Diabetes Prevalence Rates Among Adults Across California Legislative Districts

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In 2002, over one million California adults age 45 and older were diagnosed with diabetes —with negative consequences to the health of California adults. This chronic condition is the seventh leading cause of death in the state,[1] the leading cause of kidney disease, blindness and lower limb amputations, and is widely recognized as a risk factor for other serious health conditions such as heart disease and stroke. More than one in ten adults over the age of 45 in California were diagnosed with diabetes in their lifetime, according to the 2001 California Health Interview Survey (CHIS 2001). The majority of these adults have Type II or adult-onset diabetes, a condition that can be prevented or delayed by adopting healthy lifestyles supported by improved community environments.

This policy brief highlights local geographic variations in diabetes prevalence among California adults ages 45 and over. The rates reported in this policy brief were created by using a small-area methodology based on rates from CHIS 2001 that were applied to population data from the 2000 Census and 2002 Department of Finance projections. Examining regional variations of diabetes prevalence can help advocates, policymakers and clinicians identify areas of California that would greatly benefit from intensive, innovative intervention efforts to help prevent or manage this deadly condition.

Variations in Diabetes Rates Across State Assembly Districts

Rates of diabetes diagnosed among adults ranged from 6% to 20% within California's 80 Assembly districts (Exhibit 1). The majority of Assembly districts had diabetes prevalence rates similar to or worse than the statewide average. Districts in Los Angeles and San Bernardino counties and the Central Valley region had the highest rates, approaching one in five adults over age 45 diagnosed with diabetes. Specifically, the highest diabetes rates were found in Assembly District 52, which includes communities

such as Compton, South Los Angeles and Watts, and Assembly District 62 that includes the cities of Rialto and Fontana. Areas with the lowest rates compared to the statewide average were predominately found in coastal districts, such as Assembly District 21 that includes San Mateo and Santa Clara counties, and Assembly District 42 that includes parts of Los Angeles County—such as Brentwood and Century City.

Variations in Diabetes Rates Across State Senate Districts

The variation in diabetes prevalence among adults age 45 and older for Senate districts was similar to our findings among Assembly districts, as rates ranged from 7% to 17% (Exhibit 2). Over half of Senate districts had diabetes prevalence rates similar to or worse than the statewide average. The Senate districts with the highest rates of diabetes were located primarily in Southern California and the Central Valley, especially Los Angeles and Fresno counties. Lower rates of diabetes compared to the statewide rate were found in Northern California, predominately in parts of the San Francisco Bay Area and Northern Sierra regions. The Southern California region had the lowest rates—compared to

the statewide average—in Senate District 23, which includes the cities of Pacific Palisades and Malibu, followed by Senate District 35 that includes cities such as Newport Beach.

Policy Implications

This policy brief provides valuable data for legislators and public health officials with which to target regions for diabetes intervention efforts. Residents of Los Angeles County and Fresno County could greatly benefit from aggressive public health action to help manage and prevent diabetes. Diabetes treatment often includes recommendations of lifestyle changes, such as altering an individual's diet, increasing levels of exercise, and/or using prescribed medications. However, management and prevention of diabetes requires access to medical services in order to detect new cases, monitor the status, and manage medication if appropriate. In addition to increasing access to medical care, policy initiatives that focus on the social determinants of health can be beneficial. Risk factors associated with diabetes—such as diet and physical activity level—are impacted by an individual's environment. Diabetes rates will continue to skyrocket in the absence of alternatives for communities that lack safe recreational space, or readily-available and affordable fresh fruits and vegetables. Addressing these issues necessitates state support of community efforts, and could include community involvement in zoning and land use issues for undeveloped and underdeveloped public spaces. Legislation that improves community environments maximizes an individual's access to healthy lifestyle options, ultimately reducing both the risk of developing diabetes and the current high need for medical management.

Data Sources and Methods

This policy brief is based on findings from the 2001 California Health Interview Survey (CHIS 2001), 2000-2002 Current Population Surveys (CPS), 2000 Census, 2002 Department of Finance population projections, and the California State Senate Office of Demographics' file of legislative districts. The estimates of diabetes prevalence were created using a small-area methodology of the multiple data sources listed here. A detailed description of the methodology used in this study is available from the authors.

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Citation

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1   State of California, Department of Health Services. *Vital Statistics of California, 2002*. August 2004. Sacramento, California.

Exhibit 1   Diabetes Prevalence Rates by Assembly District, Age 45 and Older

District Number	Percent*	95% Range**	Number	County Location of Assembly District
			California Residents 45+ Diagnosed with Diabetes	
CALIFORNIA	11	–	1,200,000	
01	11	(9-13)	19,000	Del Norte, Humboldt, Lake, Mendocino, Sonoma, Trinity
02	11	(9-12)	18,000	Butte, Colusa, Glenn, Modoc, Shasta, Siskiyou, Sutter, Tehama, Yolo
03	10	(9-12)	17,000	Butte, Lassen, Nevada, Placer, Plumas, Sierra, Yuba
04	8	(7-10)	13,000	Alpine, El Dorado, Placer, Sacramento
05	9	(7-11)	14,000	Placer, Sacramento
06	7	(5-9)	13,000	Marin, Sonoma
07	11	(9-13)	18,000	Napa, Solano, Sonoma
08	11	(9-13)	13,000	Solano, Yolo
09	13	(10-16)	18,000	Sacramento
10	10	(9-12)	15,000	Amador, El Dorado, Sacramento, San Joaquin
11	12	(9-15)	17,000	Contra Costa
12	10	(7-12)	15,000	San Francisco, San Mateo
13	9	(6-11)	12,000	San Francisco
14	10	(8-12)	15,000	Alameda, Contra Costa
15	9	(8-11)	14,000	Alameda, Contra Costa, Sacramento, San Joaquin
16	13	(10-17)	18,000	Alameda
17	16	(13-19)	19,000	Merced, San Joaquin, Stanislaus
18	12	(8-15)	16,000	Alameda
19	8	(6-11)	13,000	San Mateo
20	11	(8-13)	14,000	Alameda, Santa Clara
21	7	(5-8)	11,000	San Mateo, Santa Clara
22	9	(6-11)	11,000	Santa Clara
23	15	(11-18)	16,000	Santa Clara
24	9	(7-12)	13,000	Santa Clara
25	10	(8-13)	17,000	Calaveras, Madera, Mariposa, Mono, Stanislaus, Tuolumne
26	13	(11-16)	18,000	San Joaquin, Stanislaus
27	7	(6-9)	11,000	Monterey, Santa Clara, Santa Cruz
28	12	(9-14)	12,000	Monterey, San Benito, Santa Clara, Santa Cruz
29	12	(10-15)	17,000	Fresno, Madera, Tulare
30	17	(14-19)	17,000	Fresno, Kern, Kings, Tulare
31	17	(13-21)	18,000	Fresno, Tulare
32	12	(9-15)	16,000	Kern, San Bernardino
33	11	(9-13)	17,000	San Luis Obispo, Santa Barbara
34	16	(13-19)	21,000	Inyo, Kern, San Bernardino, Tulare
35	10	(8-13)	15,000	Santa Barbara, Ventura
36	17	(13-22)	21,000	Los Angeles, San Bernardino
37	9	(7-11)	13,000	Los Angeles, Ventura
38	10	(8-12)	14,000	Los Angeles, Ventura
39	14	(12-17)	14,000	Los Angeles
40	11	(9-13)	14,000	Los Angeles

Source: 2001 California Health Interview Survey, 2000-2002 Current Population Surveys, and the 2000 Census.

* The numbers presented here are the midpoint of the "95% range."

**The "95% range" (commonly called a confidence interval) provides a more reliable estimate of the diabetes prevalence rate for persons in the population group.

Diabetes Prevalence Rates by Assembly District, Age 45 and Older (continued)   Exhibit 1

District Number	Percent*	95% Range**	Number	County Location of Assembly District
			California Residents 45+ Diagnosed with Diabetes	
CALIFORNIA	11	–	1,200,000	
41	7	(6-8)	12,000	Los Angeles, Ventura
42	6	(5-7)	10,000	Los Angeles
43	10	(8-12)	14,000	Los Angeles
44	10	(9-12)	16,000	Los Angeles
45	11	(8-14)	12,000	Los Angeles
46	14	(11-17)	13,000	Los Angeles
47	11	(9-14)	15,000	Los Angeles
48	17	(14-20)	18,000	Los Angeles
49	15	(12-18)	20,000	Los Angeles
50	16	(13-20)	15,000	Los Angeles
51	16	(14-19)	18,000	Los Angeles
52	20	(15-24)	17,000	Los Angeles
53	8	(6-9)	12,000	Los Angeles
54	11	(9-13)	16,000	Los Angeles
55	16	(13-18)	19,000	Los Angeles
56	14	(11-17)	17,000	Los Angeles, Orange
57	15	(12-18)	17,000	Los Angeles
58	15	(12-18)	20,000	Los Angeles
59	11	(10-13)	18,000	Los Angeles, San Bernardino
60	10	(9-12)	15,000	Los Angeles, Orange, San Bernardino
61	15	(13-18)	15,000	Los Angeles, San Bernardino
62	19	(15-23)	18,000	San Bernardino
63	13	(10-15)	16,000	Riverside, San Diego
64	12	(10-15)	19,000	Orange
65	14	(11-16)	23,000	Orange
66	13	(10-15)	16,000	Orange
67	8	(7-10)	12,000	Orange
68	10	(8-13)	14,000	Orange
69	13	(10-16)	11,000	Orange
70	7	(6-9)	11,000	Orange
71	10	(8-12)	13,000	Orange, Riverside
72	9	(7-11)	12,000	Orange
73	9	(8-11)	13,000	Orange, San Diego
74	9	(7-11)	13,000	San Diego
75	8	(7-10)	12,000	San Diego
76	9	(7-11)	12,000	San Diego
77	9	(8-11)	14,000	San Diego
78	12	(10-14)	15,000	San Diego
79	14	(11-17)	16,000	San Diego
80	15	(12-17)	21,000	Imperial, Riverside

Source: 2001 California Health Interview Survey, 2000-2002 Current Population Surveys, and the 2000 Census.

* The numbers presented here are the midpoint of the "95% range."

**The "95% range" (commonly called a confidence interval) provides a more reliable estimate of the diabetes prevalence rate for persons in the population group.

Diabetes Prevalence Rates by Senate District, Age 45 and Older   **Exhibit 2**

District Number	Percent*	95% Range**	Number	County Location of Senate District
				California Residents 45+ Diagnosed with Diabetes
CALIFORNIA	**11**	**–**	**1,200,000**	
01	8	(7-10)	28,000	Alpine, Amador, Calaveras, El Dorado, Lassen, Modoc, Mono, Nevada, Placer, Plumas, Sacramento, Sierra
02	11	(9-12)	36,000	Humboldt, Lake, Mendocino, Napa, Solano, Sonoma
03	8	(7-10)	25,000	Marin, San Francisco, Sonoma
04	11	(9-12)	35,000	Butte, Colusa, Del Norte, Glenn, Nevada, Placer, Shasta, Siskiyou, Sutter, Tehama, Trinity, Yuba
05	13	(11-15)	33,000	Sacramento, San Joaquin, Solano, Yolo
06	12	(9-15)	32,000	Sacramento
07	10	(8-13)	32,000	Contra Costa
08	9	(7-11)	28,000	San Francisco, San Mateo
09	12	(9-15)	33,000	Alameda, Contra Costa
10	11	(9-14)	29,000	Alameda, Contra Costa
11	8	(6-9)	22,000	San Mateo, Santa Clara, Santa Cruz
12	13	(11-15)	30,000	Madera, Merced, Monterey, San Benito, Stanislaus
13	12	(9-15)	27,000	Santa Clara
14	12	(10-13)	35,000	Fresno, Madera, Mariposa, San Joaquin, Stanislaus, Tuolumne
15	9	(8-10)	28,000	Monterey, San Luis Obispo, Santa Barbara, Santa Clara, Santa Cruz
16	17	(15-20)	35,000	Fresno, Kern, Kings, Tulare
17	14	(12-16)	37,000	Los Angeles, San Bernardino, Ventura
18	14	(11-16)	37,000	Inyo, Kern, San Bernardino, Tulare
19	9	(7-11)	27,000	Los Angeles, Santa Barbara, Ventura
20	13	(11-16)	28,000	Los Angeles
21	10	(9-11)	30,000	Los Angeles
22	13	(11-15)	27,000	Los Angeles
23	7	(6-8)	23,000	Los Angeles, Ventura
24	15	(13-18)	36,000	Los Angeles
25	16	(14-18)	38,000	Los Angeles
26	13	(11-15)	33,000	Los Angeles
27	14	(12-15)	32,000	Los Angeles
28	10	(8-12)	28,000	Los Angeles
29	10	(9-12)	30,000	Los Angeles, Orange, San Bernardino
30	16	(12-19)	35,000	Los Angeles
31	12	(10-14)	34,000	Riverside, San Bernardino
32	17	(14-21)	34,000	Los Angeles, San Bernardino
33	8	(7-10)	23,000	Orange
34	12	(10-15)	24,000	Orange
35	8	(6-9)	23,000	Orange
36	10	(8-11)	29,000	Riverside, San Diego
37	13	(10-16)	42,000	Riverside
38	10	(8-11)	27,000	Orange, San Diego
39	10	(8-12)	26,000	San Diego
40	15	(13-17)	34,000	Imperial, Riverside, San Diego

Source: 2001 California Health Interview Survey, 2000-2002 Current Population Surveys, and the 2000 Census.

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