From: Chief, Smallpox Eradication

To: Smallpox Staff

Subject: Progress Report 18 - Target Zero

16 January 1974

1.0 Overview -

At last, some sense of progress and achievement during the campaign begun this autumn is beginning to emerge. While recognizing that it is only mid-January with still high transmission rates, I sense that we are really on target to read "0 in 1974". Most encouraging and exciting has been the dramatic, almost unbelievable increase in the pace and extent of activities in India, reflecting certainly the keen interest, drive and determination exhibited at the national level and now also in many states. But substantial solid progress is also being exhibited in each of the three other endemic countries. Although special problems and problem areas have been identified in every country, national state and local authorities and WHO staff, are now specifically and systematically tackling these with enthusiasm and optimism and with a determination and vigor which I have never before witnessed on such a scale.

But caution must also intrude as transmission rates will remain high through March (as usually evidenced by a steady seasonal increase in incidence). Effective containment during this period is inevitably more difficult and unless vigorous efforts are continued, serious reversals could occur. In the late March/April period, the seasonal curve flattens out and later begins to decline. Transmission during this period is less efficient and containment measures more effective. A further intensive effort at this period, specifically directed toward containment of known foci, should accelerate this process, leaving us with comparatively few or no known foci requiring special programmes during the summer season.

In brief, it would appear that the principal battle of the global programme may be fought between now and the end of May. The Director-General has been fully appraised and assures all possible support but, ultimately, the success of the effort will depend on each of those in the field.

2.0 India -

The extent and intensity of efforts now being made in India are difficult to reflect in a brief written summary. Most impressive is the figure attached which shows the number of new outbreaks discovered in the heavily afflicted states of Uttar Pradesh, Bihar and West Bengal during search operations conducted respectively in October, November and December. When one recalls that the numbers of outbreaks normally increase sharply in number during this period, it is apparent that substantial progress is being made. The principal problem spots are in northern and central Bihar State and in Bareilly Division in west-central Uttar Pradesh. Additional assistance is now being provided to these areas.

A summary table showing the status of smallpox in Uttar Pradesh state (population 92.3 million) as appraised during each search is presented below.

	Uttar Pradesh		
	October Search	November Search	December Search
Districts with new outbreaks	47	43	41
Primary Health Center areas with new outbreaks	398 (45%)	227 (26%)	189 (22%)
Villages with new outbreaks	1 483	390	309
Municipalities with new outbreaks	42	24	22
Cases found during search	5 989	1 711	1 148

Despite clear indications that the efficiency of search during November and December had substantially improved over that in October, fewer units were found to be newly infected on each occasion. In theory, of course, if containment had been fully effective, an even more rapid decrease should have occurred. Execution of containment measures in Uttar Pradesh, as elsewhere in Asia, has been found to be, by far, the weakest link in the present programme. Thus, in most areas, the special epidemiologists assigned are now devoting more time to insure that the containment component of the activity is better executed at the expense of time otherwise directed toward active search.

The fourth of the large Indian States which was heavily afflicted - Madhya Pradesh - has now conducted its second search operation. Again, a dramatic decrease in incidence was observed. During the first search (November), 1 217 cases were found in 169 villages and 3 municipalities. During the second search (early December), only 215 cases were newly discovered in 51 villages and 2 municipalities. In all, by mid-December, only 111 villages or municipalities in the entire State had recorded one or more cases with onsets during the preceeding month. All but 15 were in Districts on or near the border of Bihar and Uttar Pradesh.

Provisional results of the second active search operation by divisions - Madhya Pradesh

	Villages			Municipalities		Smallpox Outbreaks			
	Total	Searched	Affected*	Total	Affected*	Total with active cases	Newly found	Cases *	Field workers used
Indore	11 447	11 435	1	13	0	0	1	12	1 870
Bhopal	10 171	10 158	3	14	2	7	5	15	1 488
Gwalior	8 515	8 507	17	6	0	37	17	76	963
Jabalpur	13 296	13 285	7	11	0	13	7	20	1 736
Rewa	11 064	9 954	18	5	0	47	18	78	NR
Bilaspur	19 509	19 466	5	29	0	7	5	14	2 506
Total	74 002	72 805	51	78	2	111	53	215	8 563

* Previously unreported

Search operations in the southern States have been selective, involving only those Districts considered to be at high risk of importation and those where surveillance was considered to be unsatisfactory. In the five states, cases were detected only in Andhra Pradesh in Districts already known to harbor smallpox.

State	Districts		Villages		Municipalities		Total Smallpox	
	Total	Searched	Searched	Affected	Searched	Affected	Outbreaks	Cases
Andhra Pradesh	21	11	19 079	14	24	2	20	174
Karnataka	19	10	15 565	0	38	0	0	0
Kerala	10	2		0	2	0	0	0
Maharashtra	26	14	17 954	0	NR	NR	0	0
Tamil Nadu	14	5	16 799	0	4	0	0	0
Total	90	42	69 397	14	68	2	20	174

The outbreaks in Andhra Pradesh, altho' limited to only a few Districts have defied the none too effective efforts of State authorities to control them and have continued for upwards of a year. Special teams began work this month in this sole remaining endemic focus in southern India which, at end December, consisted of only 10 known infected villages.

Elsewhere, limited outbreaks have recently been detected in Rajasthan - the source of which still awaits clarification but major epidemics are now occurring in two Districts of Kashmir and in Assam and Meghalaya in eastern India. The Kashmir outbreaks are being vigorously dealt with by national and local staff and over 300 additional workers recently recruited to assist. The picture in Assam and Meghalaya, however, remains bleak with, as yet, little indication that local staff have been sufficiently mobilized to cope with them.

Bangladesh -

In January, the programme in Bangladesh is expected to be strengthened by the assignment of health staff throughout the country to undertake registration, primary vaccination and case detection as a priority measure during the course of a general reorganization programme of the basic health services. In early February, a one-week intensive search will be conducted as has been done in India.

In the meantime, however, progress by the existing staff has been most encouraging. During December, only 172 villages were known to have experienced one or more cases of smallpox (see figure attached). Smallpox incidence, although rising slightly, remains somewhat below that observed at this time last year, despite far better surveillance. National and WHO epidemiologists are working specifically in those areas where clusters of outbreaks have been detected. To date, the urban areas, including major cities such as Dacca, Khulna and Chittagong have experienced only a smallpox number of imported cases.

Pakistan -

Smallpox incidence in once heavily infected Sind Provinces declined steadily from 186 cases in week 48 to 32 cases in week 1 during the course of an aggressive and highly effective special programme. Baluchistan, although continuing its widespread search programme has been able to detect very few foci and appears to be on the verge of interrupting transmission. Unfortunately, Punjab Province, once non-endemic, has continued to experience serious problems with a major endemic focus in its capital city and now spread of infection to neighbouring Districts. Special measures to control the Lahore outbreak have been taken and efforts are being made to revive the surveillance structure but no detailed report on progress has yet been received. Meanwhile, Northwest Fronteir Province has experienced yet another importation and 17 cases have occurred. The situation in Punjab can only be viewed with alarm and as a tragic object lesson to those who would relax their vigilance prematurely.

Ethiopia -

Smallpox incidence in Ethiopia continues at levels below those of last year despite many more surveillance staff in the five (of 14) remaining endemic provinces. Temporary assistance in the form of a helicopter has now been made available to permit more rapid search of remote areas in one of these provinces. However, the persistence of endemic smallpox in Hararghe and Shoa Provinces is a definite set-back as it had been hoped that, by end December, both would be free of smallpox.

Smallpox Rates

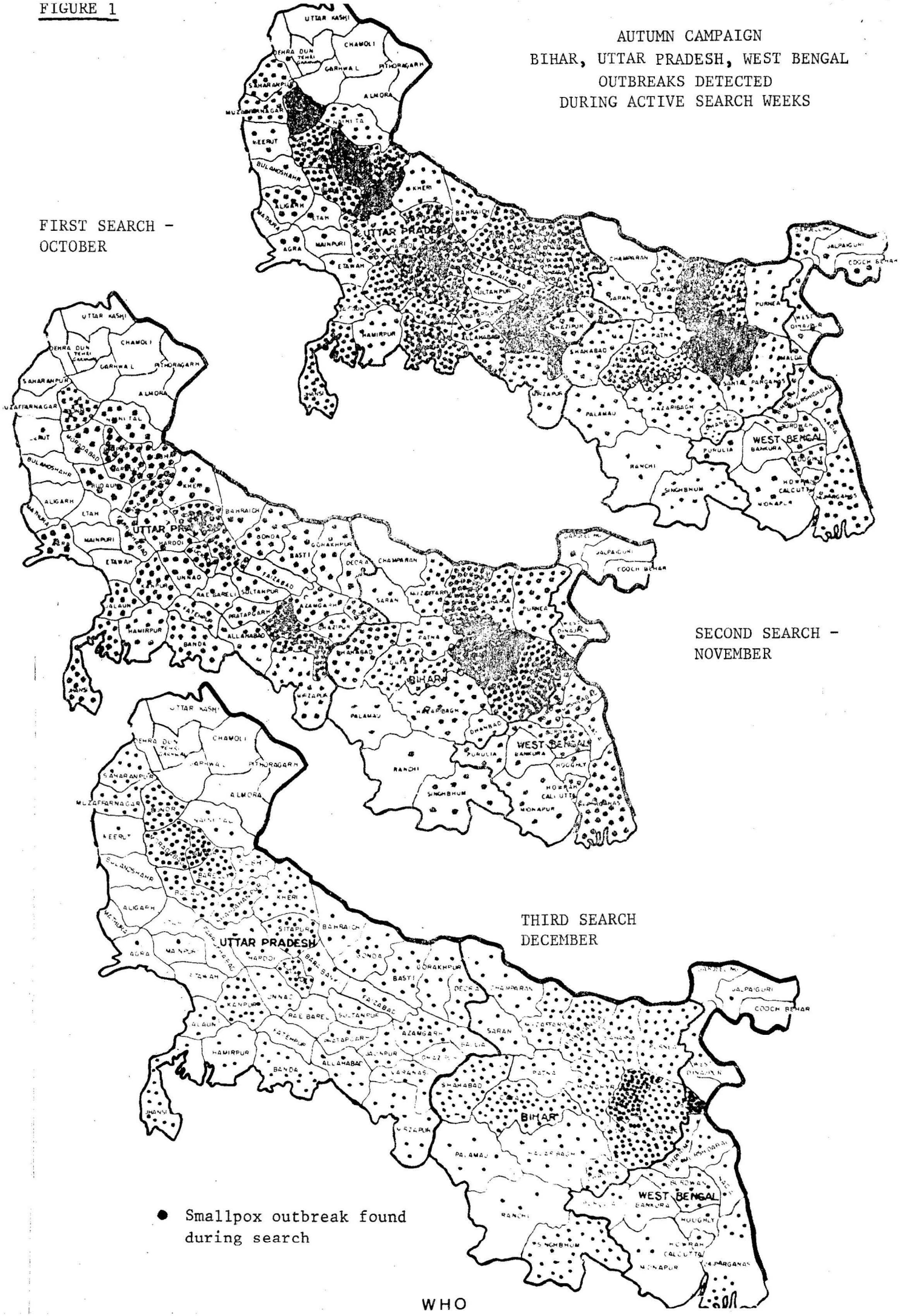
A more or less final tabulation of cases and rates for 1973 shows the "Big 10" to be as below. The 116 647 cases or 87% of the world's total occured in a population of just over 275 million. It is interesting to note that there is only a two-fold difference in incidence between the highest - Sind Province, Pakistan - and the lowest, Hararghe Province, Ethiopia.

Country	State/Province/Division	Pop (millions)	No. of cases	Cases/100 000 1973	1972
1.Pakistan	Sind	11.1	7 848	70.7	30.3
2.Bangladesh	Khulna	16.0	10 704	66.9	41.7
3.Ethiopia	Gojjam	1.8	1 036	57.6	124.6
4.Pakistan	Baluchistan	1.6	801	50.1	34.9
5.Bangladesh	Dacca	24.3	11 837	48.7	11.0
6.India	West Bengal	46.8	18 421	39.4	10.4
7.India	Bihar	59.0	23 000*	39.0	7.2
8.Bangladesh	Rajshahi	18.9	7 238	38.3	6.6
9.India	Uttar Pradesh	92.3	34 444	37.3	11.6
10.Ethiopia	Hararghe	3.7	1 318	35.6	46.4
		275.5	116 647*		

* estimated

FIGURE 1

AUTUMN CAMPAIGN
BIHAR, UTTAR PRADESH, WEST BENGAL
OUTBREAKS DETECTED
DURING ACTIVE SEARCH WEEKS



WHO

FIGURE 2

BANGLADESH

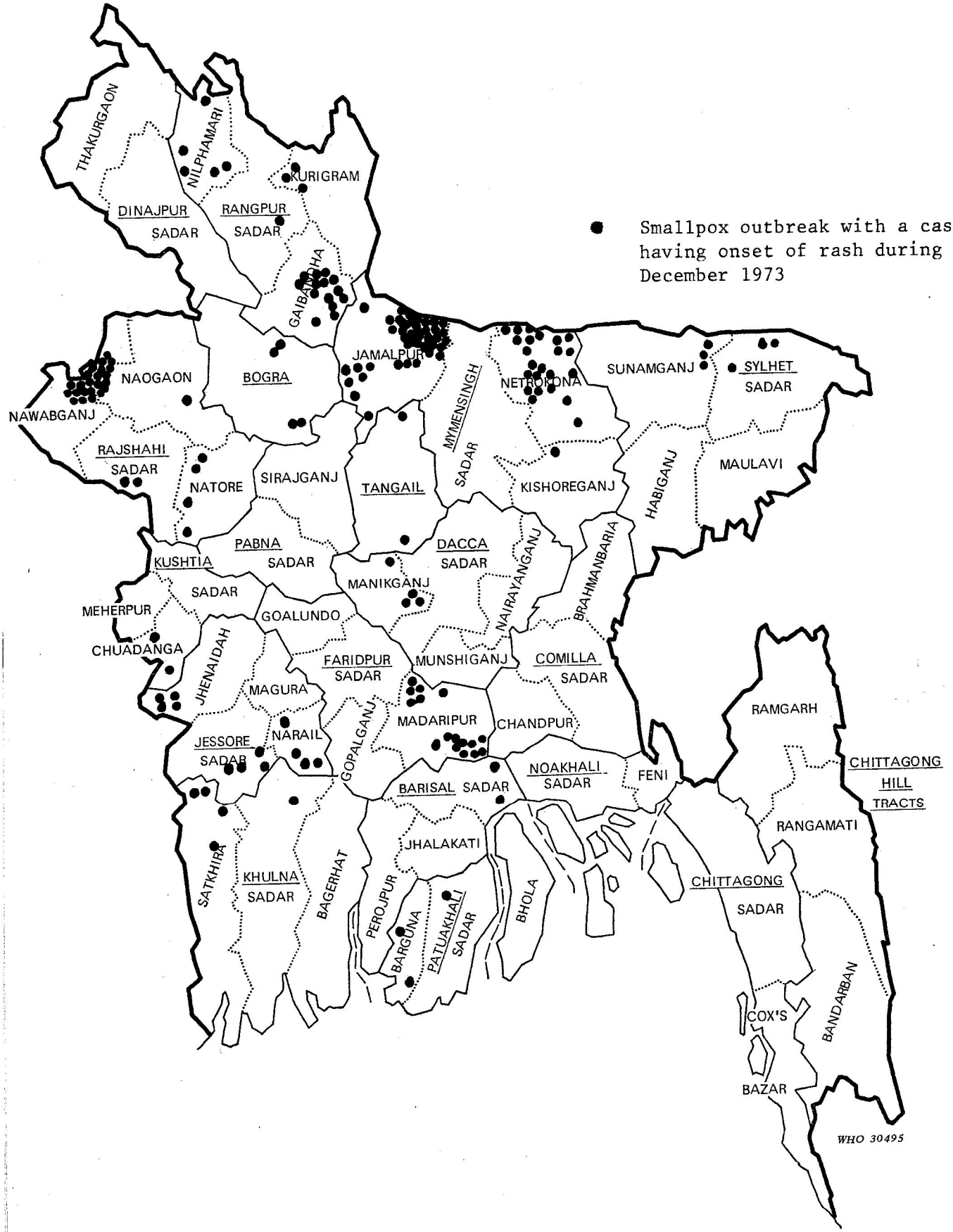
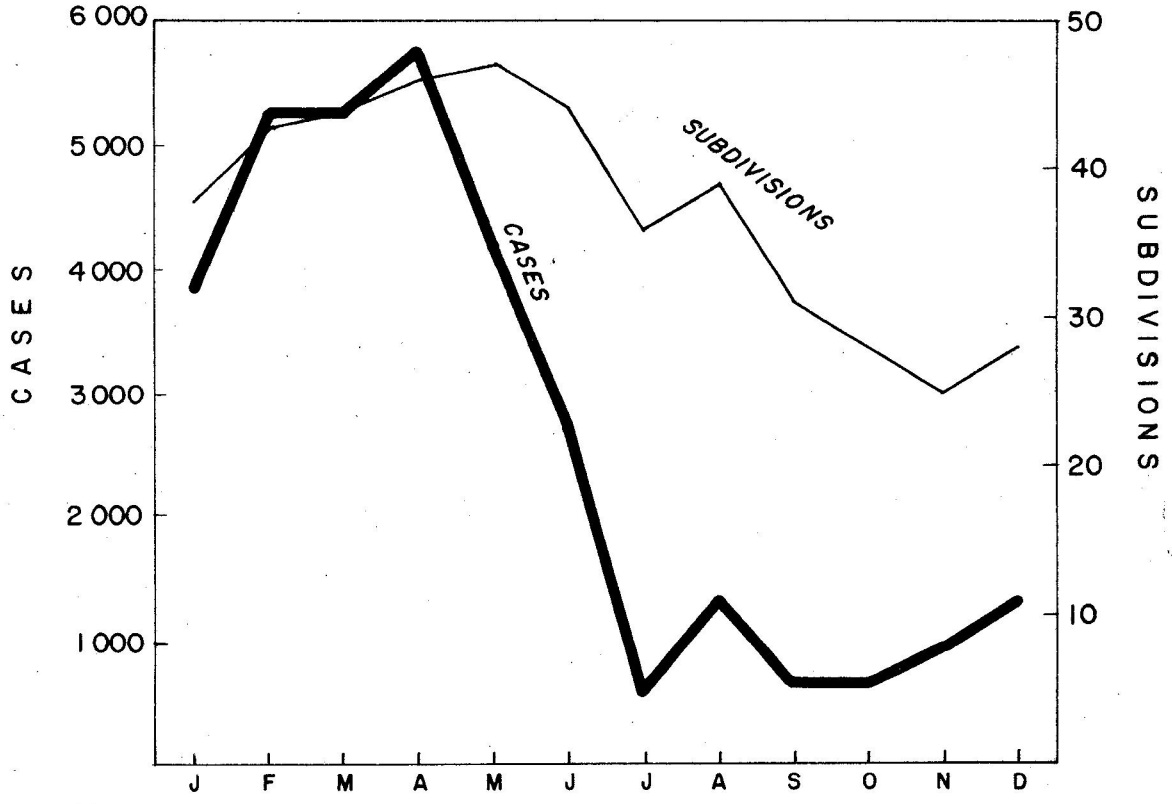


FIGURE 3

BANGLADESH

Smallpox cases and number of infected subdivisions by month