

From: Chief, Smallpox Eradication  
To: Smallpox Staff  
Subject: Progress Report 23 - Target Zero 14 June 1974

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## 1. Overview

The epidemics of smallpox now occurring in Bihar, eastern Uttar Pradesh and adjacent areas have been the subject of world-wide press interest during the past two weeks with many articles appearing in all major newspapers and news magazines. Providing perspective on the problem has not been easy. While there is no question but that Bihar and eastern Uttar Pradesh are heavily afflicted and represent now the "epicenter" of the global problem, the fact of a far more active programme and more complete reporting unquestionably magnifies the severity of the problem when comparing this year's and last year's data. Whatever the relative magnitude of the problem, it is clear that the most critical battle of the entire programme is now being fought on the Indo-Gangetic plain of Bihar, Uttar Pradesh and the adjacent states. Our success in these efforts over the coming months are determining in regard to the goal of global eradication.

The reporting of large numbers of cases as is now the case in Bihar, eastern Uttar Pradesh and adjoining areas, is of real concern but, at the same time, it may also be regarded as an encouraging sign. Unless outbreaks are found, they cannot be controlled. And one must recall the experience in Brazil when in 1969, surveillance was first introduced into the programme. Smallpox incidence abruptly rose that year to reach the highest level in almost a decade, only to fall to '0' less than a year later. Can we do the same in these other problem areas? Unquestionably we can, provided there is full government support at all levels and that every effort continues to be made to find all cases and outbreaks and to contain them.

While the epidemics in India have captured the headlines, equally news-worthy are the spectacular achievements in Pakistan. It is apparent that staff at all levels of the programme now realize that eradication is imminent and with this realization has come an even more energetic burst of activity. A report follows below.

## 2.0 Highlights of progress and campaign activities

### 2.1 Pakistan

Activities in Pakistan have been attacked with renewed vigor in recent weeks.

In the hitherto troublesome Sind Province, smallpox incidence declined for the seventh consecutive week reaching a level of 132 cases in week 23, compared to 409 cases in week 16. A report covering activities through week 20 showed only 89 active outbreaks at that time in the entire province.

District

Hyderabad	- 50
Tharparkar	- 19
Sanghar	- 8
Nawabshah	- 4
Thatta	- 4
Karachi	- 2
Jacobabad	- 1
Khairpur	- 1

In Hyderabad District, long listed as one of the world's ten most heavily infected Districts, 59 smallpox staff and 66 malaria staff assisted by four Pakistani and two WHO epidemiologists are now engaged full-time. In Tharparkar District, 31 smallpox staff and 35 malaria staff assisted by two Pakistani and one WHO epidemiologist are now working. In the other Districts, the outbreaks, which represent importations for the most part, are being dealt with by District smallpox staff supported by the assigned Pakistan medical officers and a WHO Adviser.

Efforts now being made in Punjab are no less impressive. During May, outbreaks were detected in only 31 villages in 8 Districts of the Province. In a meeting of 4 June, the Director of Health Services assumed personal direction of all operations and decided that all District Health Officers would hand over all normal duties to their assistants and deal only with smallpox during the succeeding month. In the eight infected Districts, an additional epidemiologist has been assigned and in Lahore itself 7 Medical Officers are supervising the work of 160 sanitary inspectors, vaccinators and lady health visitors in an intensive and continuing programme of case search, containment and vaccination. In early July, activities will be reviewed and future plans made in a provincial meeting presided over by the Health Minister.

Interruption of transmission not later than mid-August is believed feasible!

2.2 Ethiopia

Smallpox foci in the extensive and troublesome desert areas of Hararghe and Wollo Provinces have now virtually been eliminated and programme staff feel that by early autumn, smallpox will be wholly confined to the comparatively limited but geographically most difficult central highland areas of Begemdir, Gojjam and Wollo Provinces. Reflecting the progress made in the desert areas is the absence of cases since mid-April in the adjacent areas of Kenya, Somalia and the French Territory of the Afars and Issas.

Increasing efforts have been made in the highland areas in recent months. However, the remaining foci are widely dispersed over the country's most difficult terrain and control of outbreaks has proved difficult. Although no towns are infected, experience shows that infection can persist throughout the rainy season in the scattered rural settlements. Plans are being developed for a final attack on the problem areas immediately following cessation of the rains in early October. We anticipate that these activities will be supported by two helicopters, now expected to be provided from bilateral sources.

### 2.3 India

The last few weeks have been marked by a dramatic surge in reported cases in Bihar and in eastern Uttar Pradesh, the present centre of the smallpox story, but numerous outbreaks throughout India and in Nepal have resulted from infection acquired there. Summary reports from these areas follow:

#### Bihar

The sixth village by village search in Bihar was conducted between 29 April and 4 May. In general, it was felt to be improved in quality over earlier searches although still unsatisfactory in some districts.

As of 4 May, there were 4 921 known active outbreaks in the state, of which 2 979 (60%) were in 6 of the state's 30 districts, located in the north-eastern corner of the state (figure 1). Outbreaks were detected in 427 of the 587 blocks (73%) and an average of 11.5 outbreaks was found in each of the infected blocks (ranging from an average of 1.7 outbreaks in East Champaran District to 34.4 outbreaks in Bhagalpur District).

In reviewing the experience so far this year, it was noted that containment activities have consistently lagged behind the increase in new outbreaks as shown below.

<u>Time Period</u>	<u>New Outbreaks each week (average)</u>	<u>Outbreaks contained (average)</u>	<u>% contained</u>
18 November-15 December	162	107	(66%)
16 December-2 February	354	152	(43%)
3 February-16 March	635	403	(63%)
17 March-4 May	689	511	(74%)

Since the beginning of the year, activities have steadily increased in intensity and in the most recent period shown above, an average of 511 outbreaks each week were being successfully contained. It is felt that if activities can be sustained at this level especially over the next four months when transmission rates sharply decline, smallpox could rapidly be eliminated.

While there are several problem districts in Bihar, one of the most difficult and the one which has created major problems for the other states is Singbhum (in the extreme south-east) where a large industrial complex is located. Over 400 (and possibly 1 000 or more) outbreaks of smallpox in other states are known to have originated in this district. Because of the problem, health staff and industrial employees have recently joined in a major coordinated effort to control the epidemic. As part of the activities, a further search was organized in late May in all villages within 45 kilometres of the main town of Jamshedpur, employing 8 medical officers, 15 supervisors and 150 searchers. Data available on 25 May for 1 203 of the 1 760 villages revealed 1 279 cases in 456 of the 1 203 villages (38% of the villages). This is

substantially more than were reported in the entire district during the sixth search. Check posts and barricades for vaccination and case detection have been established at all points leading out of the area. Over a two week period, 30 cases of smallpox were intercepted at the railway station as well as 3 cases at the bus station among persons embarking or disembarking from trains and buses. Between 12 and 25 May, over 107 000 persons were vaccinated at the check posts and over 105 000 in the course of other activities including containment operations, vaccination of high-risk slum areas, etc. A staff of 937 persons is deployed.

Wider use of a technique for containment developed in Santhal Parganas District is planned. The usual block and district containment teams organize and begin containment at each outbreak. A local volunteer (school teacher or other responsible person) is trained to vaccinate, complete containment forms, etc. and is left to finish the containment, vaccinate newcomers and leftovers. Not only are Government containment teams more efficiently used if they only spend 2 or 3 days at one outbreak, but also the local volunteer tends to be highly motivated for a short term job and is automatically in the village overnight to vaccinate people as they return from fields and markets. Supervision has, of course, been found to be essential to obtain good results, and to provide the volunteers with adequate support.

#### Uttar Pradesh

The sixth search in Uttar Pradesh was conducted during the same period as in Bihar.

Comparative figures are shown below:

	<u>Bihar</u>	<u>Uttar Pradesh</u>
Number of villages	78 000	143 000
Number of active outbreaks	4 921 (6.3%)	1 593 (1.1%)
Percent of PHC's infected	73%	48%

While, overall, the situation in Uttar Pradesh is better than in Bihar, certain districts, especially in the eastern part of the state, are heavily infected. The ten districts shown in figure 2 account for 73% of all outbreaks in the state as of 4 May.

Progress by division (each division containing between 4 and 6 districts) is shown below:

Division	<u>March to 4 May</u>			
	<u>Active outbreaks - end of Search 5 (March)</u>	<u>New Outbreaks</u>	<u>Outbreaks contained</u>	<u>Active outbreaks - end of Search 6 (4 May)</u>
Gorakhpur	246	578	248	576
Varanasi	132	313	51	394
Faizabad	113	269	106	276
Bareilly	221	221	190	252
Allahabad	43	108	33	118
Lucknow	103	112	109	106
Jhansi	18	19	15	22
Kumaon	4	9	4	9
Meerut	11	6	11	6
Agra	<u>21</u>	<u>(NR)</u>	<u>(NR)</u>	<u>(NR)</u>
	912	1 635	767	1 759

Overall, the number of outbreaks almost doubled between March and May, a period when normally a marked rise in seasonal incidence occurs. The increase in outbreaks, however, was primarily confined to Gorakhpur, Varanasi, Faizabad and Allahabad - all divisions in the eastern part of the state. Lucknow and Bareilly divisions, among the most heavily infected in March, showed little increase which, at this season of the year, is indicative of significant progress. Four divisions (Jhansi, Kumaon, Meerut and Agra) are now close to interrupting transmission. However, a much more effective effort will be required in eastern Uttar Pradesh.

#### West Bengal

An active programme in West Bengal has succeeded in restricting smallpox transmission to substantially lower levels than last year. However, efforts to interrupt continuing spread and to confine the flood of importations from Bihar have not yet been wholly successful. The status of the programme at the end of each active search since January is summarized below.

	<u>No. of Villages/Wards</u>	<u>26 Jan</u>	<u>15 Feb</u>	<u>18 Mar</u>	<u>13 Apr</u>	<u>16 May</u>
North (Darjeeling, Jalpaiguri, Cooch Behar)	3 296	1	8	22	26	14
North-Central (W. Dinajpur, Malda)	7 480	35	62	85	150	164
South-Central (Murshidabad, Birbhum, Purulia, Bankura, Burdwan, Nadia)	17 582	71	91	165	253	189
South (Calcutta, Hooghly, Howrah, Midnapur, 24 Parganas)	<u>21 340</u>	<u>48</u>	<u>48</u>	<u>79</u>	<u>125</u>	<u>77</u>
	49 698	155	209	352	556	444

Problem areas are primarily concentrated in the middle belt of districts in areas bordering Bihar. Five districts - West Dinajpur, Malda, Murshidabad, Burdwan and Purulia - account for 75% of all known foci. Only 10% (35) of the Regional Primary Health Centre areas are known to be infected and these are now serving as the primary operational units for surveillance-containment activities.

The magnitude of the problem caused by importation is illustrated below:

	<u>Jan.</u>	<u>Feb.</u>	<u>Mar.</u>	<u>Apr.</u>	<u>May</u>
Known active foci	155	209	352	556	444
Importation from Bihar	39)	47)	139)	86)	
Importation from elsewhere	10)	5)	25)	4)	
	32%	25%	46%	16%	

The recent decrease in the number of known importations, the decrease in the number of active outbreaks in May and the fact that smallpox in the Calcutta areas has been effectively contained throughout the year are highly encouraging signs. Nevertheless, a difficult task remains in the five problem districts.

#### India - other areas

The story in the rest of India is largely linked to Bihar. Orissa and Madhya Pradesh are continuing a valiant and generally successful battle to stop imported outbreaks and to eliminate remaining residual foci. Were it not for the need to divert so much in energy and resources to combatting importations, it is reasonable to suppose that both would now be smallpox-free or rapidly approaching that point. Andhra Pradesh at long last appears close to stopping transmission in the only known persistent residual focus in southern India. Except for Assam, Meghalaya and Jammu and Kashmir, the cases in other parts of India are linked with importations. Recent information regarding progress in these three states has not yet been made available in Geneva. However, persistently delayed and incomplete reporting from Assam and Meghalaya provide no confidence that progress there is yet very satisfactory.

#### 2.4 Bangladesh

Implementation of an Emergency Plan for Smallpox Eradication has begun to have a definitive effect on smallpox in Bangladesh. Between the end of April and the end of May, the number of infected villages decreased from 914 to 840. Although the total number of cases officially reported increased in May, primarily through reporting of old cases, the number of active cases detected declined to the lowest level since last November.

	<u>Dec.</u>	<u>Jan.</u>	<u>Feb.</u>	<u>Mar.</u>	<u>Apr.</u>	<u>May</u>
No. of infected thanas	61	82	111	117	125	115
No. of infected villages	181	309	522	517	914	840
No. of active cases detected	1 560	1 469	1 636	1 665	1 990	1 314

A summary by area is shown below:

	Villages Infected <u>- 1 May</u>	New-infected villages detected <u>in May</u>	No. villages certified free <u>in May</u>	Infected Villages <u>(31 May)</u>
<b>RAJSHAHI DIVISION</b>				
Rangpur District	278	85	118	245
Rajshahi District	100	77	57	120
Dinajpur District	19	27	9	37
Others	48	32	40	40
<b>MYMENSINGH DIVISION</b>				
Mymensingh District	382	151	218	315
Others	77	35	54	58
<b>KHULNA DIVISION</b>	41	17	36	22
<b>CHITTAGONG DIVISION</b>	<u>5</u>	<u>0</u>	<u>2</u>	<u>3</u>
	950	424	534	840

Notably, except for Rajshahi and Dinajpur Districts, all areas recorded a reduction in the number of infected villages during the month. This is fully one month earlier than might have been anticipated based on normal seasonal trends. The three Districts which continue as the principal problem areas are Mymensingh, Rangpur and Rajshahi which together account for 680 of the 840 infected villages (81%). See also fig. 3.

### 3.0 Comparison of Surveillance-Containment in Jhansi Division (Uttar Pradesh) and Andhra Pradesh

Comparable data from the two areas noted above are available from the first of the year and comparisons were made for the period January-February and March-April.

Ti	Place	Reporting			Containment			
		Total Outbreaks Reported	Outbreaks reported 20 or more days after first case		Outbreaks with cases occurring 15 days after reporting			
					For outbreaks report- ed > 20 days after first case		For outbreaks reported less than 20 days after 1st case	
					Number	%	Number	%
January/ February	Andhra Pradesh	30	11	37%	6	54%	3	16%
	Jhansi Division, Uttar Pradesh	46	20	43%	14	70%	10	38%
March/ April	Andhra Pradesh	15	5	33%	0		0	
	Jhansi Division, Uttar Pradesh	27	12	44%	4	33%	0	

In both areas 35 to 45 percent of outbreaks were reported more than 20 days after onset of the first case. There was no significant improvement noted between January-February and March-April.

In terms of containment, it is apparent that the outbreaks which were reported later than 20 days after onset proved substantially more difficult to contain within the stipulated 15 day period after detection - Andhra Pradesh here showing consistently a better record of performance than Jhansi Division.

However, containment measures in both areas improved substantially during the later period. In March-April, only 4 of 27 outbreaks in Jhansi persisted for more than 15 days after outbreak detection (20, 21, 30 and 48 days) and three of the four outbreaks were from one PHC. In Andhra Pradesh, all outbreaks were contained within 15 days after detection.

What helped in Jhansi and could help elsewhere in further improvement of smallpox surveillance-containment work?

The introduction of weekly "market searches" in each PHC could help to detect new outbreaks earlier (thus facilitating containment) without waiting until the next active search period.

Organization of containment measures strictly in accordance with containment instructions in the Smallpox Outbreak Summary Booklet could help to stop infection quickly.

1. Organization of the work with a containment team (two vaccinators and one supervisor) in each affected village spending two-three days overnight and completing household lists for affected houses and their surroundings;



2. Organization of follow-up work by posting 1-3 workers (depending on the size of the village) permanently in each affected villages for 4-6 weeks after onset of rash of last case there, with supervisory visits twice a week for the first 4 weeks, and once a week for the fifth and sixth weeks;

4.0 Number of Infected Villages - May

Some comparison in the relative magnitude of the smallpox problem in different areas of Asia is afforded by the total count of villages which are infected at any given time. An effort is made to draw this together in the table below:

Number of Infected Villages by geographic area

		<u>Date</u>
<u>Bangladesh</u>		
Rangpur District	118	31 May
Rajshahi District	57	31 May
Mymensingh District	218	31 May
All others	160	31 May
<u>Pakistan</u>		
Punjab Province	31	31 May
Sind Province	89	31 May
Others (est.)	5	31 May
<u>India</u>		
Bihar	4 921	4 May
Uttar Pradesh	1 593	4 May
West Bengal	444	16 May
Madhya Pradesh	98	4 June
All other states (est.)	<u>352</u>	31 May
	8 086	

Considering the enormous number of villages in Asia, 8 000 villages is not a very large number to be infected now - at the peak of the smallpox season. By September, with diligent effort, I am wholly confident that this total can and will be reduced to less than 1 000. With that few villages infected, success in the final battle should be well within our grasp.

5.0 Districts recording 100 or more cases in a given month

	<u>Jan.</u>	<u>Feb.</u>	<u>Mar.</u>	<u>Apr.</u>	<u>May</u>
<u>India</u>					
Bihar	13	19	22	21	(29)
Uttar Pradesh	10	5	13	14	22
West Bengal	3	2	7	8	(6)
Assam	0	1	1	2	(2)
Madhya Pradesh	1	0	1	1	(1)
Orissa	0	0	1	1	(1)
Jammu and Kashmir	1	0	0	0	(0)
Maharashtra	1	0	0	0	(0)
Meghalaya	1	0	0	0	(1)

	<u>Jan.</u>	<u>Feb.</u>	<u>Mar.</u>	<u>Apr.</u>	<u>May</u>
India b/f	30	27	45	47	(40)
<u>Bangladesh</u>	4	5	5	5	5
<u>Pakistan</u>	3	3	3	3	3
<u>Ethiopia</u>	2	2	3	2	2
<u>Nepal</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>(1)</u>
	39	37	56	57	(73)

The number of Districts recording 100 or more cases in a month increased in May to reach what should be the peak for the year - hopefully the last peak of this magnitude. More than two-thirds of these Districts are located in Bihar and Uttar Pradesh and these two states above accounted for the increase between April and May. It should be our objective by 15 September to eliminate smallpox in at least one-third of these Districts as well as in all Districts now reporting less than 100 cases during the month. If this is done, the resources in terms of manpower and funds which can be concentrated in the remaining problem areas should be sufficient to complete the task by end December.

5.0 The world's 10 most heavily infected Districts (April)

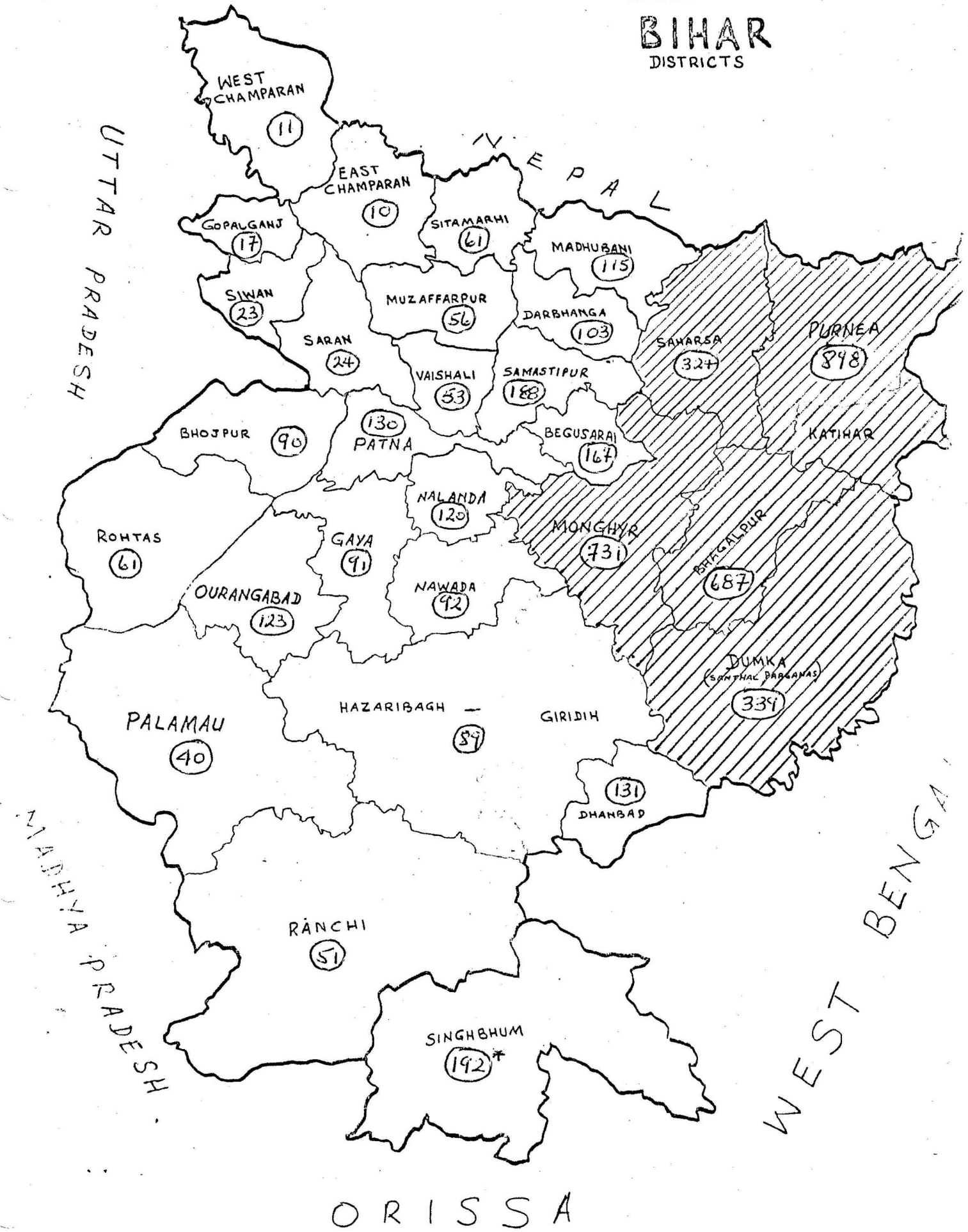
<u>Rank</u>	<u>Country</u>	<u>State/Province</u>	<u>District</u>	<u>Cases</u>	<u>Rank in March</u>
1	India	Bihar	Monghyr	2 639	5
2	India	Bihar	Dumka	2 108	1
3	India	Bihar	Saharsa	1 480	9
4	India	Bihar	Bhagalpur	1 171	7
5	Bangladesh		Mymensingh	1 101	-
6	India	Bihar	Nawada	772	6
7	India	Uttar Pradesh	Azamgarh	714	-
8	Pakistan	Sind	Hyderabad	693	8
9	India	Bihar	Katihar	681	3
10	India	Bihar	Rohtas	591	-

These 10 Districts accounted for 43% of all smallpox cases in the world during April. All but three are in the State of Bihar. New to the list, however, is Azamgarh District in Uttar Pradesh, and Mymensingh District in Bangladesh.

Figure 1

# BIHAR

DISTRICTS



○ Active outbreaks - 4 May 1971

\* See text.

Figure 2

MAP OF  
UTTAR PRADESH  
SHOWING

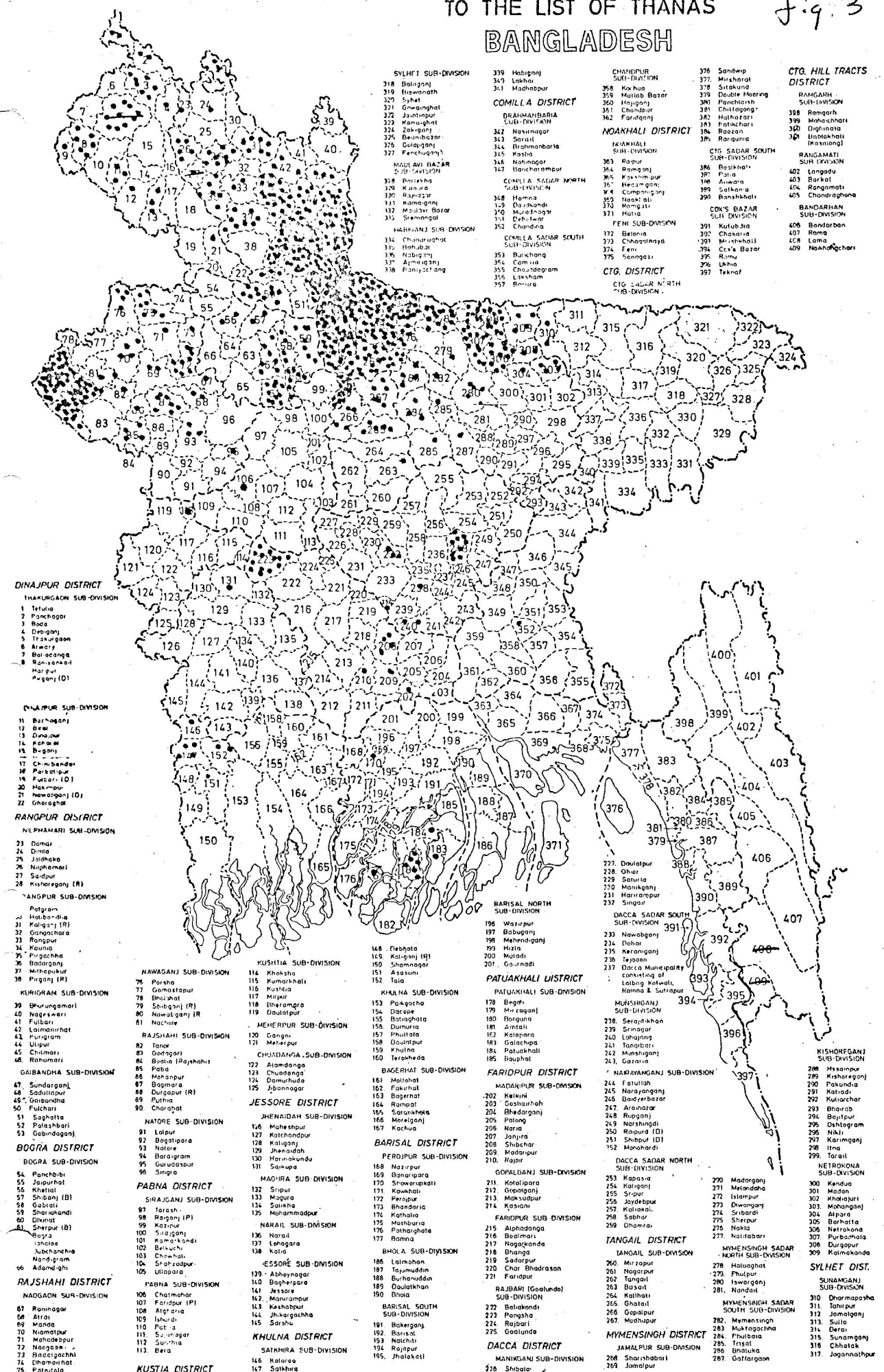


MADHYA PRADESH

○ ACTIVE OUTBREAKS - 4 MAY 1974 (TEN MOST INFECTED DISTRICTS ONLY)

# NUMBERING WITH REFERENCE TO THE LIST OF THANAS BANGLADESH

fig. 3



- SYLHET SUB-DIVISION**
- 318 Balaganj
  - 319 Biswanath
  - 320 Sylhet
  - 321 Gmanghal
  - 322 Jamilpur
  - 323 Managhat
  - 324 Zokang
  - 325 Beimbator
  - 326 Gulaganj
  - 327 Fenchuganj

- COMILLA DISTRICT**
- BRAHMANBARIA SUB-DIVISION**
- 342 Nasirnagar
  - 343 Sarail
  - 344 Brahmanbaria
  - 345 Kasla
  - 346 Nalinagar
  - 347 Bancharampur

- CHANDERNOR SUB-DIVISION**
- 358 Karkha
  - 359 Mallabazar
  - 360 Hujgaon
  - 361 Chandernor
  - 362 Faridganj

- NOAKHALI DISTRICT**
- NOAKHALI SUB-DIVISION**
- 363 Rajpur
  - 364 Ramganj
  - 365 Karampur
  - 366 Hecanganj
  - 367 Comptaganj
  - 368 Hecaganj
  - 369 Ramganj
  - 370 Mangali
  - 371 Hata

- CTG. HILL TRACTS DISTRICT**
- RANGGARH SUB-DIVISION**
- 388 Rangur
  - 389 Mohachhari
  - 390 Dighnata
  - 391 Babakhali
  - 392 Khasnati

- DINAJPUR DISTRICT**
- TRAKURGON SUB-DIVISION**
- 1 Tetulia
  - 2 Panchoar
  - 3 Bada
  - 4 Dargaganj
  - 5 Trakurgon
  - 6 Akwar
  - 7 Baisanga
  - 8 Kaniachhat
  - 9 Hatpur
  - 10 Paganj (D)

- DINAJPUR SUB-DIVISION**
- 11 Barhaganj
  - 12 Bara
  - 13 Dinaipur
  - 14 Kaniar
  - 15 Begani
  - 16 Chabander
  - 17 Faridpur
  - 18 Futari (D)
  - 19 Haxampur
  - 20 Newaganj (D)
  - 21 Ghoraghat
  - 22 Ghoraghat

- RANGPUR DISTRICT**
- NIJHAMARI SUB-DIVISION**
- 23 Bomar
  - 24 Dima
  - 25 Jidhaha
  - 26 Nijhamari
  - 27 Sadpur
  - 28 Kishoreganj (R)

- RANGPUR SUB-DIVISION**
- 29 Patgram
  - 30 Habarshia
  - 31 Kalganj (R)
  - 32 Gangachara
  - 33 Rangpur
  - 34 Kama
  - 35 Pirgachha
  - 36 Badarganj
  - 37 Mithrapur
  - 38 Pirganj (R)

- GAIBANDHA SUB-DIVISION**
- 47 Sundarganj
  - 48 Sadulbar
  - 49 Gaibandha
  - 50 Fulchari
  - 51 Saphata
  - 52 Palesbari
  - 53 Gaibandaganj

- BOGRA DISTRICT**
- BOGRA SUB-DIVISION**
- 54 Panchbi
  - 55 Japurhat
  - 56 Khatol
  - 57 Shibganj (B)
  - 58 Gaboli
  - 59 Shorabandi
  - 60 Dinait
  - 61 Shepur (B)
  - 62 Dura
  - 63 Jhalda
  - 64 Juchancha
  - 65 Mangram
  - 66 Adandaha

- RAJSHAHI DISTRICT**
- NAOGANJ SUB-DIVISION**
- 67 Rajnagar
  - 68 Bira
  - 69 Manab
  - 70 Niametpur
  - 71 Mahadebpur
  - 72 Nacaganj
  - 73 Badiachhat
  - 74 Dharmohat
  - 75 Patnashila

- NANAGANJ SUB-DIVISION**
- 76 Parsha
  - 77 Gomastapur
  - 78 Bhulaha
  - 79 Shobaganj (R)
  - 80 Nawalganj (R)
  - 81 Natche

- RAJSHAHI SUB-DIVISION**
- 82 Tanor
  - 83 Goadganj
  - 84 Badia (Rajshahi)
  - 85 Paba
  - 86 Mohanpur
  - 87 Bagmara
  - 88 Duraganj (R)
  - 89 Putha
  - 90 Charapat

- PABNA DISTRICT**
- SIRAJGANJ SUB-DIVISION**
- 91 Tarash
  - 92 Rajganj (P)
  - 93 Katiapur
  - 94 Siraganj
  - 101 Kamaikandi
  - 102 Betlach
  - 103 Chawala
  - 104 Shobadpur
  - 105 Utiaraga

- PABNA SUB-DIVISION**
- 106 Chaimohar
  - 107 Faridpur (P)
  - 108 Atpara
  - 109 Ishadi
  - 110 Pat-a
  - 111 Suraganj
  - 112 Suraha
  - 113 Bera

- MUSHTIA SUB-DIVISION**
- 114 Khokha
  - 115 Kumarkhali
  - 116 Kustia
  - 117 Mirpur
  - 118 Dheraganj
  - 119 Daulatpur

- MEHERPUR SUB-DIVISION**
- 120 Gangaj
  - 121 Meherpur

- CHUJANDHGA SUB-DIVISION**
- 122 Atamdanga
  - 123 Chuadanga
  - 124 Domohuda
  - 125 Jibannagar

- KHULNA DISTRICT**
- SATKHIRA SUB-DIVISION**
- 146 Kalora
  - 147 Salkhra

- BARISAL NORTH SUB-DIVISION**
- 148 Dehatra
  - 149 Kalganj (R)
  - 150 Shannagar
  - 151 Assonj
  - 152 Siba

- BARISAL DISTRICT**
- PERDIPUR SUB-DIVISION**
- 168 Nazipur
  - 169 Banaripara
  - 170 Showerkhata
  - 171 Kowshali
  - 172 Perdipur
  - 173 Bhondaria
  - 174 Khatla
  - 175 Matbaria
  - 176 Patharghata
  - 177 Rama

- BHOLA SUB-DIVISION**
- 186 Lalmon
  - 187 Tajmuddin
  - 188 Buraunuddin
  - 189 Goulakhan
  - 190 Bhola

- BARISAL SOUTH SUB-DIVISION**
- 191 Bakerganj
  - 192 Barak
  - 193 Naichai
  - 194 Rajpur
  - 195 Jhalakati

- PATUAKHALI DISTRICT**
- PATUAKHALI SUB-DIVISION**
- 178 Begul
  - 179 Miraganj
  - 180 Boraganj
  - 181 Jantali
  - 182 Kalapara
  - 183 Galachpa
  - 184 Patuakhali
  - 185 Bapuhata

- FARIDPUR DISTRICT**
- MADARIPUR SUB-DIVISION**
- 202 Kerkhi
  - 203 Gachrukah
  - 204 Bhadarganj
  - 205 Patang
  - 206 Narai
  - 207 Janyra
  - 208 Shubchar
  - 209 Madaripur
  - 210 Rajar

- GOPALGANJ SUB-DIVISION**
- 211 Kotalpara
  - 212 Gopalganj
  - 213 Moksudpur
  - 214 Kasion

- DACCA DISTRICT**
- MANIKGANJ SUB-DIVISION**
- 278 Shobar

- DACCA SADAR SOUTH SUB-DIVISION**
- 233 Nawabganj
  - 234 Debar
  - 235 Keraniganj
  - 236 Jayganj
  - 237 Dacca Municipality consisting of Lalbag Katwala, Hamra & Sutrapur

- MURSHIDGANJ SUB-DIVISION**
- 238 Serajdikhan
  - 239 Seraganj
  - 240 Lahaganj
  - 241 Tanbar
  - 242 Munsiganj
  - 243 Garava

- FARIDPUR SUB-DIVISION**
- 244 Fatullah
  - 245 Narayanganj
  - 246 Baidyabazar
  - 247 Arainagar
  - 248 Rupganj
  - 249 Narayanganj
  - 250 Rupard (D)
  - 251 Shepur (D)
  - 252 Harahardi

- FARIDPUR SUB-DIVISION**
- 253 Kapesa
  - 254 Kaliganj
  - 255 Sirpur
  - 256 Jaydebpur
  - 257 Kalkakali
  - 258 Sabhar
  - 259 Dhanbar

- DACCA SADAR NORTH SUB-DIVISION**
- 270 Madaganj
  - 271 Metandaha
  - 272 Istampur
  - 273 Dwaraganj
  - 274 Sitardi
  - 275 Shepur
  - 276 Naki
  - 277 Khatibari

- TANGAIL DISTRICT**
- TANGAIL SUB-DIVISION**
- 280 Mirzapur
  - 281 Nagarpur
  - 282 Tangail
  - 283 Basait
  - 284 Kalihati
  - 285 Ghatali
  - 286 Gopalganj
  - 287 Mochapur

- MYMENSINGH DISTRICT**
- JAMALPUR SUB-DIVISION**
- 288 Shu (shabari)
  - 289 Jamalpur

- MYMENSINGH SUB-DIVISION**
- 282 Mymensingh
  - 283 Muktagacha
  - 284 Phulbia
  - 285 Tratal
  - 286 Bhaituka
  - 287 Gafarganj

- NARAYANGANJ SUB-DIVISION**
- 298 Hissarpur
  - 299 Kishoreganj
  - 300 Pakundia
  - 301 Natodi
  - 302 Kutachar
  - 303 Bhairab
  - 304 Bapjur
  - 305 Dainnagar
  - 306 Nikli
  - 307 Karmaganj
  - 308 Ima
  - 309 Tarait

- NETROKONA SUB-DIVISION**
- 300 Kanua
  - 301 Madan
  - 302 Khatiduri
  - 303 Mohanganj
  - 304 Alpara
  - 305 Barhatta
  - 306 Netrakona
  - 307 Purabachala
  - 308 Gaurapur
  - 309 Kalmakanda

- SYLHET DIST.**
- SUNAMGANJ SUB-DIVISION**
- 310 Dhermapasha
  - 311 Tanpur
  - 312 Jamaganj
  - 313 Sula
  - 314 Derai
  - 315 Sunamganj
  - 316 Chhatka
  - 317 Jagannathpur

- NETROKONA SUB-DIVISION**
- 300 Kanua
  - 301 Madan
  - 302 Khatiduri
  - 303 Mohanganj
  - 304 Alpara
  - 305 Barhatta
  - 306 Netrakona
  - 307 Purabachala
  - 308 Gaurapur
  - 309 Kalmakanda

SMALLPOX TARGET ZERO - SIX MONTH SUMMARY

3 M 1961

	DEC	JAN	FEB	MAR	APR	MAY
SMALLPOX INFECTED THANAS	61	82	117	111	125	115
SMALLPOX INFECTED VILLAGES	181	309	522	517	914	840
SMALLPOX ACTIVE CASES	1560	1469	1636	1665	1990	1314