

## Supplementary Material

**Table S1 The vaccination dose and coverage rate for routine immunization and SIAs in Shandong province, China (1991-2018)**

Year	Routine immunization			SIAs		
	Eligible population	Vaccination dose	Coverage rate	Eligible population	Vaccination dose	Coverage rate
1991	4963356	4943503	99.6%	17991128	17507393	97.3%
1992	3679429	3612831	98.2%	9445685	9298759	98.4%
1993	3397239	3396230	100%	7694550	7555522	98.2%
1994	3369687	3359925	99.7%	8062332	7997409	99.2%
1995	3188024	3168886	99.4%	6703688	6654690	99.3%
1996	3063623	3054749	99.7%	6034310	5981392	99.1%
1997	3152654	3145098	99.8%	5925780	5857718	98.9%
1998	3235987	3223053	99.6%	6160081	6103068	99.1%
1999	3097252	3083622	99.6%	6510075	6442053	99.0%
2000	3211279	3155402	98.3%	6615908	6525967	98.6%
2001	3287854	3273509	99.6%	5938963	5848582	98.5%
2002	3138886	3114734	99.2%	4722127	4644817	98.4%
2003	3097707	3068219	99.0%	5887555	5759924	97.8%
2004	3196160	3163464	99.0%	5878096	5747759	97.8%
2005	3606112	3572830	99.1%	5391024	5274767	97.8%
2006	3575821	3551474	99.3%	7140511	6984315	97.8%
2007	3767760	3745171	99.4%	7180721	7037546	98.0%
2008	4129054	4105660	99.4%	5529223	5366698	97.1%
2009	4234663	4217728	99.6%	2599329	2552553	98.2%
2010	4187263	4174042	99.7%	5181785	5027568	97.0%
2011	4556483	4524604	99.3%	6432323	6286781	97.7%
2012	4675651	4666707	99.8%	3851082	3782058	98.2%
2013	4485946	4479163	99.8%	7830934	7621045	97.3%
2014	4806676	4797475	99.8%	2765569	2694980	97.4%
2015	4924645	4913333	99.8%	3185387	3082761	96.8%
2016	5064175	5050670	99.7%	-	-	-
2017	6176578	6129542	99.2%	-	-	-
2018	6047072	6030798	99.7%	-	-	-

Abbreviation: SIAs, Supplementary immunization activities.

**Table S2 Indicators of AFP surveillance and poliomyelitis laboratory in Shandong province, China (1991-2018)**

Total reported cases	Non-polio AFP rate <sup>a</sup> (≥1.0)	Reporting rate <sup>b</sup> (≥80%)	Investigation rate <sup>c</sup> (≥80%)	% with adequate specimens <sup>d</sup> (≥80%)	Stool inspection rate <sup>e</sup> (≥80%)	Stool culture rate <sup>f</sup> (≥80%)	Adequate laboratory results rate <sup>g</sup> (≥80%)	Positive-stool inspection rate <sup>h</sup> (≥80%)	Follow-up AFP rate <sup>i</sup> (%)	NPEV typed <sup>j</sup> (%)	
1991	231	1.1	27.3	62.8	58.9	36.8	58.9	56.1	26.7	59.6	11.3%
1992	130	0.6	44.8	69.4	53.5	41.8	52.4	48.4	34.2	52.4	6.2%
1993	245	1.1	71.6	82.4	29.7	47.4	23.7	8.2	20.0	46.9	6.5%
1994	405	1.8	79.1	90.6	56.4	40.8	75.5	75.8	14.3	64.5	4.4%
1995	406	1.9	93.6	96.6	81.2	60.2	61.8	54.2	27.3	89.5	4.9%
1996	394	1.7	99.2	97.2	84.2	85.8	87.8	84.9	80.0	93.6	5.8%
1997	353	2	88.0	99.0	89.0	93.0	89.0	82.0	100	84.0	13.6%
1998	396	2.3	84.8	98.2	89.1	96.5	95.7	89.6	100	91.4	9.8%
1999	403	2.4	88.8	98.0	86.6	94.8	87.8	88.3	100	89.6	3.5%
2000	395	2.6	92.4	98.0	89.3	98.4	91.2	85.8	100	90.1	11.4%
2001	459	2.9	90.0	93.0	86.1	94.9	98.2	90.9	100	92.9	8.3%
2002	384	2.3	92.5	97.2	89.4	95.2	93.9	87.3	100	94.8	9.1%
2003	437	2.3	93.9	94.1	90.9	97.9	94.0	92.6	100	92.0	15.6%
2004	443	2.4	94.3	96.9	89.6	96.9	93.4	92.9	91.7	94.5	8.8%
2005	437	2.4	96.8	97.4	93.6	95.2	92.7	96.8	86.4	95.9	8.0%
2006	398	2.2	95.2	97.9	91.3	96.4	95.3	95.3	85.6	93.6	13.6%
2007	347	2	94.3	98.6	92.1	94.5	94.3	92.3	93.8	95.2	7.5%
2008	334	2.4	95.6	100	94.3	93.7	94.6	90.5	91.9	92.0	13.2%

2009	303	2.3	94.8	99.4	90.0	89.9	95.2	95.1	87.5	91.6	12.9%
2010	328	2.7	95.2	99.2	92.2	94.6	95.4	98.9	100	94.5	11.6%
2011	379	3	96.4	98.8	89.1	97.7	96.5	93.7	100	97.3	10.8%
2012	402	2.8	95.6	100	91.1	95.1	96.8	99.6	100	98.2	9.0%
2013	348	2.5	96.5	100	92.9	94.6	98.3	99.2	100	94.1	9.2%
2014	357	2.5	96.7	100	92.3	92.7	97.5	99.5	100	94.8	11.2%
2015	371	2.3	96.6	100	92.0	96.5	98.2	100	100	95.2	10.5%
2016	389	2.5	97.2	100	91.0	97.2	98.1	100	100	95.8	9.5%
2017	352	2.2	96.8	99.7	94.0	96.4	99.3	99.2	100	96.1	5.7%
2018	398	2.4	98.1	100	94.4	97.8	99.6	100	100	95.4	6.5%

Reached or surpass target
  Nearly reached target 0.5-0.99 for non-polio AFP rate, 6-9.9% for NPEV typed, 60-79% for other indicators
  Substantially below target

<sup>a</sup>Number of non-polio AFP cases  $\times$  100,000/total population under 15 years. <sup>b</sup>Percentage of AFP cases with delay between paralysis notification and reporting  $\leq 2$  days. <sup>c</sup>Percentage of AFP cases investigated within two days of reported. <sup>d</sup>Percentage of AFP cases with two stool specimens collected 24 hours apart and within 14 days of paralysis onset. <sup>e</sup>Percentage of AFP cases with two stool specimens sent to the provincial laboratory within 7 days of collection. <sup>f</sup>Percentage of AFP cases with stool specimens cultured for enterovirus isolation within 7 days of receiving samples at laboratory. <sup>g</sup>Percentage of AFP cases with laboratory results  $< 30$  days of receiving samples at laboratory ( $< 14$  days is accepted since 2013). <sup>h</sup>Percentage of enterovirus-positive stool specimen sent to the national laboratory within 60 days. <sup>i</sup>Percentage of AFP cases with follow-up 60 days after the date of paralysis onset. <sup>j</sup>Percentage of AFP cases with NPEV positive in stool specimen.