Final Report Survey 1

Multi-Year Annual Survey to Monitor Programme Effectiveness of the "Improving Reproductive Maternal and Newborn Health (IRMNH) Programme"

Sierra Leone

Study commissioned by UNFPA

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Multi-Year Annual Survey to Monitor Programme Effectiveness of the Improving Reproductive Maternal and Newborn Health (IRMNH) Programme

Sierra Leone

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The Consultant Team
Reet, December 2014

LIST OF ABBREVIATIONS

AIDS	Acquired Immunodeficiency Syndrome
ANC	Antenatal Care
AYF	Adolescents and Youth-Friendly Services
BCC	Behaviour Change and Communication
BMJ	British Medical Journal
BPEHS	Basic Package of Essential Health Services
CAG /CAGs	Community Wellness Advocacy Groups
CHC	Community Health Centre
CHO	Community Health Officer
CHP	Community Health Post
CHW	Community Health Worker
CI	Confidence Interval
CPR	Contraceptive Prevalence Rate
CYP	Couple Years of Protection
DFID UK AID	Department for International Development, United Kingdom
DHS	Demographic Health Survey
EA	2004 Census Enumeration Areas
FGD	Focus Group Discussion
FHCI	Free Health Care Initiative
FP	Family Planning
GPRHCS	Global Programme on Reproductive Health Commodity Security
HBM	Health Belief Model
HF	Health Facility
HFS	Health Facility Survey
HH	Household
HHS	Household Survey
HIV	Human Immunodeficiency Virus
HMIS	Health Management Information System
IEC	Information Education and Communication
IQR	Interquartile range
IRMNH	Improving Reproductive Maternal and Newborn Health Programme
IUD	Intrauterine Device
LARC	Long Acting Reversible Contraception
LF	Logical Framework
LLITN	Long Lasting Insecticide Treated Net
LMIC	Low and Middle Income Countries

M&E	Monitoring and Evaluation
MCH	Maternal and Child Health
MCHP	Maternal and Child Health Post
MI	Motivational Interviewing
MICS	Multiple Indicator Cluster Survey
MIP	Malaria in Pregnancy
MM	Maternal Mortality
MMR	Maternal Mortality Ratio
MNCH	Maternal, Newborn and Child Health
MNH	Maternal and Newborn Health
MoHS	Ministry of Health and Sanitation, Sierra Leone
MSSL	Marie Stopes Sierra Leone
MSWGCA	Ministry of Social Welfare, Gender and Children Affairs
MT	Monitoring Team
NEJM	New England Journal of Medicine
NHSS	National Health Sector Strategy
PHU	Peripheral Health Unit
PMEL	Partnership Management, Evaluation and Learning
PMTCT	Prevention of Mother to Child Transmission (of HIV)
PNC	Post Natal Care
PPS	Probability Proportional to Size
PSU	Primary Sampling Units
QIQ	Quick Investigation of Quality
RCT	Randomised Controlled Trial
RD	Restless Development
RM	Registered Nurse
RMNH	Reproductive Maternal and Neonatal Health
RNCH	Reproductive Newborn and Child Health
SBA	Skilled Birth Attendant
SCT	Social Cognitive Theory
SDP	Service Delivery Point
SECHN	State Enrolled Community Health Nurses
SL DHS	Sierra Leone Demographic Health Survey
SL MICS	Sierra Leone Multiple Indicator Cluster Survey
SRH	Sexual and Reproductive Health
STI	Sexually Transmitted Infections
TBA	Traditional Birth Attendant
U5MR	Under Five Mortality Rate

ULB-ESP	Free University of Brussels – School of Public Health
UNFPA	United Nations Population Fund
UNICEF	United Nations Children´s Fund
VCCT	Voluntary Confidential Counselling and Testing (for HIV)
VPE	Volunteer Peer Educator
WHO	World Health Organisation

SUMMARY

The Consortium hera/ULB-ESP/Focus 1000 (lead by **hera**) was commissioned by UNFPA to establish a baseline and to monitor the effectiveness of UNFPA interventions under the DFID/UK AID supported "Improving Reproductive Maternal and Newborn Health Programme (IRMNH) in Sierra Leone".

The specific objectives of this assignment are: i) monitoring the effectiveness of demand-side interventions implemented by the IRMNH programme, particularly the placement of volunteer peer educators (VPEs), the establishment of an enhanced programme for Community Wellness Advocacy Groups (CAGs) and the broadcasting of the Saliwansai radio programme; ii) monitoring the availability and uptake of modern family planning services among males and females 10 -24 years of age with a specific training activity on long acting reversible contraception (LARC) and iii) monitoring the quality of care for the provision of family planning services at public health facilities, and the upgrading of health facilities and specific training to provide youth friendly services.

This report presents the results of the first of three successive monitoring surveys to be implemented over a two year period to assess progress on selected output and outcome indicators. The survey was conducted in May / June 2014. Chapter one briefly describes the programme. The survey methodology is outlined in chapter two. Chapter three presents the findings of the survey. The conclusions and policy implications are presented in chapter four.

The 2014 IRMNH Survey 1 was conducted along three major axes:

- A household survey of the effectiveness of demand-side interventions for young people (10-24). It collected data on the need for and use of family planning and reproductive health services, as well as information on the three main UNFPA interventions at the community level (ie. Saliwansai, VPEs and reinforced CAGs). It included interviews to 1110 heads of households on general characteristics of the household and interviews with 1289 women/girls and men/boys aged 10-24. The households were located in 12 chiefdoms in six districts.

- A health facility survey to assess quality of care using an adaptation of the MEASURE Evaluation tools for Quick Investigation of Quality (QIQ) in Family Planning Programmes[1] to gather information on indicators of quality care and provision of youth friendly services. Information was collected in 110 health facilities located in 62 chiefdoms in 8 districts. A total of 219 client-provider family planning encounters were observed and 219 client exit interviews were also conducted. The care-giver in charge was interviewed in each health facility.

- A qualitative study of barriers to accessing reproductive health services based on seventeen focus group discussions with young people aged 10-24 years.

The 2014 IRHMNH Survey 1 generated baseline values for programme indicators with the aim to contribute to knowledge and understanding of the sexual and reproductive health needs of young people in Sierra Leone. The survey results are summarised in Table 1.

[1] *Quick Investigation of Quality (QIQ) A User's Guide for Monitoring Quality of Care in Family Planning*. **MEASURE Evaluation Manual Series, No. 2.** MEASURE *Evaluation*. Carolina Population Center, University of North Carolina at Chapel Hill. February 2001

Table 1. *Summary of survey results*

OUTCOME: INCREASED UTILISATION OF QUALITY FAMILY PLANNING, REPRODUCTIVE MATERNAL AND NEW-BORN HEALTH SERVICES WITH FOCUS ON YOUNG PEOPLE

Age-specific fertility rate

10 - 14 yrs	4.3 / 1000
15 - 19 yrs	98.3 / 1000
20 - 24 yrs	232.7 / 1000
10 - 24 yrs	97.7 / 1000

Contraceptive prevalence rate (% girls/women 10-24 who are currently using modern contraceptive methods) if in union or married

Modern methods (10-24 yrs)	29.1 %
Any methods (10-24 yrs)	37.3 %

Unmet need for family planning among girls/women aged 10-24

Unmet need of females 10-24 married or in a union	23.4 %
Unmet need of sexually active females 10-24	27.7 %

Proportion of pregnant females (10-24) among those who already had sex, by age category

10 - 14 yrs	7.0 %
15 - 19 yrs	10.9 %
20 - 24 yrs	20.2 %
10-19 yrs	9.9%
10-24 yrs	14.5

OUTPUT 1: INCREASED KNOWLEDGE OF INTEGRATED RMNH SERVICES IN WOMEN AND YOUNG PEOPLE (DEMAND CREATION)

Information, education, communication, knowledge and practices

Percentage of young people (10-24) who used condoms the last time they had sexual intercourse disaggregated by age, sex, and education

	Male (%)	Female (%)	Total (%)
10-14 yrs	4.2	15.0	12.7
15-19 yrs	21.3	5.9	11.7
20-24 yrs	28.9	2.9	13.5
10-24 yrs	24.7	5.1	12.6

	Male (%)	Female (%)	Total (%)
In school	25.9	7.0	15.9
Not in school	22.8	3.3	8.7
Total	24.7	5.1	12.6
Can read	27.7	8.8	19.1
Cannot read	13.2	2.8	4.9
Total	24.7	5.1	12.6

Percentage of young people 10-24 with consistent condom use in the past year among all who reported condom use at last sex, by sex and age

	Male (%)	Female (%)	Total (%)
10 -14 yrs	100	100.0	100.0
15 -19 yrs	54.1	49.0	52.5
20-24 yrs	65.6	20.4	59.7
10-24 yrs	614	50.7	58.7

Percentage of young 10-24 who ever heard of a modern family planning method

	Male (%)	Female (%)	Total (%)
Has not heard of any method	31.9	31.0	31.4
Heard of at least one method	68.1	69.0	68.6

Percentage of young 10-24 who ever heard of a modern family planning method (by number of methods heard)

	Male (%)	Female (%)	Total(%)
1 method	10.6	7.4	8.8
2 methods	4.9	3.9	4.3
3 methods	4.8	4.9	4.9
4 methods	7.8	8.4	8.1
5 methods	9.6	11.2	10.5

	Male (%)	Female (%)	Total (%)
6 methods	17.3	16.8	17.0
7 methods	6.8	9.7	8.4
8 methods	4.1	4.3	4.2
9 methods	2.2	4.9	2.1

Source of information for SRH among young 10 -24 yrs (% who reported each source as source of information for SRH)

School	25.9 %	Community health workers	8.7%
Parents	3.3 %	Internet	0.4%
Friends	33.5 %	I don't need this information	17.4%
Health structures	41.1 %	I don't know	18.4%

Radio drama Saliwansai

Percentage of radio listeners (10 -24 yrs)	Male (%)	Female (%)	Total (%)
	56.9	50.7	53.4

Percentage Saliwansai listeners (among radio listeners 10-24 yrs)

	Male (%)	Female (%)	Total (%)		Male (%)	Female (%)	Total (%)
10 – 14 yrs	2.1	9.6	6.1	20 – 24 yrs	30.4	18.9	24.1
15 – 19 yrs	17.7	16.2	16.9	10 – 24 yrs	16.7	15.0	15.8

Percentage of 10-24 years old listeners who quote Saliwansai influencing them to go to a health facility in the past year (among radio listeners)

	Male (%)	Female (%)	Total (%)		Male (%)	Female (%)	Total (%)
10 – 14 yrs	100.0	74.8	75.5	20 – 24 yrs	75.2	60.2	67.4
15 – 19 yrs	44.1	50.4	46.5	10 – 24 yrs	36.0	38.6	37.4

Volunteer peer educators (VPE)

Percentage of adolescents (10-19) in **Restless Development intervention areas** who reported using a condom last time they had sexual intercourse

	Male (%)	Female (%)	Total (%)
Restless Development intervention areas	22.2	10.4	14.3
Non Restless Development intervention areas	18.8	3.4	9.6
Total	20.3	7.0	11.8

Percentage of adolescents (10-19) from **Restless Development area**s who reported using a condom the last time they had a sexual intercourse (among those who already had sex, 29/194)	15.0%
Percentage of adolescents (10-19) **from Restless Development areas** who reported using a condom the last time they had a sexual intercourse (including all young, whether they had sex or not, 29/676)	4.3%
Percentage of adolescents (10-19) from **non Restless Development areas** who reported using a condom the last time they had a sexual intercourse (among those who already had sex, 10/90)	11.1%

Percentage young people reporting meeting a VPE in last year, by age

	Male (%)	Female (%)	Total (%)
10 - 14 yrs	23.3	20.0	21.5
15 - 19 yrs	31.0	32.2	31.6
20 - 24 yrs	31.7	25.6	28.2
10 -24 yrs	28.0	25.5	26.6

Percentage of young people (10-24) reporting VPE influencing them to attend a health facility (among those who have met a VPE and who have been to the facility in the past year)

	Male (%)	Female (%)	Total (%)
10 - 14 yrs	60.7	19.1	41.3
15 - 19 yrs	66.4	38-4	47.0
20 - 24 yrs	39.9	57.2	50.3
10 -24 yrs	54.8	42.3	47.1

Percentage % of FP clients interviewed reporting meeting a VPE last year	24.5 %
Percentage % of FP clients interviewed who reported the VPE interaction having influence them to visit the health facility today for family planning services (among those that have met a VPE)	88.5 %

Community wellness advocacy groups (CAG)

Percentage of 10-24 yrs old who reported meeting a CAG in the past year, by age and sex (HH survey)

	Male (%)	Female (%)	Total (%)
10 -14 yrs	5.4	9.3	7.6
15 -19 yrs	15.0	13.7	14.3
20 - 24 yrs	12.9	36.2	26.2
10 – 24 yrs	10.6	17.4	14.4

	Male (%)	Female (%)
Percentage of young (10 – 24) who have met a CAGs, being referred by them to a health facility in the past year (among those who have met a CAG and went to the facility) by sex	22.2	29.5

Percentage of females (10-24) who have met CAGs being referred by them to a health facility in the past year, by age

	Female (%)
10 -14 yrs	19.5
15 -19 yrs	35.3
20-24 yrs	29.1

Percentage of surveyed health facilities being linked to a CAG (n=107)	73.8
Percentage of girls 10 – 19 yrs who were referred to the health facility by a CAG in the past year (denominator includes all girls under 19, whether they have met a CAG or not, 10/505)	2.0
Percentage of girls 10 – 19 yrs who were referred to the health facility by a CAG in the past year (denominator includes all girls who have met a CAG and who answered the question about being referred,10/63)	15.9
Percentage of girls 10 – 19 yrs who visited a public health facility who reported that they were referred by a CAG in the past year (denominator includes all girls who have met a CAG and who reported having visited the health facility in the past year),7/33)	21.2
Percentage of girls 10 – 19 yrs who visited a public health facility who reported that they were referred by a CAG in the past year (denominator includes all girls who have went to the health facility in the past year, whether they have met a CAG or not,7/176)	4.0
Percentage of surveyed health facilities keeping records of CAGS referral, among those being linked to a CAG (n=79)	74.4
Percentage of family planning clients (12-45) reporting meeting a CAG in the past year (n=81)	38.4
Percentage of family planning clients (ages 12-45) reporting referred by a CAG in the past year, among those that have met a CAG (n=35)	43.2
Percentage of family planning clients who mention interaction with CAG may have influenced them to attend a health facility in the past (n=37)	72.5
Percentage of family planning clients under 19 yrs, who visited a health facility and reported that they were referred by a CAG in the past year, among those having met a CAG (n=3)	33.3

OUTPUT 2: INCREASED AVAILABILITY AND UPTAKE OF MODERN FAMILY PLANNING COMMODITIES AND STI SERVICES

Delivery of family planning services

Number and percentage of surveyed government PHUs and hospitals with no stock-outs of contraceptives in the **last 6 months** (all types facilities)

	n	%		n	%		n	%
Combined oral pill (n=110)	88	80	IUD (n=53)	38	72	Spermicide (n=20)	11	55
Progesterone only pill	missing		Implant (n=81)	61	75	Female sterilisation (n=23)	14	61
Combined Injectable (n=109)	87	80	Male Condom (n=109)	89	82	Vasectomy (n=16)	10	63
Progesterone-only injectable (n=25)	14	56	Female condom (n=84)	59	70			

Number and percentage of surveyed government PHUs and hospitals with no stock-outs of contraceptives in the **last 3 months** (all types facilities)

	n	%		n	%		n	%
Combined oral pill (n=110)	89	81	IUD (n=53)	39	74	Spermicide (n=20)	12	60
Progesterone only pill	missing		Implant (n=81)	59	73	Female sterilisation (n=23)	14	61
Combined Injectable (n=109)	86	80	Male Condom (n=109)	86	79	Vasectomy (n=16)	10	63
Progesterone-only injectable (n=25)	13	54	Female condom (n=84)	62	74			

Number and Percentage of SDP with long acting family planning methods (IUD and implants) available on the day of the visit (N=110)

	n	%
IUD (n=64)	43	67
Implant (n=83)	66	80

Adolescent and youth-friendly services

Number and percentage of SDPs upgraded to provide youth-friendly services[2]

	n	%		n	%
All facilities (n=110)	11	10	Community Health Posts (n=37)	2	18
Hospitals (n=9)	2	18	Maternal and Child Health Posts (n=19)	0	0
Community Health Centres (n=45)	7	64			

Percentage of young people (10-24) considering that health services are not youth-friendly (not youth-friendly:"little or not at all")

Male (%)	Female (%)
7.8	8.8

Quality of Care

Percentage of FP users who were informed about side effects or problems of methods used (among new clients only)

	As reported by client	As observed
Explains how to use selected method	100% (n=105)	100% (n-112)
Explains side effects of method selected	95% (n=105)	95% (n=110)
Explains what to do in case of problems	94% (n=102)	

Percentage of providers who demonstrate good counselling skills (all FP clients as observed)

	n	%		n	%
Use visual aids (n=218)	40	18.3	Encourage client to ask questions (n=218)	207	95.0
Use client record (n=218)	107	49.1	Assure confidentiality (n=218)	210	95.9
Ask open ended questions (n=218)	139	63.8	Discuss a return visit (n=216)	213	98.6
Ask client her concerns with any method (n=217)	194	89.4	Treat client with respect (n=218)	217	99.5
Information not discussed					
History of pregnancy complications (n=216)	158	75.2	Number of living children (n=216)	51	23.4
Timing of next child (n=216)	142	65.1	History/signs/symptoms of STIs (n=218)	41	18.8
Multiple/single sexual partner(s) (n=217)	138	63.3	Current pregnancy status (n=219)	40	18.3
Desire for more children (n=217)	117	53.7	Marital / relationship status (n=218)	26	11.9
Partner´s attitude to FP (approve/disapprove) (n=217)	102	46.8	HIV/AIDS and STIs discussed (n=218)	16	7.3

Percentage of providers who follow infection prevention procedures (as observed)

Injection (n=98)	n	%	Pelvic exam (n=4)	n
Wash hands before injection	75	77	Washing hands	1
Use a disposable autodestruct syringe and needle	96	98	Put on new or disinfected gloves	2
Drop needle into a safety box	97	99	Use sterilised or high-level disinfected instruments	3

[2] Composite of 3 criteria: i) having at least one trained health worker in adolescents and youth SRH, ii) privacy and confidentiality honoured and iii) education material available onsite

	Ensure that instruments and reusable gloves are decontaminated (n=3)	2

Percentage of clients who are satisfied (perception) by services received

> 90% of the clients felt comfortable to ask questions

> 90% thought that the amount of information provided during the session was good or very good

Number and percentage or number of (visited) facilities that had at least one member of staff trained in youth-friendly services (n=110)

	n	%		n	%
All facilities	42	33	Community Health Posts (n= 37)	12	29
Hospital (n=9)	6	14	Maternal and Child Health Posts (n=19)	1	2
Community Health Centres (n= 45)	23	55			

**More detailed results and number of observations can be found in the report.*

1 INTRODUCTION

1.1 Background

DFID (UK AID) is providing financial assistance over four years (2012/13 to 2015/16) to support the implementation of the "Improving Reproductive, Maternal and Newborn Health (IRMNH) Programme in Sierra Leone". The goal is to contribute to the accelerated reduction of maternal and neonatal mortality and morbidity through scaling up demand for increased utilisation of Family Planning (FP) and other related Reproductive Health (RH) services for women of childbearing age, men and young people in the country. The programme implementation, brings under a single framework, major players in the health sector, including the Ministry of Health and Sanitation (MoHS), the Ministry of Social Welfare Gender and Children Affairs (MSWCHA), UNFPA, UNICEF and Marie Stopes Sierra Leone.

The Consortium hera/ULB-ESP/Focus 1000 (lead by **hera**) has been commissioned by UNFPA to establish a baseline and monitor the effectiveness of UNFPA interventions under the UK AID supported IRMNH programme. The monitoring efforts include conducting three surveys with the same methodological and technical requirements over the period 2014 - 2015. The preparatory work for Survey 1, the first of three annual surveys, started in February 2014 and the data collection took place in May-June 2014. This document presents the findings of Survey 1 (baseline).

1.2 Updated on literature review

1.2.1 Topics and methodology

The literature search was limited to the period from July 2013 to July 2014 for following topics were considered relevant:

- Family Planning services
  - In low and middle income countries (LMICs) / in young people
  - Acceptance / observance / discontinuation
  - Behavioural strategies
- Methodology of reproductive health (RH) surveys in low and middle income countries (LMICs) limited to
  - Indicators and in particular discussions on the concept of "unmet need"
  - Utilisation and validity of electronic tools
- Health in Sierra Leone

The main focus was on publications with a high level of evidence such as Cochrane reviews. New reviews were also included.

1.2.2 Family planning

Search strategy: {"family planning OR contracept*" AND "services OR utilisation" AND "evidence OR Cochrane"}. This strategy retrieved 371 publications, of which 4 were relevant Cochrane systematic reviews. . These are summarised in table 2.

Table 2. *Results of literature search (mid 2013 – mid 2014)*

1st author and year	Title	n studies	Comments	Conclusion
Lopez et al, 2014[3]	Behavioural interventions for improving dual-method contraceptive use	3 studies (3 RCTs and 1 quasi experimental)	Dual-method contraception refers to using condoms as well as another modern method of contraception	No evidence of effectiveness
Lopez et al, 2013[4]	Behavioural interventions for improving condom use for dual protection	7 studies (all RCTs, 6 cluster, 1 individual) 4 in Africa	No effect on pregnancy or on HIV; some effect on other STIs	Little clinical evidence of effectiveness
Lopez et al, 2013[5]	Theory-based interventions for contraception	17 studies (all RCTs)	Effect on pregnancy occurrence (OR 0.24 (95% CI 0.10 to 0.56) Effective in adolescents	Effective on utilisation and on pregnancy occurrence
Halpern et al, 2013[6]	Strategies to improve adherence and acceptability of hormonal methods of contraception	9 studies (all RCTs)	Heterogeneous results Methods: counselling, telephone contact, reminders Possibility that use in conjunction might be more effective?	Only three trials showed some benefit of strategies to improve adherence and continuation

The recent Cochrane review on "theory-based interventions" confirms the effectiveness of theory-based interventions for contraception adoption and utilisation. The following theoretical bases were used in the trials: Social Cognitive Theory (SCT), the Health Belief Model (HBM), SCT plus another theory, other social cognition, and Motivational Interviewing (MI). Nearly all trials provided multiple sessions or contacts. This confirms the rationale of the UNFPA DFID interventions, and in particular the potential for the VPEs.

Because the evidence above was high level, the next search was restricted to "family planning" AND "lancet OR NEJM OR BMJ". This did not identify any new review or guideline and the topic was not further explored.

[3] Lopez LM, Stockton LL, Chen M, Steiner MJ, Gallo MF. Behavioral interventions for improving dual-method contraceptive use. Cochrane Database Syst Rev. 2014 Mar 30;3:CD010915

[4] Lopez LM, Otterness C, Chen M, Steiner M, Gallo MF. Behavioral interventions for improving condom use for dual protection. Cochrane Database Syst Rev. 2013 Oct 26;10:CD010662

[5] Lopez LM, Tolley EE, Grimes DA, Chen M, Stockton LL. Theory-based interventions for contraception. Cochrane Database Syst Rev. 2013

[6] Halpern V, Lopez LM, Grimes DA, Stockton LL, Gallo MF. Strategies to improve adherence and acceptability of hormonal methods of contraception. Cochrane Database Syst Rev. 2013 Oct 26;10:CD004317

1.2.3 Methodology of RH surveys

1.2.3.1 Indicator – Unmet need

A specific search for this indicator was initiated after the research team was confronted with the complexities and controversies around this concept. The search was made using the following terms "family planning OR contraception" AND "unmet AND need". This search retrieved 514 publications. Most did not discuss the concept, some used the concept without giving their definition and not all used the same definition. However a special issue of the journal *Studies in Family Planning* was devoted solely to the topic of "unmet need". It included a history of the concept by Bradley and Casterline[7]. These authors show that the concept was introduced as far back as the 1960s, to describe the situation identified in KAP surveys, in which, in nearly all societies, existed a discrepancy between some women's reproductive preferences and their contraceptive behaviour.

The special issue contains eleven articles, in relation to policies, programmes, investment etc. all highly relevant to the present situation in Sierra Leone. Among these there is an analysis by Bongaerts et al[8] of fertility decline in Africa. He concludes that: *"policymakers in countries where demand is still low (e.g., in the poorest African countries) have often given programmes low priority, on the assumption that they would be unsuccessful and their impact would be small. This view seems too pessimistic. The finding that family planning programmes can potentially raise demand through the implementation of appropriate IEC campaigns is particularly important for such countries."* In other words decrease in fertility requires not only meeting "unmet need" but also increasing demand through change in representations of desirable family size.

1.2.3.2 Using electronic devices for surveys in LMICs

Like the search on "unmet need", this was an *ad hoc* search warranted by the use of the MAGPI device in 25% of the households surveyed. For this specific topic we did not use a date limit. The questions were about the validity of the tool in LMICs and for reproductive and sexual health surveys.

The search strategy used snowballing as no specific search term was identified. A review on the topic was found assessing nine randomised controlled trials comparing the effectiveness of hand-held computers with paper methods for data collection in clinical research. The authors concluded that the methodology is reliable and easy to learn and implement.[9] Another study from South Africa including 90,000 interviewees also concluded that the technology is reliable, user friendly and affordable.[10]

1.2.4 Sierra Leone

A search of Pubmed using the term "Sierra Leone" retrieved 79 publications of which three were relevant, albeit indirectly, to the present project. The first analysed opinions about female genital cutting revealing important sex differences.[11] The second was part of the larger survey already

[7] Bradley SE, Casterline JB. Understanding unmet need: history, theory, and measurement. Stud Fam Plann. 2014 Jun;45(2):123-50

[8] Bongaarts J. The impact of family planning programs on unmet need and demand for contraception. Stud Fam Plann. 2014 Jun;45(2):247-62

[9] Lane SJ, Heddle NM, Arnold E, Walker I. A review of randomized controlled trials comparing the effectiveness of hand held computers with paper methods for data collection. BMC Med Inform Decis Mak. 2006 May 31;6:23

[10] Seebregts CJ, Zwarenstein M, Mathews C, Fairall L, Flisher AJ, Seebregts C,Mukoma W, Klepp KI. Handheld computers for survey and trial data collection in resource-poor settings: development and evaluation of PDACT, a Palm Pilot interviewing system. Int J Med Inform. 2009 Nov;78(11):721-31

[11] Sagna ML. Gender differences in support for the discontinuation of female genital cutting in Sierra Leone. Cult Health Sex. 2014 Jun;16(6):603-19

identified, the "Surgeons Overseas Assessment of Surgical Need", a cross-sectional two-stage cluster-based household survey conducted in Sierra Leone in 2012. Secondary analysis of data allowed extrapolating a national prevalence of obstetric fistula, which is in the high range, even for Sub-Saharan Africa.[12] The third study focused on the removal of financial barriers for access to SRH and MCH in six countries including Sierra Leone.[13]

1.3 Maternal and newborn health in Sierra Leone

Sierra Leone has growing but limited capacity in health and social sectors. It is committed to improving social services through the 2010 Free Health Care Initiative (FHCI) and the 2011-2015 National Health Sector Strategy (NHSS), prioritising the delivery of a basic package of essential services. Despite these efforts, Sierra Leone remains among the countries with the lowest human development index. In 2012, its human development index of 0.359 placed Sierra Leone in the 177th position out of 187 countries.

Sierra Leone is a rapidly growing country with an estimated 2014 population of 6.3 million, up from 5.5 million in 2008, and a population density of 79 people per km^2. An estimated 63% of the population lives in rural areas. The country has a young population, 43% under the age of 15 and 26% between 10-24 years of age. Women make up 52% of the population. Gender inequality is prevalent in the country. Women and girls in Sierra Leone suffer from discrimination and are subject to various forms of gender-based violence. Women are often relegated to roles that negatively affect their reproductive health and rights. The prevalence of female genital cutting is 91% (2008 SLDHS)[14]. Access to maternal health services is increasing. Maternal mortality ratios (MMR) have declined in the last two decades but remain high. Adolescent childbearing contributes to 40% of maternal deaths. Unsafe abortions account for 13% of all maternal deaths.

Table 3. *Sierra Leone - Maternal health indicators*

Maternal health indicators		DHS 2008	DHS 2013
Maternal Mortality Ratio		857 / 100,000 live births	Not yet available
Median age at first birth		19.3 years	
Skilled birth attendance		42.4%	59.7%
Facility birth			
	Overall	24.6%	54.4%
	Urban	39.5%	68.1%
	Rural	19.0%	49.7%
Attended at least one ANC visit		86.9%	97.1%
Attended four or more ANC visits		56.1%	Not yet available
Postnatal care within two days after birth		58.0%	Not yet available

Source: 2008 SLDHS, 2013 SLDHS Preliminary report

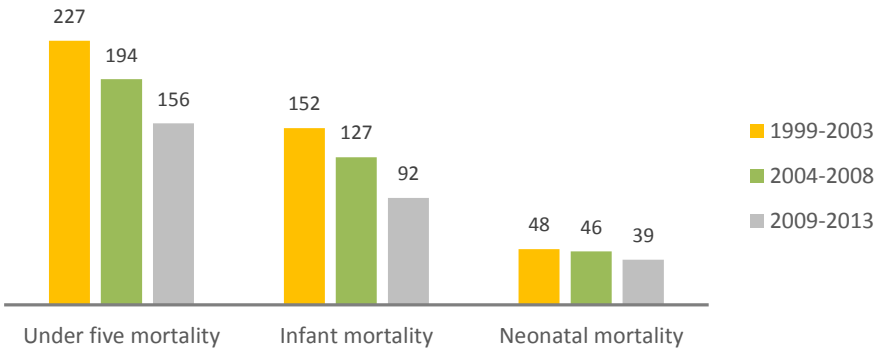
As the above table and the following figure shows, there is a general trend towards global improvement, including decreasing trend in neonatal, infant and under-five mortality.

[12] Patel HD, Kamara TB, Kushner AL, Groen RS. Estimating the prevalence of urinary and fecal incontinence in a nationally representative survey in Sierra Leone. Int J Gynaecol Obstet. 2014 Aug;126(2):175-6

[13] McPake B, Witter S, Ensor T, Fustukian S, Newlands D, Martineau T, Chirwa Y. Removing financial barriers to access reproductive, maternal and newborn health services: the challenges and policy implications for human resources for health. Hum Resour Health. 2013 Sep 22;11:46

[14] Statistics Sierra Leone (SSL) and ICF Macro. 2009. *Sierra Leone Demographic and Health Survey 2008.*Calverton, Maryland, USA: Statistics Sierra Leone (SSL) and ICF Macro

Figure 1. Early childhood mortality rates in Sierra Leone 1999-2013



Source: 2013 SLDHS Preliminary Report

1.4 Fertility and family planning in Sierra Leone

Fertility in Sierra Leone has been declining but still remains high, especially among the most disadvantaged. Total fertility rate fell slightly from 6 births per woman in 1990 to 5.1 in 2008. Total fertility rates among women in the lowest socio-economic quintile are almost twice those in highest quintile. Differences also exist between women in rural areas at 5.8 births per woman compared to 3.8 for those in urban areas. It varies also by level of education with women with no education having 5.8 births compared to 3.1 births among women with secondary education and above (2008 SLDHS).

The adolescent fertility rate is high which has implications for both the women's and children´s health but also for their further education and employment. Early marriage is widely practised and often encouraged in Sierra Leonean societies for various social, cultural and economic reasons, and is also associated with girls not attending schools. Early childbearing is high, especially among the most disadvantaged. While 50 percent of the poorest 20-24 years old women had a child before age 18, only 18 percent of their richer counterparts did (MICS 2010).

Cultural barriers, including the need of spousal approval for family planning and the preference for large families, impede contraceptive use. There is inadequate knowledge and utilisation of family planning methods, resulting in low contraceptive prevalence rates and high unmet need for family planning. The uptake of family planning (FP) and SRH services is particularly low among young people. According to the 2008 DHS, only half of all young females aged 15-20 can identify at least one modern method of family planning and only 32% of sexually active adolescent girls have ever used some form of modern contraception (2008 SLDHS).

Table 4. *Fertility and family planning indicators*

Fertility and family planning indicators		2008 - SLDHS	2013 SLDHS
Total fertility rate	Overall	5.1	4.9
	Urban	3.8	3.5
	Rural	5.8	5.7
Age-specific fertility rate	15-19	146 / 1000	125/ 1000
	20-24	222/1000	215/ 1000
Current use modern FP methods		6.7%	15.6%
Unmet need for family planning		27.6%	Not yet available

Source: 2008 SLDHS, 2013 SLDHS Preliminary report

Early and high-risk sexual activities (including transactional sex) among young people expose them to a greater risk of morbidity and mortality, such as unwanted pregnancies and unsafe abortions (abortion is illegal in Sierra Leone). Young people in Sierra Leone are sexually active at an early age. Young females start having sex and marry earlier than their male counterparts. By age 15, 22% of females had had their first sexual intercourse as compared to 11% of male counterparts. (2008 SLDHS). Young people are also among those less likely to use condoms. Very few people report using a condom during their first sexual encounter; just 2.9% of females and 7.3% of males[15] thereby increasing the risk for unwanted pregnancies, sexually transmitted infections and HIV. Young females constitute more than half of the HIV infected among the people aged 15-24. The provision of long-term contraceptives services is limited in the country, though gradually increasing.

1.5 Reproductive health and other relevant policies and services in Sierra Leone

The National Health Sector Strategic Plan 2010-2015, provides the framework to guide the MoHS and partners to attain the health-related MDGs and focus on the needs of mothers, children and the poor.

As part of the implementation of the Plan, the Basic Package of Essential Health Services (BPEHS) was developed and launched in March 2010. It covers services, including community interventions, that have greatest impact on the major health problems, especially for maternal, neonatal and child health. The Free Health Care Initiative was launched in 2010 to establish the provision of free care for pregnant women, lactating mothers and children under 5 years. It has already contributed to an increased uptake of these services. The Reproductive, Newborn and Child Health (RNCH) policy 2011-2015 outlines steps to accelerate progress towards the MDGs with a focus on equity and reduction of disparity in RNCH care.

The National Strategy for the Reduction of Teenage Pregnancy (2013-2015) was launched in 2013. Its objectives are to, by 2015, i) reduce adolescent fertility from 122/1000 (MICS 2010) to 110/1000, and ii) reduce the proportion of births by girls under 19 years of age from 34% (2008 SLDHS) to 30%. The strategy provides a multisectoral framework to guide several Ministries, particularly Health and Sanitation; Education, Science and Technology, and Youths and Sports to better respond to the needs of young people and address specific issues related to early pregnancy and childbearing. It will also foster activities to improve the policy and legal environment to protect adolescents and young people´s rights and to improve access to sexual and reproductive health (SRH) services, information and education.

The Strategy aims to improve the delivery of a basic package of interventions for adolescent and youth-friendly health services as defined in the National Standards for Adolescents and Young People-Friendly Health Services published in 2012. This package stipulates that staff members have the capacity to deliver services and show non-judgmental positive behaviours; youth are aware of the services that are available to them at no or minimal cost; and youth-friendly health services are provided in special separate areas in clinics and have their own opening hours. Sexual and reproductive health services should include education on reproductive health including birth spacing; family planning; promotion of condoms and oral contraceptives; referral of pregnant adolescents; antenatal care, promotion of abstinence if appropriate; awareness creation and sensitisation about Voluntary Confidential Counselling and Testing (VCCT) and Prevention of Mother to Child Transmission (PMTCT).

[15] National HIV/AIDS Secretariat. 2012. *Sierra Leone National HIV Prevention Strategy 2011-2015*, Sierra Leone: March 2012

The Child Rights Act (2007) recognises the right of children to dignity, respect and education and underlines the responsibilities of parents to protect their children. The act defines 18 years as the minimum age for marriage and states that no person shall force a child to early marriage.

The MoHS and its partners are implementing a number of strategies to increase uptake of quality family planning, particularly for the young population. Among others, information and education activities, facility based services, outreach services, training of staff, expanding the choices of contraceptive methods (i.e. introducing the use of implants) and ensuring a regular supply of contraceptive commodities in public health facilities. With support from UNFPA the MoHS has also developed a draft National Family Planning Manual for Service Providers to guide staff in the provision of these services.

The Ministry of Social Welfare, Gender and Children´s affairs started the establishment of Community Wellness Advocacy Groups (CAGs) in 2010. This is an initiative to mobilise communities for the reduction of maternal mortality and gender based violence by enhancing the knowledge and understanding of women and men on SRH and gender issues. The CAGs are primarily made of former traditional birth attendants, whose role is being transformed to focus on sensitising communities on issues related to SRH and rights, reduction of maternal mortality, gender based violence, antenatal and postnatal care, family planning, and referral of pregnant women to health facilities.

The government offers family planning services through its network of health facilities. Half of the users of contraceptive methods (pills, injectables, male condoms) obtain their method from a public sector facility. About 26% of users obtain their contraceptive methods from pharmacies. (2008 SLDHS).

1.6 The IRMNH Programme

The UK is providing up to £25 million (including £5 M to UNFPA) over four years (2012/13 to 2015/16) to support the Improving Reproductive, Maternal and Neonatal Health programme. IRMNH is building capacity in public and private sectors to deliver a nationwide comprehensive package of reproductive, maternal and newborn health services. The IRMNH programme focuses on young people (especially adolescent girls), pregnant women and safe childbirth, and newborns, who are particularly at risk and underserved in terms of geographical coverage and quality care. Outputs cover the entire country and contribute to increasing informed demand for, and uptake of, services across the continuum of reproductive and sexual health: family planning, sexually transmitted infections (STIs) including HIV, antenatal care, safe deliveries, post natal care and malaria prevention.

The expected *impact* of the programme is “reduced maternal and newborn mortality in line with national MDG 4 and 5 targets”. The expected *outcome* is “Increased utilisation of quality family planning, reproductive maternal and newborn health services with focus on young people in Sierra Leone” and the expected *outputs* are:

Output 1 Increased knowledge of integrated RMNH services in women and young people in Sierra Leone
Output 2 Increased availability and uptake of modern family planning commodities and STI services
Output 3 Increased uptake of ante-natal care (ANC), including malaria prevention, by pregnant women, with a specific focus on young people
Output 4 Increased uptake of facility-based births attended by a skilled birth attendant (SBA)
Output 5 Increased uptake of post-natal care (PNC) services by women

UNFPA is engaged to address nationwide demand creation; enhance community mobilisation; support outreach to young people and mass media communication for sexual and reproductive health and the prevention of malaria in pregnancy and newborns; and provide training and supplies to expand and improve the quality of family planning and STI services in the public sector. UNFPA is primarily responsible to support Output 1 and Output 2.

The main activities supported under each output are:

Output 1

- Production and nationwide broadcast of a Radio Drama "Saliwansai" covering issues of SRH/FP/STIs/ malaria.
- Placement of Volunteer Peer Educators (VPE) to provide SRH and Life skills lessons to young people in 60 communities throughout the country;
- Support to Community Wellness Advocacy Groups (CAGs) to provide information on IRMNH, counselling and referrals to health facilities
- Development of Information Education Communication (IEC) and Behaviour Change Communication (BCC) materials on FP/STIs.

Output 2

- Provision of pre-service and in-service training for health workers on FP/STIs (training of health staff on long term family planning methods and training of staff on adolescent and youth-friendly services)
- Upgrade of PHUs to provide adolescent and youth-friendly services
- Technical assistance to the MoHS on FP/STIs.

For implementation of these activities UNFPA collaborates closely with the Ministry of Health and Sanitation and the Ministry of Social Welfare Gender and Children Affairs. Additionally it has sub-contracted the services of the Population Media Centre (to produce and air the radio drama "Saliwansai") and Restless Development for the placement of VPEs.

UNICEF is primary responsible for the delivery of **Outputs 3, 4 and 5**.

Marie Stopes Sierra Leone, is responsible for the implementation of relevant activities from **Outputs 2, 3, 4 and 5 outside those implemented in the public sector by the MoHS.**

A **Partnership Management, Evaluation and Learning (PMEL)** unit provides overall guidance and co-ordination support to the partners' activities, secretariat support to the programme's steering committee and oversight for research and evaluation activities.

2 OBJECTIVES AND METHODOLOGY OF THE SURVEY

2.1 Objectives

The **overall objective** of the survey was to establish a baseline for monitoring the effectiveness of UNFPA interventions under the DFID-supported programme.

The **specific objectives** were as follows:

- To monitor the effectiveness of the demand side interventions implemented by the IRMNH programme, particularly the placement of volunteer peer educators (VPEs), the establishment of Community Wellness Advocacy Groups (CAGs) and the broadcasting of the Saliwansai radio programme.
- To monitor availability and uptake of modern family planning services among males and females 10 -24 years of age
- To monitor quality of care for the provision of family planning services at public health facilities

2.2 Agreed indicators

The indicators to be monitored were agreed with UNFPA in February 2014 and revised in May[16]. They include indicators of the programme logical framework (LF), others required by the terms of reference and others suggested by the Monitoring Team. For some, this survey will provide a baseline, for others it will provide a cross-sectional measurement.

Table 5. ***Indicators***

	Source	Indicators to be monitored
Outcome		
Primary outcome	MT	Adolescent fertility rate (10-24) (births or pregnancies/1000 girls/women 10-24)
	LF	Adolescent fertility rate (15-19) (births or pregnancies/1000 girls/women 15-19)
	LF	Contraceptive prevalence rate (% girls/women (10-24) who are currently using a modern contraceptive method)
Secondary Outcome	MT	Unmet need for family planning among the 10-24 years old girls/women
	TOR	Proportion of pregnant adolescents 10-19
Output 1: Demand creation indicators, Increased knowledge		
Radio programme	MT	% of listeners who quote the radio drama (Saliwansai) influencing them to attend a health facility, disaggregated by age
	LF	% of radio drama (Saliwansai) listeners who report Saliwansai influencing them to go to a health facility in the last year
Volunteer peer educator (VPE)	MT	% of young people (10-24) who used condoms the last time they had a sexual intercourse (primary outcome 2)
	TOR	% of FP facility users who mention VPE interaction influencing them to attend a health facility
Community Wellness	MT	% of sampled facilities keeping records of CAGS referrals
	MT	% of surveyed facility users referred by CAGS in the past year
	LF	% of adolescent girls (under 19 yrs) who visited a health facility who report that they were referred by a CAG in the past year

[16] As a result of the May revision three additional indicators were added, others were not possible to measure as the target population to be interviewed was changed to include only population between 10-24 years of age and excluding women of reproductive age 25-49 years old.

	Source	Indicators to be monitored
Advocacy Groups	MT	% of surveyed facility users who mention interaction with a CAG influencing them to attend a health facility
	TOR	% of young people (10-24) who have had interaction with CAGs in the past year, by age and area of UNFPA intervention
Develop IEC/BCC materials on FP/STI	TOR	Percentage of girls/women who have heard of more than 1 method of modern family planning, by age and disaggregated by the number of method
	TOR	Source of information for SRH among young people (10-24)
Output 2: Service delivery , increased availability and uptake of modern FP methods		
Delivery of FP services	LF	% of new young acceptors (10-24) of contraceptives disaggregated by age (10-14,15-19,20-24) and method
	LF	% of surveyed government PHUs and hospitals without stock-outs of contraceptives in the last six months
	MT	% of (visited) government PHUs and hospitals without stock-outs of contraceptives in the last three months
	LF	% of (visited) SDP with long acting family planning methods available (IUD and implants)
Adolescents & Youth-Friendly Services	MT	% of young people (10-24) considering that health services are not youth friendly
	LF	Number of PHUs upgraded to provide "youth friendly services
	LF	Percentage of Adolescents and Youth Friendly (AYF) Service Delivery Points (SDPs) meeting all 3 criteria.
	MT	Percentage of FP users who were informed about side effects or problems of methods used.
	LF	% of adolescents (10-19) in Restless Development intervention areas who reported use of condom last time they had sexual intercourse
Quality of Care	TOR	% of providers who demonstrate good counselling skill
	TOR	Percentage of providers who follow infection prevention procedure
	LF	% of women 15-49 who received FP services from a SDP and were informed side effects or problems of the method use
	TOR	% of clients who are satisfied (perception) by services received
Training of providers	TOR	% or number of (visited) facilities which have at least one member of staff trained in "youth-friendly services"

LF: log-frame indicators; TOR: indicators suggested in the Terms of Reference; MT: indicators agreed between UNFPA Sierra Leone and monitoring team

2.3 The annual survey – Survey 1

In order to establish a baseline and monitor the effectiveness of UNFPA interventions under the UK AID supported IRMNH programme, three surveys will be conducted in the period 2014-2015. Each annual survey will consist of a household survey, a health facility survey and focus group discussions. Each survey will monitor relevant indicators in three areas: i) reason for behaviour change, ii) quality of care and iii) access to services for adolescents and young people.

2.3.1 Survey Components

1. A household survey that focused primarily on the effectiveness of demand side interventions for young people (10-24). It collected data on the need for and use of family planning and reproductive health services, as well as information on the three main UNFPA interventions at the community level (i.e. Saliwansai, VPEs and CAGs).

2. A health facility survey to assess quality of care at selected PHUs and hospitals. As requested by the ToR, the tools developed by MEASURE Evaluation for Quick Investigation of Quality (QIQ) in Family Planning Programmes were adapted to collect relevant indicators. Other questions to measure agreed indicators were added.

   As suggested by the QIQ methodology, information was collected in each selected facility through: observation of provision of FP services, exit surveys of clients seeking family planning (FP) services, and a health facility audit/Manager interview (to collect among others information on resources available for provision of services).

3. A qualitative study of barriers to accessing reproductive health services based on focus group discussions with young people.

2.4 Sampling frame and sample size

The sampling frame took into consideration that the programme interventions are carried out primarily in the three provinces (Northern, Southern and Eastern) and their corresponding 149 chiefdoms. The Western Area was not included because its population differs from the rest of Sierra Leone because of urbanisation and higher standards of living. Inclusion would likely have made the findings less homogenous.

2.4.1 Sampling methodology for the household survey

For the household survey our proposal was to perform three cross-sectional studies over 3 years, in 4 areas to identify improvements of indicators for the whole country, but also to provide detailed information for each of UNFPA interventions. The sampling design included stratification according to UNFPA intervention areas as follows:

i) UNFPA Enhanced CAGs[17] & VPEs (maximum intervention)
ii) Standard CAGs & VPEs
iii) UNFPA enhanced CAGs & no VPEs
iv) Standard CAGs & no VPEs,

This is an attempt to identify the impact of the interventions, however the research team is aware that there may be other interventions occurring, e.g. by an NGO, and which have not been identified. Therefore, none of the strata is a "true control" but in theory there may be a gradient of strength of intervention, to be explored both cross-sectional and for the time trend analysis. The Primary Sampling Units (PSU) were the chiefdoms which were selected randomly in the four strata. The unit of analysis is the household and the individual.

The VPEs are placed in a limited number of communities. The stratification on VPEs and no VPEs strata aimed at ensuring that we will capture young people that have met a VPE, otherwise, we had a risk to never interview young people who had met a VPE as their coverage is not broad. The survey questionnaire included questions to understand whether or not the interviewees have been really in contact with VPEs.

VPE areas are communities under the catchment area of a VPE, in April 2014, (having a VPE for 1st or second year), as per information provided primarily by Restless Development or assumed to be under the catchment area of a VPE based on information provided over the phone by VPEs or from key informants having good knowledge of the geography and location of communities in the selected chiefdoms. Non-VPEs areas are anywhere else where no VPE has been placed or where a VPE had been placed more than two years ago.

[17] In this document, the abbreviation CAG+ or super CAG stands for the Community Wellness Advocacy Groups receiving direct support from UNFPA. Those are located in 4 districts: Kono, Kailahun, Bonthe & Pujehun. In the other districts of the country, there are CAGs not directly supported by UNFPA, which we label CAG- or normal CAG.

The 149 chiefdoms were allocated to the four types of intervention areas. Following a request from UNFPA to increase the proportion of area with VPEs, we randomly selected four chiefdoms in each of the two strata with VPEs, and two chiefdoms in each of the strata without VPEs for a total of 12 chiefdoms. This meant that two third of the sampled population lived in areas with VPEs.

In each chiefdom, four clusters of 25 households were selected using PPS (Probability Proportional to Size), the most practical and widely used method for cross-sectional studies. This was done using the enumeration areas (EA) and their population (2004 Sierra Leone Population and Housing Census). Restless Development provided information on the communities located in the catchment area of the VPEs. However, in some cases, communities with VPEs could not be matched with EAs and were therefore selected without PPS (in some cases we made a phone consultation with the VPE to inquire more in detail about his/her catchment area or consulted with Focus 1000 staff who had good knowledge of the geography and location of communities within the selected chiefdoms).

At the time of conducting this survey, the activities in the Districts selected for UNFPA Enhanced CAGs support were not in full-scale implementation. Full operations were going on in Kenema District. In the other Districts only some training activities on adolescents health have taken place. However, as this survey was to establish a baseline, it was agreed with UNFPA that it was important to include these four Districts and the selected chiefdoms / clusters in the survey sample.

Table 6. *Selected chiefdoms*

Province	District	Chiefdom	Standard CAGs & VPEs	Standard CAGs no VPEs	Enhanced CAGs & VPEs	Enhanced CAGs no VPEs
Eastern	Kenema	Nongowa	■			
	Kono	Gbane			■	
		Mafindor				■
		Nimikoro			■	
		Tankoro			■	
Northern	Kambia	Magbema	■			
		Tonko Limba	■			
	Koinadugu	Kasunko	■			
		Sengbe		■		
Southern	Bonthe	Kpanda Kemo			■	
		Sogbeni				■
	Moyamba	Kongbora		■		
Number of chiefdoms per intervention area			**4**	**2**	**4**	**2**

In order to calculate the sample size, we listed relevant indicators in the programme log frame that were related to the survey and their respective baseline and targets. From this list we selected two indicators to be used for the calculation of the sample size. These indicators needed to be proportions, to be objectively measurable and able to show a change over time. The indicators used for the calculation of the sample size are presented in the table below. Other indicators from the log frame, that were considered but not used for the sample size calculation, are presented in Annex 1.

Table 7. *Calculation of sample size for the household survey*

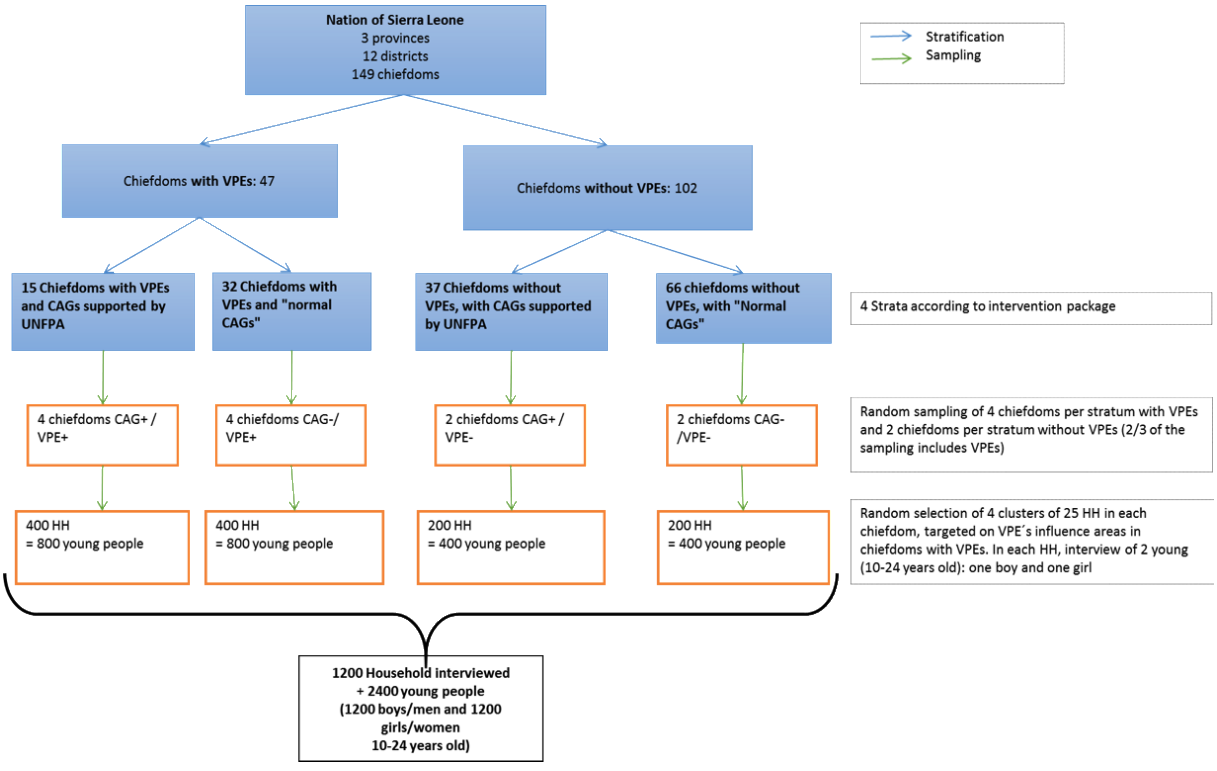
Indicator	Baseline	Source	Target	Calculated Sample Size	Adjusting for design effect *
Contraceptive prevalence in women 15-49 (any method)	16,6%	DHS 2013	28%	226 women	335
% condom use - young people	30%	Baseline (RD)	43%	230 young	341

* *We estimated the Intraclass correlation (ICC) ≈0.02 for condom use ➔ DEFF = 1.48 with clusters of size 25 (Sherri L et al 2009)*

We increased the sample size for several reasons: The number of suitable indicators for the sample calculation was limited, and UNFPA requested information for other indicators as well. Larger samples would allow detecting smaller differences and achieve more precise estimates. Variations in the indicators will be calculated between the first and the last survey to analyse differences in time. As we did not use a replacement strategy for our interviews, the number of interviewed individuals was expected to be smaller than the calculated sample.

Originally we aimed to interview 1200 young people (10-24) and 1200 women (25-59). In May 2014, UNFPA requested to focus on young people only, and to interview one male and one female (10-24 yrs) in each household. The diagram illustrates the resulting sampling frame and methodology.

Figure 2. Sampling design for household surveys



Households in the cluster were selected using a random method derived from the Epi Method (random walk method). In each selected household, a list of members was established, identifying all members, eligible or not. By using a Kish grid, one eligible male and one eligible female were randomly selected. If those were not at home, the interviewer tried to come back and reach them at

another time[18]. If they were not reached, they were recorded as "not at home" and were not replaced. This allowed having a representative sample and minimising biases.

2.4.2 Sampling methodology for the health facility survey

The health facility survey was conducted among public health facilities located in eight districts including the districts where the household surveys were carried out plus Kailahun and Pujehun districts. The selected facilities included: all district hospitals of the selected districts and randomly selected Community Health Centres (CHCs), Community Health Posts (CHPs) and Maternal and Child Health Posts (MCHPs). All health facilities in these districts were classified according to whether or not they had staff who had received training on long term family planning methods (LTM) or on Adolescents and Youth-Friendly Services (AYF) supported by UNFPA.

According to the QIQ methodology, the sample size should be computed according to the expected volume of family planning consultations per facility. As this information was not available, we used the indicators from the logical framework that were related to health facilities to compute a minimum sample size.

Table 8. ***Calculation of the sample size for the health facility survey***

Indicator	Baseline	Source	Target	Calculated Sample Size	Adjusting for design effect *
% of Service Delivery Points (SDPs) with long-acting family planning methods available					
• IUD	13.5%	(GPRHCS 2011)	50%	30	45
• Implant	13.5%		57%	23	35
% of government PHUs and hospitals with no stock-outs of contraceptives in the last 6 months	60%		85%	57	85

** We estimated the Intraclass correlation (ICC) ≈ 0.02 for condom use ➔ DEFF = 1.48 with clusters of size 25 (Sherri L et al 2009)*

We decided to increase this sample size in order to have sufficient power to detect differences in other indicators and to have sufficient precision for baseline estimations. Another reason for increasing this sampling was that the intraclass correlation effect was estimated to be 1.48 but the QIQ methodology generally uses an effect of 2.0.

To meet the requirements for broad representation of UNFPA-supported interventions (training in AYF and LTM) we had to sample outside the initially selected chiefdoms, finally reaching 62 chiefdoms, located in 8 districts. The actual distribution of the surveyed health facilities differed from those selected because some had been upgraded or were not properly recorded in the database of the MoHS. This reinforces the need for a complete and reliable database for distribution of health facilities in the country. A total of 110 health facilities were selected and surveyed. The list of the health facilities selected is included in Annex 2.

In each health facility the survey team stayed for a defined period of time (4 hours) in order to observe at least two FP client-provider consultations, to carry out the corresponding client exit interviews and the facility audit / interview of the health facility manager. A total of 219 client-provider FP consultations and 219 client´s exit interviews were conducted.

[18] More explanation on the Kish grid methodology is contained in the Household Survey interviewer´s manual

Table 9. *Distribution of surveyed health facilities by type of health facility and presence of trained staff*

Trained staff	Surveyed (N=110)	
	n	%
No trainees	32	29
AYF	36	33
LTM	38	35
AYF&LTM	4	4

Type of facility	Surveyed (N=110)	
	n	%
Hospitals	9	8
CHC	45	41
CHP	37	34
MCHP	19	17

2.4.3 Focus group discussions

Three districts, one from each of the three survey provinces, were purposefully selected for focus group discussions. In each district we selected two communities: The district capital as a non-VPE location and another community that was randomly selected from a list of VPE sites in the district. This allowed us to compare the findings between urban and rural settings.

In each location, participants were purposively selected based on age and gender. Whenever available, the team selected pregnant teenagers and lactating mothers for inclusion in the discussions. The following categories of participants were selected for inclusion in the FGDs: 10-14 years old females, 10-14 years old males, 15-19 years old females, 15-19 years old males, 20-24 years old females and 20-24 years old males.

Table 10. *Communities selected for focus group discussions*

District	Chiefdom	Community	VPE	# of FGDs
Kambia	Gbele Dixon	Tawuya	Yes	5
	Magbema	Kambia Town	No	2
Moyamba	Kori	Taiama	Yes	2
	Fakunya	Moyamba Town	No	4
Kenema	Small Bo	Wanjama	Yes	2
	Nongowa	Kenema Town	No	2
		Total		**17**

2.5 Data collection and management

2.5.1 Elaboration of data collection instruments

Five survey questionnaires, two for the household survey and three for the health facility survey, their respective manuals, and a focus group discussion guide were prepared and pre-tested. With feedback received from the pre-test as well as from the validation meeting held with UNFPA and partners, the data collection instruments were revised. Additionally a training guide was prepared for the data collectors and data encoders.

2.5.2 Training of data enumerators/interviewers and data encoders

The training of enumerators/interviewers and data encoders took place in the last week of April and first week of May 2014. We selected twelve enumerators for the household survey plus four supervisors based on a written exam. For the health facility survey the team consisted of eight interviewers (five clinical + three non-clinical people). Four people, with experience in qualitative interviews were also selected for conducting the focus group discussions. The Magpi technology was used by one of the household survey teams and additional training on the use of the Magpi software

was provided to this team[19]. Magpi is an electronic data collection system using a mobile phone. For the paper records, data entry was performed by a data manager and four data encoders who were also trained for three days.

2.5.3 Data collection

The household survey (HHS) used a questionnaire divided into two parts: 1) the "household questionnaire", intended to the household head or responsible person, addresses general questions on the household situation and established a list of household members; 2) the "individual questionnaire" administered to up to two young household members aged 10-24 one of each sex. Where there were one male and one female of eligible age in the household, both of were selected for the interview. Where there were more than one eligible respondents of either sex, a Kish grid was used to randomly select the interviewees. We planned to collect data using paper questionnaire for 900 households and the Magpi electronic questionnaire for 300 households. The survey was completed over a period of 24 consecutive days by four teams.

Three data collections instruments were used for the health facility survey: 1) facility audit / interview to the facility manager; 2) direct observation of a client-provider interaction and selected clinical procedures in a family planning consultation; and 3) exit interviews with FP clients departing from the facility and, when possible, previously observed. For the health facility survey all data were collected in paper form. The survey was completed over a period of 24 consecutive days. For both surveys, the collected data were screened on a daily basis by the field supervisors.

Data collection and data entry were coordinated by Focus 1000. In addition to the enumerators, the field team included one overall field coordinator who also acted as field supervisor for the health facility survey, and one supervisor for the household survey and focus group discussions. The field work was a challenge due to the distances and condition of the roads, aggravated by early return of the rainy season. Work in Bonthe district was particularly challenging, as the island could only be accessed by boat. The DHMTs were however very helpful in planning the itinerary, as well as in offering guides who took team members to health facilities in hard to reach areas. At the level of the health facilities, the teams often had to wait long periods for the scarce number of family planning clients.

For the focus group discussions among participants aged 10-14, informed consent was obtained from their parents or guardians, while for those age 15 and over, informed consent was directly obtained from them. A programme manager from FOCUS 1000 supervised the qualitative data collection. A female/male data collection team was responsible for facilitating the FGDs among female/male participants in order to ensure that gender-sensitive issues would be openly discussed. All discussions were held in Krio. The facilitators were experienced professionals with strong interviewing skills and prior experience in facilitating similar discussions. The note-takers/recorders were responsible for taking handwritten notes in addition to capturing the conversation using a digital recorder. At the end of each FGD, the two teams conducted a short debrief to discuss the salient themes that emerged as well as observations of participants' willingness to discuss the various issues.

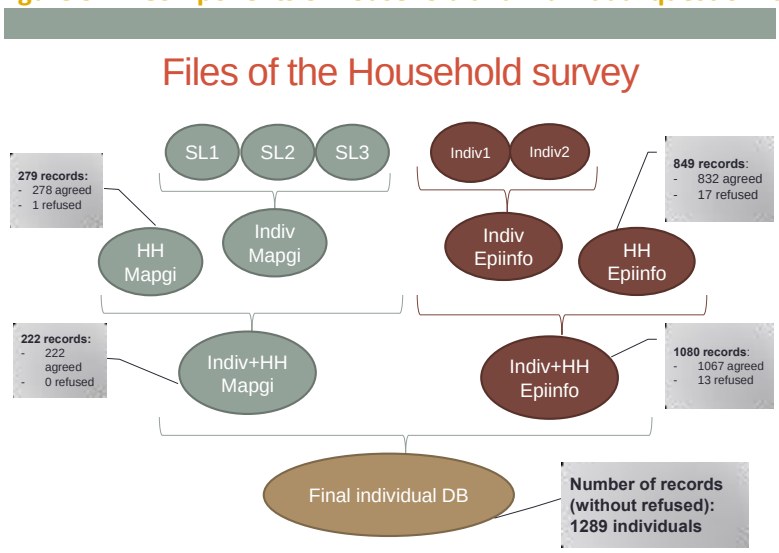
2.5.4 Data entry, merging and validation

Data entry for the paper questionnaires was carried out by the data encoders under supervision of the data manager using EpiInfo3.5.4. The datasets for the first ten observations for each

[19] For the household survey, the decision was made to test the use of Magpi (software that allows creating, designing and implementing mobile-phone-based data collection systems) as a data collection technology with the purpose of assessing its advantages versus traditional data collection methods in the Sierra Leone setting. We were also interested in assessing its ability to reduce costs. The Magpi technology was used by one of the household survey teams.

questionnaire were sent to ULB for quality control. Datasets were sent to **hera** and ULB on a weekly basis to identify inconsistencies and missing items, particularly checking those variables that required the merging of files from EpiInfo and Magpi. ULB checked the data and generated queries to FOCUS 1000 as necessary. The changes made to the original datasets are fully documented. Due to the length of some of the questionnaires and the use of two software applications (Magpi and EpiInfo), we had to divide the questionnaires into several masks which were then merged.

Figure 3. Components of household and individual questionnaires



2.6 Data analysis

The data bases were merged and analysed by ULB. The sample is described using usual statistics: percentages, means and standard deviations (SD), median and 25 - 75 percentiles (P25 - P75). Population estimates and 95% confidence intervals (95% CI) were obtained using complex sample analysis taking into account the design and the sampling weights. The design was a stratified four stage cluster design using the strata: CAG+ & VPE-, CAG+ & VPE+, CAG- & VPE+, and CAG- & VPE-. In each stratum, four stage cluster sampling was carried out. The sampling weights were computed by multiplying the selection probabilities corresponding to each stage of the sampling and then taking the inverse of the resulting probabilities. The analyses were performed with STATA v12.1 (http://www.stata.com). The weighting procedure was used for the indicators and therefore pertains to the population and takes into account the overrepresentation of VPE+ areas. For all other results data are computed without weighting and pertain therefore to the sample.

For the focus group discussions, all handwritten notes and debriefs were typed up by the note-takers. The typed up notes were compared with the audio recordings to ensure accuracy. Discrepancies were discussed among the FGD team and resolved accordingly. Plain-text versions of the transcripts/notes were then coded into themes in Microsoft Word. An iterative, thematic review of the transcripts, notes, and audio recordings was undertaken by two analysts at FOCUS 1000 to ensure inter-rater reliability. The codes were then thematically analysed using XMind, a mind mapping software, to illustrate relationships.

2.7 Ethical considerations

hera received ethical clearance for the survey´s proposal from The Sierra Leone Ethics and Scientific Review Committee. In all surveys the data collection started after information about the study was

provided. A standardised consent form was used to obtain consent from respondents. For adolescents below 15 years of age additional consent was obtained from their guardians.

3 FINDINGS

3.1 Characteristics of population surveyed

3.1.1 Household interviews

All computations are made on the interviewed sample of 1110. The interviewers attempted to visit 1128 households. In 1110 households one member agreed to be interviewed. Among the remaining, 12 households could not be interviewed because there was no competent respondent at the time of the visit or the entire household was absent for an extended period. Six households either refused to be interviewed or could not be interviewed for other reasons. The overall response rate was 98%, which shows that the interviewers had excellent communication skills. The number of households interviewed in each of the four types of intervention areas is presented in the table.

Table 11. *Number of household interviews by chiefdom*

Stratum	District	Chiefdom	Households
VPE+ & CAG+	Kono	Gbane	64
		Nimikoro	100
		Tankoro	100
	Bonthe	Kpanda Kemo	100
VPE+ & CAG-	Kambia	Magbema	103
		Tonko Limba	99
	Koinadugu	Kasunko	99
	Kenema	Nongowa	100
VPE- & CAG+	Kenema	Mafindor	55
	Bonthe	Sogbeni	97
VPE- & CAG-	Moyamba	Kongbora	98
	Koinadugu	Senbe	95
		Total Households	**1110**

Most households comprised of less than 10 members and nearly 40% had 5 members or less. The profile of the households are summarised in the table.

Table 12. *Household size and composition (n=1110)*

Household size	n	%
1 to 5 members	420	38.3
5 to 10 members	534	48.7
11 to 15 members	119	10.8
16 members or more	24	2.2
Missing	13	0.1

Youths 10-24	males		females	
	n	%	n	%
0 eligible	456	41.1	368	33.2
1 eligible	364	32.8	443	39.9
2 eligible	185	16.7	182	16.4
3 eligible	65	5.9	78	7.0
4 or more	40	3.6	39	3.5

Occupation of head of household	n	%
Farmer, breeder, fisherman	783	70.8
Worker	95	8.6
Trader	106	9.6
State employee	15	1.4
Professional	64	5.8
Community leader	4	0.4
No job	33	3.0
Other	6	0.5
Missing	4	0.4

The vast majority of household heads worked in the primary sector: agriculture or fishing. More than half owned some land. In addition to their occupation, we asked about a list of household assets and about the source of drinking water to assess the socio-economic level of the household. We used the same list of items used in the DHS, however, for clarity, we regrouped some sources of water and we did not include some assets that were owned by less than 10 households.

Table 13. ***Household assets and sources of drinking water***

Source of drinking water	IRMNH n=1105 %	SLDHS 2008 Rural %	SLDHS 2008 Urban %
Improved source	**60.5**	**34.3**	**50.8**
Piped into dwelling/yard	1.9	1.0	7.6
Public tap / standpipe	18.3	7.1	13.7
Tube well / borehole	13.1	6.4	6.4
Protected dug well	24.4	18.8	21.9
Protected spring	2.9	0.9	1.1
Non-improved source	**39.0**	**65.5**	**48.7**
Unprotected dug well	5.7	15.3	13.3
Unprotected spring	5.2	9.5	7.1
Tanker truck / cart with tank	0	0.4	0.3
Surface or rain water	28.1	40.2	27.9
Bottled / packaged water	0	0.1	0.2
Missing	0.5	0.2	0.2

Durable household assets	IRMNH n=1110 %	SLDHS 2008 Rural %	SLDHS 2008 Urban %
Electricity	3.8	1.4	12.1
Radio	55.1	43.2	55.1
Refrigerator	1.2	0.3	5.9
Television	3.3	0.9	10.1
Mobile phone	58.1	9.9	28.1
Watch	29.5		
Bicycle	6.6	10.7	10.5
Motorbike	10.5	1.6	3.3
Agricultural land	74.7	79.5	60.1

About 60% of surveyed households had access to an improved source of water which is a substantially higher proportion than reported by the 2008 SLDHS. Most of those who worked in agriculture owned their land but there were very few additional assets beyond mobile phones and radios. Most notable is the increased ownership of mobile phones and motorcycles since the 2008 DHS. The household profiles are overall quite similar to those of the DHS indicating that we used an appropriate sampling strategy.

We also explored the access of surveyed households to health and education services.

Figure 4. Time to reach the closest health facility (% households)

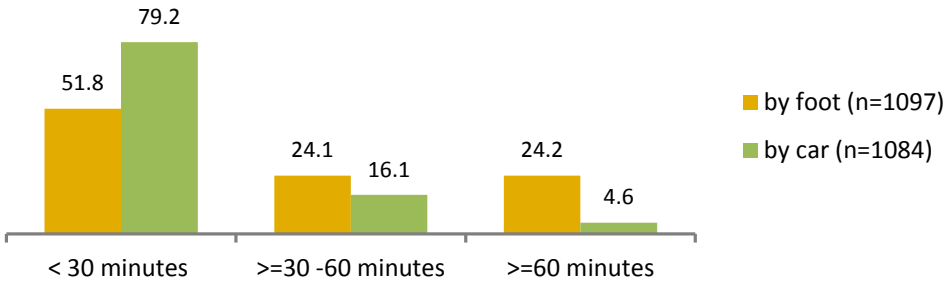
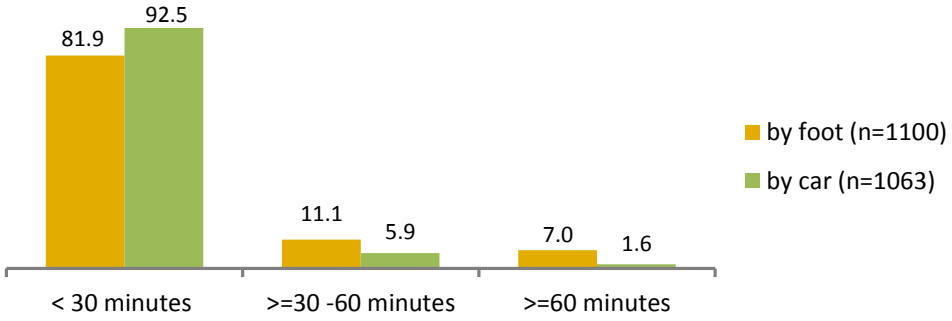


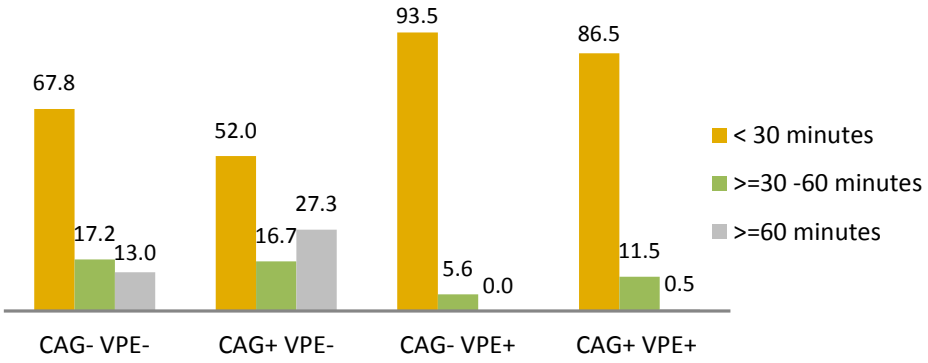
Figure 5. Time to reach the closest school (% households)



Note that in fig. 4 and fig.5 above, the missing values for the respective categories are not included, therefore the "n" value differs in each case.

Above 80% of households could reach a school in less than 30 minutes by foot, but only about half were less than 30 minutes away from a health facility. The geographic access to schools, however, differed among the four types of study areas.

Figure 6. Walking distance to closest school by intervention area (% households)



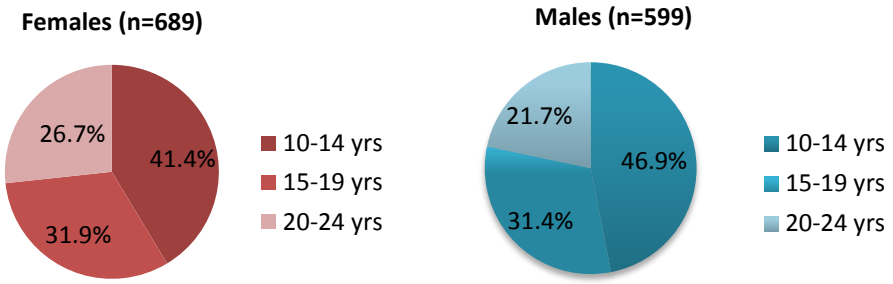
Households in the two areas without VPE programmes had significantly greater difficulties in accessing schools. This is not surprising as the VPE programmes are located in schools, but it is an important potential source of bias in the analysis of the effectiveness of VPE intervention for family planning outcomes.

3.1.2 Individual interviews

All computations are made on the interviewed sample of 1289. We had planned to interview one boy/man and one girl/woman aged 10 to 24 in each household for a total sample size of 2,400 as illustrated in Figure 2. Households, however, were considerably smaller than anticipated and we therefore did not find two eligible youths in each household. In total, we identified 1302 eligible individuals among whom 13 declined to be interviewed for a total number of 1289 interviews or a high response rate of 99% .

The age and sex distribution was slightly skewed towards girls/women (689 female / 599 male) and towards the youngest age group, with the smallest representation for the 20-24 group. This was probably due to the fact that young people in the older age groups were more likely to be out of the house at the time of interview. The higher representation of the youngest age group decreased the likelihood that interviewees were sexually active.

Figure 7. Age and sex distribution of interviewees

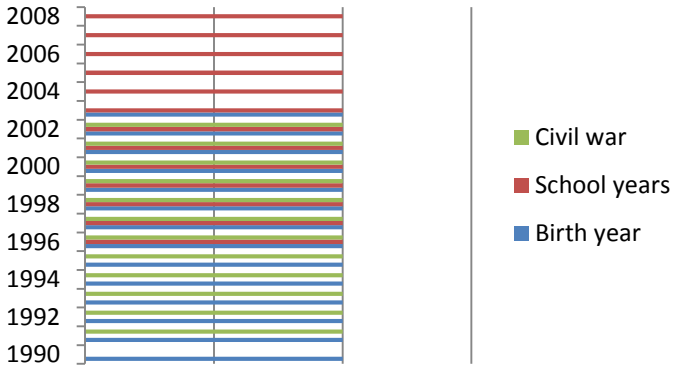


Ages were not evenly distributed but there was an excess of round ages[20] (10, 12, 15 and 20), indicating that many interviewed persons did not precisely know their age. If the rounding is purely random, this is not a problem, however if there is a systematic direction (either towards younger than reality or the opposite, this could introduce a bias into the analysis of some indicators that require adjustment for age).

There were 974 young people 10 -19 years of age, of which 51.8% (505) were girls and 48.2% (469) were boys and 69% (676) were located in Restless Development intervention areas.

The school years of our sampling cohort broadly overlapped with the civil war in Sierra Leone that lasted from 1991 to 2002, except for the youngest cohort (age group 10 to 16) which is largely not sexually active. The variable "civil war during school years" was not included in our survey design, but it is of interest in view of our finding that many young people who attended or completed primary school cannot read.

Figure 8. Year of birth, school years and civil war



Among the interviewees 69% were Muslim and 31% Christian. The distribution of first languages spoken by the interviewees differs from the national profile of about one third Temne, one third Mende and one third other. This reflects the choice of sampled chiefdoms and is unlikely to have an impact on the analysis.

[20] Round age is understood as multiple of 5 or ages that are important in life events like going to school

Table 14. *Language spoken by respondents*

	(n=1289)
Mende	33%
Temne	16%
Kono	15%
Limba	14%
All others	<10%

Among the interviewees, 73% were currently enrolled in school or studies. The highest level attained by those who were currently in school and out of school is presented in the table.

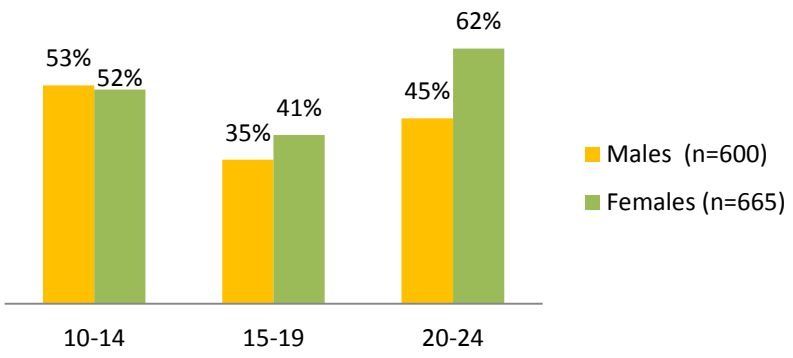
Table 15. *Education level by sex, age and current schooling status*

Education level	Males			Females		
Currently in training	**10-14** (n=233)	**15-19** (n=145)	**20-24** (n=68)	**10-14** (n=243)	**15-19** (n=138)	**20-24** (n=70)
None	2%	0%	3%	1%	0%	1%
Primary school attended	82%	22%	15%	85%	28%	30%
Primary school completed	15%	47%	32%	14%	61%	37%
JSS completed	0%	31%	50%	0%	12%	31%
Not in training	**10-14** (n=32)	**15-19** (n=34)	**20-24** (n=56)	**10-14** (n=29)	**15-19** (n=73)	**20-24** (n=99)
None	88%	62%	43%	83%	58%	71%
Primary school attended	13%	18%	7%	17%	12%	9%
Primary school completed	0%	12%	20%	0%	25%	11%
JSS completed	0%	9%	30%	0%	6%	9%

For primary school there is no difference between boys/men and girls/women. However, there were more girls/women with education level "none" (18% vs 14%), and the inverse relation was observed for secondary school. None of the interviewees had attended vocational training or university. In the 2008 DHS the rate for higher education was 2.5%, but this was primarily due to the urban sample. Given that our survey was primarily rural and the majority of respondents were below 19 years of age, the survey results are comparable to the DHS.

All those who had not reached secondary school level were asked to read a simple sentence in large characters: "the child is reading a book". A composite indicator of literacy was then created: The secondary school graduates and those interviewees who could read the sentence completely or in part were coded as "can read". All others were coded as "cannot read".

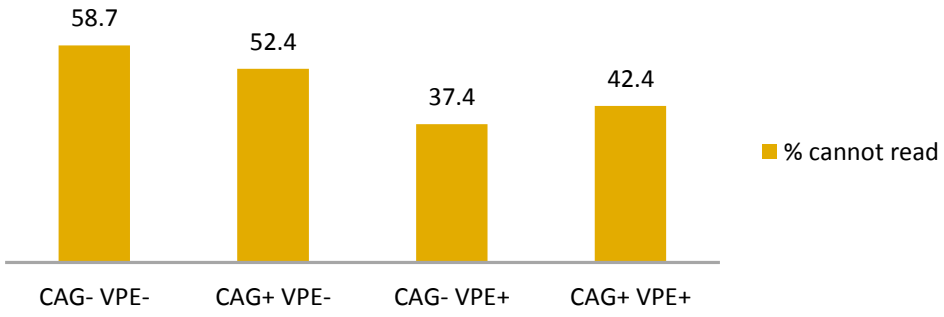
Figure 9. Percentage of young people who cannot read (by age group)



The findings show a large educational gap among the 20 -24 years old. These people were at primary school age during the war, and have not been able to gain a level of education or literacy afterwards. The 10-14 years old were born at the end of the war, but still half of them could not read a simple text. From the 2008 SLDHS, the literacy rate is around 40% country wide, which has clear implications for policy making, dissemination and implementation of family planning programmes.

We also observed marked differences in literacy between the four types of UNFPA intervention area. Literacy rates were considerably higher in areas with VPE programs, which correlates with the finding that there was better geographic access to schools in these areas. Access to schooling, literacy, and access to a VPE program are clearly interrelated independent variable for which we have to develop an adjustment when analysing the effects of the VPE program on family planning behaviour.

Figure 10. Illiteracy rate by UNFPA intervention area (n=1251)*



*n=1251, because for 38 individuals there was missing response for the literacy question

As a last marker of appropriate health behaviour, we asked about the use of mosquito nets. 48% of the interviewees slept under a net the preceding night, boys/men less likely than girls/women. There was no difference between UNFPA intervention areas.

3.1.3 Health facility survey

We surveyed a total of 110 health facilities, approximately half of them (41%) community health centres, 33% were community health posts, 17 % maternal and child health post and 8 % were hospitals. The great majority were located in rural areas. The detailed list of health facilities by chiefdom and type of health facility is found in Annex 2.

Table 16. *Health facilities surveyed (n=110)*

	n	%
Province		
East	24	21.8
North	56	50.9
South	30	27.3
Type		
Hospital	9	8.2
Community Health Centre	45	40.9
Community Health Post	37	33.6
Maternal and Child Health Post	19	17.3
Location		
Rural	99	90.0
Urban	11	10.0

	n	%
District		
Bonthe	12	10.9
Kailahun	19	17.3
Kambia	6	5.5
Kenema	19	17.3
Koinadugu	18	16.4
Kono	18	16.4
Moyamba	15	13.6
Pujehun	3	2.7

Most of the health facilities lacked an adequate electricity and water supply, and most were located in areas where there was no electricity supply grid.

All surveyed health facilities offered family planning services, which is in line with the guidelines of the Sierra Leone Basic Package of Services. More than 80% of CHCs and MCHPs offered family planning services every day, including weekends (See Annex 4). Privacy conditions (separate room, not possible to hear/see into the room from the outside) for the provision of either the counselling or the clinical component of the family planning encounter were ensured in most health facilities.

Table 17. ***Infrastructure and service conditions for the provision of FP services***

Health Facilities (n=110)	n	%
Infrastructure		
Connected to central electricity supply grid	11	20
No electricity available on the day of the visit	98	89
Availability of an electricity generator or solar supply	66	60
Waiting area with sheltered seating	82	75
A dedicated room for family planning services	11	10
A shared room with other services	98	89
Counselling and clinical exam in the same room	11	10
Different room for clinical exam	98	89
Opening times		
Scheduled opening time at 8:00	102	93
Actually opening time at 8:00 or earlier	101	92
Actually opening time later than 8:00	9	8
Family planning services offered		
Services advertised by sign on the street	37	34
Services every day including weekend	81	74
Services every day without weekend	17	16
Services only on specified days or times	12	11

3.1.4 Family planning clients

With the exception of one client who refused to be observed and interviewed, the planned number of observations and client exits interviews were carried out, for a total of 219. The participants included primarily females in the age group 12-45 years old. The median age was 25 years with the inter-quartile range (IQR) between 20-30. Forty nine percent (49%) of family planning clients were young people 12-24 years of age. About half of them were new clients. 26 % had never given birth. Among those that had given birth, 67% want more children.

Table 18. *Characteristics of family planning clients (n= 219)*

	n	%
Age in years (n=217)		
≤14	5	2
15-19	43	20
20-24	59	27
25-29	39	18
30-34	36	17
35-39	23	11
40-45	12	6
Missing	2	
Sex (n=217)	**n**	**%**
Male	7	3
Female	211	97
Missing	1	
Highest level of education (n=216)		
None	78	36
Primary school attended	28	13
Primary school completed	33	15
Junior secondary completed	42	19
Senior secondary completed	29	13
Vocational training completed	3	1
Higher education	3	1
Missing	3	
Able to read a text (among those with no education or primary education) (n=126)		
Unable to read	96	76
Able to read	29	23
Blind/visually impaired	1	1
Missing	13	

	n	%
Marital status		
Married	90	42
Living with partner	44	21
In a union / not living together	35	16
Not in a union	44*	21
Missing	6	
Number of children (n=206)		
0	54	26
1-2	59	29
3-4	48	23
5+	45	22
Missing	13	
Wants more children (already given birth, n=152)		
Yes	102	67
No/ depends on God or on husband	49	32
Don't know	1	1
Timing of next birth (n=102)		
< 1 year	4	4
> 2 years	17	17
1-2 years	80	80
Missing	1	
FP use as reported by client (n=214)		
New client	106	50
Continuing client	108	51
Missing	5	

* 5 were formerly married or living with partners

3.1.5 Family planning service providers

The service providers were female in 80% of the family planning encounters observed. Maternal and child health aids provided 41% of the services followed by state registered nurses who provided 23%, community health officers 15%, enrolled midwives and community health assistants provided 9% respectively and registered midwives 4%. The type of provider varied by the type of health facility. At the MCHPs and CHPs maternal and child health aides provided the largest proportion of the FP services (80% and 42% respectively). At CHCs most FP services were provided by maternal and child health aides and community health officers (27% and 24% respectively). In hospitals, state enrolled community health nurses were the most frequent providers (55%). See Annex 5. When the service required a clinical procedure, it was performed by the staff who provided the counselling in 98% of cases.

3.1.6 Participants in focus group discussions

A total of 96 young people 10 - 24 years of age (52% female, 48% male) participated in the 17 focus group discussions.

Table 19. *Participant in focus group discussions*

	Female	Male
Number of FGD (n=17)		
10-14 yrs	3	3
15-19 yrs	4	3
20-24 yrs	2	2
Participants (n=96)		
10-14 yrs	17	17
15-19 yrs	22	17
20-24 yrs	11	12
Schooling		
In school	57	
Out-of school	39	

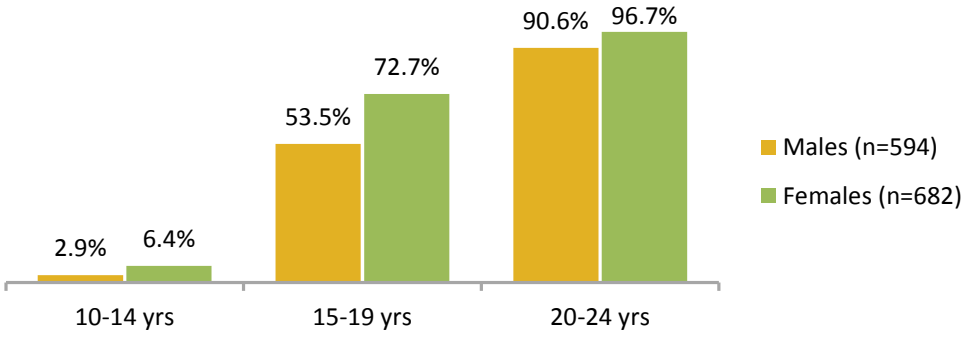
3.2 Adolescents and youth: sexuality and access to family planning services

All computations are made on the interviewed sample of 1289. In the household survey 1276 of the 1298 young people interviewed answered the question if they ever had sexual intercourse. For a conservative estimate, we assumed that the 13 respondents who declined to answer or whose answer was missing had been sexually active at least once. This decision was taken due to the sensitivity of the question, and because many of those respondents had answered to other questions related to sex later on in the interview and should not be excluded. As can be expected, the proportion of young people who reported sexual initiation increased with age.

Table 20. *Sexual initiation*

	Males (n=600)	%	Females (n=689)	%	Total (n=1289)	%
Has had sexual intercourse	224		353		577	
Missing or declined	6		7		13	
Total who had sexual intercourse	**230**	**38.3**	**360**	**52.2**	**590**	**45.7**
Has not had sexual intercourse	**370**	**61.6**	**329**	**47.7**	**699**	**54.2**

Figure 11. Proportion of young people who reported having had sex



We asked Interviewees of both sexes who had reported sexual initiation whether they could ask their partner to use a condom and whether they could ask not to have sex. The question was also answered by some who declined to answer the question on sexual initiation.

Table 21. *Condom negotiation*

	Males (n=191) %	Females (n=351) %	Total (n=542) %
Can ask boy to use a condom/ OK if girl asks boy to use a condom			
Yes	52.3	38.5	43.4
Unsure/no	47.4	61.5	56.6
Can ask boy not to have sex / OK if girl asks boy not to have sex			
	(n=185) %	(n=334) %	(n=519) %
Yes	69.6	66.5	66.1
Unsure/no	31.9	35.0	33.9

Among sexually active interviewees, 12.6% reported that they had used a condom during last intercourse (22% of boys and 7% of girls). The proportion was higher for people who were not in union: 30% for boys and 13% for girls. Condom use was related to education levels and to exposure to VPEs. There is, however considerable interdependent co-variation between education levels and exposure to VPE as shown in 3.1.2. The number of condom users is small and it is therefore not possible to control for education in order to assess the impact of the VPE program. In the follow up surveys, this could be overcome by redefining the age groups in the household survey sample.

Figure 12. Condom use among boys/men and girls/women (%)

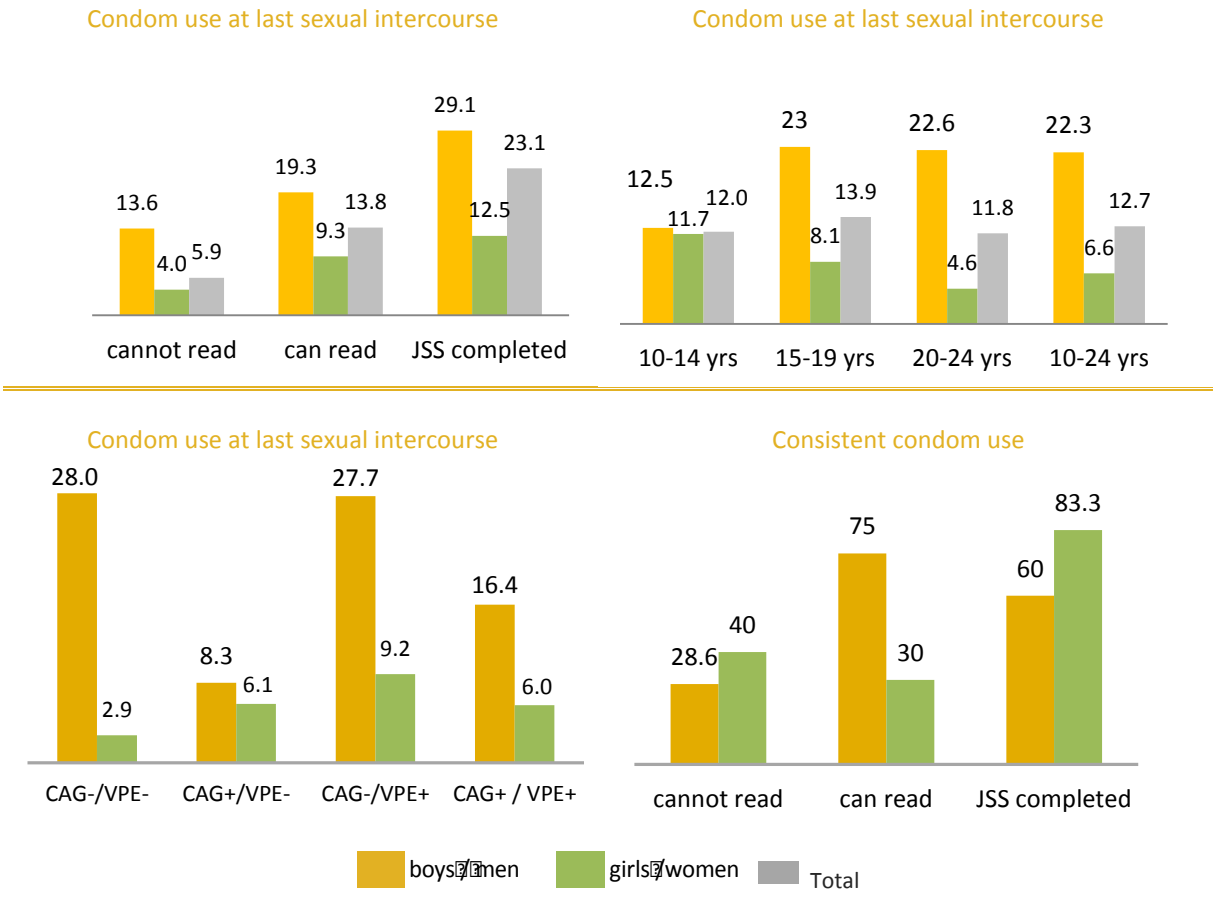


Table 22. ***Percentage of adolescents (10-19) years old from Restless Development areas that reported use of condom the last time they had sexual intercourse***

	%
Percentage of adolescents (10-19) from **Restless Development area**s who reported using a condom the last time they had a sexual intercourse (among those who already had sex, 29/194)	15.0%
Percentage of adolescents (10-19) **from Restless Development areas** who reported using a condom the last time they had a sexual intercourse (including all young, whether they had sex or not, 29/676)	4.3%
Percentage of adolescents (10-19) from **non Restless Development areas** who reported using a condom the last time they had a sexual intercourse (among those who already had sex, 10/90)	11.1%

The textbox quotes some of the reasons given by interviewees why they did not use a condom.

In the survey questionnaire, we asked about the use of family planning (modern and other methods) and about sexually transmitted infections.

Use of family planning was assessed through two set of questions, the first pertaining to the last episode of intercourse, and the second to current use. Responses are consistent and the difference among "boys/men" can be explained through sporadic use of condom.

For girls/women the three most commonly used methods were injectables, implants and oral contraceptive pills, while males mentioned condoms, implants and injectables most frequently. Because injectables need to be repeated every three months, these data were disaggregated by distance to the health facility. The distribution was the same as in the global population, implying that once the woman uses injectable contraception, returning for a renewal is not a problem.

Reasons given for not using a condom

- Not familiar with it
- Condoms are harmful
- Rumours says that condoms kills
- Shameful for me to ask for or request for condom
- It is forbidden
- It is said that condoms are infections
- Condoms are inconvenient to use
- I have fear of using a condom
- I don't know how to use it
- I had sex with a friend not the wife
- Side effects
- I do not know about condoms
- I don't want any waste time
- Fear of it not sticking in the vagina
- I did not know about it then
- Misconception of side effect such as death, illness etc.
- My husband has two of us. I also want to bear children for him
- Condoms have side effects, they may remain in the vagina
- I want to give my children pure breast milk
- I was pregnant (3 times)
- For no reason
- Dangerous to health

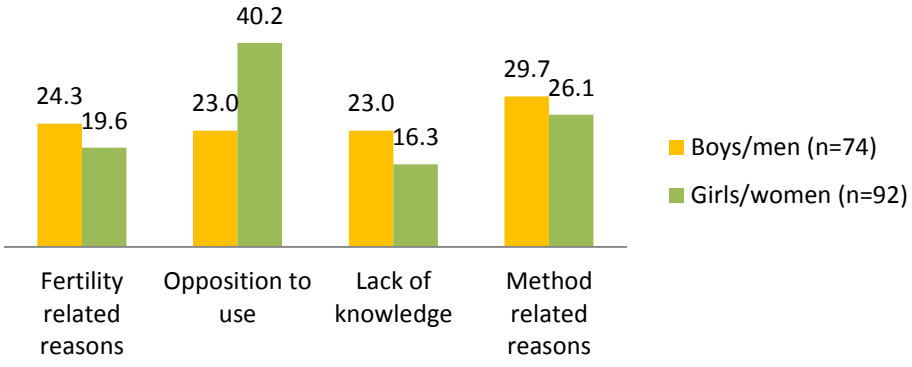
Use of modern contraception in females (122) was also analysed in terms of distance to the health facility, to literacy, and mosquito net use, none were found to be correlated. Only distance greater than 60 minutes showed an effect, with prevalence of modern contraception at 40% for people living within 30 minutes and 25% above 60 minutes. Only a limited number of methods were used, and some respondents declared more than one method.

Table 23. *Modern contraceptive methods used (current users)*

	Males (n=97)	Females (n=122)	Total n	Total %
Female Sterilization	0	1	1	0,3
Male Sterilization	0	0	0	0,0
IUD	7	7	14	4,4
Injectables	31	54	85	26,8
Implants	40	41	81	25,6
Pill	26	34	60	18,9
Male Condom	47	20	67	21,1
Female Condoms	3	1	4	1,3
Emergency Contraception	0	5	5	1,6
Total	**154**	**163**	**317**	**100**

We asked non-users why they did not use a modern family planning method. More than half were pregnant or trying to get pregnant. The reasons for the remaining are presented in the figure.

Figure 13. Reason for not using a modern family planning method (%)



It is of interest that "opposition to use" is a prominent reason. This concurs with a recent analysis of DHS data from Ghana by Makayuma[21] who reported that the relative contribution of lack of access to unmet family planning needs has diminished, whereas attitudinal resistance has grown.

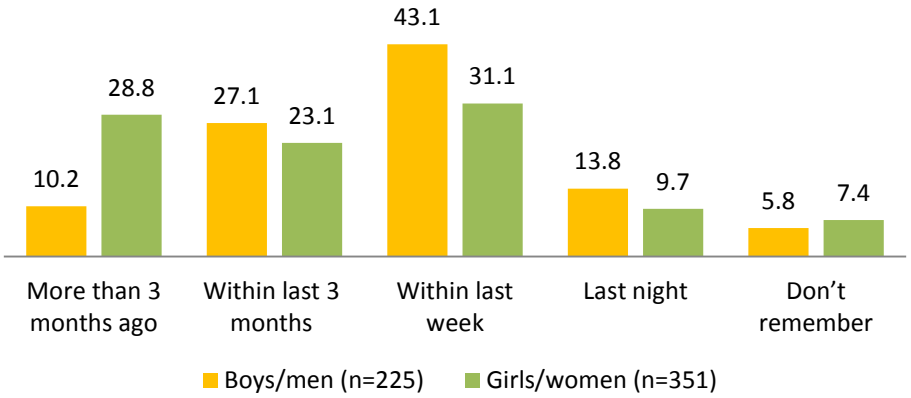
Roughly two thirds of all interviewed individuals had heard about sexually transmitted infections. There was no difference between boys/men and girls/women. We asked all who were sexually active if they ever had an STI. Regarding STIs, interviewees were asked both about knowledge and experience. Two thirds of all interviewed individuals had heard about sexually transmitted infections with no difference between boys/men and girls/women. Regarding experience of STI, this was reported by 50 interviewees, 3,9% of the total and 8.5% of the sexually active; among these 50 cases, 37 were male. All the 13 females and 32/37 males had attended a health facility in relation to the STI experience.

[21] Machiyama K, Cleland J. Unmet need for family planning in ghana: the shifting contributions of lack of access and attitudinal resistance. Stud Fam Plann 2014; 45:203-26

3.2.1 Marriage, partnership, childbirth history

In order to explore the need for family planning, we examined what proportion of people who declared having had sexual intercourse were in a union. It appears that 30% of females and 60% of males who reported having had sex are not in a union. This needs to be kept in mind when constructing indicators for unmet family planning need. Considering only people in a union[22] would leave out a large population of sexually active young people who also need access to family planning.

Figure 14. Last sexual intercourse, by sex (%)



This item allows to identify the sexually active young and will be also used for the analysis of unmet needs for FP. Will be considered sexually active everyone, including "don't remember" but excluding "more than three months ago".

3.2.2 Utilisation of health services

All young individuals (10-24) interviewed in the household survey, were included for these questions: 28.5% of males and 43.9% of females used the health facility. The difference between both sex is in part due to components of SRH such as pregnancy care and family planning, but girls/women are more likely to use the health facility also for other reasons such as malaria.

Table 24. *Utilisation of health services by young people (10-24)*

	Males		Females		Total	
Visiting a health facility in the past year	**N**	**%**	**n**	**%**	**n**	**%**
Yes	167	**28.5**	298	**43.9**	465	**36.8**
No	418		381		799	63.2
Total	**585**		**679**		**1264**	
Don't remember	7		7		14	
Missing	8		3		11	

Their reasons for visiting the HF are detailed in table 24. The majority of the reasons for visiting the health facility (92% in male and 54% in female) were not related to sexual and reproductive health. The first cause was malaria in both sexes. Because the HF was used mostly for curative motives it is possible that the positive opinions regarding youth friendliness and satisfaction in general was biased towards satisfaction.

[22] Definition of unmet need for FP : "the proportion of women of reproductive age who are married or in a union and who do not want any more children or want to wait at least two years before having a baby, and yet are not using contraception" (World Health Statistics 2012)

Table 25. *Reason for visiting the health facility, young people 10 -24 yrs*

Reason for visiting the health facility	Male		Female		Total	
	Yes	%	Yes	%	Yes	%
Antenatal	0	0.0%	88	17.0%	88	11.9%
Postpartum	0	0.0%	49	9.5%	49	665%
Delivery	0	0.0%	52	10.1%	52	7.0%
Family Planning	**2**	**0.9%**	**43**	**8.3%**	**45**	**6.1%**
Treatment of STI	**15**	**6,7%**	**8**	**1,5%**	**23**	**3.1%**
Malaria	94	42.0%	147	28.4%	241	32.5%
Trauma	75	33.5%	91	17.6%	166	22.4%
Medical conditions	38	17.0%	39	7.5%	77	10.4%
Total reasons for visiting	224	100%	517	100%	741	100%
Total who went to the HF	167		517		465	
Average number of reasons per person	1.3		1.7		1.6	

The interviewees were also asked for their appreciation of the health facility, in terms of quality of care, friendliness, respect and confidentiality. All these questions scored higher than 85%. Interviewees were also asked on a scale from 1 to 5 if the services were "youth friendly"; again more than 85% answered much or very much. These results were compared to the objective criteria of youth friendliness assessed in the HF survey (Table 32). Less than 35% of the health facilities had a separate area or special sessions with youths.

Figure 15. Opinion of young people on the health facilities (%)

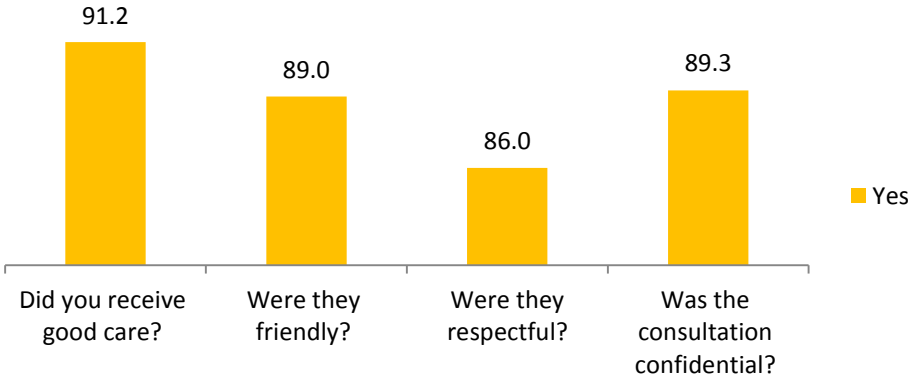
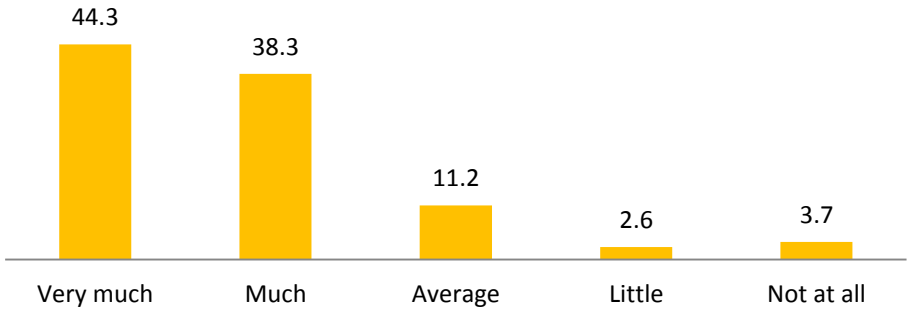


Figure 16. Young people (10-24) saying the health services are youth friendly (%)



3.3 UNFPA interventions and adolescents and young population

All computations are made on the interviewed sample of 1289. UNFPA has supported the implementation of three population targeted interventions and two interventions targeted to health providers, which will be discussed in the sections on health facilities. The three population oriented interventions are the Saliwansai radio drama, the RESTLESS DEVELOPMENT voluntary peer educators and the UNFPA supported community wellness advocacy groups. The interview comprised 30 questions related to these three interventions. For better comparability, the questions pertaining to these interventions followed a common canvass: knowledge, appreciation, possible change induction. For increased clarity these will be presented separately only briefly, and the focus will be put on the comparison (§ 3.3.4).

3.3.1 Saliwansai

This radio drama can be heard in most parts of Sierra Leone. However, the household questionnaire had shown that only 51% of households owned a radio. We assumed that youths might listen to the radio outside their own home and added a question on this topic. This confirmed that a limited part of the young population accesses the radio outside their home, though mainly boys/men, with 51% of the girls/women and 42% of the boys/men as non-listeners.

Most listeners liked the programme, believed it influenced them to think and act differently, and might have influenced them to go to a health facility. The topics addressed will be discussed in the comparison section.

3.3.2 VPEs

It is important to remember that the design of the study was to over-represent the population exposed to VPEs with 411 interviewed persons in non-VPE areas and 878 in VPE areas. This means that exposure rates are specific to this study. VPE exposure occurred, as expected mostly in VPE areas (47% of boys/men and 45% of girls/females), but also in non VPE areas (12% of boys/men and 11% of girls/women).

Like for Saliwansai, most people exposed liked the programme, believed it influenced them to think and act differently, and it was considered to have influenced them to go to a health facility.

3.3.3 UNFPA enhanced CAGs

As has been mentioned in the introduction, Community Wellness Advocacy Groups, generally referred to by the population as “CAGs” have been established all over the country since before 2010. The UNFPA intervention on CAGs aims to ensure a programme of continuing professional development, specific to certain UNFPA supported districts, and in addition to what is already provided by the MSWGCA for all CAGs. This means that exposure to CAGs occurs in all areas, but that there are in effect two kinds of CAGs: standard CAGs and UNFPA enhanced CAGs. In the description of the 4 areas (see fig 3) CAG+ refers to areas of the UNFPA enhanced CAGs and CAG- to the areas with standard CAGs.

In the HH survey, CAG exposure was reported by 17 % of respondents in CAG+ areas and by 14 % in CAG-areas., implying that to the interviewees there is no visible difference between enhanced and standard CAGs.

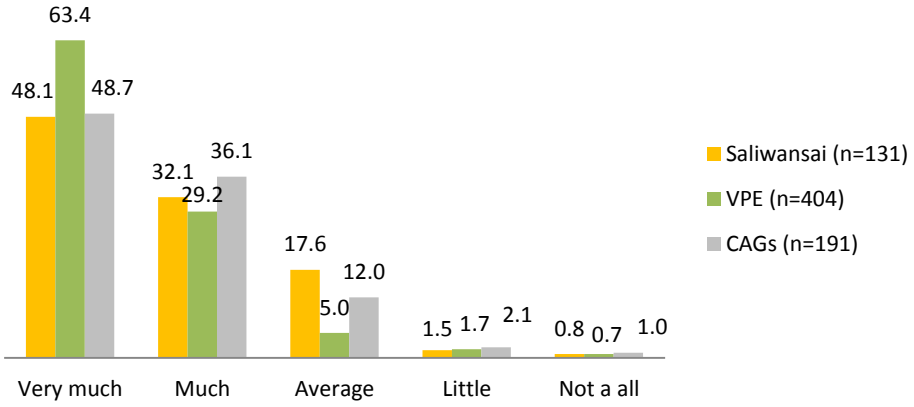
As for Saliwansai and the VPEs, most people exposed to CAGs, liked the programme, believed it influenced them to think and act differently, and might have influenced them to go to a health facility.
CAGs are also able to send a person to a health facility with a referral slip.

3.3.4 Comparing the three interventions

The three interventions have a common goal of health promotion and empowerment, with a specific focus on reproductive health and gender issues, including delayed childbearing and education. For this reason it appears more useful to present the characteristics and the impact of the three interventions together. However it is of importance that they are not targeted to the same population, with broadly the following distribution: Saliwansai for all, VPEs for youths, and CAGs for women.

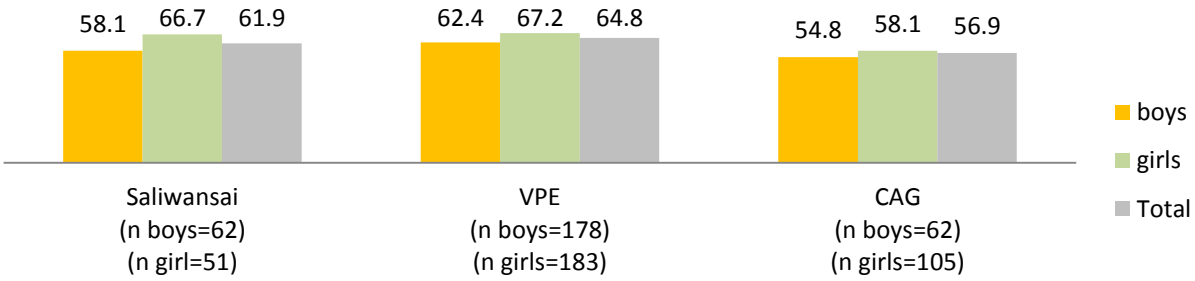
Among the young people 10-24 interviewed in the household survey, the exposure to each of the three interventions was of the same order of magnitude, between 12% and 20% of interviewees. The most appreciated intervention appears to be the VPEs scoring above 90% of very appreciative interviewees. However all interventions scored above 80% on the question how much you like each intervention (liked very much or much).

Figure 17. Opinion of interviewees (10-24) on each of population based interventions (%)



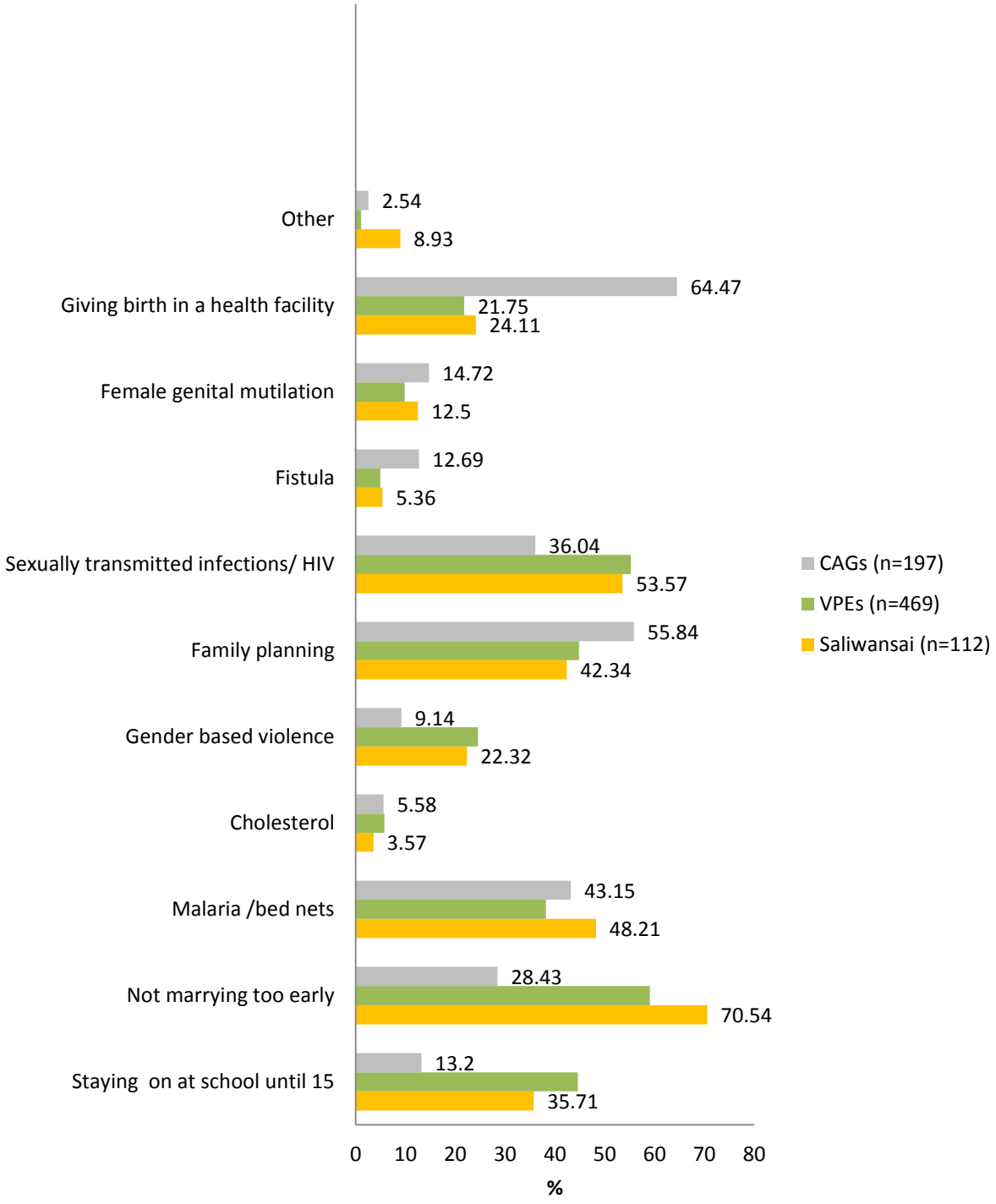
The same trend of a slight preference for the VPE programme was observed in the questions did it Influence you to think differently and did it Influence you to act differently. However, in terms of influence to use family planning there was no trend.

Figure 18. Does the intervention influence to look for family planning services?, by sex (%)



The interviewees reported having heard about the following topics from each of the interventions.

Figure 19. Topics heard by interviewees from each of the population based interventions



Family planning, malaria prevention, and STIs were topics addressed in a similar manner in all three interventions and were reported by 35% to 60% of interviewees. For other topics there was a specificity of the intervention, for instance giving birth in a health facility was reported in 21% of VPE exposed and in 64% of CAG exposed. Cholesterol and female genital mutilation (FGM) are not included in the training of VPEs, these topics were included as control. It was expected that very few

people would answered positively to these topics. It is notable that these topics are discussed by some VPEs.

3.4 The provision of FP services by the public health facilities

Contraceptive methods usually provided at the health facilities

The facility managers were asked which contraceptive methods were usually provided at the health facilities, whether or not the methods were available on the day of the visit and if the facility has experience stock-out in the last six and three months (Table 25). Given the large number of missing data in the last three and six months, the results should be interpreted with caution.

According to the Sierra Leone Basic Package of Health Services all type of health facilities should distribute male and female condoms, oral and injectable contraceptives. Insertion of IUD and implant should be done at hospitals and under supervision at CHC. Permanent surgical methods should be carried out at hospitals (all other health facilities should refer to the hospital for these services). In most cases the HF surveyed were usually providing FP methods according to the Basic Package for family planning. There were some deviations particularly for IUD and implants which were usually provided by all type of health facilities, with a larger proportion of hospitals and CHC offering these services. One third of the health facilities surveyed were usually offering IUD services, while 70% were offering implants.

Table 26. ***Availability and stock-out of contraceptive methods in the health facilities surveyed***

Contraceptive methods	Availability			Without Stockouts								
	Usually			Today			For last 6 months			For last 3 months		
	N	Yes		N	Yes		N	Yes		N	Yes	
		n	%	n	n	%		n	%		n	%
Combined oral contraceptive pills	110	109	99.1	110	105	95.5	110	22	20.0	110	21	19.1
Progesterone only pill	110	107	97.3	110	105	95.5						
IUD	**101**	**35**	**34.7**	**64**	**43**	**67.2**	**53**	**15**	**28.3**	**53**	**14**	**26.4**
Combined Injectables	110	109	99.1	109	100	91.7	109	22	20.2	109	23	21.1
Progesterone-only injectable	109	9	8.3	39	3	7.7	25	11	44.0	24	11	45.8
Implant	**110**	**76**	**69.1**	**83**	**66**	**79.5**	**81**	**20**	**24.7**	**81**	**22**	**27.2**
Male Condoms	109	109	100.0	106	102	96.2	109	20	18.3	109	23	21.1
Female condoms	106	65	61.3	86	73	84.9	84	25	29.8	84	22	26.2
Spermicide	106	2	1.9				20	9	45.0	20	8	40.0
Female sterilisation	101	9	8.9	32	5	15.6	23	9	39.1	23	9	39.1
Vasectomy	110	1	0.9	25	1	4.0	16	6	37.5	16	6	37.5

Availability of contraceptive commodities at the health facilities on the day of the facility audit

It is critical that contraceptive methods are actually available at the service delivery point at the time of a FP consultation. This reduces the possibilities of missed opportunities and also contributes to client´s satisfaction with the services. We inquired about the availability of contraceptive methods on the day of the visit. The interviewers were told to ask the question and actually observe if the methods were available at the facility on the date of the visit.

On the day of our visit, the pill (combined oral contraceptive pills, progesterone only pill), combined injectable contraceptives and male condoms were found in most health facilities (>90%), followed by female condoms (85%), implants (79%) and IUDs (67%). Annex 6 shows the availability of contraceptive methods on the day of the facility audit by type of health facility.

The findings above show an improvement in availability of all contraceptive methods in health facilities when compared to the findings of the 2011 survey of availability of modern contraceptives (UNFPA 2012) [23] as shown in the table below.

Table 27. ***Percentage of HF having contraceptive methods available on the day of the visit – Comparison 2014 and 2011***

Availability of contraceptive methods	All type facilities	Hospital		CHC		CHP		MCHP	
	Available date of visit IRMNH 2014	Available date of visit IRMNH 2014	In stock time of survey (2011)	Available date of visit IRMNH 2014	In stock time of survey (2011)	Available date of visit IRMNH 2014	In stock time of survey (2011)	Available date of visit IRMNH 2014	In stock time of survey (2011)
	%	%	%	%	%	%	%	%	%
Combined oral pills	95.5	88.9	19.6	97.8	21.8	94.6	13.1	94.7	38.9
Progesterone only pill	95.5	77.8		93.3		100.0		100.0	
IUD	**67.2**	**71.4**	**8.1**	**75.8**	**1.8**	**55.6**	**1.8**	**50.0**	**1.4**
Combined Injectables	91.7	88.9	17.9	88.6	17.5	94.6	10.5	94.7	35.1
Progesterone only injectable	7.7	20.0		5.6		8.3		0.0	
Implant	**79.5**	**100.0**	**8.1**	**85.0**	**1.4**	**71.4**	**0.7**	**50.0**	**2.5**
Male Condoms	96.2	100.0	18.2	100.0	23.2	97.3	13.3	94.4	38.9
Female condoms	84.9	42.9	14.4	85.7	14	92.9	10.5	87.5	22.8

Source: For 2011 data: UNFPA 2012.*2011 Survey of availability of modern contraceptives and essential lifesaving maternal and reproductive health medicines in service delivery points in Sierra Leone*. Analytical Report and tables. March 2012. For 2014: IRMNH Survey 1.

No stock-outs of contraceptive commodities in the health facilities in the last six and three months

When comparing the percentage of health facilities experiencing "no stock out" of contraceptives commodities in the last six and three months (table 28), there were more facilities experiencing stock out of injectables, implants and male condoms in the last three months than in the last six months. However the differences were not large. For six [24] of the commodities inquired, 70% or more of the health facilities had "no stock out" of contraceptive commodities in the last three or six months, suggesting perhaps a more regular supply. This varies by type of health facility as shown in Table 28 below. Annex 7 shows the number of health facilities without stock out of contraceptives in the last six and three months bye type of health facility.

A comparison with the presence of "No Stock out" of contraceptive commodities in health facilities in 2011(UNFPA 2012), shows important improvements in the supply of contraceptive commodities in the health facilities over this period, as shown below.

[23] This survey includes health facilities own by government health facilities, private sector, NGOs, facility based organisations and forces. It also includes tertiary level care service delivery points. Surveyed a total of 349 facilities: 2% (6) tertiary hospitals; 28% (99) secondary level hospitals; 23%(82) CHC; 11% (39) CHP; 35% (123) MCHP

[24] The six commodities are: combined oral pills, IUDs, combined injectables, implant, male and female condoms

Table 28. *Percentage of HF with no stock out of contraceptive commodities in the last 6 months, 2011, 2014*

Availability of contraceptive methods	All type facilities	Hospital		CHC		CHP		MCHP	
	No stock out last 6 mo. IRMNH 2014	No stock out last 6 mo. IRMNH 2014	No stock out last 6 mo. (2011)	No stock out last 6 mo. IRMNH 2014	No stock out last 6 mo. (2011)	No stock out last 6 mo. IRMNH 2014	No stock out last 6 mo. (2011)	No stock out last 6 mo. IRMNH 2014	No stock out last 6 mo. (2011)
	%	%	%	%	%	%	%	%	%
Combined oral pills	80.0	66.7	18.6	80.0	21.1	89.2	11.6	68.4	36.8
Progesterone only pill									
IUD	**71.7**	**33.3**	**7.0**	**77.4**	**1.4**	**66.7**	**0.7**	**100.0**	**1.1**
Combined Injectables	79.8	66.7	15.8	79.5	15.4	86.5	8.4	73.7	29.5
Progesterone-only injectable	**56.0**	**50.0**		**53.8**		**66.7**		**50.0**	
Implant	75.3	66.7	7.4	84.6	1.4	64.3	0.4	80.0	2.1
Male Condoms	81.7	62.5	17.5	82.2	21.8	89.2	12.3	73.7	37.5
Female condoms	70.2	50.0	13.5	69.4	12.6	81.5	8.8	60.0	17.9

Source: For 2011 data: UNFPA 2012.*2011 Survey of availability of modern contraceptives and essential lifesaving maternal and reproductive health medicines in service delivery points in Sierra Leone*. Analytical Report and tables. March 2012; 2014: IRMNH Survey 1

Combination of family planning services being provided

When asked about which family planning services are offered, all the health facilities were offering services for at least three methods, 10% were offering four methods, 39% five methods and 50% were offering more than six methods[25].

Equipment items

Certain equipment must be available and in working order for the provision of different methods. Their presence at the facility will affect the availability and quality of services. Out of 18 basic equipment items for which information was collected, 12 were available in 80% or more of the health facilities surveyed at the time of the audit. A few items were not available in 50% or less of the health facilities including, sterile drapes, speculum, standing lamp, flash light and tenaculum.

The availability of 5 items for the provision of IUD (specula, tenaculum, scissors, flashlight, standing lamp), and 3 items for provision of implants (implant kit, sterile gloves, Xylocaine or Lidnocaine) in hospitals and CHC was also inquired. More than half of the health facilities (55%) had the three items for the insertion of implants, while only 3.6 % of all health facilities had all five items for the insertion of IUDs. See Annex 8 for details on the availability of equipment items at the health facilities.

Human resources for the provision of family planning services

The availability of human resources in adequate numbers and with the proper skills for the provision of services is essential to quality care. In the HF surveyed, the mix of medical and nursing staff and their respective numbers varies according to the type of health facility. Most health facilities had 0-3 staff in each one of the staff categories inquired. None of the family planning consultations observed had a doctor or a state registered nurse as a provider. Maternal and child health aides, state certified midwives and registered nurses provided most of the family planning consultations observed. These cadres have been targeted for LTM training, however training gaps remain to be addressed. For example, MCH aides were found to be the most common cadre assigned to provide FP in the health facilities surveyed (83 %) however only 29% of health facilities had at least one MCH aide trained on LTM. There is an extensive network of health facilities in the country and a limited number of medical and nursing cadres available. This situation demands clear policies and guidelines for the placement and training of staff on LTM.

[25] The methods inquired include: female sterilisation, vasectomy, implant, IUD, Combined oral contraceptive pills, progesterone only pill, combined injectables contraceptives, progestin-only injectable contraceptives, male condoms, female condoms, spermicide

Table 29. *Proportion of health facilities with at least one staff per category of staff providing FP services or trained in LTM per staff*

Staff categories	No. of HF responding	HF with with number of staff = 0 per staff category		% of HF with at least one staff per staff category	
	N	n	%	Trained in LTM	Providing FP services
Medical Doctor	109	99	90.8	6.4	5.5
State certified midwife	108	50	46.3	43.9	47.2
Community Health Officer	108	107	99.1	0	0.9
State Registered Nurse	108	52	48.1	30.6	45.4
State Enrolled Community Health Nurse	108	79	72.5	22.2	26.9
Maternal and Child Health Aide	108	10	9.3	29.6	83.3
Nurse Aid	92	81	88.0	0.0	1.1

Management and logistics

Supervisory visits are essential to ensure high quality services. One third of facility managers reported having received a supervisory visit that included review of family planning services in the last three months.

Consistent with the finding about level of stock-outs in the health facilities, is the finding on facility managers reporting that it took less than a week to replace contraceptive commodities the last time the facility run out of them. In general, for 93% of health facilities the replacement time was three months or less.

Proper storage of medical supplies contributes to preserve the quality of these supplies and their availability (adequate supply management ensures early detection of stock-outs, expiration date). All health facilities surveyed stored contraceptive commodities. In more than 80% of the health facilities contraceptive pills, male and female condoms were stored both protected from rain as well as off the floor/on shelves. Storage conditions for IUDs and implants were less favourable. Implants were protected from the rain and off the floor/on shelves in approximately 70% of the health facilities, while for IUDs, 40% of health facilities were providing these conditions. Issues related to availability of adequate storage capacity (space) as well as medical supplies store management were not inquired and may require additional studies.

The family planning client – provider encounter

Provider's counselling skills

The quality of the counselling skills was assessed using eight "actions" the health providers should perform during the counselling session. The median number of actions performed was six for all staff categories. Annex 9 presents the number of actions performed by staff categories.

The content of the counselling session is expected to differ for new and continuing clients. If the client is known to the provider, due to previous visits or information from clinical records, tends to reduce the number of issues discussed in the session. With regard to new clients, the providers are expected to ask about certain demographic characteristics and reproductive intentions during the counselling session (i.e. number of living children, desire for more children, timing of next child, currency pregnancy status, history of pregnancy complications, partner's attitudes about FP. The providers were covering these topics far less consistently than the eight actions for good counselling.

Issues related to sexuality were discussed less frequently (history of pregnancy complications, timing of next child, multiple/single partners, desire for more children).

Table 30. *Providers´ actions during the counselling session*

Provider´s counselling and communication skill	As reported by observer	
	n	%
Provider´s actions during the counselling session, all FP clients		
Use visual aids (n=218)	40	18.3
Use client record (n=218)	107	49.1
Ask open ended questions (n=218)	139	63.8
Ask client her concerns with any method (n=217)	194	89.4
Encourage client to ask questions (n=218)	207	95.0
Assure confidentiality (n=218)	210	95.9
Discuss a return visit (n=216)	213	98.6
Treat client with respect (n=218)	217	99.5
Information not discussed, all FP clients		
History of pregnancy complications (n=216)	158	75.2
Timing of next child (n=216)	142	65.1
Multiple/single sexual partner(s) (n=217)	138	63.3
Desire for more children (n=217)	117	53.7
Partner´s attitude about FP (approve/disapprove) (n=217)	102	46.8
Number of living children (n=216)	51	23.4
History/signs/symptoms of STIs (n=218)	41	18.8
Current pregnancy status (n=219)	40	18.3
Marital / relationship status (n=218)	26	11.9
HIV/AIDS and STIs discussed (n=218)	16	7.3

On other actions considered particularly important for new clients, the providers performed well, as shown in the table below.

Table 31. *Percentage of new FP clients who were informed about side effects or problems of methods used*

Percentage of FP clients who were informed about side effects or problems of methods used (new clients only)	As reported by client		As reported by observer	
	n	Yes (%)	n	Yes (%)
Explains how to use selected method	105*	100	112	100
Explains side effects of method selected	105*	95.2	110**	94.5
Explains what to do in case of problems	102***	94.3		
*: 1 Missing; ** 2 missing; *** 4 missing				

Infection prevention procedures

An important component of quality services is compliance with infection control procedures.

Compliance with specific infection prevention procedures required for the provision of injectables and pelvic exams were determined through the observation of clinical procedures. Except for washing hands, almost all providers followed the infection control procedures for injectables. As only four pelvic examinations were observed, we cannot draw any conclusions on the basis of it. However the information on their observation is presented below for illustration purposes.

Table 32. *Percentage of providers who follow infection procedure*

Providers who follow infection prevention procedure	Observation	
	n	%
Injectable, n=98		
Wash hands before injection	75	76.5
Used a disposable autodestruct syringe and needle	96	98.0
Drop needle into a safety box	97	99.0
Pelvic Exams, n=4		
Washing hands	1	25.0
Put on new or disinfected gloves before exam	2	50.0
Use sterilised or high-level disinfected instruments for each exam	3	75.0
Ensure that instruments and reusable gloves are decontaminated, n=3	2	66.7

Additionally most health facilities had disposal containers for contaminated waste supplies, antiseptic solutions, sharps containers for used sharps, plastic buckets or containers for decontamination (see above, section on equipment)

Correct actions observed during the application of contraceptive methods

The observers were provided with a check list of procedures to check when the provider was performing a clinical procedure. This list was developed based on the National Family Planning Manual for Service providers, July 2013. Out of a total of 219 clients whose client-provider interaction was observed, 98 application of injectables, 37 insertion of implants and 4 pelvic examinations were observed.

Figure 20. Percentage of providers performing procedures for application of injectable according to guidelines

Injectable (n=98)

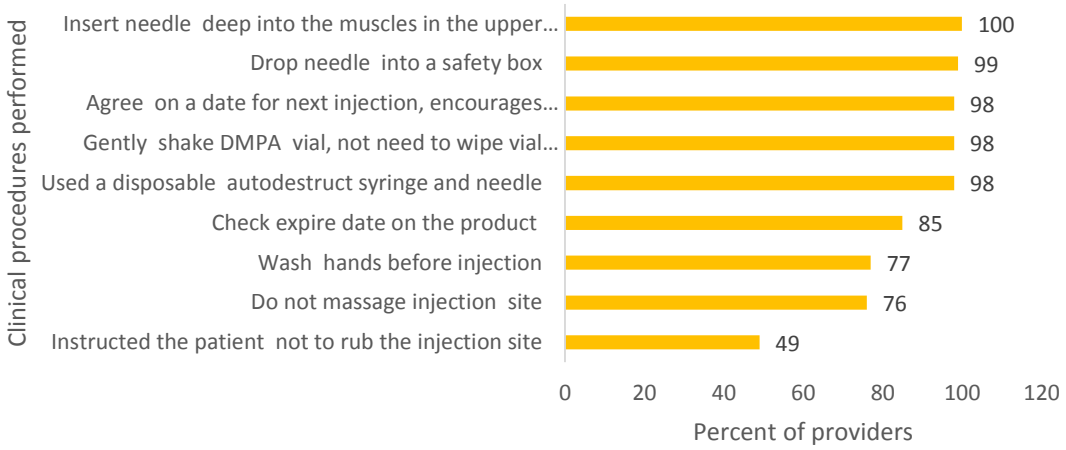
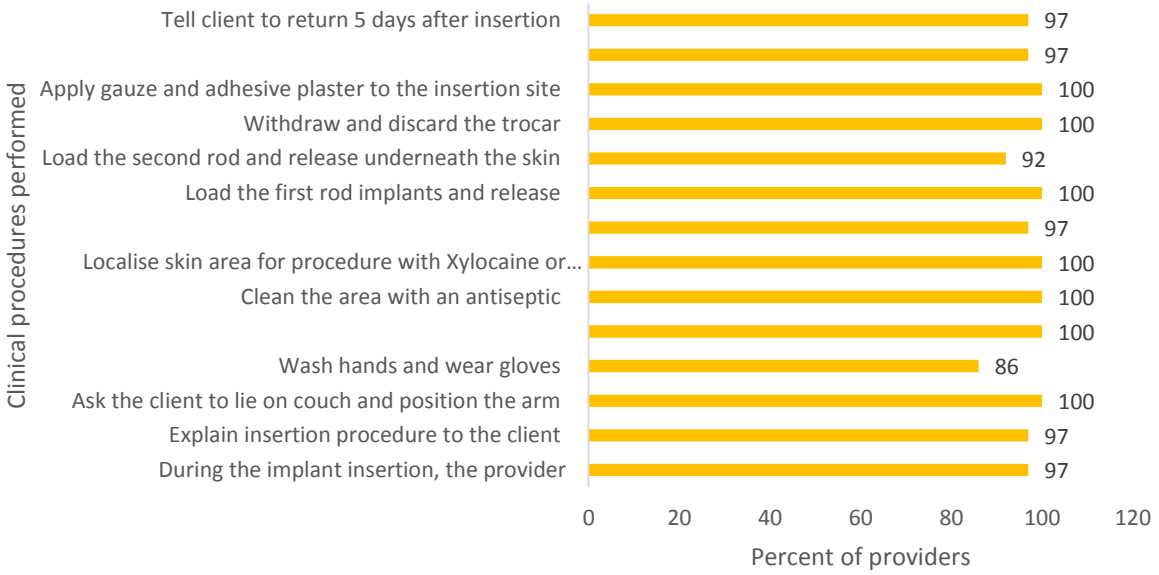


Figure 21. Percentage of providers performing procedures for insertion of implants according to guidelines

Insertion of implants (n=37)



Client´s attitudes toward services received

Most FP clients interviewed had a positive perception of the family planning services received. More than 90% of the clients felt comfortable to ask questions during the family planning encounter with the provider and thought that the amount of information provided during the session was good or very good. The clients were also asked if they were having problems with the contraceptive method they are using/ were using in the last six months and if they were satisfied with the advice or treatment received for their problem(s). Only few clients (13) reported having problems with their methods and all were satisfied with the advice and treatment received.

3.5 Adolescents and youth friendly services

The government is encouraging health facilities to be upgraded to provide adolescents and youth friendly services and it is also training staff on the provision of these services. National standards for adolescents and youth friendly services (MOH SL, 2011) have been developed. These standards relate to five areas: information, service provider skills, service delivery point organisation, community participation and management. For each standard a number of criteria are suggested for the health facilities to implement. The IRMNH Survey 1 inquired on few selected criteria related to these standards.

Table 33. *Existence of selected criteria for adolescents & youth friendly services*

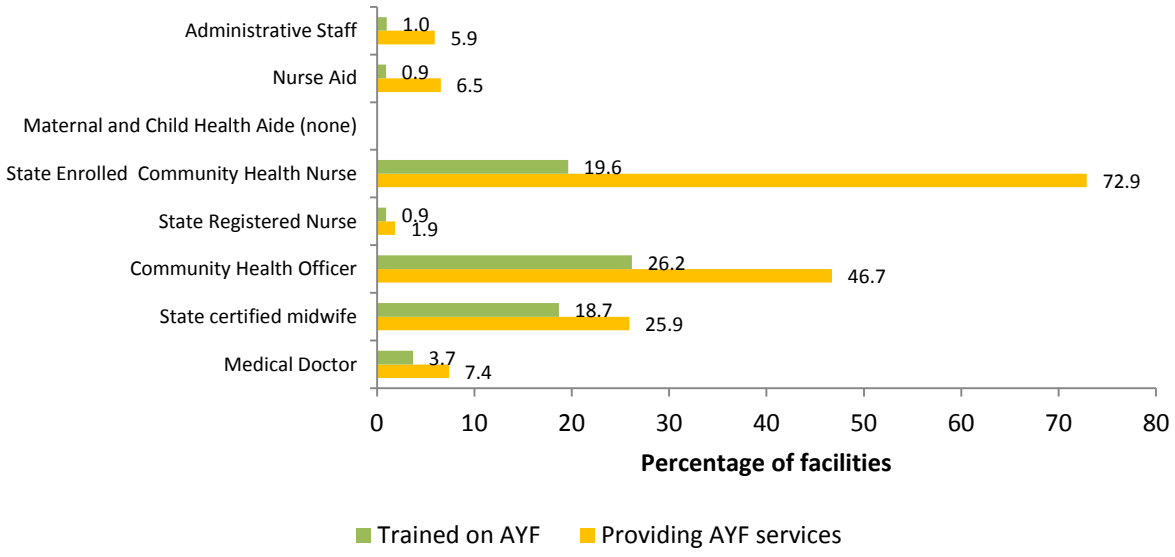
Selected criteria for youth friendly services	Health facilities N	n	%
IEC materials availability			
IEC on FP for adolescents and youth	82	76	92.7
IEC on teenage pregnancy	81	64	79.1
IEC on STI/HIV	**81**	57	70.37
IEC on prevention of GBV	**81**	52	64.2

Selected criteria for youth friendly services	Health facilities N	n	%
National standards book			
Nat Standards book available and observed	**107**	16	23.1
Service delivery point organisation			
Provide services in separate room	**105**	13	12.0
Special sessions with young people	**104**	23	22.0
Special arrangements for young females (married, pregnant, lactating)	**104**	35	33.0
Privacy			
Consultation room offers privacy	105	25	22.7
Community participation			
Traditional leaders sensitised on adolescents SRH	**105**	36	34.2
Parent´s association sensitised on adolescents SRH	**106**	44	41.5
CHW sensitised on adolescents SRH	**105**	76	72.3
CAG oriented on their role towards adolescents and young people	**105**	75	70.0
Data on young people shared with communities	**105**	43	40.9

Human resources for the provision of adolescents and youth friendly services

The survey inquired about the availability of 8 different staff categories per facility, their assignment to actual provision of services for young people and whether or not they have been trained on AYF service provision. Most health facilities had 0-3 staff per category. State enrolled community health nurses and community health officers were most likely to be assigned to the provision of services to the young. These staff categories have also been targeted for training on adolescents and youth friendly services, however important training gaps remain.

Figure 22. Percentage of health facilities having at least one staff per category trained on AYF or assigned to provide services to young people



Number of SDPs upgraded to provide "youth friendly services"

This indicator is used to determine the basic capacity of the health facilities to provide youth friendly services. The SDPs upgraded to provide "youth friendly services" should fulfil the following criteria: i) having at least one trained health worker in adolescents and youth SRH, ii) privacy and confidentiality honoured and iii) education material available onsite. Eleven (10%) of the health facilities surveyed fulfilled these criteria.

Table 34. *SDPs upgraded to provide youth friendly services*

SPDs upgraded to provide youth friendly services (composite of 3 criteria)[26] (n=110)	n	%
Total	11	10.0
Hospital	2	18.2
Community Health Centres	7	63.6
Community Health Posts	2	18.2
Maternal and Child Health Posts	0	0.0

3.6 Focus group discussions

The following topics were explored in-depth during the focus group discussions:

Most common health/social problems affecting young people.

Malaria, diarrhea, teenage pregnancy, and STI/HIV were consistently among the perceived common health/social problems cited by both male and female participants across all age categories. However, it should be noted that younger participants aged 10-12 were less likely to cite STI/HIV as a pressing health or social problem.

Age of sexual initiation.

Generally, both males and females reported that they initiated sex around the age of 14-16 years. However, there was a unique instance when a male participant in Tuwuya, Kambia shared that his first sexual encounter was at the age of 11 years. On the other hand, some female participants reported not becoming sexual active until the age of 20 years. Males were more likely to report engaging in "sexual experimentation acts" other than penetration at a younger age than their female companions -- as early as 10 years. The male sexual experimentation was mainly with an older female under 18 years, but in some cases, it was with an adult woman over 18 years. It usually involved "touching" and "playing around" but without penetration. However, the first "full sexual encounter" that involved penetration occurred around the age of 14-16 years for both male and female participants. During the initiation of sex, males seemed to be more concerned about "getting caught" and "parental repercussions" while females reported being "worried about becoming pregnant." In almost all instances, participants were not concerned about contracting STI during the first sexual encounter – mainly because they reported not being fully aware of the risks of STI transmission at the time. Most participants reported being "preoccupied with emotions during the first encounter" – ranging from initial excitement to anxiety and fear of the subsequent consequences.

Recurring themes that emerged on the issue of delaying sexual initiation were: (i) desire to wait until completion of secondary education; (ii) belief that sex outside of marriage is forbidden by their

[26] Composite of 3 criteria: i) having at least one trained health worker in adolescents and youth SRH, ii) privacy and confidentiality honoured and iii) education material available onsite; Estimates based on survey results

religion; (iii) wanting to avoid pregnancy; and (iv) waiting to become financially stable to bear the responsibility of raising a child. Females were more likely to cite "avoiding pregnancy" as a reason for delaying sexual initiation as compared to male participants.

Number of sexual partners.

Nearly all participants in the age group 10 - 14 reported that they have not yet initiated sex. Nonetheless, few male participants in this age category shared that they have initiated sex, and reported having had one to two sexual partners by the age of 14. This age category of participants was more likely to discuss the number of sexual partners of their friends or peers in the community or at school. The older participants 13-14yrs were more comfortable discussing the issue while the 10-12 year olds were seemingly uncomfortable by the topic.

Among the 15-19 years old, the number of sexual partners ranged from none to "too many to remember." Only few participants in this category reported that they had no sexual partner while most generally have had 5 to 10 partners; those that had no sexual partners were likely to be 15-16 years whereas the 17-19 year olds have had at least 1-5 sexual partners. Males in this age category reported having higher number of sexual partners than their female counterparts. Females in this age category usually reported having less than 5 sexual partners. As compared to the 10-14 year olds, this group was more open to discussing the topic as they were likely to have initiated sex; males were forthcoming about their number of sexual partners and females were reluctant.

Most female participants in the age group 20-24 usually reported that they have had 1-5 sexual partners. There was only one instance where a female participant shared that she has had too many sexual partners to remember. All males in this category were already sexually active and have usually had at least 10 sexual partners. Some males in the upper age bracket of 23-24 reported that they have had more than 20 sexual partners. An important theme that emerged among this age category of male participants (20-24) was the notion of using football analogy to describe their sexual partners as either "home-base" or "away matches"— wherein the "home-base" is considered the primary sexual partner that he is in a committed relationship with and the "away matches" are non-committed/casual sexual partners. Sexual encounters with casual partners are coined as playing "away matches."

From our observations, the male participants in this category were comfortable discussing their sexual practices and took pride in having high number of sexual partners. Unlike their male counterparts, we observed that female participants did not take the same level of pride in sharing that they have had multiple sexual partners. It required extensive probing to get the female groups to discuss their sexual partners. In fact, some of them would initially give a lower number then later change to higher number – usually after someone else from the group has shared their own sexual experiences.

Awareness of birth control methods.

About half of the younger participants aged 10-14 were mainly aware that "using condoms prevents pregnancy." A minority of them were further aware of other long acting methods such as captain band (implant), pills, and injectable (these were likely to be in VPE locations). None of the 10-14 year olds were aware of IUD or the rope. On the other hand, older participants (15-24) were generally more likely to be aware of long acting methods such as captain band, pills, Depo injection and IUD. These older participants were also aware of the "rope" as a traditional birth control method.

Attitudes towards birth control.

Both male and female participants generally held positive attitudes towards birth control and modern family planning methods. Captain Band (implant) was the most preferred option by the female participants who were already sexually active due to its "ease of insertion" and "long-term

features." Male participants also preferred captain band for the female partners because they perceived them as been "more reliable and trusted." Several male participants shared numerous stories about how they would check a female partner's arm to see if she "has the band on" before becoming sexually involved with her. Older male participants (20+) shared distrust of injectables, pills, and the rope as they had "caused "disappointment" in the past that resulted in unwanted pregnancies.

When probed further, the male participants believed that the injections could be used by females and their health providers to "trick men" into having children against their will as a way to "trap" them into "a more committed relationship." Male participants held similar attitudes towards the use of birth control pills. The rope was generally viewed as ineffective by most of the female and male participants – mainly because they had experienced "disappointments" in the past when using it. Sexually active female participants overwhelmingly saw themselves as exerting more "control" when using implants, injectables, and IUD as compared to condoms which they felt was up to their male partner to decide on its use. IUD was sometimes seen as "dangerous" because it may "stay inside the womb forever."

Use of birth control and family planning methods.

A majority of the female participants who were already sexually active reported using at least one form of birth control method. Positive attitudes held towards Depo injection and captain band led to their wider use by sexually active female participants. On the other hand, only a small minority of them reported using IUD or pills. Males overwhelming preferred captain band for the female partners as it was perceived to be "more reliable" and they could confirm its use by "checking her arm." Participants generally reported infrequent and inconsistent condom use. Only few participants reported condom as their primary method of birth control. For the most part condom use was sporadic and highly dependent on its availability at the time of the sexual encounter.

Knowledge of condom.

Most participants from all age categories have heard of condoms, and were usually able to describe it. The commonly used words to describe condoms included: balloon-like, plastic/rubber, sticky, and oily. While condom was usually associated with preventing pregnancy, there was less association with STI prevention. While male participants were universally aware of condom as a commodity, many of them were not knowledgeable on its proper use.

Participants in VPE placement sites were more knowledgeable about condom, including its STI prevention functions, as compared to non-VPE locations. They reported that VPEs would periodically visit the schools to provide sexual and reproductive health information; including demonstrating proper condom use through simulations with a banana. Participants in VPE locations shared that they can easily access condoms through the VPE placed in the community. They usually knew the name and residential address of the VPE. There were instances where male participants mentioned that their older siblings or relatives would send them to the VPE to obtain condoms on their behalf. Young participants (10-14) from non-VPE locations usually learned about condoms from their peers and older siblings/relatives. In several instances, they also received information through health in-school education seminars (by Marie Stopes in particular).

Attitudes towards condom.

Male and female participants overwhelming held negative perceptions regarding condom use. While knowledge on condom was relative high among the various categories of participants, they generally complained that it "does not feel the same" as "skin-to-skin" or "flesh-to-flesh." Some participants (especially in the older age groups) equated condom use with mistrust/lack of commitment with one's partner. These attitudes usually led participants to choose other methods of birth control such as injectable, IUD, and implants. Male participants who believed that other methods had "failed" or "disappointed" them were also more inclined to choose condom as a form of birth control. Even

though it was trusted as being effective in preventing pregnancy, sexually active participants overwhelmingly reported that they found it to be less pleasurable (i.e. "not the same feeling as 'skin-to-skin' or 'flesh-to-flesh'").

Condom use & negotiation.

Condom use was very low among sexually active participants – as reported by both male and female participants. Condom use was generally inconsistent and sporadically decided by the male partner. Participants overwhelming cited pregnancy prevention as the primary reason for using a condom. On the other, STI prevention was rarely cited as a reason for using a condom. Once a female partner was already using another form of birth control such as a long acting method, then condom use was usually discontinued; except for a minority of male participants who shared that they would continue to use a condom when their partner is on her menstrual cycle.

Participants aged 15-19 in VPE placement communities were more likely to report condom use as compared to their peers in non-VPE communities. In VPE communities, access and cost were not perceived as a barrier to condom use, whereas in non-VPE communities, cost was sometimes seen as a barrier.

Family planning counselling and source of FP information.

Family planning counselling and education were primarily obtained via postnatal clinic (PNC) visits and in-school health education classes/sessions. Older female participants with one or more children were more likely to report that they had received family planning counselling and education during PNC visits at the PHU. They shared that the nurse or attendant would discuss birth spacing, explained the various FP methods, and help them decide on a method that is appropriate for their needs. Most of the PNC counselling would be in group-based settings with other lactating mothers. Participants rarely shared that their healthcare provider had discussed with them the side-effects of the various methods. It was also very rare for male partners to have been included in the PNC counselling. However, a small minority of men shared that they had accompanied their partners to the clinic to seek family planning counselling.

In VPE locations, participants who were in school were likely to report that they had received family planning education from a VPE – explaining the various methods to them in a class-based setting. Female participants who had never been pregnant, and were not in school in a VPE location, were almost entirely unlikely to have received any form of family planning counselling. Similarly, male participants who were not in school in a VPE location were also unlikely to have received any family planning education. In some of the non-VPE locations in Kambia and Moyamba, both male and female participants reported receiving school-based family planning education from Marie Stopes.

STI and HIV.

With the exception of some of the 10-14 year olds, the majority of other participant groups were aware that HIV can be transmitted through unprotected sex. Despite low condom use being reported, most participants did not perceive themselves to be vulnerable to HIV because they "trust" their partners. Some of the male participants shared that they are able to tell if a women has HIV based on her appearance – skinny, frail, and weak. None of the participants, even those aged 20-24, reported that they have been tested for HIV.

Participants in VPE communities were more knowledgeable on the modes of HIV transmission as compared to those in non-VPE communities. Participants in VPE locations, including those aged 10-14, were able to cite other modes of transmission outside of sexual intercourse such as reuse of needles. Most participants did not cite mother-to-child transmission as a mode of transmission.

3.7 Outcome and output indicators

In this section we provide an overview of relevant outcome and output indicators, not discussed in previous sections.
For all indicators coming from the household survey, computation was made as population based estimates, taking into account the study design. The most relevant indicators are commented upon. For some indicators only quantitative information is provided in table format, which is self-explanatory.

3.7.1 Outcome indicators

1. Adolescent fertility rate

Definition: numerator: young women (10-24) who delivered in the last 12 months; denominator all women 10-24.

This indicator is a population based estimate but was calculated based on the sample results. It could only be computed from the EPI-INFO data, due to the lack of information on this topic in the MAGPI data. There was a coding error whereby the same code "0" was used in Magpi for women with no children and women with a child aged less than 12 months (= 0 years). This will be revised for the next survey. Of the total 689 girls/women interviewed in the household survey, 573 were in the EPI-INFO database. Of these 56 had a child less than one year old, and 46 were pregnant.

The fertility rate therefore is as described in the following table

Table 35. *Outcome indicator 1: adolescent fertility rate*

Age	10-14	15-19	20-24	Total
All female	231	183	159	573
Delivered past year	1	18	37	56
Fertility rate per 1000	**4.3**	**98.3**	**232.7**	**97.7**

Because the total number was low, no further analyses on this indicator were performed.

2. **Contraceptive prevalence rate**: % women of reproductive age currently using modern contraceptive methods

Definition: numerator : women who are married or in union currently using, or whose sexual partner is currently using, at least one method of contraception; denominator women who are married or in a union (n= 251)

There is some controversy concerning lactational amenorrhea and rhythm method as to whether these are "modern methods". We excluded these methods from our definition of modern methods[27]

There were 251 women married or in union, contraception information was missing for 10.
70 used at least one modern method, ie. **a prevalence of 29.1% modern method**.

[27] Modern methods included in the survey : male and female condoms, male and female sterilization, contraceptive pills, IUD, implants, injectables and emergency contraception

If non modern methods are included the total is 90, **a prevalence of 37.3% any method**.

This indicator was available through two set of questions and the data were consistent.

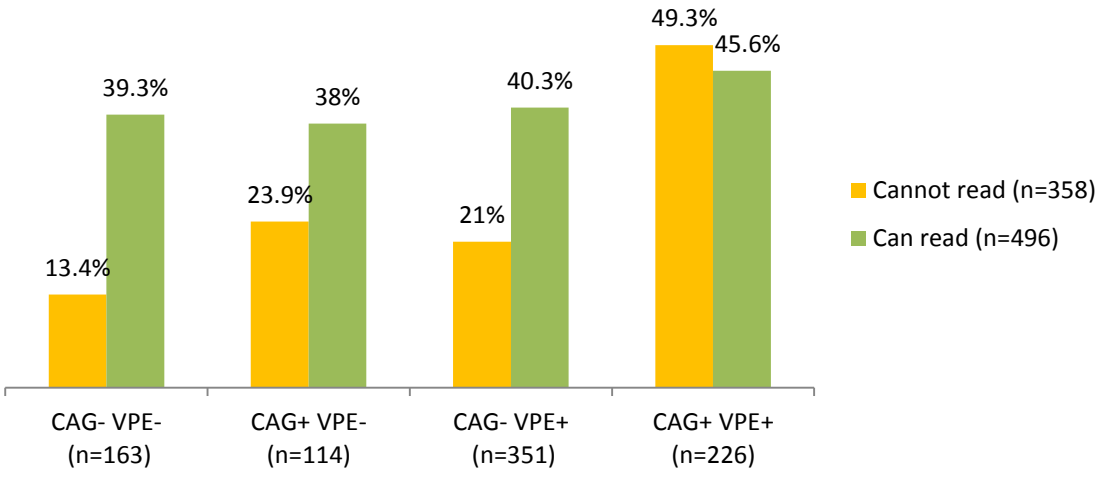
The following determinants were computed: UNFPA intervention area; distance to HF, age, sex, education (composite indicator), and method.

Both males and females from 15-19 yrs. old were more likely to use a modern contraceptive method than the other categories, but this difference was not significant.

Table 36. ***Contraceptive prevalence of modern methods by age, sex, if in a union or married***

Age category	Males		Females		Total	
	%	95% CI	%	95% CI	%	95% CI
10-14 ($_{nM}$=4; $_{nF}$=9)	0		20.73	0-69.24	16.5	0-55.2
15-19($_{nM}$=27; $_{nF}$=92)	59.5	18.9-100.0	28.79	11.78-45.80	34.5	16.7-52.4
20-24 ($_{nM}$=67; $_{nF}$=140)	36.5	17.4-55.7	21.45	8.7-34.1	26.1	11.9-40.3
10-24 ($_{nM}$=98; $_{nF}$=241)	41.2	22.6-59.7	24.3	12.8-35.8	28.7	16.5-40.9

Figure 23. Contraceptive prevalence of modern methods among young people (10-24) by UNFPA intervention areas and education



The graph concerning intervention areas and literacy seems very promising. It suggests that literate interviewees are using modern family planning in the same proportion in all areas (38 to 45%), but that the non-literate benefit very much of the interventions increasing steadily from 13% use in no intervention areas to 49% in double intervention areas (VPEs and enhanced CAGs).

3. Unmet need for family planning among the 10-24 years old girls/women

Definition used in this survey: numerator women married or in union who are not using modern family planning, who are not pregnant and who are not trying to get pregnant; denominator all women married or in union (n=251)

The reasons for not using modern family planning are described in Fig. 13

Exactly half of the people interviewed were pregnant or trying to get pregnant so this is outside "unmet needs". These people only gave one answer. On the other hand, for the interviewees who were not pregnant or trying to get pregnant, the reasons for not using a modern method were then regrouped according to the 6 categories used in the DHS broad categories: not married and in union; fertility related, opposition to use, lack of knowledge, method related, and "other-non recordable". For this question the interviewees were allowed to give multiple answers, so results are expressed as a percentage of answers.

This shows that the largest barrier in our sample is "opposition to use", followed by "method related". This is very similar to what was found in the 2008 DHS were almost 40% of respondents were "opposed."

Finally "unmet need" was also estimated for the entire population of sexually active, both married/in union and unmarried/not in union estimated for the entire population.

Unmet need for women married and in union was 23.4% and unmet need for sexually active (in union or not in union, but sexually active was 27.7%. This result points once more to the rationale of developing youth friendly services, as the sexually active not in union have a need which is not at present met.

Table 37. ***Unmet need for FP among young in a union, total and by age***

Unmet need in females(10-24) in a union	**%**	**95% CI**
All age categories (nF=251)	23.41	13.6-33.2
Unmet need in females in a union by age	**%**	**95% CI**
10-14 yrs (nF=9)	46.2	0-98.5
15-19 yrs (nF=96	26.2	18.5-34.0
20-24 yrs (nF=146)	19.7	7.4.4-32.1

Table 38. ***Unmet need for FP among young (10-24) sexually active, total and by age***

Unmet need in females (10-24) sexually active	**%**	**95% CI**
All age categories ($_{nF}$=158)	27.7	19.4-36.0
Unmet need in females sexually active	**%**	**95% CI**
10-14 yrs ($_{nF}$=12)	73.7	39.6-100
15-19 yrs ($_{nF}$=79)	31.2	23.5-38.9
20-24 yrs ($_{nF}$=67)	19.9	4.0-35.8

4. Percentage of pregnant females by age category

This indicator was calculated using all females in the denominator- The numerator includes girls who say they were pregnant, but note that additional girls stated they were "unsure" and those may include pregnant women as well (respectively by age category : 3.7%, 0.1% and 1.1 %.
The results indicate that the strategies to prevent pregnancy among adolescents are not being successful. This issue needs further investigation.

Table 39. *% of pregnant girls/females by age category*

Age category	%	95% CI
10-14 yrs (n_G=43)	7.0	0-24.9
15-19 yrs (n_G=160)	10.9	2.7-19.0
20-24 yrs (n_G=179)	20.2	14.6-25.8
10-19 yrs (n_G=203)	9.9	6.3-13.5
10-24 yrs (n_G=382)	14.5	11.3-17.7

5. Condom use

Table 40. *Condom use at last sex, by sex and age*

Condom use at last sex by sex and age	Males		Females		Total	
	%	95% CI	%	95% CI	%	95% CI
10-14 yrs ($_{nM}$=8; $_{nF}$=17)	4.2	0-14.6	15.0	0-31.1	12.7	0-27.4
15-19 yrs ($_{nM}$=100; $_{nF}$=159)	21.3	11.5-31.1	58.8	2.0-9.7	11.7	6.1-17.4
20-24 yrs ($_{nM}$=115; $_{nF}$=173)	28.9	23.5-34.3	2.9	0-6.0	13.5	11.1-15.9
10-24 yrs ($_{nM}$=224; $_{nF}$=349)	24.7	18.3-31.2	5.1	3.6-6.5	12.6	9.7-15.6

Table 41. *Condom use at last sex, by sex and in and out of school*

Condom use at last sex, by sex, in/out of school	Males		Females		Total	
	%	95% CI	%	95% CI	%	95% CI
In training ($_{nM}$=146; $_{nF}$=160)	25.9	18.0-33.8	7.0	3.7-10.4	15.9	10.9-21.5
Not in training($_{nM}$=67; $_{nF}$=174)	22.8	10.8-34.9	3.3	0-7.3	8.7	3.6-13.9
Total ($_{nM}$=213; $_{nF}$=334)	24.7	18.7-31.2	5.1	3.6-6.5	12.6	9.7-15.6

Currently in training or not in training does not seem to be an important variable. Therefore, we tried to present the results according to literacy, which seems a better marker of education level.

Table 42. *Condom use at last sex, by sex and by literacy*

Condom use at last sex, by sex and literacy	Males		Females		Total	
	%	95% CI	%	95% CI	%	95% CI
Cannot read ($_{nM}$=44; $_{nF}$=174)	13.2	4.7-21.8	2.8	1.4-4.3	4.9	2.9-6.9
Can read ($_{nM}$=174; $_{nF}$=156)	27.7	20.2-35.2	8.8	5.4-12.2	19.1	14.4-23.7
Total ($_{nM}$=218; $_{nF}$=330)	24.7	18.7-31.2	5.1	3.6-6.5	12.6	9.7-15.6

Table 43. *Consistent condom use in the past year, by sex and age*

Consistent use of condom in the past year	Males		Females		Total	
	%	95% CI	%	95% CI	%	95% CI
10-14 yrs ($_{nM}$=1; $_{nF}$=2)	100	/	100		100	
15-19 yrs ($_{nM}$=22; $_{nF}$=12)	54.1	26.9-81.3	49.0	9.1-88.8	52.5	31.5-73.4
20-24 yrs ($_{nM}$=26; $_{nF}$=8)	65.6	45.3-85.9	20.4	0-43.3	59.7	38.4-81.1
Total ($_{nM}$=49; $_{nF}$=22)	61.4	52.9-69.9	50.7	15.2-86.1	58.7	47.3-70.1

Table 44. *Consistent condom use in the past year, by sex and literacy*

Condom use at last sex, by sex and literacy	Males		Females		Total	
	%	95% CI	%	95% CI	%	95% CI
Cannot read ($_{nM}$=8; $_{nF}$=10)	28.11	0-85.7	36.2	0-1	52.3	24.9-79.8
Can read ($_{nM}$=42; $_{nF}$=18)	64.4	52.6-76.2	38.4	5.1-71.8	60.4	45.6-75.1
Total ($_{nM}$=50; $_{nF}$=28)	61.4	52.9-69.9	50.7	15.2-86.1	58.7	47.3-70.1

Table 45. *Condom use at last sex by young people 10-19 years old, in Restless Development intervention areas*

% of young (10-19) who reported use of condom last time they had sexual intercourse	Males		Females		Total	
	%	95% CI	%	95% CI	%	95% CI
Restless Development intervention areas ($_{nM}$=72; $_{nF}$=122)	22.2	21.4-42.3	10.4	4.7-16.2	14.3	4.5-24.0
Non Restless Development intervention areas ($_{nM}$=36; $_{nF}$=54)	18.8	13.2-24.4	3.4	0-6.7	9.6	6.6-12-5
Total ($_{nM}$=108; $_{nF}$=176)	20.3	11.1-29.5	7.0	4.6-9-3	11.8	7.4-6.3

3.7.2 Output 1 indicators – Demand creation

Radio Drama Saliwansai

3.7.2.1 % of listeners quote radio drama (Saliwansai) influencing them to attend a health facility. It will also be disaggregated by age

Table 46. *Radio listeners, by sex*

% of radio listeners	Males		Females		Total	
	%	95% CI	%	95% CI	%	95% CI
10-14 yrs ($_{nM}$=278; $_{nF}$=285)	41.0	30.5-51.6	37.8	28.4-47.2	39.2	29.9-48.6
15-19 yrs ($_{nM}$=188; $_{nF}$=220)	66.1	50.7-81.6	59.3	50.3-68.3	62.4	56.7-67.8
20-24 yrs ($_{nM}$=128; $_{nF}$=183)	71.1	59.1-83.2	60.9	51.6-70.3	65.2	56.8-73.7
All age categories ($_{nM}$=594; $_{nF}$=688)	56.9	53.0-60.8	50.7	46.3-55.2	53.4	50.3-56.6

Among family planning clients

Table 47. *% of radio listeners among family planning clients that declare having used a health facility*

	n	%	95% CI
Radio listeners among family planning clients that declared having used a health facility	152	71.4	64.2% - 78.6%

3.7.2.2 % of radio drama (Saliwansai) listeners who reported Saliwansai influencing them to go to a health facility in the last year

Table 48. *Saliwansai influences to go to the health facility, by sex*

% of drama listeners quote Saliwansai influencing them to attend a health facility in the past year	Males (n=29)		Females (n=31)		Total	
	%	95% CI	%	95% CI	%	95% CI
10-14 yrs ($_{nM}$=1; $_{nF}$=2)	100		74.8	43.2-100	75.5	44.2-100
15-19 yrs ($_{nM}$=22; $_{nF}$=12)	44.1	18.3-69.8	50.4	12.2-88.5	46.5	31-3-61-7
20-24 yrs ($_{nM}$=26; $_{nF}$=8)	75.2	42.6-100	60.2	26.4-94.0	67.4	44.4-90.4
10-24 ($_{nM}$=49; $_{nF}$=22)	36.0	8.0-64.0	38.6	12.7-64.6	37.4	17.1-57.7

Table 49. *Saliwansai listeners (among radio listeners), by sex and age*

% radio drama listeners	Males		Females		Total	
	%	95% CI	%	95% CI	%	95% CI
10-14 yrs ($_{nM}$=117; $_{nF}$=116)	2.1	0-5.9	9.6	0-19.3	6.1	1.4-10-8
15-19 yrs ($_{nM}$=134; $_{nF}$=121)	17.7	0-36.1	16.2	4.0-28.3	16.9	2.1-31.8
20-24 yrs ($_{nM}$=91; $_{nF}$=104)	30.4	16.6-44.19	18.9	14.4-23.4	24.1	18.4-29.9
10-24 yrs ($_{nM}$= 342; $_{nF}$= 341)	16.7	8.8-24.52	15.0	8.6-21-4	15.8	9.2-22.3

Table 50. *Saliwansai listeners (among radio listeners), by UNFPA intervention area*

% Radio drama listeners	%	95% CI
CAG- VPE- (n=138)	11.0	2.6-19.4
CAG+ VPE-(n=63)	24.5	8.0-41.0
CAG- VPE+ (n=247)	18.7	11.8-25.7
CAG+ VPE+ (n=236)	22.0	14.0-30.0

Again the results are much less satisfactory in areas with neither VPEs nor enhanced CAGs.

Volunteer peer educators (VPEs)

3.7.2.3 % of FP facility users who mention VPE interaction influencing them to attend a health facility

Table 51. *Meeting a VPE, by sex and age*

% reporting meeting a VPE in the past year	Males		Females		Total	
	%	95% CI	%	95% CI	%	95% CI
10-14 yrs ($_{nM}$=265; $_{nF}$=268)	23.3	13.4-30.2	20.0	7.3-32.7	21.5	11.9-31.0
15-19 yrs ($_{nM}$=185; $_{nF}$=213)	31.0	10.0-52.1	32.2	13.9-50.4	31.6	12.5-50.7
20-24 yrs ($_{nM}$=126; $_{nF}$=176)	31.7	15.6-47.9	25.6	16.9-34.3	28.2	16.9-39.5
10-24 yrs ($_{nM}$=576; $_{nF}$=657)	28.0	18.3-37.8	25.5	13.3-37.6	26.6	15.6-37.6

Population based estimates

Table 52. *Meeting a VPE, by UNFPA intervention areas*

% reporting meeting a VPE in the past year	%	95% CI
CAG- VPE- (n=259)	10.4	3.5-17.3
CAG+ VPE-(n=141)	9.7	4.9-14.5

CAG- VPE+ (n=435)	46.9	36.4-57.4
CAG+ VPE+ (n=399)	46.2	36.1-56.2

Table 53. *VPE influences to go to the health facility, by sex*

% of young reporting VPE influencing them to attend a health facility in the past year	Males (n=62)		Females (n=90)		Total	
	%	95% CI	%	95% CI	%	95% CI
10-14 yrs ($_{nM}$=19; $_{nF}$=15)	60.7	34.3-87.2	19.1	0-59.7	41.3	7.3-75.3
15-19 yrs ($_{nM}$=22; $_{nF}$=42)	66.4	37.6-95.2	38.4	13.9-62.8	47.0	29.0-65.1
20-24 yrs ($_{nM}$=21; $_{nF}$=33)	39.9	13.0-66.7	57.2	38.4-76.0	50.3	36.9-63.8
All age categories ($_{nM}$=62; $_{nF}$=90)	54.8	39.3-70.2	42.3	26.5-58.0	47.1	33.5-60.7

Among family planning clients

Table 54. *Percentage family planning clients reporting interaction with VPE*

	n	%	95% CI
• Percentage of FP clients reporting meeting a VPE last year (N= 212)	52	24.5	12.8% - 36.2%
• Percentage of FP clients who reported the VPE interaction having influence them to visit the health facility today for family planning services (among those that have met a VPE)	46	88.5%	79.1% - 97.9%

Health facilities interacting with CAGs

3.7.2.4 % of sampled facilities keeping records of CAGs referral

Table 55. *Percentage of surveyed health facilities keeping records of CAG referral*

	n	%
• Percentage of surveyed health facilities being linked to a CAG (N=107)	78	73.8%
• Percentage of surveyed health facilities keeping records of CAGs referral, among those being linked to a CAG (N=78)	58	74.4

Community Wellness Advocacy Groups (CAGs)

3.7.2.5 % of surveyed facility users referred by CAGS in the past year

Table 56. *Meeting a CAG, by sex and age*

% reporting meeting a CAG in the past year	Males		Females		Total	
	%	95% CI	%	95% CI	%	95% CI
10-14 yrs ($_{nM}$=256; $_{nF}$=265)	5.4	2.8-8.0	9.3	5.4-13.2	7.6	4.5-10.7
15-19 yrs ($_{nM}$=184; $_{nF}$=215)	15.0	8.7-21.3	13.7	7.7-19.6	14.3	9.2-19.4
20-24 yrs ($_{nM}$=125; $_{nF}$=179)	12.9	7.9-18.0	36.2	17.4-55.0	26.2	14.7-37.7
10-24 yrs ($_{nM}$=565; $_{nF}$=659)	10.6	7.8-13.4	17.4	12.7-22.1	14.4	10.7-18.1

Table 57. *Meeting a CAG, by UNFPA intervention areas*

% reporting meeting a CAG in the past year	%	95% CI
CAG- VPE- (n=258)	12.1	6.1-18.2
CAG+ VPE-(n=142)	15.1	2.6-27.6
CAG- VPE+ (n=436)	16.9	8.8-24.9
CAG+ VPE+ (n=389)	16.5	7.9-25.1

Table 58. *CAG influences to go to the health facility, by sex*

% of young reporting CAG influencing them to attend a health facility in the past year	Males (n=28)		Females (n=75)		Total (n=103)	
	%	95% CI	%	95% CI	%	95% CI
All age categories ($_{nM}$=28; $_{nF}$=75)	22.2	/*	29.5	/*	27.4	/*

*Missing standard errors and confidence interval because of stratum with single sampling unit.

Table 59. *CAG referral to go to the health facility, in girls by age category*

% of young females being referred by a CAG to a health facility in the past year	Females (n=75)	
	%	95% CI
10-14 yrs ($_{nF}$=8)	19.5	/
15-19 yrs ($_{nF}$=25)	35.3	/
20-24 yrs ($_{nF}$=42)	29.13	/

Among the family planning clients interviewed at the health facilities

Table 60. *Family planning clients referred by a CAG*

	n	%	95% CI
• Percentage family planning clients reporting meeting a CAG (N=211)	81	38.4	27.8%- 49%
• Percentage family planning clients reporting referred by a CAG in the past year, among those that have met a CAG (N=81)	35	43.2	26.8%-59.6%
• Percentage family planning clients reporting the CAG giving a referral slip (among those referred by CAG)(N=35)	16	45.7	21.3%-70.1%

3.7.2.6 % of women (under 19 yrs) who visited a health facility who report that they were referred by the CAG in the past year.

This indicator was calculated for the family planning clients who were interviewed at the health facility. There were only very few family planning clients under 19 years of age who reported having met a CAG. Therefore, the results should be interpreted with caution.

Table 61. *Percentage of women (under 19 yrs) who visited a health facility who report that they were referred by the CAG in the past year*

	n	%	95% CI
• Total number of family planning clients under 19 years of age	37		
• Percentage of family planning clients under 19 years of age who have met a CAG (n=37)	9	24	
• Percentage women under 19 year of age who visited a health facility who reported that they were referred by the CAG in the past year, among those having met a CAG (n=9)	3	33.3	2.5% - 64.1%

3.7.2.7 Percentage of surveyed facility users who mention interaction with a CAG influencing them to attend a health facility in the last year

Among the family planning clients interviewed at the health facilities

Table 62. *Percentage of surveyed facility who mention interaction with a CAG influencing them to attend a health facility in the last year*

	n	%	95% CI
• Percentage of family planning clients who mention interaction with CAG may influencing them to attend a health facility in the past (n=51)	37	72.5%	60.2% - 84.8%
• Percentage of family planning clients who reported GAG influencing them to attend a health facility for FP services today, among those reporting having met a CAG	46	59%	44.8-73.2%

3.7.2.8 Percentage of girls (10-19) years referred by CAGs to the health facility

	n	%
Percentage of girls 10 – 19 yrs who were referred to the health facility by a CAG in the past year (denominator includes all girls under 19, whether they have met a CAG or not, n=505)	10	2.0
Percentage of girls 10 – 19 yrs who were referred to the health facility by a CAG in the past year (denominator includes all girls who have met a CAG and who answered the question about being referred, n= 63)	10	15.9
Percentage of girls 10 – 19 yrs who visited a public health facility who reported that they were referred by a CAG in the past year (denominator includes all girls who have met a CAG and who reported having visited the health facility in the past year), n= 33)	7	21.2

Percentage of girls 10 – 19 yrs who visited a public health facility who reported that they were referred by a CAG in the past year (denominator includes all girls who have went to the health facility in the past year, whether they have met a CAG or not, n = 176)	7	4.0

Proportion of girls who has heard of more than one modern family planning method

3.7.2.9 Percentage of girls who can name more than 1 method of modern family planning, disaggregated by the number of method

Table 63. *Percentage of girls who can name more than 1 method of modern family planning, disaggregated by the number of method*

Ever heard of a modern FP method	Males (n=581)		Females (n=680)		Total	
	%	95% CI	%	95% CI	%	95% CI
Heard of no method	31.9	22.6-41.3	31.0	16.5-45.5	31.4	19.3-43.5
Heard of at least one method	68.1	58.7-74.4	69.0	54.5-83.5	68.6	56.5-80.7
Disaggregated by number of method						
Ever heard of 1 modern method	10.6	4.4-16.9	7.4	5.5-9.3	8.8	6.3-11.3
Ever heard of 2 modern methods	4.9	3.3-6.5	3.9	1.2-6.7	4.3	2.3-6.4
Ever heard of 3 modern methods	4.8	3.4-6.2	4.9	3.2-6.7	4.9	3.9-5.8
Ever heard of 4 modern methods	**7.8**	4.4-11.3	8.4	5.4-11.4	8.1	5.7-10.6
Ever heard of 5 modern methods	9.6	4.5-14.8	11.2	8.0-14.4	10.5	6.8-14.3
Ever heard of 6 modern methods	17.3	14.0-20.6	16.8	11.2-22.4	17.0	12.7-21.3
Ever heard of 7 modern methods	6.8	3.2-10.4	9.7	3.0-16.4	8.4	5.5-11.4
Ever heard of 8 modern methods	4.1	2.2-6.0	4.3	1.5-7.1	4.2	2.8-5.6
Ever heard of 9 modern methods	2.2	0.9-3.4	2.1	0.7-3.5	2.1	1.1-3.1

Source of information for SRH among young people

3.7.2.10 Source of information for SRH among young people (10-24)

For interviewees in the household survey, health structures, friends and schools were cited as their most common source of information on sexual and reproductive health matters.

For the participants in the focus group discussions, across all age groups they overwhelmingly reported that they learned about sex through the following two channels: (i) older friends (ii) romantic/sex scenes in movies -- mainly non-adult movies. However, they soon transitioned to watching adult movies. Male participants seemed to have been more exposed to pornography at an earlier age as compared to females. Male participants were more likely than females to report pornography as an influencing factor in their decision to engage in sex for the first time.

Table 64. *Source of information for SRH*

Source of information for SRH	%	95% CI
School (n=1098)	25.9	21.35-30.45
Parents (n=1099)	3.3	1.8-4.8
Friends (n=1099)	33.5	27.5-39.4
Health structures (n=1097)	41.1	31.8-50.3
Community health workers (n=1097)	8.7	4.6-12.8
Internet (n=1097)	0.4	0-1.2
I don't need this information (n=1096)	17.4	14.3-20.5
I don't know (1085)	18.4	14.5-22.3
Other source of information cited		**N° of citation**
Other family members (old brother or sister)		4
Radio		8
From Restless Development		2
Marie Stopes		6

3.7.3 Output 2 Indicators – Service delivery, increased availability and uptake of modern methods

Uptake of modern methods by the young people (among family planning clients)

3.7.3.1 % of new young acceptors (10-24) of contraceptives disaggregated by method

This indicator was calculated as well for the family planning clients who were interviewed at the health facility. Only 25 subjects answered this question including 15 less than 25 years of age and 10 more than 25 years old, among them. Their method of choice included only four methods: pill, injectable, implants and condoms. Three subjects selected both condom and Implant, two selected both condom and injectable. Given, the small numbers, the results should be interpreted with caution.

Table 65. *Percentage of new acceptors of contraceptive methods, among family planning clients interviewed (10-24 years of age) by method accepted*

Proportion of new acceptors of contraceptive methods, disaggregated by method	All age (n=205)[1] Yes		Aged 12-24 years (n=99)[2] Yes	
	n	%	n	%
Acceptors new to contraception (n=94)	94	45.9	53	53.5
Distribution by contraceptives method, (n=25)	25		15	
Pill	8	32.0	6	40.0
Injectable	9	36.0	3	20.0
Implant (Captain Band)	7	28.0	6	40.0
Condom	6	24.0	4	26.7

Note: Some new acceptors mentioned two contraceptive methods.; 1. 14 missing; 2. 8 missing

Availability of IUD and implants at the health facilities visited

3.7.3.2 % of (visited) SDP with long acting family planning methods available (IUD and implants)

Table 66. *Percentage of surveyed SDP with long acting family planning methods available*

% of (visited) SDP with long acting family planning methods available (IUD and implants) YES, Availability of Long term methods on the day of the visit	YES available today	
	n	%
All health facilities		
IUD (N=64)	43	67.2
Implant (N=83)	66	79.5
Hospital		
IUD (N=7)	5	71.4
Implant (N=9)	9	100
CHC		
IUD (N=33)	25	75.8
Implant (N=40)	34	85.0
CHP		
IUD (N=18)	10	55.6
Implant (N=28)	20	71.4
MCHP		
IUD (N=6)	3	50.0
Implant (N=6)	3	50.0

Youth Friendly Services

3.7.3.3 % of young people (10-24) considering that health services are not youth friendly

Calculated from results of the household survey

Table 67. *Services not youth friendly is considered as "little or not at all"*

% of young who think that health services are not youth friendly	Males (n=167)		Females (n=298)		Total	
	%	95% CI	%	95% CI	%	95% CI
All age categories	7.8	1.9-9.8	8.8	0-19.2	8.5	0-17.2

Among the family planning clients

Table 68. *Percentage of family planning clients who think this facility is youth friendly*

Percentage of family planning clients who think this facility is youth friendly	All age (n=212)[1]		Aged 12-24 years (n=106)[2]	
	n	%	n	%
Very much	143	67.5	71	67.0
Much	67	31.6	34	32.1
Average	2	0.9	1	0.9

1. 7 missing; 2. 1 missing

3.7.3.4 % or number of (visited) facilities which have at least one member of staff trained in AYFS

One third of the health facilities surveyed had at least one member of staff trained in adolescents and youth friendly services. This is consistent with the estimated sampling.

Table 69. *Number of health facilities with at least one member of staff trained in adolescents and youth friendly services*

Visited facilities which have at least one member of staff trained in youth friendly services, N=110	n	%
Total	42	32.8
Hospital	6	14.3
Community Health Centres	23	54.8
Community Health Posts	12	28.6
Maternal and Child Health Posts	1	2.4

Utilisation of health services

3.7.3.5 Utilisation of health services - % of young who have visited a health facility in the past year

Table 70. *Percentage of young who have visited a health facility in the past year*

% of young (10-24) who have visited a health facility in the past year	Males (n=585)		Females (n=679)		Total	
	%	95% CI	%	95% CI	%	95% CI
All age categories	28.6	17.9-39.3	40.8	22.0-59.7	35.5	20.5-50.4

4 DISCUSSION & CONCLUSION

4.1 Statement of principal findings

The first set of IRMNH-SL surveys confirms the findings of the latest DHS and MICS surveys regarding the present situation in Sierra Leone, both in general and regarding sexual and reproductive health. This is a country where the surveyed population lives with major needs and where access to basic commodities remains a major issue, which results in maintaining its very low rank (177th position out of 187 countries) on the UN Human Development Index classification[28]. This explains why Sierra Leone is one of the 10 countries with stream one funding from UNFPA[29]

4.1.1 Outcome indicators

One of the most marking features of the household survey is that it included the age-group 10 to 14 years old which is not usually surveyed. They were surveyed because there still is a high rate of young and very young motherhood. In the study sample 2.9% of males and 6.4% of females of this age-group declared they were sexually active. In this same age-group, less than half can read a simple sentence (in part or fully).

- **Adolescent fertility rate**

The adolescent fertility rate (given birth in the year prior to the survey) was 4.3% for 10 to 14 years old and 98.3% in the age-group 15-19.

Because pregnancy in this 10 to 14 age group is a relatively rare, albeit adverse, event, the survey methodology is presumably underpowered to show change over the years of the UNFPA/DFID project. On the other hand, for the two other age groups, changes may be observable.

- **Contraceptive prevalence and unmet need / proportion pregnant adolescents**

Over a third (37.3%) of the interviewees declared using a method of contraception, mostly modern methods (29.1%). Unmet need was 23.3% for girls/women in a union and 27.7 % for girls/women sexually active. Because there were only 49 pregnant girls in the sample (less than 5%).

4.1.2 Output-1 (demand creation) indicators

- **Condom use**

Condoms were used at last intercourse by less than 20% of boys/men and by less than 10% of girls/women. Condom use and family planning utilisation were strongly associated with other indicators, such as sex, age and literacy.

- **UNFPA supported interventions: Saliwansai, VPEs, enhanced CAGs**

They all three are perceived, by those exposed, as having direct impact in terms of behaviour change, and specifically in terms of using the health services (Saliwansai 36%, VPEs 48% and CAGs 26%). However, the exposure rate for these three interventions was not high, globally less than 25%, with differences related to age, area and other determinants.

[28] UNDP annual report http://hdr.undp.org/fr/content/human-development-report-2013-summary

[29] UNFPA. The Global Programme to Enhance Reproductive Health Commodity Security report 2012 http://www.unfpa.org/webdav/site/global/shared/documents/publications/2013/UNFPA%20GPRHCS%20Annual%20Report%202012_web%20final.pdf

4.1.3 Output-2 (increased availability) indicators

- **Family planning services**

Family planning services are being offered and contraceptives methods are available at all type of health facilities. The frequency of non stock-outs of contraceptive commodities at the health facilities has improved when compared to the findings of the 2011 Survey of Availability of Modern Contraceptives (UNFPA 2012). The mix of FP services and commodities available varies with the type of health facility. All health facilities were offering at least three contraceptive methods (oral contraceptive pills, injectables and male condoms). The availability of long term methods was less generalised. IUDs and implants were available respectively in 67% and 79% of the health facilities surveyed. In correspondence with national policies a good proportion of hospitals and CHCs had these commodities available. It is encouraging to find that implant services are being made available in remote rural areas where CHPs and MCHPs can be located.

The survey results indicate that important gaps remain in training of providers on long term methods. Particularly, in the training of the cadres that are most likely to be assigned to the provision of family planning services such as maternal and child health aides (MCH aide) and state registered nurses. 83% of health facilities had at least one MCH aide assigned to provide family planning services, only 30% of health facilities had one MCH aide trained on long term methods. Issues related to human resources should be looked at within the overall framework of availability of human resources in the country.

The survey identified strong aspects of quality care family planning services being provided at the health facilities. In 90% the family planning encounters, the clients were treated with respect, confidentiality was ensured. New family planning clients in almost all cases were provided information on how to use the methods, their side effects of the methods and what to do in case of problems. The clinical guidelines for provision of implants were followed by the health providers. The family planning clients had a positive perception of the services received. More than 90% felt comfortable asking questions and thought that the amount of information provided to them was good or very good.

A number of areas where quality of care should be improved were also identified, as the results were not as positive as expected or desired. They include compliance with certain infection procedures, for example, washing hands before the application of an injectable was not done in a third of the cases observed. The availability of basic equipment items for the provision of IUDs and implants. 55% of health facilities had three items for the insertion of implants (implant kits, sterile gloves, Xylocaine/Lidocaine). 3.6% of health facilities had five items for insertions of IUDs (specula, tenaculum, scissors, flashlight, standing lamp). Only one third of health facilities reported having received a supervisory visit that included a review of family planning services in the last three month.

Not all health facilities scored equally on all areas, which indicates that improvement efforts should be facility-specific. However, all those involved in provision of family planning services should be aware that there is always scope to improve the quality of care.

- **Youth Friendly services**

Only 10% of the health facilities surveyed were found to comply with the three defined criteria for “being upgraded to provide services”. The three criteria cover issues of human resources, infrastructure and availability of information and educational material. The health facilities were

most likely to have IEC materials on family planning (93% of health facilities). As expected from the sampling methodology, one third of health facilities had a staff trained in youth friendly services, however, there are important gaps in availability of trained staff in youth friendly services. For example, 72% of the health facilities surveyed had at least one State Enrolled Community Health Nurses (SECHN) assigned to provide services to the young population, only 19% of health facilities had a SECHN trained in youth friendly services. Infrastructure conditions for the provision of services for the young are also lacking. Only 23% of the health facilities surveyed are providing services to the young in a consultation room that offers privacy.

Given the known limited availability of human resources in general and the conditions of infrastructure at health facilities, the IRMNH programme should be careful in setting realistic targets to be achieved as a result of this support.

- **The Linkages to CAGs**

Most health facilities surveyed (74%) have linkages to CAGs and receiving clients being referred by CAGs. Similarly, 74% of health facilities being linked to a CAG reported keeping records of CAGs referrals.

The results of the household survey, the health facility survey and the focus groups concur to a large extent, showing inequalities in access, utilisation and satisfaction. Remoteness from the health facility and from exposure to the interventions, as well as low educational attainment are the major determinants of this equity issue.

4.2 Strengths and weaknesses of the study

The present set of surveys is methodologically strong, focusing four specific aspects.
(i) special needs and demands of the younger population, including the 10 to 14 year group (HHS),
(ii) expressed and perceived KAP and demands of interviewees (Focus Groups),
(iii) situation at the Health Facility, and
(iv) relation between UNFPA activities and outcome / output indicators.

For the aspects (i) to (iii), the results of this survey can be compared to previous MICS and DHS surveys in Sierra Leone. The results are very much in keeping with these larger surveys, confirming that the results are reliable.

The weaknesses are methodological, and are not incidental, but were accepted at the planning stage. They are mainly related to insufficient statistical power, and to the selection of the intervention areas.

For the household survey, the power problem is related to the fact that the 10-14 age-group, mostly does not declare any sexual activity. The sampling strategy deliberately used VPE-exposed areas, in these the population has a higher level of literacy, so that causality of associations is very difficult to establish.

For the Health facility survey, only a small number of individuals were available.

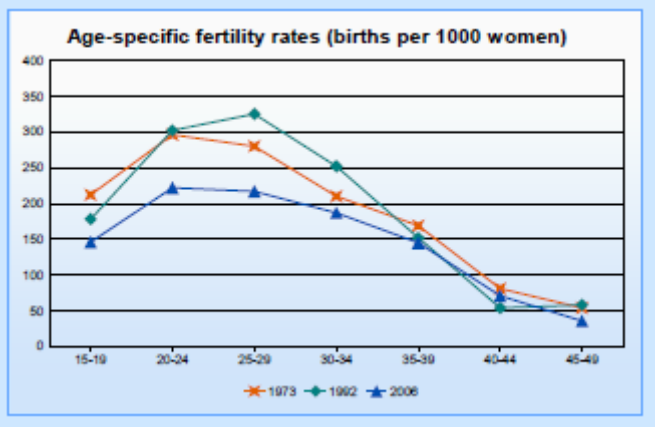
For the focus groups, participants ages 10-14 and 15-19 were largely enrolled in school. Consequently, out-of-school adolescents were underrepresented.

4.3 Comparing findings with other study results

4.3.1 Outcome indicators

The fertility rate in the survey is of the same order of magnitude as those reported in the UN 2012 fertility rate report[30] for Sierra Leone, though once more there are no data for the 10 to 14 years old

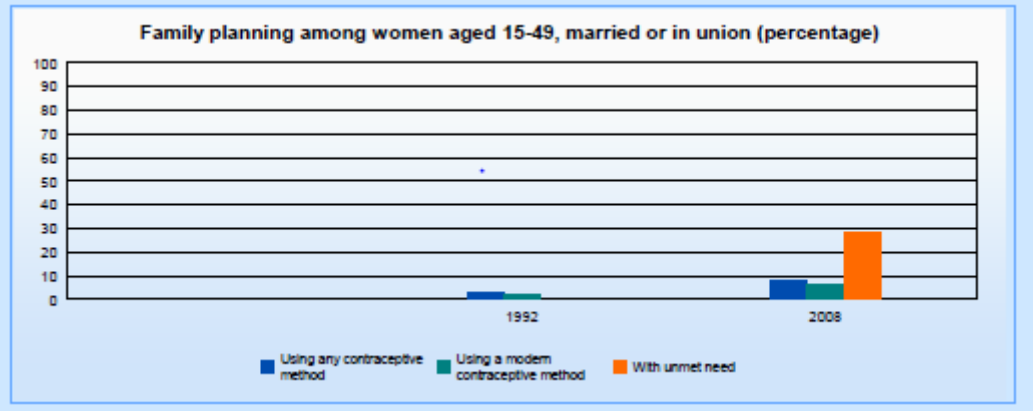
Figure 24. Age – specific fertility rates (births per 1000 women) for Sierra Leone 1973 - 2008



Source: 2012 UN fertility rate data for Sierra Leone

The contraceptive prevalence and unmet needs have increased in comparison to the 2008 estimate. The trend for contraceptive prevalence will hopefully continue over the years, while the unmet needs will be met.

Figure 25. Family planning among women aged 15 – 49, married or in a union (percentages), Sierra Leone



Source: 2012 UN fertility rate data for Sierra Leone

4.3.2 Output-1 (demand creation) indicators

The objective is to create demand by working within a rights-based approach that empowers individual choices and dignity, sharing information through behaviour change communication.

[30] 2012 UN World Fertility Report at http://www.un.org/en/development/desa/population/publications/dataset/fertility/wfr2012/MainFrame.html

The different routes for achieving this objective have not to this day been evaluated rigorously and there is a lack of evidence based recommendations. In addition, external validity of such studies is apt to be poor. Rogers et al, using a radio-drama in Tanzania[31] obtained similar effects, and particularly change in the capacity of discussing family planning between spouses, an aspect not addressed in the present survey.

4.3.3 Output-2 (increased availability) indicators

The objective is to increase access with a special focus for underserved and hard-to-reach populations.

The results of this survey are very much in line with earlier surveys in Sierra Leone, in particular the survey published by Groen et al. [32] where 1,205 participants were interviewed in depth, with 20% using family planning methods; and injectables were the most frequently used method. Many families mentioned financial constraints.

4.4 Policy implications / unanswered questions and projection in the future

This study provides some baseline against which changes can be measured in the next two surveys. We cannot (yet) compare trends or assess the quality of the UNFPA interventions. However, this study provides interesting information to guide future strategies (for future surveys or programme related) and some general findings that raise other questions.

4.4.1 Implications for the conduct of the next surveys

Further methodological aspects deserve to be taken into account before the second round of surveys.

- **Household survey**
  - Sheer size of the scope of the survey implied a very long questionnaire addressing all the issues in details. Possibly consider shortening and addressing completeness and quality
  - Problem of VPEs being correlated with education, very difficult to disentangle association and causality / possibly reassess sampling strategy
  - Difficulties to find the young people at home at the time of the visit – advantages/disadvantages of the non-replacement
  - Difficulty in finding households because Enumeration Area file did not correspond, but also because of adverse field conditions (rain, remote and hilly area such as Mafindor). The new census should solve the 1st concern
  - Time constrains in relation to tight agenda

- **Health facility survey**
  - Bias of observation (the presence of the clinical observer may have influenced the actions of the provider)
  - Sampling strategy dependant on criteria such as the health facilities having specific staff trained in long term methods or youth friendly services.

[31] Rogers EM, Vaughan PW, Swalehe RM, Rao N, Svenkerud P, Sood S. Effects of an entertainment-education radio soap opera on family planning behavior in Tanzania. Stud Fam Plann. 1999 Sep;30(3):193-211

[32] Groen RS, Solomon J, Samai M, Kamara TB, Cassidy LD, Blok L, Kushner AL, Dhanaraj M, Stekelenburg J. Female health and family planning in Sierra Leone. Obstet Gynecol. 2013 Sep;122(3):525-31

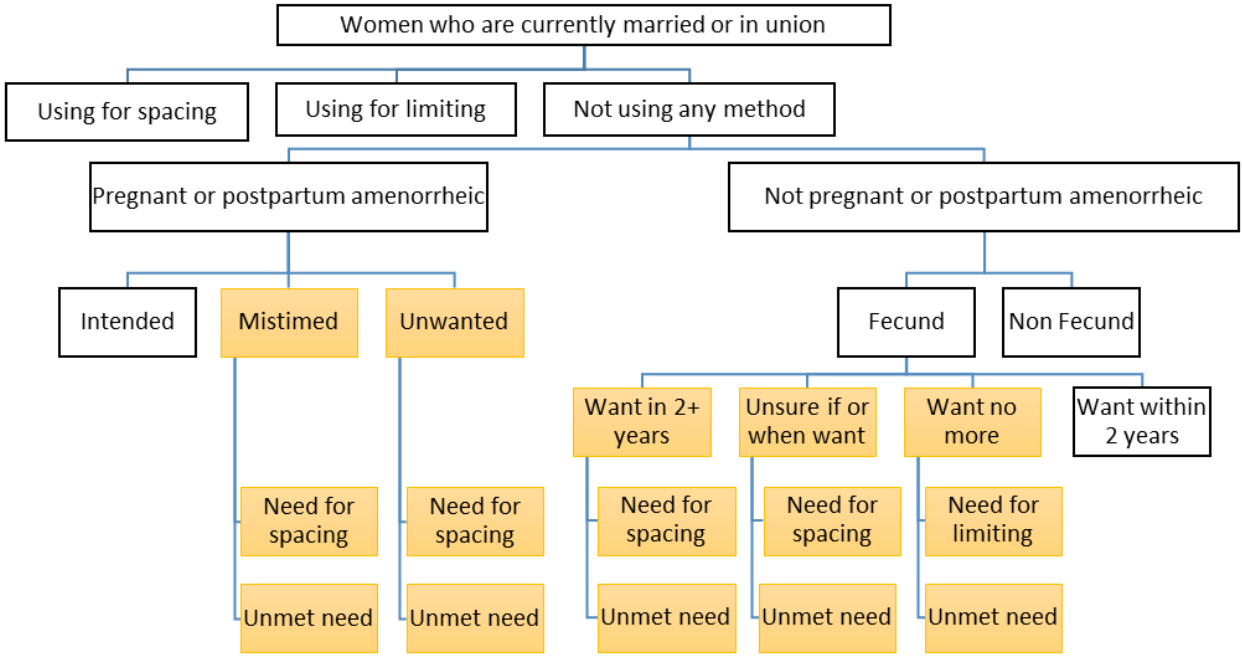
- Limited number of observations of family planning encounters (two per health facility) due to time constrains and small volumes of patients at the health facilities.

4.4.2 Implications for the UNFPA – DFID intervention package

The present set of surveys reaffirms the needs in Sierra Leone and the rationale for UNFPA of including Sierra Leone into the twelve countries with GPRHCS stream 1 level of need.
Some new issues have come up in these surveys. They are simply listed below.

- ☞ More than half the interviewees in the household survey consider the main barrier to access health services is financial. However in the health facility survey more than 95% said they had not paid anything. Is the financial barrier a fact or a misconception?
- ☞ Less than half the households have a radio; one quarter are more than 60 minutes from a health facility. Even with outreach activities, how can these populations be served?
- ☞ Literacy is the best predictor of utilisation of condoms and contraception; however less than half the youngsters 10-14 can read. Is there a need to collaborate with school services?
- ☞ There is some ambiguity concerning social desirability and FP promotion. Is abstinence until marriage / union promoted or not?
- ☞ It is important to agree on the definition used for "unmet need" aspect. See fig below. If the complete definition is to be used (mistimed and unintended pregnancies), the questionnaire needs to be revised in this direction.

Figure 26. Defining unmet needs for family planning



Source 2012 UN World Fertility report / section definitions in metadata

- ☞ A third of women declared they wished to become pregnant. This needs to be further explored under the topic of fertility desire. The concept "unmet need" to identify "prospective clients" may in effect misrepresent the population, given that a proportion of

women have ambivalent fertility desires, or even are not familiar with the notion of fertility desire at a given moment of their lives[33].

- ☞ Promotion of long term methods: which ones (it seems that demand for IUDs is low) and there is an increasing demand for implants) and where should they be offered
- ☞ Targeted training in LTM and AYFS (by type of providers) and where to locate these providers. This possibly also requires better understanding of volume of services provided, and why present users of health facilities consider the services to be user- and youth-friendly
- ☞ Need to know more and better which strategies can help to address the gap between knowledge and behaviour (70% could name a contraceptive methods); Misconceptions about risk "condom kills"
- ☞ Carefully documenting in a data base for primary health units (PHUs) their name, type, location as well as the data base for trainees (name, staff category, location, type of training received), location of VPEs and their respective areas of influence,… and using a standardize classification of chiefdoms (Sogbeni, Sogbini, Sogboni,…)

4.5 Conclusion

The survey provided baseline data for a number of indicators to be used for monitoring the implementation of the interventions supported by the IRMNH programme, and their potential to reach out to young people 10 – 24 years old effectively. The response rate was high. The survey therefore contributes to further advance the knowledge and understanding of the sexual and reproductive health needs of the young people of Sierra Leone. Additionally, it provides baseline data on the quality of family planning services provided by public health facilities and how well the facilities surveyed have advanced towards having conditions for the provision of youth friendly services. The results confirmed the need to target the adolescent population, in addition to the men and women above 20, for strategies and interventions that will contribute to increase their uptake of family planning methods. Additionally the survey confirms that more needs to be known about the effectiveness of the strategies implemented and what level of coverage is required to achieve an impact with those strategies.

[33] Speizer IS. Using strength of fertility motivations to identify family planning program strategies. Int Fam Plan Perspect. 2006 Dec;32(4):185-91

5 ANNEXES

Annex 1 Indicators considered but not used for calculation of sample size

Indicator	Baseline	Source	Endline Target	Estimated Sample size for each study	Sample size taking design effect into account*
Unmet need for family planning	28%	DHS 2008	23%	1232	1824
% radio listeners	22%		30%	496	
Women (15-49) received FP services from SDPs informed about side effects or problems of method used	65%		68%	3951	

Annex 2 List of surveyed health facilities

Province	District	Chiefdom	PHU name	Type of Health Facility				
				CH	CHP	Hospital	MCHP	Total
EASTERN	KAILAH	Kissi Teng	Koindu	1				1
		Kpeje	Gbahama		1			1
			Manowa				1	1
		Kpeje West	Bunumbu		1			1
			Pejewa		1			1
		Luawa	Bandajuma Sinneh				1	1
			Gbalahum		1			1
			Kailahun	1				1
			Kailahun Gov't Med. Hosp			1		1
		Malema	Jojoima	1				1
			Njama				1	1
		Njaluahun	Follah				1	1
		Penguia	Sandaru	1				1
		Upper	Mendekelema		1			1
			Pendembu		1			1
			Siama		1			1
		Yawei	Bandajuma		1			1
			Bendu		1			1
			Foidu		1			1
	Kailahun Total			**4**	**10**	**1**	**4**	**19**
	KENEM	Dama	Majihun MCHP				1	1
		Dodo	Mbowohun		1			1
		Gaura	Joru	1				1
		Kandu	Baoma Oil Mill	1				1
			Levuma (Kandu Lep)		1			1
		Koya	Baoma koya	1				1
		Lower	Tongo Field	1				1
		Niawa	Sendumei	1				1
		Nongowa	Gbo-Labayama				1	1
			Gbo-Lambayama 2		1			1
			Hangha	1				1
			Kenema Government Hospital			1		1
			Koryagbema		1			1
			Largo	1				1
			Nekabo	1				1
			Ngelehun				1	1
		Simbaru	Boajibu	1				1
		Tunkia	Ngegbwema	1				1
		Wandor	Faala		1			1
	Kenema Total			**10**	**5**	**1**	**3**	**19**
	KONO	Gbane	Baoma				1	1
			Gandorhun	1				1
		Gbense	Gbangadu				1	1
			Kamadu		1			1
			Kono Government Hospital			1		1
		Gorama	Kangama	1				1
		Koidu Town	Kensay				1	1
			Koakoyima				1	1
		Lei	Gongoifeh				1	1

Province	District	Chiefdom	PHU name	Type of Health Facility				
				CH	CHP	Hospital	MCHP	Total
		Mafindor	Koindu Kutay				1	1
		Nimikoro	Motema	1				1
		Nimiyama	Ngo Town		1			1
			Sewafe	1				1
		Sandor	Kayima	1				1
		Tankoro	Kimberdu		1			1
			Kokyema		1			1
			Timbadu	1				1
			Woama				1	1
	Kono Total			**6**	**4**	**1**	**7**	**18**
NORTHERN	**KAMBI**	Magbema	Kambia Government Hospital			1		1
			Rokupr	1				1
		Samu	Mapotolon	1				1
		Tonko	Kamagbewu		1			1
			Kamassasa	1				1
			Timbo				1	1
	Kambia Total			**3**	**1**	**1**	**1**	**6**
	KOINA	Dembelia -	Sinkunia	1				1
		Diang	Kelibaya		1			1
			Kondembaia	1				1
			Lengekoro		1			1
			Yarah CHP		1			1
		Folosaba	Musaia	1				1
		Kasunko	Fadugu	1				1
		Mongo	Seria				1	1
		Neya	Bambu Koro				1	1
			Foria		1			1
		Sengbe	Dankawalie	1				1
			Kamadu Sokurala		1			1
			Sengbeh		1			1
		Sulima	Falaba		1			1
		Wara Wara	Thelia		1			1
		Wara Wara	Kabala Hospital			1		1
			Senekedugu		1			1
			Yataya CHC		1			1
	Koinadugu Total			**5**	**10**	**1**	**2**	**18**
SOUTHERN	**BONTH**	Bonthe	Bonthe Government Hospital			1		1
		Bum	Madina	1				1
			Ngepehun	1				1
		Imperi	Mogbwemo		1			1
			Moriba Town	1				1
		Jong	Gambia	1				1
			Jorma		1			1
			MATTRU	1				1
			Mattru Govt. Hospital			1		1
		Kpanda	Motuo	1				1
		Sogbeni	Tihun	1				1
		Yawbeko	Senehun				1	1
	Bonthe Total			**7**	**2**	**2**	**1**	**12**
	MOYA	Bumpeh	Bellentin CHP		1			1

Province	District	Chiefdom	PHU name	Type of Health Facility				
				CH	CHP	Hospital	MCHP	Total
			Moyeamoh		1			1
			Rotifunk	1				1
		Fakunya	Gandorhun	1				1
			Moyamba Junction		1			1
		Kagboro	Mokongbetty				1	1
			Shenge	1				1
		Kaiyamba	Moyamba Government Hospital			1		1
		Kongbora	Bauya	1				1
		Kori	Njala	1				1
			Taiama	1				1
		Kowa	Mofombo	1				1
		Ribbi	Bradford		1			1
			Suen	1				1
		Timdale	Mosanda	1				1
	Moyamba Total			**9**	**4**	**1**	**1**	**15**
	PUJEH	Barri	Potoru	1				1
		Kpaka	Liya Kpaka		1			1
		Malen	Govt Hospital Pujehun			1		1
	Pujehun Total			**1**	**1**	**1**		**3**
Grand Total				**45**	**37**	**9**	**19**	**110**

Annex 3 Characteristics of respondents for the household survey

Characteristics of respondent in survey, values are number and percentage, n=1289									
Sex	**Male**			**Female**			**Total**		
Characteristics	**n**	**%**	**mean(SD)**	**n**	**%**	**mean(SD)**	**n**	**%**	**mean(SD)**
Males	**600**	**46.5**					**600**	**46.5**	
Females				**689**	**53.5**		**689**	**53.5**	
Total	**600**	**46.5**		**689**	**53.5**		**1289**	**100.0**	
Age, years, Mean age (SD)	599		15,44 (4,20)	689		16,10	1288		15.79(4.22)
median (min max) or (Q25-Q75)			15 (10-24) or (12-18)			16 (10-24) or (12-20)			15 (10-24) or (12-19)
Age in categories, years (n=1288)	599			689			1288		
10-14 yrs	281	46.9		285	41.4		566	43.9	
15-19 yrs	188	31.4		220	31.9		408	31.7	
20-24 yrs	130	21.7		184	26.7		314	24.4	
Missing	1	100.00		0	100.00		1	100.00	
Grand Total	600								
Current education or training									
Yes	454	78.5		452	68.1		906	72.9	
Non	124	21.5		212	31.9		336	27.1	
Total	578	100.0		664	100.00		1242	100.0	
Missing	22			25			47		
Grand Total	600			689			1289	1289	
Current education or training by age category (% of yes)	Male (n=600)			Female (n=689)					
	10-	15-19	20-24 yrs						
Yes	239	146	68	243	138	71			
Non	34	34	56	32	73	107			
Total	273	180	124	275	211	178			
% Yes	**87.5**	**81.1**	**54.8**	**88.4**	**65.4**	**39.9**			
Missing	8	8	7	10	9	6			
Grand Total	600			689					
Highest level of education	Male (n=590)			Female (n=676)					
None	83	14.1		142	21.0		225	17.8	
Primary school attended	256	43.4		299	44.2		555	43.8	
Primary school completed	147	24.9		182	26.9		329	26.0	
JSS completed	104	17.6		53	7.8		157	12.4	
total	590	100.0		676	100.00		1266	100.0	
Missing	10			13			23		
Grand Total	600			689			1289		
Ability to read	Male (n=482)			Female (n=612)					
Able to read	257	53.3		272	44.4		530	48.4	

Cannot read at all	225	46.7		340	55.6		565	51.6	
Total	482	100		612	100.0		1095	100.0	
Missing (including blind)	13			23			36		
Grand Total	495			635			1131		
Ability to read (15 - 24 yrs)	Male (n=208)			Female (n=331)					
Able to read	129	62.0		193	58.3		272	50.5	
Cannot read at all	79	38.0		138	41.7		267	49.5	
total	208	100.0		331	100.00		539	100.00	
Missing (including blind)	111			73			184		
Grand Total	319			404					
Education and literacy									
Cannot read	225	38.4		340	51.1		565	45.2	45.16
Able to read	257	43.9		272	40.9		529	42.3	87.45
JSS completed	104	17.7		53	8.0		157	12.6	100.00
Total	586	100		665	100.0		1251	100.0	
Missing	14			24			38		
Grand total	600			689			1289		
Religion									
Muslim	417			479			896	69.8	
Christian	179			207			386	30.1	
None	1			1			2	0.2	
Total	597			687			1284	100	
Missing / declines to answer	3			2			5		
Grand Total	600			689			1289		
Language									
Mende							417	35.8	
Temne							200	17.2	
Kono							188	16.1	
Limba							175	15	
All others							301	23.5	
Missing/ don't know/declines							8		
Mosquito net	Male (n=589)			Female (n=682)					
Yes	239	40.6		372	54.5		611	48.1	
No	350	59.4		310	45.5		660	51.9	
	589	100		682			1,271	100.0	
Missing	11			7			18		

Annex 4 Setting for the provision of family planning services by type of health facility

Characteristics / Setting for the provision of family planning services by type of health facility	Total (N=110)		Hospital (N=9)		CHC (N=45)		CHP (N=37)		MCHP (N=19)	
	n	%	n	%	n	%	n	%	n	%
Family planning services offered	110	100%	9	100%	45	100%	37	100%	19	100%
Every day including weekend	81	73.6	5	55.6	37	82.2	23	62.2	16	84.2
Every day without weekend	17	15.5	2	22.2	2	4.4	10	27.0	3	15.8
Only on morning in week	4	3.6	0	0.0	4	8.9	0	0.0	0	0.0
Once a week	4	3.6	2	22.2	0	0.0	2	5.4	0	0.0
Other	4	3.6	0	0.0	2	4.4	2	5.4	0	0.0
Setting of FP offered										
A room exclusively for FP	11	10.0	5	55.6	4	8.9	2	5.4		
A shared room with other	98	89.1	4	44.4	40	88.9	35	94.6	19	100.0
Other	1	0.9			1	2.2				
Setting of FP counselling										
Same room with clinical exam	11	10.0	5	55.6	4	9.1	2	5.4		
Different room with clinical exam	98	89.1	4	44.4	40	90.9	35	94.6	19	100.0
Don't know	1	0.9			1					
Opening time										
Schedule opening time at 8:00	102	92.7	8	88.9	42	93.3	34	91.9	18	94.7
Actually opening time at 8:00	66	60.0	5	55.6	25	55.6	26	70.3	10	52.6
Actually opening time early than 8:00	35	31.8	2	22.2	18	40.0	9	24.3	6	31.6
Actually opening time late than 8:00	9	8.2	2	22.2	2	4.4	2	5.4	3	15.8

Annex 5 Providers of family planning consultation by staff category and type of health facility

Provider of family planning consultation, by staff category and type of health facility										
	All		Hospital		CHC		CHP		MCHP	
Providers of family planning consultation	n	%	n	%	n	%	n	%	n	%
SECHN	50	22.8	10	55.6	15	16.5	20	27.0	5	13.9
Registered Midwife	8	3.7	5	27.8	3	3.3	0	0.0	0	0.0
Enrolled Midwife	19	8.7	1	5.6	16	17.6	2	2.7	0	0.0
CHO	33	15.1	0	0.0	22	24.2	11	14.9	0	0.0
Community health assistant	20	9.1	0	0.0	10	11.0	10	13.5	0	0.0
Maternal and child health aide	89	40.6	2	11.1	25	27.5	31	41.9	31	86.1
Total	219	100.0	18	100.0	91	100.0	74	100.0	36	100.0

** CHC: Community Health Centres; CHP: Community Health Posts ; MCHP: Maternal and Child Health Posts : FP: Family Planning*
SECHN: State Enrolled Community Health Nurse ; CHO: Community Health Officer

Annex 6 Availability of contraceptive methods on the day of the facility audit

Availability of contraceptive methods on the day of the facility audit

Contraceptive methods	Hospital			CHC			CHP			MCHP		
	N	Yes		N	Yes		N	Yes		N	Yes	
		n	%		n	%		n	%		n	%
Combined oral contraceptive pills	9	8	88.9	45	44	97.8	37	35	94.6	19	18	94.7
Progesterone only pill	9	7	77.8	45	42	93.3	37	37	100.0	19	19	100.0
IUD	**7**	**5**	**71.4**	**33**	**25**	**75.8**	**18**	**10**	**55.6**	**6**	**3**	**50.0**
Combined Injectables contraceptives	9	8	88.9	44	39	88.6	37	35	94.6	19	18	94.7
Progesterone-only injectable	5	1	20.0	18	1	5.6	12	1	8.3	4	0	0.0
Implant	**9**	**9**	**100.0**	**40**	**34**	**85.0**	**28**	**20**	**71.4**	**6**	**3**	**50.0**
Male Condoms	8	8	100.0	45	45	100.0	37	36	97.3	18	17	94.4
Female condoms	7	3	42.9	35	30	85.7	28	26	92.9	16	14	87.5

Annex 7 Health facilities without stock out of contraceptives

Health facilities with no stock-out of contraceptive methods in the last 6 months by type of health facility

Contraceptive methods	Hospital			CHC			CHP			MCHP		
	N	Yes		N	Yes		N	Yes		N	Yes	
		n	%		n	%		n	%		n	%
Combined oral contraceptive pills	9	6	66.7	45	36	80.0	37	33	89.2	19	13	68.4
Progesterone only pill												
IUD	**6**	**2**	**33.3**	**31**	**24**	**77.4**	**12**	**8**	**66.7**	**4**	**4**	**100.0**
Combined Injectables contraceptives	9	6	66.7	44	35	79.5	37	32	86.5	19	14	73.7
Progesterone - only injectable	4	2	50.0	13	7	53.8	6	4	66.7	2	1	50.0
Implant	**9**	**6**	**66.7**	**39**	**33**	**84.6**	**28**	**18**	**64.3**	**5**	**4**	**80.0**
Male Condoms	8	5	62.5	45	37	82.2	37	33	89.2	19	14	73.7
Female condoms	6	3	50.0	36	25	69.4	27	22	81.5	15	9	60.0

Health facilities with no stock-out of contraceptive methods in the last 3 months by type of health facility

Contraceptive methods	Hospital			CHC			CHP			MCHP		
	N	Yes		N	Yes		N	Yes		N	Yes	
		n	%		n	%			%			%
Combined oral contraceptive pills	9	7	77.8	45	37	82.2	37	31	83.8	19	14	73.7
Progesterone only pill												
IUD	**6**	**2**	**33.3**	**31**	**24**	**77.4**	**12**	**9**	**75.0**	**4**	**4**	**100.0**
Combined Injectables contraceptives	9	7	77.8	44	34	77.3	37	31	83.8	19	14	73.7
Progesterone-only injectable	4	2	50.0	12	6	50.0	6	4	66.7	2	1	50.0
Implant	**9**	**6**	**66.7**	**39**	**31**	**79.5**	**28**	**18**	**64.3**	**5**	**4**	**80.0**
Male Condoms	8	5	62.5	45	37	82.2	37	32	86.5	19	12	63.2
Female condoms	6	4	66.7	36	27	75.0	27	22	81.5	15	9	60.0

Annex 8 Equipment at health facilities

Availability of selected equipment items at health facilities

Equipment items at health facilities	N	Available and functional		Available and not functional		Not available	
		n	%	n	%	n	%
Stethoscope	110	102	92,7	3	2,7	5	4,5
Blood pressure gauge	109	94	86,2	10	9,2	5	4,6
Flashlight	109	25	22,9	3	2,8	81	74,3
Standing lamp	110	26	23,6	1	0,9	83	75,5
Speculum	110	51	46,4	3	2,7	56	50,9
Tenaculum	109	19	17,4	1	0,9	89	81,7
Scissors	110	97	88,2	2	1,8	11	10,0
Forceps (mosquito)	110	95	86,4	1	0,9	14	12,7
Xylocaine or Lidnocaine 1% without adrenaline	110	90	81,8	1	0,9	19	17,3
Implant Kit (Trocar and Implant)	110	66	60,0	1	0,9	43	39,1
Sterile gloves /surgical gloves	110	103	93,6	1	0,9	6	5,5
Sterilisers / autoclave	110	94	85,5	1	0,9	15	13,6
Disposal containers for contaminated waste/supplies	109	87	79,8	1	0,9	21	19,3
Sharps containers for used sharp	110	109	99,1	1	0,9	0	0,0
Plastic buckets or containers for decontamination	110	91	82,7	1	0,9	18	16,4
Instrument tray	110	95	86,4	1	0,9	14	12,7
Bowls or galipot	110	95	86,4	1	0,9	14	12,7
Antiseptic solution	110	103	93,6	1	0,9	6	5,5
Sterile drapes	110	52	47,3	2	1,8	56	50,9

Health facilities with five items (available and functional) for the provision of IUDs (including specula, tenaculum, scissors, flashlight, standing lamp)

All HF (n=110)		Hospital (n=9)		CHC (n=45)		CHP (n=37)	
n	%	n	%	n	%	n	%
4	3,6	2	22,2	2	4,4	0	0

Health facilities with three items (available and functional) for the provision of implants (including Implant kit, sterile gloves, Xylocaine or Lidnocaine)

All HF (N=110)		Hospital (N=9)		CHC (N=45)		CHP (N=37)		MCHP (N=19)	
N	%	n	%	n	%	n	%	n	%
61	55.5	9	100.0	32	71.1	17	45.9	3	15.8

Annex 9 Number counselling actions performed by type of provider, reported by observer

Number of counselling actions performed by type of provider reported by observer.

Staff categories	n	Mean	Median	IQR*	Range (Min to Max)
SECHN	50	6.3	6	6.0 to 7.0	5 to 8
Registered Midwife	8	5.9	6	5.3 to 6.8	4 to 7
Enrolled Midwife	19	6.1	6	6.0 to 7.0	4 to 7
CHO	33	6.0	6	5.0 to 6.0	5 to 8
Community health assistant	20	6.4	6	6.0 to 7.0	5 to 8

*IQR: interquartile range

Distribution of counselling actions performed by type of provider reported by observer.

No. counselling actions performed	SECHN	Registered Midwife	Enrolled Midwife	CHO	Community health assistant	Maternal and child health aide	All	
	n	n	n	n	n	n	N	%
2	0	0	0	0	0	1	1	0.5
4	0	1	1	0	0	6	8	3.7
5	5	1	2	9	2	21	40	18.3
6	30	4	11	17	11	36	109	49.8
7	11	2	5	6	4	21	49	22.4
8	4	0	0	1	3	4	12	5.5
Total	50	8	19	33	20	89	219	100.0

Annex 10 List of staff involved in the survey

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Sulaiman Samura	Driver		
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Mamud Abass	Driver		076639142
Mohamed Mansaray	Driver		079459443
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Annex 11 Documentation available to the team

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