



WORLD HEALTH ORGANIZATION
ORGANISATION MONDIALE DE LA SANTÉ

INDEXED

SMALLPOX ERADICATION SEMINAR

Kinshasa, 19-26 November 1968

STATUS OF SMALLPOX ERADICATION ACTIVITIES

COUNTRY TANZANIA

1. Demographic data

1.1 Estimated population (1967)

<u>Age</u>	<u>Male</u>	<u>Female</u>	<u>Total</u>
0-4	<u>1 140 700</u>	<u>1 181 600</u>	<u>2 322 300 (19.00%)</u>
5-14	<u>1 672 500</u>	<u>1 735 300</u>	<u>3 407 800 (27.85%)</u>
15 and over	<u>3 156 400</u>	<u>3 345 300</u>	<u>6 501 700 (53.15%)</u>
TOTAL	<u>5 969 600</u>	<u>6 262 200</u>	<u>12 231 800 (100.0%)</u>

1.2 Proportion of population which is nomadic - %

2. Smallpox incidence and vaccination data

2.1 Annual smallpox incidence by Province/Region (1958-1967) - (Table 1)

2.2 Monthly smallpox incidence (1964-1968) - (Table 2)

2.3 Smallpox cases by age, sex and vaccination status - 1967 - (Table 3)

2.4 Vaccinations performed by Province/Region (1966-1968) - Table 4)

3. Vaccine

3.1 Liquid vaccine

Amount of liquid vaccine still being used (% of total) - 1967 Nil

1968 Nil

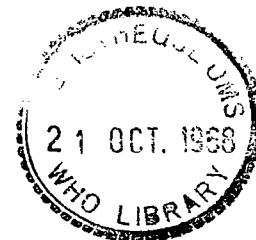
3.2 Freeze-dried vaccine

Sources (producers) - 1968

Amount

USSR

1 550 000 doses



3.3 Vaccine storage

- 3.3.1 All vaccine at the central depot continuously stored at less than 10°C
Yes No
- 3.3.2 Adequate refrigeration facilities in the interior of the country to permit storage at less than 10°C
Yes No
- 3.3.3 All vaccine used less than 30 days after removal from refrigerated storage
Yes No

4. Vaccination

4.1 Personnel engaged in vaccinations: (Gelta Pilot Project)

4.1.1	Vaccinators	<u>12</u>
	Other field staff, including recorders, drivers, etc. . .	<u>16</u>
	Supervisory personnel (paramedical)	<u>2</u>
	Supervisory personnel (medical officers)	<u>3</u>

4.1.2 Organization of vaccination effort

- House to house: Collecting points
 Vaccinators working alone;
 Vaccinators working in teams
 Other _____

4.1.3 Number of vaccinators directly supervised by one supervisor 3

4.1.4 Average number of vaccinations performed daily by each vaccinator or team 200 - 300

4.1.5 Vaccination targets by Province/Region, 1968-1970 - (Table 5)

4.2 Technique of vaccination used now:

	<u>Percentage performed by this method</u>
4.2.1 Multipuncture (bifurcated needle)	<u>100%</u>
Ped-O-Jet	<u>-</u>
Other (specify) _____	<u>-</u>
4.2.2 Usual preparation of skin before performing vaccination, (i.e. water, nothing, etc.) <u>Nothing</u>	
4.2.3 Method of sterilization of vaccination instrument <input checked="" type="checkbox"/> Boiling <input type="checkbox"/> Flaming <input type="checkbox"/> None	

4.3 Reconstituted vaccine used only on the day on which it is reconstituted

Yes No

4.4 Method for recording of vaccinations (please attach sample of sheets used for recording of vaccinations)

Tally sheet (vaccinees recorded only by age, sex, vaccination status)

Yes No

Other registry system (specify) _____

4.5 Youngest age for beginning vaccination

Birth _____
Three months Yes
Other _____

4.6 Contra-indications to vaccination other than severe, acute illness

No Yes - specify _____

5. Programme

5.1 Supervision

5.1.1 Proportion of time spent in field by supervisory staff checking directly on the work of vaccinators and lower level supervisors

- (a) By staff at Territory/District level 80 %
- (b) By staff at Regional/Provincial level 18 %
- (c) By staff at National level 2 %

5.1.2 Measures taken when vaccinator performance is unsatisfactory (e.g. reprimand, suspension, dismissal)

He is reprimanded

5.2 Assessment

5.2.1 Vaccine "take rates"

Proportion of primary vaccinations in 0-4 year-old children which are checked after seven days to determine takes 100 %

Steps taken when the proportion of successful primary vaccinations falls below 95%

5.2.2 Vaccination coverage

5.2.2.1 Vaccinations performed in each village or area are compared with population estimated to be in area (e.g. village register, census data, other)

Yes No

5.2.2.2 Assessment of coverage regularly performed in a sample of the population

Yes

No

When coverage in the 0-4 or 5-14 year age-group is less than 85%, the following steps are taken:

5.3 Surveillance

5.3.1 Notification of smallpox cases

5.3.1.1 Notification sites

(a) Number of sites which may notify cases of smallpox (e.g. hospitals, health centres, health posts, dispensaries) 1 385

(b) Number which report at least every two weeks whether or not smallpox cases were observed 17

(c) Other specialized programmes which report cases (e.g. malaria, yaws, etc. - specify) None

(d) Other persons or groups who have been requested to notify cases (e.g. teachers, village headmen, etc. - specify)

Normally village headmen, teachers inform notification sites.

5.3.1.2 Proportion of cases for which age, sex and vaccination status are recorded Data not available, yet %

5.3.1.3 Best estimate of the percentage of cases which are reported

More than 90%	<u>Yes</u>
75-90%	<u>-</u>
50-75%	<u>-</u>
Less than 50%	<u>-</u>

5.3.2 Case investigation and containment measures

Case investigation - containment teams ("fire-fighting" teams) have been established in each Province/Region

Yes

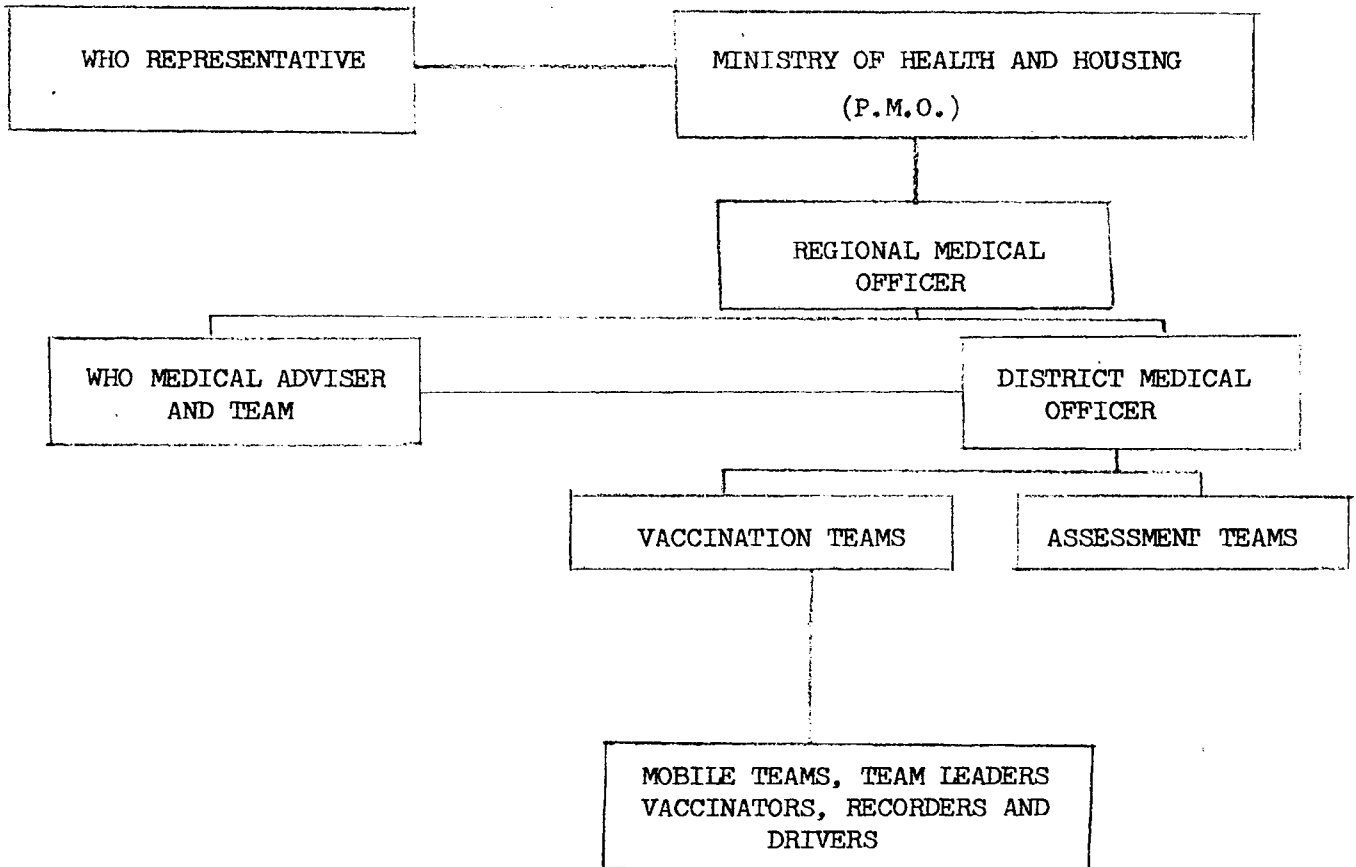
No

Proportion of cases in which containment action (verification, vaccination, isolation, etc.) taken within 48 hours after notification 100 %

Proportion of cases routinely investigated to determine the origin of infection 100 %

7. Describe briefly (two pages) the administrative organization and method of execution of the programme with organizational chart. Discuss specifically with reference to component activities in Table 6. (Attach samples of posters and pamphlets being used in programme.)

ORGANIZATIONAL CHART



7. (continuation)

SMALLPOX ERADICATION SCHEME

The Government of Tanzania, with the assistance of the World Health Organization, has as a fundamental aim, and as a part of the global programme, to eradicate smallpox from the mainland of Tanzania by the vaccination of the entire population (about 11 800 000, excluding Zanzibar) within three years from 1968 (the attack phase). The government will, thereafter, if the attack phase is successful, continue with a maintenance phase.

The administration of this scheme is outlined in the sketch on the previous page. Briefly therefore, the Ministry of Health and Housing is responsible, at the national level, for this programme. The supply of vaccine and equipment relating to this project from WHO etc. are channelled through this Ministry and thence to the Regions where actual work is done.

At the Ministry's Headquarters, the Principal Medical Officer, Communicable Diseases, is at the moment taking care of the programme. The Ministry liaison with the representative of WHO in Dar es Salaam, who also has direct contact with WHO Medical Adviser on smallpox, in the field.

At the Regional Level, the Regional Medical Officer has an overall charge of the programme. He appoints team leaders who are usually Health Inspectors. The District Medical Officers generally supervise the teams and the work in collaboration with the District Health Inspectors in the initiation of the eradication programmes in their districts and see to the continuation of the programmes to the end.

As a matter of principle, District Medical Officers should have teams at their disposal to assess the success of the venture but since the attack phase is not in operation yet, these teams only exist on paper.

The team leader is responsible for the collection and manipulation of all data pertaining to the eradication project and he sends these to the Ministry's Headquarters through the World Health Organization Medical Adviser, District Medical Officer and the Regional Medical Officer.

Surveillance is done by health staff. From the districts cases and deaths reported either to the health offices or hospitals and dispensaries, are relayed to the Regional Medical Officer who in turn sends out weekly infectious diseases returns to the Ministry's Headquarters.

All cases reported are promptly and thoroughly investigated by health staff and all contacts, both close and distant contacts, are vaccinated. This has been the practice even before the inception of the scheme. During epidemics, community mass vaccination is the rule. Isolation of cases is effected usually in the hospitals. All reports on the investigations, not necessarily on pre-prepared forms, are usually submitted to the Ministry's Headquarters. From this Headquarters, weekly bulletins on infectious diseases, in which smallpox is included are despatched to neighbouring and other foreign countries and back to the Regions.

2.1 Annual Smallpox Incidence
Incidence annuelle de la variole

TABLE 1
(1958-1967 annual figures)

TABLEAU 1
(1958-1967 chiffres annuels)

Notes: Cases -
a) incl. in
b) " " Coast
c) " " Mwanza
d) " " Mtwara
e) " " Arusha
f) " " Iringa
g) " " Tabora

Province (or major administrative area) Province (ou autre grande subdivision administrative)	Number of cases Nombre de cas									
	1958	1959 *	1960 *	1961	1962	1963	1964	1965	1966	1967
1. ARUSHA REGION	9	-	-	30	20	11	16	80	-	-
2. COAST REGION	165	-	-	386	111	18	6	9	-	-
3. DODOMA REGION	25	-	-	106	546	102	128	41	4	-
4. IRINGA REGION	44	-	-	221	193	22	181	309	109	24
5. KIGOMA REGION	(g)	-	-	(g)	(g)	-	4	407	1,093	563
6. KILIMANJARO REGION	(e)	-	-	(e)	(e)	-	3	2	-	12
7. MARA REGION	(c)	-	-	(c)	(c)	12	31	15	116	58
8. MBEYA REGION	(f)	-	-	(f)	(f)	59	289	475	118	4
9. MOROGORO REGION	(b)	-	-	(b)	(b)	6	1	85	45	17
10. MTWARA REGION	21	-	-	34	4	44	250	107	152	120
11. MWANZA REGION	402	-	-	48	144	104	69	490	927	476
12. RUVUMA REGION	(d)	-	-	(d)	(d)	4	55	54	33	97
13. SHINYANGA REGION	(c)	-	-	(c)	(c)	223	36	354	176	45
14. SINGIDA REGION	(a)	-	-	(a)	(a)	83	80	137	18	4
15. TABORA REGION	533	-	-	24	31	130	247	175	187	15
16. TANGA REGION	5	-	-	153	25	4	53	17	2	-
17. WEST LAKE REGION	(e)	-	-	(e)	(e)	14	12	5	47	194
TOTAL	1 204	-	-	1 002	1 074	836	1 461	2 762	3 027	1 629

N.B. - Prior to 1963, Tanganyika was divided into 8 provinces

* - Data not available.

2.2

TABLE 2 - Smallpox Incidence by month or four week period

TABLEAU 2 - Incidence de la variole par mois ou période de quatre semaines

YEAR ANNEE	Jan. Jan.	Feb. Fév.	Mar. Mars	April Avril	May Mai	June Juin	*	July Juil.	Aug. Août	Sept. Sept.	Oct. Oct.	Nov. Nov.	Dec. Déc.	Total
Weeks Semaines	1-4	5-8	9-12	13-16	17-20	21-24	25-28	29-32	33-36	37-40	41-44	45-48	49-52	
1964	93	43	23	55	90	90	54	200	149	128	98	224	214	1 461
1965	154	193	151	92	178	272	161	194	200	205	279	196	487	2 762
1966	462	350	281	215	196	231	141	196	210	271	201	152	121	3 027
1967	116	136	129	142	98	107	87	143	136	167	163	123	82	1 629
1968	60	61	48	52	22	22	37	*	*	*	*	*	*	302
TOTAL	885	783	632	556	584	722	480	766	716	771	741	695	904	9 235

* Use this column only if reporting by four week periods

* N'utiliser cette colonne que si les chiffres correspondent à des périodes de quatre semaines

2.3

TABLE 3. CASES BY AGE, SEX AND VACCINATION STATUS - 1967
 TABLEAU 3. CAS DE VARIOLE PAR AGE ET SEXE, ET PAR ETAT DE VACCINATION - 1967

I. Check this box if there were no smallpox cases during 1967.
 Cocher cette case s'il n'y a pas eu de cas de variole en 1967.

II. SMALLPOX CASES BY AGE AND SEX, AND VACCINATION STATUS
 CAS DE VARIOLE PAR AGE ET SEXE, ET PAR ETAT DE VACCINATION

Age Group Groupe d'âge	Number of cases - Nombre de cas			
	Male Sexe Masculin	Female Sexe Féminin	Unknown Sexe non précisé	Total
< 1	-	-		
1-4	-	-		
5-14	-	-		
15+	-	-		
Unknown Age inconnu	-	-	2 451 256	
TOTAL	-	-	2 451 256	

Number vaccinated before exposure Nombre de vaccinés avant l'exposition		
Vac. Vaccinés	Not vac. Non vaccinés	Unknown Antécédents vaccinaux inconnus
*	*	*

If detailed information is not available for all cases, complete as far as possible.

En l'absence de renseignements détaillés sur tous les cas, remplir la formule dans toute la mesure du possible.

* Data not available

TABLE 4 : TABLEAU 4

VACCINATIONS PERFORMED⁽¹⁾ : VACCINATIONS PRATIQUÉES⁽¹⁾

Province (or major administrative area)	Population (estimate for 1966) Nombre d'habitants (chiffre estimatif pour 1966)	1966			1967			1968 ⁽²⁾			
		Primary vaccination	Revaccination	Total	Primary vaccination	Revaccination	Total	Primary vaccination	Revaccination	Total	
		Primovaccination	Revaccination	Total	Primovaccination	Revaccination	Total	Primovaccination	Revaccination	Total	
1. ARUSHA REGION	*	-	-	-	-	187 506	187 506	6 779	159 566	166 345	
2. COAST REGION	*	8 490	13 916	22 406	44 858	35 703	80 561	25 173	13 034	38 207	
3. DODOMA REGION	*	-	73 300	73 300	35 732	99 887	135 619	3 954	11 133	15 087	
4. IRINGA REGION	*	-	158 917	158 917	14 236	107 851	122 087	4 174	11 880	16 054	
5. KIGOMA REGION	*	50 073	169 227	219 300	37 938	128 596	166 534	307	1 530	1 837	
6. KILIMANJARO REGION	*	860	11 928	12 788	9 888	49 950	59 838	1 630	5 401	7 031	
7. MARA REGION	*	11 621	135 880	147 501	13 257	59 360	72 617	701	2 017	2 718	
8. MBEYA REGION	*	39 038	227 866	266 904	33 889	188 198	222 087	26 344	43 140	69 484	
9. MOROGORO REGION	*	-	-	-	37 939	78 356	116 295	2 239	7 983	10 222	
10. MTWARA REGION	*	-	59 437	59 437	13 182	114 803	127 985	25 367	90 278	115 645	
11. MWANZA REGION	*	-	412 562	412 562	52 569	134 338	186 907	9 491	22 254	31 745	
12. RUVUMA REGION	*	32 272	45 709	77 981	31 595	68 821	100 416	9 712	25 403	35 115	
13. SHINYANGA REGION	*	-	-	-	25 353	208 772	234 125	11 864	55 158	67 022	
14. SINGIDA REGION	*	-	-	-	38 383	124 032	162 415	921	6 402	7 323	
15. TABORA REGION	*	-	184 266	184 266	38 383	124 977	163 360	6 047	22 119	28 166	
16. TANGA REGION	*	-	91 599	91 599	12 807	43 930	56 737	-	-	57 441	
17. WEST LAKE REGION	*	49 812	188 800	238 612	57 061	199 100	256 167	18 660	84 880	103 540	
TOTAL		10 377 000	192 166	1 773 407	1 965 573	497 070	1 954 186	2451 256	153 363	619 619	772 982

* Regional figures not available.

VACCINATION TARGETS : VACCINATIONS PREVUES

Région/Region	Number of vaccinations planned - Nombre de vaccinations prévues						
	1968 Total	1969					1970 Total
		Jan.-Mar. Jan.-Mars	April-June Avril-Juin	July-Sept. Juil-Sept.	Oct.-Dec. Oct.-Déc.	Total	
ARUSHA +	-	-	-	-	-	-	-
COAST +	-	-	-	-	-	-	-
DODOMA +	-	-	-	-	-	-	-
IRINGA	-	-	-	-	-	-	683 555
KIGOMA	-	114 600	110 400	124 425	121 348	470 773	-
KILIMANJARO +	-	-	-	-	-	-	-
MARA	-	128 970	130 972	139 140	136 800	535 882	-
MBEYA	-	230 072	231 172	246 775	247 872	955 891	-
MOROGORO	-	-	-	-	-	-	683 061
MTWARA	-	-	-	-	-	-	1 032 896
MWANZA	371 396*	170 074	169 407	173 074	173 744	1 057 695	-
RUVUMA	-	-	-	-	-	-	392 812
SHINYANGA	-	-	-	-	-	-	888 209
SINGIDA	-	-	-	-	-	-	454 749
TABORA	-	131 084	132 087	144 284	144 884	552 339	-
TANGA +	-	-	-	-	-	-	-
WEST LAKE	-	159 009	161 022	170 029	168 019	658 079	-
TOTAL	371 396	933 809	935 060	997 727	992 667	4 230 659	4 135 782

* Geita pilot project

+ Target for 1971 - Over 3 500 000 people will be vaccinated.

TABLE 6

	ATTACK PHASE (PHASE 1)	CONSOLIDATION PHASE (PHASE 2)	MAINTENANCE PHASE (PHASE 3)	
DEFINITION	Endemic areas with an incidence of smallpox of five or more cases per 100 000 population per year and with less than 80% of all segments of the population showing scars of primary vaccination.	Areas with an incidence of smallpox of less than five cases per 100 000 and in which over 80% of all segments of the population show scars of primary vaccination.	Areas free from endemic smallpox for more than two years but geographically situated in an endemic continental area, presently Africa, Asia or South America.	
ACTIVITIES	VACCINATION	Systematic mass vaccination.	Continuing maintenance vaccination.	
	SURVEILLANCE	<p><u>Reporting</u> Establish prompt and regular reporting of smallpox by existing health facilities.</p> <p><u>Field investigation</u> Investigation of major outbreaks or outbreaks occurring in smallpox-free areas.</p>	<p><u>Reporting</u> Extension of case detection system to assure reporting of all suspect smallpox in all segments of the population.</p> <p><u>Field investigation</u> All cases and outbreaks promptly investigated epidemiologically to establish source of infection and unreported cases. Investigation forms submitted for every case.</p>	<p><u>Reporting</u> Extension of case detection system to assure reporting of all suspect smallpox in all segments of the population</p> <p><u>Field investigation</u> Each case investigated promptly as an emergency by a competent epidemiologist.</p>
	LABORATORY	Establish techniques and methods for the submission and examination of specimens for confirmation of diagnosis.	Specimens studied from all isolated cases and representative samples from each outbreak.	Specimens studied from every suspect case.
	CONTAINMENT	Localized, intensive vaccination in community where cases or outbreaks occur. Isolation of cases if feasible.	Vaccination and observation of case contacts. Isolation of cases and appropriate disinfection. Localized, intensive vaccination in community.	Vaccination and observation of case contacts. Isolation of cases and appropriate disinfection. Localized, intensive vaccination in community.

CENSUS SHEET.

FORM 1

MPANGO WA TAIFA WA KUONDOA KABISA UGONJWA WA NDUI - Ser. No.

WILAYA: MWANA WAKWA:

TARAFU: BALOZI:

TARAFU NDOGO: KITUCHO:

GUNGULI: TAKENZI:

No.	Jina	Umri	Mume au Mke	No.	Jina	Umri	Mume au Mke
1.....				35.....			
2.....				36.....			
3.....				37.....			
4.....				38.....			
5.....				39.....			
6.....				40.....			
7.....				41.....			
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28.....				62.....			
29.....				63.....			
30.....				64.....			
31.....				65.....			
32.....				66.....			
33.....				67.....			
34.....				68.....			

NATIONAL SMALLPOX ERADICATION CAMPAIGN - VACCINATION TALLY SHEET

DISTRICT: VACCINATION SITE:
 DIVISION: MOBILE UNIT No:
 SUBDIVISION: VACCINE BATCH No:
 VILLAGE: DATE OF VACCINATION:
 CORRESPONDING FORM I SERIAL No:

AGE	PRIMARY VACCINEES	REVACCINEES
0 - 4		
5 - 14		
15 - +		

SUMMARY

RECORDER:

SENIOR VACCINATOR:

AGE	Primary V.	Revaccinees	TOTAL
0 - 4			
5 - 14			
15 - +			
TOTAL			

NATIONAL SMALLPOX ERADICATION CAMPAIGN - VACCINATION SUMMARY SHEET

DISTRICT: MOBILE UNIT No.
 DIVISION: DATE:
 SUBDIVISION: VIALS VACCINE USED:
 VILLAGE/s:

	VACCINATION SITE	POPULATION ESTIMATES	NUMBER VACCINATED						TOTAL
			PRIMARY VACCINEES			REVACCINEES			
			0-4	5-14	15+	0-4	5-14	15 & +	
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									

TOTAL

Senior Vaccinator _____

Team Leader _____