



POLIO

newsletter



POLIO ERADICATION NEPAL

A Collaboration of His Majesty's Government/MOH and World Health Organization (WHO)

Volume 5, Issue 1

January – June 2003

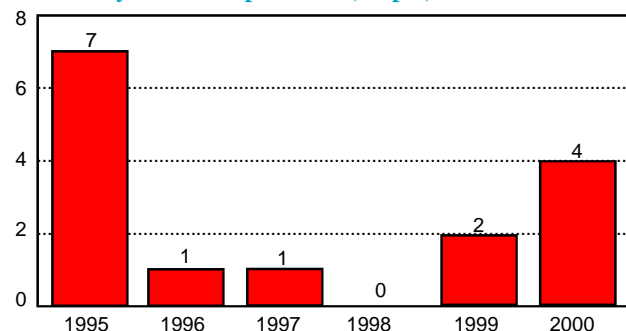
Progress of AFP Surveillance in Nepal

Dr. Ganga Ram Choudhary, Surveillance Coordinator, PEN
Mr. Tika Ram Sedai, Data Manager, PEN

Polio Eradication Nepal has been achieving very significant progress in AFP surveillance since its establishment in July 1998. Before this, the Division of Epidemiology and Disease Control and the Department of Health Services with assistance from WHO had been carrying out AFP surveillance through the Early Warning Reporting System (EWARS).

The AFP surveillance system in Nepal has achieved the non-polio AFP rate in accordance with WHO performance standard since 1999 and stool collection from AFP cases within 14 days of onset of paralysis since 2001. Nepal has been using the virological case classification scheme since January 2001. Since then, 31 out of 32 AFP cases presented to the Expert review Committee (ERC) were discarded as non-polio AFP. On the basis of inadequate information the ERC classified one AFP case as Polio Compatible during 2002. Polio compatible case is not considered confirmed polio. The AFP cases with inadequate specimen and having residual weakness/died before sixty-day follow-up/lost to follow-up should be presented to the ERC for final classification. The above compatible case died before the 2nd stool collection and had inadequate information.

Laboratory confirmed polio cases, Nepal, 1995-2000



Continue on Page 2

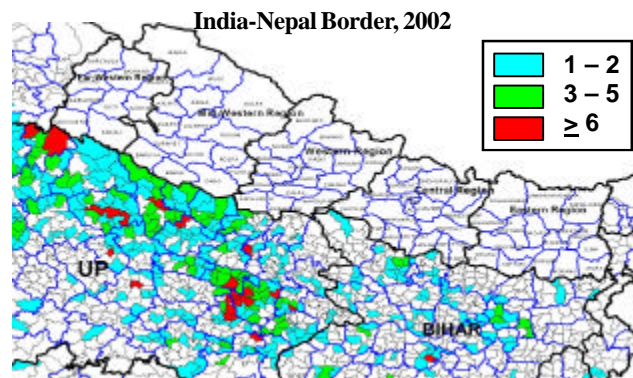
Despite high risk of infection, Nepal remains free of Poliomyelitis

Thomas F. Wierzbza, PhD, MPH
Technical Officer- EPI and Polio Eradication, WHO Nepal

No case of polio has occurred in Nepal since November 2000. This is more than 2.5 years ago. It is difficult to fully appreciate this achievement until we realize that parts of Nepal have been under serious risk of infection with wild poliovirus. For 2002, 229 out of 1600 laboratory confirmed cases of poliomyelitis reported from India occurred only 70 kilometers from the Nepal border. Since for every case of symptomatic poliomyelitis, there are 200 (range: 100 to 1000) asymptomatic cases, these 229 cases represent 45,800 infections along the Nepal border. Both symptomatic and asymptomatic cases are capable of transmitting poliovirus. Over 4.8 million children less than 15 years old reside in the area along the border.

The reason for the absence of polio in Nepal is the immunity afforded to children by oral polio vaccine (OPV). In Nepal, OPV is provided during both routine immunization and supplementary immunization activities. For routine immunization 12 (60%) of the 20 districts along the border with India had greater than 80% coverage with three doses of OPV and seven (35%) more districts had coverage of greater than 70% with three doses of OPV in 2002.

Polio Cases with Isolation of Wild Poliovirus



Continue on Page 3



Progress of AFP.....

There were a total of 12 AFP cases presented for review to conclude whether paralysis were associated with the vaccine virus. As decided by members of the ERC, 11 out of 12 were found not associated with vaccine virus and one case will be

examined physically in the next meeting due to inadequate information. In November 2000, the last polio case was found from Siraha district along the border with Bihar, India, since then no wild polio cases have been detected in Nepal.

AFP Surveillance Performance Indicators, Nepal, 1998-2002

AFP case Classification	1998*	1999	2000	2001	2002
No. of expected non-polio AFP cases	90	96 **	93	95	98
No. of AFP Case	69	234	211	175	191
No. of clinically confirmed polio cases	31	40	25	NA	NA
No. of compatible cases	NA	NA	NA	0	1
No. of wild polio cases	0	2	4	0	0
No. of non-polio AFP cases (discard)	38	192	182	175	190

**In 1999, expected non-polio AFP cases were 96 due to projected < 15 yrs population estimated as 43% of the total population, and since 2000, estimated as 40.51%.

AFP Surveillance Performance Indicators	Target	1998*	1999	2000	2001	2002
Annual AFP rate	-	0.74	2.44	2.28	1.84	1.95
Annual non-polio AFP rate	≥ 1/100,000	0.41	2.00	1.96	1.84	1.94
% with notification of AFP cases w/in 7 days of paralysis onset	-	32	58	58	65	67
% with investigation of AFP cases w/in 48 hrs of notification	≥ 80%	81	93	91	93	99
% with 2 stool collection from AFP cases w/in 14 days of onset	≥ 80%	35	76	79	83	87
% with any specimen collection from AFP cases	-	64	97	99	99	98
% with 60 day follow-up	≥ 80%	93	92	93	97	99
% Timeliness of weekly zero reporting	≥ 80%	-	-	-	70	87
% Completeness of weekly zero reporting	≥ 90%	-	-	-	80	93
% Active surveillance sites visited by SMOs	-	-	-	-	47	70
% Stool received by PEN in good condition	≥ 90%	80	99	100	100	100
% Stool arriving at lab, Bangkok w/in 3 days of shipment	≥ 80%	100	100	100	98	100
% Stool received by Lab, Bangkok in good condition	≥ 90%	100	99	100	100	100
% with timeliness of the stool results received by PEN	≥ 80%	29	76	100	99	98
% Stool specimens from which non-polio enterovirus (NPEV) was isolated	≥ 10%	35	39	32	28	32

NA = Not Applicable

PEN = Polio Eradication Nepal

* July – December 1998





Despite high risk...

Supplementary immunization in February and March 2002 included 100% coverage during two rounds of house-to-house immunization campaigns. Coverage during the national immunization day held December 2001 and February 2002 was 100% for each round. Again, high rates of coverage with three or more doses of OPV were responsible for limiting transmission of wild poliovirus in Nepal.

The Department of Health Services should be proud of this achievement. Still, to further improve routine immunization coverage, the leadership of the Child Health Division with assistance from the World Health Organization and the United Nations Children's Fund have organized a series of regional workshops with district supervisors for the Expanded Program on Immunization (EPI) in 2003. As part of this workshop, each district EPI supervisor is trained using existing data to identify villages where the EPI coverage is low (< 80% coverage with DPT1, drop out is high (> 10% drop out from DPT1 to DPT3), or both. After identifying problem areas, the EPI supervisor is expected to list the causes of low coverage and/or high drop out and develop an intervention.

Nepal has demonstrated that high coverage with three or more doses of OPV can prevent infection with the poliovirus even when there is substantial exposure to wild poliovirus strains. Maintaining a high level of immunity will require maintaining that effort by further improving routine immunization with three doses of OPV and conducting high quality supplementary immunization activities. ◆

News in Polio Eradication Nepal

- Measles control and MNT elimination surveillance have integrated with the existing AFP surveillance system since January 2003.
- 6 STOP Officers from CDC (Centers for Disease Control and Prevention-USA) had been assigned to Polio Eradication Nepal for 3 months (Feb-Apr, 2003) to provide technical assistance in all aspects of VPD surveillance.
- Training on Integrated VPD surveillance was held on 18-19 April 2003 in Kathmandu.
- Dr. Thomas Wierzba has joined WHO- Polio Eradication Nepal as Technical Officer in May 2003.

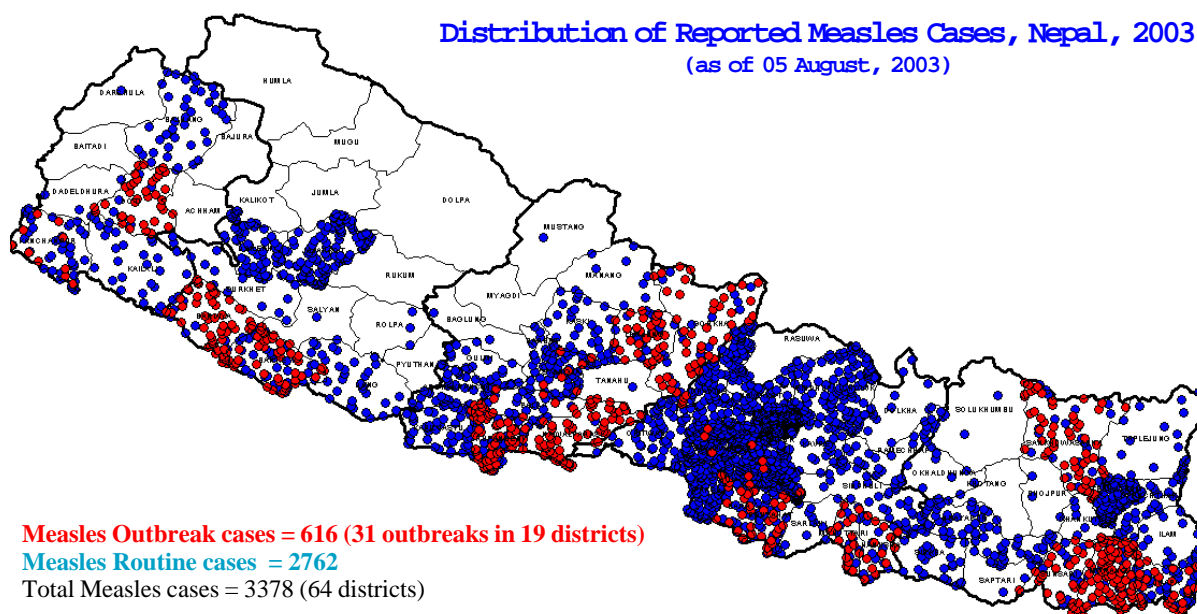




Table 1: AFP surveillance performance indicators, Nepal, 2002-2003

Region	AFP cases	2002									2003									
		Case Classification				AFP rates		Surveillance Indicators			AFP cases	Case Classification				AFP rates		Surveillance Indicators		
		Confirmed Polio	Compatible	Discarded (non-polio AFP)	Pending	Total AFP rate	Non-Polio AFP rate ¹	% Invest W/48h. of notific.	% 2 specimens collect. W/14 days ²	% 60day F/up exam.		Confirmed Polio	Compatible	Discarded (non-polio AFP)	Pending	Total AFP rate	Non-Polio AFP rate ¹	% Invest W/48h. of notific.	% 2 specimens collect. W/14 days ²	% 60day F/up exam.
Eastern	57	0	0	57	0	2.45	2.45	100	91	100	20	0	0	20	0	1.41	1.41	100	90	84
Central	58	0	1	57	0	1.75	1.72	97	83	100	50	0	0	42	8	2.47	2.07	96	92	73
Western	38	0	0	38	0	1.93	1.93	100	89	100	27	0	0	25	2	2.24	2.07	89	93	88
Mid-Western	19	0	0	19	0	1.49	1.49	100	74	100	21	0	0	20	1	2.68	2.56	95	86	94
Far-Western	19	0	0	19	0	2.11	2.11	100	100	95	8	0	0	5	3	1.45	0.91	100	100	100
Total	191	0	1	190	0	1.95	1.94	99	87	99	126	0	0	112	14	2.10	1.87	95	91	83

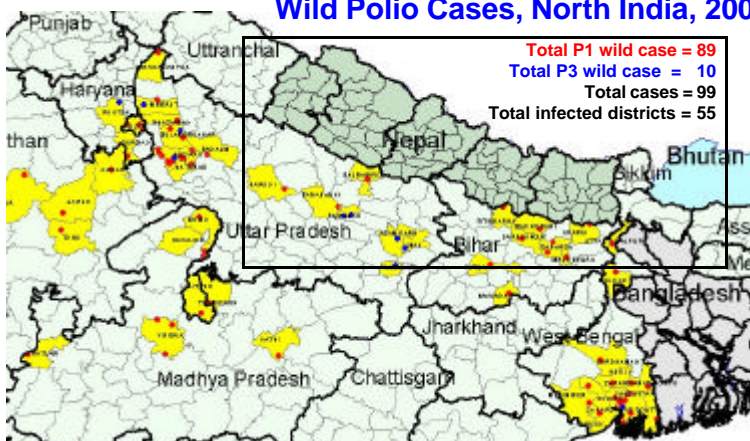
1 Expected rate at least 1 case non-polio AFP per 100,000 children aged <15 yrs.

2 Stool specimen collection: 2 adequate specimens within 14 days of paralysis onset from at least 80% of cases

Table 2: AFP surveillance performance indicators in South East Asia Region (SEAR) countries, 2002-2003

Country	AFP cases	2002								2003								
		AFP				Surveillance Indicators				AFP				Surveillance Indicators				
		Case Classification				Annualized AFP rates		Specimen		AFP cases	Case Classification				Annualized AFP rates		Specimen	
Confirm Polio	Compatible	Discarded (non-polio AFP)	Pending	AFP rate	Non-Polio AFP rate	% with 2 spec. W/in 14 days	% with any specimen	Confirm Polio	Compatible		Discarded (non-polio AFP)	Pending	AFP rate	Non-Polio AFP rate	% with 2 spec. W/in 14 days	% with any specimen		
Bangladesh	1365	0	0	1365	0	2.70	2.70	89	98	752	0	0	661	91	2.37	2.09	90	99
Bhutan	1	0	0	1	0	0.38	0.38	0	0	3	0	0	0	3	1.67	0.00	67	100
DPR Korea	71	0	0	71	0	1.11	1.11	97	100	52	0	0	37	15	1.26	0.90	94	100
India	9705	1600	681	7419	0	2.45	1.87	82	96	4552	99	125	3402	924	1.84	1.38	82	97
Indonesia	848	0	7	841	0	1.30	1.29	84	99	430	0	0	385	45	1.07	0.96	87	99
Maldives	4	0	0	4	0	3.28	3.28	25	75	1	0	0	0	1	1.00	0.00	100	100
Myanmar	306	0	0	306	0	1.90	1.90	88	100	147	0	0	112	35	1.33	1.01	94	100
Nepal	191	0	1	190	0	1.99	1.98	87	98	128	0	0	112	16	2.07	1.81	91	98
Sri Lanka	78	0	0	78	0	1.41	1.41	85	100	57	0	0	50	7	1.66	1.45	84	95
Thailand	331	0	0	331	0	2.00	2.00	83	98	118	0	0	106	12	1.23	1.11	82	96
Timor-Leste	0	0	0	0	0	0.00	0.00	0	0	0	0	0	0	0	0.00	0.00	0	0
Total	12900	1600	689	10606	0	2.27	1.87	83	97	6240	99	125	4865	1149	1.76	1.38	84	97

Wild Polio Cases, North India, 2003*



Global Polio cases, 2003*

South East Asia (SEARO)	= 99 (40%)
India	= 99
Africa (AFRO)	= 95 (38%)
Nigeria	= 90
Niger	= 2
Ghana	= 3
Eastern Mediterranean (EMRO)	= 54 (22%)
Pakistan	= 50
Afghanistan	= 2
Egypt	= 1
Lebanon	= 1
Americas (PAHO)	= 0
Europe (EURO)	= 0
Western Pacific (WPRO)	= 0
Total cases	= 248

* Data (WHO) as of 10 August 2003