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CAMPAIGNS AGAINST SMALLPOX

Attached is a report received from the Government of China (Taiwan)  
with regard to its campaign against smallpox.

# REPORT OF THE GOVERNMENT OF CHINA (TAIWAN)

## CAMPAIGN AGAINST SMALLPOX (From 1946 to May 1956)

### A Brief History

Taiwan is an island in the Western Pacific, less than 150 kilometres from the South China coast, with an area of 35,961 square kilometres and a population of about 9,000,000. The climate is sub-tropical and products are chiefly agricultural.

Taiwan is one province of the Republic of China. On the provincial level, there is the Provincial Health Administration which is responsible for the health problems of the whole population. The island is divided into 17 counties and 5 cities, and in each unit, there is a health centre. At the basic level, there are 360 villages and towns, and there is one health station in each village or town which is in charge of the health problems of the inhabitants.

The island was occupied by the Japanese for fifty years and during that time, smallpox was prevalent for a number of years. During the last few years, however, of the Japanese occupation, smallpox was almost entirely under control with none or very few cases each year.

Since October 1945, Taiwan has been restored to China. Due to the large population movement and the bad situation after the war, various kinds of communicable disease have been prevalent and, among these, smallpox used to be the most serious. The highest epidemic was in 1947, when there were 5,193 cases and 1,725 deaths of smallpox among the population of about 6,500,000. However, after the carrying out of the mass immunization campaign, both the incidence and the mortality rate have been considerably reduced since 1948, and we have not had any case of smallpox since 1955. The cases and deaths of smallpox in Taiwan from 1947 to May 1956 are shown in Table I, and the age distribution of smallpox cases from 1946 to May 1956 is shown in Table II. It is interesting to note that the cases of smallpox have been more concentrated among the adult group rather than among the youngsters. This may be partly due to the fact that the soldiers have played an important role in the incidence of smallpox during the last few years, and partly due to the fact that the immunization campaign among the infants has been quite successful while the immunizing rate of the campaign among the adults has not been entirely satisfactory.

### Control Programme

There are three important parts in the smallpox control programme in this country, namely:

1. To vaccinate all the infants (primary vaccination) every year.
2. To revaccinate the whole population every three years.
3. To revaccinate the inhabitants of the area where smallpox cases are reported.

The programme is essentially considered to be a governmental responsibility, all the vaccine, supplies, and personnel for the smallpox control programme being provided by the government at various levels to the people, free of charge.

1. To vaccinate all the infants every year.

As in other parts of the world, smallpox vaccination has been quite popular in this country even in the most remote villages. The Government conducts the smallpox vaccination campaign for the infants twice a year--once in the spring and once in the autumn. The parents of the infants are notified by the health stations and are asked to bring their babies within a certain time to a certain place where the medical personnel will vaccinate the babies free of charge. Most of the practitioners are asked to participate in this campaign with or without charge to the people. The reactions of the vaccination are read by the person who has done the vaccination and those who show no reactions will be revaccinated. The percentage of the infants who receive primary vaccination ranges from 95 to 98 each year. (See Table III)

2. To revaccinate the whole population every three years.

Since the duration of immunity after smallpox vaccination has not yet been fully understood, it is difficult to decide within what period of time a person should be revaccinated. In order to increase the immunity level among the population as far as possible, the policy since 1950 has been that the mass vaccination campaign should be carried out every other year. This was done in 1950, 1952 and 1954. The number of people who were vaccinated in the past three campaigns was 6,649,065, 6,773,595, and 5,758,538, respectively, among the population of about 9,000,000. The percentage of the people who were vaccinated in each mass campaign was 88.02, 83.94 and 67.18, respectively. (See Table III)

As the number of smallpox cases has become very few in recent years, the frequency of the mass vaccination campaign will be changed from every other year to every three years starting this year. Also, for the sake of administrative convenience, one third of the population will be revaccinated within three years. The dividing of the population will be done at the village level, that means, suppose there are 15 hamlets in a village, the health officer in the health station of the village (there is one health station in every village) will vaccinate the people of 5 hamlets each year.

3. To revaccinate the inhabitants of the area where smallpox cases are reported.

Whenever there is a suspected smallpox case reported to the health centre, the responsible officer will go to the place to check the diagnosis and carry out the routine work such as, isolation of the case, disinfection, and quarantine of the contacts if it is a highly suspected case. The specimen of the skin lesion will be sent to the central laboratory for the laboratory diagnosis (this was not done until 1955). In addition, a smallpox vaccination campaign will be immediately organized in the region where the case originated. As the people of this island are quite aware of smallpox, there is no difficulty in doing this.

Table I - Cases and Deaths of Smallpox in China (Taiwan)  
(From 1947 to May 1956)

Year	Population	Cases	Cases per 100,000 population	Deaths	Deaths per 100,000 population
1946	6,097,117	1,561	25.60	315	5.16
1947	6,497,734	5,193	79.91	1,725	26.54
1948	6,807,601	288	4.23	50	0.73
1949	7,396,131	625	8.45	173	2.33
1950	7,554,399	78	1.037	27	0.35
1951	7,869,247	7	0.090	0	0
1952	8,069,959	37	0.470	0	0
1953	8,369,404	14	0.160	0	0
1954	8,578,567	9	0.10	1	0.01
1955	9,020,938	0	0	0	0
1956 Jan-May	(Feb.) 9,123,707	0	0	0	0

Table II - Age Group Distribution of Smallpox Cases in China (Taiwan)  
 (From 1946 to May 1956)

Age Group	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	Jan- May 1956	Total
0-4 years	171	1206	64	113	29		9	1				1583
5-9 years	68	258	17	35	7	1	9	5				400
10-14 years	29	123		12	4		3	1				172
15-19 years	49	199	12	39	2	1	3	2	1			308
20-24 years	147	344	28	60	6	2	2	1	2			592
25-29 years	230	614	35	64	9	2	5	1	1			960
30-34 years	230	657	30	61	7	2	4	1	1			994
35-39 years	192	517	30	58	5		2	1	1			806
40-44 years	141	475	18	67	3		2					706
45-49 years	138	335	25	59	2				1			560
50-54 years	78	204	16	33	3			1				335
55-59 years	36	136	7	12	1							192
60-64 years	23	84	5	6								118
65-69 years	26	31	1	3					1			62
70 years and over	3	20		3								26
Total	1561	5193	288	625	78	7	39	14	9	0	0	7814

Table III - Number of People Who were Vaccinated from 1946 to 1955

Year	Population	No. of people received vaccination	Percentage received vaccination
1946	6,097,117	2,120,312	***
1947	6,497,734	6,399,768 **	98.49
1948	6,807,601	856,726	***
1949	7,396,131	1,709,146	***
1950	7,554,399	6,649,065 *	88.20
1951	7,869,247	529,715	***
1952	8,069,959	6,773,595 *	83.94
1953	8,369,404	1,130,611	***
1954	8,578,567	5,758,538 *	67.13

\* Mass campaign of smallpox vaccination for the whole population.

\*\* Mass campaign of smallpox vaccination during the epidemic period.

\*\*\* The number of people who were vaccinated included: (1) infants of primary vaccination, (2) infants whose vaccinations showed no reaction last year, (3) people who were revaccinated due to the fact that they lived in the area where smallpox cases were reported. So there is no need to calculate the percentages.