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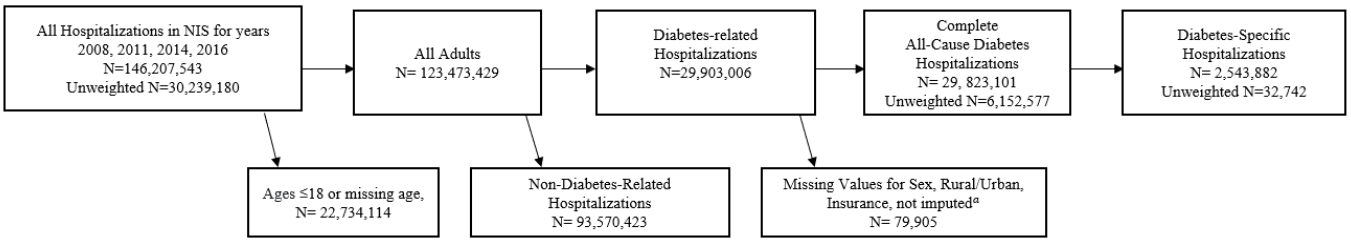
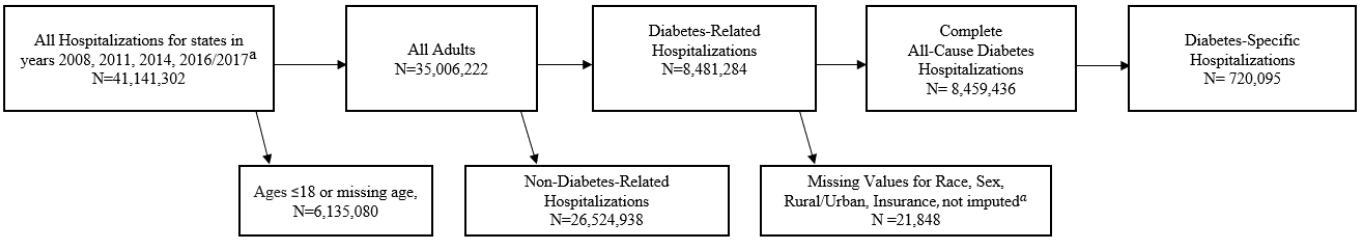
Appendix 1. Study Selection and Missing Data Materials

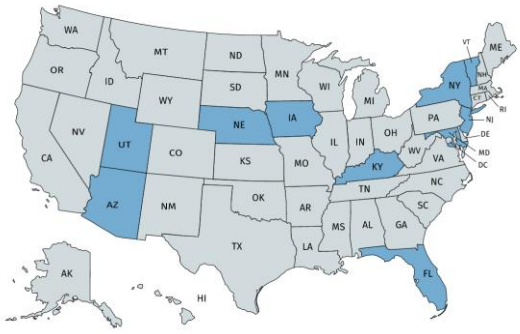
Appendix 1 Figure 1. NIS data selection



Appendix 1 Figure 2. SID data selection



Appendix 1 Figure 3. State Inpatient Databases Selection



Both our national and state data contain missing observations for key data used to explore inpatient utilization rates among subpopulations.

In general, states in the South had the highest prevalence of diabetes in 2016 (ex. Kentucky 11.8%, North Carolina 10.1%, Florida 9.8%), while other regions of the country were more

similar to each other (ex. Northeast/Mid-Atlantic: Vermont 7.3%, New Jersey 8.1%, Maryland 9.8%, New York 9.4%; Mid/Northwest: Iowa 8.1%, Nebraska 8.0%; Southwest: Arizona 9.7%, Utah 7.7%).

Appendix 1. Table 1. Variable Missingness in NIS data, by Year

Variable Name	Variable Type	Total Number of Missing Observations (%) - NIS				Description
		2008	2011	2014	2016	
Gender	Binary	218 (0.01)	155 (0.01)	184 (0.01)	751 (0.05)	Male/Female
Patient Location - NCHS categories	Ordered Categorical	43,157 (2.91)*	30983 (1.87)*	5,227 (0.35)	5,491 (0.35)	1."Central" Metro counties ≥ 1 million population 2. "Fringe" Metro counties ≥1 million population 3. Metro counties 250,000-999,999 population 4. Metro counties 50,000-249,999 5. Micropolitan counties 6. Not metropolitan or microplitan counties
Primary Payer	Unordered Categorical	2148 (0.14)	4609 (0.28)	2516 (0.17)	1833 (0.12)	1. Medicare 2. Medicaid 3. Private insurance 4. Self-pay 5. No charge 6. Other
Total # of Observations		1,484,331	1,657,036	1,497,935	1,566,504	

*****Variable missing in >1% of total # of observations for given state-year dataset

Within the NIS data, we observe missingness primarily in the patient location (rural/urban) and primary payer variables. Across all years, approximately 1.53% of observations had at least one missing analytic variable. Our year specific NIS datasets had missingness >1% for patient location in years 2008 and 2011 (**Appendix 1, Table 1)**. For these two years of data, we conducted hot-deck imputation using the R package *VIM*.[4] Observations were categorized within domains to allow for imputation of missing observations with data from similar observations. Domains were selected based on correlation with the variable with greatest missingness, patient location. Hospital characteristics, including hospital location, and encounter-level data, including admission type, were used to define our domains. Analysis using the NIS data for 2014 and 2016 were conducted using complete case selection, as missingness for analytic variables fell below 1% for these two years. This criterion excluded 79,905 observations from our final sample, approximately 0.27% of the diabetes-related inpatient stays in the NIS.

Appendix 1. Table 2. Characterizing Diabetes Related Hospitalizations within the NIS dataset by Data Missingness; years 2008-2016.

	Complete All-Cause Diabetes Hospitalizations		Data with Missing Observation for ≥1 variable	
# of Visits		29,444,406		458,599
s.e.		(6,072,056)		(75,609)
Age (Mean)		65.4		64.8
s.e.		(0.06)		(0.60)
	%	(95% CI)	%	(95% CI)
Age Groups				
18-29	2.1	(2, 2.1)	2.1	(1.8, 2.3)
30-44	7.3	(7.2, 7.4)	7.8	(6.9, 8.7)
45-64	35.2	(34.9, 35.4)	37.8	(35.3, 40.3)
65-74	23.1	(23, 23.2)	20.0	(19.1, 21)
75+	32.4	(32.1, 32.7)	32.3	(29.2, 35.4)
% Female	51.5	(51.4, 51.6)	47.2	(45.8, 48.5)
% Rural	18.7	(18, 19.4)	28.4	(22.5, 34.4)
Region				
Midwest	23.4	(22.4, 24.4)	2.9	(1.6, 4.2)
Northeast	17.6	(16.6, 18.6)	77.7	(70.2, 85.1)
South	41.2	(39.9, 42.5)	13.4	(8.7, 18.1)
West	17.8	(16.9, 18.6)	6.0	(4, 8)
Insurance				
Medicaid	11.5	(11.2, 11.8)	14.0	(11.1, 16.9)
Medicare	62.6	(62.2, 63)	58.5	(55.3, 61.8)
Private	19.7	(19.4, 20.1)	20.7	(18, 23.3)
Uninsured	3.7	(3.5, 3.8)	4.0	(2.9, 5.1)
Other	2.5	(2.3, 2.7)	2.9	(2.2, 3.5)

Dataset generated from National Inpatient Sample data, years 2008, 2011, 2014, 2016. All-cause diabetes hospitalizations include all inpatient stays with a diabetes-related diagnosis, while diabetes-specific visits include all hospitalizations with a principal diagnosis of a diabetes specific condition/complication.

*continuous variables reported as mean (sd) and proportions presented as proportion (95% C.I.)

We characterized the NIS datasets prior to imputation; data with ≥1 missing observation for our analytic variables and data with complete observations were both characterized (**Appendix 1, Table 2)**. Data with missing observations largely resembled the complete data in terms of age distribution, sex. Data with missing observations were predominantly from hospitals within the Northeast Region (77.7%).

Appendix 1. Table 3. Variable Missingness in SID datasets with any analytic variable with >1% missingness

	Variable Name				
	Gender	Race	Patient Location	Primary Payer	
SID Datasets: State and Year	n (%)	n (%)	n (%)	n (%)	Total # of Observations
Arizona					
2008	1 (0.0)	2,129 (1.6) *	581 (0.4)	1 (0.0)	136,665
Iowa					
2008	5 (0.0)	5,775 (18.3) *	194 (0.3)	-	69,999
2011	1 (0.0)	3,274 (4.9) *	7 (0.0)	48 (0.1)	66,921
2014	1 (0.0)	1,815 (2.9) *	6 (0.0)	-	63,462
2017	-	837 (1.2) *	7 (0.0)	-	71,197
Maryland					
2014	-	18,287 (12.8) *	400 (0.3)	4 (0.0)	143,475
North Carolina					
2008	-	67,399 (33.8) *	1,252 (0.6)	545 (0.3)	199,595
New Jersey					
2008	-	2,489 (1.1) *	105 (0.1)	-	220,830
2014	-	3,430 (1.6) *	59 (0.0)	-	209,071
2017	-	2,355 (1.1) *	79 (0.0)	-	213,858
New York					
2008	5 (0.0)	2,588 (0.5)	14,716 (3.0) *	-	486,693
2011	4 (0.0)	2,121 (0.4)	7,995 (1.6) *	-	506,044
2014	10	-	7,647 (1.6) *	-	484,811
2016	2 (0.0)	-	7,475 (1.5) *	-	497,642
Utah					
2008	-	2,169 (8.4) *	25 (0.1)	20 (0.1)	25,853
2011	1 (0.0)	1,692 (6.0) *	29 (0.1)	22 (0.1)	28,056
2014	-	15,198 (50.0) *	37 (0.1)	13 (0.0)	30,430
2017	8 (0.0)	1,139 (2.9) *	94 (0.2)	431 (1.1) *	39,942
Vermont					
2008	-	441 (4.6) *	5 (0.1)	6 (0.1)	9,561
2011	-	186 (1.9) *	13 (0.1)	205 (2.1) *	9,739
2014	-	138 (1.4) *	6 (0.1)	161 (1.7) *	9,689
2016	2 (0.0)	120 (1.2) *	5 (0.1)	241 (2.4) *	9,901

* >1% missingness for given variable in the SID dataset for the given state and year

"-" indicates no missing observations for the given dataset-variable

[1]Gender is a binary variable, with values Male or Female

[2]Race is an unordered categorical variable, with values 1)White, 2) Black, 3) Hispanic, 4) Asian, 5) Native, and 6) Mixed Race

[3]Patient Location is an ordered categorical variable, with values "Central" Metro counties ≥ 1 million population, Fringe" Metro counties ≥1 million population, Metro counties 250,000-999,999 population, Metro counties 50,000-249,999 population, Micropolitan counties, Not metropolitan or microplitan

[4]Primary Payer is an unordered categorical variable, with values 1) Medicare, 2) Medicaid, 3) Private Insurance, 4) Self-pay, 5) No charge, 6) Other

We observe missingness in the SID datasets primarily in the race (range: 0.4 – 33.2%), patient location (range: 0.0 – 3.0%), and primary payer variables (range: 0.0 – 2.4%). To impute these missing observations, we used an algorithm proposed and evaluated by Ma et al.,[5] focused explicitly on imputing missing data in the HCUP SID making it an ideal approach for our work. They show that conditional multiple imputation (MI) is the optimal approach when using HCUP

data. We applied their algorithm to impute data for variables missing greater than 1% per year. The algorithm was applied to each state by year dataset. We did not impute value for variables that were completely missing each year and state. Consequently, states such as NE which did not collect race data were not imputed and excluded from our state-specific race estimates.

Consequently, states such as IA that had race data which was not uniformly coded throughout years was not imputed and excluded from our state specific race estimates.

As noted by Ma et al., it is impossible to directly test whether the data are missing not at random (MNAR). For practical purposes we similarly assume that the data are missing at random (MAR) which has been recommended for practical applications especially when there are a large number of predictors of that can be included in the imputation model.[6-8] the HCUP data itself includes many quality predictors but following MA et al., we additionally include information on racial and socioeconomic status distributions from the U.S. Census and information on hospital characteristics the American Hospital Association database.

Conditional MI imputes data variable by variable rather than using a joint distribution. The benefit of this approach that it allows different types of variables to be modeled separately (e.g., categorical versus continuous variables). We use the MICE algorithm in R.[9] As an Markov chain Monte Carlo method we confirmed chain convergence to stationary distributions using convergence plots.

Appendix 2. ICD-9 and ICD-10 code list to define Diabetes-Specific Events

	ICD-9-CM/PCS	ICD-10-CM/PCS
Short-Term Complications[1]	250.10, 250.11, 250.12, 250.13, 250.20, 250.21, 250.22, 250.23, 250.30, 250.31, 250.32, 250.33	E10.10, E10.11, E10.65, E10.69, E11.00, E11.01, E11.10, E11.641, E11.65, E11.69, E13.00, E13.01, E13.10, E13.641, E13.65, E13.69
Long-Term Complications[1]	250.4, 250.40, 250.41, 250.42, 250.43, 250.5, 250.51, 250.52, 250.53, 250.6, 250.61, 250.62, 250.63, 250.7, 250.70, 250.71, 250.72, 250.73, 250.8, 250.80, 250.81, 250.82, 250.83, 250.9, 250.90, 250.91, 250.92, 250.93	E1021, E1029, E10311, E10319, E1036, E1039, E1040, E1051, E1052, E1059, E10618, E10620, E10621, E10622, E10628, E10630, E10638, E10649 E1065, E1069, E108, E118, E1121, E1129, E11311, E1136, E11319, E1139, E1140, E1151, E1152, E1159, E11618, E11620, E11621, E11622, E11628, E11630, E11638, E11649, E1165, E1169, E1321, E1322, E1329, E13311, E13319, E1336, E1339, E1340, E1351, E1352, E1359, E13618, E13620, E13621, E13622, E13628, E13630, E13638, E13649, E1365, E1369
Uncontrolled Diabetes[1]	250.02, 250.03	E10.649, E10.65, E11.65, E11.649, E13.649, E13.65
Lower Extremity Ulcers, Inflammation, and Infection[2]	454.0, 707.1, 680.6, 680.7, 681.1, 682.6, 682.7, 711.05, 711.06, 711.07, 730.05,730.06, 730.07, 730.15, 730.16, 730.17, 730.25, 730.26, 730.27, 730.35, 730.36, 730.37, 730.85, 730.86, 730.87, 730.95, 730.96, 730.97, 785.4	L97, I83.009, I83.019, 183.029, L02.429, L02.439, L02.629, L02.639, L03.039, L03.049, L03.129, L03.119, M00.059, M00.159, M00.259, M00.859, M00.069, M00.169, M00.269, M00.869, M00.079, M00.179, M00.279, M00.879, M86.159, M86.259, M86.169, M86.269, M86.179, M86.279, M86.659, M86.669, M86.679, M86.9, M90.859, M90.869, M90.879, I96
Non-Traumatic Lower Extremity Amputations[3]	84.11, 84.12, 84.13, 84.14, 84.15, 84.16, 84.17, 84.18, 84.19 Excluding traumatic amputations (895, 896, 897)	0Y6.P0Z0, 0Y6.P0Z2, 0Y6.P0Z3, 0Y6.Q0Z0, 0Y6.Q0Z1, 0Y6.Q0Z2, 0Y6.Q0Z3, 0Y6.R0Z0, 0Y6.R0Z1, 0Y6.R0Z2, 0Y6.R0Z3, 0Y6.S0Z0, 0Y6.S0Z1, 0Y6.S0Z2, 0Y6.S0Z3, 0Y6.T0Z0, 0Y6.T0Z1, 0Y6.T0Z2,

		0Y6.T0Z3, 0Y6.U0Z0, 0Y6.U0Z1, 0Y6.U0Z2, 0Y6.U0Z3, 0Y6.V0Z0, 0Y6.V0Z1, 0Y6.V0Z2, 0Y6.V0Z3, 0Y6.W0Z0, 0Y6.W0Z1, 0Y6.W0Z2, 0Y6.W0Z3, 0Y6.X0Z0, 0Y6.X0Z1, 0Y6.X0Z2, 0Y6.X0Z3, 0Y6.Y0Z0, 0Y6.Y0Z1, 0Y6.Y0Z2, 0Y6.Y0Z3, 0Y6.M0Z4, 0Y6.M0Z5, 0Y6.M0Z6, 0Y6.M0Z7, 0Y6.M0Z8, 0Y6.M0Z9, 0Y6.M0ZB, 0Y6.M0ZC, 06Y.M0ZD, 06Y.M0ZF, 0Y6.N0Z4, 0Y6.N0Z5, 0Y6.N0Z6, 0Y6.N0Z7, 0Y6.N0Z8, 0Y6.N0Z9, 0Y6.N0ZB, 0Y6.N0ZC, 0Y6.N0ZD, 0Y6.N0ZF, 0Y6.H0Z3, 0Y6.J0Z3, 0Y6.F0ZZ, 0Y6.G0ZZ, 0Y6.70ZZ, 0Y6.80ZZ, 0Y6.20ZZ, 0Y6.30ZZ, 0Y6.40ZZ

Diabetes-specific discharge records were defined by any record with any of the above listed codes on primary diagnosis.

Appendix 3. Calculating Crude Rates and Age-Standardized Rates

Estimating Analogous Denominator Population Estimates using the American Community Survey

Identifying analogous population figures to match subgroup populations broken down by rural/urban status, race, and region in the HCUP data was straightforward. To align insurance definitions with ACS population denominator estimates, if an ACS participant had multiple insurance providers, we considered their age, disability status, and employment status to determine likely primary payer based on a 2018 Medicare User Guide.[10] We recoded insurance categorization in HCUP to align with the ACS estimates using coding guidelines provided by methodology reports published by AHRQ.[11]

The IPUMS ACS provided rural/urban variable had high missingness (>10%). We replaced/imputed the variable with the rural-urban continuum codes published by the United States Department of Agriculture Economic Research Center, which allocates all Public Use Microdata Area data to rural/urban categorization based on metro and non-metro population shares.[12]

Calculation of Crude Population Utilization Rates by Subpopulation

NIS

Counts and standard errors of inpatient events generated using NIS data were weighted and adjusted for complex survey design. HCUP provides discharge weights for the NIS that are used to generate nationally representative estimates of hospitalizations. Trend weights supplied by HCUP were used for years 2008 and 2011, as NIS was redesigned in 2012. Trend weights facilitate comparison of NIS data pre- and post- redesign. Thus, the crude diabetes-related hospitalization rate for a given demographic/insurance group using NIS data is given by equation (1),

$$CR_v = 10{,}000 \cdot \frac{\sum_{i=1}^{n} w_i v_i}{N} = 10{,}000 \cdot \frac{S}{N}$$

Where w_i is the discharge/trend weight associated with the patient *i*, and v_i is the variable of interest (i.e. rural, 1=rural, 0=not rural). *N* represents the population estimate for the variable of interest Barret [13]. Variance for survey-weighted estimates were estimated using Taylor Series Linearization methodology provided in the *Survey* package for R [14].

We assumed constant denominator population counts,[13] consequently the standard error of the crude rate was calculated as:

$$SE_R = 10{,}000\, SE_S/N$$

Where SE_s is the standard error of the estimated count.

SID

Although the SID are considered a census of inpatient stays within hospitals in a given state, because we are estimating age-standardized estimates and are thus describing a different estimate than the direct rate of use within a state for a given year, we considered the state databases to be samples from a “super-population” for the purposes of variance estimation. To

estimate the standard error of our estimates, we assumed a Poisson distribution of counts, in which the standard error of the number of hospitalizations is equal to the square root of the number of hospitalizations.[15,16] The state databases are not weighted as each file contains nearly all hospitalizations from nearly all hospitals within a given state, thus the crude hospitalization rate using SID data is given by equation (2),

$$R = 10{,}000 \cdot \frac{S}{N}$$

Where *S* is the number of estimated counts, and *N* is the corresponding denominator population figure. We assumed constant denominator population counts, consequently the standard error of rates was calculated as:

$$SE_R = 10{,}000\, SE_S/N$$

Where SE_s is the standard error of the estimated count.

Standardization of Rates

Standardized rates were calculated using the direct method. Standardized rates reflect rates that would be expected for the observed study population if it had the same population distribution as the standard population.

Standard Population

All rates excluding age-specific and insurance-specific rates are age standardized using standard population distribution of the U.S. Adult Population. Standard population data of national age distribution was collected from the 2010 CDC National Mortality Database. We estimated the observed crude rate for each of the for each of the following age-specific bins for each demographic group:

Table 1. Standard Population Estimates: 2010 United States Adult Age Distribution

Age Group	N
18-29	51,773,937
30-44	61,032,705
45-64	81,489,000
65-74	21,713,000
75+	18,554,000

Estimates generated from the 2010 CDC National Mortality Database.[17]

Calculating Standardized Rates and Standardized Rate Error Estimates

We calculated the weighted average of bin-specific observed rates using weights proportional to the percentage of the standard population in age-specific cell.

$$R_{std} = Standardized\ Rate = \sum_i w_i P_i$$

Where *i* = 1 to 5 standard population bins, w_i is the proportion of the standard population in population group *i* of the total standard population and P_i is the observed age-specific crude rate [18].

The variance of standardized rates was calculated as:

$$var_{std} = Variance\ (Standardized\ Rate) = \sum_i {w_i}^2 * Variance\ (Pi)$$

Where *i* = 1 to 5 standard population bins, w_i is the proportion of the standard population in population group *i* of the total standard population, and P_i is the estimated age-specific crude rate.

95% confidence intervals for standardized rates were calculated as:

$$(R_{std} - 1.96 * \sqrt{var_{std}}\ \ ,\ \ R_{std} + 1.96 * \sqrt{var_{std}})$$

Age and Insurance Specific Rates

Age-specific rates and insurance-specific rates were not standardized because of the age-distributions within these groups. Insurance-specific crude rates were reported because direct standardization is unstable in the case of a zero-cell count (i.e., # of diabetes-specific hospitalizations in Vermont, ages 18-29, Medicare population). Therefore, insurance-specific rates do not control for population age composition and variability between states in these rates may be a result of variation in age distribution between geographies.[19]

Appendix 4. Additional National Descriptive Tables

Describing the National Sample

We reported mean and standard error for continuous variables and % for categorical variables by year. We also estimated percent change and 95% confidence intervals of population characteristics between 2008 and 2017 for both all-cause diabetes and diabetes-specific inpatient stays.

Appendix 4. Table 1. Sample Characteristics of All-Cause and Diabetes-Specific Inpatient Stays from the National Inpatient Sample Dataset, years 2008-2016

	All-Cause Diabetes Hospitalizations								Diabetes-Specific Hospitalizations							
	2008		2011		2014		2016		2008		2011		2014		2016	
# of Visits	6,950,056		7,630,758		7,450,098		7,792,188		622,329		683,968		680,190		557,394	
s.e.	(287,268)		(313,503)		(139,959)		(141,735)		(25,970)		(27,903)		(12,614)		(10,207)	
Age (Mean)	65.4		65.5		65.3		65.3		56.9		56.3		55.5		54.1	
s.e.	(0.15)		(0.15)		(0.07)		(0.06)		(0.18)		(0.19)		(0.09)		(0.09)	
	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)
Age Groups																
18-29	2.0	(1.9, 2.1)	2.0	(1.9, 2.1)	2.1	(2, 2.1)	2.1	(2.1, 2.1)	8.8	(8.5, 9.2)	9.3	(8.9, 9.7)	10.1	(9.8, 10.3)	12.3	(12.1, 12.6)
30-44	7.6	(7.3, 7.8)	7.3	(7, 7.5)	7.3	(7.1, 7.4)	7.0	(6.9, 7.1)	16.1	(15.6, 16.5)	16.0	(15.5, 16.5)	16.3	(16.1, 16.6)	16.8	(16.5, 17.1)
45-64	34.8	(34.3, 35.4)	35.5	(34.9, 36.1)	35.2	(35, 35.5)	35.0	(34.7, 35.3)	39.2	(38.7, 39.7)	40.8	(40.3, 41.4)	41.4	(41.1, 41.7)	40.8	(40.4, 41.1)
65-74	22.0	(21.7, 22.2)	22.3	(22.1, 22.5)	23.7	(23.5, 23.8)	24.3	(24.1, 24.4)	15.4	(15, 15.7)	15.2	(14.9, 15.6)	15.8	(15.6, 16)	15.5	(15.2, 15.7)
75+	33.6	(32.8, 34.4)	32.9	(32.2, 33.7)	31.8	(31.4, 32.1)	31.6	(31.3, 31.9)	20.6	(19.9, 21.2)	18.7	(18, 19.3)	16.4	(16.1, 16.7)	14.6	(14.3, 15)
% Female	52.9	(52.5, 53.2)	52.2	(51.8, 52.5)	50.9	(50.8, 51.1)	50.0	(49.9, 50.2)	47.4	(46.9, 47.9)	45.9	(45.4, 46.4)	44.1	(43.8, 44.4)	41.9	(41.5, 42.2)
% Rural	20.0	(18.1, 22)	19.4	(17.4, 21.3)	17.8	(16.8, 18.7)	17.5	(16.6, 18.3)	18.7	(16.7, 20.7)	82.0	(80, 84)	16.4	(15.5, 17.3)	16.4	(15.5, 17.2)
Region																
Midwest	23.3	(20.2, 26.4)	23.3	(20.1, 26.5)	23.0	(21.5, 24.5)	22.8	(21.3, 24.3)	21.2	(18.3, 24.1)	21.5	(18.5, 24.5)	21.7	(20.3, 23.1)	21.2	(19.8, 22.6)
Northeast	18.5	(15.3, 21.7)	19.2	(15.8, 22.6)	18.1	(16.8, 19.5)	18.1	(16.7, 19.5)	19.6	(16.3, 22.9)	19.9	(16.6, 23.2)	18.0	(16.6, 19.4)	17.2	(15.9, 18.6)
South	41.2	(37.1, 45.3)	39.6	(35.6, 43.6)	41.3	(39.5, 43.2)	41.1	(39.4, 42.9)	42.3	(38.2, 46.5)	40.0	(36, 43.9)	42.3	(40.5, 44.2)	43.4	(41.6, 45.2)
West	17.0	(14.3, 19.7)	17.8	(15, 20.7)	17.5	(16.2, 18.8)	18.0	(16.7, 19.2)	16.9	(14.2, 19.6)	18.6	(15.6, 21.6)	18.0	(16.6, 19.3)	18.2	(16.8, 19.5)
Insurance																
Medicaid	9.8	(9.2, 10.5)	10.7	(10, 11.4)	12.5	(12.1, 12.8)	12.9	(12.6, 13.3)	15.8	(14.7, 16.8)	17.1	(16.2, 18.1)	21.2	(20.6, 21.8)	23.5	(22.9, 24)
Medicare	60.8	(59.8, 61.7)	62.7	(61.8, 63.7)	63.3	(62.8, 63.7)	63.3	(62.9, 63.8)	47.5	(46.5, 48.5)	47.7	(46.7, 48.7)	47.3	(46.8, 47.8)	44.1	(43.6, 44.6)
Private	22.8	(22, 23.6)	19.8	(19, 20.6)	18.5	(18.1, 18.9)	18.2	(17.8, 18.6)	24.2	(23.3, 25.2)	21.7	(20.8, 22.7)	21.0	(20.5, 21.5)	21.6	(21.1, 22.1)
Uninsured	3.9	(3.5, 4.3)	4.2	(3.8, 4.6)	3.5	(3.3, 3.7)	3.1	(2.9, 3.3)	9.1	(8.3, 9.8)	10.0	(9.2, 10.9)	8.2	(7.7, 8.6)	8.2	(7.8, 8.7)
Other	2.7	(2.3, 3.1)	2.6	(2.2, 2.9)	2.3	(2.1, 2.4)	2.4	(2.2, 2.6)	3.4	(2.8, 4.1)	3.4	(2.8, 4.1)	2.4	(2.2, 2.6)	2.6	(2.3, 2.9)

Dataset generated from National Inpatient Sample data, years 2008, 2011, 2014, 2016. All-cause diabetes hospitalizations include all inpatient stays with a diabetes-related diagnosis, while diabetes-specific hospitalizations include all inpatient stays with a prinicpal diagnosis of a diabetes specific condition/complication.

Total # of All-Cause Diabetes hospitalizations=29,823,101; total # of diabetes-specific hospitalizations=2,543,882

*continuous variables reported as mean (sd) and proportions presented as proportion (95% C.I.)

Appendix 4. Table 2. Sample Characteristics of All-Cause and Diabetes-Specific Inpatient Stays from the National Inpatient Sample Dataset, years 2008-2016

	All-Cause Diabetes Hospitalizations		Diabetes-Specific Hospitalizations	
# of Visits (Weighted)	29,823,101		2,543,882	
s.e.	(359,101)		(32,742)	
Age (Mean)	65.4		55.7	
s.e.	(0.06)		(0.08)	
	%	(95% CI)	%	(95% CI)
Age Groups				
18-29	2.1	(2, 2.1)	10.1	(9.9, 10.2)
30-44	7.3	(7.2, 7.4)	16.3	(16.1, 16.5)
45-64	35.2	(34.9, 35.4)	40.6	(40.3, 40.8)
65-74	23.1	(23, 23.2)	15.5	(15.3, 15.6)
75+	32.5	(32.2, 32.8)	17.6	(17.4, 17.9)
% Female	51.5	(51.3, 51.6)	44.9	(44.7, 45.2)
% Rural	18.6	(17.9, 19.3)	17.4	(16.7, 18.1)
Region				
Midwest	23.1	(22.1, 24.1)	21.4	(20.5, 22.4)
Northeast	18.5	(17.5, 19.4)	18.7	(17.8, 19.7)
South	40.8	(39.5, 42.1)	41.9	(40.6, 43.3)
West	17.6	(16.8, 18.4)	17.9	(17, 18.8)
Insurance				
Medicaid	11.5	(11.2, 11.8)	19.3	(18.9, 19.7)
Medicare	62.6	(62.2, 63)	46.7	(46.3, 47.2)
Private	19.8	(19.4, 20.1)	22.1	(21.7, 22.5)
Uninsured	3.7	(3.5, 3.8)	8.9	(8.6, 9.2)
Other	2.5	(2.3, 2.7)	3.0	(2.7, 3.3)

Dataset generated from National Inpatient Sample data, years 2008, 2011, 2014, 2016. All-cause diabetes hospitalizations include all inpatient stays with a diabetes-related diagnosis, while diabetes-specific visits include all inpatient stays with a principal diagnosis of a diabetes specific condition/complication.

*continuous variables reported as mean (sd) and proportions presented as proportion (95% C.I.)

Over 2008 to 2016, the count of all cause diabetes hospitalizations increased from 6,950,056 to 7,792,188, with no observed changes in shares represented by region or rurality (**Appendix 4. Table 1**). We observe a slight reduction in the share of all-cause diabetes hospitalizations in the groups: ages 30-44, Females, Private, and Uninsured. We observe increases in the share of all-cause diabetes hospitalizations occurred among those insured with Medicaid, Medicare, and those aged 65-74.

From 2008 to 2016, the count of diabetes specific hospitalizations decreased from 622,329 to 557,394 (**Appendix 4. Table 1**). Patients with diabetes-specific hospitalizations are increasingly younger (18-29) and Medicaid-insured. We observe decreased shares of hospitalizations represented by the groups: 75+, Female, Rural, Medicare, and Privately insured.

Patients admitted for a diabetes-specific reason are younger on average as compared patients conforming to our all-cause diabetes criteria (**Appendix 4. Table 3**). Further, diabetes-specific hospitalizations are characterized by greater proportions of patients insured by either Medicaid and Private insurance, and Uninsured. We observe no difference between groups in terms of rurality and region.

Appendix 4. Table 3. Sample Characteristics of All-Cause Diabetes and Diabetes-Specific Inpatient Stays among Adults ages 18-29 from the National Inpatient Sample

	All-Cause Diabetes Hospitalizations				Diabetes-Specific Hospitalizations			
	2008	2011	2014	2016	2008	2011	2014	2016
# of Visits (Weighted)	141,944	151,783	154,130	163,724	54,919	63,444	68,535	68,749
s.e.	(6842)	(7072)	(3282)	(3,351)	(2614)	(2779)	(1449)	(1423)
Age (Mean)	24.4	24.4	24.3	24.4	23.6	23.6	23.6	23.5
s.e.	(0.04)	(0.04)	(0.02)	(0.02)	(0.07)	(0.06)	(0.04)	(0.03)
	% (95% CI)							
% Female	64.3 (63.2, 65.4)	62.6 (61.5, 63.7)	62.7 (62, 63.4)	61.2 (60.5, 61.9)	53.7 (52.2, 55.2)	52.9 (51.4, 54.5)	53.8 (52.8, 54.8)	51.8 (50.8, 52.8)
% Rural	18.1 (16, 20.2)	17.8 (15.6, 20)	15.3 (14.4, 16.3)	15.8 (14.9, 16.6)	18.8 (16.3, 21.2)	18.4 (15.8, 20.9)	15.8 (14.7, 16.8)	17.0 (15.8, 18.1)
Region								
Midwest	21.6 (18, 25.2)	23.4 (19.6, 27.3)	23.2 (21.5, 25)	22.7 (21, 24.4)	21.1 (17.6, 24.6)	22.7 (19.2, 26.1)	23.8 (22, 25.5)	23.4 (21.7, 25.1)
Northeast	16.2 (12.9, 19.4)	15.4 (12.2, 18.6)	14.9 (13.5, 16.3)	14.6 (13.3, 15.9)	15.6 (12.5, 18.7)	15.2 (12.4, 18)	13.9 (12.6, 15.2)	13.3 (12.1, 14.6)
South	43.3 (38.5, 48.1)	39.8 (35.3, 44.3)	41.8 (39.7, 43.9)	43.1 (41.1, 45.1)	45.6 (40.8, 50.3)	39.2 (35, 43.4)	42.0 (39.9, 44.1)	44.0 (42, 46)
West	19.0 (15.4, 22.5)	21.4 (17.7, 25)	20.1 (18.5, 21.7)	19.6 (18.1, 21.2)	17.7 (14.7, 20.8)	22.9 (19, 26.7)	20.3 (18.6, 21.9)	19.2 (17.7, 20.8)
Insurance								
Medicaid	36.5 (34.8, 38.2)	38.8 (37, 40.5)	45.5 (44.5, 46.4)	47.3 (46.3, 48.2)	32.9 (30.8, 35)	35.0 (32.9, 37.1)	42.8 (41.6, 44.1)	44.9 (43.7, 46.2)
Medicare	9.8 (9, 10.6)	9.7 (8.9, 10.5)	8.5 (8.1, 8.9)	7.9 (7.5, 8.3)	6.8 (5.9, 7.8)	7.5 (6.6, 8.5)	6.9 (6.3, 7.4)	5.0 (4.6, 5.5)
Private	31.7 (29.9, 33.4)	29.3 (27.7, 30.9)	30.0 (29.2, 30.8)	29.9 (29.1, 30.7)	29.3 (27.4, 31.2)	28.5 (26.7, 30.2)	29.8 (28.8, 30.8)	30.3 (29.3, 31.3)
Uninsured	17.0 (15.8, 18.1)	16.7 (15.4, 18.1)	12.8 (12.2, 13.5)	11.4 (10.8, 12.1)	25.4 (23.8, 27)	23.0 (21.1, 24.8)	17.5 (16.5, 18.5)	15.9 (14.9, 16.8)
Other	5.0 (4.2, 5.8)	5.5 (4.6, 6.4)	3.2 (2.9, 3.5)	3.5 (3.1, 3.9)	5.6 (4.4, 6.7)	6.1 (4.8, 7.3)	3.0 (2.6, 3.4)	3.8 (3.3, 4.4)

Dataset generated from National Inpatient Sample data, years 2008, 2011, 2014, 2016. All-cause diabetes hospitalizations include all inpatient stays with a diabetes-related diagnosis, while diabetes-specific visits include all inpatient stays with a principal diagnosis of a diabetes specific condition/complication.

*continuous variables reported as mean (sd) and proportions presented as proportion (95% C.I.)

Appendix 5. State-Specific All-Cause Diabetes Hospitalization Rates Tables

Appendix 5. Table 1. Rates of All-Cause Diabetes Inpatient Stays per 10,000 Adults in Arizona; Years 2008-2017

	2008				2011				2014				2017				2017-2008		
Variable	**# of I.P. Stays**	**Denominator**	**Rate**	**(c.i.)**	**# of I.P. Stays**	**Denominator**	**Rate**	**(c.i.)**	**# of I.P. Stays**	**Denominator**	**Rate**	**(c.i.)**	**# of I.P. Stays**	**Denominator**	**Rate**	**(c.i.)**	**Absolute Δ**	**Percent Δ**	**(c.i.)**
Age																			
18-29	3,710	1,077,305	34.44	(33.3,35.6)	4,047	1,087,985	37.2	(36.1,38.3)	3,779	1,116,039	33.9	(32.8,34.9)	3,824	1,171,053	32.7	(31.6,33.7)	-1.7	-5.1	(-8.7, -1.5)
30-44	12,657	1,319,581	95.92	(94.3,97.6)	14,251	1,249,964	114	(112.1,115.9)	12,858	1,294,687	99.3	(97.6,101)	12,680	1,318,320	96.2	(94.5,97.9)	0.3	0.3	(-1.8, 2.4)
45-64	49,879	1,519,215	328.32	(325.4,331.2)	55,861	1,599,974	349.1	(346.2,352)	52,618	1,628,864	323	(320.3,325.8)	51,690	1,697,501	304.5	(301.9,307.1)	-23.8	-7.3	(-8.3, -6.3)
65-74	30,225	412,979	731.88	(723.6,740.1)	34,404	482,729	712.7	(705.2,720.2)	34,660	577,502	600.2	(593.9,606.5)	36,469	645,040	565.4	(559.6,571.2)	-166.5	-22.7	(-23.9, -21.5)
75+	40,194	447,485	898.22	(889.4,907)	43,365	439,111	987.6	(978.3,996.9)	41,344	493,146	838.4	(830.3,846.5)	44,841	552,520	811.6	(804.1,819.1)	-86.6	-9.6	(-10.7, -8.5)
Sex																			
Female	68,108	2,405,053	268.31	(266.3,270.4)	75,210	2,463,272	285.2	(283.2,287.3)	69,780	2,597,140	244.9	-243246.7	69,829	2,730,465	227.3	(225.6,229)	-41	-15.3	(-16.1, -14.5)
Male	68,557	2,371,512	306.62	(304.3,308.9)	76,718	2,396,491	324.7	(322.4,327)	75,479	2,513,098	293.5	(291.4,295.6)	79,675	2,653,969	285.5	(283.5,287.5)	-21.1	-6.9	(-7.7, -6.1)
Race/Ethnicity[d]																			
White, Non-Hispanic	-	-	-	-	-	-	-	-	91,281	3123174	230.9	(229.4,232.5)	94,761	3,201,040	225.7	(224.2,227.2)	-5.2	-2.3	(-3.1, -1.5)
Black, Non-Hispanic	-	-	-	-	-	-	-	-	7,493	202353	457	(446.4,467.7)	8,208	219,796	457.5	(447.4,467.7)	0.5	0.1	(-2.6, 2.8)
Hispanic	-	-	-	-	-	-	-	-	31,427	1353068	333.9	(330.1,337.8)	33,819	1,480,422	317.2	(313.7,320.7)	-16.7	-5.0	(-6.3, -3.7)
Rural/Urban																			
Rural	16,925	460,355	323.39	(318.4,328.4)	18,715	470,682	338	-333342.9	9,147	529,619	145.2	(142.1,148.3)	8,625	535,281	131.1	(128.2,134)	-192.3	-59.5	(-61, -58)
Urban	119,740	4,316,210	281.09	(279.5,282.7)	133,213	4,389,081	299.1	(297.5,300.7)	136,112	4,580,619	284.2	(282.7,285.7)	140,879	4,849,153	270.8	(269.4,272.3)	-10.3	-3.7	(-4.3, -3.1)
Insurance																			
Medicaid	18,796	337,252	557.33	(549.4,565.3)	23,598	471,844	500.1	(493.7,506.5)	24,537	496,345	494.4	(488.2,500.5)	28,532	594,676	479.8	(474.2,485.4)	-77.5	-13.9	(-15.4, -12.4)
Medicare	78,194	945,447	827.05	(821.3,832.9)	91,211	1,018,680	895.4	(889.6,901.2)	87,802	1,171,311	749.6	(744.6,754.6)	93,099	1,294,597	719.1	(714.5,723.8)	-107.9	-13.1	(-13.9, -12.3)
Private	30,798	2,445,558	125.94	(124.5,127.3)	26,341	2,295,628	114.7	(113.4,116.1)	24,746	2,500,398	99	(97.7,100.2)	21,806	2,714,220	80.3	(79.3,81.4)	-45.6	-36.2	(-37.3, -35.1)
Uninsured	4,079	874,954	46.62	(45.2,48.1)	7,379	894,434	82.5	(80.6,84.4)	5,297	744,112	71.2	(69.3,73.1)	3,023	583,927	51.8	(49.9,53.6)	5.2	11.1	(7, 15.2)
Total	136,665	4,776,565	285.42	(283.9,286.9)	151,928	4,859,763	303.3	(301.7,304.8)	145,259	5,110,238	267.4	-266268.8	149,504	5,384,434	254.6	(253.2,255.9)	-30.8	-10.8	(-11.4, -10.2)

[a] Total # of Inpatient Stays N=583,356

[b] All rates except Age-Specific and Insurance-Specific rates are age-standardized to the 2010 US Adult Population using data from the CDC Mortality Database

[c] The transition from ICD-9 CM/PCS to ICD-10 CM/PCS coding occured in third quarter of 2015. Estimates reported from years post-2015 were estimated using ICD-10 codes and may not be directly comparable to rates estimated pre-2015.

[d] Value of - indicates estimate was not reported. All estimates n<=10 events or RSE>=30% were not reported. Additionally, HCUP prioritizes ethnicity when coding the uniform Race variable, AZ did not provide an ethnicity variable in 2008 and 2011. Percent change estimates for race/ethnicity subgroups for AZ were calculated using 2014 as the reference year.

Appendix 5. Table 2. Rates of All-Cause Diabetes Inpatient Stays per 10,000 Adults in Florida; Years 2008-2017

Variable	2008				2011				2014				2017				2017-2008		
	# of I.P. Stays	Denominator	Rate	(c.i.)	# of I.P. Stays	Denominator	Rate	(c.i.)	# of I.P. Stays	Denominator	Rate	(c.i.)	# of I.P. Stays	Denominator	Rate	(c.i.)	Absolute Δ	Percent Δ	(c.i.)
Age																			
18-29	8,716	2,783,157	31.3	(30.7,32)	9,946	2,985,810	33.3	(32.7,34)	10,870	3,080,075	35.3	(34.6,36)	12,272	3,158,262	38.9	(38.2,39.5)	7.6	24.3	(21.7, 26.9)
30-44	35,360	3,590,210	98.5	(97.5,99.5)	36,996	3,545,422	104.3	(103.3,105.4)	39,032	3,668,380	106.4	(105.3,107.5)	41,005	3,857,687	106.3	(105.3,107.3)	7.8	7.9	(6.7, 9.1)
45-64	166,922	4,764,788	350.3	(348.6,352)	188,873	5,173,375	365.1	(363.4,366.7)	200,979	5,296,412	379.5	(377.8,381.1)	216,462	5,554,964	389.7	(388, 391.3)	39.4	11.2	(10.6, 11.8)
65-74	115,266	1,419,169	812.2	(807.5,816.9)	129,930	1,642,006	791.3	(787, 795.6)	143,880	1,928,373	746.1	(742.3,750)	158,551	2,139,804	741	(737.3,744.6)	-71.2	-8.8	(-9.4, -8.2)
75+	187,399	1,762,049	1064	(1,058.7,1,068.3)	205,865	1,718,192	1198.1	(1193, 1203.3)	214,424	1,868,050	1147.8	(1143, 1152.7)	237,735	2,074,993	1145.7	(1141.1,1150.3)	82.2	7.7	(7.2, 8.2)
Sex																			
Female	261,110	7,374,758	295.9	(294.7,297)	288,872	7,787,443	310.1	(308.9,311.2)	303,166	8,192,489	304.7	(303.6,305.8)	322,388	8,671,836	300.4	(299.3,301.5)	4.5	1.5	(1.1, 1.9)
Male	252,553	6,944,615	335.7	(334.4,337)	282,738	7,277,362	353.1	(351.8,354.4)	306,019	7,648,801	354.3	(353, 355.5)	343,637	8,113,874	366.5	(365.3,367.8)	30.8	9.2	(8.7, 9.7)
Race/Ethnicity																			
White, Non-Hispanic	-	-	-	-	353,204	9124354	289.1	(288.1,290.1)	369,085	9299079	290.1	(289.1,291.1)	398,262	9,542,674	299.2	(298.2,300.2)	10.1	3.5	(3.1, 3.9)
Black, Non-Hispanic	-	-	-	-	108,828	2116845	613.2	(609.5,616.9)	117,184	2272110	589.4	(586, 592.8)	130,426	2,399,728	601.6	(598.3,604.9)	-11.6	-1.9	(-2.6, -1.2)
Hispanic	-	-	-	-	93,346	3232996	331.5	(329.4,333.6)	102,572	3598495	315.9	(314, 317.8)	115,561	4,062,171	300.6	(298.9,302.4)	-30.9	-9.3	(-10, -8.6)
Rural/Urban																			
Rural	41,026	1,020,740	344	(340.6,347.4)	46,238	1,051,316	347	(343.8,350.3)	28,575	963,272	240.5	(237.6,243.4)	32,051	998,650	256.6	(253.6,259.5)	-87.4	-25.4	(-26.5, -24.3)
Urban	472,637	13,298,633	311.1	(310.2,312)	525,372	14,013,489	327.9	(327, 328.8)	580,610	14,878,018	333.3	(332.4,334.2)	633,974	15,787,060	336.1	(335.2,336.9)	25	8.0	(7.7, 8.3)
Insurance																			
Medicaid	41,141	519,576	791.8	(784.2,799.5)	55,735	790,678	704.9	(699, 710.8)	60,681	973,616	623.3	(618.3,628.2)	61,429	1,010,681	607.8	(603, 612.6)	-184	-23.2	(-24.2, -22.2)
Medicare	339,950	3,436,830	989.1	(985.8,992.5)	390,278	3,674,467	1062.1	(1058.8,1065.5)	417,456	4,124,206	1012.2	(1009.1,1015.3)	456,013	4,525,869	1007.6	(1004.6,1010.5)	18.5	1.9	(1.5, 2.3)
Private	89,731	6,973,815	128.7	(127.8,129.5)	77,595	6,712,132	115.6	(114.8,116.4)	81,683	7,392,875	110.5	(109.7,111.2)	93,605	8,391,459	111.5	(110.8,112.3)	-17.2	-13.4	(-14.1, -12.7)
Uninsured	27,882	3,117,459	89.4	(88.4,90.5)	31,822	3,570,343	89.1	(88.1,90.1)	32,043	3,000,154	106.8	(105.6,108)	34,918	2,506,717	139.3	(137.8,140.8)	49.9	55.8	(54.2, 57.4)
Total	513,663	14,319,373	313.6	(312.7,314.4)	571,610	15,064,805	329.4	(328.5,330.2)	609,185	15,841,290	327.2	(326.3,328)	666,025	16,785,710	330.8	(330, 331.6)	17.2	5.5	(5.2, 5.8)

[a] Total # of Inpatient Stays N=2,360,483

[b] All rates except Age-Specific and Insurance-Specific rates are age-standardized to the 2010 US Adult Population using data from the CDC Mortality Database

[c] The transition from ICD-9 CM/PCS to ICD-10 CM/PCS coding occured in third quarter of 2015. Estimates reported from years post-2015 were estimated using ICD-10 codes and may not be directly comparable to rates estimated pre-2015.

[d] Value of - indicates estimate was not reported. All estimates n<=10 events or RSE>=30% were not reported. Additionally, HCUP prioritizes ethnicity when coding the uniform Race variable, FL, IA, and NC did not provide an ethnicity variable in 2008. Percent change estimates for race/ethnicity subgroups in states FL, IA, and NC used 2011 as the reference year.

Appendix 5. Table 3. Rates of All-Cause Diabetes Inpatient Stays per 10,000 Adults in Iowa; Years 2008-2017

Variable	2008				2011				2014				2017				2017-2008		
	# of I.P. Stays	Denominator	Rate	(c.i.)	# of I.P. Stays	Denominator	Rate	(c.i.)	# of I.P. Stays	Denominator	Rate	(c.i.)	# of I.P. Stays	Denominator	Rate	(c.i.)	Absolute Δ	Percent Δ	(c.i.)
Age																			
18-29	1,075	514,831	20.9	(19.6,22.1)	1,085	508,767	21.3	(20.1,22.6)	1,159	511,098	22.7	(21.4,24.0)	1,372	519,925	26.4	(25.0,27.8)	5.5	26.4	(18.8, 34)
30-44	3,969	554,642	71.6	(69.3,73.8)	3,682	552,221	66.7	(64.5,68.8)	3,407	561,554	60.7	(58.6,62.7)	4,273	569,426	75.0	(72.8,77.3)	3.5	4.9	(1.2, 8.6)
45-64	20,134	787,644	255.6	(252.1,259.2)	20,446	820,979	249.0	(245.6,252.5)	19,762	817,938	241.6	(238.2,245.0)	21,913	802,022	273.2	(269.6,276.8)	17.6	6.9	(5.2, 8.6)
65-74	15,415	192,149	802.2	(789.6,814.9)	14,847	210,963	703.8	(692.5,715.1)	14,653	241,275	607.3	(597.5,617.2)	17,230	267,215	644.8	(635.2,654.4)	-157.4	-19.6	(-21.3, -17.9)
75+	29,406	248,618	1182.8	(1169.3,1196.3)	26,861	246,990	1087.5	(1074.5,1100.5)	24,481	250,593	976.9	(964.7,989.2)	26,409	256,554	1029.4	(1017.0,1041.8)	-153.4	-13.0	(-14.3, -11.7)
Sex																			
Female	36,605	1,178,886	264.6	(261.8,267.4)	34,794	1,193,978	248.2	(245.5,250.8)	32,106	1,212,257	224.1	(221.6,226.6)	35,016	1,227,627	240.6	(238.0,243.1)	-24	-9.1	(-10.3, -7.9)
Male	33,394	1,118,998	303.8	(300.5,307.1)	32,127	1,145,942	276.8	(273.7,279.8)	31,356	1,170,201	257.2	(254.4,260.1)	36,181	1,187,515	287.9	(284.9,290.9)	-15.9	-5.2	(-6.4, -4)
Race/Ethnicity																			
White, Non-Hispanic	-	-	-	-	62,571	2118989	254.3	(252.3,256.3)	58,546	2131366	232.2	(230.3,234.2)	64,793	2,128,722	252.9	(250.9,254.8)	-1.4	-0.6	(-1.5, 0.3)
Black, Non-Hispanic	-	-	-	-	2,617	53633	693.6	(665.3,722.0)	2,645	68893	521.8	(500.9,542.6)	3,365	67,976	630.5	(608.4,652.6)	-63.1	-9.1	(-13.5, -4.7)
Hispanic	-	-	-	-	800	90769	176.0	(160.4,191.5)	1,268	102599	228.6	(214.0,243.2)	1,624	114,337	325.4	(305.8,345)	149.4	84.9	(72.9, 96.9)
Rural/Urban																			
Rural	35,660	1,159,789	251.8	(249.1,254.5)	33,204	1,155,609	230.9	(228.3,233.4)	29,576	917,459	253.2	(250.3,256.2)	31,921	907,571	276.4	(273.3,279.6)	24.7	9.8	(8.4, 11.2)
Urban	34,339	1,138,095	315.4	(312, 318.7)	33,717	1,184,311	295.2	(292.1,298.4)	33,886	1,464,999	227.0	(224.6,229.4)	39,276	1,507,571	250.3	(247.8,252.8)	-65.1	-20.6	(-21.7, -19.5)
Insurance																			
Medicaid	4,568	96,410	473.8	(460.1,487.6)	4,994	114,769	435.2	(423.1,447.3)	5,907	161,225	366.4	(357.0,375.7)	7,393	197,985	373.4	(364.9,381.9)	-100.4	-21.2	(-24.1, -18.3)
Medicare	50,055	487,455	1026.9	(1017.9,1,035.9)	46,962	509,930	920.9	(912.6,929.3)	45,290	551,939	820.6	-813,828.10	50,752	573,828	884.5	(876.8,892.2)	-142.4	-13.9	(-14.9, -12.9)
Private	13,087	1,472,585	88.9	(87.4,90.4)	12,878	1,443,397	89.2	(87.7,90.8)	10,988	1,489,539	73.8	(72.4,75.2)	11,785	1,498,814	78.6	(77.2,80.1)	-10.2	-11.5	(-13.5, -9.5)
Uninsured	1,552	221,821	70.0	(66.5,73.5)	1,355	244,747	55.4	(52.4,58.3)	747	159,690	46.8	(43.4,50.1)	663	118,942	55.7	(51.5,60.0)	-14.2	-20.3	(-26.9, -13.7)
Total	69,999	2,297,884	279.9	(277.8,282.0)	66,921	2,339,920	259.8	(257.8,261.8)	63,462	2,382,458	238.2	(236.4,240.1)	71,197	2,415,142	261.4	(259.4,263.3)	-18.5	-6.6	(-7.5, -5.7)

[a] Total # of Inpatient Stays N=271,579

[b] All rates except Age-Specific and Insurance-Specific rates are age-standardized to the 2010 US Adult Population using data from the CDC Mortality Database

[c] The transition from ICD-9 CM/PCS to ICD-10 CM/PCS coding occured in third quarter of 2015. Estimates reported from years post-2015 were estimated using ICD-10 codes and may not be directly comparable to rates estimated pre-2015.

[d] Value of - indicates estimate was not reported. All estimates n<=10 events or RSE>=30% were not reported. Additionally, HCUP prioritizes ethnicity when coding the uniform Race variable, FL, IA, and NC did not provide an ethnicity variable in 2008. Percent change estimates for race/ethnicity subgroups in states FL, IA, and NC used 2011 as the reference year.

Appendix 5. Table 4. Rates of All-Cause Diabetes Inpatient Stays per 10,000 Adults in Kentucky; Years 2008-2017

	2008				2011				2014				2017				2017-2008		
Variable	**# of I.P. Stays**	**Denominator**	**Rate**	**(c.i.)**	**# of I.P. Stays**	**Denominator**	**Rate**	**(c.i.)**	**# of I.P. Stays**	**Denominator**	**Rate**	**(c.i.)**	**# of I.P. Stays**	**Denominator**	**Rate**	**(c.i.)**	**Absolute Δ**	**Percent Δ**	**(c.i.)**
Age																			
18-29	2,756	686,355	40.2	(38.7,41.7)	2,824	701,845	40.2	(38.8,41.7)	2,785	705,491	39.5	(38,40.9)	3,035	723,004	42	(40.5,43.5)	1.8	4.5	(-0.1, 9.1)
30-44	11,230	875,762	128.2	(125.9,130.6)	11,762	854,038	137.7	(135.2,140.2)	11,132	844,789	131.8	(129.3,134.2)	11,020	828,086	133.1	(130.6,135.6)	4.9	3.8	(1.5, 6.1)
45-64	50,737	1,141,903	444.3	(440.5,448.2)	55,571	1,197,727	464	(460.1,467.8)	54,328	1,195,181	454.6	(450.7,458.4)	56,700	1,181,324	480	-476483.9	35.7	8.0	(6.9, 9.1)
65-74	31,235	282,371	1106.2	(1093.9,1118.4)	35,304	310,591	1136.7	(1124.8,1148.5)	33,839	361,611	935.8	(925.8,945.8)	37,914	388,350	976.3	(966.5,986.1)	-129.9	-11.7	(-12.9, -10.5)
75+	40,437	278,395	1452.5	(1438.3,1466.7)	43,449	283,281	1533.8	(1519.4,1548.2)	40,435	292,355	1383.1	(1369.6,1396.6)	44,326	320,578	1382.7	(1369.8,1395.6)	-69.8	-4.8	(-5.9, -3.7)
Sex																			
Female	75,444	1,687,215	419.1	(416.1,422.1)	80,893	1,723,771	433.2	(430.2,436.2)	75,508	1,745,872	391.5	(388.7,394.3)	79,220	1,769,085	396.4	(393.7,399.2)	-22.7	-5.4	(-6.2, -4.6)
Male	60,951	1,577,571	410.8	(407.6,414.1)	68,017	1,623,711	435.1	(431.8,438.4)	67,011	1,653,555	405.8	(402.7,408.9)	73,775	1,672,257	428.6	(425.5,431.7)	17.8	4.3	(3.4, 5.2)
Race/Ethnicity																			
White, Non-Hispanic	120,462	2914443	397.5	(395.3,399.8)	133,985	2936726	427.9	(425.6,430.2)	126,747	2963813	390.3	(388.1,392.4)	135,918	2,974,103	404.7	(402.6,406.9)	7.2	1.8	(1.2, 2.4)
Black, Non-Hispanic	10,808	228993	561.4	(550.5,572.3)	12,865	256770	596.2	(585.7,606.7)	12,715	257591	555.9	(546.1,565.7)	14,594	267,804	601.4	(591.6,611.3)	40	7.1	(4.9, 9.3)
Hispanic	544	60828	214.1	(192.4,235.8)	840	81175	181.9	(168.5,195.4)	1,683	89378	421	(397.8,444.3)	1,166	95,903	260.6	(242.1,279)	46.5	21.7	(10.5, 32.9)
Rural/Urban																			
Rural	69,873	1,456,541	460.2	(456.8,463.6)	75,718	1,450,065	485.6	(482.2,489.1)	70,714	1,301,804	490.4	(486.7,494)	73,622	1,300,430	497.3	(493.6,500.9)	37.1	8.1	(7.2, 9)
Urban	66,522	1,808,245	375	(372.1,377.8)	73,192	1,897,417	389.1	(386.3,391.9)	71,805	2,097,623	334.9	(332.4,337.3)	79,373	2,140,912	353.7	(351.2,356.2)	-21.3	-5.7	(-6.6, -4.8)
Insurance																			
Medicaid	16,260	200,703	810.2	(797.7,822.6)	17,711	212,517	833.4	(821.1,845.7)	22,822	375,297	608.1	(600.2,616)	24,654	512,109	481.4	(475.4,487.4)	-328.8	-40.6	(-42, -39.2)
Medicare	84,417	701,873	1202.7	(1194.6,1210.9)	98,177	761,230	1289.7	(1281.6,1297.8)	90,183	819,549	1100.4	(1093.2,1107.6)	100,053	871,862	1147.6	(1140.5,1154.7)	-55.1	-4.6	(-5.3, -3.9)
Private	28,108	1,788,932	157.1	(155.3,159)	24,618	1,709,024	144	(142.2,145.8)	25,206	1,776,836	141.9	(140.1,143.6)	24,174	1,773,309	136.3	(134.6,138)	-20.8	-13.2	(-14.5, -11.9)
Uninsured	4,304	513,674	83.8	(81.3,86.3)	6,697	592,445	113	(110.3,115.7)	2,066	361,709	57.1	(54.7,59.6)	1,465	217,001	67.5	(64.1,71)	-16.3	-19.5	(-23.9, -15.1)
Total	136,395	3,264,786	413.9	(411.7,416.1)	148,910	3,347,482	432.4	(430.2,434.6)	142,519	3,399,427	396.9	(394.9,399)	152,995	3,441,342	410.4	(408.3,412.4)	-3.5	-0.8	(-1.4, -0.2)

[a] Total # of Inpatient Stays N=580,819

[b] All rates except Age-Specific and Insurance-Specific rates are age-standardized to the 2010 US Adult Population using data from the CDC Mortality Database

[c] The transition from ICD-9 CM/PCS to ICD-10 CM/PCS coding occured in third quarter of 2015. Estimates reported from years post-2015 were estimated using ICD-10 codes and may not be directly comparable to rates estimated pre-2015.

Appendix 5. Table 5. Rates of All-Cause Diabetes Inpatient Stays per 10,000 Adults in Maryland; Years 2008-2017

	2008				2011				2014				2017				2017-2008		
Variable	**# of I.P. Stays**	**Denominator**	**Rate**	**(c.i.)**	**# of I.P. Stays**	**Denominator**	**Rate**	**(c.i.)**	**# of I.P. Stays**	**Denominator**	**Rate**	**(c.i.)**	**# of I.P. Stays**	**Denominator**	**Rate**	**(c.i.)**	**Absolute Δ**	**Percent Δ**	**(c.i.)**
Age																			
18-29	2,857	925,017	30.9	(29.8,32)	3,204	961,324	33.3	(32.2,34.5)	2,863	981,853	29.2	(28.1,30.2)	2,835	956,139	29.7	(28.6,30.7)	-1.2	-3.9	(-8.4, 0.6)
30-44	13,133	1,179,901	111.3	(109.4,113.2)	11,785	1,168,164	100.9	(99.1,102.7)	10,053	1,184,647	84.9	(83.2,86.5)	9,610	1,197,106	80.3	(78.7,81.9)	-31	-27.9	(-29.8, -26)
45-64	60,879	1,509,065	403.4	(400.2,406.6)	59,968	1,622,154	369.7	(366.7,372.6)	52,773	1,643,919	321	(318.3,323.8)	51,354	1,653,684	310.5	(307.9,313.2)	-92.9	-23.0	(-23.9, -22.1)
65-74	35,147	336,994	1043	(1032.1,1053.9)	33,781	376,339	897.6	(888, 907.2)	33,445	445,619	750.5	(742.5,758.6)	34,913	488,375	714.9	(707.4,722.4)	-328.1	-31.5	(-32.6, -30.4)
75+	52,167	347,770	1500	(1487.2,1512.9)	49,012	354,276	1383.4	(1371.2,1395.7)	44,341	373,097	1188.5	(1177.4,1199.5)	46,354	411,753	1125.8	(1115.5,1136)	-374.2	-24.9	(-25.8, -24)
Sex																			
Female	88,888	2,254,179	380.5	(378, 383.1)	84,262	2,347,748	342.5	(340.2,344.8)	74,946	2,421,400	287.9	(285.9,290.0)	73,542	2,457,969	269.2	(267.2,271.1)	-111.3	-29.3	(-30, -28.6)
Male	75,295	2,044,568	406.1	(403.2,409)	73,488	2,134,509	371.4	(368.7,374.1)	68,529	2,207,735	324.1	(321.7,326.6)	71,524	2,249,088	318.1	(315.7,320.4)	-88	-21.7	(-22.5, -20.9)
Race/Ethnicity																			
White, Non-Hispanic	92,944	2555841	328.7	(326.6,330.9)	85,555	2542349	293.9	(291.9,295.9)	74,817	2540532	249.1	(247.3,251.0)	76,349	2,504,317	248.1	(246.4,249.9)	-80.6	-24.5	(-25.2, -23.8)
Black, Non-Hispanic	63,224	1199144	620.7	(615.8,625.6)	63,314	1269315	573.8	(569.2,578.3)	58,630	1325983	486.8	(482.6,490.9)	57,118	1,367,328	435.3	(431.7,438.9)	-185.4	-29.9	(-30.7, -29.1)
Hispanic	2,389	248620	166.8	(159.5,174.1)	2,950	333408	168.9	(162.1,175.8)	4,054	377452	198.8	(191.0,206.5)	4,594	408,745	197.4	(190.9,204)	30.6	18.3	(13.4, 23.2)
Rural/Urban																			
Rural	12,849	256,663	495.4	(486.8,504)	12,093	264,105	426.7	(419.1,434.3)	5,785	286,834	178.2	(173.6,182.9)	5,710	291,832	167	(162.6,171.3)	-328.4	-66.3	(-67.9, -64.7)
Urban	151,334	4,042,084	384.1	(382.2,386.1)	145,657	4,218,152	349.6	(347.8,351.4)	137,690	4,342,301	312.7	(311.0,314.3)	139,356	4,415,225	299.4	(297.9,301)	-84.7	-22.1	(-22.7, -21.5)
Insurance																			
Medicaid	17,112	146,118	1171.1	(1153.6,1188.7)	18,990	259,084	733	(722.5,743.4)	19,697	381,128	516.8	(509.6,524.0)	20,697	425,596	486.3	(479.7,492.9)	-684.8	-58.5	(-59.9, -57.1)
Medicare	98,576	736,236	1338.9	(1330.6,1347.3)	95,976	794,757	1207.6	(1200, 1215.3)	90,434	889,220	1017	(1010.4,1023.6)	92,567	967,979	956.3	(950.1,962.5)	-382.6	-28.6	(-29.3, -27.9)
Private	40,505	2,781,283	145.6	(144.2,147.1)	34,424	2,790,686	123.4	(122.1,124.7)	29,221	2,819,513	103.6	(102.5,104.8)	27,778	2,879,302	96.5	(95.3,97.6)	-49.1	-33.7	(-34.7, -32.7)
Uninsured	5,654	555,310	101.8	(99.2,104.5)	5,953	548,093	108.6	(105.9,111.4)	1,893	443,011	42.7	(40.8,44.7)	1,259	332,280	37.9	(35.8,40)	-63.9	-62.8	(-65.7, -59.9)
Total	164,183	4,298,747	391.1	(389.2,393)	157,750	4,482,257	354.6	(352.8,356.3)	143,475	4,629,135	303.5	(302.0,305.1)	145,066	4,707,057	290.5	(289, 292)	-100.6	-25.7	(-26.2, -25.2)

[a] Total # of Inpatient Stays N=610,474

[b] All rates except Age-Specific and Insurance-Specific rates are age-standardized to the 2010 US Adult Population using data from the CDC Mortality Database

[c] The transition from ICD-9 CM/PCS to ICD-10 CM/PCS coding occured in third quarter of 2015. Estimates reported from years post-2015 were estimated using ICD-10 codes and may not be directly comparable to rates estimated pre-2015.

Appendix 5. Table 6. Rates of All-Cause Diabetes Inpatient Stays per 10,000 Adults in North Carolina; Years 2008-2017

	2008				2011				2014				2017				2017-2008		
Variable	**# of I.P. Stays**	**Denominator**	**Rate**	**(c.i.)**	**# of I.P. Stays**	**Denominator**	**Rate**	**(c.i.)**	**# of I.P. Stays**	**Denominator**	**Rate**	**(c.i.)**	**# of I.P. Stays**	**Denominator**	**Rate**	**(c.i.)**	**Absolute Δ**	**Percent Δ**	**(c.i.)**
Age																			
18-29	4,973	1,506,878	33.0	(32.1,33.9)	5,652	1,579,505	35.8	(34.9,36.7)	5,646	1,629,692	34.6	(33.7,35.5)	6,196	1,675,318	37.0	(36.1,37.9)	4	12.1	(8.7, 15.5)
30-44	18,216	1,966,936	92.6	(91.3,94.0)	19,112	1,956,756	97.7	(96.3,99.1)	20,087	1,964,562	102.2	(100.8,103.7)	19,913	1,964,144	101.4	(100, 102.8)	8.8	9.5	(7.7, 11.3)
45-64	75,067	2,367,982	317.0	(314.7,319.3)	84,280	2,553,324	330.1	(327.9,332.3)	92,399	2,599,340	355.5	(353.2,357.8)	90,389	2,704,704	334.2	(332, 336.4)	17.2	5.4	(4.6, 6.2)
65-74	44,746	576,439	776.3	(769.1,783.4)	51,085	671,783	760.4	(753.8,767)	61,385	811,978	756.0	(750, 762)	60,766	909,997	667.8	(662.5,673.1)	-108.5	-14.0	(-15, -13)
75+	56,593	562,439	1006.2	(997.9,1,014.5)	64,048	604,764	1059.1	(1050.9,1067.3)	73,943	649,047	1139.3	(1131, 1147.5)	71,329	718,475	992.8	(985.5,1000.1)	-13.4	-1.3	(-2.2, -0.4)
Sex																			
Female	108,849	3,621,428	289.3	(287.5,291)	120,554	3,837,059	296.9	(295.2,298.6)	133,323	3,986,470	306.7	(305.1,308.4)	127,443	4,153,432	275.3	(273.8,276.9)	-14	-4.8	(-5.5, -4.1)
Male	90,746	3,359,246	299.9	(297.9,301.8)	103,623	3,529,073	310.6	(308.7,312.5)	120,137	3,668,149	333.7	(331.8,335.6)	121,150	3,819,206	310.9	(309.1,312.6)	11	3.7	(3, 4.4)
Race/Ethnicity[d]																			
White, Non-Hispanic	-	-	-	-	144,178	5,012,355	257.1	(255.8,258.4)	159,990	5,142,267	267.8	(266.5,269.2)	153,052	5,276,746	242.8	(241.5,244)	-14.3	-5.6	(-6.2, -5)
Black, Non-Hispanic	-	-	-	-	68,273	1,525,444	499.2	(495.4,503)	77,601	1,599,624	524.4	(520.6,528.1)	77,329	1,663,098	486.0	(482.5,489.4)	-13.2	-2.6	(-3.5, -1.7)
Hispanic	-	-	-	-	3,427	507,001	169.0	(161.9,176.1)	5,976	543,612	241.6	(234.2,248.9)	7,105	591,627	241.4	(234.7,248)	72.4	42.8	(38, 47.6)
Rural/Urban																			
Rural	76,227	2,169,085	331.0	(328.6,333.3)	83,445	2,265,395	334.4	(332.1,336.7)	75,556	2,284,763	292.1	(290, 294.2)	73,189	2,319,651	272.5	(270.5,274.5)	-58.5	-17.7	(-18.5, -16.9)
Urban	123,368	4,811,589	274.8	(273.2,276.3)	140,732	5,100,737	286.8	(285.3,288.3)	177,904	5,369,856	331.0	(329.5,332.6)	175,404	5,652,987	300.4	(299, 301.8)	25.6	9.3	(8.7, 9.9)
Insurance																			
Medicaid	19,589	313,186	625.5	(616.7,634.3)	22,084	407,701	541.7	(534.5,548.8)	24,608	440,204	559.0	(552, 566)	25,038	487,943	513.1	(506.8,519.5)	-112.4	-18.0	(-19.5, -16.5)
Medicare	116,763	1,352,260	863.5	(858.5,868.4)	131,225	1,522,184	862.1	(857.4,866.7)	136,469	1,709,304	798.4	(794.2,802.6)	127,243	1,871,776	679.8	(676.1,683.5)	-183.7	-21.3	(-21.9, -20.7)
Private	49,137	3,877,629	126.7	(125.6,127.8)	54,529	3,785,857	144.0	(142.8,145.2)	74,903	4,075,326	183.8	(182.5,185.1)	77,048	4,344,322	177.4	(176.1,178.6)	50.7	40.0	(38.9, 41.1)
Uninsured	9,612	1,220,469	78.8	(77.2,80.3)	11,282	1,398,146	80.7	(79.2,82.2)	11,396	1,180,182	96.6	(94.8,98.3)	12,271	998,211	122.9	(120.8,125.1)	44.1	56.0	(53.1, 58.9)
Total	199,595	6,980,674	293.0	(291.7,294.3)	224,177	7,366,132	302.1	(300.9,303.4)	253,460	7,654,619	317.8	(316.6,319.1)	248,593	7,972,638	291.0	(289.8,292.1)	-2	-0.7	(-1.2, -0.2)

[a] Total # of Inpatient Stays N=925,825

[u] All rates except Age-Specific and Insurance-Specific rates are age-standardized to the 2010 US Adult Population using data from the CDC Mortality Database

[c] The transition from ICD-9 CM/PCS to ICD-10 CM/PCS coding occured in third quarter of 2015. Estimates reported from years post-2015 were estimated using ICD-10 codes and may not be directly comparable to rates estimated pre-2015.

[d] Value of - indicates estimate was not reported. All estimates n<=10 events or RSE>=30% were not reported. Additionally, HCUP prioritizes ethnicity when coding the uniform Race variable, FL, IA, and NC did not provide an ethnicity variable in 2008. Percent change estimates for race/ethnicity subgroups in states FL, IA, and NC used 2011 as the reference year.

Appendix 5. Table 7. Rates of All-Cause Diabetes Inpatient Stays per 10,000 Adults in Nebraska: Years 2008-2017

	2008				2011				2014				2017				2017-2008		
Variable	**# of I.P. Stays**	**Denominator**	**Rate**	**(c.i.)**	**# of I.P. Stays**	**Denominator**	**Rate**	**(c.i.)**	**# of I.P. Stays**	**Denominator**	**Rate**	**(c.i.)**	**# of I.P. Stays**	**Denominator**	**Rate**	**(c.i.)**	**Absolute Δ**	**Percent Δ**	**(c.i.)**
Age																			
18-29	664	306,221	21.7	(20,23.3)	849	315,155	26.9	(25.1,28.8)	714	310,033	23	(21.3,24.7)	891	316,312	28.2	(26.3,30)	6.5	30.0	(20.8, 39.2)
30-44	2,054	335,474	61.2	(58.6,63.9)	2,152	337,329	63.8	(61.1,66.5)	2,092	360,994	58	(55.5,60.4)	2,593	364,731	71.1	(68.4,73.8)	9.9	16.2	(10.9, 21.5)
45-64	10,155	449,350	226	(221.6,230.4)	10,473	480,215	218.1	(213.9,222.3)	9,015	470,520	191.6	(187.6,195.6)	13,083	469,395	278.7	(273.9,283.5)	52.7	23.3	(20.9, 25.7)
65-74	7,007	107,290	653.1	(637.8,668.4)	6,499	114,778	566.2	(552.5,580)	5,958	137,087	434.6	(423.6,445.7)	10,417	153,222	679.9	(666.8,692.9)	26.8	4.1	(1.5, 6.7)
75+	12,157	129,899	935.9	(919.2,952.5)	10,836	135,971	796.9	(781.9,811.9)	8,697	134,303	647.6	(634, 661.2)	14,331	141,352	1014	(997.3,1030.5)	78	8.3	(6.2, 10.4)
Sex																			
Female	16,702	680,017	222.7	(219.3,226.2)	16,108	706,151	208.9	(205.6,212.2)	13,481	717,025	170.9	(167.9,173.8)	20,367	729,285	246.9	(243.4,250.3)	24.2	10.9	(9, 12.8)
Male	15,335	648,217	251.5	(247.5,255.5)	14,701	677,297	222.2	(218.6,225.8)	12,995	695,912	188.9	(185.7,192.2)	20,948	715,727	287.4	(283.5,291.3)	35.9	14.3	(12.4, 16.2)
Race/Ethnicity[d]																			
White, Non-Hispanic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Black, Non-Hispanic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hispanic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rural/Urban																			
Rural	15,592	569,030	227.8	(224.1,231.5)	14,083	576,261	201.5	(198.1,205)	10,821	576,096	156.9	(153.9,159.9)	16,130	574,919	226.9	(223.3,230.4)	-0.9	-0.4	(-2.3, 1.5)
Urban	16,445	759,204	241.2	(237.5,244.9)	16,726	807,187	224	(220.6,227.4)	15,655	836,841	197.4	(194.3,200.5)	25,185	870,093	295.4	(291.7,299)	54.2	22.5	(20.7, 24.3)
Insurance																			
Medicaid	1,796	40,626	442.1	(421.6,462.5)	1,863	47,356	393.4	(375.5,411.3)	1,207	51,743	233.3	(220.1,246.4)	3,133	54,807	571.6	(551.6,591.7)	129.5	29.3	(23.9, 34.7)
Medicare	21,390	262,843	813.8	(802.9,824.7)	19,507	278,804	699.7	(689.8,709.5)	16,764	299,763	559.2	(550.8,567.7)	27,808	316,330	879.1	(868.7,889.4)	65.3	8.0	(6.4, 9.6)
Private	7,649	847,442	90.3	(88.2,92.3)	8,045	837,009	96.1	(94,98.2)	7,256	876,007	82.8	(80.9,84.7)	8,977	906,023	99.1	(97, 101.1)	8.8	9.7	(7.1, 12.3)
Uninsured	672	153,935	43.7	(40.4,47)	894	181,493	49.3	(46,52.5)	752	150,163	50.1	(46.5,53.7)	420	135,703	30.9	(28,33.9)	-12.8	-29.3	(-37.9, -20.7)
Total	32,037	1,328,234	233.7	(231.1,236.3)	30,809	1,383,448	213.8	(211.4,216.2)	26,476	1,412,937	178.2	(176, 180.3)	41,315	1,445,012	264.7	(262.1,267.2)	31	13.3	(12, 14.6)

[a] Total # of Inpatient Stays N=130,637

[b] All rates except Age-Specific and Insurance-Specific rates are age-standardized to the 2010 US Adult Population using data from the CDC Mortality Database

[c] The transition from ICD-9 CM/PCS to ICD-10 CM/PCS coding occured in third quarter of 2015. Estimates reported from years post-2015 were estimated using ICD-10 codes and may not be directly comparable to rates estimated pre-2015.

[d] Value of - indicates estimate was not reported. All estimates n<=10 events or RSE>=30% were not reported. Nebraska did not provide a race variable to HCUP.

Appendix 5. Table 8. Rates of All-Cause Diabetes Inpatient Stays per 10,000 Adults in New Jersey; Years 2008-2017

Variable	2008				2011				2014				2017				2017-2008		
	# of I.P. Stays	Denominator	Rate	(c.i.)	# of I.P. Stays	Denominator	Rate	(c.i.)	# of I.P. Stays	Denominator	Rate	(c.i.)	# of I.P. Stays	Denominator	Rate	(c.i.)	Absolute Δ	Percent Δ	(c.i.)
Age																			
18-29	2,922	1,306,349	22.4	(21.6,23.2)	3,244	1,324,379	24.5	(23.7,25.3)	3,281	1,367,695	24	(23.2,24.8)	3,376	1,372,927	24.6	(23.8,25.4)	2.2	9.9	(5.6, 14.2)
30-44	14,452	1,862,521	77.6	(76.3,78.9)	13,481	1,783,584	75.6	(74.3,76.9)	12,524	1,753,846	71.4	(70.2,72.7)	12,218	1,749,689	69.8	(68.6,71.1)	-7.8	-10.0	(-11.9, -8.1)
45-64	71,755	2,322,663	308.9	(306.7,311.2)	70,528	2,461,341	286.5	(284.4,288.7)	68,681	2,494,736	275.3	(273.2,277.4)	68,814	2,490,992	276.2	(274.2,278.3)	-32.7	-10.6	(-11.4, -9.8)
65-74	46,738	539,915	865.6	(857.8,873.5)	45,512	589,674	771.8	(764.7,778.9)	47,345	676,027	700.3	(694.0,706.7)	49,418	739,520	668.2	(662.4,674.1)	-197.4	-22.8	(-23.8, -21.8)
75+	84,963	604,153	1406.3	(1396.9,1415.8)	81,378	621,296	1309.8	(1300.8,1318.8)	77,240	634,566	1217.2	(1208.6,1225.8)	80,032	675,978	1183.9	(1175.7,1192.2)	-222	-15.8	(-16.5, -15.1)
Sex																			
Female	113,372	3,426,778	296.4	(294.7,298.2)	108,367	3,527,273	271.1	(269.5,272.8)	103,134	3,591,661	249.1	(247.5,250.6)	103,522	3,641,398	240.9	(239.4,242.4)	-55.5	-18.7	(-19.4, -18)
Male	107,458	3,208,823	359.6	(357.5,361.8)	105,776	3,253,001	336.8	(334.7,338.8)	105,937	3,335,209	321	(319.0,322.9)	110,336	3,387,708	317.3	(315.4,319.1)	-42.4	-11.8	(-12.5, -11.1)
Race/Ethnicity																			
White, Non-Hispanic	44,932	838203	630.7	(624.8,636.6)	44,453	840695	582.9	(577.5,588.4)	44,711	869873	553.3	(548.2,558.5)	45,278	886,765	534.5	(529.6,539.5)	-96.1	-15.2	(-16.2, -14.2)
Black, Non-Hispanic	23,793	996973	366.7	(361.8,371.6)	24,462	1128479	332	(327.7,336.4)	24,631	1225135	283.1	(279.4,286.8)	27,570	1,307,725	279.2	(275.8,282.6)	-87.5	-23.9	(-25.3, -22.5)
Hispanic	136,413	4229385	268.2	(266.8,269.7)	130,784	4131094	253.6	(252.2,255)	124,550	4087664	239	(237.6,240.3)	123,470	4,025,066	233	(231.7,234.4)	-35.2	-13.1	(-13.7, -12.5)
Rural/Urban[d]																			
Rural	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Urban	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Insurance																			
Medicaid	11,041	290,635	379.9	(372.8,387.0)	13,553	361,594	374.8	(368.5,381.1)	18,376	462,056	397.7	(392.0,403.5)	22,334	584,094	382.4	(377.4,387.4)	2.5	0.7	(-1.2, 2.6)
Medicare	139,342	1,250,959	1113.9	(1108.0,1119.7)	135,291	1,311,515	1031.6	(1026.1,1037.1)	131,305	1,415,311	927.8	(922.7,932.8)	133,184	1,522,964	874.5	(869.8,879.2)	-239.4	-21.5	(-22.1, -20.9)
Private	54,733	4,139,238	132.2	(131.1,133.3)	49,412	4,009,016	123.3	(122.2,124.3)	48,230	4,102,112	117.6	(116.5,118.6)	48,886	4,249,595	115	(114.0,116.1)	-17.2	-13.0	(-14, -12)
Uninsured	13,703	923,607	148.4	(145.9,150.9)	14,015	1,060,003	132.2	(130, 134.4)	8,713	910,641	95.7	(93.7,97.7)	3,366	629,971	53.4	(51.6,55.2)	-94.9	-64.0	(-65.7, -62.3)
Total	220,830	6,635,601	323.8	(322.5,325.2)	214,143	6,780,274	299.7	(298.4,300.9)	209,071	6,926,870	280.6	(279.4,281.8)	213,858	7,029,106	275.1	(273.9,276.3)	-48.8	-15.1	(-15.6, -14.6)

[a] Total # of Inpatient Stays N=857,902

[b] All rates except Age-Specific and Insurance-Specific rates are age-standardized to the 2010 US Adult Population using data from the CDC Mortality Database

[c] The transition from ICD-9 CM/PCS to ICD-10 CM/PCS coding occured in third quarter of 2015. Estimates reported from years post-2015 were estimated using ICD-10 codes and may not be directly comparable to rates estimated pre-2015.

[d] Value of - indicates estimate was not reported. All estimates n<=10 events or RSE>=30% were not reported. Denominator estimates for rural population in New Jersey using the American Community Survey USDA-linked rural/urban variable were <10.

Appendix 5. Table 9. Rates of All-Cause Diabetes Inpatient Stays per 10,000 Adults in New York; Years 2008-2016

Variable	2008				2011				2014				2017				2017-2008		
	# of I.P. Stays	Denominator	Rate	(c.i.)	# of I.P. Stays	Denominator	Rate	(c.i.)	# of I.P. Stays	Denominator	Rate	(c.i.)	# of I.P. Stays	Denominator	Rate	(c.i.)	Absolute Δ	Percent Δ	(c.i.)
Age																			
18-29	8,121	3,330,436	24.4	(23.9,24.9)	8,473	3,382,395	25	(24.5,25.6)	8,783	3,449,034	25.5	(24.9,26)	8,703	3,406,325	25.6	(25.0,26.1)	1.2	4.8	(2.2, 7.4)
30-44	34,859	4,020,959	86.7	(85.8,87.6)	33,785	3,890,674	86.8	(85.9,87.8)	30,706	3,898,392	78.8	(77.9,79.7)	30,024	3,861,706	77.8	(76.9,78.6)	-8.9	-10.3	(-11.5, -9.1)
45-64	170,099	5,141,374	330.8	(329.3,332.4)	181,321	5,253,266	345.2	(343.6,346.8)	172,172	5,283,866	325.8	(324.3,327.4)	174,405	5,273,615	330.7	(329.2,332.3)	-0.1	0.0	(-0.6, 0.6)
65-74	102,688	1,224,393	838.7	(833.6,843.8)	107,227	1,290,368	831	(826.0,836.0)	109,277	1,486,157	735.3	(730.9,739.7)	114,951	1,586,994	724.3	(720.1,728.5)	-114.3	-13.6	(-14.3, -12.9)
75+	170,926	1,376,299	1241.9	(1236.0,1247.8)	175,238	1,372,131	1277.1	(1271.1,1283.1)	163,873	1,410,167	1162.1	(1156.5,1167.7)	169,559	1,443,619	1174.5	(1169.0,1180.1)	-67.4	-5.4	(-5.9, -4.9)
Sex																			
Female	253,881	7,874,358	296.4	(295.2,297.5)	259,634	7,950,682	298.5	(297.4,299.7)	243,277	8,106,141	271	(269.9,272.1)	245,491	8,119,687	268.4	(267.3,269.5)	-28	-9.4	(-9.9, -8.9)
Male	232,812	7,219,103	347.2	(345.8,348.6)	246,410	7,238,152	360.8	(359.4,362.3)	241,534	7,421,475	334.3	(332.9,335.6)	252,151	7,452,572	340.6	(339.3,342.0)	-6.6	-1.9	(-2.4, -1.4)
Race/Ethnicity																			
White, Non-Hispanic	263,994	9355249	244	(243.0,244.9)	266,210	9098525	249	(248.0,300.0)	245,195	9068059	225.9	(225.0,226.8)	244,381	8,958,153	223.8	(223.0, 224.7)	-20.1	-8.3	(-8.7, -7.9)
Black, Non-Hispanic	105,134	2129649	559	(555.6,562.4)	109,165	2136385	556.9	(553.6,560.3)	106,627	2194101	513.5	(510.4,516.6)	106,429	2,203,763	499.4	(496.4,502.4)	-59.7	-10.7	(-11.4, -10)
Hispanic	64,965	2308197	390.1	(387.0,393.2)	67,228	2514280	371.1	(368.2,373.9)	64,456	2661023	316.4	(313.9,318.9)	67,766	2,723,870	312	(309.6,314.3)	-78.1	-20.0	(-20.8, -19.2)
Rural/Urban																			
Rural	39,814	1,243,723	300.5	(297.5,303.5)	40,168	1,250,394	288.4	(285.5,291.2)	34,729	1,235,524	245.7	(243.1,248.3)	36,050	1,214,296	254.8	(252.1,257.4)	-45.8	-15.2	(-16.3, -14.1)
Urban	446,879	13,849,738	320.5	(319.5,321.4)	465,876	13,938,440	329.8	(328.8,330.7)	450,082	14,292,092	304.5	(303.6,305.4)	461,592	14,357,963	305.1	(304.3,306.0)	-15.3	-4.8	(-5.1, -4.5)
Insurance																			
Medicaid	81,889	1,351,364	606	(601.8,610.1)	90,550	1,760,708	514.3	(510.9,517.6)	93,675	2,043,074	458.5	(455.6,461.4)	98,344	2,318,372	424.2	(421.5,426.9)	-181.8	-30.0	(-30.7, -29.3)
Medicare	290,822	2,887,945	1007	(1003.4,1010.7)	305,494	2,963,084	1031	(1027.3,1034.7)	295,293	3,221,167	916.7	(913.4,920.0)	301,765	3,348,570	901.2	(898.0,904.4)	-105.8	-10.5	(-10.9, -10.1)
Private	90,069	8,727,751	103.2	(102.5,103.9)	89,519	8,288,813	108	(107.3,108.7)	78,094	8,581,836	91	(90.4,91.6)	80,125	8,688,671	92.2	(91.6,92.9)	-11	-10.6	(-11.4, -9.8)
Uninsured	16,706	2,019,786	82.7	(81.5,84.0)	11,877	2,061,120	57.6	(56.6,58.7)	9,276	1,569,929	59.1	(57.9,60.3)	9,044	1,104,604	81.9	(80.2,83.6)	-0.8	-1.0	(-3.1, 1.1)
Total	486,693	15,093,461	318.8	(317.9,319.7)	506,044	15,188,834	326	(325.1,326.9)	484,811	15,527,616	299.3	(298.5,300.2)	497,642	15,572,259	300.7	(299.9,301.6)	-18	-5.7	(-6, -5.4)

[a] Total # of Inpatient Stays N=1,975,190

[b] All rates except Age-Specific and Insurance-Specific rates are age-standardized to the 2010 US Adult Population using data from the CDC Mortality Database

[c] The transition from ICD-9 CM/PCS to ICD-10 CM/PCS coding occured in third quarter of 2015. Estimates reported from years post-2015 were estimated using ICD-10 codes and may not be directly comparable to rates estimated pre-2015.

Appendix 5. Table 10. Rates of All-Cause Diabetes Inpatient Stays per 10,000 Adults in Utah; Years 2008-2016

	2008				2011				2014				2017				2017-2008		
Variable	**# of I.P. Stays**	**Denominator**	**Rate**	**(c.i.)**	**# of I.P. Stays**	**Denominator**	**Rate**	**(c.i.)**	**# of I.P. Stays**	**Denominator**	**Rate**	**(c.i.)**	**# of I.P. Stays**	**Denominator**	**Rate**	**(c.i.)**	**Absolute Δ**	**Percent Δ**	**(c.i.)**
Age																			
18-29	992	590,462	16.8	(15.8,17.9)	1,139	545,856	20.9	(19.7,22.1)	1,162	547,583	21.2	(20,22.4)	1,420	586,594	24.2	(23.0,25.5)	7.4	44.1	(35.9, 52.3)
30-44	2,229	516,453	43.2	(41.4,45.0)	2,605	567,614	45.9	(44.1,47.7)	2,962	610,255	48.5	(46.8,50.3)	3,725	640,622	58.1	(56.3,60.0)	15	34.7	(29.7, 39.7)
45-64	9,363	538,738	173.8	(170.3,177.3)	9,943	563,825	176.3	(172.9,179.8)	10,468	585,497	178.8	(175.4,182.2)	13,350	614,875	217.1	(213.4,220.8)	43.3	24.9	(22.4, 27.4)
65-74	5,762	121,334	474.9	(462.6,487.2)	6,252	130,992	477.3	(465.5,489.1)	7,257	159,439	455.2	(444.7,465.6)	9,527	184,712	515.8	(505.4,526.1)	40.9	8.6	(5.8, 11.4)
75+	7,507	124,037	605.2	(591.5,618.9)	8,117	127,571	636.3	(622.4,650.1)	8,581	134,979	635.7	(622.3,649.2)	11,920	150,203	793.6	(779.4,807.8)	188.4	31.1	(28.4, 33.8)
Sex																			
Female	12,720	952,000	153.3	(150.6,156.0)	13,858	971,560	160.8	(158.2,163.6)	14,633	1,024,043	156.8	(154.3,159.4)	19,096	1,092,186	188.5	(185.8,191.2)	35.2	23.0	(20.9, 25.1)
Male	13,133	939,024	183.6	(180.5,186.8)	14,198	964,298	186	(182.9,189.1)	15,797	1,013,710	189.2	(186.2,192.1)	20,846	1,084,820	226.8	(223.7,229.9)	43.2	23.5	(21.5, 25.5)
Race/Ethnicity																			
White, Non-Hispanic	22,345	1588818	163.1	(161.0,165.3)	23,225	1592695	162.2	(160.1,164.3)	20,774	1657244	134.9	(132.9,136.9)	33,644	1,745,144	201.9	(199.7,204.1)	38.8	23.8	(22.2, 25.4)
Black, Non-Hispanic	277	16936	215.6	(186.9,244.3)	320	15819	387.6	(328.6,446.6)	460	20701	333.7	(294.7,372.7)	650	24,066	381.2	(345.9,416.5)	165.5	76.8	(59, 94.6)
Hispanic	2,049	193733	195.4	(185.8,204.9)	2,997	224168	283.8	(272.2,295.4)	7,488	242961	655.4	(636.3,674.6)	2,891	273,160	172.7	(165.7,179.8)	-22.6	-11.6	(-16.7, -6.5)
Rural/Urban																			
Rural	4,152	313,916	138.6	(134.3,142.8)	4,458	322,547	134.4	(130.5,138.4)	4,474	272,165	168.6	(163.6,173.5)	5,492	289,750	190.7	(185.6,195.8)	52.2	37.6	(33.6, 41.6)
Urban	21,701	1,577,108	176.1	(173.7,178.4)	23,598	1,613,311	183.5	(181.2,185.9)	25,956	1,765,588	172.4	(170.3,174.5)	34,450	1,887,256	209.3	(207.1,211.5)	33.2	18.9	(17.3, 20.5)
Insurance																			
Medicaid	1,875	61,304	305.8	(291.9,319.6)	2,231	79,256	281.5	(269.8,293.2)	2,433	68,354	355.9	(341.8,370.1)	3,322	78,870	421.2	(406.8,435.6)	115.4	37.7	(32.2, 43.2)
Medicare	11,882	272,464	436.1	(428.3,443.9)	14,777	286,559	515.7	(507.4,524)	17,380	329,176	528	(520.1,535.8)	24,049	362,242	663.9	(655.5,672.3)	227.8	52.2	(50, 54.4)
Private	9,506	1,233,040	77.1	(75.5,78.6)	7,861	1,213,744	64.8	(63.4,66.2)	7,666	1,323,294	57.9	(56.6,59.2)	10,045	1,480,402	67.8	(66.5,69.2)	-9.2	-12.0	(-14.2, -9.8)
Uninsured	843	296,240	28.4	(26.5,30.4)	1,193	331,214	36	(34.0,38.1)	1,211	285,740	42.4	(40.0,44.8)	1,534	223,794	68.5	(65.1,72.0)	40.1	141.0	(129.4, 152.6)
Total	25,853	1,891,024	167.2	(165.1,169.2)	28,056	1,935,858	172.3	(170.3,174.4)	30,430	2,037,753	171.8	(169.9,173.8)	39,942	2,177,006	206.4	(204.4,208.5)	39.3	23.5	(22, 25)

[a] Total # of Inpatient Stays N=124,281

[b] All rates except Age-Specific and Insurance-Specific rates are age-standardized to the 2010 US Adult Population using data from the CDC Mortality Database

[c] The transition from ICD-9 CM/PCS to ICD-10 CM/PCS coding occured in third quarter of 2015. Estimates reported from years post-2015 were estimated using ICD-10 codes and may not be directly comparable to rates estimated pre-2015.

Appendix 5. Table 11. Rates of All-Cause Diabetes Inpatient Stays per 10,000 Adults in Vermont; Years 2008-2017

	2008				2011				2014				2017				2017-2008		
Variable	**# of I.P. Stays**	**Denominator**	**Rate**	**(c.i.)**	**# of I.P. Stays**	**Denominator**	**Rate**	**(c.i.)**	**# of I.P. Stays**	**Denominator**	**Rate**	**(c.i.)**	**# of I.P. Stays**	**Denominator**	**Rate**	**(c.i.)**	**Absolute Δ**	**Percent Δ**	**(c.i.)**
Age																			
18-29	188	99,268	18.9	(16.2,21.7)	208	99,277	21	(18.1,23.8)	167	101,792	16.4	(13.9,18.9)	162	102,030	15.9	(13.4,18.3)	-3.1	-16.2	(-32.4, 0)
30-44	587	115,418	50.9	(46.7,55.0)	555	112,475	49.3	(45.2,53.5)	488	110,046	44.4	(40.4,48.3)	470	106,355	44.2	(40.2,48.2)	-7	-13.1	(-22.6, -3.6)
45-64	2,977	191,266	155.7	(150.1,161.2)	3,079	193,415	159.2	(153.6,164.8)	3,021	186,455	162	(156.3,167.8)	3,026	182,085	166.2	(160.3,172.1)	10.5	6.8	(2.4, 11.2)
65-74	2256	44,410	508	(487.0,529.0)	2225	47,543	468	(448.6,487.4)	2315	58,175	397.9	(381.7,414.2)	2,547	63,713	399.8	(384.2,415.3)	-108.2	-21.3	(-25.6, -17)
75+	3,553	42,854	829.1	(801.8,856.4)	3,672	46,933	782.4	(757.10,807.7)	3,698	48,020	770.1	(745.3,794.9)	3,696	50,412	733.2	(709.5,756.8)	-95.9	-11.6	(-15.3, -7.9)
Sex																			
Female	4,715	254,338	167.9	(163.1,172.8)	4,816	254,641	165	(160.3,169.7)	4,698	260,641	153.4	(148.9,157.8)	4,730	259,493	150.6	(146.3,155)	-17.3	-10.3	(-13.6, -7)
Male	4,846	238,878	206.3	(200.5,212.2)	4,923	245,002	194.1	(188.7,199.5)	4,991	243,847	187.8	(182.5,193.0)	5,171	245,102	187.3	(182.2,192.5)	-19	-9.2	(-12.4, -6)
Race/Ethnicity[d]																			
White, Non-Hispanic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Black, Non-Hispanic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hispanic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rural/Urban																			
Rural	6,724	331,730	183.4	(179.0,187.8)	6,801	329,683	176.3	(172.1,180.6)	6,463	330,868	161.9	(157.9,165.9)	6504	330,050	159.5	(155.5,163.4)	-23.9	-13.0	(-15.7, -10.3)
Urban	2,837	161,486	188.7	(181.7,195.7)	2,938	169,960	186.8	(180.0,193.6)	3,226	173,620	189.7	(183.2,196.3)	3,397	174,545	189.5	(183.1,195.9)	0.8	0.4	(-3.8, 4.6)
Insurance																			
Medicaid	920	45,815	200.8	(187.9,213.8)	999	56,954	175.3	(164.4,186.3)	956	65,776	145.4	(136.1,154.6)	967	69,271	139.7	(130.8,148.5)	-61.2	-30.5	(-37.1, -23.9)
Medicare	6,555	102,640	638.7	(623.2,654.1)	6,637	106,997	620.3	(605.3,635.3)	6,656	124,297	535.5	(522.6,548.4)	6,717	128,549	522.6	(510.0,535.1)	-116.1	-18.2	(-20.8, -15.6)
Private	1,815	291,962	62.2	(59.3,65.0)	1,880	286,474	65.6	(62.6,68.7)	1,909	281,172	67.9	(64.8,71.0)	2,066	280,782	73.6	(70.3,76.8)	11.4	18.3	(12.5, 24.1)
Uninsured	173.2	47,088	36.8	(31.3,42.3)	137.6	42,758	32.2	(26.8,37.6)	62.4	28,058	22.2	(16.7,27.8)	52	20,787	25	(18.1,31.9)	-11.8	-32.0	(-52.2, -11.8)
Total	9,561	493,216	184.1	(180.4,187.8)	9,739	499,643	178	(174.4,181.5)	9,689	504,488	169.2	(165.8,172.6)	9,901	504,595	167.7	(164.4,171.1)	-16.3	-8.9	(-11.2, -6.6)

[a] Total # of Inpatient Stays N=38,890

[b] All rates except Age-Specific and Insurance-Specific rates are age-standardized to the 2010 US Adult Population using data from the CDC Mortality Database

[c] The transition from ICD-9 CM/PCS to ICD-10 CM/PCS coding occured in third quarter of 2015. Estimates reported from years post-2015 were estimated using ICD-10 codes and may not be directly comparable to rates estimated pre-2015.

[d] Value of - indicates estimate was not reported. All estimates n<=10 events or RSE>=30% were not reported. Race-specific estimates generated using Vermont data had relative standard errors >=30% for Black and Hispanic populations. As such, race/ethnicity specific estimates were not reported.

Appendix 5. Table 12. Average Rates of All-Cause Inpatient Stays from Pooled State Data by Race, Rural/Urban, and Insurance; Years 2008-2017

	2008	2011	2014	2016 / 2017*
	Rate (95% CI)	Rate (95% CI)	Rate (95% CI)	Rate (95% CI)
Race				
Black, non-Hispanic	587.4 (585, 589.9)	566.4 (564.7,568.2)	533.7 (532.1,535.4)	518.8 (517.3,520.4)
Hispanic	363.2 (360.8,365.6)	331.1 (329.6,332.6)	313.6 (312.3,314.8)	295.8 (294.6,296.9)
White, non-Hispanic	276.3 (275.6,277)	274.6 (274.1,275.1)	258.2 (257.7,258.6)	260.1 (259.7,260.6)
Rural/Urban				
Rural	355 (353.8,356.2)	366.6 (365.4,367.8)	317.1 (315.9,318.3)	330.2 (329, 331.4)
Urban	318.1 (317.6,318.6)	329.8 (329.3,330.3)	327.9 (327.4,328.4)	335.6 (335.1,336.1)
Insurance				
Medicaid	631.8 (629.1,634.4)	553 (550.9,555.2)	498.1 (496.2,500)	467 (465.4,468.7)
Medicare	995.4 (993.6,997.1)	1009.6 (1007.9,1011.3	911 (909.4,912.5)	895.3 (893.9,896.8)
Private	120.1 (119.7,120.4)	116 (115.6,116.4)	110.7 (110.4,111.1)	109.2 (108.9,109.5)
Uninsured	85.7 (85.1,86.2)	84.8 (84.2,85.3)	83.2 (82.6,83.8)	99 (98.2,99.7)

Rates were generated using average inpatient stays aggregated from pooled SID data from states AZ, FL, IA, KY, MD, NC, NE, NJ , NY, UT, VT.
Population estimates generated from pooled state populations estimated from the IPUMS USA American Community Survey for corresponding years.
All rates except insurance were age-standardized to the 2010 US Adult Population using population estimates available from the CDC Mortality
*Average rates calculated from an average ED utilization rates from 2016 and 2017 estimates, as 2017 data was not available for select states.
**Average use across states for Race estimates do not include NE and VT due to missing race variable and low n of numerator and denominator
**Average use across states for Rural/Urban estimates do not include NJ due to lack of rural counties as defined by USDA supplied rural/urban

Appendix 6. State-Specific Diabetes-Specific Hospitalization Rates Tables

Appendix 6. Table 1. Rates of Diabetes-Specific Diabetes Inpatient Stays per 10,000 Adults in Arizona; Years 2008-2017

	2008				2011				2014				2017				2017-2008		
Variable	**# of I.P. Stays**	**Denominator**	**Rate**	**(c.i.)**	**# of I.P. Stays**	**Denominator**	**Rate**	**(c.i.)**	**# of I.P. Stays**	**Denominator**	**Rate**	**(c.i.)**	**# of I.P. Stays**	**Denominator**	**Rate**	**(c.i.)**	**Absolute Δ**	**Percent Δ**	**(c.i.)**
Age																			
18-29	1,294	1,077,305	12	(11.4,12.7)	1,529	1,087,985	14.1	(13.3,14.8)	1,472	1,116,039	13.2	(12.5,13.9)	1,370	1,171,053	11.7	(11.1,12.3)	-0.3	-2.6	(-8.7, 3.5)
30-44	2,351	1,319,581	17.8	(17.1,18.5)	2,625	1,249,964	21	(20.2,21.8)	2,456	1,294,687	19	(18.2,19.7)	2,122	1,318,320	16.1	(15.4,16.8)	-1.7	-9.7	(-14.1, -5.3)
45-64	4,760	1,519,215	31.3	(30.4,32.2)	5,876	1,599,974	36.7	(35.8,37.7)	5,715	1,628,864	35.1	(34.2,36)	4,819	1,697,501	28.4	(27.6,29.2)	-2.9	-9.4	(-12.6, -6.2)
65-74	1,759	412,979	42.6	(40.6,44.6)	1,997	482,729	41.4	(39.6,43.2)	2,167	577,502	37.5	(35.9,39.1)	1,765	645,040	27.4	(26.1,28.6)	-15.2	-35.7	(-40.5, -30.9)
75+	1,945	447,485	43.5	(41.53,45.4)	2,108	439,111	48	(46,50.1)	1,815	493,146	36.8	(35.1,38.5)	1,509	552,520	27.3	(25.9,28.7)	-16.2	-37.2	(-41.8, -32.6)
Sex																			
Female	5,451	2,405,053	22.3	(21.7,22.9)	6,157	2,463,272	24.4	(23.8,25)	5,648	2,597,140	21.3	(20.7,21.8)	4,369	2,730,465	15.8	(15.3,16.2)	-6.5	-29.1	(-31.8, -26.4)
Male	6,658	2,371,512	29.2	(28.5,29.9)	7,978	2,396,491	33.9	(33.1,34.6)	7,977	2,513,098	32	(31.3,32.7)	7,216	2,653,969	27.3	(26.7,27.9)	-1.8	-6.3	(-9, -3.6)
Race/Ethnicity[d]																			
White, Non-Hispanic	-	-	-	-	-	-	-	-	7,882	3,123,174	23.6	(23.1,24.2)	6,532	3,201,040	19.5	(19,20)	-4.1	-17.4	(-20.4, -14.4)
Black, Non-Hispanic	-	-	-	-	-	-	-	-	774	202,353	41.6	(38.6,44.6)	756	219,796	37.5	(34.7,40.2)	-4.1	-9.9	(-18, -1.8)
Hispanic	-	-	-	-	-	-	-	-	3,316	1,353,068	30.3	(29.2,31.4)	3,086	1,480,422	25	(24.1,25.9)	-5.3	-17.5	(-21.8, -13.2)
Rural/Urban																			
Rural	1,446	460,355	30.1	(28.5,31.7)	1,806	470,682	36	(34.3,37.7)	854	529,619	15.5	(14.5,16.6)	707	535,281	12.8	(11.9,13.8)	-17.3	-57.4	(-62.6, -52.2)
Urban	10,663	4,316,210	25.1	(24.6,25.6)	12,329	4,389,081	28.2	(27.7,28.7)	12,771	4,580,619	27.8	(27.3,28.3)	10,878	4,849,153	22.3	(21.9,22.8)	-2.8	-11.0	(-13.1, -8.9)
Insurance																			
Medicaid	2,963	337,252	87.9	(84.7,91.0)	3,768	471,844	79.9	(77.3,82.4)	3,953	496,345	79.6	(77.2,82.1)	4,122	594,676	69.3	(67.2,71.4)	-18.6	-21.1	(-24.8, -17.4)
Medicare	5,067	945,447	53.6	(52.1,55.1)	6,198	1,018,680	60.8	(59.3,62.4)	6,021	1,171,311	51.4	(50.1,52.7)	4,928	1,294,597	38.1	(37,39.1)	-15.5	-28.9	(-31.7, -26.1)
Private	3,023	2,445,558	12.4	(11.9,12.8)	2,578	2,295,628	11.2	(10.8,11.7)	2,564	2,500,398	10.3	(9.9,10.7)	1,976	2,714,220	7.3	(7,7.6)	-5.1	-40.9	(-44.9, -36.9)
Uninsured	698	874,954	7.98	(7.4,8.6)	1,315	894,434	14.7	(13.9,15.5)	894	744,112	12	(11.2,12.8)	370	583,927	6.3	(5.7,7)	-1.7	-21.1	(-29.9, -12.3)
Total	12,109	4,776,565	25.6	(25.1,26.0)	14,135	4,859,763	29	(28.5,29.4)	13,625	5,110,238	26.4	(26,26.9)	11,585	5,384,434	21.3	(20.9,21.7)	-4.2	-16.6	(-18.6, -14.6)

[a] Total # of Inpatient Stays N=51,454

[b] All rates except Age-Specific and Insurance-Specific rates are age-standardized to the 2010 US Adult Population using data from the CDC Mortality Database

[c] The transition from ICD-9 CM/PCS to ICD-10 CM/PCS coding occured in third quarter of 2015. Estimates reported from years post-2015 were estimated using ICD-10 codes and may not be directly comparable to rates estimated pre-2015.

[d] Value of - indicates estimate was not reported. All estimates n<=10 events or RSE>=30% were not reported. Additionally, HCUP prioritizes ethnicity when coding the uniform Race variable, AZ did not provide an ethnicity variable in 2008 and 2011. Percent change estimates for race/ethnicity subgroups for AZ were calculated using 2014 as the reference year.

Appendix 6. Table 2. Rates of Diabetes-Specific Diabetes Inpatient Stays per 10,000 Adults in Florida; Years 2008-2017

Variable	2008				2011				2014				2017				2017-2008		
	# of I.P. Stays	Denominator	Rate	(c.i.)	# of I.P. Stays	Denominator	Rate	(c.i.)	# of I.P. Stays	Denominator	Rate	(c.i.)	# of I.P. Stays	Denominator	Rate	(c.i.)	Absolute Δ	Percent Δ	(c.i.)
Age																			
18-29	3,447	2,783,157	12.4	(12,12.8)	4,079	2,985,810	13.7	(13.2,14.1)	4,639	3,080,075	15.1	(14.6,15.5)	4,935	3,158,262	15.6	(15.2,16.1)	3.2	25.8	(22, 29.6)
30-44	6,552	3,590,210	18.2	(17.8,18.7)	7,134	3,545,422	20.1	(19.7,20.6)	7,998	3,668,380	21.8	(21.3,22.3)	7,111	3,857,687	18.4	(18,18.9)	0.2	1.1	(-1.5, 3.7)
45-64	16,132	4,764,788	33.9	(33.3,34.4)	19,030	5,173,375	36.8	(36.3,37.3)	21,150	5,296,412	39.9	(39.4,40.5)	19,678	5,554,964	35.4	(34.9,35.9)	1.5	4.4	(2.3, 6.5)
65-74	6,662	1,419,169	46.9	(45.8,48.1)	7,469	1,642,006	45.5	(44.5,46.5)	8,537	1,928,373	44.3	(43.3,45.2)	8,022	2,139,804	37.5	(36.7,38.3)	-9.4	-20.0	(-22.5, -17.5)
75+	9,631	1,762,049	54.7	(53.6,55.7)	10,222	1,718,192	59.5	(58.3,60.6)	9,969	1,868,050	53.4	(52.3,54.4)	8,759	2,074,993	42.2	(41.3,43.1)	-12.5	-22.9	(-25.3, -20.5)
Sex																			
Female	19,992	7,374,758	25	(24.6,25.3)	22,340	7,787,443	26.5	(26.2,26.9)	23,247	8,192,489	26.6	(26.2,26.9)	20,290	8,671,836	22	(21.7,22.3)	-3	-12.0	(-13.9, -10.1)
Male	22,432	6,944,615	31.3	(30.9,31.7)	25,594	7,277,362	33.8	(33.4,34.2)	29,046	7,648,801	36.4	(36,36.8)	28,215	8,113,874	33.3	(32.9,33.7)	2	6.4	(4.9, 7.9)
Race/Ethnicity[d]																			
White, Non-Hispanic	-	-	-	-	26,286	9,124,354	25.6	(25.3,26)	28,665	9,299,079	27.8	(27.5,28.2)	25,703	9,542,674	24.9	(24.6,25.3)	-0.7	-2.7	(-4.5, -0.9)
Black, Non-Hispanic	-	-	-	-	13,106	2,116,845	68.7	(67.5,69.9)	13,863	2,272,110	65.7	(64.5,66.8)	13,278	2,399,728	58.7	(57.7,59.7)	-10	-14.6	(-16.5, -12.7)
Hispanic	-	-	-	-	7,483	3,232,996	25.5	(24.9,26)	8,364	3,598,495	24.9	(24.3,25.4)	8,261	4,062,171	21.1	(20.7,21.6)	-4.4	-17.3	(-19.6, -15)
Rural/Urban																			
Rural	2,914	1,020,740	26.9	(25.9,27.9)	3,315	1,051,316	28.8	(27.7,29.8)	2,441	963,272	23.7	(22.7,24.7)	2,249	998,650	21.6	(20.7,22.5)	-5.3	-19.7	(-24, -15.4)
Urban	39,510	13,298,633	28	(27.7,28.3)	44,619	14,013,489	30.1	(29.8,30.3)	49,852	14,878,018	31.7	(31.4,32)	46,256	15,787,060	27.7	(27.5,28)	-0.3	-1.1	(-1.9, -0.3)
Insurance																			
Medicaid	5,344	519,576	103	(100.1,105.6)	7,858	790,678	99.4	(97.2,101.6)	8,941	973,616	91.8	(89.9,93.7)	7,890	1,010,681	78.1	(76.3,79.8)	-24.8	-24.1	(-26.8, -21.4)
Medicare	21,751	3,436,830	63.3	(62.4,64.1)	24,736	3,674,467	67.3	(66.5,68.2)	26,742	4,124,206	64.8	(64.1,65.6)	23,768	4,525,869	52.5	(51.8,53.2)	-10.8	-17.1	(-18.4, -15.8)
Private	8,157	6,973,815	11.7	(11.4,12)	7,232	6,712,132	10.8	(10.5,11)	8,070	7,392,875	10.9	(10.7,11.2)	8,460	8,391,459	10.1	(9.9,10.3)	-1.6	-13.7	(-15.7, -11.7)
Uninsured	5,588	3,117,459	17.9	(17.5,18.4)	6,620	3,570,343	18.5	(18.1,19)	6,954	3,000,154	23.2	(22.6,23.7)	6,918	2,506,717	27.6	(26.9,28.2)	9.7	54.2	(50.9, 57.5)
Total	42,424	14,319,373	27.9	(27.6,28.2)	47,934	15,064,805	29.9	(29.7,30.2)	52,293	15,841,290	31.2	(30.9,31.5)	48,505	16,785,710	27.4	(27.1,27.6)	-0.5	-1.8	(-2.6, -1)

[a] Total # of Inpatient Stays N=191,156

[b] All rates except Age-Specific and Insurance-Specific rates are age-standardized to the 2010 US Adult Population using data from the CDC Mortality Database

[c] The transition from ICD-9 CM/PCS to ICD-10 CM/PCS coding occured in third quarter of 2015. Estimates reported from years post-2015 were estimated using ICD-10 codes and may not be directly comparable to rates estimated pre-2015.

[d] Value of - indicates estimate was not reported. All estimates n<=10 events or RSE>=30% were not reported. Additionally, HCUP prioritizes ethnicity when coding the uniform Race variable, FL, IA, and NC did not provide an ethnicity variable in 2008. Percent change estimates for race/ethnicity subgroups for these states were calculated using 2011 as the reference year.

Appendix 6. Table 3. Rates of Diabetes-Specific Diabetes Inpatient Stays per 10,000 Adults in Iowa; Years 2008-2017

Variable	2008				2011				2014				2017				2017-2008		
	# of I.P. Stays	Denominator	Rate	(c.i.)	# of I.P. Stays	Denominator	Rate	(c.i.)	# of I.P. Stays	Denominator	Rate	(c.i.)	# of I.P. Stays	Denominator	Rate	(c.i.)	Absolute Δ	Percent Δ	(c.i.
Age																			
18-29	502	514,831	9.8	(8.9,10.6)	533	508,767	10.5	(9.6,11.4)	568	511,098	11.1	(10.2,12.0)	579	519,925	11.1	(10.2,12.0)	1.4	14.3	(3.5, 25.1
30-44	795	554,642	14.3	(13.3,15.3)	836	552,221	15.1	(14.1,16.2)	753	561,554	13.4	(12.5,14.4)	833	569,426	14.6	(13.6,15.6)	0.3	2.1	(-6.2, 10.4
45-64	1,859	787,644	23.6	(22.5,24.7)	1,988	820,979	24.2	(23.2,25.3)	2,079	817,938	25.4	(24.3,26.5)	1,818	802,022	22.7	(21.6,23.7)	-0.9	-3.9	(-9.2, 1.4
65-74	795	192,149	41.4	(38.5,44.3)	802	210,963	38.0	(35.4,40.7)	849	241,275	35.2	(32.8,37.6)	661	267,215	24.7	(22.9,26.6)	-16.6	-40.2	(-47.2, -33.2
75+	1,269	248,618	51.0	(48.2,53.9)	1,049	246,990	42.5	(39.9,45.0)	955	250,593	38.1	(35.7,40.5)	693	256,554	27.0	(25,29.0)	-24	-47.1	(-52.8, -41.4
Sex																			
Female	2,449	1,178,886	19.4	(18.7,20.2)	2,298	1,193,978	18.1	(17.4,18.9)	2,143	1,212,257	16.7	(16.0,17.4)	1,894	1,227,627	15.0	(14.3,15.7)	-4.5	-22.9	(-27.4, -18.4
Male	2,771	1,118,998	25.0	(24.1,25.9)	2,910	1,145,942	25.3	(24.4,26.2)	3,061	1,170,201	25.7	(24.8,26.7)	2,690	1,187,515	22.4	(21.6,23.3)	-2.6	-10.3	(-14.6, -6
Race/Ethnicity[d]																			
White, Non-Hispanic	-	-	-	-	4,672	2,118,989	20.8	(20.2,21.4)	4,591	2,131,366	20.2	(19.6,20.8)	3,933	2,128,722	17.7	(17.1,18.2)	-3.1	-15.0	(-18.4, -11.6
Black, Non-Hispanic	-	-	-	-	352	53,633	79.7	(70.7,88.7)	340	68,893	56.6	(50.2,63.1)	365	67,976	57.6	(51.4,63.7)	-22.1	-27.7	(-39.2, -16.2
Hispanic	-	-	-	-	88	90,769	11.8	(8.7,14.9)	146	102,599	19.0	(15.4,22.7)	142	114,337	19.3	(15.2,23.4)	7.5	63.5	(27, 100
Rural/Urban																			
Rural	2,537	1,159,789	19.9	(19.1,20.7)	2,340	1,155,609	18.7	(17.9,19.5)	2,212	917,459	22.1	(21.1,23.0)	1,954	907,571	20.3	(19.4,21.3)	0.4	2.2	(-3, 7.4
Urban	2,683	1,138,095	24.3	(23.3,25.2)	2,868	1,184,311	24.8	(23.9,25.7)	2,992	1,464,999	20.4	(19.7,21.2)	2,630	1,507,571	17.5	(16.8,18.2)	-6.8	-27.9	(-31.8, -24
Insurance																			
Medicaid	696	96,410	72.2	(66.8,77.6)	833	114,769	72.6	(67.7,77.5)	1,041	161,225	64.6	(60.7,68.5)	1,205	197,985	60.9	(57.4,64.3)	-11.3	-15.7	(-23.1, -8.3
Medicare	2,831	487,455	58.1	(55.9,60.2)	2,686	509,930	52.7	(50.7,54.7)	2,680	551,939	48.6	(46.7,50.4)	2,166	573,828	37.8	(36.2,39.3)	-20.3	-35.0	(-38.9, -31.1
Private	1,237	1,472,585	8.4	(7.9,8.9)	1,265	1,443,397	8.8	(8.28,9.3)	1,243	1,489,539	8.3	(7.9,8.8)	1,076	1,498,814	7.2	(6.8,7.6)	-1.2	-14.5	(-20.9, -8.1
Uninsured	366	221,821	16.5	(14.8,18.2)	308	244,747	12.6	(11.2,14.0)	185	159,690	11.6	(9.9,13.3)	108	118,942	9.1	(7.4,10.8)	-7.4	-45.0	(-57.2, -32.8
Total	5,220	2,297,884	22.0	(21.4,22.6)	5,208	2,339,920	21.5	(21.0,22.1)	5,204	2,382,458	21.0	(20.5,21.6)	4,584	2,415,142	18.6	(18.0,19.1)	-3.4	-15.4	(-18.5, -12.3

[a] Total # of Inpatient Stays N=20,216

[b] All rates except Age-Specific and Insurance-Specific rates are age-standardized to the 2010 US Adult Population using data from the CDC Mortality Database

[c] The transition from ICD-9 CM/PCS to ICD-10 CM/PCS coding occured in third quarter of 2015. Estimates reported from years post-2015 were estimated using ICD-10 codes and may not be directly comparable to rates estimated pre-2015.

[d] Value of - indicates estimate was not reported. All estimates n<=10 events or RSE>=30% were not reported. Additionally, HCUP prioritizes ethnicity when coding the uniform Race variable, FL, IA, and NC did not provide an ethnicity variable in 2008. Percent change estimates for race/ethnicity subgroups for these states were calculated using 2011 as the reference year.

Appendix 6. Table 4. Rates of Diabetes-Specific Diabetes Inpatient Stays per 10,000 Adults in Kentucky; Years 2008-2017

Variable	2008			2011			2014			2017			2017-2008		
	# of I.P. Stays	Denominator	Rate (c.i.)	# of I.P. Stays	Denominator	Rate (c.i.)	# of I.P. Stays	Denominator	Rate (c.i.)	# of I.P. Stays	Denominator	Rate (c.i.)	Absolute Δ	Percent Δ	(c.i.)
Age															
18-29	1,037	686,355	15.1 (14.2,16)	1,086	701,845	15.5 (14.6,16.4)	1,190	705,491	16.9 (15.9,17.8)	1,295	723,004	17.9 (16.9,18.9)	2.8	18.5	(10.8, 26.2)
30-44	1,742	875,762	19.9 (19,20.8)	2,192	854,038	25.7 (24.6,26.7)	2,165	844,789	25.6 (24.5,26.7)	1,947	828,086	23.5 (22.5,24.6)	3.6	18.1	(12.2, 24)
45-64	3,784	1,141,903	33.1 (32.1,34.2)	4,638	1,197,727	38.7 (37.6,39.8)	5,060	1,195,181	42.3 (41.2,43.5)	4,585	1,181,324	38.8 (37.7,39.9)	5.7	17.2	(13.3, 21.1)
65-74	1,428	282,371	50.6 (47.9,53.2)	1,597	310,591	51.4 (48.9,53.9)	1,737	361,611	48 (45.8,50.3)	1,557	388,350	40.1 (38.1,42.1)	-10.5	-20.8	(-26.1, -15.5)
75+	1,549	278,395	55.6 (52.9,58.4)	1,618	283,281	57.1 (54.3,59.9)	1,657	292,355	56.7 (53.9,59.4)	1,235	320,578	38.5 (36.4,40.7)	-17.1	-30.8	(-36.1, -25.5)
Sex															
Female	4,817	1,687,215	27.8 (27,28.6)	5,263	1,723,771	29.6 (28.8,30.4)	5,424	1,745,872	30.1 (29.3,30.9)	4,582	1,769,085	25.4 (24.7,26.1)	-2.4	-8.6	(-12, -5.2)
Male	4,723	1,577,571	30.6 (29.7,31.5)	5,868	1,623,711	36.4 (35.5,37.4)	6,385	1,653,555	38.5 (37.5,39.4)	6,037	1,672,257	35.8 (34.9,36.7)	5.2	17.0	(13.5, 20.5)
Race/Ethnicity															
White, Non-Hispanic	8,018	2,914,443	27 (26.4,27.6)	9,719	2,936,726	32.2 (31.6,32.8)	10,192	2,963,813	33.2 (32.6,33.9)	9,018	2,974,103	29.5 (28.9,30.1)	2.5	9.3	(6.7, 11.9)
Black, Non-Hispanic	1,040	228,993	49.4 (46.3,52.5)	1,274	256,770	54 (50.9,57)	1,326	257,591	54.1 (51.1,57)	1,402	267,804	54.8 (51.9,57.7)	5.4	10.9	(3.6, 18.2)
Hispanic	39	60,828	9 (5.4,12.6)	69	81,175	11.4 (8.4,14.3)	181	89,378	33.4 (27.7,39.1)	111	95,903	16.3 (12.7,19.9)	7.3	81.1	(34.4, 127.8)
Rural/Urban															
Rural	4,735	1,456,541	31.9 (31,32.8)	5,432	1,450,065	36.4 (35.4,37.3)	5,690	1,301,804	42.1 (41,43.2)	4,827	1,300,430	36 (34.9,37)	4.1	12.9	(9.2, 16.6)
Urban	4,805	1,808,245	26.8 (26,27.6)	5,699	1,897,417	30.1 (29.3,30.9)	6,119	2,097,623	28.9 (28.2,29.7)	5,792	2,140,912	26.8 (26.1,27.5)	0	0.0	(-3.5, 3.5)
Insurance															
Medicaid	1,781	200,703	88.7 (84.6,92.9)	2,057	212,517	96.8 (92.6,101)	3,268	375,297	87.1 (84.1,90.1)	3,442	512,109	67.2 (65,69.5)	-21.5	-24.2	(-28.6, -19.8)
Medicare	4,379	701,873	62.4 (60.5,64.2)	5,410	761,230	71.1 (69.2,73)	5,740	819,549	70 (68.2,71.9)	4,829	871,862	55.4 (53.8,56.9)	-7	-11.2	(-14.4, -8)
Private	2,291	1,788,932	12.8 (12.3,13.3)	2,166	1,709,024	12.7 (12.1,13.2)	2,304	1,776,836	13 (12.4,13.5)	1,965	1,773,309	11.1 (10.6,11.6)	-1.7	-13.3	(-17.9, -8.7)
Uninsured	835	513,674	16.3 (15.2,17.4)	1,403	592,445	23.7 (22.4,24.9)	343	361,709	9.5 (8.5,10.5)	223	217,001	10.3 (8.9,11.6)	-6	-36.8	(-46.1, -27.5)
Total	9,540	3,264,786	29.1 (28.5,29.7)	11,131	3,347,482	32.8 (32.2,33.4)	11,809	3,399,427	34 (33.4,34.6)	10,619	3,441,342	30.3 (29.7,30.9)	1.2	4.1	(1.7, 6.5)

[a] Total # of Inpatient Stays N=43,099

[b] All rates except Age-Specific and Insurance-Specific rates are age-standardized to the 2010 US Adult Population using data from the CDC Mortality Database

[c] The transition from ICD-9 CM/PCS to ICD-10 CM/PCS coding occured in third quarter of 2015. Estimates reported from years post-2015 were estimated using ICD-10 codes and may not be directly comparable to rates estimated pre-2015.

Appendix 6. Table 5. Rates of Diabetes-Specific Diabetes Inpatient Stays per 10,000 Adults in Maryland; Years 2008-2017

Variable	2008				2011				2014				2017				2017-2008		
	# of I.P. Stays	Denominator	Rate	(c.i.)	# of I.P. Stays	Denominator	Rate	(c.i.)	# of I.P. Stays	Denominator	Rate	(c.i.)	# of I.P. Stays	Denominator	Rate	(c.i.)	Absolute Δ	Percent Δ	(c.i.)
Age																			
18-29	1,032	925,017	11.2	(10.5,11.8)	1,237	961,324	12.9	(12.2,13.6)	1,221	981,853	12.4	(11.7,13.1)	1,072	956,139	11.2	(10.5,11.9)	0	0.0	(-6.3, 6.3)
30-44	2,156	1,179,901	18.3	(17.5,19)	2,208	1,168,164	18.9	(18.1,19.7)	1,992	1,184,647	16.8	(16.1,17.6)	1,593	1,197,106	13.3	(12.7,14)	-5	-27.3	(-31.8, -22.8)
45-64	5,331	1,509,065	35.3	(34.4,36.3)	5,842	1,622,154	36	(35.1,36.9)	5,703	1,643,919	34.7	(33.8,35.6)	4,418	1,653,684	26.7	(25.9,27.5)	-8.6	-24.4	(-27.4, -21.4)
65-74	2,086	336,994	61.9	(59.2,64.6)	1,948	376,339	51.8	(49.5,54.1)	2,113	445,619	47.4	(45.4,49.4)	1,740	488,375	35.6	(34,37.3)	-26.3	-42.5	(-46.9, -38.1)
75+	2,621	347,770	75.4	(72.5,78.3)	2,349	354,276	66.3	(63.6,69)	2,058	373,097	55.2	(52.8,57.5)	1,713	411,753	41.6	(39.6,43.6)	-33.8	-44.8	(-48.7, -40.9)
Sex																			
Female	6,158	2,254,179	26.7	(26.1,27.4)	6,392	2,347,748	26.6	(25.9,27.2)	5,861	2,421,400	23.5	(22.9,24.1)	4,357	2,457,969	17	(16.5,17.5)	-9.7	-36.3	(-38.9, -33.7)
Male	7,068	2,044,568	36.3	(35.5,37.2)	7,192	2,134,509	34.7	(33.9,35.5)	7,226	2,207,735	33.2	(32.4,34.0)	6,179	2,249,088	27.4	(26.7,28.1)	-8.9	-24.5	(-26.8, -22.2)
Race/Ethnicity																			
White, Non-Hispanic	6,403	2555841	23.5	(22.9,24.1)	6,497	2542349	23.7	(23.1,24.3)	6,149	2540532	22.2	(21.6,22.8)	4,773	2,504,317	17.5	(17,18)	-6	-25.5	(-28.5, -22.5)
Black, Non-Hispanic	6,288	1199144	57.6	(56.1,59)	6,439	1269315	54	(52.7,55.3)	6,107	1325983	47.8	(46.5,49.0)	5,002	1,367,328	37.2	(36.1,38.2)	-20.4	-35.4	(-37.9, -32.9)
Hispanic	251	248620	14.1	(12.1,16.1)	319	333408	14.8	(12.9,16.7)	453	377452	17.8	(15.8,19.8)	410	408,745	13.4	(11.9,14.9)	-0.7	-5.0	(-20, 10)
Rural/Urban																			
Rural	903	256,663	35.1	(32.8,37.4)	957	264,105	34.9	(32.7,37.1)	518	286,834	17.3	(15.8,18.8)	338	291,832	10.8	(9.6,12)	-24.3	-69.2	(-75.5, -62.9)
Urban	12,323	4,042,084	30.9	(30.4,31.5)	12,627	4,218,152	30	(29.5,30.5)	12,569	4,342,301	28.7	(28.2,29.2)	10,198	4,415,225	22.6	(22.1,23)	-8.3	-26.9	(-28.8, -25)
Insurance																			
Medicaid	2,159	146,118	148	(141.5,154)	2,684	259,084	104	(99.7,107.5)	3,244	381,128	85.1	(82.2,88.0)	2,813	425,596	66.1	(63.7,68.5)	-81.7	-55.3	(-59.1, -51.5)
Medicare	6,277	736,236	85.3	(83.1,87.4)	6,138	794,757	77.2	(75.3,79.2)	6,130	889,220	68.9	(67.2,70.7)	4,925	967,979	50.9	(49.5,52.3)	-34.4	-40.3	(-42.8, -37.8)
Private	3,495	2,781,283	12.6	(12.1,13)	3,512	2,790,686	12.6	(12.2,13)	3,197	2,819,513	11.3	(11.0,11.7)	2,361	2,879,302	8.2	(7.9,8.5)	-4.4	-34.9	(-38.6, -31.2)
Uninsured	1,110	555,310	20	(18.8,21.2)	1,071	548,093	19.5	(18.4,20.7)	369	443,011	8.3	(7.5,9.2)	221	332,280	6.7	(5.8,7.5)	-13.3	-66.5	(-72.4, -60.6)
Total	13,226	4,298,747	31.2	(30.6,31.7)	13,584	4,482,257	30.3	(29.8,30.8)	13,087	4,629,135	27.9	(27.5,28.4)	10,536	4,707,057	21.8	(21.4,22.2)	-9.4	-30.1	(-32, -28.2)

[a] Total # of Inpatient Stays N=50,433

[b] All rates except Age-Specific and Insurance-Specific rates are age-standardized to the 2010 US Adult Population using data from the CDC Mortality Database

[c] The transition from ICD-9 CM/PCS to ICD-10 CM/PCS coding occured in third quarter of 2015. Estimates reported from years post-2015 were estimated using ICD-10 codes and may not be directly comparable to rates estimated pre-2015.

Appendix 6. Table 6. Rates of Diabetes-Specific Diabetes Inpatient Stays per 10,000 Adults in North Carolina; Years 2008-2017

	2008				2011				2014				2017				2017-2008		
Variable	**# of I.P. Stays**	**Denominator**	**Rate**	**(c.i.)**	**# of I.P. Stays**	**Denominator**	**Rate**	**(c.i.)**	**# of I.P. Stays**	**Denominator**	**Rate**	**(c.i.)**	**# of I.P. Stays**	**Denominator**	**Rate**	**(c.i.)**	**Absolute Δ**	**Percent Δ**	**(c.i.)**
Age																			
18-29	1,911	1,506,878	12.7	(12.1,13.3)	2,499	1,579,505	15.8	(15.2,16.4)	2,446	1,629,692	15.0	(14.4,15.6)	2,702	1,675,318	16.1	(15.5,16.7)	3.4	27.0	(21.6, 32.4)
30-44	3,633	1,966,936	18.5	(17.9,19.1)	3,964	1,956,756	20.3	(19.6,20.9)	4,403	1,964,562	22.4	(21.8,23.1)	3,926	1,964,144	20.0	(19.4,20.6)	1.5	8.3	(4.4, 12.2)
45-64	7,737	2,367,982	32.7	(32.0,33.4)	8,967	2,553,324	35.1	(34.4,35.8)	9,426	2,599,340	36.3	(35.5,37)	8,892	2,704,704	32.9	(32.2,33.6)	0.2	0.7	(-1.7, 3.1)
65-74	2,831	576,439	49.1	(47.3,51.0)	3,125	671,783	46.5	(44.9,48.1)	3,346	811,978	41.2	(39.8,42.6)	3,124	909,997	34.3	(33.1,35.5)	-14.8	-30.2	(-33.9, -26.5)
75+	3,204	562,439	57.0	(55.0,59.0)	3,378	604,764	55.9	(54,57.7)	3,209	649,047	49.4	(47.7,51.2)	2,769	718,475	38.5	(37.1,40)	-18.5	-32.4	(-36, -28.8)
Sex																			
Female	9,331	3,621,428	25.3	(24.8,25.8)	10,652	3,837,059	27.2	(26.6,27.7)	10,541	3,986,470	25.8	(25.3,26.3)	9,302	4,153,432	21.9	(21.5,22.4)	-3.4	-13.4	(-15.5, -11.3)
Male	9,985	3,359,246	31.2	(30.6,31.9)	11,281	3,529,073	32.7	(32.1,33.3)	12,289	3,668,149	33.8	(33.2,34.4)	12,111	3,819,206	31.6	(31,32.1)	0.4	1.2	(-1.1, 3.5)
Race/Ethnicity[d]																			
White, Non-Hispanic	-	-	-	-	11,897	5,012,355	22.6	(22.2,23)	12,389	5,142,267	22.9	(22.5,23.3)	11,362	5,276,746	20.6	(20.2,21)	-2	-8.8	(-10.9, -6.7)
Black, Non-Hispanic	-	-	-	-	8,767	1,525,444	60.4	(59.1,61.6)	8,906	1,599,624	57.4	(56.2,58.6)	8,357	1,663,098	51.2	(50.1,52.3)	-9.2	-15.2	(-17.7, -12.7)
Hispanic	-	-	-	-	473	507,001	18.2	(16,20.3)	677	543,612	20.8	(18.9,22.8)	783	591,627	19.3	(17.6,20.9)	1.1	6.0	(-6.3, 18.3)
Rural/Urban																			
Rural	7,037	2,169,085	31.6	(30.9,32.4)	7,669	2,265,395	32.5	(31.8,33.3)	6,739	2,284,763	28.3	(27.6,29)	6,134	2,319,651	25.7	(25,26.3)	-5.9	-18.7	(-21.2, -16.2)
Urban	12,279	4,811,589	26.4	(26.0,26.9)	14,264	5,100,737	28.5	(28,28.9)	16,091	5,369,856	30.1	(29.6,30.5)	15,279	5,652,987	26.9	(26.4,27.3)	0.5	1.9	(-0.1, 3.9)
Insurance																			
Medicaid	3,213	313,186	102.6	(99.0,106.1)	3,843	407,701	94.3	(91.3,97.2)	3,892	440,204	88.4	(85.6,91.2)	4,058	487,943	83.2	(80.6,85.7)	-19.4	-18.9	(-22.5, -15.3)
Medicare	8,895	1,352,260	65.8	(64.4,67.1)	10,006	1,522,184	65.7	(64.4,67)	9,375	1,709,304	54.8	(53.7,56)	7,835	1,871,776	41.9	(40.9,42.8)	-23.9	-36.3	(-38.5, -34.1)
Private	4,577	3,877,629	11.8	(11.5,12.2)	4,982	3,785,857	13.2	(12.8,13.5)	6,256	4,075,326	15.4	(15,15.7)	6,082	4,344,322	14.0	(13.6,14.4)	2.2	18.6	(14.9, 22.3)
Uninsured	2,231	1,220,469	18.3	(17.5,19.0)	2,664	1,398,146	19.1	(18.3,19.8)	2,854	1,180,182	24.2	(23.3,25.1)	2,975	998,211	29.8	(28.7,30.9)	11.5	63.0	(57.3, 68.7)
Total	19,316	6,980,674	28	(27.6,28.4)	21,933	7,366,132	29.7	(29.3,30.1)	22,830	7,654,619	29.5	(29.1,29.9)	21,413	7,972,638	26.4	(26.1,26.8)	-1.6	-5.7	(-7.4, -4)

[a] Total # of Inpatient Stays N=85,492

[b] All rates except Age-Specific and Insurance-Specific rates are age-standardized to the 2010 US Adult Population using data from the CDC Mortality Database

[c] The transition from ICD-9 CM/PCS to ICD-10 CM/PCS coding occured in third quarter of 2015. Estimates reported from years post-2015 were estimated using ICD-10 codes and may not be directly comparable to rates estimated pre-2015.

[d] Value of - indicates estimate was not reported. All estimates n<=10 events or RSE>=30% were not reported. Additionally, HCUP prioritizes ethnicity when coding the uniform Race variable, FL, IA, and NC did not provide an ethnicity variable in 2008. Percent change estimates for race/ethnicity subgroups for these states were calculated using 2011 as the reference year.

Appendix 6. Table 7. Rates of Diabetes-Specific Diabetes Inpatient Stays per 10,000 Adults in Nebraska; Years 2008-2017

Variable	2008				2011				2014				2017				2017-2008		
	# of I.P. Stays	Denominator	Rate	(c.i.)	# of I.P. Stays	Denominator	Rate	(c.i.)	# of I.P. Stays	Denominator	Rate	(c.i.)	# of I.P. Stays	Denominator	Rate	(c.i.)	Absolute Δ	Percent Δ	(c.i.)
Age																			
18-29	200	306,221	6.5	(5.6,7.4)	327	315,155	10.4	(9.3,11.5)	337	310,033	10.9	(9.7,12)	373	316,312	11.8	(10.6,13)	5.3	81.5	(61.7, 101.3)
30-44	312	335,474	9.3	(8.3,10.3)	340	337,329	10.1	(9,11.2)	450	360,994	12.5	(11.3,13.6)	395	364,731	10.8	(9.8,11.9)	1.5	16.1	(3.6, 28.6)
45-64	960	449,350	21.4	(20,22.7)	1,075	480,215	22.4	(21,23.7)	1,096	470,520	23.3	(21.9,24.7)	1,033	469,395	22	(20.7,23.3)	0.6	2.8	(-4.8, 10.4)
65-74	375	107,290	35	(31.4,38.5)	383	114,778	33.4	(30,36.7)	411	137,087	30	(27.1,32.9)	449	153,222	29.3	(26.6,32)	-5.7	-16.3	(-27.1, -5.5)
75+	646	129,899	49.7	(45.9,53.6)	535	135,971	39.3	(36,42.7)	505	134,303	37.6	(34.3,40.9)	446	141,352	31.6	(28.6,34.5)	-18.1	-36.4	(-44.7, -28.1)
Sex																			
Female	1,136	680,017	15.7	(14.8,16.7)	1,186	706,151	16.1	(15.2,17)	1,265	717,025	17	(16.1,18)	1,139	729,285	15.1	(14.2,16)	-0.6	-3.8	(-11.2, 3.6)
Male	1,357	648,217	21.7	(20.6,22.9)	1,474	677,297	22	(20.8,23.1)	1,534	695,912	22.3	(21.2,23.4)	1,557	715,727	21.8	(20.7,22.8)	0.1	0.5	(-6, 7)
Race/Ethnicity[d]																			
White, Non-Hispanic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Black, Non-Hispanic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hispanic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rural/Urban																			
Rural	1,181	569,030	18.4	(17.4,19.5)	1,072	576,261	16.9	(15.8,17.9)	1,074	576,096	17.5	(16.4,18.6)	977	574,919	15.6	(14.6,16.6)	-2.8	-15.2	(-22.2, -8.2)
Urban	1,312	759,204	18.5	(17.5,19.5)	1,588	807,187	20.5	(19.5,21.5)	1,725	836,841	21.3	(20.3,22.3)	1,719	870,093	20.1	(19.2,21.1)	1.6	8.6	(2.3, 14.9)
Insurance																			
Medicaid	232	40,626	57.1	(49.8,64.5)	241	47,356	50.9	(44.5,57.3)	220	51,743	42.5	(36.9,48.1)	353	54,807	64.4	(57.7,71.1)	7.3	12.8	(-1.7, 27.3)
Medicare	1,390	262,843	52.9	(50.1,55.7)	1,294	278,804	46.4	(43.9,48.9)	1,352	299,763	45.1	(42.7,47.5)	1,258	316,330	39.8	(37.6,42)	-13.1	-24.8	(-30.4, -19.2)
Private	719	847,442	8.5	(7.9,9.1)	878	837,009	10.5	(9.8,11.2)	966	876,007	11	(10.3,11.7)	884	906,023	9.8	(9.1,10.4)	1.3	15.3	(7.1, 23.5)
Uninsured	108	153,935	7	(5.7,8.3)	196	181,493	10.8	(9.3,12.3)	209	150,163	13.9	(12,15.8)	101	135,703	7.4	(6,8.9)	0.4	5.7	(-17.6, 29)
Total	2,493	1,328,234	18.5	(17.7,19.2)	2,660	1,383,448	18.9	(18.2,19.6)	2,799	1,412,937	19.5	(18.8,20.2)	2,696	1,445,012	18.3	(17.6,19)	-0.2	-1.1	(-6.1, 3.9)

[a] Total # of Inpatient Stays N=10,648

[b] All rates except Age-Specific and Insurance-Specific rates are age-standardized to the 2010 US Adult Population using data from the CDC Mortality Database

[c] The transition from ICD-9 CM/PCS to ICD-10 CM/PCS coding occured in third quarter of 2015. Estimates reported from years post-2015 were estimated using ICD-10 codes and may not be directly comparable to rates estimated pre-2015.

[d] Value of - indicates estimate was not reported. All estimates n<=10 events or RSE>=30% were not reported. Nebraska did not provide a race variable to HCUP.

Appendix 6. Table 8. Rates of Diabetes-Specific Diabetes Inpatient Stays per 10,000 Adults in New Jersey; Years 2008-2017

Variable	2008				2011				2014				2017				2017-2008		
	# of I.P. Stays	Denominator	Rate	(c.i.)	# of I.P. Stays	Denominator	Rate	(c.i.)	# of I.P. Stays	Denominator	Rate	(c.i.)	# of I.P. Stays	Denominator	Rate	(c.i.)	Absolute Δ	Percent Δ	(c.i.)
Age																			
18-29	1,159	1,306,349	8.9	(8.4,9.4)	1,363	1,324,379	10.3	(9.7,10.8)	1,510	1,367,695	11	(10.5,11.6)	1,346	1,372,927	9.8	(9.3,10.3)	0.9	10.5	(3.5, 17.5)
30-44	2,687	1,862,521	14.4	(13.9,15.0)	2,671	1,783,584	15	(14.4,15.5)	2,550	1,753,846	14.5	(14.0,15.1)	2,040	1,749,689	11.7	(11.2,12.2)	-2.8	-19.2	(-23.6, -14.8)
45-64	8,244	2,322,663	35.5	(34.7,36.3)	8,187	2,461,341	33.3	(32.5,34)	8,165	2,494,736	32.7	(32.0,33.4)	6,753	2,490,992	27.1	(26.5,27.8)	-8.4	-23.6	(-26, -21.2)
65-74	3,503	539,915	64.9	(62.7,67.0)	3,501	589,674	59.4	(57.4,61.3)	3,628	676,027	53.7	(51.9,55.4)	3,046	739,520	41.2	(39.7,42.7)	-23.7	-36.5	(-39.9, -33.1)
75+	5,427	604,153	89.8	(87.4,92.2)	5,048	621,296	81.2	(79,83.5)	4,556	634,566	71.8	(69.7,73.9)	3,575	675,978	52.9	(51.2,54.6)	-36.9	-41.1	(-43.9, -38.3)
Sex																			
Female	9,527	3,426,778	25.9	(25.4,26.4)	9,073	3,527,273	23.8	(23.3,24.3)	8,572	3,591,661	22.1	(21.6,22.6)	6,545	3,641,398	16.5	(16.1,17.0)	-9.3	-36.1	(-38.3, -33.9)
Male	11,493	3,208,823	37.3	(36.7,38.0)	11,697	3,253,001	36.4	(35.8,37.1)	11,837	3,335,209	35.4	(34.8,36.1)	10,215	3,387,708	29.6	(29.0,30.2)	-7.7	-20.7	(-22.7, -18.7)
Race/Ethnicity																			
White, Non-Hispanic	5,583	838,203	74	(72.0,76)	5,607	840,695	70.7	(68.9,72.6)	5,520	869,873	65.8	(64.1,67.6)	4,819	886,765	55.5	(54.0,57.1)	-18.5	-25.0	(-27.9, -22.1)
Black, Non-Hispanic	2,524	996,973	34.9	(33.5,36.4)	2,719	1,128,479	32.5	(31.2,33.8)	2,697	1,225,135	27	(25.9,28.1)	2,522	1,307,725	22.8	(21.9,23.7)	-12.1	-34.8	(-38.9, -30.7)
Hispanic	11,587	4,229,385	24.2	(23.8,24.7)	11,390	4,131,094	24	(23.6,24.5)	11,086	4,087,664	23.2	(22.8,23.7)	8,430	4,025,066	17.9	(17.5,18.3)	-6.3	-25.9	(-28, -23.8)
Rural/Urban[d]																			
Rural	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Urban	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Insurance																			
Medicaid	1,439	290,635	49.5	(47.0,52.1)	1,641	361,594	45.4	(43.2,47.6)	2,814	462,056	60.9	(58.7,63.2)	2,858	584,094	48.9	(47.1,50.7)	-0.6	-1.2	(-6.5, 4.1)
Medicare	10,982	1,250,959	87.8	(86.2,89.4)	10,743	1,311,515	81.9	(80.4,83.5)	10,301	1,415,311	72.8	(71.4,74.2)	8,068	1,522,964	53	(51.8,54.1)	-34.8	-39.7	(-41.6, -37.8)
Private	5,741	4,139,238	13.9	(13.5,14.2)	5,389	4,009,016	13.4	(13.1,13.8)	5,423	4,102,112	13.2	(12.9,13.6)	4,562	4,249,595	10.7	(10.4,11.1)	-3.1	-22.6	(-25.5, -19.7)
Uninsured	2,637	923,607	28.6	(27.5,29.6)	2,808	1,060,003	26.5	(25.5,27.5)	1,633	910,641	17.9	(17.1,18.8)	558	629,971	8.9	(8.1,9.6)	-19.7	-69.0	(-72.9, -65.1)
Total	21,020	6,635,601	31.1	(30.7,31.6)	20,770	6,780,274	29.6	(29.2,30.1)	20,409	6,926,870	28.2	(27.9,28.6)	16,760	7,029,106	22.6	(22.3,23.0)	-8.5	-27.4	(-28.9, -25.9)

[a] Total # of Inpatient Stays N=78,959

[b] All rates except Age-Specific and Insurance-Specific rates are age-standardized to the 2010 US Adult Population using data from the CDC Mortality Database

[c] The transition from ICD-9 CM/PCS to ICD-10 CM/PCS coding occured in third quarter of 2015. Estimates reported from years post-2015 were estimated using ICD-10 codes and may not be directly comparable to rates estimated pre-2015.

[d] Value of - indicates estimate was not reported. All estimates n<=10 events or RSE>=30% were not reported. Denominator estimates for rural population in New Jersey using the American Community Survey USDA-linked rural/urban variable were <10.

Appendix 6. Table 9. Rates of Diabetes-Specific Diabetes Inpatient Stays per 10,000 Adults in New York; Years 2008-2016

Variable	2008				2011				2014				2017				2017-2008		
	# of I.P. Stays	Denominator	Rate	(c.i.)	# of I.P. Stays	Denominator	Rate	(c.i.)	# of I.P. Stays	Denominator	Rate	(c.i.)	# of I.P. Stays	Denominator	Rate	(c.i.)	Absolute Δ	Percent Δ	(c.i.)
Age																			
18-29	3,136	3,330,436	9.4	(9.1,9.8)	3,198	3,382,395	9.4	(9.1,9.8)	3,387	3,449,034	9.8	(9.5,10.2)	3,077	3,406,325	9	(8.7,9.4)	-0.4	-4.1	(-8.2, 0)
30-44	6,598	4,020,959	16.4	(16.0,16.8)	6,188	3,890,674	15.9	(15.5,16.3)	5,927	3,898,392	15.2	(14.8,15.6)	4,618	3,861,706	12	(11.6,12.3)	-4.4	-27.1	(-29.8, -24.4)
45-64	18,941	5,141,374	36.8	(36.3,37.4)	19,707	5,253,266	37.5	(37.0,38.0)	18,173	5,283,866	34.4	(33.9,34.9)	13,646	5,273,615	25.9	(25.4,26.3)	-11	-29.8	(-31.4, -28.2)
65-74	7,994	1,224,393	65.3	(63.9,66.7)	8,067	1,290,368	62.5	(61.2,63.9)	7,467	1,486,157	50.2	(49.1,51.4)	5,747	1,586,994	36.2	(35.3,37.2)	-29.1	-44.5	(-46.7, -42.3)
75+	11,971	1,376,299	87	(85.4,88.5)	11,291	1,372,131	82.3	(80.8,83.8)	9,504	1,410,167	67.4	(66.0,68.8)	6,588	1,443,619	45.6	(44.5,46.7)	-41.3	-47.5	(-49.3, -45.7)
Sex																			
Female	22,700	7,874,358	27.2	(26.9,27.6)	21,781	7,950,682	25.9	(25.5,26.2)	19,201	8,106,141	22.3	(22.0,22.7)	13,802	8,119,687	16	(15.7,16.3)	-11.2	-41.2	(-42.6, -39.8)
Male	25,940	7,219,103	37.6	(37.1,38.1)	26,670	7,238,152	38.2	(37.7,38.6)	25,257	7,421,475	34.6	(34.2,35.0)	19,874	7,452,572	26.8	(26.4,27.2)	-10.8	-28.7	(-30, -27.4)
Race/Ethnicity																			
White, Non-Hispanic	21,688	9,355,249	21.1	(20.8,21.4)	21,946	9,098,525	21.8	(21.5,22.1)	20,033	9,068,059	20	(19.7,20.2)	13,920	8,958,153	14.2	(14.0,14.5)	-6.9	-32.6	(-34.1, -31.1)
Black, Non-Hispanic	14,309	2,129,649	73.6	(72.4,74.8)	13,634	2,136,385	67.6	(66.5,68.8)	12,369	2,194,101	58.4	(57.3,59.4)	9,779	2,203,763	45.3	(44.4,46.2)	-28.3	-38.5	(-40.2, -36.8)
Hispanic	7,727	2,308,197	42.5	(41.5,43.4)	7,554	2,514,280	38.4	(37.5,39.3)	6,754	2,661,023	30.4	(29.6,31.1)	5,287	2,723,870	22.5	(21.8,23.1)	-20	-47.1	(-49.4, -44.8)
Rural/Urban																			
Rural	3,136	1,243,723	24.6	(23.7,25.4)	3,371	1,250,394	25.5	(24.6,26.4)	2,893	1,235,524	22.1	(21.3,22.9)	2,333	1,214,296	18.4	(17.7,19.2)	-6.1	-24.9	(-28.9, -20.9)
Urban	45,504	13,849,738	32.8	(32.5,33.1)	45,080	13,938,440	32.2	(31.9,32.5)	41,565	14,292,092	28.6	(28.4,28.9)	31,343	14,357,963	21.3	(21.1,21.6)	-11.4	-34.9	(-35.9, -33.9)
Insurance																			
Medicaid	12,027	1,351,364	89	(87.4,90.6)	12,398	1,760,708	70.4	(69.2,71.7)	12,747	2,043,074	62.4	(61.3,63.5)	10,553	2,318,372	45.5	(44.7,46.4)	-43.5	-48.9	(-50.6, -47.2)
Medicare	24,007	2,887,945	83.1	(82.1,84.2)	24,152	2,963,084	81.5	(80.5,82.5)	21,910	3,221,167	68	(67.1,68.9)	15,635	3,348,570	46.7	(46.0,47.4)	-36.4	-43.8	(-45.1, -42.5)
Private	8,984	8,727,751	10.3	(10.1,10.5)	9,024	8,288,813	10.9	(10.7,11.1)	7,744	8,581,836	9	(8.8,9.2)	6,007	8,688,671	6.9	(6.7,7.1)	-3.4	-32.8	(-35.1, -30.5)
Uninsured	2,993	2,019,786	14.8	(14.3,15.4)	2,108	2,061,120	10.2	(9.8,10.7)	1,409	1,569,929	9	(8.5,9.4)	1,019	1,104,604	9.2	(8.7,9.8)	-5.6	-37.7	(-42.1, -33.3)
Total	48,640	15,093,461	32.1	(31.8,32.4)	48,451	15,188,834	31.6	(31.3,31.8)	44,458	15,527,616	28	(27.8,28.3)	33,676	15,572,259	21.1	(20.8,21.3)	-11	-34.3	(-35.3, -33.3)

[a] Total # of Inpatient Stays N=175,225

[b] All rates except Age-Specific and Insurance-Specific rates are age-standardized to the 2010 US Adult Population using data from the CDC Mortality Database

[c] The transition from ICD-9 CM/PCS to ICD-10 CM/PCS coding occured in third quarter of 2015. Estimates reported from years post-2015 were estimated using ICD-10 codes and may not be directly comparable to rates estimated pre-2015.

Appendix 6. Table 10. Rates of Diabetes-Specific Diabetes Inpatient Stays per 10,000 Adults in Utah; Years 2008-2016

	2008				2011				2014				2017				2017-2008		
Variable	**# of I.P. Stays**	**Denominator**	**Rate**	**(c.i.)**	**# of I.P. Stays**	**Denominator**	**Rate**	**(c.i.)**	**# of I.P. Stays**	**Denominator**	**Rate**	**(c.i.)**	**# of I.P. Stays**	**Denominator**	**Rate**	**(c.i.)**	**Absolute Δ**	**Percent Δ**	**(c.i.)**
Age																			
18-29	348	590,462	5.9	(5.3,6.5)	448	545,856	8.2	(7.5,9.0)	488	547,583	8.9	(8.1,9.7)	581	586,594	9.9	(9.1,10.7)	4	68.1	(53.5, 82.7)
30-44	388	516,453	7.5	(6.8,8.3)	470	567,614	8.3	(7.5,9.0)	568	610,255	9.3	(8.5,10.1)	608	640,622	9.5	(8.7,10.3)	2	26.4	(14.6, 38.2)
45-64	887	538,738	16.5	(15.4,17.6)	942	563,825	16.7	(15.6,17.8)	954	585,497	16.3	(15.3,17.3)	984	614,875	16	(15,17)	-0.5	-2.8	(-10.3, 4.7)
65-74	348	121,334	28.7	(25.7,31.7)	366	130,992	27.9	(25.1,30.8)	347	159,439	21.8	(19.5,24.1)	322	184,712	17.4	(15.5,19.3)	-11.2	-39.2	(-49.7, -28.7)
75+	342	124,037	27.6	(24.7,30.5)	367	127,571	28.8	(25.8,31.7)	336	134,979	24.9	(22.2,27.6)	290	150,203	19.3	(17.1,21.5)	-8.3	-30.0	(-41.2, -18.8)
Sex																			
Female	1,064	952,000	12	(11.3,12.7)	1,179	971,560	12.8	(12.0,13.5)	1,137	1,024,043	11.4	(10.7,12.1)	1,206	1,092,186	11.2	(10.6,11.9)	-0.8	-6.6	(-13.4, 0.2)
Male	1,249	939,024	15.8	(15.0,16.8)	1,414	964,298	16.7	(15.8,17.6)	1,556	1,013,710	16.9	(16,17.7)	1,579	1,084,820	15.6	(14.9,16.4)	-0.2	-1.3	(-7.6, 5)
Race/Ethnicity																			
White, Non-Hispanic	1,879	1,588,818	12.9	(12.3,13.5)	2,055	1592695	13.6	(13.0,14.2)	1,682	1657244	10.6	(10,11.1)	2,184	1,745,144	12.8	(12.3,13.4)	-0.1	-0.9	(-6.1, 4.3)
Black, Non-Hispanic	41	16,936	27.6	(18.3,36.8)	46	15819	48.8	(30.1,67.5)	62	20701	34	(21.7,46.3)	90	24,066	40.9	(31.1,50.7)	13.3	48.3	(7.1, 89.5)
Hispanic	265	193,733	19.9	(17.1,22.6)	333	224168	23.3	(20.2,26.3)	763	242961	45.6	(41.0,50.2)	294	273,160	14	(12.2,15.8)	-5.9	-29.6	(-43.6, -15.6)
Rural/Urban																			
Rural	360	313,916	11.8	(10.6,13.1)	370	322,547	11.5	(10.3,12.7)	330	272,165	12.2	(10.9,13.6)	344	289,750	12	(10.8,13.3)	0.2	1.7	(-11, 14.4)
Urban	1,953	1,577,108	14.3	(13.7,15.0)	2,223	1,613,311	15.5	(14.9,16.2)	2,363	1,765,588	14.3	(13.8,14.9)	2,441	1,887,256	13.6	(13.0,14.1)	-0.7	-5.1	(-10.1, -0.1)
Insurance																			
Medicaid	347	61,304	56.7	(50.7,62.6)	402	79,256	50.8	(45.8,55.7)	392	68,354	57.4	(51.7,63.0)	449	78,870	56.9	(51.6,62.2)	0.3	0.5	(-11.3, 12.3)
Medicare	816	272,464	30	(27.9,32.0)	1,002	286,559	35	(32.8,37.1)	1,056	329,176	32.1	(30.2,34.0)	949	362,242	26.2	(24.5,27.9)	-3.8	-12.6	(-20, -5.2)
Private	812	1,233,040	6.6	(6.1,7.0)	733	1,213,744	6	(5.6,6.5)	803	1,323,294	6.1	(5.7,6.5)	913	1,480,402	6.2	(5.8,6.6)	-0.4	-6.4	(-14, 1.2)
Uninsured	227	296,240	7.7	(6.7,8.7)	312	331,214	9.4	(8.4,10.5)	327	285,740	11.4	(10.2,12.7)	367	223,794	16.4	(14.7,18.1)	8.7	113.8	(92.3, 135.3)
Total	2,313	1,891,024	13.8	(13.2,14.4)	2,593	1,935,858	14.6	(14.1,15.2)	2,693	2,037,753	14	(13.5,14.6)	2,785	2,177,006	13.4	(12.9,13.9)	-0.5	-3.3	(-8, 1.4)

[a] Total # of Inpatient Stays N=10,384

[b] All rates except Age-Specific and Insurance-Specific rates are age-standardized to the 2010 US Adult Population using data from the CDC Mortality Database

[c] The transition from ICD-9 CM/PCS to ICD-10 CM/PCS coding occured in third quarter of 2015. Estimates reported from years post-2015 were estimated using ICD-10 codes and may not be directly comparable to rates estimated pre-2015.

Appendix 6. Table 11. Rates of Diabetes-Specific Diabetes Inpatient Stays per 10,000 Adults in Vermont; Years 2008-2017

Variable	2008				2011				2014				2017				2017-2008		
	# of I.P. Stays	Denominator	Rate	(c.i.)	# of I.P. Stays	Denominator	Rate	(c.i.)	# of I.P. Stays	Denominator	Rate	(c.i.)	# of I.P. Stays	Denominator	Rate	(c.i.)	Absolute Δ	Percent Δ	(c.i.)
Age																			
18-29	86	99,268	8.7	(6.8,10.5)	101	99,277	10.2	(8.2,12.2)	99	101,792	9.7	(7.8,11.6)	89	102,030	8.7	(6.9,10.5)	0.1	0.7	(-24.2, 25.6)
30-44	119	115,418	10.3	(8.5,12.2)	106	112,475	9.4	(7.6,11.2)	114	110,046	10.4	(8.5,12.3)	101	106,355	9.5	(7.6,11.4)	-1	-7.9	(-29.3, 13.5)
45-64	288	191,266	15.1	(13.3,16.8)	291	193,415	15.1	(13.3,16.8)	351	186,455	18.8	(16.9,20.8)	221	182,085	12.1	(10.5,13.7)	-2.9	-19.4	(-32.7, -6.1)
65-74	117	44,410	26.4	(21.6,31.1)	108	47,543	22.7	(18.4,27)	159	58,175	27.3	(23.1,31.6)	101	63,713	15.8	(12.8,18.9)	-10.5	-39.8	(-58, -21.6)
75+	161	42,854	37.6	(31.8,43.4)	173	46,933	36.9	(31.4,42.4)	138	48,020	28.7	(24.0,33.5)	106	50,412	21	(17.0,25.0)	-16.5	-44.0	(-59.8, -28.2)
Sex																			
Female	367	254,338	13.9	(12.5,15.3)	362	254,641	13.6	(12.2,15.0)	359	260,641	13.3	(11.9,14.7)	251	259,493	9.3	(8.1,10.5)	-4.6	-33.2	(-44.4, -22)
Male	404	238,878	16.9	(15.2,18.5)	417	245,002	16.5	(14.9,18.1)	502	243,847	19.4	(17.7,21.1)	367	245,102	14.4	(12.9,15.9)	-2.5	-14.6	(-25.7, -3.5)
Race/Ethnicity[d]																			
White, Non-Hispanic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Black, Non-Hispanic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hispanic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rural/Urban																			
Rural	541	331,730	15.6	(14.3,17.0)	568	329,683	16.2	(14.8,17.5)	583	330,868	16.4	(15.0,17.7)	408	330,050	11.9	(10.7,13.0)	-3.8	-24.2	(-33.8, -14.6)
Urban	230	161,486	14.7	(12.8,16.6)	211	169,960	12.8	(11.0,14.5)	278	173,620	16.1	(14.2,18.0)	210	174,545	11.9	(10.3,13.5)	-2.8	-19.1	(-33.4, -4.8)
Insurance																			
Medicaid	154	45,815	33.6	(28.3,38.9)	175	56,954	30.7	(26.2,35.3)	197	65,776	29.9	(25.7,34.2)	171	69,271	24.6	(20.9,28.4)	-9	-26.7	(-42.9, -10.5)
Medicare	372	102,640	36.2	(32.6,40.0)	397	106,997	37.1	(33.4,40.7)	461	124,297	37.1	(33.7,40.5)	302	128,549	23.5	(20.9,26.2)	-12.7	-35.1	(-45.7, -24.5)
Private	206	291,962	7.1	(6.1,8.0)	176	286,474	6.2	(5.2,7.1)	177	281,172	6.3	(5.4,7.3)	128	280,782	4.6	(3.8,5.4)	-2.5	-35.3	(-50.2, -20.4)
Uninsured	36	47,088	7.7	(5.2,10.1)	25	42,758	5.9	(3.6,8.2)	18	28,058	6.4	(3.5,9.4)	13	20,787	6.2	(2.9,9.7)	-1.4	-18.3	(-64.6, 28)
Total	771	493,216	15.2	(14.2,16.3)	779	499,643	14.9	(13.9,16)	861	504,488	16.2	(15.1,17.3)	618	504,595	11.7	(10.8,12.7)	-3.5	-23.0	(-30.9, -15.1)

[a] Total # of Inpatient Stays N=3,029

[b] All rates except Age-Specific and Insurance-Specific rates are age-standardized to the 2010 US Adult Population using data from the CDC Mortality Database

[c] The transition from ICD-9 CM/PCS to ICD-10 CM/PCS coding occured in third quarter of 2015. Estimates reported from years post-2015 were estimated using ICD-10 codes and may not be directly comparable to rates estimated pre-2015.

[d] Value of - indicates estimate was not reported. All estimates n<=10 events or RSE>=30% were not reported. Race-specific estimates generated using Vermont data had relative standard errors >=30% for Black and Hispanic populations. As such, race/ethnicity specific estimates were not reported.

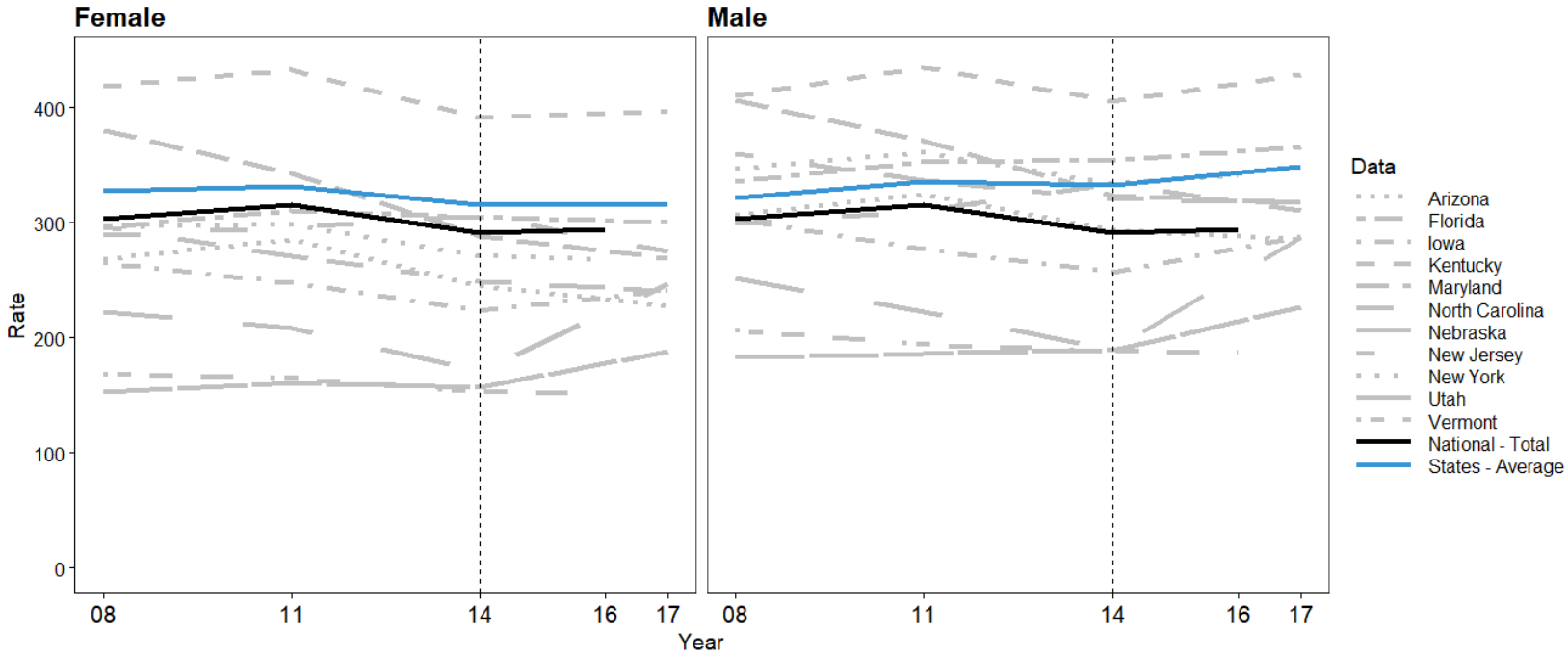
Appendix 6. Table 12. Average Rates of Diabetes-Specific Inpatient Stays from Pooled State Data by Race, Rural/Urban, and Insurance; Years 2008-2017

	2008	2011	2014	2016 / 2017*
	Rate (95% CI)	Rate (95% CI)	Rate (95% CI)	Rate (95% CI)
Race				
Black, non-Hispanic	68.3 (67.4,69.1)	65 (64.4,65.6)	59.2 (58.6,59.7)	50.3 (49.9,50.8)
Hispanic	37.7 (37,38.5)	29.5 (29.1,30)	27.4 (27.1,27.8)	21.9 (21.6,22.2)
White, non-Hispanic	22.6 (22.4,22.8)	23.9 (23.7,24)	23.7 (23.6,23.9)	20.1 (20,20.2)
Rural/Urban				
Rural	27.8 (27.4,28.1)	29.8 (29.4,30.1)	27.2 (26.8,27.5)	23.6 (23.3,23.9)
Urban	28.9 (28.7,29)	30.2 (30,30.3)	29.7 (29.6,29.9)	24.9 (24.8,25.1)
Insurance				
Medicaid	89.4 (88.4,90.4)	79.1 (78.3,79.9)	74.2 (73.5,74.9)	60.5 (59.9,61.1)
Medicare	70.3 (69.8,70.7)	71 (70.5,71.4)	63.4 (63,63.8)	48 (47.8,48.5)
Private	11.4 (11.3,11.5)	11.5 (11.4,11.6)	11.1 (11,11.2)	9.4 (9.3,9.5)
Uninsured	17 (16.7,17.2)	17.3 (17.1,17.6)	17.4 (17.1,17.6)	19 (18.6,19.3)

Rates were generated using average inpatient stays aggregated from pooled SID data from states AZ, FL, IA, KY, MD, NC, NE, NJ, NY, UT, VT.
Population estimates generated from pooled state populations estimated from the IPUMS USA American Community Survey for corresponding years.
All rates except insurance were age-standardized to the 2010 US Adult Population using population estimates available from the CDC Mortality
*Average rates calculated from an average ED utilization rates from 2016 and 2017 estimates, as 2017 data was not available for select states.
**Average use across states for Race estimates do not include NE and VT due to missing race variable and low n of numerator and denominator
**Average use across states for Rural/Urban estimates do not include NJ due to lack of rural counties as defined by USDA supplied rural/urban

Appendix 7. State-Specific All-Cause Diabetes Hospitalization Rates by Race/Ethnicity, Rural/Urban, and Insurance

Appendix 7. Figure 1. Age-Adjusted Rates of All-Cause Hospitalizations among US Adults by Sex; Years 2008-2017

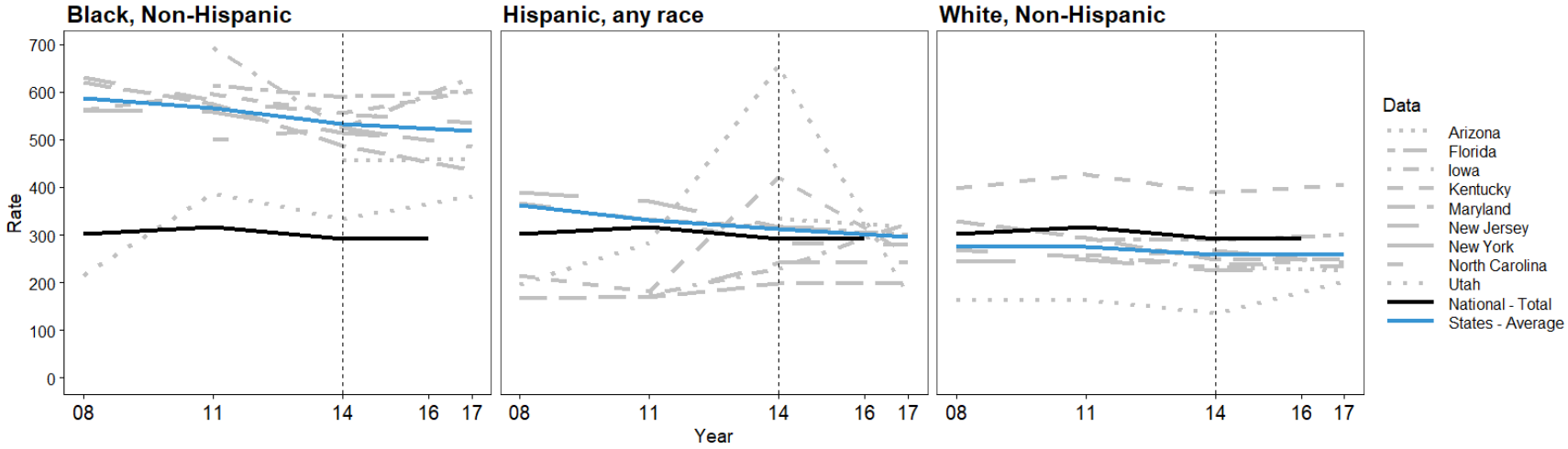


Hospitalization rates were calculated using numerator data from the HEALTHCARE COST AND UTILIZATION PROJECT Nationwide Inpatient Sample and State Inpatient Databases and denominator data from the IPUMS USA American Community Survey from years 2008-2017. All rates are age-standardized to the national 2010 US adult population using data from the CDC Mortality Database.

Two benchmark lines are highlighted: the black National-Total line shows national hospitalization rates across all US adults, regardless of sex and the blue 11 States-Average line shows average hospitalization rates across all states by sex.

The dotted vertical line delineates the point within our data that the data transitioned from rates generated using ICD-9 codes to ICD-10 codes. Rates post-transition may not be directly comparable to rates prior to the transition.

Appendix 7. Figure 2. Age-Adjusted Rates of All-Cause Hospitalizations among US Adults by Race/Ethnicity; Years 2008-2017



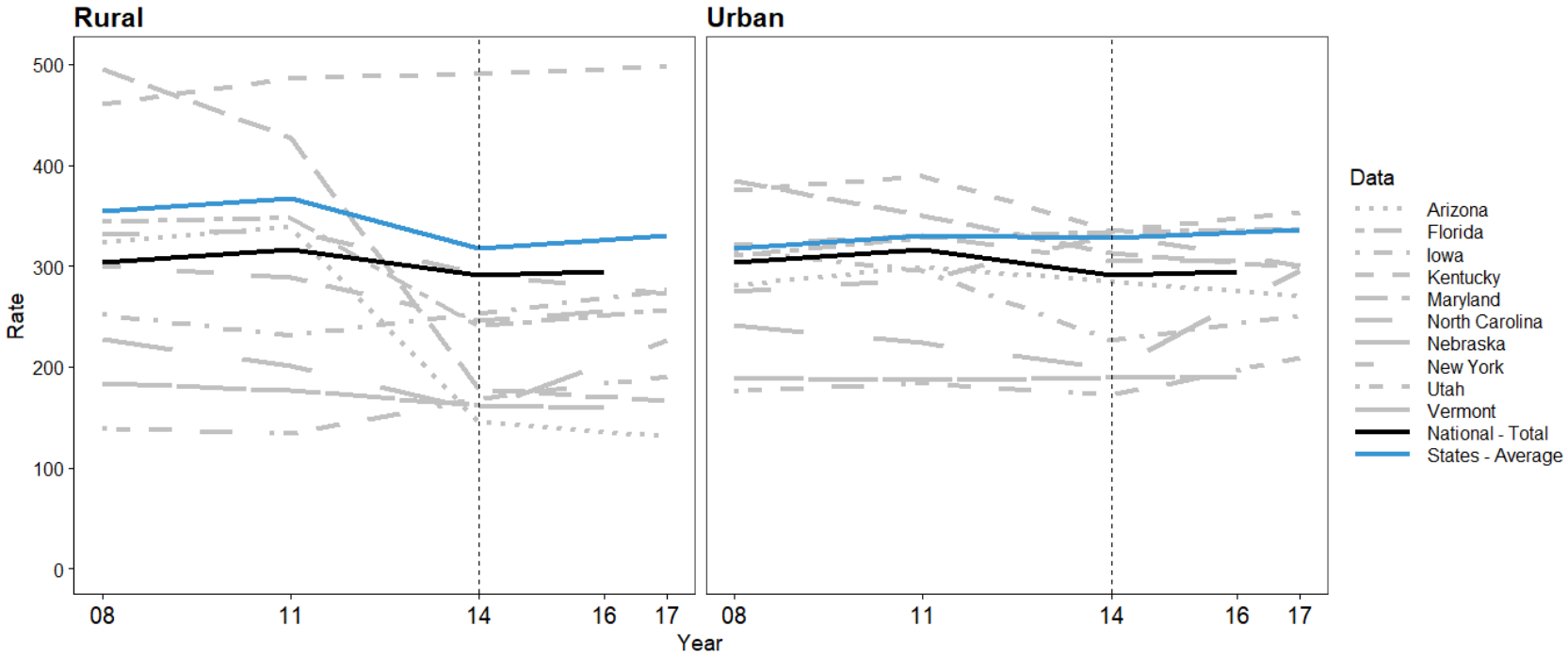
Hospitalization rates were calculated using numerator data from the HEALTHCARE COST AND UTILIZATION PROJECT Nationwide Inpatient Sample and State Inpatient Databases and denominator data from the IPUMS USA American Community Survey from years 2008-2017. All rates are age-standardized to the national 2010 US adult population using data from the CDC Mortality Database.

Two benchmark lines are highlighted: the black National-Total line shows national hospitalization rates across all US adults, regardless of race/ethnicity and the blue 11 States-Average line shows average hospitalization rates across all states by race/ethnicity.

Rates were not reported for state data with inconsistently coded race/ethnicity variables and/or sub-group estimates with estimates n≤10 events or RSE >= 30%. Nevada did not supply race/ethnicity data.

The dotted vertical line delineates the point within our data that the data transitioned from rates generated using ICD-9 codes to ICD-10 codes. Rates post-transition may not be directly comparable to rates prior to the transition.

Appendix 7. Figure 3. Age-Adjusted Rates of All-Cause Hospitalizations among US adults by Rural Status; Years 2008-2017



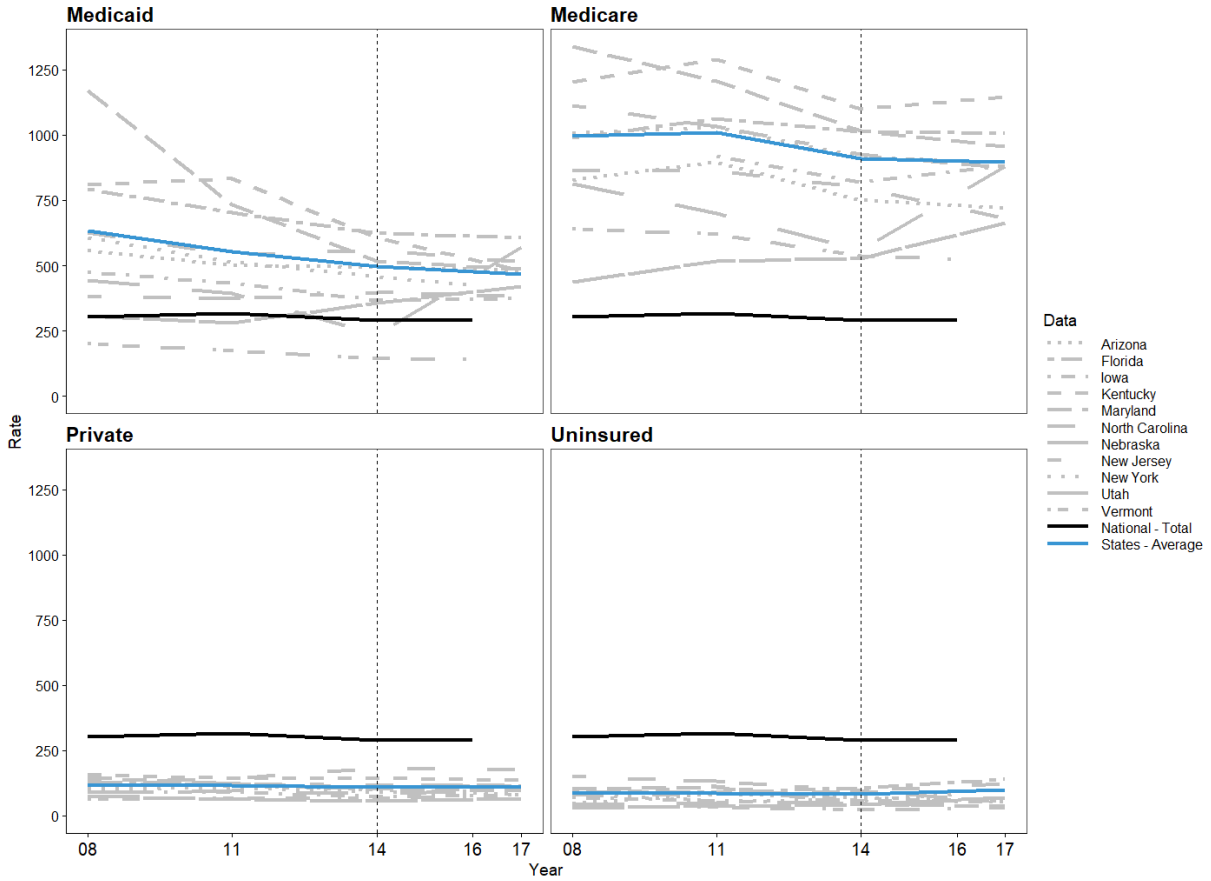
Hospitalization rates were calculated using numerator data from the HEALTHCARE COST AND UTILIZATION PROJECT Nationwide Inpatient Sample and State Inpatient Databases and denominator data from the IPUMS USA American Community Survey from years 2008-2017. All rates are age-standardized to the national 2010 US adult population using data from the CDC Mortality Database.

Two benchmark lines are highlighted: the black National-Total line shows national hospitalization rates across all US adults, regardless of rural/urban status and the blue 11 States-Average line shows average hospitalization rates across all states by rural/urban status.

Rates were not reported for state data with sub-group estimates with n≤10 events or RSE>30%. The USDA-linked Rural/Urban variable did not allocate any rural counties in New Jersey.

The dotted vertical line delineates the point within our data that the data transitioned from rates generated using ICD-9 codes to ICD-10 codes. Rates post-transition may not be directly comparable to rates prior to the transition.

Appendix 7. Figure 4. Insurance-Specific Rates of All-Cause Hospitalizations among US adults; Years 2008-2017



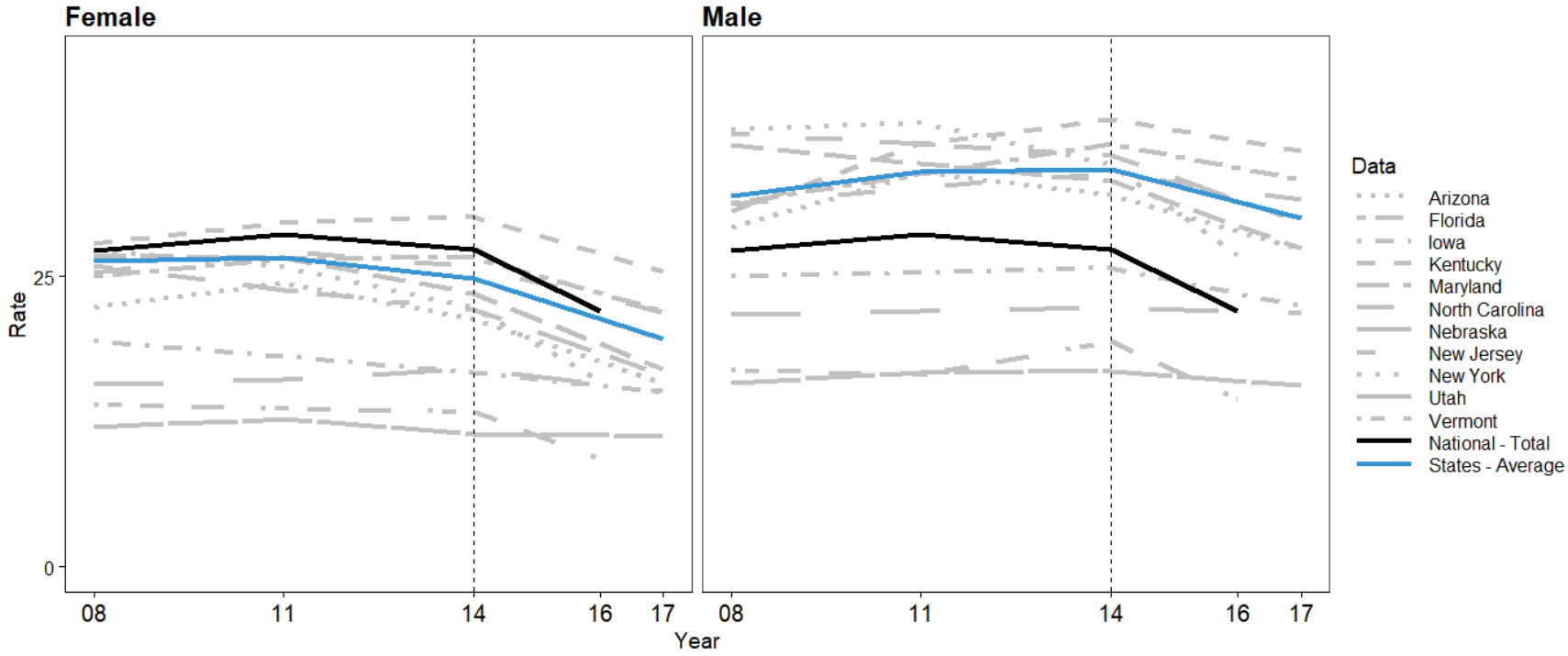
Hospitalization rates were calculated using numerator data from the HEALTHCARE COST AND UTILIZATION PROJECT Nationwide Inpatient Sample and State Inpatient Databases and denominator data
from the IPUMS USA American Community Survey from years 2008-2017. All rates are age-standardized to the national 2010 US adult population using data from the CDC Mortality Database.

Two benchmark lines are highlighted: the black National-Total line shows national hospitalization rates across all US adults, regardless of insurance status and the blue 11 States-Average line shows average hospitalization rates across all states by insurance.

The dotted vertical line delineates the point within our data that the data transitioned from rates generated using ICD-9 codes to ICD-10 codes. Rates post-transition may not be directly comparable to rates prior to the transition.

Appendix 8. State-Specific Diabetes-Related Hospitalization Rates by Sex, Rural/Urban, and Insurance

Appendix 8, Figure 1. Age-Adjusted Rates of Diabetes-Specific Hospitalizations among US Adults by Sex; Years 2008-2017

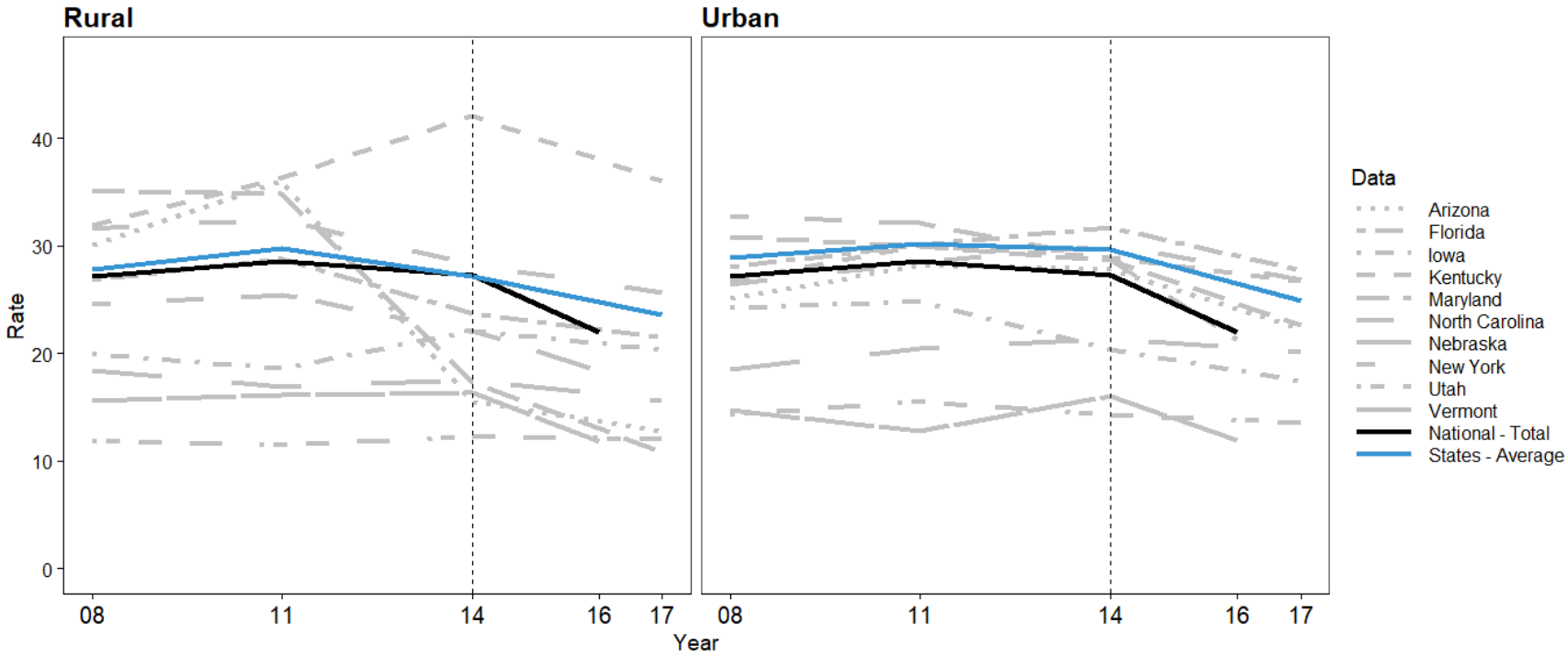


Hospitalization rates were calculated using numerator data from the HEALTHCARE COST AND UTILIZATION PROJECT Nationwide Inpatient Sample and State Inpatient Databases and denominator data from the IPUMS USA American Community Survey from years 2008-2017. All rates are age-standardized to the national 2010 US adult population using data from the CDC Mortality Database.

Two benchmark lines are highlighted: the black National-Total line shows national hospitalization rates across all US adults, regardless of sex and the blue 11 States-Average line shows average hospitalization rates across all states by sex.

The dotted vertical line delineates the point within our data that the data transitioned from rates generated using ICD-9 codes to ICD-10 codes. Rates post-transition may not be directly comparable to rates prior to the transition.

A**ppendix 8, Figure 2.** Age-Adjusted Rates of Diabetes-Specific Hospitalizations among US adults by Rural Status; Years 2008-2017



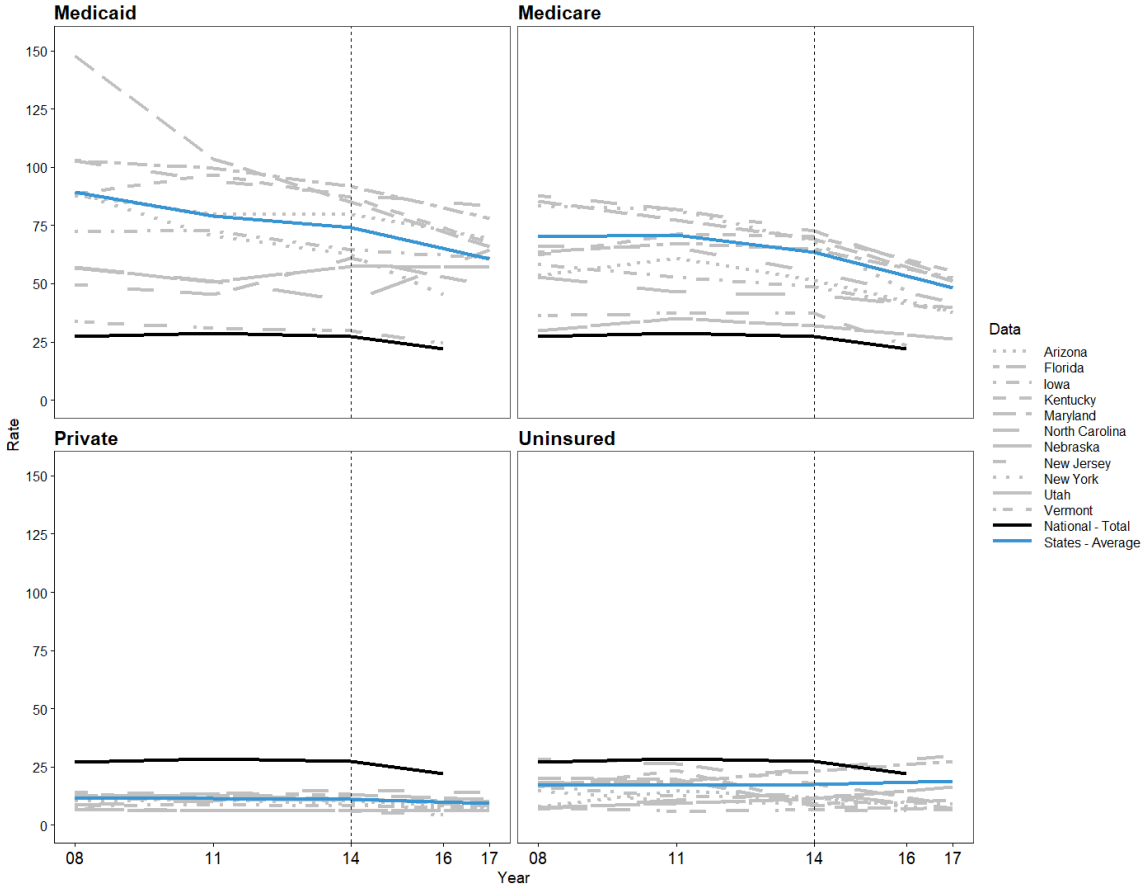
Hospitalization rates were calculated using numerator data from the HEALTHCARE COST AND UTILIZATION PROJECT Nationwide Inpatient Sample and State Inpatient Databases and denominator data from the IPUMS USA American Community Survey from years 2008-2017. All rates are age-standardized to the national 2010 US adult population using data from the CDC Mortality Database.

Two benchmark lines are highlighted: the black National-Total line shows national hospitalization rates across all US adults, regardless of rural/urban status and the blue 11 States-Average line shows average hospitalization rates across all states by rural/urban status.

Rates were not reported for state data with sub-group estimates with n≤10 events or RSE>30%. The USDA-linked Rural/Urban variable did not allocate any rural counties in New Jersey.

The dotted vertical line delineates the point within our data that the data transitioned from rates generated using ICD-9 codes to ICD-10 codes. Rates post-transition may not be directly comparable to rates prior to the transition.

Appendix 8, Figure 3. Insurance-Specific Rates of All-Cause Hospitalizations among US adults; Years 2008-2017



Hospitalization rates were calculated using numerator data from the HEALTHCARE COST AND UTILIZATION PROJECT Nationwide Inpatient Sample and State Inpatient Databases and denominator data
from the IPUMS USA American Community Survey from years 2008-2017. All rates are age-standardized to the national 2010 US adult population using data from the CDC Mortality Database.

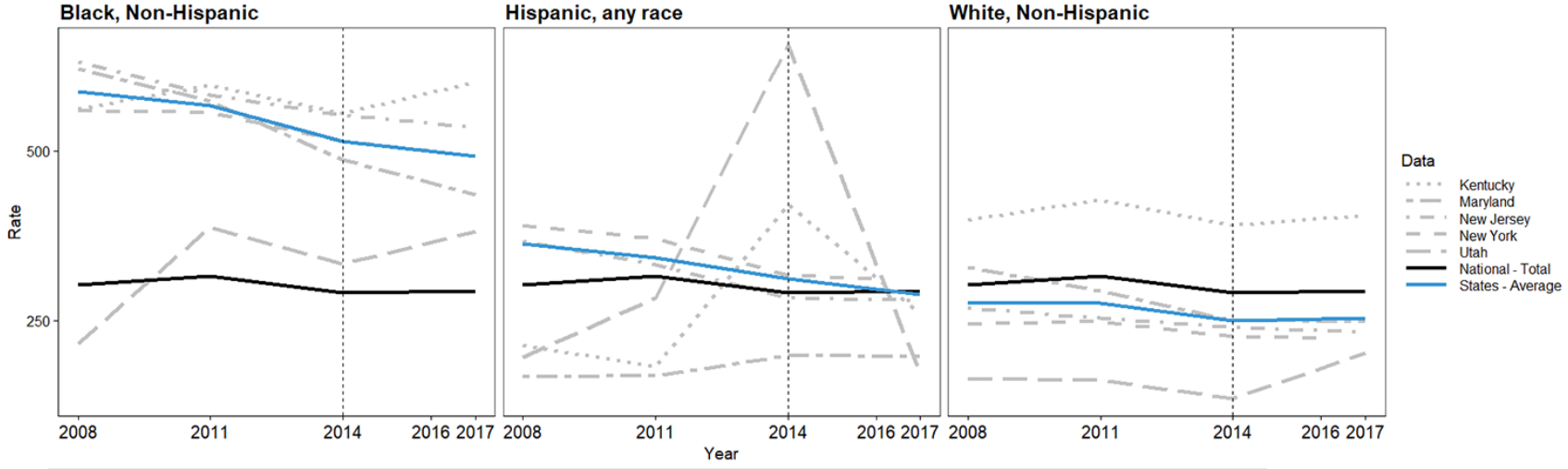
Two benchmark lines are highlighted: the black National-Total line shows national hospitalization rates across all US adults, regardless of insurance status and

the blue 11 States-Average line shows average hospitalization rates across all states by insurance.

The dotted vertical line delineates the point within our data that the data transitioned from rates generated using ICD-9 codes to ICD-10 codes. Rates post-transition may not be directly comparable to rates prior to the transition.

Appendix 9. Sensitivity Analyses of Unavailable Data for State-Specific All-Cause Diabetes and Diabetes-Specific Hospitalization Rates by Race/Ethnicity

Appendix 9. Figure 1. Age-Adjusted Rates of All-Cause Diabetes Hospitalizations among US Adults by Race/Ethnicity; Sensitivity Analysis, Complete Race/Ethnicity Data for All Years 2008-2017



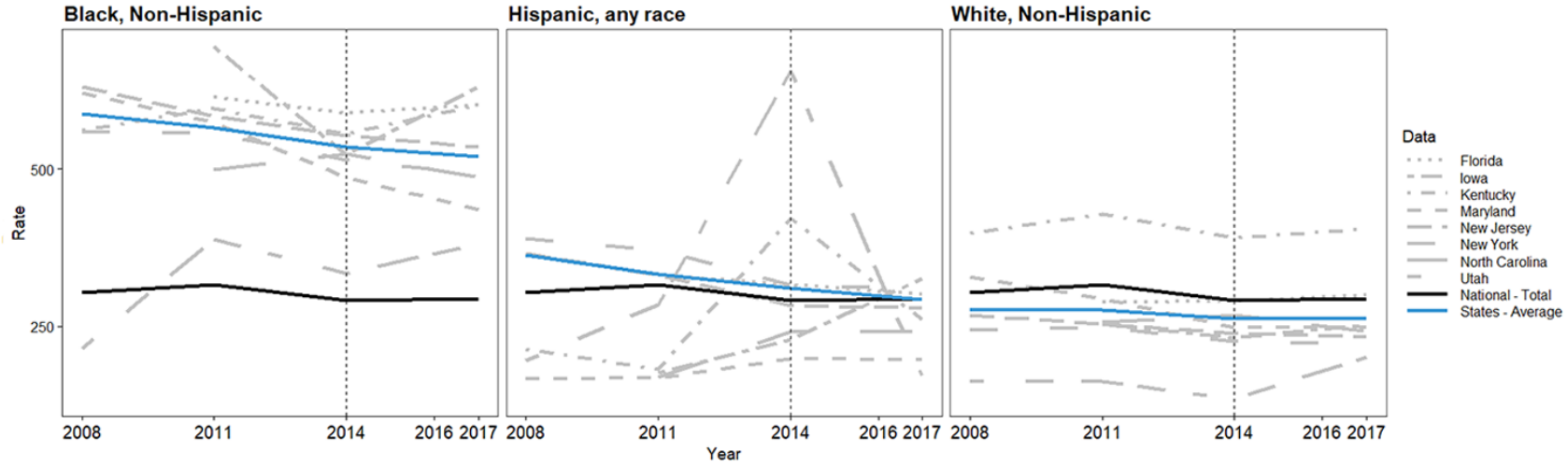
Hospitalization rates were calculated using numerator data from the HCUP Nationwide Inpatient Sample and State Inpatient Databases and denominator data from the IPUMS USA American Community Survey from years 2008-2017. All rates are age-standardized to the national 2010 US adult population using data from the CDC Mortality Database.

Two benchmark lines are highlighted: the black National-Total line shows national hospitalization rates across all US adults, regardless of race/ethnicity and the blue 11 States-Average line shows average hospitalization rates across all states by race/ethnicity.

Rates were not reported for state data with inconsistently coded race/ethnicity variables and/or sub-group estimates with estimates n≤10 events or RSE >= 30%. Nevada did not supply race/ethnicity data.

The dotted vertical line delineates the point within our data that the data transitioned from rates generated using ICD-9 codes to ICD-10 codes.
Rates post-transition may not be directly comparable to rates prior to the transition.

Appendix 9. Figure 2. Age-Adjusted Rates of All-Cause Diabetes Hospitalizations among US Adults by Race/Ethnicity; Sensitivity Analysis, Complete Race/Ethnicity Data for at least 3 Years 2008-2017



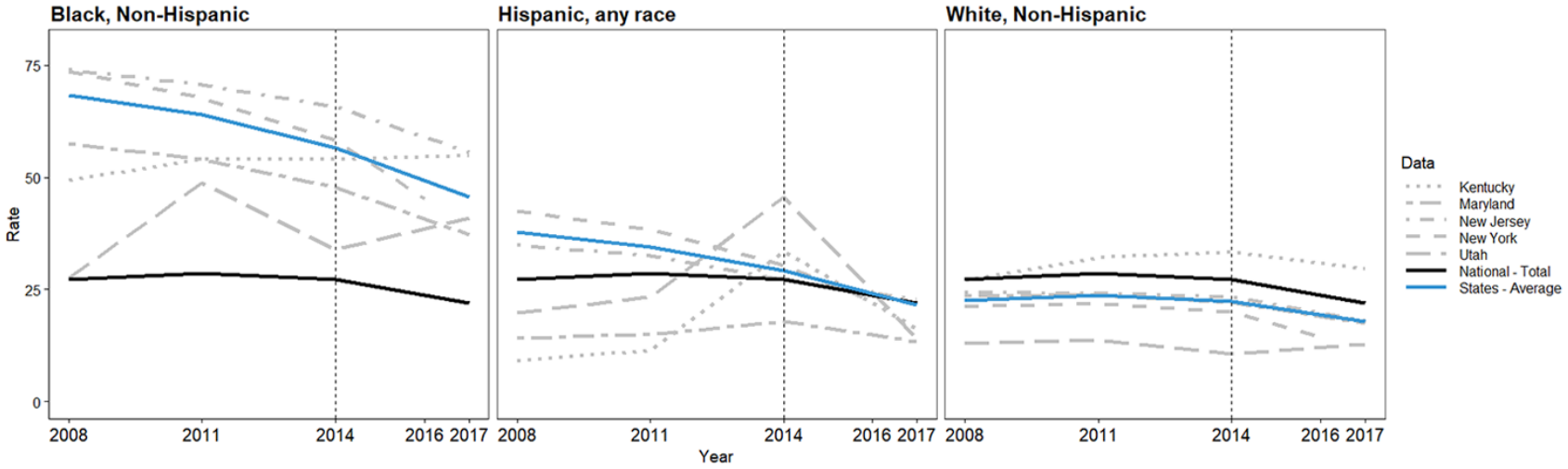
Hospitalization rates were calculated using numerator data from the HCUP Nationwide Inpatient Sample and State Inpatient Databases and denominator data from the IPUMS USA American Community Survey from years 2008-2017. All rates are age-standardized to the national 2010 US adult population using data from the CDC Mortality Database.

Two benchmark lines are highlighted: the black National-Total line shows national hospitalization rates across all US adults, regardless of race/ethnicity and the blue 11 States-Average line shows average hospitalization rates across all states by race/ethnicity.

Rates were not reported for state data with inconsistently coded race/ethnicity variables and/or sub-group estimates with estimates n≤10 events or RSE >= 30%. Nevada did not supply race/ethnicity data.

The dotted vertical line delineates the point within our data that the data transitioned from rates generated using ICD-9 codes to ICD-10 codes.
Rates post-transition may not be directly comparable to rates prior to the transition.

Appendix 9. Figure 3. Age-Adjusted Rates of Diabetes-Specific Hospitalizations among US Adults by Race/Ethnicity; Sensitivity Analysis, Complete Race/Ethnicity Data for all Years, 2008-2017



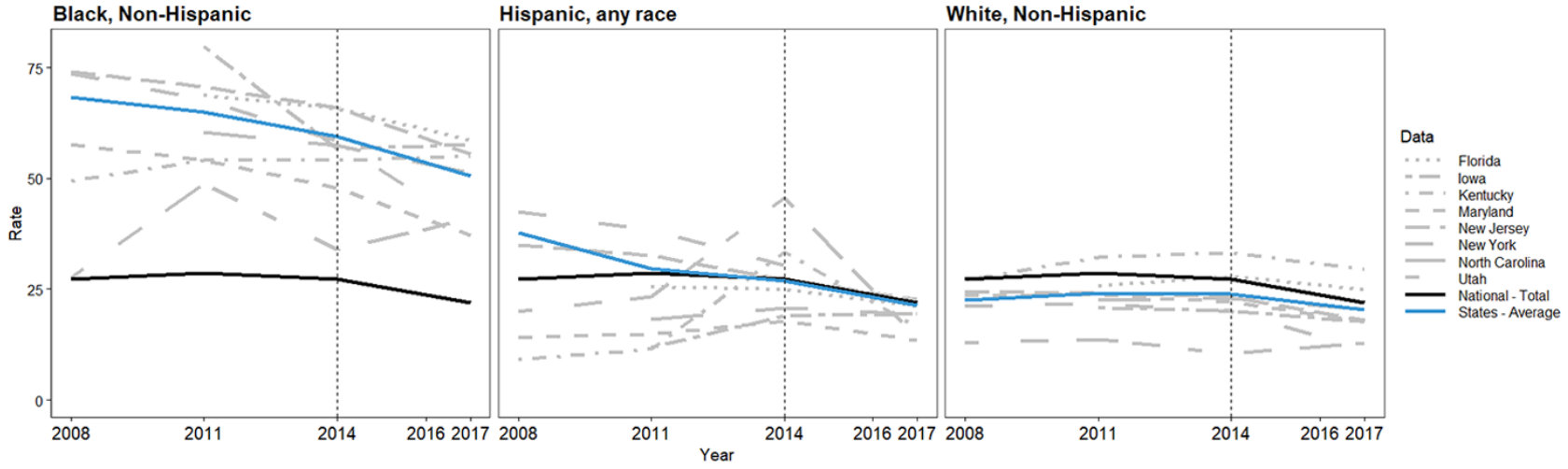
Hospitalization rates were calculated using numerator data from the HCUP Nationwide Inpatient Sample and State Inpatient Databases and denominator data from the IPUMS USA American Community Survey from years 2008-2017. All rates are age-standardized to the national 2010 US adult population using data from the CDC Mortality Database.

Two benchmark lines are highlighted: the black National-Total line shows national hospitalization rates across all US adults, regardless of race/ethnicity and the blue 11 States-Average line shows average hospitalization rates across all states by race/ethnicity.

Rates were not reported for state data with inconsistently coded race/ethnicity variables and/or sub-group estimates with estimates n≤10 events or RSE >= 30%. Nevada did not supply race/ethnicity data.

The dotted vertical line delineates the point within our data that the data transitioned from rates generated using ICD-9 codes to ICD-10 codes. Rates post-transition may not be directly comparable to rates prior to the transition.

Appendix 8. Figure 4. Age-Adjusted Rates of Diabetes-Specific Hospitalizations among US Adults by Race/Ethnicity; Sensitivity Analysis, Complete Race/Ethnicity Data for at least 3 Years, 2008-2017



Hospitalization rates were calculated using numerator data from the HCUP Nationwide Inpatient Sample and State Inpatient Databases and denominator data from the IPUMS USA American Community Survey from years 2008-2017. All rates are age-standardized to the national 2010 US adult population using data from the CDC Mortality Database.

Two benchmark lines are highlighted: the black National-Total line shows national hospitalization rates across all US adults, regardless of race/ethnicity and the blue 11 States-Average line shows average hospitalization rates across all states by race/ethnicity.

Rates were not reported for state data with inconsistently coded race/ethnicity variables and/or sub-group estimates with estimates n≤10 events or RSE >= 30%. Nevada did not supply race/ethnicity data.

The dotted vertical line delineates the point within our data that the data transitioned from rates generated using ICD-9 codes to ICD-10 codes. Rates post-transition may not be directly comparable to rates prior to the transition.

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