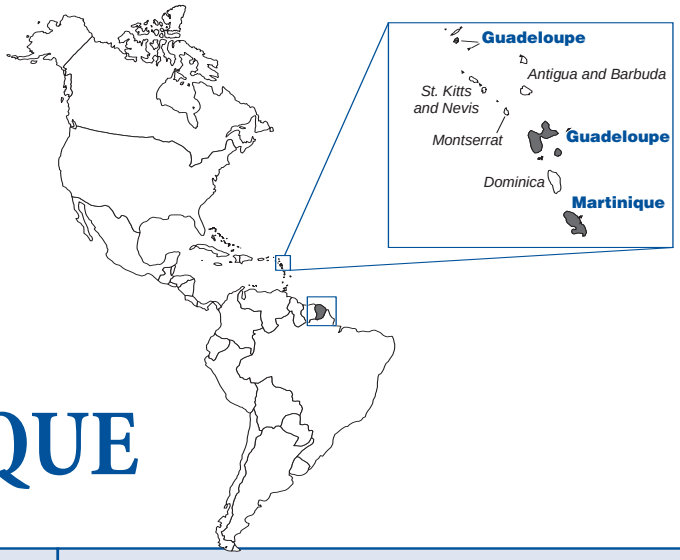
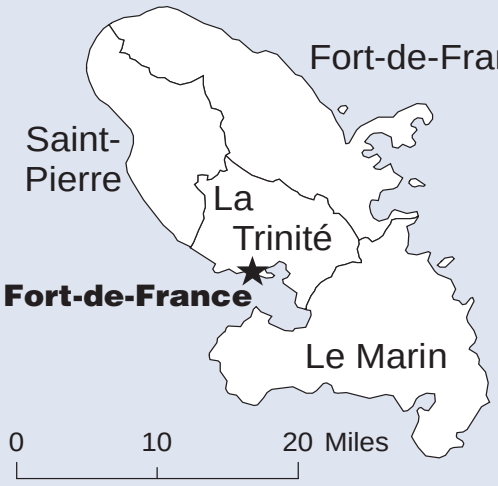
FRENCH GUIANA, GUADELOUPE, AND MARTINIQUE

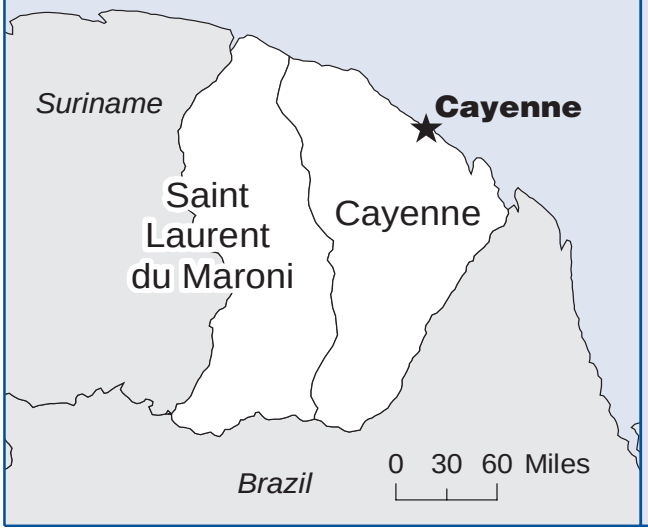


Martinique



Guadeloupe

French Guiana



The islands of Guadeloupe and Martinique in the Lesser Antilles, and French Guiana, located on the northern coast of South America between Suriname and Brazil, are the three French overseas *départements* in the Region of the Americas that have been an integral part of France since 1946. Despite their geographical distance from France, their political and administrative organization into departments and regions coincides with that of the rest of France.

GENERAL CONTEXT AND HEALTH DETERMINANTS

The archipelago of Guadeloupe, covering an area of 1,703 km^2, is the largest of the two islands. It comprises, in addition to Guadeloupe proper—which is actually two separate landmasses, Basse-Terre and Grande-Terre, bisected by a seawater channel—the islands of Marie-Galante, Les Saintes, La Désirade, Saint-Barthélemy, and the French section of Saint-Martin. Martinique occupies an area of 1,128 km^2, and French Guiana, 83,534 km^2. Guadeloupe and Martinique enjoy a tropical climate tempered by trade winds, but are often buffeted by tropical storms between July and October, whereas the climate in French Guiana is equatorial. Even though French Guiana is the largest of the three French Overseas Departments in the Americas, 94% of its land is dense Amazonian forest crisscrossed by rivers of all sizes.

Social, Political, and Economic Determinants

As part of France, French Guiana, Guadeloupe, and Martinique belong to the European Union (EU), and the euro is the official currency. The economy of the French Overseas Departments shares a number of problems common to small island entities: insufficiently competitive exports, a tendency to specialize in services, a strong reliance on tourism and natural resources, environmental fragility, and vulnerability to natural disasters. Additionally, the Departments' economic and political stability is accompanied by heavy financial dependence on metropolitan France and limited economic exchanges with the rest of the world. Only 9% of imports from the three Departments come from the Caribbean, and barely 3% of exports go to markets in that subregion.

The economy of French Guiana includes two peculiarities. The first is a space center built by the French Government in the mid-1960s as a base from which to launch its satellites. Located in the small coastal town of Kourou, once known only as the headquarters for the infamous Devil's Island penal colony, the center's impact on GDP varies from year to year. The second is gold panning, the leading export activity (along with space-related activities), but also a source of illegal employment and widespread trafficking. In Guadeloupe and Martinique, the banana production and exportation sector is hampered by constant fluctuations in market conditions.

In terms of per capita GDP, despite a marked improvement over the past few years, the French Overseas Departments rank lower than all regions in metropolitan France. In 2002, GDP per capita was 15,622 euros in Martinique, 14,108 euros in Guadeloupe, and 12,858 euros in French Guiana. Compared to most of their geographical neighbors, the French Overseas Departments have a relatively high standard of living, due to susidies and imports from the French Government, but their performance in employment and foreign trade places them at or near the bottom of the Caribbean group, and their GDP is less a reflection of wealth and internal productive activities than it is of their unique departmental status.

The unemployment rate in 2005 was very high throughout the French Overseas Departments: in French Guiana, 26.5% of the working-age population was without a job; in Guadeloupe, this figure was 26%; and in Martinique, it was 21.8%. Although these rates have remained constant over the past several years, the situation has improved somewhat compared to that of 1998, when unemployment peaked at 30% in the Antilles (Guadeloupe and Martinique). Those hardest hit by unemployment are the young, especially the least skilled in this group, and women. Unemployment on this scale is largely the product of a sharp increase in the size of the economically active population since the 1980s and the shift from farming to tertiary services. In French Guiana, the unemployment issue is even more acute, since the marked increase in workforce size has not been offset by the generation of sufficient job opportunities; the level of training available is lower, and employers are unable to find qualified staff. The unemployment situation is further compromised by the presence of illegal workers willing to work for low wages.

The available indicators show that the socioeconomic environment in the French Overseas Departments is less favorable than that found in other French regions, even though the overall standard of living is higher than in most neighboring countries. In France, a mechanism was devised in 1988 called the *Revenu Min-*

imum d'Insertion (RMI), or Minimum Integration Income, which provides persons aged 25 or over with a minimum amount of resources, access to certain social benefits, and assistance with social and/or professional integration. The percentage of RMI beneficiaries is much higher in the French Overseas Departments than in the regions of metropolitan France. On 31 December 2005, there were 80,000 RMI beneficiaries in the French Overseas Departments, representing 13% of the population between the ages of 20 and 59 in French Guiana, 14% in Guadeloupe, and 15% in Martinique.

A 2001 French National Institute of Statistics and Economic Studies (INSEE) survey found a larger percentage of poor households in the French Overseas Departments than in metropolitan France. It also showed that of the three departments, French Guiana fared the worst, with 20.7% of all households living below the poverty line,[1] compared to 12.5% in Guadeloupe and 12% in Martinique. The differences are even more marked when child poverty is measured: 32% of children in French Guiana live below the poverty line, compared to 16% in Guadeloupe and 13% in Martinique, as opposed to 8% in metropolitan France.

To ensure access by the entire population to health care, the French Government has implemented a measure called universal basic health coverage, which provides access to health insurance for anyone who has lived in France for at least three months and who does not otherwise already have health insurance coverage. The plan also includes supplementary health insurance coverage, which, unlike basic universal health insurance, provides additional health care free of charge—that is, with no deductible and without having to pay an out-of-pocket reimbursement. Supplementary health insurance coverage is targeted towards the neediest populations. A high percentage of the population in the French Overseas Departments is covered by these basic and supplementary universal health insurance arrangements. In 2005, one-quarter of the population in the Antilles and one-third of the population in French Guiana had supplementary universal health insurance coverage.

The availability of housing is growing, due in part to tax measures that encourage new housing construction as well as a greater supply of low-cost rental accommodations. Despite the progress made, there is still a heavy demand for housing due to growth in the population and the total number of households and a decreasing tendency for extended families to live under one roof. Housing conditions are improving, along with the trend toward a reduction in substandard dwellings.

The impact of urban policy on the most precarious and poorest districts of French Guiana, Guadeloupe, and Martinique was somewhat mixed in the 1990s. On the one hand, the government's efforts to improve housing and living conditions are evident. On the other, the residents of those districts were the first to be hit by the rise in unemployment, despite the incentives designed to generate jobs.

School attendance is obligatory for children ages 6 to 16. Thus nearly all children ages 3 to 6 attend school. At the start of the 2005–2006 school year, the school population in the French Overseas Departments totaled almost 275,000. Over half of the pupils were in nursery and elementary (primary) schools, one-quarter attended junior high school, and one-fifth (aged 15 to 18) were enrolled in schools preparing them for the baccalaureate (*lycée*).[2]

Baccalaureate pass rates are improving; in 2004, 72% of students in French Guiana, 75% in Guadeloupe, and 79% in Martinique passed the general baccalaureate. These rates still lag behind those of metropolitan France, and the percentage of nongraduates is relatively high, particularly in French Guiana, with the rate increasing with the age bracket.

The French Overseas Departments had 19,050 university students during the 2004–2005 school year, 60% of whom were enrolled at the University of the Antilles French Guiana. After marked growth in the 1990s, the number of students has stabilized in recent years. Not all courses of study are available locally, forcing some young people to continue their studies in metropolitan France or other countries.

Various characteristics of the environment may affect the health of the inhabitants of the French Overseas Territories. In the Antilles, natural hazards, such as earthquakes, tropical storms, and volcanic eruptions, are taken into account in the development of major risk prevention plans. Moreover, the use of organochlorine pesticides over a number of years in Guadeloupe and Martinique has negatively affected the natural environment (water bodies, river sediment, and soils). Several studies have been conducted or are currently under way to gauge the health risks for the inhabitants of these regions.

In French Guiana, the principal environmental health issues are water supply and gold panning. The pillaging of gold deposits takes place both on the fringes of authorized mining sites and in the jungle interior. The environmental impact has manifested itself dramatically through deforestation, the decimation of wildlife, mercury pollution of rivers, and malaria transmission. Due to its geographical features, French Guiana is unable to supply all of its inhabitants with safe water. This is particularly the case for inland populations and for certain segments living along riverbanks or in marginal urban and periurban districts without the availability of running water.

[1] A person is considered "poor" if he or she lives in a household whose standard of living is below the poverty line, with the latter being defined as half the median standard of living. The median standard of living divides the totality of households in a given geographical area into two equal halves. This definition is both monetary and relative, since the poverty line is a function of its position on the income ladder of a set of households. This explains why the poverty line differs from one territory to another and why these lines are calculated separately for the French Overseas Territories and metropolitan France.

[2] Secondary school education (or *deuxième degré*) follows pre-elementary and elementary school (*premier degré*) and is provided in junior high schools and *lycées*.

Demographics, Mortality, and Morbidity

From the 1960s to the 1980s, the population of the French Overseas Departments held stable, despite a high birth rate, due to emigration to metropolitan France where there was a shortage of labor. In the mid-1980s, emigration flows began to slow down, spurring population growth in the French Overseas Departments. Furthermore, the populations of Guadeloupe and, to an even greater extent, French Guiana were boosted by an influx of immigrants. Thus, the population of Guadeloupe doubled in 50 years (it had 229,000 inhabitants in 1954) while that of French Guiana multiplied seven-fold in the same period (from 28,000 in 1954).

From the time of the 1999 census to the end of 2004, the population grew by 4.5% in Martinique and 7.5% in Guadeloupe, whereas in French Guiana it grew by 22.5%. On 1 January 2005, Guadeloupe had the largest population (453,029 inhabitants), followed by Martinique (397,820 inhabitants) and French Guiana (190,842 inhabitants). Given its small land area, Martinique is the most densely populated territory, with 353 inhabitants/km^2 in 2005. That same year, there were 266 inhabitants/km^2 in Guadeloupe, while in French Guiana, despite the relative vastness of its territory, the population density was only 2 inhabitants/km^2.

The population distribution differs from one Department to another. In the Antilles, the population is still young, but aging. With 17% of its population being age 60 or older in 2005, Martinique has the highest share of older adults. In contrast, French Guiana has the youngest population, with 44% being under the age of 20. The population distribution in 1990 and 2005, by age and sex, for French Guiana, Guadeloupe, and Martinique is presented in Figures 1, 2, and 3, respectively.

The population of the French West Indies is mainly the product of intermarriage among the Amerindian, Black, White, and Indian populations that have inhabited them for centuries. Unlike some other Caribbean islands, there are no survivors of an ethnically pure indigenous (Amerindian) population. French Guiana's population is a mosaic of influences. Amerindians were joined by Europeans and the descendants of Black African slaves beginning in the 17th century. In the 19th century, penal colonies and the first gold rush led to an increase in the population. Finally, in the 20th century, there were inflows of Chinese and Lebanese traders, as well as settlement by a community of Hmong farmers from Upper Laos.

In Martinique, the minority population of external origin remains stable at 1% of the total population. It consists mainly of nationals of Haiti and Saint Lucia. In Guadeloupe, immigrants accounted for 5% of the population in the 1999 census, and almost half of them were from Haiti. The Saint-Martin municipality accounts for half of all foreign nationals in Guadeloupe. In French Guiana the largest immigrant contingents are from Suriname (39%), Haiti (30%), and Brazil (15%). Officially, the population of external origin accounts for 33% of the population, but the sheer length of the territorial borders, the ease with which borders defined by the Maroni and Oyapock Rivers may be crossed, and activities such as gold panning all promote clandestine immigration. The number of foreign nationals is underestimated, thus indicating that official figures for the total population are lower than they would be if accurate numbers on this group were available.

FIGURE 1. Population structure, by age and sex, French Guiana, 1990 and 2005.

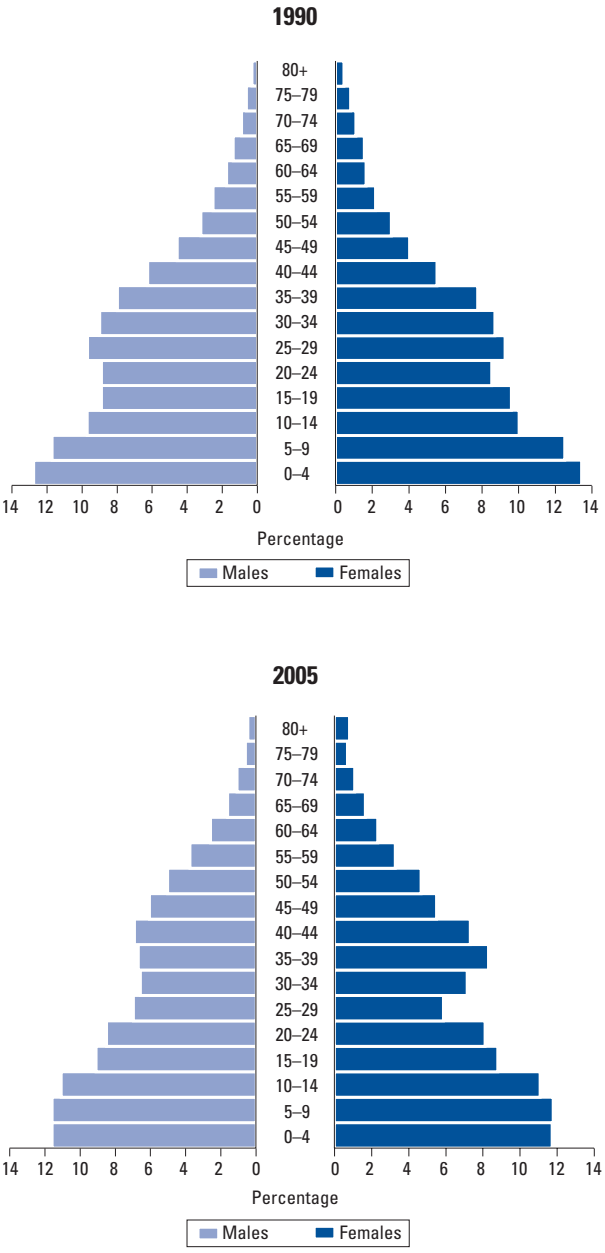
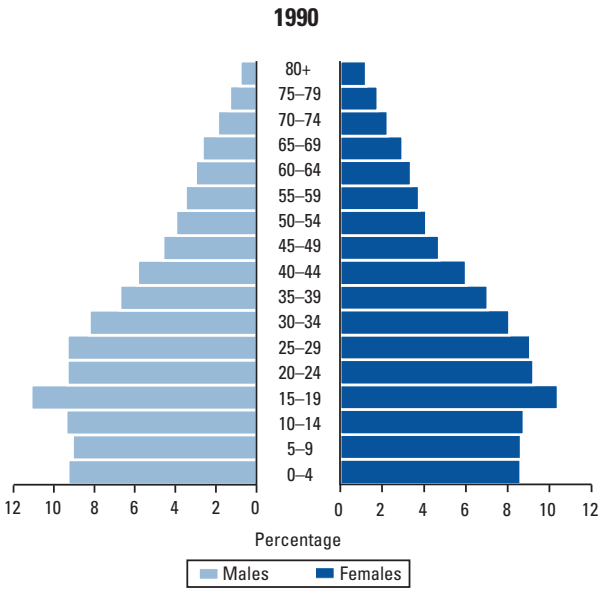


FIGURE 2. Population structure, by age and sex, Guadeloupe, 1990 and 2005.



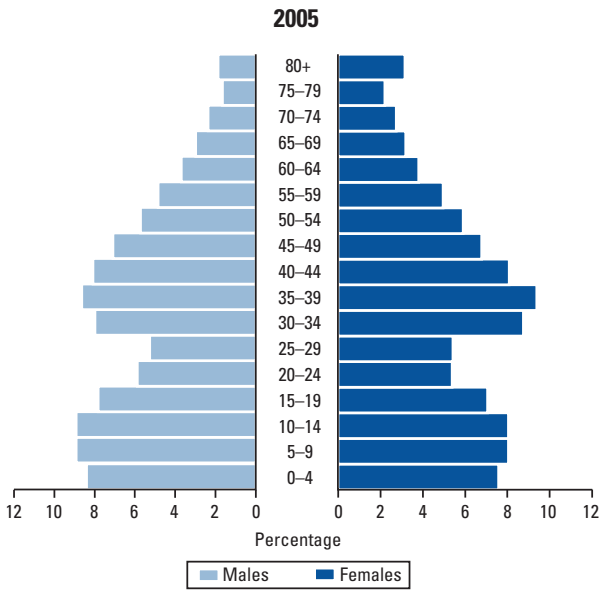
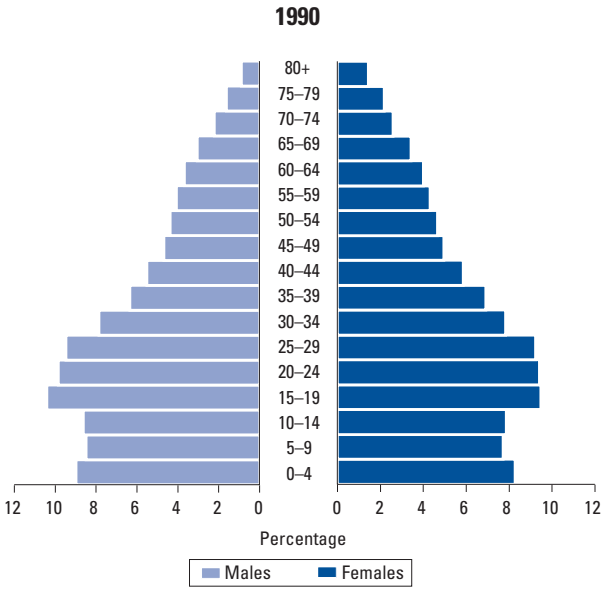
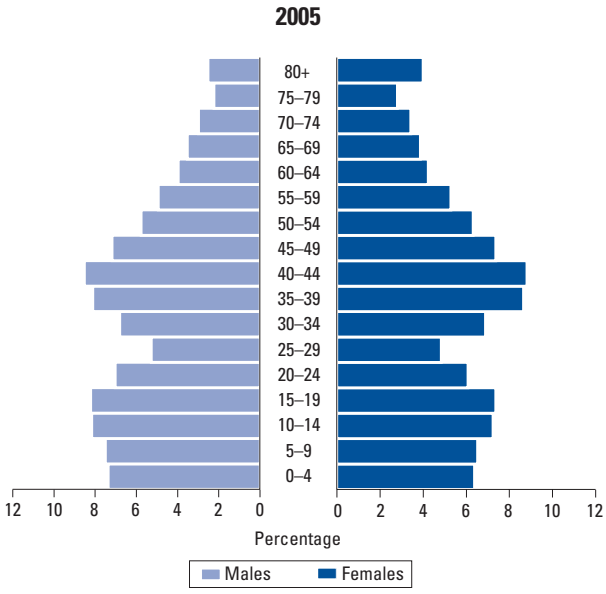


FIGURE 3. Population structure, by age and sex, Martinique, 1990 and 2005.





There are 34 municipalities in Guadeloupe and Martinique and 22 in French Guiana. In Guadeloupe, over 40% of the population lives in Pointe-à-Pitre, the economic capital located on Grande-Terre, while only 10% live in the administrative center of Basse-Terre on the island of the same name. In Martinique, more than one-third of the population lives in the administrative center, Fort-de-France. In French Guiana, most of the population lives along the coast; the dense rainforest cover renders inland municipalities more difficult to reach.

In Guadeloupe and Martinique, health conditions generally reflect those of developed countries. The situation in French Guiana is more mixed, however, with some indicators resembling those of developed countries, such as chronic disease incidence and relative wealth, while at the same time exhibiting other char-

acteristics typical of developing countries, such as a young population, high perinatal mortality, and a high incidence of infectious and parasitic diseases. Obstacles in French Guiana include its geography (sizeable remote areas and the challenges these pose for timely communication and accessibility), its sociodemographic indicators (a rapidly growing population, fragile economy, and migration flows), and its lack of human resources and infrastructure (too few health professionals and a chronic shortage of medical equipment). Despite these challenges, the health status of the population has improved over the past 30 years. In Guadeloupe, the principal indicators show an improvement over the past 15 years, with a decline in infant mortality, an overall improvement in the standard of living, and progress in medical care and the development of health services delivery. Despite progress in these areas, certain health problems have proven to be especially intractable in Guadeloupe and the other two French Overseas Departments, including high blood pressure, stroke, diabetes, mental health problems (including alcohol and crack addiction), prostate cancer, and HIV infection. At the same time, all three regions continue to record troubling perinatal indicators, and Martinique and Guadeloupe, with older populations than that of French Guiana, are increasingly facing public health issues related to aging.

Life expectancy at birth is highest in Martinique. In 2003, it was 81.7 years for women and 75.9 years for men. Guadeloupe follows closely behind, with 81.6 years for women and 75.3 years for men. Life expectancy was lowest in French Guiana, with 79.7 years for women and 71.3 years for men.

The above figures indicate progress being made since 1990, when life expectancy at birth was 79.6 years for women and 73.3 years for men in Martinique; 78.5 years for women and 70.8 years for men in Guadeloupe; and 76.1 years for women and 67.2 years for men in French Guiana.

In 2004, the overall birth rate was 13.3 births per 1,000 inhabitants in Martinique, 16.2 in Guadeloupe, and 28.8 in French Guiana. Women of childbearing age (15–49 years old) accounted for 50% of the female population in the Antilles and 52% of the female population in French Guiana. The fertility rate was 53 births per 1,000 women of childbearing age in Martinique and 62 in Guadeloupe, but it was twice as high in French Guiana, with 113 in 2004. The estimated fertility rate was approximately 2 children per woman in the Antilles, and nearly 4 children per woman in French Guiana.

The aging of the population and a decline in the birth rate explain why the actual number of births is declining in the Antilles, whereas in French Guiana there has been a sharp increase. In 2004, there were 7,273 births reported in Guadeloupe, 5,255 in Martinique, and 5,312 in French Guiana.

As expected, because of the aging of the population, both the number of deaths and the total morality rate are increasing in the Antilles. For instance, in Martinique, deaths averaged 2,200 to 2,300 per year during the 1990s, whereas the number is now 2,700.

Nearly 6,000 deaths are registered each year, with 52% of these occurring among males and 48% among females. The principal mortality cause in all three Departments is cardiovascular diseases, followed by neoplasms and external causes of trauma. In French Guiana, infectious and parasitic diseases rank fourth, while in the Antilles, endocrine, nutritional, and metabolic disorders—primarily diabetes mellitus—are the next leading cause of death.

HEALTH OF POPULATION GROUPS

Children under 1 Year Old

Although there have been health improvements achieved among this age group (for instance, with respect to infant mortality), perinatal indicators in the French Overseas Departments are still a cause for concern and remain inferior to those recorded for metropolitan France. While slight improvements have been recorded in the Antilles, progress in French Guiana has been both slow and intermittent.

In 2003, the infant mortality rate was 6.1 deaths per 1,000 live births in Martinique, 7.9 per 1,000 in Guadeloupe, and 10.4 per 1,000 in French Guiana. In 1990, the rates had been 7.2, 10.2, and 18.1, respectively. The steady decline witnessed in the infant mortality rate over the past several decades is a consequence of an improved standard of living, medical advances, better access to health care, and the organization of prevention campaigns.

The pattern for perinatal mortality for the Antilles and French Guiana is similar to that for infant mortality. In Martinique, perinatal mortality increased from 14.6 per 1,000 total births in 2000 to 19 in 2002. In 2002, more than 16 children per 1,000 total births were stillborn. Early neonatal deaths have declined: 3 out of every 1,000 babies born alive died during their first week of life in 2002, compared to 4.6 in 2000. The persistence of a high stillbirth rate is probably due to poor monitoring of pregnancy, while the death rate for newborn babies has decreased due to better sanitation and medical advances. In Guadeloupe, perinatal mortality declined up to 1992, then rose again because of the increase in stillbirths. The trend has fluctuated from year to year, reaching 19.2 deaths per 1,000 total births in 2002. Even though the overall trend with this indicator over the past 20 years has been satisfactory, it is worth emphasizing that the downward trend still needs to be consolidated. According to health professionals, the two leading causes of perinatal mortality have been maternal-fetal infections and maternal high blood pressure.

In French Guiana, the perinatal mortality rate declined throughout the 1990s from 25.8 per 1,000 total births in 1990 to 16.1 in 2000, after which it held steady between 17 and 18 in the early 2000s. This decline is explained mainly by the drop in the stillbirth rate, from 20 per 1,000 total births in 1990 to just over 13 per 1,000 in 2002. The early neonatal mortality rate, on the other hand, has hardly declined at all. In 2002, it stood at the

same level as in 1990 (approximately 6 deaths per 1,000 live births) and had even increased in the mid-1990s, peaking at 10.8 in 1995. In French Guiana, the distance from health centers for some women about to give birth hampers their ability to seek adequate and regular prenatal care. Table 1 presents period-specific mortality rates for the under-1 age group for the 2001–2003 period.

In the French Overseas Departments, 10% to 12% of all births are premature. The two leading causes of maternal death are hemorrhage in childbirth and maternal high blood pressure.

Age Group 1–14 Years Old

This age group averaged 78 deaths a year during the 2000–2002 period, or approximately 1% of all deaths. These deaths were mainly the result of trauma or poisoning in all three regions, representing 40% of all deaths in this age group. In French Guiana, a third of all deaths were due to trauma or poisoning, followed by 17% due to infectious and parasitic diseases. In Guadeloupe and Martinique, 40% of all deaths were due to trauma or poisoning, followed by 10% which were due to diseases of the respiratory system.

Age Group 15–34 Years Old

In 2000–2002, an average of 320 deaths per year occurred in this age group, or 5% of all deaths. Traffic accidents and other forms of violence were the leading causes in all three French Overseas Departments. In Guadeloupe and Martinique, these were followed by neoplasms and diseases of the circulatory system, while in French Guiana a considerable number of deaths were caused by infectious and parasitic diseases. The leading chronic conditions among both sexes in this age group are mental disorders, diabetes mellitus, and cardiovascular diseases (Table 2).

TABLE 1. Mean annual period-specific mortality rates[a] for the population under age 1, French Overseas Departments, 2001–2003.

Rates	Guadeloupe	French Guiana	Martinique
Stillbirth	15.6	12.0	15.5
Perinatal mortality	18.4	17.3	18.8
Early neonatal mortality	2.9	5.3	3.3
Late neonatal mortality	1.8	2.2	1.1
Post-neonatal mortality	2.4	4.2	2.2

[a]For stillbirth and perinatal mortality rates, per 1,000 total births; for all other rates, per 1,000 live births.

Source: French National Institute of Statistics and Economic Studies (INSEE).

TABLE 2. Leading causes of admission to long-term care for the population aged 15–34 years, by sex, French Overseas Departments, 2003.

MEN	Number	%
Mental disorders	252	44
Diabetes mellitus, types 1 and 2	49	8
Cardiovascular diseases	46	8
Other	229	40
Total	**576**	**100**

WOMEN	Number	%
Mental disorders	119	20
Diabetes mellitus, types 1 and 2	78	13
Cardiovascular diseases	58	10
Other	342	57
Total	**597**	**100**

Source: CNAMTS and CANAM study, World Health Organization.

While the average age of mothers at first birth is increasing in Martinique and Guadeloupe, the number of teenage pregnancies is very high in French Guiana; in 2002, one birth in every six was by an adolescent mother. At 52 births per 1,000 women, the fertility rate in French Guiana is higher than that for 19-year-olds in Guadeloupe and Martinique. Fertility for women in French Guiana increases with every year of age thereafter, until peaking at 151 births per 1,000 women at age 19.

Nearly 9,000 elective abortions were performed in 2004 in the three French Overseas Departments: 40 per 100 conceptions in Guadeloupe, 32 in Martinique, and 24 in French Guiana.

Adults 35–64 Years Old

During the 2000–2002 period, an average of 1,450 deaths per year occurred within this age group, or 25% of all deaths. Neoplasms and cardiovascular diseases were the leading causes of mortality for the three French Overseas Departments, followed by traffic accidents and other forms of violence in both Guadeloupe and Martinique. Among both women and men in the 35–64-year-old age group, the leading chronic conditions are cardiovascular diseases, diabetes mellitus, and neoplasms (Table 3).

Older Adults 65 Years Old and Older

Long considered islands with young populations, Guadeloupe, and to an even greater extent Martinique, are now increasingly facing issues associated with an aging population. The population size of those aged 65 years old and older in Martinique almost tripled between the 1967 and 1999 censuses, increasing from 16,000 to 47,000. In 2005, this population was estimated at 52,645, or 13% of the total population. In Guadeloupe, this age group consisted of 50,500 persons, or 11% of the total population in 2005. At the other extreme, for French Guiana the proportion

TABLE 3. Leading causes of admission to long-term care for the population aged 35–64 years, by sex, French Overseas Departments, 2003.

MEN	Number	%
Diabetes mellitus, types 1 and 2	1,292	36
Cardiovascular diseases	973	27
Neoplasms	504	14
Other	805	23
Total	**3,574**	**100**
WOMEN	Number	%
Cardiovascular diseases	1,646	38
Diabetes mellitus, types 1 and 2	1,246	28
Neoplasms	536	12
Other	976	22
Total	**4,404**	**100**

Source: CNAMTS and CANAM study, World Health Organization.

TABLE 4. Leading causes of admission to long-term care for the population aged 65 years and older, by sex, French Overseas Departments, 2003.

MEN	Number	%
Cardiovascular diseases	1,411	41
Neoplasms	916	27
Diabetes mellitus, types 1 and 2	536	16
Other	560	16
Total	**3,423**	**100**
WOMEN	Number	%
Cardiovascular diseases	2,080	52
Diabetes mellitus, types 1 and 2	872	22
Mental disorders	395	10
Other	648	16
Total	**3,995**	**100**

Source: CNAMTS and CANAM study, World Health Organization.

of those aged 65 and older represents only 4% of the population, or 7,500 people.

The incidence of major health problems is highest after age 65 and leads to more frequent care-seeking for health issues. The frequency of comorbidities increases, such as high blood pressure with diabetes, significantly impacting on the quality of life. For the group 85 years of age and older, the prevalence of physical and/or psychological dependence rapidly increases.

After age 65, the first two leading causes of death are diseases of the circulatory system and neoplasms, respectively. In Guadeloupe and French Guiana, endocrine, nutritional, and metabolic disorders—primarily diabetes mellitus—are the third leading cause of death. In Martinique, the third leading cause of death is respiratory diseases. For males in this age group, the three leading chronic conditions requiring long-term care are cardiovascular diseases, neoplasms, and diabetes mellitus, respectively. In women, the three leading chronic diseases requiring long-term care are cardiovascular diseases, diabetes mellitus, and mental disorders, including dementia and Alzheimer's disease, respectively (Table 4).

The Family

Household size has continued to decline during the review period; while the decline is less marked in French Guiana, household size in the case of Guadeloupe and Martinique currently stands at fewer than three persons per household. Family structure in the French Overseas Departments also shows a pronounced shift toward single-parent households, with approximately 40% of families in Guadeloupe and Martinique and one-third in French Guiana being headed by a single parent. In nine out of ten cases, these households are headed by a woman, reflecting both tradition (matriarchal societies) and more recent social trends (less permanent unions).

Persons with Disabilities

In each of the three French Overseas Departments, the Departmental Commission on Special Education is responsible for reviewing all requests for placement of children under the age of 20 with disabilities, as well as requests for financial assistance by their families. As of 31 December 2005, there were 2,673 children benefiting from the special education allowance, which means that there were eight beneficiaries for every 1,000 young persons under the age of 20.

For adults over the age of 20 with disabilities, the Technical Commission for the Guidance and Professional Reclassification of Disabled Persons is the body responsible for assigning individual disabled status, providing employment guidance, reviewing the allocation of financial assistance, and directing candidates to specialized institutions. In the French Overseas Departments, as of 31 December 2005, there were 16,031 adult beneficiaries of the disabilities allowance, or 29 beneficiaries for every 1,000 individuals between the ages of 20 and 59 years.

For the most part, adults with disabilities live with their families or in their own homes. Very few are cared for in specialized institutions because of limited space. There is more specialized institutional care available for children.

HEALTH CONDITIONS AND PROBLEMS

Communicable Diseases

Vector-borne Diseases

Martinique and Guadeloupe report an annual average of 10 imported cases of **malaria**, while in French Guiana the disease is much more widespread. The annual number of cases in the

French Guiana provinces with endemic malaria held stable at approximately 4,000–5,000 reported cases until 1999. That number declined to approximately 3,000 cases each in 2002 and 2003, but then increased again in 2005, with 4,414 reported cases.

Since the end of 2001, along the coastal areas of French Guiana there have been troubling increases in the number of malaria cases in the Régina and Cacao municipalities and the more interior Camopi municipality. The uncontrolled development of gold mining activities and constant migration and mobility among the population over vast remote areas make malaria control a particularly daunting task in French Guiana.

There were no reported cases of yellow fever in French Guiana, Guadeloupe, and Martinique during the 2001–2005 period. All travelers to French Guiana are required to provide proof of yellow fever vaccination.

In French Guiana, there were three **dengue** epidemics (in 2001, 2002, and 2004–2005), all of them associated with serotype 3. A new dengue serotype 2 epidemic that began at the end of 2005 affected more than 15,000 people and was responsible for four registered deaths between December 2005 and July 2006. Two dengue epidemics broke out in Guadeloupe and Martinique in 2001 and 2005. The first was due to serotype 3 and the second mainly to serotype 4. In Martinique, serotype 2, which is frequently associated with severe forms of dengue, was also isolated in the course of this epidemic. In Martinique, the 2001 epidemic is estimated to have affected approximately 25,000 people, leading to 400 hospitalizations and four deaths. Some 14,500 people were affected in 2005 (4% of the island's population), with 200 hospitalizations and four deaths. In Guadeloupe, nearly 9,000 people are estimated to have consulted a town doctor due to suspected dengue during the 2005 epidemic.

Réunion, the French Overseas Department located in the Indian Ocean, was stricken by a widespread **Chikungunya fever** epidemic in late 2005 and early 2006. Three confirmed cases of Chikungunya fever imported from Réunion were detected in Martinique in the first quarter of 2006, as well as three cases in French Guiana and one in Guadeloupe. To prevent the disease's establishment in the French Overseas Departments, health authorities activated surveillance and early warning and response systems for all travelers returning from Réunion and other Indian Ocean islands and employed mosquito eradication programs**.**

Vaccine-preventable Diseases

Many years have passed since the last cases of **acute flaccid paralysis**, **poliomyelitis**, and **diphtheria** were reported in the French Overseas Departments. In contrast, epidemics or isolated cases of **whooping cough** are regularly reported. There have been no cases of neonatal **tetanus** since the late 1970s. A few cases are found in older adults whose immunity through vaccination has weakened and who were never revaccinated. Very few cases were reported between 1993 and 2003: nine in Guadeloupe, five in Martinique, and none in French Guiana. However, in 2005, French Guiana reported two cases. During the 2001–2005 period, only one suspected case of **measles** was reported by the sentinel network in Martinique, and none were reported in Guadeloupe. In French Guiana, measles surveillance has been coupled with dengue surveillance since 2001. All suspected cases of dengue with a rash are tested for measles and German measles immunoglobulin M (IgM). No case has tested positive to date. France has embarked on a policy of eliminating measles and congenital rubella syndrome by 2010.

While vaccination coverage levels among the young in the Antilles are generally satisfactory, the situation is less positive in French Guiana, with lower levels in the isolated interior and higher levels in the developed coastal areas. In 2000, MMR vaccine coverage along the coast at 24 months of age was 69%, compared to coverage levels ranging from 43% to 61% in the country's interior. DPT 3 vaccine coverage at one year of age was 68% on the coast, compared to a range of 9%–60% for the interior.

Intestinal Infectious Diseases

There is a year-round high incidence of viral **gastroenteritis** epidemics, and these represent the leading cause of **diarrhea** in the Antilles. In French Guiana, the distribution of gastroenteritis is uneven due to water supply contamination for certain population segments. The incidence of enteric diseases exceeds 10% in some inland municipalities.

Every year an average of 10 outbreaks of food poisoning are recorded in each of the three French Overseas Departments. A few cases of ciguatera poisoning are regularly reported in the Antilles, and in June 2006, two ciguatera outbreaks were reported; one occurred in Guadeloupe and the other in Martinique.

Due to improved hygiene and prevention and detection activities led by local health authorities, there has been a sharp decline in the number of cases of **ancylostomiasis** and **strongyloidiasis** in the Antilles over the past 20 years.

Chronic Communicable Diseases

In 2004, 30 cases of **tuberculosis** were reported in Guadeloupe, 17 in Martinique, and 51 in French Guiana.

Hansen's disease remains endemic in the French Overseas Departments but the incidence is declining. There are fewer than 10 cases reported annually in each of the three regions. In Guadeloupe, the number of cases detected fell from 14 in 1997 to 9 in 2004. In French Guiana, the incidence rate of 3.29 cases per 10,000 inhabitants in 1984 declined to 0.57 case per 10,000 inhabitants in 2001, representing approximately 10 new cases per year. Each of the French Overseas Departments has a referral center for Hansen's disease that screens patients, offers consultations with a physician and social worker, and conducts home visits.

Sickle cell disease is the leading genetic disease in the French Antilles. Newborns are routinely screened, and on average, one newborn in 300 is born each year with one sickle cell trait lead-

Changes in French Public Health Policy Extend To The Overseas Departments

In 2004, France's legislature enacted three laws—one on local freedoms and responsibilities, one on public health policy, and one on health insurance—that radically changed the country's health governance. Subsequently, French Guiana, Guadeloupe, and Martinique, which as overseas departments of France have the same political and administrative structure as the rest of the country, each drew up a regional public health plan for 2006–2010. The plans share the overall objectives of preventing avoidable deaths, lowering the incidence of diseases and disabilities, reducing inequities by addressing the social determinants of health—education, nutrition, access to health services, and environmental health—and enlisting the public's engagement in public health. At the heart of each plan is a commitment to achieve health for all the French citizens living in the departments in the Americas.

ing to a major sickle cell syndrome (SS, SC, or S/b thal). Guadeloupe and Martinique have specialized facilities that provide medical care and offer preventive activities. As a result of improved management, sickle cell disease now poses problems similar to those of other chronic diseases, with increased numbers of active patients, longer life expectancy, and complications that accompany aging.

Acute Respiratory Infections

During the winter season, the French Overseas Departments regularly experience outbreaks of **bronchiolitis**. Based on a survey conducted in Martinique from November 2005 to February 2006, it was estimated that between 115 and 230 newborns or infants were affected by bronchiolitis each week.

From 1998 to 2003, three cases of **Legionnaires' disease** were reported in Guadeloupe, and one each in Martinique and French Guiana.

HIV/AIDS and Other Sexually Transmitted Infections

HIV/AIDS is more prevalent in French Guiana and Saint-Martin than on the islands of Guadeloupe and Martinique. During the 2001–2005 review period, the stigmatization of those with HIV-positive status, as well as discrimination and other forms of exclusion, remained major obstacles for early screening and detection, access to treatment and care, and thus control of the infection. The situation is more precarious for vulnerable groups such as injection drug users, commercial sex workers, and illegal immigrants.

From the start of the epidemic through 30 September 2005, 2,885 cases of HIV/AIDS had been reported in the French Overseas Departments, with 1,074 being from French Guiana, 1,175 from Guadeloupe, and 636 from Martinique. Women accounted for 35% of the cases, and the population aged 50 and older accounted for 20% of all cases. In 71% of the cases, the infection was contracted through heterosexual contact. Since the start of the epidemic, 1,492 people have died, representing a case fatality rate of 52%. Due to the availability of antiretroviral drugs, the AIDS death rate remained relatively stable during the 2001–2005 period.

Following the introduction of the triple drug regimen in 1996, the prevalence of people living with HIV has increased and the progression to full-blown AIDS is primarily among HIV seroconverters not receiving treatment. In March 2003, the reporting of HIV diagnoses became mandatory. This notification affords better insight into the HIV-positive population and facilitates the tracking of HIV infections. Between March 2003 and September 2005, 735 newly detected cases of HIV seropositivity were reported (343 in French Guiana, 239 in Guadeloupe, and 153 in Martinique). Challenges for health care personnel in the provision of effective HIV/AIDS care in the French Overseas Departments include overcoming language barriers and social, cultural, and religious restraints among those seeking treatment, as well as dealing with discrimination and stigmatization issues. Monitoring and evaluation were implemented in 2002 to find and apply solutions to these problems.

Treatment for persons living with HIV is handled by HIV information and care centers (*Centres d'informations and de soins de l'immunodéficience humaine*). There are seven patient centers: one in Fort-de-France for Martinique, three in Guadeloupe (Pointe-à-Pitre, Basse-Terre, and Marigot on Saint-Martin), and three in French Guiana (Cayenne, Kourou, and Saint-Laurent-du-Maroni). Between January and December 2004, the centers monitored and provided services to 2,862 individuals with HIV infection in the French Overseas Departments. Female patients are proportionately overrepresented in the Saint-Martin and French Guiana centers, with a male-to-female ratio of 0.7 and 0.8, respectively, while in Guadeloupe and Martinique, the male-to-female ratio is 1.2 and 1.6, respectively. In more than 90% of cases, transmission is via sexual contact, primarily heterosexual. In Martinique, sexual relations between men account for 22% of all transmissions. There is little or no transmission via injecting drug use. Patients who are non-French nationals are especially numerous in Saint-Martin and French Guiana; French patients account for just 24% and 20% of active cases visiting these clin-

ics, respectively, while in Guadeloupe and Martinique the proportion is 69% and 89%, respectively. Seventy-five percent of the patients monitored received antiretroviral drugs in 2004.

HIV screening is carried out at medical laboratories and screening centers; this service is anonymous and free of charge. There have been renewed outbreaks of syphilis, first in Guadeloupe in 2001 and then in Martinique in 2004. In Guadeloupe, a cluster of 13 cases of primary and secondary syphilis was reported at the University Hospital Center in Pointe-à-Pitre in early 2001. Among a higher-risk, mostly unemployed population, a survey identified 38 cases of syphilis in 2001. Coinfection with HIV was found in approximately a quarter of the cases. The 2004 epidemic in Martinique largely affected persons living with HIV. Eight out of 14 patients were men who have sex with men. These 14 cases of recent syphilis were diagnosed at the University Hospital Center in Fort-de-France between January 2004 and September 2005, and 11 of them were diagnosed between April and September 2005.

Zoonoses

Leptospirosis is a commonly reported disease in Guadeloupe and Martinique. The incidence of confirmed leptospirosis cases is much higher in Guadeloupe than Martinique. In Guadeloupe, the incidence was 16.5 confirmed cases per 100,000 inhabitants in 2003, with the incidence of confirmed cases peaking in January and December. In 2004, the incidence rate was 21 cases per 100,000 inhabitants in Guadeloupe. In Martinique, leptospirosis incidence peaked in July and October–December in both 2003 and 2004. For those two years, the annual incidence rate was 7.3 and 6.9 per 100,000 inhabitants, respectively. In French Guiana, leptospirosis cases have been reported regularly over the past 30 years. The main serogroups found in both animals and humans in the Antilles are *icterohaemorrhagiae* and *ballum* (or *castellonis*). However, some 10 other serogroups are also found, including *australis*, *cynopteri*, *canicola*, *panama*, *sejroë*, and *grippotyphosa*.

There were no suspected cases of **avian influenza** in the French Overseas Departments during the 2001–2005 period.

Chagas' disease is not found in Guadeloupe or Martinique. Between 1939 and 1989, only nine cases of Chagas' disease were reported in French Guiana. Between 1990 and 2004, 15 clinical cases of Chagas' disease, including six acute and eight chronic cases, were diagnosed in French Guiana, with two deaths attributed to the disease. Infection in the areas around the Maroni and Oyapock Rivers was the source of nine indigenous cases, while some imported cases have been detected in the coastal region. In late 2005, a cluster of eight confirmed cases, one probable case, and one suspected case of acute Chagas' disease occurred in the Iracoubo municipality in French Guiana.

Deforestation, uncontrolled migration, and importation of the Chagas vector have increased the risk of disease in French Guiana.

The distribution of **schistomiasis** in the French Overseas Departments is uneven. Surveys conducted between 2001 and 2005 in Martinique's watercress fields and aquatic environments confirmed the successful eradication of the *B. glabrata* snail, the principal intermediate host for schistosomiasis. In the past few years, rare residual cases of schistomiasis have been detected. The absence of active transmission of the parasite for more than 20 years and the elimination of the principal intermediate snail host, which was confirmed in 2001, suggest that as of 2005 schistosomiasis was eradicated in Martinique.

In Guadeloupe, the swamps are home to large populations of black rats heavily infested with schistosomiasis, supporting an endemic of the parasite. Although these areas constitute a danger for cattle breeders and farmers who frequent them, the current extent of transmission in humans remains unknown.

In French Guiana, only imported cases of schistosomosis have been detected. Active transmission of the parasite has never been confirmed. The acidic waters of French Guiana are highly unfavorable habitats for the intermediate snail hosts of schistosomiaisis.

NONCOMMUNICABLE DISEASES

Metabolic and Nutritional Diseases

Social and economic improvements, changes in lifestyle, and the growing availability of fast foods have altered dietary habits in the French Overseas Territories, and in recent years diseases linked with poor dietary habits and overeating, such as obesity, diabetes, and hypercholesterolemia, have garnered increasing importance as public health concerns.

Approximately 260 deaths due to **diabetes** are registered in the French Overseas Departments each year, representing some 4%– 5% of all deaths. The majority of diabetic deaths occur among older women.

According to a survey conducted in Martinique in late 2003 and early 2004 among those aged 16 or older, the prevalence of reported diabetes was 6.5% (8.1% for women and 4.7% for men). This prevalence increased with age, being 1.7% in the 16–44-year-old age group, 10% in the group aged 45–64, and 18% in those aged 65 or older.

In Guadeloupe and Martinique, there is a high number of chronic renal insufficiency cases, with an estimated incidence of 200 cases per one million inhabitants in Guadeloupe. Diabetes is the primary cause for dialysis (one-third of all those on dialysis are diabetics), the second leading cause of blindness, and the third leading cause for amputation. Since late 2004, kidney transplants on patients with renal insufficiency in the three French Overseas Departments have been offered in Guadeloupe. Approximately 50 transplants were performed in the first 18 months following the availability of this new service.

The proportion of the population that is **overweight** or **obese** is growing in Guadeloupe and Martinique. A 2003–2004 survey revealed that almost one child in every four (24%) in Martinique

is affected by either overweight (16%) or obesity (8%). In the case of adults, these conditions are 33% and 20%, respectively. Obesity is more common among women (26%) than men (14%). Findings from surveys in Guadeloupe have yielded similar results. Studies in schools conducted in all three of the French Overseas Departments indicate that far fewer children in French Guiana suffer from overweight than in Guadeloupe and Martinique.

Cardiovascular Diseases

Cardiovascular diseases are the leading cause of death in the French Overseas Departments, accounting for 1,800 deaths per year, or 30% of all deaths. The figures are higher for women than men. The share of cardiovascular diseases in overall mortality increases with age, becoming particularly high after age 65.

Compared to regions in metropolitan France, the French Overseas Departments are characterized by a higher incidence of **cerebrovascular diseases**, while **ischemic heart diseases** are less common. Among diseases covered for long-term care, cardiovascular diseases account for 38% of annual admissions. Most cases involve hypertensive and cerebrovascular diseases.

Hypertension is common among the population of the French Overseas Departments. According to a 2003–2004 survey, the incidence of high blood pressure in the population aged 16 or older is 22% (20% among men and 25% among women). The incidence increases with age, from 5% in the 25–34-year-old age group to 65% among persons aged 65 or older. Of those diagnosed with high blood pressure, 73% were receiving treatment at the time of the survey. The percentage of those receiving treatment is lower for men (55%) than it is for women (84%).

Patients with cardiovascular diseases are likely to suffer from such comorbidities as high blood pressure, diabetes, and high cholesterol, leading to serious complications that include stroke, amputation, renal insufficiency, and blindness.

Malignant Neoplasms

On average, slightly more than 1,300 deaths from malignant neoplasms are registered annually in the French Overseas Departments. This cause accounts for one death in every four among men and one in every five among women. After age 65, neoplasms account for almost one death in every four.

In men, the most common forms of cancer are prostate cancer, followed by stomach cancer and cancer of the lips, mouth, and pharynx. Among women, the most common cancers are breast cancer, followed by colon or rectal cancer and cervical cancer.

Systematic screening for breast cancer has been in place in all three French Overseas Departments since 2005. Martinique provides cervical cancer screening as well. However, the fact that Guadeloupe is an archipelago whose population is scattered across several islands and that many of French Guiana's inland municipalities are isolated presents formidable obstacles to providing universal cancer screening and health care.

Other Health Problems or Issues

Violence and Other External Causes

There were 954 road traffic accidents in Guadeloupe in 2003; 1,383 persons suffered injuries, and 83 in this group died. In Martinique every year there are approximately 700 traffic accidents, leaving some 800 injured and 50 dead. In French Guiana, there are nearly 800 accidents a year, with about 1,000 persons injuried. The annual number of deaths ranges between 30 and 40.

Mental Health

A survey conducted among the general population of Guadeloupe and Martinique in the late 1990s found that the most frequent pathologies were depression, suicidal tendencies, and general anxiety. The leading causes of hospitalization were schizophrenia, psychoses with delirium, and addiction-related disorders.

Suicide and suicidal behavior are addressed in a national plan covering each region in France. In the French Overseas Departments, the average annual number of deaths from suicide is 85, and the majority of these occur among men and the population over age 35. While the annual number of deaths from suicide is under surveillance, there is no periodic collection of data on attempted suicides. However, in a 2000 mental health survey conducted in Martinique, 4.1% of adults reported that they had attempted suicide at least once in their lives. In a school survey carried out in Martinique in 2003–2004, 13% of young people aged 14–19 reported thinking fairly often or very often about killing themselves over the previous 12 months, and 11% reported having attempted suicide once or more than once during their lifetime. More girls (15%) than boys (6%) had attempted suicide one or more times. Of those who had attempted suicide one or more times, only 15% had been hospitalized for that reason.

Addictions

Guadeloupe and Martinique are traditional producers of rum, and while consumption of this product may be declining, consumption of other alcoholic beverages such as wine, champagne, whisky, and beer is on the rise.

A survey of the patients of general practitioners conducted in late 2000 and early 2001 found that out of the 26 French regions, Martinique ranked third, French Guiana fourth, and Guadeloupe fifth in prevalence of alcoholism among men. Surveys conducted periodically in Martinique and French Guiana also point to a growing prevalence of alcohol consumption by the school-age population.

By contrast, tobacco use in the French Overseas Departments is relatively low; this translates into reduced morbidity and mortality from respiratory illnesses and cardiovascular diseases related to this risk factor. According to a 2003–2004 survey, 87% of those aged 16 or older in Martinique do not smoke; of this group, 77% are nonsmokers and 10% are former smokers. Ten percent of those surveyed said they were habitual smokers, and 3% reported

being occasional smokers. More men than women were smokers, and the largest proportion of current smokers were between the ages of 25 and 34 years.

Illegal substances abuse in the French Overseas Departments is characterized by predominantly high rates of cannabis consumption and, since the mid-1980s, an increasing prevalence of crack cocaine usage. The surge in crack use has had a significant impact on society in the French Overseas Departments, in terms of increasing criminal activity and the likelihood that persons using crack will become homeless.

Among schoolchildren, cannabis is the most frequently used substance; in fact, there is very little use of other illegal substances. There are, however, age and sex-related differences, such as increased experimentation and/or more regular use as children grow older and greater use by boys. According to the findings of a survey regularly conducted among 18-year-olds, as of 2003 regular use of cannabis appeared to be slightly more frequent among young people in Guadeloupe and French Guiana (7% and 6%, respectively) than in Martinique (3%). To address the rising use of cannabis and identify interventions better tailored to youth, cannabis consultations were organized in each of the French Overseas Departments in 2005.

The majority of those with an addiction to illicit substances are users of crack cocaine, male, and between the ages of 25 and 39 years. Addictions are among the priority health concerns in each of the French Overseas Departments.

Environmental Pollution

Two leading agencies are responsible for environmental health concerns in the French Overseas Departments, the *Cellule Interrégionale d'Epidémiologie d'Intervention Antilles-Guyane* (Antilles-French Guiana Interregional Epidemiology Unit), known as CIRE and which primarily directs interventions and responses to address environmental threats to health, and the French National Health and Medical Research Institute, which focuses on conducting research addressing these issues.

Protecting the population's health from contamination of foodstuffs is a priority. In 2002–2003, the French Agency for Food Safety (*Agence Française de Sécurité Sanitaire des Aliments*, or AFSSA) was directed by the ministries responsible for agriculture and fisheries, regulations related to consumption, and health to assess the harmful effects to health of exposure to the organochlorine pesticide chlordecone in Martinique. The foods found likely to contribute to chronic chlordecone exposure were commonly consumed and included taro, sweet potatoes, yams, cucumbers, carrots, tomatoes, melons, and chicken skin.

Based on AFSSA survey data and studies, 3% of Martinique's population, or some 12,700 individuals, showed exposure levels to this pesticide in excess of the established safety benchmark value for repeat exposure. Given these results, a pesticide exposure prevention program is currently being developed.

Other studies have been conducted or are under way in Guadeloupe and Martinique to examine the health risks posed by the presence of organochlorine pollutants in the environment and associated occupational risks. These studies are examining the association of pesticide exposure with male fertility, prenatal and postnatal development, and prostate cancer.

One of the studies examining chlordecone exposure among pregnant women in Guadeloupe detected chlordecone in 90% of blood samples taken from the mother and the umbilical cord, in 100% of abdominal fat samples taken from the mother, and in 40% of breast milk samples taken within 72 hours of delivery.

Studies from the 1990s established that mercury used in gold panning in the interior of French Guiana was contaminating river fish which in turn were being consumed by the population. Some interior Amerindian populations, among whom consumption of river fish is high, showed high levels of mercury exposure. Further studies of mercury exposure by the Antilles-French Guiana Interregional Epidemiology Unit (CIRE) in 2001, 2002, and 2004 confirmed that the most exposed population groups were those living along the upper reaches of the Maroni and Oyapock Rivers whose diet was largely based on the consumption of fish. A 1997 survey revealed that 57% of women of childbearing age from the interior area of Haut Maroni exceeded established safety limits of mercury, while a 2004 survey found 8%–21% of women living in villages along the Oyapack River to similarly have reached unsafe levels.

RESPONSE OF THE HEALTH SECTOR

Health Policies and Plans

Metropolitan France has 22 regions and 96 departments (*départements*), all of which have the same status. Overseas France, which was restructured in 2003, is legislatively split into two distinct entities: (1) the four overseas departments (*Départements d'Outre-Mer*) created in 1946 (Martinique, French Guiana, Guadeloupe, and Réunion), which are subject to the same legislature as the *départements métropolitains*, and (2) the other partially autonomous overseas *collectivités territoriales* (e.g., New Caledonia, French Polynesia), which are subject to special legislative regimes.

Each French Overseas Department is an administrative region that has two authorities, each with its own assembly elected by popular vote: the General Council (*Conseil Général*) for the Department and the Regional Council for the Region.

The French Overseas Departments are considered "ultraperipheral regions" of the EU, and as such they benefit from special protective measures and structural funding from this entity.

The constitutional reform of 2003 proposed amendments that replace departmental authority with individual partially autonomous authority. After consultation with and agreement from their electorates, Guadeloupe, French Guiana, and Martinique

maintained their department status, but the islands of Saint-Martin and Saint-Barthélemy elected to separate from Guadeloupe and with passage by the French Parliament will form partially autonomous *collectivités territoriales*.

In a *Département*, the *Préfet*, who is appointed by the President of France, is the government representative who exercises sole authority of the State. State administration is centralized, but at the French Overseas Departments level it includes several layers of delegated authority known as decentralized government departments (*services déconcentrés de l'état*).

Public health is the responsibility of the French Government. Three laws passed in August 2004 radically altered health policy in France. Law 809, on local freedoms and responsibilities, recentralized numerous prerogatives of the *Conseil Général*. Health responsibilities of the *Conseil Général* are now limited to social action policy and health protection for families and children (maternal and child health and family planning). Law 810 on health insurance aims to achieve better control over health sector expenditure. A regional health mission, composed of the regional agency for hospitalization and regional association of health insurance funds, determines guidelines for changes in the territorial distribution of private health professionals, the organization of mechanisms for continuing care, and the annual program of action to improve coordination among the various regional components of the health care system for delivering the preventive, diagnostic, and curative services covered by health insurance.

Finally, law 806, focusing on public health policy, places prevention at the forefront of collaborative efforts and seeks to strengthen the role of the State in coordinating the activities of the various players in the health sector, the actions undertaken, and their funding. The way the health sector is now organized validates both the regional input in health policy and a volunteerism approach to prevention and health promotion through the linking of preventive strategies and health care. Regional organization of the health sector is based on utilization of the Regional Public Health Plan (PRSP) as the framework for public health planning, the Regional Public Health Group as the policy implementation body, and the Regional Health Conference as a consultative body. During 2005–2006, each of the three French Overseas Departments established priorities within the corresponding PRSP.

In Guadeloupe, 11 public health priorities were identified: (1) to ensure that everyone has access to information promoting good health; (2) to promote the health of schoolchildren; (3) to combat social inequalities in health care; (4) to promote behaviors favoring a balanced diet and adequate physical activity; (5) to prevent, screen, and monitor chronic diseases and their complications; (6) to combat the HIV/AIDS epidemic; (7) to promote the population's sexual and reproductive health and improve maternal and perinatal health care; (8) to prevent and screen for sickle cell disease; (9) to prevent and control cancer; (10) to combat addictions; and (11) to develop and implement an environmental health plan.

In French Guiana, the PRSP identified core strategies to focus on the following nine priority areas: (1) HIV/AIDS, (2) cancer, (3) health education, (4) vaccine-preventable diseases, (5) addictive behaviors, (6) infectious diseases, (7) the Upper Maroni-Upper Oyapock Health Program, (8) environmental health, and (9) access to health promotion strategies and care for the disadvantaged.

In Martinique, seven public health areas for action were selected: (1) nutrition, (2) risk behaviors, (3) vulnerable social groups, (4) preventive health care, (5) rare diseases, (6) environmental health, and (7) health alerts and emergency management.

The overarching challenges that the PRSPs of the three French Overseas Department share are overcoming social and territorial inequalities in health care, preventing avoidable diseases and reducing associated mortality, promoting a healthy environment, increasing public health knowledge and rendering it multidisciplinary, and fostering community participation in public health issues.

Complementing the PRSP, the Regional Hospital Agencies in each of the French Overseas Departments published the third edition of the Regional Health Care Organization Plans (*Schémas régionaux d'organisation sanitaire*) in March 2006.

Public Health Services

Epidemiological surveillance is performed by the Health and Social Development Directorates in partnership with the Antilles-French Guiana Interregional Epidemiology Unit (CIRE), established in 1997. It acts in tandem with the National Health Watch Institute to strengthen the work of the decentralized departments of the Ministry of Health in two major areas: infectious diseases and health risks linked with the environment.

As in all regions of France, 27 communicable diseases have been identified for mandatory reporting to public health authorities. This reporting is supported by a network of physicians participating in a sentinel surveillance system, who on a weekly basis report suspected cases of dengue, influenza-like conditions, gastroenteritis, measles, chicken pox, gonorrhea, and other STIs, among others. The sentinel surveillance network has existed for several years in Guadeloupe and Martinique, but was not created in French Guiana until 2006. This system is reinforced by reports from public and private laboratories, including the Pasteur Institute in Pointe-à-Pitre, Guadeloupe, which specializes in mycobacteria, and another in Cayenne, French Guiana, which is a referral center for arbovirus and influenza viruses.

Given new potential threats to public health and heightened security concerns in response to the current global environment, strengthening early warning and response systems is a priority for the French Ministry of Health. The Plan for Alarm Systems and Health Emergency Management strengthens local and re-

gional health watch and warning facilities in the French Overseas Departments.

The Antilles-French Guiana Interregional Epidemiology Unit (CIRE) and the Health Watch Units of the Health and Social Development Directorates maintain the regional health watch and warning systems. CIRE brings its scientific expertise to bear on public actions undertaken by the *Préfets* of the three French Overseas Departments by coordinating with the Health Watch Unit, the operational level of the early warning and response system. Through this structure, with recently updated procedures and new human and technological resources, the French Overseas Departments are not only strengthening their capacity to respond rapidly and effectively to local public health threats, but are also contributing to the forging of a Caribbean and international health surveillance system that is essential in today's globalized world.

In collaboration with the Health Watch Units and numerous other players, the Antilles-French Guiana CIRE began work on the development of its Dengue Epidemic Surveillance, Early Warning, and Management Program in 2005. This initiative establishes dengue surveillance and control strategies for different epidemic risks. The Program's four principal areas of activity are: (1) epidemiological and entomological surveillance and research; (2) mosquito eradication through insecticide use and social mobilization strategies; (3) information-sharing with health professionals, political and administrative leaders (Health and Social Development Directorates, hospitals, *Préfets*, *Conseil Général*, and mayors' offices), and the public at large; and (4) development and dissemination of patient care and treatment protocols. These actions require the well-coordinated participation of numerous additional players in the areas of epidemiology, entomology, mosquito eradication, clinical medicine, biology, and mass media. Program development was finalized in 2006.

A National Environmental Health Plan was adopted in June 2004 to reduce the incidence of diseases linked with the environment and improve natural habitats. The Plan includes 45 objectives to be pursued at the national and/or regional level. Utilizing the Plan as its framework, each of the French Overseas Departments has drawn up its own regional environmental health plan. Certain goals are shared by the three, such as protecting the health and well-being of populations living in unhealthy habitats, preserving water catchment areas, eradicating disease vectors, combating Legionnaires' disease, and reducing the harmful effects of pesticides on the environment and human health.

Drinking water in Guadeloupe and in Martinique is bacteriologically safe, except during periods of special weather conditions. In French Guiana, universal access to safe water remains a challenge. Solid waste disposal is also a problem; numerous untreated dump sites exist, incinerators handle only a portion of the refuse, and recycling is still in its early stages. Efforts are under way to bring current dump sites up to standards before resorting to closure and major rehabilitation. The dumping of various kinds of waste materials in the natural environment also has a negative impact on the development of tourism and urban improvement projects.

Establishment of a ceiling of 0.1 g/L of chlordecone in drinking water has led to the closure of certain catchment areas in Guadeloupe and Martinique. Prefectorial decrees issued in 2003 have been directed primarily toward preventing vegetables grown in contaminated soils from reaching public markets. Based on scientific study and review, in October 2005 provisional contamination ceilings for chlordecone concentrations in various foodstuffs were set to protect consumers.

Individual Care Services

Health care is provided by hospital complexes and private clinics. Unlike the other two French Overseas Departments, French Guiana has health centers. These facilities are designed to respond to the needs of geographically isolated residents and represent the only access to health care for the scattered and isolated communities that make up 20% of French Guiana's population.

Previously under the management of the *Conseil Général*, since 2000 these health centers have been separated into two groups, based on whether the provision of care is curative or preventive in nature. Curative care is undertaken by 10 health centers and 11 health posts under the supervision of the hospital complex in Cayenne and includes medical consultations, routine care, nursing services, and dispensing of medications. Disease prevention activities are the focus of some 20 vaccine and maternal and child health centers that remain under the general management of the *Conseil Général*.

Facilities in the short-term care sector are generally satisfactory, but inadequate in the area of follow-up care and psychiatry. The lack of facilities for older adults with special needs is evident, especially in Guadeloupe and Martinique. Currently, there are insufficient alternatives to hospitalization, even though home hospitalization initiatives are beginning to emerge and health care networks have begun to participate in this alternative strategy. Health care networks have been or are in the process of being established for such conditions as hypertension, gerontology, perinatal care, oncology, addictions, diabetes, and asthma. The availability of beds for various types of care at short-term facilities is shown in Table 5.

Health Promotion

The PRSP in each of the three French Overseas Departments underscores the importance of health education for the public and the need to strengthen efforts in this area. In 2004, Guadeloupe and Martinique drew up their Regional Education for Health Plan, although it has not yet been completely implemented in Martinique. French Guiana has yet to draw up a plan. Guadeloupe and Martinique each have a committee working in

TABLE 5. Beds per 1,000 population at short-term health care facilities, French Overseas Departments, 2005.

Type	Guadeloupe	French Guiana	Martinique
Medicine	2.09	1.50	2.32
Surgery	1.08	0.96	1.39
Obstetrics and gynecology	0.48	0.69	0.53

tandem with the National Institute for Prevention and Health Education. They are the Guadeloupian Committee for Health Education and the Martinican Committee for Prevention and Health Education. In addition, numerous associations, including entities at the national, district, and municipality levels and patients' groups, play an essential role as partners in prevention of disease, bringing their expertise to bear in such areas as HIV/AIDS, substance abuse, sickle cell disease, and cancer.

Human Resources

The shortage and equitable distribution of health professionals are a challenge in all three Departments, but particularly in French Guiana. With respect to physicians, the lack of specialists is even more pronounced than the lack of generalists (Table 6). This applies to all types of medical specializations. At the Cayenne hospital complex, numerous positions remain vacant or are filled by physicians who do not possess adequate qualifications for hospital practice.

In Guadeloupe and Martinique, there are sufficient midwives and nurses to meet current needs (Table 7), but for all other career categories the density rates are far below those found in metropolitan France. This shortage is expected to worsen in the years to come, given the increase in demand for health services due to the population's aging in Guadeloupe and Martinique and the demographic growth occurring in French Guiana. Medical and paramedical schools have substantially increased the number of training programs available and of students being trained, but the output of new professionals has remained insufficient to meet the demand.

TABLE 6. Number and density of physicians per 100,000 population, French Overseas Departments, 1 January 2005.

Type	Guadeloupe	French Guiana	Martinique
General physicians			
Number	542	195	536
Density	121	106	136
Specialists			
Number	434	147	450
Density	97	80	114
Total number of doctors	**976**	**342**	**986**

TABLE 7. Number and density of health professionals other than physicians per 100,000 population, by type, French Overseas Departments, 1 January 2005.

Type	Guadeloupe	French Guiana	Martinique
Dentists			
Number	162	43	155
Density	36	23	39
Midwives			
Number	160	51	167
Density	36	28	42
Nurses			
Number	2,159	573	2,365
Density	482	311	599
Physical therapists			
Number	257	58	260
Density	57	31	66

The third year of medical studies and the first year of medicine are taught in the French Overseas Departments (in the case of Guadeloupe and Martinique, only the first year). Training for various other medical and paramedical professions is also available in the French Overseas Departments, including one school for midwives, one school for massage and physical therapists, three schools for nurses (one in each of the French Overseas Departments), one school for pediatric nurses, one school for surgical nurses, one school for nurse-anesthetists, one school for biomedical technicians, three schools for child care auxiliaries, and three schools for nursing auxiliaries. Training for the other health professions is available in metropolitan France. Certificates were awarded in 2004 to 14 midwives, 116 nurses, 9 surgical nurses, 19 pediatric nurses, 64 child care auxiliaries, and 81 nursing auxiliaries who completed their training in the French Overseas Departments.

Health Supplies

There are a total of 340 pharmacies in the French Overseas Departments, excluding medical dispensaries in health centers. Of these, 153 are found in Guadeloupe (one for every 2,960 inhabitants), 150 are in Martinique (one per 2,650 inhabitants), and 37 are located in French Guiana (one for every 5,150 inhabitants). All pharmaceuticals are imported from France, with delivery from the manufacturer to the pharmacist taking place through the wholesale distributor or dealer. A "third-party payer" system is widely used in the French Overseas Departments, especially by public hospitals and pharmacies, in which the health care provider receives reimbursement directly from the universal health insurance plan, after the payment of any deductibles. Prices are fixed by the French public health authorities for reimbursable medications. In the French Overseas Departments, drug

prices are subject to a markup to cover shipment costs from France. There is no local production of vaccines in the French Overseas Departments; all vaccines are likewise imported from France.

Health Sector Expenditures and Financing

Expenditure on health care and medical products continued to increase during the period under review. In 2004, health expenditures totaled nearly 1,879 million euros for all three French Overseas Departments (Table 8). Annual expenditure is approximately 2,000 euros per inhabitant in Martinique, 1,800 euros per inhabitant in Guadeloupe, and 1,400 euros per inhabitant in French Guiana. These variations are due in part to the different age structures of the respective populations. Hospitals, especially public hospitals, account for the bulk of the expenditure. In addition to these outlays, major sums are disbursed each year by the State or the *Conseil Général* in the social sector for special groups, including the elderly and persons with disabilities.

TABLE 8. Total health insurance expenditure and distribution by category, French Overseas Departments, 2004.

Category	Guadeloupe	French Guiana	Martinique
Total health insurance expenditure (in millions of euros)	805.3	268.4	804.8
Hospitalization	50%	68%	57%
Ambulatory care	18%	11%	17%
Drugs	16%	10%	15%

Technical Cooperation and External Financing

Apart from partnerships, programs, and financing mechanisms that have been developed with other EU members, the French Oversees Departments do not receive cooperation funds from abroad from international institutions such as the World Bank and United Nations entities.

On the other hand, between 2001 and 2005 the three regions developed a number of activities with neighboring countries and provided technical expertise as needed. For example, the staff at the University Hospital Center in Fort-de-France, Martinique, provided training in pathology to Caribbean physicians and technicians for cervical cancer screening and in the maintenance of biomedical equipment. There was also bilateral cooperation between the hospital complex in Lamentin, Martinique, and a hospital in Cuba. The Pasteur Institute's mycobacteria reference laboratory in Guadeloupe provided technical expertise on laboratory development and infrastructure to Haiti and other Caribbean countries. Professionals from Martinique and Guadeloupe helped train those responsible for treating HIV/AIDS patients in Haiti and other countries. In French Guiana, the Pasteur Institute conducted regional cooperation activities in connection with its role as the national referral center for arbovirus and influenza viruses.

Exchanges in expertise, medical equipment, and patients took place between French Overseas Departments' facilities in heart surgery, kidney transplants, oncology, and other areas. The university hospitals are also attracting patients from neighboring countries. The University Hospital Center at Fort-de-France handles an annual average of 400 to 500 hospitalization cases involving patients who reside outside the French Overseas Departments. In 2004–2005, one-third of the hospitalizations were cancer-related, followed by cardiovascular and osteoarthritic conditions.