From: Chief, Smallpox Eradication

To: Smallpox Staff

Subject: Progress Report 20 - Target Zero 11 March 1974

1.0 Overview

The difficult January-March period with its marked seasonal increase in the rate of smallpox transmission is coming to an end. For the rest of the year, containment measures should be increasingly effective in preventing further spread. During the past two months, smallpox incidence, not unexpectedly, showed increases in Bangladesh, India and Pakistan but, with some exceptions, the increases were less marked than would normally have been expected. As never before, problem areas are more accurately delineated and there is a much greater expertise in knowing how best to cope with them. More personnel and funds are available. The success of our efforts over the next three to four months both in reducing the geographic extent of the endemic areas and in reducing incidence in the highly infected areas will be determining in the outcome of the global programme.

It is clear that the more heavily infected areas are becoming increasingly circumscribed. Reports received through 5 March show that only 50 districts (or provinces in Ethiopia) had recorded more than 100 cases since the first of the year and that over 80% of all cases were in these districts.

	Total cases	No. of districts with 100 cases since 1 January	Total cases in these districts	% of all cases
INDIA				
Bihar	8 080	14	7 328	91
Jammu & Kashmir	332	1	266	80
Madhya Pradesh	498	1	222	44
Maharashtra	229	1	226	99
Uttar Pradesh	4 617	17	3 485	75
West Bengal	916	3	564	62
BANGLADESH	3 054	8	2 892	95
PAKISTAN	1 882	3	1 329	71
ETHIOPIA	538	2	281	52
Total	20 802	50	16 593	81

Current population data for all districts is not immediately available but the approximate population in these 50 districts is estimated to be not more than 150 million persons. The total population of the four endemic countries is over five times this figure, or 765 million, in all.

Through week 8 (week 6 only in Bihar), the 10 worst afflicted districts were as follows:

	State/Province	District	No. of cases
India	Bihar	Bhagalpur	1 180
	"	Dumka	940
Bangladesh		Mymensingh	937
		Rangpur	896
Pakistan	Sind	Hyderabad	867
India	Bihar	Purnea	788
	"	Nawada	701
	"	Samastipur	690
	"	Katihar	524
	"	Monghyr	512

It is noted that 7 of the 10 districts are located in Bihar State but additional reports for weeks 7 and 8 may further increase Bihar's representation in the list of the "top 10". The State of Bihar deservedly must be termed the world's smallpox capital at this time.

2.0 Ethiopia

Exemplifying the best in the spirit of international cooperation, French teams from Djibouti and Sudanese teams have joined in the eradication effort in Ethiopia within the past two months. French teams accompanied by Ethiopian officials and SE programme staff are now engaged in a systematic programme of case search and vaccination throughout the vast eastern nomadic desert areas. With a staff of 50, supported by more than 20 vehicles and 3 helicopters, it was anticipated that the task would be completed within two months. Meanwhile, Sudanese teams are assisting in certain of the rugged and difficult western districts of Begemdir and Gojjam Provinces bordering Sudan. With this assistance, Ethiopian programme staff are able to concentrate their efforts on the remaining endemic foci of the central highland areas.

Notably, smallpox incidence in Ethiopia has shown a progressive decline since November at a time when the incidence usually rises. In most areas, outbreaks are scattered and the numbers of cases in each outbreak are much fewer than before. While much remains to be done, the pace of progress in Ethiopia this year is most encouraging.

3.0 Pakistan

Had it not been for serious programme failures in two districts (Lahore and Hyderabad), Pakistan would now be marking the time to achievement of a nil incidence in terms of days to weeks. As previously noted, premature dissolution of the programme in Punjab Province permitted smallpox introductions into Lahore to multiply and to spread to adjacent districts. Thus far this year, 169 cases have been detected in Lahore itself and 184 cases in 9 other districts. A programme incorporating room by room search was instigated in Lahore in February and malaria and family planning staff are now participating in active search throughout the rest of the province. If no presently unsuspected major problem areas are found, rapid control should be able to be achieved. In Hyderabad, the situation is more serious. Numerous outbreaks were discovered in one tehsil in early November. Intensive efforts were initially made to stop transmission but after a matter of a few weeks, activities markedly slowed and effective measures were not reinstituted until late January. Meanwhile, smallpox spread throughout most of the district and to the neighbouring, previously smallpox-free Tharparkar District. During January and February, 867 cases were found in Hyderabad and 293 in Tharparkar - 82% of all cases in the province. Many of the cases in neighbouring districts stem from introductions from Hyderabad. Additional national and WHO staff are now working in these districts but the outcome hangs in the balance.

The recent cases in NWFP have occurred as a result of importations from Lahore but all outbreaks are believed under control. In Baluchistan, only one small, well-controlled outbreak is known at present.

4.0 Bangladesh

Reported cases of smallpox in Bangladesh increased only slightly in January but more sharply in February as smallpox spread over wider geographic areas

	December	January	February
Smallpox infected subdivisions (56 total)	27	36	
Smallpox infected thanas (410 total)	61	84	
Smallpox infected villages	181	343	
No. of cases reported	1 337	1 432	1 622 (3 weeks only)

The average number of cases in each outbreak decreased, however, - from 7.4 in December to 4.2 in January - suggesting that earlier detection and containment is occurring. Three of 18 districts (Mymensingh, Rangpur and Rajshahi), all located in the north, accounted for 2 166 of the 3 054 cases (71%) in Bangladesh and here special programmes are in progress. However, a postal strike and shortages of petrol are seriously impeding work. The task in Bangladesh remains a formidable

one and will require far more in effort and application of local staff.

5.0 India

The development of extensive epidemics of smallpox in Bihar State casts a shadow over the India programme as a whole. These epidemics are occurring primarily in the central and eastern part of the state (fig. 1) and, from these endemic areas, numerous importations are occurring in West Bengal, Orissa and other states. Not yet reported officially are cases found during the fourth village-by-village search which was completed at end February. During this search, 1 170 new outbreaks were discovered and more than 5 000 new cases. At present, over 2 300 outbreaks are under follow-up. Additional epidemiologists have been assigned to the state in order to provide one for each principally infected district.

In contrast, the situation in Uttar Pradesh, long the major problem area in India, has substantially improved. Two-thirds of the primary health center areas are now reported to be smallpox-free and 36 of the 54 districts have fewer than 10 outbreaks currently under follow-up. Half of all known outbreaks are now reported from the west-central Bareilly Division and the eastern Gorahkpur Division.

Madhya Pradesh, likewise, has made excellent progress. The third active search was conducted between 7 and 12 January and, as in the first two, employed nearly 10 000 field workers. Cases were found in 14 of the 45 districts, five fewer than during the second search. Of the 459 primary health centers in the state, only 22 (4.8%) were found to be infected.

	No. of Villages	New outbreaks found	No. of Municipalities	New outbreaks found	Cases discovered
First search (Nov.)	73 605	164 (.22%)	82	6	1 216
Second search (Dec.)	73 605	51 (.07%)	82	2	215
Third search (Jan.)	73 605	46 (.06%)	82	2	230

At the end of the first search, there was a total of 184 outbreaks under follow-up; at the end of the second search, 111 outbreaks; and at the end of the third, 76. Virtually all outbreaks are located near the Uttar Pradesh border but only 3% have been documented as due to importation from another state.

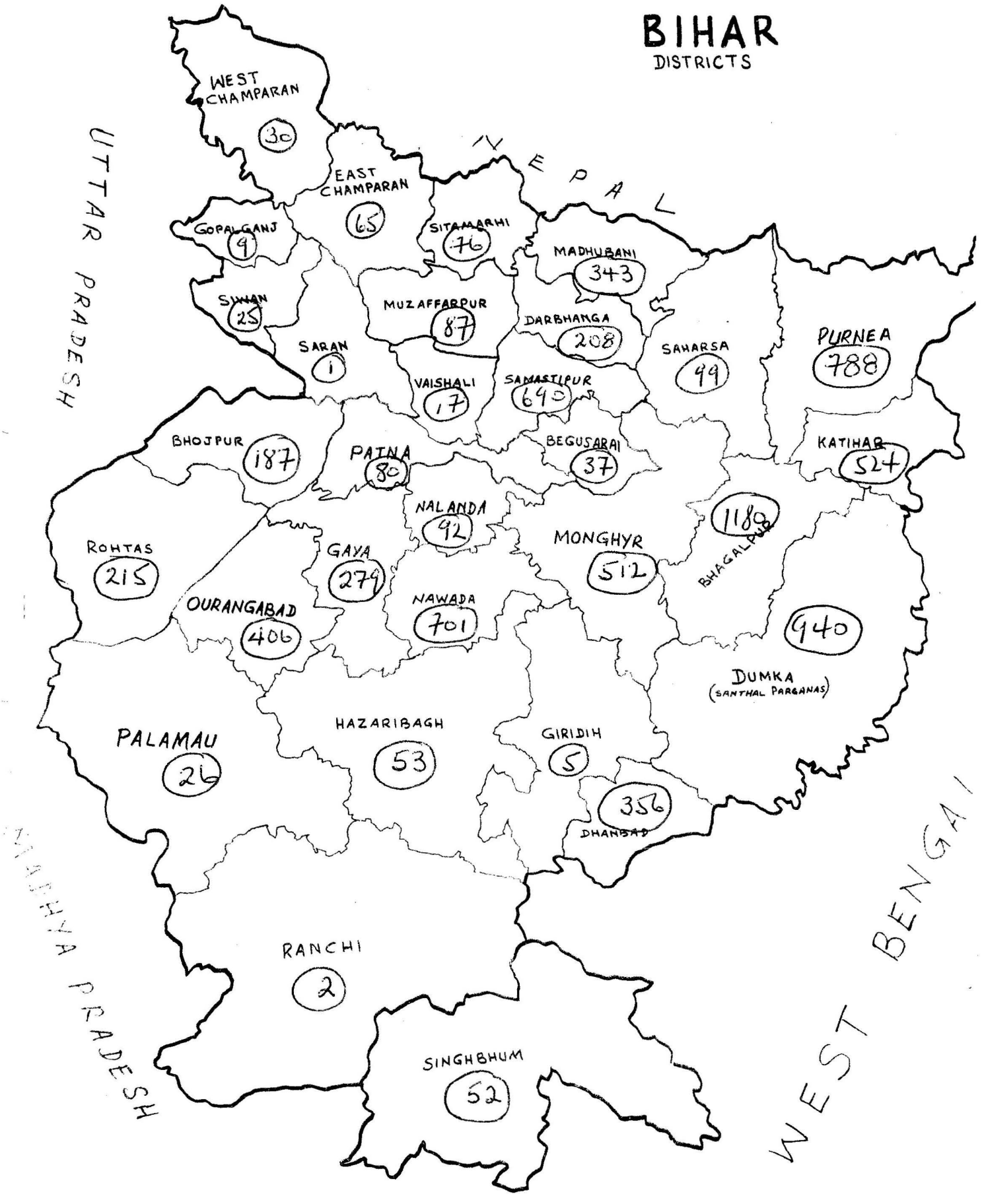
In the other states, programmes appear to be progressing satisfactorily altho' both Orissa and West Bengal are finding it difficult to stem the flood of importations from Bihar.

Failure to eliminate small foci distant from the main endemic centers continues to be especially disappointing. Infection continues to smolder in Andhra Pradesh with cases now occurring in neighbouring districts of Karnataka; the hidden focus

in Maharashtra, discovered in January, remains to be contained and, as such, continues as a threat to surrounding smallpox-free areas; Jaipur District in Rajasthan continues to record cases and epidemics persist in the extreme eastern and western parts of the country (Kashmir, Assam and Meghalaya). Each of these areas deserves more intensive attention.

In India, and no less in the other countries, the eradication effort must progress as a unit - failure of activities in one state, in one district, or even in a primary health center area can jeopardize the success of efforts throughout a wide area if not the country as a whole. However, with the army of health personnel available on the subcontinent, a concerted and coordinated effort by all, could eliminate smallpox within a matter of months. From reports received, it would appear that more active participation by more and more staff is occurring but much remains to be done to fully mobilize this army.

Figure 1



(6) No. of cases weeks 1-6.

WHO