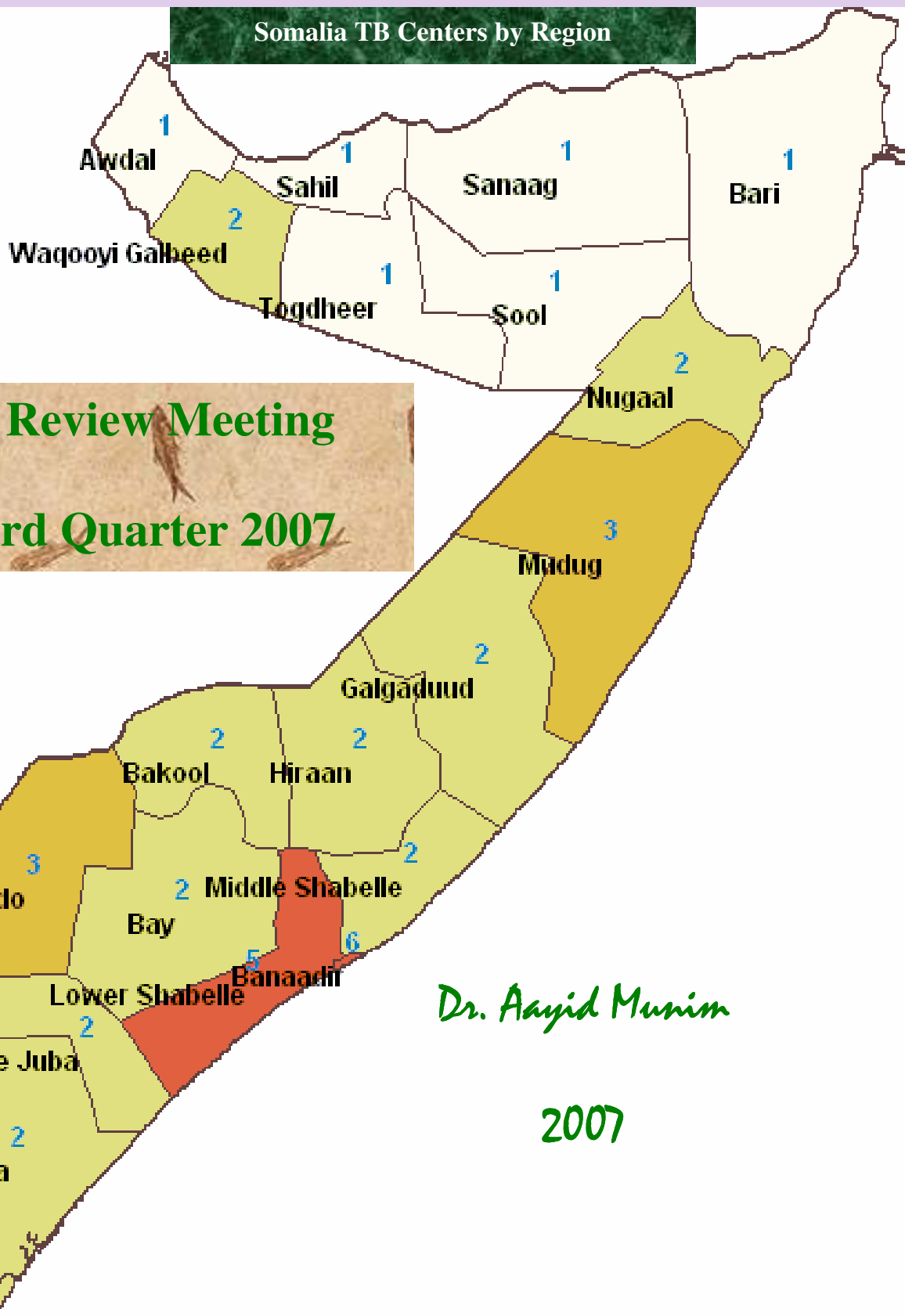


# World Health Organization Somalia Country Office Stop Tuberculosis



Somalia TB Centers by Region



TB Review Meeting

Third Quarter 2007

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2007

## 1. Background

All TB centers have reported the Second Quarter for the year 2007 to the STB/MO. Almost 98% of these centers reported before the deadline. This quarter includes DOTS coverage until the end of September 2007, TB case notifications for the Third quarter of 2007, sputum conversion for Second quarter of 2007 and the treatment outcome results for Fourth quarter of 2006. Descriptive analysis of such data yielded the following results:

## 2. Results

- The percentage of population covered by DOTS is 100% based on one center in each region.
- The percentage of pulmonary smear positive to all pulmonary cases was 74% compared to 70% in Q2 2007; 74% in Q 1 2007 and 78% in the 4<sup>th</sup> quarter 2006.
- The percentage of pulmonary smear positive to all pulmonary cases is higher than 65% compare with the following countries in the region (EMRO): Afghanistan (65%), Bahrain (50% in nationals), Djibouti (61%), Iraq (62%), Jordan (47%), Kuwait (55%), Lebanon (45%), Libyan Arab Jamahiriya (57% in nationals), Pakistan (45%), Sudan (54%).

This indicator reflects the quality of sputum smear examination which is basically depend on laboratory personnel capacity and training, the extent of their adherence to the diagnostic guidelines, quality and availability of laboratory supplies and equipment, the existence of a good laboratory quality assurance system, and the extent of laboratory network expansion.

The ratio of new smear positive cases to new smear negative and extra pulmonary cases in the country was **1.4** compared to a ratio of **1.4** Q 1 ;**1.5** in Q 2 ,**1.6** Q 3, 1.7 in Q 4;1.3 in Q 2 2007 and 1.4 during Q 1 2007. All centers reported ratios higher than one. The proportion of extra pulmonary TB cases accounts for 19% of all forms and ranged between **0% in El Guula;Eldere;Haradere;Mogadishu Mercy and Tiyeglow and 53% in luuq**. All centers reported less than 20% except the following centers: **Adala; Berbere;Boroma;Bulomarer;Galkaio;GalkaioSouth;Garbaharey;Hargeisa;Jalaqsi;Jamame;Luuq; Merka Hospital COSV; Mog Ayan; Mog Finsom;Mog Saacid;Wanlawein and Xuddur**.

### **Sputum Conversion in DOTS for the Period April to June 2007**

This quarter reported 91% smear conversion rate compare with 91% in Q1 2006, and Q2; 93% in 2006; 92% during Q 4 2006 and 91% during Q1 2007. Eight centers reported sputum conversion rates below the acceptable level of 85% (**Abudwak;Bosaso;Garowe;Jamame;Jowhar;Mog MuslimAid; Mog Saacid and Qoryole**)

Low sputum conversion rates could be attributed to the fact that sputum smear examination was not performed for some of the registered cases or to non-conversion of sputum smear positive to negative as a result of suboptimal treatment of cases: inadequate treatment support, reduced compliance to treatment, etc.

## Treatment outcome results of the new smear positive TB cases registered from Oct to Dec 2006

- For this period the program has successfully treated **89%** of total case registered comparing with 88% in Q 2 2006 and 89% during Q 3 2006
- Success rates have reached 85% and above in **39** TB centers out of 47.
- TB centers that reported success rates less than 85% were: **Barava; Beletweine Zamzam; Burtinle; DarylB/Burte, Galkaio South; Mog Mercy ; Mog Muslim Aid; and Wajid.**
- The treatment failure rate is 0.01 in the current round. A high treatment failure rate of more than 3% was reported from **Garowe(7%); Mogadishu-Mercy; Booma and Beletweine Zamzam (4.%)**
- Treatment failure may be due to inappropriate treatment regimens or underlying primary resistance. When treatment failure exceeds 3%, case management should be reviewed to determine whether these failures could have been prevented and/or whether program interventions are warranted. Drug resistance surveys and drug susceptibility testing should be also considered.
- The default rate was 4% however few center show more than 4% defaulter rate(**Mog Muslim Aid 23%; Galkaio South 13%; Beletwein Zamzam 11%; Qoreyole 11%; Mog Manhal 6%; and Mog Saacid 5%**), so these centers reported low success rate and the causes of defaulting need to be determined in order to take remedial action.
- The death rate in the country was kept a round 3% as the previous quarter. A high death rate of more than 5% was reported from the following centers (**Belet-Hawa 7%; Belet Zamzam 11%; Berbera 6%; Bulomarar 10%; Daryl B/burte 8%; EL Gulae 8%; ;Garowe 7%; Kismayo 12%; Jamame 9% and Mog Ayan 17%**). Deaths of these patients should be investigated to determine whether they are TB-specific or attributed to non-TB causes. However, the association of high rates of treatment failure and deaths raises doubts about the emergence of drug resistance in the country.

## Recommendations

### General

- 1- Conduct regular supervisory visits to discuss the identified weaknesses and devise solutions.
- 2- Ensure timely submission of the reports to DOTS quarterly online in order to allow timely monitoring of country performance.

### DOTS Coverage and Case Notifications

- 1- **Laboratory:** Expand the laboratory networks with an established quality assurance system and ensure confirmed diagnosis of extra-pulmonary TB cases.

- 2- **Suspect management:** Raise awareness of health workers at all levels, mainly at the peripheral level in the primary health care centers (PHCs), or in Chest clinics/centers about TB suspects, and ensure that “ALL INDIVIDUALS SUFFERING FROM COUGH FOR MORE THAN 2-3 WEEKS I.E TB SUSPECTS” are investigated by sputum smear examination, properly registered in the OPD or suspect register, and followed up for their results in the laboratory register. Such adequate suspect management will definitely result in increased case detection.
- 3- **Contact tracing:** Household contacts are a high risk group. Experience and reports have shown that the incidence of smear positive tuberculosis among them could reach thousands per 100, 000 population. Accordingly, they should be thoroughly investigated for early detection of cases among them and eligible individuals should be given preventive therapy to reduce disease burden.
- 4- **Quality of care:** Ensure adherence of health care workers to NTP guidelines in diagnosis and follow up at all levels through training, supervision and proper monitoring and evaluation.

## **Sputum Conversion**

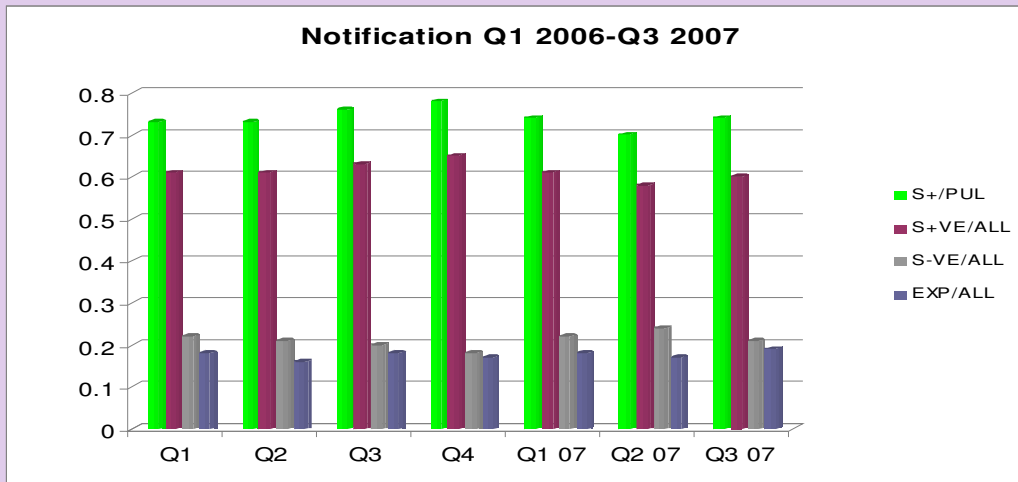
- 1- Ensure that all patients are treated under direct supervision.
- 2- Educate patients on the importance of adherence to the follow-up tests and treatment regimens.
- 3- Provide continuous training to the treatment supporters.

## **Treatment Outcome**

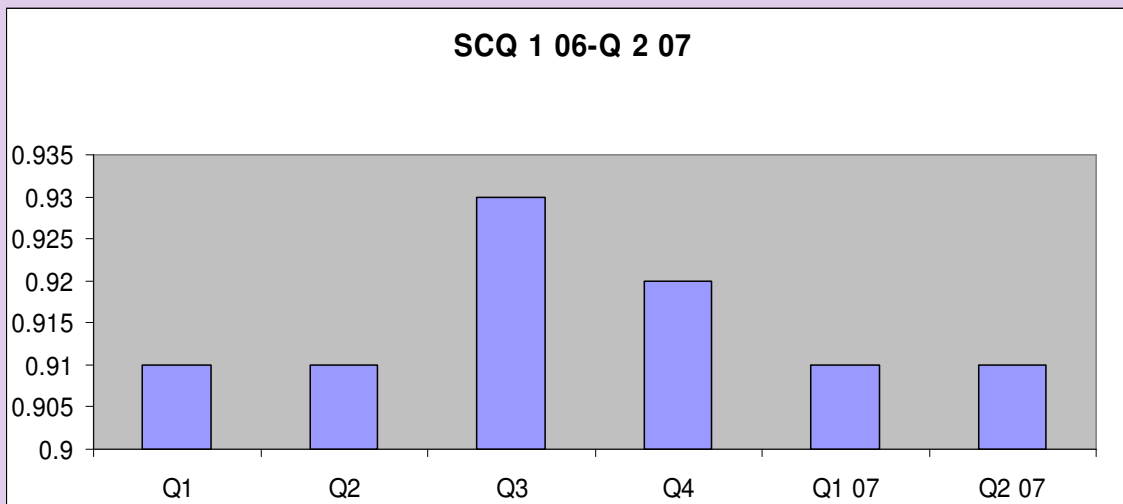
1. Strengthen reporting and improve its accuracy.
2. Ensure that all patients are treated under direct supervision.
3. Strengthen default-tracing activities.
4. Ensure that all cases whether are properly registered and managed till cure once diagnosed.
5. When treatment failure exceeds 3%, case management should be reviewed to determine whether these failures could have been prevented and/or whether program interventions are warranted.
6. Centers that reported relatively high death rates should investigate the causes of deaths to determine whether they could have been prevented or programmatic interventions are warranted.

## Annex I: Graphs

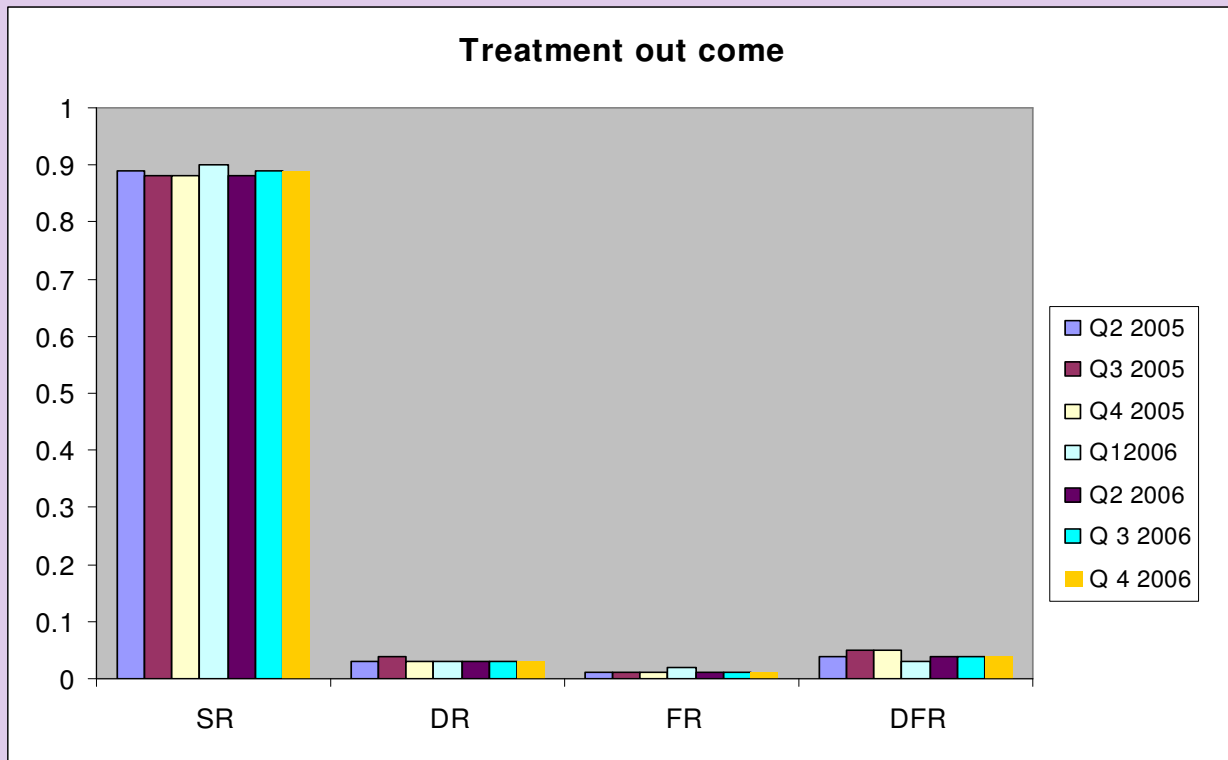
**Fig I Notification performance 2006 & Q1; 2 ;3 2007**



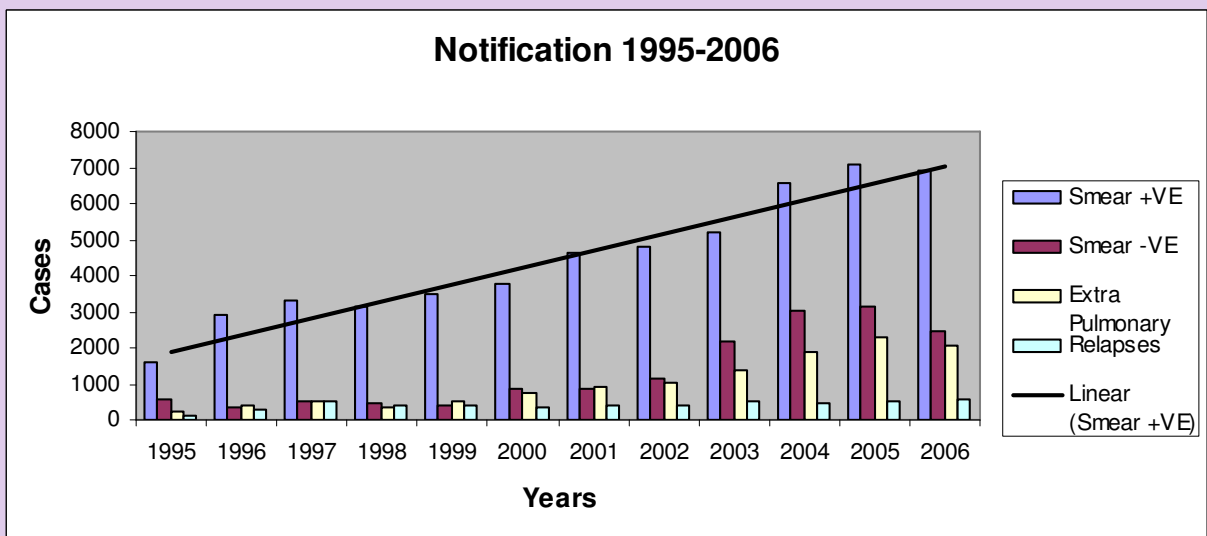
**Fig 2 Smear conversion rare 2006 and Q 1; Q 2 2007**



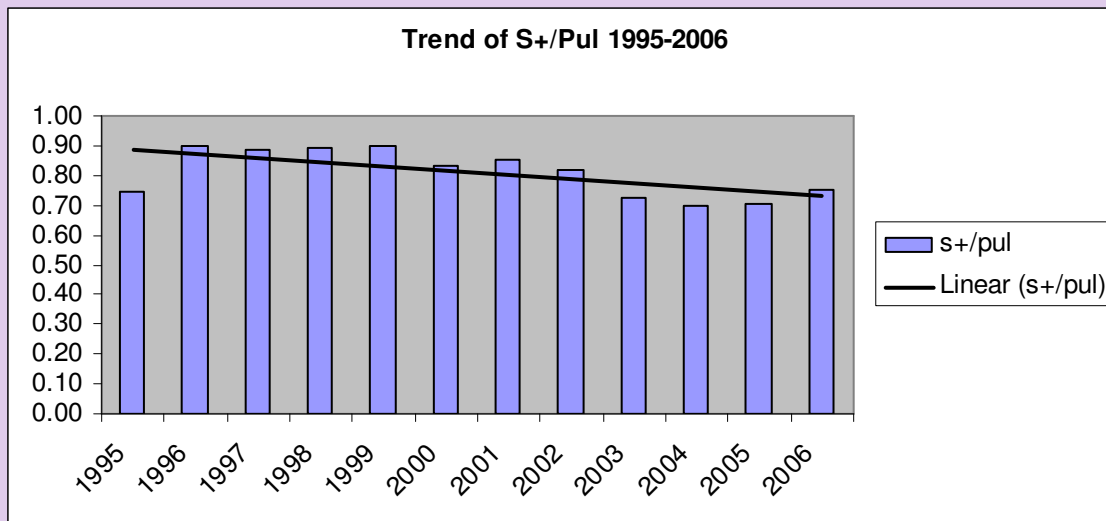
**Fig 3 : Treatment outcome (Q2 2005-Q4 2006)**



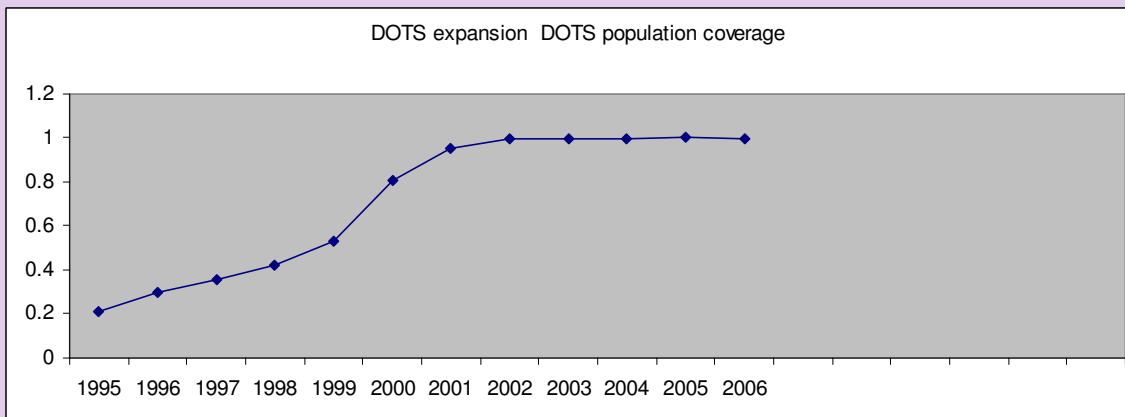
**Fig 4 Notification of TB cases (1995-2006)**



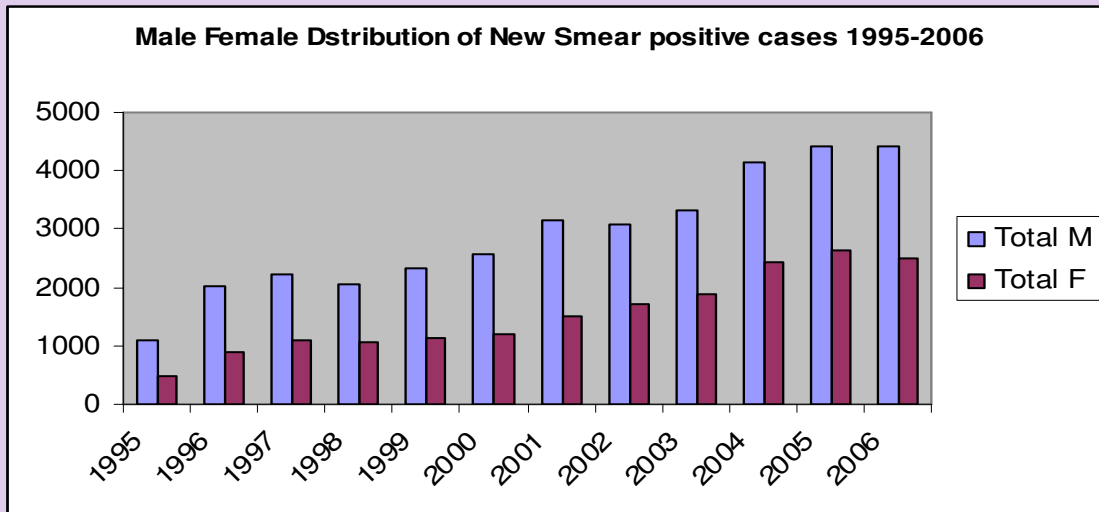
**Fig 5: Trend of smear positive among pulmonary cases (1995-2006)**



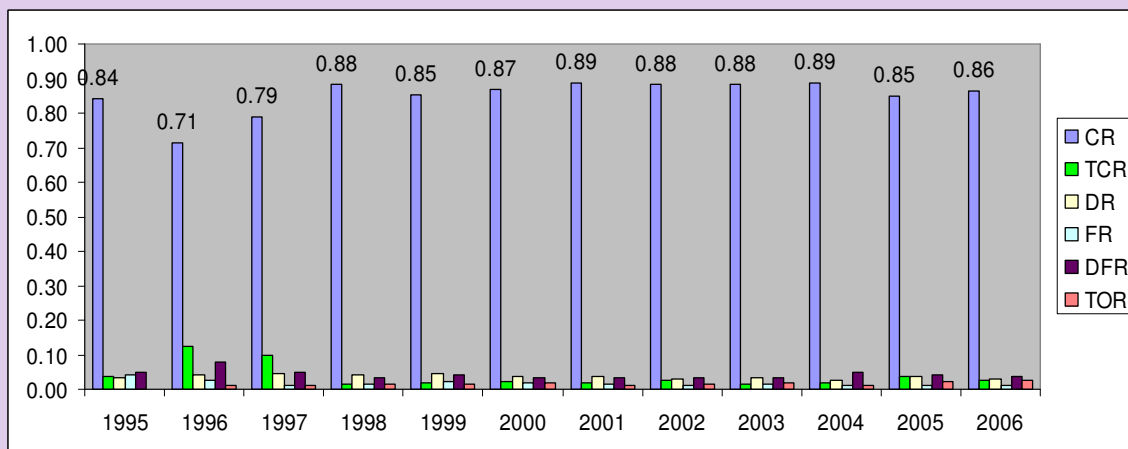
**Fig 6: DOTS EXPANSION AND POPULATION COVERAGE**



**Fig 7: Male Female distribution of new smear positive cases 1995 - 2006**



**Fig 8: Treatment outcome over time 1995-2006**



**Table 1 Treatment out come of Q 4 2006**

Centre	Agency	Cured	Treatment Completed	Died	Failure	Default	Total Evaluated	SR	DR	FR	DFR
Abudwak	LNGO	20	1	1	0	0	22	0.95	0.05	0	0
Adale	SAACID	22	0	0	0	0	22	1.00	0.00	0	0
Baidoa	W V	48	2	0	0	0	50	1.00	0.00	0	0
Barawa	COSV	14	0	0	0	0	18	0.78	0.00	0	0
Belet-Hawa	GHC	25	2	2	0	0	29	0.93	0.07	0	0
BeletweinIVRF(WAMY)	WAMY	48	0	2	0	0	50	0.96	0.04	0	0
BeletweineZamzam	ZAMZAM	20	0	3	1	3	27	0.74	0.11	0.04	0.11
Berbera	COOPI	15	1	1	0	0	18	0.89	0.06	0.00	0.00
Boroma	COOPI	26	0	1	1	0	28	0.93	0.04	0.04	0.00
Bosaso	MercyInternational	41	0	0	0	4	48	0.85	0.00	0.00	0.08
Buale	W V	39	0	1	0	0	40	0.98	0.03	0.00	0.00
Bulomarar	LNGO	9	0	1	0	0	10	0.90	0.10	0.00	0.00
Burao	COOPI	53	0	0	0	2	55	0.96	0.00	0.00	0.04
BURHAKABA	W V	6	0	0	0	0	7	0.86	0.00	0.00	0.00
Burtinle	MSF H	7	0	2	0	0	10	0.70	0.20	0.00	0.00
Daryel B/burte	ZAMZAM	21	0	2	0	1	26	0.81	0.08	0.00	0.04
Dinsor	MSF CH	72	1	3	1	1	81	0.90	0.04	0.01	0.01
EL Gulae	LNGO	10	1	1	0	0	12	0.92	0.08	0.00	0.00
Eldere	CISP	7	0	0	0	0	7	1.00	0.00	0.00	0.00
Erigavo	Mayor	19	0	1	0	0	20	0.95	0.05	0.00	0.00
Gabiley	WV	18	0	0	0	0	19	0.95	0.00	0.00	0.00
Galkaio	MSF H	42	0	1	0	1	44	0.95	0.02	0.00	0.02
Galkaio South	MSF H	22	1	0	0	4	31	0.74	0.00	0.00	0.13
Garbaharey	GHC	10	0	0	0	0	10	1.00	0.00	0.00	0.00
Garowe	Merlin	11	1	1	1	0	14	0.86	0.07	0.07	0.00
Haradere	CISP	4	0	0	0	0	4	1.00	0.00	0.00	0.00
Hargeisa	KJRC	124	3	2	5	5	146	0.87	0.01	0.03	0.03
Jalaqsi	ZAMZAM	25	0	0	0	0	27	0.93	0.00	0.00	0.00
Jamame	Muslim Aid	38	1	4	0	1	45	0.87	0.09	0.00	0.02
Jilib	MercyInternational	58	1	1	0	0	60	0.98	0.02	0.00	0.00
Jowhar	Interrsos	20	0	0	0	0	20	1.00	0.00	0.00	0.00
Kismayo	Muslim Aid	37	0	5	0	1	43	0.86	0.12	0.00	0.02
Lasanod	MerInternational	41	0	0	0	1	44	0.93	0.00	0.00	0.02
Luuq	GHC	12	0	0	0	0	12	1.00	0.00	0.00	0.00
Merka	SWISSO	31	0	1	0	1	34	0.91	0.03	0.00	0.03
Merka Hospital	COSV	21	0	1	0	0	24	0.88	0.04	0.00	0.00
Mogadishu-Ayan	Muslim Aid	5	0	1	0	0	6	0.83	0.17	0.00	0.00
Mogadishu-Finsom	Finsom	65	2	1	0	3	72	0.93	0.01	0.00	0.04
Mogadishu-Manhal	Manhal	49	0	2	0	3	54	0.91	0.04	0.00	0.06
Mogadishu-Mercy	MercyInternational	76	0	4	4	11	98	0.78	0.04	0.04	0.11
Mogadishu-Muslim	Muslim Aid	43	11	0	0	17	73	0.74	0.00	0.00	0.23
Moga - SAACID	SAACID	56	0	0	2	3	64	0.88	0.00	0.03	0.05
Qoryoley	COSV	30	0	1	0	4	37	0.81	0.03	0.00	0.11
Tiyeglow	W V	5	0	0	0	0	5	1.00	0.00	0.00	0.00
Wajid	W V	2	0	1	0	0	3	0.67	0.33	0.00	0.00
Wanlawein	Muslim Aid	22	1	1	0	1	25	0.92	0.04	0.00	0.04
Xuddur	MSF B	11	5	0	0	0	16	1.00	0.00	0.00	0.00
<b>TOTAL</b>		<b>1400</b>	<b>34</b>	<b>48</b>	<b>15</b>	<b>67</b>	<b>1610</b>	<b>0.89</b>	<b>0.03</b>	<b>0.01</b>	<b>0.04</b>

**Table 2 Notification in Q 3 2007**

No.	Centre	Agency	Smear +VE	Smear -VE	Extra Pulmonary	Relapses	All	S+/PUL	S+/ALL	S-/ALL	EXP
1	Abudwak	LNGO	21	13	7	7	48	0.68	0.58	0.27	
2	Adale	SAACID	24	2	11	2	39	0.93	0.67	0.05	
3	Baidoa	W V	53	24	10	1	88	0.69	0.61	0.27	
4	Barawa	COSV	15	2	1	1	19	0.89	0.84	0.11	
5	Belet-Hawa	GHC	37	20	1	8	66	0.69	0.68	0.30	
6	BelelVRF(WAMY)	WAMY	91	17	16	4	128	0.85	0.74	0.13	
7	Beletweine-Zamzam	ZAMZAM	40	29	11	1	81	0.59	0.51	0.36	
8	Berbera	COOPI	15	16	11	0	42	0.48	0.36	0.38	
9	Borama	COOPI	33	14	38	7	92	0.74	0.43	0.15	
10	Bosaso	MInternational	39	26	10	10	85	0.65	0.58	0.31	
11	Buale	W V	62	0	6	7	75	1.00	0.92	0.00	
12	Bulomarar	MSF H	11	3	8	1	23	0.80	0.52	0.13	
13	Burao	COOPI	79	60	33	2	174	0.57	0.47	0.34	
14	BURHAKABA	W V	23	2	2	0	27	0.92	0.85	0.07	
15	Burtinle	MSF H	10	2	1	0	13	0.83	0.77	0.15	
16	Daryel B/burte	ZAMZAM	28	11	7	4	50	0.74	0.64	0.22	
17	Dinsor	MSF CH	85	7	13	5	110	0.93	0.82	0.06	
18	EL Gula	MSF H	6	0	0	2	8	1.00	1.00	0.00	
19	Eldere	CISP	6	4	0	0	10	0.60	0.60	0.40	
20	Erigavo	Mayor	35	4	4	6	49	0.91	0.84	0.08	
21	Gabiley	WV	16	9	6	1	32	0.65	0.53	0.28	
22	Galkaio	MSF H	55	32	25	4	116	0.65	0.51	0.28	
23	Galkaio South	MSF H	31	11	17	7	66	0.78	0.58	0.17	
24	Garbaharey	GHC	13	6	5	0	24	0.68	0.54	0.25	
25	Garowe	Merlin	22	11	4	1	38	0.68	0.61	0.29	
26	Haradere	CISP	6	4	0	0	10	0.60	0.60	0.40	
27	Hargeisa	KJRC	146	145	118	15	424	0.53	0.38	0.34	
28	Jalaqsi	ZAMZAM	38	0	38	0	76	1.00	0.50	0.00	
29	Jamame	Muslim Aid	6	1	4	0	11	0.86	0.55	0.09	
30	Jilib	MInternational	37	0	6	4	47	1.00	0.87	0.00	
31	Jowhar	Interrsos	35	14	11	2	62	0.73	0.60	0.23	
32	Kismayo	Muslim Aid	41	0	5	3	49	1.00	0.90	0.00	
33	Lasanod	Me International	34	16	11	2	63	0.69	0.57	0.25	
34	Luuq	GHC	7	2	10	0	19	0.78	0.37	0.11	
35	Merka	SWISSO	36	2	1	5	44	0.95	0.93	0.05	
36	Merka Hospital	COSV	21	2	9	2	34	0.92	0.68	0.06	
37	Mogadishu-Ayan	Muslim Aid	3	3	2	0	8	0.50	0.38	0.38	
38	Mogadishu-Finsom	Finsom	47	7	21	2	77	0.88	0.64	0.09	
39	Mogadishu-Manhal	Manhal	34	40	6	4	84	0.49	0.45	0.48	
40	Mogad-Mercy	MeInternational	95	7	0	1	103	0.93	0.93	0.07	
41	Mogadi - Muslim Aid	Muslim Aid	59	12	10	0	81	0.83	0.73	0.15	
42	Mogadishu - SAACID	SAACID	60	20	28	9	117	0.78	0.59	0.17	
43	Qoryoley	COSV	42	4	7	0	53	0.91	0.79	0.08	
44	Tiyeglow	W V	9	1	0	0	10	0.90	0.90	0.10	
45	Wajid	W V	10	1	5	0	16	0.91	0.63	0.06	
46	Wanlawein	Muslim Aid	29	3	2	1	35	0.91	0.86	0.09	
47	Xuddur	MSF B	15	19	17	0	51	0.44	0.29	0.37	
	<b>TOTAL</b>		<b>1660</b>	<b>628</b>	<b>558</b>	<b>131</b>	<b>2977</b>	<b>0.74</b>	<b>0.60</b>	<b>0.21</b>	

**Table 3 Smear conversion rate Q 2 2007**

	Centre	Agency	Smear -ve	Smear +ve	Died	Failure Smear +ve	Default (Smear -ve)	Transferred Out	Total Evaluated	SC
1	Abudwak	LNGO	19	1	2	0	1	3	26	0.73
2	Adale	SAACID	13	0	0	0	0	0	13	1.00
3	Baidoa	W V	58	7	3	0	0	1	69	0.84
4	Barawa	COSV	22	1	0	0	1	0	24	0.92
5	Belet-Hawa	GHC	27	1	1	0	0	0	29	0.93
6	BeleIVRF(WAMY)	WAMY	98	0	1	0	0	0	99	0.99
7	Beletweine-Zamzam	ZAMZAM	26	3	1	0	0	0	30	0.87
8	Berbera	COOPI	23	0	0	0	0	0	23	1.00
9	Borama	COOPI	18	0	2	0	0	0	20	0.90
10	Bosaso	MerInternational	35	2	1	0	4	1	43	0.81
11	Buale	W V	51	0	4	0	0	0	55	0.93
12	Bulomarar	Hayat Group	9	0	0	0	0	0	9	1.00
13	Burao	COOPI	61	3	0	0	0	0	64	0.95
14	BURHAKABA	W V	2	0	0	0	0	0	2	1.00
15	Burtinle	MSF H	9	1	0	0	0	0	10	0.90
16	Daryel B/burte	ZAMZAM	23	0	2	0	0	1	26	0.88
17	Dinsor	MSF CH	61	3	1	0	1	2	68	0.90
18	Eldere	CISP	16	1	0	0	0	0	17	0.94
19	Erigavo	Mayor	13	0	0	0	0	0	13	1.00
20	Gabiely	W V	11	0	1	0	0	1	13	0.85
21	Galkaio	MSF H	46	1	1	1	0	0	49	0.94
22	Galkaio South	MSF H	31	1	1	0	0	0	33	0.94
23	Garbaharey	GHC	8	0	0	0	0	0	8	1.00
24	Garowe	Merlin	14	2	0	1	0	1	18	0.78
25	Haradere	CISP	3	0	0	0	0	0	3	1.00
26	Hargeisa	KJRC	157	8	4	0	0	1	170	0.92
27	Jalaqsi	ZAMZAM	50	0	2	0	0	0	52	0.96
28	Jamame	Muslim Aid	15	0	0	1	1	1	18	0.83
29	Jilib	MeInternational	53	0	3	0	0	2	58	0.91
30	Jowhar	Interrsos	34	1	2	0	2	3	42	0.81
31	Kismayo	Muslim Aid	24	1	0	0	1	1	27	0.89
32	Lasanod	MercyInternational	32	0	2	0	0	0	34	0.94
33	Luuq	GHC	8	0	0	0	0	0	8	1.00
34	Merka	SWISSO	28	0	1	0	1	1	31	0.90
35	Merka Hospital	COSV	23	0	0	0	0	0	23	1.00
36	Mogadishu - Ayan	Muslim Aid	4	0	0	0	0	0	4	1.00
37	Mogadishu - Finsom	Finsom	27	1	0	0	0	0	28	0.96
38	Mogadishu - Mercy	Merc International	47	1	1	0	0	2	51	0.92
39	Mogadishu - Manhal	Manhal	51	1	0	0	0	0	52	0.98
40	Mogadi - Muslim Aid	Muslim Aid	27	5	0	0	1	2	35	0.77
41	Mogadishu -SAACID	SAACID	30	0	3	1	1	1	36	0.83
42	Qoryoley	COSV	24	0	3	0	2	1	30	0.80
43	Tiyeglow	W V	3	0	0	0	0	0	3	1.00
44	Wajid	W V	11	0	0	0	0	0	11	1.00
45	Wanlaweine	Muslim Aid	20	0	0	1	0	0	21	0.95
46	Xuddur	MSF B	13	0	0	0	0	0	13	1.00
	<b>TOTAL</b>		<b>1378</b>	<b>45</b>	<b>42</b>	<b>5</b>	<b>16</b>	<b>25</b>	<b>1511</b>	<b>0.91</b>

