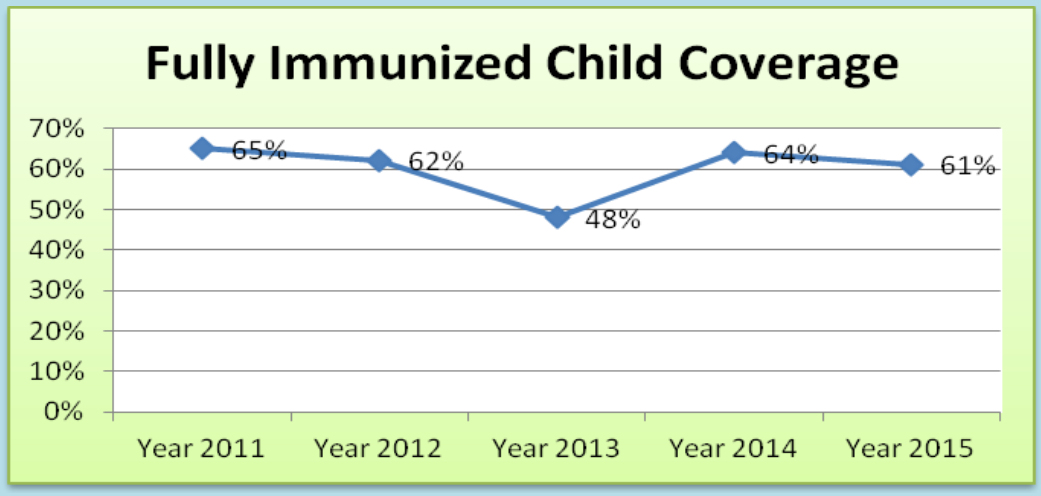
MINISTRY OF HEALTH- COUNTY- GOVERNMENT OF GARISSA

REPUBLIC OF KENYA

MINISTRY OF HEALTH (2015)



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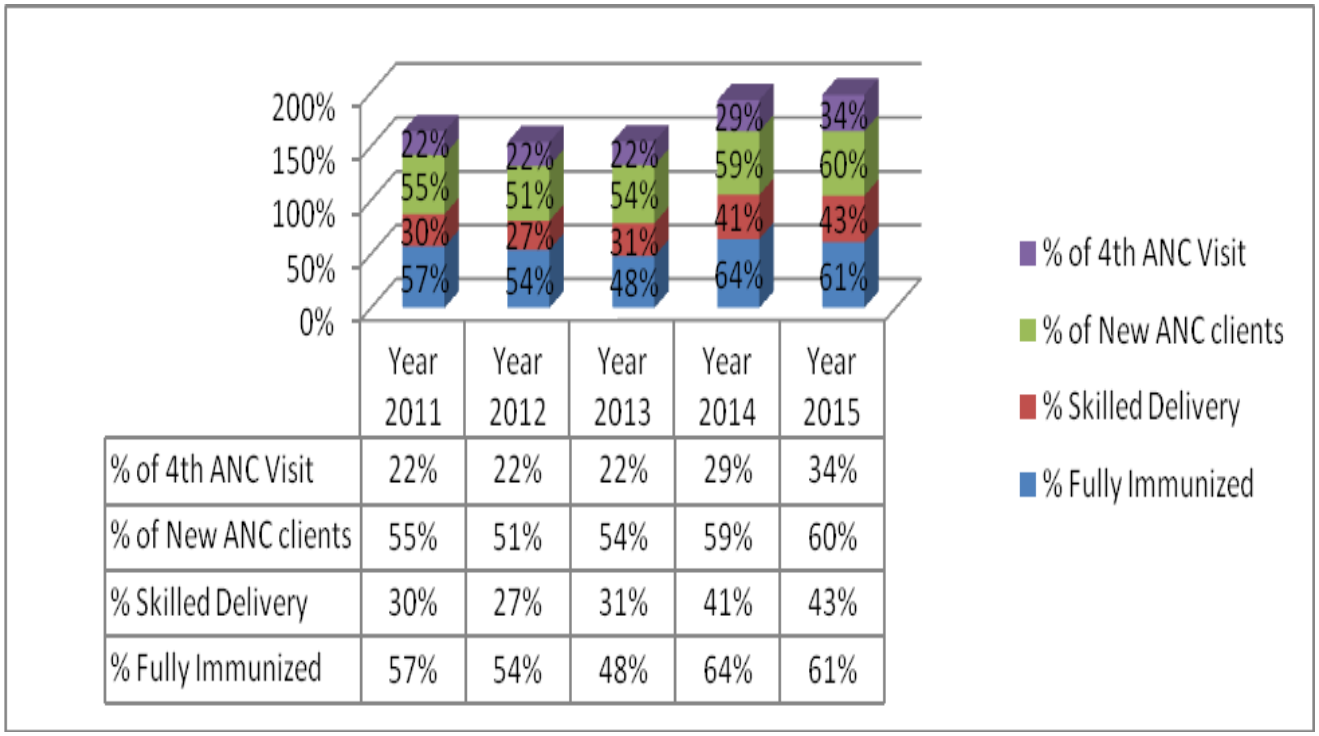
GARISSA COUNTY STATISTICS AT GLANCE

Impact level Indicators	National estimates	County estimates	Source
Neonatal Mortality Rate (per 1,000 births)	22/1000	24/1000	KDHS 2014
Infant Mortality Rate (per 1,000 births)	39/1000	37/1000	KDHS 2014
Under 5 Mortality Rate (per 1,000 births)	52/1000	44/1000	KDHS 2014
Child Mortality	14/1000	8/1000	KDHS 2014
Post neonatal Mortality	16/1000	13/1000	KDHS 2014
Maternal Mortality Rate (per 100,000 births)		646/100,000	KPS 2013
Stunting (%)	26	16	KDHS 2014
Underweight (%)	11	13	KDHS 2014
Total Fertility Rate	3.9	6.1	KDHS 2014

Trends in achievement of major impact indicators



	Year 2011	Year 2012	Year 2013	Year 2014	Year 2015
% of 4th ANC Visit	22%	22%	22%	29%	34%
% of New ANC clients	55%	51%	54%	59%	60%
% Skilled Delivery	30%	27%	31%	41%	43%
% Fully Immunized	57%	54%	48%	64%	61%

FOREWORD

Health Information System (HIS) annual report provides information and interpretation related to a wide range of indicators computed on the basis of routine data generated from facility based Health Information System (HIS) during the year 2015. The report provides the data and information that are required to support evidence – based decision making in the county Health care planning and programming. Routine data collection, compilation, analysis and use constitute an important management function of an effective health care delivery system. Sound and effective management decisions are based on evidence derived from use of good statistics which provide guidance to the decision making process at all levels in the health system. In this issue, analyzed data reported over the year 2015 (January to December).

The data which has been analyzed and aggregated is useful for planning purposes not at only the sub county but also the county and national levels depending on each levels needs and requirements. Health care providers are frequently concerned with the collection and reporting on health service (patient) data with minimal, if any, collection and reporting on management/ administrative data. In the absence of data collection and provision of information health resources such as personnel, finances, physical facilities, transport and equipment, becomes difficult to relate health resources to actual provision of services to the population being served.

This report provides reliable and relevant health information for use by all in order to make evidence based decisions in the allocation of the scarce resources available for purposes of improving the quality of health services at all levels in Garissa County

Currently District Health Information System (DHIS) is use by all counties to manage health data.

Dr Farah Amin
County Director of Health
Garissa County

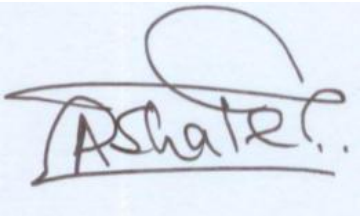
ACKNOWLEDGEMENT

We would like to acknowledge the efforts of health facilities and other institutions and individuals who participated and contributed into providing material that was used to draw up the report and the subsequent development of this report.

In particular, we wish to specially acknowledge CEC Health, COH, CDH and Heads of Division for their strategic direction and leadership. Equally appreciation goes to the entire county health management and sub county health team for their support and commitment.

Special thanks go to the editorial team for the technical input and commitment during the process of developing this report

Finally we wish to thank all those who contributed directly or indirectly into the development of this report.



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ABBREVIATION AND ACRONYMS

1. ABD- Available Bed Days
2. ACF- Action Against Hunger
3. ALOS- Average Length Of Stay
4. AMREF-Africa Medical Research Foundation
5. ANC- Antenatal Clinic
6. ART- Antiretroviral Therapy
7. BCG- Bacillus Calmete Guerin
8. CDC- Centre for Disease Control
9. CHC- Community Health Committees
10. CHIS- Community Health Information System
11. CHMT-County Health Management Team
12. CHEW- Community Health Extension Worker
13. CU- Community Unit
14. DHIS- District Health Information Software
15. DOMC- Division Of Malaria Control
16. ESP- Economic Stimulus program
17. FIC- Fully Immunized Child
18. GCRH- Garissa County Referral Hospital
19. GF- Global Fund
20. GOK- Government of Kenya
21. HIS- Health Information System
22. HIV/AIDS- Human Immune Deficiency Virus
23. IRC- International Rescue Committee
24. HRH- Human Resource for Health
25. KRCS- Kenya Red Cross Society
26. LSTM- Liverpool School of tropical medicine
27. MDR- Multiple Drug Resistance
28. NASCOP- National Aids and STI Control P

29. OBD- Occupied Bed Days
30. OPD- Out Patient Department
31. OPV- Oral Polio Vaccine
32. OTP- Out-patient Therapeutic Program
33. Penta- Pentavelent
34. PMTCT- Prevention of Mother To Child Transmission
35. SCHMT- Sub County Health Management Team
36. SFP- Supplementary Food Program
37. TB - Tuberculosis
38. TDH- Terre Des Hommes
39. UNICEF- United Nations Children's Fund
40. WFP- World Food Programme

CHAPTER 1: INTRODUCTION

The Garissa County Annual Report 2015 is a key to determining the achievement and performance of health indicators during the year, trends and achievements, key milestones issues and challenges. This report will guide the planning of health service provision in the county.

The report covers programme activities, interventions and achievements. The source of data was mainly drawn from:

- Outpatient system that reports morbidity and other statistics that are collected for patients who are nonresident in health facilities
- In patient system that reports morbidity and mortality for patients admitted in health facilities
- Service workload statistics that analyze health service utilization
- Hospital administrative statistics that describes bed utilization and other activities in the inpatient departments of the hospitals.

This report is in accordance with the monitoring and evaluation plan in the County health system which essentially based on reports from the routine Health information system.

1.0: Garissa County Demographic Profile

Garissa County is one of the 47 counties in Kenya. It covers an area of 44,174.1 km2 and lies between latitude 10 58'N and 20 1' S and longitude 380 34'E and 410 32'E. The county borders the Republic of Somalia to the East, Lamu County to the South, Tana River County to the West, Isiolo County to the North West, and Wajir County to the North.

Figure 1: Garissa Map

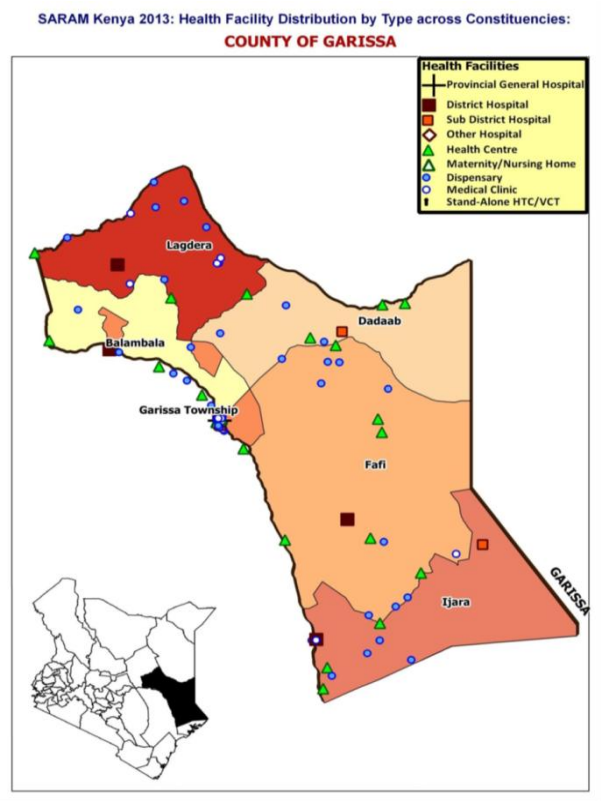


Table 1: Population per Sub County

No	Sub County Units	CENSUS	Population trends					
		2009	Year 2013	Year 2014	Year 2015	Year 2016	Year 2017	Year 2018
1	Garissa	116953	136608	142017	147641	153488	159566	165885
2	Balambala	73109	85395	88777	92292	95947	99747	103697
3	Lagdera	92636	108204	112489	116943	121574	126389	131394
4	Dadaab	152487	178113	185167	192499	200122	208047	216286
5	Fafi	95212	111213	115617	120195	124955	129903	135048
6	Ijara	43849	51218	53246	55355	57547	59825	62195
7	Hulugho	48814	57017	59275	61622	64063	66600	69237
	TOTAL	**623,060**	**727,768**	**756,588**	**786,547**	**817,696**	**850,077**	**883,744**

Table 2: Garissa county population by category-2016

	Description	Proportion	Population estimates
1	Total population		**817,696**
2	Total Number of Households	103,966	136,283
3	Children under 1 year (12 months)	3.60%	29,437
4	Children under 5 years (60 months)	16.90%	138,191
5	Under 15 year population	42.30%	345,885
6	Women of child bearing age (15 – 49 Years)	24%	196,247
7	Estimated Number of Pregnant Women	3.70%	30,255
8	Estimated Number of Deliveries	3.70%	30,255
9	Estimated Live Births	3.69%	30,173
10	Total number of Adolescent (15-24)	21%	171,716
11	Adults (25-59)	26.10%	213,419
12	Elderly (60+)	4.80%	39,249

1.1: Distribution of Health Facilities in the County

Health care services in the county is provided by a mix of public, private, faith based, traditional groups and NGOs (especially in the refugee camps) with the government providing over 90% of the health Services.

Table 3: Distribution of Health Facilities in the county per Sub County by Type

Sub county	community units	Dispensaries	Nomadic clinics	Health centers	Hospital	Medical clinics	Nursing homes
Balambala	8	5	0	3	1	0	0
Dadaab	14	10	0	4	1	2	0
Fafi	9	6	0	5	1	0	0
Garissa	16	12	0	3	3	80	1
Hulugho	8	4	0	1	1	0	0
Ijara	11	6	0	3	1	0	0
Lagdera	15	8	0	2	1	0	0
County	**81**	**51**	**0**	**21**	**9**	**82**	**1**

Table 4: Distribution of Health Facilities in the county per Sub County by Type

Sub county	Community	FBOs	MOH	Private	NGO	Total
Balambala	8	0	9	0	0	17
Dadaab	14	0	15	2	0	31
Fafi	9	0	12	0	0	21
Garissa	16	1	16	82	0	115
Hulugho	8	0	6	0	0	14
Ijara	11	0	10	0	0	21
Lagdera	15	0	11	0	0	26
County	**81**	**1**	**79**	**84**	**0**	**245**

Table 5: Facilities in Dadaab refugee camps

1	**Hagadera Camp**	**1 hospital and 5 health posts**
2	IFO Camp	1 hospital and 6 health posts
3	IFO 2 Camp	1 hospital and 3 health posts
4	Dagahaley Camp	1 hospital and 4 health posts

Table 6: Distribution of Human resource

S/no	Cadres	Garissa	Balambala	Fafi	Lagdera	Hulugho	Ijara	Dadaab	County
1	Medical Consultants	5	0	0	0	0	0	0	5
2	General medical officers	20	0	2	2	0	2	2	28
3	Specialized clinical officers	13	0	2	0	0	0	0	13
4	General clinical officers	30	4	5	4	3	8	4	59
5	Community Oral Health officers	2	0	0	1	0	1	1	5
6	Dentists	3	0	0	0	0	0	0	3
7	Dental Technologists	2	0	1	1	0	1	1	6
8	Nursing officers (Bsn)	3	1	0	2	0	2	1	9
9	Kenya Registered Community Health Nurses	124	8	18	13	9	14	20	206
10	Kenya Enrolled Community Health Nurses	32	13	8	12	3	11	8	87

11	Public Health Officers	16	3	5	6	4	4	4	42
12	Public Health Technicians	6	0	0	5	0	1	0	12
13	Radiographers	5	0	0	0	0	0	0	5
14	Pharmacists	4	0	0	0	0	0	0	4
15	Pharmacist Technologists	15	2	1	2	1	3	3	27
16	Orthopaedic Technologists	4	0	0	1	0	1	1	7
17	Nutritionists	9	4	3	3	3	2	3	27
18	Physiotherapists	5	0	0	1	0	0	0	6
19	Laboratory Technologist	31	6	7	4	3	7	6	64
20	Health Record & Information Officers	9	0	2	0	2	1	2	16
21	Health Record & Information Technicians	3	1	0	3	0	0	0	7
22	Occupational Therapists	4	0	0	0	0	1	1	6
23	Medical Engineering Technicians	0	0	0	0	0	0	0	0
24	Medical Engineering Technologists	4	0	0	0	0	0	0	4
25	Trained Community Health Workers	350	400	21 0	165	320	348	280	2073
26	Community Health Extension Workers	12	10	8	6	0	3	9	48
27	All others technical officer VCT Counselor	7	0	1	2	0	2	0	12
28	Administrators	3	0	1	1	1	1	1	8
29	Accountants	6	0	0	0	0	0	0	6
30	Secretaries	2	0	0	1	0	1	0	4
31	Social health workers	2	0	0	0	0	0	0	2
32	Clerks	16	0	0	2	1	2	2	23
33	Mortuary attendants	1	0	0	0	0	0	0	1
34	Cleaners	32	0	4	15	8	2	28	89
35	Cooks	9	1	0	2	1	1	1	15
36	Drivers	8	1	1	3	2	2	4	21
37	Security officers	13	8	3	14	8	4	17	67
38	All others non-technical HR	6	28	0	0	0	0	0	34

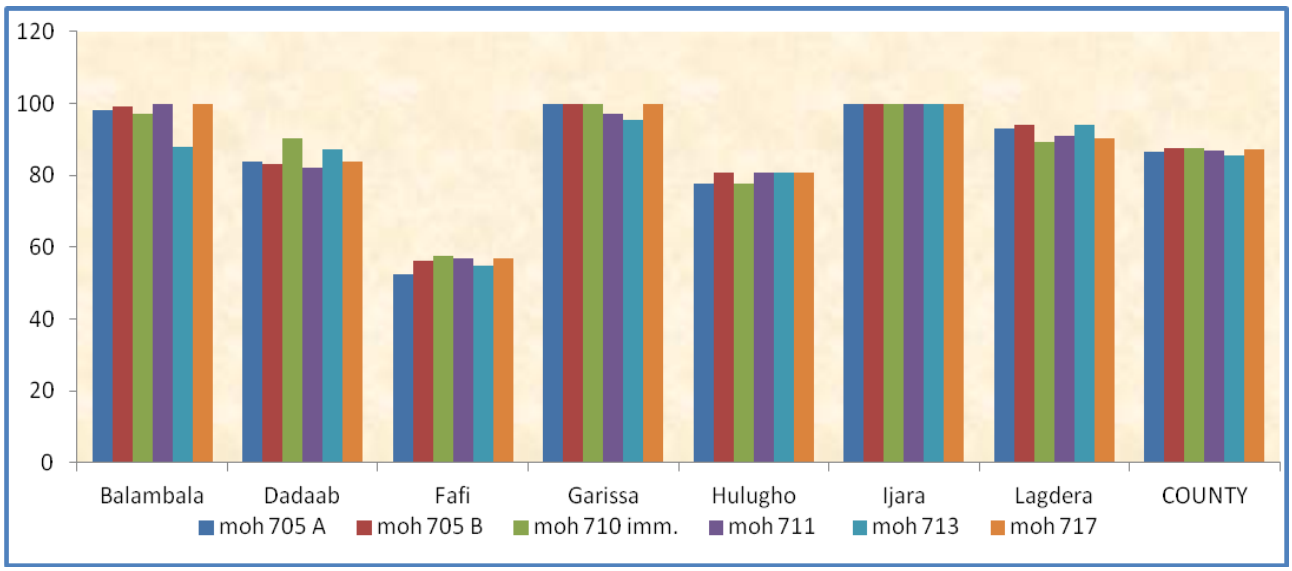
CHAPTER 2: SERVICE DELIVERY STATISTICS

The analyzed data for 2015 are as follows:

2.0: County Reporting Rate

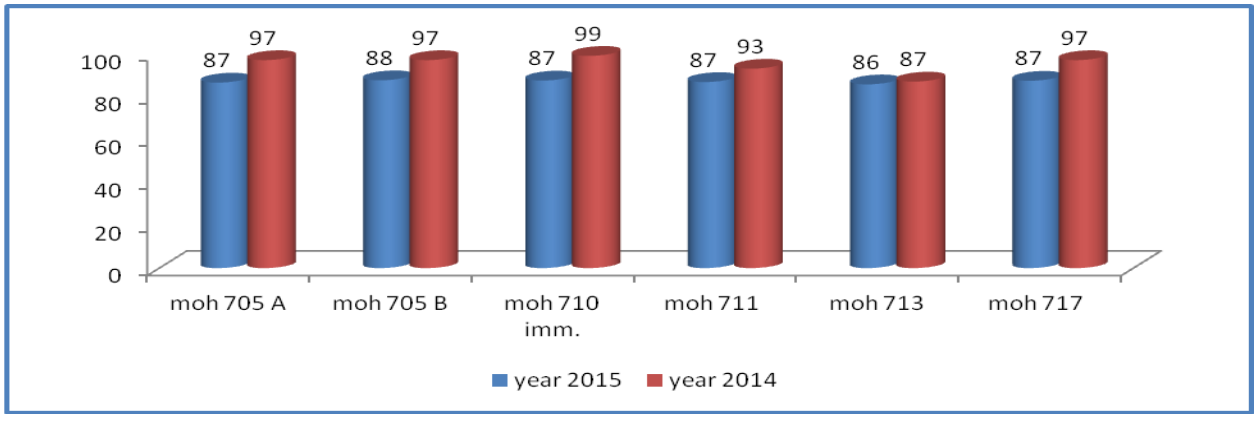
Overall reporting rate and timeliness for (MOH 705A under 5 outpatient morbidity, MOH 705 B over 5 outpatient morbidity, MOH717 workload, MOH 710 Immunization, MOH 711B Integrated tool, MOH 731 (1-6) for the period January – December 2015.

Figure 2: County Reporting Rate



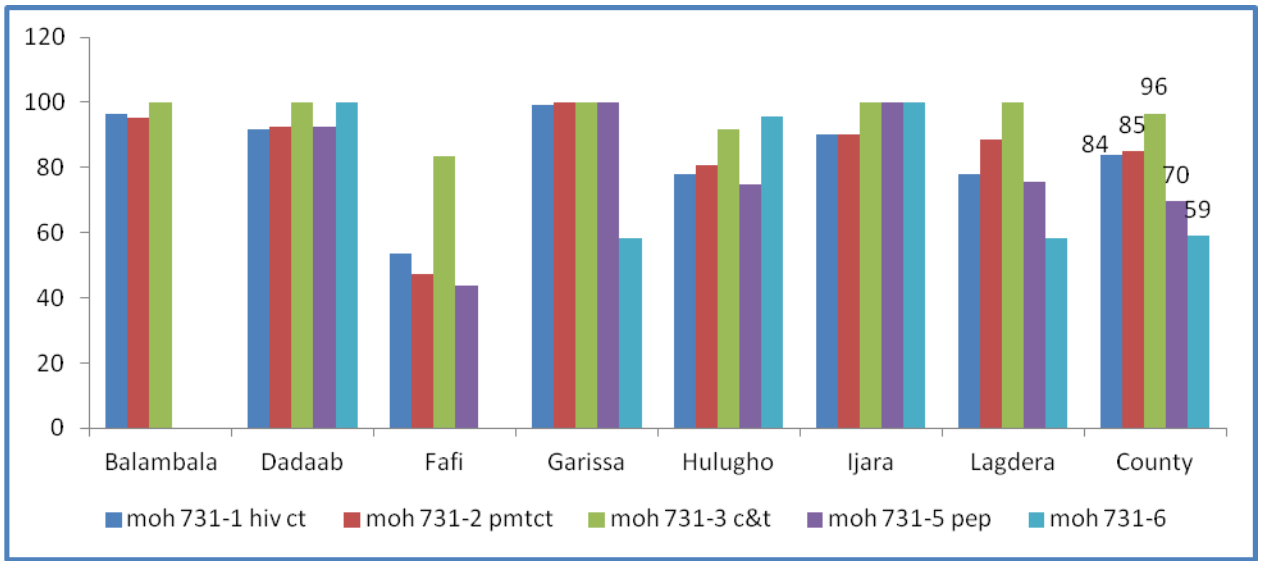
- Overall County reporting rate was at average of 87%, this dropped from 91% in 2014 compared with the year 2015, and this may be due to closure of some facilities in Fafi, Hulugho and Dadaab Sub County due to insecurity.
- Garissa and Ijara sub counties had the highest reporting rate, while Fafi and Hulugho sub counties had the lowest.

Figure 3: Comparison of reporting rates Major Forms 2014 and 2015



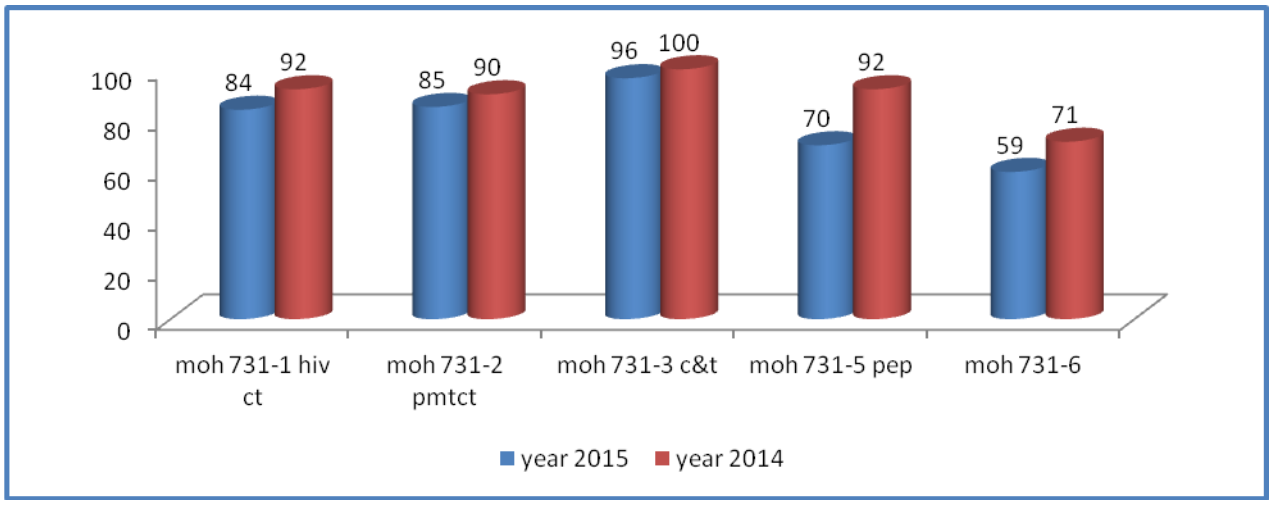
- Reporting rates for the year 2015 dropped when compared to 2014 in all the reports

Figure 4: Reporting Rate MOH 731(1-6) for 2015



- The county overall reporting rate was highest in MOH731-3 for care and treatment, while the lowest was MOH 731-6 for blood safety.
- Generally, in all the data sets, Garissa, Ijara and Dadaab sub counties had the highest reporting rates, while Fafi Sub County had the lowest.

Figure 5: MOH 731 (1-6) comparison for 2014 and 2015



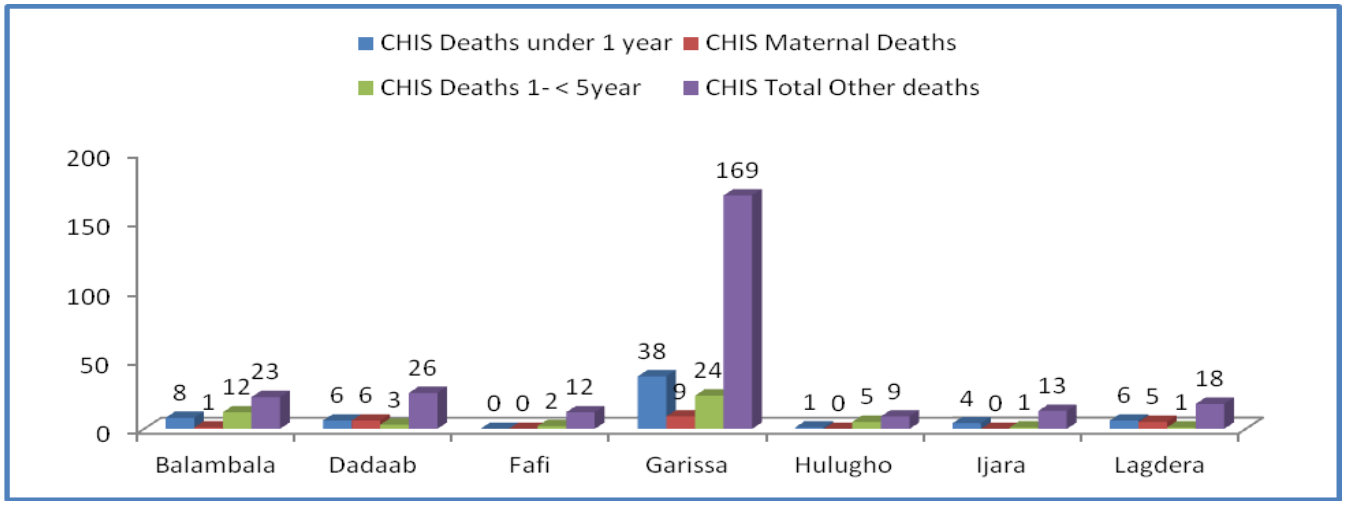
- The reporting of all the reports MOH731 1-6 dropped during the year 2015 this was also noted in other reports

2.1: Community Unit

Table 7: Community Health Extension worker summary

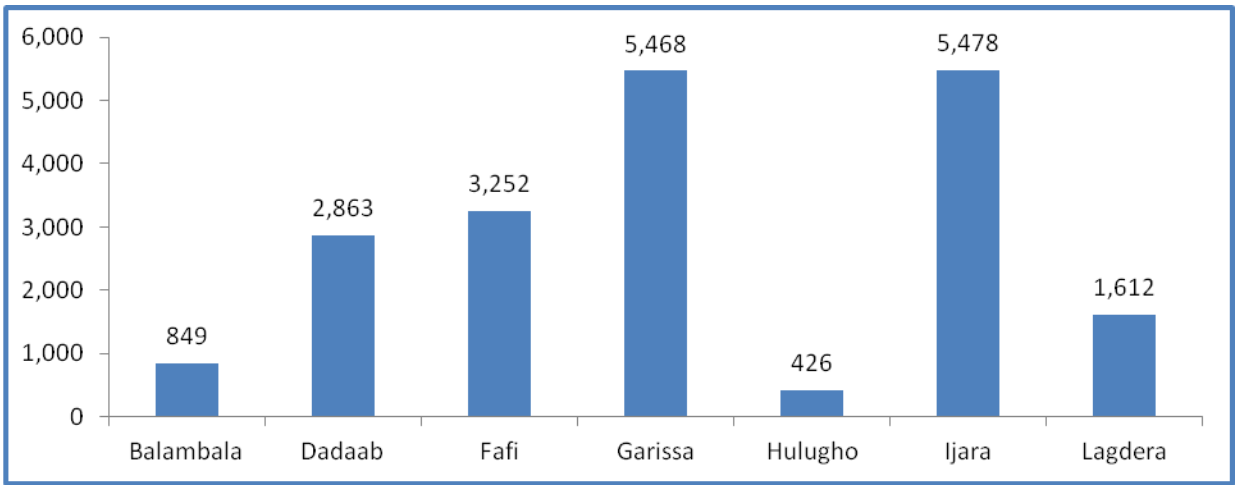
Indicator	Balambala	Dadaab	Fafi	Garissa	Hulugho	Ijara	Lagdera
CHIS Community action days	21	19	29	36	5	18	41
CHIS Dialogue days	21	28	24	87	10	17	37
CHIS Diarrhea cases managed	473	982	456	1,849	96	54	477
CHIS Injuries and wounds managed	413	517	216	1,670	92	16	218
CHIS Chronic illness or cough for more than 2 weeks referred	67	647	204	849	45	222	45
CHIS Newborns referred	35	151	133	336	97	95	33
CHIS Pregnant women referred	591	1,446	453	3,256	172	1,685	952
CHIS Moderate malnutrition cases referred	129	453	272	1,098	50	385	294
CHIS All cases referred	849	2,863	3,252	5,468	426	5,478	1,612
CHIS Fever cases referred	706	1,202	498	1,743	107	161	435
CHIS Severe malnutrition cases referred	26	177	83	605	47	54	74
CHIS Deaths under 1 year	8	6	0	38	1	4	6
CHIS Maternal Deaths	1	6	0	9	0	0	5
CHIS Deaths 1- < 5year	12	3	2	24	5	1	1
CHIS Total Other deaths	23	26	12	169	9	13	18

Figure 6: CHIS Deaths per Sub County, 2015



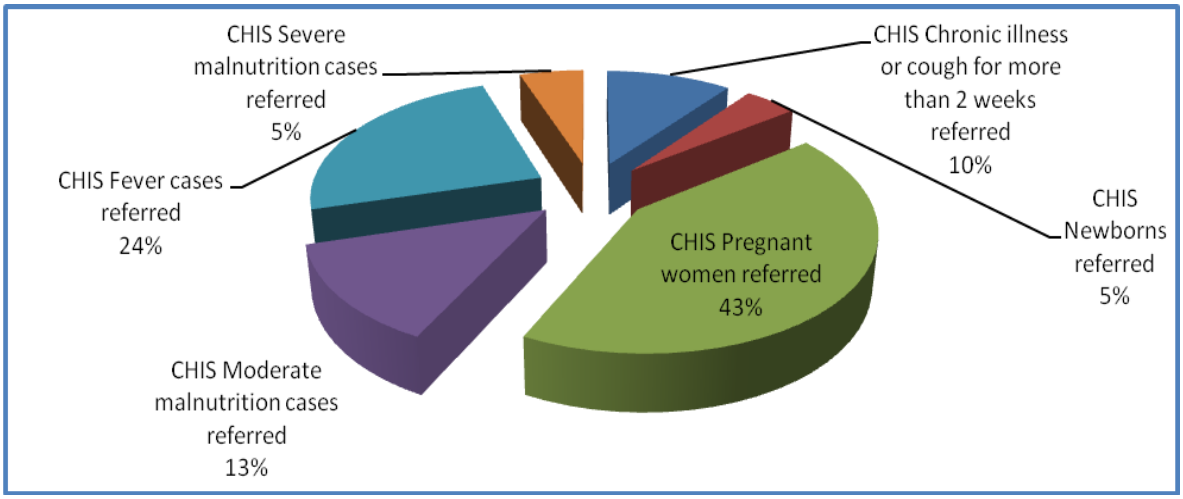
- Garissa Sub County reported the highest number of deaths for all ages while the lowest reported was Hulugho Sub County.

Figure 7: CHIS cases referred



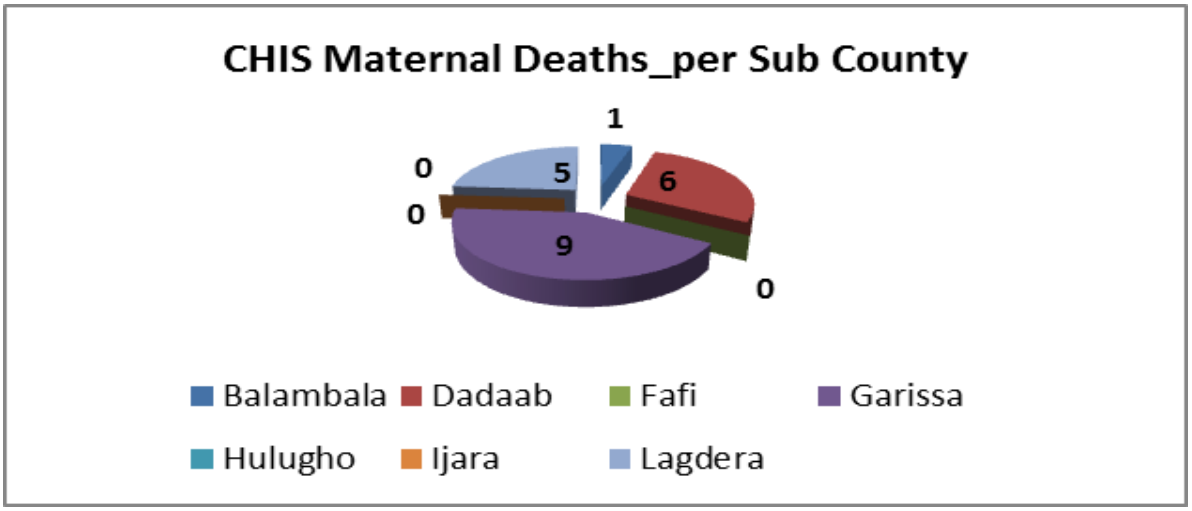
- The highest number of CHIS cases referred was from Ijara and Garissa but was lowest in Hulugho.

Figure 8 CHIS Cases referred in the county



- The highest numbers of cases referred by community units to the link facility were for pregnant mothers at 43%, fever cases at 24%, while the lowest cases were for severe malnutrition and newborns at 5% each.

Figure 9: CHIS maternal deaths

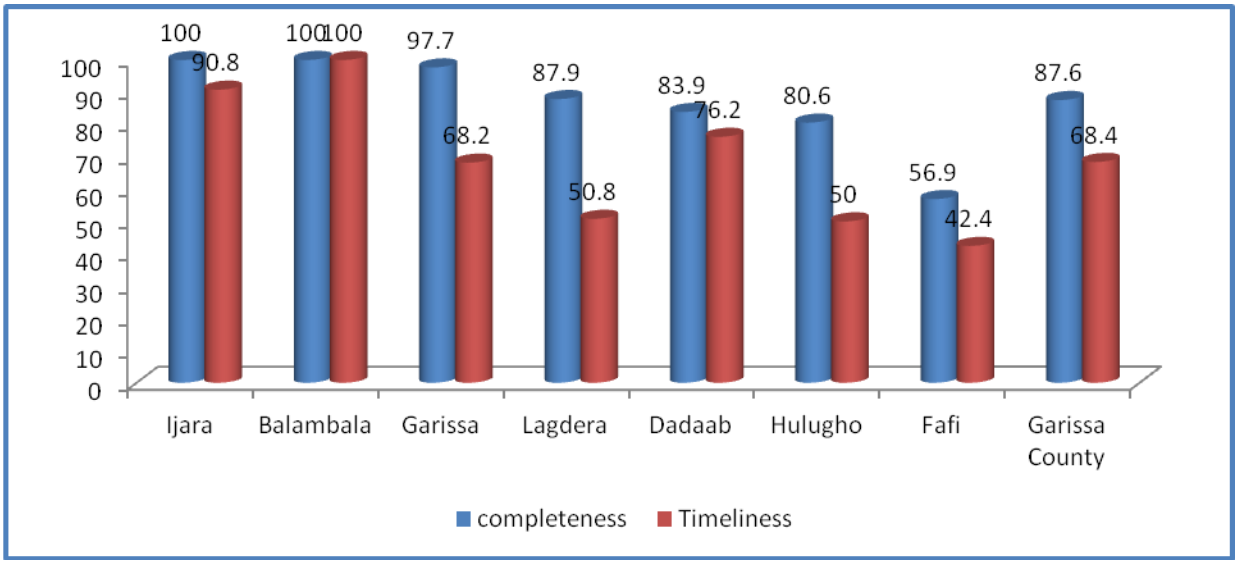


- Garissa sub county had the highest (9) number of maternal deaths reported at community level, while Fafi, Hulugho and Ijara Sub counties had the lowest; Zero each.

2.2: Service Workload

Service workload statistics are derived from the facilities day to day activities on outpatient services, including MCH/FP and specialized clinic services and inpatient services among others. Service workload measures the accessibility and utilization hence use for planning and allocation of resources in a health institution.

Figure 10: Workload reporting rates and timeliness



- Overall County reporting rate was at 88%, Ijara and Balambala had the highest at 100% and the lowest was Fafi Sub County (56.9%)
- There was a drop in reporting rate on completeness for 2015 at 88% compared to 93% for 2014
- In average, 68% of the workload reports were submitted on time within the county.

Table 8: OPD Workload per Sub County

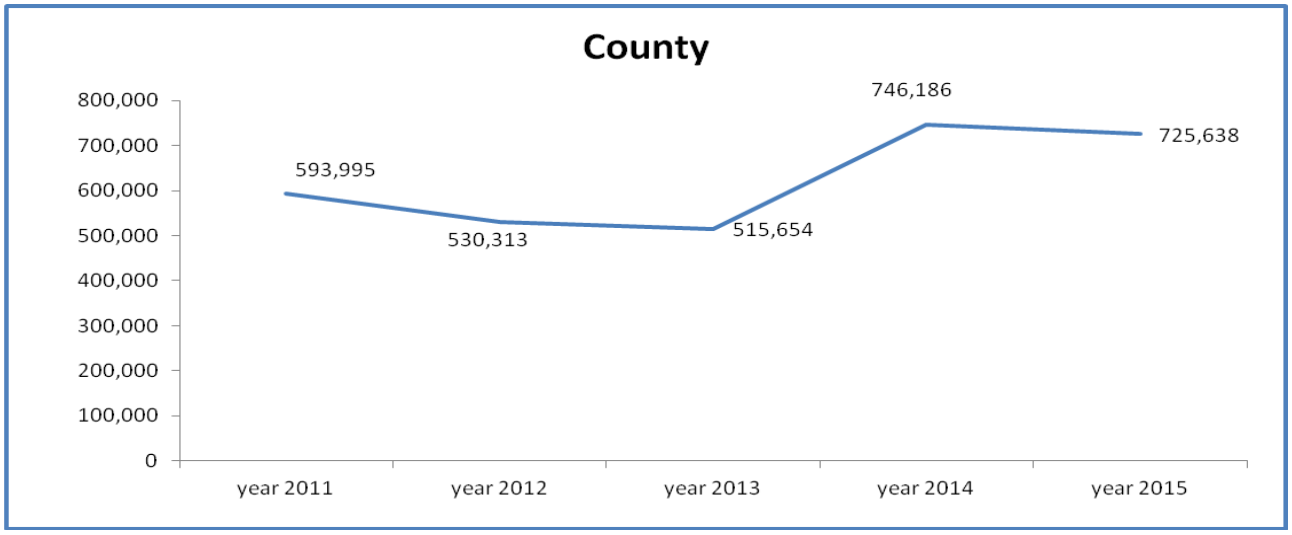
OPD workload	Period	Balambala	Dadaab	Fafi	Garissa	Hulugho	Ijara	Lagdera	County
	2011	45,271	74,535	47,152	274,120	34,132	55,219	63,566	593,995
	2012	42,107	65,111	61,133	234,716	27,529	44,377	55,340	530,313
	2013	43,347	57,832	51,760	237,725	17,925	47,736	59,329	515,654
	2014	59,968	100,923	106,007	302,032	28,385	63,401	85,470	746,186
	2015	55,168	129,171	59,941	301,973	19,453	79,345	80,587	725,638
OPD Average attendance per day	2011	124	204	129	751	94	151	174	1,627
	2012	115	178	167	641	75	121	151	1,449
	2013	119	158	142	651	49	131	163	1,413
	2014	167	280	294	839	79	176	237	2073
	2015	151	354	164	827	53	217	221	1988

Table 9: OPD Workload per Sub County

Facilities	**OPD-Accessibility**		**OPD-Utilization**	
	2014	**2015**	**2014**	**2015**
Hulugho	27%	20%	9%	6%
Ijara	72%	98%	21%	15%
Balambala	45%	41%	10%	10%
Fafi	31%	20%	37%	22%
Lagdera	56%	54%	23%	20%
Dadaab	68%	86%	32%	41%
Garissa	98%	89%	30%	33%
Total	**61%**	**59%**	**25%**	**23%**

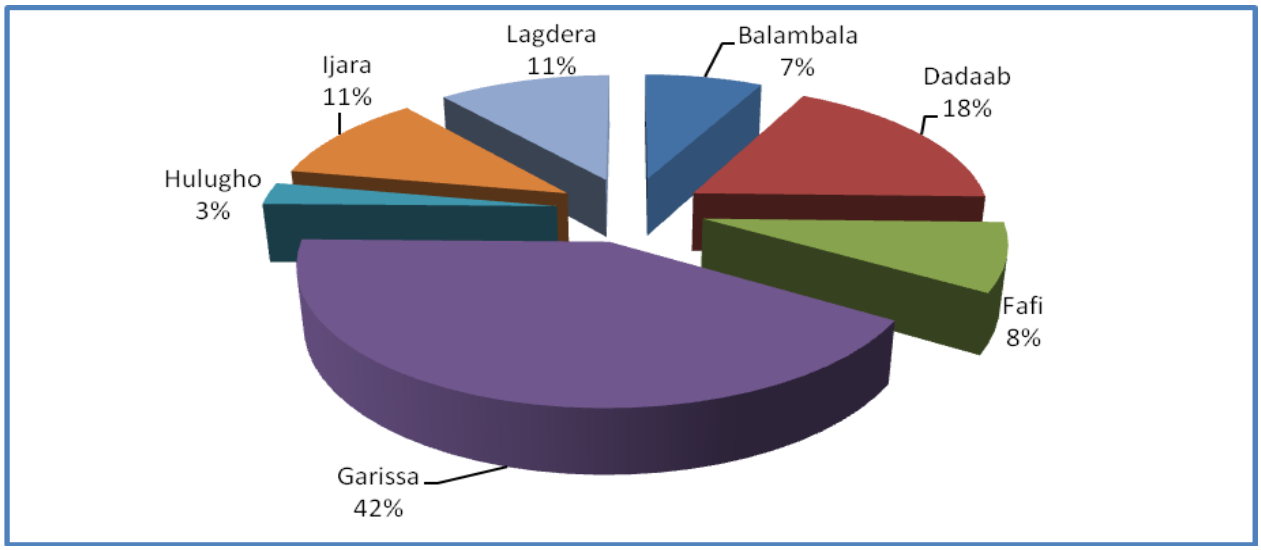
- Accessibility and utilization is tabulated based on population.
- Accessibility measures patient/clients who accessed outpatient filter clinic, normally this are first attendance, while utilization measures frequent use of outpatient filter clinic thus re attendance.
- In year 2015, 59% of the population within the county accessed outpatient filter clinic compared to 61% in year 2014 thus a reduction of 2%.
- In year 2015, Ijara Sub County had the highest accessibility; 98% while Fafi and Hulugho had the lowest 20% each.
- In year 2015, county utilization rate was 23% compared to 25% in year 2014.
- Hulugho Sub County had the lowest utilization in both years.

Figure 11: Workload trend from 2011 to 2015



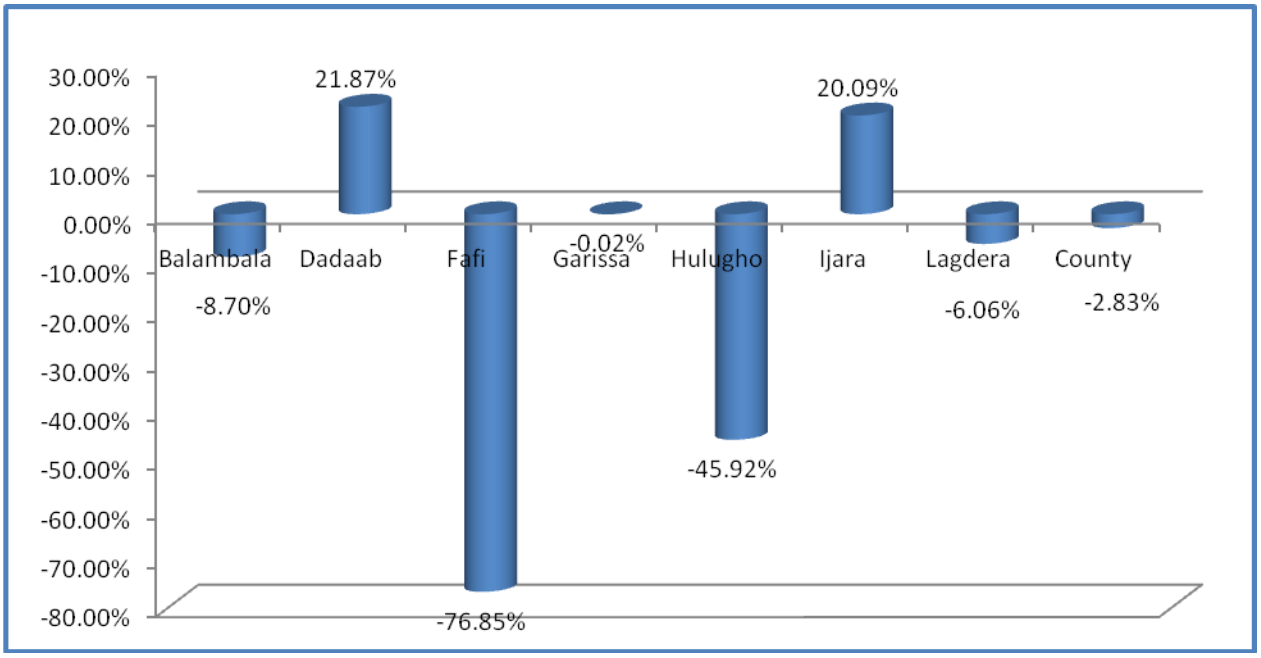
- In year 2014, there was drastic increase in number of clients; this may be due to newly operationalization of facilities and improvement of documentation due to increase of number of staffs. Also more community units were established during this time.

Figure 12: Contribution of each Sub County to the County workload (2015)



- The highest county workload is contributed by Garissa and Dadaab sub counties at 42% and 18% respectively. The lowest workload is from Hulugho Sub County at 3%.

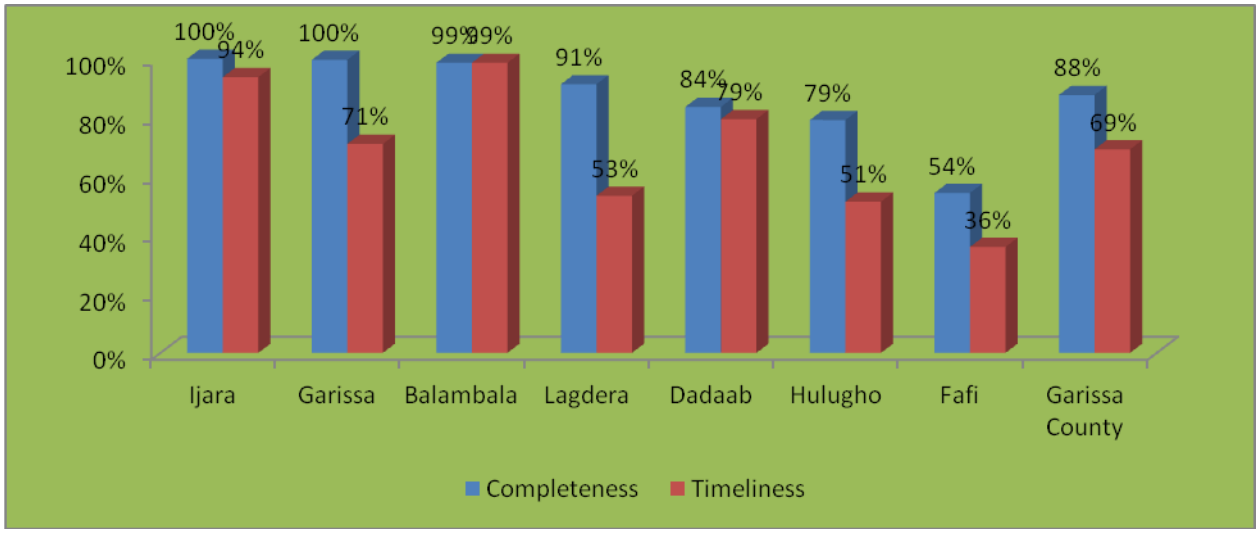
Figure 13: Contribution of each Sub County to the County workload (2015)



- There was notable Workload decrease in the county in 2015 by 2.8%.
- Fafi and Hulugho Sub Counties had the highest decrease; 76% and 46% respectively in year 2015 as compared with 2014.
- The total number of patients/clients served in outpatient per day in all the facilities within the county was 1,988 which is a decrease of 4% (2,073) as compared to year 2014.

2.3: Outpatient Morbidity

Figure 14: Over 5 years and under 5 years outpatient morbidity reporting rate.



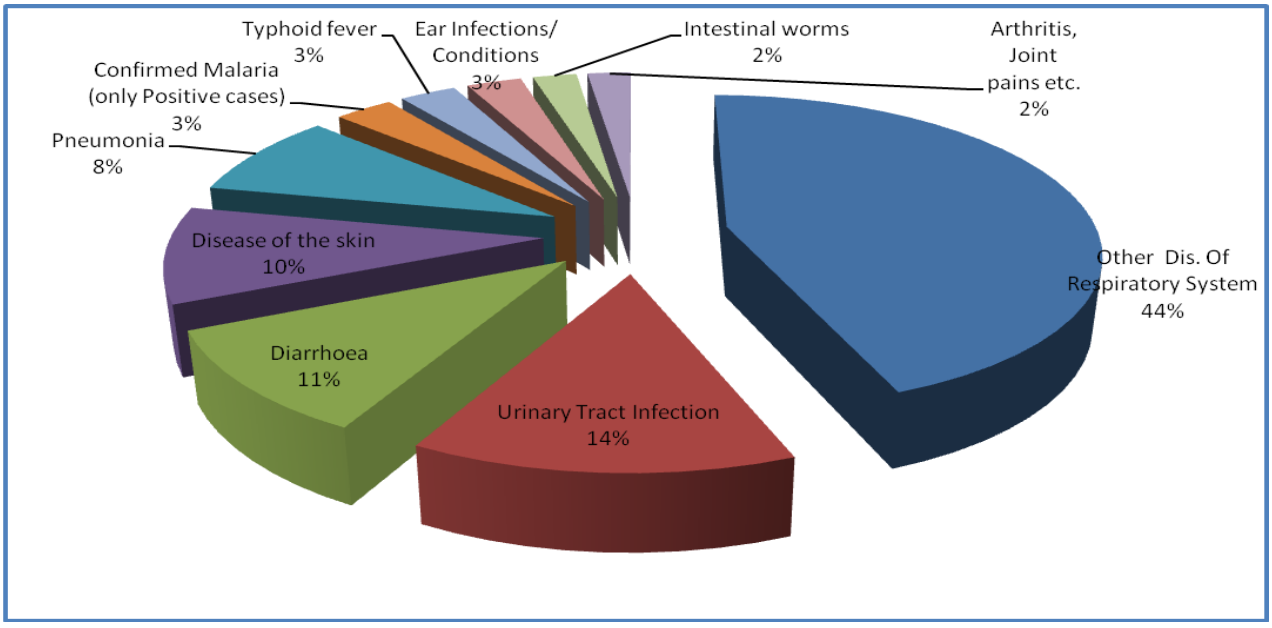
The overall county reporting rate was at 88% compared to 94% in 2014 thus a drop of 6%, the highest being Garissa and Ijara sub counties at 100%, while Fafi sub county being the lowest at 54%. The overall county timelines was at 69%.

Table 10: Top ten morbidity 2015 (under 5 years, over 5 years & combined)

	Combined over 5yrs & under 5yrs		Under 5yrs		Over 5yrs	
	Condition	**%**	**Condition**	**%**	**Condition**	**%**
1	Other Dis. Of Respiratory System	**38%**	Other Dis. of Respiratory System	**45%**	Other Dis. of Respiratory System	**34%**
2	Urinary Tract Infection	**12%**	Diarrhoea	**11%**	Urinary Tract Infection	**18%**
3	Diarrhoea	**9%**	Pneumonia	**6%**	Diseases of the skin	**9%**
4	Disease of the skin	**8%**	Diseases of the skin	**6%**	Pneumonia	**7%**
5	Pneumonia	**7%**	Intestinal worms	**4%**	Diarrhoea	**5%**
6	Confirmed Malaria (only Positive cases)	**3%**	Ear Infections/Conditions	**2%**	Typhoid fever	**4%**
7	Typhoid fever	**3%**	Confirmed Malaria (only Positive cases)	**2%**	Anthritis, Joint pains etc.	**3%**
8	Ear Infections/ Conditions	**2%**	Urinary Tract Infection	**2%**	Confirmed Malaria (only Positive)	**3%**
9	Intestinal worms	**2%**	Eye Infections	**1%**	Road Traffic Injuries	**2%**
10	Arthritis, Joint pains etc.	**2%**	Suspected Malaria	**1%**	Anemia	**2%**

- Diseases of respiratory system are the main cause of outpatient morbidity both in under 5 and over 5 years 45% and 34% respectively, followed by urinary tract infection, Diarrhoea, Diseases of the skin and pneumonia at 12%, 9%, 8%, 7% respectively.

Figure 15: Pie chart showing County top ten combined outpatient morbidity



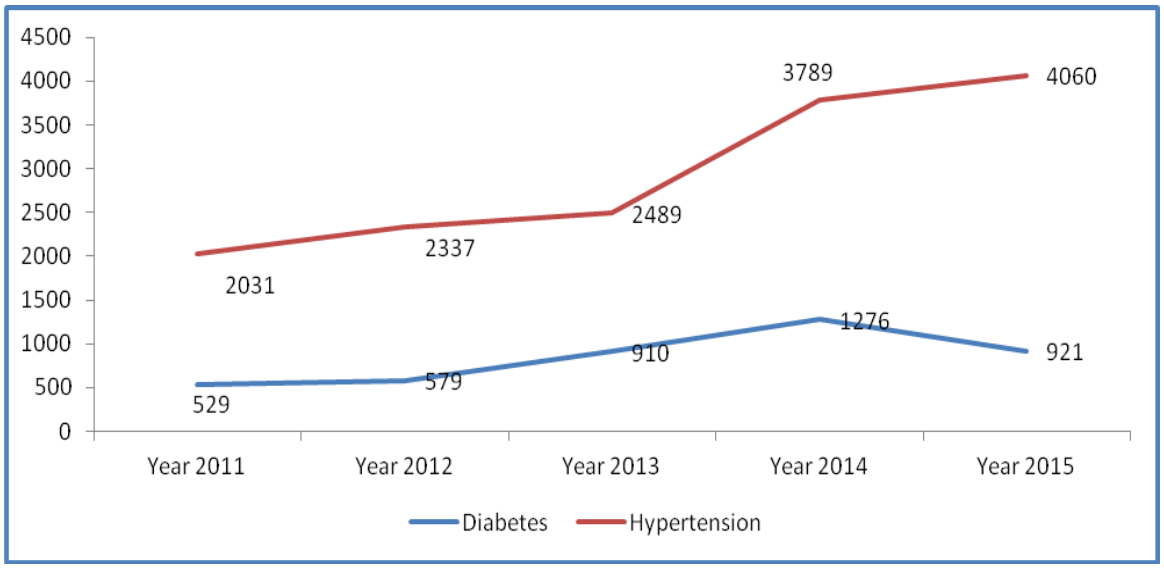
- The diseases of respiratory system are the highest cause of morbidity accounting for 44% of all the outpatient morbidity in the county.

Table 11: Outpatient cases for county and National level and their proportions

	Garissa county			National		
	Diseases	No. of cases	proportion	Diseases	No. of cases	proportion
1	Other Dis. Of Respiratory System	177,527	**38%**	Other Dis. Of Respiratory System	18,275,144	**40%**
2	Urinary Tract Infection	55,508	**12%**	Confirmed Malaria (only Positive cases)	5,498,544	**12%**
3	Diarrhoea	42,577	**9%**	Disease of the skin	4,759,796	**10%**
4	Disease of the skin	39,441	**8%**	Diarrhoea	3,116,343	**7%**
5	Pneumonia	34,490	**7%**	Suspected Malaria	2,178,143	**5%**
6	Confirmed Malaria (only Positive cases)	12,125	**3%**	Urinary Tract Infection	1,540,984	**3%**
7	Typhoid fever	11,716	**3%**	Pneumonia	1,507,997	**3%**
8	Ear Infections/ Conditions	11,387	**2%**	Arthritis, Joint pains etc.	1,471,702	**3%**
9	Intestinal worms	9,086	**2%**	Road Traffic Injuries	1,166,318	**3%**
10	Arthritis, Joint pains etc.	8,935	**2%**	Eye Infections	986,260	**2%**

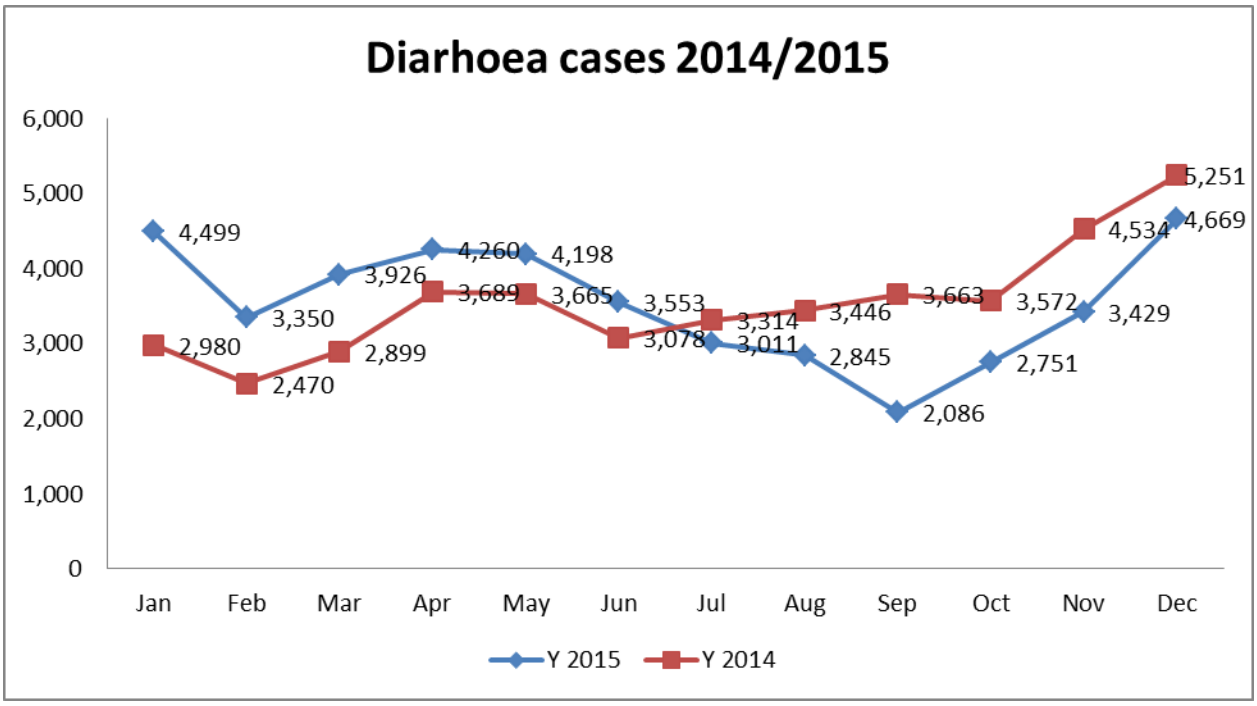
- Diseases of respiratory system are the main cause of outpatient morbidity both in Garissa county and national; 38% and 40% respectively.

Figure 16: Trend for non-communicable diseases- Hypertension & Diabetes (Garissa County)



- There is a steady increase in the reported cases of diabetes and hypertension in all the years (2011 – 2014), but the year 2015 decrease in diabetes was noted.

Figure 17: Diarrhea cases 2014/2015



- The peak of diarrhea cases was noted in the month of December in both years. This may be due to onset of short rains.

2.4: Inpatient Morbidity and Mortality

NO DATA

2.5: Top ten causes of Hospital admissions

NO DATA

2.6: Administrative Statistics

Hospital administrative statistics is based on bed compliment against occupation of the same in a period of time, which intern generate indicators useful in planning and management of services to the patients and hospital concerned.

The statistics provide hospital administration with indicators necessary to deliver services on evidence based aspect. Specific areas concerned where managers are likely to benefit are:

- Procurement and supplies,
- Identifying health needs in the catchment population,
- Effectiveness of curative services,
- Measures access in terms of admissions,
- Staffs, bed utilization and availability

Table 12: County hospitals Administrative statistics

Data	Balambala	Dadaab	Fafi	Garissa	Hulugho	Ijara	Lagdera	County
BEDS	8	60	18	256	10	70	20	442
COTS	0	20	0	8	0	4	2	34
ADMISSIONS	216	1,410	66	13,875	244	1,874	729	18,414
DISCHARGES	216	1,344	138	12,777	242	1,758	616	17,091
Inpatient Deaths	0	15	1	260	4	19	16	315
Inpatient Abscondees	0	77	0	183	0	19	14	293
Inpatient Well Persons Days	72	113	0	263	26	2,156	45	2,675
OBD	490	0	0	65,273	79	6,413	1,436	73,691
ABD	2,920	29,200	6,570	96,360	3,650	27,010	8,030	173,740
VBD	2,430	29,200	6,570	31,087	3,571	20,597	6,594	100,049
% OCC	17%	0%	0%	68%	2%	24%	18%	42%
ALOS	2.3	0.0	0.0	5.0	0.3	3.6	2.3	4.2
TOI	11	20	47	2	15	11	10	6
Turnover per Bed	27	18	8	50	25	24	29	37

KEY:

OBD- occupied bed days- number of patients remaining in the ward each day added together.

ABD- available bed days-is maximum number of patient who can occupy hospital beds in a given time.

VBD- Vacant bed days- cumulative number of days hospital beds remain vacant in a given period of time.

ALOS-Average length of Stay-average number days a patient occupy hospital bed (period between admission and discharge/death)

% occ- Percentage occupancy- proportion of beds occupied in a given period.

TOI-Turn Over interval- the number days a bed remains vacant between successful occupancy.

Turnover per Bed-Number of patient treated per bed.

- A total of 315 deaths were reported in year 2015 compared with 301 deaths in year 2014 thus an increase of 4.7% (14)
- The percentage number of hospital beds occupied in the county was 42%. This quite low though it increased from 33% in the year 2014.
- In average, patients admitted stayed in the ward for a period of 4 days.
- In average each bed within the county was used by 37 patients; Fafi sub county had the lowest number of patients who utilized the bed i.e 8 per bed, while Garissa sub county had the highest number of patient who utilized hospital beds i.e 50 per bed.

2.7: Reproductive, Maternal, Nutrition and Child Health

In realization of MDGs by 2015, the health sector envisages to reduce infant and child mortality rate through various integrated interventions such as immunization and child nutrition. In these regard, several indicators have been defined to monitor these interventions.

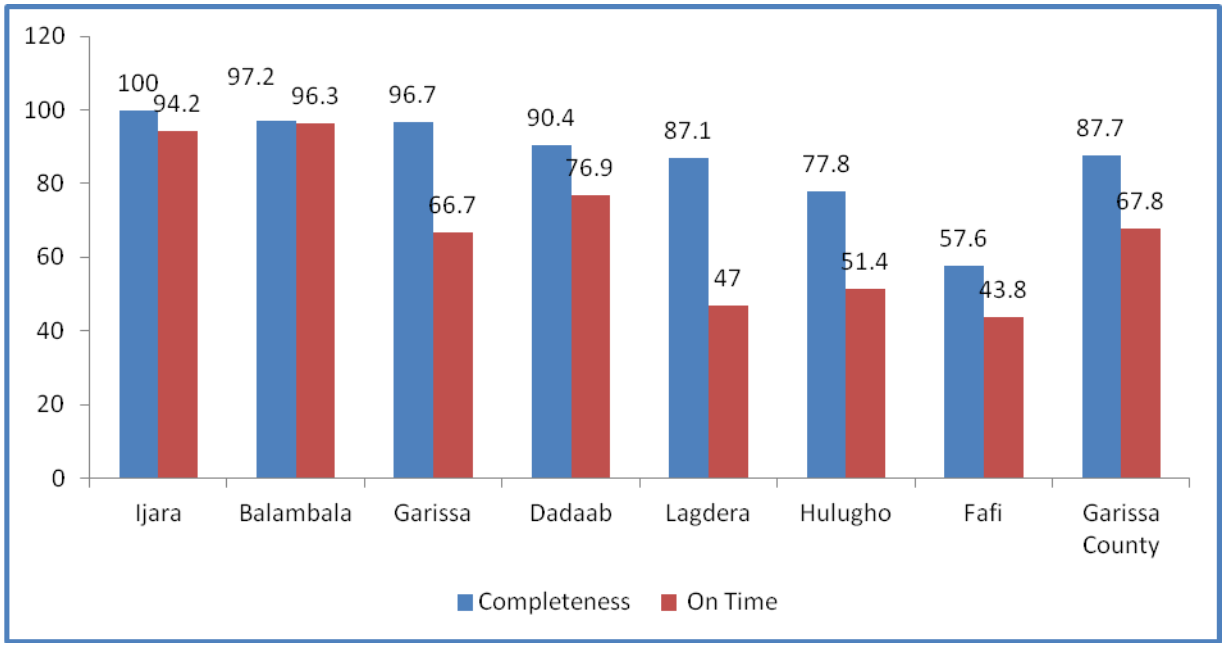
MDG 5 recognizes the importance of improving Maternal Health through reduction of maternal mortality and increasing births attended by skilled health personnel.

2.7.1: Immunization

Routine child immunization in Kenya is based on defined schedule from birth to 18 months.

By end of 2015 Garissa County had at least 80 health facilities offering immunization services which accounted for 50% of all health facilities. It is however noteworthy that, 98% of government health facilities were offering immunization services. In the year 2015, the county had targeted 23,860 children below one year. Children at 18 months are given a second dose of measles so as to create hard immunity

Figure 18: Immunization reporting rate by Sub County



- Overall County reporting rate for MOH 710 Immunization summary was at 87.5% which dropped from 95.7% in the year 2014.
- Ijara sub county had the highest reporting rate at 100% and the lowest was Fafi Sub County at 57.6%
- 67% of the reports were submitted on time lowest being Fafi sub county at 43%

Table 13: Percentage coverage 2015

Antigens	Total Achievement	% Coverage	Unvaccinated	% unvaccinated
BCG	14808	62%	9052	38%
OPV (Birth dose)	11326	47%	12534	53%
OPV1	16495	69%	7365	31%
OPV2	14602	61%	9258	39%
OPV3	14906	62%	8954	38%
IPV	0	0%	23860	100%
PENTA 1	16603	70%	7257	30%
PENTA 2	14757	62%	9103	38%
PENTA 3	15053	63%	8807	37%
Pneum. 1	16752	70%	7108	30%
Pneum. 2	14799	62%	9061	38%
Pneum. 3	15206	64%	8654	36%
Rota 1	16844	71%	7016	29%
Rota 2	14465	61%	9395	39%
Measles-Rubella 1	15252	64%	8608	36%
Fully Immunized Children(FIC) under 1 year	14555	61%	9305	39%

- 9305 (39%) of targeted children under one year were not fully immunized.

Table 14: Trend of children below 1 year vaccinated 2011—2015.

Antigens	2011	2012	2013	2014	2015
BCG	17,196	15,641	14,792	17,226	14,808
OPV Birth	9,998	9,564	9,737	11,743	11,326
OPV1	16,894	16,720	15,740	18649	16,495
OPV3	13,946	13,548	12,854	16,185	14,906
Penta 1	16,889	16,728	15693	18,655	16,603
Penta 3	14,014	13,739	12,936	16,280	15,053
Pneu.1	17,750	16,093	15,573	18,679	16,752
Pneu.3	10,362	13,112	12,883	16,410	15,206
Measles	15,436	16,225	12,563	16,521	15,252
Fully Immunized Children(FIC)	12,187	12,967	11,256	14,581	14,555

Figure 19: Immunization coverage for selected indicators 2011- 2015

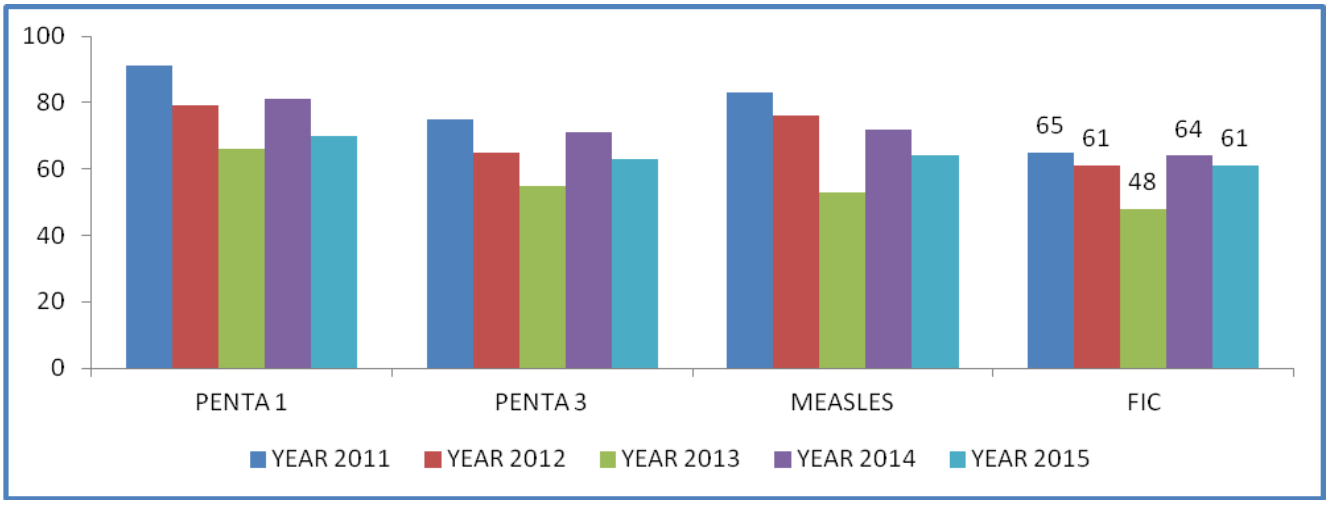


Figure 20: Trend of fully immunized children 2011-2015

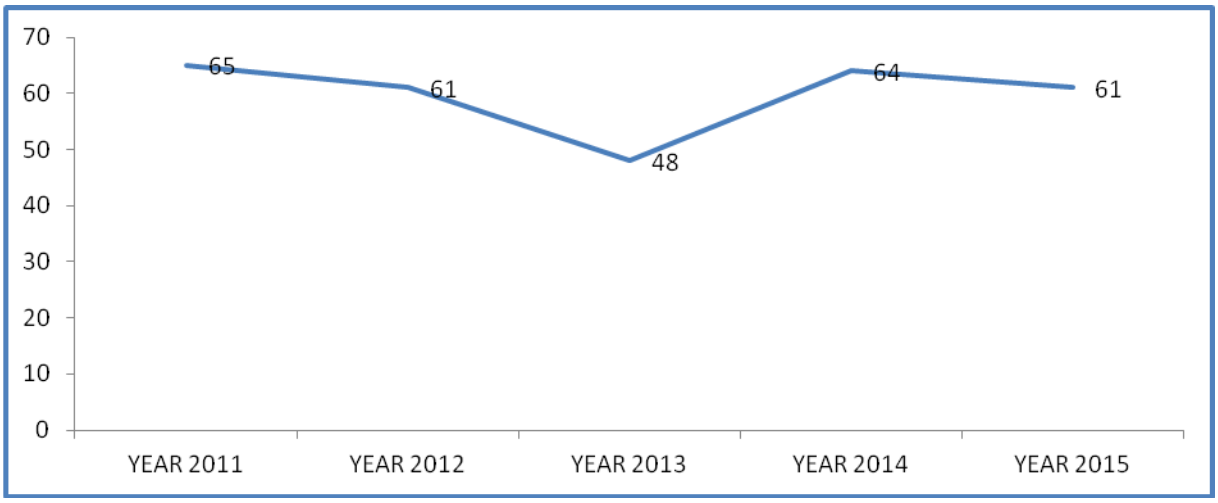
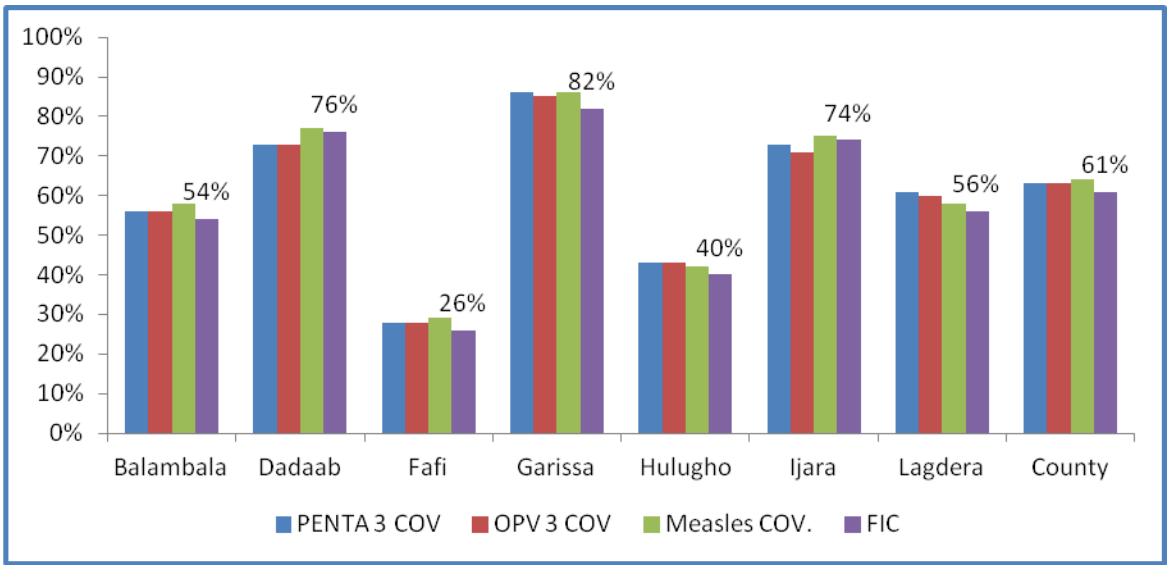


Table 15: EPI Percentage Coverage per Sub County-2015

Sub county	Balambala	Dadaab	Fafi	Garissa	Hulugho	Ijara	Lagdera	County
Target	2664	2900	4088	7228	2044	1892	3016	23832
BCG doses Administered	1373	2056	1060	6538	855	1344	1582	14808
BCG COV.	52%	71%	26%	90%	42%	71%	52%	62%
DPT/Hep+HiB1 doses Administered (<1 Years)	1560	2483	1252	6781	1026	1444	2057	16603
PENTA 1 COV.	59%	86%	31%	94%	50%	76%	68%	70%
DPT/Hep+HiB2 doses Administered (<1 Years)	1354	2154	1137	6107	916	1323	1766	14757

PENTA 2 COV.	51%	74%	28%	84%	45%	70%	59%	62%
DPT/Hep+HiB3 doses Administered	1479	2105	1128	6237	881	1375	1848	15053
PENTA 3 COV	56%	73%	28%	86%	43%	73%	61%	63%
OPV Birth doses Administered (<1 Years)	490	1555	555	6199	466	1043	1018	11326
OPV BIRTH COV.	18%	54%	14%	86%	23%	55%	34%	48%
OPV1 doses Administered (<1 Years)	1588	2479	1227	6782	1001	1408	2010	16495
OPV 1 COV	60%	85%	30%	94%	49%	74%	67%	69%
OPV2 doses Administered (<1 Years)	1343	2156	1137	6013	904	1305	1744	14602
OPV 2 COV	50%	74%	28%	83%	44%	69%	58%	61%
OPV3 doses Administered	1488	2107	1133	6140	873	1344	1821	14906
OPV 3 COV	56%	73%	28%	85%	43%	71%	60%	63%
Pneumococal 1 doses Administered (<1 Years)	1605	2477	1272	6873	1023	1440	2062	16752
PNEUM 1 COV	60%	85%	31%	95%	50%	76%	68%	70%
Pneumococal 2 doses Administered (<1 Years)	1377	2150	1133	6149	916	1308	1766	14799
PNEUM. 2 COV.	52%	74%	28%	85%	45%	69%	59%	62%
Pneumococal 3 doses Admin	1510	2102	1134	6338	886	1388	1848	15206
PNEUM.3 COV.	57%	72%	28%	88%	43%	73%	61%	64%
Measles doses Administered	1552	2240	1192	6221	867	1427	1753	15252
Measles COV.	58%	77%	29%	86%	42%	75%	58%	64%
Fully Immunized Children(FIC) under 1 year	1447	2208	1078	5933	819	1395	1675	14555
FIC	54%	76%	26%	82%	40%	74%	56%	61%

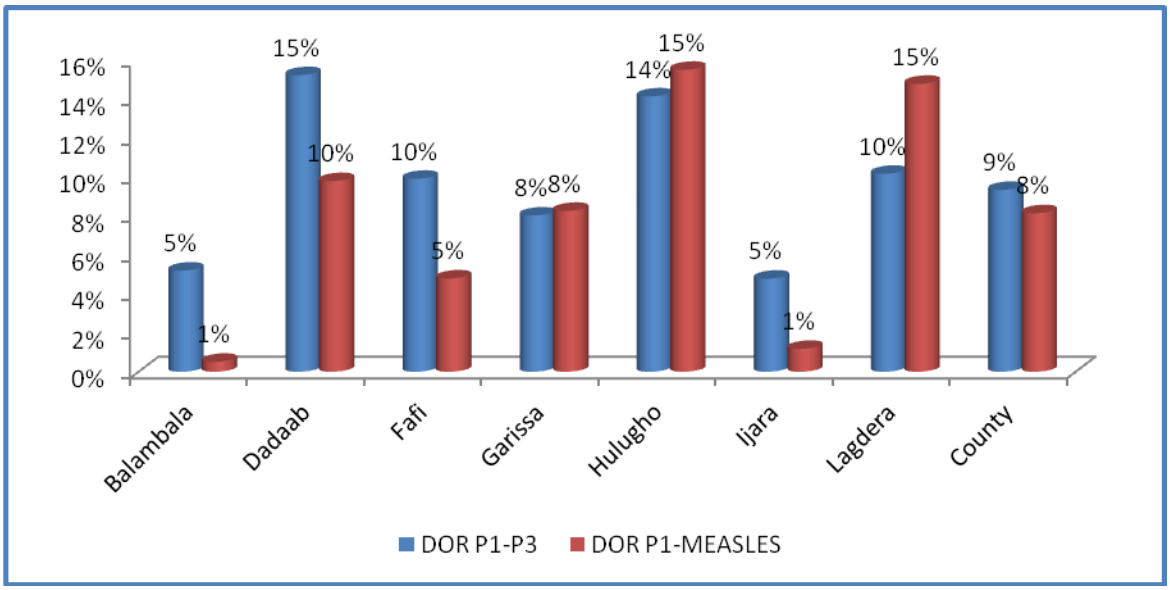
Figure 21: Coverage per Antigen-2014



2.7.2: Drop Out Rates (Penta1-Penta3 &Penta1-Measles)

- **Penta 1-penta 3 dropout –** Measure the probability of a child who received penta 1 antigen will receive penta 3
- **Penta 1-measles dropout –** Measure the probability of a child who received penta 1 antigen will receive measles antigen

Figure 22: Drop Out Rates (Penta1-Penta3 &Penta1-Measles)



- The county Dropout rate for penta1 –penta3 in the year 2015 was 9%, while dropout rate for penta1-measles was 8%. Thus 9% and 8% of the children below one year who received penta 1 did not receive penta 3 and measles respectively.

Table 16: Immunization access and utilization

	Sub county	Balambala	Dadaab	Fafi	Garissa	Hulugho	Ijara	Lagdera	County
	Target	2664	2900	4088	7228	2044	1892	3016	23832
Immunization coverage	PENTA 1 COV.	59%	86%	31%	94%	50%	76%	68%	70%
	PENTA 3 COV	56%	73%	28%	86%	43%	73%	61%	63%
	Measles COV.	58%	77%	29%	86%	42%	75%	58%	64%
Unimmunized children	PENTA 3	1185	795	2960	991	1163	517	1168	8779
	MEASLES	1112	660	2896	1007	1177	465	1263	8580
Dropout rates	DOR P1-P3	5%	15%	10%	8%	14%	5%	10%	9%
	DOR P1-MEASLES	1%	10%	5%	8%	15%	1%	15%	8%
Identify problem	ACCESS	POOR	GOOD	POOR	GOOD	POOR	POOR	POOR	POOR
	UTILIZATION	GOOD	GOOD	GOOD	GOOD	POOR	GOOD	POOR	GOOD
Categories Problem	Category 1,2,3,4	3	1	3	1	4	3	4	3

PLEASE NOTE:
ACCESSIBILITY = % COVERAGE OF PENTA 1
UTILIZATION=% Drop out of measles
Category 1 (no problem) = drop rates for penta 1 to measles are low = good
Utilization (<10%)
=penta 1 coverage is high = good access (>80%)
Category 2 =drop out for penta 1 to measles are high = poor
Utilization (>10%)
= penta 1coverage is high = good access (>80%)
Category 3 = dropout rates for penta 1 to measles are low = good
Utilization (<10%)
= penta 1coverage is low = poor access (<80%)
Category 4 = dropout rates for penta 1 to measles are high = poor

Utilization (>10%)

= penta 1 coverage is low = poor access (<80%)

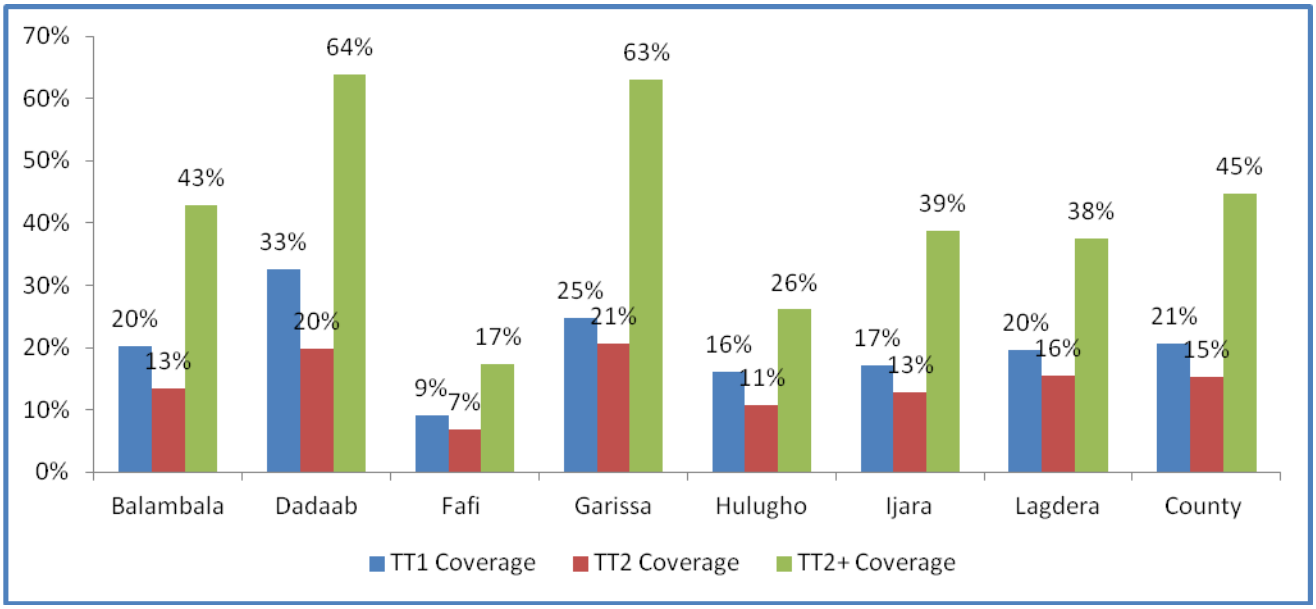
Good Accessibility= penta 1 coverage should be more than 80%

Good Utilization==Penta 1-measles dropout rate should be less than +10% and -10%

2.7.3: Tetanus Toxoid coverage per Sub Ccounty

The Tetanus Toxoid (TT) vaccine is given during pregnancy to prevent mother against tetanus as well as the baby. It also helps prevent premature delivery.

Figure 23: Tetanus Toxoid coverage per sub county



- At county level, 45% of pregnant women who attended ANC were protected against tetanus for at least 3 years. Dadaab Sub County had the highest number (64%) of pregnant women who attended ANC protected against tetanus.
- 15% of pregnant women who attended ANC were protected against tetanus for 3 years.

2.8 Nutrition

The nutrition status among children under 5 years in Garissa County is key indicator of socio-economic and health status of a community. Currently the nutrition indicators of children that are routinely monitored through the health facilities are weighed (Weight for age), Vitamin A supplementation, screened for stunting (height for age) and advised on importance of exclusive breast feeding.

The reporting was done through MOH 713 nutrition reporting. Malnourished children are supplemented with food at outpatient level (SFP and OTP) and inpatient level (therapeutic commodity).This data is routinely collected at the health facilities using three different age groups of 0-<6, 6-23 and 24-59 months

Table 17: Growth monitoring per Sub County

Indicator	Balambala	Dadaab	Fafi	Garissa	Hulugho	Ijara	Lagdera	County
Normal Weight for Age 0-<6 months	3,666	3,470	1,925	15,324	165	3,592	2,506	30,648
Normal Weight for Age 6-23 months	4,159	5,251	2,219	13,758	1,035	3,270	4,305	33,997
Normal Weight for Age 24-59 Months	4,328	6,401	2,546	12,373	1,315	2,729	5,932	35,624
Overweight 0-<6 months	3	3	1	65	1	6	1	80
Overweight 24-59 months	0	2	2	37	0	2	2	45
Overweight 6-23 months	0	0	1	74	0	3	1	79
Underweight 0-<6 months	114	95	36	773	1	153	50	1,222
Underweight 24-59 Months	235	919	141	811	522	289	588	3,505
Underweight 6-23 months	285	929	155	954	369	326	303	3,321
Severely underweight 0-<6 months	6	7	1	124	0	35	1	174
Severely underweight 24-59 months	52	178	19	233	229	45	52	808
Severely underweight 6-23 months	30	202	32	217	156	62	16	715
Normal Height for Age 0-<6 months	3,610	3,021	1,695	15,170	162	1792	728	26,178
Normal Height for Age 24-59 Months	4,336	5,987	2,355	12,851	1,897	2,294	5,482	35,202
Normal Height for Age 6-23 months	3,838	4,906	2,085	13,540	1,475	3,337	4,006	33,187
Stunting 0-<6 months	19	22	24	101	1	105	16	288
Stunting 24-59 Months	83	10	15	278	18	173	128	705
Stunting 6-23 months	91	110	45	266	14	111	166	803

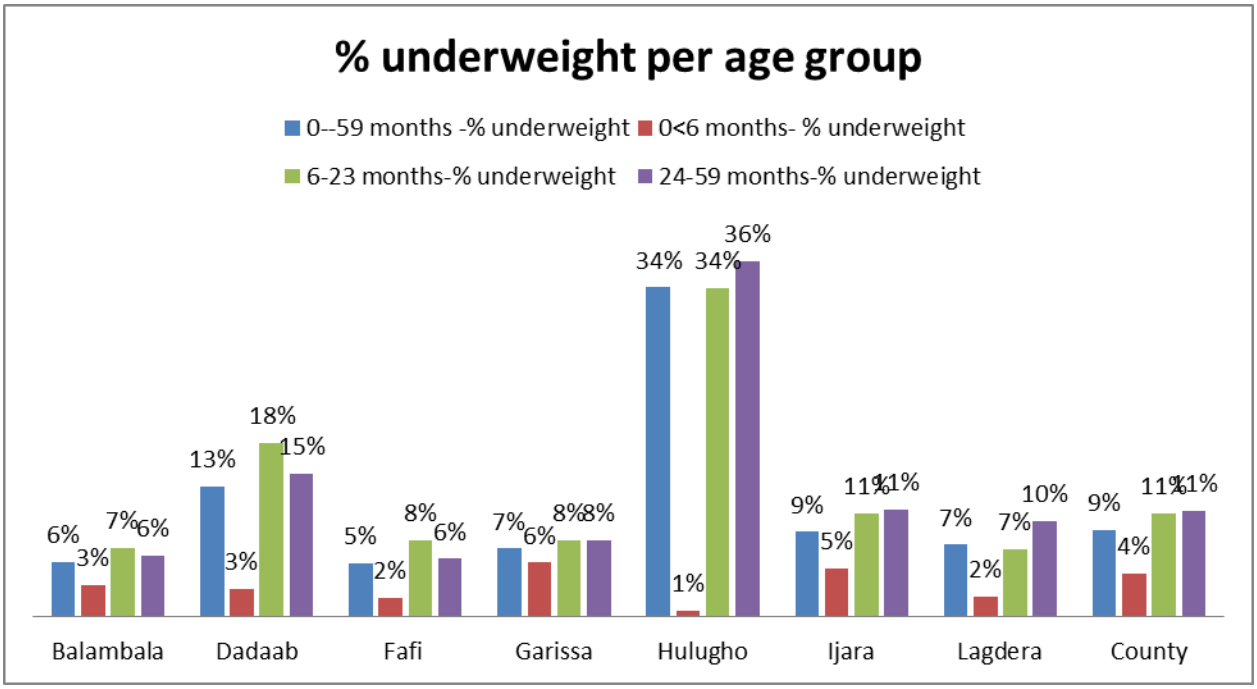
Table 18: Nutrition sphere standard

Sub County	Inpatient Defaulter Rate	Inpatient Death Rate	Inpatient Recovery Rate	OTP Death Rate	OTP Defaulter Rate	OTP Recovery Rate	SFP Death Rate-	SFP Defaulter Rate	SFP Recovery Rate
Balambala	0.0%	0.0%	100.0%	2.6%	5.3%	92.1%	1.4%	1.4%	97.2%
Dadaab	3.6%	7.1%	89.3%	0.5%	2.7%	95.2%	0.1%	7.2%	90.1%
Fafi	0.0%	0.0%	0.0%	0.0%	38.5%	61.5%	0.0%	19.3%	80.7%
Garissa	0.6%	1.9%	97.5%	2.1%	14.2%	82.7%	0.7%	13.5%	85.0%
Hulugho	0.0%	0.0%	0.0%	0.9%	0.0%	97.5%	0.0%	8.6%	89.0%
Ijara	0.0%	0.0%	100.0%	0.0%	11.6%	80.3%	0.0%	14.0%	82.3%
Lagdera	0.0%	0.0%	100.0%	0.5%	23.4%	76.2%	0.9%	25.3%	72.4%
Garissa County	**0.8%**	**2.2%**	**97.0%**	**1.2%**	**13.0%**	**84.0%**	**0.5%**	**13.3%**	**84.6%**

Key

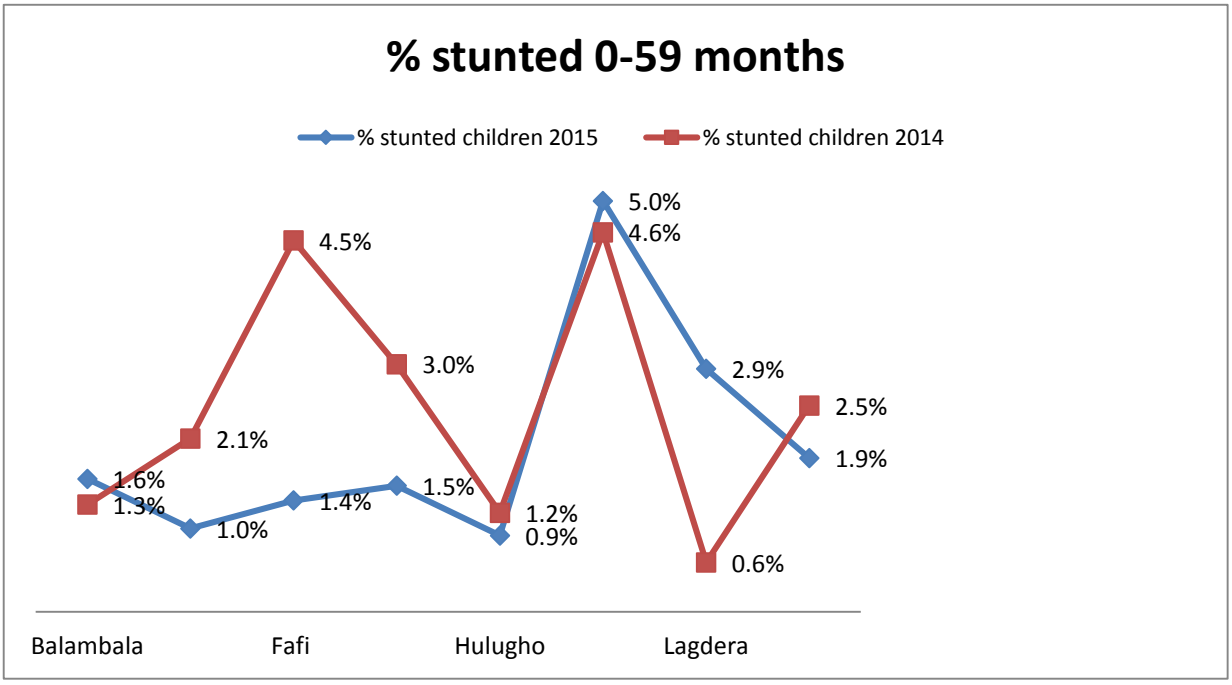
Indicator	OTP	SFP	Inpatient
Defaulter rate	<10%	<3%	<10%
Recovery rate	>75%	>75%	>75%
Death rate	<15%	<15%	<15%

Figure 24: Underweight per age group



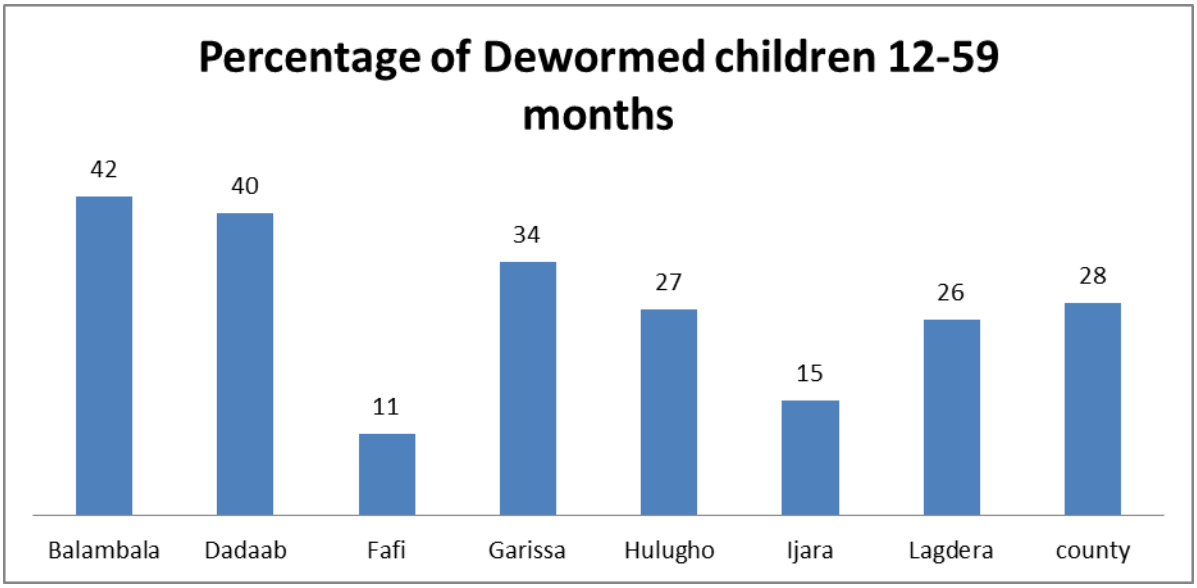
- In year 2015 Hulugho had the highest percentage of underweight in all age group except 0<6 months.
- In all the sub counties 0<6 months had the lowest proportion of children underweight compared to other age groups. This may be due to breast feeding.
- Overall the county has 9% of the children as underweight.
- Notably, there was significant increase of children who are underweight in age group 6-23 months as compared to 0<6 months; this may be due to the transition from exclusive breast feeding to complementary feeding.

Figure 25: Percentage of children stunted during the year 2015 compared to 2014



- During the year 2014 Ijara Sub County had the highest number of children stunted at 4.6% which increased to 5.0% in year 2015.
- Lagdera Sub County had the highest increase of stunted children; 0.6% in 2014 to 2.9% in year 2015 thus 2.3% increase.
- As a County, percentage of children who were stunted dropped from 2.5% in the year 2014 to 1.9% in the year 2015**.**

Figure 26: Percentage of 12-59 months' children de-wormed



- Overall the percentage of children 12-59 months de wormed in the county during the year 2015 was 28%
- Balambala Sub County had the highest number of children that were de wormed at 42%while the lowest was Fafi Sub County at 11%.

2.8.1: Vitamin A Supplementation

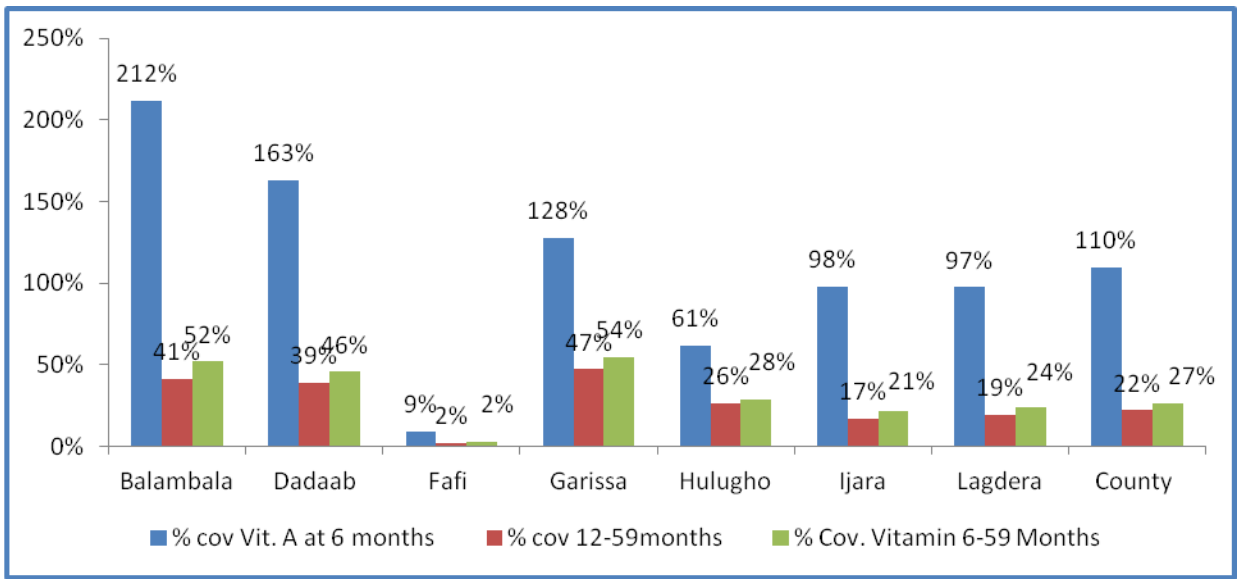
Vitamin A may be the single most effective child survival intervention, since deficiencies in this Micronutrient can cause blindness and can increase the severity of infections such as measles and diarrhea.

Vitamin A supplementation is given to specific age cohorts within the health care system. The specific cohorts are children 6 to 11 months (once a year) and 12 to 59 months who are supposed to be supplemented twice yearly and then aggregated to 6-59months. While lactating mothers are supplemented once within four weeks after delivery.

Table 19: Vitamin A Supplementation

Indicator	**Balambala**	**Dadaab**	**Fafi**	**Garissa**	**Hulugho**	**Ijara**	**Lagdera**	**County**
Target Vitamin A at 6 months	1332	1451	1966	3614	1017	947	1508	11834
Target Vitamin A 12-59moths	19,886	24,912	9,776	36,942	15,652	16,266	24,482	215,250
Target 6-59 months	21,218	26,363	31,742	40,556	16,669	17,213	25,990	227,084
Vitamin A at 6 months(100,000 IU)	2,818	2,367	172	4,617	625	927	1,468	12,994
% cov Vit. A at 6 months	212%	163%	9%	128%	61%	98%	97%	110%
vitamin A 12-59 months(200,000 IU)	8,193	9,631	565	17,397	4,092	2,728	4,670	47,276
% cov 12-59months	41%	39%	2%	47%	26%	17%	19%	22%
Total Vitamin A 6-59months	11,011	11,998	737	22,014	4,717	3,655	6,138	60,270
% Cov. Vitamin A 6-59 Months	52%	46%	2%	54%	28%	21%	24%	27%

Figure 27: Vitamin A supplementation coverage per sub-county



- Vitamin A County coverage was at 27% in 2015 compared to 26% in the year 2014 thus only 1% increase.
- Garissa Sub County had the highest Vitamin A coverage, 54 % (6-59months) while Fafi Sub County had the lowest Vitamin A coverage at 2%.
- Vitamin A coverage at 6-11 months was the best compared to 12-59 months in all Sub Counties.
- Generally, vitamin A coverage was low in all the Sub Counties for 12-59 months.

2.9: Reproductive Health

2.9.1: Family Planning

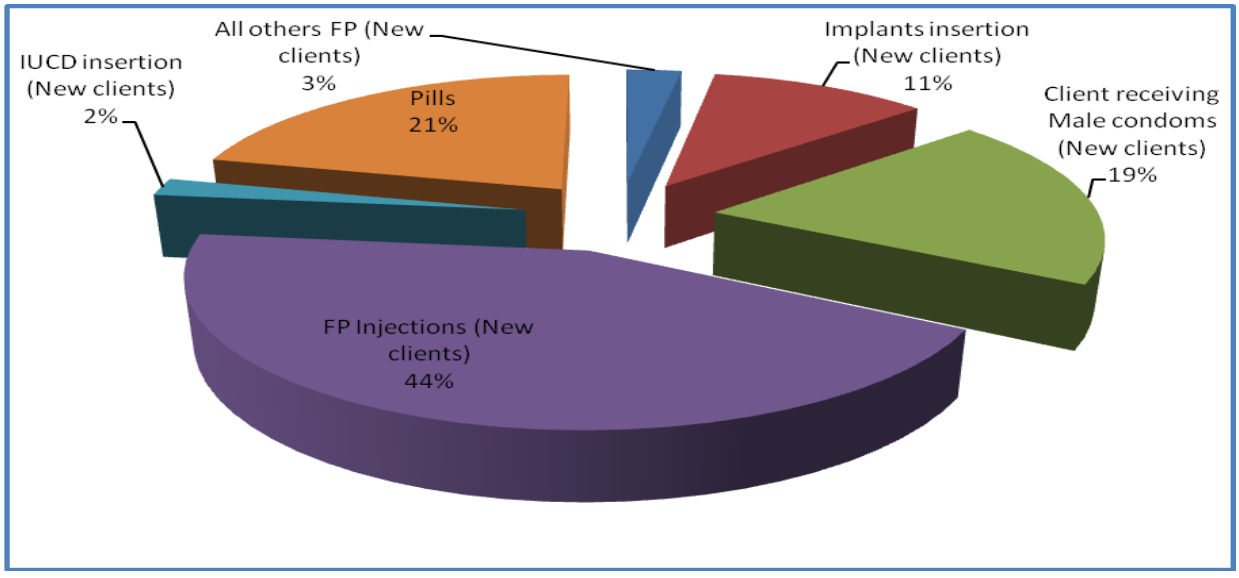
In order to achieve vision 2030, population growth rate need to be controlled. To attain a balance between resources and population, Kenya population policy promote family planning as an entitlement that is based on informed and voluntary choice. Couples are motivated to adopt a family planning method when they are offered improved access to and quality of reproductive health services.

Women of reproductive age in the county are 154,942. The eligible population for family planning is 71.5% which translates to 110,783.

Table 20: Family planning methods in the county

Indicator	Balambala	Dadaab	Fafi	Garissa	Hulugho	Ijara	Lagdera	County
Women of childbearing age (15–49yrs)	14,282	14,641	20,666	25,840	10,574	9,559	15,221	110,783
All others FP (New clients)	10	13	7	106	2	3	16	157
Implants insertion (New clients)	15	96	13	373	1	109	19	626
Client receiving Male condoms (New clients)	157	360	32	457	12	87	6	1,111
FP Injections (New clients)	193	211	249	1451	39	244	122	2,509
IUCD insertion (New clients)	6	5	3	65		32	2	113
Pills	68	161	58	773	45	84	30	1,219
Total	449	846	362	3225	99	559	195	5,735
% women who accessed FP commodities	3.1%	5.8%	1.8%	12.5%	0.9%	5.8%	1.3%	5.2%

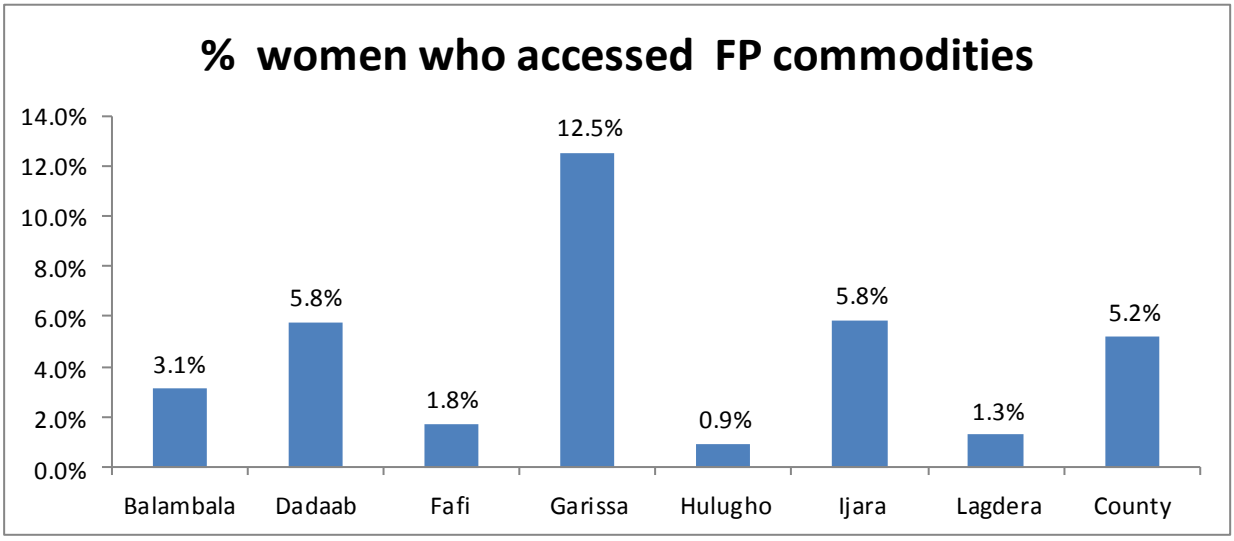
Figure 28: Percentage of women using different Family planning in the county



- The most preferred method of family planning was injections which accounted for 44 % of family planning methods.
- Only 5.2% (5,735) of eligible population accessed family planning. However according

to KDHS 2014/2015 5.5% women reported to be using any modern method of family planning.

Figure 29: Family planning coverage per sub county 2015

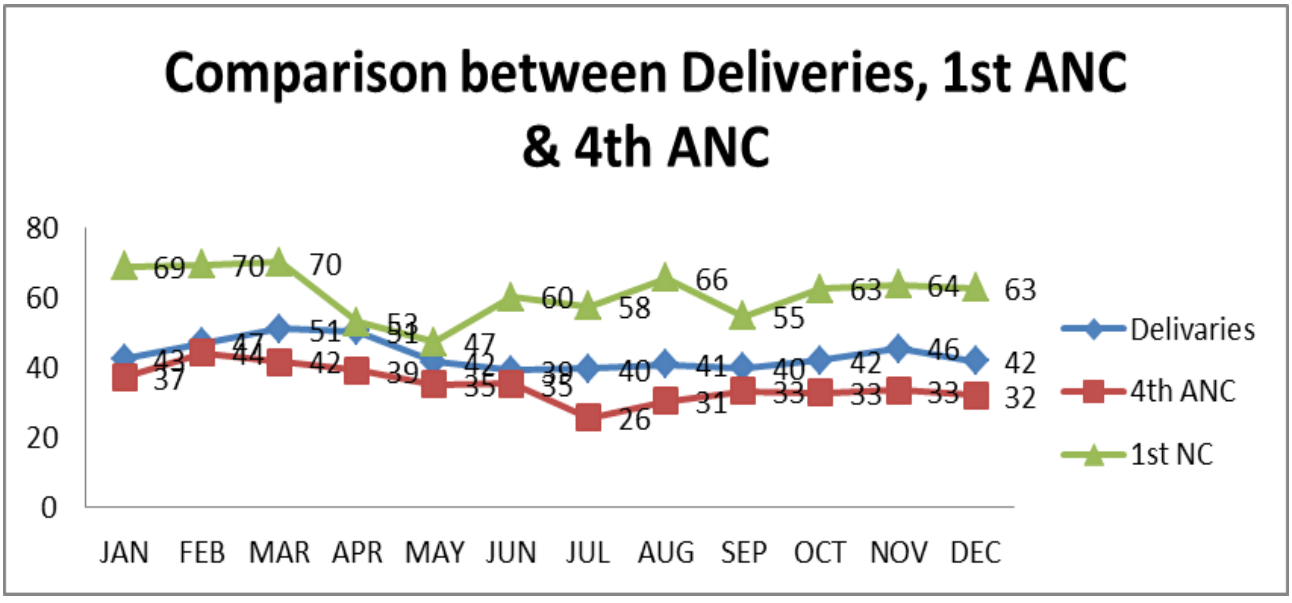


- Garissa Sub County had the highest number of women using family planning (12.5 %) while Hulugho had the lowest (0.9 %). This could be because the population in Garissa might be having more knowledge on family planning compared to other sub counties.

2.9.2 Antenatal Care

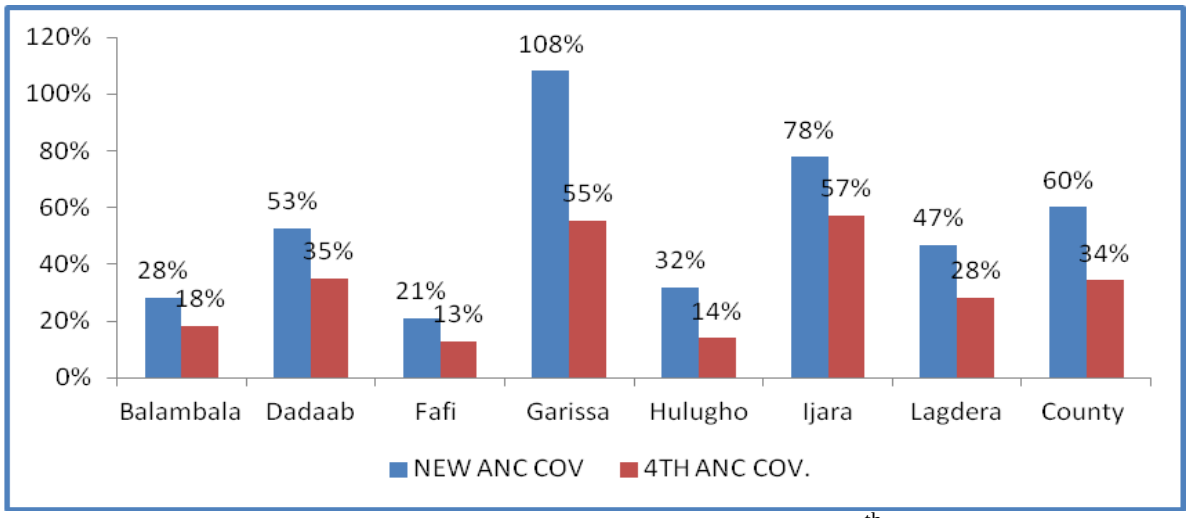
The main aim of ante natal clinic is to take care of mother and unborn children for safe delivery.

Figure 30: Comparison of deliveries with first and fourth ANC visits



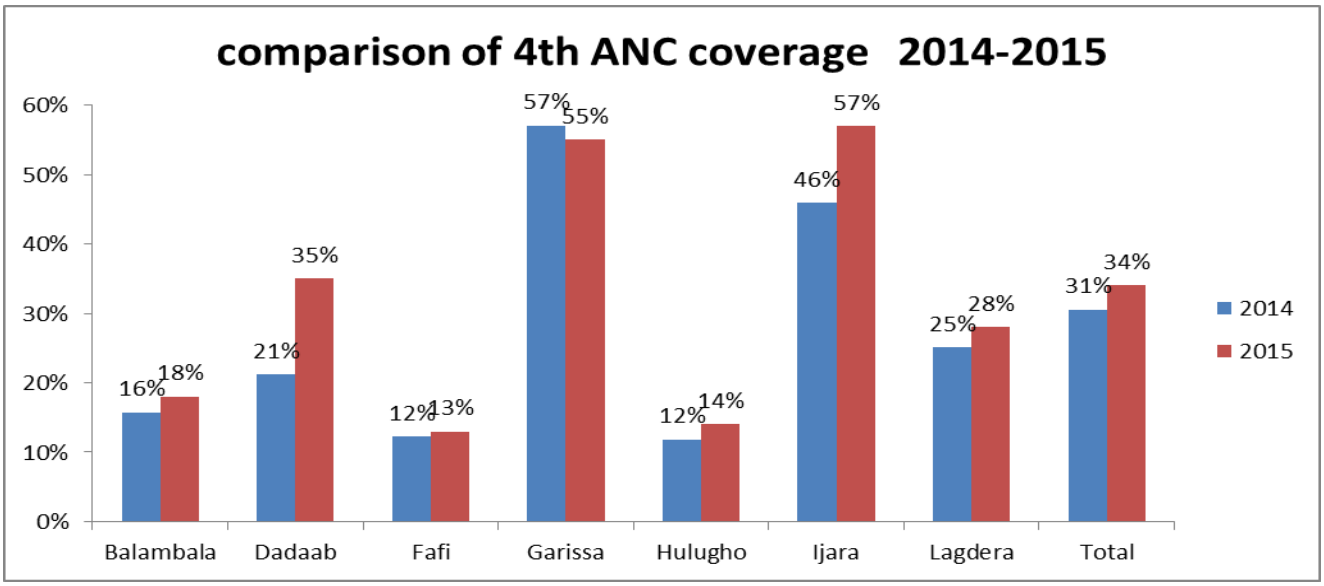
- Throughout the months, more mothers attended 1st ANC as compared to 4th ANC and Deliveries. This may be due to mother attending 4th ANC at a late stage in pregnancy.

Figure 31: Comparison between 1st and 4th ANC per Sub County



- The county coverage for new ANC was 60% compared to 4th ANC which was at 34%.
- The highest 1st ANC was reported by Garissa Sub County and lowest in Fafi Sub County.
- Only 60% of pregnant mothers attended ANC clinic at least once which dropped from 65% in 2014, nationally 1st ANC attendance is at 92%.

Figure 32: 4th ANC coverage 2014/2015



- Some improvement was noted in 4th ANC coverage in year 2015 in all the Sub Counties except Garissa Sub County.
- Dadaab Sub County had the highest increase in coverage of 4Th ANC;14%.

Table 21: Garissa county Safe Deliveries

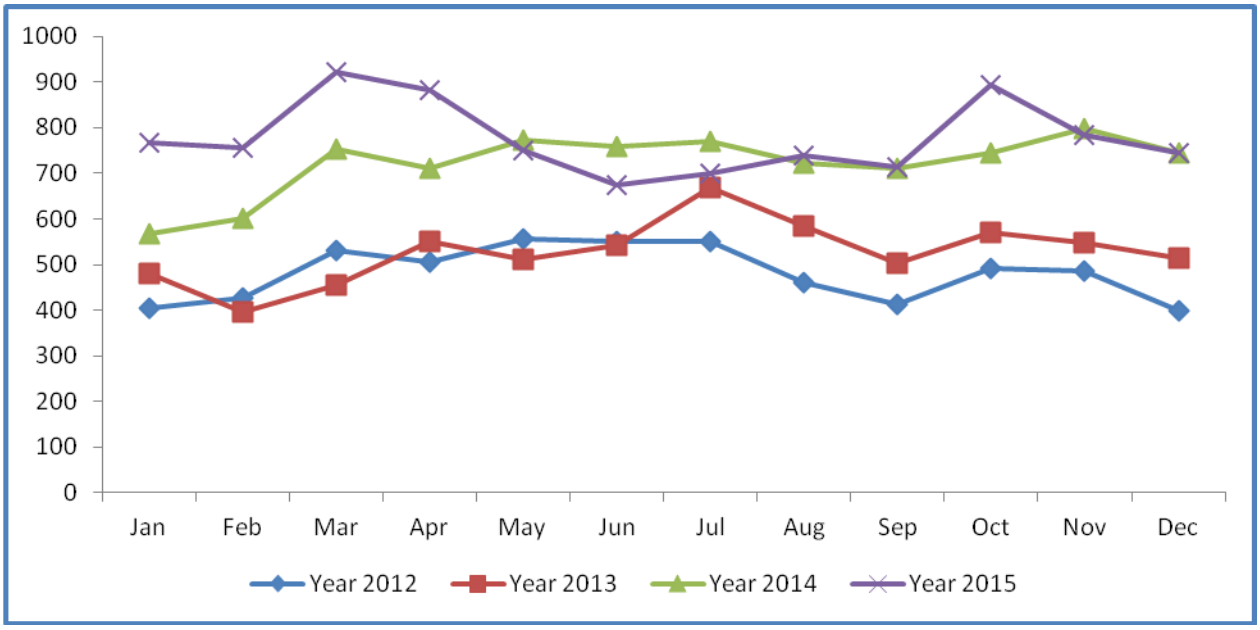
Indicator	Balambala	Dadaab	Fafi	Garissa	Hulugho	Ijara	Lagdera	County
Assisted vaginal delivery	0	20	0	16	0	1	0	37
Babies discharge Alive	563	1,352	485	5,492	244	878	1,041	10,055
Breach Delivery	0	7	1	70	2	7	7	94
Caesarian Sections	0	145	0	1,003	0	28	0	1,176
Normal Deliveries	580	1,237	505	4,666	267	890	1,060	9,205
Live birth	567	1,361	505	5,579	264	898	1,028	10,202
Fresh Still Birth	7	32	1	105	4	5	1	155
Macerated still Birth	3	15		97	1	24	5	145
Neonatal deaths				75		2	1	78
Underweight babies <2500gms	12	18	1	169	0	15	20	235
Pre-term babies	1	1	0	88	0	11	3	104
Maternity Referrals From Other Health Facility	35	54	13	335	2	88	26	553
Total deliveries	580	1,409	506	5,755	269	926	1,067	10,512

Table 22: Maternal/child health priority Indicators Analysis

Indicator	Balambala	Dadaab	Fafi	Garissa	Hulugho	Ijara	Lagdera	County
% Deliveries	19%	46%	12%	81%	12%	46%	34%	43%
% Caesarian Sections	0%	10%	0%	17%	0%	3%	0%	11%
% live births	98%	97%	100%	97%	98%	97%	96%	97%
% under weight babies	2.1%	1.3%	0.2%	2.9%	0.0%	1.6%	1.9%	2.2%
Fresh per 1000 live births	12	24	2	19	15	6	1	16
% total Still births	2%	4%	2%	4%	2%	4%	3%	4%
Facility based Neonatal death rate per 1000	0	0	0	14	0	2	1	8
Facility based maternal death rate per 10,000	0	216	0	290	0	108	187	217

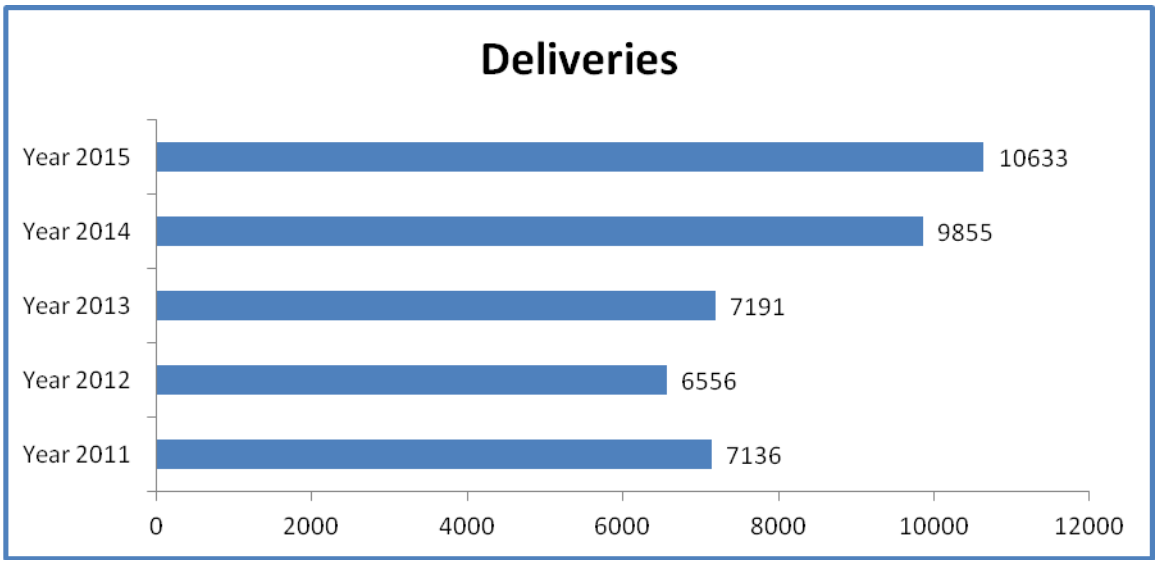
- The county skilled deliveries is at coverage of 43%, Garissa sub county having the highest at 81% while the lowest sub county is Hulugho and Fafi at 12% each.
- Caesarian section as a mode of delivery accounted for 11% (1,180) of the total deliveries. Garissa sub county leading with 17%.
- Facility based neonatal deaths was 8 per 1000 live births while Still births in the county is at 4%.

Figure 33: Monthly Trend of skilled deliveries conducted 2012, 2013, 2014 and 2015



- Year 2015 had the highest monthly deliveries as compared year 2012,2013 and 2014

Figure 34: Annual trend of skilled deliveries 2011-2015



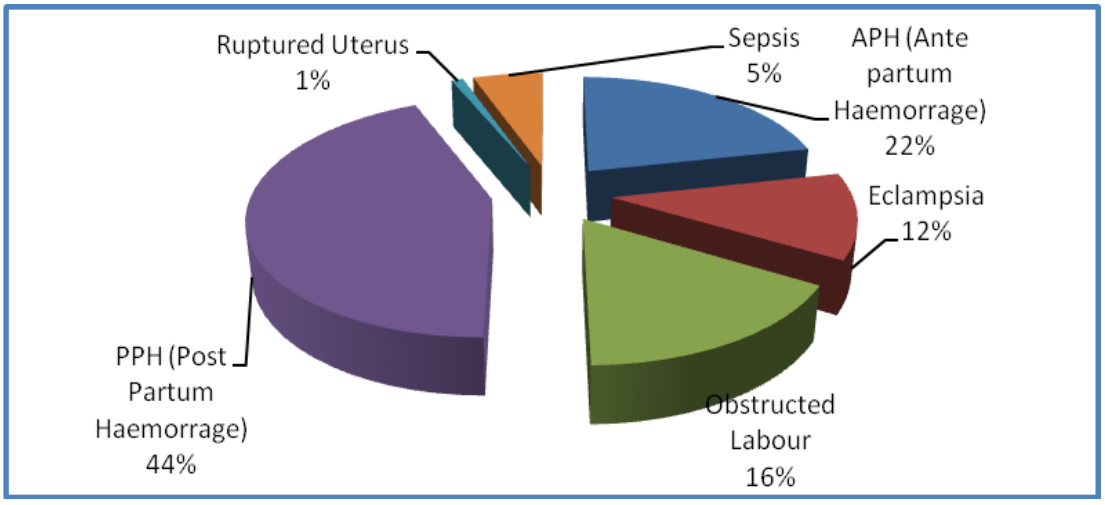
- There was high increase in deliveries during the year 2015 as compared to other years. Also as shown in the graph significant improvement was recorded in year 2013 to 2015, this may be due to free maternity which was initiated on July 2013.

Table 23: Maternal complications per Sub County

Indicator	Balambala	Dadaab	Fafi	Garissa	Hulugho	Ijara	Lagdera	County
APH (Ante partum Haemorrage)	8	17	4	131	2	13	8	183
Eclampsia	2	20	3	60	3	7	4	99
Obstructed Labour	3	45		57	1	27	7	140
PPH (Post-Partum Hemorrhage)	11	41	13	229	0	60	15	369
Ruptured Uterus	0	4	0	4	0	0	0	8
Sepsis	2	3	1	32	0	2	7	47
Total complications	26	130	21	513	6	109	41	846

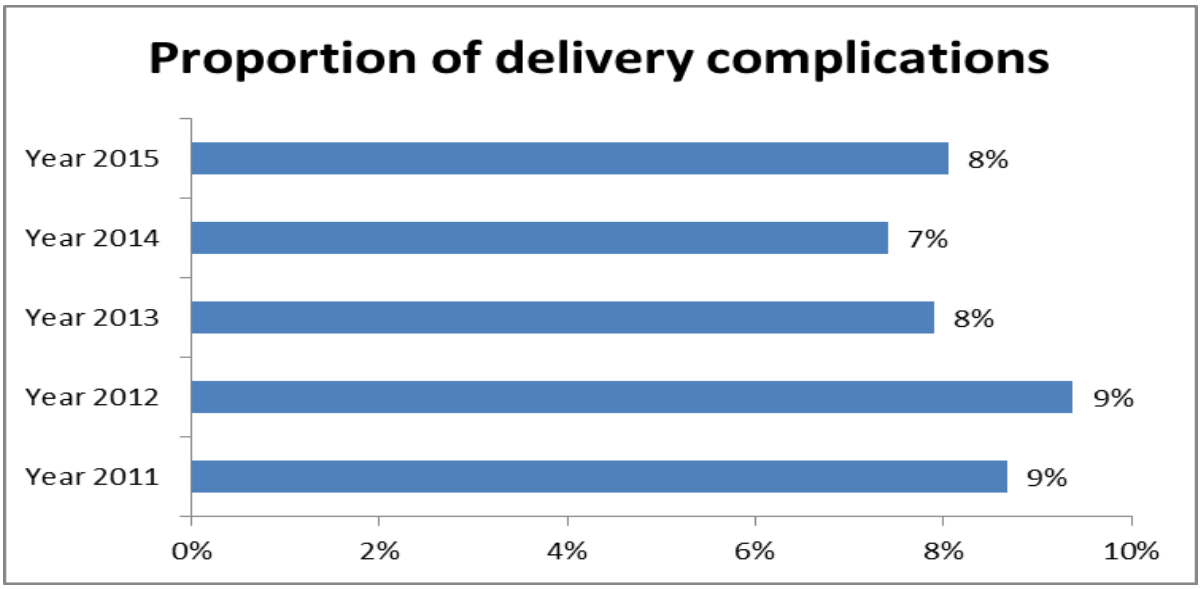
- Garissa Sub County reported the highest number of maternal complications as compared to other sub counties this could be attributed to referrals from other counties and sub counties.

Figure 35: Percentage contribution of the maternal deaths 2015



- Post Partum Hemorrhage was the highest cause of maternal complications in the county accounting for 44% of all the complications.

Figure 36: Comparison of maternal complication in 2011 and 2015 in the county



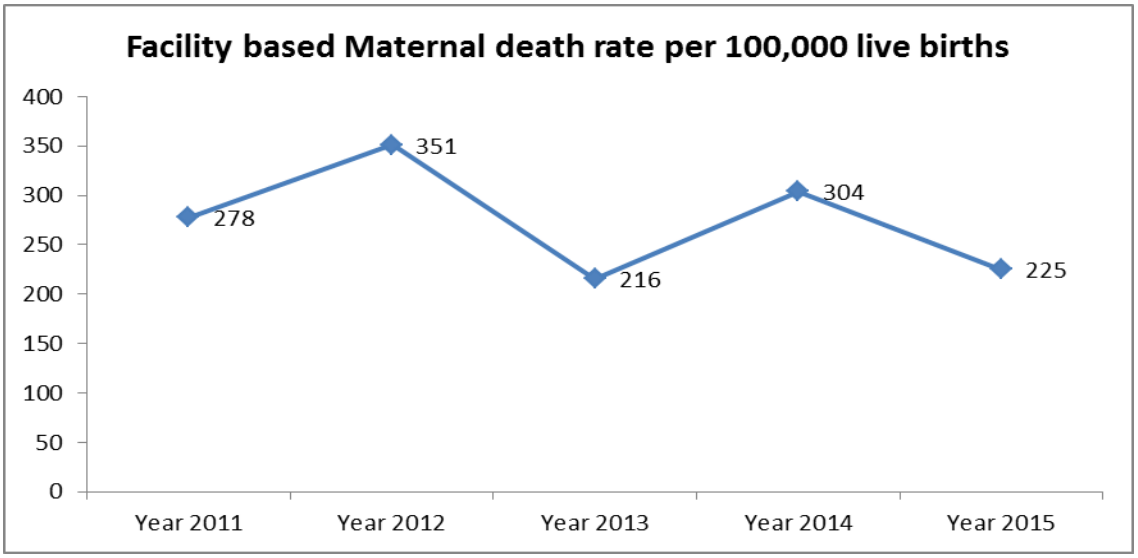
- There were more maternal complication in year 2011 and year 2012 compared to other years.

Table 24: Maternal Deaths trend 2011- 2015

period name	Balambala	Dadaab	Fafi	Garissa	Hulugho	Ijara	Lagdera	County
Year 2011	1	3	0	12	0	2	1	19
Year 2012	1	3	0	11	2	5	0	22
Year 2013	2	3	1	7	1	0	1	15
Year 2014	0	4	3	20	2	0	0	29
Year 2015	0	3	0	17	0	1	2	23

- During the year 2015 the maternal deaths reduced as compared to the year 2014 which had the highest maternal deaths.
- During the period of five years 2011-2015, Garissa Sub County had the highest number of maternal deaths accounting for 74% of all maternal deaths in year 2015; this could be due to the county referral hospital where maternal complications are referred.

Figure 37: Facility based Maternal Death Rate per 100,000 live births



- Year 2012 and 2014 had the highest maternal deaths; 351 and 304 respectively.
- Compared to year 2014, year 2015 had significant reduction of maternal death from 304 to 225. This may be due to improved referral system.

Table 25: Postnatal Attendance coverage - 2015

Organization unit name	Target	Postnatal attendance	% PNC
Balambala	3064	641	21%
Dadaab	2988	1053	35%
Fafi	4208	424	10%
Garissa	7228	3238	45%
Hulugho	2156	251	12%
Ijara	2004	1119	56%
Lagdera	3104	670	22%
County	24652	7396	30%

- Ijara Sub County had the highest coverage of mothers attending postnatal at 56%, while the lowest was Fafi Sub County at 10%. County coverage of postnatal is at 30%, it dropped from 39% in the year 2014

Table 26: Comparison of deliveries with postnatal attendance

Organization unit name	Deliveries	Postnatal attendance	% PNC
Balambala	580	641	111%
Dadaab	1,409	1,053	75%
Fafi	506	424	84%
Garissa	5,755	3,238	56%
Hulugho	269	251	93%
Ijara	926	1,119	121%
Lagdera	1,067	670	63%
County	**10,512**	**7,396**	**70%**

2.10 HIV and AIDS

2.10.1: HIV Testing Services

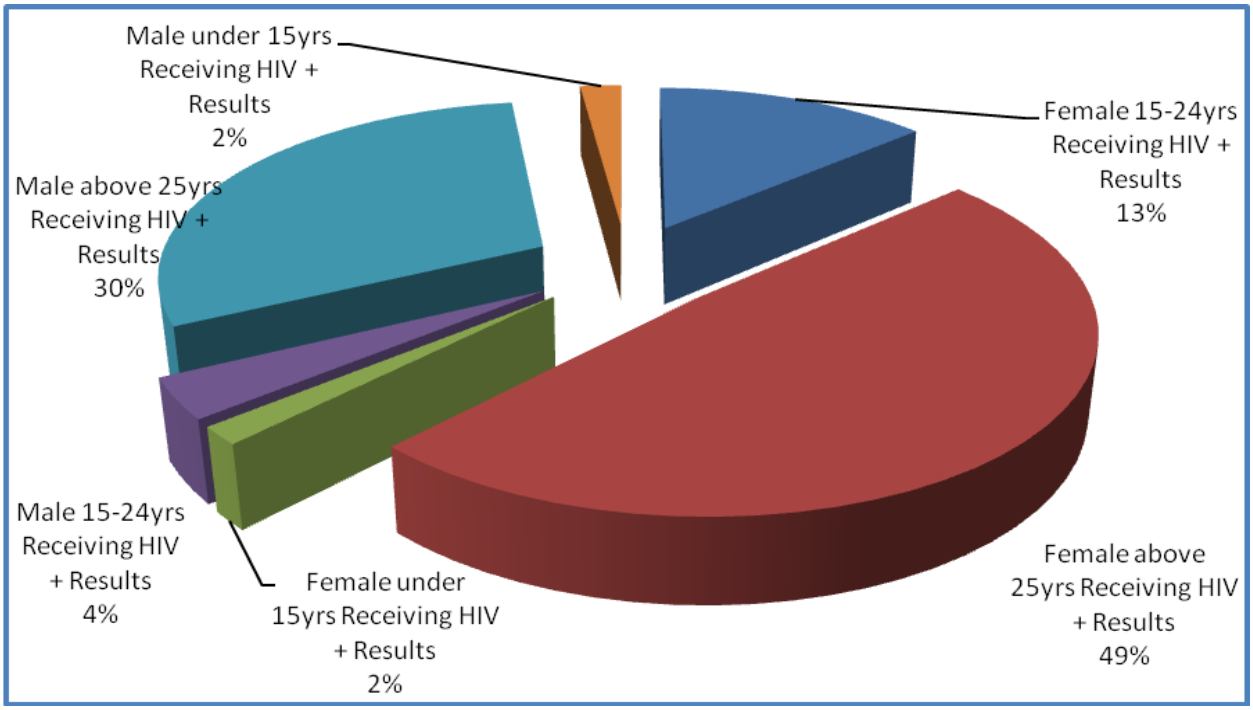
A total of 20,132 clients were tested for HIV during the year under review.

Table 27: HIV indicators 2015

Indicator	Balambala	Dadaab	Fafi	Garissa	Hulugho	Ijara	Lagdera	County
Testing for HIV								
Static Testing HIV (Health Facility)	977	893	1922	10611	1142	3098	1228	19,871
Outreach Testing HIV	16	14	0	140	0	71	20	261
First Testing HIV	892	878	1515	4540	973	1195	1151	11,144
Couples Testing	5	19	64	390	0	78	9	565
Repeat Testing HIV	101	29	407	6211	169	1974	97	8,988
Total Tested HIV	993	907	1922	10751	1142	3169	1248	20,132
Receiving positive results								
Female 15-24yrs Receiving HIV + Results	0	0	0	28	0	1	4	33
Female above 25yrs Receiving HIV + Results	6	1	0	107	0	4	1	119
Female under 15yrs Receiving HIV + Results	0	0	0	2	0	1	1	4
Male 15-24yrs Receiving HIV + Results	0	1	0	8	0	0	0	9
Male above 25yrs Receiving HIV + Results	5	1	0	64	0	3	1	74
Male under 15yrs Receiving HIV + Results	0	0	0	5	0	0	0	5
Total positive	11	3	0	214	0	9	7	244
Couples received positive results								
Concordant Couples Receiving Results (Couples Only)	0	0	11	30	0	56	8	105
Discordant Couples Receiving Results (Couples Only)	0	0	0	12	0	0	0	12
HIV prevalence rate	1.1%	0.3%	0.0%	2.0%	0.0%	0.3%	0.6%	1.2%

- Facility based prevalence rate was at within the county 1.2 %; Garissa Sub County had the highest prevalence rate, while Fafi and Hulugho had the lowest; 0% each.
- 3% of those who were tested were couples, of which 18.6% (105) were concordant and 2.1% (12) were discordant.
- 55% were tested for the first time while 45% were repeat test.
- Outreach testing accounted for only 1% of those tested.
- Only 4.4% of the county population knew their HIV status in year 2015 compared to 9.5% in year 2014; this may be due to inadequate supply of HIV test kits.

Figure 38: Percentage of clients who received positive results per gender and age group



- Of the clients who were positive, 49% were females above 25 years 30%,13%,4%,2% and 2% were male above 25, female 15-24 years, male 15-24 years, female under 15 years and male under 15 years respectively.

2.10.2: Prevention of Mother and Child Transmission

The main aim of ante natal clinic is to take care of mother and unborn children for safe delivery

Table 28: PMTCT

Indicators	Balambala	Dadaab	Fafi	Garissa	Hulugho	Ijara	Lagdera	Total
Target population	2,663	2,986	4,048	7,228	2,157	2,785	3,105	24,972
New ANC clients	860	1,577	880	7,812	683	1,558	1,457	14,827
Deliveries	580	1,409	506	5,755	269	926	1,067	10,512
Antenatal Testing for HIV (default)	374	1,166	780	6,223	682	1,368	1,312	11,905
Antenatal Positive to HIV Test-new	0	1	4	32	0	0	0	37

Known positive status (at entry into ANC)	0	13	0	45	0	1	0	59
Labour and Delivery (Infant ARV prophylaxis) (default)	0	1	1	20	0	0	0	22
Labour and Delivery Positive to HIV Test (default)	1	1	0	2	0	0	0	4
Labour and Delivery Testing for HIV (default)	111	462	321	88	268	607	488	2,353
Discordant Couples Partner Involvement (default)	0	0	0	1	0	0	0	1
Male partners tested -(ANC/L&D) (default)	6	0	3	269	0	92	0	370
Postnatal (within 72hrs) Positive to HIV Test (default)	0	0	0	0	0	1	0	1
Postnatal (within 72hrs) Testing for HIV (default)	41	69	17	215	207	97	51	697
Prophylaxis – HAART (default)	0	1	0	67	0	1	0	69
Total PMTCT prophylaxis (default)	0	1	0	67	0	0	0	68
Total Positive (PMTCT) (default)	1	15	4	79	0	2	0	101
Analysis								
HIV incidence rate of tested	0.0%	0.1%	0.5%	0.5%	0.0%	0.0%	0.0%	0.3%
PMTCT HIV prevalence rate (target pop)	0.0%	0.5%	0.1%	1.1%	0.0%	0.0%	0.0%	0.4%
PMTCT uptake among ANC attendance	43%	74%	89%	80%	100%	88%	90%	80%
HIV +ve mothers issued prophylaxis	0%	7%	0%	87%	N/A	50%	N/A	71%
Male partners tested (couple)	1.6%	0.0%	0.4%	4.3%	0.0%	6.7%	0.0%	3.1%
% of postnatal tested within 72hrs	6.4%	6.6%	4.0%	6.6%	82.5%	8.7%	7.6%	9.4%
% tested at labour and delivery	19.1 %	32.8 %	63.4 %	1.5%	99.6% %	65.6 %	45.7 %	22.4%

- The number of expected ANC mother in the county was 24,972
- Garissa Sub County had the highest new positivity rate (0.5 %).
- In Garissa County 80% of those who attended ANC were tested, Balambala Sub County had the lowest uptake of ANC-PMTCT at 43%.
- Generally PMTCT uptake was low in year under review compared to other years,; this may be due to inadequate supply of test kits.
- In the county, only 71% of HIV positive mothers were issued with prophylaxis; Dadaab Sub County had the lowest at 7%.
- Hulugho and Lagdera had no positive PMTCT mother.
- Overall 3.1% of ANC mothers were tested as a couple, Ijara Sub County had the highest couples tested at 6.7% while Dadaab and Hulugho had the lowest at 0% each.
- Only 9.4% of postnatal mothers were tested within 72 hours; Hulugho Sub County had the highest at 82.5% while Fafi Sub County had the lowest at 4.0%.
- 22.4% of deliveries were tested in maternity.

2.10.3: Care and Treatment

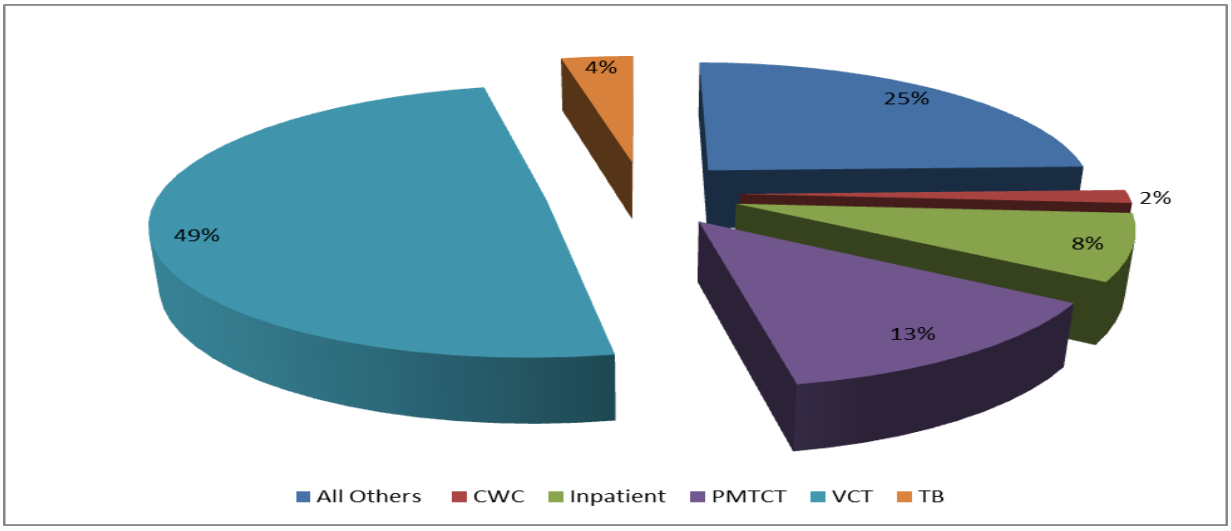
ART programme aims at providing anti-retroviral therapy to the people affected and exposed HIV virus, and also to provide prophylaxis treatment to prevent opportunistic infection. This ensures life prolongation.

Table 29: ART indicators

Indicator	Balambala	Dadaab	Fafi	Garissa	Hulugho	Ijara	Lagdera	County
New patients enrolled within the month for HIV care all others	5	10	9	34	0	0	4	62
New patients enrolled within the month for HIV care through CWC	0	0	1	3	0	0	0	4
New patients enrolled within the month for HIV care through Inpatient	0	0	0	18	0	2	0	20
New patients enrolled within the month for HIV care through PMTCT	0	2	0	28	0	2	1	33
New patients enrolled within the month for HIV care through VCT	0	4	0	117	0	2	2	125
New patients enrolled within the month for HIV care through TB	0	1	1	4	0	0	3	9
Total enrolled	**5**	**17**	**11**	**204**	**0**	**6**	**10**	**253**
Occupational on post exposure prophylaxis	0	10	0	26	0	0	0	36
Sexual assult on Post exposure prophylaxis	0	5	0	12	0	2		19
All others on post exposure prophylaxis	0	6	0	89	0	2	1	98
Patient started on ARVs by WHO stage 1	0	0	0	85	0	0	1	86
Patient started on ARVs by WHO stage 2	5	0	6	75	0	3	0	89
Patient started on ARVs by WHO stage 3	0	0	5	29	0	0	1	35
Patient started on ARVs by WHO stage 4	0	0	0	18	0	0	0	18
Total Ever on ART	4	0	32	1,853	0	81	55	2,025
Total currently on ART	0	0	27	894	0	49	21	991
HIV Currently in Care - Total	4	9	27	1,075	0	73	21	1,209
Persons enrolled and eligible for ART but not started on ART	0	0	0	47	0	13	5	65
Proportion Eligible for ART but started on ART	100%	N/A	100 %	81%	N/A	19 %	29%	78%

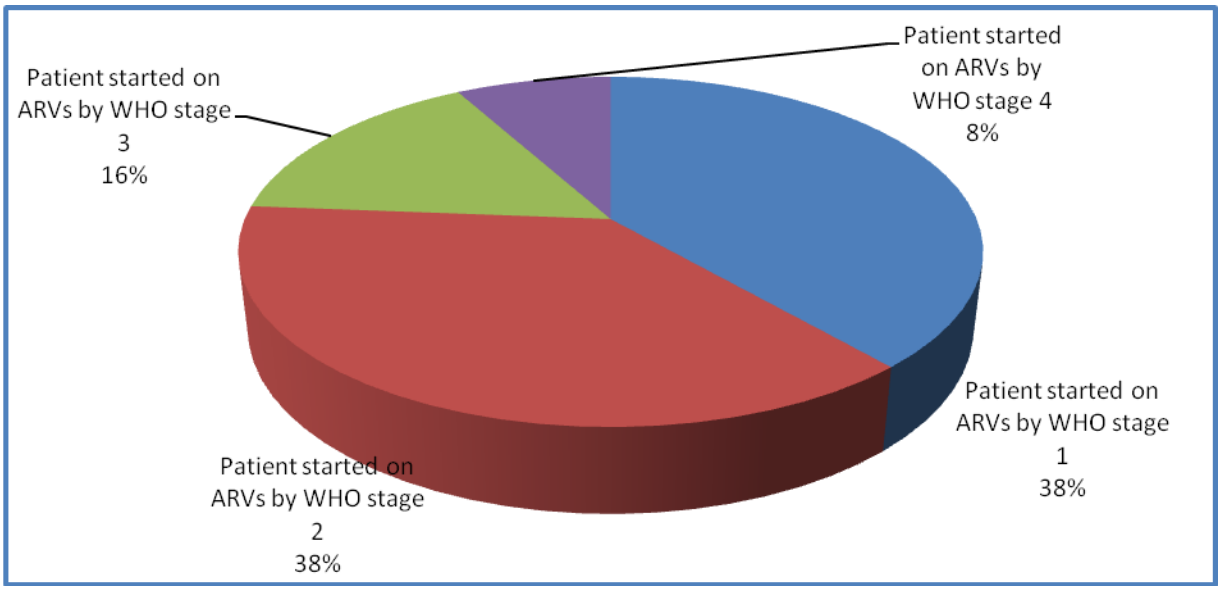
- A total of 253 clients were enrolled to CCC, of which 49% (125) were enrolled through VCT.
- Cumulatively by end of year 2015, 2,025 clients had ever been on ART out of which only 991 (49%) are currently on ART, 51 %(1,034) have either died, transfer out, defaulted or non-adherence.
- By end of year 2015, 1,209 clients were on care out of which 991 (82%) were on ART; this does not meet 90-90-90 WHO goal, which state that 90% of the clients on care should be on ART.
- 78% of eligible clients were started on ART in the county, thus 22% of eligible clients were not started on ART; Ijara Sub County had the highest number of clients eligible but not started on ART i.e.81%.

Figure 39: ART entry points



VCT accounted the highest number of clients enrolled on HIV care during the year at 49%, followed by all others, PMTCT, inpatient, TB and CWC at 25%, 13%, 8%, 4% and 2% respectively.

Figure 40: Patients started on ARVs by WHO stages



Most of the HIV positive patients (38%) were started on ARVs at WHO stage 1 and 2, and very few started at WHO stage 4 at 8%.

Table 30: Garissa county patients Starting ART, 2015

Data name	Balambala	Dadaab	Fafi	Garissa	Hulugho	Ijara	Lagdera	County
Female under 15yrs Starting on ART	0	0	0	7	0	2	1	10
Female above 15yrs Starting on ART	1	0	1	135	0	3	1	141
Male above 15yrs Starting on ART	4	5	2	51	0	6	2	70
Male under 15yrs Starting on ART	0	0	1	6	0	0	0	7
Total starting on ART	5	5	4	199	0	11	4	228

- During the period Garissa Sub County had the highest number of patients started on ARVs (199).
- The number of females started on ART was the highest in all the age groups.

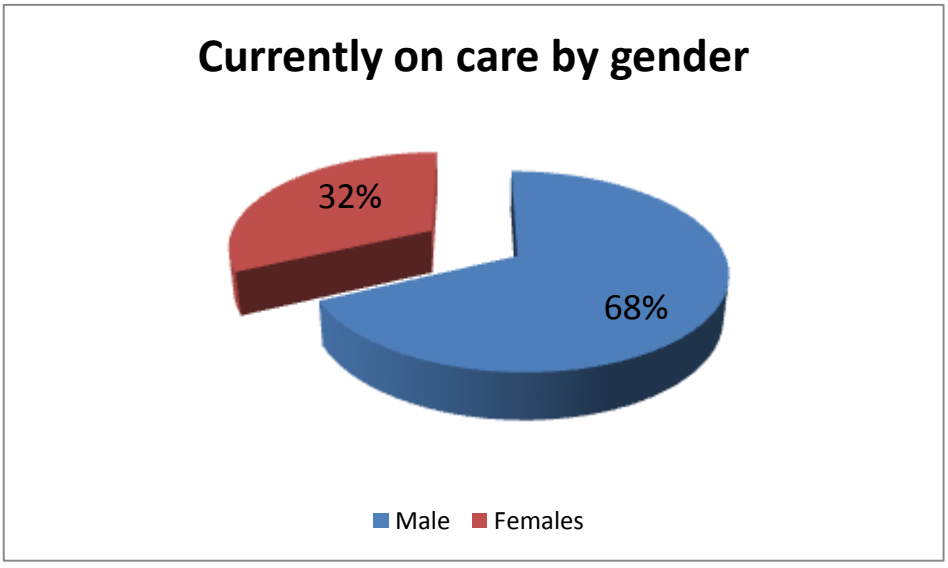
Table 31: Number of clients currently on care by age group end of December 2015

Indicators	Balambala	Dadaab	Fafi	Garissa	Hulugho	Ijara	Lagdera	County
Female under 15yrs Currently in Care (default)	0	0	4	22	0	6	2	34
HIV Currently in Care – above 15yrs Female (default)	0	2	10	733	0	34	8	787
Male above 15yrs Currently in Care (default)	4	7	10	291	0	22	11	345
Male under 15yrs Currently in Care (default)	0	0	3	29	0	11	0	43
Total	4	9	27	1,075	0	73	21	1,209

- Garissa Sub County had the highest number of clients on care accounting for 89% of all clients in the county.
- Hulugho Sub County had no client on care.

Figure 41: Currently on care by gender

- The highest number of patients on care during the year was female accounting for 68% (821) patients compared to males 32% (388).



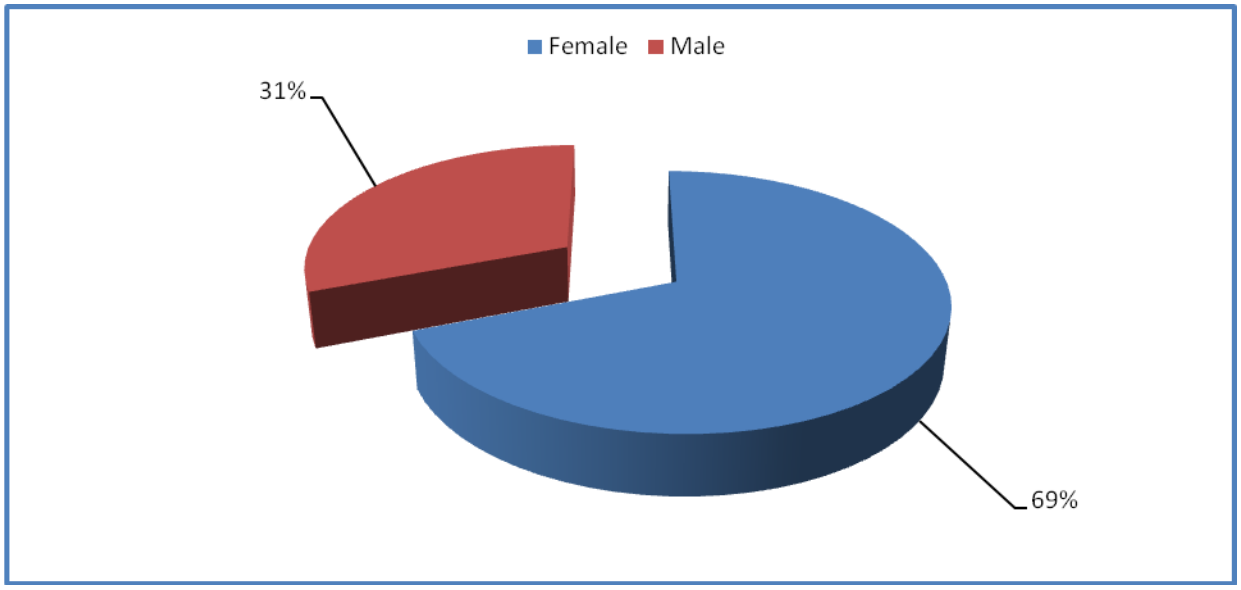
There were more male (68%) on care as compared to female (32%) in the year 2015

Table 32: Positive clients currently on ARVs

Indicators	Balambala	Dadaab	Fafi	Garissa	Hulugho	Ijara	Lagdera	County	Proportion from total
Currently on ART - Female Below 15 years (default)	0	0	5	21	0	6	2	34	3.4%
Currently on ART - Female above 15 years (default)	0	0	10	608	0	25	8	651	65.4%
Currently on ART - Male above 15 years (default)	4	0	10	238	0	14	11	277	27.8%
Currently on ART - Male below 15 years (default)	0	0	2	27	0	4	0	33	3.3%
Total	**4**	**0**	**27**	**894**	**0**	**49**	**21**	**995**	

- Below 15 years accounted for 6.7% of all clients on ART.
- 100% of female below 15 years on care were on ART compared to 77% males in the same age category.
- 83% of women on care were on ART compared to 80% of males.

Figure 42: Currently on ART by gender



The highest number of patients on ARVs during the year was females at 69%, while the males were at 31%.

2.11: Tuberculosis

2.11.1: Background

The TB/Leprosy program was formed in 1980 when the Kenya TB and Leprosy program were joined together by the Ministry of Health to become National Leprosy and Tuberculosis Program (NLTP). In year 2008 Division of Leprosy, TB and Lung Diseases (DLTLD) was created with more functions for NLTP by giving responsibilities for handling other chronic lung disease like asthma and chronic obstructive pulmonary disease (COPD).

Mission: To sustain and improve Tuberculosis, Leprosy and Lung Disease control gains in order to accelerate the reduction of Tuberculosis incidence, intensify post- elimination leprosy activities and control Lung disease.

Goal: A generation free of TB, Leprosy and Lung Disease.

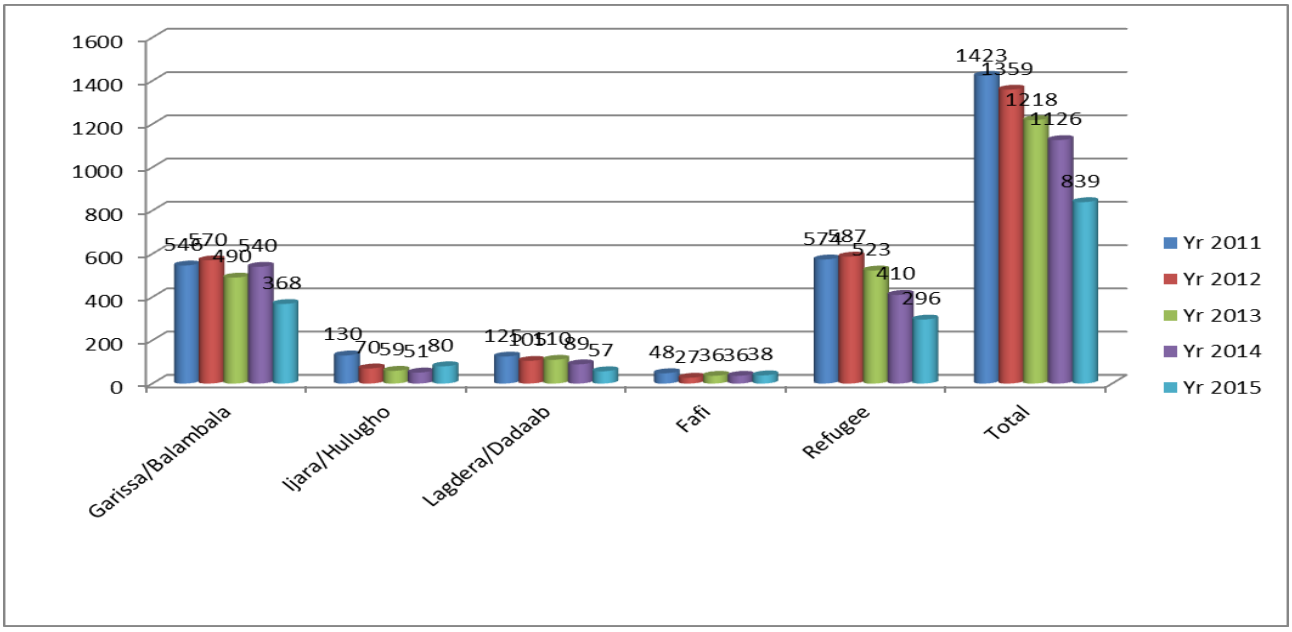
Figure 43: Currently on ART by gender

SUB COUNTY	DIAGNOSTIC FACILITIES	TREATMENT FACILITIES	TOTAL
GARISSA/Balambala	14	0	14
FAFI	6	0	6
Ijara/ Hulugho	6	2	8
Lagdera / Dadaab	11	2	12
Total	37	4	41

Table 33: Currently on ART by gender

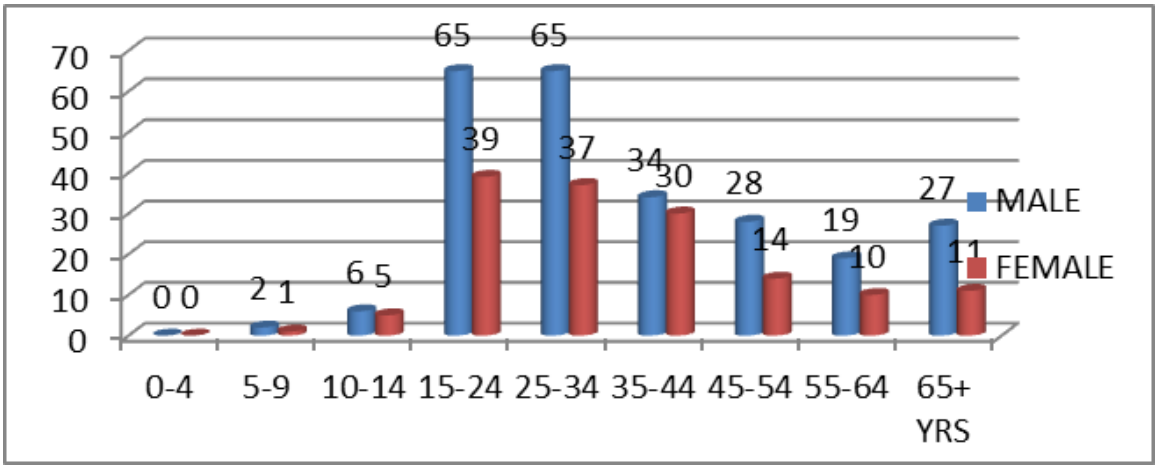
Control zone	Retreatment	%	New sm+ve	%	New Sme-ve	%	EPTB	%	SMND	%	Total
Garissa/Balambala	25	6.8	160	43.5	65	17.7	76	20	22	5.9	368
Ijara/Hulugho	2	2.5	56	70	4	5	16	20	2	2.5	80
Lagdera/Dadaab	3	5.2	28	45.6	8	14	19	33.3	1	1.7	59
Fafi	0	0	14	36.8	14	36.8	9	23.7	1	2.6	38
Refugee camps	6	2	137	46.2	51	17.2	61	20	41	13.8	296
Total	36	4.3	393	46.7	142	16.9	181	21.5	67	8	842

Figure 44: Currently on ART by gender



- TB Cases have significantly reduced in high burden control zones of Garissa, Lagdera and the refugee camps.
- Notably, there was a reduction of patients in Garissa/ Balambala, Lagdera/Dadaab, Refugee camps control zone compared to 2014.
- Ijara, and Fafi controls zones increased their case finding by 13% and 8% respectively.

Figure 45: Currently on ART by gender



- In every age category, smear positive cases in male than female.
- Age between 15-24, 25-34 are the most affected with PTB

Figure 46: Currently on ART by gender

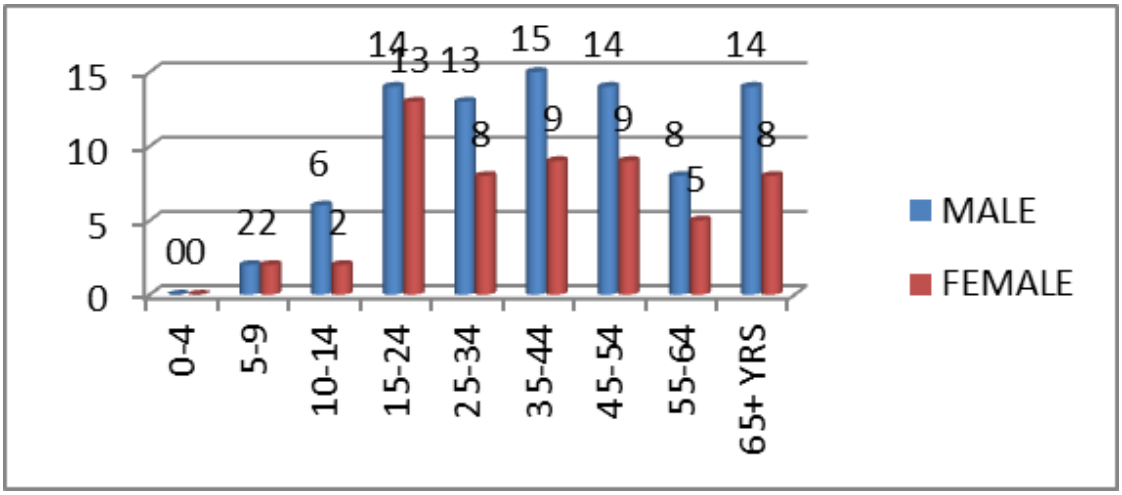
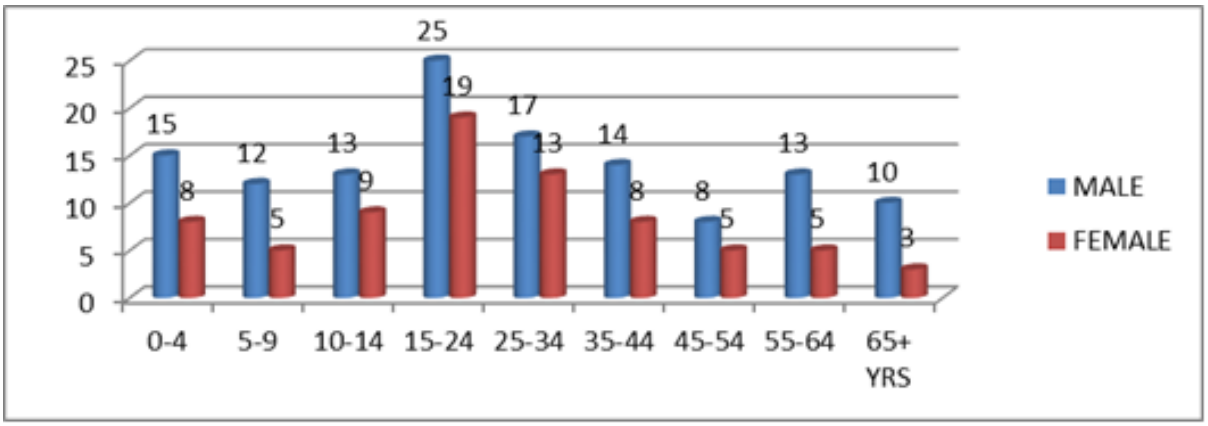


Figure 47: Currently on ART by gender



The most affected age group is (15-24 years) with a total of 44 clients male – 25,female 19 and the lowest age group affected being (45-54years) and (above 65 years) with 13 cases each

Table 34: Currently on ART by gender

Control zone	**Children treated for TB**	**Target**	**achieved**
Garissa/Balambala	41	10-15%	11%
Ijara / Hulugho	5	10-15%	6%
Lagdera /Dadaab	9	10-15%	15%
Fafi	2	10-15%	5%
Refugees	67	10-15%	22%
County	124	10-15%	14%

During the year 2015 a total of 124 children were started on anti TB treatment. The refugee camps and Garissa/Balambala control zone contributed the highest. All the control zones

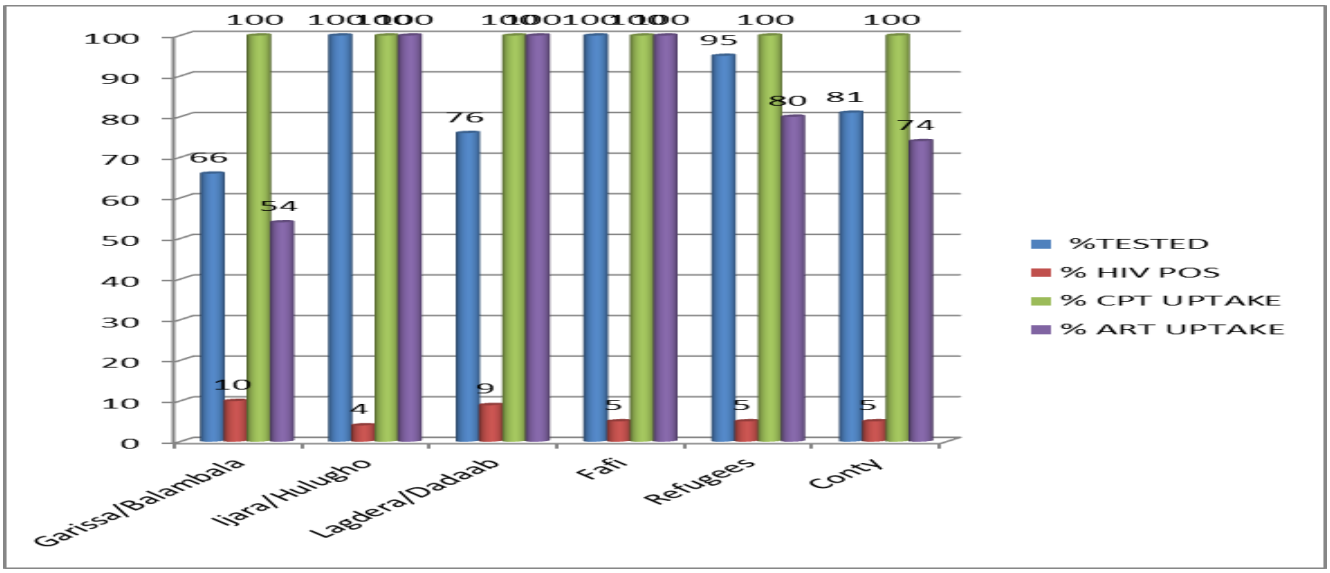
achieved the target of 10-15% except Ijara/Hulugho and Fafi which achieved 6% and 5% respectively.

Table 35: Currently on ART by gender

Control zone	Target: Treatment success Rate	Achievement
Garissa/ Balambala	90%	81%
Lagdera/ Dadaab	90%	91%
Ijara/Hulugho	90%	97%
Fafi	90%	95%
Refugee camps	90%	100%
County	90%	88.4%

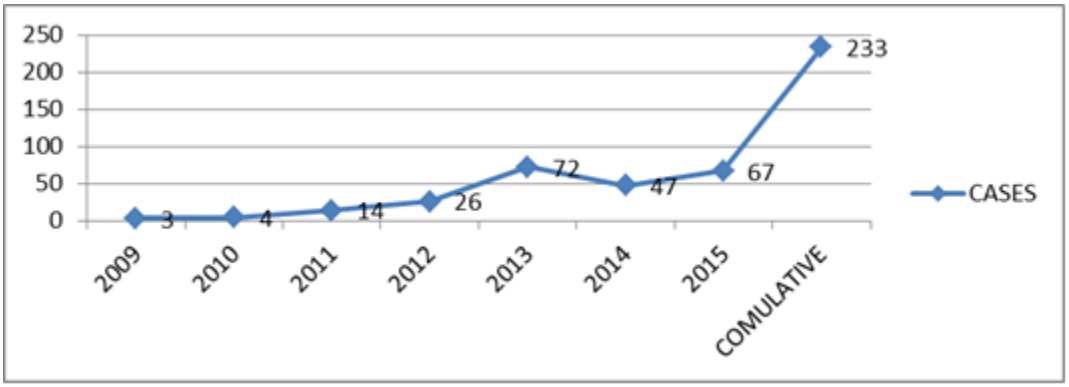
According to the WHO guidelines, the treatment success rate is 90%,during the year 2015 the county had 88.4% treatment success rate with Refugee camps control zone leading with 100% and Garissa/Balambala being the least with 81%

Figure 48: Currently on ART by gender



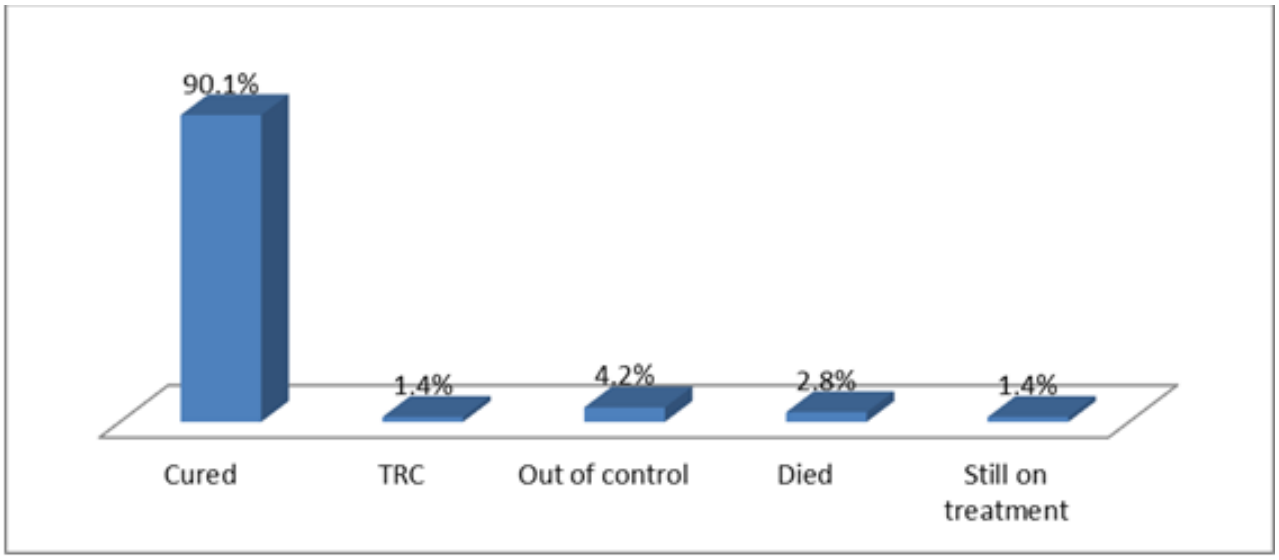
- The HIV performance indicators were on track except Garissa/ Balambala and Lagdera / Dadaab control zones
- Garissa has achieved 66% testing rate against the target of 95% while Lagdera/ Dadaab achieved 76%.
- The ART uptake Target (90%) was achieved by all the control zones except Garissa and the Refugee camps which achieved 54% and 80% respectively.

Figure 49: Currently on ART by gender



- The trend of MDR-TB notification increased significantly from 3 cases in 2009 to 67 cases in the year 2015
- In total 233 MDR cases were reported between 2009 to 2015

Figure 50: Currently on ART by gender



90% of all MDR-TB cases were cured, 2.8% died and 4.2% out of control during the year 2015,

2.11.2 GenXpert Utilization

The use of GenXpert has eased the diagnosis of MDR TB. The GenXpert machine when fully utilized can do 360 samples in a month and 4320 in a year. The error rate of the GenXpert machine must be not more than 4%. In 2015 the following is the performance of the GenXpert machine in the County referral hospital Garissa

Table 36: Currently on ART by gender

MONTH	TOTAL SPECIMEN DONE	TB POSITIVE	% POSITIVITY	RIFAMPICIN REISTANT	% REISTANT	ERROR	% ERROR
January	11	1	**9.1**	0	**0**	0	**0**
February	87	2	**2.3**	0	**0**	1	**1.1**
March	24	0	**0**	0	**0**	0	**0**
April	6	0	**0**	0	**0**	0	**0**
May	26	8	**30.8**	3	**11.5**	1	**3.8**
June	32	8	**25**	1	**3.1**	2	**6.3**
July	56	3	**5.3**	0	**0**	2	**3.6**
August	72	9	**12.5**	0	**0**	0	**0**
September	65	8	**12.3**	1	**1.5**	1	**1.5**
October	63	9	**14.3**	1	**1.6**	2	**3.2**
November	41	4	**9.8**	0	**0**	0	**0**
December	70	3	**4.3**	1	**1.4**	0	**0**
Total	553	54	**9.8**	7	**1.3**	9	**1.6**

- The machine performance was only 9.8% against a target of 80% and the error rate was within the normal limit with year error rate of 1.6%.
- The positivity of the sample tested was 9.8% and Rifampicin resistant pattern was 1.3% of the total samples. With utilization of at least 80% more MDR TB patients were diagnosed hence reducing the infectious pool from the population

Table 37: Currently on ART by gender

	Target	Achieved	% Achievement
County TB & Leprosy coordinator	12	11	92
Garissa/Balambala	12	9	75
Ijara	12	11	92
Fafi	12	12	100
Lagdera	12	3	25
Refugee	12	12	100
County achievement	72	58	81

- The county achieved 81% of the targeted supervision

2.11.3 TB Commodity Reporting

Commodity reporting in the 2015 had not been satisfactory in many control zones, the worst been Garissa/ Balambala and Lagdera Zones and the best been Ijara/Hulugho zone. The following are their reporting rate during the year.

Table 38: COMMODITY REPORTING

CONTROL ZONE	EXPECTED REPORTS	ACHIEVED	% ACHIEVEMENT
Garissa/Balambala	12	1	8.3
Lagdera/ Dadaab	12	2	16.6
Ijara /Hulugho	12	12	100
Fafi	12	8	66.7
Refugees	12	12	100
County	72	31	43

The under reporting especially Garissa/ Balambala control zones which reports majority of TB patients in the county has put constrain in supply of anti TB drugs from KEMSA and the TB program

2.11.4: Other Achievement

The following were achieved during the year

- Opening of MDR TB centre in Garissa
- Sensitization of County referral staffs on Genxpert
- Employment of new clinical officer in the TB program by the National TB programme
- Celebration of the world TB day in Danyere
- Quarterly Data review meeting

2.11.4: Constraints

1. Low MDR TB surveillance in all the control zones except the refugee camps
2. High number of MDR TB patients putting constrains on the program especially accommodations
3. Low utilization of the GenXpert machine
4. Low commodity reporting rate
5. Low staffs capacity on how to handle program activities
6. Low supervision rates especially in Lagdera/Dadaab
7. Low IPT uptake

2.11.5: Way Forward

1. Capacity building of staffs
2. Increasing GenXpert utilization to at least 80%
3. Increasing DR TB surveillance to at least 80%
4. Increasing IPT uptake
5. Increase commodity reporting to 100%
6. Increasing support supervision and OJT

2.12: Human Resource Department Annual Report 2015

The department of human resource in the Ministry of Health, Garissa County is tasked with human resource functions that the ministry of health undertakes. Some of these functions include;

- Recruitment of new staffs
- Promotions.
- Posting and transfers.
- Salary preparation, payments or stoppage
- Personnel data entry and records maintenance.
- Induction of new staffs
- Training and development
- Disciplinary matters
- Attending to staff welfare
- Addressing concerns of Unions

2.12.1: Activities

A) Recruitment of new staffs

In the year 2015, the department recruited seventy eight health workers in the following categories;

1. Community health extension workers –thirty five (35)
2. Enrolled Nurses – Twenty One (21)
3. Registered nurses- Sixteen (16)
4. Human resource officers- Four (4)
5. Radiologist - One (1)
6. Clinical Officer Anaesthetist – One (1)

All these staffs have been posted to all sub-counties and the headquarters.

B) Promotion

Staff promotion has been undertaken during the year in question with 352 health workers benefiting as per the table below

Table 39: Currently on ART by gender

S/NO	CADRE	NO.
1	Clinical officers	52
2	Nurses	135
3	Public health	47
4	Lab tech	17
5	Health Admins/Support Staff	34
6	Drivers	12
7	Medical officers	21
8	Pharmacists	7
9	Health Records Officers	6
10	Medical engineering	2
11	Radiographer	3
12	Nutrition Officers	5
13	Social worker	2
14	Dental Technologists	2
15	Orthopaedic/physiotherapist/plaster	9
16	Community Health Extension workers	4
	TOTAL	**358**

Unfortunately, fifty health workers who were absorbed from capacity program were not promoted due to lack of personal numbers. Effort is being made by the department to have them promoted, now that their personal numbers have been processed.

C) Induction of new health workers

The department has inducted four human resources for health workers but it was not successful in carrying out induction for the rest of employees due to budget constraints.

The budget for induction has been prepared awaiting funds to actualize it.

Challenges

There are challenges that hamper the department in its provision of services to the health workers.

- Lack of spacious offices. Currently the department has three cubes it uses as offices which is congested and does not accommodate the number of visitors who visit the department.
- Lack of enough cabinet files. Some of the existing cabinets have been inherited from the national government and it has malfunctioned.
- Transport challenges. No vehicle assigned to the department

Recommendations

- Procurement or construction of new offices for the department
- Procurement of new cabinet files.
- Allocation of one vehicle to the human resource department

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