TANA RIVER COUNTY

SMART SURVEY RESULTS

January 2017

SUPPORTING PARTNERS

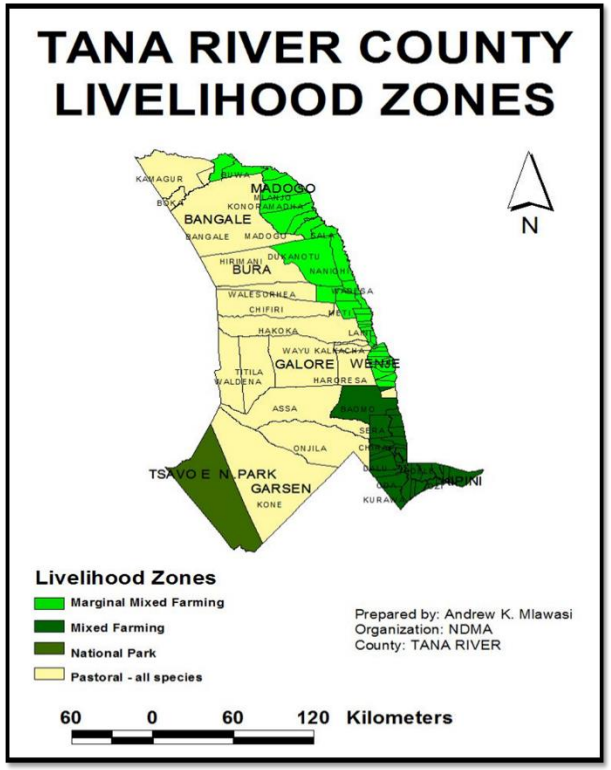
unicef

International Medical Corps

Kenya Red Cross

Background Information

- Tana River County is located in the Coastal region of Kenya.
- It occupies an area of approximately 38,437 km^2 has an estimated population of 293,261 people.
- The County, has 4 livelihood zones namely; marginal mixed farming, mixed farming, pastoral and national park.



Justification

- County drought status was at Alarm and the trend worsening within all livelihood zones
- Global acute malnutrition is at 14.0%, Severe acute malnutrition is at 1.5% and stunting is at 26.1%. *(Smart nutrition survey 2016 July).*
- IPC analysis (LRA) projected the IPC phase to be at critical Phase
- The 3-month VCI indicates that the County is experiencing severe vegetation deficit.
- Milk production and consumption at household level remained poor and below normal.
- No food stocks were available at the household level in all the livelihood zones and heavily depend on purchased foodstuff and relief food from the county and national governments.

sources;(*NDMA December 2016 EWS bulletin*)

Main Objective

- To determine the prevalence of malnutrition among the children aged 6- 59 months old and women of reproductive age (15-49years).

Specific Objectives

- To assess the prevalence of malnutrition in children aged 6-59 months.
- To determine the nutritional status of women of reproductive age (15-49 years)
- To determine immunization coverage for measles, OPV1/3 and Vitamin A for children aged 6-59months.
- To determine deworming coverage for children aged 12 to 59 months.
- To determine the prevalence of common illnesses (diarrhea, measles and ARI).
- To assess water, sanitation and hygiene practices.
- To establish the coverage of iron/folic acid supplementation and consumption during pregnancy among lactating women
- To asses health seeking behaviour among caregivers of children below 5years
- To assess the prevailing situation of household food security in the County.

Methodology

- Standardized Monitoring and Assessment of Relief and Transition (SMART).
- Sampling Population: Tana River County Population (293,261 people).
- Two stage sampling was used in the survey.
- Stage 1: Random selection of clusters based on PPS
- Stage 1 Sampling Unit: Cluster (equivalent to a village)
- ENA July 2015 version used in calculation of sample size.

Sample size calculation using ENA

Parameters for Anthropometry	Value	Assumptions based on context
Estimated Prevalence of GAM (%)	14.0 %	Based on July 2016 prevalence. The County drought status is Alarm and the trend is worsening in all the livelihood zones (EWS bulletin December 2016).This status is expected to worsen
± Desired precision	3%	Informed by current prevalence
Design Effect	1.13	Based on July 2016 SMART Survey
Children to be included	**632**	
Average HH Size	6	Based on CIDP
% Children under-5	20.06%	Based on 2009 population census projections
%Non-response Households	3 %	Estimated non response based on the current situation pop migration
Households to be included	**602**	

Sampling continued

- Minimum of 602 households and 632 Children were targeted
- 17 households were surveyed per day
- 36 clusters were selected

Stage 2 Sampling

- Sampling Unit (Basic): Household
- Sampling Method: Simple Random Sampling
- Number of household sampled per cluster: 17

Survey Organization

- Number of Teams involved: 6
- Team Composition: 1 team leader and 3 Enumerators
- Overall Coordinator: CNC

Data collection and Analysis

- Data Collection: Open data kit (ODK)

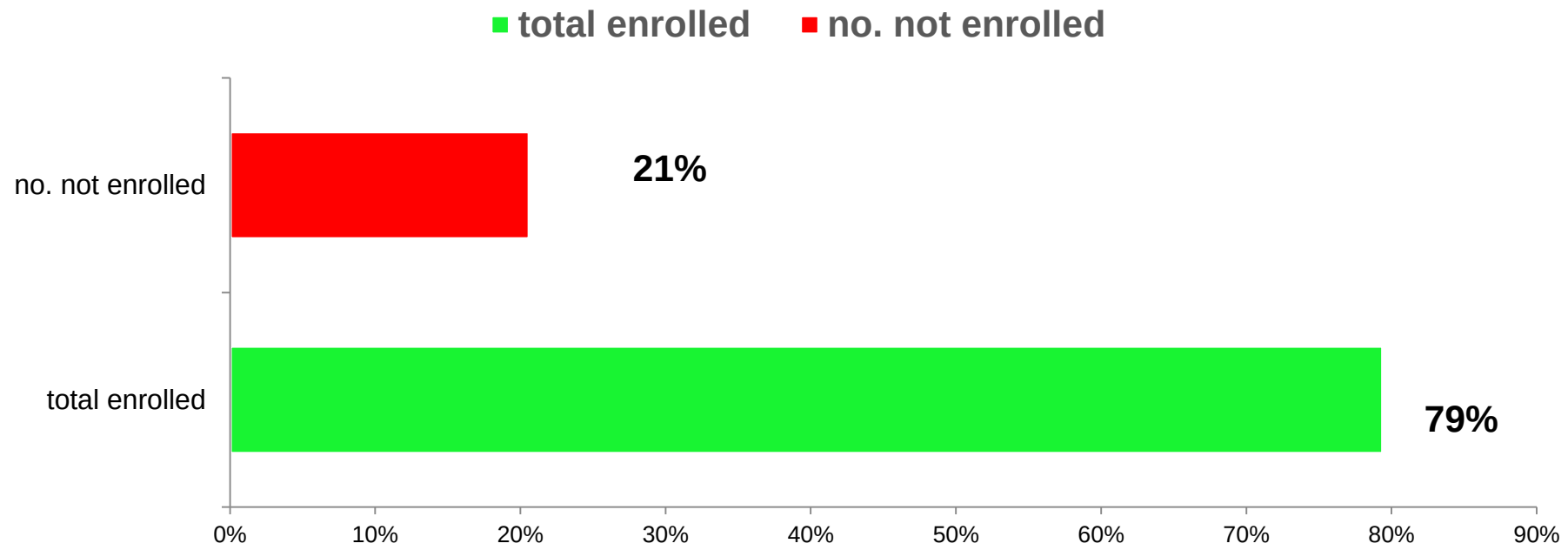
- Analysis: ENA July 2015 version, SPSS version 20, Ms. Excel

RESULTS

HOUSEHOLD DEMOGRAPHICS

Indicator	Number
Total number of household sampled	612
Response Rate	99%
Children 6-59	717
Children 5 to 18 years	660
Adults	1075
Total Population	2500
Average household size	4.1

SCHOOL ENROLLMENT



The main reasons for non enrollment were

- The parents felt their children were too young to be in school
- There were no schools nearby
- Family labor responsibilities
- Household did not see the need of being in school

MAIN OCCUPATION OF HOUSEHOLD HEAD

Main Occupation of household head	Numbers	Percentage
Livestock herding	141	23.3%
Own farm labor	104	17.2%
Employed (salaried)	49	8.1%
Waged labor	184	30.4%
Petty trading	27	4.5%
Merchant /trader	9	1.5%
Firewood/charcoal	29	4.8%
Fishing	8	1.3%

MAIN HOUSEHOLD INCOME SOURCES

Main Source of Income	Number	Percentage
Casual labor	186	30.7%
Petty trading e.g. sale of fire wood	63	10.4%
Sale of livestock products	77	12.7%
Sale of crops	88	14.5%
Sale of livestock	60	9.9%
Permanent job	39	6.4%
No income	27	4.5%
Remmitances	14	2.3%
Others	51	8.4%

MARITAL AND RESIDENCY STATUS

- 90.3% of the respondents were married, 5.3% were widowed, while 2.5% were single & 2.0% separated/divorced.
- All households (100%) that participated in the survey were Residents

ANTHROPOMETRIC MEASUREMENT PLAUSIBILITY REPORT

CRITERIA	SCORE	INTERPRETATION
Missing/Flagged data	0(0.8%)	Excellent
Overall sex ratio	0 (p= 0.108)	Excellent
Over all age distribution	0 (p= 0.106)	Excellent
Digit preference score (Weight)	0 (4)	Excellent
Digit preference score (Height)	0(5)	Excellent
Digit preference score (MUAC)	0(5)	Excellent
Standard deviation WHZ	5(p= 1.11)	Good
Skewness (WHZ)	0(-0.06)	Excellent
Kurtosis (WHZ)	0(-0.18)	Excellent
Poisson Distribution	5(p= 0.00)	Problematic
Overall Score	**10%**	**Good**

Health & Nutrition Status

ACUTE MALNUTRITION

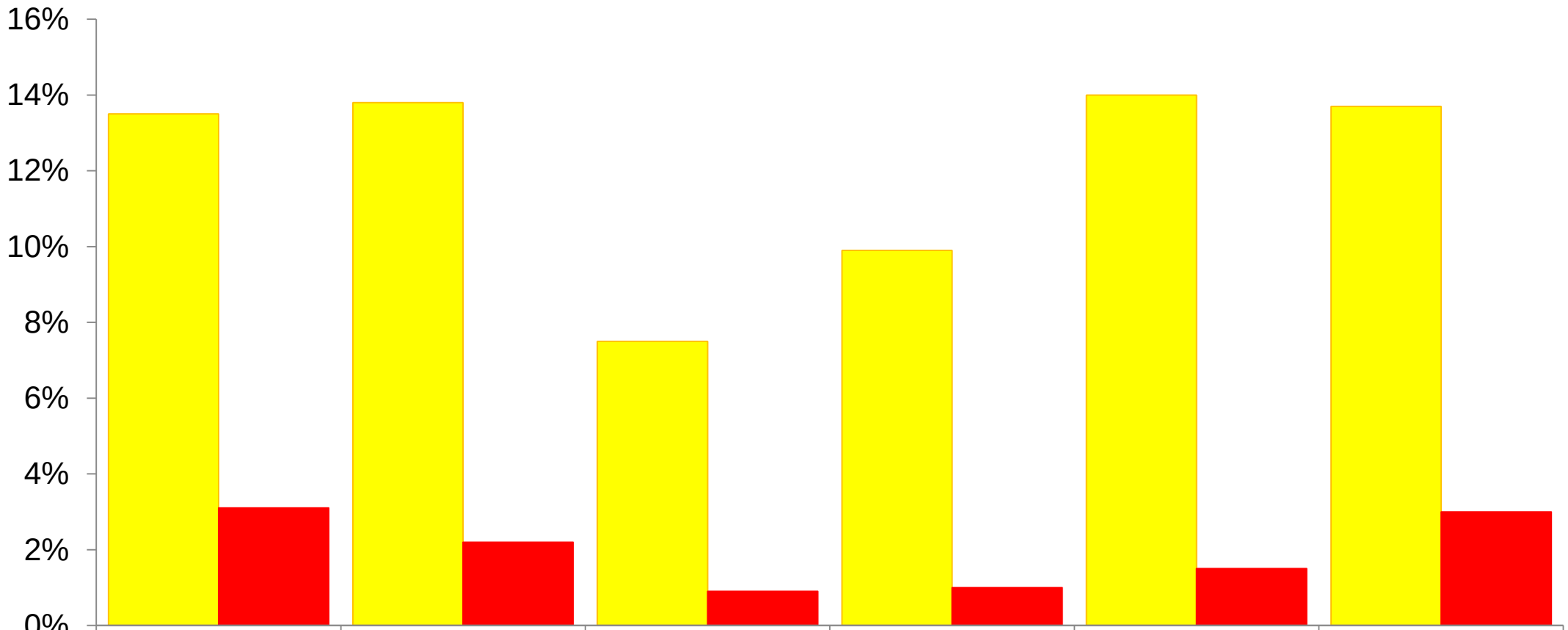
Indicator	Total (N)	All% with 95% CI	Boys (% with 95% CI)	Girls % with 95% CI
GAM: Weight for Height (WHZ) <-2 Z score or oedema	710	(97) 13.7 % (10.1 - 18.2 95% C.I.)	(57) 15.2 % (10.5 - 21.6 95% C.I.)	(40) 11.9 % (8.3 - 16.8 95% C.I.)
Prevalence of SAM (<-3 z-score and/or oedema)	710	(21) 3.0 % (1.3 – 6.4 95% C.I.)	(13) 3.5 % (1.3 – 8.7 95% C.I.)	(8) 2.4 % (1.1 – 5.0 95% C.I.)
MUAC < 12.5 cm	717	(29) 4.0 % (2.3 – 7.1 95% C.I.)	(12) 3.2 % (1.4 - 7.2 95% C.I.)	(17) 5.0 % (2.9 – 8.6 95% C.I.)
MUAC < 11.5 cm	717	(4) 0.6% (0.2 – 1.5 95% C.I.)	(2) 0.5 % (0.1 - 2.1 95% C.I.)	(2) 0.6 % (0.1 – 2.5 95% C.I.)

AFFECTED CLUSTERS

The Poisson's distribution was 5% signifying some pockets of malnutrition in some clusters. Furthermore the design effect for WHZ was 2.12 signifying heterogeneity in acute malnutrition based on WHZ. The following clusters were identified to have a burden of acute malnutrition based on WHZ

Cluster Number	Cluster Name	Sub County	Livelihood Zone
Cluster 27	Bura Furi A	Bura	Pastoral
Cluster 28	Kotole A	Bura	Pastoral
Cluster 13	Odole	Tana Delta	Mixed farming
Cluster 15	Kaloleni A	Tana Delta	Mixed farming
Cluster 3	Hemesa A	Tana Delta	Mixed farming
Cluster 4	Centre A	Tana Delta	Mixed farming
Cluster 35	Chuma Mrefu	Bura	Pastoral

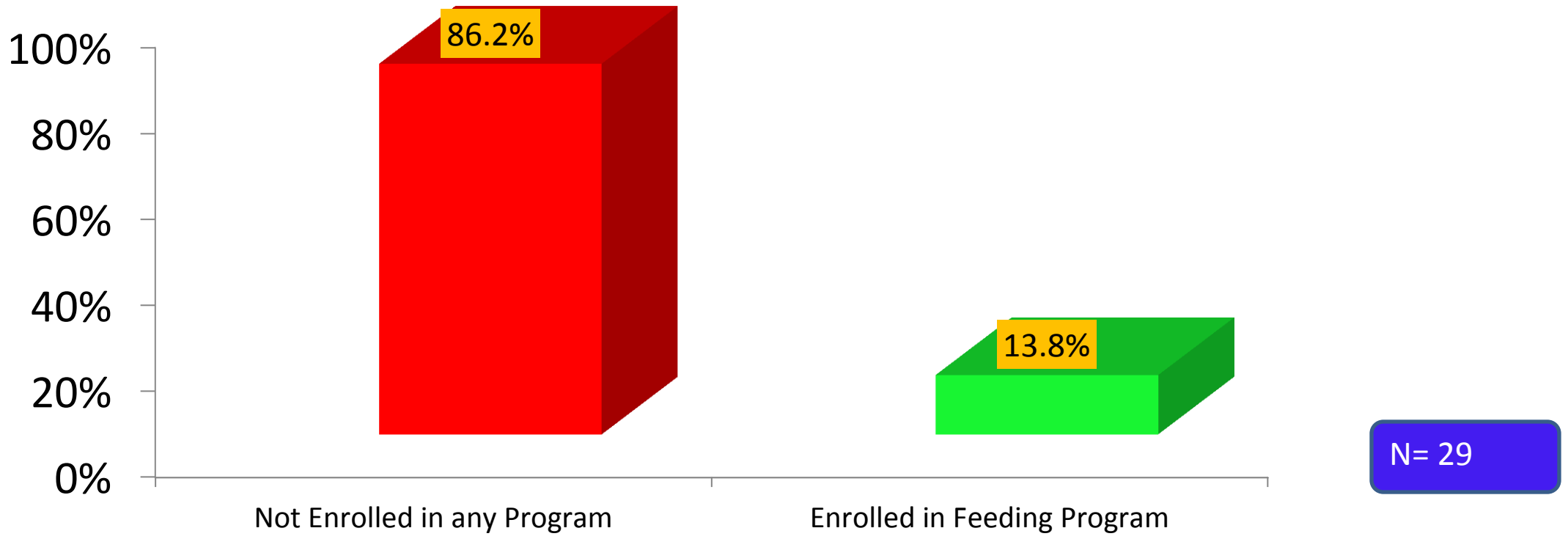
TRENDS OF ACUTE MALNUTRITION IN TANA RIVER COUNTY



	Feb. 2012	Apr. 2013	Jun. 2014	Feb. 2015	July. 2016	Jan. 2017
GAM	13.50%	13.80%	7.50%	9.90%	14.0%	13.70%
SAM	3.10%	2.20%	0.90%	1.00%	1.50%	3.00%

OTP/SFP Coverage

Is the child enrolled in any Feeding Program?



Summary of situation in the County

- The food security situation is in stressed phase (IPC phase 2) in mixed farming and marginal mixed farming it is in minimal phase (Phase 1)
- There was poor performance of short and long rains leading to water stress in the households, low crop production.
- Low rainfall led to inadequate pastures leading to migration of livestock, low production of milk.
- The body conditions of livestock deteriorated leading to poor prices, while crop prices is increasing.
- Current drought status is at alert phase and worsening (NDMA, Dec 2017)

STUNTING AND UNDERWEIGHT

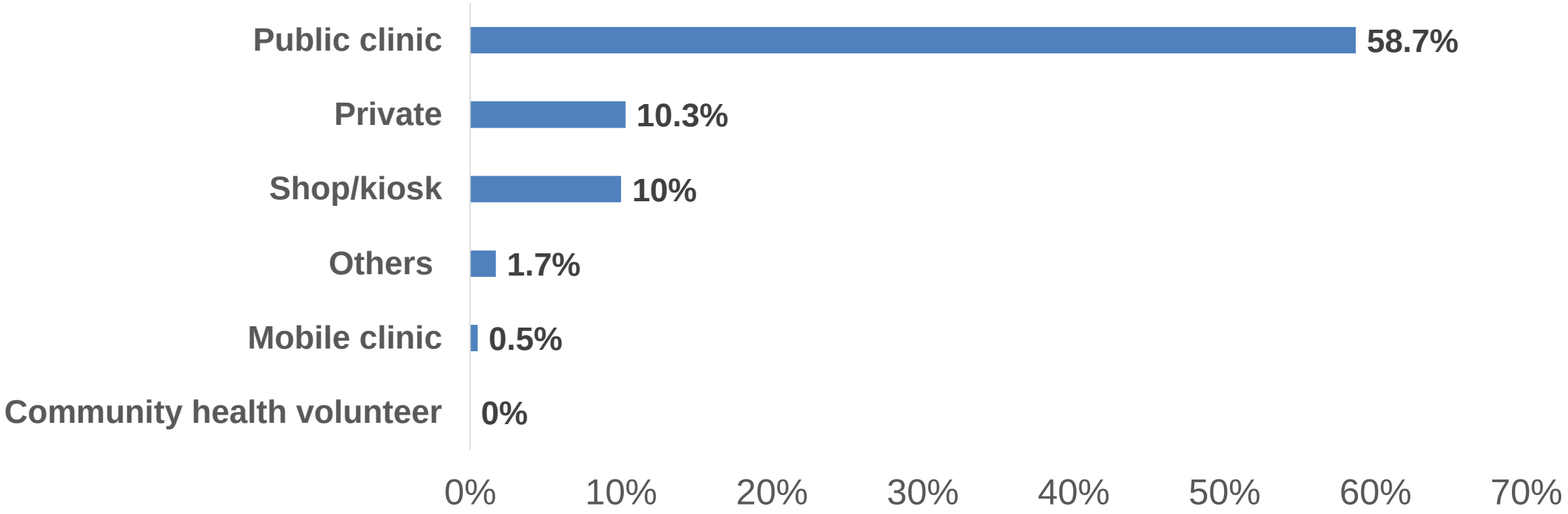
Indicator	N (Total)	All %(95% CI)	Boys%(95% CI)	Girls% (95% CI)
Prevalence of stunting (<-2 z-score)	687	(136) 27.8 % (23.7 – 32.3 95% C.I.)	(115) 31.6 % (26.1 - 37.6 95% C.I.)	(76) 23.5 % (19.2 - 28.5 95% C.I.)
Prevalence of severe stunting (<-3 z-score)	687	(49) 7.1 % (5.2 - 9.7 95% C.I.)	(31) 8.5 % (5.8 - 12.3 95% C.I.)	(18) 5.6 % (3.3 - 9.3 95% C.I.)
Prevalence of underweight (<-2 z-score)	712	(117) 23.7 % (19.6 – 27.2 95% C.I.)	(100) 26.5 % (21.8 - 31.8 95% C.I.)	(65) 19.4 % (15.3 - 24.3 95% C.I.)
Prevalence of severe underweight (<-3 z-score)	712	(43) 6.0 % (4.2 – 8.6 95% C.I.)	(22) 5.8 % (3.9 - 8.6 95% C.I.)	(21) 6.3 % (3.9 - 9.8 95% C.I.)

CHILD MORBIDITY

Diseases	% Prevalence			
	July 2016 Survey		January 2017 survey	
	n	Percent	n	Percent
All	235	43.0	409	57%
Fever with chills	83	35.3	254	62.1%
ARI/Cough	152	64.7	171	41.8%
Watery diarrhea	48	20.4	59	14.4%
Bloody diarrhea	2	0.9	1	0.3%
Other infections	30	12.8	30	7.3%

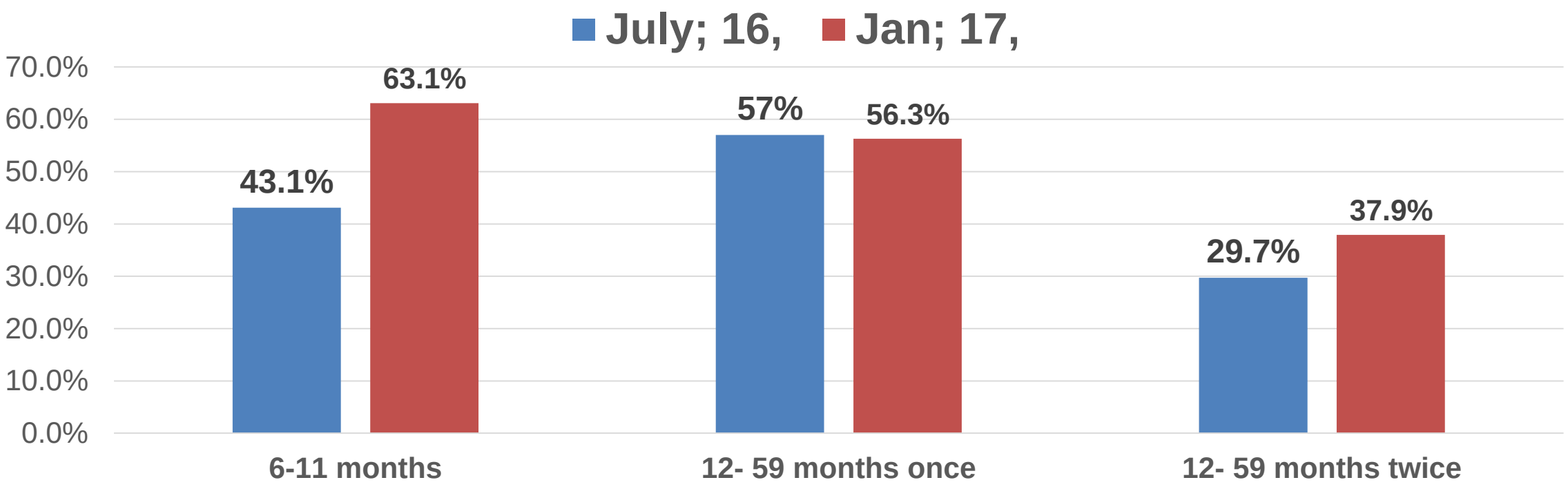
62.7% of children who had diarrhea episodes were supplemented with zinc

HEALTH SEEKING



87.9% of caregivers whose child were sick sought assistance from appropriate sources i.e. public clinic, private clinic or mobile clinic

VITAMIN A SUPPLEMENTATION AND DEWORMING

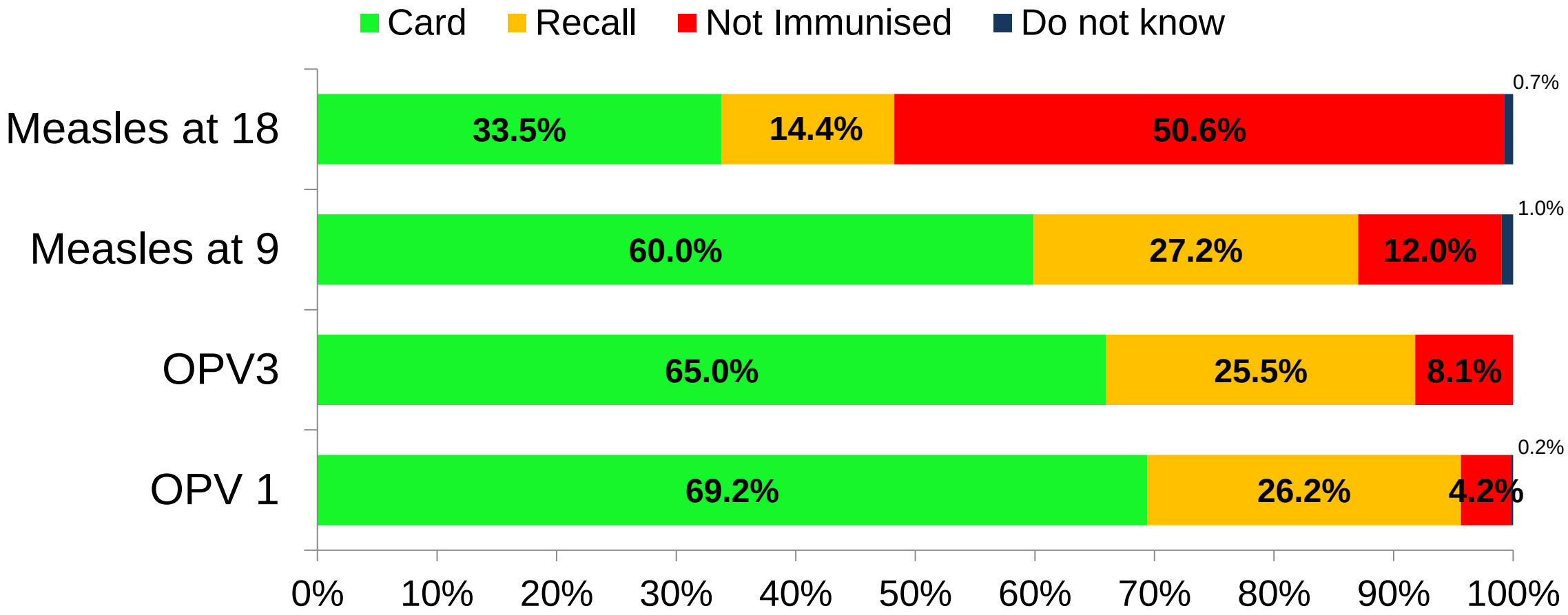


Whereas 62.0% of children of children aged 6- 59 m were supplemented with vitamin A at least once, 52.4% of children (12- 59m) had been dewormed in the past one year out of whom 13.8% had been dewormed at least twice

POSSIBLE REASONS FOR LOW VITAMIN A AND DEWORMING COVERAGE

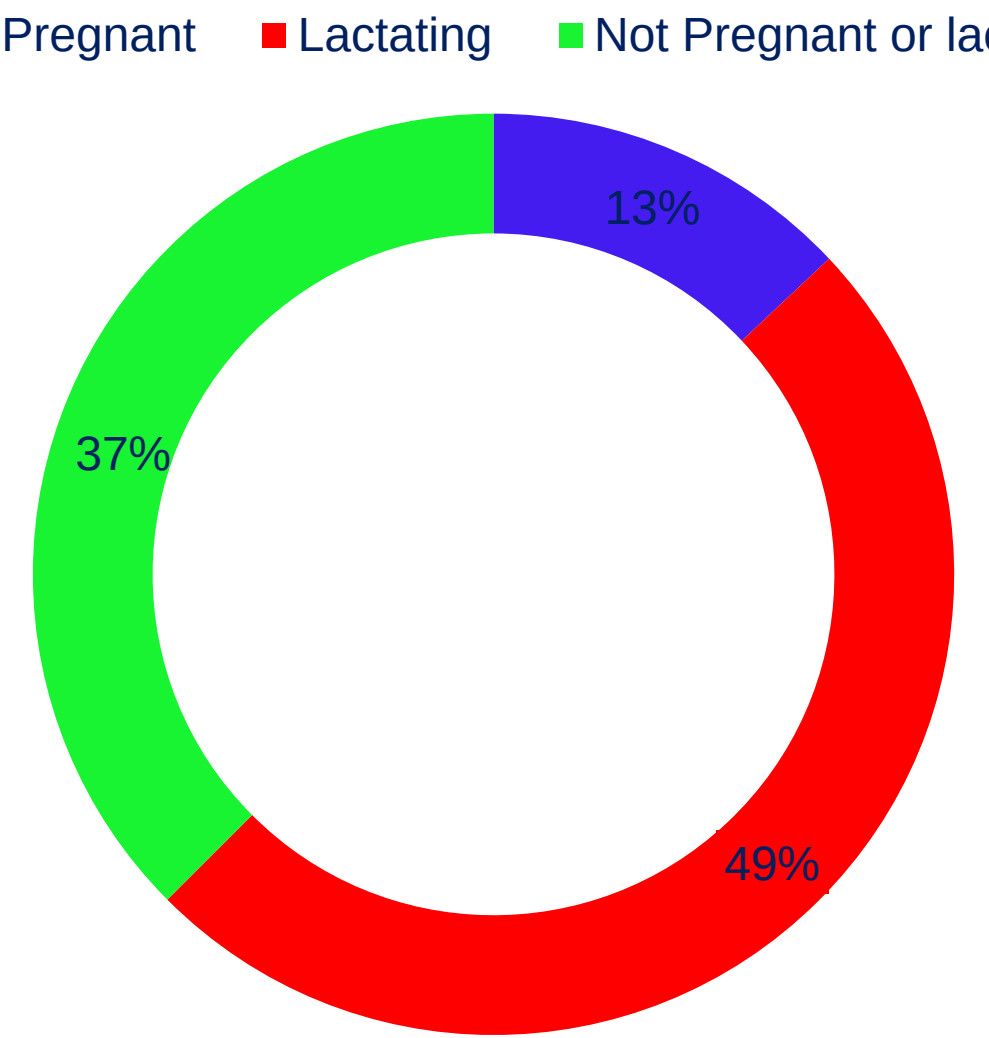
- Distance to the health facilities. More children from villages far away were likely not to be supplemented with vitamin A than villages near the health facilities
- Mobile clinics and outreaches are rarely done
- De- wormers stock outs

IMMUNISATION



90.4% of children were immunized on BCG confirmed by scar

PHYSIOLOGICAL STATUS OF WRA



IRON AND FOLIC ACID SUPPLEMENTATION AND CONSUMPTION

- 88.4% of mothers with children below 24 months were supplemented with iron and folic acid during their immediate previous pregnancy.
- The mean number of days for iron and folic acid consumption was 76.4 days.

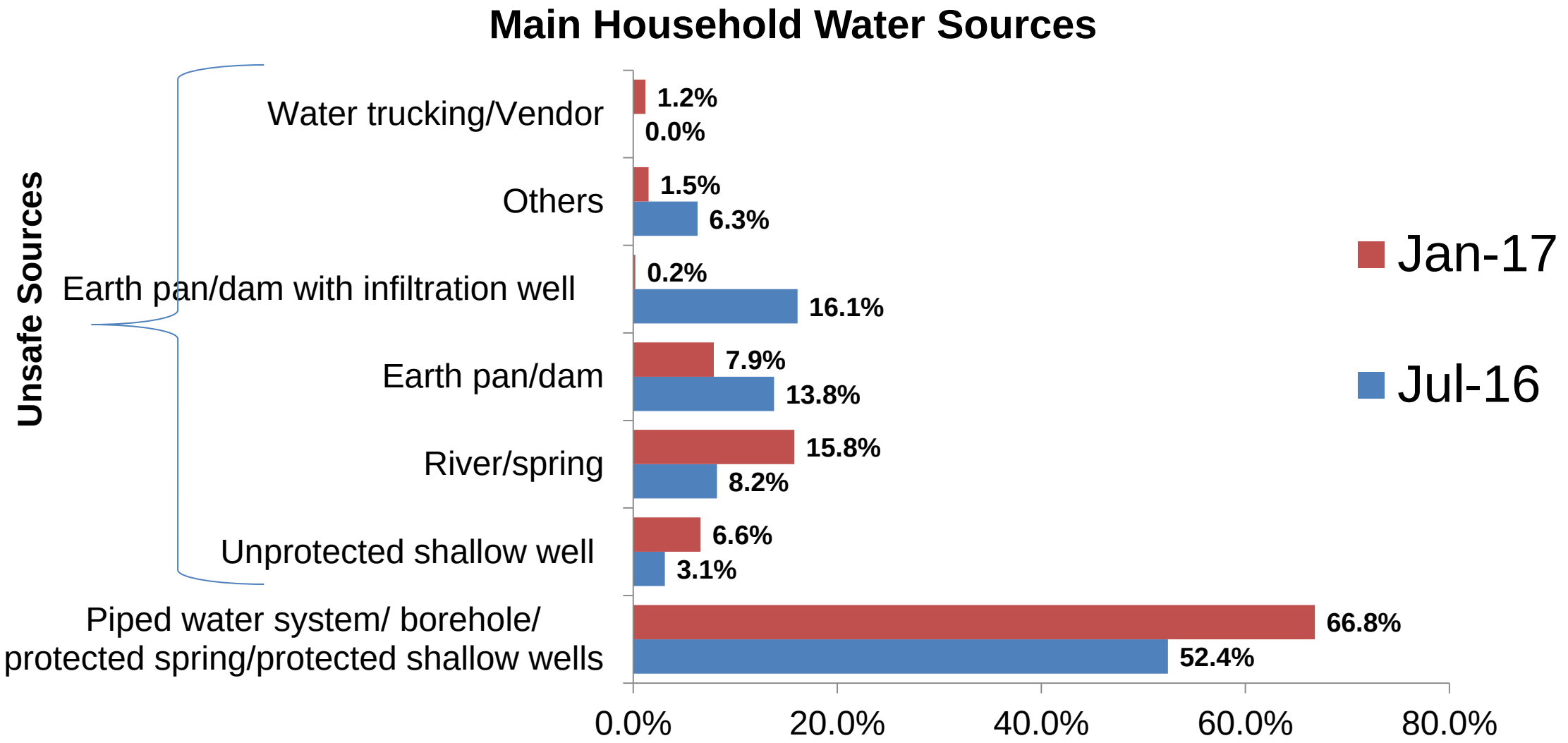
IFAS consumption in days	No of Women	Percentage
Less than 90 days	137	52.7
90 to 180 days	120	46.2
Above 180	3	1.1

MATERNAL NUTRITION (MUAC)

Indicator	N (Total)	n	Percentage
MUAC	All women of reproductive age		
< 21 cm (malnourished)	541	21	3.9%
21 - 23 cm (at risk)	541	75	13.9%
MUAC	Pregnant and lactating women		
< 21 cm (malnourished)	337	15	4.5%
21 - 23 cm (at risk)	337	39	11.6%

WATER HYGIENE AND SANITATION

MAIN WATER SOURCES



DISTANCES TO WATER SOURCES AND QUEING TIME

Distance to Water Sources	July 2016%	Jan 2017%
Less than 500m (Less than 15 minutes)	75.3	73.6
500m to 2km(15min to 1hr)	17.2	16.3
More than 2km(1 to 2hrs)	7.5	10.1

35.8% of the households queue for water. 24.7% queued for water in July 2016. 98.8% of the households consumed more than 15 litres as per the SPHERE recommendations

Queueing time	No. of Households (Jan 2017)	% July 2016	% Jan 2017
< 30 minutes	139	64.4	64.1
30 to 60 minutes	66	26.3	30.4
More than 1 hr	12	9.3	5.5

WATER TREATMENT AND STORAGE

Only 25.6% of the households treat their drinking water.

Water Treatment method	No. of households	Percentage
Use of chemicals	106	63.9%
Boiling	31	18.8%
Use of herbs	7	4.2%
Use of filter	18	10.8%

Water storage	Closed Container (%)	95.4
	Open Container (%)	4.6
60.4% of the household purchases water.		

HANDWASHING

94.4% of the caregivers are aware of handwashing practices

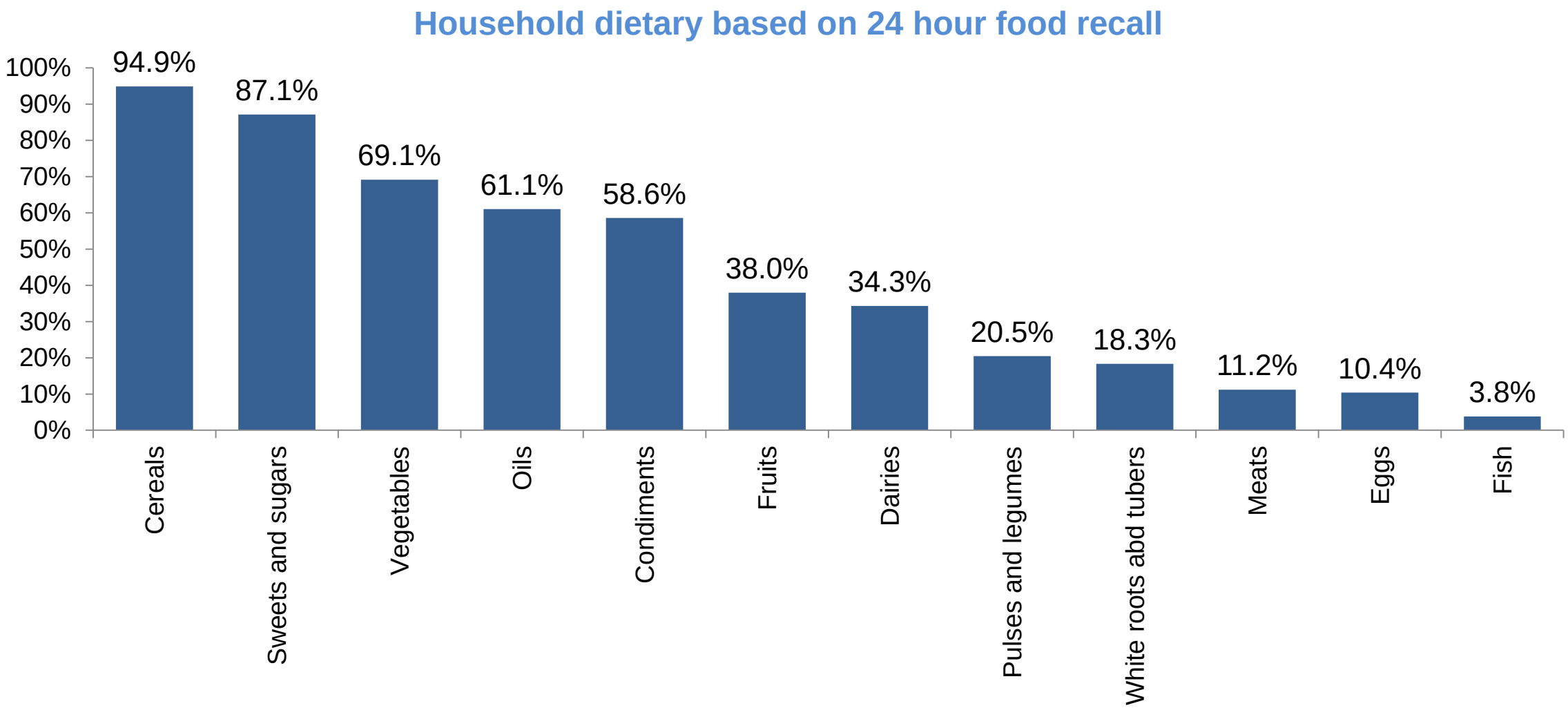
Handwashing Practice	No. of caregivers	Percentage
After toilet	430	71.0
Before cooking	196	32.3
Before eating	533	88.0
After taking a child to toilet	86	14.2
Handwashing in 4 critical moments	**27**	**4.5**
Handwashing with soap and water	309	54.0

RELIEVING POINTS

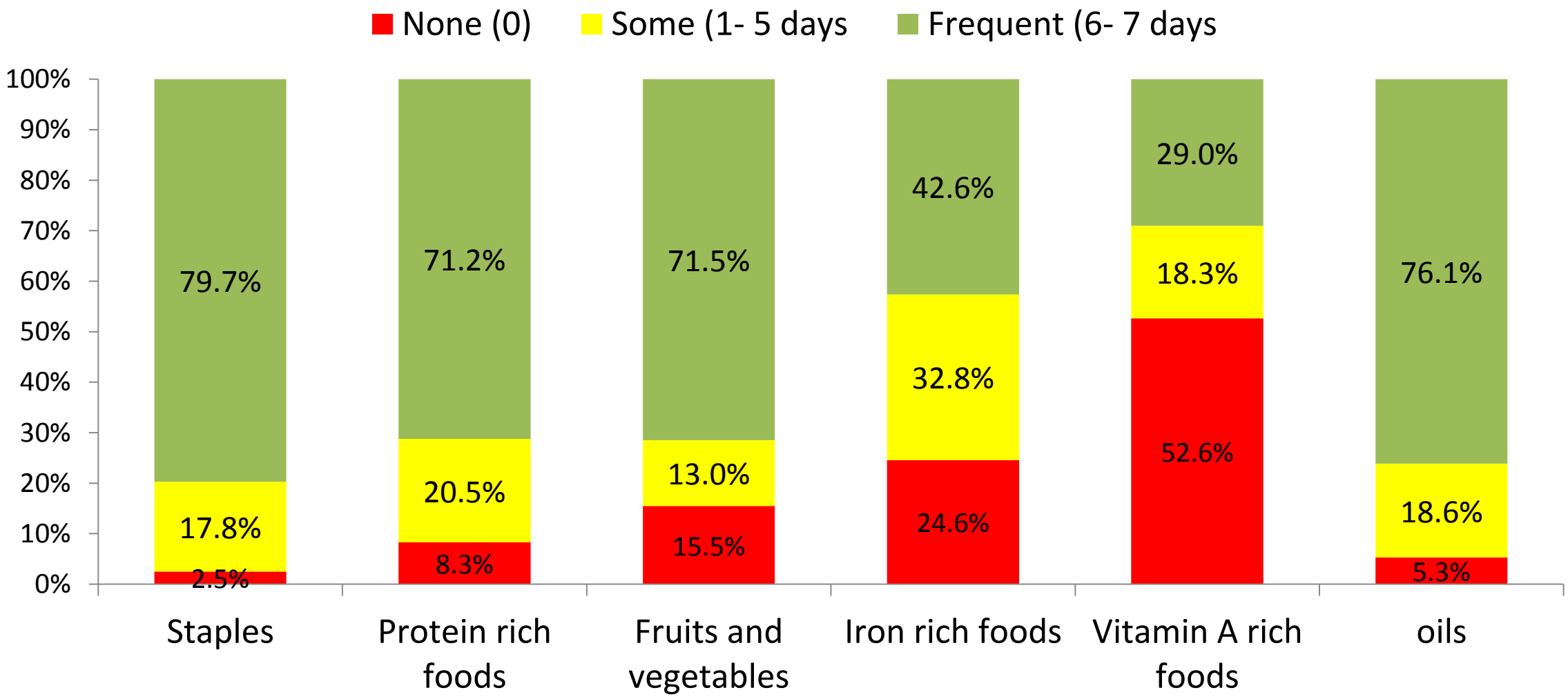
Relieving point	No. of Households	Percentage
Open defecation	317	52.3%
Neighbors or shared traditional/improved latrine	98	16.2%
Own traditional/improved latrine	190	31.4%

Food security and dietary consumption

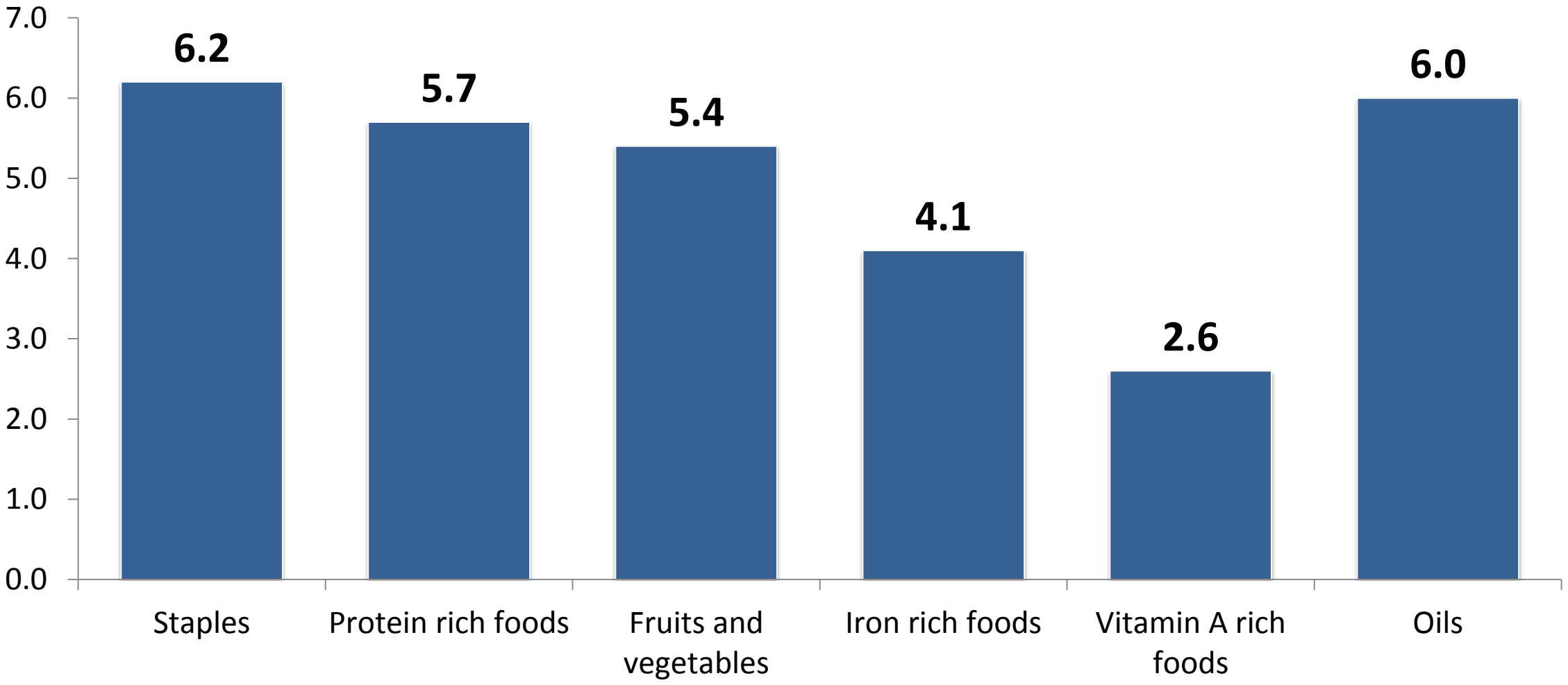
Household Dietary Diversity



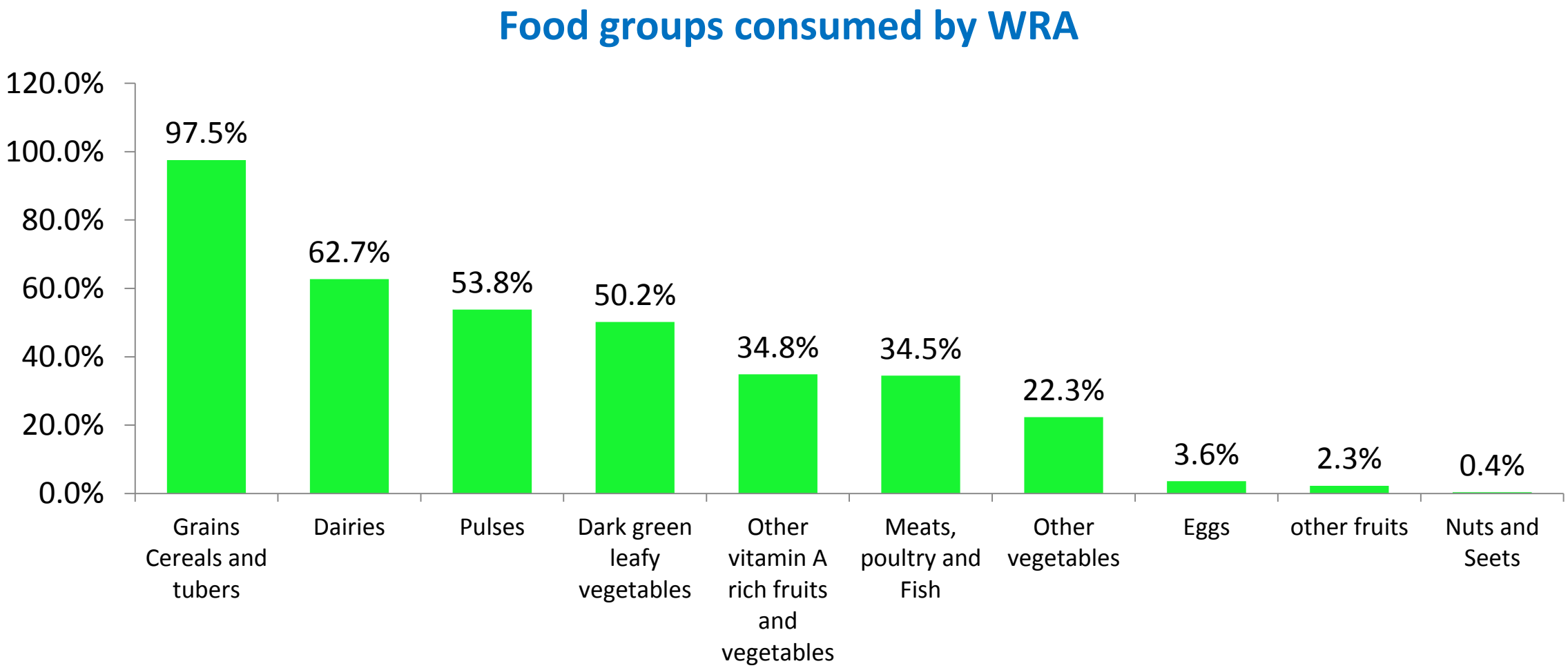
Frequency of consumption of staples and micronutrients rich foods



Frequency of consumption….ctd



Women Dietary Diversity (WDD)



Women Dietary Diversity Continued

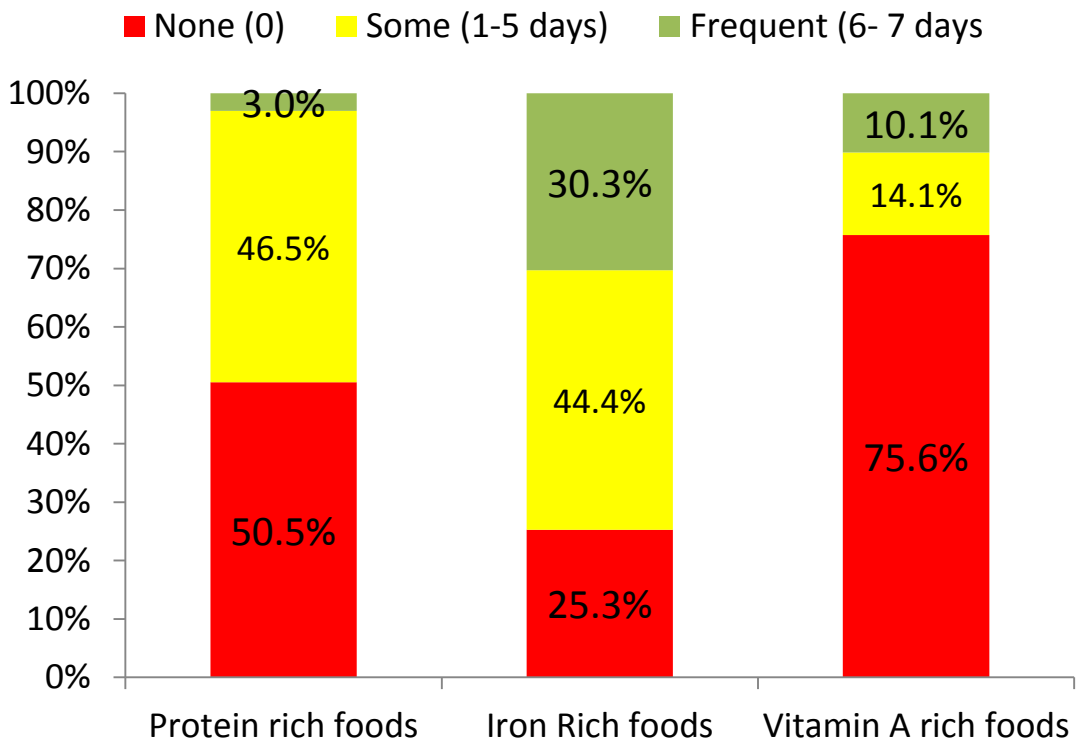
	Number (Jan 2017)	%(Jul. 2016)	%(Jan. 2017)
WRA consuming 5 FGs or more	126	34.4	23.9
WRA consuming less than 5 food	402	65.6	76.1
Mean No. of food groups		3.9	3.6

Food Consumption Score (FCS)

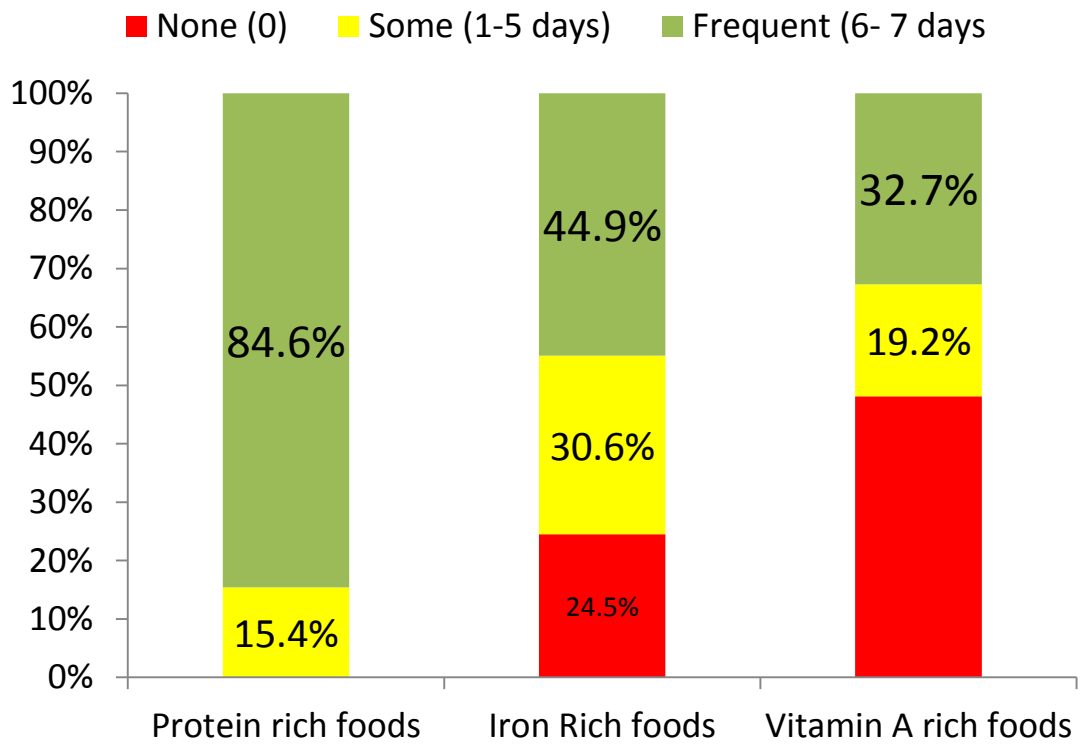
Household Classification (Thresholds)	n(Jan. 2017)	Jan-17 (%)	Jul-16 (%)
Poor (0- 21)	41	6.8%	2.70%
Borderline (21.5- 35)	58	9.6%	5.50%
Acceptable (Above 35.5)	507	83.7%	91.80%

Households diet composition based on FCS classification

Poor/Borderline Households



Acceptable Households

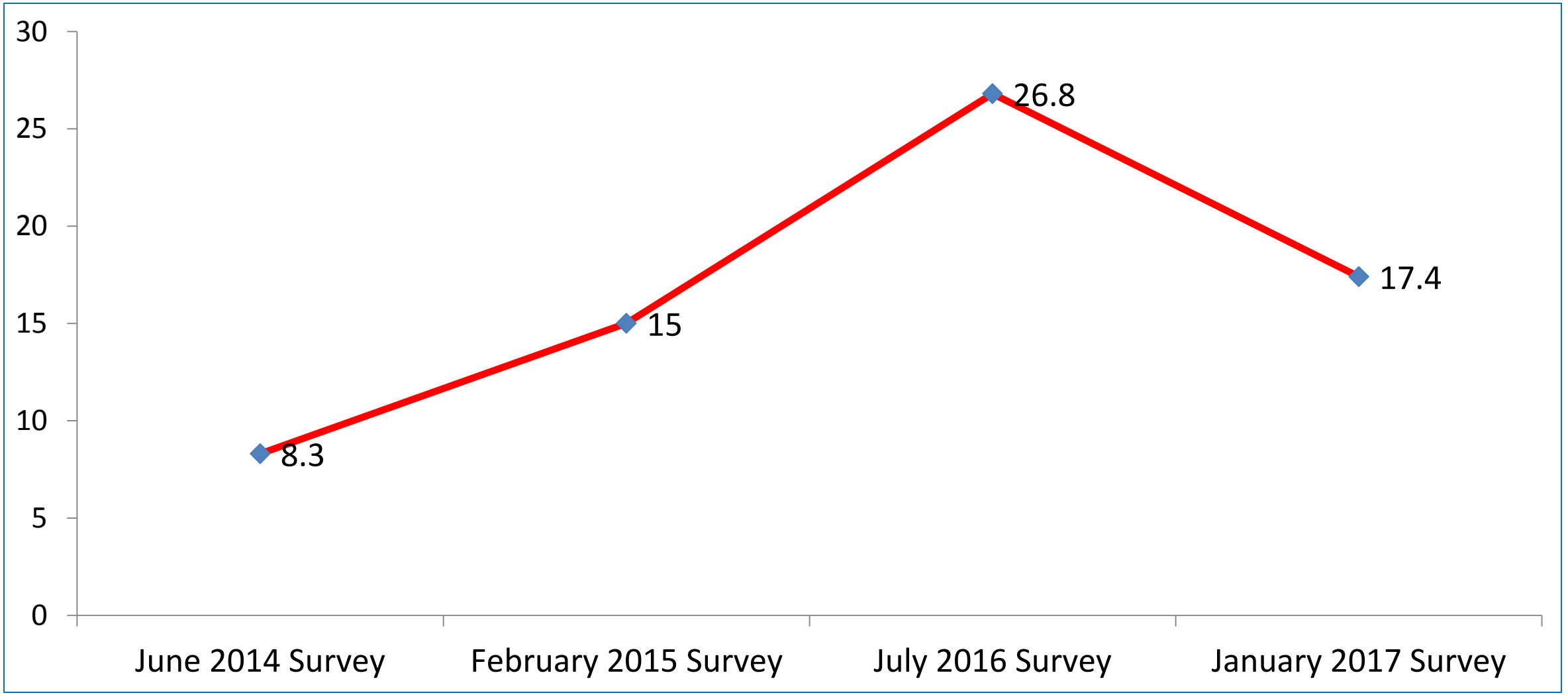


Coping Strategy Index (CSI)

33.0% of the household experienced food insecurity in the past 7 days compared to 40.0% in July 2016

Coping Strategy	**No. of Households**	**Frequency Score (0-7)**	**Severity Score (1-3)**	**Weighted Score**
Rely on less preferred or less expensive foods	79	2.3	1	2.3
Borrow foods from relatives or friends	68	1.9	2	3.8
Limit Portion sizes	79	2.5	1	2.5
Restrict consumption by adults so that children can feed	27	2.0	3	6.0
Reduce the number of meals	140	2.8	1	2.8
Total Weighted Coping Strategy Index				**17.4**

CSI Trend


30
25
20
15
10
5
0
8.3
15
26.8
17.4
June 2014 Survey
February 2015 Survey
July 2016 Survey
January 2017 Survey

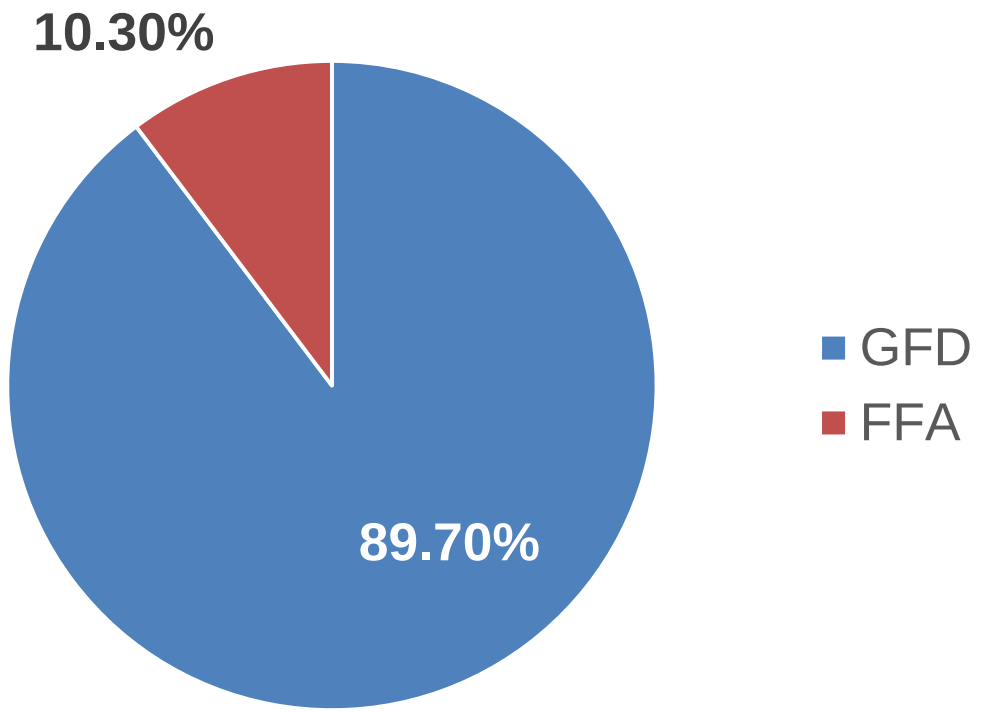
HH FOOD PROGRAM

17.7% of (606) total household are enrolled in food program

Relief program	Number Enrolled
GFD	96
FFA	11

GFD – General Food Distribution.

This is the food relief distributed by Government (both county & national) and other agencies.



Summary of situation in the County

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- There was poor performance of short and long rains leading to water stress in the households, low crop production.
- Low rainfall led to inadequate pastures leading to migration of livestock, low production of milk.
- The body conditions of livestock deteriorated leading to poor prices, while crop prices is increasing.
- Current drought status is at alert phase and worsening (NDMA, Dec 20167)

Conclusion and Recommendations

Conclusion and Recommendations

Findings	Recommendations	Actors	Timelines
GAM is at the serious state and deteriorating at 13.7%	• Share the SMART survey findings on a special CSG (for multi- sectoral approach) • Initiate active case findings, referral and defaulter tracing • Lobby for funds to conduct integrated outreaches	CNC, CHSP, County Nurse, CSG	Results shared at special CSG Response plans done and shared
Vitamin A and deworming coverage is very low, this has been attributed to poor documentation, stock out and distance to SDPs / lack of routine outreaches	• Sensitize HCP on forecasting and quantification to avoid stock outs • Sensitize the community on the importance of VAS and deworming through local radio • Conduct routine integrated outreaches and VAS/Deworming campaign	Health sector county pharmacist Health sector and partners Nutrition sector	March 2017 On going
IFAS uptake is bellow recommended days (at least 180 days)at less than 1.1%. Attributed to late ANC visits and inadequate knowledge.	• Conduct health education to community on important of IFAS uptake and early ANC visit through radio • Sensitize HCP on IFAS policy guidelines	CUs HCP in HF CNC	March 2017

Conclusion and Recommendations

Findings	Recommendation	Actors	Timelines
25.6% of the population treats drinking water, Attributed to chemical stock out (of which only 63.9% preferred chemical method).	• Community health education on importance of treated drinking water • Procurement and distribution of water treatment chemical; as the preferred method of treatment.	Health sector – PH Office Water sector	On going
ODF is beyond acceptable level at 52.3% Handwashing at 4 critical times is at 4.5%	Adopt and fully operationalize CLTS in the county Sensitize the community on proper hand washing at the 4 critical times through local radio station	CLTS focal person CHSFP	On going March 2017
Immunization coverage for measles among other antigens is low. Attributed poor documentation at SDPs and also lack of routine outreaches	• Sensitize HF In charges on forecasting and quantification • Conduct integrated outreaches • Purchase cold chain equipments • Procure mother child booklets	KEPI Logistician County Nursing Officer	

END