Overview of Immunization Coverage during COVID -19 period
Sri Lanka

History of the National Immunization Program in Sri Lanka

- The law relating to compulsory vaccination (against smallpox) is referred to in the Vaccination Ordinance of 1886.

1949 – BCG vaccination

1961 – Introduction of "Triple" vaccine [Diphtheria, Whooping Cough, Tetanus]

1962 – Oral polio vaccination

EPI in 1978

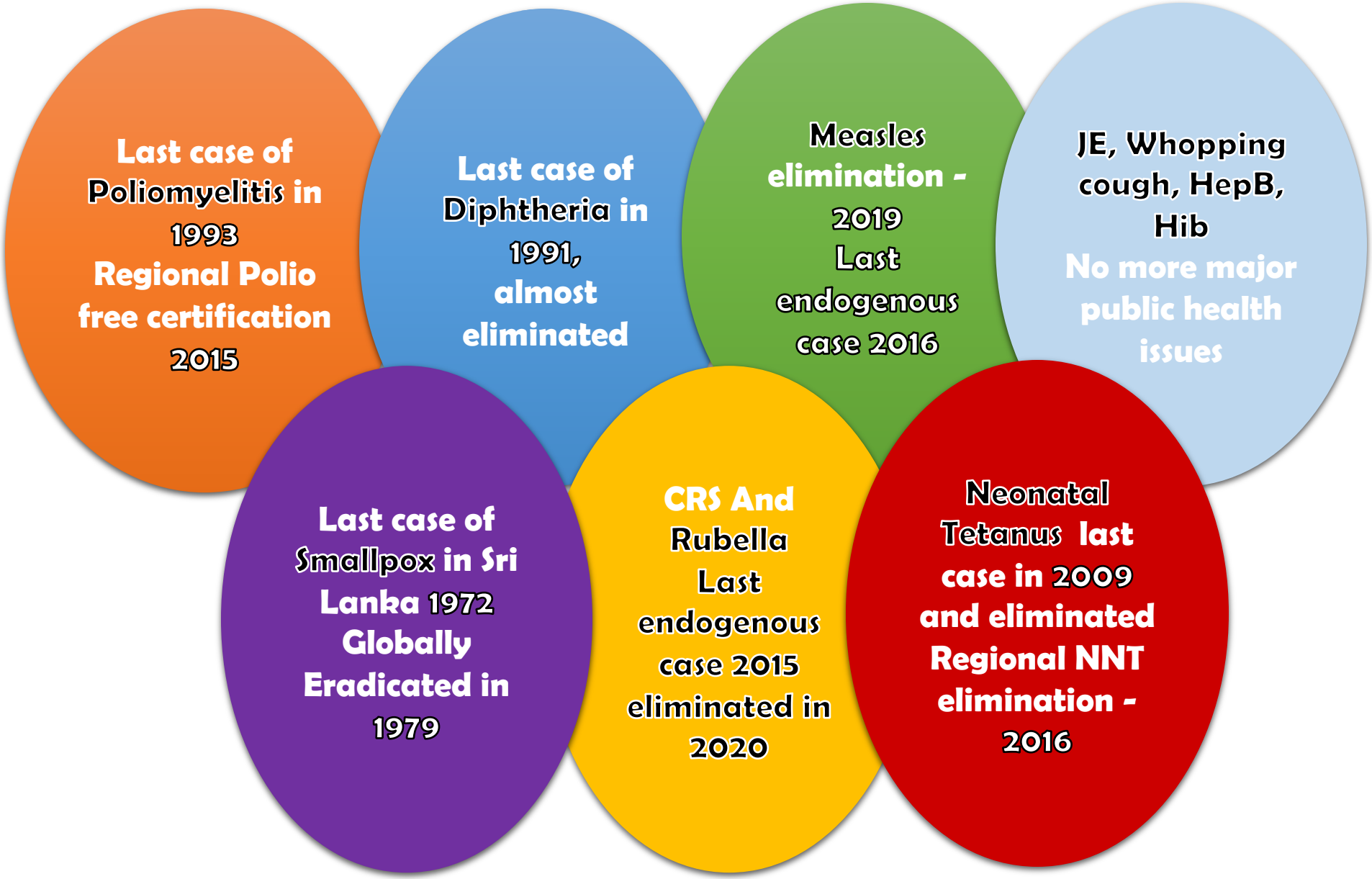
1984- Measles vaccine

1996-Rubella vaccine

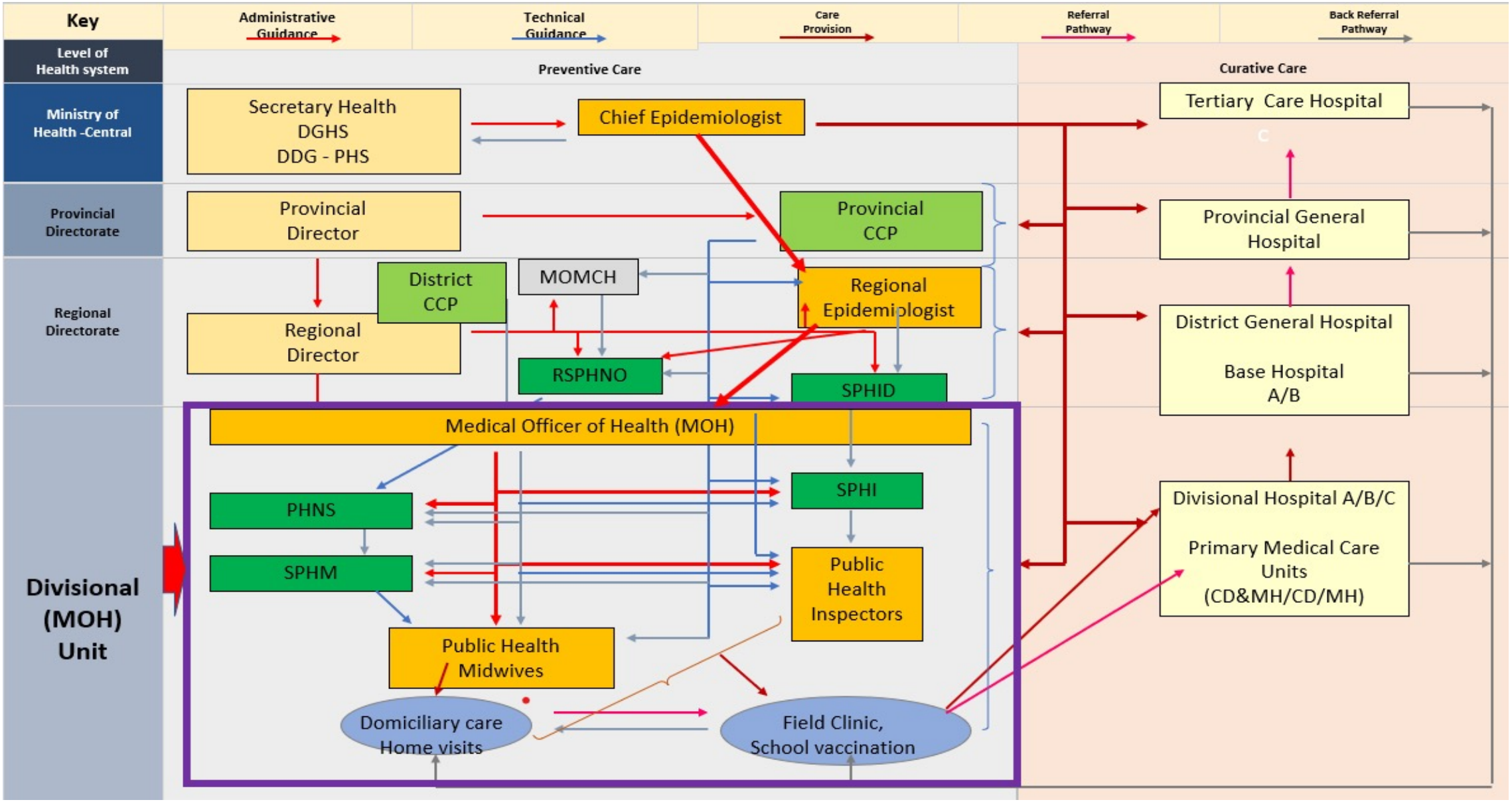
After 2000

2001	MR vaccine
2003	Hepatitis B vaccine
2008	Hib containing Pentavalent vaccine
2009	Live JE vaccine
2011	MMR vaccine
2015	IPV
2017	HPV

Achievements of the National Immunization Programme



Immunization Service Delivery Structure



Key components of PHC delivery system

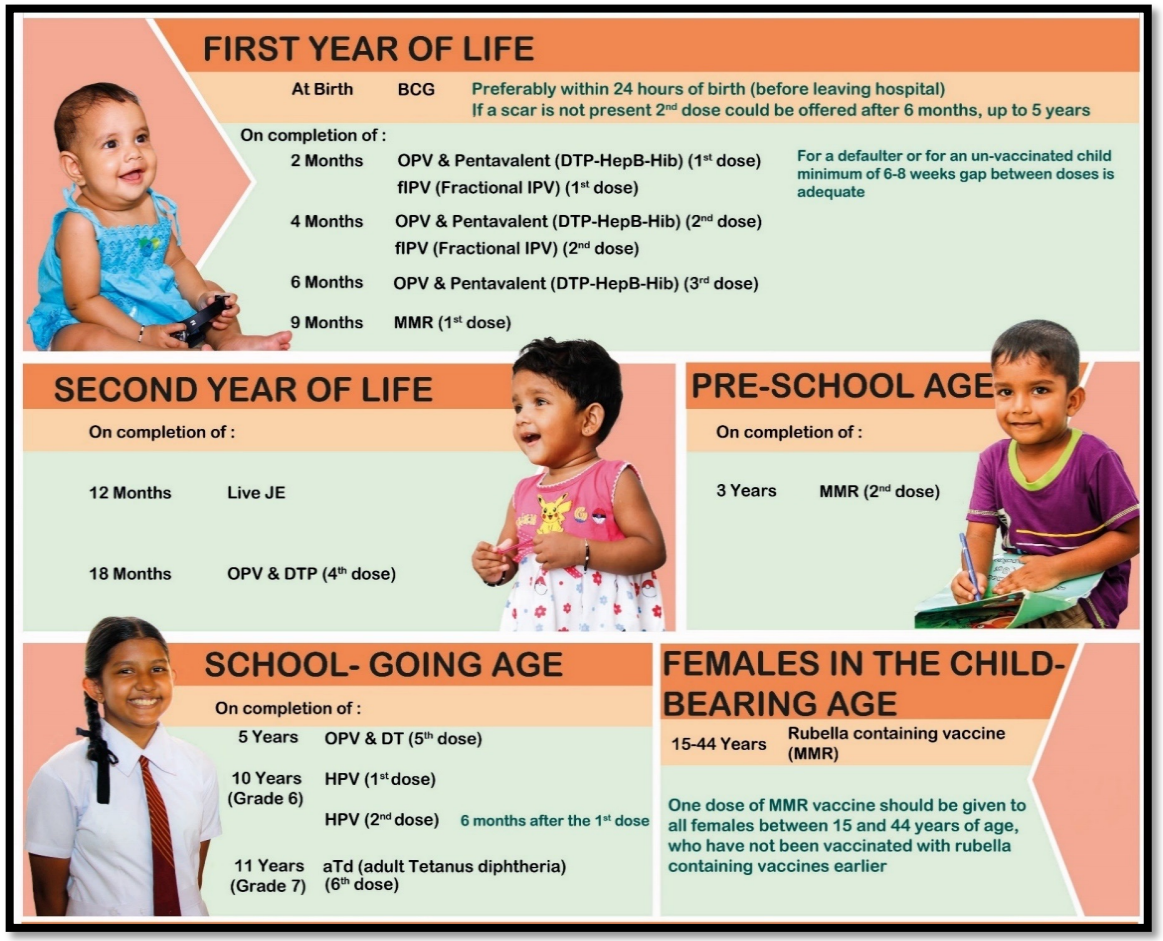
Integrated PHC services delivered through divisional level (MOH) units			
Maternal and Child Health	Immunization	School Health	Well-women services
Family Planning	Environment Health	Occupational Health	Prevention & control of CD
Prevention & control of NCD	Active ageing	Mental Health well being	Health Promotion
Oral health care	Adolescent health		




Opportunities experienced when integrating immunization programmes with PHC system.

- Can achieve high immunization coverage for relatively less cost and effort
- Health workers get more opportunities to interact with the communities
- Health workers can gain more community acceptance and trust
- Health workers get more opportunities to follow up with clients in the field
- By employing a multidisciplinary team working together at the field level can improve the efficiency of PHC service delivery.
- Integrated PHC system gives an opportunity for optimal utilization of available resources at field level
- Emerging issues related to immunization programmes can be efficiently handled through integrated systems e.g
  - ✓ Vaccine safety issues,
  - ✓ Trace the drop outs
  - ✓ anti vaccine lobby
  - ✓ Community demand for new vaccines

National Immunization schedule

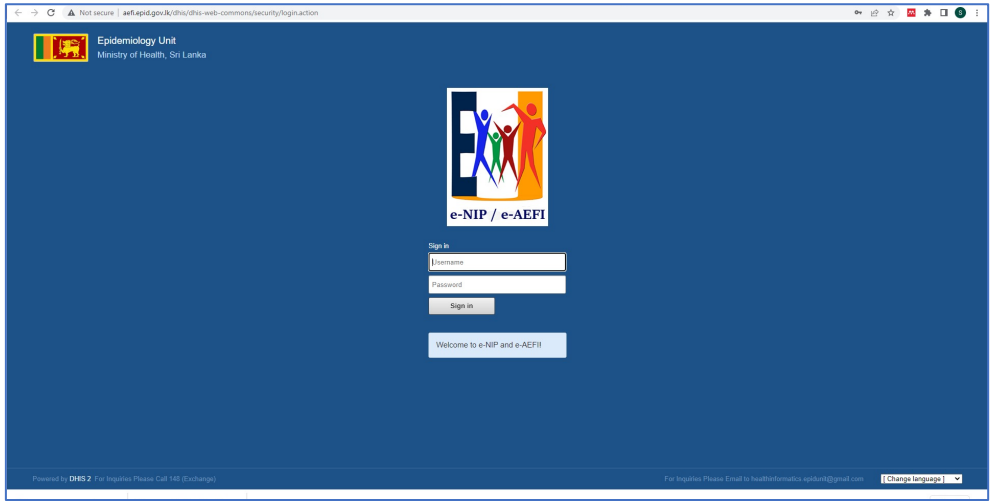


- Provide protection against 12 deadly VPDs

Electronic National Immunization Programme data management system (e-NIP)

- The first web-based Management Information System of the National Immunization Programme (NIP), the WEBIIS was introduced in 2016.

- It was upgraded to e-NIP in 2019 and is currently being used to collect and compile NIP data.



- Developed using the DHIS2 platform

- Data entry point - vaccination clinics (the service delivery point of the NIP) based aggregated data entered.

- The data are available for analysis and interpretation at each level.

- Validation points are incorporated into the system to ensure the validity of entered data.

- Allows regular monitoring of the NIP – immunization coverage rate for each vaccine, vaccine wastage rates

- This system immensely helps to monitor the district immunization coverage during the covid time.

Country's immunization performance – WHO & UNICEF , JRF 2021

National Immunization Coverage in Sri Lanka (2012 – 2021)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
BCG	99	99	99	99	99	99	99	99	99	99
DTP3	99	99	99	99	99	99	99	99	96	96
OPV3	99	99	99	99	99	99	99	99	96	96
MCV1	99	99	99	99	99	99	99	99	96	97
MCV2	99	99	99	99	99	99	99	99	96	97

Source: WHO and UNICEF estimates of immunization coverage

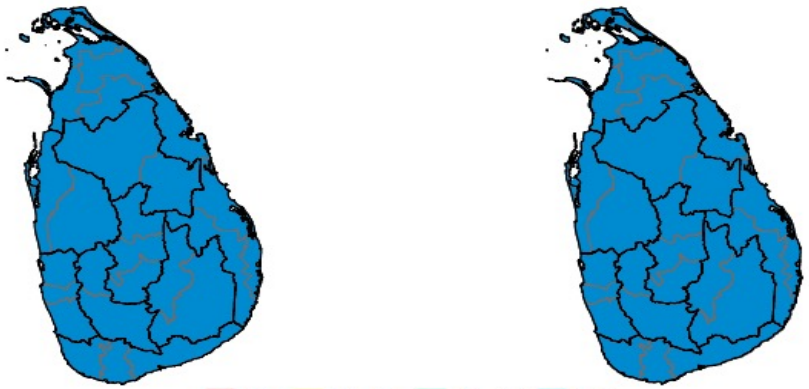
Table 5: Reported cases of vaccine preventable diseases, 2015-2021

Year	Polio	Diphtheria	Pertussis	NT (% of all tetanus)	Measles	Rubella	Mumps	JE	CRS
2015	0	0	107	0	1,568	9	338	17	0
2016	0	0	54	0	112	0	311	20	0
2017	0	0	0	0	1*	1	252	23	0
2018	0	0	12	0	1*	0	290	29	0
2019	0	0	5	0	49*	0	248	19	0
2020	0	0	1	0	2	0	170	31	0
2021	0	0	0	0	0	0	73	4	0

Source: WHO/UNICEF JRF (multiple years) ** Import and/or import related*

DTP-Hib-HepB3 coverage by district

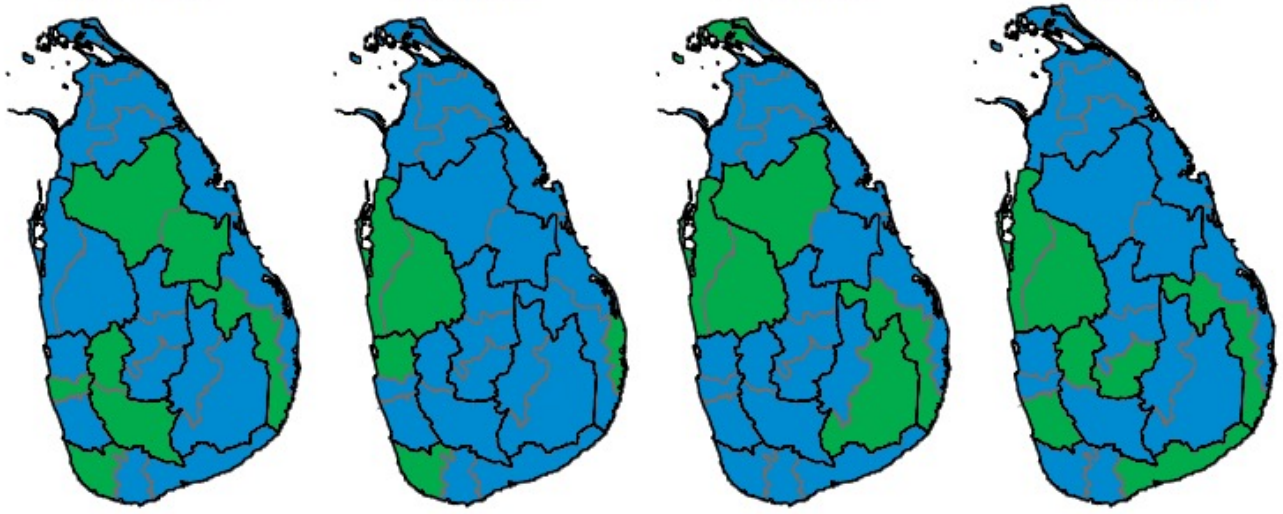
Figure 4: 2020 Figure 5: 2021



Source: SEAR annual EPI reporting form, 2020 and 2021 (administrative data)

MR1 coverage by district **MR2 coverage by district**

Figure 12: 2020 Figure 13: 2021 Figure 14: 2020 Figure 15: 2021



Source: SEAR annual EPI reporting form, 2020 and 2021 (administrative data)

Key mechanisms to monitor/evaluate immunization performance

- Monitor Divisional/District and National level administrative coverage using e –NIP coverage data – Done during the COVID period
- District-level quarterly public health reviews
- National-level Regional epidemiologist's quarterly reviews – Not able to organize during the COVID period (2020 & 2021)
- Annual district EPI & VPD reviews . Review the divisional level and PHM level individual immunization performance of the previous year using a special tool- Not able to organize during the COVID period (2020 & 2021). For 2021 reviews already started started

District Level EPI & VPD reviews

Background information

1-MOH area	Thamankaduwa	
2-RDHS area	Polonnaruwa	
3-Estimated Population for the year 2021	90,506	
4-Actual Population for the year 2021	92,241	
5-Reasons for differences in actual and estimated populations	(1,735)	
6-Crude Birth Rate for District 2021	15.2	
7-Crude Birth Rate for Province 2021	15.0	
8-Estimated Number of Births in the year 2021		
	Based on the Actual Population	*Based on the Estimated Population*
For District BR	1402	1376
For Provincial BR	1384	1356
9-Number of Immunizations performed in the year 2021 (institutions and field) (Sum of relevant data from four Q/ EPI returns, 2021)	PVV1	PVV2 / PVV3
	1344	1333 / 1374
10-Number of pregnant mothers registered for the area in 2020	1457	
11-Number of actual births reported for the area in 2021	1153	
12- Number of infants registered for the area in 2021	1278	
13-The most probable number of births for the MOH area*	1376	

- PVV1 ↓ 28

01.Fever	20
02. Hesitant	01
03.Heart Disease	01
04. Quarantine	01
05. PBU	01
06.Clinic Postponded	02
07.Hospital Admission	01

Coverage of OPV1 /PVV 1/FIPV1 vaccination among infants born between 01st of November 2020 to 31st of October 2021

Number of registered infants under care* (A)	Number of Infants born between 1st of November 2020 to 31st of October 2021				
	registered within 3 months of birth	registered after 3 months of birth to date^^	came newly into the area registered to date^^	left the area to date^^	Died to date^^
A = (V+W+X) - (Y+Z)	(V)****	(W)****	(X)	(Y)	(Z)
1286	1208	44	235	183	18

Vaccine	(AA) Number of pregnant mothers registered in year 2020	(A) Number of registered infants under care*	(B) Number of estimated births For 2021	(C) Number of vaccinations according to BI registers	(D) Number & % of age appropriate vaccinations according to BI registers* *		(E) Number of vaccines given according to Q/ EPI return	Coverage according to		
								Registered infants under care*	Estimated births	Number of vaccines given as per Q/ EPI return
Formula					D	(D/A)* 100		(C/A) *100	(C/B) *100	(C/E)* 100
PVV1	1531	1286	1376	1285	1258	97.8	1344	99.9	93	96
OPV1	1531	1286	1376	1285	1258	97.8	1344	99.9	93	96
FIPV1	1531	1286	1376	1285	1258	97.8	1344	99.9	93	96

№	PHM area	Actual population 2011	Estimated number of births for 2011	Number of registered infants under care*	PVV 1					OPV 1		
					Number of vaccinations carried out according to BI register	Number of age appropriate vaccinations carried out according to BI register**	Age appropriate coverage (%) for registered infants under care	Coverage (%) for registered infants under care *	Coverage for estimated births	Number of vaccinations carried out according to BI register	Coverage (%) for registered infants under care *	Coverage (%) for estimated births
		A	B	C	D	E	F (E/C) 100	G (D/C) 100	H (D/B) 100	I	J (I/C) 100	K (I/B) 100
	FORMULA											
01	Patana	1760	32	31	31	26	84	100	97	31	100	97
02	Kudaoya	2015	36	29	29	27	93	100	81	29	100	80
03	UC	3830	69	56	56	39	70	100	81	56	100	81
04	Harington	3119	56	47	47	47	100	100	84	47	100	105
05	Crs farm	1350	24	24	24	23	96	100	100	24	100	96
06	Bogahawatte	1426	26	31	31	29	94	100	119	31	100	119
07	Keliwatte	1600	29	18	18	17	94	100	62	18	100	60
08	Logie	2936	53	54	54	42	78	100	102	54	100	102
09	Kotagala	3729	67	47	47	39	83	100	89	47	100	89
10	Mayfield	4092	74	87	87	75	86	100	117	87	100	117
11	Derryclare	1909	34	32	32	28	88	100	94	32	100	97
12	Craigealea	3005	54	63	63	62	98	100	117	63	100	112
13	Yullifiela	2376	43	39	39	37	95	100	91	39	100	91
14	Dimbula	1650	30	26	26	24	92	100	87	26	100	87
15	TK Estate	3558	64	76	76	73	95	100	118	76	100	101
16	Watagoda	3572	64	48	48	29	60	100	75	48	100	74
17	Yathenside	1561	28	29	29	27	93	100	100	29	100	100
18	Greate westen	4104	74	97	97	94	97	100	131	97	100	134
19	Holyrood	3544	64	63	63	34	54	100	98	63	100	98
20	Stonycliff	2491	45	52	52	52	100	100	116	52	100	116
21	St Clair	2714	49	49	49	49	100	100	100	49	100	98
22	Troup	2941	53	42	42	39	93	100	79	42	100	79
23	Drayton	2833	51	54	54	52	96	100	106	54	100	106
24	Mountvernon	2721	49	48	48	46	95	100	98	48	100	98
25	Watagoda Col:	825	15	22	22	20	91	100	147	22	100	147
26	St Clair colon:	370	07	08	08	04	50	100	114	08	100	114
	Total	66031	1189	1172	1172	1034	88	100	99	1172	100	99

PHM areas with low immunization coverages

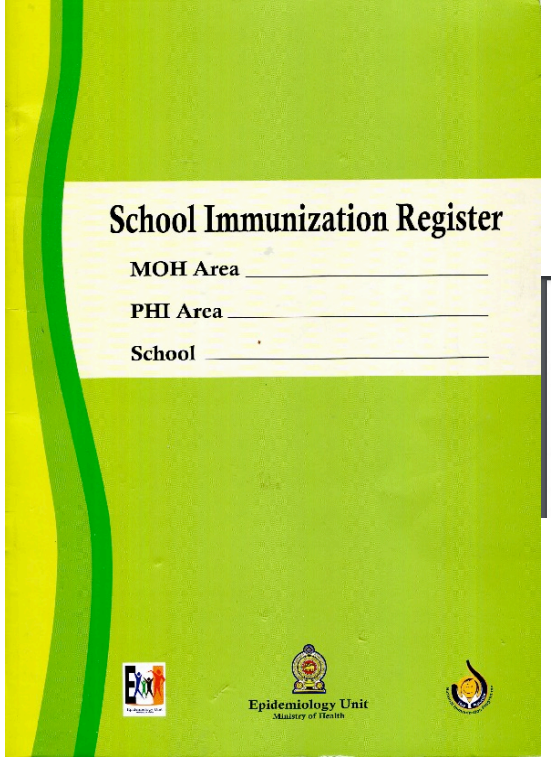
(Please include the data for the 3 PHMM areas where the lowest immunization coverages have been reported under each category)

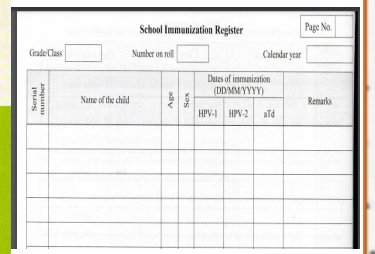
Vaccine	PHMM areas with low immunization coverages (%) according to					
	estimated births	%	registered infants under care	%	age appropriate immunizations	%
	PHM area		PHM area			
PVV2/OPV2/ FIPV2	Sewagama Laxauyana Kalahagala	60% 60% 65%	Manikkampattiya-1	98%	Nelumvila Onegama Manikkampattiya	94% 94% 95%
PVV3/OPV3	Sewagama Laxauyana Kalahagala	45% 54% 54%	Manikkampattiya-1	97%	Manikkampatiya Gallella Parakum Place	91% 92% 92%
MMR1	Sewagama Laxauyana Kalahagala	49% 60% 70%	Manikkampattiya-3	92%	Kaduruwela Sirisagabopedesa Muslim Coloniya	93% 93% 97%
LJEV	Laxauyana Sewagama Kaduruwela	57% 61% 63%	Manikkampattiya-1 Kaduruwela-2 Kalingaela-2 Kalahagala-2 PS Coloniya-2 **Total-17**	92% 95% 93% 93% 95%	Manikkampattiya Kalingaela Thopawewa	93% 94% 94%

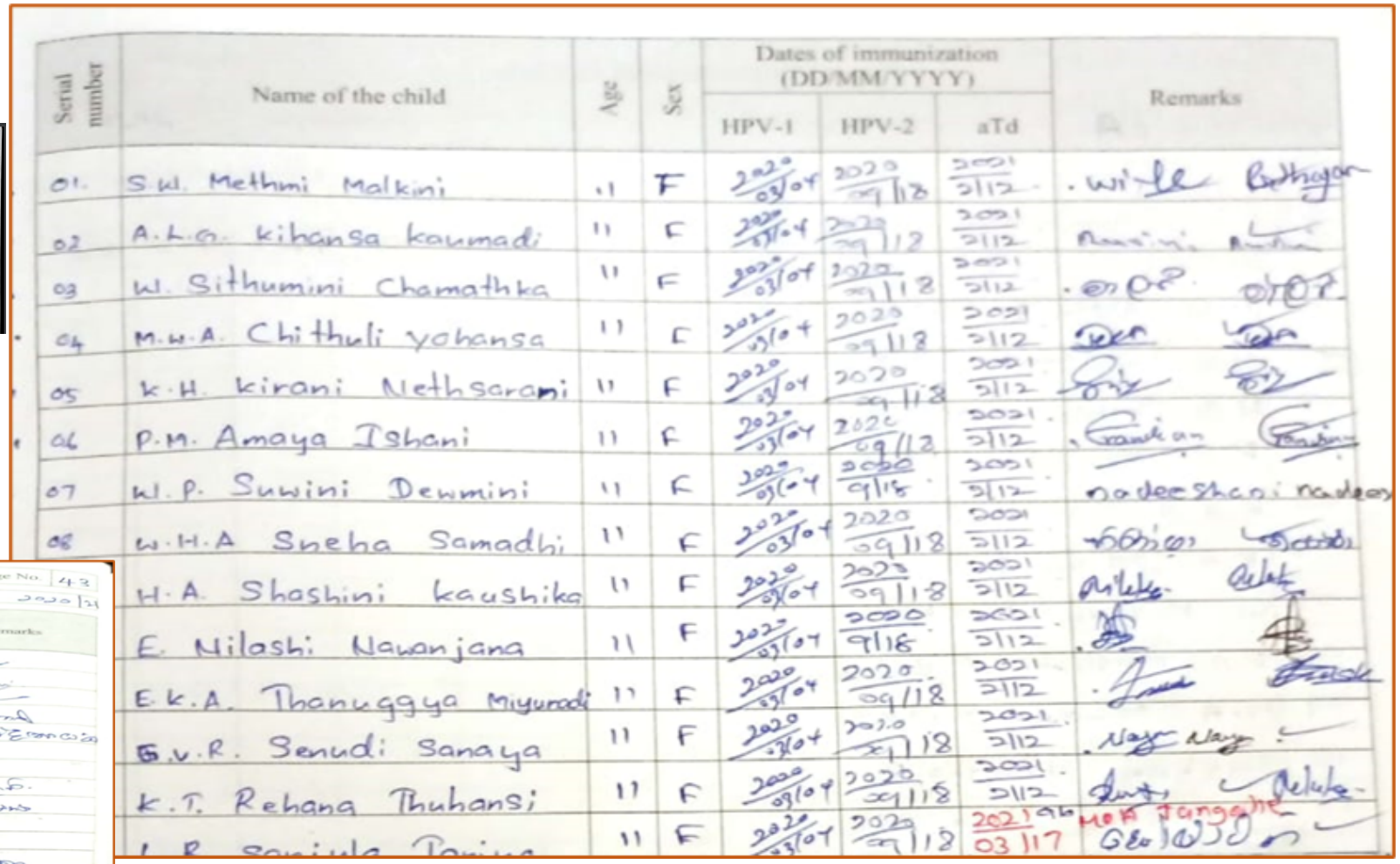
Coverage of aTd vaccination among school children in grade 7 & other grades during 2021 by PHI areas

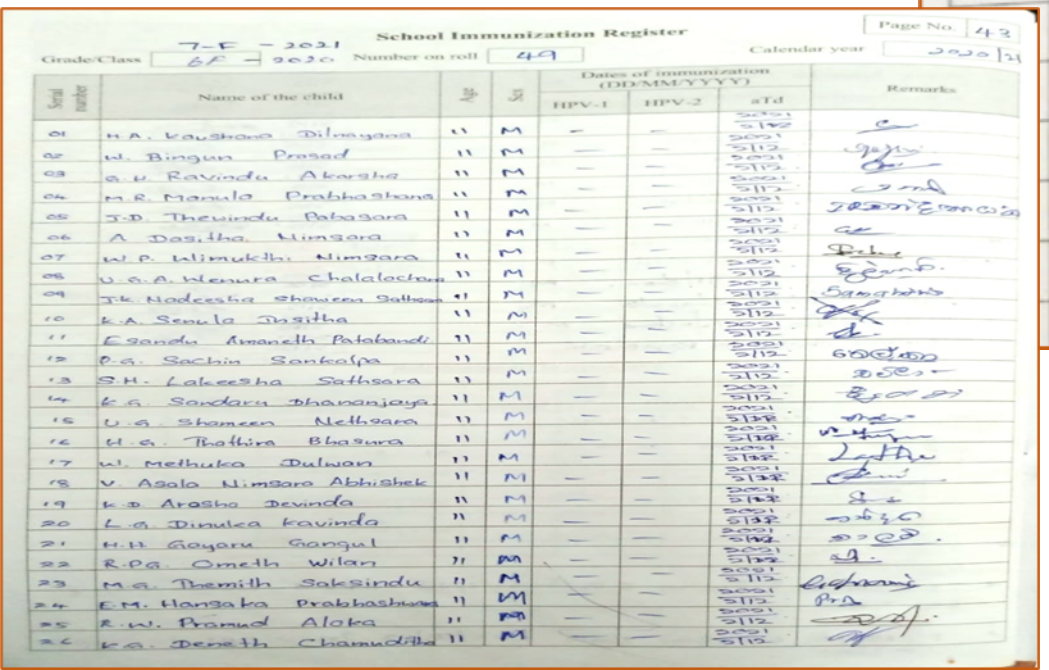
No	PHI area	Number on roll in grade 7 (A)	Number of vaccinations given to children in grade 7 (In Schools + clinics) (B)	% of vaccinated children in grade 7 (C)=(B)/(A)*100%	Number of vaccinations given to children in other grades (D)	Number of vaccinations given to children who came from other areas or attend schools located outside the MOH area (E)	Total number vaccinated in year 2021 (F)=(B)+(D)+(E)
1	**BANDIWEWA**	132	134	101%	0		134
2	**KADURUWELA**	787	776	98%	01		777
3	**MUSLIM COLONY**	263	244	92%	05		249
4	**POLONNARUWA**	291	276	95%	03		279
5	**LAKSHAUYANA**	046	45	97%	0		045
6	**PS COLANIYA**	076	76	100%	0		076
7	**SEWAGAMA**	256	239	93%	01		240
	Clinics (If PHI area is unknown/not marked but children are attending to schools located in your MOH area)		03				03
	Total	1851	1793	97 %	10		1803

School vaccination programme





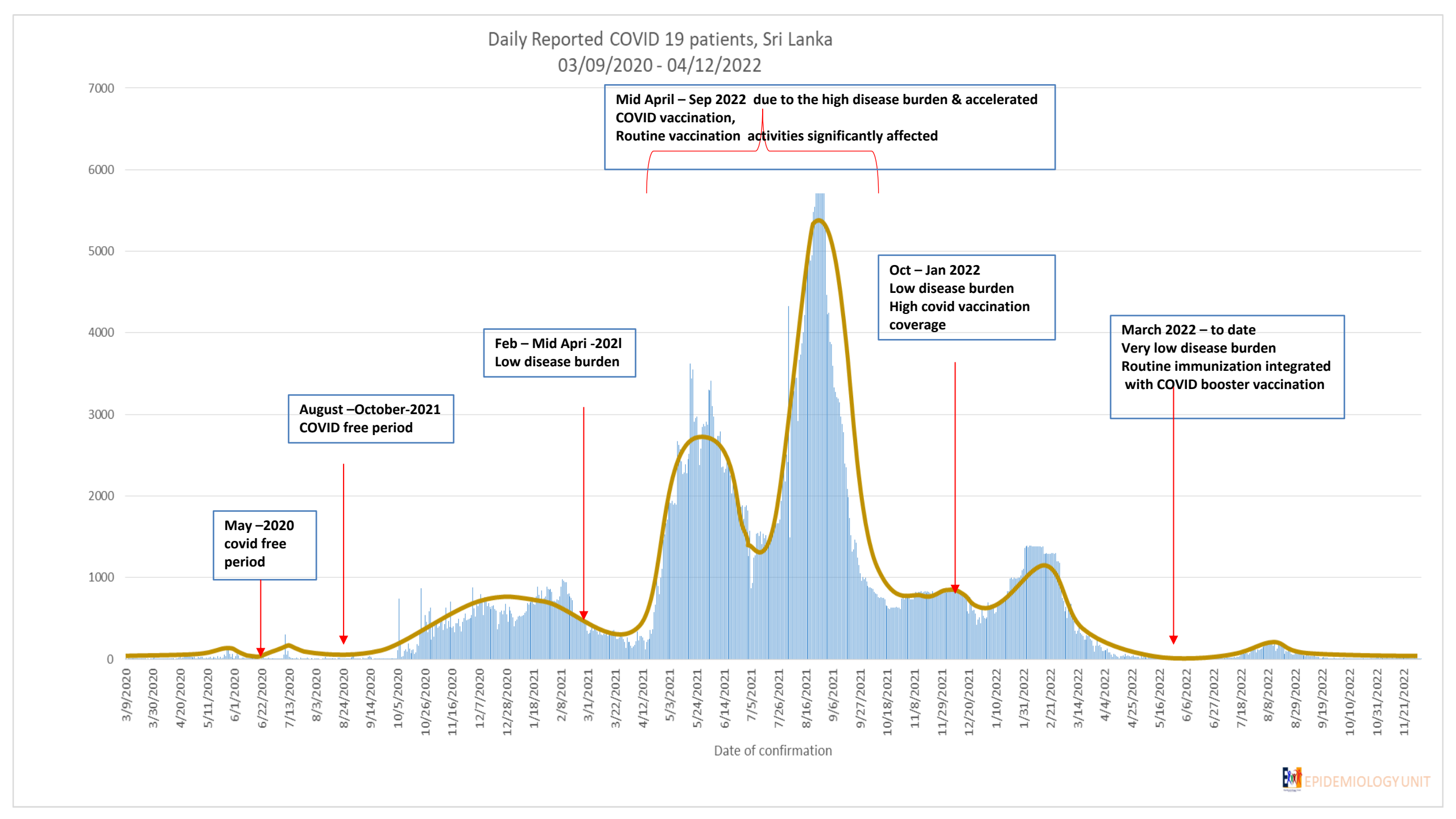




- PHI of the respective area needs to maintain one register for all schools in his area
- All the children enrolled to grade 6 & 7 need to include according to the school registry
- Due to the prolonged closure of schools in 2020, 2021 not be able to cover school vaccinations.
- Backlog was almost cleared during the latter part of 2021 and 2022.

Comparison of PVV1 & 2 data between administrative data and Birth & immunization register data

District	PVV1 (Administr)	PVV1 (B & I register)	PVV2 (Administr)	PPV23(B & I register)
Kilinochchi	2029	1650	1964	1641
Mannar	2212	2216	2172	2178
Mullativu	1805	1802	1791	1810
Vavuniya	2616	2642	2552	2583
Polonnaruwa	6744	6933	6940	6923
Batticaloa	9486	9463	9824	9788
Matale	7063	6667	7358	6707
Gampaha	23591	27549	25227	27534
Ampara	3833	4187	3921	4162
Kalmunai	8032	7933	8423	7942
	67411	**71042**	70172	71268


Daily Reported COVID 19 patients, Sri Lanka
03/09/2020 - 04/12/2022
Mid April – Sep 2022 due to the high disease burden & accelerated COVID vaccination,
Routine vaccination activities significantly affected
Oct – Jan 2022
Low disease burden
High covid vaccination coverage
March 2022 – to date
Very low disease burden
Routine immunization integrated with COVID booster vaccination
Feb – Mid Apri -202l
Low disease burden
August –October-2021
COVID free period
May –2020
covid free period
7000
6000
5000
4000
3000
2000
1000
0
3/9/2020
3/30/2020
4/20/2020
5/11/2020
6/1/2020
6/22/2020
7/13/2020
8/3/2020
8/24/2020
9/14/2020
10/5/2020
10/26/2020
11/16/2020
12/7/2020
12/28/2020
1/18/2021
2/8/2021
3/1/2021
3/22/2021
4/12/2021
5/3/2021
5/24/2021
6/14/2021
7/5/2021
7/26/2021
8/16/2021
9/6/2021
9/27/2021
10/18/2021
11/8/2021
11/29/2021
12/20/2021
1/10/2022
1/31/2022
2/21/2022
3/14/2022
4/4/2022
4/25/2022
5/16/2022
6/6/2022
6/27/2022
7/18/2022
8/8/2022
8/29/2022
9/19/2022
10/10/2022
10/31/2022
11/21/2022
Date of confirmation
EPIDEMIOLOGY UNIT

Summary of measures taken to sustain the EPI Program activities during COVID-19 Crisis

At national level

- Maintenance of buffer stock of vaccine
  - Central level – 6 months buffer stocks
  - District level – 3 months buffer stocks
  - Divisional level – 2 months buffer stocks
- Assured continuous service provision with precautionary measures whenever possible
- Utilize Hospital immunization clinics to an optimum level
- Timely circular instructions issued by the central level with the latest recommendations considering the COVID situation
- Continuous regular monitoring and supervision EPI overage data
- Special attention and introduction of immediate measures to maintain EPI coverage where deficiencies are identified.
- Maintained a continuous dialog with the district EPI

At Divisional level

- Continued EPI vaccination clinic services when ever possible
  - EPI vaccination clinics re-scheduled in between lockdown periods
  - whenever time permits accelerated EPI program continued in all districts/divisions
  - Prevented accumulation of children with out due vaccination
- Offered services with precautionary measures
  - Service provision adhering to timely guidelines/circulars

Summary of measures taken to sustain the EPI Program activities during the COVID-19 Crisis

- Modifications at the service delivery points

- Extended vaccination clinic hours from 8am to 4 pm with the appointment system
    - Children due vaccination cleared within 3 months
- Continuous service provision through hospital immunization clinics
- Integration of EPI program with COVID-19 vaccination sessions especially during the booster vaccination campaign
    - Improved service accessibility
- Conduct both MCH & immunization clinics at the same center simultaneously with the appointment system
- Accelerated school immunization program
    - Vaccination of school children conducted by local clinics during school closure

Enabling factors for Immunization programme

- Existence of Well established public health infrastructure
- Integration of immunization programme into PHC service delivery system
- Existence of well established inbuilt routine monitoring and evaluation mechanism for EPI programme
- Availability of free healthcare delivery system
- High literacy rate
- Existence of a well-organized school health programme
- Good partnership between the health and education sectors

Thank you