.	.	.
Black or African American only	4,500	4,353	4,255	3,980
White only	2,305	2,167	2,075	2,049
2 or more races	621	559	518	487
Hispanic or Latino	3,340	3,190	2,950	2,894
Not Hispanic or Latino	2,543	2,416	2,346	2,282
Black or Af Am only, not Hisp/Latino	4,727	4,562	4,503	4,210
White only, not Hispanic or Latino	2,070	1,924	1,849	1,821
Male	2,954	2,767	2,643	2,557
Female	2,353	2,263	2,203	2,162
<18	29	73	189	247
0-4	.	.	.	.
5-11	*	.	.	.
12-17	16	57	45	94
18-44	1,643	1,572	1,539	1,489
18-24	351	294	304	309
25-44	1,781	1,721	1,676	1,608
45-64	2,405	2,280	2,216	2,158
45-54	2,037	1,872	1,880	1,893
55-64	2,669	2,592	2,453	2,328
65+	3,122	2,958	2,819	2,727
65-74	3,214	3,011	2,915	2,773
75-84	3,363	3,169	2,948	2,879
85+	1,964	2,102	2,001	2,114

HP2020 CKD-10

Increase the proportion of chronic kidney disease patients receiving care from a nephrologist at least 12 months before the start of renal replacement therapy

TARGET: 29.8%

In 2009, 29.4 percent of patients beginning ESRD therapy on hemodialysis had seen a nephrologist for at least 12 months prior to initiation, nearly reaching the 29.8 percent goal set by Healthy People 2020, and up from the level of 25.6 percent seen in 2005.

By race, rates of pre-ESRD nephrologist care range from 24.1 percent among American Indians/Alaskan Natives to 31 percent among whites;

rates by ethnicity are lowest among Hispanics/Latinos, at 22.9 percent. There is little difference in pre-ESRD care by gender; by age, however, rates range from 23.7 percent among those age 18–44 to 36.7 percent in the pediatric population. » [Table HP2020 CKD-10](#); see page 429 for analytical methods. *Incident hemodialysis patients with a valid Medical Evidence form; nephrologist care determined from Medical Evidence form.*

	2005	2006	2007	2008	2009	2010
All	25.6	26.3	27.1	28.4	28.4	29.4
American Indian or Alaskan Native only	25.1	27.2	25.8	27.8	26.9	24.1
Asian only	25.5	23.8	26.1	27.4	28.8	29.5
Native Hawaiian or other Pacific Islander only	23.0	24.8	23.6	22.1	23.5	24.8
Black or African American only	22.1	23.1	24.0	24.6	24.9	25.4
White only	27.1	27.8	28.6	30.1	29.9	31.1
2 or more races	23.3	22.3	24.3	29.0	27.8	31.4
Hispanic or Latino	19.2	20.6	20.5	21.5	21.7	22.9
Not Hispanic or Latino	26.5	27.2	28.2	29.5	29.4	30.4
Black or Af Am only, not Hisp/Latino	22.1	23.1	24.1	24.7	24.9	25.5
White only, not Hispanic or Latino	28.7	29.5	30.4	32.1	31.9	33.1
Male	26.0	26.4	27.2	28.2	28.1	29.4
Female	25.1	26.2	27.1	28.6	28.7	29.3
<18	39.4	34.3	33.5	37.8	37.5	36.7
0-4	26.6	17.3	25.1	25.5	24.6	24.7
5-11	48.7	47.0	39.1	49.5	46.2	48.9
12-17	41.9	36.1	35.2	38.3	40.2	37.1
18-44	23.0	22.6	23.1	23.9	23.4	23.7
18-24	23.4	22.6	23.1	23.1	22.9	24.2
25-44	22.9	22.6	23.1	24.0	23.4	23.7
45-64	25.5	26.0	26.5	27.1	27.2	27.7
45-54	24.1	24.9	25.4	25.2	25.5	26.0
55-64	26.6	26.8	27.3	28.5	28.3	28.8
65+	26.0	27.4	28.6	30.3	30.4	31.9
65-74	27.0	28.3	28.7	30.4	30.6	32.0
75-84	25.7	27.3	28.9	31.1	30.9	32.6
85+	22.8	24.1	26.8	27.4	28.3	29.5

HP2020 CKD-11

Improve vascular access
for hemodialysis patients

Identified through the ESRD CPM dataset, use of an arteriovenous (AV) fistula as the primary mode of vascular access in prevalent hemodialysis patients increased from 27 percent in 1998 to 50 percent in 2007 (the most recent year of available CPM data). By race, use is highest among Asian patients, at 57 percent, and lowest among African Americans, at 42. The most dramatic variations occur by gender, with fistula use at just 40 percent among women, compared to 57 percent among men. Patients age 65 and older have the lowest use by age of fistulas as their primary access, at 47 percent, compared to 55 percent among those age 18–44.

Among prevalent hemodialysis patients, use of a catheter as the only mode of vascular access has remained relatively stable since the late 1990s. At 28 percent overall in 2007, use ranges by race from 19 percent among Asian patients to 29 percent among whites. Use remains highest among women, at

32 percent compared to 24 percent for men, and is similar among age groups, at 27–29 percent for most ages.

Overall, just 34 percent of patients starting hemodialysis therapy in 2010 — 30 percent of women, and 36 percent of men — had a maturing AV fistula or were using one as their primary vascular access. This varies by race from 32 percent among blacks/African Americans to 41 percent among American Indians/Alaskan Natives.

Programs such as HP2020 and the Fistula First Initiative continue to work to increase the use of fistulas and promote early placement prior to initiation of ESRD therapy. » [Tables HP2020 CKD-11; see page 429 for analytical methods.](#) *Prevalent hemodialysis patients; ESRD CPM data. Vascular access determined from “current access” within CPM data. Prevalent year represents year of data collection. DNC: data not collected (11.1–2). Incident hemodialysis patients age 18 & older (11.3).*

HP2020 CKD-11.1 TARGET: 50.6%

Increase the proportion of adult hemodialysis patients who use an arteriovenous fistula as the primary mode of vascular access

	Prevalent year									
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
All	27.1	27.9	29.9	31.6	33.1	36.6	39.4	44.2	46.0	49.6
American Indian or Alaskan Native only	39.0	37.7	38.2	45.3	41.0	54.3	44.3	55.3	57.7	56.6
Asian only	32.8	30.6	33.3	35.3	35.6	48.9	44.4	47.9	55.9	57.4
Native Hawaiian or other Pacific Islander only	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Black or African American only	22.4	22.9	25.9	26.7	28.4	29.6	35.2	38.0	40.0	42.4
White only	29.5	30.0	32.0	34.1	35.6	39.4	41.6	47.5	48.6	53.2
2 or more races	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Hispanic or Latino	28.5	30.4	32.1	33.5	38.8	39.5	42.6	51.6	51.9	53.0
Not Hispanic or Latino	26.9	27.7	29.8	31.4	32.2	36.2	39.1	43.0	45.0	49.0
Black or Af Am only, not Hisp/Latino	22.3	23.2	25.8	26.8	28.3	29.6	35.2	37.8	39.7	42.3
White only, not Hispanic or Latino	30.0	30.5	32.5	34.2	34.7	39.3	41.2	46.2	47.6	53.1
Male	36.0	36.4	39.6	41.7	42.6	45.6	49.1	52.9	54.1	57.4
Female	17.0	18.2	19.4	20.4	21.9	26.4	29.4	33.8	35.5	39.9
18-44	35.6	36.1	40.8	41.0	41.7	46.8	49.8	52.2	53.2	54.8
18-24	41.2	47.5	48.6	39.6	42.7	51.9	39.0	52.7	54.7	52.2
25-44	35.1	35.1	40.1	41.1	41.6	46.4	50.5	52.2	53.1	55.0
45-64	29.2	29.1	31.2	33.8	35.5	37.2	39.6	45.1	46.9	50.7
45-54	31.0	31.5	34.5	36.4	38.3	39.4	40.8	46.0	49.1	52.7
55-64	27.7	27.0	28.6	31.8	33.1	35.4	38.6	44.4	45.3	49.3
65+	22.1	23.7	25.0	26.4	28.0	32.6	36.0	41.0	42.9	46.9
65-74	23.0	23.5	25.9	27.3	28.3	33.8	36.3	42.2	43.6	46.6
75-84	22.3	24.4	24.9	25.6	28.3	32.6	36.7	41.6	43.2	48.2
85+	12.7	20.8	19.2	23.7	24.6	25.3	31.1	32.2	38.0	43.7

HP2020 CKD-11.2 TARGET: 26.1%
 Decrease the proportion of adult hemodialysis patients
 who use catheters as the only mode of vascular access

	Prevalent year									
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
All	19.5	23.3	24.5	25.3	26.8	26.8	27.5	27.8	29.0	27.7
American Indian or Alaskan Native only	15.9	15.6	20.1	21.7	17.4	17.1	22.8	22.4	18.8	23.7
Asian only	12.5	15.0	16.8	17.8	21.6	15.8	19.9	23.2	20.1	19.0
Native Hawaiian or other Pacific Islander only	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Black or African American only	17.5	22.1	21.8	23.3	25.3	26.5	26.0	25.9	28.5	27.3
White only	21.4	24.7	26.9	27.4	28.3	28.1	29.2	29.5	30.3	28.7
2 or more races	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC	DNC
Hispanic or Latino	16.7	20.7	22.1	21.3	22.6	23.6	23.7	23.7	23.4	24.7
Not Hispanic or Latino	19.9	23.4	24.6	25.8	27.4	27.2	28.0	28.5	29.9	28.2
Black or Af Am only, not Hisp/Latino	17.5	21.5	21.8	23.4	25.4	26.2	25.9	25.6	28.8	27.3
White only, not Hispanic or Latino	22.6	25.7	27.7	28.8	29.6	29.6	30.5	31.3	32.3	30.0
Male	17.5	20.7	20.5	21.6	23.7	23.8	23.8	24.2	25.3	24.4
Female	21.7	26.1	28.8	29.5	30.5	30.3	31.7	32.0	33.7	31.7
18-44	18.7	24.2	24.3	24.1	26.4	24.0	26.1	26.0	27.6	27.0
18-24	17.5	24.6	21.9	33.3	32.0	29.6	40.3	33.3	29.1	37.0
25-44	18.8	24.2	24.5	23.5	25.9	23.4	25.2	25.4	27.5	26.2
45-64	17.5	21.6	21.9	23.6	24.4	25.6	26.1	26.7	27.2	26.9
45-54	18.6	21.5	21.0	23.3	24.9	24.5	25.4	26.6	25.6	26.6
55-64	16.6	21.7	22.6	23.8	23.9	26.6	26.6	26.7	28.3	27.1
65+	21.4	24.3	26.7	27.2	29.0	28.9	29.1	29.3	31.1	28.6
65-74	18.1	22.1	25.5	24.9	27.4	25.9	27.4	26.9	29.0	27.1
75-84	24.1	26.0	26.1	28.5	30.1	30.3	28.9	30.5	32.0	28.3
85+	38.0	33.2	39.5	38.7	33.6	41.0	40.3	36.8	37.4	37.1

HP2020 CKD-11.3 TARGET: 34.5%

Increase the proportion of adult hemodialysis patients who use arteriovenous fistulas or have a maturing fistula as the primary mode of vascular access at the start of renal replacement therapy

	Incident year					
	2005	2006	2007	2008	2009	2010
All	30.9	31.7	31.4	31.0	32.1	33.6
American Indian or Alaskan Native only	36.1	39.0	37.5	41.2	40.9	40.8
Asian only	35.8	37.3	34.7	35.5	35.2	36.9
Native Hawaiian or other Pacific Islander only	40.1	34.9	35.3	32.6	32.1	32.5
Black or African American only	28.3	29.2	29.6	29.0	30.5	31.9
White only	31.7	32.4	31.9	31.4	32.4	34.1
2 or more races	25.4	36.6	32.8	29.7	37.2	38.1
Hispanic or Latino	30.6	31.3	29.3	29.1	30.5	32.1
Not Hispanic or Latino	30.9	31.8	31.7	31.3	32.3	33.9
Black or Af Am only, not Hisp/Latino	28.2	29.1	29.6	29.0	30.4	31.8
White only, not Hispanic or Latino	31.9	32.8	32.6	32.1	33.0	34.7
Male	34.8	34.9	34.6	33.7	34.7	36.1
Female	26.1	27.7	27.3	27.4	28.7	30.3
18-44	29.0	29.0	27.7	27.3	28.8	30.6
18-24	25.0	23.0	20.8	21.6	22.8	23.3
25-44	29.4	29.6	28.5	27.9	29.4	31.4
45-64	32.9	33.0	32.4	32.2	33.0	34.1
45-54	32.0	32.7	32.1	31.8	32.5	33.9
55-64	33.5	33.3	32.6	32.5	33.3	34.3
65+	29.9	31.4	31.5	30.9	32.1	33.9
65-74	31.6	33.4	33.9	32.8	34.2	35.8
75-84	29.4	30.7	30.6	30.7	31.7	33.8
85+	23.6	25.0	25.2	23.9	25.3	26.6

HP2020 CKD-12

Increase the proportion of dialysis patients wait-listed and/or receiving a deceased donor kidney transplant within one year of end-stage renal disease start (among patients under 70 years of age)

Among 2009 ESRD patients younger than 70, 17.3 percent were wait-listed or received a deceased donor kidney transplant within one year of initiation — slightly below the HP2020 target of 18.8 percent.

The target is currently met only among Asians, individuals of two or more races, those younger than 18,

and those age 18–44. Groups furthest from the target include American Indians/Alaskan Natives and those older than 65. » **Table HP2020 CKD-12;** see page 429 for analytical methods. *Incident ESRD patients younger than 70. *Values for cells with ten or fewer patients are suppressed.*

TARGET: 18.8%
of dialysis patients

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
All	15.0	14.5	14.1	14.4	14.5	15.2	15.7	16.7	16.8	16.7	17.3
American Indian or Alaskan Native only	9.0	12.4	9.1	10.1	9.5	10.2	10.9	10.2	11.1	10.7	11.1
Asian only	26.9	26.9	29.6	28.8	28.6	32.1	28.0	30.9	30.5	31.3	32.1
Native Hawaiian or other Pacific Islander only	18.4	18.7	19.5	22.1	22.2	20.1	18.0	17.6	17.3	16.8	18.0
Black or African American only	10.7	10.8	10.2	10.7	10.5	11.6	12.1	13.1	13.3	13.2	14.0
White only	17.5	16.4	15.9	16.2	16.5	16.7	17.5	18.3	18.2	18.0	18.4
2 or more races	*	*	*	*	*	*	16.5	18.2	13.8	23.4	23.3
Hispanic or Latino	12.5	12.2	12.8	13.5	13.9	13.8	15.0	16.6	16.5	16.7	17.3
Not Hispanic or Latino	15.5	14.9	14.4	14.6	14.6	15.4	15.8	16.7	16.8	16.6	17.1
Black or Af Am only, not Hisp/Latino	10.7	10.9	10.2	10.7	10.5	11.6	12.0	13.0	13.2	13.2	13.9
White only, not Hispanic or Latino	18.6	17.3	16.6	16.8	16.9	17.2	18.1	18.8	18.7	18.3	18.6
Male	16.6	15.8	15.0	15.7	15.7	16.4	16.8	17.9	17.7	17.5	18.2
Female	13.2	12.9	13.1	12.8	13.0	13.6	14.3	15.3	15.5	15.6	15.9
<18	51.2	42.5	44.9	44.6	50.7	45.2	51.7	56.6	54.2	55.4	49.5
0-4	30.0	23.4	28.4	31.6	42.2	33.5	33.7	40.1	34.0	37.8	30.8
5-11	59.5	45.7	56.3	47.0	51.3	49.7	59.2	60.0	64.4	66.9	58.2
12-17	52.5	47.0	44.3	46.9	52.8	47.1	53.9	60.7	57.6	57.4	55.7
18-44	26.8	25.5	24.6	24.4	23.6	24.9	24.5	25.7	25.0	25.0	25.6
18-24	33.1	31.2	28.8	30.9	29.3	32.2	26.4	30.4	29.9	28.7	30.7
25-44	26.3	25.0	24.3	23.8	23.1	24.2	24.3	25.2	24.5	24.6	25.1
45-64	13.5	13.4	13.0	13.2	13.5	14.0	14.5	15.5	15.7	15.4	16.0
45-54	18.1	17.3	16.9	16.9	16.6	16.7	16.8	18.1	18.3	17.2	18.5
55-64	10.1	10.5	10.1	10.5	11.4	12.0	13.0	13.7	13.9	14.2	14.3
65+	4.6	4.7	5.1	5.9	6.2	7.4	8.0	9.0	9.2	9.9	10.9
65-69	4.6	4.7	5.1	5.9	6.2	7.4	8.0	9.0	9.2	9.9	10.9

HP2020 CKD-13

Increase the proportion of patients with treated chronic kidney failure who receive a transplant (among patients under 70 years of age)

The goal of Objective 13.1 is to have 19.7 percent of incident ESRD patients younger than 70 transplanted within three years of initiation; as of 2007, the rate was 16.2 percent. Rates are lowest among blacks/African Americans and American Indians/Alaskan Natives, at 9–10 percent.

The percentage transplanted falls with age, from 75.4 among pediatric patients to 8.1 among those age 65 and older.

The percentage of patients who receive a preemptive transplant at the start of ESRD has risen only slightly over the past decade, from 2.8 in 2000 to 3.3 in 2010. Preemptive transplants are most common in the pediatric population, reaching 26 percent among those age 5–11. » **Tables HP2020 CKD-13;** see page 429 for analytical methods. *Incident ESRD patients younger than 70. *Values for cells with ten or fewer patients are suppressed.*

HP2020 CKD-13.1 TARGET: 19.7%

Increase the proportion of patients receiving a kidney transplant within three years of end-stage renal disease

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
All	20.2	20.0	19.4	19.1	18.4	18.4	17.8	17.9	17.3	16.7	16.2
American Indian or Alaskan Native only	10.6	11.6	9.9	15.8	8.6	11.6	8.8	9.3	8.8	10.1	9.9
Asian only	21.7	19.6	18.8	19.7	19.6	21.7	22.4	20.6	18.3	18.7	17.3
Native Hawaiian or other Pacific Islander only	14.6	13.8	15.6	9.0	14.7	14.4	13.6	13.7	10.3	10.9	12.1
Black or African American only	9.8	9.9	9.7	9.9	8.9	9.7	9.3	10.1	9.6	9.1	9.0
White only	27.4	27.0	26.2	25.2	24.4	23.8	23.2	22.7	22.1	21.3	20.4
2 or more races	*	*	*	*	*	*	*	*	17.2	16.1	14.2
Hispanic or Latino	17.0	17.0	15.1	15.3	14.9	14.6	14.6	13.9	13.9	13.7	12.9
Not Hispanic or Latino	20.7	20.5	20.2	19.9	19.0	19.1	18.4	18.5	17.7	17.2	16.8
Black or Af Am only, not Hisp/Latino	9.8	9.9	9.7	10.0	8.9	9.7	9.3	10.0	9.5	8.9	8.9
White only, not Hispanic or Latino	29.4	29.0	28.8	27.7	26.9	26.5	25.6	25.1	24.3	23.7	23.0
Male	22.1	22.0	21.1	20.6	19.8	20.0	19.4	19.3	18.7	18.1	17.0
Female	17.8	17.6	17.4	17.3	16.6	16.3	15.8	16.1	15.5	14.9	15.0
<18	74.7	75.1	76.0	73.4	73.0	74.5	76.1	74.3	74.3	75.0	75.4
0-4	73.8	76.3	80.9	76.8	75.8	79.7	78.1	78.2	73.3	75.3	73.3
5-11	84.2	82.0	79.0	76.5	81.8	79.2	82.0	82.6	79.5	79.4	85.0
12-17	70.7	71.3	73.3	70.8	67.9	70.8	73.0	69.7	72.6	73.6	72.8
18-44	34.8	33.8	32.6	31.5	30.2	29.8	28.4	28.5	26.7	25.7	24.4
18-24	45.8	44.5	42.8	44.3	42.6	39.5	41.4	39.9	36.8	35.1	33.0
25-44	33.6	32.6	31.5	30.1	28.8	28.7	26.9	27.2	25.5	24.6	23.4
45-64	16.0	16.2	15.7	15.9	15.3	15.1	14.9	14.9	14.7	14.2	13.8
45-54	21.0	20.9	20.1	20.2	19.5	18.5	18.2	18.2	17.2	16.7	16.6
55-64	12.1	12.4	12.0	12.4	11.9	12.5	12.3	12.4	13.0	12.4	11.9
65+	4.9	5.3	6.0	6.2	6.4	7.4	7.7	8.0	7.7	8.3	8.1
65-69	4.9	5.3	6.0	6.2	6.4	7.4	7.7	8.0	7.7	8.3	8.1

HP2020 CKD-13.2

Increase the proportion of patients who receive a preemptive transplant at the start of ESRD

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
All	2.8	2.9	3.0	2.8	3.1	3.2	3.4	3.4	3.3	3.2	3.3
American Indian or Alaskan Native only	0.8	0.9	0.9	1.5	0.7	0.8	1.4	1.1	1.1	1.6	0.8
Asian only	2.9	2.4	3.0	2.8	2.6	2.7	2.7	2.9	3.1	2.8	3.4
Native Hawaiian or other Pacific Islander only	0.8	1.1	1.6	0.8	0.9	0.9	1.5	2.1	3.0	2.3	1.3
Black or African American only	0.7	0.7	0.8	0.8	0.8	0.9	0.9	1.0	1.0	1.0	1.1
White only	4.3	4.4	4.5	4.2	4.6	4.7	4.8	4.9	4.7	4.4	4.5
2 or more races						1.6	2.6	1.3	2.3	3.0	3.3
Hispanic or Latino	1.2	1.3	1.4	1.3	1.4	1.3	1.8	1.7	1.8	1.8	1.8
Not Hispanic or Latino	3.1	3.2	3.3	3.1	3.2	3.4	3.5	3.7	3.6	3.3	3.4
Black or Af Am only, not Hisp/Latino	0.7	0.7	0.8	0.8	0.7	0.8	0.9	1.0	1.0	1.0	1.1
White only, not Hispanic or Latino	4.9	5.1	5.3	4.9	5.1	5.4	5.6	5.8	5.6	5.1	5.2
Male	2.9	3.0	3.1	2.9	3.1	3.2	3.5	3.5	3.3	3.2	3.2
Female	2.7	2.8	3.0	2.8	3.1	3.2	3.2	3.3	3.5	3.2	3.3
<18	17.6	18.2	17.0	15.2	14.9	17.8	17.4	16.9	16.0	18.7	16.5
0-4	14.0	16.3	10.7	14.1	15.0	14.4	11.8	15.5	8.5	10.4	10.3
5-11	21.5	19.0	24.7	22.3	17.2	22.2	24.0	25.1	26.0	26.7	26.4
12-17	16.8	18.5	15.0	12.5	14.0	17.1	17.1	14.3	15.0	19.5	15.7
18-44	5.3	5.2	5.3	4.6	5.1	4.7	5.2	5.0	4.9	4.7	4.6
18-24	7.3	7.3	6.9	7.4	7.4	6.4	8.1	6.8	6.3	6.6	7.1
25-44	5.1	5.0	5.1	4.3	4.8	4.5	4.9	4.8	4.7	4.5	4.4
45-64	2.2	2.4	2.5	2.5	2.7	2.9	3.0	3.2	3.1	2.8	3.0
45-54	3.1	3.3	3.5	3.2	3.4	3.7	3.7	4.0	3.8	3.5	3.7
55-64	1.5	1.7	1.8	1.9	2.2	2.3	2.4	2.7	2.6	2.4	2.5
65+	0.6	0.7	0.8	1.0	1.1	1.4	1.6	1.5	1.7	1.6	1.9
65-69	0.6	0.7	0.8	1.0	1.1	1.4	1.6	1.5	1.7	1.6	1.9

HP2020 CKD-14

Reduce deaths in persons with end-stage renal disease

Since 2000, the overall death rate among prevalent patients on dialysis has fallen 17 percent, from 233 deaths per 1,000 patient years to 193 in 2010 — approaching the HP2020 target of 190.8. By race, the rate ranges from 137 among Asians to 228 among whites; by ethnicity, it is 142 among Hispanics and Latinos and 203 among those not in either group.

The rate of mortality in the first three months of ESRD has fallen from its peak of 388 in 2003, but, at 354 in 2010, remains a distance from the HP2020 target of 319.9 deaths per 1,000 patient years at risk. The highest rate by race occurs among whites, at 414 compared to 147 among American Indians/Alaskan Natives, 212 among Asians, and 243 among blacks/African Americans.

The HP2020 goal of 81.3 cardiovascular deaths per 1,000 patient years was met in 2010, with a rate of 79.9. The rate has fallen 31 percent overall since 2000, and 35–41 percent for Asians and

American Indians/Alaskan Natives. By race, the rate is highest among whites, at 93 compared to 62–64 among blacks/African Americans, American Indians/Alaskan Natives, and Asians.

For patients with a functioning transplant, the overall rate of mortality remained stable in 2010, at 32.3 deaths per 1,000 patient years — slightly above the HP2020 goal of 29.4. By race, mortality ranges from 17.4 among Asians to 48.7 among American Indians/Alaskan Natives.

The rate of cardiovascular mortality among transplant patients has fallen 29 percent since 2010, but, at 5.6 deaths per 1,000 patient years, still remains above the HP2020 target of 4.5. » **Tables HP2020 CKD-14;** see page 429 for analytical methods. *Period prevalent dialysis patients; unadjusted (14.1, 14.3). Incident dialysis patients; unadjusted (14.2). Period prevalent transplant patients; unadjusted (14.4–5). *Values for cells with ten or fewer patients are suppressed.*

HP2020 CKD-14.1 TARGET: 190.8 deaths per 1,000 patient years

Reduce the total death rate for persons on dialysis

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
All	232.6	234.4	232.5	231.4	227.2	223.4	219.4	211.2	204.2	199.1	192.5
American Indian or Alaskan Native only	206.0	206.4	195.6	190.5	182.9	181.3	172.4	165.2	169.3	172.4	150.7
Asian only	171.0	173.1	162.5	175.1	166.7	170.4	160.4	156.0	144.1	145.4	137.0
Native Hawaiian or other Pacific Islander only	169.1	162.2	177.6	169.5	166.5	154.7	164.8	162.6	148.8	155.8	153.8
Black or African American only	181.0	186.5	182.6	182.7	182.1	178.7	173.4	166.8	160.6	156.3	149.0
White only	279.3	279.4	278.8	275.4	268.4	264.5	260.2	249.6	241.0	234.1	228.3
2 or more races						354.2	253.6	190.9	191.7	183.4	176.1
Hispanic or Latino	185.5	186.5	185.0	184.4	178.0	173.8	165.8	155.7	150.4	149.0	141.5
Not Hispanic or Latino	239.4	241.8	240.0	239.0	235.4	232.0	228.9	221.3	214.3	208.8	202.7
Black or Af Am only, not Hisp/Latino	181.2	186.7	182.6	182.8	181.9	178.7	173.3	167.1	160.6	156.5	148.8
White only, not Hispanic or Latino	300.4	301.5	301.7	299.6	293.4	290.5	288.6	279.4	272.4	265.1	261.0
Male	226.6	228.1	225.7	226.4	223.3	219.4	215.5	208.2	202.0	198.6	191.2
Female	239.2	241.6	240.3	237.0	231.7	228.1	224.0	214.7	206.8	199.7	194.0
<18	42.3	46.7	40.1	52.3	41.8	37.0	40.8	41.6	33.5	33.0	47.6
0-4	141.2	151.5	112.9	113.4	93.7	83.7	80.4	94.7	91.5	79.8	100.2
5-11	*	48.1	*	74.7	51.3	35.9	39.2	37.2	36.9	40.5	51.3
12-17	24.4	20.8	31.1	30.7	26.9	26.5	31.4	29.3	15.9	15.3	24.8
18-44	89.1	89.8	92.1	89.5	86.2	84.0	81.6	77.5	73.2	71.5	65.1
18-24	41.6	49.5	46.6	51.8	53.2	49.3	48.5	46.4	41.5	38.8	36.1
25-44	93.1	93.2	95.9	92.7	88.9	86.9	84.3	80.1	75.9	74.3	67.5
45-64	174.6	177.0	172.7	174.1	170.4	163.6	162.8	154.7	148.4	145.0	139.3
45-54	141.0	147.4	141.8	141.1	139.1	135.5	134.2	128.4	120.0	117.2	110.5
55-64	202.6	201.9	198.4	201.0	195.4	185.3	184.4	174.4	169.2	165.1	159.5
65+	350.4	350.3	347.1	342.1	337.0	335.3	327.3	317.5	309.0	300.3	292.2
65-74	293.0	289.8	285.6	281.1	275.0	270.9	260.1	249.5	244.5	239.8	231.0
75-84	401.7	404.4	396.8	388.5	383.8	381.5	374.9	363.4	351.9	338.4	330.5
85+	575.1	560.8	566.4	549.6	532.2	535.6	523.2	519.0	497.9	480.8	471.6

HP2020 CKD-14.2 TARGET: 319.9 deaths per 1,000 patient years at risk

Reduce the death rate in dialysis patients within the first three months of initiation of renal replacement therapy

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
All	377.2	382.5	382.5	388.3	383.8	378.7	372.3	365.2	361.3	353.6	353.5
American Indian or Alaskan Native only	299.9	185.0	145.9	203.4	212.0	205.5	158.4	171.8	233.1	157.9	146.5
Asian only	194.3	233.8	229.0	230.1	226.5	256.4	216.6	237.9	198.0	211.3	211.8
Native Hawaiian or other Pacific Islander only	173.2	204.9	180.7	185.1	185.4	172.1	219.9	184.1	161.6	206.2	157.2
Black or African American only	272.6	273.1	265.0	278.4	273.9	272.2	264.4	253.4	250.8	246.8	242.8
White only	442.6	445.6	450.6	453.9	445.7	434.7	429.4	424.4	420.4	411.5	414.4
2 or more races						419.6	303.6	289.3	328.2	177.5	263.2
Hispanic or Latino	273.4	277.6	250.2	269.2	255.3	259.4	231.9	237.6	225.1	215.3	221.5
Not Hispanic or Latino	393.7	397.4	402.3	406.8	403.9	397.4	395.0	386.3	384.5	377.2	376.9
Black or Af Am only, not Hisp/Latino	271.5	273.4	264.6	278.3	274.3	271.2	264.4	253.9	250.0	246.0	242.0
White only, not Hispanic or Latino	475.4	479.2	491.8	493.5	488.0	476.7	479.7	473.2	475.0	466.3	470.7
Male	372.0	382.5	376.3	387.0	383.8	375.0	367.9	366.1	362.1	357.7	350.1
Female	383.2	382.6	389.9	389.9	383.9	383.4	378.0	364.0	360.3	348.3	358.0
<18	67.9	*	*	56.7	83.0	78.3	78.5	*	61.0	62.8	64.3
0-4	*	*	*	*	*	275.4	*	*	*	*	174.3
5-11	*	*	*	*	*	*	*	*	*	*	*
12-17	*	*	*	*	*	*	*	*	*	*	*
18-44	103.0	102.5	104.8	105.1	105.6	104.8	99.4	94.9	99.5	103.3	93.7
18-24	61.1	69.9	59.6	69.2	79.9	55.8	83.0	62.3	57.1	53.4	61.8
25-44	107.2	105.9	109.6	108.9	108.3	110.2	101.1	98.5	104.1	108.5	97.0
45-64	212.6	219.3	211.3	219.5	213.6	216.8	208.4	200.5	207.3	207.1	204.5
45-54	161.6	163.8	169.6	169.1	169.7	178.6	156.9	158.3	170.9	162.9	155.6
55-64	250.1	260.6	241.9	255.5	244.7	243.1	244.3	228.9	231.3	235.9	234.9
65+	579.6	581.8	583.3	592.5	589.5	579.3	576.4	570.7	556.1	539.9	541.5
65-74	434.7	432.7	428.5	423.5	424.2	417.8	408.0	407.7	405.9	391.3	392.7
75-84	679.7	676.2	678.3	682.6	680.8	659.8	663.2	651.9	618.6	613.2	614.4
85+	1,012.9	1,038.9	994.3	1,067.2	1,019.4	998.6	997.9	971.7	959.3	900.9	914.2

HP2020 CKD-14.3 TARGET: 81.3 deaths per 1,000 patient years at risk
 Reduce the cardiovascular death rate for persons on dialysis

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
All	116.2	117.9	114.6	112.3	107.4	100.7	95.2	89.9	85.2	82.6	79.9
American Indian or Alaskan Native only	104.7	103.8	91.5	88.7	83.3	77.6	72.6	69.1	60.5	68.1	61.9
Asian only	96.3	97.2	88.3	96.4	85.6	88.2	72.4	70.9	68.0	69.6	62.8
Native Hawaiian or other Pacific Islander only	107.1	100.0	108.4	102.4	90.5	76.9	90.7	82.2	73.6	83.9	82.4
Black or African American only	87.6	90.4	88.7	86.7	85.1	81.0	77.5	72.4	69.6	67.1	63.5
White only	140.9	142.2	138.3	134.8	127.5	118.7	111.1	105.0	98.4	95.0	93.0
2 or more races						*	88.5	83.9	81.7	73.6	74.2
Hispanic or Latino	94.5	97.3	93.1	90.0	85.7	81.5	75.3	70.0	67.0	67.4	64.4
Not Hispanic or Latino	119.3	121.0	118.0	116.0	111.1	104.1	98.7	93.6	88.7	85.6	83.0
Black or Af Am only, not Hisp/Latino	87.7	90.4	88.6	86.8	84.9	80.9	77.4	72.4	69.5	67.1	63.5
White only, not Hispanic or Latino	150.9	152.9	149.1	146.4	138.8	129.1	121.7	116.2	109.3	105.0	103.8
Male	114.7	117.0	113.9	112.4	108.1	101.3	96.1	90.8	87.0	84.9	81.7
Female	117.9	118.8	115.5	112.2	106.6	100.1	94.0	88.8	83.1	79.8	77.7
<18	10.0	17.5	12.4	11.0	13.1	14.9	15.5	10.2	9.1	14.1	11.6
0-4	*	60.6	*	*	*	*	*	*	*	*	*
5-11	*	*	*	*	*	*	*	*	*	*	*
12-17	*	*	*	*	*	14.3	14.6	*	*	*	*
18-44	39.2	40.3	41.3	39.6	38.6	37.3	35.5	32.7	31.1	30.9	29.1
18-24	15.2	20.6	19.1	23.5	24.6	23.2	19.1	18.1	15.1	17.1	18.3
25-44	41.2	41.9	43.2	40.9	39.7	38.5	36.8	34.0	32.4	32.1	30.0
45-64	88.5	89.3	86.3	84.6	81.2	75.5	73.4	68.5	65.3	63.8	61.1
45-54	70.4	72.6	69.1	66.9	64.0	61.0	59.9	57.0	53.1	52.1	47.7
55-64	103.5	103.3	100.6	99.0	94.9	86.8	83.5	77.1	74.3	72.2	70.6
65+	176.3	177.9	171.7	167.7	159.6	149.8	139.3	132.8	125.5	120.5	117.3
65-74	148.7	149.7	142.9	139.1	133.0	123.4	114.7	108.0	104.3	101.1	96.9
75-84	201.9	203.6	195.0	189.9	179.7	169.9	156.3	150.6	138.9	131.6	130.6
85+	278.7	273.7	274.8	262.7	243.2	226.0	213.5	201.6	189.8	182.6	175.2

HP2020 CKD-14.4 TARGET: 29.4 deaths per 1,000 patient years at risk
 Reduce the total death rate for persons with a functioning kidney transplant

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
All	34.5	35.6	33.9	34.5	33.0	33.7	33.1	32.5	31.4	32.6	32.3
American Indian or Alaskan Native only	39.0	42.8	38.3	39.0	35.0	40.9	44.9	36.7	38.7	59.4	48.7
Asian only	19.6	20.3	23.8	19.8	21.5	22.6	20.6	25.4	20.9	17.9	17.4
Native Hawaiian or other Pacific Islander only	32.1	30.8	33.8	30.5	33.0	33.5	21.1	13.9	20.2	27.2	21.2
Black or African American only	38.1	39.1	37.5	38.4	35.5	36.4	35.7	32.5	31.7	32.0	32.4
White only	34.4	35.2	33.8	34.1	33.0	33.5	33.3	33.4	31.6	33.4	33.2
2 or more races						*	*	*	*	*	*
Hispanic or Latino	28.0	28.4	24.5	23.5	23.9	25.5	27.9	24.0	24.8	24.6	24.3
Not Hispanic or Latino	35.2	36.4	35.0	35.9	34.2	34.8	33.9	33.7	32.3	33.8	33.6
Black or Af Am only, not Hisp/Latino	38.2	39.4	37.9	38.2	35.7	36.5	36.0	32.4	31.9	31.9	32.7
White only, not Hispanic or Latino	34.9	35.9	34.7	35.6	34.2	34.6	33.9	34.9	32.7	35.1	34.8
Male	35.9	37.6	35.5	35.9	35.0	36.1	35.1	34.6	32.9	34.1	34.3
Female	32.5	32.5	31.4	32.5	30.2	30.2	30.4	29.6	29.2	30.4	29.3
<18	5.3	5.6	9.2	7.2	4.3	8.2	3.8	*	3.2	4.3	6.1
0-4	*	*	*	*	*	*	*	*	*	*	*
5-11	*	*	*	*	*	*	*	*	*	*	*
12-17	5.5	5.8	8.1	6.9	*	10.0	*	*	*	*	6.1
18-44	15.3	16.9	15.3	13.6	13.2	13.1	12.5	12.1	10.9	10.9	9.9
18-24	7.9	9.6	6.0	6.8	7.8	9.2	9.5	8.7	8.6	8.7	6.9
25-44	16.1	17.6	16.2	14.3	13.8	13.5	12.8	12.4	11.1	11.1	10.3
45-64	41.3	41.0	37.7	38.1	34.9	35.1	34.1	31.6	30.4	30.1	29.0
45-54	32.4	32.2	30.2	28.9	25.9	26.9	26.5	23.6	23.4	23.5	19.9
55-64	54.0	53.6	48.0	50.0	45.9	44.6	42.5	40.0	37.4	36.5	37.5
65+	97.3	93.9	89.6	91.6	87.8	85.5	81.4	81.5	74.7	77.7	76.3
65-74	91.5	87.7	83.8	83.1	79.8	78.0	72.2	72.2	64.5	67.6	66.7
75-84	146.0	142.0	131.4	150.9	135.7	126.2	130.9	125.3	121.4	122.5	114.8
85+	*	*	*	*	240.3	237.5	139.2	237.3	164.8	136.3	175.0

HP2020 CKD-14.5 TARGET: 4.5 deaths per 1,000 patient years at risk
 Reduce the cardiovascular death rate in persons with a functioning transplant

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
All	7.9	8.1	7.3	7.5	7.4	6.9	6.6	6.5	5.4	5.6	5.6
American Indian or Alaskan Native only	12.7	*	*	*	*	8.8	10.5	8.0	*	10.0	*
Asian only	*	5.1	7.4	4.0	3.4	3.5	4.8	5.2	3.5	*	2.7
Native Hawaiian or other Pacific Islander only	*	*	*	*	*	*	*	*	*	*	*
Black or African American only	9.5	10.2	9.0	9.6	9.2	8.5	8.0	7.3	5.9	6.8	6.5
White only	8.0	8.3	7.5	7.7	7.5	6.9	6.6	6.7	5.5	5.7	5.7
2 or more races						*	*	*	*	*	*
Hispanic or Latino	7.2	7.2	7.0	6.0	6.3	5.8	6.4	4.9	4.8	4.4	4.1
Not Hispanic or Latino	8.0	8.2	7.4	7.7	7.6	7.1	6.7	6.8	5.5	5.7	5.8
Black or Af Am only, not Hisp/Latino	9.5	10.3	9.1	9.6	9.1	8.7	8.1	7.2	6.0	6.7	6.5
White only, not Hispanic or Latino	8.0	8.4	7.4	7.9	7.7	7.0	6.5	7.0	5.6	5.9	6.1
Male	8.5	9.0	7.8	7.9	8.2	7.5	7.1	7.3	5.9	5.7	6.0
Female	7.1	6.9	6.6	7.0	6.3	6.0	5.9	5.4	4.6	5.4	4.9
<18	*	*	*	*	*	*	*	*	*	*	*
0-4	*	*	*	*	*	*	*	*	*	*	*
5-11	*	*	*	*	*	*	*	*	*	*	*
12-17	*	*	*	*	*	*	*	*	*	*	*
18-44	3.8	3.9	3.5	3.2	3.2	3.0	2.7	2.8	2.3	2.0	1.8
18-24	*	*	*	*	*	*	*	2.6	*	*	*
25-44	3.9	4.1	3.7	3.3	3.5	3.1	2.8	2.8	2.4	2.1	1.9
45-64	10.0	9.7	8.4	8.8	8.3	7.2	7.3	6.8	5.6	5.3	5.4
45-54	8.2	8.8	6.4	6.9	7.1	5.5	5.7	5.7	4.4	4.4	3.6
55-64	12.6	11.1	11.3	11.1	9.8	9.2	9.2	7.9	6.9	6.1	7.2
65+	18.6	19.6	17.6	17.8	17.3	16.7	14.0	14.3	10.8	12.7	11.8
65-74	17.2	19.0	16.7	15.8	16.2	15.8	12.2	12.6	9.9	11.3	10.9
75-84	28.6	24.1	24.3	31.8	24.2	20.7	24.4	22.7	15.3	19.6	15.5
85+	*	*	*	*	*	*	*	*	*	*	*

RECOMMENDED CARE AMONG PATIENTS WITH DIABETES & CKD

patients with diagnosed diabetes who obtain an annual urinary urine albumin measurement, 2010 (diabetes-12)

- » all · 38.8%
- » American Indian/Alaskan Native · 23.4% » Asian · 42.1% » black/African American · 37.1% » white · 38.9%

ACEI/ARB TREATMENT

patients with diabetes & CKD who receive treatment with an ACEI or ARB, 2010 (CKD-5)

- » all · 72.6%
- » American Indian/Alaskan Native · 73.3% » Asian · 81.2% » black/African American · 75.0% » white · 71.2%

ESRD INCIDENCE

rate per million population of new cases of end-stage renal disease, 2010 (CKD-8)

- » all · 350
- » American Indian/Alaskan Native · 452 » Asian · 332 » Native Hawaiian/Pacific Islander · 2,453
- » black/African American · 956 » white · 283

KIDNEY FAILURE DUE TO DIABETES

rate per million population of new cases of end-stage renal disease due to diabetes, 2010 (CKD-9.1)

- » all · 151
- » American Indian/Alaskan Native · 321 » Asian · 159 » Native Hawaiian/Pacific Islander · 1,525
- » black/African American · 417 » white · 124

NEPHROLOGIST CARE

patients receiving at least 12 months of nephrologist care prior to initiation, 2010 (CKD-10)

- » all · 29.4%
- » American Indian/Alaskan Native · 24.1% » Asian · 29.5% » Native Hawaiian/Pacific Islander · 24.8%
- » black/African American · 25.4% » white · 31.1%

VASCULAR ACCESS

adult incident hemodialysis patients with a maturing AV fistula or using one as their primary vascular access, 2010 (CKD-11.3)

- » all · 33.6%
- » American Indian/Alaskan Native · 40.8% » Asian · 36.9% » Native Hawaiian/Pacific Islander · 32.5%
- » black/African American · 31.9% » white · 34.1%

TRANSPLANTATION

patients wait-listed or receiving a deceased donor kidney within one year of ESRD initiation in 2009 (CKD-12)

- » all · 17.3%
- » American Indian/Alaskan Native · 11.1% » Asian · 32.1% » Native Hawaiian/Pacific Islander · 18.0%
- » black/African American · 14.0% » white · 18.4%

MORTALITY

overall mortality (deaths per 1,000 patient years at risk) among patients on dialysis, 2010 (CKD-14.1)

- » all · 193
- » American Indian/Alaskan Native · 151 » Asian · 137 » Native Hawaiian/Pacific Islander · 154
- » black/African American · 149 » white · 228