

INFO

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THREE DOLLARS

THE DYNAMICS OF VITAL EVENTS IN THE SAN DIEGO REGION

COMPONENTS OF POPULATION CHANGE
BY MAJOR STATISTICAL AREA
1990-2000

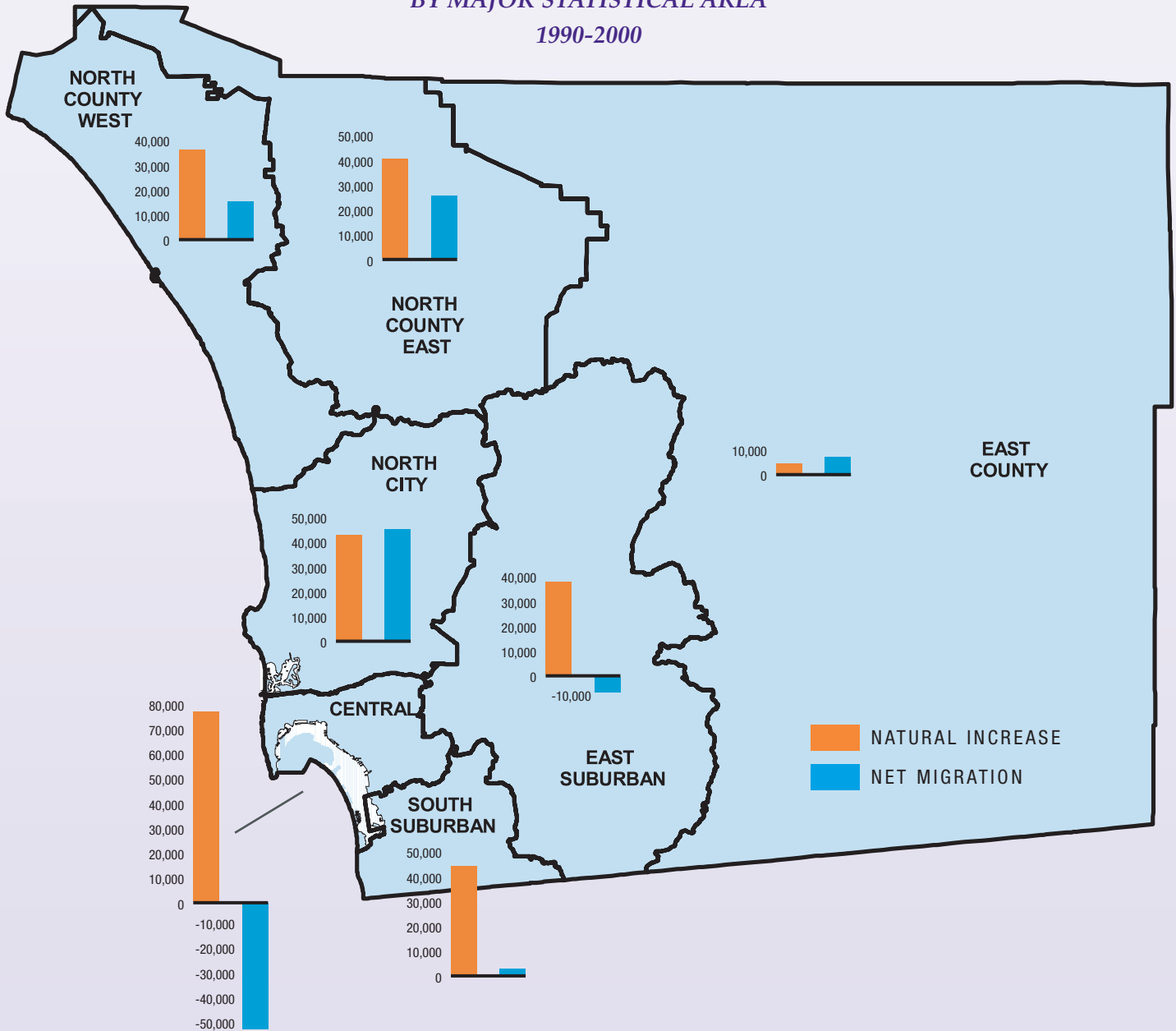


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Introduction

The San Diego region increased by 330,700 persons between July 1, 1990 and June 30, 2000 according to the California Department of Finance (DOF)¹. During this period, there were approximately 467,000 births and 184,000 deaths, adding 283,000 persons to the region through natural increase (births minus deaths). Natural increase therefore contributed 85 percent of the region's total population growth during that ten-year period; the remaining 15 percent resulted from the migration of people into and out of the region. This represents a reversal from the 1980s when migration was the driving factor in our growth. During the early 1990s, we experienced a severe economic recession. Now, with a growing economy, migration is again asserting its influence on the region's population growth.

The trends and characteristics of births and deaths underlie many planning and policy-making activities and serve as important indicators of a population's overall well being. Infant mortality, for example, is one of the most often used indicators of the general health of a population. The number and ethnic composition of births is important when analyzing school program and facility requirements. Vital events information, births and deaths, also provides us with the trends and characteristics of our communities' well being and future needs. Monitoring and tracking changes in the region's components of growth are important because they help decision-makers make the best choices for managing the region's growth.

The data in this *INFO* show that in the past 20 years infant mortality rates have declined across all ethnic groups at a faster rate than either the nation or the state. In addition, more women in all ethnic groups are receiving prenatal care earlier in their pregnancies and making more prenatal care visits to the doctor. The data also point out the important tie between birth weight and infant mortality and the close relationship between the educational level of the mother and the number of children she bears. Finally, the data clearly illustrate the ethnic diversity in our population as indicated by different age patterns and rates of childbearing and natural increase.

See section on "About the Data" on page 11 for specifics about the information and time periods used in this *INFO*.

Along with the vital events information, SANDAG has an extensive inventory of demographic and economic data that can be obtained by calling (619) 595-5347 or by visiting our Web site (www.sandag.org). Additional information regarding the contents and applications of the birth and death certificate information also is available from SourcePoint, a nonprofit corporation chartered by SANDAG. SourcePoint offers customized marketing, economic, and demographic information services for specific needs. For information on these and other SourcePoint services, call (619) 595-5353.

¹The population change is based on official estimates for July 1 produced by the California State Department of Finance, Demographic Research Unit. These estimates, released in February 2002, incorporate Census 2000 information and supercede previously published estimates. For comparison, between the April 1, 1990 and 2000 censuses, the region grew by 315,800 persons.

Components of Population Change: The Region

The contribution to population change of natural increase and net migration varied significantly during the decade of the 1990s (see Table 1). In the first half of the decade, natural increase was relatively high, while net migration was mostly negative. During the second half of the decade, natural increase declined, and there was a return to positive net migration. Regional births peaked at a historical high of just over 50,000 in 1990 after increasing steadily for 15 years (not shown in the table). Births then declined steadily until 1998 where they have remained relatively constant at between 43,300 and 43,700. As discussed below, this decline was due primarily to differences in fertility rates among ethnic groups and the aging of our population.

The volume of net migration during the 1990s was relatively small compared to what had occurred in the region during the 1980s. Overall,

while natural increase resulted in similar percent increases in the population for both the 1980s and the 1990s (12.4 % and 11.3 %, respectively), net migration resulted in a 21.6 percent increase in population during the 1980s but only a 1.9 percent increase during the 1990s. The drop in the percentage change due to migration accounts for most of the slowdown in the growth in total population from the 1980s (34.0%) to the 1990s (13.2%). Historically, the volume of net migration to the San Diego region has been strongly influenced by the local economy. During periods of sustained economic growth, net migration is usually large, while during recessions, net migration is often small or even negative as was the case in the first half of the 1990s.

There have been significant changes in births, deaths, and natural increase among the region's ethnic groups over the past 20 years (see Table 2). The number of annual Hispanic births in the San Diego region nearly tripled, between 1980 and 1999, while births

Table 1
Annual Components of Population Change¹
San Diego Region, 1980 - 2000

Year	July 1st Population	Births	Deaths	Numeric Change			Percentage Change		
				Natural Increase	Net Migration	Total	Natural Increase	Net Migration	Total
1990	2,504,900								
1991	2,554,600	50,471	17,270	33,201	16,499	49,700	1.3%	0.7%	2.0%
1992	2,590,200	50,251	17,901	32,350	3,250	35,600	1.3%	0.1%	1.4%
1993	2,597,900	49,690	17,817	31,873	-24,173	7,700	1.2%	-0.9%	0.3%
1994	2,611,000	49,313	18,344	30,969	-17,869	13,100	1.2%	-0.7%	0.5%
1995	2,615,200	46,775	18,350	28,425	-24,225	4,200	1.1%	-0.9%	0.2%
1996	2,627,000	45,822	19,014	26,808	-15,008	11,800	1.0%	-0.6%	0.5%
1997	2,680,000	44,283	18,628	25,655	27,345	53,000	1.0%	1.0%	2.0%
1998	2,725,700	43,299	19,178	24,121	21,579	45,700	0.9%	0.8%	1.7%
1999	2,776,300	43,277	18,830	24,447	26,153	50,600	0.9%	1.0%	1.9%
2000	2,835,600	43,689	19,011	24,678	34,622	59,300	0.9%	1.2%	2.1%
1980 - 1990		386,673	152,574	234,099	404,001	638,100	12.4%	21.6%	34.0%
1990 - 2000		466,870	184,343	282,527	48,173	330,700	11.3%	1.9%	13.2%

¹Change is for the July 1 to June 30 period.

Sources: California Department of Finance, Demographic Research Unit, 2002
California Department of Health Services, Center for Health Statistics, 2001

Definition of Terms

Birth Order

The current birth plus all preceding births (e.g., 1st birth, 2nd birth, etc.).

Birth Certificates

include the following information:

Social and demographic characteristics of the mother and father (age, ethnicity, education, and place of birth of the mother); Health characteristics of the pregnancy (initiation of prenatal care, number of prenatal care visits, and length of gestation); Characteristics of the delivery (method of delivery); Demographic and health characteristics of the birth (birth order and birth weight); and Payment sources for pregnancy.

Death Certificates

include the following information:

Demographic characteristics of the decedent (age, sex, ethnicity, place of birth); Medical conditions just prior to death (operations and injuries); Autopsy performed; Type of facility where death occurred; and Cause of death.

Components of Population Change

Natural increase (or decrease) refers to the difference between births and deaths. If the number of births exceeds the number of deaths, natural increase will increase the population. Conversely, if the number of deaths exceeds the number of births, natural decrease will lower the population.

Net migration is the difference between the number of persons who move into an area and the number of persons who move out of the area. If more people move into an area than move out, net migration will increase the population. Conversely, if more people move out from an area than in, net migration will decrease the population.

General Fertility Rate (GFR)

This rate is commonly used by demographers to measure the childbearing propensity of a population. GFR is computed by dividing all births by the total number of women of child-bearing ages (ages 15 to 49) multiplied by 1,000.

Infant Mortality Rate

This rate is commonly used by demographers as a measure of the general health of a population. The infant mortality rate is computed by dividing deaths to infants under one year old by the total number of births multiplied by 1,000.

Ethnicity

Ethnicity is reported in four mutually exclusive groups- Hispanics or Latinos and non-Hispanic Whites, non-Hispanic Blacks or African Americans, and non-Hispanic Asian and Other races. These groups are referred to as Hispanics, non-Hispanic Whites, Blacks, and Asian and Others in the text. This terminology is consistent with the 1990 census and the procedures used to collect vital events information, and ensures comparability with historical information. As a note, the way racial information was collected changed considerably with the 2000 census, including the ability of the respondent to select multiple races. All federal agencies must use the new standard by 2003, which will change the way race is designated on vital events certificates.

Hispanics

Includes all persons who identified themselves as Hispanic or of Latino or Spanish origin. Hispanics may be of any race.

Non-Hispanics are divided into three groups:

WHITES: Includes persons who identified their race as White as well as persons who did not classify themselves in one of the specific race categories but entered a response suggesting European or Middle Eastern origin.

BLACKS: Includes persons who identified their race as Black or African American as well as persons who did not classify themselves on one of the specific race categories, but entered a response such as African, Creole, Jamaican, or West Indian.

ASIAN AND OTHERS: Includes persons who identified their race as Japanese, Chinese, Filipino, Korean, Asian Indian, Vietnamese, Hawaiian, Guamanian, Samoan, Other Asian and Pacific Islander, American Indian, or another race category not included elsewhere.

among non-Hispanic Whites declined. In 1980 non-Hispanic White births accounted for 62 percent of all births in the region. By 1999, non-Hispanic White births were no longer the majority. In fact, the number of births to non-Hispanic White women was smaller than the number of births to Hispanics: 17,387 and 18,529, respectively. Annual births to Blacks increased by nearly 700 from 1980 to 1999 (30%). Annual births to Asian and Others grew by more than 2,000 (76%), compared to

a 40 percent increase in births to all ethnic groups.

There are two primary reasons for these shifts in births among the ethnic groups. First, there are differences in birth rates among the ethnic groups. As illustrated in Figure 1, Non-Hispanic Whites have the lowest general fertility rate (49 births per 1,000 women of childbearing ages) while Hispanics have the highest (117). The general fertility rates of Blacks (66) and Asian

Table 2
Births, Deaths, and Natural Increase by Ethnicity¹
San Diego Region, 1980-1999

Ethnicity	Calendar Year					Decade	
	1980	1985	1990	1995	1999	1980-1989	1990-1999
Hispanics							
Births	6,933 22%	8,892 24%	17,643 35%	18,285 40%	18,529 43%	105,532 28%	189,384 40%
Deaths	911 7%	1,002 7%	1,445 8%	1,691 9%	1,914 10%	10,917 7%	16,617 9%
Natural Increase	6,022 35%	7,890 36%	16,198 48%	16,594 60%	16,615 69%	94,615 42%	172,767 60%
Non-Hispanic Whites							
Births	19,272 62%	21,678 58%	25,055 50%	19,718 43%	17,387 40%	211,065 56%	201,586 43%
Deaths	12,013 88%	13,257 87%	14,312 84%	14,911 82%	15,460 81%	129,063 86%	148,882 82%
Natural Increase	7,259 42%	8,421 38%	10,743 32%	4,807 17%	1,927 8%	82,002 36%	52,704 18%
Blacks							
Births	2,110 7%	2,642 7%	3,639 7%	3,233 7%	2,739 6%	26,383 7%	32,406 7%
Deaths	487 4%	564 4%	764 4%	834 5%	863 5%	5,982 4%	8,187 5%
Natural Increase	1,623 9%	2,078 9%	2,875 9%	2,399 9%	1,876 8%	20,401 9%	24,219 8%
Asian & Others							
Births	2,616 8%	3,988 11%	4,249 8%	4,666 10%	4,606 11%	33,921 9%	44,720 10%
Deaths	205 2%	343 2%	537 3%	695 4%	931 5%	3,589 2%	7,500 4%
Natural Increase	2,411 14%	3,645 17%	3,712 11%	3,971 14%	3,675 15%	30,332 13%	37,220 13%
All Ethnic Groups							
Births	30,931 100%	37,200 100%	50,586 100%	45,902 100%	43,261 100%	376,901 100%	468,096 100%
Deaths	13,616 100%	15,166 100%	17,058 100%	18,131 100%	19,168 100%	149,551 100%	181,186 100%
Natural Increase	17,315 100%	22,034 100%	33,528 100%	27,771 100%	24,093 100%	227,350 100%	286,910 100%

¹ Vital events data is for the January 1 - December 31 period.

Source: California Department of Health Services, Center for Health Statistics, 2001

and Others (67) are similar and fall between the rates of Hispanics and non-Hispanic Whites. Second, most prominent in the non-Hispanic White and the Black populations is the aging of the baby boom generation out of the prime fertility years (ages 20 to 30), leading to relatively fewer women within these ethnic groups bearing children at the highest fertility rates.²

Deaths among all ethnic groups increased during the last two decades, but at different rates, causing a shift in the ethnic shares of total deaths. For example, in 1980 deaths to non-Hispanic Whites accounted for 88 percent of all deaths. By 1999, this share had decreased to 81 percent. Two counteracting factors contributed to this shift in the share of deaths to non-Hispanic Whites over the 20-year period: the rapid growth of the non-White ethnic groups and the aging of the non-Hispanic White population. While the former factor decreased the share of non-Hispanic White deaths, the latter mitigated the size of the downward shift. The share of all deaths to Hispanics and Asian and Others increased by three percentage points each, while the Black share of deaths increased by one percentage point.

These changes in ethnic composition of births and deaths have caused a shift in natural increase across the region's ethnic groups over the past 20 years (see Figure 2). In the 1980s the share of natural increase was higher for Hispanics (42%) than non-Hispanic Whites (36%). In the 1990s, three-fifths of the region's

natural increase occurred within the Hispanic population. The non-Hispanic White share of natural increase dropped to 18 percent in the 1990s, while Blacks and Asian and Others shares remained relatively constant across decades.

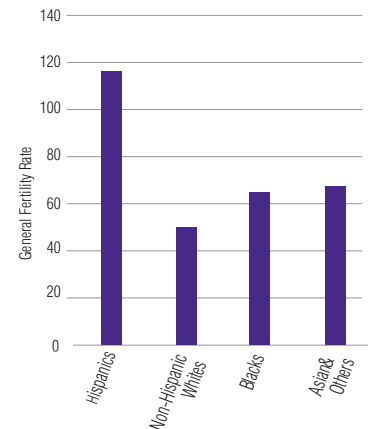
These changes due to natural increase are in part responsible for the differential growth rates in ethnic group populations. As Table 3 indicates, between 1990 and 2000 the Hispanic population increased by 47 percent while the non-Hispanic population increased by only 4 percent.³ While Hispanics' added population to the region through both natural increase and net migration, Non-Hispanic growth was due entirely to natural increase. Hispanic net migration added nearly 67,000 residents, but 36,500 more non-Hispanics left the region than entered during the 1990s.

The higher level of natural increase for Hispanics resulted from differences in the number of deaths between the two populations. While non-Hispanic births exceeded Hispanic births by 46 percent (277,124 to 189,925), non-Hispanic deaths were nearly 10 times greater than Hispanic deaths (164,991 to 16,724) due to the relatively youthful age structure of the Hispanic population. (In 2000, the median age for the non-Hispanic population was 36.9 years, more than 12 years higher than the Hispanic median.) Thus, Hispanic natural increase exceeded that of the non-Hispanics by more than 60,000.

² The baby boom generation is usually defined as births that occurred during the time period of the late 1940s (1946 or 1947) to the middle 1960s (1963 or 1964). During this period both the number of births and the birth rates were considerably higher than the preceding and following periods.

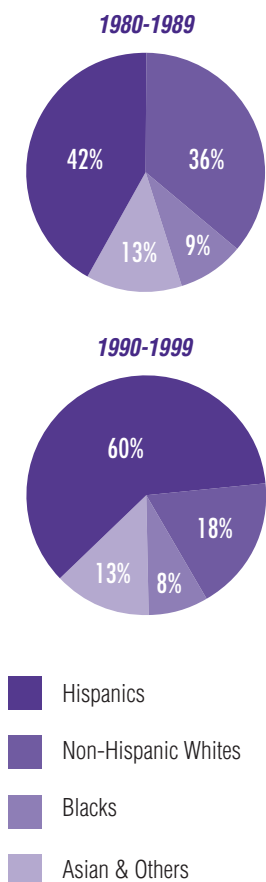
³ In the 2000 Census, respondents were allowed to select multiple races when identifying their racial backgrounds. This was not done in the 1990 Census so population by race cannot be directly compared between the two censuses. However, the census questions do enable direct comparisons for the Hispanic and non-Hispanic populations.

Figure 1
General Fertility Rates by Ethnicity
San Diego Region, 1999



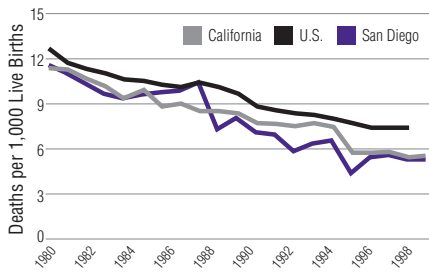
Sources: California Department of Health Services, Center for Health Statistics, 2001; SANDAG, Population Estimates, 2000

Figure 2
Share of Natural Increase
by Ethnicity
San Diego Region



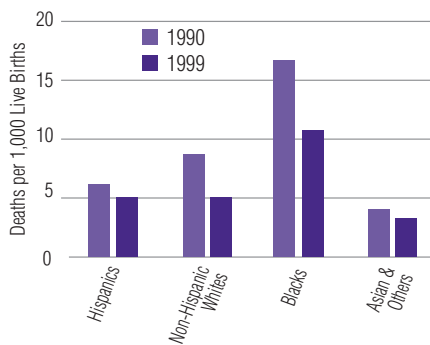
Source: California Department of Health Services, Center for Health Statistics, 2001

Figure 3
Infant Mortality Rates
U.S., California, and San Diego Region,
1980 - 1999



Sources: California Department of Health Services, Center for Health Statistics, 2001; National Center for Health Statistics, 2001.

Figure 4
Infant Mortality Rates by Ethnicity
San Diego Region, 1990 & 1999



Source: California Department of Health Services, Center for Health Statistics, 2001.

Components of Population Change: Jurisdictions

Table 4 presents the components of population change between April 1, 1990 and April 1, 2000. A quick review of these data clearly illustrates the importance of natural increase to the population growth in the region and its 19 jurisdictions. Seventeen jurisdictions (all except Coronado and Del Mar) increased their populations during the 1990s. Eight of these 17 jurisdictions experienced a loss of population due to migration (more people moved out than in), which means that natural increase was solely responsible for their overall increase in population. These eight were the Cities of Encinitas, Imperial Beach, Lemon Grove, National City, San Diego, Santee, Solana Beach, and the unincorporated area. Five jurisdictions with population increases (Chula Vista, El Cajon, Oceanside, Poway, and Vista) grew more from natural increase than from net migration, while four jurisdictions (Carlsbad, Escondido, La Mesa, and San Marcos) grew more from net migration than from natural increase. Del Mar's population loss was a result of both out-migration and because that city experienced more deaths than births. Del Mar is the only jurisdiction in the

region where deaths outnumbered births during the 1990s. The loss of population in Coronado was due to out-migration, most likely related to the downsizing of the military.

Infant Mortality and Birth Weight

Infant mortality is an often-used gauge of the general health of a population. As Figure 3 illustrates, infant mortality rates (deaths per 1,000 live births) in the San Diego region are generally below those of California and the nation. While the rate for all three areas declined from 1980 to 1999, our infant mortality rate declined by 24 percent from 1980 to 1989 and by 28 percent from 1990 to 1999. This compares with a decline for the nation of 22 percent in both decades and a decline for California of 22 percent in the 1980s and 32 percent in the 1990s. The local rate fluctuates more than the national or California rates due to the relatively few infant deaths that occur each year in the San Diego region.

Figure 4 illustrates that the region's infant mortality rate declined across all ethnic groups during the last decade. From 1990 to 1999, the infant

Table 3
Components of Population Change by Hispanic Ethnicity
San Diego Region, 1990 - 2000

Ethnicity	Total Population		1990-2000		Numeric Change			Percent Change		
	April 1, 1990	April 1, 2000	Births	Deaths	Natural Increase	Net Migration	Total Change	Natural Increase	Net Migration	Total Change
Hispanics	510,781	750,965	189,925	16,724	173,201	66,983	240,184	33.9%	13.1%	47.0%
Non-Hispanics	1,987,235	2,062,868	277,124	164,991	112,133	-36,500	75,633	5.6%	-1.8%	3.8%
All Ethnic Groups	2,498,016	2,813,833	467,050	181,715	285,335	30,482	315,817	11.4%	1.2%	12.6%

Sources: U.S. Census Bureau, 1990 and 2000 Census of Population and Housing; California Department of Health Services, Center for Health Statistics, 2001

Table 4
Components of Population Change by Jurisdiction¹
San Diego Region, 1990 - 2000

Ethnicity	Total Population		Births	Deaths	Numeric Change			Percent Change		
	April 1, 1990	April 1, 2000			Natural Increase ²	Net Migration	Total Change	Natural Increase	Net Migration	Total Change
Carlsbad	63,126	78,247	9462	4,445	5,017	10,104	15,121	7.9%	16.0%	24.0%
Chula Vista	135,163	173,556	30887	10,503	20,384	18,009	38,393	15.1%	13.3%	28.4%
Coronado	26,540	24,100	2080	1,813	267	-2,707	-2,440	1.0%	-10.2%	-9.2%
Del Mar	4,860	4,389	447	808	-361	-110	-471	-7.4%	-2.3%	-9.7%
El Cajon	88,693	94,869	17387	12,036	5,351	825	6,176	6.0%	0.9%	7.0%
Encinitas	55,386	58,014	8122	2,670	5,452	-2,824	2,628	9.8%	-5.1%	4.7%
Escondido	108,635	133,559	23818	11,666	12,152	12,772	24,924	11.2%	11.8%	22.9%
Imperial Beach	26,512	26,992	6703	1,342	5,361	-4,881	480	20.2%	-18.4%	1.8%
La Mesa	52,931	54,749	7024	6,937	87	1,731	1,818	0.2%	3.3%	3.4%
Lemon Grove	23,984	24,918	4258	2,282	1,977	-1,043	934	8.2%	-4.3%	3.9%
National City	54,249	54,260	12486	3,696	8,790	-8,779	11	16.2%	-16.2%	0.0%
Oceanside	128,154	161,029	36870	10,679	26,191	6,684	32,875	20.4%	5.2%	25.7%
Poway	43,516	48,044	5778	2,469	3,309	1,219	4,528	7.6%	2.8%	10.4%
San Diego	1,110,554	1,223,400	202258	75,980	126,278	-13,432	112,846	11.4%	-1.2%	10.2%
San Marcos	38,974	54,977	8894	4,551	4,343	11,660	16,003	11.1%	29.9%	41.1%
Santee	52,902	52,975	7679	3,438	4,241	-4,168	73	8.0%	-7.9%	0.1%
Solana Beach	12,968	12,979	1497	931	566	-555	11	4.4%	-4.3%	0.1%
Vista	71,872	89,857	17456	6,726	10,730	7,255	17,985	14.9%	10.1%	25.0%
Unincorporated	398,997	442,919	63944	18,744	45,200	-1,278	43,922	11.3%	-0.3%	11.0%
Region	2,498,016	2,813,833	467,050	181,715	285,335	30,482	315,817	11.4%	1.2%	12.6%

¹ Change is for the April 1 - March 31 period.

² Del Mar represents a natural decrease since deaths exceed births.

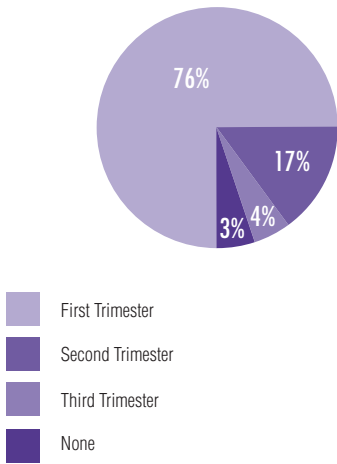
Sources: U.S. Census Bureau, 1990 and 2000 Census of Population and Housing.
 California Department of Health Services, Center for Health Statistics, 2001

mortality rate for Asian and Others declined by 38 percent, followed by Blacks with a 37 percent decline. The rate for non-Hispanic Whites and Hispanics declined by 27 percent and 22 percent, respectively. However, while the Black infant mortality rate improved, it is still more than twice the rate found among Hispanics and non-Hispanic Whites and more than three times the rate among the Asian and Others population. Hispanics and non-Hispanic Whites shared similar rates through the 1990s, while the Asian

and Others rate was by far the lowest at 2.6 infant deaths per 1,000 live births in 1999.

Low birth weight is a major underlying cause of infant mortality. Much of the care provided during pregnancy is focused on reducing the risk of premature and/or low birth weight infants. Birth weight is generally divided into three categories: normal, low, and very low. Normal birth weights are those of 2,500 grams or more (5.5 pounds). Low birth weight is defined as 1,500 to 2,499 grams (3.3 to 5.5 pounds).

Figure 5
Initiation of Prenatal Care by Trimester
San Diego, 1990-1999



Source: California Department of Health Services, Center for Health Statistics, 2001

Very low birth weight is defined as less than 1,500 grams (3.3 pounds).

Table 5 illustrates the relationship between birth weight and ethnicity. Babies of Black mothers are at a higher risk of being below normal birth weight compared to babies of non-Black mothers. While 89 percent of newborns of Black mothers were normal weight, births of normal weight to Hispanic, non-Hispanic White, and Asian and Others mothers accounted for 95 percent, 95 percent, and 93 percent, respectively, of their births.

Very low weight births account for a disproportionate share of all infant deaths. According to the U.S. Department of Health and Human Services, very low weight births represent one percent of all births, but account for 45 percent of all infant deaths.⁴ Therefore, the distribution of very low birth weight infants among the four ethnic groups helps explain the disproportionate share of infant deaths among Blacks. For example, while births to Black mothers are over represented among low birth weight infants, they are even more so among the very low weight births. While a Black birth is

⁴ Trends in the Well-Being of America's Children and Youth, 1997 Edition. Office of the Assistant Secretary for Planning and Evaluation, Department of Health and Human Services, Washington, D.C., 1997.

nearly twice as likely as all births to be low weight, it is nearly three times as likely to be very low weight.

Prenatal Care

Birth certificates contain information on the month during pregnancy that the mother begins prenatal care. The initiation of prenatal care is usually grouped into three-month categories: first through third month, referred to as the first trimester; fourth through sixth month, referred to as the second trimester; and seventh through the ninth month, referred to as the third trimester.

Figure 5 shows that during the 1990s over three-fourths of mothers initiated prenatal care in the first trimester of their pregnancy; only seven percent of mothers received late (prenatal care beginning in the third trimester) or no care during pregnancy. Table 6 presents data on the timing of the initiation of prenatal care across ethnic groups in 1990 and 1999. All ethnic groups had increases in the percent of pregnancies in which prenatal care was initiated during the first trimester during the last decade. The change in early prenatal care was most pronounced among Hispanics (an increase of 23 percentage points), while non-Hispanic Whites had the

Table 5
Birth Weight by Ethnicity of Mother
San Diego Region, 1990 to 1999

Ethnicity	Normal	Low	Very Low
	(2,500+ grams or 5.5+ pounds)	(1,500 to 2,499 grams or 3.3 to 5.5 pounds)	(Less than 1,500 grams or less than 3.3 pounds)
Hispanics	95%	4%	1%
Non-Hispanic Whites	95%	4%	1%
Blacks	89%	9%	3%
Asian & Others	93%	6%	1%
All Ethnic Groups	94%	5%	1%

Source: California Department of Health Services, Center for Health Statistics, 2001

least amount of change (six percentage points). Blacks and Asian and Others had significant increases of 13 and 10 percentage points in initiating care during the first trimester, respectively.

Since 1989, the number of prenatal visits the mother makes during her pregnancy has been recorded on the birth certificate. The averages shown in Table 7 indicate that the number of prenatal visits has increased for every ethnic group between 1990 and 1999. Hispanic mothers received the least prenatal care of any ethnic group in 1999. Seven percent of Hispanic mothers visited health care facilities four times or fewer in 1999, which is a significant improvement from the 22 percent figure in 1990. Similarly, the percentage of Black and Asian and Others mothers

visiting four or fewer times declined by half over the decade. At 20 percent, non-Hispanic White mothers had the highest percentage of 15 or more visits in 1990. By 1999 their percentage had declined slightly, leaving Black mothers with the highest percent of their births in the 15 or more visits category (20%).

Much of the increase in early prenatal care can be traced directly to federal and state programs that provide free access to health care for moderate- and low-income women. While federal Medicaid provisions provide free prenatal care to women with incomes at or below 185 percent of poverty, state funded programs such as MediCal provide low-cost insurance programs for women with higher incomes.

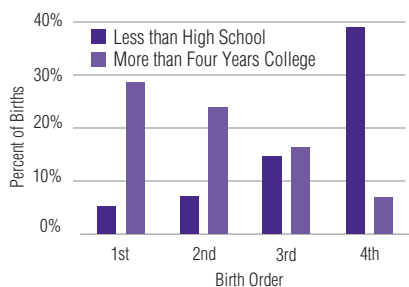
Table 6
Initiation of Prenatal Care by Ethnicity of Mother
San Diego Region, 1990 and 1999

Ethnicity	Percent of Births, 1990				
	1st trimester	2nd trimester	3rd trimester	No Care	All births
Hispanics	51%	29%	10%	11%	100%
Non-Hispanic Whites	84%	13%	2%	1%	100%
Blacks	68%	24%	5%	3%	100%
Asian & Others	73%	22%	4%	2%	100%
All Ethnic Groups	70%	20%	5%	5%	100%

Ethnicity	Percent of Births, 1999				
	1st trimester	2nd trimester	3rd trimester	No Care	All births
Hispanics	74%	19%	5%	2%	100%
Non-Hispanic Whites	90%	8%	1%	<1%	100%
Blacks	81%	15%	3%	1%	100%
Asian & Others	83%	13%	3%	1%	100%
All Ethnic Groups	82%	14%	3%	1%	100%

Source: California Department of Health Services, Center for Health Statistics, 2001

Figure 6
Birth Order for Women
35 Years and Older
San Diego Region, 1990-1999



Source: California Department of Health Services, Center for Health Statistics, 2001

Births by Age of Mother

A notable characteristic of today's births is the trend toward an older age pattern of childbearing. In 1980, 21 percent of all births in the region occurred to women 30 years of age or older. By 1999, this percentage had increased to 40 percent. Two factors help explain this trend. First, the aging of the baby boom generation is causing faster growth of women in the older childbearing years (ages 30-44). Between 1990 and 2000, the region's female population ages 30-44 increased by 10 percent compared to an almost 1 percent drop in females ages 15-30. Second, as more women participate in higher education and enter the work force, many delay the initiation of childbearing.

Table 8 contains data that illustrate the age at which women in each ethnic group have their first child. Some clear differences are seen with non-Hispanic Whites and Asian and Others having an older pattern of childbearing. Over 30 percent of Hispanic and Black mothers have

their first child before the age of 20 as compared to less than 14 percent for non-Hispanic White and Asian and Others. On the other hand, over 31 percent of non-Hispanic White and Asian and Others mothers have their first child at age 30 years or older, while less than 13 percent of Hispanic and Black first-time mothers fall into this age group.

Education

The level of education attained by the mother correlates strongly with the number of children she bears, with higher educated mothers having fewer children (see Figure 6). For example, for women 35 years old or older (i.e., women nearing the end of their reproductive years), 39 percent of all fourth or higher order births during the 1990s were to those with less than a high school diploma, compared to only seven percent to those with more than four years of college. The pattern reverses for first births, where a much higher percentage of these births were to women with more than four years of college. College educated women

Table 7
Number of Prenatal Visits by Ethnicity of Mother
San Diego Region, 1990 and 1999

Ethnicity	1990					Total	Average # of visits
	4 or less	5-9	10-11	12-14	15 or more		
Hispanics	22%	28%	21%	21%	8%	100%	8.4
Non-Hispanic Whites	3%	16%	26%	36%	20%	100%	11.8
Blacks	10%	26%	27%	26%	11%	100%	10.1
Asian & Others	6%	26%	31%	28%	10%	100%	10.4
All Ethnic Groups	10%	22%	25%	29%	14%	100%	10.4
Ethnicity	1999					Total	Average # of visits
	4 or less	5-9	10-11	12-14	15 or more		
Hispanics	7%	23%	22%	34%	13%	100%	10.8
Non-Hispanic Whites	2%	14%	20%	44%	19%	100%	12.3
Blacks	5%	20%	19%	36%	20%	100%	11.6
Asian & Others	3%	20%	22%	39%	16%	100%	11.5
All Ethnic Groups	4%	19%	21%	39%	16%	100%	11.5

Source: California Department of Health Services, Center for Health Statistics, 2001

accounted for 29 percent of all first births compared to only five percent for women with less than a high school diploma.

Conclusion

Vital events (births and deaths) are both causes and consequences of other social, economic, and demographic factors and are part of a larger set of information used to develop our annual demographic and economic estimates and long range Regional Growth Forecast. Our estimates and forecast are valuable because they provide the public, elected officials, and other decision-makers information on how we are doing, who we are, and how we are changing. They also are

integral to the development of policies and plans to cost-effectively deal with the changing demographic and economic make-up of our region and its jurisdictions and communities.

SANDAG's Preliminary 2030 Cities/County Forecast provides projections for 2010, 2020, and 2030 of population, housing, employment, and other characteristics for jurisdictions and other areas in the region. We also have prepared population and housing estimates for 2002 based on Census 2000 information. Look for our forecasts and estimates on our Web site (www.sandag.org) and in *INFOs* and other documents that will be published over the next year.

About the Data

This INFO summarizes the major trends and characteristics of births and deaths in the San Diego region from 1990 to 2000 and provides comparisons to the period 1980 to 1990⁵. The vital statistics used in this INFO come from the Center for Health Statistics of the California Department of Health Services. This information contains most of the items found on the birth and death certificates, except those that would violate confidentiality, and is available for selected geographic areas that include ZIP codes and jurisdictions.

The information in this INFO reflects three points in time in order to present the most current and relevant information. When reporting annual information on regional change, the data correspond to mid-year (July 1 to June 30) to match the latest estimates prepared by the California Department of Finance. When reporting on changes to jurisdictions, the data correspond to the April 1 to March 31 period to reflect changes between the 1990 and 2000 decennial censuses. Finally, we use the calendar year (January 1 to December 31) to describe the characteristics of births and deaths. These different time points will cause seemingly like figures to vary slightly between tables. For example, regional births for the decade of the 1990s are 466,870 (Table 1) based on the July to June period, 467,050 (Table 3) based on the April to March period, and 468,096 (Table 2) based on the calendar year period.

⁵ The number of births and deaths reported in this *INFO* may differ slightly from previously reported information due to revisions in the historical data.

Table 8
Percent of First Births by Mother's Age and Ethnicity
San Diego Region, 1990 - 1999

Ethnicity	Mother's Age (Years)			All Ages
	Less than 20	20 to 29	30+	
Hispanics	31%	57%	13%	100%
Non-Hispanic Whites	12%	52%	36%	100%
Blacks	34%	54%	12%	100%
Asian & Others	14%	55%	31%	100%
All Ethnic Groups	21%	56%	23%	100%

Source: California Department of Health Services, Center for Health Statistics, 2001



INFO

INFO presents information produced as part of the San Diego Association of Governments' overall planning program. The series, published every other month, contains population, housing, employment, land use, transportation, criminal justice and other data, as well as occasional reports on other subjects of general interest. This report is financed with federal funds from the U.S. Department of Transportation, state funds from Caltrans, and local funds from SANDAG member jurisdictions.

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Future Issues of INFO

Census 2000: Demographic and Economic Characteristics of the San Diego Region

The census collects a wide variety of information about the nation's residents. This *INFO* looks at characteristics such as household income, poverty status, educational attainment, commute times, and other information. These characteristics are presented for the San Diego region, California, and the nation.

Mapping the Census: Demographic and Economic Characteristics of the San Diego Region

This *INFO* contains maps that illustrate various characteristics about the San Diego region's residents. The geographic distribution of people in poverty, those speaking a language other than English at home, educational attainment, and other information will be portrayed.

On the Cover

This *INFO* summarizes the major trends and characteristics of births and deaths in the San Diego region from 1990 to 2000 and provides comparisons to the 1980 to 1990 time period. The map on the cover shows, for each of the San Diego region's Major Statistical Areas, 1990 to 2000 population change due to natural increase (births minus deaths) and net migration. In all areas, there were more births than deaths, resulting in population increases due to natural increase. In two areas, however (Central and East Suburban), more people moved out than moved in, causing a net loss in population due to migration.