



Population



Health status



Health sector  
accounts



Non-medical  
factors  
and health



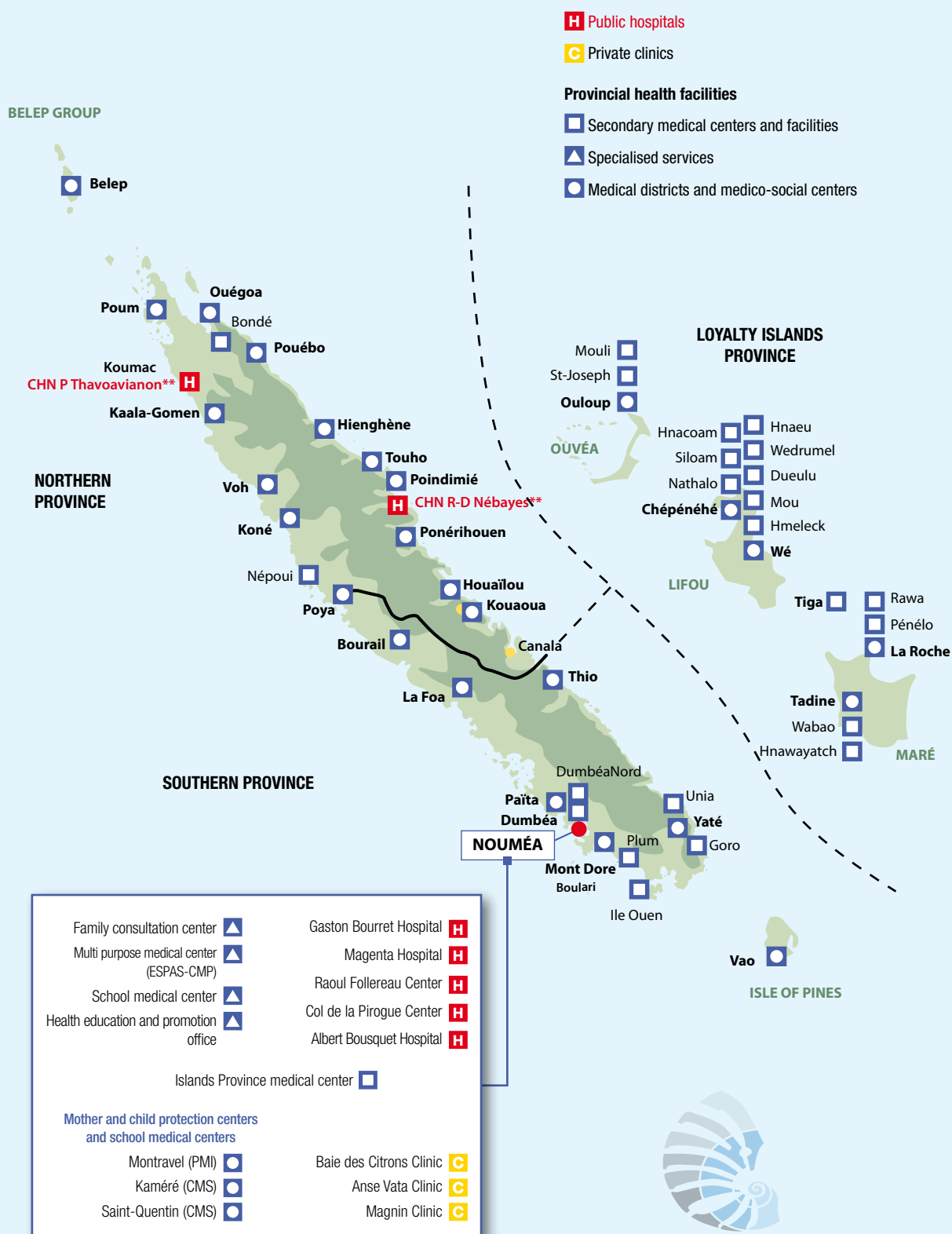
# Key Features **2010**

New Caledonia Public Health Report



**DASS**  
Direction des Affaires  
Sanitaires et Sociales

# Main health facilities in New Caledonia\*



\* The health facilities and staff available to the people of New Caledonia are detailed in Chapter II : Health Services

\*\* The Koumac and Poindimié (Northern Province) hospitals each have a medico-psychological unit attached to the A. Bousquet 'CSH' (Specialised Hospital Centre)

2010



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## DEMOGRAPHIC CHARACTERISTICS

The 2009 census recorded the population of New Caledonia as 245 580, an increase of 6.4 % over the figure from the previous population census in 2004.

Distribution by province changed in comparison with the previous population census. A migratory trend from the Northern Province (from 18.7 % in 2004 to 18.4% in 2009) and the Loyalty Islands (from 9.2 % in 2004 to 7.1%) to the Southern Province influenced population distribution. The percentage of the overall population of New Caledonia residing in the Southern Province increased from 72.1% to 74.5% in 2009.

The population comprised 50.7 % men and 49.3 % women.

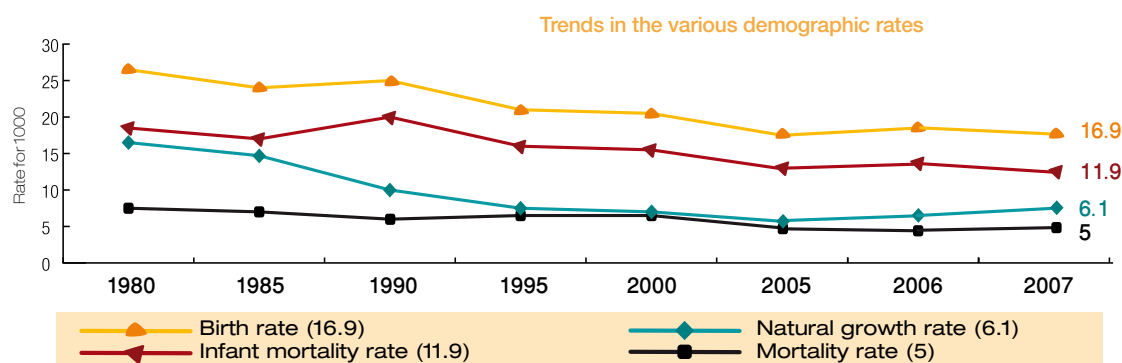
As the main demographic indicators for 2010 were still being analysed by ISEE as at 01/09/2011, the figures published in the 2009 version of this report are included below.

	Population as at 01/01/08	Rate of increase (%)	Number of births according to mother's place of residence	Birth rate (‰)	Fertility index	Crude infant death rate (‰)	Number of deaths according to place of residence	Crude mortality rate	Crude perinatal mortality rate (‰)	Life expectancy at birth
New Caledonia	244 410	11.9	4138	16.9	2.2	5	1207	5	13.5	75.9
Islands Prov. *	22 570	10.7	387	17.2	2.4	18.1	145	6.4		72.7
Northern Prov. *	45 700	9.3	701	15.4	1.9	7,1	277	6,1		73.2
Southern Prov. *	176 140	12.7	2982	17.1	2.2	4	766	4.4		76.9
France (2006)	63,75 million	4.7	830 900	12.9		3.6		8.45	7 (96)	84.4
Fr. Polynesia (2006)	279 882			17.8	2.01	6.8		4.69		76.9
Australia (2005)	19,9 million	1.2		12.7		5		6.4		83.5

\* Only persons residing in the province.

The natural growth rate<sup>1</sup> fell in 2007, from 13.0 to 11.9 %.

The birth rate<sup>2</sup> -16,9‰ - has been constantly falling since the 1960s, from 34.5 in 1965, to 23.4 in 1985 then, after a spectacular recovery in 2000, it declined to its lowest ever level in 2007.



Fertility index<sup>3</sup>: 2.2 per 1 000 women of child-bearing age.

A decrease in the fertility rate range by age between 1981 and 2005, with a rising average age for motherhood (from 26.4 in 1980 to 28.8 in 2006), can be observed.

Crude mortality rate<sup>4</sup>: 5 per 1 000 (6.1 ‰ for men and 3.8 ‰ for women)

After a distinct drop in the 1970s and 1980s, the crude death rate decreased at a lower rate until 1998.

Since then, it has varied little and has remained slightly above 5 deaths per 1000 since 2005.

Male mortality is higher, with a peak between the ages of 20 and 25.

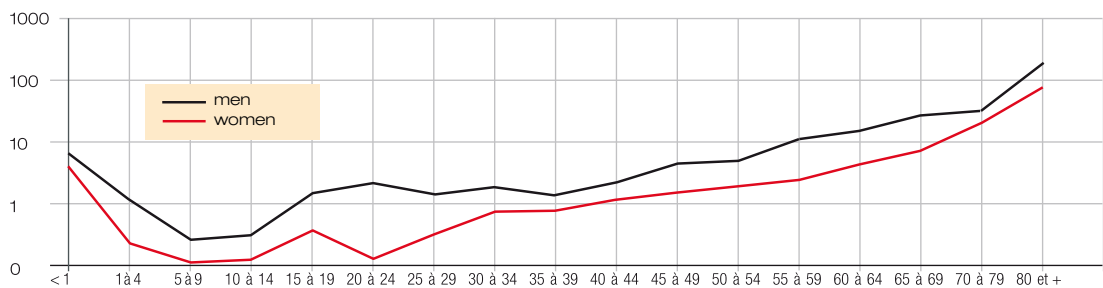
1 Natural growth rate : difference between crude birth rate and crude death rate, expressed as a per 1000 population figure.

2 Birth rate : ratio of annual number of live births to total population at the half-way stage of the year concerned, expressed as a per 1000 population figure.

3 Fertility index or conjunctural fertility indicator : sum of all fertility rates by age for the year concerned.

4 Crude mortality rate : ratio of annual number of deaths to total population at the half-way stage of the year concerned, expressed as a per 1000 population figure.

Mean annual mortality rate (%) from 1996 to 2007, by age group and sex



In 2007, the crude mortality rate gradually rose in the Loyalty Islands Province (6.4) and the Northern Province (6.1). In the Southern Province, this rate remained relatively stable (4.4).

**Life expectancy at birth<sup>5</sup>: 75.9 years in 2007 (men : 71.8 ; women : 80.3).**

is characterized by a regular increase, with higher gains for men than for women over the last 20 years and a continuing gap between men and women.

**Infant mortality rate<sup>6</sup>: 6.1‰.** After a sharp drop in the 1970s, this rate, which is an indicator of a country's socio-economic and health development status, fell more gradually until the early 1990s, when it dropped below 10‰. Since 2001, a regular but less marked decrease can be observed, with the rate moving increasingly closer to that of metropolitan France and the European countries.

New Caledonia still has a young population (43.1% under 25 years old). Improvements in socio-economic and health conditions have helped in raising life expectancy and reducing mortality, in particular infant mortality, which is now close to the developed country rate. However, the fall in the fertility rate, which is still higher than that necessary to maintain current population size, points to future difficulties associated with an ageing population.

## MEDICAL CAUSES OF DEATH

1 190 medical death certificates were issued in 2010 (men: 698; women: 492). The following classification by disease group varies only slightly from year to year.

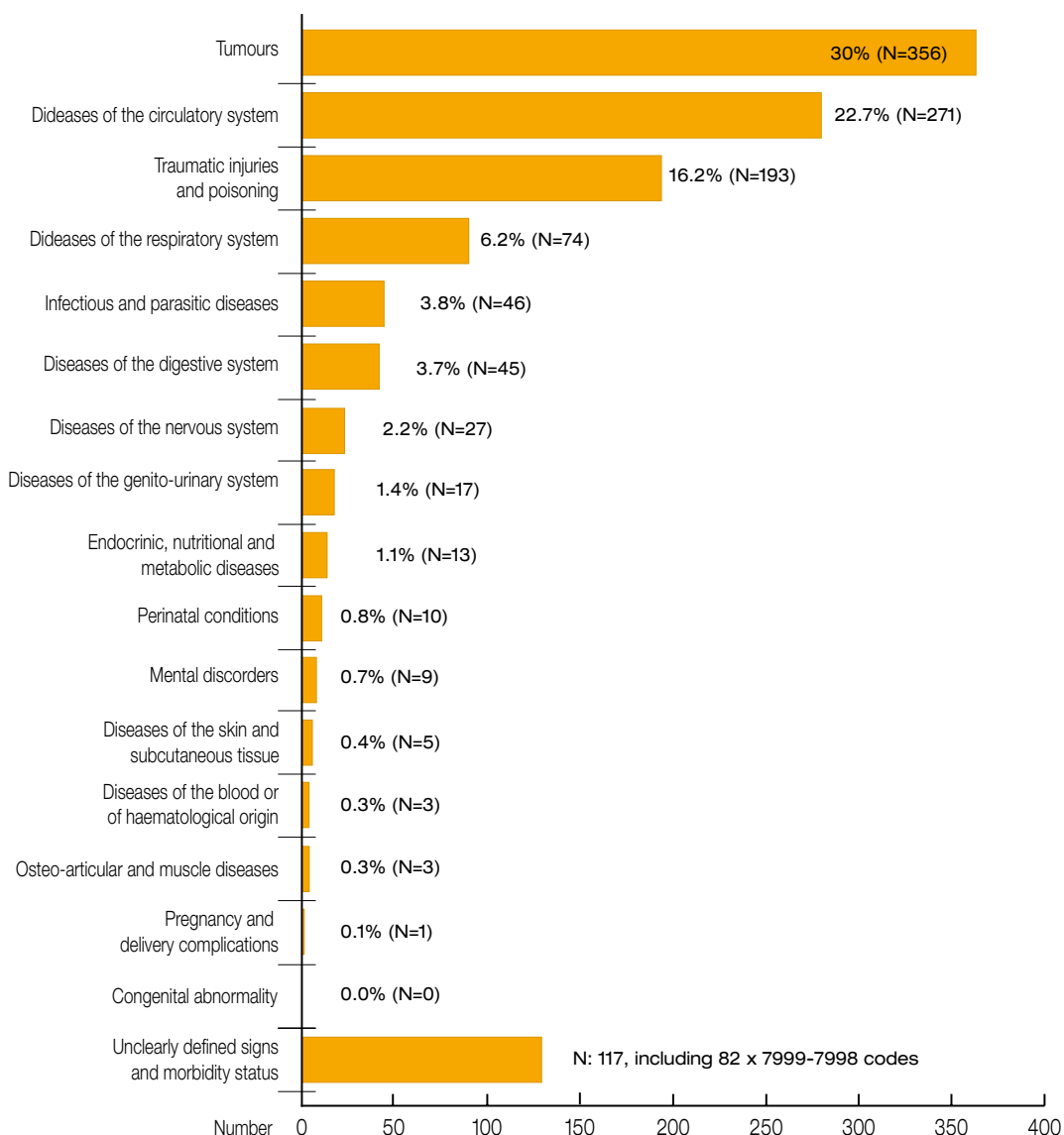
In 2010, gender-disaggregated, the 5 main causes of death were as follows :

	Men	Women
Tumours	29.9%	29.9%
Circulatory system	22.2%	23.6%
Traumatic injuries	20.6%	10%
Respiratory system	5.4 %	7.3%
Inadequately defined disease status	7.4%	13.2%

It is noteworthy that traumatic injuries and poisonings remained the principal causes of death in the young population, accounting for 64.9 % of deaths in 1-24 year-olds and 45.6 % of deaths in 25-44 year-olds over the 1991-2010 period. This group represents the leading cause of premature death in both sexes in New Caledonia, with 82 765 years of potential life lost (YPLL) between 1991 and 2010. This premature mortality is particularly high in males with 65 736 years of potential life lost, as compared to 17 029 years for females.

<sup>5</sup> Life expectancy at birth expresses the mean number of remaining life years for a new-born child if the mortality trends prevailing at the time of birth do not change.  
<sup>6</sup> Infant mortality rate: ratio of number of deaths of children under one year of age to 1000 live births during the year concerned.

Breakdown of causes of death in 2010



## MEDICAL CAUSES OF PERINATAL DEATH

In 2010, 70 child deaths were reported through specific perinatal death certificates, bringing the number of deaths to 1 231 for the 1993-2010 period.

72.3% of these deaths concerned very premature births (<32 weeks).

For the 1993-2010 period, 187 certificates involved medical terminations of pregnancy (MTP), the most frequent reasons for which were congenital disorders (nervous system: 25.7%, chromosomal defects: 17.6%, other congenital anomalies: 27.8%).

Of the 1044 neonatal deaths not including MTP, 32% had no determining foetal or neonatal cause. For the remaining 710 certificates, the cause was child-related in 90.2 % of cases and mother-related (maternal condition or pregnancy complications) in 9.8% of cases. Among child-related causes, intra-uterine hypoxia and/or birth asphyxia accounted for 33.8 % of cases and congenital defects 17 % of cases.



## INFECTIOUS DISEASES

Notifiable diseases (not including cancers - see specific chapter)

In 2010, 989 notifiable disease cases were reported, not including cancers.

Following the establishment of the register of acute rheumatic fever (ARF) patients by the Health Agency, ARF is analysed in detail in a special chapter (see summary in the following pages).

Two reporting categories exist :

**Emergency alert :** an emergency procedure, to issue an alert and communicate individual case data without delay and using any appropriate means with no specific form or format.

**Notification :** a procedure for individual data transmission by the notifying physician or biologist, using a specific form for each disease.

Notifiable diseases of group B	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Amoebiasis	13	20	11	6	0	1	1	1	0	0	1
Whooping cough	3	0	1	0	1	72	4	1	0	1	3
Dengue fever	12	34	105	5673	792	46	48	47	1179	8410	122
Diphtheria	0	0	0	0	0	1	0	0	0	0	1
Typhoid and paratyphoid fever	0	3	0	0	0	1	0	1	0	0	0
Viral Hepatitis B	40	49	31	39	29	11	9	31	102	33	5
Viral Hepatitis C	0	1	0	0	0	0	0	2	0	2	0
Leprosy	7	7	2	4	8	4	7	2	6	7	8
Leptospirosis	28	23	49	23	13	40	65	53	157	162	42
Meningococcal meningitis	4	9	10	11	3	5	7	13	9	8	10
Indigenous and imported malaria	3	1	1	5	6	0	0	0	2	0	10
Measles	0	0	0	0	0	0	1	0	0	0	0
HIV related syndromes	21	15	17	8	7	13	10	21	15	13	14
Tetanus	0	1	0	0	0	0	0	0	0	0	0
Collective food poisoning (foci)	3	9	1	6	0	8	10	8	6	9	11
Tuberculosis (incl.latent infection)	171	100	112	82	84	72	90	67	80	83	59

In 2010, no cases of poliomyelitis, botulism or brucellosis were observed. 42 cases of leptospirosis and 122 cases of dengue were reported.

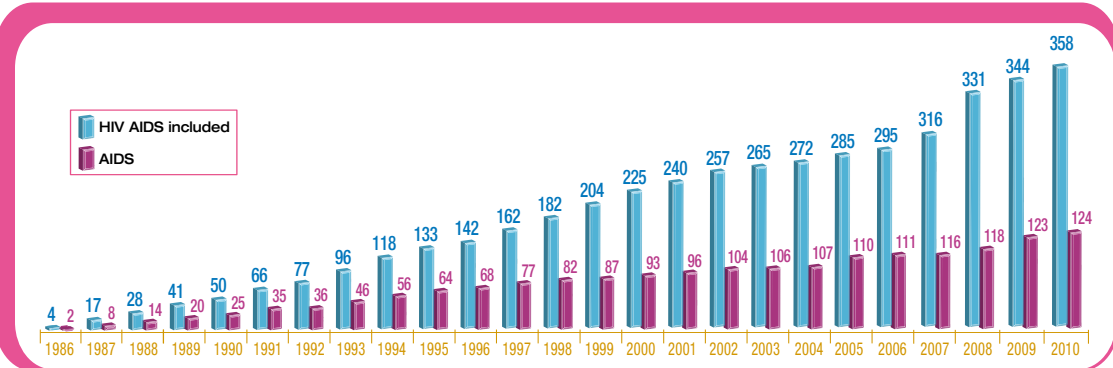
### Sexually transmitted diseases :

Notifiable diseases of group C	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Condyloma acuminatum	26	27	28	26	17	3	12	22	28	25	30
Genital herpes	2	3	3	5	4	2	3	10	8	7	5
Mycoplasma infections	115	119	107	90	93	108	134	219	184	160	104
Genital chlamydial infections	94	96	72	86	88	71	96	148	191	202	150
Gonococcal infections	52	55	49	31	33	35	58	82	90	77	68
Syphilis	24	16	11	10	20	15	21	38	36	46	38
Uro-genital trichomonosis	250	203	156	175	158	115	98	206	118	153	147
Other venereal diseases	198	121	77	75	55	40	50	60	72	86	13

HIV-AIDS

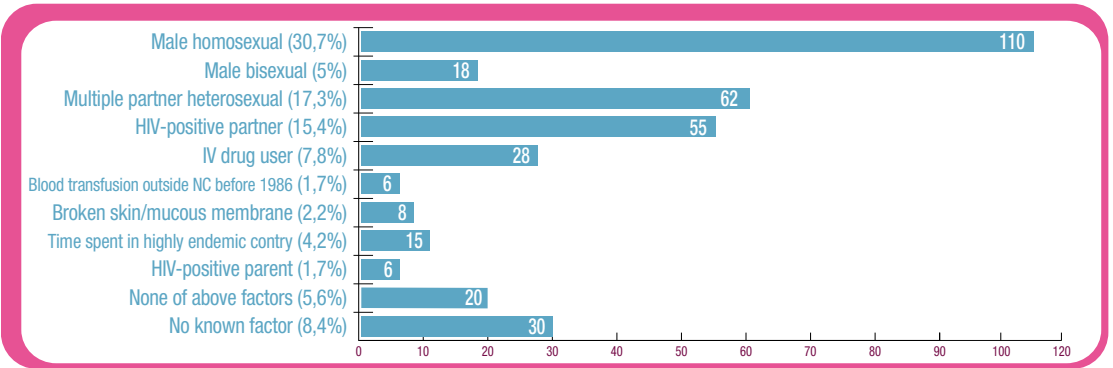
Statistical data regarding HIV infection come from notifiable disease surveillance activities and from specific initial notification forms and supplementary notifications of HIV-induced syndromes.  
14 new HIV-positive cases were recorded in 2010 (including 7 confirmed by laboratories outside New Caledonia and 7 diagnosed and confirmed by IPNC).  
This brings to 358 the accumulated number of cases since 1986.

Annual progression depending on the stage of infection (accumulated cases)



As at 31st December 2010, the sex-ratio of accumulated cases was 3 males for 1 female.  
The most affected age group, as in previous years, was the 20-39 year group,  
with a rate of 30.7 per 10 000 population.

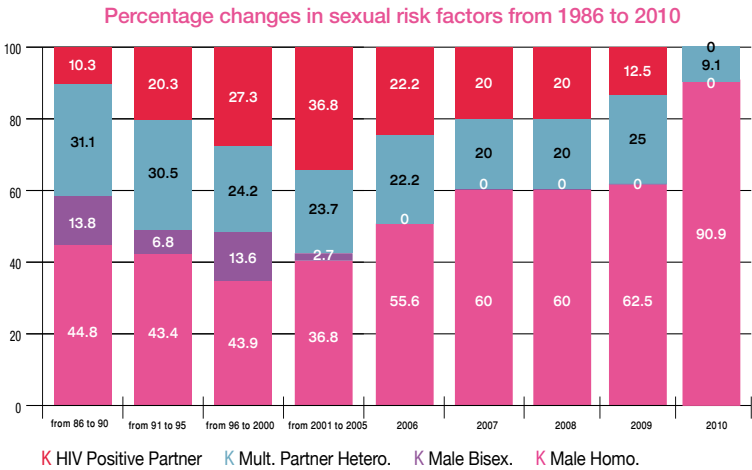
HIV risk factors



Breakdown of the 358 HIV-positive cases by risk factor

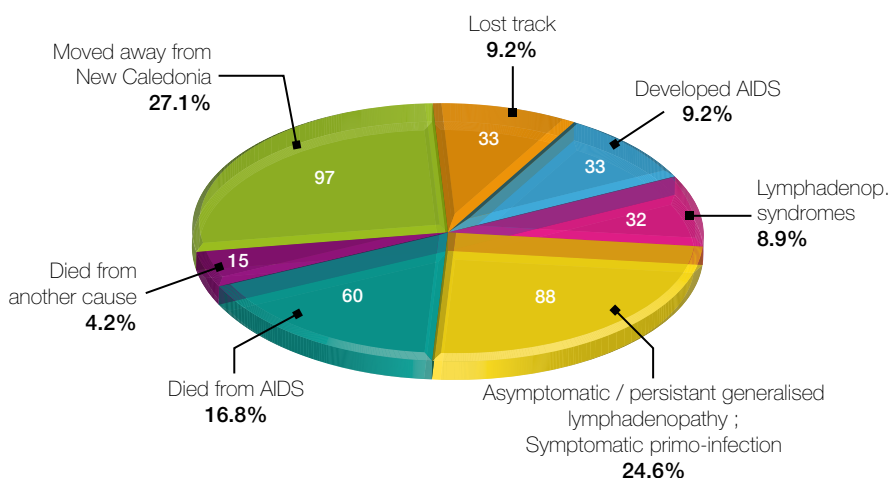
With regard to the cases whose risk factors are known, it can be noted that 79.5 % are linked to a sexual mode of HIV transmission, 52.2 % of which (128/245) are male homo/bisexuals.

It should be noted that, over time, after oscillating between 34.8% and 50% (from 1986 to 2006) the 'homosexual' risk factor percentage has increased since 2007 to account for over 90% of sexual risk factors.  
  
Of the 28 (7.8 %) intravenous drug users (4 women and 24 men), 16 had been residing in the territory for less than 6 months at the time of notification, 11 had been residents for more than 6 months and 1 often travelled outside New Caledonia.



K HIV Positive Partner K Mult. Partner Hetero. K Male Bisex. K Male Homo.

## Breakdown of the 358 HIV-positive persons, by last known status



### Last known status of HIV-positive persons

'Last known status' refers to the assessment contained in the latest supplementary report prepared by the attending physician. Of the 344 HIV-positive patients, 75 have died (including 15 of a cause other than AIDS) and 130 have moved away from New Caledonia or are no longer being monitored. Among the latter, some have probably left New Caledonia for good.

In New Caledonia, of the 14 cases recorded in 2010, 10 (71.4%) were at the asymptomatic stage, 3 (21.4%) were at the symptomatic non-AIDS stage and 1 (7.2%) was at the confirmed AIDS stage.

### Free and anonymous testing and counselling centres (CDAG)

In 1992, the Territorial Congress Standing Committee introduced free and anonymous testing and counselling centres (CDAG) for the human immuno-deficiency virus (HIV) (Resolution N° 211/CP dated 30 October 1992). This resolution was superseded by Resolution N° 154/CP dated 16 April 2004, specifying the standards of training required and the operating conditions for these CDAG.

The consultation is conducted by a consulting physician or a midwife approved by the Medical Inspector after receiving specific training on counselling in relation to HIV infection testing. Approved personnel receive patients either in their surgery (private practitioners and midwives) or at the counselling centres (these centres must meet requirements laid down in the resolution: the venue must be part of a multi-purpose medical centre, the counselling must protect the confidentiality and anonymity of the process and the staff must have received special training for counselling).

Each consultation must include a counselling session covered by a questionnaire, developed by the Medical Inspector and completed by the doctor or midwife.

Since November 2005 and in 6 successive training sessions, 85 health professionals (53 doctors and 30 midwives) have been trained and are certified and active in New Caledonia. It should however be noted that, for 12 of them (5 doctors and 7 midwives), their certification has only been operational since the second half of 2010.

The CDAG 2010 records were therefore compiled with contributions from 49 professionals (of the 85 possible, i.e. 57.6% of them).

An analysis of the 2 320 strictly anonymous questionnaires completed in 2010 and returned to the DASS-NC Health Action Department, showed a 1.3% decrease in the number of reports received in 2010 as compared to 2009.

- Under-35s accounted for over ¾ (79.2%) of patients (46.4 % between 15 and 24 years and 31.9% between 25 and 34 years).
- European patients accounted for 47.1% of consultations. Melanesian patients represented a little over one third (34.4%).
- 'Risky behaviour' was referred to in 39.4% of cases, far more than 'early stage of relationship' (22.4%).
- 'Pregnancy' was a reason for coming in 11.1% of cases (for 19% of women) and for 3.1% of visits by a spouse or partner.

It should be noted that 122 patients (6.3% of patients) reported a split condom as the reason for coming in.

Conclusions

The 2010 analysis confirms conclusions from previous years :

- The majority (63.6 %) of the data analysed in 2010 relates to the Noumea 'ESPAS CMP' (the Multi-purpose Medical Centre of DPASS Southern Province, referred to in previous years as the Noumea CDAG). The expansion since 2006 to 85 professionals certified to conduct consultations has made it possible to gradually increase and diversify the CDAG's range of patients, mainly through increasing territorial coverage.
- In 2010, 12 more professionals were certified. They now number 85 altogether. But only in 2011 will their contribution to the number of free and anonymous consultations be seen. The number of consultations conducted outside the ESPAS CMP structure increased from 231 in 2006 to 844 in 2010. These newly qualified staff strengthen the supply of services to the community in the screening and prevention areas. It remains necessary however to train more professionals in some parts of New Caledonia and especially in the Islands and Northern Provinces in order to offer a better service all areas.
- The importance of the ESPAS CMP (especially the pilot training and incentive role played by the team there) is evident in the high number of tests carried out and the number of people who, over 18 years, have enjoyed personalised treatment whether or not followed by testing.
- Research on patient characteristics has enabled us to detect risky behaviour and lack of understanding of preventive methods and virus transmission.

SEXUALLY TRANSMITTED INFECTIONS

579 notifications were received in 2010, almost all of which (95.3%) came from the provincial medical districts and the Southern Province dispensaries (ESPAS-CMP multi-purpose medical centre, mother and infant health protection centre and family counselling services) because of under-notification by the private sector. Despite this under-reporting, prevention, information and screening work should be kept up, even if certain diseases such as syphilis are less common.

The number of notified STI cases remains higher in women (84.8%) than in men (15.2%). This should be related to the reproductively active age period when women see a practitioner more often to start or check contraception, but also for prenatal care.

STD / Sex	Male	Female	NA	Total	%
Molloscum contagiosum	0	0	0	0	0
Soft chancre	0	0	0	0	0
Genital herpes	1	4	0	5	1
Condyloma acuminatum	6	24	0	30	5
Urogenital candidiasis	0	24	0	24	4
Syphilis	12	26	0	38	7
Gonococcal infections	31	37	0	68	12
Other venereal diseases	0	13	0	13	2
Urogenital trichomoniasis	0	147	0	147	25
Mycoplasma infections	8	96	0	104	18
Chlamydial genital infections	30	120	0	150	26
Total	88	491	0	579	100

Medical laboratory data also emphasize the need for surveillance and data collection. In recent years the trend is a clear drop in the number of STI notifications (especially in the private sector from 2000), while the demand for biological testing and the rate of positive results (at IPNC in particular) are not decreasing.

These discrepancies underline the need to improve the STI notification process, and therefore obtain more representative results at the scale of New Caledonia.

VIRAL HEPATITIS

5 new cases of hepatitis B were recorded in 2010. All concerned adults.  
The proportion of Hepatitis B cases in children under 15 years has diminished as a result of the introduction of systematic vaccination of all newborns in 1989 (38% in 1992, 5.8 % in 1996, 6.4 % in 1998, 2.5% in 2000 and 0 % since 2005).  
The 3 cases in 2003, which raised the rate to 7.7 % for that year and confirm the need to vaccinate at childbirth, should be noted. There were no cases of Hepatitis C in 2010.

TUBERCULOSIS

The World Health Organization has already advised that the number of tuberculosis cases has risen spectacularly in Europe and North America in the last few years.  
Among the factors contributing to this resurgence, WHO reports the deterioration of tuberculosis control programmes and the link between tuberculosis and HIV. Also, new drug-resistant bacteria are developing throughout the world.

In New Caledonia, 59 new cases of tuberculosis were notified in 2010 (63 in 2009), including 39 cases of pulmonary tuberculosis (51 in 2009). After a drastic fall of the incidence rate in 2003 (17 per 100 000 population), the incidence rate in 2010 was equal to 24.1 per 100 000. Even though there has been a downward trend since the beginning of the 1990s, it remains at high levels in comparison to industrialized countries, and at a lower level than world incidence.  
23 cases were recorded from direct positive testing (18 in 2009), all of pulmonary tuberculosis. Contagious tuberculosis enables tuberculosis infection to perpetuate itself. Diagnosis must occur as early as possible, treatment must be strictly followed and the identification of infected persons commenced as soon as reliable treatment starts. The incidence rate of tuberculosis from direct positive testing (smear-positive) was 9.4 per 100 000 (7.3 in 2009).

Incidence/100 000 of all forms of tuberculosis and sputum-positive tuberculosis

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
All forms	64.4	50.1	51.1	40.1	48.3	28.8	30.1	17	28.5	22.8	21.6	19.6	20.9	25.7	24.1
Smear positive	21	17.5	18.7	13	11.4	9.8	9.6	6.3	8.8	7.3	5.1	5.8	5.3	7.3	9.4

Treatment  
By definition, tuberculosis is considered cured when sputum specimens test negative two and five months after the beginning of treatment.  
If these tests are not performed, treatment is said to be completed or finished. The WHO strategy regards a programme to be efficient if the rate of cure is above the 85% mark.  
For patients tested in 2009, a rate of cure of 89.5% (sputum-positive) was observed.

Patient characteristics  
A detailed study of the 462 tuberculosis cases notified over the last 8 years, all types combined (from 2003 to 2010) showed that 67.6 % of the cases were pulmonary forms.  
All municipalities are affected by the disease, which is more frequent however in Belep, Ponerihouen and Kaala-Gomen, where rates are higher than in other areas.

The diagnosis was made from clinical signs in 70.0% of the cases. 9 % of new cases were relapses.  
In metropolitan France, this disease still occurs, with an incidence rate equal to 8.2 per 100 000 in 2009. Regional disparities are observed, with the highest rate in the Ile-de-France region where it is similar to that of New Caledonia.

Note (2007):

High notification rates were observed in certain population groups, such as persons born abroad (41.5/100 000), in particular in sub-Saharan Africa (130/100 000) and those having arrived in France less than two years previously (251/100 000) as well as persons with no fixed abode (214/100 000) and persons aged 80 years and over (21.7/100 000).

## ACUTE RHEUMATIC FEVER

Acute rheumatic fever (ARF) mostly affects children and adolescents and is a disease with severe medical, human, social and economic consequences.

Acute rheumatic fever is a possible consequence of a probably auto-immune mechanism of bacterial angina due to a group A beta-haemolytic streptococcus (GABHS). It is common among children but in New Caledonia outbreaks can occur very late in life (age 35).

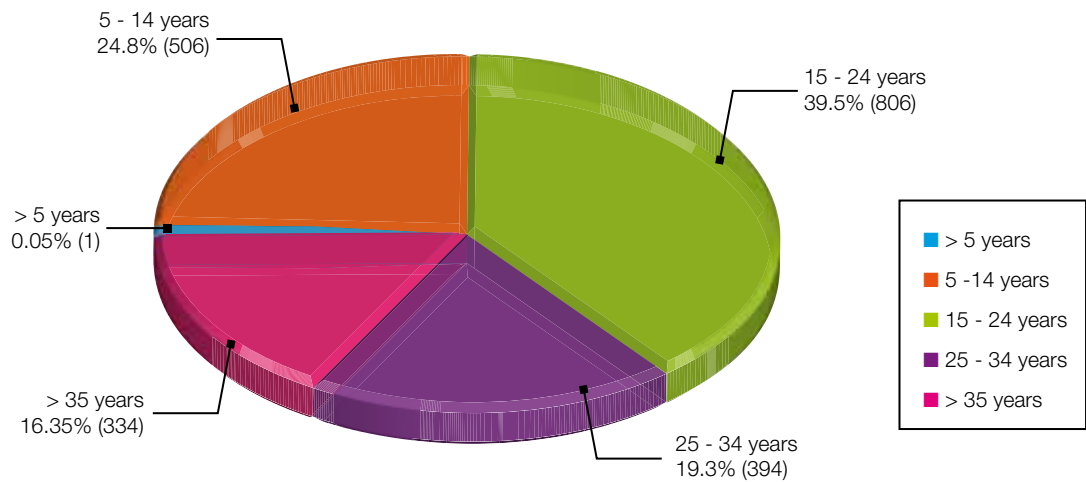
With the adoption of a resolution dated 11th August 1994, the Territorial Congress decided that acute rheumatic fever was one of 9 priority preventive programmes.

A register was set up to monitor the situation.

As at 31 December 2010, the active rheumatic fever list comprised 2 041 cases of ARF under treatment by antibioprophyllaxis.

The prevalence is estimated at 8.3 per 1 000 in New Caledonia, all ages combined, and varies depending on municipality (referring physicians assigned by municipality) :

Breakdown of the 2 041 cases of acute rheumatic fever by age group



The female / male ratio was 1.2, expressing a slight over-representation of women as compared to the overall population balance.

Prevalence rate by province per 1 000 of the population :

- 16.4 in the Northern Province;
- 16.5 in the Islands Province;
- 5.6 in the Southern Province.

In 2010, 137 cases were added to the ARF register.

### Conclusion

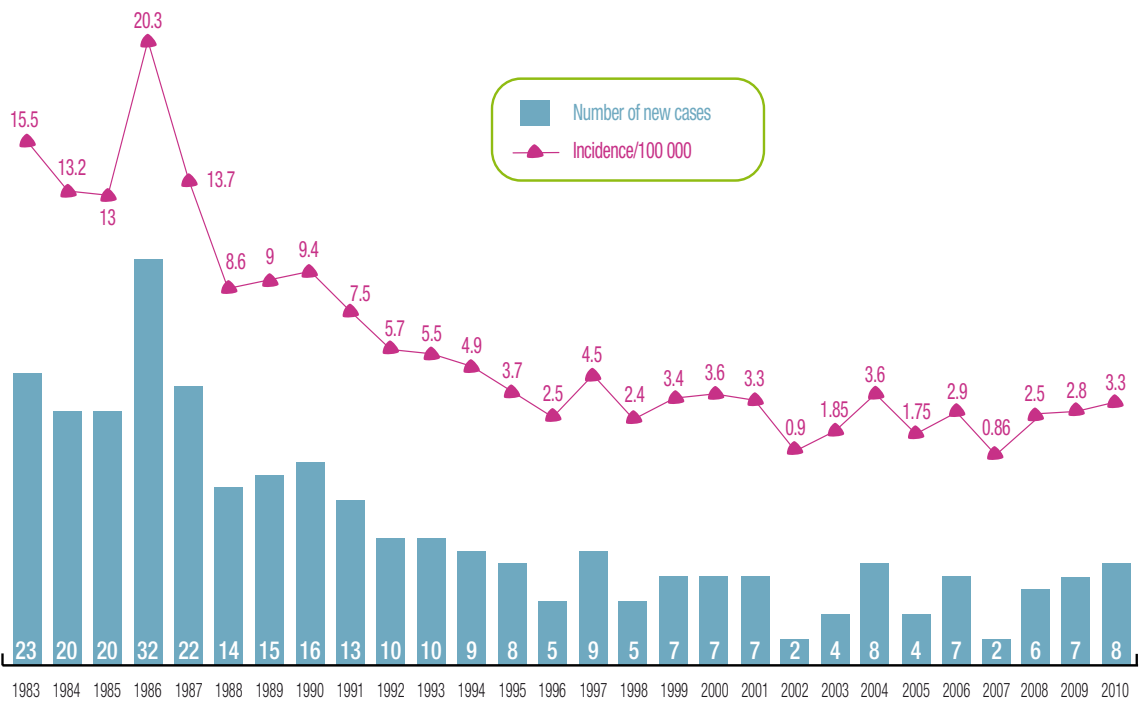
Despite ARF being a notifiable disease, it is extensively under-reported, making it difficult to carry out an accurate assessment of its incidence in New Caledonia.

LEPROSY

Leprosy (or Hansen's disease) is a chronic infectious disease caused by the acid-fast bacillus (*Mycobacterium leprae*, formerly Hansen's Bacillus), transmitted through direct, intimate and prolonged contact with an infected person. The leprosy registry covers 28 years, from 1983 to 2010 and comprises 300 records.

The Hansen's disease control programme is conducted by the dermatology department of the Nouméa CHT (Territorial Hospital). Screening in New Caledonia is essentially passive, the large majority of patients being referred by either their attending physician or their dispensary physician.

The multidrug leprosy treatment (MDT) programme has reduced the prevalence of leprosy in New Caledonia and this disease is no longer a major public health problem. With 8 new cases in 2010, the incidence rate is 3.3 per 100 000. In 2010, 4 new cases were multi-bacillus.



In the 300 cases recorded since 1983, the following was observed:

- A male predominance : 196 men and 104 women.
- An ethnic disparity, with higher representation of the Melanesian community (251 persons) than other ethnic groups (Europeans : 31 cases ; others : 18 cases).

**Prevalence**  
In 2010, only 10 patients were treated with multidrug therapy, which represents a prevalence rate equal to 0.37 per 10 000 population.

**International situation :**

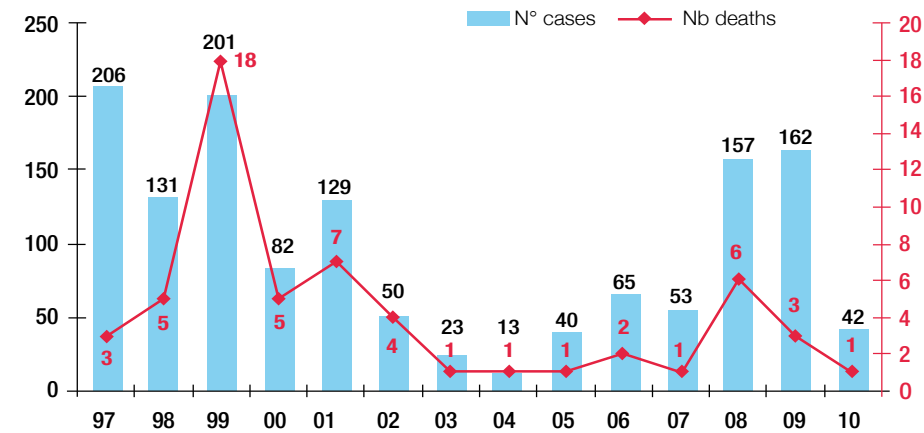
Source : WHO

The number of new cases detected in the world in 2009 was 244 796. This number has fallen by 1.7% over 2008. This drop results mainly from a fall in the number of new cases in India (367 143 cases in 2003 to 134 184 in 2008) and in Brazil. In 2009, the number of cases in India represented 54.6% of the total number of cases in the world

# LEPTOSPIROSIS

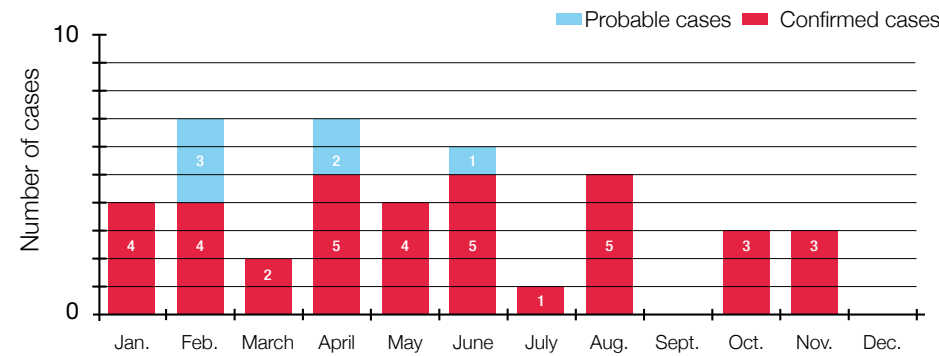
In New Caledonia, leptospirosis is an endemic disease that can surge to outbreak status depending on the weather.  
In 2010, 42 cases were reported.

Number of cases of leptospirosis and deaths per year in New Caledonia from 1997 to 2010



In 2010, this disease mainly affected men (57.1%), and young adults: (the average age is 40 years). Infection was probably due to risky behaviour, daily or occupational contact with infected animals or contact with contaminated soil.  
Infections in children and adolescents can be linked to exposure during leisure activities such as bathing in fresh water. Most cases were reported between February and June (61.9%).

Monthly distribution of accumulated cases in 2010

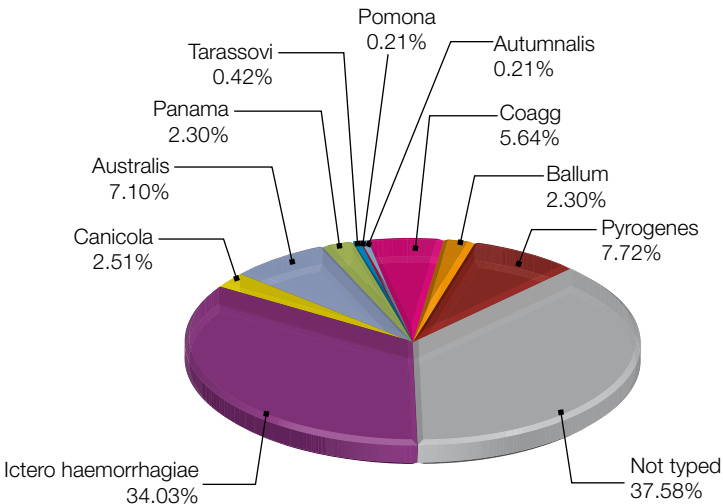


In 2010, 1 death was directly due to leptospirosis.

A study of cases over the last 5 years shows geographical disparities, with average incidence higher in Bourail.

The most frequently identified serogroups in 2010 were :

- Ictero-haemorrhagiae,
- Australis,
- Pyrogenes.



DENGUE

Dengue is a viral condition transmitted by the Aedes aegypti mosquito that lays its eggs in clean water (empty tin cans, etc.).

This arbovirus has 4 serotypes, without cross immunity, but giving permanent immunity for each of the serotypes. Reinfection by another serotype can cause the onset of a more severe form of the disease.

After the 2003 epidemic, during which 5 673 cases and 17 dengue-related deaths were recorded, residual virus transmission occurred during the first half of 2004 and the year saw a total of 792 cases

The 2005-2007 period was quieter (46, 48 and 48 cases respectively, no deaths). Apart from 2 imported cases of dengue 3 and 4 in September 2005, years 2006 and 2007 featured serotype 1 (and only 1 case of type 3 for each of those years).

In 2008, 1 179 cases of dengue 2 were recorded with serotype 1 the one mainly in circulation, then also serotype 4 at the end of the year.

In 2009, an unprecedented epidemic affected New Caledonia. 8 410 cases and 1 death were recorded. Serotype 4 was dominant throughout the year.

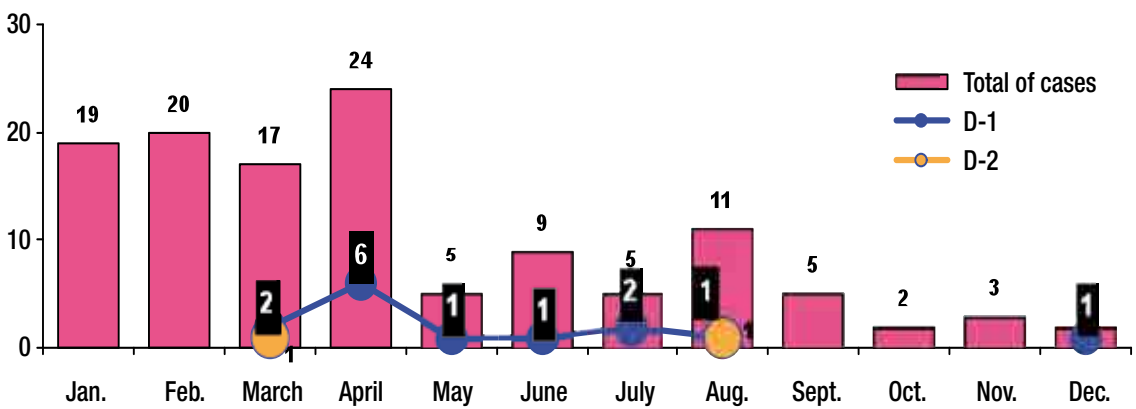
The various dengue fever serotypes occurring during epidemics from 1996 to 2010

Year	1972	1976-78	1979-80	1989	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Type 1							1				12	64	563	177		3	27	199	62	14
Type 2						1	154	1390	225		1							1	2	2
Type 3					2212	1123	7	5							1	1	1	1		
Type 4						12		1							1			25	253	
Total					2212	2121	251	2612	354	12	34	105	5673	792	46	48	48	1179	8410	122

It should be noted that typing of dengue cases began in 1996. The cases recorded during the 1995 outbreak were considered to be type 3. The same assumption was made for previous years.

2010 did not see an outbreak and, of the 1 753 tests carried out, 122 cases were confirmed, including 14 DEN-1 cases and 2 DEN-2 cases (see breakdown below).

Monthly distribution of dengue cases and types circulating in 2010



65.6% of cases were diagnosed between January and April 2010.

## DISEASES UNDER SURVEILLANCE

Weekly disease reporting using 'grouped data' was introduced in the provincial public health services. Theoretically, they come from the two hospitals in the Northern Province, 26 socio-medical districts in the Loyalty Islands, Northern and Southern Provinces, the mother and child protection centres and the multi-purpose medical centre in Nouméa.

For 2010, about 2.7 % of the expected reports were received by DASS-NC. For 2010, the data presented in this report were communicated by the Southern Province health service ('DPASS-Sud') and IPNC.

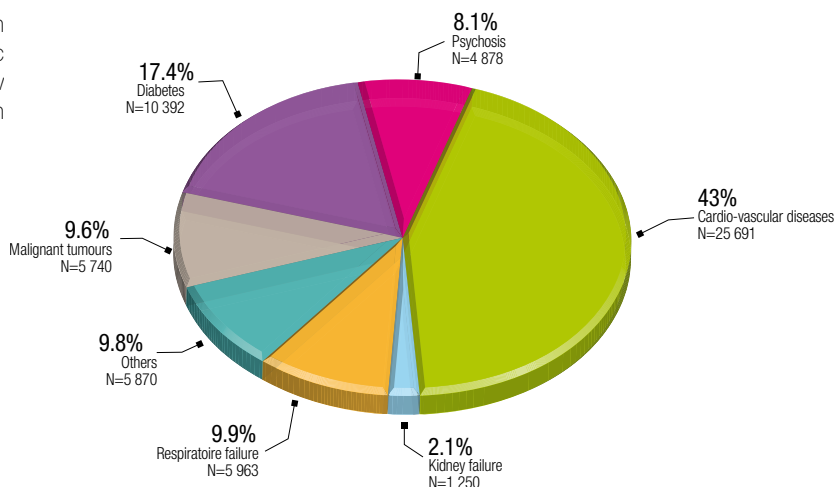
Disease	N° of cases 2005	N° of cases 2006	N° of cases 2007	N° of cases 2008	N° of cases 2009	N° of cases 2010
Acute conjunctivitis	224	438	304	109	79	103
Ear infection	628	1547	949	245	145	242
Acute respiratory tract infection	3261	7503	3372	1089	183	885
Pneumonia	30	20	19	8	621	422
Influenza	254	975	571	144	1055	316
Salmonella infection without typhoide	0	21	0	40	0	16
Shigellosis	0	5	0	14	19	18
Other Protozoal intestinal diseases	2	0	1	0	0	0
Diarrhoea	276	613	375	95	137	204
Acute viral hepatitis other than B or C	787	68	5	1	76	3
Meningitis other than meningococcal	0	8	4	2	1	0
Ciguatera	25	67	25	5	2	2

## CHRONIC DISEASES

Most chronic diseases are covered as 'prolonged diseases' under the CAFAT social security system for insured persons and other entitled persons.

Since July 2002, with the creation of 'RUAMM', the number of insured persons has risen considerably to include public servants and other new contributors. It comprised 241 888 beneficiaries as at 31st December 2010. In 2010, 37 561 persons were covered under the prolonged disease arrangement (15.4 % of the RUAMM total) for 59 784 conditions (certain patients may be covered for more than one disease).

This gives an indication of the main chronic diseases covered in New Caledonia as shown in the graph opposite.



CANCERS

Cancers are notifiable under the relevant regulations. Most notifications come from physicians working in the anatomo-cytopathological laboratories and specialist doctors in public or private practice who attend these patients. The data sent to the Cancer Registry are checked by reference to the clinical file in order to ensure that the records are complete.

All solid invasive tumours are recorded and assessed, as well as malignant haemopathies and benign tumours of the central nervous system.

Not included in the analysis are all in situ malignant tumours, recurrences and cancer metastasis from known previous tumours already included in the Register and other benign tumours. Baso-cellular skin tumours are also excluded.

The data collected are registered in accordance with the recommendations of the European Network of Cancer Registries (ENCR). Topography and morphology are coded as per the 3rd Edition of the International Classification of Diseases for Oncology (ICD-O-3).

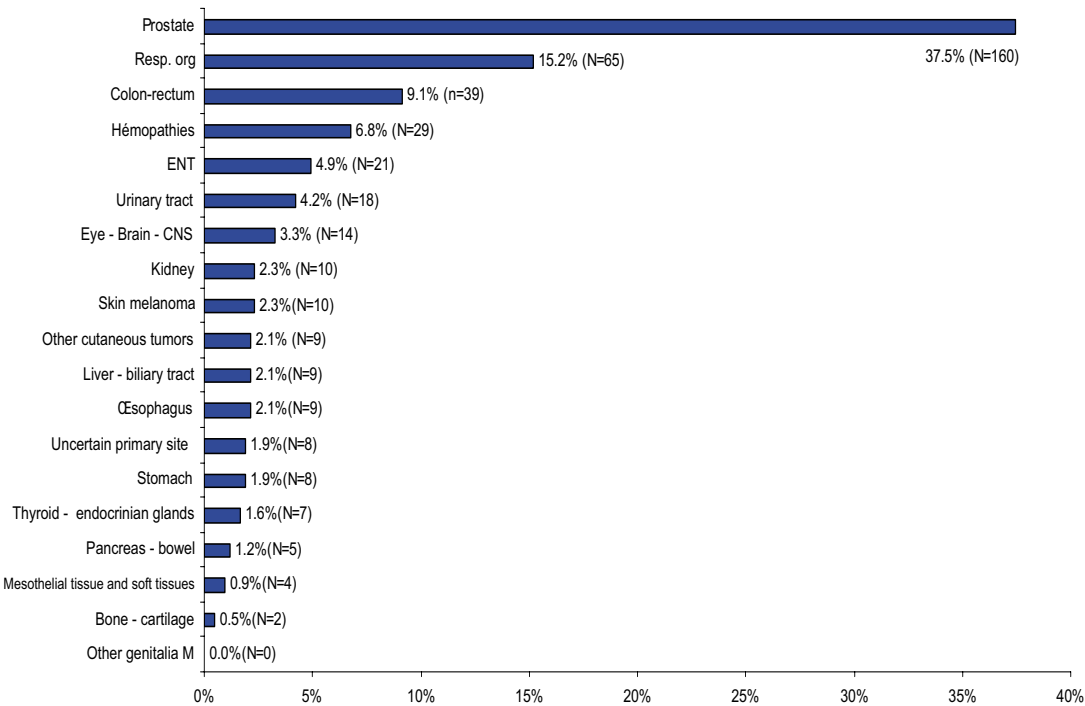
The results given below relate to the cancers detected in 2008 (record as at 15/07/2011). In 2008, 746 new primary malignant tumours and 8 non-malignant tumours of the CNS were registered (427 in men and 327 in women).

Their topographical distribution varies by gender.

In men, the most frequent cancer sites were:

- 1. Prostate (160 cases, 37.5%)
- 2. Respiratory organs (65 cases, 15.2%)
- 3. Colon/rectum/anus (39 cases, 9.1%)

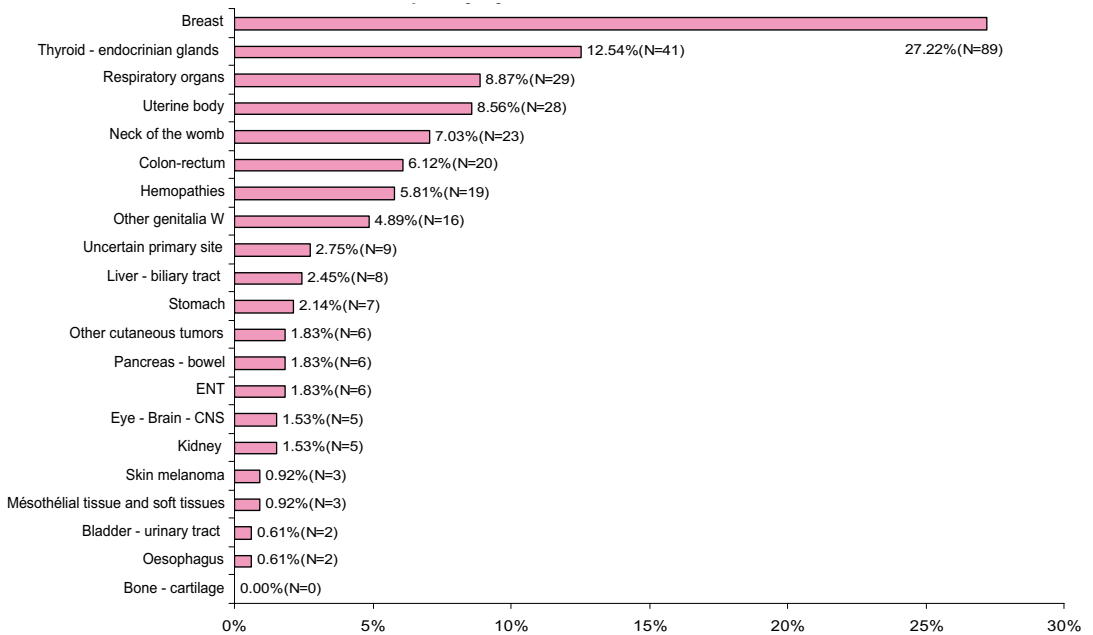
Distribution of main cancer sites in men



The distribution also varies by community, with a higher frequency of prostate cancer in Europeans (44%) and Polynesians (38.1%) and a higher proportion of respiratory cancers in Melanesians (25%).

In women, the main cancers were breast cancer (89 cases, 27.2%), thyroid and endocrine gland cancers (41 cases, 12.5%) and cancers of the respiratory organs (29 cases, 8.9%).

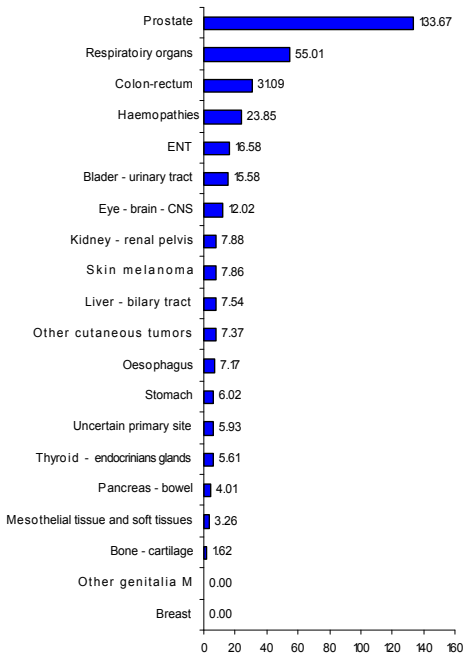
### Distribution of main cancer sites in women



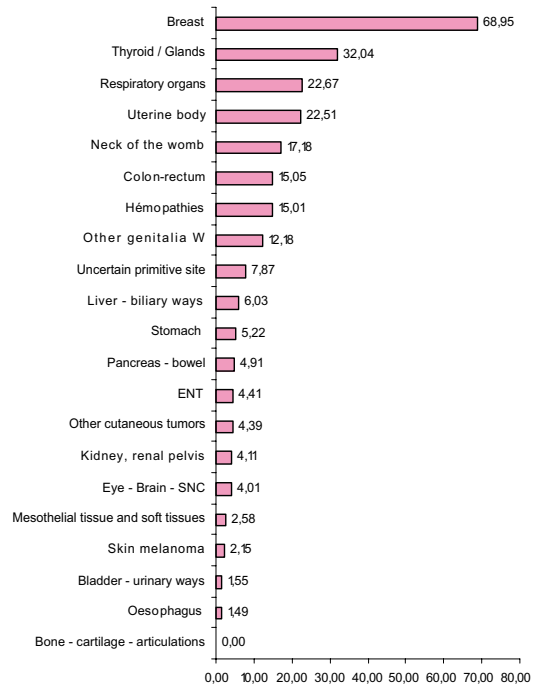
A much higher rate of breast cancer is observed in European women (36.2%) in comparison with the other communities (Melanesians: 23.9%, Polynesians: 17.6%) and a higher proportion of thyroid cancer in Melanesian women.

The standardised incidence rates (SIR), calculated from the reference world population, make it possible to carry out international comparisons by limiting the effect due to the differing age structures of the compared population groups.

### SIR - Men



### SIR - Women



New Caledonia is a high-incidence country for some cancers : thyroid, endometrium and cervix in women and prostate in men.

Overall, in 2008 in New Caledonia the most common male cancers were of the prostate and the respiratory organs, while the most frequent female cancers were of the breast and thyroid.

CHRONIC RENAL FAILURE

Chronic renal failure (CRF) can be defined as the gradual deterioration of filtration, excretion and endocrine secretion functions by the renal parenchyma, as a consequence of irreversible anatomical lesions.

Most renal diseases develop, albeit at different speeds, towards a stage called chronic uraemia. When CRF reaches an advanced stage, it becomes essential for the patient's survival to offset the failure of the sick organ, either by kidney transplant or graft, or by extra-renal purification.

Three facilities provide extra-renal purification through Haemodialysis and Peritoneal Dialysis.

Depending on the options chosen, these two processes are broken down into several treatment plans. Haemodialysis can take the form of hospital haemodialysis, simple haemodialysis, home haemodialysis or auto-dialysis.

Peritoneal dialysis comprises continuous ambulatory peritoneal dialysis (CAPD) and Automated Peritoneal Dialysis (APD).

The third compensatory technique is Renal Transplantation, but this is not available in New Caledonia. Pending the introduction of a local transplant programme, patients are sent to Metropolitan France or Australia.

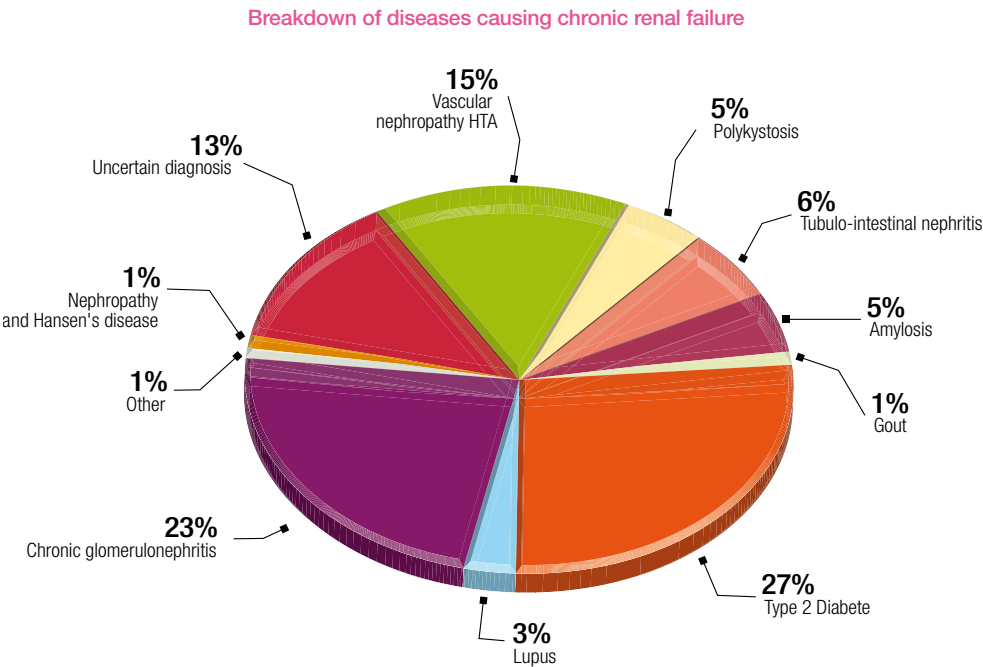
The increasing number of patients treated for chronic renal failure makes this condition a public health problem. As at 31st December 2010, 439 patients were under treatment for CRF, an increase of 5.3 % over 2009 and a prevalence rate equal to 1 695 per million population (PMP), a crude rate 1.7 times higher than in Metropolitan France in 2007 (1013 PMP).

With 95 new patients in 2010, the incidence rate is equal to 366 per million, which is the rate in the United States where the prevalence rate was already higher than 1 600 PMP.

The breakdown by mode of treatment shows that haemodialysis remains the principal method of treatment and concerns 67.4 % of patients, followed by peritoneal dialysis (9.8 %). Kidney transplants (22.8%) began in 1984.

Chronic glomerulonephritis and Type 2 diabetes remain the major two causes of chronic renal failure in New Caledonia.

These two conditions represent half of all new patients being treated, as shown in the following figure :



The crude incidence and prevalence rates of renal failure treated in New Caledonia are relatively high overall and comparable to those of countries such as Japan and the United States.

These figures characterise the breadth of the range of health care services available for renal dysfunction in New Caledonia, but do not permit an accurate assessment of the frequency of chronic renal failure.

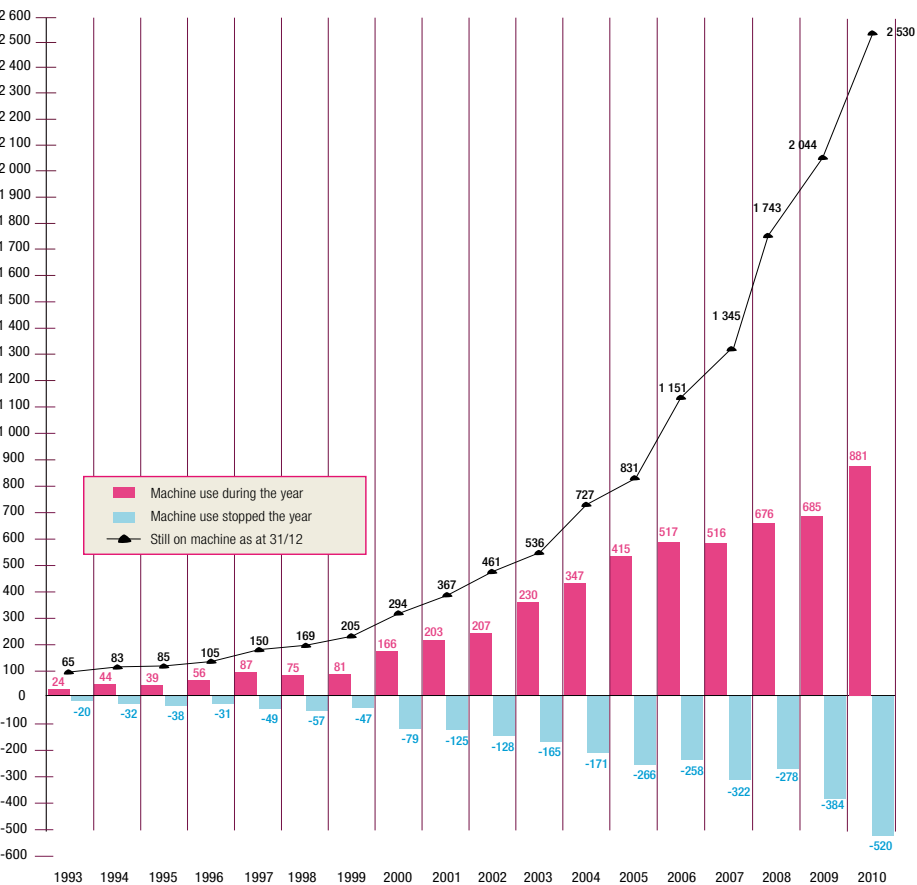
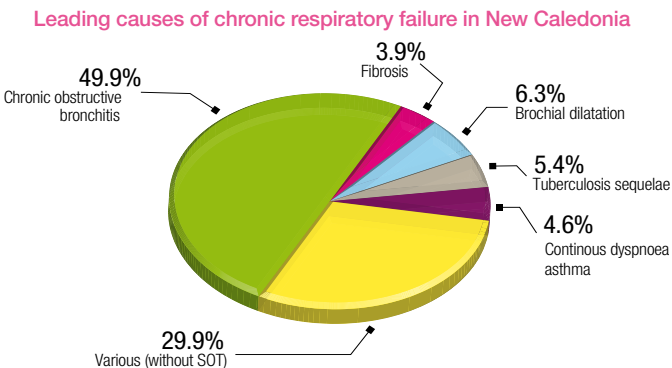
To do so, further research would have to be considered.

CHRONIC RESPIRATORY FAILURE

Five facilities offer home treatment for respiratory failure patients in New Caledonia.

- ‘Service d’Assistance Respiratoire à Domicile’ (SARD-NC), an association set up in 1990;
- ‘Oxygène Confort’, a private company established in September 2004;
- ‘Respire’, a private company set up in August 2007;
- ‘Respidom’, a private company incorporated in November 2007;
- ‘Assistéo’, a private company incorporated in 2009.

The diseases covered can be broken down into two major groups: chronic respiratory failure (CRF) and sleep apnoea syndrome (SAS), which require two main kinds of treatment: oxygen therapy and positive-pressure ventilation. To these two categories, in significant numbers since 1997, can be added cancers (terminal care or otorhinolaryngology) and various diseases that remain unknown because of the mode of decision on treatment for short-term oxygen therapy (SOT), which is offered on prescription and yields no information on the disease requiring such treatment. The leading cause of chronic respiratory failure in New Caledonia remains chronic obstructive bronchopulmonary disease (50%).



The number of patients on machine-assisted treatment has shown an exponential growth trend since 2000, when short-term oxygen therapy began.

One reason why treatment with machines ceased was patient death (24.8 % of cases of treatment discontinuation in 2010). Deaths mainly occurred in patients with respiratory failure and terminal cancer. The average age of patients enjoying machine treatment is 60 years. The group concerned comprises 69.1 % men and 30.9 % women.

## MANAGEMENT

Patients are either cared for in the private sector by specialists (psychiatrists, psychologists) or in the public health care system.

In the public health care system, the hospital sector is structured as follows :

### 1 - The General Psychiatry Department with a number of 'Functional Units' addressing two sectors :

- In-patient hospital sector with 6 units (Ward 2 - 3 ; Ward 4 ; Ward 5 ; Ward 6 ; Ward 7 ; ergotherapy).
- Out-patient hospital sector with 7 units : (Psychiatric Treatment, Orientation and Emergency Unit ('UAOUP') ; day hospital ; Medico-psychological Centre (CMP) ; Medico-psychiatric unit for prisoners (UMP) ; consultation and ambulatory care services unit (UCSA), Medico-psychological units in Poindimié, Koumac and Lifou ; therapeutic workshops.

In-patient hospital activity 2010	Short stay			Long stay		Total
	Ward 5	Ward 6	Ward 7	Ward 2-3	Ward 4	
Direct admissions	360	17	294	47	1	718
Days of hospitalisation	7 062	3 689	5 956	12 760	7 160	36 627
Average length of stay	16.4	105.4	16.9	84.5	341	40.2
Occupation rate	96.7	101	77.7	87.4	98.1	90.4

Out-patient hospital care 2010 :

**UAOUP** : 1 707 consultations

**Day hospital** : 4 961 hospitalisation days

**CMP** : 7 932 psychologist consultations ; 5 597 home calls

**Penitentiary** : psychological and psychiatric consultations: 2 355

**Medico-psychological centres** : 6 092 consultations at Koumac and Poindimié

### 2 - The general child psychiatry department comprises 5 functional units on 3 sites in Noumea :

- Magenta, with the Early Childhood Unit (UPE) and the Medico-psychological Centre (CMP)
- Anse Vata, with the Part-time Treatment Centre (CATTP) and the Day Hospital
- Rue Dezamaud with the Treatment and Care Centre for Adolescents (CASADO)

**NB : 2009 : the active list, with 2 543 patients, is shorter than that for 2008, by -23.1%.**

### 3 - The geriatric department

In 2009, the number of consultations was 1 107; the active list comprised 759 patients, including 513 new patients.

The most frequent needs were memory monitoring and memory (4.6%) and admission requests (29%): geriatric case monitoring represented 18%, opinions 4% and expert opinions 2%.

SUICIDE : ONE ASPECT OF MENTAL ILLNESS

Suicide is a major public health problem in the world and particularly among adolescents. In metropolitan France, suicide is one of the major causes of premature deaths compared to other causes, especially among young adults. Since we do not have data concerning attempted suicides, only data on deaths will be used.

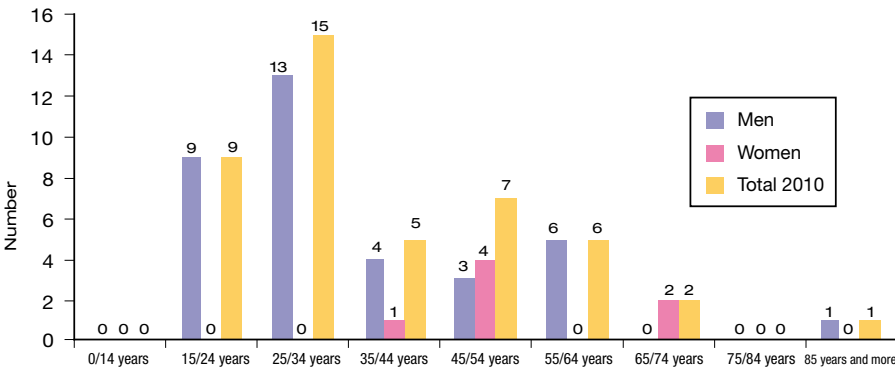
In 2010, 45 deaths by suicide were recorded, or 3.8 % of all deaths (N=1 190) and 24.2% of violent deaths, representing a crude mortality rate equal to 18.3 per 100 000 of the population (men : 28.9 per 100 000 ; women : 7.4 per 100 000) and a standardised rate equal to 17.2 (men : 27.2 per 100 000 ; women : 6.9 per 100 000).

Male suicides account for over 80% of all suicides, or 4 times more suicides in men than in women in 2010 (36 men and 9 women).

Distribution of deaths by suicide by sex and age group in 2010

In men, the age group most affected by suicide is the 25-34 year-olds at 36.1%, as against 25% in the 15-24 age group.

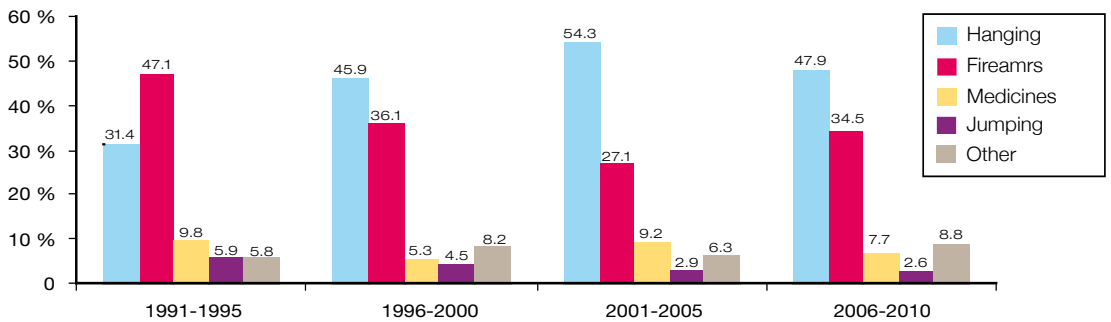
With women, the 45-54 year-old group accounts for 44% of suicides.



As in previous years, the 2 main methods of suicide in 2010 were hanging (51.1%) and the use of firearms (35.5%).

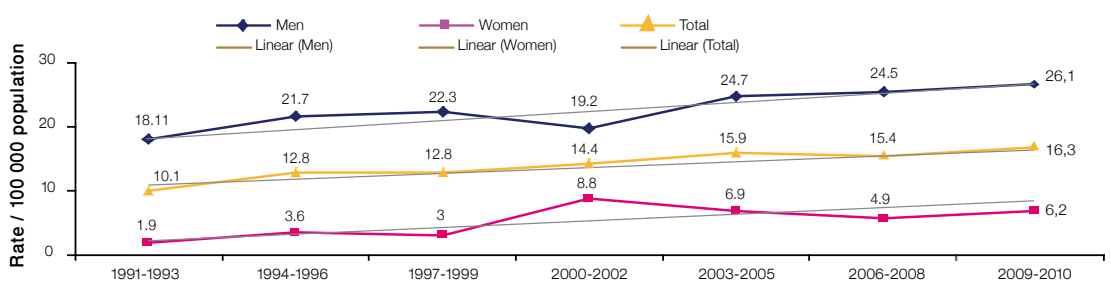
Over the 1991-2010 period, the proportion of suicides by hanging increased in comparison with suicide by firearm.

Trends in the main suicide methods for both sexes combined



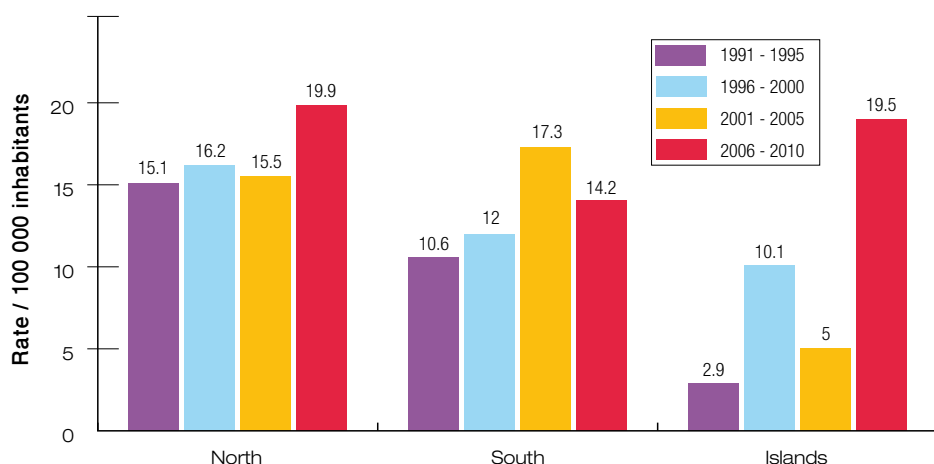
As the following figure shows, the crude annual mean rate has been tending to decrease in women since 2000 and has remained stable in men since 2003.

Trends in the crude annual mean rate by sex



When these death by suicide rates are related to the population concerned, an increase in the mean annual rate over the 2006-2010 period can be observed in the Northern and Islands Provinces.

## Crude mean annual rate of death by suicide by province of residence



### Comparison with the European area

The standardised mean rate observed in New Caledonia was 22.7 per 100 000 in men and 5.46 per 100 000 in women. The combined rate was 14.2 per 100 000 depending on age and is lower than for metropolitan France (16.0 deaths per 100 000 in 2006).

France is in 3rd position in Europe behind Finland and Austria (26.3 and 24.0 per 100 000 respectively).

### Conclusions

Suicide is a public health problem that, according to the WHO, can be avoided to a great extent and each death by suicide has devastating emotional, social and economic consequences for many families. Numerous underlying and complex causes are described as producing suicidal behaviour, especially poverty, unemployment, the loss of someone close, arguments, separations in relationships and work-related worries or brushes with the law. Family precedents as well as abuse of alcohol and drugs, sexual abuse during childhood, social isolation and some mental disorders like depression and schizophrenia play a determining role in many cases.

In New Caledonia, suicide seems to be a less worrying cause of death than in European countries and less significant than deaths by road accident. However, even if the rate of suicide is lower than the rate of deaths by road accident, it is still a significant cause of death among young men that could be avoidable.

Early detection of mental disorders and appropriate treatment are a good preventive strategy, particularly for young people. Health care professionals, teachers and social workers have an important role to play in this area by creating youth mental health care networks.

## PSYCHOTROPIC DRUG CONSUMPTION

All importations of psychotropic drugs for human use from mainland France are recorded by DASS-NC. Consumption levels remained stable over the observation period.

Tetrazepam had been prescribed in significantly growing quantities for several years. This drug is a benzodiazepine not indicated for its psychotropic properties (that do exist nevertheless) but for its myorelaxant qualities. As most other myorelaxants have disappeared from the market or are no longer eligible for reimbursement, this product is showing increased use, although it induces the side effects or contra-indications of the other benzodiazepines. After stabilizing in 2008 and 2009, its consumption declined in 2010.

As a result of the recording of abuse or misuse of these drugs, the conditions governing the prescription of flunitrazepam and high doses of oral clorazepate (20 and 50 mg) have been tightened. The drug-dependency observed with certain hypnotics had also justified restrictive measures over their prescription.

The consumption of buprenorphine is increasing constantly through its use as a substitute treatment for opiate dependence.

## ROAD ACCIDENTS

Number of vehicles on the road :

Annual vehicle sales have constantly increased since 2000.

In 2010, 14 223 new vehicles were registered in New Caledonia.

The total number of vehicles on the road in New Caledonia is estimated at 150 000 according to the 2010 National Police report, or 1 vehicle per inhabitant over 20 years old.

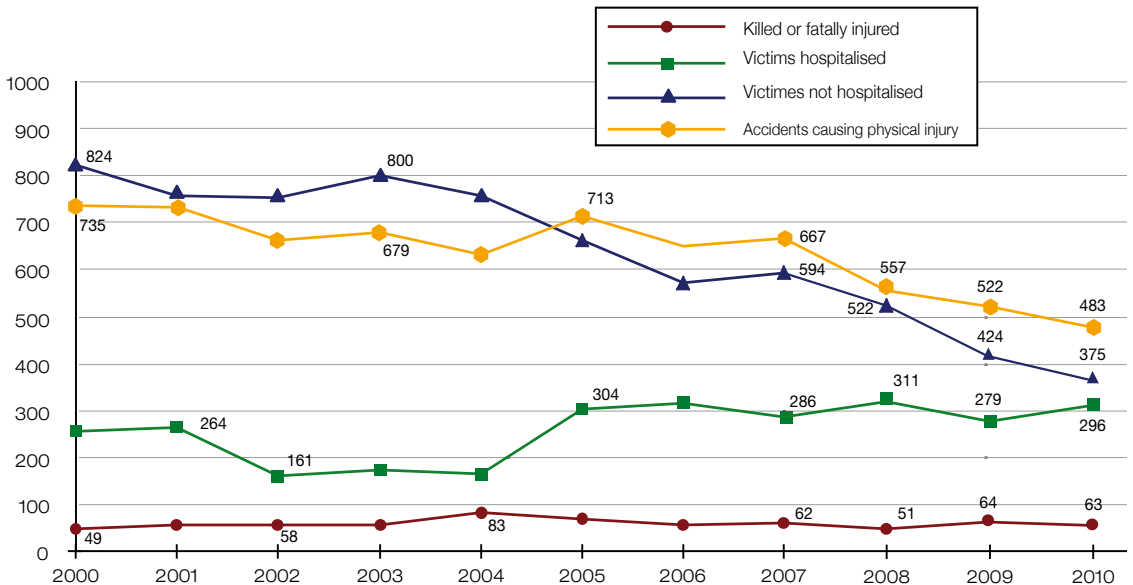
Accidents causing physical injury :

In 2010, 483 accidents causing physical injury were recorded for the whole of New Caledonia, producing 63 deaths or fatal injuries, or 9.4 % of the 671 victims (296 seriously injured and hospitalised and 375 injured but not hospitalised).

The record shows a decrease of 7.5 % in the number of accidents causing physical injury over 2009 with more hospitalisations (+6.1%) and less unhospitalised accident victims (-11.6%).

The number of road accident deaths in 2010 is however higher than the mean annual figure for the past 5 years (N=59).

Annual trends in physical injury, death or fatal injury, victims hospitalised, victims not hospitalised



Three main causes of accidents :

In the city of Noumea, the three clearly leading main causes of accidents concerning 73% of the 332 accidents were :

- loss of control of vehicle - speeding: 90 cases, or 27.1% of accidents;
- failure to give way (failure to stop at stop sign or red light) : 83 cases, or 27.1 %;
- drink-driving : 69 cases, 20.8%.

Outside the urban area : the three main causes of accidents account for 92.7 % of the total of 151 accidents.

- 72 accidents, or 48 %, were due to drink-driving;
- 68, or 45%, were due to speeding or loss of control of the vehicle.

Comparatively, New Caledonia has a crude rate of 256 deaths per 1 million population (pop. at 01/01/09) and metropolitan France 68 deaths per million population.

(Source: INSEE. pop as at 01/01/10.)

### 3 AGENCIES OFFER INDUSTRIAL MEDICINE SERVICES IN NEW CALEDONIA.

#### 1 - 'Service Médical Interentreprises du Travail' (SMIT, the Business Industrial Medicine Service),

responsible for occupational medicine for workers under CAFAT coverage for companies that do not have their own service. In 2010, SMIT catered for 83 754 workers in 14 061 companies. In 2010, 34 640 examinations were conducted in comparison with 33 262 in 2009.

The number of regular examinations was 15 243 and the number of non-regular examinations was 19 397. Counted in the non-regular examinations were hiring examinations, work resumption examinations and occasional examinations.

A total of 34 206 decisions was taken during 2010. Of the persons examined, 34 206 were found to be fit for work. The others were declared to be fit with restrictions or unfit. 38 occupational diseases were detected. Musculo-tendon disorders represent 39.5% (n=15) of cases of such diseases. Others were scabies (11 cases), lesions due to noise (5 cases), and 1 case each of eczema, inhaling iron dust, asthma, knee lesions, vibrations, chronic spine complaint and leukemia.

#### 2 - Medical Department of the SLN

(Société Le Nickel) company, comprising two services : care medicine and preventive medicine. The medical care service takes staff without appointments and performs vaccinations. The preventive medicine service examines new staff at the hiring medical examination and conducts regular examinations. Most staff are examined annually. Highly exposed workers, such as electrode welders, undergo a regular six-monthly examination. It conducts special medical surveillance, work resumption examinations and additional screening.

It also attends to the disabled and pregnant women. Workers under special medical surveillance are those assigned to dangerous work environments or involving risks specified in Order N° 4775-T dated 10th December 1993, article 1134 para. 1, line 2 and line 3. Work resumption examinations are carried out after work accidents, occupational diseases, absences of more than one month and repeated absences.

Additional examinations are : chest x-rays, biological tests, basic respiratory tests, audiograms, ophthalmologic tests, toxicology, nickeluria, urinary tests and PSA dosage tests.

2010 figures : 6 worksites, employing 2 263 workers altogether, were monitored by the industrial medicine physician. 1 982 workers were under special medical supervision.

A total of 4 973 medical examinations were carried out, including 2 249 regular examinations and 30 for hiring examinations, work accidents and resumption examinations. 10 197 additional examinations were performed (blood tests, urine tests, x-rays, ophthalmology, toxicology, etc.).

#### 3 -The Occupational Medicine Service

at CHT Gaston Bourret opened in January 1998. It is located at Gaston Bourret Hospital. It is responsible for the medical surveillance of staff at the four CHT sites: Gaston Bourret, Magenta, Raoul Follereau leprosy centre and Col de la Pirogue tuberculosis treatment centre. It also oversees staff working at the Albert Bousquet (CHS) psychiatric hospital.

It monitors some 1 800 people altogether for the CHT (permanent public servants and contract staff).

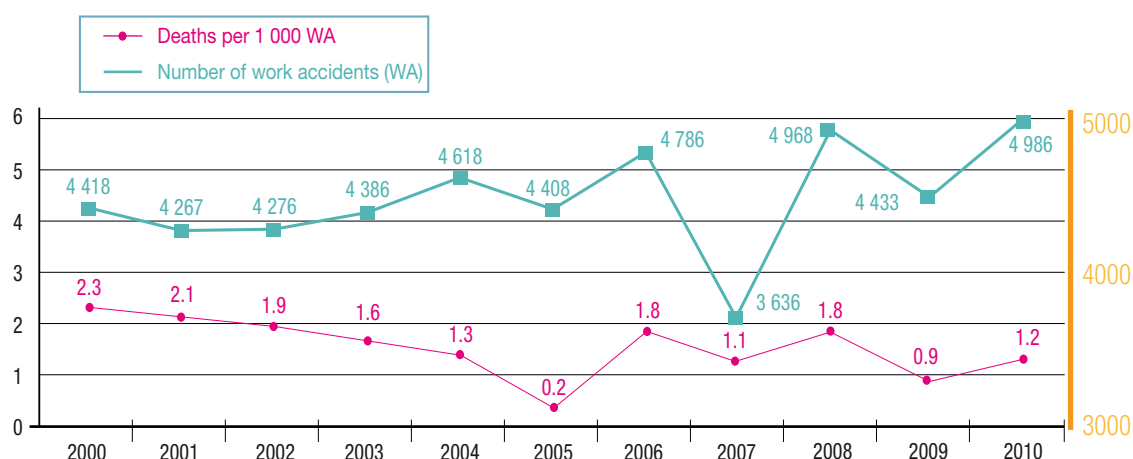
#### **Work Accidents (WA)**

According to CAFAT data: In 2010, 4 986 occupational accidents were recorded, a decrease of 12.5% over 2009. 141 commuting accidents leading to absence from work (+17.5% over 2009) and 85 occupational diseases (stable in comparison with 2008) were recorded. The number of compensated sick leave days (65 367) fell by 3% in comparison with 2009 and the average duration of a period of sick leave increased from 30.5 days in 2009 to 28.2 days in 2010.

Since 2004, the number of deaths has been relatively low and varies between 1 and 10 per year.

As the graph below shows, the death rate is between 0.2 and 2.3 deaths per 1 000 work accidents (WA).

## Annual trends in number of WA and number of deaths following a WA



In 2010, overall, an increase in the number of occupational accidents, deaths and commuting accidents was observed, but also an increase in the number of occupational diseases over 2009.

## ADDICTIONS : ALCOHOL, TOBACCO, NARCOTICS

### ALCOHOL

#### Consumption

In 2010, 1 821 303 litres of pure alcohol were consumed in New Caledonia, 4.6% more in than 2009.

In 2010, beer consumption accounted for 42.5 % of total alcohol consumption.

Also to be noted is an increase in this figure (4.2%) over 2009.

An increase can be observed (12.2%) in wine consumption over 2009. In 2010, it accounted for 35.1% of total consumption.

Spirits accounted for 22.5% of the total, a reduction of 5% in comparison to 2009.

### Consequences of alcoholism

In New Caledonia, the consequences of alcohol consumption and in particular excessive consumption are commonly social issues or, in the health area, traumatic injuries.

### Mortality

In New Caledonia, medical death certificates recorded 39 deaths totally or almost totally due to alcohol consumption in 2010, or 3.2% of the total number of deaths, a crude annual rate of 15.8 deaths per 100 000 population.

These 649 deaths between 1991 and 2010, account for 3 % of the total of 21 736 deaths over the past 20 years, or a crude mean rate equal to 15.1 deaths per year per 100 000 inhabitants.

In addition to these 649 deaths, the figure can be extended to include deaths for which acute or chronic alcoholism was quoted as an item of further information, i.e. 610 extra deaths, increasing to 1 259 the number of deaths that can be attributed to alcohol (33 extra deaths for 2010)

Between 1991 and 2010, therefore, 2 389 deaths can be attributed to alcohol.

This represents 11% of total mortality for the period concerned.

Since 2000, OFDT, in partnership with the National Service Unit (DSN), has implemented the 'ESCAPAD' declarative survey using a questionnaire offered to all the young people present at a 'defense preparation day' (JAPD). It provides information on use levels and trends in consumption patterns and preferred products.

The most recent survey was carried out in 2008 in France, the DOMs, New Caledonia and French Polynesia. It provides information on use levels and emerging trends in terms of products and consumption patterns and enables very active monitoring of developments at an age that is closely concerned. Young New Caledonians seem to have habits that are broadly comparable to those measured throughout the nation. The local trends between 2005 and 2008 differ from those recorded in the French mainland, with a rising trend towards inebriation.

TOBACCO

The tobacco trading monopoly in New Caledonia was initiated by a Decree dated 17th October 1916. The 'Regie Locale des Tabacs', a section in the miscellaneous contributions department within the tax department, is in charge of supplying tobacco monopoly products. In this chapter, 1 tobacco unit is: 1 cigarette = 1 cigar = 1 gram (Seita agreement).

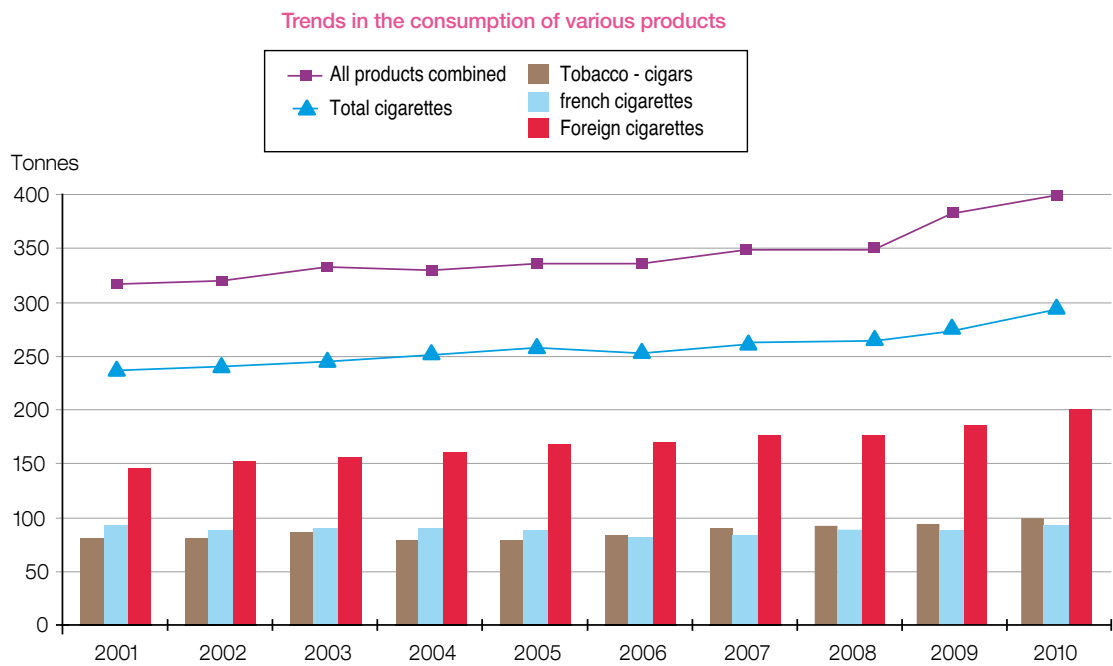
For 2010, the total sale of tobacco products amounted to: 399.6 tonnes, or 4% more than in 2009.

Since 2001, a gradual increase in annual tobacco consumption has been observed in New Caledonia, taking all tobacco products together, with 2010 showing the highest annual consumption figure for the past ten years.

The estimate for daily tobacco consumption, all products combined, per adult 15 years old and older, was 5.98 grams/adult/day.

Tax revenues collected by the local tobacco monopoly increased by 19.5 % from 2009 to 2010.

It should be noted that the Government of New Caledonia, in its meeting on 24 December 2010, drew up a list of the new retail tobacco product prices in New Caledonia. The new price structure came into force on Saturday 26 December 2010.



Consequences of smoking

**Morbidity :** The main diseases related to smoking for which we are able to collect data in terms of morbidity are respiratory cancers (lungs and bronchial tubes, larynx) as well as, in some instances, the respiratory diseases covered by home ventilation or oxygen therapy.

New Caledonia cancer register figures show that, over the past ten years, on average 75 new cases of respiratory cancers are recorded per year.

Mortality

In the same way as with morbidity, it is possible to quantify the mortality due to smoking from an assessment of the death certificates issued in New Caledonia since 1991. The number of deaths due to smoking is obtained by multiplying the total number of deaths due to a given cause by the risks attributed to tobacco, as assessed in a cohort survey by the American Cancer Society.

When the risk factor is applied to each of the diseases linked to smoking, the result is 2 426 deaths in men and 299 deaths in women thought to be smoking-related, or 2 725 for 21 736 deaths during the same period, i.e. 12.5 % of deaths, representing a mean crude rate of smoking-related deaths of 63.3 per 100 000.

The data from metropolitan France showed, in 2000, that 20 % of the total number of male deaths was smoking-related, as was 2 % of female mortality.

ILLICIT DRUGS

Our information comes from seizures by the police, 'gendarmerie' or customs services, which are covered by their annual reports to the pharmacy inspectorate.

The main substance concerned in New Caledonia, by far, remains cannabis.

Small quantities of LSD were seized in 2007, 2009 and 2010.

Small amounts of ecstasy were seized in 2008 and 2009.

The efforts by the Gendarmerie to combat cannabis use are having visible results in terms of volumes of seizures. The majority of seizures concern plants. One plant is equivalent to 200 g of cannabis.

Expressed in terms of total population, these seizures suggest that an economy has sprung up around cannabis dealing.

Seizures (in g)	2003	2004	2005	2006	2007	2008	2009	2010
Cannabis	775 286	3 833 264	2 045 060	3 458 102	3 156 117	1843 062	4 309 063	5 389 723
Cannabis resin	439	20	281	2	1	41	31	71
Cannabis oil	11 507	0	0	0	0	0	0	0
Cocaine	0	0	198	0	3	0	1	1
Heroin	0	0	0	0		0	0	0
LSD	0	0	0	0	8 blotters	0	17 blotters	0,04 (g)
MDMA	0	4	0	0		0	0	0
Methamphetamine	0	20	0	0			0	0
Ecstasy						1	1	0

Addiction to codeine exists in New Caledonia but has not been accurately assessed. It mostly involves the pharmacy drug Codoliprane® (association of 20 mg of codeine phosphate and 400mg of paracetamol). Besides the drug addiction aspect as such, the abuse of this medicine is risky because of its paracetamol content. There is a risk of hepatic cytolysis (which can be fatal) due to the ingestion of doses of paracetamol exceeding 10 grams, i.e. two packets of Codoliprane®.

The use of derivatives of N-Benzylpiperazine or BZP, whose effects are close to those of amphetamines, is tolerated in New Zealand and personal importations have been reported. Their importation into New Caledonia is now banned.



## POPULATION GROUP APPROACH

### Women

The 2009 population census recorded a female population of 121 056 in New Caledonia, 53.6 % aged between 15 and 49 years old (considered to be of child-bearing age).

### CONTRACEPTION

Contraception-related activity can be estimated from the number of prescriptions issued at provincial medical centres. However, because the data for 2010 are incomplete, these numbers will only be presented for the CCF (family advisory services) in Noumea where contraception activity has increased significantly, due probably to contraceptive promotion campaigns and the involvement of all medical professionals, whether in public or private practice, as well as those of the Mother and Child Health Protection Centre (PMI).

In 2010, the CCF recorded no significant change in consultations for contraceptive methods (1 047 as against 1 052 in 2009) with increasing use of Implanon, supplied free of charge since 2008 (except for CAFAT and collective insurance schemes).

The PMI has noted a fall in consultations for contraception of 72.5% over 2009 but with an increase in Implanon implants of 15.9%.

To more realistically assess the contraception use rate in women in New Caledonia, data from contraceptive product sales were used. If the relationship between the number of oral contraception packets sold in a year and the number necessary for a year of contraception is established, this gives an estimate of the number of women for one year.

This calculation is also done for other contraceptive methods such as IM (Intramuscular – 4 injections per year for the products used in New Caledonia) and for IUD (Intra-Uterine Device - it is considered that an IUD has an average life of 5 years).

In 2010, the number of women-years of contraception can be estimated as at least 33 747 (other methods of contraception such as condoms and others, are not accounted for), which would represent a coverage of 52% of the women concerned.

VOLUNTARY TERMINATION OF PREGNANCY

The methods of voluntary pregnancy termination in New Caledonia were defined by a Resolution dated 22nd September 2000 and applied since 1st January 2001.

In 2009, 499 voluntary pregnancy terminations were notified by public hospitals and private clinics and recorded by DASS-NC, which is 2.2 % more than in 2008.

The rate per 100 conceptions can be calculated as follows: number of voluntary terminations per 100 conceptions (live births + stillbirths + voluntary terminations); thus assessed more accurately, it is equal to 26.7 per 100 conceptions.

Of 1000 women between the ages of 15 to 49 years considered to be of childbearing age (average population), the voluntary termination rate in New Caledonia is at least equal to 22.7 per 1 000. This very high estimate should be relate to the as-yet insufficient contraception coverage in New Caledonia, apart from the rate of undesired pregnancies that lead to a birth.

In metropolitan France, the number of abortions per 1 000 women was 14.7 in 2007.

SCREENING FOR CERVICAL CANCER

Cervical cancer screening for is one of the 9 priority areas of the prevention plan approved by the Territorial Congress in 1994 (Resolution N° 490 dated 11th August 1994, relating to a health promotion plan). A direct method of evaluating the effects of this screening is to regularly monitor the number of cervical smears done in New Caledonia through laboratory activities.

In 2010, 22 943 cervical smears were done in New Caledonia by two medical laboratories (a decrease of 15.1% in comparison to 2009). 3.2% of these cervical smears showed pathological lesions.

MATERNITY

The average age for mothers at first birth is tending to rise, since it went from 25.7 in 1994 to 27 in 2007 (ISEE figures).

PREGNANCIES AND DELIVERIES

Since 2006, the rate of caesarian sections in all facilities has shown a downward trend.

In the public sector in 2010, this rate increased by 0.7% over 2009 but remained in the mean range between 2006 and 2010. It dropped however in the public sector by 0.9% over 2009 and was under the mean over the 2006-2010 period.

2010	Public sector	Private sector	Total
Number of deliveries	2 418	1 692	4 110
Number of caesareans	389	353	742
% of caesareans / deliveries	16.1	20.8	18.0

MATERNAL DEATHS

Maternal death is the death of a woman **occurring** during pregnancy or within 42 days after delivery, whatever the duration or location of delivery, for any cause determined or aggravated by pregnancy or the care it has required but neither accidental nor occurring by chance. 1 maternal death was recorded in 2010 (1 in 2009) a total of 24 cases over the past 20 years. For the period from 1991 to 2010, the average rate was therefore 26.3 per 100 000 live births.

Because of the low number of cases recorded each year, this rate is influenced by the hazards of small numbers. Caution should therefore be exercised when interpreting it, which does not obviate the need to look closely at the causes of death so to reduce frequency.

CHILDREN

PREMATURE BIRTHS

A total of 4 165 births (including stillborn children) were recorded in 2010. This figure is not comprehensive as it does not include births at dispensaries in parts of the main island other than Nouméa and in the islands or those occurring at Poindimié Hospital in the Northern Province. At the time of writing, these figures had not been supplied to us.

These births are distributed as follows :

Place	Total births	Age of gestat. < 37 wks	% of gestat. < 37 wks	Births < 2 500 g	% of births. < 2 500 g
Islands Province	na	na	na	na	na
Northern Province	na	na	na	na	na
P.Thavoavianon Hospital	307	19	6.1	18	5.8
D. Nebayes Hospital	na	na	na	na	na
Southern Province not including hospitals and clinics	na	na	na	na	na
CHT	2 160	331	15.3	304	14.1
Anse Vata Polyclinic	666	14	2.1	14	2.1
Magnin Clinic	1 032	41	3.9	36	3.5
TOTAL ANALYSABLE DATE	4 165	405	9.7	372	8.9

From these data, the rate of premature births can be estimated as at least 7.9 % and the rate of light birth weights at 8.9%. These values are still however higher than those of metropolitan France in 2003.

CAUSES OF INFANT MORTALITY

581 deaths of children less than 1 year of age were recorded between 1991 and 2010.

Perinatal diseases (foetal disorders, neonatal infections, respiratory diseases specific to the neonatal period, etc.) represent the main cause of death with 34.6% of deaths, then congenital anomalies, with 17.4% of deaths (mainly cardiovascular conditions: 34 cases and nervous system: 17 cases ) and infectious diseases (38 cases).

55 cases of sudden infant w syndrome were observed during this period, representing 9.4% of these deaths.

These figures confirm the need to monitor pregnancies, so as to detect any congenital disease as early as possible, but to also inform mothers about the need to deliver in a medical facility in order to give better care at birth to any child with a perinatal disorder.

## YOUNG CHILDREN

Preventive action related to child care in provincial facilities  
One of the purposes of preventive medicine is to make sure that all children are up to date with their vaccinations and vaccinate those who are not.

New Caledonia's regulations provide for all children to have mandatory vaccinations for certain communicable diseases such as diphtheria, tetanus, poliomyelitis, tuberculosis, whooping cough, measles, rubella, mumps, viral Hepatitis B since 1989, haemophilus type b infections since 1994 and pneumococcal infections since 2006.

## REGULAR MEDICAL EXAMINATIONS IN SCHOOLS

Medical examinations are mandatory in certain grades through children's schooling.

Since the 'Nouméa Accord', school medical examinations have been a provincial responsibility until primary school and a French government task ('Vice-rectorat': education authority) from secondary school onwards.

A total of 36 329 children were enrolled in primary schools in New Caledonia in 2010 (education authority).  
In 2010, the Nouméa school medical centre carried out 2 660 pre-school medical examinations, 6 172 primary school ("CP", "CE2", "CM2") medical examinations and 494 special class ("clis", "IMI/ACH" and "Segpa") medical examinations, from an active list of 9 489 children to see.

Information about school medical examinations for the rest of the country is unavailable.



## HEALTH SERVICE ORGANISATION

### HEALTH PROFESSIONALS DEMOGRAPHICS

#### PHYSICIANS

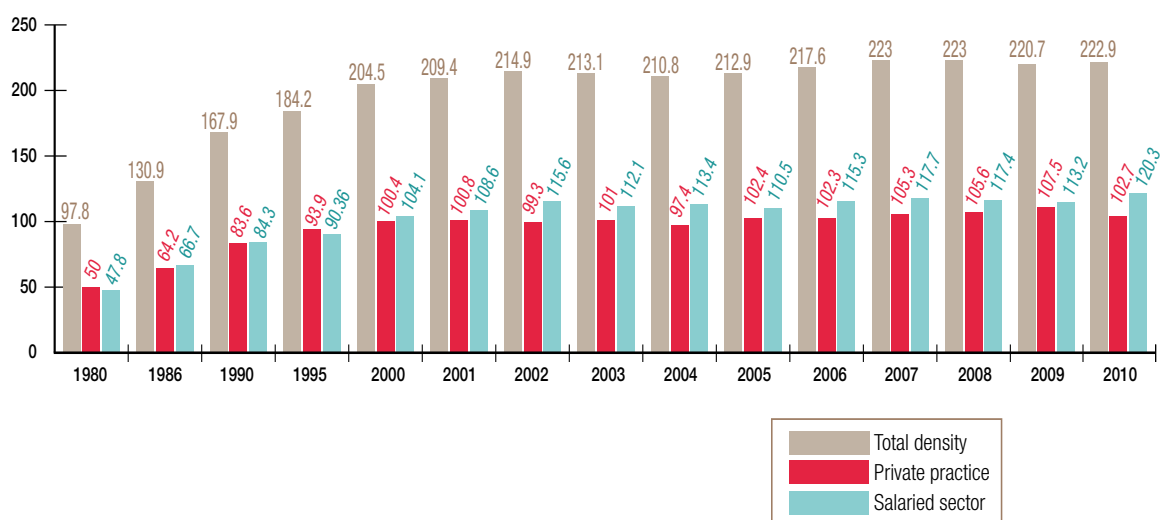
The results obtained come from the 'ADELI' records administered by the Health Inspectorate at DASS - NC. For 2010, the figures were drawn up as at 1st September.

This group includes private practice physicians whether or not bound by contract to the public health scheme, public health physicians and salaried physicians in the private sector.

Physicians doing a replacement, interns, physicians awaiting a practice or seeking employment, physicians who are technical aid volunteers and those practicing at the 'Direction Inter Armée des Services de Santé' (Armed Forces Joint Health Services) are not included.

In the ADELI listing, a physician is considered as a specialist if he/she is practicing his/her specialty.  
The nomenclature used is therefore related to the year concerned.

588 physicians were practicing in 2010 (301 in private practice and 257 salaried), an increase of 2.9% in comparison to 2009. In 2010, an increase (8.27%) in salaried physician numbers and a decrease of 2.65% in private practice physicians were observed. The number of physicians in private practice is controlled because of the freeze in new contracts with the social protection agencies.  
In 2010, the density was 222.9 physicians per 100 000 population.



Density disparities are observed between provinces, with the lowest in the Northern Province and the highest in the Southern Province, in Nouméa in particular because of the presence of hospitals and clinics where most of the specialists and many GPs practice.

In the Northern Province, the figure falls between that of the Islands Province and that of the Southern Province.

These densities are as follows :

- Southern Province : 258.2
- Northern Province : 122.8
- Loyalty Islands : 104.7

276 (49.5%) of active physicians are general practitioners, a density equal to 110.3 for New Caledonia as a whole, which is lower than for metropolitan France which was equal to 145.5 general practitioners for 100 000 population (estimate by ATLAS of medical demography in France – CNOM as at 1st January 2009). 89.6% of Southern Province general practitioners were working in the Nouméa or Greater Nouméa area, a density equal to 113.1 for this zone as against 113 for the other Southern Province municipalities taken together.

282 specialist physicians are active, representing a density of 112.7 specialists per 100 000 population in New Caledonia. The density is higher in the Southern Province and in Nouméa in particular, because of the presence of the main hospitals and technical facilities.

The densities by group of specialists by province are as follows :

Speciality	Density per 100 000 habitants		
	Northern Province	Southern Province	New Caledonia
Medical	8.8	86.4	66.3
Surgical	6.6	35.7	28
Psychiatry and Child Psychiatry	4.4	10.1	8.4
Biology	2.2	4.3	3.6
Public health	0	2.7	2
Occupational	0	5.9	4.4
<b>Total density</b>	<b>21.9</b>	<b>145.1</b>	<b>112.7</b>

OTHER HEALTH PROFESSIONALS

The numbers in each profession and distribution by area of activity come from the ADELI records, employer records and CAFAT data for 2010.

In New Caledonia, the density of dental surgeons is 47.1 per 100 000 population. The breakdown between the salaried sector and the private sector is respectively 36 % and 64 %.

The density of dental surgeons in private practice is 67 per 100 000 population.  
In metropolitan France, the average density was a little higher and equal to 65 per 100 000 as at 01/01/2009.

The total density of physiotherapists in New Caledonia is 45.9 per 100 000 population, with the private practice sector showing a density of 37.6 per 100 000 population. The figure in mainland France is 105 as at 01/01/2007.  
The density of nurses – general, specialist and supervisors – was 509.8 per 100 000. In metropolitan France, the density was 780 as at 01/01/2008.

The density of midwives in New Caledonia was 127.8 per 100 000 women aged between 15 and 49 years in 2008 (N=83).. In metropolitan France, the density was 125 per 100 000 women aged 15 to 49 years (as at 01/01/2008).

The density of pharmacists, all categories combined, was 75.9 per 100 000 (N = 19041) in New Caledonia in 2008. In metropolitan France, this density was higher and equal to 118 as at 01/01/2008.

FACILITIES

HOSPITAL BEDS AND PLACES (AS AT 31 DECEMBER 2008)

Short-stay :

- Medicine :** 206 in-patient beds at the ‘CHT’ and 20 day beds.
- Surgery :** 133 in-patient beds in the surgery unit of CHT Gaston Bourret and 8 day beds.
- Obstetrics :** 47 in-patient Obstetric Department beds at the CHT Gaston Bourret and 2 day beds.

**Critical care unit :** there are 52 in-patient beds for this unit, including 40 at CHT Gaston Bourret.

In total : short-stay wards account for 659 in-patient beds (HC) and 53 day beds

Sector	Short-stay hospitalisation services				
PRIVATE	Medical	Surgical	Obstetrics	Intensive care	Total
Baie des Citrons Clinic	51	33	11	0	95
Magnin Clinic	21	40	19	7	87
TOTAL private sector	72	73	30	7	182
PUBLIC	Medical	Surgical	Obstetrics	Intensive care	Total
G.Bourret Hospital	206	133	47	40	426
P.Thavoavianon Hospital	20	13	9	5	47
D.Nebayes Hospital	16	0	0	0	16
TOTAL secteur public	242	146	56	45	489
OVERALL TOTAL	314	219	86	52	671

## General Psychiatry

**Adults :** 111 in-patient beds and 58 day beds.

**Infants and juveniles :** 25 day beds.

**Geriatric ward :** 75 in-patient beds.

### Medium-term stay :

Follow-up and rehabilitation care (SSR): 74 in-patient beds.

### Long-term stay :

Geriatric care : 18 in-patient beds at the 'CHT' (Raoul Follereau Centre), 57 beds at CHS Albert Bousquet.

Multi-purpose local hospitalisation facilities :

These are the beds in the medico-social centres managed by the provincial health and social affairs departments in the rural areas and the islands. They number 27 with a total of 78 beds, broken down as follows:

- 5 medico-social districts in the Islands Province totalling 54 beds
- 14 medico-social districts in the Northern Province totalling 2 beds
- 7 medico-social districts in the Southern Province totalling 22 beds

All these health facilities operate with a constant medical and para-medical presence (weekdays and holidays). These are local facilities whose main task is to meet the needs of the community in the curative, emergency and prevention areas.

## PARA-PUBLIC FACILITIES (2008-2009)

**The Société Le Nickel, with the 'Mutuelle SLN' (SLN mutual insurance system) includes :**

- The SLN medical centre at Doniambo, in Nouméa, with 2 ophthalmologists, 3 dental surgeons and 2 general practitioners.
- 2 optical centres, one in Quartier Latin and one in Doniambo, where 3 optician/ spectacle-makers practice.
- 2 dental surgeries, in Thio and Kouaoua; one dental surgeon covers these two locations.

In 2008, 12 139 ophthalmological consultations and 11 297 dental consultations were performed.

### 'Mutuelle des Fonctionnaires' (public servants' mutual insurance scheme)

**It offers:**

- in Noumea: 1 physician, 6 dental surgeons, 2 physiotherapists , 1 pharmacist,
- in Boulari (Mont-Dore): 1 general practitioner, 2 dental surgeons,
- in Bourail: 1 dentist,
- in Pouembout: 1 dental surgeon, 1 pharmacist.

In 2008, 3 080 dental consultations and 8 456 medical consultations were performed.

### CAFAT: (New Caledonia social security system)

In Noumea, there are 2 socio-medical centres, one at Receiving and one at Rivière Salée, where the following doctors practice:

- 9 general practitioners,
- 4 dental surgeons,
- 1 radiologist,
- Cardiologists, paediatricians and ENT specialists working as consultants.

In 2009, 31 848 general practitioner consultations were recorded, along with 1 783 specialist consultations and 2 771 dental consultations.

ARMED FORCES HEALTH SERVICE

Infirmarys	Staff			Number of days	Number of consultations
	Lits	Physicians	Nurses		
Center of consultations For joint task forces', Noumea	12	3	7	272	5 787
Marine infantry regiment for the Pacific (RIMAP)in Plum	9	3	5	160	2 217
RIMAP Detachment in Nandaï - Bourail	7	1	1	72	1 453
Tontouta naval air base	4	0	0	2	1 280
Special military service group in Koumac	0	1	1	0	1 109
TOTAL 2009	32	8	14	506	11 846

For outpatient consultations, army families can go to the 'Centre de consultations interarmées' (Armed Services Health Centre) in Nouméa.

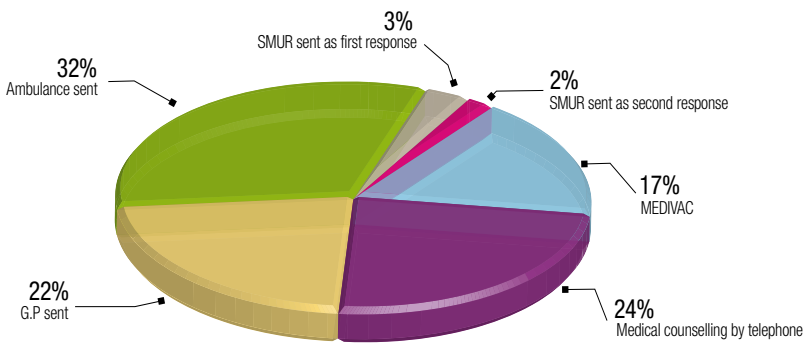
EMERGENCY UNITS

The SAMU's essential mission is to provide or obtain appropriate emergency health care to sick persons, persons with injuries and parturients, wherever they are located in New Caledonia, on a constant basis. The emergency unit's mission is to cater at any time for all patients coming to Gaston Bourret Hospital for immediate care and for whom care was not scheduled, whether in the event of an emergency or a perceived emergency.

In 2010, the 2 emergency units at Gaston Bourret and Magenta recorded 43 457 patients as against 45 578 in 2009, a decrease of 5% (-7.7% at Magenta and -2.4% at G. Bourret). 23 % of these cases required hospitalisation: 30.3% at Gaston Bourret and 12.8% at Magenta.

SAMU - SMUR results:

The 15 emergency call centre received 36 934 calls producing a medical response in 2010, which is 8.2% more than in 2008. These calls were processed as follows:



MEDICO-TECHNICAL SERVICES

Blood transfusions

Activity	2007	2008	2009	2010	Trend 2010/2009
Persons seen	7 540	7 160	7 180	6 850	-5%
Donors	5 700	5 440	5 770	5 210	-10%
Therapeutic apheresis	440	490	550	605	+10%
Distribution					
Blood products + blood derived medicines	11 660	12 110	12 350	11 490	-7%

## **Blood donations**

2010 was characterised by a reduction (-10%) in blood donations and by an increase in the number of cases of therapeutic apheresis (+10%).

## **Distribution**

The total number of products distributed declined (-7%) over 2009.

## **Medical biology**

In the public sector, there are biochemical and haemostasis laboratories at 'Centre Hospitalier Territorial Gaston Bourret' and there is a laboratory at the Thavoavianon Hospital in Koumac.

Institut Pasteur, mostly performing serology, haematology, and microbiology, as well as having an anatomo-cytopathological function, is a private foundation recognised as being of public benefit with the task of contributing to disease prevention and treatment through public health activities, research and training. The medical testing laboratory of the CAFAT Medico-social Centre is located in the Receiving area of Nouméa and performs chemical, haematological and microbiological testing.

11 medical testing laboratories are registered in the private sector, 6 in Noumea, 1 in Dumbea, 1 in Mont-Dore, 1 in Koné, 1 in Païta and 1 in Bourail.

## **Medical imaging**

At the Noumea CHT, radiology is split into 2 units, one in-house in rue Paul Doumer that includes the Scanner and RMI Unit (since November 2005) and one at the Magenta Annex which basically performs woman and child radiology and echography. It should be noted that an agreement between the public and private sectors gives private practice patients access to the CHT Scanner and MRI unit.

The P. Thavoavianon and D. Nebayes hospitals as well as the Cafat Medico-social Centre at Receiving all have radiology units.

In the private sector, there are 5 private radiology practices.

## **PHARMACIES**

62 pharmacies are registered and 61 open to the public: 98 in the private sector and 3 mutual insurance pharmacies.

These 61 pharmacies are located as follows :

- Noumea : 23 pharmacies + 2 mutual insurance pharmacies;
- The other communes of the Greater Noumea area: 15 pharmacies;
- Outside Greater Nouméa : 19 pharmacies + 1 mutual insurance pharmacy;

Islands Province : 4 pharmacies.

Three dispensing physicians practice in the Isle of Pines.

### Pharmacies within a healthcare facility

Twelve pharmacies within healthcare facilities have been authorized in the following facilities:

ATIR-NC, 'CHT Gaston Bourret', 'CHS Albert Bousquet', 'P. Thavoaviannon Hospital', 'D. Nebayes Hospital', 'Magnin Clinic', 'Anse-Vata Clinic', 'Baie des Citrons Clinic'; Islands Province, Northern Province, Southern Province and Vavouto Medical Centre (KNS).

### Pharmaceutical wholesalers

There are 5 wholesale pharmaceutical distributors in New Caledonia, with the main ones being 'Office Calédonien de Distribution Pharmaceutique' (OCDP) and 'Groupement de Pharmaciens de Nouvelle-Calédonie' (GPNC).

### Medicine depots

There are 25 medicine depots operated by non-pharmacist traders. This number of businesses conducting this activity in practice is not accurately known and the situation needs to be reassessed.



## GENERAL

Resolution No 490 dated 11 August 1994, as amended, relating to a health promotion and health expenditure control plan on the Territory of New Caledonia provides for annual 'health accounts' to be prepared. In this document, they are presented for a series of three financial years (2004 to 2006). Health accounts make it possible to assess the cost of health care and assess trends. They also make it possible to identify the source of the financial resources allocated to this expenditure and the distribution of financial effort between health insurance agencies, households, supplementary insurance policies and public agencies.

### Definition

The cost of health care can be approached through two standardised combined concepts:

- Total medical consumption;
- Recurrent health costs.

### Total medical consumption

Total medical consumption is equivalent to the value of the medical goods and services used in New Caledonia in direct response to individual health needs. It is expressed in terms of overall financial volumes arising from curative care and individual preventive medicine services offered over the year.

Health care consumption comprises inpatient and outpatient healthcare benefits delivered by hospitals, private practices, district medical facilities, provincial health centres and social welfare agencies. To health care proper should be added the consumption of medicines and other medical goods (optical items, prostheses, minor equipment and dressings).

Medical care and goods are grouped into the following categories: hospitalisations, out-patient care, medical evacuations, physicians' fees and the costs stemming from their prescriptions: medical auxiliaries, drugs, tests, prostheses medical transport, etc., plus dental care.

The expenditure relating to individual preventive medicine comprises the cost of vaccinations, testing and medical surveillance, as well as the expenditure incurred in industrial medicine services.

### Recurrent health expenditure

Recurrent health expenditure is equivalent to the overall effort expended on health in the course of a year by the population and institutions in New Caledonia; It amounts to the total expenditure committed by the funders of the health system: Cafat, the provinces of New Caledonia under medical aid, the supplementary cover organisations (mutual insurance companies, insurance companies, provident institutions) and households themselves.

To the total medical consumption defined above, should be added the daily allowances, research, health professionals' training, health system management costs and collective prevention outlay (public awareness and health education campaigns).

### Precautions

The following data are estimated where household and private insurance outlays are concerned, as the private insurers did not communicate any information. Expenditure is assessed through deductions based on the revenue received by hospitals and as an overall figure estimate where municipal health care expenditure is concerned (SANESCO basis = 5 % upward adjustment).

Similarly, the data communicated by certain bodies or public administrations were incomplete and a footnote states which data are estimates.

# COST OF HEALTH CARE IN NEW CALEDONIA

## Trends from 2008 to 2010

Between 2008 and 2010, total medical consumption increased, overall, by 20.9% and recurrent health expenditure by 19.3%.

After a downward trend observed between 2006 and 2008, total medical consumption and recurrent health costs rose again, particularly in the latter case because of a marked rise in management costs over the period.

Year	Total medical consumption in millions of CFP francs	% N-1	Recurrent health expenditure	% N-1
2008	62 348.58	+3.1%	68 862.22	+3.6%
2009	69 661.50	+11.7%	76 755.15	+11.5%
2010	75 362.89	+8.2%	82 186.03	+7.1%

The development of the range of available care in the health sector, improved socio-economic circumstances and the extension of the social protection system have contributed to an improvement in the overall health status of the community but have been accompanied by an uncontrolled structural increase in health expenditure.

This major growth in health-related expenditure prompted the Congress in late 2005 to adopt a second health expenditure control plan after the initial one adopted in 1994 that made it possible to contain health expenditure for a number of years. The first effects of this new plan were felt in 2006, notably in reduced hospital expenditure.

## COMPARISON

The use of standardised aggregates makes comparisons possible, with mainland France in particular, by expressing:

- Total medical consumption and recurrent health expenditure per inhabitant;
- Total medical consumption and recurrent health expenditure per inhabitant in relation to GDP.

A - Trends in total medical consumption per inhabitant and recurrent health expenditure per inhabitant

Year	2008	2009
Population of NC (ISEE data)	244 600*	245 580
Total medical consumption per inhabitant in NC	254 900 FCFP	283 661 FCFP
in France	317 221 FCFP	335 604 FCFP
Health expenditure per inhabitant in NC	280 529 FCFP	312 546 FCFP
in France	400 015 FCFP	426 143 FCFP

\* Population as estimated

The lower figures for medical consumption per inhabitant in New Caledonia can be explained in particular by the age structure of the New Caledonian population, with young people representing a higher proportion of the population than on the French mainland, as young people consume less health care, and also by the fact that the supply of some services is still limited in some sectors and some parts of the country.

To this lower medical consumption per inhabitant should be added training and research expenditure which is much lower in New Caledonia than in mainland France, producing recurrent health expenditure that is also relatively lower.

B - Trends in recurrent health expenditure in relation to GDP

The fall in GDP growth in 2008 (+0.6%) and 2009 (+2%) after a number of years of strong growth (mean annual growth rate of 5.6 %), has led to health expenditure accounting for a much greater proportion of the figure. The same trend is evident in mainland France where the percentage taken up by health care is increasing as GDP falls.

In %	2008	2009
New Caledonia GDP (in billions of CFP francs)*	736.6	752.1
Medical consumption in terms of GDP	9.34%	10.2%
in France	11%	11.7%

\*Source : ISEE

National health expenditure in OECD countries

The OECD uses a slightly different concept to enable comparisons between its members : national health expenditure, which is assessed from recurrent health expenditure by deducting daily cash benefits and research and medical training expenditure and adding the crude initial fixed capital value of the public hospital sector.

In New Caledonia, this corresponds to investment in the territorial public hospitals (CHT/CHN/CHS), amounting in 2008 to 479.77 million francs and in 2009 to 1.386 billion francs.  
The construction of a new hospital in Koutio (Medipole), to supersede the current Gaston Bourret CHT, accounts for a major share of this investment.

National health expenditure calculated for New Caledonia in 2009 was 9.9 % of GDP, while for France the figure was 11 % of GDP.

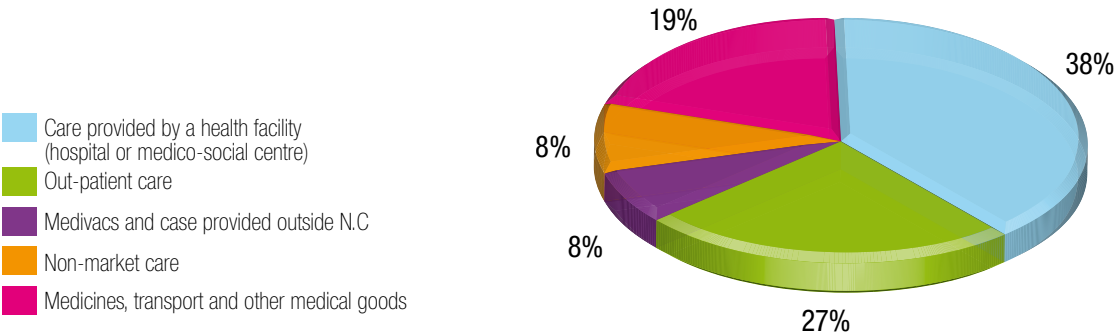
**In 2009, 76.7 billion CFP francs were spent in total on health care in New Caledonia, an average of 312 546 CFP francs per inhabitant.**  
**Within this figure, 69.6 billion were directly spent on the consumption of medical care and goods, i.e. 283 661 francs per inhabitant.**  
**New Caledonia's health expenditure is equivalent to the average health expenditure of developed countries.**

Health care consumption

Less than 10% of the care received in New Caledonia is non-market care, provided free of charge or under special rates, mainly at the provincial dispensaries or medico-social centres run by social welfare agencies (CAFAT and mutual insurance schemes).

The consumption of market medical goods and services comprises care provided in health facilities, out-patient care (physicians, dentists, medical laboratories), transport, medicines and other medical goods (optical, prostheses, minor equipment and dressings).

Percentage breakdown of various types of expenditure





## THE ENVIRONMENT

Health is the result of a group of determining factors, in particular, the physical and social environment, lifestyles and health care systems. Health protection and promotion policies should be designed to encompass all of these determinants.

### Climatology

#### Climatological review of the year

The climate of the South-west Pacific is extensively influenced by the El Nino Southern Oscillation. In 2010, this event alternated between two phases. The El Nino event that had commenced the previous year lasted until May and generated a marked rainfall deficit. A La Nina event followed in the second half of the year. The annual rainfall deficit was 20% on average.

- The mean annual temperature was statistically above the normal seasonal figures.
- Insolation and overall solar radiation were above average on the whole.
- Potential evapo-transpiration is at its highest during the summer season. The potential annual water balance is showing a shortfall.
- Average wind speeds were close to normal in the south.  
They were below normal annual levels in the north and above them in the Loyalty Islands.

### Water

The Government of New Caledonia exercises jurisdiction over water mainly through health and hygiene regulations. The Provinces have jurisdiction over environmental matters, particularly regulations on classified facilities (water treatment plants, for example).

According to the 'Commune Code' (the 'commune' or municipality is the smallest administrative subdivision in France), communes have jurisdiction over hygiene matters and are responsible for preventing disease outbreaks. In this regard, they must implement quality control measures for their water supply systems and ensure that quality standards apply to bathing and recreational water and sanitation facilities.

In New Caledonia, the mean volume of water billed per year and per consumer is 460 cu. m. In Noumea, the public water supply service has been contracted to 'Calédonienne des Eaux'. Noumea's water supply comes from the water reservoir formed by the Dumbéa River dam, the 'Aqueduct' pumping facilities at Tontouta and several pumping stations spread out along the Dumbéa River.

### Water quality at swimming sites

Only the City of Noumea carries out quality control inspections of water at swimming beaches. The Municipal Hygiene Department takes and tests water samples on a regular basis.

### Sanitation

Poor maintenance or lack (in most cases) of sanitation systems lead to a noticeable decrease in the bacteriological quality of water.

For that reason, water in New Caledonia is, on the whole, of inadequate bacteriological quality. It is characterised by excessive amounts of faecal germs from both humans and cattle. This adversely affects drinking water if it is not treated but also impinges on contact uses such as swimming, washing, etc. The most alarming situation is the contamination of the water lens in the Loyalty Islands, the population's only source of drinking water.

## Air

The 'Association de Surveillance Calédonienne de la Qualité de l'Air (Scal-Air: <http://www.scalair.nc>) is responsible for the surveillance of air quality in New Caledonia and raising public awareness on this issue. Scal-Air takes samples and analyses in real time the pollutants present in the ambient air.

Four pollutants are kept under surveillance: fine particles; sulphur dioxide; nitrogen dioxide; ozone. Concentrations of each of these pollutants are classified on a scale from 1: 'very good' to 10: 'very bad'. The highest of these four sub-indices gives the 'ATMO' index for the day.

Real-time mapping data can be used to accompany the index figure.

## Fires

All levels of government and the communes are responsible for fire protection. The French Government, as part of civil security, has a share in the responsibility for managing the resources to fight large-scale fires. The high level of involvement by the Armed Forces in fires that exceed the communes' resources should be noted.

The figures included here cover the 2010/2011 season (from 1st September 2009 to 16 January 2011). Altogether, 264 fires destroyed 5 515 hectares (during the 2009-2010 period: 694 fires and 10 900 hectares burnt).

## Food

The Animal Health Office at the Department of Animal Health, Food and Rural Affairs (DAVAR) is responsible for monitoring food products of animal origin. This office also monitors collective catering facilities in collaboration with provincial or municipal hygiene services.

This department has a laboratory capable of carrying out microbiological testing of food items. It also has data on the in-house inspections carried out by facilities that prepare ready-to-eat cooked dishes.

The Economic Affairs Department conducts quality control of food in retailing networks as part of its fraud control work.

## Waste

Household refuse generation is steadily increasing due to the growing population and increased use of manufactured and factory-packaged goods

Certain specific types of waste, e.g. purged substances or liquids, used oil, tyres, toxic waste (pyralene, lead batteries) undergo specific processing. Up to now, potentially infectious health system waste material has been destroyed by incineration.

A new process will soon be put into place that uses a disinfection process.

A wide ranges of actions designed to heighten public awareness about cleanliness have been carried out and are still extremely vital for New Caledonia.

## ECONOMICAL AND SOCIAL DATA (ISEE)

Internationally, the economic crisis at last gave way, late in 2009, to an incipient recovery. The disruption that began in the United States in mid-2007 with the 'sub-prime' crisis grew into a major economic crisis in 2008 and lasted until mid-2009, becoming the worst such event since 1929.

### New Caledonian economy

In 2010 the economy of New Caledonia was performing well, assisted by the favourable world context. Strong domestic demand contributed to the country's good economic performance.

The monetary indicators also returned to a growth trend. Despite concern among business leaders, investment rose. In 2010, inflation began to rise again, following global trends, and reached 2.7%.

To cope with rising prices, the Government raised the guaranteed minimum salary to 132 000 CFP francs in 2010.

### Mining and ore-processing

At the London Metal Exchange, the average per-pound price of nickel for 2010 was multiplied by almost 1.5 at 9.89 USD per pound as against 6.65 USD/lb in 2009. It again reached its 2008 level (9.58 USD/lb), while remaining far below the exceptional 2007 mean value of 16.89 USD/lb.

### Fisheries and aquaculture

In 2010, New Caledonia exported 2 100 tonnes of seafood products as against 2 400 tonnes the previous year. Revenue also dipped accordingly, with 1.8 billion francs as against 2.1 billion in 2009. Half of these exports went to Japan, followed by Hong Kong, France and American Samoa, which three destinations accounted for 30% of exports.

### Construction

With 8 700 people on average employed in the construction sector in 2010, wage employment showed a 3.4% increase in one year, representing 360 extra jobs. The BT 21 'all trades' index, which tracks overall trends in construction costs, stood at 133.81 in December 2010, as against 129.04 in December 2009.

### Energy

In 2010, electricity production reached a new record. For the first time, generation exceeded 2 000 GWh, an increase of 10% over 2009. In 2010, 85% of

the power generated in New Caledonia came from thermal energy and 15% from renewable energy sources. Thermal energy production is 20% higher than last year. Hydro-electricity output confirms and extends the trend in 2009 with -33% year-on-year, after the 14% drop in 2009. The rainfall deficit has brought production down to a historically low level. Wind power output continues to rise: +24% in one year.

### Tourism

Visitor numbers amounted to 99 379 in 2009, as against 103 672 in 2008 (-4 293 tourists).

### Travel by New Caledonians

2010 was another record year, with 131 600 return journeys, as compared to 119 035 in 2009 (+10.6%).

### Consumer prices

In December 2010, the consumer price index stood at 135.9, as against 132.3 in December 2009, showing an increase of +2.7% year-on-year

### Salaried employment

The private sector, which accounts for almost three-quarters (72%) of total salaried employment, comprised 61 000 staff on average in 2010, as compared to 58 836 in 2009.

The public sector, representing over one quarter (28%) of total salaried employment, in 2010 recorded an increase of 2% over 2009.

### Public finances

In 2010, the French Government spent 129 billion CFP francs in New Caledonia, slightly less (-3.5%) than in 2009.

The provisional budget situation in New Caledonia shows an increase in revenue (+16.9%) and in expenditure (+7.7%) for 2010.



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