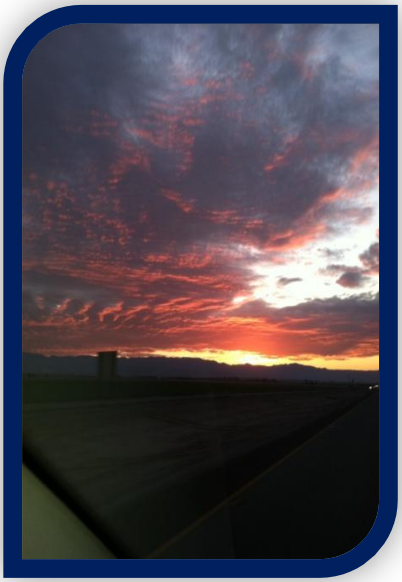
IMPERIAL COUNTY HEALTH STATUS REPORT

2015-2016

Executive Summary



The Imperial County Public Health Department is pleased to present the third edition of the Health Status Report 2015-2016. Monitoring the community's health status is a core function of public health. It provides a platform to compare how we're doing with regard to key health indicators over time. Over the past decade, there have been significant areas of change, mostly for the better, although some important health issues continue to elude efforts for improvement.

Imperial County's first Health Status Report was published in 2002, just months after the terrorist attacks on September 11, 2001. That event shed light on the lack of resources in many key areas, in particular Public Health's preparedness to respond to and handle the aftermath of major disasters. Since then, major changes have occurred in Public Health, as well as other agencies and organizations in this county.

Subsequent events have tested our ability to respond. In 2009, the first case of pandemic influenza A (H1N1) was identified through our enhanced surveillance system for influenza-like illness. Public Health and the health-care community responded in a monumental way. Together, we successfully conducted the first-ever mass vaccination of the community, and continue this as an annual exercise to test and perfect our skills.

Imperial County has made great strides in improving the public's health in collaboration with community partners over the past decade. But many challenges remain.

Health Successes

Imperial County's health status has shown marked improvement in key health indicators. There were fewer deaths due to chronic lower respiratory disease and cancer, in particular lung cancer. Deaths due to motor vehicle crashes and unintentional injuries, such as falls, traffic collisions, and poisonings, decreased substantially. The incidence of gonorrhea, chlamydia, and other reportable diseases have declined and are lower than California overall.

Opportunities for Health Improvement

Access to health care remains elusive for many Imperial County residents. Many pregnant women do not receive adequate prenatal care. Asthma rates, while improved, remain high. Hospitalization rates for asthma remain among the highest in the state, most notably for children. Imperial County continues to report the highest rate of tuberculosis in California. Teen birth rates have declined incrementally but remain among the highest rates in the state and higher than national teen birth rates. Diabetes death rates are higher than the statewide or national rates. Obesity continues to be a problem for many residents.

Public Health in 2016 and Beyond

Improving health for all residents will require extraordinary measures that must be implemented in collaborative, multi-faceted ways. Innovated projects designed on the firm foundation of evidence-based practices have been initiated in our community. These projects are targeting some of the most difficult health and social issues of our times: obesity and its related illnesses and at-risk populations that include teen-age mothers and other disenfranchised individuals. We are also collaborating with partner agencies to study ways to mitigate environmental issues that impact health such as the Salton Sea. Health-care delivery for Medi-Cal beneficiaries is transitioning from fee-for-service to managed care, and continues to add new beneficiaries under the Affordable Care Act.

The Public Health Department is committed to continued collaboration with our community partners to improve the overall health status of this community. We are making great strides in expanding our ability to reach and inform local residents. Our web site has been revamped to make information more accessible and user friendly. We are now connected through social media to provide timely information. You can visit us on Facebook, and sign up for tweets at Twitter (https://twitter.com/ICPublicHealth).

Robin Hodgkin, MPA
Director

Stephen Munday, MD, MPH
Health Officer

Selected Health Indicators

HEALTH STATUS INDICATOR	YEAR(S)	IMPERIAL COUNTY RATE	CALIFORNIA RATE	HEALTHY PEOPLE 2020 OBJECTIVE	STATUS
MORTALITY[1]					
ALL CAUSES	2012-2014	606.7	619.6	NOT APPLICABLE (NA)	☑
ALL CANCERS	2012-2014	126.7	146.5	161.4	☑
LUNG CANCER	2012-2014	26.1	31.7	45.5	☑
DIABETES	2012-2014	27.6	20.4	NA	☐
HEART DISEASE	2012-2014	107.3	103.8	103.4	☐
STROKE	2012-2014	30.4	34.4	34.8	☐
CHRONIC LOWER RESPIRATORY DISEASE	2012-2014	19.1	33.7	NA	☑
CHRONIC LIVER DISEASE & CIRRHOSIS	2012-2014	15.2	11.7	8.2	☐
UNINTENTIONAL INJURIES	2012-2014	40.7	28.2	36.4	☐
DRUG-INDUCED	2012-2014	15.1	11.3	11.3	☐
MORBIDITY[2]					
CHLAMYDIA	2012-2014	353.0	447.0	NA	☑
TUBERCULOSIS	2012-2014	19.5	5.9	1.0	☐
NATALITY					
TEEN BIRTHS (15-19 yrs)[3]	2012-2014	45.0	23.4	NA	☐
LOW BIRTHWEIGHT	2012-2014	5.6%	6.7%	7.8%	☑
FIRST TRIMESTER PRENATAL CARE	2012-2014	43.4%	83.5%	77.9 %	☐
CENSUS					
Persons <18 years living in POVERTY	2013 N=15,594	30.9%	23.3%	NA	☐

[1] Age-adjusted death rates per 100,000 population [2] Crude case rate [3] Age-specific birth rate

☑ Healthy People 2020 (HP 2020) National Objective achieved or local rates are better than statewide rates.

NA – HP 2020 National Objective not established for this indicator.

Sources: California Department of Public Health / California Department of Finance / U.S. Census Bureau

Acknowledgements

Thank you to all Public Health staff who provided information for the Health Status Report. Special thanks for the contributions of Janette Angulo, Amy Binggeli-Vallarta, and Kathleen Lang for reviewing, editing, and providing feedback.

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HEALTH STATUS

Key Findings

Health Status

- Most Imperial County residents report their health status favorably, but slightly less so than the overall population in California.

Disability

- A slightly larger proportion of Imperial County residents reported having a disability due to a mental, physical, or emotional condition compared to California as a whole.

Health Status

What is it?

Health status is determined not only by the absence of disease, but a myriad of other factors that are more difficult to measure. Health status can be defined by an individual's own perception of wellness and well-being, which is influenced by determinants such as income, education, access to health insurance and health care, physical environment, and other disparities associated with race and ethnicity.

An individual's health status is also influenced by the overall health of the community. To understand the health status of a population, it is essential to monitor and evaluate the consequences of the determinants of health. Health status can be measured by birth and death rates, life expectancy, quality of life, illness caused by specific diseases, health risk indicators, use of ambulatory care and inpatient care, accessibility of health personnel and facilities, health insurance coverage, and other factors.

Why is it important?

Monitoring health status is a vital tool for Public Health and community leaders. This information can be used to determine areas to target resources to prevent illness and other health problems, as well as improve overall health in the community.

What is our status?

Great strides have been made over the past decade: life expectancy at birth has increased; rates of death from coronary heart disease and stroke have decreased. Nonetheless, public health challenges remain, and significant health disparities persist.

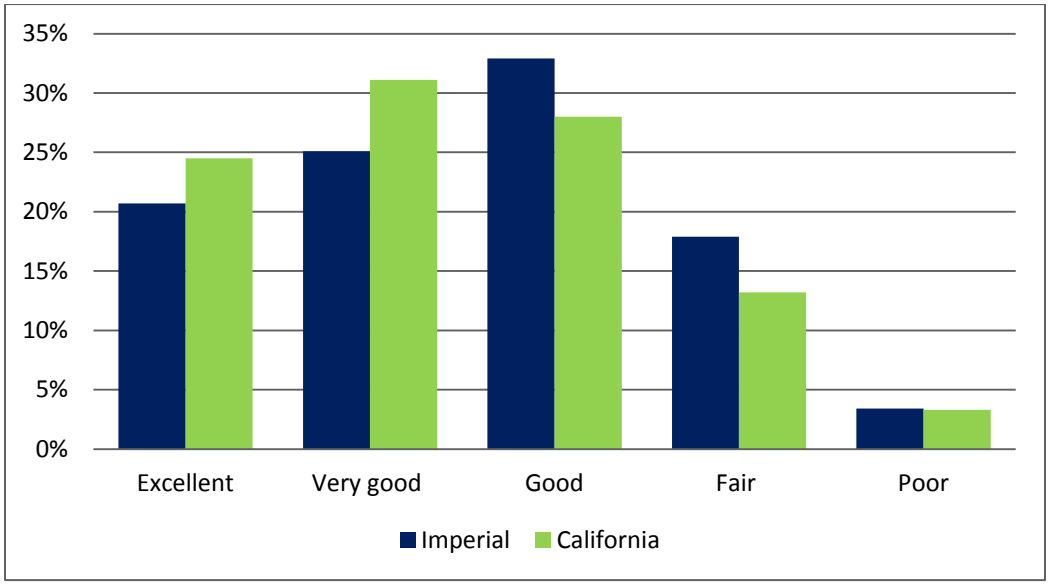
Self-assessed health status is a measure of how an individual perceives his or her health—rating it as excellent, very good, good, fair, or poor. Self-assessed health status has been validated as a useful indicator of health for a variety of populations and allows for broad comparisons across different conditions and populations.

Many Imperial County residents rate their own health favorably, according to the findings of the California Health Interview Survey (CHIS), the country's largest population-based state health survey (Figure 1-1). Compared to California as a whole, a smaller proportion of Imperial County residents considered their health to be excellent (20.7% versus 24.5%). Most Imperial County residents considered their health to be very good or good. A greater percentage of Imperial County residents (21.3%) rated their health as fair or poor compared to Californians overall (16.5%).

Imperial County adults reported having 4.8 *physically unhealthy days* on average during the previous 30 days (age-adjusted), which is higher on average than California overall (3.6 days) and the United States (2.9 days), according to the County Health Rankings & Roadmaps. Imperial County adults reported having 4.2 *poor mental health days* on average during the previous 30 days, slightly higher compared to California (3.6) and the national average (2.8).

FIGURE 1 - 1

Self-Reported Health Status, Imperial County and California · 2012-2014



Source: **2012, 2013, 2014 California Health Interview Survey**

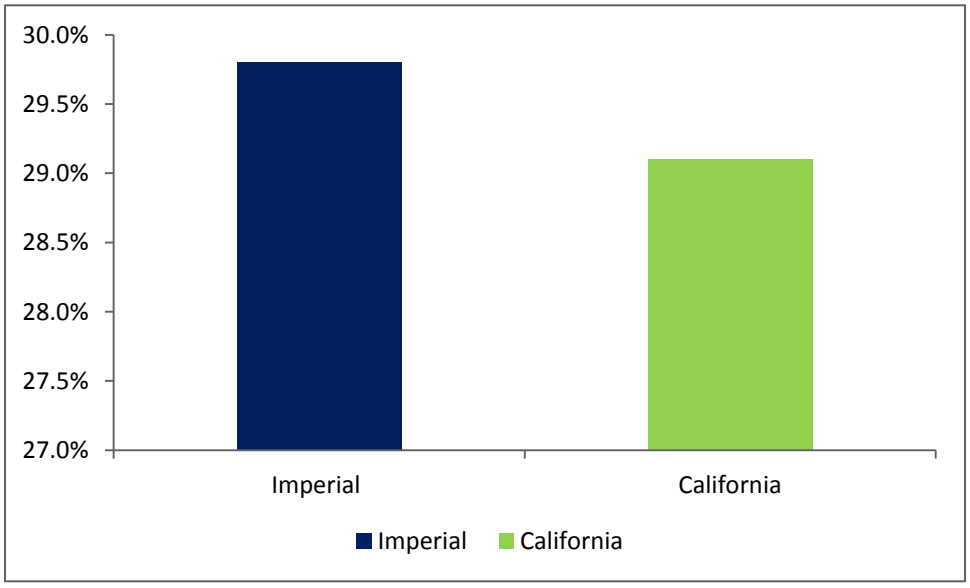
Despite the overall favorable health status reported by most Californians, a number of factors such as lack of health insurance, asthma prevalence, and high obesity rates continue to challenge the health-care system.

Many Imperial County residents face health challenges. People with disabilities face additional barriers to good health. Studies indicate that individuals with disabilities are more likely than people without disabilities to have poorer overall health, less access to adequate health care, and engage in risky health behaviors, including smoking and physical inactivity.

A slightly greater proportion of Imperial County residents reported having a disability due to a physical, mental or emotional condition, compared to respondents statewide, according to the findings of the 2012-2014 CHIS survey (Figure 1-2).

FIGURE 1- 2

Disability due to Physical, Mental or Emotional Condition · 2012-2014



Source: **2012, 2013, 2014 California Health Interview Survey**

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DEMOGRAPHIC AND SOCIOECONOMIC CHARACTERISTICS

Key Findings

Population Growth

- Imperial County continued to experience steady growth from 174,528 in 2010 to 185,831 residents in 2016.

Age Distribution

- Imperial County's population is younger than that of California overall. An estimated 28.4 percent of the population was under 18 years and 12.5 percent was 65 years or older.

Household Income

- In 2015, the median income for Imperial County residents was $41,772, significantly lower than the median income for California overall ($61,489).

Education

- Sixty-five percent of Imperial County residents aged 25 years and older had graduated from high school and 13 percent had a bachelor's degree or higher.

Health Insurance Coverage

- Eighty-four percent of Imperial County residents under age 65 reported having health insurance coverage.

Demographic and Socioeconomic Characteristics

What are they?

Many personal, social, economic, and environmental factors contribute to individual and population health. People with an education, stable employment, safe homes and neighborhoods, and access to preventive services tend to be healthier throughout their lives. Conversely, poor health outcomes are often made worse by an individual's social and physical environment.

Why are they important?

Age, race and ethnicity, household income, employment status, and educational attainment have a significant impact on health status. Economic status is an important predictor of health, and inequalities in income and education underlie many health disparities. In general, population groups that suffer the worst health status also are those that have the highest poverty rates and the least education. Data indicate that people with low socioeconomic status are less likely than their higher-income counterparts to have health insurance or use preventive services. They are more likely to have problems accessing care. They are also more likely to suffer from chronic illnesses and have shorter life spans.

What is our status?

Imperial County faces a greater challenge than other counties in California in meeting residents' basic health needs because a large proportion of the county's population lives in poverty, has limited access to health insurance, and has limited English proficiency or education. Immigration status and proximity to the U.S. – Mexico border also impact the demographics of this county.

Demographic Highlights

General Population Characteristics

Imperial County continues to experience steady population growth. Since 2000, the county's population has grown to an estimated 185,831 residents in 2016 (Table 2-1).

The city of Imperial continued to rank among California's fastest-growing cities with a 3.7 percent population increase from 17,517 to 18,165, making it among the top 11 fastest-growing cities statewide based on percent change from 2015-2016.

Table 2 - 1

Population Growth, Imperial County · 1990-2016

POPULATION	1990	2000	2010	2015	2016
County of IMPERIAL	109,303	142,361	174,528	184,500	185,831
BRAWLEY	18,923	22,052	24,953	26,327	26,566
CALEXICO	18,633	27,109	38,572	40,092	40,211
CALIPATRIA	2,690	7,289	7,705	7,367	7,468
EL CENTRO	31,405	38,025	42,598	44,946	45,170
HOLTVILLE	4,820	5,612	5,939	6,052	6,093
IMPERIAL	4,113	7,560	14,758	17,517	18,165
WESTMORLAND	1,380	2,131	2,225	2,251	2,256
Unincorporated	27,339	32,583	37,778	39,948	39,902

Source: State of California, Department of Finance, E-4 Population Estimates for Cities, Counties and the State, 2001-2010, with 2000 & 2010 Census Counts. Sacramento, California, September 2011

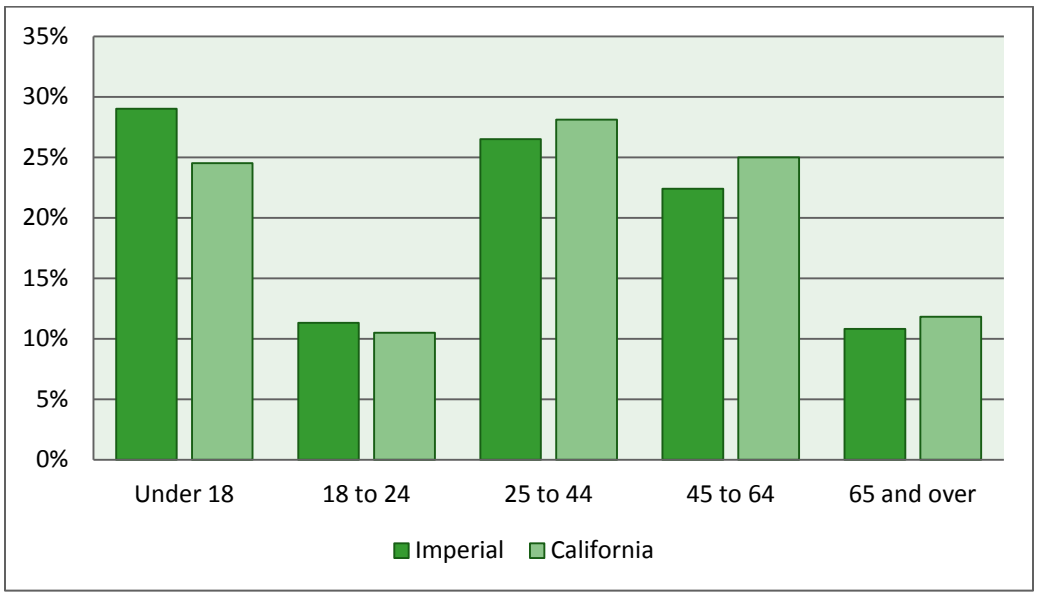
State of California, Department of Finance, E-4 City/County Population Estimates with Annual Percent Change — January 1, 2013 and 2014. Sacramento, California, May 2014.

AGE

Imperial County residents are slightly younger than Californians overall (Figure 2-1). The median age was 31.9 years. An estimated 29 percent of Imperial County's population is under 18 years and 11 percent is 65 years and older.

FIGURE 2 - 1

Population Age Distribution, Imperial County and California · 2009-2013



Source: U.S. Census Bureau, 2009-2013 American Community Survey 5-year Estimates

RACE / ETHNICITY

Imperial County continues to report the highest concentration of Hispanic/Latino population of all counties in California. More than 80 percent of Imperial County's population is Hispanic/Latino; the majority of those are Mexican (77.2%). A total of 13.7 percent are White, non-Latino; 2.9 percent are Black or African American; 1.3 percent is Asian; and less than 1 percent is American Indian and Alaska Native.

Socioeconomic Status

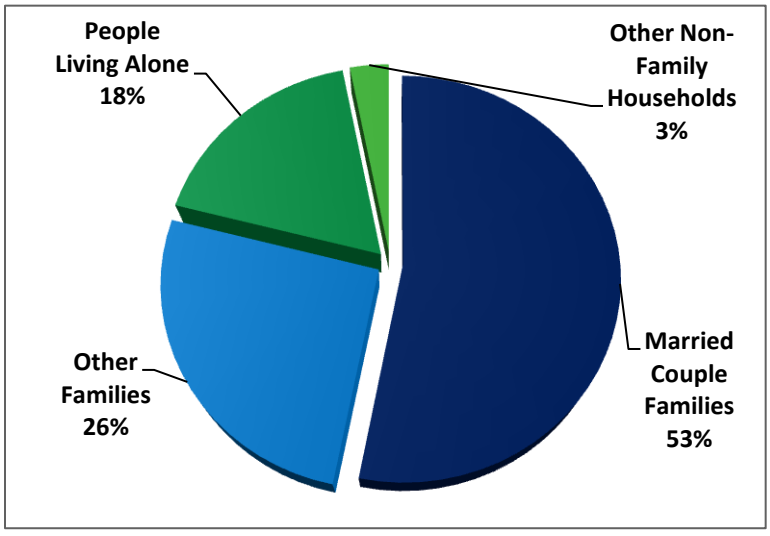
Inequalities in income and education underlie many health disparities in the United States. Income and education are intrinsically related and often serve as proxy measures for each other. In general, population groups that suffer the worst health status also are those that have the highest poverty rates and the least education. Disparities in income and education levels are associated with differences in the occurrence of illness and death in a variety of conditions that include heart disease, diabetes, obesity, elevated blood lead level, and low birth weight. Higher incomes permit increased access to medical care, enable people to afford better housing and live in safer neighborhoods, and increase the opportunity to engage in health-promoting behaviors.

HOUSEHOLDS AND FAMILIES

In 2009-2013, there were more than 48,100 households in Imperial County. The average household size was 3.4 people. Families made up 79 percent of households, including both married-couple families (53%) and other families (26%). Of the other families, 11 percent are female householders with no husband present and children under 18 years. Most of the non-family households are people living alone, but some were composed of people living in households in which no one was related to the householder (Figure 2-2).

FIGURE 2 - 2

Types of Households in Imperial County · 2009 – 2013



Source: U.S. Census Bureau, 2009-2013 American Community Survey 5-year Estimates

NATIVITY · FOREIGN BORN

An estimated 68 percent of people living in Imperial County in 2009-2013 were native residents of the United States; 57 percent of these residents were living in the state in which they were born, according to the American Community Survey 5-Year Estimates. Thirty-two percent of people living in Imperial County in 2009-2013 were foreign born. Of the foreign-born population, 42 percent were naturalized U.S. citizens, and 97 percent had entered the country before the year 2010.

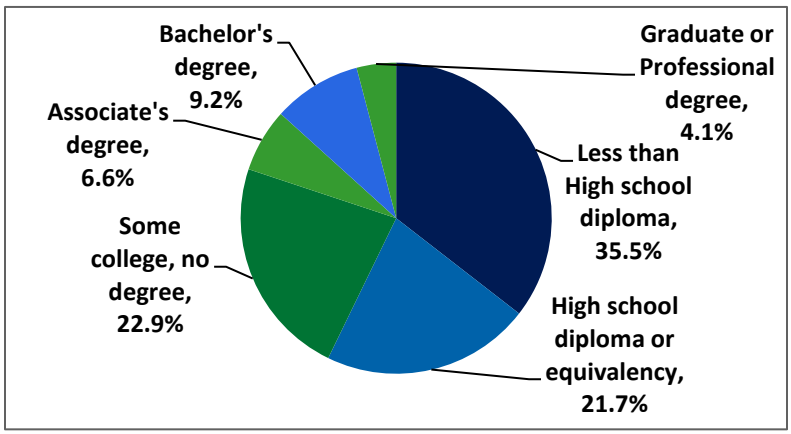
A significant proportion of Imperial County residents speak a second language. Among people at least 5 years of age living in Imperial County in 2009-2013, 74 percent spoke a language other than English at home. Of those who spoke another language at home, 98 percent spoke Spanish and 2 percent spoke some other language. Forty-three percent reported that they not speak English very well.

EDUCATION

In 2009-2013, 65 percent of Imperial County's population aged 25 and older had graduated from high school or higher (Figure 2-3). In 2012-2013, 83.1 percent of the County's enrolled students graduated from high school in four years, compared to 80.4 percent statewide.

Imperial County's total school enrollment was 54,000 on average in 2009-2013. Nursery school and kindergarten enrollment was 6,200 and elementary and high school enrollment was 35,200 children. College or graduate school enrollment was 13,300.

FIGURE 2-3



Educational Attainment · 2009 – 2013

Source: U.S. Census Bureau, 2009-2013 American Community Survey 5-Year Estimates

Economic Status

The median income of households in Imperial County in 2013 was $43,310, significantly lower than for California households overall ($60,190), according to the U.S. Census Bureau. An estimated 19 percent of households had income below $15,000 a year, and 5 percent had income over $150,000 or more.

Imperial County's population is poorer than that of California as a whole. A higher proportion of Imperial County residents live at or below the Federal Poverty Level compared to other counties in California. In 2006, 18 percent of Imperial County's population was living in poverty, compared to 13 percent of California's overall population. In 2013, 22.1 percent of Imperial County residents were living at or below poverty, compared to 16.8 percent of the statewide population.

An even higher percentage of children are living in poverty, an indicator of global risk factors that have implications for their ability to access health services. In 2006, 26.7 percent of children under age 18 live in poverty, compared to 18 percent in this age group statewide. Since then, the percentage of children living in poverty in Imperial County has increased. In 2012, 32.6 percent of children under age 18 were living in poverty, compared to 23.6 percent of the state's population under age 18.

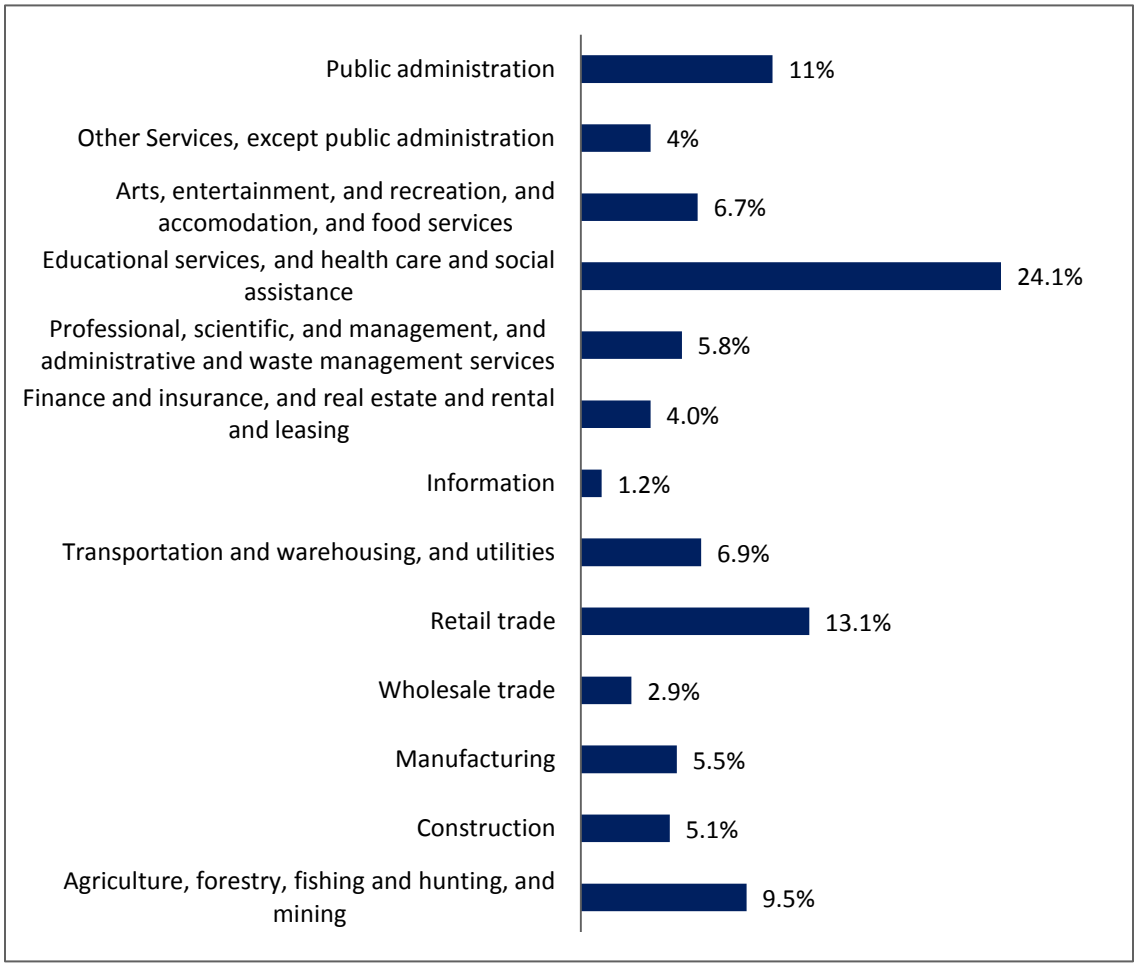
Employment Status and Type of Employer

In Imperial County, almost 45 percent of the population aged 16 and older was employed; 45 percent were not currently in the labor force in 2011. This was lower than California as a whole where 56 percent of the population aged 16 and older was employed; 36 percent were not currently in the labor force, according to the 2009-2013 American Community Survey 5-Year Estimates.

Sixty-six percent of the people employed in Imperial County were private wage and salary workers; 28 percent were federal, state, or local government workers; and 5 percent were self-employed in their own (not incorporated) business (Figure 2-4).

FIGURE 2-4

Industries by Percent Employed, Imperial County · 2009-2013



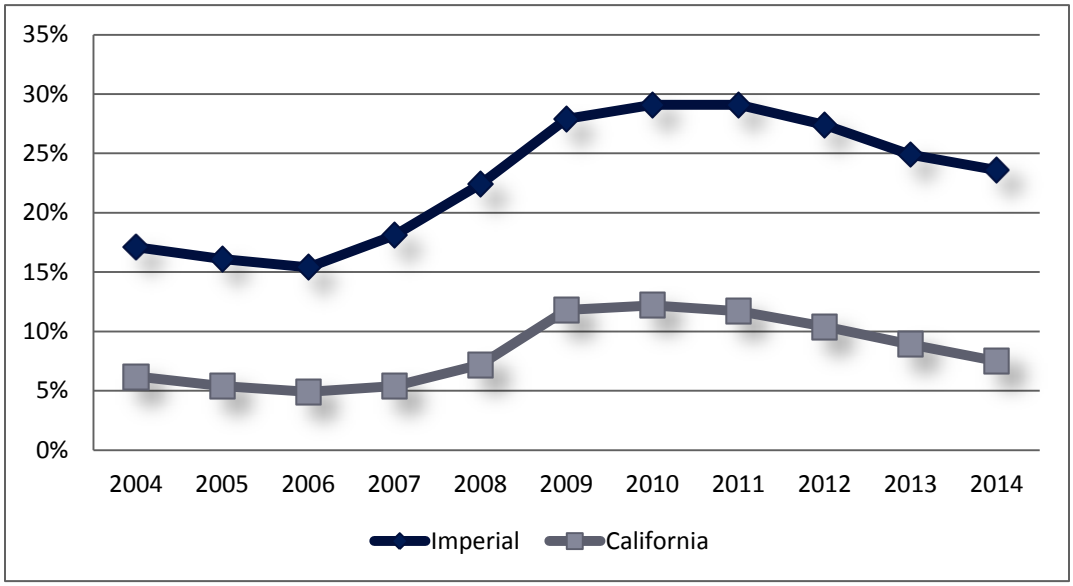
Source: U.S. Census Bureau, 2009-2013 American Community Survey 5-Year Estimates

UNEMPLOYMENT

Imperial County reports the second highest rate of annual unemployment of all counties in California. Imperial County's unemployment rate was 18.6 percent, compared to 6.5 percent for California overall. The rates in the chart below are not seasonally adjusted (Figure 2-5).

FIGURE 2-5

Annual Unemployment Rates, Imperial County and California · 2004-2014



Source: State of California, Economic Development Department

ACCESS TO HEALTH CARE

Among the population in Imperial County that was not in the military or in penal or other institutions (civilian, non-institutionalized), 79 percent had health insurance coverage and 21 percent did not have health insurance, according to the 2009-2013 American Community Survey 5-Year Estimates. For those under 18 years old, 12 percent did not have health insurance coverage. Of those Imperial County residents with health insurance, with 45 percent have private coverage and 40 percent have public coverage.

Imperial County has two hospitals, El Centro Regional Medical Center and the Pioneers Memorial Hospital and Healthcare District in Brawley, which anchor the health-care delivery system. Clinicas de Salud del Pueblo, Inc. (Clinicas), is a federally qualified health center with six clinics located throughout the county. Clinicas provides comprehensive primary-care services to a large number of residents. Both hospitals also operate rural health clinics in the community.

Much of Imperial County is designated as a medically underserved area. The County has a shortage of medical providers, in particular those that provide primary care and mental health services. In 2013, there was one primary-care physician for every 4,410 Imperial County residents, compared to one for every 1,270 residents statewide. There is one mental health provider for every 930 County residents, compared to one for every 360 residents in California overall. There are also a limited number of dentists to serve the local population: one for every 3,140 County residents, while in the rest of the state there are one for every 1,260 residents.

The Imperial County Public Health Department provides traditional public health services including communicable disease identification, control, and surveillance, as well as well-baby clinics, immunizations, and preventive health services for children.

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MATERNAL, CHILD AND ADOLESCENT HEALTH

Key Findings

Fertility Rates

- Since 2002, Imperial County's general fertility rates have been higher than California overall, with the higher rates in all age groups except those aged 35 years and older.

Teen Births

- Teen birth rates have declined substantially since 2009, mirroring a statewide trend but remain among the highest in the state.

Prenatal Care

- In 2013, 14.9% of pregnant women in Imperial County began prenatal care late or did not receive any prenatal care, compared to 3.5% of women statewide

Low Birth Weight

- Over the past decade, Imperial County has remained at or below the statewide average for the percent of low birth weight births

Breastfeeding Initiation

- In-hospital *exclusive* breastfeeding in Imperial County was reported at 38% in 2015, significantly lower than California overall, which reported in-hospital *exclusive* breastfeeding at 68.8%, according to the Newborn Screening Test Form.

Childhood Immunization

- Both child-care centers and kindergartens in Imperial County exceeded California's vaccination coverage goal and had higher coverage rates than California as a whole.

Fertility and Birth Rates

What are they?

General fertility rates are the number of live births per 1,000 women of childbearing age (15-44 years). Age-specific birth rates refer to the number of live births per 1,000 female population within specified age groups.

Why are they important?

Fertility and birth rates play a significant role in determining population growth. Before the 1990s, only half of the population growth in California could be attributed to natural increases (more births and fewer deaths) or fertility and the remainder was attributed to migration. Since then, fertility rates have accounted for a larger percentage of the population growth. Over the next 20 years, an estimated two-thirds of the population growth in California will be attributable to natural increases or fertility. Age-specific and race/ethnicity-specific birth rate trends provide information on the divergent needs of different population groups, allowing for targeted public health outreach.

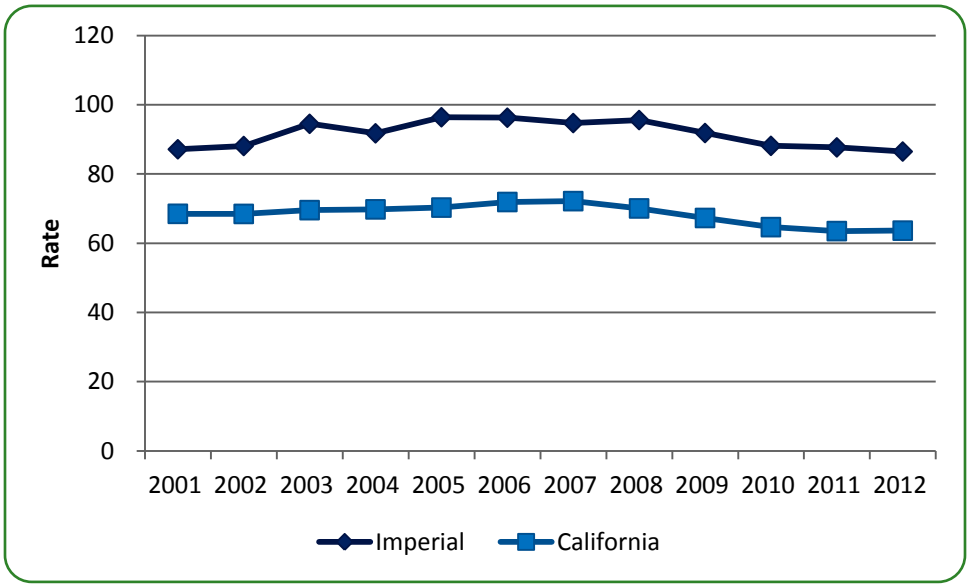
What is our status?

The County's general fertility rate remains higher than the rate for California overall (Figure 3-1). These rates are not influenced by population size or growth so they reflect a true increase in the number of births among women of childbearing age.

Birth rates in Imperial County in 2013 were consistently higher than statewide rates for all age groups except for those older than 35 years, with the greatest rate difference for women aged 15 to 19 and those aged 20 to 24 (Table 3-1).

FIGURE 3-1

General Fertility Rates, Imperial County and California · 2001-2012



*Rates are per 1,000 women of childbearing age.

Source: State of California, Department of Public Health, Birth Records
State of California, Department of Finance, Population Estimates

TABLE 3 - 1

Birth Rates by Age of Mother, Imperial County and California · 2013

	Under 15[1]	15-19 years	20-24 years	25-29 years	30-34 years	35-39 years	40-44 years	45 & Older[2]
Imperial	0.4	44.1	130.1	150.3	123.1	56.3	8.4	0.4
California	0.3	22.7	70.1	98.7	104.3	61.4	14.7	1.3

1 - For girls under 15 years old, the birth rate is calculated using female population 10-14 years of age.

2 - For women 45 years and older, the birth rate is calculated using the female population 45-49 years of age

Source: State of California, Department of Public Health, Birth Records
State of California, Department of Finance, Race/Ethnic Population with Age and Sex Detail, 2010-2060, Sacramento , CA, January 2013.

Teen Birth Rates

What are they?

Teen birth rates are defined as number of live births per 1,000 female population in specified teenage groups.

Why are they important?

Teen birth rates in the United States are high: nine times higher than in most other developed countries. Teenage mothers have a higher incidence of premature births and low birth weight babies than mothers aged 20 to 35. Teen mothers are less likely to complete high school, more likely to remain on state assistance, and their families are more likely to remain in poverty. Children of teen parents are also more likely to become teen parents themselves.

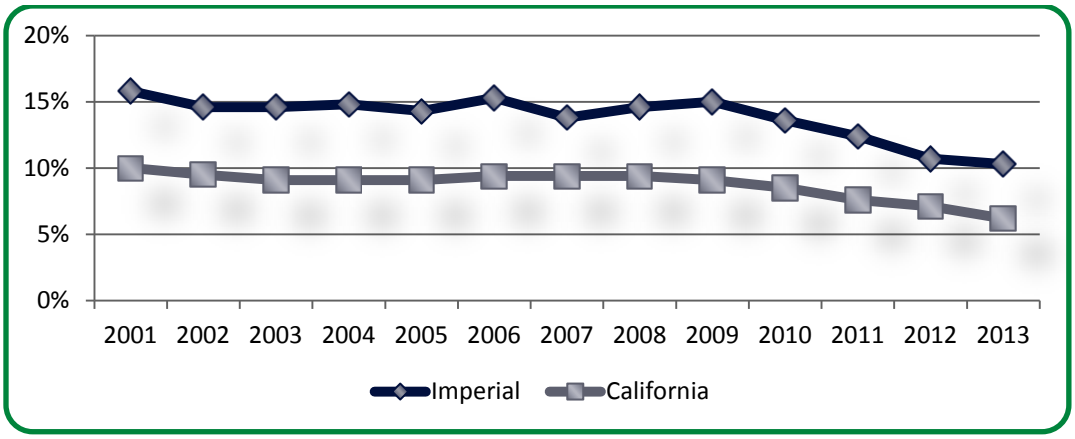
What is our status?

Imperial County continues to report among the highest teen birth rates of all counties in California, despite a decline in the rate since 2009 (Figure 3-2). In 2012-2014, there were 338 live births on average to mothers aged 15 to 19 in Imperial County, for an age-specific birth rate of 45 live births per 1,000 female population aged 15-19. In contrast, the teen birth rate for all of California during the same three-year period was 23.4 live births per 1,000 female population aged 15-19.

Adolescent pregnancy and subsequent pregnancy were identified as a priority issue in Imperial County's Maternal Child and Adolescent Health (MCAH) Five-Year (2010-2014) Needs Assessment, as well as in the 2015-2019 MCAH Needs Assessment. Over the past decade, Imperial County has seen a statistically significant trend in the increasing percentage of births to girls and young women between the ages of 12 and 19 years who were already mothers, according to data from the Family Health Outcomes Project. In 2012-2014, 16.8 percent of Imperial County adolescents aged 15-19 had another child born.

FIGURE 3 - 2

Percent of Live Births to Teen Mothers (19 years and Younger)
Imperial County and California · 2001-2013



Source: California Department of Public Health, Center for Health Statistics and Informatics, Birth Records

Prenatal Care

What is it?

Prenatal care is defined as the utilization of health-care services by pregnant women.

Why is it important?

Receiving timely prenatal care is believed to result in better pregnancy outcomes, reducing the risk for preterm delivery and low birth weight babies, in addition to reducing maternal and infant sickness and death, according to the Centers for Disease Control and Prevention (CDC).

What is our status?

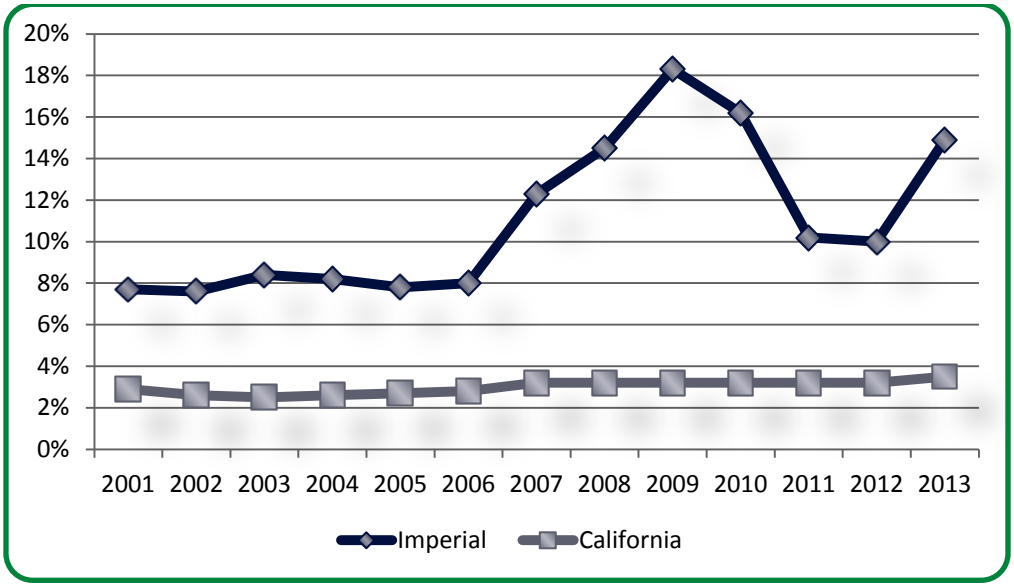
During 2012-2014, 43 percent of Imperial County pregnant women on average accessed prenatal care during the first trimester of their pregnancy, compared to 84 percent of pregnant women in all of California during the same 3-year period. This was significantly lower than 2006-2008 when 66.9 percent of pregnant women in Imperial County on average accessed prenatal care during their first trimester of pregnancy.

Imperial County also reported the highest percentage of women who receive prenatal care late (beginning in the third trimester) or not at all. In 2013, 15 percent of pregnant women in Imperial County began prenatal care late or did not receive any prenatal care, compared to 4 percent of women statewide (Figure 3-3).

Measures of prenatal care, based on the trimester in which a pregnant woman first began accessing prenatal services, do not necessarily give a complete picture of how frequently a pregnant woman uses prenatal services. The “Adequacy of Prenatal Care Usage Index” calculates the appropriate number of prenatal care visits a pregnant woman should receive during the time period she utilizes prenatal services. Based on this measurement, only 50.3 percent of pregnant women in Imperial County received adequate/adequate plus prenatal care on average in 2012-2014, compared to 78.6 percent of women statewide during the same period. The Healthy People 2020 target is 77.6 percent of pregnant women.

FIGURE 3-3

Percent of Live Births with Late or No Prenatal Care
Imperial County and California · 2001-2013



Source: California Department of Public Health, Center for Health Statistics and Informatics, Birth Records

Low Birth Weight

What is it?

Low birth weight is defined as weight at birth of less than 2,500 grams (5.5 pounds).

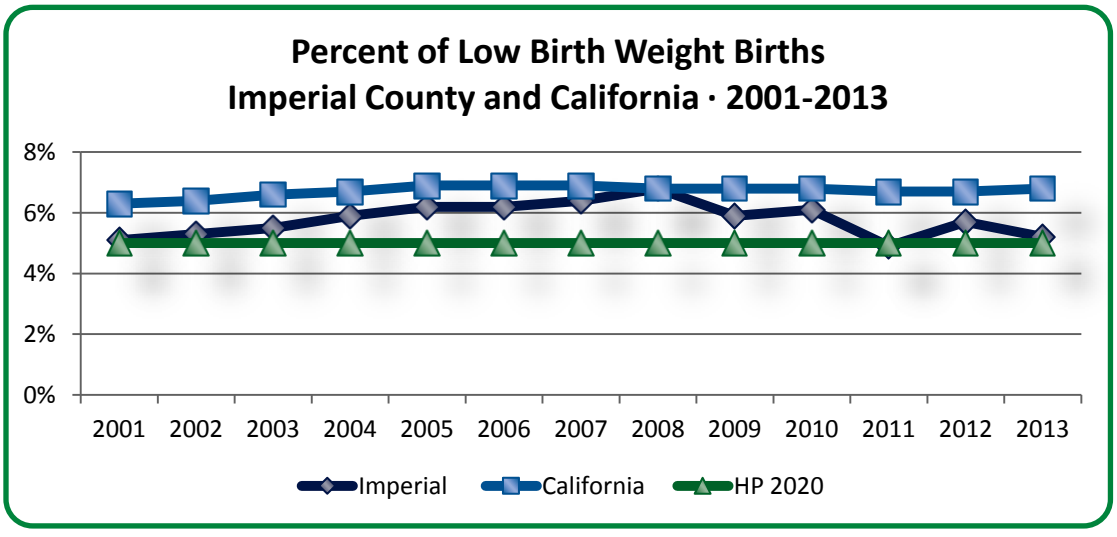
Why is it important?

Low birth weight infants have an increased risk of death and permanent disability.

What is our status?

Between 2001 and 2008, Imperial County and California reported an increase in the percentage of low birth weight babies. Beginning in 2009, that trend started to decline in Imperial County. In 2012-2014, the county reported on average 5.6 percent of all babies were born with low birth weight, compared to 7.8 percent of babies statewide. Over the past decade, Imperial County has remained at or below the statewide average for the percentage of low birth weight births in the population (Figure 3-4).

FIGURE 3-4



Source: California Department of Public Health, Center for Health Statistics and Informatics, Birth Records

Breastfeeding Initiation

What is it?

Breastfeeding initiation can be defined in two ways: as the percentage of infants who are exclusively breastfed *(exclusive breastfeeding)* or as the percentage of infants who are breastfed in conjunction with formula feeding (*any breastfeeding*) during the early postpartum period. Exclusive breastfeeding refers to no other liquids or solids entering the infants' mouth.

Why is it important?

Breastfeeding ensures the best possible health, developmental, and psychosocial outcomes for an infant, according to the American Academy of Pediatrics. Breastfeeding reduces infant sickness and death by providing optimal brain, retinal, and oral development; decreases the risk of developing chronic health conditions such as asthma, diabetes, obesity, and allergies; and lowers the rates of middle ear infections and pneumonia. In addition, breastfeeding reduces the risk of iron-deficiency anemia, osteoporosis, and breast, ovarian, and uterine cancer for mothers. Breastfeeding has economic benefits by reducing health-care costs, increasing productivity, and reducing employee absenteeism for care attributable to child illness. It is also considered economical and environmentally friendly as it reduces waste and energy required to manufacture infant formula and other substitutes for breast milk.

What is our status?

In-hospital *exclusive* breastfeeding in Imperial County was reported at 38 percent in 2015, significantly lower than California overall, which reported in-hospital *exclusive* breastfeeding at 68.8 percent, according to the Newborn Screening Test Form. These women only breastfed their newborns while in the hospital. In 2015, the percentage of women who reported *any breastfeeding* was 93.2 in Imperial County, compared to 94 percent statewide.

Childhood Immunization

What is it?

Routine childhood immunization can provide immunity against more than a dozen infectious diseases.

Why is it important?

Vaccines are considered one of the greatest public health achievements of our time. Immunizations can prevent disability and death from infectious disease for individuals and can help control the spread of diseases within communities.

California's goal is to have 90 percent coverage for all individual vaccines and 80 percent coverage for all vaccine series by 19 to 35 months of age. Immunization coverage is defined as the percentage of children who have received the minimum recommended doses of vaccine for their age group.

For children 19 to 35 months of age, immunization coverage is defined as: four doses of Diphtheria, Tetanus, and Pertussis combined vaccine (DTaP); one dose of Measles, Mumps, and Rubella (MMR) combined vaccine; one dose of *Haemophilus* Influenzae type B (Hib); three doses of Polio vaccine; three doses of Hepatitis B (Hep B) vaccine; and one dose of Varicella vaccine (or physician-documented Varicella disease).

The implementation of statewide requirements has been effective in maintaining ≥92 percent immunization coverage among children in licensed child-care facilities and kindergartens in California.

What is our status?

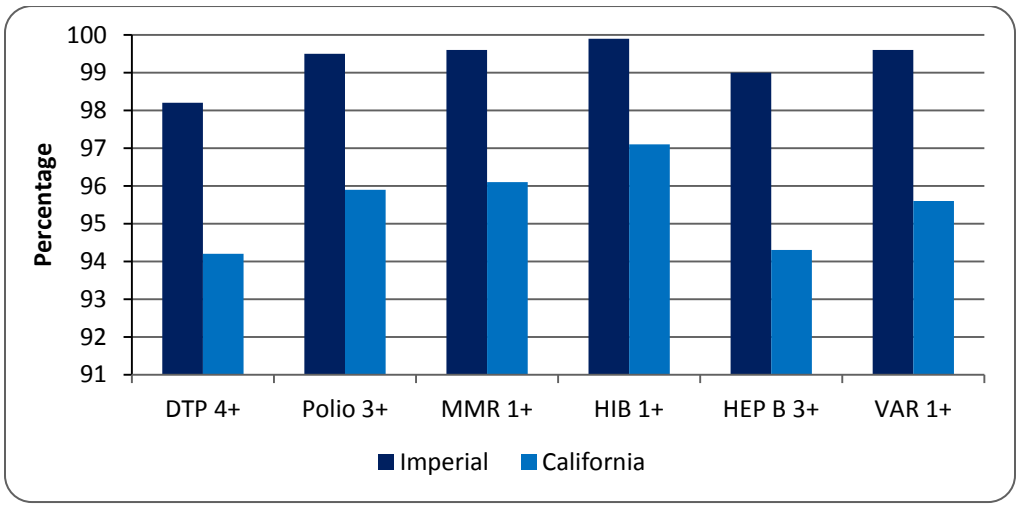
Under California law, children are required to receive a series of immunizations before entry to school or a child-care center. The type and number of vaccines required vary by age. Required vaccines for entrance into kindergarten are: five doses of DTaP (four doses if at least one dose was administered after the child's 4th birthday); four doses of Polio (three doses if at least one dose was after the child's 4th birthday); two doses of MMR; three doses of Hepatitis B; and one dose Varicella vaccine (or physician-documented varicella disease).

Both child-care centers and kindergartens in Imperial County exceeded California's vaccination coverage goal and had higher coverage rates than California as a whole.

In 2014-2015, 97.4 percent of children enrolled in child-care centers had completed all required immunizations, compared to the statewide average of 89.4 percent. Imperial County also exceeded statewide averages for all individual antigens (Figure 3-5). In the fall of 2014, 93.4 percent of 3,110 students enrolled in reporting kindergartens in Imperial County received all required vaccinations, compared to the statewide average of 90.4 percent (Figure 3-6).

FIGURE 3-5

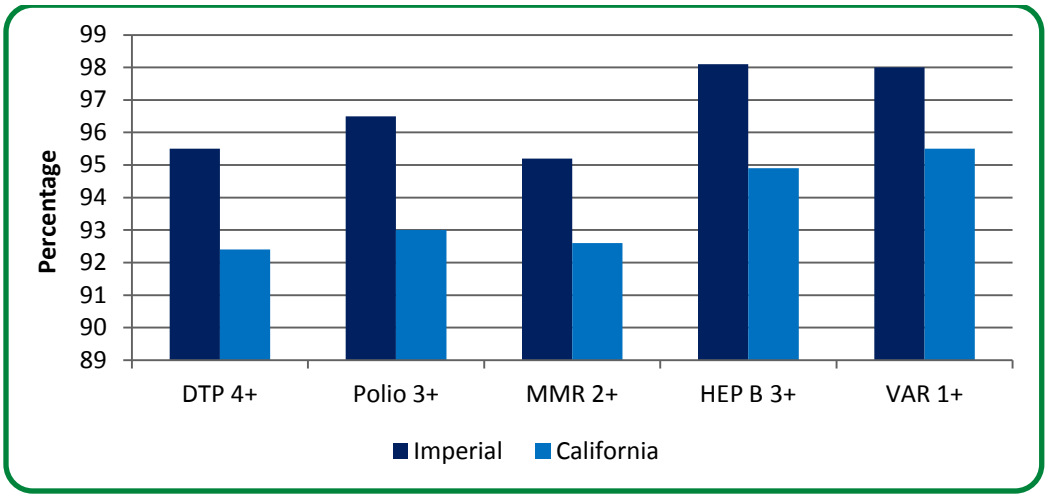
Child-care Center Immunization Rates, Imperial County and California · 2014-2015



Source: California Department of Public Health, Immunization Branch

FIGURE 3-6

Kindergarten Immunization Rates, Imperial County and California · 2014



Source: California Department of Public Health, Immunization Branch

In 2010, California experienced the worst outbreak of pertussis in more than 50 years, with more than 9,100 confirmed cases (rate of 24.55 per 100,000 population) and 10 infant deaths. In 2014, there was another surge in pertussis cases with 29.2 cases per 100,000 reported statewide and 5.6 cases per 100,000 in Imperial County. In response to the first outbreak, legislation was passed in 2010 requiring Tdap vaccination for all California students. Under the law, 7th-12th grade students are required to provide documentation of Tdap vaccine prior to the start of school. In 2014 in Imperial County, 29 of 31 schools reported that 99.4 percent of all students received Tdap vaccine upon entry to 7th grade, compared to 97.8 percent statewide.

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COMMUNICABLE DISEASES

Key Findings

Tuberculosis

- Imperial County's tuberculosis incidence rate continues to be the highest in California and is more than triple the statewide TB incidence rate.

Influenza

- During the 2015-2016 influenza season, overall influenza activity in Imperial County was low (0.5%), similar to what was occurring statewide. There were no outbreaks due to influenza reported.

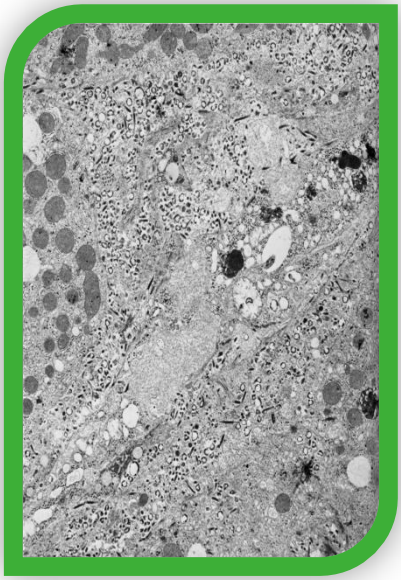
Sexually Transmitted Diseases

- Imperial County's crude case rates for chlamydia and gonorrhea are lower than the statewide rates.

HIV/AIDS

- The county's incidence rates for HIV and AIDS are lower than the statewide rates.

Communicable Diseases



Ebola virus, CDC

What are they?

Communicable diseases are illnesses caused by infectious agents such as bacteria, viruses, fungi, parasites, and toxins. Most, but not all, of these diseases can be transmitted from one person to another.

Infections range in severity from: asymptomatic (without symptoms) to severe or fatal.

Why are they important?

Communicable diseases are a leading cause of sickness and death. New and re-emerging diseases continue to pose a significant threat to populations worldwide.

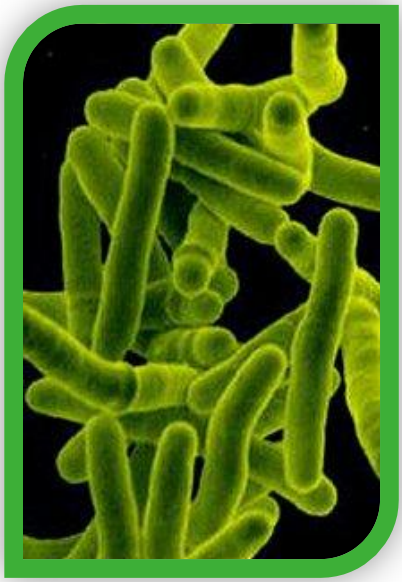
What is our status?

One of the most basic functions of the Public Health Department is the prevention and control of infectious diseases. Health-care providers and laboratories are required by state law to report certain diseases and health conditions to the local Public Health Department, which is responsible for the control and prevention of communicable diseases in the community. Public Health surveillance depends on timely and complete case reporting to help control outbreaks and prevent the spread of diseases.

Imperial County's reported incidence of measles, pertussis, and other vaccine-preventable diseases is low or non-existent, but the incidence of infectious diseases such as tuberculosis and certain sexually transmitted infections remains high.

The Public Health Department also conducts enhanced surveillance for influenza-like illness at sentinel clinic sites and for severe acute respiratory infections at both hospitals to monitor respiratory illness trends in the community. Other enhanced surveillance projects have been implemented in Imperial County over the past decade to monitor for the presence of other new and emerging diseases that could pose a threat.

Tuberculosis



Mycobacteria tuberculosis, CDC

What is it?

Tuberculosis (TB) is a disease caused by a bacterium called *Mycobacterium tuberculosis.* The bacteria usually attack the lungs, but can also attack other parts of the body such as the kidney, spine, lymph nodes, and brain. If TB infection progresses to active tuberculosis disease, it typically takes six months or more of appropriate medications to cure. If not treated properly, tuberculosis disease can be fatal.

Why is it important?

Tuberculosis was once the leading cause of death in the United States. TB is spread through the air from one person to another when a person with active TB disease of the lungs either coughs or sneezes. People nearby may breathe in these bacteria and become infected. However, not everyone infected with TB bacteria becomes sick. People who are not sick have what is called latent TB infection (LTBI). People who have LTBI do not feel sick, do not have any symptoms, and cannot spread TB to others. If left untreated, some people with LTBI go on to get TB disease.

In the 1940s, the first drugs used to treat tuberculosis were discovered, and the incidence of tuberculosis slowly began to decrease in the United States. In the 1970s and early 1980s, however, TB control efforts were neglected and the number of TB cases increased. With increased funding and attention to the tuberculosis problem, there has been a steady decline in TB since 1992.

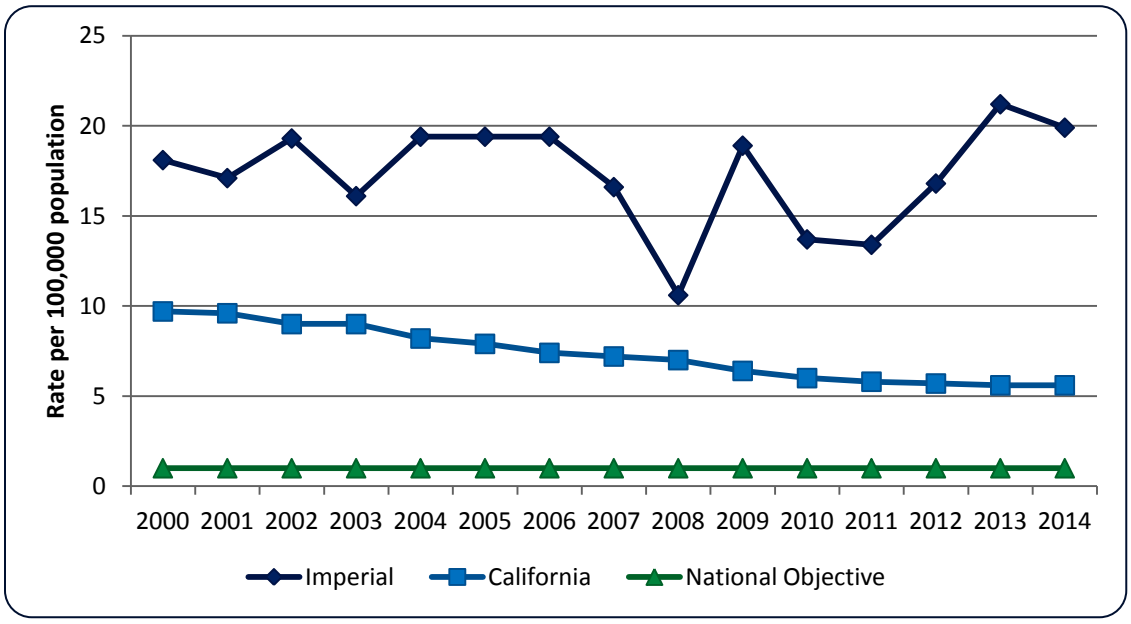
What is our status?

In 1989, there was a resurgence of TB in California, with a peak in the number of cases in 1992. Since then, the overall TB rate has steadily declined, but California continues to report among the highest TB rates in the United States.

Imperial County's tuberculosis incidence rate on average in 2012-2014 was 19.5 cases per 100,000 population. The county's tuberculosis rate remains the highest in California and is more than three times the statewide TB incidence rate of 5.7 cases per 100,000 population, and does not meet the Healthy People 2020 objective of one case per 100,000 population (Figure 4-1).

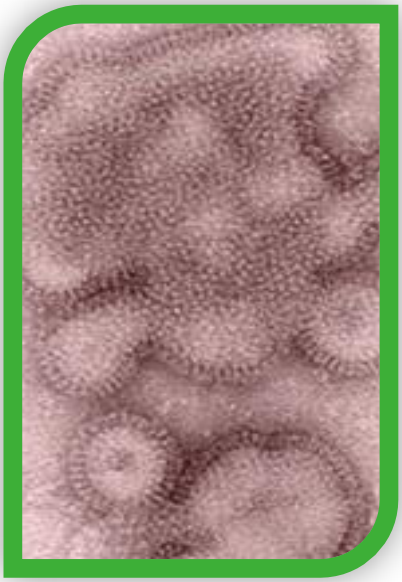
FIGURE 4 - 1

Tuberculosis Case Rates, Imperial County and California · 2000-2014



Source: California Department of Public Health, Tuberculosis Control Branch

Influenza



Influenza Virus, CDC

What is it?

Seasonal influenza, commonly known as the flu, is a contagious respiratory illness caused by influenza viruses that infect the nose, throat, and lungs. It can cause mild to severe illness, and can lead to death. The best way to prevent influenza is by getting a flu vaccine every year. The vaccine is recommended for everyone 6 months of age and older.

Why is it important?

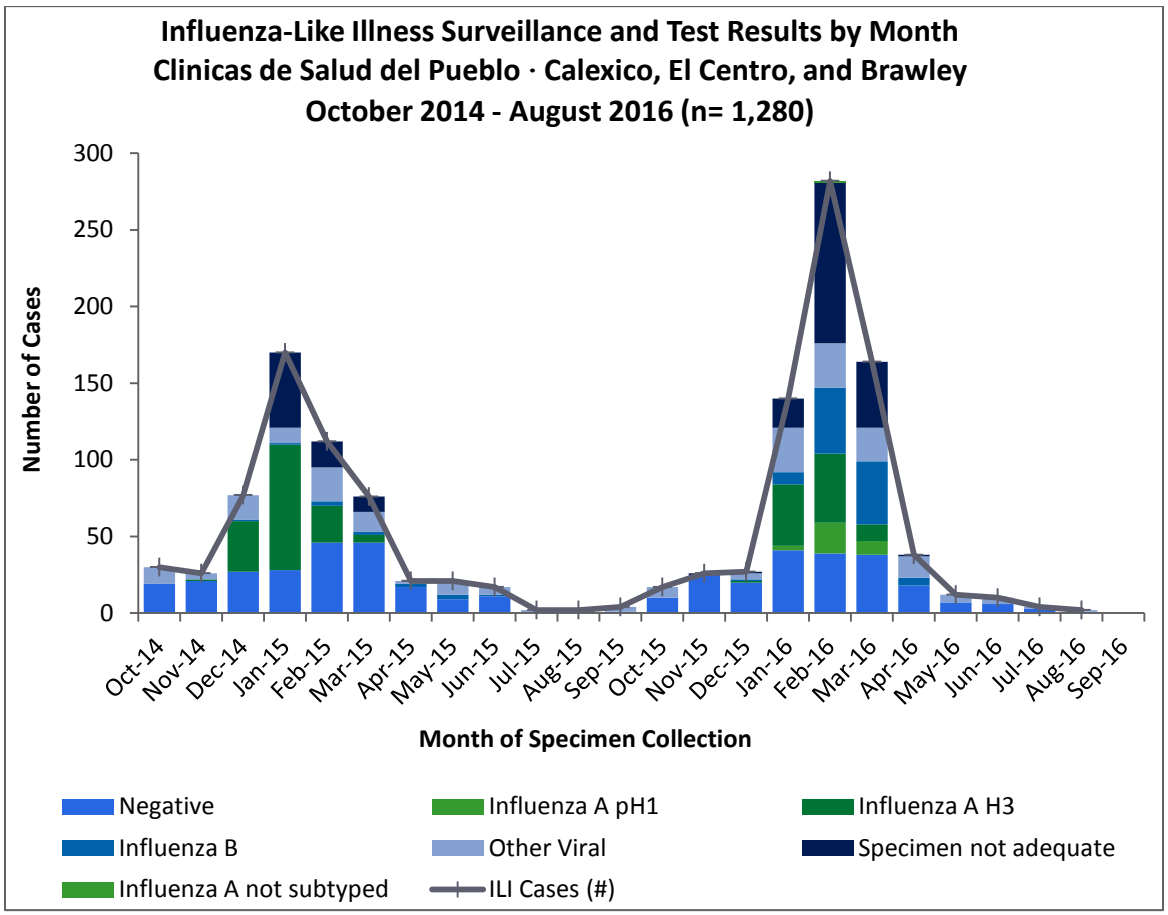
Unlike other viral respiratory infections such as the common cold, influenza can cause severe illness and life-threatening complications in many people. In the United States, on average 5 to 20 percent of the population gets the flu and more than 200,000 people are hospitalized from seasonal flu-related complications each year.

What is our status?

Since 2004, the Imperial County Public Health Department has monitored influenza activity in the community in collaboration with Clinicas de Salud del Pueblo, Inc., and both local hospitals. In addition, syndromic surveillance data from hospital emergency departments is routinely monitored for respiratory illnesses and other unusual disease reports, as well as higher-than-expected increases in certain illnesses that warrant further investigation.

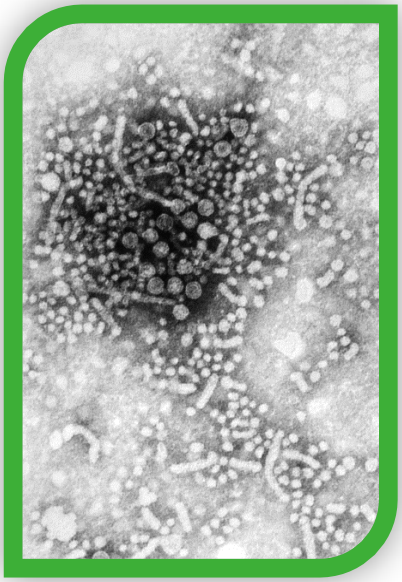
During the 2014-2015 influenza season, overall influenza-like illness activity in the community was low (0.53%), with slightly more activity (0.68%) reported in 2015-2016 (Figure 4-2). There were no outbreaks reported due to influenza during the 2015-2016 flu season.

FIGURE 4 - 2



Source: Imperial County Public Health Department

Sexually Transmitted Diseases



Hepatitis B, CDC/Partin

What are they?

Sexually transmitted diseases (STDs) are caused by a variety of bacteria and viruses. Progress has been made in preventing, diagnosing, and treating certain STDs in recent years. The Centers for Disease Control and Prevention (CDC) estimates that 19 million new infections occur each year nationwide, almost half of them among young people aged 15 to 24.

Why are they important?

Sexually transmitted infections are a major public health challenge in the United States. Many STDs have serious health consequences. Women and infants in particular bear significant long-term consequences of STDs. Untreated STDs can lead to serious long-term health consequences, especially for adolescent girls and young women. The CDC estimates that undiagnosed and untreated STDs cause at least 24,000 women in the United States each year to become infertile.

What is our status?

The large numbers of reported cases make sexually transmitted diseases by far the most commonly reported communicable diseases in Imperial County and California, as well as nationwide.

Chlamydia

Chlamydia trachomatis, CDC/Arum, Jacobs

What is it?

Chlamydia is the most common sexually transmitted bacterial infection. The disease can be cured easily with antibiotics, but usually occurs without symptoms and often goes undiagnosed.

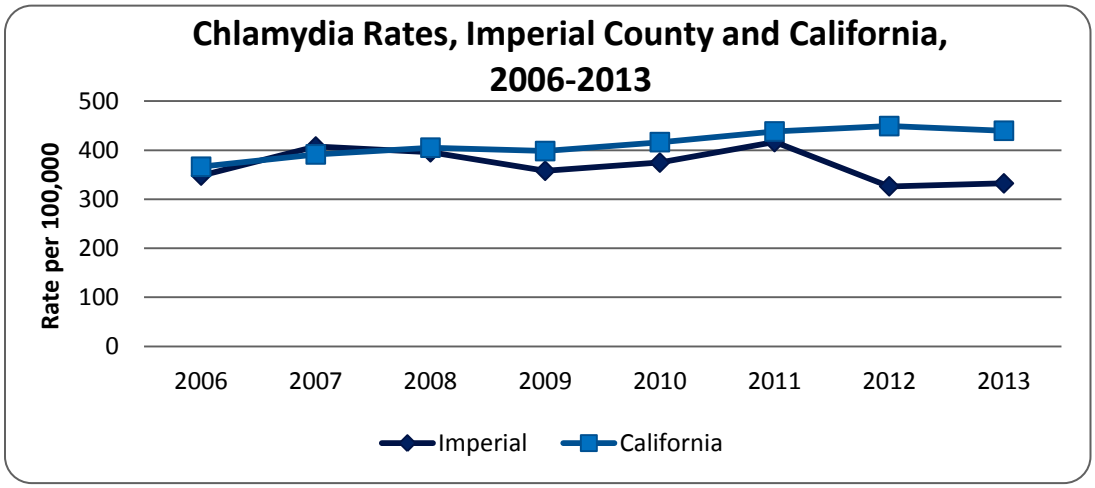
Why is it important?

Chlamydia is the most frequently reported infectious disease in the United States. Untreated, chlamydia can cause severe health consequences for women. Up to 40 percent of females with untreated chlamydia infections develop pelvic inflammatory disease (PID), and 20 percent of those may become infertile. Complications from chlamydia among men are relatively uncommon, but may include epididymitis and urethritis, which can cause pain, fever, and in rare cases, sterility.

What is our status?

Imperial County's chlamydia rates are lower than those of California overall (Figure 4-3).

Figure 4 -3



Source: California Department of Public Health, STD Control Branch

Imperial County's average crude case rate for chlamydia in 2012-2014 (353 cases per 100,000 population) is lower than the statewide rate of 447 cases per 100,000 population (Table 4-1).

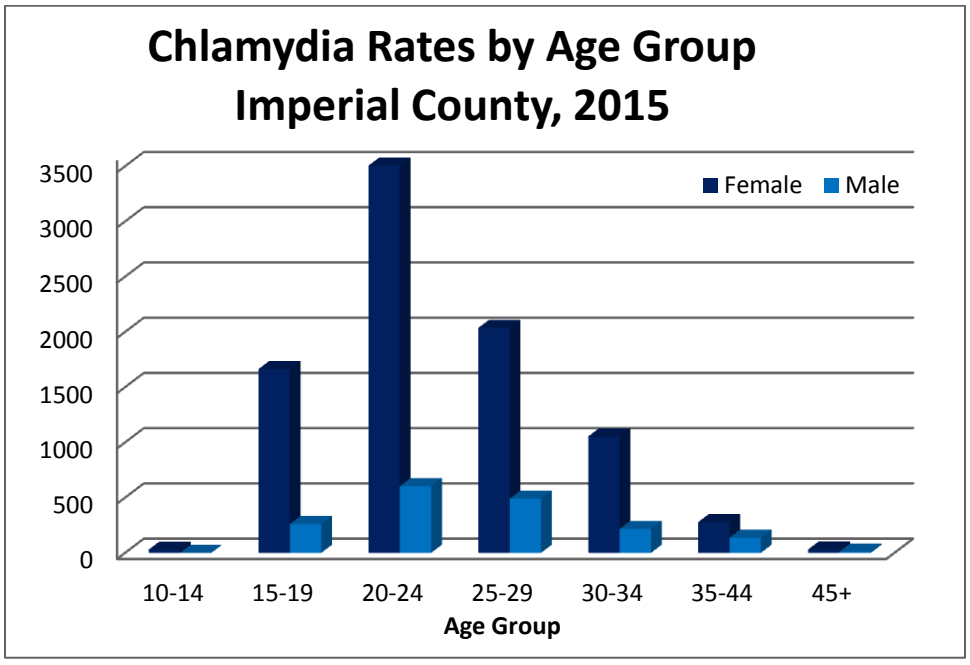
TABLE 4 -1

Chlamydia Incidence, Imperial County and California, 2012-2014		
	Average Number of Cases	*Cases/100,000*
Imperial County	633	353
California	170,780	447
Healthy People 2020		None

Source: California Department of Public Health, Sexually Transmitted Disease Branch

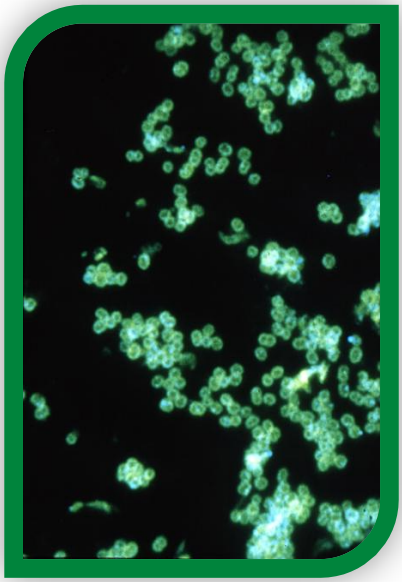
Chlamydia rates are highest among females of all ages, with the highest rates in females aged 20-24 years (Figure 4-4).

FIGURE 4 -4



Source: California Department of Public Health, STD Control Branch

Gonorrhea



Neisseria gonorrhoeae, CDC

What is it?

Gonorrhea is a sexually transmitted disease that is caused by the bacterium *Neisseria gonorrhoeae*.

Why is it important?

Gonorrhea is the second most commonly reported infectious disease in the United States. Like chlamydia, gonorrhea is substantially under-diagnosed and under-reported, and about twice as many new infections are estimated to occur each year than are reported.

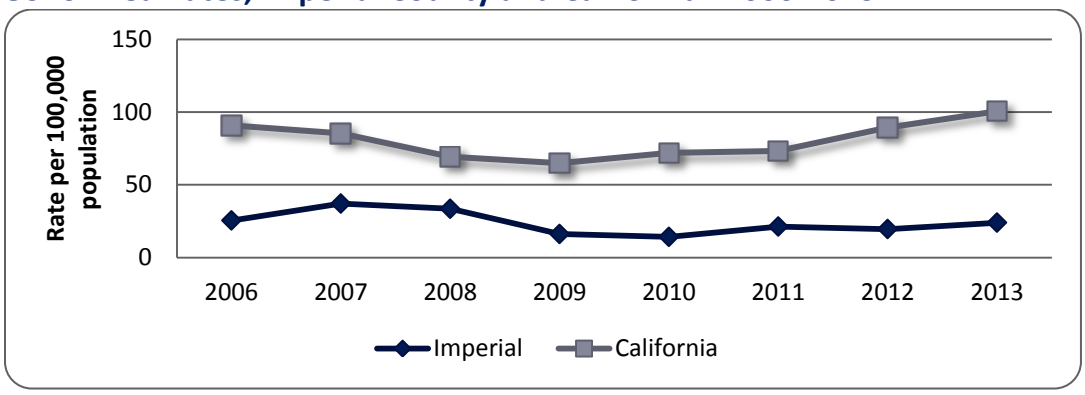
Many gonorrhea infections, especially in females, are asymptomatic and detectable only through screening. Untreated gonococcal infection is associated with adverse reproductive health consequences in both females and males. In addition, infections in pregnant females can lead to serious complications for the newborn child.

What is our status?

Over the past decade, Imperial County's gonorrhea rates have declined. The county's gonorrhea rates are significantly lower than those for California overall (Figure 4-5).

FIGURE 4 - 5

Gonorrhea Rates, Imperial County and California · 2006-2013



Source: California Department of Public Health, STD Control Branch

Imperial County's crude case rate among females aged 15-44 in 2012-2014 (66.7 per 100,000 female population aged 15-44) is significantly lower than the statewide rate of 172.1 per 100,000. Imperial County's crude case rate among males aged 15-44 is 62.5 per 100,000 male population aged 15-44, which is significantly lower than California's rate of 255.6. The overall gonorrhea incidence for Imperial County and California in 2015 is in Table 4-2.

TABLE 4 -2

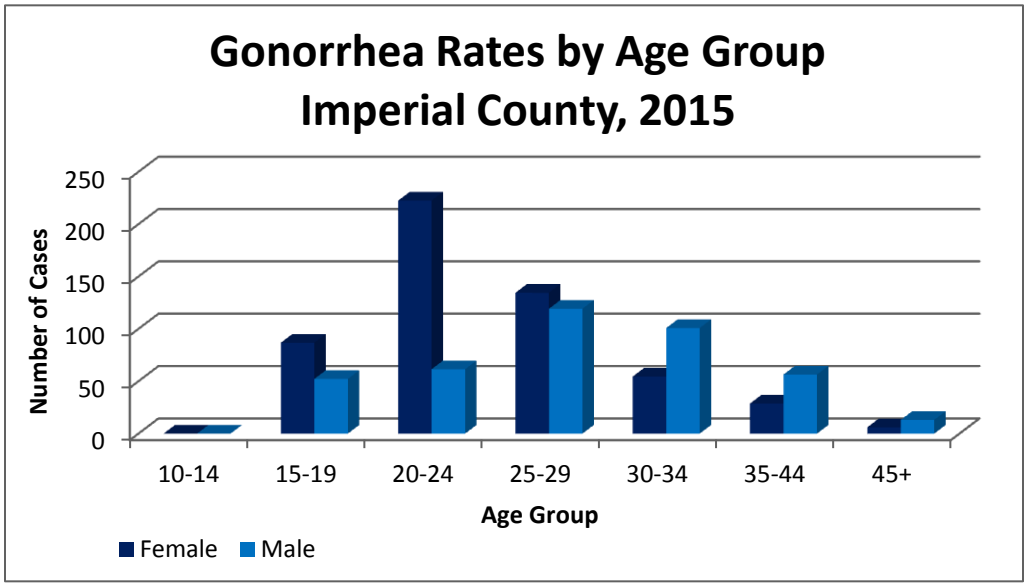
Gonorrhea Incidence, Imperial County and California, 2015

	Number of Cases	*Cases per 100,000*
Imperial County	74	40.1
California	54,255	138.9
Healthy People 2020		**19.0**

Source: California Department of Public Health, STD Control Branch

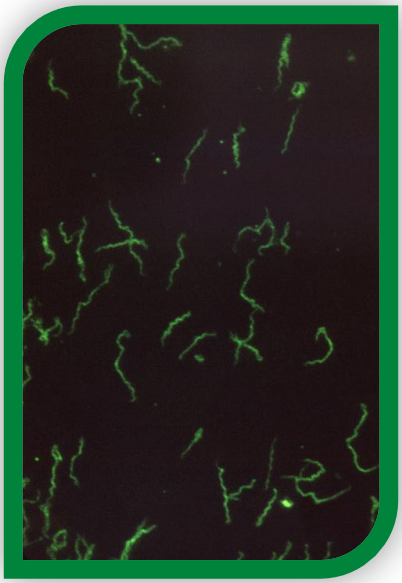
Gonorrhea rates are highest among females between 15 and 24 years of age, with the highest rates in females aged 20-24 years (Figure 4-6).

FIGURE 4 - 6



Source: California Department of Public Health, STD Control Branch

Syphilis



Treponema pallidum, CDC/Russell

What is it?

Syphilis is a sexually transmitted disease caused by the bacterium *Treponema pallidum*. It has often been called "the great imitator" because so many of the signs and symptoms are indistinguishable from those of other diseases.

Why is it important?

Syphilis is passed from one person to another through direct contact with syphilis sores. Pregnant women can pass the disease to their unborn child. Syphilis can cause long-term complications and/or death if not adequately treated.

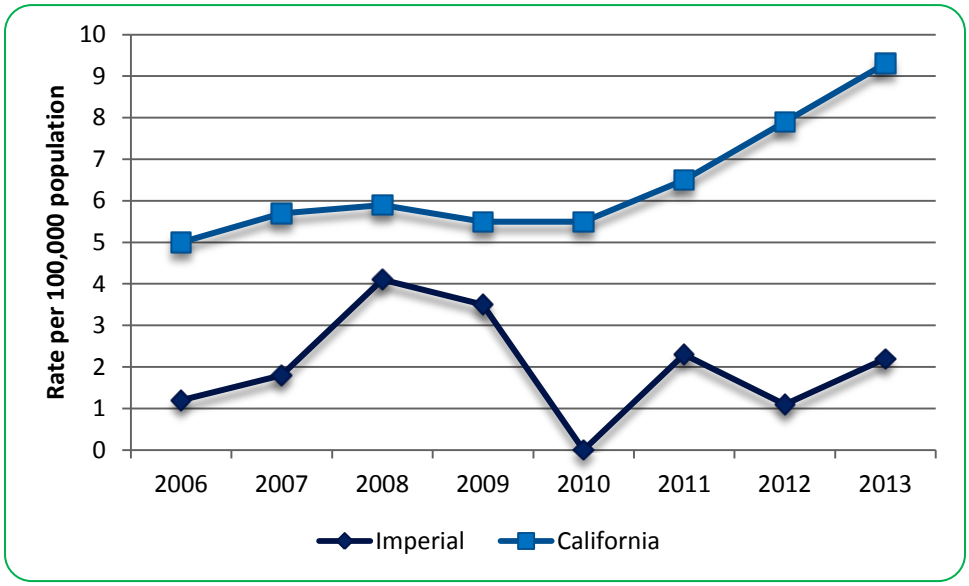
California continues to report increases in primary and secondary syphilis cases, the earliest and most infectious phase of the disease. The increases occurred primarily among men who have sex with men (MSM). These increases are of particular concern due to the high percentage of HIV co-infection among primary and secondary syphilis cases.

What is our status?

Imperial County's rate of primary and secondary syphilis have increased since 2006, with the exception of 2010 when no cases were reported (Figure 4-7). The county's rate continues to be significantly lower than that of California as a whole. In 2015, Imperial County's rate of primary and secondary syphilis was 6.5 cases per 100,000 population, compared to 12.5 cases per 100,000 population statewide.

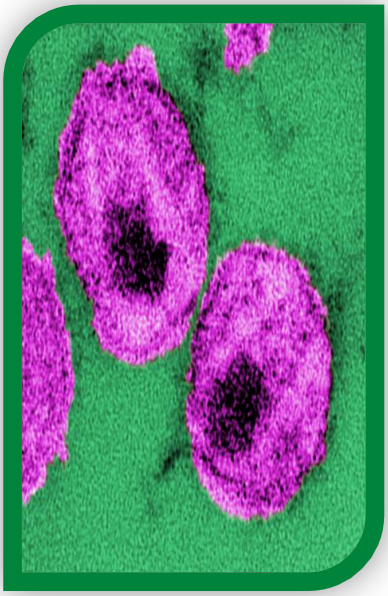
FIGURE 4 - 7

Primary and Secondary Syphilis Rates, Imperial County and California · 2006-2013



Source: California Department of Public Health, STD Control Branch

HIV/AIDS



HIV, CDC/Harrison, Feorino

What is it?

People infected with human immunodeficiency virus (HIV) have what is called HIV infection. Some may develop Acquired Immunodeficiency Syndrome, better known as AIDS, as a result of their HIV infection. This virus can be passed from one person to another when infected blood, semen, or vaginal secretions come in contact with an uninfected person's broken skin or mucous membranes. In addition, infected pregnant women can pass HIV to their baby during pregnancy or delivery, as well as through breastfeeding.

Why is it important?

The number of new HIV infections remains high, particularly among African Americans and Latinos. AIDS cases, however, have decreased dramatically since 1996, when new drugs became available.

What is our status?

Imperial County's three-year average crude case rate of 5.4 cases per 100,000 population aged 13 years and older, although statistically unreliable due to small numbers, is lower than the statewide rate of 7.3 cases per 100,000 population aged 13 and older (Table 4-3).

TABLE 4 -3

AIDS Incidence (Age 13 and Older), Imperial County and California, 2012-2014		
	Average Number of Cases	*Cases per 100,000*
Imperial County	7.7	5.4*
California	2,323.7	7.3
Healthy People 2020		**Not Established**

*Statistically unreliable due to small numbers.

Source: California Department of Public Health, County Health Status Profiles 2016

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CHRONIC DISEASES

Key Findings

Diabetes

- In 2014, 15.9% of Imperial County adults reported ever being diagnosed with diabetes (not related to pregnancy).

Asthma

- Imperial County's asthma hospitalization rate among children aged 0-17 is 17.8 per 10,000 population in that age group. This is significantly higher than the statewide rate.

Obesity

- Imperial County has a high rate of obesity compared to California overall.

Tobacco

- Imperial County continues to work with retailers, multi-family housing and other public venues for the prevention and control of tobacco use.

Chronic Diseases

What are they?

Chronic diseases are defined as conditions lasting longer than one year, limiting a person's ability to function, and/or conditions that require continuing care.

Why are they important?

Chronic diseases—such as heart disease, stroke, cancer, and diabetes—are the leading causes of death and disability in the United States.
Chronic diseases account for 70 percent of all deaths in the U.S., or 1.7 million each year. These diseases also cause major limitations in daily living for nearly one out of 10 Americans, or about 25 million people. Chronic diseases are among the most common, costly, and preventable of all health problems.

Many chronic illnesses can be delayed or prevented by healthy lifestyle changes such as increasing physical activity, improving nutrition, and eliminating smoking and use of other tobacco products.

What is our status?

A significant proportion of Imperial County's population suffers from one or more chronic diseases.

- Diabetes is the fifth leading cause of death in Imperial County. In 2014, nearly 16 percent of adults reported ever being diagnosed with diabetes (not related to pregnancy), compared to 8.9 percent statewide, according to the findings of the California Health Interview Survey (CHIS). Note: Since the data from CHIS are self-reported, the actual diabetes prevalence rate is likely to be significantly higher when people with undiagnosed diabetes are considered.
- Heart disease accounted for 17 percent of all deaths in Imperial County on average in 2012-2014, while stroke caused nearly 6 percent of deaths in this county.

- In 2014, 28 percent of adults in Imperial County reported having high blood pressure (hypertension), and 63 percent of those reported taking medication for high blood pressure, according to CHIS.
- In 2012-2014, on average 21 percent of Imperial County deaths were due to cancer.

Obesity

What is it?

Overweight and obesity are terms for ranges of weight that are greater than what is generally considered healthy for a given height.

Why is it important?

Obesity has been shown to increase the likelihood of certain diseases and other health problems. Obesity-related conditions include heart disease, stroke, type 2 diabetes, and certain types of cancer. These are some of the leading causes of preventable death.

What is our status?

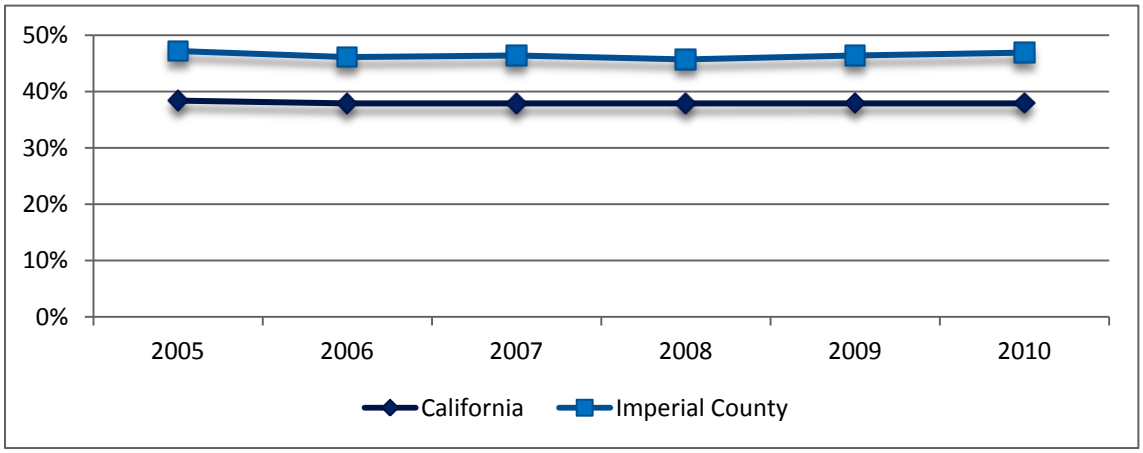
Overweight and obesity rates in California counties tripled over the past 30 years. In 2015, 22 percent of Imperial County adults reported being obese with a Body Mass Index (BMI) equal or greater than 30, compared to 23 percent statewide, according to the findings of the County Health Rankings and Roadmaps.

Nationwide, childhood obesity has more than doubled in children and quadrupled in adolescents in the past 30 years. The percentage of children aged 6–11 years in the United States who were obese increased from 7 percent in 1980 to nearly 18 percent in 2012. Similarly, the percentage of adolescents aged 12–19 years who were obese increased from 5 percent to nearly 21 percent over the same period. In 2012, more than one third of children and adolescents were overweight or obese.

A greater percentage of Imperial County children have a BMI in the overweight or obese ranges compared to California overall, according to data from the California Department of Education, Physical Fitness Testing Research Files. These data are for public school students in grades 5, 7, and 9 with Body Mass Indices (BMIs) in the overweight or obese ranges of the 2000 Centers for Disease Control and Prevention sex-specific BMI-for-age growth charts (Figure 5-1).

FIGURE 5 -1

Overweight/Obese Students, Imperial County and California · 2005 - 2010



Source: California Department of Education, Physical Fitness Testing Research Files.

Diabetes

What is it?

Diabetes is a disease in which blood glucose levels are above normal. Most food is turned into glucose, or sugar, for the body to use for energy. The pancreas makes a hormone called insulin to help glucose get into the cells of the body. For diabetics, the body either doesn't make enough insulin or can't use its own insulin as well as it should, causing sugar to build up in the blood.

Why is it important?

Diabetes can cause serious health complications including heart disease, blindness, kidney failure, and lower-extremity amputations. Diabetes is the sixth leading cause of death in this county and the seventh leading cause of death in the United States.

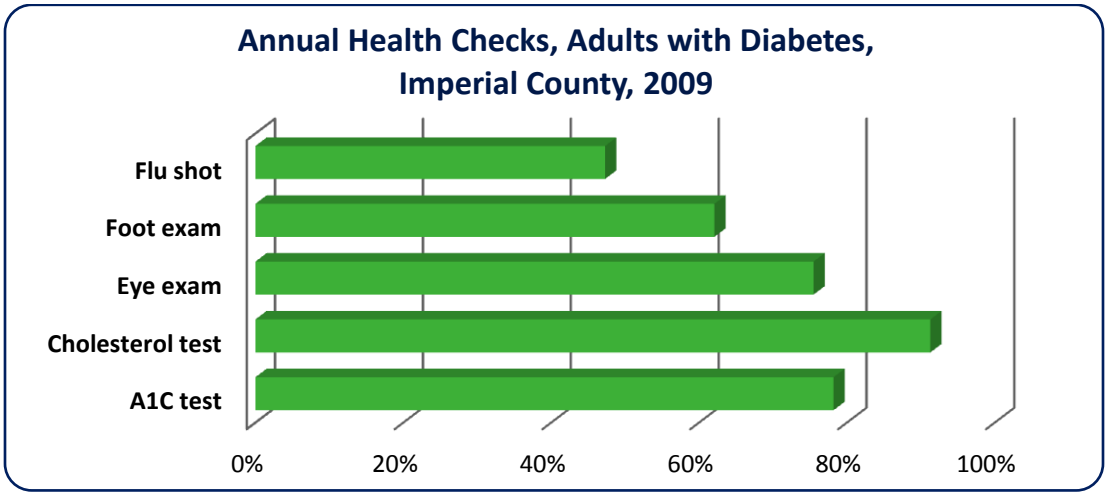
What is our status?

In 2014, 15.9 percent of Imperial County adults reported being diagnosed with diabetes (not related to pregnancy), compared to 8.9 percent statewide, according to the findings of the California Health Interview Survey (CHIS).

Imperial County's age-adjusted death rate due to diabetes on average in 2012-2014 (27.6 deaths per 100,000 population) is higher than the statewide rate (20.4).

Type 2-diabetes can be delayed or prevented by healthy lifestyle changes to reduce risk factors including moderate weight loss and engagement in regular moderate-intensity physical activity (Figure 5-2). The California Diabetes Program works with many partner organizations to promote awareness of diabetes risk factors, increase pre-diabetes screening, and support communities that encourage healthy lifestyles.

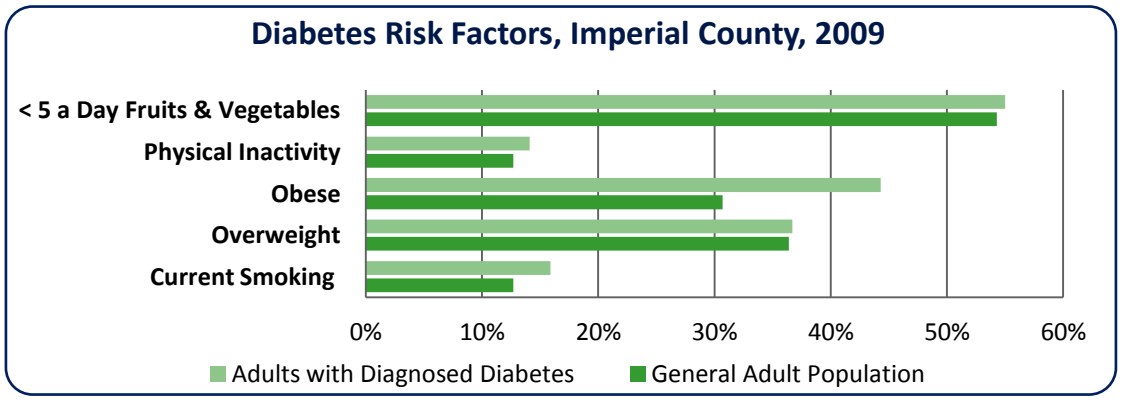
FIGURE 5 -2



Source: California Department of Public Health; University of California San Francisco, Institute for Health and Aging

Comprehensive, evidence-based diabetes detection, care, and multi-disciplinary management strategies can help reduce the impact of diabetes and prevent or delay serious complications. Access to health care is also critical for people with diabetes (Figure 5-3). Management of blood sugar levels, blood pressure, and blood lipids/cholesterol are particularly important. This includes a periodic A1C test that measures average blood glucose control for the previous 2 to 3 months to ensure the prescribed treatment plan is working. Regular health checks should also include eye, foot, kidney, and dental exams, as well as influenza and pneumococcal vaccinations.

FIGURE 5 -3



Source: California Department of Public Health; University of California San Francisco, Institute for Health and Aging

Diabetes must be managed on a daily basis by the person with the disease, so proper self-management education is essential and should include information on blood sugar monitoring, healthy diet, physical activity, weight management, and medication adherence (including aspirin therapy). Since tobacco use increases the risk of complications for individuals with diabetes, smoking cessation is also strongly encouraged.

Asthma

What is it?

Asthma is a chronic condition that inflames the airways of the lungs and causes recurrent wheezing, coughing, difficulty breathing, and tightness of the chest. Asthma attacks can range from a mild episode to a life-threatening event.

Why is it important?

Fourteen percent of the total population 1 year and older in California have been diagnosed with asthma, contributing significantly to missed days of school and work, increased visits to the emergency department, and reduced daily activities, according to the California Health Interview Survey (CHIS).

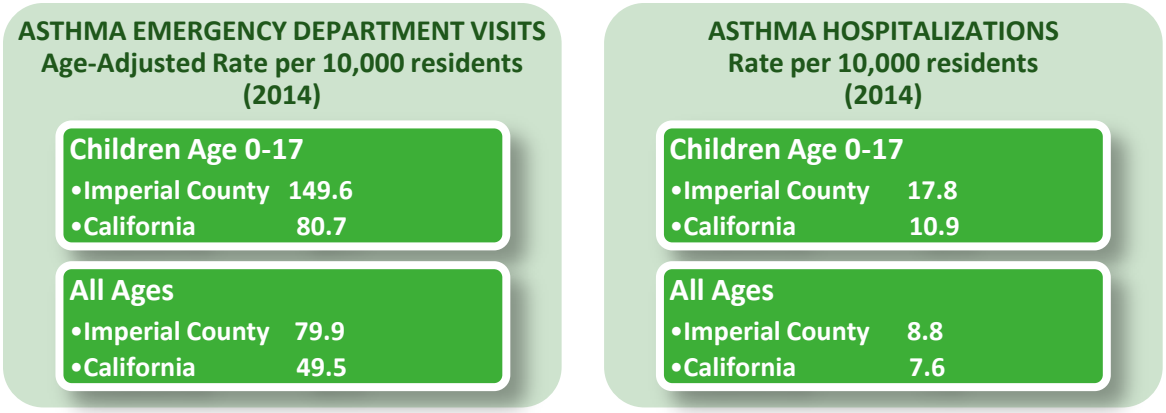
What is our status?

In 2011-2012, 14 percent of Imperial County residents reported having ever been diagnosed with asthma by a health-care provider during their lifetime, compared to 14.1 percent of all California residents, according to CHIS.

The prevalence of current asthma provides one indicator of the burden of asthma in a community. Other indicators include the number of people with asthma, the number of doctor and emergency department visits, the rates of hospitalization and deaths due to asthma.

Imperial County reports higher rates of emergency department visits and hospitalizations due to asthma compared to California as a whole (Figure 5-4).

FIGURE 5 -4



Source: California Breathing County Profiles

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INJURIES

Key Finding

Injury Deaths

- The leading causes of injury deaths in Imperial County are motor vehicle traffic collisions, unintentional poisonings, suicide (self-inflicted), and falls, according to California Department of Public Health Vital Statistics data.

Injuries

What are they?

Injuries are generally defined as events that cause physical damage to a person's body and can include trauma, falls, poisonings, burns, drowning, homicides, suicides, and assaults.

Injuries can be classified as unintentional, which are incidents that occur without the intent of harm; self-inflicted or suicide, incidents that are deliberately intended to cause harm to oneself; and assault or violence, events that are intended to harm another person or other persons.

Why are they important?

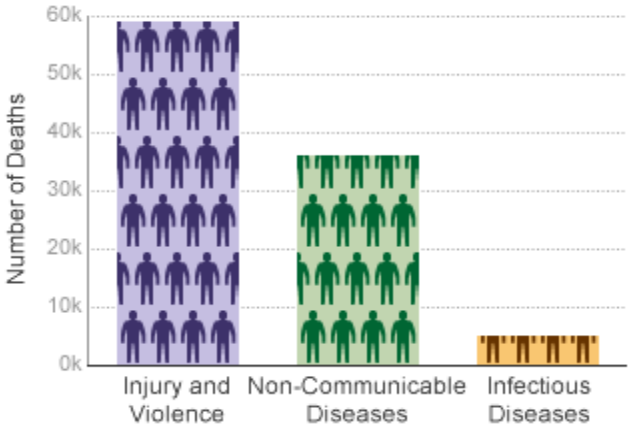
In California each year, injuries cause:

- More than 17,000 deaths
- More than 75,000 individuals to be permanently disabled
- More than 240,000 Californians to be hospitalized
- More than 2 million individuals to get treatment in emergency rooms

In 2013 in the United States, injuries, including all causes of unintentional and violence-related injuries combined, accounted for 59% of all deaths among persons 1–44 years of age, according to the U.S. Centers for Disease Control and Prevention. That is more deaths than non-communicable diseases and infectious diseases combined (Figure 6-1).

FIGURE 6 - 1

Injury Deaths Compared to Other Leading Causes of Death for Persons Ages 1–44 United States, 2013



Source: U.S. Centers for Disease Control and Prevention

What is our status?

The leading causes of injury deaths in Imperial County are unintentional poisonings, falls, suicide (self-inflicted), motor vehicle traffic collisions, and assaults/homicide, according to the California Department of Public Health Vital Statistics data (Table 6-1).

TABLE 6 - 1

Five Leading Causes of Injury Deaths, Imperial County and California, 2013

IMPERIAL	CALIFORNIA
• 1 - Unintentional - Poisoning	• 1- Suicide / Self-inflicted
• 2 - Unintentional - Fall	• 2 - Unintentional - Poisoning
• 3 - Suicide / Self-inflicted	• 3 - Unintentional - Fall
• 4 - Unintentional - Motor Vehicle Traffic, unspecified	• 4 - Homicide / Assault
• 5 - Assault/Homicide	• 5 - Unintentional - Motor Vehicle Traffic, Unspecified

Source: California Department of Public Health, Vital Statistics Death Statistical Master Files

Unintentional Injuries

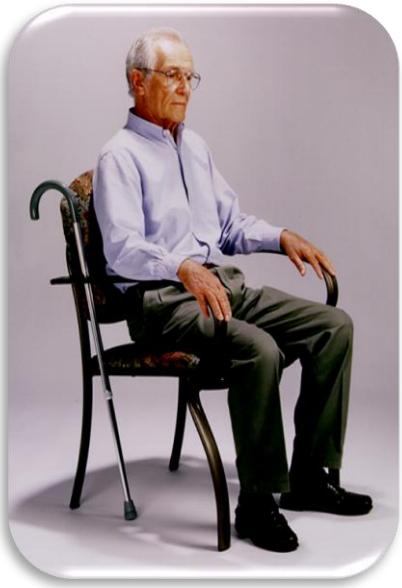
CDC/ Amanda Mills

What are they?

Injuries are among the most common threats to life and health. Unintentional injuries are ones that are not caused purposefully or with the intent to harm. Unintentional injuries and the events leading up to them are not random and many times can be prevented by choosing safe behaviors, using safety equipment, and obeying safety laws.

Why are they important?

Unintentional injuries, or accidents, are one of the top five leading causes of death in Imperial County. But death is only part of the health burden; serious injuries can lead to disability and can have long-term impacts on quality-of-life outcomes and costs to society.



CDC / Duncan

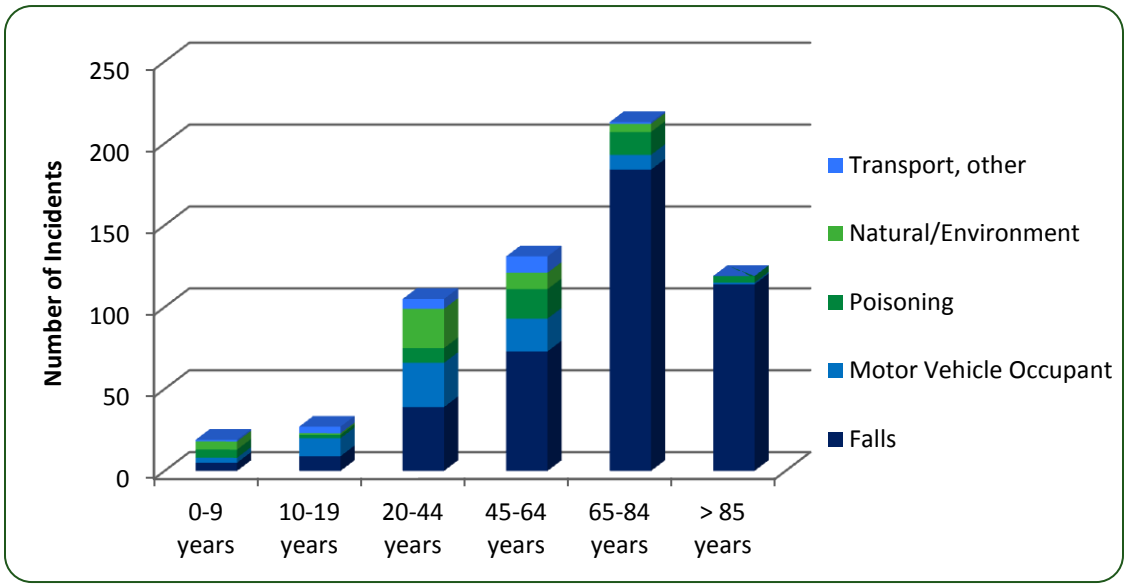
What is our status?

The age-adjusted death rate due to unintentional injuries has decreased over the past decade in Imperial County from 44.5 deaths per 100,000 population on average in 1999-2000 to 40.7 deaths in 2012-2014. The County's rate continues to be higher than California's rate (28.2).

In 2013, 657 Imperial County residents were hospitalized due to unintentional injuries. Falls were by far the most common cause of non-fatal hospitalizations due to unintentional injuries in all age groups, with the highest number of cases occurring among individuals aged 65 and older (Figure 6-2). Nearly 65 percent (424) of all non-fatal hospitalized injuries were due to falls, and 11 percent (71) were due to motor vehicle traffic incidents.

FIGURE 6 - 2

Non-Fatal Hospitalizations due to Unintentional Injuries by Cause and Age
Imperial County · 2013



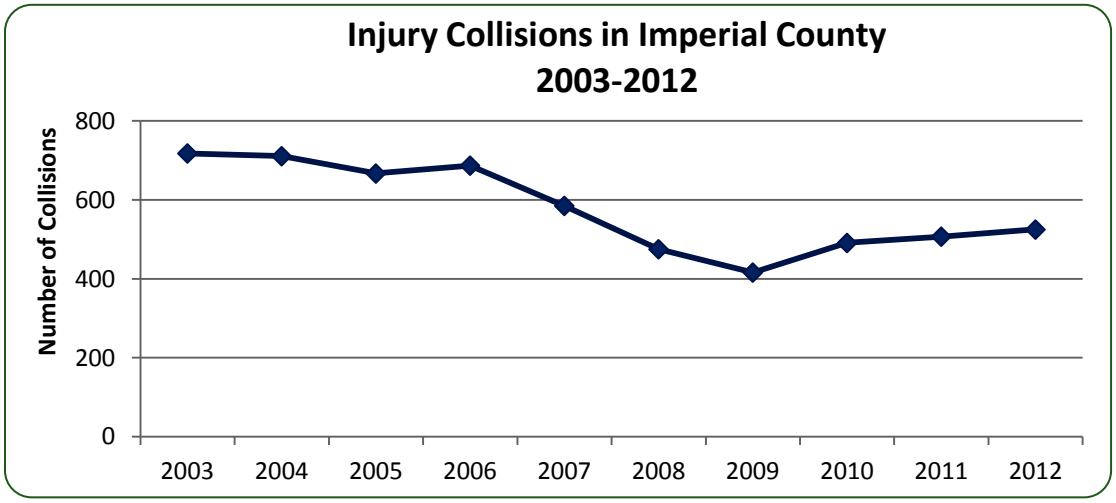
Source: California Office of Statewide Health Planning and Development, Inpatient Discharge Data

Motor Vehicle Traffic Collisions

Motor vehicle collisions are a major cause of death and disability. In 2012, there were 159,696 injury collisions statewide, according to the California Highway Patrol. Of those, 2,758 were fatal and 226,544 involved injury. This is the lowest number of fatal collisions since 1933 when 2,230 were reported, as well as the lowest number of injury collisions since 1971, when 160,182 were reported.

In Imperial County, the number of injury collisions has declined since 2003 (Figure 6-3).

FIGURE 6 - 3



Source: Statewide Integrated Traffic Records System (SWITRS)

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ENVIRONMENTAL HEALTH

Key Findings

Air Quality

- The number of days that exceed state or national standards for ozone and particulate matter (PM_{10}) levels in Imperial County has decreased over the past decade.

Vector-Borne Diseases

- Between 2003 and 2015, 10 human cases of West Nile virus (WNV) were reported.

Animal Control

- In 2014, Animal Control sheltered 1,338 animals, with 463 of those being rescued.

Lead Poisoning

- In 2011, there were 5,081 children under 6 years of age screened in Imperial County. Twelve children were identified as having elevated blood lead levels ($\geq$ 9.5 mcg/dL).

Food Safety

- In 2014, the Public Health Department investigated 31 lab-confirmed cases of *salmonella*, 42 cases of *campylobacter*, and 29 cases of *shigella*, which represent the most common food- and water-related illnesses reported.
- Environmental Health followed up on 132 food-related complaints from the public regarding restaurants and other retail establishments.

Air Quality

What is it?

Air quality standards define the maximum amounts of pollutants that can be present in ambient (outdoor) air without harm to the public's health. Both the California Air Resources Board (CARB) and the United States Environmental Protection Agency (U.S. EPA) are authorized to set ambient air quality standards for common pollutants.

Why is it important?

Air pollutants impact the public's health, and can be particularly harmful to the very young, the very old, and those with certain preexisting medical conditions. Air pollutants can cause breathing difficulties, asthma, lung damage, bronchitis, cancer, and brain and nervous system damage. Also, air pollutants can irritate the eyes, nose and throat, and reduce resistance to colds and other illnesses.

What is our status?

The Federal Clean Air Act requires the U.S. Environmental Protection Agency to set outdoor air quality standards for the nation. It also permits states to adopt additional or more protective air quality standards if needed. California has set standards for certain pollutants that are more protective of public health than respective federal standards. California also sets standards for some pollutants not addressed by federal standards.

California sets standards for criteria pollutants including: ozone (1-hour and 8-hour), suspended particulate matter (PM_{10}), fine suspended particulate matter ($PM_{2.5}$), carbon monoxide, nitrogen dioxide, sulfur dioxide, sulfates, lead, hydrogen sulfide, and visibility-reducing particles. The U.S. EPA sets national standards for seven criteria pollutants: ozone (8-hour), $PM_{2.5}$, PM_{10}, carbon monoxide, lead, nitrogen dioxide, and sulfur dioxide. Areas that meet either state or national standards for criteria pollutants are called "attainment areas," and areas that don't meet standards are "non-attainment areas." Imperial County is considered a "non-attainment area" for ozone and PM_{10}.

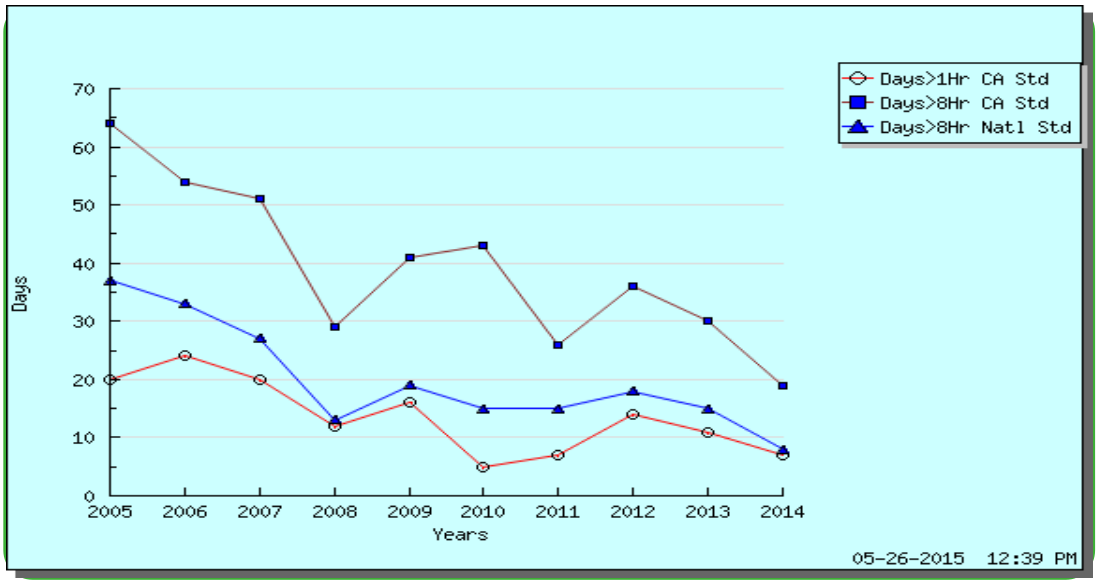
Ozone

Ozone is created by chemical reactions between oxides of nitrogen (NOx) and volatile organic compounds (VOC) in the presence of sunlight. Emissions from industrial facilities and electric utilities, motor vehicle exhaust, gasoline vapors, and chemical solvents are some of the major sources of NOx and VOC. Breathing ozone can trigger a variety of health problems including chest pain, coughing, throat irritation, and congestion. It can worsen bronchitis, emphysema, and asthma. Ground level ozone also can reduce lung function and inflame the linings of the lungs. Repeated exposure may permanently scar lung tissue.

The overall number of days exceeding state and federal standards has decreased for ozone pollution in Imperial County (Figure 7-1).

FIGURE 7 - 1

Ozone: Days Exceeding State and National Standards, Imperial County · 2005 – 2014



Source: California Air Resources Board (CARB)

Particulate Matter

"Particulate matter," also known as particle pollution or PM, is a complex mixture of extremely small particles and liquid droplets. Particle pollution is made up of a number of components, including acids (such as nitrates and sulfates), organic chemicals, metals, and soil or dust particles.

The size of particles is directly linked to their potential for causing health problems. Particles that are 10 micrometers in diameter or smaller can generally pass through the throat and nose and enter the lungs. Once inhaled, these particles can affect the heart and lungs and cause serious health effects. The EPA groups particle pollution into two categories:

- "Inhalable coarse particles," such as those found near roadways and dusty industries, are larger than 2.5 micrometers and smaller than 10 micrometers in diameter.
- "Fine particles," such as those found in smoke and haze, are 2.5 micrometers in diameter and smaller. These particles can be directly emitted from sources such as forest fires, or they can form when gases emitted from power plants, industries, and automobiles react in the air.

Particle pollution - especially fine particles - contains microscopic solids or liquid droplets that are so small that they can get deep into the lungs and cause serious health problems. Numerous scientific studies have linked particle pollution exposure to a variety of problems, including:

- premature death in people with heart or lung disease
- nonfatal heart attacks
- irregular heartbeat
- aggravated asthma
- decreased lung function
- increased respiratory symptoms, such as irritation of the airways, coughing or difficulty breathing

Imperial County and California have both improved in terms of average daily density of fine particulate matter in micrograms per cubic meter (PM2.5). Imperial County is slightly lower than the national average, according to the 2016 County Health Rankings & Roadmaps.

The California Air Resources Board, in cooperation with the Imperial Valley Air Pollution Control District and the U.S. Environmental Protection Agency, has set up a web site to provide current conditions of air quality in Imperial County.

Data are collected from monitoring stations in Calexico, El Centro, Brawley, Westmorland, and Niland. The information is reported using an Air Quality Index (AQI). The AQI is an indicator developed by the U.S. Environmental Protection Agency to report air quality and to help the public understand what it means for their health (Table 7-1).

It is used to report the five most common air pollutants that are regulated under the Clean Air Act: ground-level ozone (O_3), particulate matter (PM), carbon monoxide (CO), sulfur dioxide (SO_2), and nitrogen dioxide (NO_2).

The AQI uses a scale from 0 to 500. The higher the AQI value is, the greater the level of pollution and the greater the health concern. An AQI value of 100 generally corresponds to the national ambient air quality standard set for each pollutant to protect public health. AQI values below 100 are generally considered to be satisfactory, and values above 100 represent unhealthy air pollution levels — at first for members of sensitive populations, then for everyone as AQI values go above 150.

Interested individuals can sign up to be notified when air quality in the Imperial Valley reaches unhealthy levels. This service is free, and notifications can be made via e-mail, pager, or cellular phone.

TABLE 7 - 1

Air Quality Index

AQI Value	Air Quality	
Green 0 to 50	Good	Air quality is considered satisfactory, and air pollution poses little or no risk.
Yellow 51 to 100	Moderate	Air quality is acceptable; however, for a very small number of people, there may be a moderate health concern.
Orange 101 to 150	Unhealthy for Sensitive Groups	Members of sensitive groups may experience health effects. The general public is not likely to be affected when the AQI is in this range.
Red 151 to 200	Unhealthy	Everyone may begin to experience health effects. Members of sensitive groups may experience more serious health effects.
Purple 201 to 300	Very Unhealthy	Pollution levels trigger a health alert. Everyone may experience more serious health effects.
Maroon Above 300	Hazardous	Pollution levels trigger health warnings of emergency conditions. The entire population is more likely to be affected.

Vector-Borne Diseases

What are they?

Vector-borne diseases are viral and bacterial diseases transmitted to humans by mosquitoes, ticks, fleas, and rodents. Other vectors that pose threats to the public's health include Africanized honey bees and imported red fire ants. Some vectors – lice, mites, and bed bugs – typically are more of a nuisance than a health hazard.

Why are they important?

Vector-borne diseases are some of the world's most destructive diseases, many of which are increasing threats to human health such as West Nile virus, Lyme disease, plague, Hantavirus, dengue, and malaria.

What is our status?

In Imperial County, surveillance is conducted primarily for the three most prevalent mosquito-borne viruses in California: West Nile virus (WNV), St. Louis Encephalitis (SLE), and Western Equine Encephalomyelitis (WEE). In 2003, Imperial County reported one of the first three indigenous human cases of West Nile virus (WNV) in California. Between 2003 and 2015, ten human cases of WNV disease were reported in Imperial County. Both WEE and SLE have been detected in mosquito pools or sentinel chicken flocks, although not consistently every year. In 2015, *Aedes Aegypti* mosquitoes were trapped for the first time in this county. This mosquito is the primary vector of dengue, chikungunya, and yellow fever viruses.

Animal Control

What is it?

The Animal Control program enforces County ordinances and state regulations concerning rabies, animal and human safety, and humane treatment of animals. This includes operation of the Imperial County Animal Control Shelter.

Why is it important?

The Animal Control unit responds to calls of animal disturbances, loose animals, animal cruelty cases, injured animals, and a host of other situations involving domesticated animals.

What is our status?

Animal Control continues to remain a very active program given the reduction to its service area with the termination of animal control services with the city of Calipatria and Quechan Tribal Lands. In 2014, Animal Control sheltered 1,338 animals, with 463 of those being rescued.

Lead Poisoning

What is it?

Lead is an element that occurs in nature and has been used in many products that are now banned in the United States, such as paint, gasoline, and solder in food cans. The United States has taken many steps to remove sources of lead, but lead is still around us, in the environment as well as some imported products.

When food, dust, soil, or other items contaminated with lead are ingested, small amounts of lead can accumulate in the body, and can cause lifelong learning and behavior problems. This buildup of lead in the body is referred to as lead poisoning.

Why is it important?

Lead poisoning is the most common environmental illness in California children. Children are more susceptible to lead poisoning than adults because of the increased likelihood of exposure to dust and soil. Children less than 6 years of age and fetuses are the most vulnerable to the harmful effects of lead poisoning because their brains and nervous systems are still forming. Ingestion of large amounts of lead can damage the nervous system and other major organs and can lead to brain damage, seizures, or even death. At lower levels of exposure, lead can affect a child's mental and physical growth. By impairing brain function, low levels of lead exposure can make it more difficult for children to learn, pay attention, and succeed in school.

What is our status?

The only way to know if a child has lead poisoning is by getting a blood test for lead. Children aged 12 months and 24 months who are enrolled in publicly supported health care programs are considered to be at higher risk. They are tested at 12 months and again at 24 months, and if missed at those ages can be tested anywhere from ages 24 months to 6 years of age. The cost is covered by government health programs and most health insurance plans.

Children who come in contact with lead-based products or spend time in homes, child-care centers, or buildings constructed before 1978 that have chipping or peeling paint should also be tested. Lead-based products include handmade ceramic pottery, certain imported candies, home remedies, and cosmetics, among others.

Because there is no mandate to screen all children, childhood lead poisoning prevalence rates are unknown. Most lead-poisoned children are asymptomatic. If present, symptoms typically are nonspecific complaints, such as stomach ache, irritability, headache, fatigue, or loss of appetite. The only way to diagnose lead poisoning is to obtain a blood lead level (BLL).

Blood Lead Level	Possible Health Effects
< 10 mcg/dL	Decreased IQ, developmental toxicity (No known lower level for effects)
10 - 44 mcg/dL	Behavior problems (hyperactivity, irritability), overt physical symptoms rare
45 - 69 mcg/dL	Apathy/fatigue, anemia, abdominal symptoms (pain, constipation, nausea/vomiting)
70 - 100 mcg/dL	Nephropathy, colic, encephalopathy
> 100 mcg/dL	CNS crisis (cerebral edema, ischemia, seizure, coma, possible death)

In 2012, there were a total of 4,981 children under 6 years of age screened in Imperial County. Ten children under age 6 had blood lead levels ≥ 9.5 mcg/dL in 2012, according to state data.

TABLE 7 - 2

Number of Individual Children Screened for Lead, by Highest Level, Imperial County, 2012

AGE GROUP (years)	BLL<4.5* n	%	BLL ≥4.5-9.5* n	%	BLL ≥9.5* n	%	TOTAL Tested
Age < 6	4,830	96.97%	141	2.83%	10	0.20%	4,981
Age 6 to < 21	722	97.70%	17	2.30%	0	0.00%	739
Total age < 21	5,552	97.06%	158	2.76%	10	0.17%	5,720

Source: California Department of Public Health, Childhood Lead Poisoning Prevention Branch
Data from RASSCLE surveillance database archive of 12/17/2014
* Measures are in µg/dL (micrograms per deciliter) of whole blood

Food Safety

Queso Fresco

What is it?

Enteric diseases are generally caused by ingesting contaminated food or water. Many different disease-causing microbes, or pathogens, can contaminate foods, beverages, or bodies of water. Ensuring the safety of food and water supplies, and preventing outbreaks of foodborne illness are critical public health functions.

Why is it important?

Food-related diseases affect tens of millions of people and kill thousands in the United States each year. They also cause billions of dollars in health care-related and industry costs annually.

What is our status?

Foodborne illnesses are the cause of a significant number disease cases reported to the Imperial County Public Health Department. In 2014, the department investigated 31 lab-confirmed cases of *salmonella*, 42 cases of *campylobacter*, and 29 cases of *shigella*, which represent the most common food- and water-related illnesses reported. In addition, the department received and followed up on 111 food-related complaints from the public about restaurants and other retail food establishments. Of the 111 complaints, 23 were specifically related to suspected foodborne illness.

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EMERGENCY PREPAREDNESS

Key Finding

Emergency Preparedness

- Most Imperial County residents surveyed in 2009 reported being prepared for a major disaster, according to the findings of the California Health Interview Survey (CHIS). Prepared respondents had 4 or more days of additional supplies and a 2-week medication supply, if necessary.

Emergency Preparedness

CDC/Nahid Bhadelia

What is it?

Emergency preparedness involves planning for response to an urgent threat such as an earthquake or other natural disaster, disease outbreak, terrorism attack, or massive chemical spill.

Why is it important?

Emergency preparedness is important to ensure an effective and efficient response to a disaster. Being prepared can save lives, protect property, and reduce costs associated with an emergency. Since emergencies are typically local, the preparedness and training of local first responders is critical to the success of emergency response efforts.

Emergency preparedness is an ongoing process and, although a region can never be fully prepared, the level of readiness depends significantly on the local agency's training and the resources that are available.

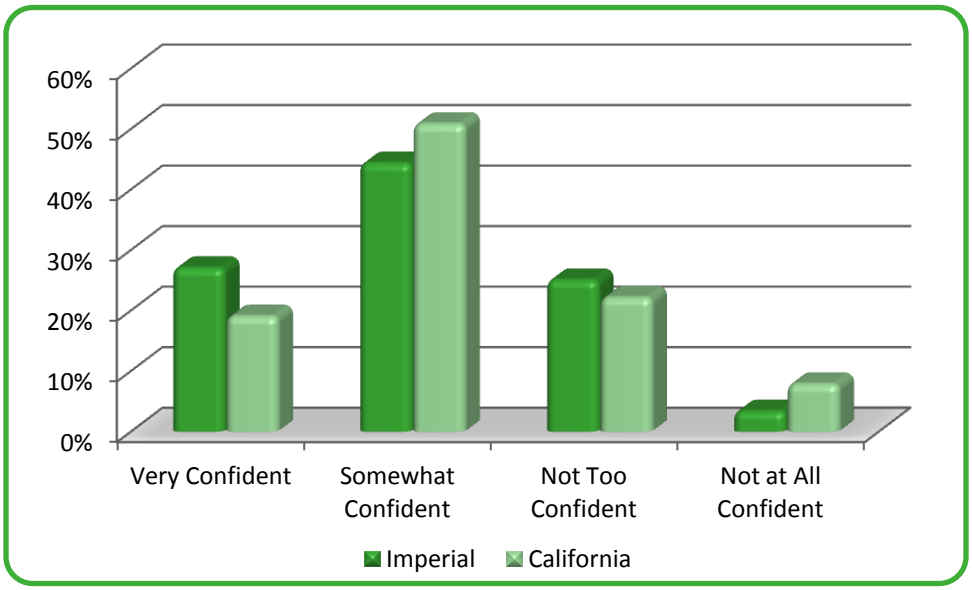
What is our status?

Most Imperial County residents (78.3%) surveyed in 2009 indicated that they were prepared for a major disaster, according to the findings of the California Health Interview Survey (CHIS). Respondents were asked a series of questions regarding the number of days they would be able to stay in their home without additional supplies and medicine supply. Prepared respondents had 4+ days of additional supplies and a 2-week medication supply, if necessary (Figure 8-1).

A majority of survey respondents also indicated that they were either very confident (27.1%) or somewhat confident (44.4%) that the county's public health system can respond in a way to protect the health of their family and neighbors, according to the results of the 2009 CHIS.

FIGURE 8-1

Confidence in the Public Health System to Respond to Major Disasters · Imperial County and California · 2009



Source: California Health Interview Survey (CHIS)

Hospital and Health-Care Preparedness

The Hospital Preparedness Program (HPP) improves the ability of hospitals and health-care system participants to prepare for and respond to terrorism and other public health emergencies. Current priority areas include interoperable communications, bed tracking, trauma system support, fatality management planning, and hospital evacuation planning. HPP funds have also been used for improved decontamination capabilities, isolation capacity, training, education, drills and exercises.

Public Health Emergency Preparedness

The Public Health Emergency Preparedness (PHEP) Program provides funding and support to prepare Imperial County to respond to health emergencies caused by natural, accidental, or intentional threats. The PHEP program approach for preparedness is from an all-hazards focus, thus allowing for optimal development of capabilities in Imperial County. The goal is to improve the pre-planned and coordinated rapid-response capability by regularly reviewing and updating response plans. The PHEP program trains staff, and identifies local partners and subject matter experts in advance of an event. Finally, accountability and quality improvement are also enhanced through the development of after-action reports and improvement plans that identify local lessons learned and a plan for improving them.

Communication Systems

The Imperial County Public Health Department's EMS program maintains various communication methods with health-care system participants. In Imperial County, emergency and disaster radio communications are achieved through participation in the Imperial Valley Emergency Communications Authority's (IVECA) 800 MHz radio system. IVECA's 800 MHz radio system provides voice and data wireless communications during normal system operation and during disaster operations. Acute-care facilities also communicate with the EMS Agency through the use of ReddiNet, which is a dedicated emergency medical communications network. This system facilitates information exchange among hospitals, the EMS program, field providers, dispatch centers, law enforcement, public health officials, and other health-care system professionals.

2011 Mass Vaccination Clinic – Imperial Valley Expo Fairgrounds

Medical Reserve Corps

The Imperial County Medical Reserve Corps (MRC) recruits volunteers to assist with alternative care sites, points of distribution, mass vaccination clinics, as well as other needs during health-care emergencies such as the pandemic Influenza A (H1N1) investigations in 2009. Currently, the Imperial County MRC has 359 volunteers from a variety of medical and non-medical backgrounds.

Community Emergency Response Teams

The Community Emergency Response Team (CERT) program educates local residents about disaster preparedness for hazards that may impact the county, and trains them in basic disaster response skills, such as fire safety, light search and rescue, team organization, and disaster medical operations. Using the information learned in the classroom and during exercises, CERT members can assist others in their neighborhood or workplace following an event when professional responders are not immediately available to help. CERT team members also are encouraged to support emergency response agencies by taking a more active role in emergency preparedness projects in their own communities. The Public Health Department conducts a minimum of four CERT trainings a year.

CERT Training

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MORTALITY RATES

Key Finding

Leading Causes of Death

- All cancers, heart disease, cerebrovascular disease (stroke), unintentional injuries, diabetes, and lung cancer were the leading causes of death in Imperial County in 2012-2014.

Mortality Rate

CDC/Bob Sanders

What is it?

A simple way to assess the heath status of a population is to look at the major causes of death. The mortality rate is a measure of the number of deaths (in general or due to a specific cause) in a population, scaled to the size of that population, per unit of time.

Crude death rates are calculated by dividing the number of deaths in a year by the population being assessed. Because populations are rarely the same and continually change, these crude death rates are not very useful when comparing deaths between populations. One solution to this problem is to calculate what the death rate would be if the populations being compared had the same composition. This is accomplished by adjusting the population to match a "standard" or known population, such as that of a census year. The age-adjusted death rates in this report are based on the "standard" 2000 United States census population.

Why is it important?

The mortality rate is one of the primary measures of a population's health. Death statistics are analyzed because of their importance for identifying and monitoring health problems, developing programs for disease prevention and health promotion, and for portraying trends and patterns.

Leading causes of death are used frequently to describe the heath status of the nation. Over the past century, the United States has experienced great changes in leading causes of death. In the early 1900s, infectious diseases were rampant both in this country and worldwide. Today, with the control of many infectious agents and the increasing age of the population, chronic diseases and injuries are the major causes of death.

What is our status?

The age-adjusted death rate from all causes in Imperial County on average for 2012-2014 was 606.7 deaths per 100,000 residents, which was lower than California's age-adjusted rate of 619.6 deaths per 100,000 residents (Table 9-1).

TABLE 9-1

Overall Deaths, Imperial County and California, 2012-2014

	Average Number of Deaths	*Age-Adjusted Death Rate**
Imperial County	1,010	606.7
California	245,451	619.6
Healthy People 2020		Not Established

Source: County Health Status Profiles 2015

*Rate is per 100,000 population

Leading Causes of Death

In 2012-2014, the leading cause of death for Imperial County and California was cancer (malignant neoplasms), accounting for nearly one-quarter of all deaths in California and 21 percent of all deaths in Imperial County. In Imperial County and California, the top two leading causes of death are cancer and heart disease (Table 9-2).

Cerebrovascular disease (stroke), accidents (unintentional injuries), diabetes, and lung cancer also ranked as leading causes of death in Imperial County.

TABLE 9-2

Leading Causes of Death, Imperial County and California, 2012-2014

	Average Number Deaths	Age-Adjusted Death Rate*
Imperial County		
All Cancers	211	126.7
Heart Disease	175	107.3
Accidents (Unintentional Injuries)	71	40.7
Cerebrovascular Disease (Stroke)	50	30.4
Diabetes	45	27.6
Lung Cancer	43	26.1
California		
All Cancers	57,763	146.5
Heart Disease	38,543	96.6
Cerebrovascular Disease (Stroke)	13,574	34.4
Chronic Lower Respiratory Disease	13,073	33.7
Lung Cancer	12,376	31.7
Alzheimer's disease	12,043	30.1

Source: California Department of Public Health

*Rates per 100,000 population

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TECHNICAL NOTES

Technical Notes

Healthy People 2020 National Objectives

Healthy People 2020 is a comprehensive set of health objectives for the nation to achieve over the first decade of the new century. Healthy People 2020 identifies a wide range of public health priorities and specific, measurable objectives. The overarching goals are to increase quality and years of healthy life and eliminate health disparities. Note that some of the Healthy People 2020 objective target rates were changed in accordance with midcourse review recommendations, and have been used since 2006 in the County Health Status Profiles published by the California Department of Public Health, as well as in this report.

Rates

Reliability of Rates

All vital statistics, including morbidity rates, are subject to random variation. This variation is inversely related to the number of events (i.e., deaths) used to calculate the rate. The smaller the number of events, the greater is the likelihood of random variation within a specified time period. For this reason, counties with only a few deaths, or a few cases of illness, can have highly unstable rates from year to year.

Crude Rates

A rate is a common estimate used to compare events or characteristics across different populations. A crude rate is calculated by dividing the total number of events, such as deaths due to cancer, by the total population at risk (all residents of Imperial County). Most rates are reported as the number of events per 100,000 population.

Group-Specific Rates

Rates can pertain to a specific subgroup of the population. For example, rates are reported by age or race. In this case, the rate is calculated by dividing the total number of events for the specific subgroup (i.e., number of deaths due to cancer in Latinos) by the total population at risk within the same subgroup (i.e., all Latino residents in Imperial County).

Adjusted Rates

Comparing crude rates across different populations can be misleading if those populations have different age, race/ethnicity or gender distributions. For example, if Imperial County has a higher crude death rate than California, the high rate may be due to a higher concentration of older people compared to the state as a whole, because age strongly impacts the risk of death. To address this issue, rates are adjusted for demographic factors so that different groups can be compared even though they have different characteristics and age, gender or age/ethnicity distributions in the population. Rates used in this report are not adjusted unless indicated.

Adjusted rates are calculated by applying the specific rates for subgroups observed in each of the populations to a single reference population considered to be a "standard." For data through 1998, the standard chosen by the National Center for Health Statistics is the 1940 U.S. population. Beginning in 1999, rates are adjusted to the 2000 U.S. Standard Population because the national objectives in Healthy People 2010 are based on this standard.

Death rates in this report have been age-adjusted. By removing the effect of different age compositions, counties with age-adjusted rates are directly comparable to the Healthy People 2010 National Objectives.

Birth Cohort Infant Mortality

The infant mortality rate is the number of deaths among infants under one year of age per 1,000 live births. Infant mortality rates in this report are based on linked birth and death infant records in the Birth Cohort-Perinatal Outcome Files.

Small Numbers

Rates based on small numbers of events can fluctuate widely from year to year for reasons other than a true change in the underlying frequency of occurrence of the event (i.e., the number of AIDS deaths in white, non-Latino residents in Imperial County). Several years of data are often combined to help stabilize rates that would otherwise be based on very small numbers.

Prenatal Care Indicators

The prenatal care indicator, Month Prenatal Care Began, has been associated with access to care. Late prenatal care is defined as the percentage of mothers who did not begin prenatal care in the first three months of their pregnancy. However, documenting the percentage of births in which the mother's prenatal care began in the first trimester may not provide a complete assessment because it fails to document whether prenatal care continued for the course of the pregnancy. For this reason, in addition to Prenatal Care Not Begun in the First Trimester of Pregnancy, this report included adequacy of prenatal care based on the Adequacy of Prenatal Care Utilization Index developed by Milton Kottlechuck. This index attempts to characterize prenatal care utilization in two distinctive dimensions: adequacy of initiation of prenatal care and adequacy of received services (once prenatal care has begun). Adequacy of initiation of prenatal care indicates the month prenatal care began. Adequacy of received services characterizes the adequacy of prenatal care visits (number of visits) received during the time the mother is actually in prenatal care (from initiation until delivery). The adequacy of prenatal visits is based on the recommendations set by the American College of Obstetricians and Gynecologists.