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## More Than Half of Californians in HMOs Are Overweight or Obese

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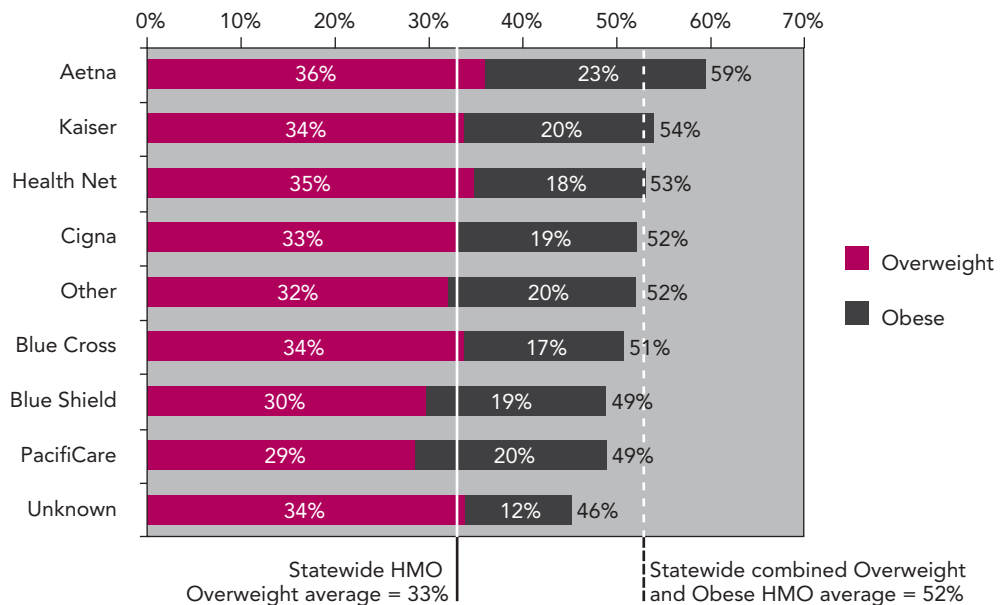
**M**ore than five million Californians enrolled in HMOs—over half of all HMO enrollees ages 12 to 64—are overweight or obese, based on the most recent data from the California Health Interview Survey.

Being overweight or obese increases the risk of diabetes, heart disease and several types of cancer. It is also a costly problem, adding approximately \$7.7 billion a year to medical care costs in California alone.<sup>1</sup> HMOs should address this problem both to help their membership lead healthier, more productive lives, and to control growing health care costs.

This policy research brief examines overweight and obesity among HMO enrollees. Using data from the 2003 California Health Interview Survey (CHIS 2003), it examines the proportion of enrollees ages 12 to 64 who are overweight and the proportion that are obese in each of the state's major health plans. Obesity is defined as having a body mass index (BMI) of 30 or higher, based on self-

### Exhibit 1

Prevalence of Overweight or Obesity by Health Plan, Ages 12-64, California 2003



Notes:

BMI (body mass index) values for children ages 0-11 are not reported due to the probability of inaccurate data on height and weight. Overall statewide averages for all 12-64 year olds: 32.3% are overweight and 19.7% are obese (combined total = 52%).

Source: 2003 California Health Interview Survey



This Health Policy Research Brief was funded by the California Office of the Patient Advocate as part of their obesity initiative.



## Exhibit 2

## Prevalence of Overweight or Obesity by Health Plan and Age Group, Ages 12-64, California, 2003

		Health Plans					
		Aetna	Blue Cross	Blue Shield	Cigna	Health Net	
Overall Population		327,600	1,357,800	846,600	330,300	966,700	
Number Overweight or Obese		194,500	687,500	413,300	172,700	512,200	
Age Groups	12 to 17	Overweight	21.8	12.9	8.3	13.8	16.0
		Obese	9.0	11.2	9.8	9.0	6.5
		<b>Overweight or Obese</b>	<b>30.9</b>	<b>24.0</b>	<b>18.1</b>	<b>22.8</b>	<b>22.5</b>
	18 to 34	Overweight	38.4	30.5	27.5	32.2	35.4
		Obese	17.1	12.2	18.6	17.1	15.1
		<b>Overweight or Obese</b>	<b>55.4</b>	<b>42.7</b>	<b>46.1</b>	<b>49.3</b>	<b>50.4</b>
	35 to 49	Overweight	38.7	41.0	33.7	36.4	37.1
		Obese	28.0	18.3	19.2	22.9	21.3
		<b>Overweight or Obese</b>	<b>66.7</b>	<b>59.3</b>	<b>52.9</b>	<b>59.3</b>	<b>58.4</b>
	50 to 64	Overweight	36.6	39.9	38.5	44.0	40.1
		Obese	33.4	23.5	26.4	20.9	23.9
		<b>Overweight or Obese</b>	<b>70.1</b>	<b>63.3</b>	<b>64.9</b>	<b>64.9</b>	<b>63.9</b>
	All Ages	<b>Overweight</b>	<b>36.0</b>	<b>34.0</b>	<b>29.5</b>	<b>33.5</b>	<b>34.6</b>
		<b>Obese</b>	<b>23.4</b>	<b>16.6</b>	<b>19.3</b>	<b>18.8</b>	<b>18.4</b>
		<b>Overweight or Obese</b>	<b>59.4</b>	<b>50.6</b>	<b>48.8</b>	<b>52.3</b>	<b>53.0</b>

Source: 2003 California Health Interview Survey

For expanded exhibits, including 95% confidence intervals, please visit [http://www.healthpolicy.ucla.edu/pubs/files/obesity\\_app\\_0605.pdf](http://www.healthpolicy.ucla.edu/pubs/files/obesity_app_0605.pdf)

reported height and weight. Overweight is defined as a BMI of 25 to 29.9. Although teens are usually grouped differently than adults in terms of overweight and obesity, for the purposes of this brief, we will be using similar measures. Teens that would be considered “at risk of overweight” (85th to 94th BMI percentile) are labeled “overweight,” like their adult counterparts with a BMI from 25 to 29.9. Likewise, teens in the 95th BMI percentile and above are usually considered to be “overweight,” but are labeled as “obese” in this report, like their adult counterparts with a BMI of 30 or over.

Combined rates of overweight and obesity range from 46 to 59% in the seven largest plans at the time of the CHIS 2003 interviews—Aetna (which includes US Healthcare and Prudential), Blue Cross, Blue Shield, Cigna, Health Net, Kaiser and PacifiCare.

Controlling for age and race/ethnicity did not explain the differences between plans in rates of overweight and obesity prevalence. Therefore, variations across plans are not attributable to demographic differences in plan membership. In spite of the variations in member characteristics, the overall prevalence of overweight and obese HMO enrollees is high among all plans—a pattern that should motivate action by the individual members and by all HMOs in California.

#### Prevalence of Overweight or Obesity by Health Plan

As shown in Exhibit 1, the average combined prevalence of overweight and obesity in California’s HMOs was 52% in 2003. Members of Aetna (59%), Kaiser (54%) and Health Net (53%) reported higher combined prevalence of overweight and obesity relative to the statewide rate; Cigna

## Exhibit 2 (continued)

## Prevalence of Overweight or Obesity by Health Plan and Age Group, Ages 12-64, California, 2003

		Health Plans					
		Kaiser	PacifiCare	Other Plans	Unknown	All Plans	
Overall Population		3,951,700	853,800	968,700	384,300	9,987,500	
Number Overweight or Obese		2,129,000	421,700	503,700	173,700	5,208,300	
Age Groups	12 to 17	Overweight	13.3	9.1	17.5	13.9	13.4
		Obese	13.0	13.3	14.5	4.3	11.5
		<b>Overweight or Obese</b>	<b>26.2</b>	<b>22.4</b>	<b>32.0</b>	<b>18.2</b>	<b>24.9</b>
	18 to 34	Overweight	32.1	27.9	26.5	31.4	31.0
		Obese	14.7	14.9	13.8	10.0	14.5
		<b>Overweight or Obese</b>	<b>46.9</b>	<b>42.7</b>	<b>40.3</b>	<b>41.4</b>	<b>45.5</b>
	35 to 49	Overweight	37.5	31.4	38.6	40.0	37.2
		Obese	23.7	22.9	26.1	10.8	22.2
		<b>Overweight or Obese</b>	<b>61.2</b>	<b>54.3</b>	<b>64.6</b>	<b>50.7</b>	<b>59.4</b>
	50 to 64	Overweight	39.9	40.4	38.9	41.8	39.8
		Obese	25.0	24.6	24.2	23.7	24.8
		<b>Overweight or Obese</b>	<b>64.9</b>	<b>65.0</b>	<b>63.2</b>	<b>65.5</b>	<b>64.6</b>
	All Ages	<b>Overweight</b>	<b>33.6</b>	<b>29.5</b>	<b>31.8</b>	<b>33.6</b>	<b>33.0</b>
		<b>Obese</b>	<b>20.2</b>	<b>19.9</b>	<b>20.2</b>	<b>11.6</b>	<b>19.2</b>
		<b>Overweight or Obese</b>	<b>53.8</b>	<b>49.4</b>	<b>52.0</b>	<b>45.2</b>	<b>52.2</b>

Source: 2003 California Health Interview Survey

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(52%) was comparable to the state average; while members of Blue Cross (51%), Blue Shield (49%) and PacifiCare (49%) had combined overweight and obesity rates lower than the statewide average. The “other HMOs” category (52%) included all HMO plans other than the seven mentioned above, while the “unknown HMO” category (46%) included all members who reported being enrolled in an HMO but did not know the name of the plan.

The statewide average prevalence of obese enrollees across all HMOs was 19%. Members of Aetna (23%), Kaiser (20%) and PacifiCare (20%) reported higher prevalence of obesity relative to the statewide average; Cigna (19%) and Blue Shield (19%) members reported the same prevalence of obesity compared to the statewide average; while the prevalence of

obesity among Health Net (18%) and Blue Cross (17%) members was lower than the statewide average.

#### Prevalence of Overweight or Obesity by Age Category Within Health Plans

Overweight and obesity progressively increase with age.<sup>2</sup> According to CHIS 2001 data, more than half of respondents showed a significant weight gain (more than 20 pounds) since age 18.<sup>3</sup> CHIS 2003 data are consistent with these observations. The average combined prevalence of overweight and obesity increased from 24.9% for the age group of 12 to 17 to 64.6% for the age group of 50 to 64 (Exhibit 2). A similar trend is observed for the average percentage of obese enrollees: an increase from 11.5% among the age group of 12 to 17 to 24.8% among the age group of 50 to 64.

## Exhibit 3

## Prevalence of Overweight or Obesity by Health Plan and Race/Ethnicity, Ages 12-64, California, 2003

		Health Plans					
		Aetna	Blue Cross	Blue Shield	Cigna	Health Net	
Overall Population		327,600	1,357,800	846,600	330,300	966,700	
Number Overweight or Obese		194,500	687,500	413,300	172,700	512,200	
Race/Ethnicity	Asian-American/ Pacific Islander	Overweight	37.2	22.8	11.9	32.0	32.3
		Obese	6.2	4.8	15.5	17.1	5.5
		<b>Overweight or Obese</b>	<b>43.3</b>	<b>27.6</b>	<b>27.4</b>	<b>49.1</b>	<b>37.8</b>
	African American	Overweight	36.1	19.8	21.3	24.7	24.9
		Obese	15.2	17.7	17.8	13.2	16.5
		<b>Overweight or Obese</b>	<b>51.3</b>	<b>37.4</b>	<b>39.1</b>	<b>37.9</b>	<b>41.5</b>
	Latino	Overweight	35.8	40.1	33.3	37.5	37.6
		Obese	43.1	22.4	26.1	17.5	25.6
		<b>Overweight or Obese</b>	<b>78.9</b>	<b>62.6</b>	<b>59.4</b>	<b>55.0</b>	<b>63.2</b>
	White	Overweight	37.6	38.5	35.6	34.5	37.1
		Obese	24.3	16.4	17.0	20.0	19.0
		<b>Overweight or Obese</b>	<b>61.9</b>	<b>54.9</b>	<b>52.6</b>	<b>54.5</b>	<b>56.0</b>
	Other	Overweight	21.3	17.1	24.8	33.0	28.3
		Obese	21.3	16.1	29.6	38.3	23.6
		<b>Overweight or Obese</b>	<b>42.6</b>	<b>33.3</b>	<b>54.4</b>	<b>71.3</b>	<b>51.8</b>
	All Ethnicities	<b>Overweight</b>	<b>36.0</b>	<b>34.0</b>	<b>29.5</b>	<b>33.5</b>	<b>34.6</b>
		<b>Obese</b>	<b>23.4</b>	<b>16.6</b>	<b>19.3</b>	<b>18.8</b>	<b>18.4</b>
		<b>Overweight or Obese</b>	<b>59.4</b>	<b>50.6</b>	<b>48.8</b>	<b>52.3</b>	<b>53.0</b>

Source: 2003 California Health Interview Survey

For expanded exhibits, including 95% confidence intervals, please visit [http://www.healthpolicy.ucla.edu/pubs/files/obesity\\_app\\_0605.pdf](http://www.healthpolicy.ucla.edu/pubs/files/obesity_app_0605.pdf)

As shown in Exhibit 2, Aetna and Kaiser members reported higher combined prevalence rates of overweight and obesity relative to statewide rates in all four age groups (12 to 17, 18 to 34, 35 to 49 and 50 to 64). Blue Shield and Cigna members reported higher than average prevalence in two of four age groups, while PacifiCare and Health Net members had above average prevalence in only one of the four age categories. Blue Cross was the only plan whose members reported lower than average prevalence in all four age categories.

Focusing only on obesity rates in Exhibit 2, Kaiser members reported higher than average obesity rates in all four age categories. Aetna and PacifiCare members reported higher than average rates in three of four age categories. Blue Shield and Cigna members reported higher than average obesity rates in two of four age categories. Health Net had higher

than average obesity rates in only one age category, and Blue Cross had no age groups with higher obesity rates than the statewide average. The findings in Exhibit 2 suggest that there are substantial differences across the seven largest HMOs in California within age categories, and that some plans have consistently higher or lower rates across age categories. These findings suggest that differences across plans in the age distribution of their members do not account for the differences we observe in the aggregate, unadjusted rates reported in Exhibit 1.

#### Prevalence of Overweight or Obesity by Race/Ethnicity Within Health Plans

High prevalence of overweight and obesity affects all racial/ethnic groups with rare exceptions.<sup>4</sup> There has been a steady increase in obesity among all racial/ethnic groups of the adult population.<sup>5</sup>

## Exhibit 3 (continued)

## Prevalence of Overweight or Obesity by Health Plan and Race/Ethnicity, Ages 12-64, California, 2003

		Health Plans					
		Kaiser	PacifiCare	Other Plans	Unknown	All Plans	
Overall Population		3,951,700	853,800	968,700	384,300	9,987,500	
Number Overweight or Obese		2,129,000	421,700	503,700	173,700	5,208,300	
Race/Ethnicity	Asian-American/ Pacific Islander	Overweight	26.2	27.5	27.1	30.2	26.1
		Obese	8.5	6.2	13.9	12.5	9.2
		<b>Overweight or Obese</b>	<b>34.6</b>	<b>33.8</b>	<b>41.0</b>	<b>42.7</b>	<b>35.3</b>
	African American	Overweight	26.6	22.4	21.0	35.0	24.9
		Obese	25.6	18.9	19.4	3.0	20.6
		<b>Overweight or Obese</b>	<b>52.2</b>	<b>41.4</b>	<b>40.4</b>	<b>38.0</b>	<b>45.5</b>
	Latino	Overweight	39.2	29.9	36.7	32.9	37.3
		Obese	24.1	27.9	26.5	19.9	24.8
		<b>Overweight or Obese</b>	<b>63.3</b>	<b>57.8</b>	<b>63.1</b>	<b>52.8</b>	<b>62.0</b>
	White	Overweight	35.2	30.8	33.2	35.3	35.3
		Obese	20.0	20.2	19.7	7.5	18.9
		<b>Overweight or Obese</b>	<b>55.2</b>	<b>51.0</b>	<b>52.9</b>	<b>42.8</b>	<b>54.2</b>
	Other	Overweight	36.1	34.8	36.7	34.2	30.9
		Obese	23.3	11.0	12.6	7.8	20.6
		<b>Overweight or Obese</b>	<b>59.5</b>	<b>45.7</b>	<b>49.3</b>	<b>42.0</b>	<b>51.5</b>
	All Ethnicities	<b>Overweight</b>	<b>33.6</b>	<b>29.5</b>	<b>31.8</b>	<b>33.6</b>	<b>33.0</b>
		<b>Obese</b>	<b>20.2</b>	<b>19.9</b>	<b>20.2</b>	<b>11.6</b>	<b>19.2</b>
		<b>Overweight or Obese</b>	<b>53.8</b>	<b>49.4</b>	<b>52.0</b>	<b>45.2</b>	<b>52.2</b>

Source: 2003 California Health Interview Survey

For expanded exhibits, including 95% confidence intervals, please visit [http://www.healthpolicy.ucla.edu/pubs/files/obesity\\_app\\_0605.pdf](http://www.healthpolicy.ucla.edu/pubs/files/obesity_app_0605.pdf)

Among California's HMO members in 2003, those reporting Latino race/ethnicity had the highest combined prevalence of overweight and obesity (62%), followed by whites (54.2%), "Other" race/ethnicities, including American Indian/Alaska Natives (51.5%), African-Americans (45.5%), and Asian-American/Pacific Islanders (35.3%; Exhibit 3). Latino rates ranged from 59.4% in Blue Shield to 78.9% in Aetna. Those reporting "Other" race/ethnicity had combined rates of overweight and obesity ranging from 33.3% in Blue Cross to 71.3% in Cigna. White enrollees in PacifiCare had the lowest rates among their ethnic group (51%), while whites in Aetna had the highest rates (61.9%). African-American HMO members had rates ranging from 37.4% for Blue Cross enrollees to 52.2% for Kaiser members. Finally, Asian-American/Pacific Islanders, who had the lowest overall rates of overweight and obesity of all the

racial/ethnic categories, had the lowest rate in Blue Shield (27.4%). Cigna had the highest rate of Asian-American/Pacific Islanders with weight problems among the plans (49.1%)

Our findings in Exhibit 3 suggest that there are also substantial differences across the seven largest HMOs in California within racial/ethnic categories. Again, plans have consistently higher or lower rates across racial/ethnic categories. These findings suggest that differences across plans in the racial/ethnic distribution of their members do not account for the differences we observe in the aggregate, unadjusted rates reported in Exhibit 1.

### Policy Implications

The findings presented in this brief indicate that HMOs face a serious challenge in addressing the problem of overweight and

obesity among their members, and should actively design appropriate interventions to address this problem. Emphasizing diet, exercise and regular health activity are important steps in confronting this nationwide epidemic. The enrollees studied in this brief have health care access, and should be able to improve their lifestyle, health and eating habits when given the information and encouragement to do so. However, health plans can take steps to help the process. Physician incentives to discuss weight management may be more effective than the physician guidelines currently in place.

The purpose of our analysis is to provide additional motivation for HMOs in California to take action and battle the epidemic of overweight and obesity. Because data on overweight and obesity rates are not reported as part of other quality and satisfaction surveys, our results provide important information on the health status of HMO members not available from any other source. In the future, health plans should consider releasing more detailed information on the health status of their members and improvements in health status, as a measure of how well they are maintaining the health of California's insured population.

Our estimates provide a baseline measure of overweight and obesity prevalence rates in California's HMOs, and thus provide a starting point for assessing whether plans are making progress in dealing with this important threat to public health in the future. Since HMOs provide insurance to almost half of California's population, it is

essential that they take further action to improve the current baseline of overweight and obesity rates in HMOs.

### Study Limitations

*Without explicitly risk-adjusting the prevalence rates of overweight and obesity presented in this policy brief, the differences presented here may result from differential enrollment of high-risk members across plans. However, the data we present—stratified first by age category and then by racial/ethnic category—indicate that health plans still have rates of overweight and obesity that vary substantially within these categories. These findings suggest that some plans may face a greater challenge in reducing rates of overweight and obesity, because they are consistently higher even after controlling for differences in the age and racial/ethnic distribution of their members.*

*The data on race/ethnicity within health plans would lead to a better understanding of the makeup of health plans and, therefore, would help to design appropriate interventions. Unfortunately these data are not publicly available from any of the largest plans. CHIS 2003 provides data on race and ethnicity and on self-reported enrollment in each plan.*

*Finally, because overweight and obesity rates in this study are based on self-reported measures of height and weight from CHIS 2003, it is possible that some of the variation across plans is related to bias in the plan in which members were surveyed. Because health plans do not report the demographic characteristics of the members, we are unable to assess whether CHIS 2003 may have selected a biased sample of respondents from the general population. If there were a bias toward a particular plan during random selection, this*



could impact the results, especially for plans with small enrollment numbers. This brief does not explore the income differences between health plans and their overweight or obese enrollees. It is expected that the distributions would be similar to those seen in Exhibits 2 and 3.

### Data Source and Methods

The 2003 California Health Interview Survey was used for this study. All respondents aged 12 to 64 who reported that they were privately insured and enrolled in an HMO in 2003 were included. For additional information on CHIS data collection and methodology, or for further data, please visit [www.chis.ucla.edu](http://www.chis.ucla.edu). For expanded versions of Exhibits 2 and 3, including 95% confidence intervals, please visit [http://www.healthpolicy.ucla.edu/pubs/files/obesity\\_app\\_0605.pdf](http://www.healthpolicy.ucla.edu/pubs/files/obesity_app_0605.pdf)

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### Notes

- 1 P Mirzadehgan, GG Harrison, C DiSogra. *Nearly One in Five California Adults Obese And Most Still Gaining Weight.* Los Angeles: UCLA Center For Health Policy Research. December 2004.
- 2 American Obesity Association (AOA). Fact Sheets. [http://www.obesity.org/subs/fastfacts/obesity\\_US.shtml](http://www.obesity.org/subs/fastfacts/obesity_US.shtml) Date Accessed: March 31, 2005.
- 3 P Mirzadehgan, et al.
- 4 Ibid.
- 5 JA Rhoades, BM Altman and LJ Cornelius. Statistical Brief #37: Trends in Adult Obesity in the United States, 1987; and 2001: Estimates for the Noninstitutionalized Population, Ages 20 to 64. <http://www.meps.abrq.gov/papers/st37/stat37.pdf> Date Accessed: April 2, 2005.



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