
KEEP 2009

Summary Figures

Definitions

KEEP DATA ANALYSES

DIABETES

Self-reported diabetes, self reported diabetic retinopathy, receiving medication for diabetes, or elevated blood glucose (WHO); fasting blood sugar ≥ 126 mg/dl, non-fasting blood sugar ≥ 200 mg/dl

SELF-REPORTED DIABETES

Self-reported diabetes: self-reported diabetes, self-reported diabetic retinopathy

GLYCEMIC CONTROL

Fasting blood sugar < 126 mg/dl & non-fasting blood sugar < 200 mg/dl

HYPERTENSION

Self reported history hypertension, receiving a medication for hypertension, or elevated blood pressure (JNC7): Diabetes or CKD; systolic ≥ 130 mmHg or diastolic ≥ 80 mmHg, otherwise systolic ≥ 140 mmHg or diastolic ≥ 90

SELF-REPORTED HYPERTENSION

Self-reported hypertension

BLOOD PRESSURE CONTROL

Diabetes or CKD: systolic < 130 mmHg and diastolic < 80 mmHg, otherwise systolic < 140 mmHg and diastolic < 90 mmHg

HIGH CHOLESTEROL

Self-reported high cholesterol or receiving medication for cholesterol, or cholesterol level > 200 mg/dl

SELF-REPORTED HIGH CHOLESTEROL

Self-reported high cholesterol

CHOLESTEROL CONTROL

Total cholesterol levels of ≤ 200 mg/dl

SELF-REPORTED CARDIOVASCULAR DISEASE

Participant reports any of the following cardiac events: heart attack, bypass surgery, heart angioplasty, stroke, heart failure, abnormal heart rhythm, or PVD (only for KEEP version 2)

MICROALBUMINURIA

Albumin/creatinine ratio ≥ 30 mg/g

CHRONIC KIDNEY DISEASE

eGFR < 60 mL/min/1.73 m² or eGFR ≥ 60 mL/min/1.73 m² and albumin-creatinine ratio (ACR) ≥ 30 mg/g. GFR estimated using the IDMS-traceable 4-variable Modification of Diet in Renal Disease (MDRD) Study equation for calibrated serum creatinine (Scr) values: $GFR = 175 \times \text{standardized Scr}^{-1.154} \times \text{age}^{-0.203} \times 1.212$ [African Americans] $\times 0.742$ [women]

CKD STAGES

Stage 1: eGFR ≥ 90 mL/min/1.73 m², and ACR ≥ 30 mg/g
 Stage 2: eGFR 60–89 mL/min/1.73 m², and ACR ≥ 30 mg/g
 Stage 3: eGFR 30–59 mL/min/1.73 m²
 Stage 4: eGFR 15–29 mL/min/1.73 m²
 Stage 5: eGFR < 15 mL/min/1.73 m², or dialysis

ANEMIA**WHO**

Male: hemoglobin < 13 g/dl
 Female: < 12 g/dl

KDOQI (2006)

Males: hemoglobin < 13.5 g/dl
 Women < 12 g/dl

BODY MASS INDEX CATEGORIES

UW: underweight, BMI < 18.5
 N: normal, BMI 18.5–24.9
 OW: overweight, BMI 25–29.9
 OB: obese, BMI 30–39.9
 EOB: extremely obese, BMI ≥ 40

EDUCATIONAL STATUS

GSL: Grade school or less
 SHS: Some high school
 HSG: High school graduate
 SC+: Some college, college graduate, post-graduate

NHANES 1999–2006 DATA ANALYSES

SELF-REPORTED DIABETES

To be classified as having self-reported diabetes, participants had to report being told by a doctor, at any time, that they had diabetes or sugar diabetes other than that related to pregnancy. Participants answering “borderline” to the question were classified as non-diabetic.

SELF-REPORTED HYPERTENSION

Self-reported hypertension was identified by an affirmative answer to the question: “Have you ever been told by a doctor that you had hypertension, also called high blood pressure.”

SELF-REPORTED HIGH CHOLESTEROL

Self-reported high cholesterol was identified by an affirmative answer to the question: “Have you ever been told by a doctor or other health professional that your blood cholesterol level was high?”

SELF-REPORTED CARDIOVASCULAR DISEASE

Participant reports any of the following cardiac events: coronary heart disease, angina/angina pectoris, heart attack, congestive heart failure, or stroke.

MICROALBUMINURIA

Albumin/creatinine ratio ≥ 30 mg/g

CHRONIC KIDNEY DISEASE

eGFR < 60 mL/min/1.73 m² or eGFR ≥ 60 mL/min/1.73 m², and albumin-creatinine ratio (ACR) ≥ 30 mg/g. GFR estimated using the IDMS-traceable 4-variable Modification of Diet in Renal Disease (MDRD) Study equation for calibrated serum creatinine (Scr) values: $GFR = 175 \times \text{standardized Scr}^{-1.154} \times \text{age}^{-0.203} \times 1.212$ [African Americans] $\times 0.742$ [women]

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ANEMIA**WHO**

Male: hemoglobin < 13 g/dl
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KDOQI (2006)

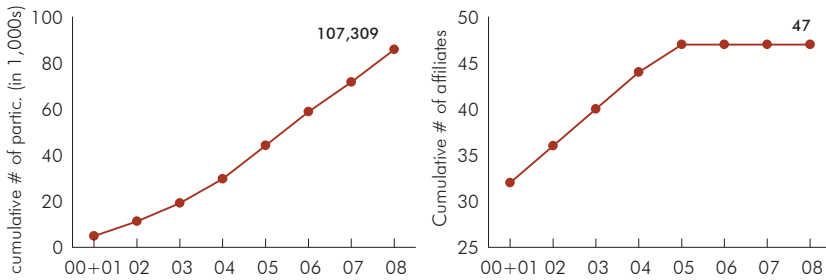
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S.1

Cumulative number of eligible KEEP participants & affiliates, by year

KEEP N = 107,309.

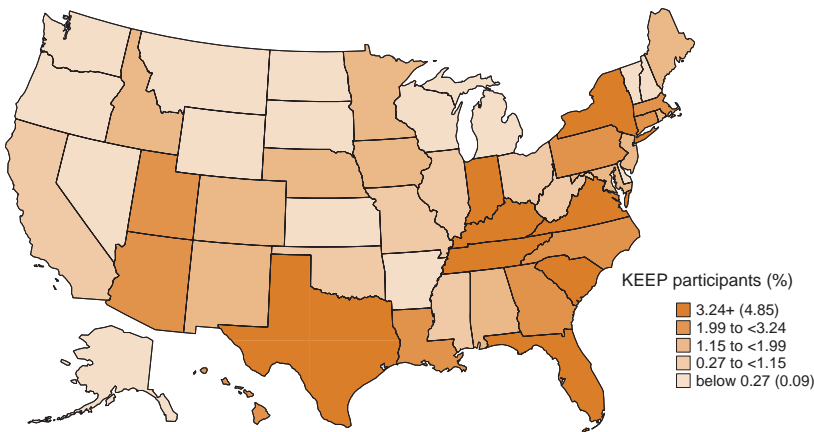
In 2008, over 107,000 individuals participated in KEEP screening programs that were conducted by a total of 47 affiliates in 49 states and the District of Columbia.

S.2

Geographic variations in the percentage of KEEP participants, by state

KEEP N = 107,309.

The highest rates of participation in the KEEP program occur in states located along the Gulf Coast, the Mid-Atlantic Region, the Ohio Valley, and portions of New England; participation rates average 4.85% for individuals residing in areas represented by the upper map quintile. The highest rate of participation occurred in the New York affiliate, at 9.43%.

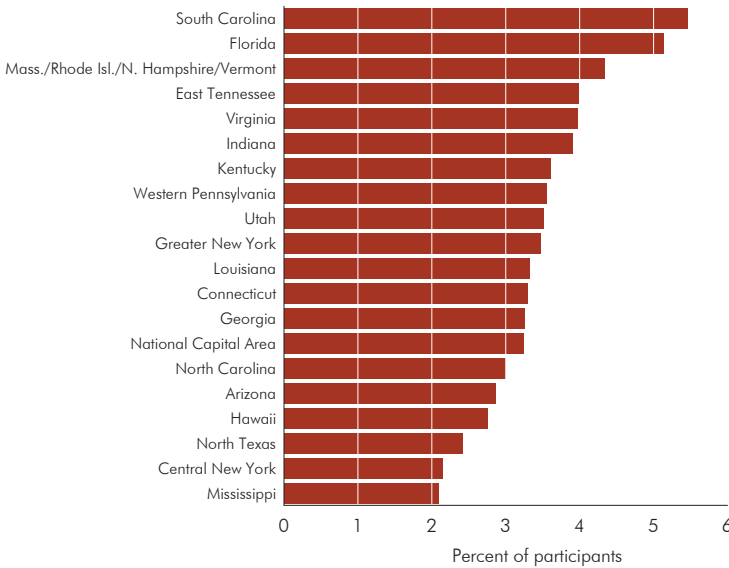


S.3

Twenty largest KEEP affiliates, by percentage of participants (rank order)

KEEP N = 107,309.

South Carolina and Florida have the highest percentage of KEEP participants, at 5.5 and 5.1%, followed by Massachusetts/Rhode Island/New Hampshire/Vermont, East Tennessee, and Virginia, at 4.3, 4.0, and 4.0% respectively.



Program accessibility

s.a

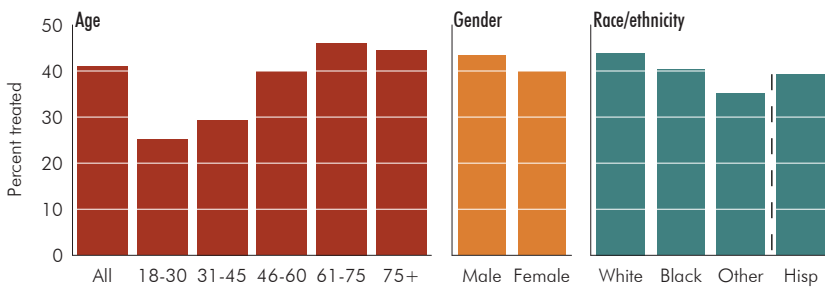
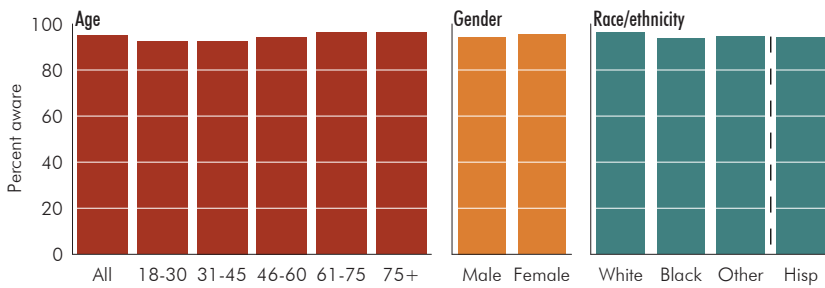
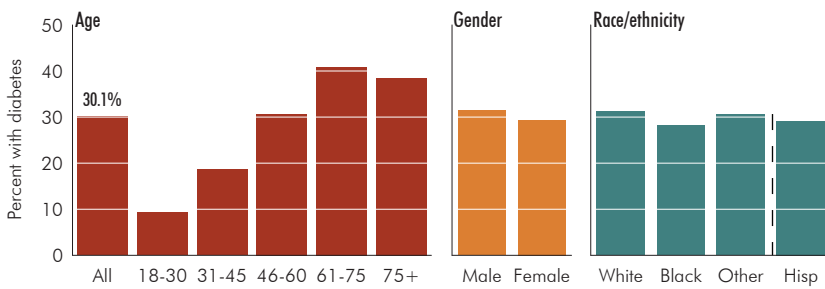
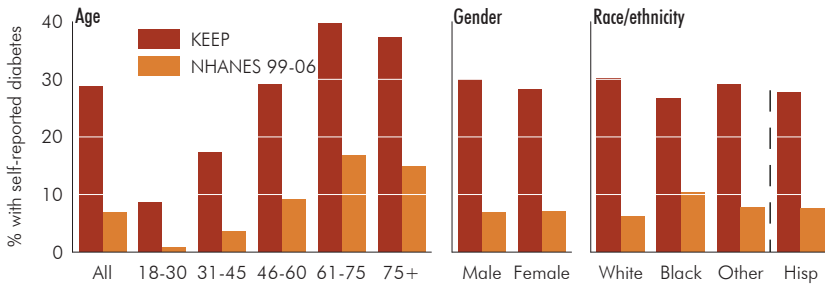
Total eligible KEEP participants

KEEP N = 107,309.

Thirty-five percent of KEEP participants are age 46–60, 68% are women, and 47% are white. Approximately seven times more non-Hispanics are screened compared to Hispanics, while the majority of participants have at least a high school diploma and some type of health insurance.

		2000+2001	2002	2003	2004	2005	2006	2007	2008	All	All (%)
Age	18-30	568	644	1,004	1,085	1,391	1,257	989	1,077	8,015	7.5
	31-45	1,491	1,977	2,393	2,939	3,984	3,685	2,870	3,005	22,344	20.8
	46-60	2,097	2,651	3,422	4,690	6,437	6,592	5,509	6,114	37,512	35.0
	61-75	1,502	2,029	2,382	3,328	4,769	5,111	4,968	5,561	29,650	27.6
	>75	424	743	721	1,076	1,547	1,656	1,683	1,938	9,788	9.1
	Missing
Gender	Male	1,959	2,570	2,944	4,142	5,879	5,684	5,207	5,805	34,190	31.9
	Female	4,123	5,473	6,976	8,975	12,191	12,613	10,808	11,890	73,049	68.1
	Missing	.	1	2	1	58	4	4	.	70	0.1
Race	White	2,284	3,104	4,301	5,793	9,026	9,008	8,131	9,261	50,908	47.4
	Black	2,652	3,392	3,430	4,274	5,267	5,564	5,041	5,402	35,022	32.6
	Other	967	1,358	1,851	2,969	3,414	2,943	2,332	2,650	18,484	17.2
	Unknown/missing	179	190	340	82	421	786	515	382	2,895	2.7
Ethnicity	Hispanic	618	712	1,117	1,890	2,416	2,317	2,075	2,164	13,309	12.4
	Non-Hispanic	5,464	7,332	8,805	11,228	15,712	15,984	13,944	15,531	94,000	87.6
Education Level	≤ 6 years	362	406	499	814	1,051	1,019	888	884	5,923	5.5
	<12 years	586	871	921	1,188	1,779	1,763	1,581	1,570	10,259	9.6
	12 years	1,585	2,192	2,591	3,491	4,611	4,462	4,190	4,531	27,653	25.8
	>12 years	1,629	2,155	2,775	3,459	4,674	4,351	3,815	4,504	27,362	25.5
	16 years	1,143	1,463	1,913	2,530	3,614	3,814	3,228	3,683	21,388	19.9
	>16 years	688	862	1,132	1,467	2,144	2,453	2,019	2,298	13,063	12.2
	Missing	89	95	91	169	255	439	297	225	1,660	1.5
Health Insurance Status	Yes	4,948	6,428	7,892	10,153	14,056	14,207	12,404	13,632	83,720	78.0
	No	883	1,234	1,660	2,490	3,250	3,371	3,292	3,525	19,705	18.4
	Missing	251	382	370	475	822	723	318	536	3,877	3.6
All		6,082	8,044	9,922	13,118	18,128	18,301	16,019	17,695	107,309	100.0

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s.4

Self-reported diabetes in KEEP & NHANES participants

KEEP N= 106,484. NHANES N= 22,606.

Nearly 29% of KEEP participants report that they have diabetes, compared to 6.9% in the NHANES population. Diabetes is more prominent in older participants in both populations and is evenly distributed among gender, racial, and ethnic groups.

s.5

KEEP participants with diabetes

KEEP N= 107,284.

Diabetes is evident in 30.1% of KEEP participants, and occurs in 40.9% and 38.5%, respectively, of those age 61–75 and those older than 75.

s.6

KEEP participants with diabetes who are aware of their condition

KEEP N= 32,303.

Overall, 95% of KEEP participants are aware that they have diabetes.

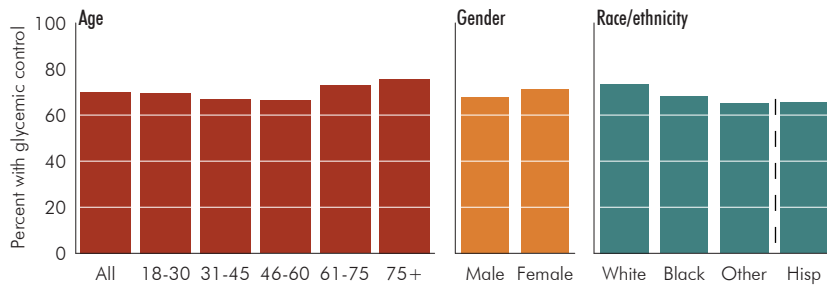
s.7

KEEP participants with diabetes who receive medication for their condition

KEEP N= 32,303.

In KEEP participants with diabetes, 41% receive a medication for their diabetes. Patients age 61 or older patients are more likely to be treated than their younger counterparts.

Targeting high-risk populations

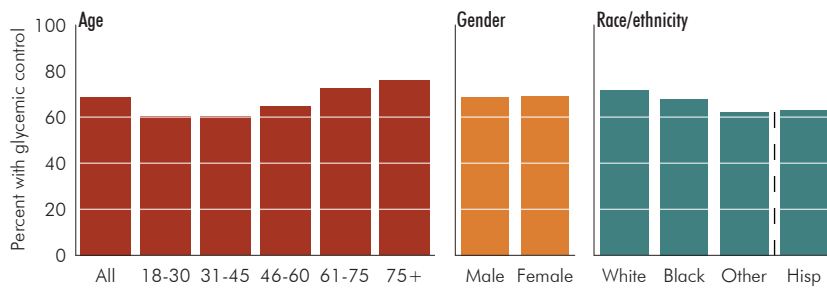


s.8

Glycemic control in KEEP participants with diabetes

KEEP N= 32,303.

Slightly more than 70% of KEEP participants with diabetes reach glycemic control with fasting or non-fasting blood sugar levels below 126 mg/dl and 200 mg/dl, respectively.

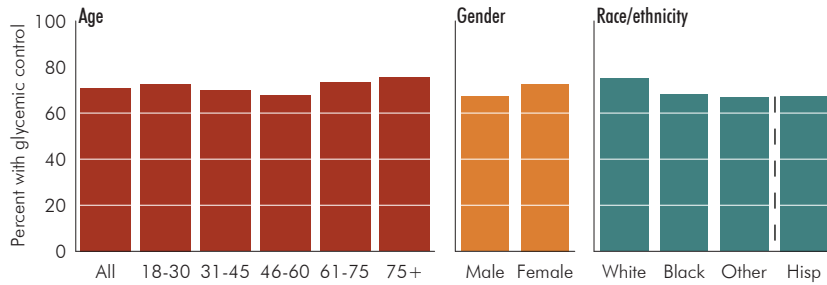


s.9

Glycemic control in KEEP participants with diabetes who are being treated for their condition

KEEP N= 13,260.

In KEEP participants who receive treatment for their diabetes, 68.8% have controlled blood sugar levels.

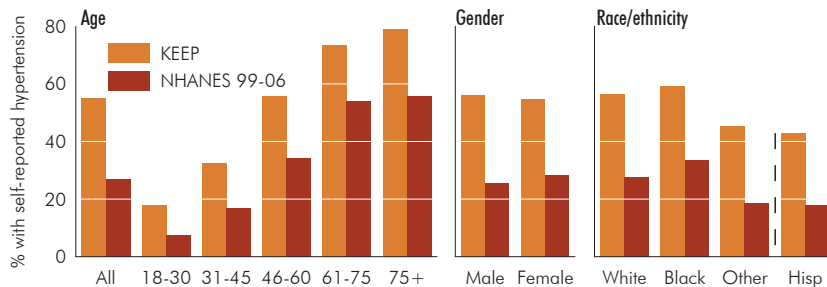


s.10

Glycemic control in KEEP participants with diabetes who are not being treated for their condition

KEEP N= 19,043.

In KEEP participants who do not receive treatment for their diabetes, 70.9% have controlled blood sugar levels.

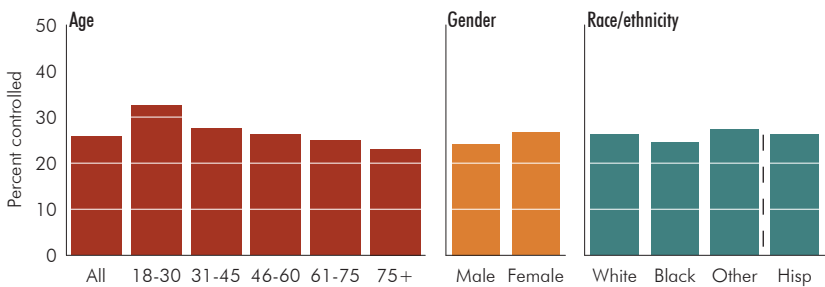
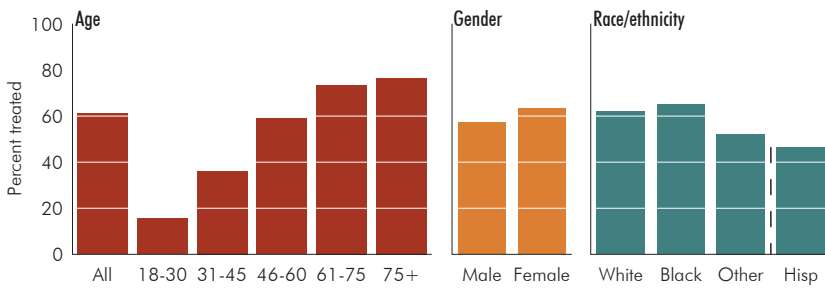
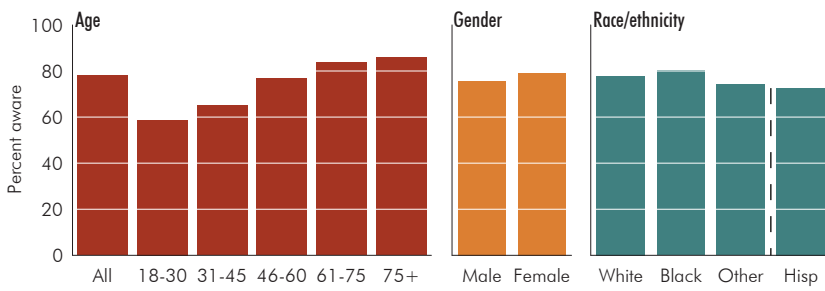
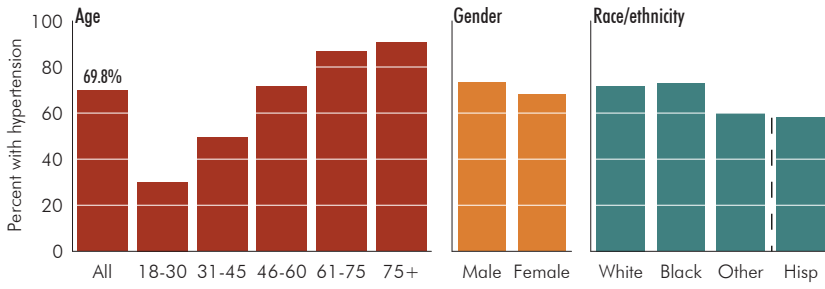


s.11

Self-reported hypertension in KEEP & NHANES participants

KEEP N= 105,766. NHANES N= 22,366.

Overall, 55.2% of KEEP participants report that they are hypertensive compared to 26.9% in the NHANES population. Hypertension is more evident in older participants, evenly distributed by gender, and slightly higher in blacks compared to whites.



s.12

KEEP participants with hypertension

KEEP N= 107,292.

The rate of hypertension in KEEP participants is nearly 70%, and reaches 91% in those age older than 75; rates are higher in men than in women, and are similar in whites and blacks.

s.13

KEEP participants with hypertension who are aware of their condition

KEEP N= 74,857.

Overall, 78% of KEEP participants are aware that they have hypertension; awareness of the condition increases with age.

s.14

KEEP participants with hypertension who receive medication for their condition

KEEP N= 74,857.

Sixty-one percent of KEEP participants with hypertension receive medication for their condition. Women are more likely to be treated than men, at 63.4% and 57.3%, respectively, while rates of treatment are similar in whites and blacks, at 62.0% and 65.1%.

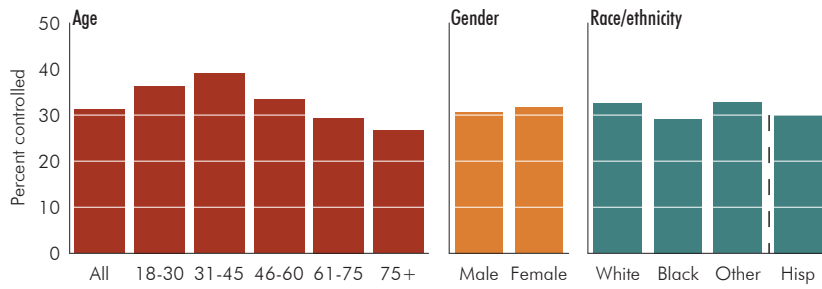
s.15

Blood pressure control in KEEP participants with hypertension

KEEP N= 74,857.

Of KEEP participants with hypertension, 25.8% reach blood pressure control (JNC7: systolic and diastolic blood pressure levels of less than 130 mmHg and 80 mmHg), while control is achieved in 23–25% of those age 61 and older.

Targeting high-risk populations

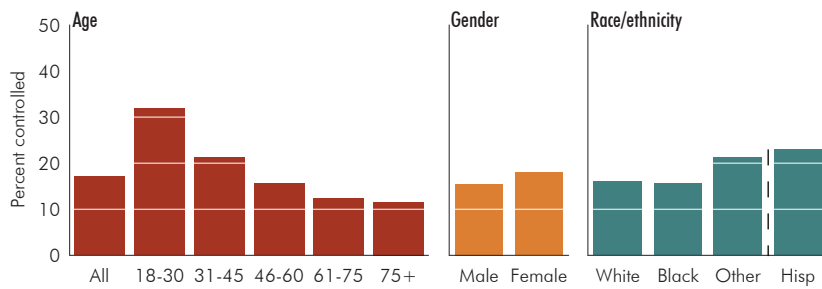


s.16

Blood pressure control in KEEP participants with hypertension who are being treated for their condition

KEEP N= 45,918.

Nearly 31.3% of KEEP participants who are treated for hypertension reach blood pressure control. Compared to blacks, a greater proportion of whites have controlled pressures, at 29.2% and 32.5%, respectively.

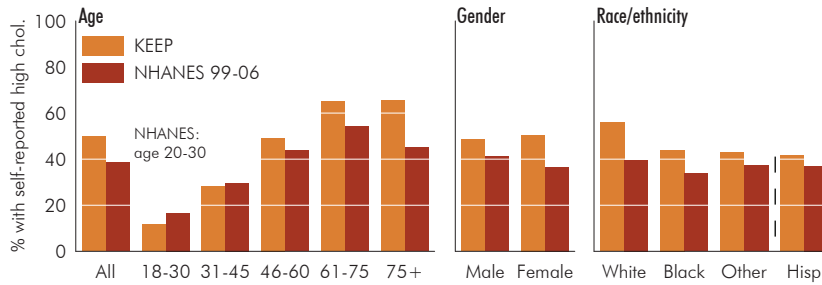


s.17

Blood pressure control in KEEP participants with hypertension not being treated for their condition

KEEP N= 28,939.

Of KEEP participants not being treated for hypertension, 17.1% achieve blood pressure control. Control is similar in whites and blacks, at 16.1% and 15.7%, respectively.

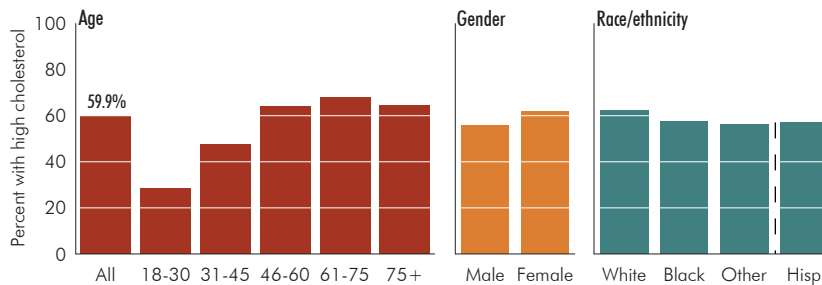


s.18

Self-reported high cholesterol in KEEP & NHANES participants

KEEP N= 38,401. NHANES N= 13,535.

Overall, 49.9% and 38.7% of KEEP and NHANES participants, respectively, report that they have high cholesterol levels (>200 mg/dl). High levels are more common in older KEEP participants than in their younger counterparts, and in both populations whites tend to have higher levels than blacks.

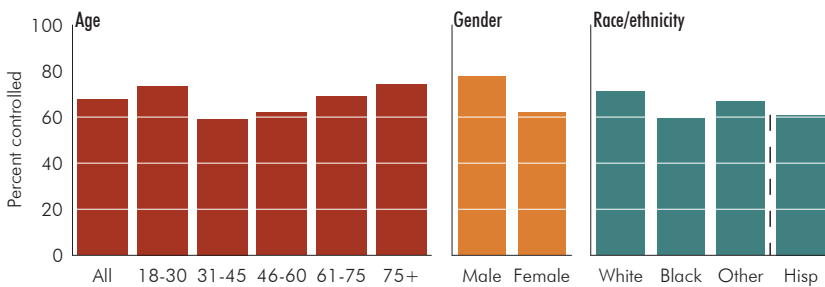
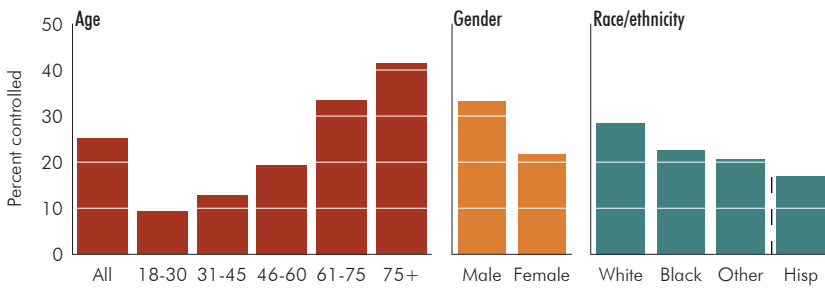
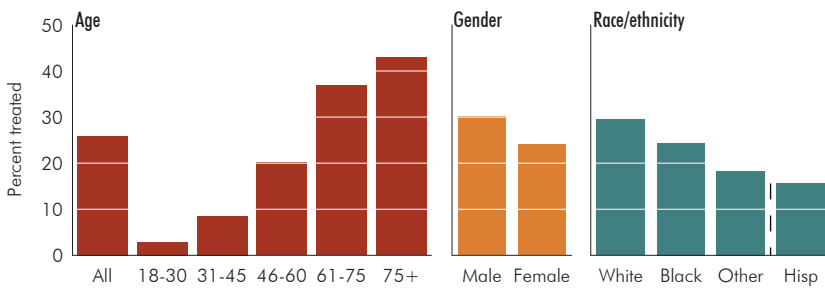
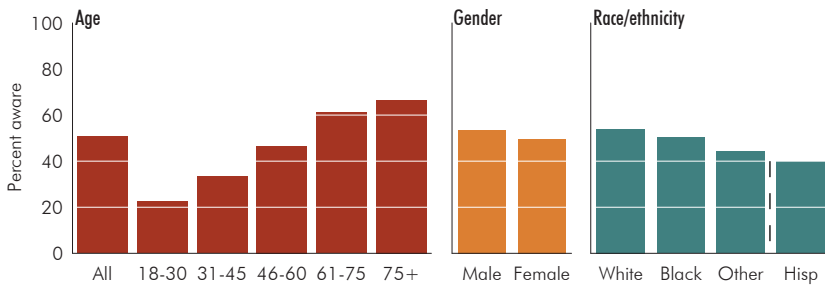


s.19

KEEP participants with high cholesterol

KEEP N= 62,992.

Nearly 60% of KEEP participants have high cholesterol levels, including 55.7% and 61.8% of males and females, respectively. More whites than blacks have elevated levels, at 62.6% and 57.6%, respectively.



S.20

KEEP participants with high cholesterol who are aware of their condition

KEEP N= 37,703.

Overall, 50.8% of KEEP participants are aware that they have high cholesterol levels. Awareness increases with age, and is more common in men and whites than in women and blacks.

S.21

KEEP participants with high cholesterol who receive medication for their condition

KEEP N= 37,703.

Approximately one in four KEEP participants with high cholesterol levels receives medication for the condition. The proportion of those treated increases with age but is alarmingly low in participants age 18–30 and 31–45, at 2.9% and 8.5%, respectively.

S.22

Cholesterol control in KEEP participants with high cholesterol

KEEP N= 37,703.

Twenty-five percent of KEEP participants with high cholesterol levels achieve cholesterol control. Control is reached by one-third of male participants, but by only one-fifth of their female counterparts.

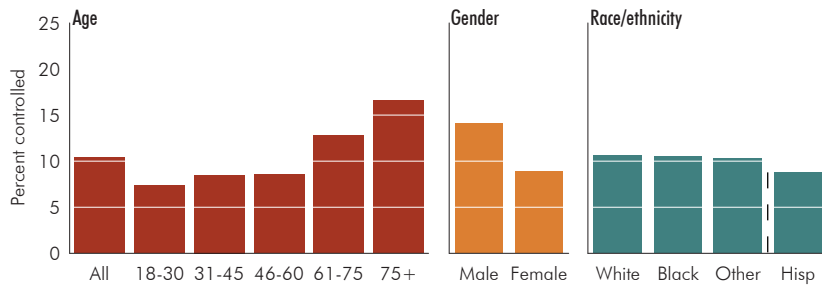
S.23

Cholesterol control in KEEP participants with high cholesterol who are being treated for their condition

KEEP N= 9,762

In KEEP participants who are treated for high cholesterol, 67.5% achieve controlled levels. Men are more likely to have controlled cholesterol levels than women (at 77.5% and 62.1%, respectively), and whites more likely than blacks (at 71.3% and 59.5%).

Targeting high-risk populations

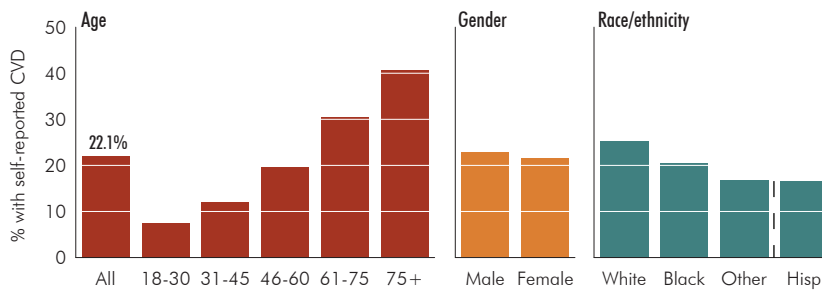


s.24

Cholesterol control in KEEP participants with high cholesterol who are not being treated for their condition

KEEP N= 27,941

Only 10.4% of non-treated KEEP participants with high cholesterol reach acceptable cholesterol levels. By race and ethnicity, control is reached by 10.6%, 10.5%, and 8.8% of whites, blacks, and Hispanics, respectively.

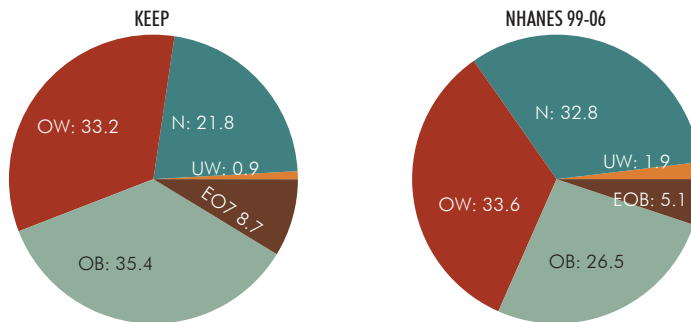


s.25

Self-reported cardiovascular disease in KEEP participants

KEEP N= 107,309

Twenty-two percent of KEEP participants report that they have cardiovascular disease. The condition is more common in older participants, is evenly distributed by gender, and its occurrence is slightly higher in whites compared to blacks, at 25.3% and 20.5%, respectively.

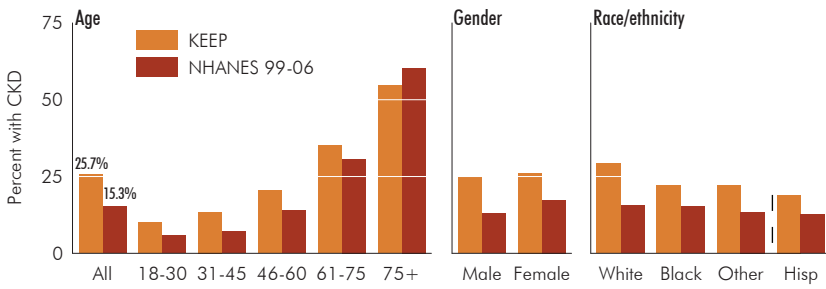


s.26

Percent distribution of KEEP & NHANES participants, by BMI

KEEP N= 105,872. NHANES N= 20,567.

Rates of obesity reach 35.4% and 26.5%, respectively, in KEEP and NHANES participants. One-third of each population is classified as overweight, and 8.7% and 5.1% are classified as extremely obese.

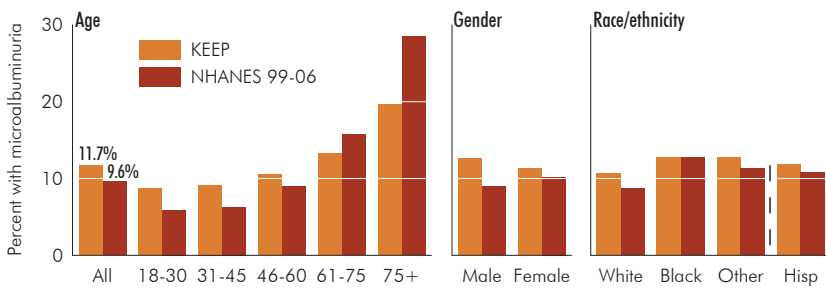


s.27

Prevalence of CKD in KEEP & NHANES participants

KEEP N= 94,004. NHANES N= 19,551.

Overall, CKD is evident in 25.7% and 15.3% of KEEP and NHANES participants, respectively. Of KEEP participants, 54.8% of those age older than 75 have CKD, compared to 60.4% in the NHANES population. In the KEEP population, CKD is most prominent in whites.

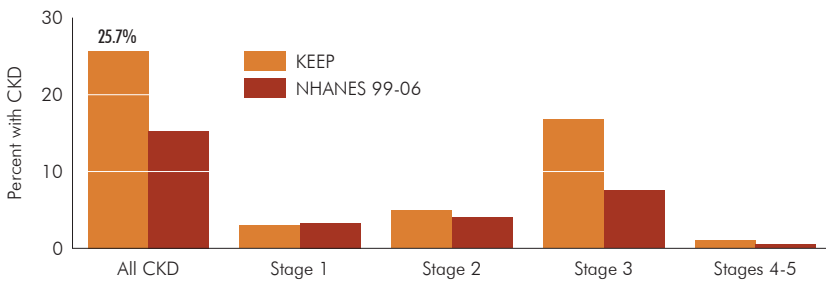


s.28

Prevalence of microalbuminuria in KEEP & NHANES participants

KEEP N= 96,715. NHANES N= 20,573.

The prevalence of microalbuminuria reaches rates of 11.7% and 9.6%, respectively, in KEEP and NHANES participants. Microalbuminuria is evident in 19.6% and 28.5% of participants age older than 75.

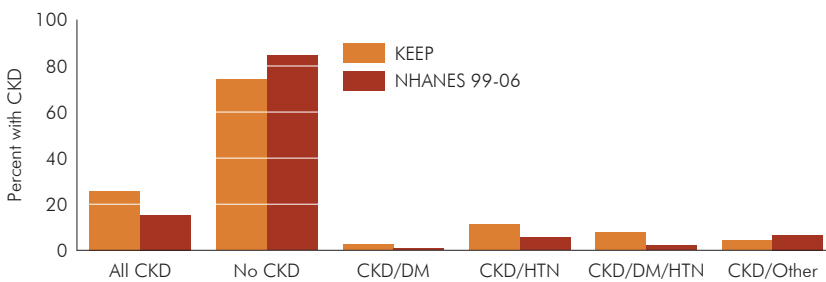


s.29

Prevalence of CKD in KEEP & NHANES participants, by CKD stage

KEEP N= 94,004. NHANES N= 19,551.

Stage 3 CKD (eGFR 30-59), is the most common level of CKD in KEEP and NHANES participants, at 16.8% and 7.5%, respectively.



s.30

Prevalence of CKD in KEEP & NHANES participants, by risk factor

KEEP N= 93,432. NHANES N= 19,352.

Of KEEP participants with CKD, 11.1% have self-reported hypertension, 2.5% have self-reported diabetes, and nearly 8% are shown to have both risk factors; rates in NHANES participants, in contrast, are 5.7%, 0.8%, and 2.2%, respectively.

Prevalence of CKD

s.b

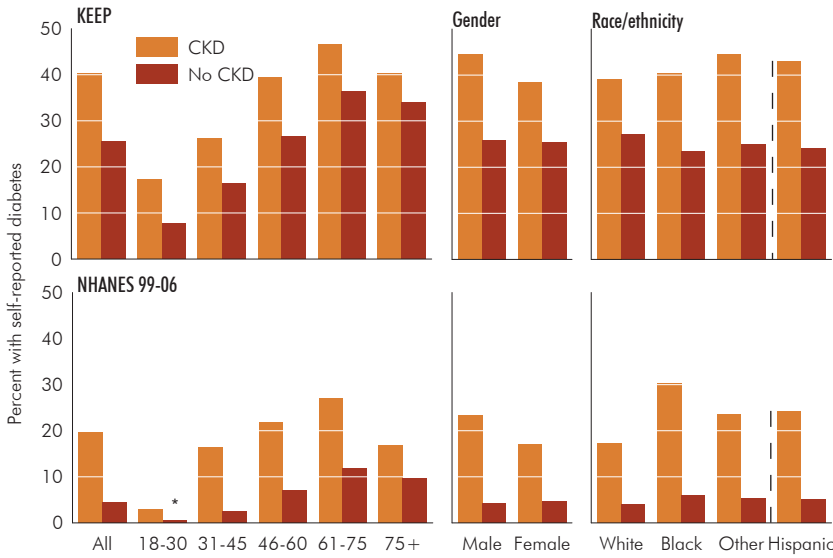
Total eligible KEEP participants with CKD, by CKD stage

KEEP N= 107,309.

Of the total eligible KEEP participants with CKD, Stage 3 (eGFR 30–59) is most apparent. In the KEEP population, CKD exists in greater proportions of females, whites, and older age groups. Geographically, the disease is most prominent in the South U.S. census region; a high concentration of participants reside in the South Atlantic census division. Among KEEP participants, CKD is more common in non-smokers than in smokers, and in those with health insurance compared to those without.

	Stage 1 &		Stage 2 &		Stage 3	Stages 4-5	Missing	All
	Non-CKD	Abnormal ACR	Abnormal ACR					
Age								
18-30	5,985	366	167	126	13	1,358	8,015	
31-45	16,353	780	732	974	53	3,452	22,344	
46-60	26,116	1,124	1,504	3,870	186	4,712	37,512	
61-75	17,314	488	1,592	6,896	376	2,984	29,650	
>75	4,062	85	617	3,911	314	799	9,788	
Gender								
Male	22,433	831	1,608	4,611	350	4,357	34,190	
Female	47,397	2,012	3,004	11,166	592	8,878	73,049	
Missing	70	70	
Race								
White	32,903	856	2,153	10,097	534	4,365	50,908	
Black	23,166	1,282	1,548	3,539	237	5,250	35,022	
Other	12,862	660	858	2,050	168	1,886	18,484	
Unknown/missing	899	45	53	91	3	1,804	2,895	
Ethnicity								
Hispanic	8,849	439	478	1,093	67	2,383	13,309	
Non-Hispanic	60,981	2,404	4,134	14,684	875	10,922	94,000	
U.S. Census Region								
Northeast	15,953	649	1,066	3,608	211	2,836	24,323	
Midwest	10,276	433	700	2,436	158	1,820	15,823	
South	34,360	1,423	2,228	7,403	422	7,083	52,919	
West	9,225	338	618	2,324	151	1,555	14,211	
Missing	16	.	.	6	.	11	33	
U.S. Census Division								
New England	5,590	197	380	1,502	64	1,598	9,331	
Middle Atlantic	10,363	452	686	2,106	147	1,238	14,992	
East North Central	6,661	298	473	1,411	92	854	9,789	
West North Central	3,615	135	227	1,025	66	966	6,034	
South Atlantic	17,184	683	1,094	3,868	201	4,096	27,126	
East South Central	9,788	371	653	2,121	111	1,258	14,302	
West South Central	7,388	369	481	1,414	110	1,729	11,491	
Mountain	5,739	199	356	1,649	84	882	8,909	
Pacific	3,486	139	262	675	67	673	5,302	
Missing	16	.	.	6	.	11	33	
Smoking								
Yes	26,382	1,196	1,999	6,503	434	5,251	41,765	
No	40,646	1,515	2,431	8,604	470	7,198	60,864	
Missing	2,802	132	182	670	38	856	4,680	
Education Level								
≤ 6 years	3,403	198	309	1,044	90	879	5,923	
<12 years	6,075	325	519	1,798	122	1,420	10,259	
12 years	17,299	785	1,250	4,653	299	3,367	27,653	
>12 years	18,093	739	1,157	3,734	226	3,413	27,362	
16 years	15,045	519	791	2,471	115	2,447	21,388	
>16 years	8,991	238	498	1,832	77	1,427	13,063	
Missing	923	39	88	245	13	352	1,660	
Health Insurance Status								
Yes	53,808	1,933	3,609	13,463	795	10,112	83,720	
No	13,748	797	841	1,671	106	2,542	19,705	
Missing	2,267	113	162	643	41	651	3,877	
Doctor Status								
Yes	53,514	2,158	3,639	13,238	804	10,645	83,998	
No	9,391	446	442	817	45	1,857	12,998	
Missing	6,925	239	531	1,722	93	803	10,313	
All	69,830	2,843	4,612	15,777	942	13,305	107,309	

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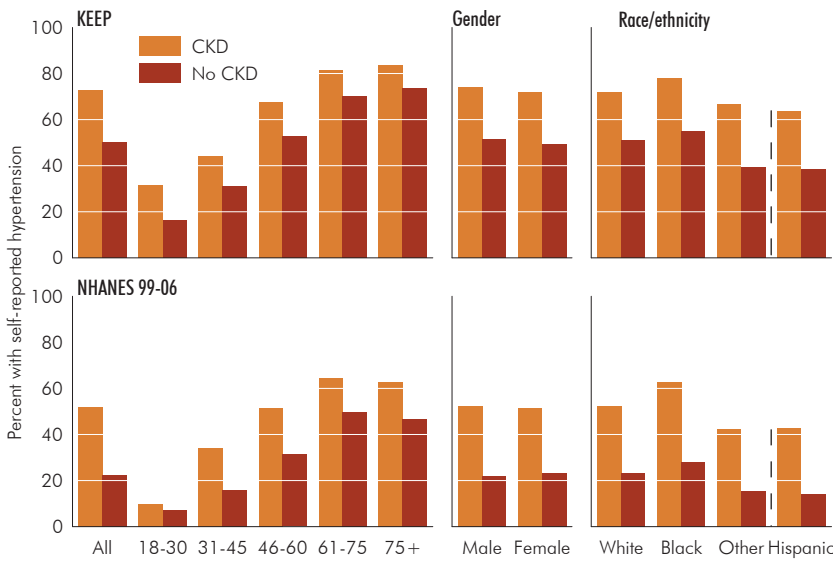
S.31

Self-reported diabetes in KEEP & NHANES participants with or without CKD

KEEP N= 93,432. NHANES N= 19,540.

In both the KEEP and NHANES populations, self-reported diabetes is more common in those with CKD—at 40.4% and 19.7%, respectively—compared to 25.5% and 4.6% in participants with no CKD diagnosis. By gender, self-reported diabetes is far more common in males and females with CKD compared to those without the diagnosis. In white and black KEEP participants with CKD, 39–40% report having diabetes compared to 25–26% of those with no CKD.

*estimate not reliable



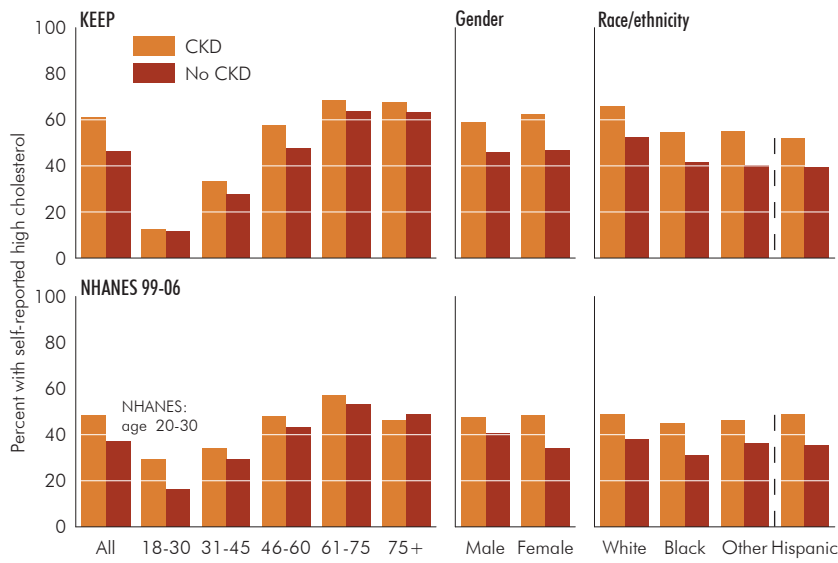
S.32

Self-reported hypertension in KEEP & NHANES participants with or without CKD

KEEP N= 92,736. NHANES N= 19,358.

Among KEEP participants with or without CKD, 72.7% and 50.2%, respectively, report that they are hypertensive, while 52% of NHANES participants with CKD report the condition compared to 22.6% of those with no CKD. By gender, nearly three of four male and female KEEP participants report they have hypertension compared to one in two participants with no CKD. In the NHANES population, 52% of male and female participants with CKD report being hypertensive compared to 22–23% of those with no CKD. And in KEEP participants with CKD, self reported hypertension is evident in 72.0%, 77.9%, 66.7%, and 63.9%, respectively, of whites, blacks, individuals of other races, and Hispanics, compared to 51.1%, 55.2%, 39.4%, and 38.4% of those with no CKD.

CKD as a disease multiplier

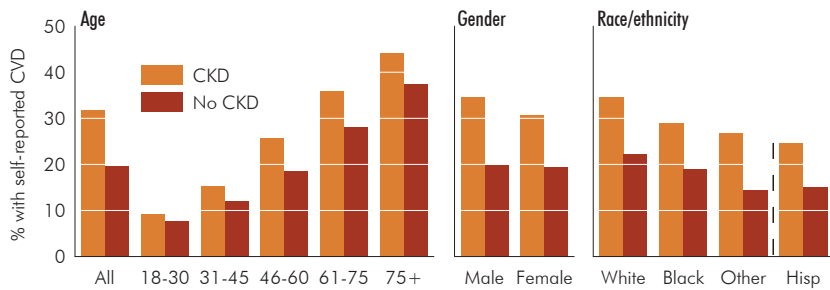


s.33

Self-reported high cholesterol in KEEP & NHANES participants with or without CKD

KEEP N= 36,915, NHANES N= 11,781

In both KEEP and NHANES participants, self-reported high cholesterol is more evident in those with CKD—at 61.3% and 48.3%, respectively—compared to 46.5% and 37.2% in those with no CKD diagnosis. Older patients in both populations are more likely to report they have high cholesterol. And in the KEEP population, self-reported high cholesterol levels are far more likely in males and females with CKD compared to those without the diagnosis.

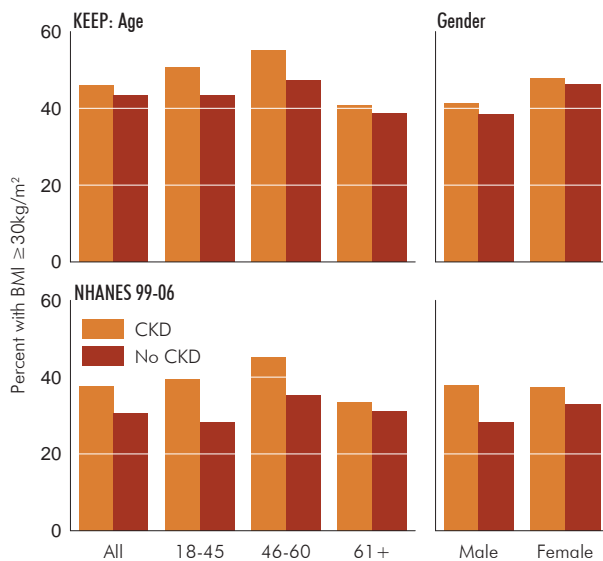


s.34

Self-reported cardiovascular disease in KEEP participants with or without CKD

KEEP N= 94,004

Cardiovascular disease (CVD) is present in 31.8% of KEEP participants with CKD compared to 19.6% of those with no CKD. Proportions of those with CVD increase with age in both CKD and non-CKD participants, and CVD is most prominent in whites, regardless of CKD status.



s.35

BMI ≥ 30 kg/m² in KEEP & NHANES participants with or without CKD

KEEP N= 92,856, NHANES N= 19,146.

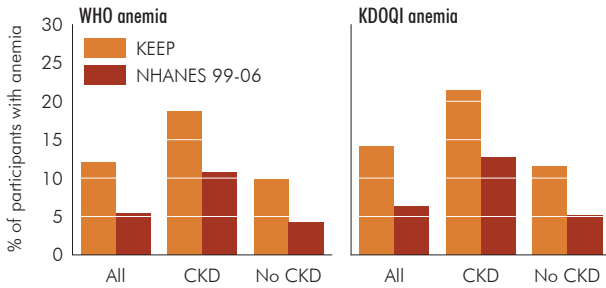
The percentage of KEEP participants classified as obese is similar in those with or without CKD, at 46.1% and 43.4%, respectively; in the NHANES population, 37.7% of those with CKD are classified as obese compared to 30.6% in those without a CKD diagnosis. While age does not appear to be directly related to obesity, the condition is more common in younger KEEP participants.

s.36

Anemia (WHO & KDOQI definitions) in KEEP & NHANES participants with or without CKD

KEEP N= 92,804. NHANES N= 19,531.

Using the WHO definition for anemia, 12.1% of all KEEP participants are classified as anemic compared to 5.4% in the NHANES population. By the KDOQI definition, 14.1% of KEEP participants are classified as anemic compared to 6.4% in the NHANES population.



s.c

Odds ratios of CKD, by risk factor

KEEP N= 34,824.

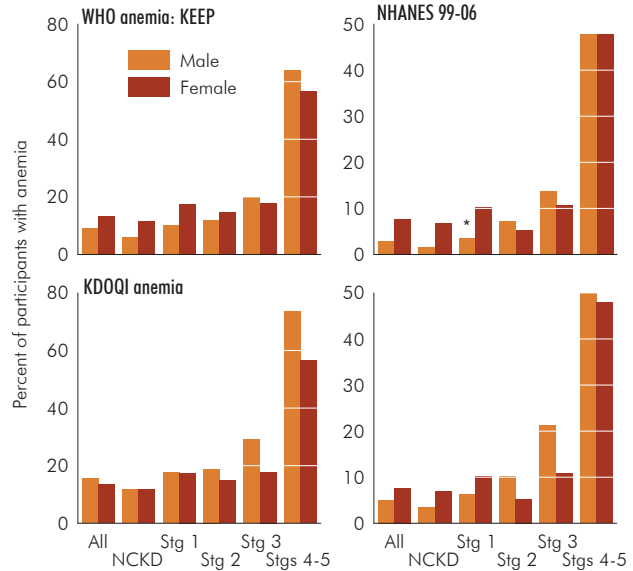
The odds of CKD are four times higher in KEEP participants age older than 75 compared to those age 46–60. Males are slightly less likely than females to have the diagnosis, while blacks and Hispanics are 33% and 28% less likely to have CKD than their white and non-Hispanic counterparts. Participants with diabetes are 46% more likely to have CKD than those with no diabetes, and those with hypertension are 80% more likely to have the diagnosis when compared to participants with no hypertension. Participants who are classified as anemic are twice as likely to have CKD compared to those who are not anemic.

s.37

Anemia (WHO & KDOQI definitions) in KEEP & NHANES participants, by CKD stage & gender

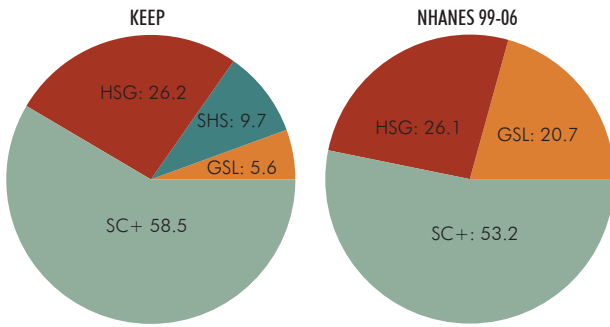
KEEP N= 92,804. NHANES N= 19,531

Regardless of anemia definition (WHO or KDOQI), anemia is more evident in both the KEEP and NHANES populations as the severity of CKD progresses. Among KEEP participants, anemia is more common in males than in females in the more advanced stages of CKD. *estimate not reliable.



	OR	Low	Upper	P-value
Age				
18 - 45	0.76	0.69	0.83	<.0001
46 - 60	1.00			
61 - 75	1.72	1.61	1.84	<.0001
75+	4.13	3.79	4.51	<.0001
Male	0.96	0.91	1.02	0.1868
Race				
White	1.00			
Black	0.67	0.63	0.71	<.0001
Other	0.97	0.89	1.06	0.4921
Hispanic	0.72	0.65	0.80	<.0001
Self-reported diabetes	1.46	1.38	1.54	<.0001
Self-reported hypertension	1.80	1.69	1.92	<.0001
Self-reported high cholesterol	1.09	1.03	1.16	0.0025
Cardiovascular disease	1.27	1.20	1.34	<.0001
BMI ≥30 kg/m ²	1.21	1.14	1.28	<.0001
Anemia (WHO definition)	2.15	2.00	2.31	<.0001
Insurance	0.92	0.86	1.00	0.0356

Education & insurance

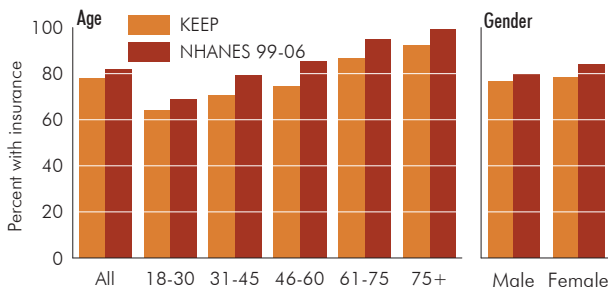


s.38

Percent distribution of KEEP & NHANES participants, by educational status

KEEP N= 105,648. NHANES N= 22,553

In the KEEP and NHANES populations, 26% of participants have completed high school and more than half—58.5% and 53.2%, respectively—have some level of college.

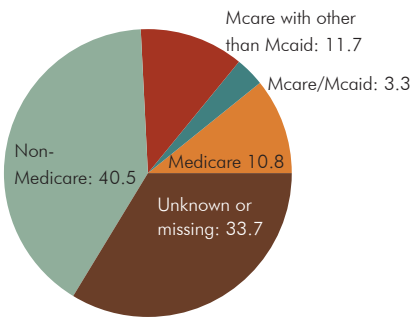


s.39

Insurance coverage in KEEP & NHANES participants, by age & gender

KEEP N= 107,302. NHANES N= 22,300.

Overall, 78.0% and 81.9% of KEEP and NHANES participants, respectively, have some type of insurance coverage. The proportion of participants with coverage increases with age, and is in general evenly distributed between males and females.

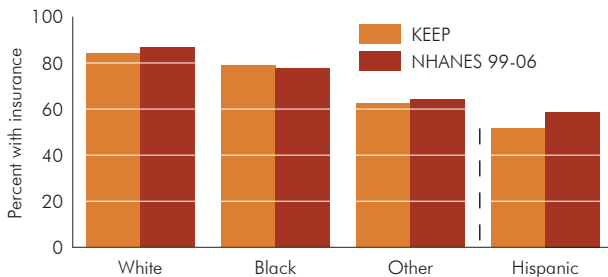


s.40

Percent distribution of types of insurance in KEEP participants reporting they have insurance

KEEP N= 107,232.

In KEEP participants reporting they have insurance, 10.8% are covered by Medicare, while 3.3% are dually covered by Medicare and Medicaid. The majority of participants (40.5%) have some type of coverage other than Medicare, while 11.7% have Medicare coverage with supplemental insurance provided by a carrier other than Medicaid.

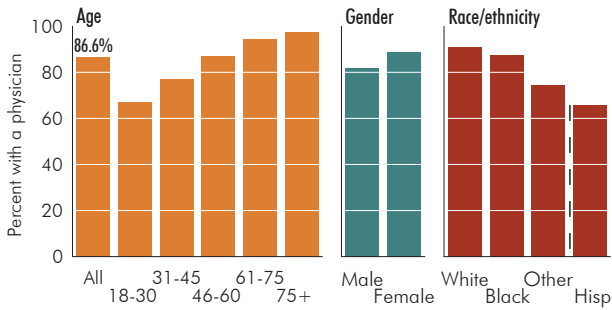


s.41

Insurance coverage in KEEP & NHANES participants, by race & ethnicity

KEEP N= 105,513. NHANES N= 40,897

By race or ethnicity, 84.3%, 78.9%, 62.4%, and 51.6%, respectively, of whites, blacks, individuals of other races, and Hispanics participating in KEEP are insured; in the NHANES population, 86.8%, 77.5%, 64.4%, and 58.8%, respectively, have insurance coverage.

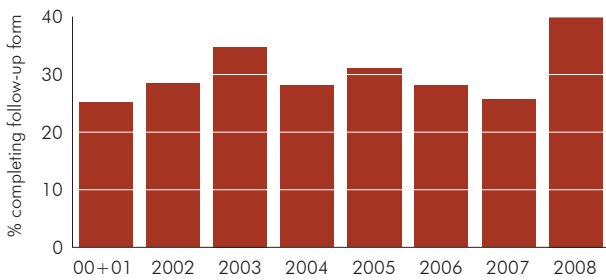


s.42

KEEP participants with a physician

KEEP N= 96,996

Nearly 87% of all eligible KEEP participants have a physician. Slightly more females have physicians compared to males—88.8% versus 81.8%—and whites are more inclined to have a physician when compared to blacks and individuals of other races, at 91.0%, 87.9%, and 74.7%, respectively.



s.43

KEEP follow-up response rate (%)

Percent represents the number of participants who received follow-up forms divided by the number who returned the form & answered the question regarding seeing a doctor about screening results. KEEP N= 17,695 in 2008.

After steadily declining from a peak rate of 34.8% in 2003, the percent of KEEP participants who returned follow-up forms reached its highest level to date, with a response rate of 40.7% in 2008.



s.44

Reasons for seeing a physician in KEEP participants who return their follow-up forms

KEEP N= 23,910.

Among KEEP participants who returned their follow-up forms, the main reason for seeing a physician about test results was related to issues with blood pressure, at 54%.

Chapter summary

Figure s.1

In 2008, over 107,000 individuals participated in KEEP screening programs that were conducted by a total of 47 affiliates in 49 states and the District of Columbia.

Figure s.5

Diabetes is evident in 30.1% of KEEP participants, and occurs in 40.9% and 38.5%, respectively, of those age 61–75 and those older than 75.

Figure s.7

In KEEP participants with diabetes, 41% receive a medication for their diabetes. Patients age 61 or older patients are more likely to be treated than their younger counterparts.

Figure s.12

The rate of hypertension in KEEP participants is nearly 70%, and reaches 91% in those age older than 75; rates are higher in men than in women, and are similar in whites and blacks.

Table s.14

Sixty-one percent of KEEP participants with hypertension receive medication for their condition. Women are more likely to be treated than men, at 63.4% and 57.3%, respectively, while rates of treatment are similar in whites and blacks, at 62.0% and 65.1%.

Figure s.19

Nearly 60% of KEEP participants have high cholesterol levels, including 55.7% and 61.8% of males and females, respectively. More whites than blacks have elevated levels, at 62.6% and 57.6%, respectively.

Figure s.21

Approximately one in four KEEP participants with high cholesterol levels receives medication for the condition. The proportion of those treated increases with age but is alarmingly low in participants age 18–30 and 31–45, at 2.9% and 8.5%, respectively.

Figures.25

Twenty-two percent of KEEP participants report that they have cardiovascular disease. The condition is more common in older participants, is evenly distributed by gender, and its occurrence is slightly higher in whites compared to blacks, at 25.3% and 20.5%, respectively.

Figure s.26

Rates of obesity reach 35.4% and 26.5%, respectively, in KEEP and NHANES participants. One-third of each population is classified as overweight, and 8.7% and 5.1% are classified as extremely obese.

Figure s.27

Overall, CKD is evident in 25.7% and 15.3% of KEEP and NHANES participants, respectively. Of KEEP participants, 54.8% of those age older than 75 have CKD, compared to 60.4% in the NHANES population. In the KEEP population, CKD is most prominent in whites.

Figure s.28

The prevalence of microalbuminuria reaches rates of 11.7% and 9.6%, respectively, in KEEP and NHANES participants.

Figure s.29

Stage 3 CKD (eGFR 30–59), is the most common level of CKD in KEEP and NHANES participants, at 16.8% and 7.5%, respectively.

Figure s.42

Nearly 87% of all eligible KEEP participants have a physician.

Figure s.43

After steadily declining from a peak rate of 34.8% in 2003, the percent of KEEP participants who returned follow-up forms reached its highest level to date, with a response rate of 40.7% in 2008.