# Leprosy in French Polynesia.
# Epidemiological trends between 1946 and 1987

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*Summary*  The analysis of computerized data (OMSLEP system) on patients from
French Polynesia followed since 1940 has shown a decrease in the mean annual
detection rates for leprosy, all forms combined, from 24.73 per 100,000
inhabitants in 1946 to 8·1 per 100,000 in 1987 ($y = -0.49\ x + 45.83$; $p < 0.05$). In
fact, the decrease was significant ($y = -1·18\ x + 83·54$; $p < 0·05$) during the first
half of the study period (1946–66), but not during the second half (1967–87).
Similarly, a significant decrease in all of the specific mean annual detection rates
(according to the form of leprosy and to the sex and age of patients), in the
proportion of multibacillary patients among the total of newly detected cases, and
in the proportion of all patients with disabilities at the onset of leprosy was
observed only during the first half of the study period (1946–66). Nevertheless,
when comparing age-specific cumulative detection rates, calculated by 10-year
age groups over the period 1946–66, to those of the period 1967–87, an ageing of
the leprosy population was noted. Finally, the decrease of mean annual detection
rates was greater in the smaller populations of remote islands than in the
population of Tahiti, the main island, where 70% of the total population were
living during the study period. This decline was shown to correspond to an
effective improvement of the leprosy situation which could be attributed, among
other factors (such as economic development and systematic BCG vaccination),
to the implementation of a control programme for leprosy in 1950. The
introduction in 1982 of multidrug therapy for all patients suffering active leprosy
has raised the hope of a subsequent decline of leprosy in French Polynesia in the
near future.

## Introduction

Up to now, leprosy control has been based on the adequate treatment of patients detected
as early as possible. The knowledge and understanding of the evolution of epidemi-

ological indicators for leprosy are essential for evaluating and monitoring control strategy. Therefore, the collection and analysis of epidemiological data is a most important part of leprosy control programmes. However, reliable epidemiological data on leprosy are difficult to collect in most countries, especially for operational reasons. In French Polynesia, an area where the population is of a relatively small size and where medical infrastructures are considerable, a control programme for leprosy was implemented by the end of the 1940s. In 1986–7, computerization of data on leprosy patients registered from 1940 onwards was initiated according to the OMSLEP[1] system and reliable information on leprosy for the past 40 years has now become available. This enabled us to analyse the evolution of the main epidemiological indicators for leprosy in French Polynesia for the period 1946–87.

## Background

French Polynesia is made up of about 130 islands (88 usually inhabited), with a land surface of only 4000 km², scattered over an oceanic area of 4 million km². The 130 islands are divided into 5 archipelagoes (Society, Australes, Tuamotus, Gambiers and Marque-
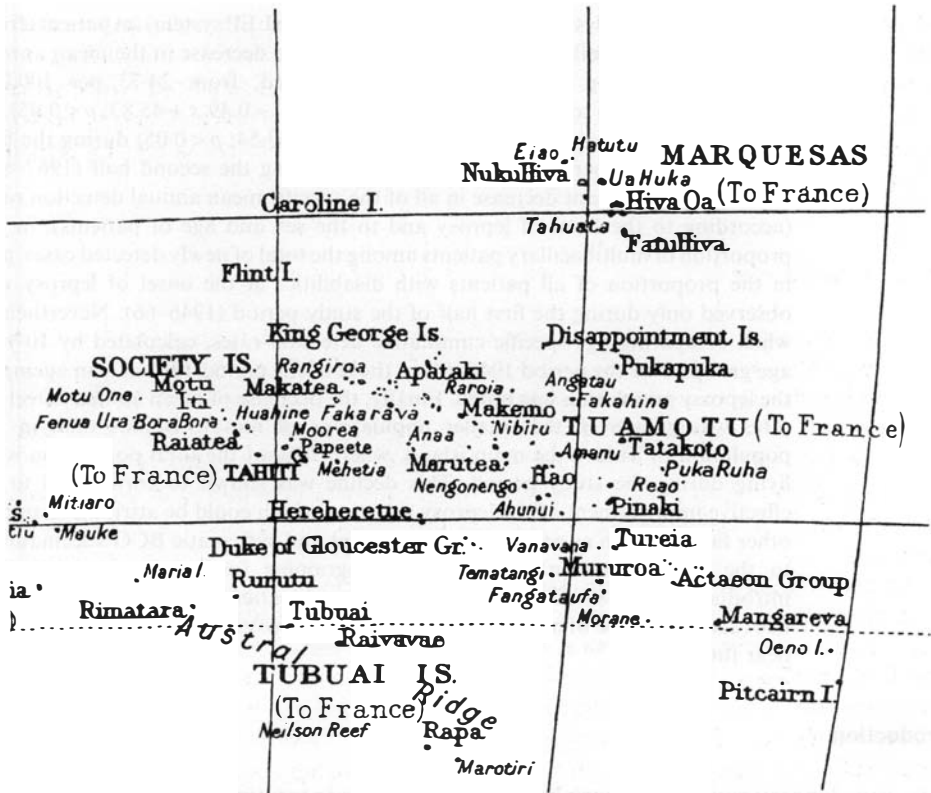


**Figure 1.** Archipelagoes of French Polynesia.

sas); Papeete, the main town, where administrative authorities are concentrated, is located on Tahiti, the main island of the Society archipelago (Figure 1). The population increased dramatically between 1946 and 1987; according to the IT Stat.[2] records, there were 56,601 inhabitants in 1947 (18,462 < 15 years of age and 38,139 > 15 years of age), and 181,862 in 1986 (69,077 < 15 years of age and 112,785 > 15 years of age). For each year of the study period, the population was calculated from the results of 8 censuses (1946, 1951, 1957, 1962, 1967, 1971, 1977 and 1983) assuming a linear increase between two censuses. It is important to note that, between 1946 and 1987, about 75% of the total population of French Polynesia were living in Tahiti while only 50% were born on that island.

As in many countries, the leprosy control programme started with the construction of leprosariums, the first two in Tahiti and in a remote valley of the Southern Marquesas (1500 km north of Tahiti) in 1914; a third one was opened in 1934 in Reao, one of the easternmost islands of the Tuamotu archipelago. Since 1902, notification of all cases of leprosy to the Health Authority by the diagnosing physician has been compulsory. For each new case of leprosy, a patient form is filled out indicating name, sex, date and place of birth, date and place of detection, as well as the results of clinical, microbiological and pathological examinations, and the nature and duration of treatment. Each month assessment of drug intake and of clinical evolution is performed and the form updated. All data on leprosy patients living in the 3 leprosariums are centralized in Tahiti where a central leprosy register is kept. In 1950, the 'Louis Malardé' Institute was created and was given direction of the leprosy control unit. This unit organizes active case-finding among household contacts of known leprosy patients, and passive case-finding; it is responsible for the prescription, distribution, supervision and evaluation of chemotherapy. Today the Institute is still in charge of the leprosy control programme and keeps the territorial leprosy register.

**Materials and methods**

The data analysed in this study comes partly from the territorial register and partly from the medical files of patients followed from 1946 to 1987. The diagnosis of leprosy was based on the clinical examination of patients (including examination of the skin and the large nerve trunks) supplemented by biological tests: the lepromin intradermal reaction, the search for acid-fast bacilli in nasal mucosa and skin (earlobes and skin lesions) and biopsy for pathological examination. Clinical examination and biological tests also permitted the assignment of cases retrospectively into paucibacillary and multibacillary categories.

Between 1951 and 1982 the basis of treatment for leprosy was dapsone monotherapy, which was prescribed lifelong for multibacillary patients and for an average of 10 years for paucibacillary patients. Rifampicin (RMP) was prescribed occasionally and over short periods of time from 1973 to 1982. After January 1982, multidrug therapy, including daily administration of 10 mg/kg RMP, has been implemented in French Polynesia. All drugs are distributed free of charge every month to patients, either at the Institute, or in non-specialized public health clinics (in this latter case the drugs are provided by the leprosy control unit).

The annual prevalence rates for leprosy were calculated according to the definition

given by Lechat and Vanderveken,[3] i.e. taking into account all known leprosy cases (on treatment as well as under surveillance after treatment). Because important variations in the number of newly detected leprosy cases were observed from year to year, the following indicators were calculated for 3-year periods: crude, type-specific, sex-specific, and age-specific (< 15 years, > 15 years) detection rates; proportion of multibacillary patients among the total number of cases, and with disabilities[4] of grade > 2. Also, cumulative detection rates, specific for 10-year age groups, and mean annual detection rates according to the place of birth were calculated for the two consecutive 21-year periods, 1946–66 and 1967–87.

All data from the medical files of the patients were anonymously entered on the OMSLEP record card and analysed by computer. For statistical analysis, Pearson's $\chi^2$ test and the Student's *t* test were used.[5] Regression curves were established using a computer statistical package (Chart 3 Microsoft).

## Results

### PREVALENCE RATE

In 1946, 133 leprosy patients, all on treatment, were recorded in the territorial register, giving a prevalence rate of 2·4/1000; in 1987, the number of registered patients was 291 (88 on treatment and 203 under surveillance after treatment) and the prevalence rate was 1·57/1000, not significantly different ($p > 0.05$) from that of 1946. If taking into account only the patients requiring treatment for the calculation of the prevalence rate, as recommended by WHO in 1988,[6] then the prevalence rate in 1987 was 0·48/1000, significantly lower ($p < 0.01$) than that of 1946.

### CRUDE DETECTION RATES

Between 1946 and 1987, 520 new leprosy cases were detected, 233 (45%) were multibacillary and 287 paucibacillary cases; 306 (59%) were males and 214 were females (Table 1).

During the first 3-year period of the study (1946–48), the number of newly-detected patients was 42 and the mean annual detection rate for leprosy (all forms combined) was 24·73/100,000 (Table 1). The corresponding figure was 44 during the last 3-year period (1985–87) but, given the dramatic increase of the population to 181,862 inhabitants, the mean annual detection rate for leprosy was 8·1/100,000, significantly lower than that for the period 1946–48. The regression curve, plotted on the basis of mean annual detection rates for all 3-year periods (Figure 2) indicates a significant decrease ($y = -0.49 x + 45.83$; $r = -0.80$; $p < 0.05$). In fact, the regression was not constant between 1946 and 1987; the detection rate fell dramatically from 24·73 in 1946–48 to 8·6/100,000 in 1964–66 ($y = -1.18 x + 83.54$; $r = -0.89$; $p < 0.05$); conversely, between 1967 and 1987, no significant decrease ($p > 0.05$) was observed in the detection rates of the 7 3-year periods.

### SPECIFIC DETECTION RATES

With respect to the type of leprosy (Table 1), during the first 3-year period of the study, 25 of the 42 newly-detected cases were multibacillary (14·7/100,000 mean annual detection

**Table 1.** Mean annual detection rates for leprosy according to (a) type, (b) sex and (c) age by 3-year periods between 1946 and 1987

| 3-year periods | (a) Type | | | | | | (b) Sex | | | | (c) Age | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | | Paucibacillary | | Multibacill-ary | | Males | | Females | | <15 Years | | >15 Years | |
| | No. | Rates* | No. | Rates* | No. | Rates* | No. | Rates* | No. | Rates* | No. | Rates* | No. | Rates* |
| 1946–48 | 42 | 24·73 | 17 | 10·01 | 25 | 14·72 | 25 | 28·04 | 17 | 21·07 | 10 | 18·05 | 32 | 27·96 |
| 1949–51 | 60 | 33·19 | 27 | 14·93 | 33 | 18·25 | 31 | 32·08 | 29 | 33·06 | 12 | 16·97 | 48 | 43·60 |
| 1952–54 | 43 | 21·44 | 19 | 9·47 | 24 | 11·96 | 25 | 24 | 18 | 18·07 | 19 | 22·45 | 24 | 20·70 |
| 1955–57 | 33 | 14·75 | 19 | 8·49 | 14 | 6·25 | 23 | 20 | 10 | 9·22 | 8 | 8·23 | 25 | 19·75 |
| 1958–60 | 35 | 14·63 | 17 | 7·10 | 18 | 7·52 | 21 | 17·01 | 14 | 12·04 | 5 | 4·80 | 30 | 22·18 |
| 1961–63 | 28 | 10·98 | 17 | 6·67 | 11 | 4·31 | 16 | 12·02 | 12 | 9·07 | 6 | 5·42 | 22 | 15·24 |
| 1964–66 | 24 | 8·61 | 14 | 5·02 | 10 | 3·59 | 15 | 10·32 | 9 | 6·75 | 3 | 2·49 | 21 | 13·27 |
| 1967–69 | 24 | 7·75 | 15 | 4·84 | 9 | 2·90 | 15 | 9·18 | 9 | 6·15 | 3 | 2·22 | 21 | 12·00 |
| 1970–72 | 30 | 8·53 | 15 | 4·26 | 15 | 4·26 | 16 | 8·58 | 14 | 8·48 | 5 | 3·21 | 25 | 12·77 |
| 1973–75 | 37 | 9·67 | 22 | 5·75 | 15 | 3·92 | 21 | 10·04 | 16 | 8·85 | 8 | 4·83 | 29 | 13·34 |
| 1976–78 | 37 | 8·94 | 21 | 5·07 | 16 | 3·86 | 16 | 7·36 | 21 | 10·07 | 4 | 2·30 | 33 | 13·72 |
| 1979–81 | 37 | 8·11 | 22 | 4·82 | 15 | 3·28 | 28 | 11·73 | 9 | 4·13 | 1 | 0·55 | 36 | 13·10 |
| 1982–84 | 46 | 9·19 | 29 | 5·79 | 17 | 3·39 | 28 | 10·74 | 18 | 7·52 | 6 | 3·14 | 40 | 12·92 |
| 1985–87 | 44 | 8·06 | 33 | 6·04 | 11 | 2·01 | 26 | 9·15 | 18 | 6·88 | 14 | 6·75 | 30 | 8·86 |
| Total | 520 | — | 287 | — | 233 | — | 306 | — | 214 | — | 104 | — | 416 | — |

* Per 100,000 inhabitants.

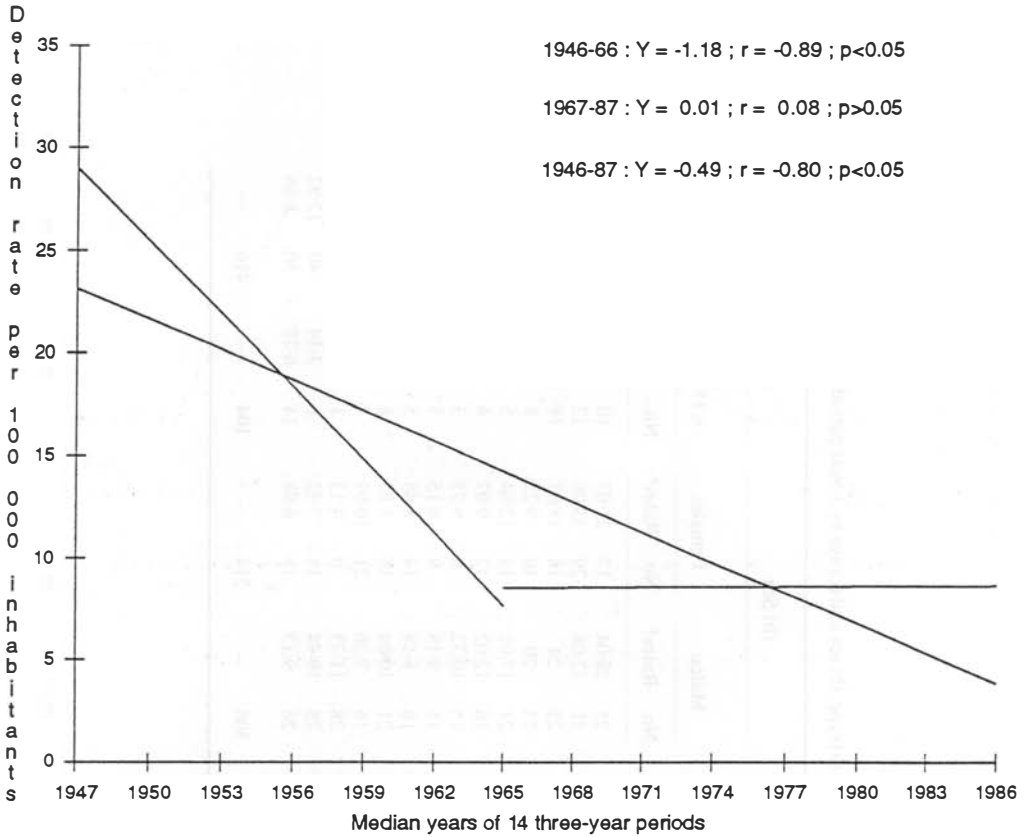*Leprosy in French Polynesia. Epidemiological trends 1946–87*

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**Figure 2.** Evolution of mean annual detection rates for leprosy (all forms) by 3-year periods between 1946 and 1987.

rate) and 17 were paucibacillary patients (10/100,000) whereas, during the last one, of the 44 newly detected patients, 11 were multibacillary (2·01/100,000) and 33 were paucibacillary (6·04/100,000). The regression curve plotted on the basis of the 14 specific 3-year detection rates showed a significant ($p < 0.05$) decline for both multibacillary and paucibacillary detection rates. The decline was significant for multibacillary as well as for paucibacillary detection rates between 1946 and 1966 ($p < 0.05$), but not between 1967 and 1987 ($p > 0.05$).

With respect to sex of the patients (Table 1), a significant decrease ($p < 0.01$) of the detection rate was observed between 1946 and 1987, from 28·04 to 9·15/100,000 in males and from 21·07 to 6·88 in females. Again, the regression was significant in males ($p < 0.01$) as well as in females ($p < 0.05$) between 1946 and 1966, but not between 1967 and 1987 ($p > 0.05$).

With respect to age (Table 1), of the 42 newly detected patients during the first 3-year period of the study (1946–48), 10 were less than 15 years of age (mean annual detection rate: 18·05/100,000) and 32 were 15 years of age or more (27·96/100,000). The regression curves plotted on the basis of all 14 age-specific detection rates showed a significant
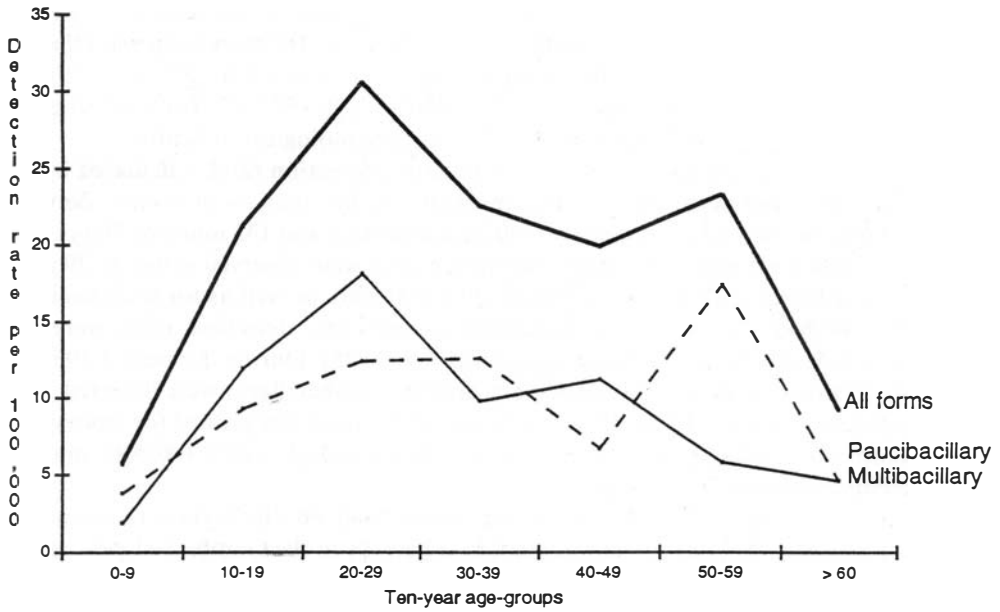
**Figure 3.** Age-specific detection rates of leprosy between 1946 and 1966.

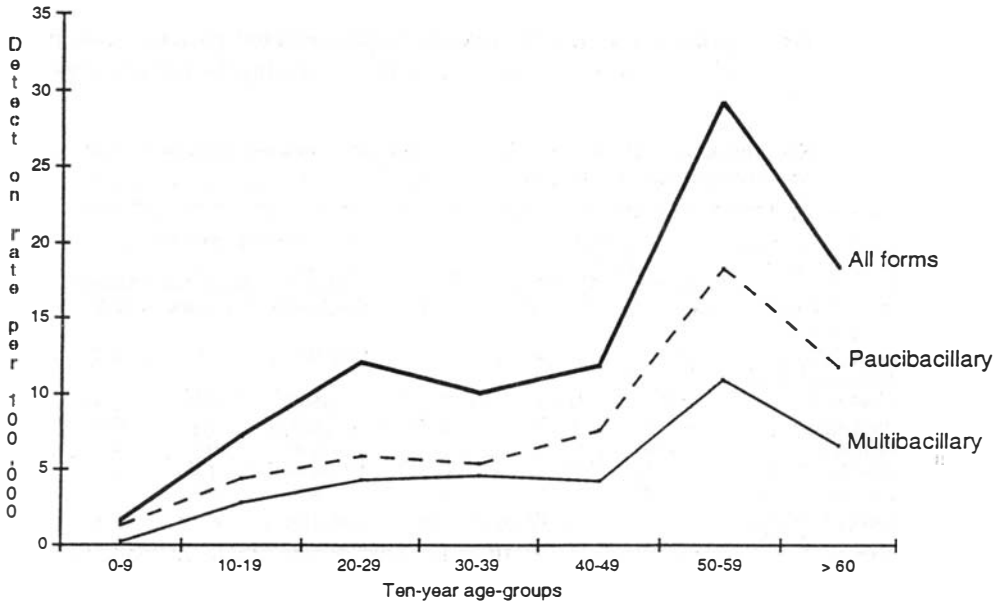**Figure 4.** Age-specific detection rates of leprosy between 1967 and 1987.

decrease ($p < 0.05$) for both $< 15$ years of age and $> 15$ years of age detection rates; as observed for previously reported epidemiological indicators, the regression was effective ($p < 0.05$) during the period 1946–66, but not during the period 1967–87 ($p > 0.05$).

This led us to consider two study periods, 1946–66 and 1967–87, for analysing our results concerning detection rates as well as other epidemiological indicators.

When considering age-specific, 21-year cumulative detection rates, calculated by 10-year age groups, more pertinent data became available for analysis of results. Between 1946 and 1966, 265 new cases of leprosy (130 paucibacillary and 135 multibacillary) were detected; as shown in Figure 3 the highest detection rates were observed in the 20–29 years age groups for leprosy, all forms combined (30·5/100,000), as well as for multibacillary cases (18·1/100,000); whereas, for paucibacillary patients, detection rates were not significantly different in the 7 10-year age groups ($p > 0.05$). During the period 1967–87 (Figure 4), 255 new cases (157 paucibacillary and 98 multibacillary) were detected, with the highest detection rates being observed in the 50–59 years age groups for leprosy (all forms combined, 29·2/100,000), as well as for paucibacillary (10·9/100,000) and for multibacillary patients (18·3/100,000).

With respect to place of birth, during the period 1946–66, the highest mean annual detection rates were observed in remote islands, especially in the Gambier islands, and in the Northern and Southern Marquesas islands, where they were 198, 72 and 49 per 100,000, respectively (Table 2); during the same period, the detection rate was 9·2/100,000 in the Society archipelago (where 70% of the population were living). During the 1967–87 period, the mean annual detection rates decreased dramatically to 54 and 12/100,000 in the Gambier and Northern Marquesas islands, respectively, while they remained stable in the Southern Marquesas (49/100,000) as well as in the Society archipelago (7/100,000).

## PROPORTION OF MULTIBACILLARY PATIENTS AMONG NEWLY-DETECTED CASES

The proportion of multibacillary patients among newly-detected patients was 59·5% during the first 3-year period (1946–48) of the study and 25% during the last one (1985–7);

**Table 2.** Mean annual detection rates for leprosy according to place of birth in French Polynesia by 21-year periods between 1946 and 1987

| Place of Place of birth | 1946–66 period | | | 1967–87 period | | |
|---|---|---|---|---|---|---|
| | Mean* population | Mean* No. of cases | Mean* rate | Mean population | Mean No. of cases | Mean rate |
| Society islands | 58,388 | 5·4 | 9·2 | 97,405 | 7 | 7·2 |
| Marquesas islands | | | | | | |
| Northern | 2505 | 1·8 | 72·2 | 4600 | 0·6 | 12·4 |
| Southern | 1356 | 0·8 | 49·6 | 2824 | 1·4 | 49 |
| Australes islands | 4206 | 0·9 | 22·1 | 7036 | 0·7 | 9·5 |
| Tuamotu islands | 6530 | 2·2 | 34·3 | 9655 | 1·4 | 14·3 |
| Gambier islands | 552 | 1·1 | 198·4 | 870 | 0·5 | 54·7 |
| Outside of FP† | 9708 | 0·42 | 4·4 | 18,239 | 0·7 | 3·6 |

\* Annual mean population, number of cases and detection rates (per 100,000 inhabitants).
† Patients born outside of French Polynesia, but detected in French Polynesia.

the regression curve plotted on the basis of the 14 3-year proportions ($y = -109.8$ $x + 114$) indicates a significant decrease ($p < 0.05$). As was noted for other indicators previously reported, the decrease was significant between 1946 and 1966 but not significant between 1967 and 1987.

PROPORTION OF PATIENTS WITH DISABILITIES OF GRADE $> 2$ AT DETECTION

In 1946–8, among the 42 newly-detected patients, 22 (52%) presented disabilities of grade $> 2$ at the moment of detection; this percentage fell dramatically to reach 6·8% in 1985–7; for the whole study period, the regression curve ($y = -0.51$ $x + 79.5$) indicates a significant decrease ($p < 0.05$). Again, the decrease was significant ($p < 0.05$) during the first period of the study (1946–66), but not during the second one (1967–87).

## Discussion

As mentioned above, the number of newly-detected patients differed greatly from year to year during the whole study-period. Such a phenomenon may be due either to the small number of cases and random fluctuations, or to a lack of continuity in the active case finding performed in the islands. Therefore, to validate detection rates as estimates of incidence, we examined the evolution of 2 indicators: the proportion of newly-detected patients with deformities of grade $> 2$ and the proportion of multibacillary patients among the total number of newly-detected patients (though the use of the latter indicator may be controversial). The proportion of patients with deformities among the newly-detected cases should tend towards zero if detection rates approach incidence rates and the proportion of multibacillary patients (who are usually detected first when control schemes are initiated) should decrease steadily some years after the implementation of a leprosy control programme.[3] In fact, we observed a reduction of these 2 proportions, along with the decrease of the detection rates. This suggests that, 20 years after the implementation of the control programme, the 3-year detection rates reported in our study closely approximated the true incidence of leprosy.

The next point to emerge from our data is the consistant decrease in the leprosy detection rates. The fact that it is limited to the period 1946–66, that is, during the period following the introduction of dapsone, must be considered very carefully. The evolution of the epidemiological situation may not always be attributed to the efficacy of a control programme,[7] and the declining incidence of leprosy coincident with the implementation of a leprosy control programme is difficult to interpret because of other possible influencing factors, such as a change in control programme efforts, economic development of the country and the natural decline of the disease.[8] After 1946 the main change in leprosy control in French Polynesia was the closure of leprosariums in the remote islands of the Marquesas and Tuamotu archipelagoes, and, in 1950, the centralization at the Louis Malardé Institute of the activities of the leprosy control unit. In fact, this operational change resulted in the strengthening and the standardizing of the activities of the control unit and treatment measures. Thus, the reduction of detection rates is likely to reflect an improvement in the epidemiological situation rather than a failure of the control strategy, and it may be assumed that an actual decline in leprosy has occurred since 1946. A period of important economic development occurred in French Polynesia but, because

this only commenced after 1962,[9] it is unlikely to be the only cause of the improvement in the leprosy situation between 1946 and 1966. Moreover, this economic improvement affected remote islands much less and much later than Tahiti; thus, it is not likely to be responsible for the decrease of the detection rates for leprosy in the remote archipelagoes. Though several reports have suggested that control programmes only resulted in improvement of the leprosy situation in a few areas,[10] some of our findings suggest that improvement in the leprosy situation noted in French Polynesia could be attributed, among other factors, to the efficacy of the control programme implemented in 1950. The most important is the decline in the proportion of newly-detected patients with disabilities, which has been demonstrated in other countries[11] to be the main effect of a control strategy. Another point is that the most important decrease in detection rates was observed in remote islands. This suggests that control programmes, including not only standardized treatment and the follow-up of patients, but also active case-finding among household contacts, are easier to manage, and, thus, are more effective in small size populations. That such a decrease was not observed in the South Marquesan population, which is also of a small size, remains difficult to explain.

Regarding the second study period of 1967–87, the stability in detection rates might suggest, as reported in a previous study,[12] that no change occurred in the leprosy situation. It must be emphasized that, during that period, the highest detection rates were observed in the oldest age groups (in terms of age at detection) whereas, during the first period (1946–66), they were observed, at least for multibacillary leprosy, in the 20–9 year age group. In fact, the difference between age at onset and age at detection was probably longer during the first period than during the second, due to the delay in case finding. Thus, the difference in age at onset between the two periods was most likely greater than what we have reported. However, the ageing of the leprosy population may have several explanations, among them the introduction in French Polynesia by the mid-1960s of systematic BCG vaccination for all new-born children. As reported by Bagshawe, BCG should afford protection against leprosy, more particularly in vaccinated children under 15 years of age.[13] Also, it is known that the efficacy of a leprosy control programme should result in a more marked decrease in children,[14] and that increase in the mean age of patients at the onset of leprosy reflects a decrease in the risk of infection in a community. However, it should be kept in mind that increasing mean age of patients has been considered as an indicator of long-term decreasing trends irrespective of any control strategy.[8] Why detection rates for leprosy remained stable during the period 1967–87 is difficult to explain. It is assumed that, theoretically, effective treatment of all patients with overt disease (known prevalence) together with the reduction to zero of the reservoir of undetected cases (unknown prevalence) should interrupt transmission, and that after a period of latency, no new cases should appear.[15] In that assumption, a most important point is that treatment should be effective: in French Polynesia, nearly half of the multibacillary patients on dapsone monotherapy have relapsed and have become additional sources of transmission.[16] Therefore, it might be speculated that an additional reservoir of infection, consisting of all relapsing multibacillary patients since 1946, has contributed to the emergence of new cases of leprosy and to a slowing down of the decrease in detection rates which was observed during the previous period. Whatever the explanation and despite the stability in detection rates for leprosy during the period 1967–87, our results suggest that the leprosy situation also improved during the last 21 years of the study. Finally, it should be noted that, ever since multidrug therapy was implemented

in French Polynesia in 1982, no relapses have been detected;[17] whereas, as mentioned above, during the time of dapsone monotherapy, cumulative relapse rates of 30–50% were observed in multibacillary patients.[16] It seems reasonable to hope that, by suppressing or greatly reducing the occurrence of relapse, the implementation of MDT in French Polynesia will reduce the risk of transmission of the disease, and that a subsequent fall in detection rates should be observed in the near future.

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# Lèpre en Polynésie Française. Tendances épidémiologiques entre 1946 et 1987

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*Résumé*    L'analyse des données informatiques (système OMSLEP) sur des patients de Polynésie française suivis depuis 1940 a révélé une diminution des taux annuels moyens de détection de toutes les formes de lèpre, de 24,73 pour 100 000 habitants en 1946 jusqu'à 8,1 pour 100 000 en 1987 ($y = -0,49\,x + 45,43$; $p < 0,05$). En réalité, la diminution était significative ($y = -1,18\,x + 83,54$; $p < 0,05$) pendant la première moitié de la période d'étude (1946–66), mais ne l'était pas pendant la seconde (1967–87). De même, on a observé seulement au cours de cette même première moitié (1946–66) de la période d'étude une diminution significative dans tous les taux de détection annuels moyens spécifiques (selon la forme de lèpre, le sexe et l'age des patients), dans la proportion des patients multibacillaires sur le total des nouveaux cas détectés, et dans la proportion de tous les patients souffrant d'infirmités au début de leur lèpre. Pourtant, lorsque les taux de détection cumulatifs par age, calculés par groupe d'age de 10 ans, au cours de la période 1946–66, ont été comparés à ceux de la période 1967–87, on a noté un vieillissement de la population lépreuse. Enfin, la diminution des taux de détection annuels moyens était plus importante dans les plus petites populations des iles isolées que dans la population de Tahiti, l'ile principale, où 70% de la population totale vivait pendant la période de l'étude. On a montré que ce déclin correspondait à une amélioration réelle de la situation quant à la lèpre, que l'on pourrait attribuer, entre autres facteurs, (tels que le développement économique et la vaccination BCG systématique), au programme de contrôle de la lèpre exécuté en 1950. L'introduction en 1982 d'une thérapeutique multidrogue pour tous les patients atteint de lèpre évolutive a fait naître l'espoir d'un nouveau déclin de la lèpre en Polynésie française dans un avenir prochain.

# La lepra en la Polinesia Francesa. Las tendencias epidemiologicas entre 1946 y 1987

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*Resumen*    El análisis de datos informatizados (sistema OMSLEP) sobre pacientes de la Polinesia Francesa desde 1940 ha indicado una reducción del promedio anual de detección de la lepra, en una combinación de todas sus formas, de 24,73 por 100 000 habitantes en 1946 a 8,1 por 100 000 en 1987 ($y = -0,49\,x + 45,83$); $p < 0.05$). En efecto, la reducción durante la primera mitad del período del estudio (1946–66) fue significativa ($y = -1,18\,x + 83,54$; $p < 0,05$), pero no durante la segunda mitad (1967–87). Igualmente, se observó una reducción significativa de todos los promedios anuales específicos de frecuencia de detección (según la forma de la lepra y el sexo y edad de los pacientes), en la proporción de pacientes multibacilares en el total de casos recién detectados, y en la proporción de todos los pacientes con incapacidades al inicio de la lepra, durante el la primera mitad del período de estudio (1946–66). No obstante, cuando se compara la frecuencia de detección cumulativa para edades específicas, calculada en grupos de 10 años durante el período 1946–66, con la frecuencia para 1967–87, se notó un aumento de la población leprosa. Finalmente, la reducción del promedio anual de frecuencias de detección fue más grande en las poblaciones más pequeñas de las islas remotos que en la población de Tahiti, la isla principal, donde vivía 70% de la población total durante el período del estudio. Se mostró que la disminución correspondía a una mejora efectiva de la situación leprosa que se podía atribuir a, entre otros factores (como el desarrollo económico y la vacunación antituberculosa sistemática), debida a la implementación de un programa de control de la lepra en 1950. La introducción en 1982 de una terapia multi-droga para todos los pacientes que sufrían de lepra activa ha creado la esperanza de una reducción posterior de la lepra en la Polinesia Francesa en un futuro próximo.