# Research briefing: Rapid assessment of Ebola impact on reproductive, maternal, neonatal, child and adolescent health services and service-seeking behaviour in Sierra Leone

This research briefing outlines methods and findings from a study to assess the impact of the Ebola outbreak on reproductive, maternal, neonatal, adolescent, and child health (RMNCAH) outcomes in Sierra Leone, and the factors affecting the demand and supply of these services. It is based on a rapid assessment conducted by UNFPA with support from the Ministry of Health and Sanitation, UK Department for International Development, Irish Aid and Options, between December 2014 and January 2015. This research briefing aims to inform the work of the Government of Sierra Leone and its partners during the post-Ebola recovery period.

## Background

Sierra Leone has some of the worst health outcomes globally for women and children. Based on the 2013 Sierra Leone Demographic and Health Survey, the maternal mortality ratio is 1,165 maternal deaths per 100,000 live births and the under-five mortality rate is 156 deaths per 1,000 live births[1]. The uptake of health services increased with the introduction of the Free Health Care Initiative in April 2010. However, there are concerns about how the recent Ebola outbreak has affected RMNCAH service utilisation and health outcomes in Sierra Leone.

## Aims & Objectives

The aim of the study was to evaluate the impact of Ebola on RMNCAH services and to identify attitudes, practices, perceptions and challenges in health seeking behaviour amongst women and adolescents in the context of the Ebola outbreak.

**Figure 1: A complete picture of the impact of the EVD outbreak on RMNCAH**

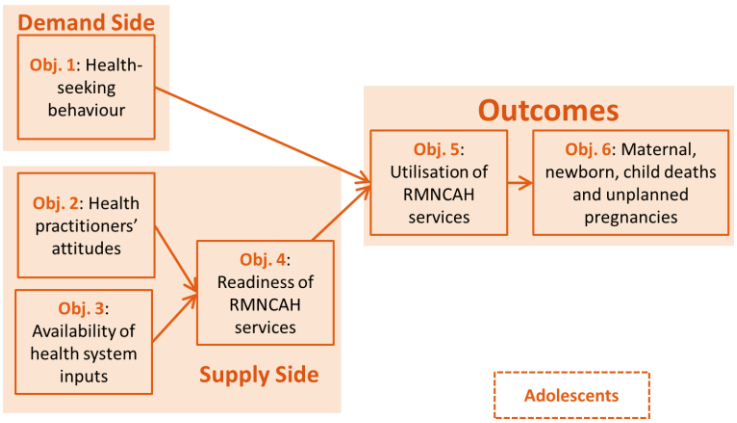


Figure 1 illustrates how the study's six objectives contribute to an understanding of the supply and demand side factors affecting utilisation of RMNCAH services, and the impact on health outcomes. The following sections explain the approach and key findings for outputs and outcomes, demand side factors and supply side factors in turn.

[1] Statistics Sierra Leone & ICF International. (2014). *Sierra Leone Demographic and Health Survey 2013.* Freetown: SSL & ICF International.

# Outputs – Utilisation of RMNCAH Services

## Methods

Analysis was based on the quantitative data available, which included:

- Nationwide government health service statistics[2] from January 2013 to September 2014 for all facilities, aggregated at district level
- Data on the number of services provided each month: 4th antenatal visits, facility deliveries, postnatal care visits, family planning visits, and penta 3 vaccinations
- The statistical change in the number of services provided after the start of the outbreak was applied to baseline population coverage of key RMNACH interventions in order to understand the impact of the outbreak on population coverage.

## Key Findings

- Population coverage of essential RMNCAH interventions declined, as shown in the following table:

| | Essential Interventions | | | | |
|---|---|---|---|---|---|
| **% Decrease in coverage** | Contraceptive prevalence rate | Antenatal care, inc. TT*, malaria prevention | Facility delivery and skilled birth attendance | Postnatal care | Newborn and child vaccines (DPT*, BCG*, Polio, Measles) |
| Compared to coverage in the previous year | - 2% | - 19% | - 14% | - 11% | - 17% |
| Compared to hypothetical scenario where Ebola had not occurred | 0% | - 21% | - 17% | - 19% | - 17% |

* TT – tetanus toixoid immunisation; DPT – Diptheria, Pertussis and Tetanus immunisation; BCG - Bacillus Calmette-Guérin for TB

- Due to highly irregular patterns in the number of monthly family planning visits before the Ebola outbreak, there is no statistical evidence that family planning visits declined more than usual after May 2014. Qualitative data, however, does provide evidence of lower uptake of family planning services after the start of the Ebola outbreak

[2] Ie. from the Government of Sierra Leone's Health Management Information System, HMIS – which comprises service utilisation data from primary health facilities across the country.

# Outcomes – Maternal, Newborn and Child Deaths and Unplanned Pregnancies

## Methods

- We inputted population coverage of key interventions (above) into the Lives Saved Tool (LiST) to calculate the impact on maternal deaths and newborn deaths, unplanned pregnancies and child deaths

## Key Findings

- Between May 2014 and April 2015, maternal deaths increased by 22% and newborn deaths increased by 25%, solely as a result of lower access to routine health services
- Due to the lack of statistical evidence of the impact of Ebola on family planning take-up, it was not possible to model the change in unplanned pregnancies
- The impact on child deaths is not reported here as it was highly under-estimated. This was due to the difficulty of estimating the impact of the outbreak on the treatment of non-Ebola related childhood illnesses. As a result, only the impact of the Ebola outbreak on vaccines was included, which caused an under-estimation of the impact on child deaths.

# Supply Side Factors

## Methods

Analysis was based on quantitative (facility assessments) and qualitative (in-depth interviews) data:

**Figure 2: The 8 domains of readiness that 78 EmONCs were assessed against**

1. Readiness of RMNCH services
2. Youth friendly services
3. Laboratory
4. Infrastructure
5. Staff readiness
6. Infection, prevention & control (IPC) Supplies
7. Personal Protective Equipment
8. Manage suspected cases

- **Facility assessments:** we adapted the low-cost, telephone based "QuIC" (Quality of Institutional Care) approach to rapid collection, analysis and presentation of service readiness results. 78 EmONC-designated facilities (65 Basic and 13 Comprehensive) were assessed according to 8 domains (Figure 2). Primary telephone data for youth friendly services were collected in January 2015 and secondary data (from FIT and QuIC) collected in December 2014.

- **In-depth interviews: we** interviewed 28 front-line health providers from various cadres across Western Area Rural and Moyamba about challenges in providing quality RMNCAH care e.g. preparedness to deliver care in the context of Ebola, changes to RMNCAH service provision and the perceived impact of Ebola on community uptake of services.

## Key Findings – Facility Assessments [3]

- **RMNCH services:** only six facilities met all criteria (outlined in Figure 3) and 47 facilities met all but one of the criteria. Facilities scored well for the availability of key drugs and contraceptive supplies overall. In general, facilities' capacity to provide timely emergency referral was limited.
- **Youth friendly services:** 23 facilities met all criteria (outlined in Figure 4) and 27 facilities met all but one of the criteria [4]. The greatest need was for staff to be trained in youth friendly services and the provision of a dedicated counselling space.

**Figure 3: Criteria for assessing readiness of RMNCH services**

**Family planning**
1. Contraceptive pills
2. IUCD insertion kit

**Maternity**
3. A designated ambulance for maternity cases (non-Ebola suspected cases – available within 2 hours)
4. All 4 tracer maternity drugs (oxytocin, magnesium sulphate, gentamycin, ampicillin)
5. Examination gloves ( at least 150 pairs)

**Child health**
6. Penta 3 vaccine
7. Measles vaccine
8. Oral Rehydration Salts (ORS)

**Figure 4: Criteria for assessing readiness of youth friendly services**

1. Does your facility have any staff trained in youth-friendly services?
2. Are information, education and communication materials available for adolescent reproductive health?
3. Do you have either a private consultation room for adolescents or a special place for counselling adolescents?

## Key findings – In-Depth Interviews

Health workers reported a number of challenges to providing care:

- Health workers were fearful of contracting Ebola
- Patients delayed or ceased seeking care for preventative services e.g. users refused 'mark late' (vaccinations)
- Patients delayed seeking curative or consultative services contributing to increased severity of caseload, ie. by the time women did seek care, complications were more severe
- Health workers faced stigma and discrimination.

*"We are their enemies for now they are afraid to come to care for fear of infecting them" (Health worker, Western Rural)*

Health workers also reported some positive supply side factors:

- Community sensitisation had improved trust compared to the start of the Ebola outbreak
- Training and availability of personal protective equipment helped to allay fears of contracting Ebola
- Health care workers displayed dedication to practice, patients, and Ebola eradication.

[3] Findings are presented here for only two domains (RMNCH services and youth friendly services). Findings for the other six domains can be found in the full report, available here: http://www.mamaye.org.sl/en/evidence/rapid-assessment-ebola-impact-reproductive-health-services-and-service-seeking-behaviour

[4] 19 facilities across Sierra Leone have been upgraded to deliver Adolescent and Youth Friendly Heath Services. This sample includes 10 of the upgraded facilities, of which 5 met all criteria and 3 met all but one.

# Demand Side Factors

## Methods

- Analysis was based on seven focus group discussions in Moyamba and Western Rural districts (14 in total)
- 100 participants (62 females aged 15-49y including both FHCI users and non-users; 16 girls aged 10-14y; 13 men aged 18-49y; 9 female Ebola survivors aged 18-49y).

## Key Findings

Participants reported a number of challenges that affect demand for care:

- Fear of contracting Ebola at facilities e.g. fear of health workers and of other infectious patients
- Unavailability of services e.g. facility closures, including private pharmacies; routine diagnostic test services not available; children denied vaccinations. As a result, some women resorted to traditional healers
- Pregnant women being turned away from health facilities
- Concerns about quality of care e.g. health providers no longer holding newborns; neglect for women in labour
- Poor standards of care e.g. stock outs of family planning commodities and lack of transport for onward referral of pregnant women with complications
- Financial concerns e.g. unofficial requests for payments.

*"Three weeks ago, a pregnant woman was in labour and when they took her to the X hospital she was then refer to the Y hospital. When they also get there the nurses ask them to return home since they cannot treat her. On their way coming home, the woman passes away, so you see it was very sad and so many women have seen that happen that is why they prefer to give birth at home."*
*(Female aged 15-24, Western Rural)*

Participants also reported some encouraging demand side factors:

- Communities were reassured about the competence of health workers known to have had infection prevention control training
- Screening and IPC measures were seen as improvements in quality
- There was a recognition that caring nurses were constrained by a lack of resources
- The demand for reproductive health persists – the general consensus was that hospitals offered the highest quality of RMNCAH care
- Community sensitisation contributed towards improved relationships with health care workers compared to the start of the outbreak, and encouraged RMNCAH care seeking at government facilities.

# Adolescents: A Vulnerable Population in the Context of Ebola

Women, adolescents and health workers expressed concern that more girls of school age than usual were falling pregnant. One of the main reported reasons for this was closure of schools.

*"Before Ebola, there were schools going on, so there is not much time for school-going children to [be] idling around. Unlike now, now that there are no schools going on they have more time for their boyfriends. Also when schools were up and running some will reflect that 'Oh! I have to go to school so let me take my time otherwise I become pregnant and that will affect my education; I have to go to school'. So there's great difference now with regard to teenage pregnancy than when Ebola was not yet here."* (*Adolescent girl, Western Area Rural district)*

- The focus group discussions with adolescents revealed pre-existing misperceptions and lack of knowledge of family planning methods
- In terms of access to services, school closures meant that health workers were no longer able communicate with adolescents via school-based reproductive health programmes. There were also reports of reduced family planning uptake and lapses in implants/injections
- Respondents reported that before the outbreak, some school attendees who became pregnant were barred from school. However, one respondent noted that becoming pregnant was less of a concern in the context of the Ebola outbreak, as the baby would be born by the time schools re-opened
- Respondents stated belief that the following strategies could contribute to improving adolescents' awareness of how to access services: community sensitisation (radio, megaphones), providing quality care for those who do attend (encouraging peer recommendation); and school health initiatives.

## Implications for Recovery

Pre-existing constraints to health services (and perceptions thereof) worsened during the Ebola outbreak. The findings from this study highlighted the need to invest resources beyond patient and health worker safety for the remainder of the Ebola outbreak and in the post-Ebola recovery period.

Increasing demand for RMNCAH services requires re-building trust in the health system. Support for health providers, including skills-building and provision of protective equipment, could ensure their safety, whilst promoting an enabling environment for women seeking care. Community sensitisation should continue to involve trusted and influential figures, including women with recent positive experiences at health facilities. Accountability mechanisms, whereby health providers and women jointly address issues of quality and availability of care, must be strengthened too.

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