MSF HEALTH SURVEILLANCE PROGRAMME

MEDECINS SANS FRONTIERES
أطبّاء بلا حدود

EAST DARAA, SYRIA FIRST FOLLOW-UP ASSESSMENT

Centre for the Advancement of Humanitarian Medicine
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Old lady from Daraa being interviewed by MSF teams.

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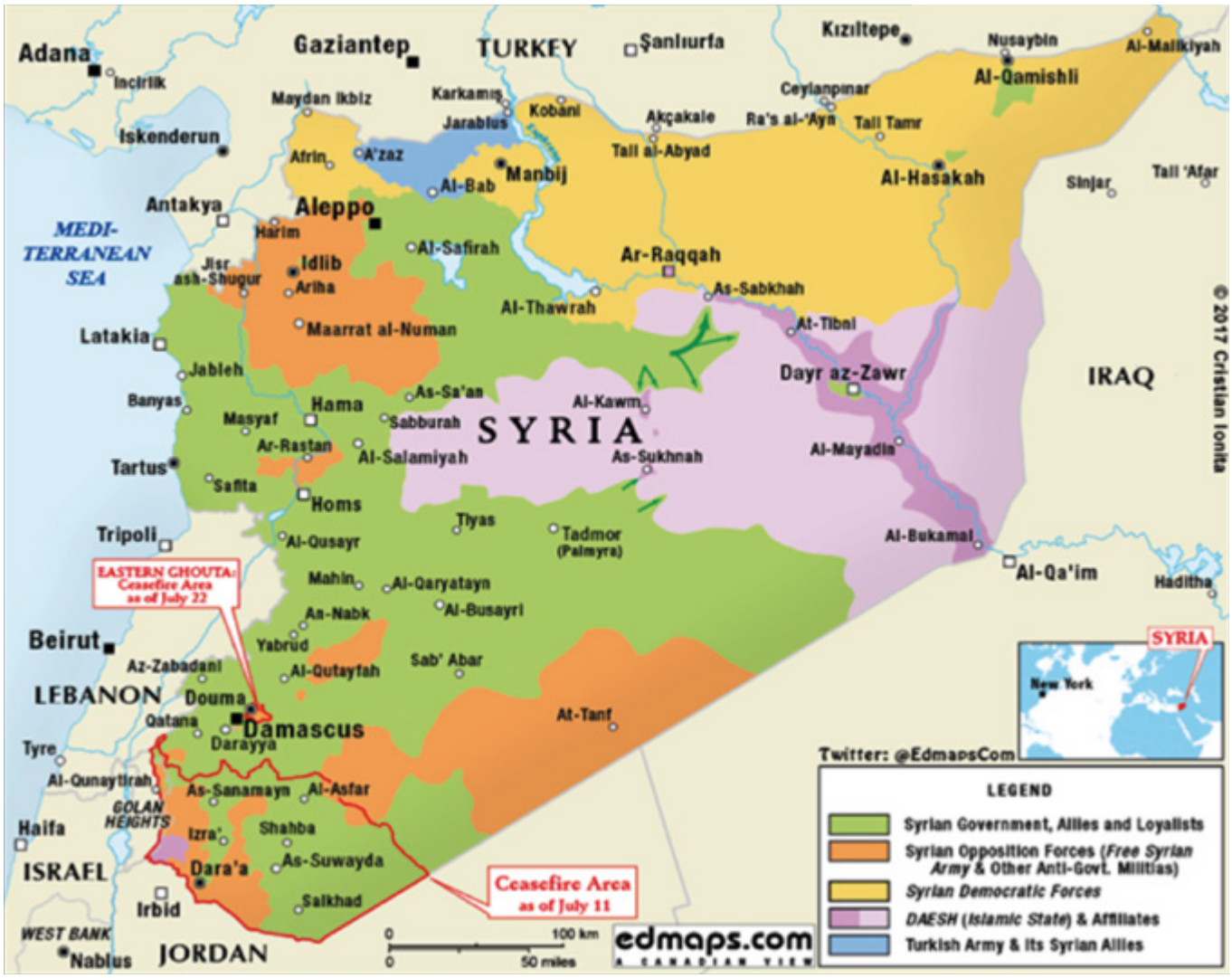
Figure 1. Syrian Civil War: terrotorial control map as of July 22, 2017



As the Syria crisis enters its seventh year, people continue to suffer the consequences of a conflict that has caused destruction and devastation with complete disregard for human life. The United Nations Office for the Coordination of Humanitarian Affairs (UNOCHA) estimates that 13.5 million people require humanitarian assistance, 4.6 million of whom are trapped in hard-to reach and besieged areas.

Over half of the population, many of whom have been displaced multiple times, have been forced from their homes. This conflict has affected adults and children alike, exposing them to grave protection threats. Children and young people comprise more than half of the displaced communities, as well as half of those in general need of humanitarian assistance.

There are currently 13 besieged locations across Syria where people are trapped. Humanitarian groups do not have sustainable access to these areas, and people are being denied the most basic rights, including freedom of movement and access to adequate food, water and healthcare. This is paralleled by a complicated political landscape where neighbouring countries have restricted the admission of people fleeing Syria. This has left hundreds of thousands of people stranded on their borders in deplorable conditions and exposed to a range of life-threatening needs.

In the absence of a political solution to the conflict, intense and widespread hostilities are likely to persist in some parts of the country throughout 2017.

http://www.unocha.org/syrian-arab-republic/syria-country-profile/about-crisis

Normal roads in towns in east Daraa.

STUDY OBJECTIVES

The objectives of the *Eastern Daraa First Follow-up Assessment*, conducted in all study settings with the participation of all respondents, aimed to answer the following questions.

PRIMARY ASSESSMENT COMPONENTS

1. What are the critical health needs of the people currently living in eastern Daraa?
2. What is the current quality of life of those living in the area of interest?
3. How do the follow-up findings compare to the baseline findings?

SECONDARY ASSESSMENT COMPONENTS

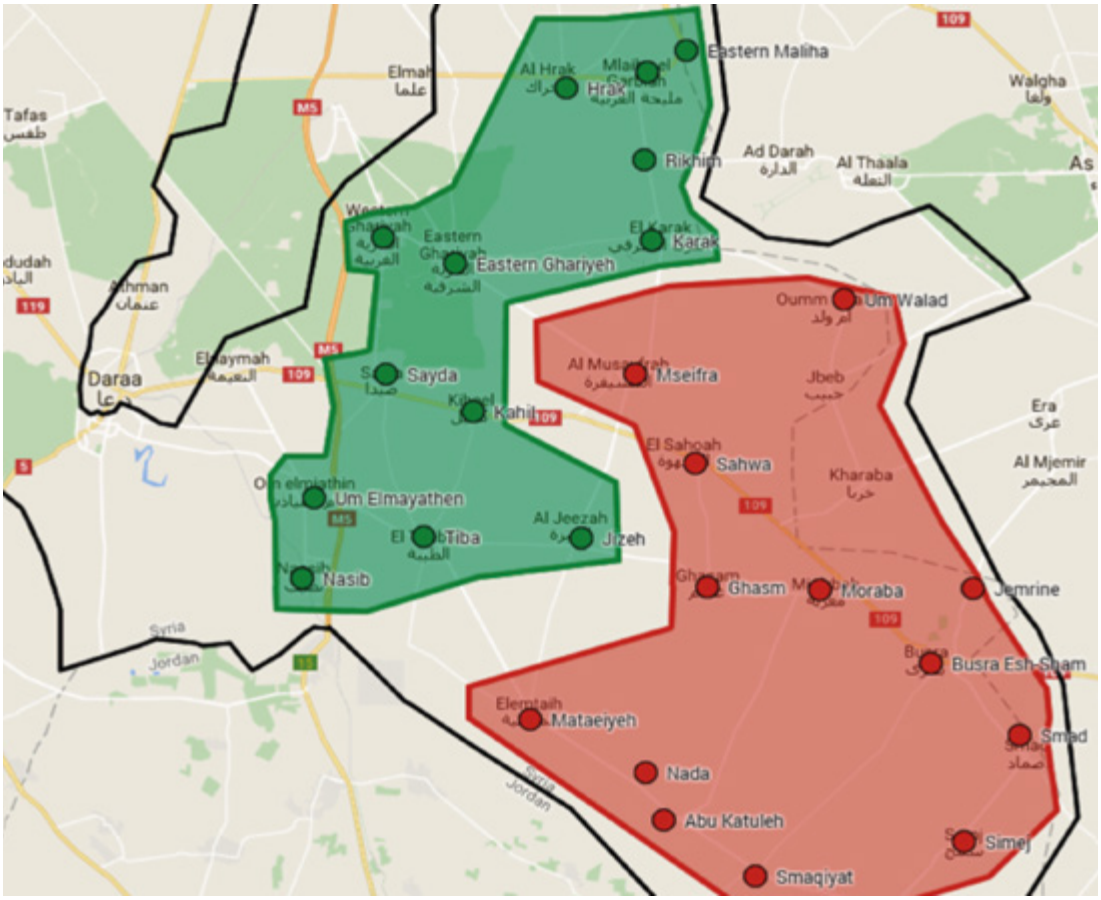
1. What is the demographic profile of households currently living in eastern Daraa governorate?
2. What are the medical service access issues and concerns among the overall population in this region?
3. What is the crude mortality rate among this population?
4. What are the general morbidities and prevalence of these morbidities among this population?
5. What proportion of overall population mortality and morbidity is related to the current conflict in the region?
6. What are the recent healthcare-seeking behaviours of the overall population in the eastern Daraa governorate area?
7. What is the current use and sources of medication used among this population?
8. What is the prevalence of chronic medical conditions among the population in this region?
9. What are the gaps in medical coverage among those who have been diagnosed with chronic medical conditions in this area?
10. What type and amount of medical services are available for the population in this region?
11. What is the health services utilisation behaviour and rate of use for this population?
12. Are health service utilisation behaviours related to recent population displacement?
13. What is the immunisation coverage, incidence of diarrhoeal disease, and prevalence of respiratory infection among children under the age of five among those displaced in this area?
14. What reproductive health and family planning services are used by women of 15-49 years of age in this area?
15. What is the current situation among this population related to shelter and sanitation?
16. What are the current issues among this population related to non-food items, including summer cooling supplies, bedding?
17. What are the current and future plans of the population in this area in terms of income generation and if applicable, 'home region' repatriation?

METHODOLOGY

The area of interest comprises the cities, towns, and villages of Smaqiyat, Simej, Smad, Busra Esh-Sham, Jemrine, Moraba, Nada, Abu Katuleh, Mataeiyeh, Ghasm, Sahwa, Jizeh, Mscifra, Karak, Um Walad, Rikhim, eastern Maliha, western Maliha, Hrak, Nasib, Tiba, Um Elmayathen, Kahil, Sayda, western Gharyeh and eastern Gharyeh. The total population in this catchment area is estimated to be approximately 200,000 people, including internally displaced people (IDPs), according to local government estimates. The sampling strategy used was a multi-stage cluster sampling design. Since the sampling frame was very large, two clusters (labelled as Red and Green) of equal size were initially selected to represent the different social demographics of the area. Within each cluster we then conducted a systematic random sampling of every sixth dwelling. At all selected locations, trained data collectors proceeded to collect data until the target sample size was reached.

The target sample size was a minimum of 3,500 individuals, from at least 600 households dispersed throughout 26 small communities. Within each household that met the inclusion criteria, a pre-tested, standardised, comprehensive questionnaire was administered to all persons who met the 'household definition' (see below). Dharma Mobile™ software was used for data collection, storage, and some automated analytic. Data collectors used MSF- provided mobile data collection devices (iOS tablets, mini iPads) for all collection activities. Access to the MSF Health Surveillance Program (HSP) web portal is available internally for authorised MSF staff.

Figure 2. Assessed towns and cities in east Daraa



INCLUSION AND EXCLUSION CRITERIA

All persons living in the area of interest were included as participants in the East Daraa Follow-up Assessment, regardless of the period of time they had been living in the current location. Syrians, Iraqis, Palestinians and people of other nationalities who were living in the study locations were all included as participants. There were no exclusions related to gender, age, sex, ethnicity or socioeconomic reasons.

Inclusion: All participants from selected dwellings who met the 'household' definition as described below.
Exclusion: Any members of selected dwellings who did not meet the 'household' definition as stated below.
Household: PPrimary family members living in the same dwelling for at least one month prior to interview. In addition, any individual living and eating with primary family members for at least one month prior to interview were included.

SURVEY INSTRUMENT

A standardised questionnaire was used for the *MSF-HSP: Eastern Daraa Follow-up Assessment*. This instrument has been used by MSF's Operating Centre Geneva (OCG) and Operating Centre Barcelona-Athens (OCBA) sections since 2014, and was designed and implemented originally by researchers with the World Health Organization (WHO) in Iraq. Additional reproductive health questions were incorporated from *Knowledge, Practices, & Coverage* surveys (USAID-sponsored Maternal and Child Health Integrated Program (MCHIP) assessments). All addendums/additional questions were first vetted by the MSF OCBA regional medical advisor and HSP project manager and they were piloted during data collector training for region-specific integration prior to deployment. All question components used key WHO and Centers for Disease Control and Prevention (CDC) indicators, which matched survey research questions from UNHCR, UNICEF, MSF, and WHO standards. This protocol was submitted and approved for use by the MSF Ethical Review Board (ERB).

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MSF teams during households' visits.

DATA CLEANING

The data was extracted from Dharma platform in a csv format. It was then converted to an xls format and imported to Stata 13 MP. The total count amounted to 5,166 entries representing a stacking of household and individual level data. The two datasets were separated based on a unique pattern at household level. The household level dataset was merged under the individual dataset facilitating the use of the household identifier as a cluster variable to adjust for random effects in multilevel modelling. Multiple choice variables were split into categorical binary variables for bivariate and multivariate analyses. Using household identifiers, individual-level variables were recoded numerically and collapsed to a household level using the summation function when needed for cross-tabulations and advanced analyses at household level.

DATA ANALYSIS

Analysis was conducted using Stata 13 MP. In the absence of true population figures and household listings, the collected data could not be weighted to adjust for survey design such as intra- and inter-cluster correlations. Therefore, univariate and bivariate logistic regression models with robust standard error adjustments were used to calculate prevalence estimates and their confidence intervals. A p-value<0.05 was used to indicate statistical significance of the bivariate associations. Multilevel modelling (specifically mixed-effects logistic regression) was used for predictive analyses of outcomes of interest. This methodology enables us to adjust not only for fixed effects, but also for the random effects resulting from observations being nested within households and therefore not independent of one another. A p-value<0.05 was used to indicate statistical significance.

RESULTS

MSF teams during households' visits; photo shows a household with 6 children.

The following results represent the responses collected from 959 households and a total of 4,207 individuals in east Daraa. The achieved sample size exceeded the calculations at a design phase, and this surge in statistical power provides increasingly precise inferences at population level.

HOUSEHOLD DEMOGRAPHICS

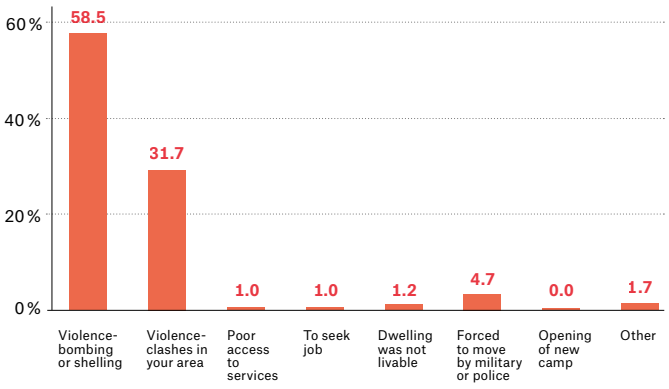
The total number of sampled individuals was almost equally distributed among males (50.7%) and females (49.3%). The mean age of the population was 25.13 ± 19.07 and the median was 20 years of age. This divergence between mean and median underlines a skewed age distribution whereby 60% of the sample is under the age of 25 and 80% under the age of 40. Interestingly, the interviewed head of the household was the husband in only 44.2% of the cases and the wife in a notable 42.6% of the cases. On average, there were 4.92 members in each household and 17% of households had seven or more members while 2.1% had one single member. This highlights a drop in household size compared to the baseline assessment (5.7) whereby there is on average almost one individual less per household. The cross-border task force (CBTF) recently reported an increased average household size from five to six in Daraa and Quneitra making this observed drop in household size a finding specific to east Daraa.

The level of education of the head of household in the follow-up east Daraa assessment was fairly comparable to the baseline findings. Generally, only 11% of heads of household could not read and write, while almost 51% reported an intermediate school level of education or higher.

DISPLACEMENT

The absolute majority of households (94%) are originally from Daraa governorate with almost half of the sample (47%) reportedly having resettled at least once since the start of the conflict in 2011, indicating a high level of internal displacement within the governorate. The average amount of resettlement across households was found to be 2.8 times, a slight drop from the 3.2 times reported last year. This average was 2.5 in Busra city (which we were unable to sample in the baseline) and the area surrounding it, and 3.5 in the area further outside. In 90% of the cases, the reason for resettlement was violence-related (bombings or clashes).

Figure 3. Reasons for changing settlement



LIVING CONDITIONS

The majority of households were living in completed houses (74%) and reported owning the shelters in which they were living (62%). The different types (p=0.000) and costs (p=0.000) of the shelter however, were significantly mediated by the displacement status of households. Although the majority of households were living in completed houses, 26.5% of displaced people were living in damaged houses compared to only 11.5% of host communities. Additionally, while 81% of the host population reported owning their shelters, only 44% of displaced households owned their shelters and 38% of them were living at no cost. Moreover, 5% of hosts and 18% of displaced people were renting their shelters.

Figure 4. Settlement type

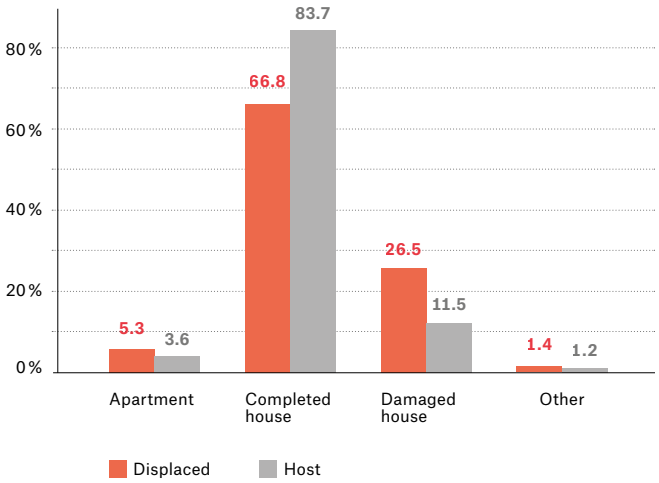
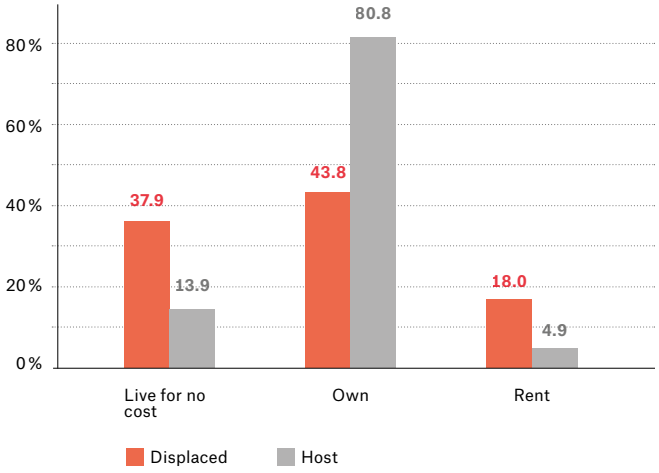
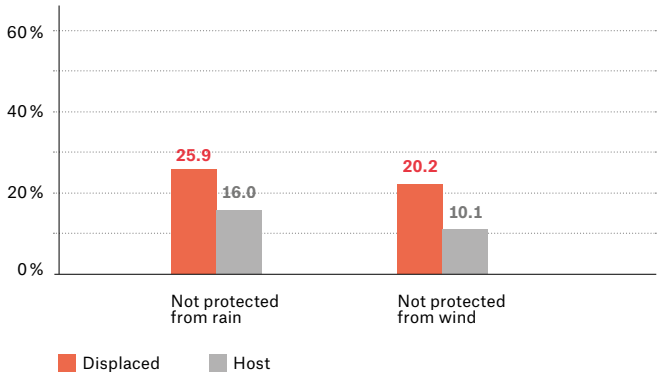


Figure 5. Settlement cost



Shelters were reportedly not protected from wind and rain in 15% and 21% of cases respectively, a decrease from last year's 21% and 28%, respectively. The protection of shelters from rain on the one hand and wind on the other was less common among displaced people than among host ones. These associations with displacement status were found to be statistically significant (p=0.000).

Figure 6. Protection from rain

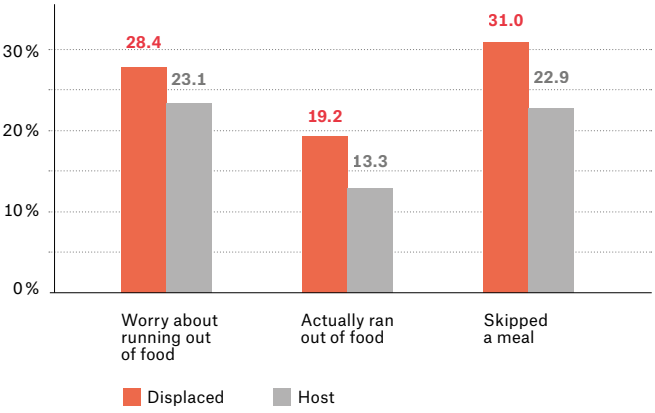


The vast majority of households reported having flush toilets connected to sewers (79.1%) or septic tanks (10.6%) as well as having a private shower that they do not share with others (90%), similar figures to the findings of the baseline assessment. Moreover, electricity was not available in 8.8% of households compared to last year's 10.81%. However, the average hours of electricity per day in the households where it is available dropped from 5.51 hours per day in the baseline assessment to 3.48 hours per day in the follow-up assessment.

FOOD ACCESS

Out of the total sampled households, 25% reported worrying about running out of food in the last 30 days due to a lack of money, and 15% actually ran out of food for at least one day over the past 30 days prior to the interview. Additionally, 26% reported skipping a meal and 10% reported going a whole day without eating in the past 30 days due to shortage of resources. These results were significantly mediated by displacement status whereby the prevalence of worrying about running out of food (p=0.067), actually running out of food (0.018), and skipping a meal (p=0.007) in the past 30 days, was higher among displaced people (28.4%; 19.2%; and 31% respectively) than among host communities (23.1%; 13.3%; and 23% respectively).

Figure 7. Food availability



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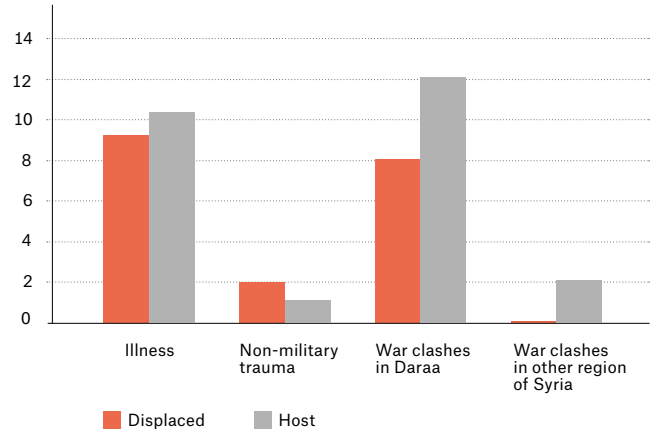
MSF teams during households' visits.

MORTALITY

The crude mortality rate was calculated at 0.42 deaths per 10,000 people per day, a slight increase from the 0.3 deaths per 10,000 people per day observed at baseline. 51 deaths assessed over the past 12 months were mainly caused by illnesses (37%) and war clashes (39%). The association between displacement and the causes of deaths was not statistically significant (p=0.974), possibly due to the relatively low number of deaths sampled. Alternatively, this could be due to both population subsets living in the same geographical area and being exposed to similar levels of risk.

Figure 8. Cause of death



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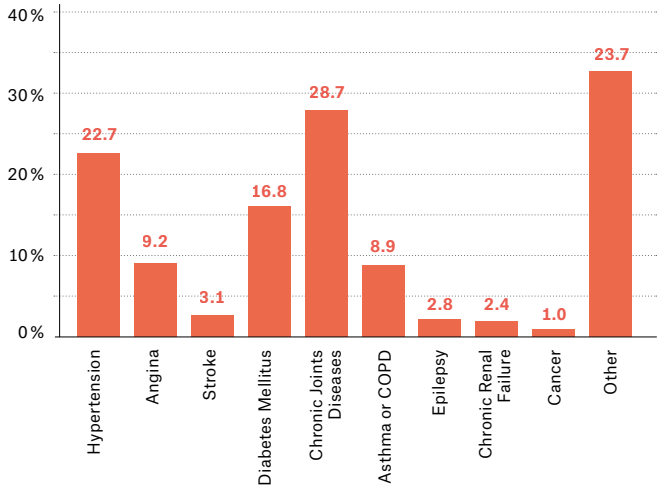
MSF teams during households' visits.

CHRONIC DISEASE BURDEN

The results indicate that 17.3% of the sample reported suffering from at least one chronic illness, which is a slight increase from the 15.7% reported last year. Among those 17.3% who have one or more chronic disease, the most prevalent chronic diseases were Chronic Joint Diseases (28.7%), Hypertension (22.7%) and Diabetes Mellitus (16.8%). The baseline analysis reported similar top chronic disease burdens.

Figure 9. Distribution of chronic illnesses

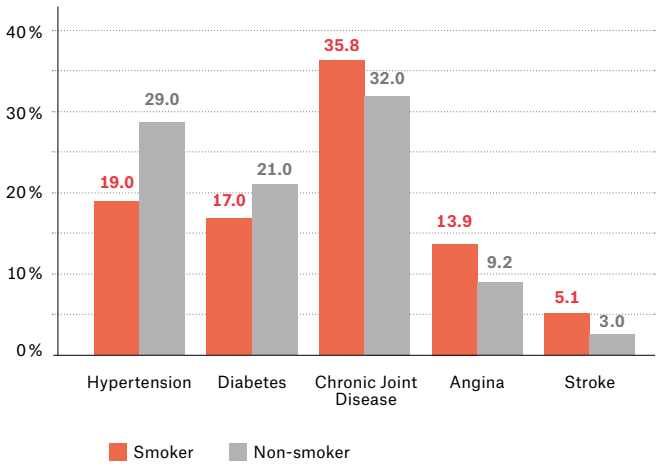


These common morbidities were stratified by gender and displacement to detect potential associations that can better guide the response. The results indicate that hypertension was significantly associated with gender (p=0.001) with 17% of males and 27.4% of females found to be hypertensive among those who reported suffering from at least one chronic illness. Additionally, hypertension was more prevalent (26%) among host communities than it was among displaced ones (19.9%), among those who reported suffering from at least one chronic illness, but this association was not statistically significant (p=0.137). Also among this subset, diabetes was significantly more prevalent among women than it was among men but was not mediated by displacement. Furthermore, chronic joint disease was not significantly associated with gender but was found to be significantly more prevalent among displaced people.

	Gender			Community		
	Males	Females	p-value	Host	Displaced	p-value
Hypertension	17.1	27.4	0.001	20	26	0.137
Diabetes	13.8	19.6	0.039	18.6	15.5	0.508
Joint Disease	26.9	30.8	0.254	22.6	34.5	0.002
Angina	9.8	8.6	0.590	10.8	7.5	0.002
Stroke	4	3.1	0.544	4	3.1	0.790
Asthma	11	7.3	0.086	8.7	9.3	0.908
Epilepsy	2.7	2.9	0.923	3.4	2.3	0.680
Renal	1.8	2.9	0.368	1.5	3.1	0.395
Cancer	0.6	1.3	0.351	1.2	0.8	0.822

The prevalence of smoking across our sample was found to be 23.6%, indicating a slight decrease from the 26.4% observed at baseline. Smoking was significantly more prevalent among men (24%) than among women (1.9%). Furthermore, linking smoking with non-communicable diseases (NCDs) assessed, smokers were significantly (p=0.000) more likely to suffer from angina, strokes and chronic joint disease. However, the results indicate that non-smokers were significantly more likely to be hypertensive.

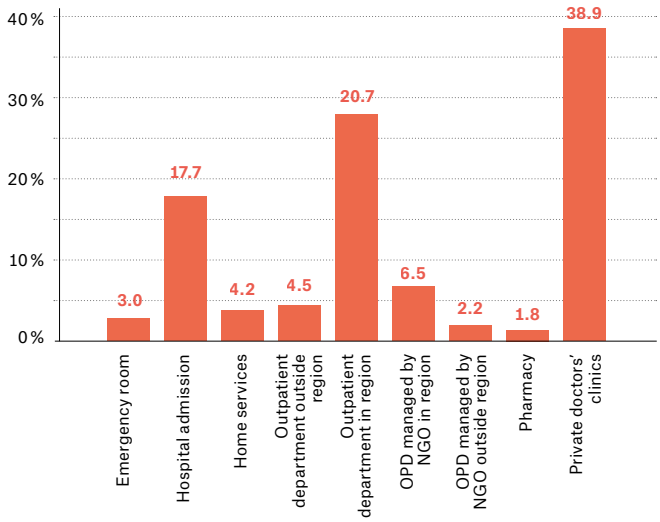
Figure 10. NCD prevalence among smokers



HEALTHCARE-SEEKING BEHAVIOUR

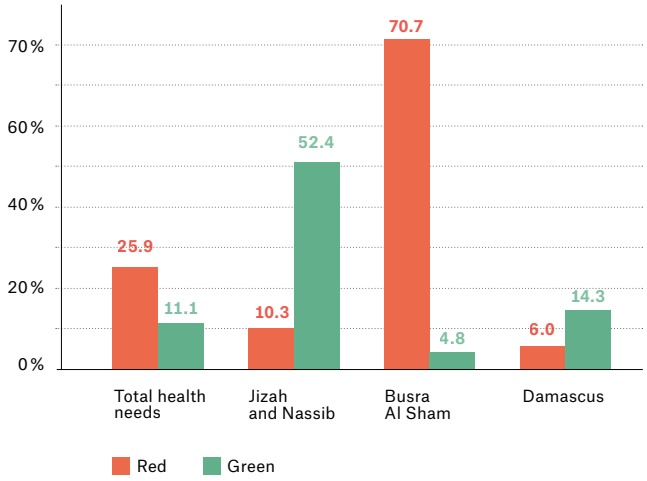
The results indicate that 753 (18.2%) respondents reportedly needed medical care in the past 30 days, a decrease from the 25% reported in the baseline report. The leading chronic conditions for which care was sought were joint disease (11.2%), hypertension (8.7%) and diabetes mellitus (5.3%). The leading acute conditions for which care was sought were respiratory infections (16.8%), gastrointestinal tract infections (7.8%) and urinary tract infections (3.7%). Out of those 753 individuals, almost 89% sought care, 94.6% of whom received care in the primary care-seeking location. Whenever medical care was sought, it was primarily in private physician clinics (39%), outpatient departments in the region of residence (21%) or through hospitals (ward admissions or ER) (17.7%). Whenever this care was reportedly sought in emergency rooms or through hospital admissions, the vast majority of health needs (almost 61%) were attended in Busra Al-Sham hospital.

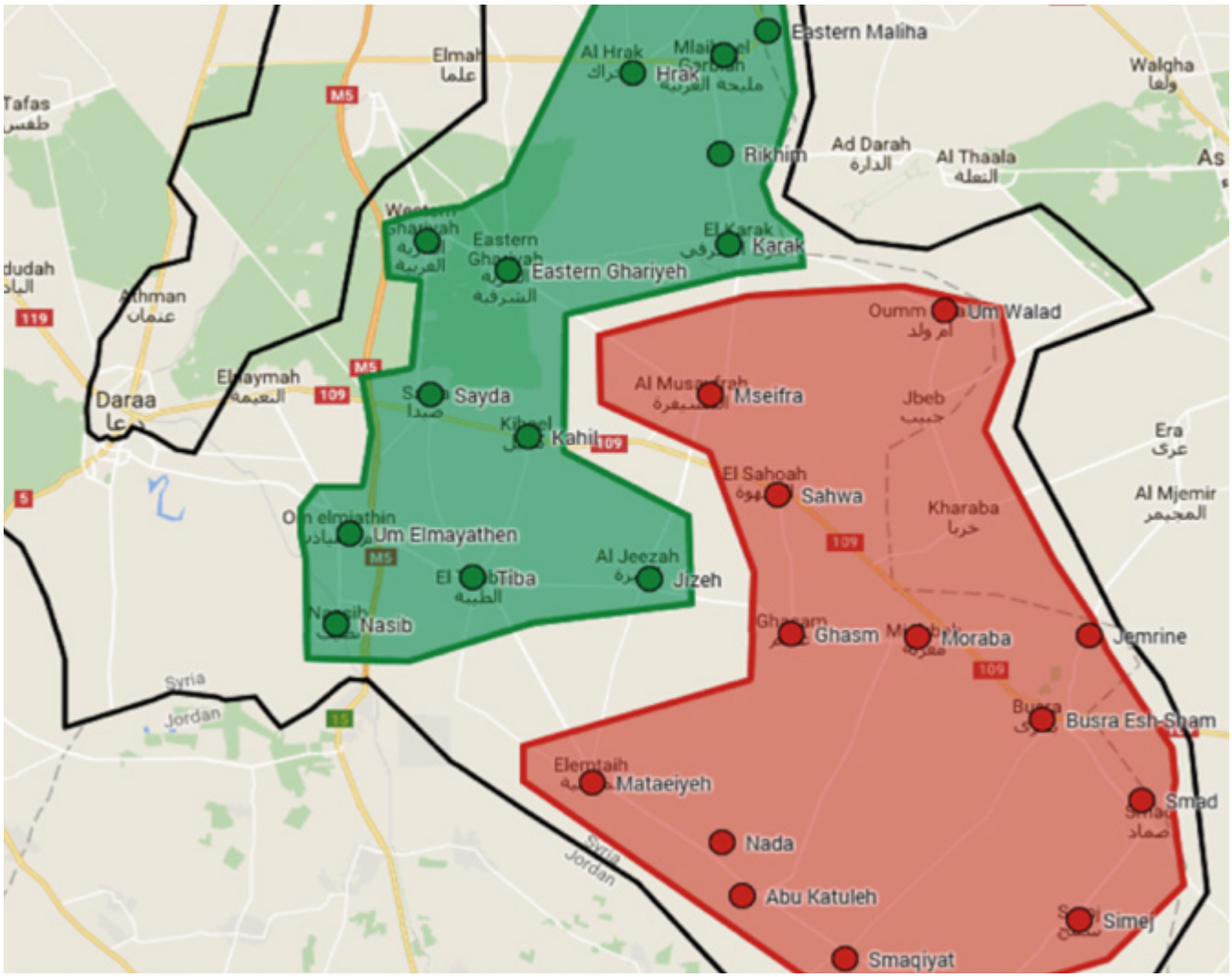
Figure 11. Locations where healthcare was sought



The association between reportedly needing care (and ultimately seeking it) and the location of individuals was found to be statistically significant (p=0.000). Two clusters were initially defined for sampling purposes and the sample was equally distributed across clusters. The red cluster underlined the area surrounding Busra city while the green one was further out to the west of east Daraa. The probability of needing healthcare was higher (25.9%) among households in the vicinity of Busra Al-Sham (red cluster) compared to households in the green cluster (11.1%). Therefore, the likelihood of needing/seeking healthcare decreased the further away households were from Busra. The probability of seeking healthcare based on needs should not be affected by the location of individuals, but people living closer to Busra hospital may feel more compelled to report on their healthcare-seeking behaviours. That being said, households that were located in the green cluster were significantly more likely to receive care in Jizah or Nassib (part of the green cluster) due to their proximity to these hospitals.

Figure 12. Hospitals where care was sought by cluster location





Summary of facilities utilisation across clusters						
	Total		Red		Green	
	n	%	n	%	n	%
Needed care	752	18.3	518	25.9	234	11.1
Received care at hospital	137	20.6	116	24.7	21	10.7
Received care at Busra hospital	83	60.6	82	70.7	1	4.8
Spent one night in hospital	173	4.2	140	7.0	33	1.6
Spent that night in Busra hospital	83	48.0	82	58.6	1	3.0
Has used Busra hospital at least once	247	6.0	235	11.7	12	0.6
Services used when visiting Busra						
Medical	155	62.7	152	64.7	3	25.0
Surgical	49	19.8	42	17.9	7	58.3
Paediatrics	16	6.5	15	6.4	1	8.3
Obstetrics	11	4.4	11	4.7	0	0.0
Gynaecological	7	2.8	7	3.0	0	0.0
Others	9	3.6	8	3.4	1	8.3

As mentioned above, healthcare was primarily sought in hospitals and private clinics. For the 11.6% (86 individuals) who did not seek care, the primary barrier was cost (59.3%). For the 5.4% (35 individuals) who sought and did not receive care, the primary barriers to this access were cost (37.1%) and unavailability of either services (28.6%) or medication (11.4%).

Figure 13. Barries to receiving healthcare whenever sought

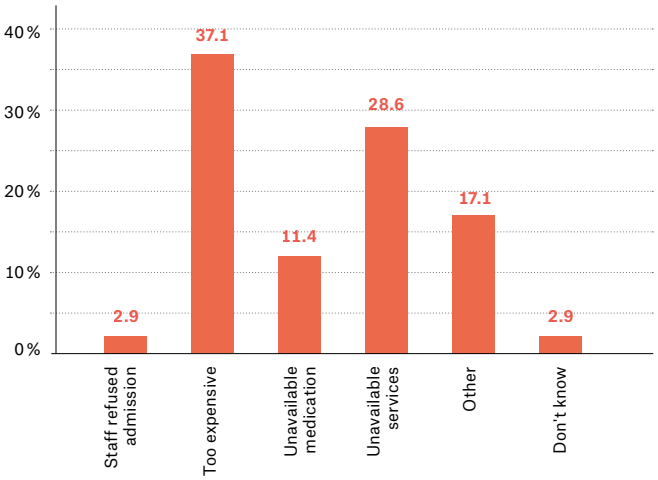
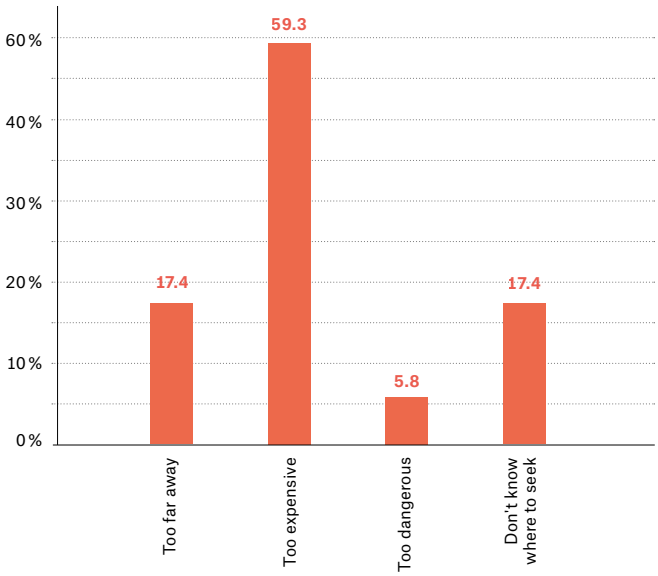


Figure 14. Barries to seeking healthcare



PREDICTIVE ANALYSIS

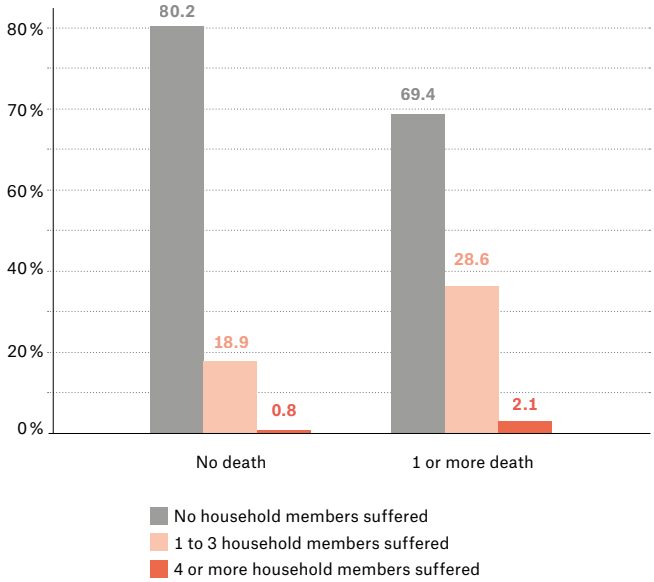
Multilevel mixed-effects logistic regression was used to gain a better understanding of the correlations between needing care and the different independent variables that were either found to be significantly associated with this outcome at bivariate level or rationally expected to be associated with it. In order to predict the greatest amount of variability in the probability of needing care, we ran a model adjusting for household size, age, gender, education, displacement, suffering from at least one chronic illness, and reported emotional suffering. The different education categories were lumped accordingly: no formal education (cannot read and write, can read and write), primary education, secondary education (secondary education, intermediate education, and technical institutes), college or higher (graduate degree, university). Taking the household as a random effect and adjusting for all the mentioned fixed covariates, the association between suffering from chronic illnesses in the past 12 months and reportedly needing care was statistically significant and extremely strong. In fact, respondents who had suffered from a chronic illness in the past 12 months were 7.8 (95%CI: 5.56-11.10) times more likely to need care than those who had not reported suffering from chronic illnesses. Additionally, respondents who were displaced at least once and those who had reported emotional suffering were respectively 1.7 (95%CI: 1.12-2.34) times and 1.5 (95%CI: 1.01-2.24) times more likely to need care compared to those who had not. Adjusting for all other fixed and random effects, the associations between household size and education on the one hand and reportedly needing care on the other were not statistically significant.

Needing Care	OR	95%	CI
Household size	0.98	0.92	1.05
Gender	0.61	0.47	0.79
Age	1.01	1.01	1.02
Education			
No formal	1.00	-	82
Primary education	0.96	0.58	1.61
Secondary education	1.04	0.66	1.65
College or higher	1.15	0.62	2.12
Displacement	1.66	1.18	2.34
Suffered chronic illness	7.80	5.60	11.10
Emotional suffering	1.51	1.01	2.20

MENTAL HEALTH

The results indicate that 12.3% of individuals older than 15 years of age who had been assessed for mental health suffering had reported emotional suffering over the past 30 days. This emotional suffering was numerically coded and collapsed to a household level with the results indicating that 20% of households reported at least one member with emotional suffering over that time period. Although non-significant (p=0.166), the association between household-level death and household-level emotional suffering generally depicts a greater proportion of emotional suffering across households that reported death. In households where at least one death was reported, the prevalence of no emotional suffering is 69.4% compared to 80.2% in households with no reported deaths. On the other hand, the prevalence of total emotional suffering in households with at least one reported death is almost 31% compared to 19.7% in households with no reported deaths. Emotional suffering was significantly more common among those who had been resettled (14.6%) than those that had not been resettled (9.7%), and significantly more common among residents of the red cluster (14.8%) than residents of the green cluster (9.5%). Since resettlement is significantly more common among residents of the red cluster (60.5%) than residents of the green cluster (41.6%), it is the main factor contributing to mental health suffering.

Figure 15. Emotional suffering caused by deaths in household



IMMUNISATION

The assessment captured information related to 445 children under the age of five. This subpopulation is 24.62 months old on average. The findings highlight that 98% of children under five received at least one vaccine over the course of their life. Among the 2% who were not vaccinated, the major barriers were distance (33.3%), lack of trust in origin of vaccines (22.2%), and a general reluctance to vaccinate (22.2%). The majority of children were vaccinated in health centres in the same region (80%), and surprisingly only 9% were vaccinated through catch-up campaigns. It is worth mentioning here that these vaccination centres in east Daraa are still receiving the vaccines from Damascus.

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MSF teams during households' visits.

Vaccination cards were available in 89.91% (392 children) of cases and were used to extract detailed information surrounding immunisation data, as well as mode and frequency of administration. Whenever vaccination cards were not available, the information was collected through detailed questioning of the closest relative.

The categorical information for every antigen was split into multiple dummy variables to highlight the different possible doses, and the data was observed across age groups reflecting an immunisation schedule specific to the Syrian Arab Republic. The data is visualised both within age categories and across a continuum up to the age of five. The first is useful to highlight coverage rates within specific age subsets. The second enables us to observe the vaccine coverage compared to the growth of the cohort of children, and subsequently highlight the need for catch-up campaigns.

	at least 1	at least 2 doses	at least 3 doses	at least 4 doses	more than 4 doses
BCG	88.70%	-	-	-	-
Hep B	83.50%	46.70%	27.80%	-	-
Penta	78.60%	56.70%	28.70%	12.40%	1.30%
Measles	68.70%	33.40%	5.40%	-	-
OPV	92.80%	78.80%	52.40%	37.90%	28.90%

BCG

The BCG vaccine is expected to be received only once at birth and the results highlight a coverage of 88.7% across the sample with the lowest coverage (77.3%) in the 0-2 age group. This represents a drop in the total coverage compared to the 96.9% reported in the baseline assessment.

Figure 16. BCG coverage across age

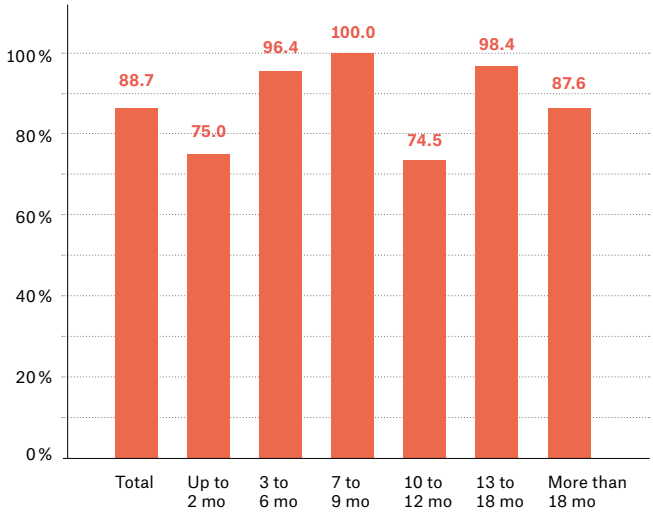
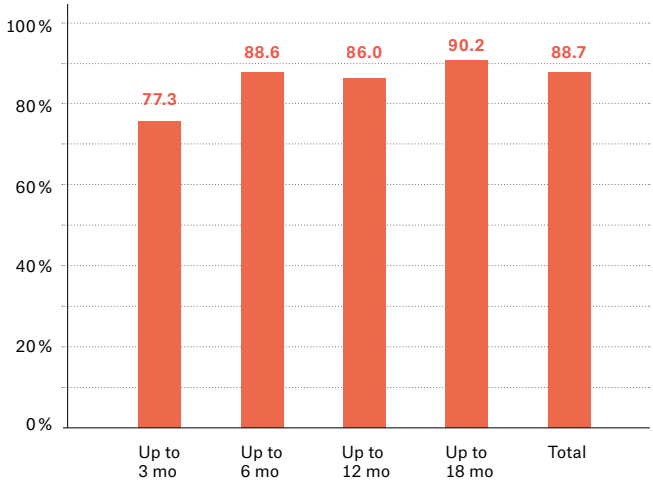


Figure 17. BCG coverage by age



Hepatitis B

The HepB vaccine is given in three doses; the first at birth and the remaining two at eight and 24 weeks after birth. The coverage for at least one dose of HepB vaccine was relatively high across the sample at 83.5% with a sharp drop to less than 50% and less than 30% coverage when respectively computing for at least two and at least three doses received. The coverage for at least one dose of HepB dropped considerably from the 96.32% reported at baseline.

Figure 18. HepB coverage across age

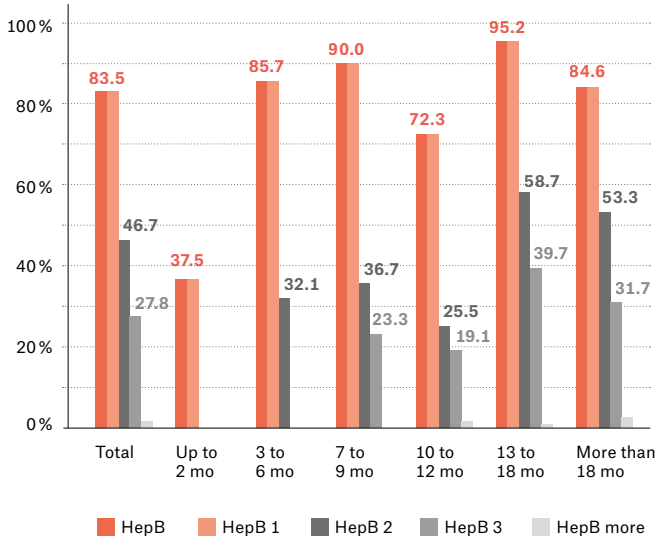
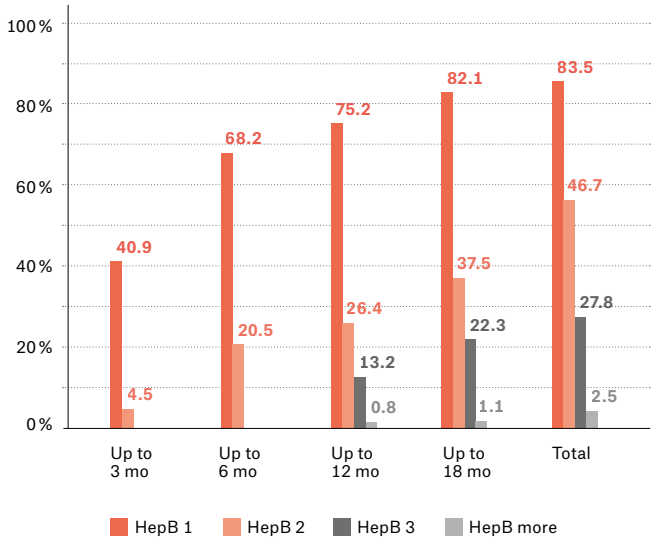


Figure 19. HepB coverage by age



Pentavalent vaccine

The pentavalent vaccine consists of Diphtheria, Tetanus Toxoid, Acellular Pertussis, Haemophilus Influenzae type B, and the Inactivated Polio Vaccine. It is expected to be given in four doses at eight weeks, 16 weeks, 24 weeks, and 18 months. The average coverage of at least one dose of this vaccine was 78% across the sample with rates reaching 86.5% across the highest age group of more than 18 months old. The coverage rate dropped sharply with increased restriction on the dosages whereby only 56.7%, 28.7% and 12.4% of the sample reported receiving at least two, three and four dosages of the vaccine, respectively. Similarly to BCG and HepB, the total coverage was lower than the 91.26% reported at baseline.

Figure 20. Penta coverage across age

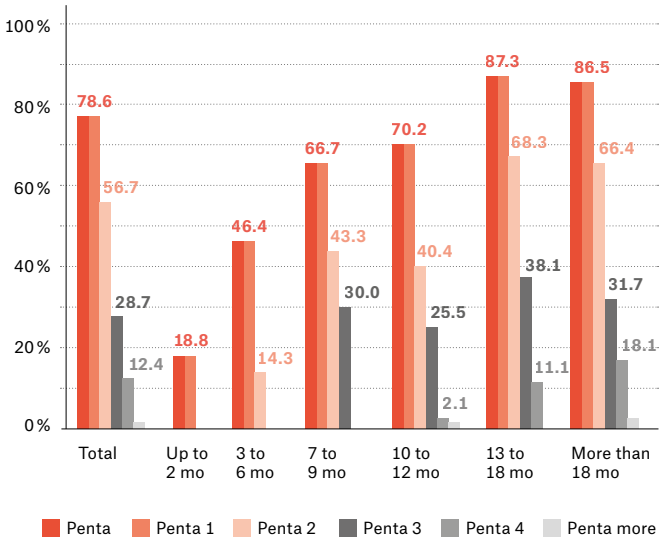
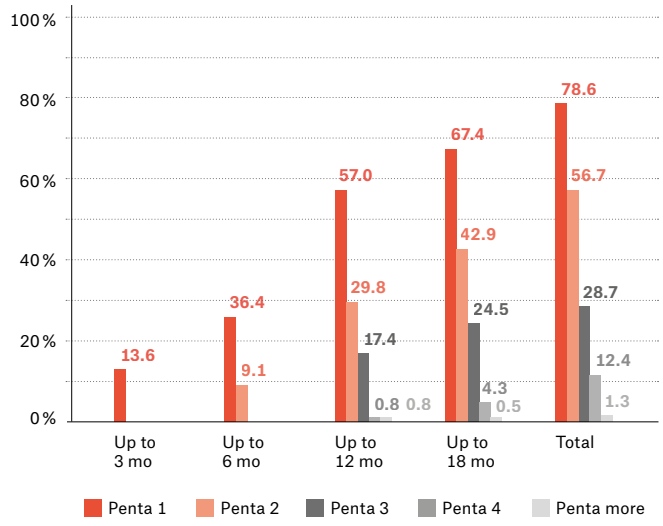


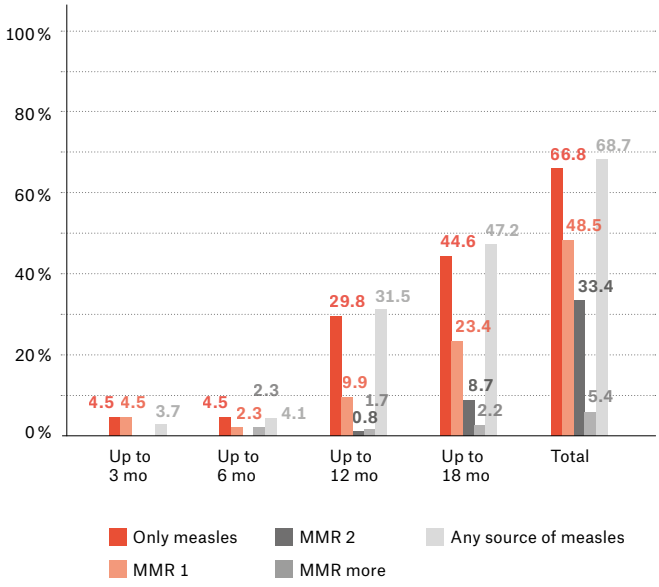
Figure 21. Penta coverage by age



Measles

The coverage of measles was assessed by combining both individual measles and MMR (Measles Mumps Rubella) coverage. According to the schedule, measles is supposed to be received in three dosages at nine months as measles vaccine alone, and MMR at 12 and 18 months of age. The total coverage of at least one dose of measles across the sample was 68.7%, a sharp drop from the 82.98% reported at baseline.

Figure 22. Measles and MMR coverage by age



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MSF teams during households' visits.

OPV

The Oral Polio Vaccine (OPV) is expected to be received in four dosages (birth, 24 weeks, 12 months, and 18 months). The overall coverage of at least one dose of the vaccine was as high as 93% with the lowest coverage (37.5%) across the 0-2 months old group and the highest (97.9%) across the 10-12 months old group. On average, 78.8% of the sample received at least two doses and 52.4% at least three doses. In the baseline assessment, it was reported that 94.48% of children received at least one OPV dose. The OPV vaccine coverage was the only one comparable to the reported coverage at baseline.

Figure 23. OPV coverage across age

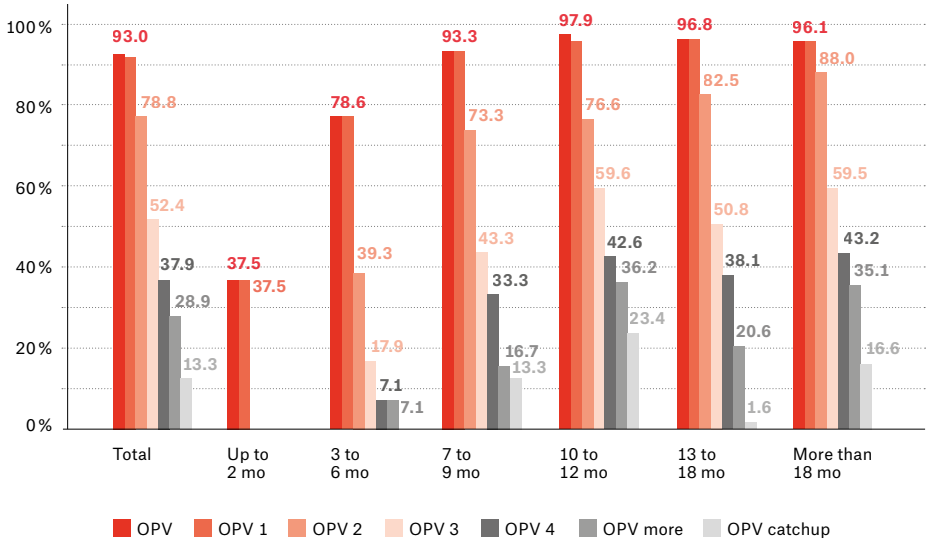
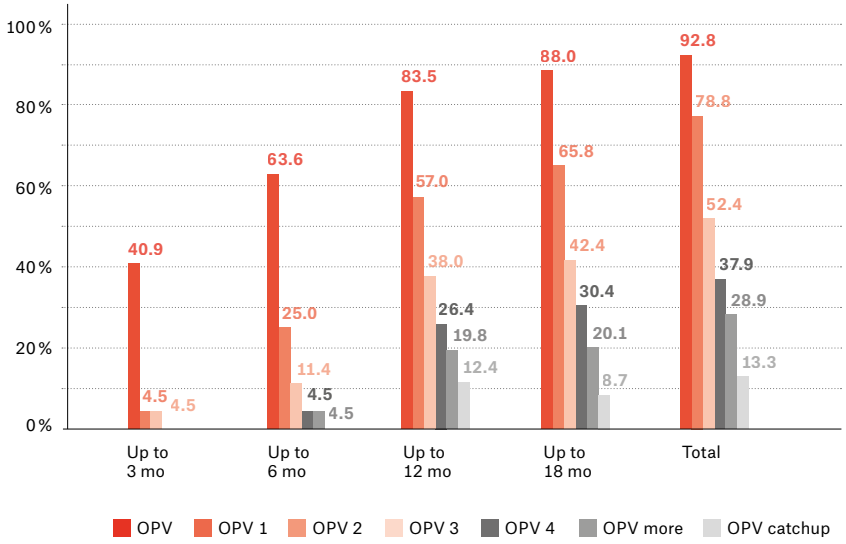


Figure 24. OPV coverage by age



SEXUAL AND REPRODUCTIVE HEALTH

Out of the 4,207 respondents, there were a total of 1,081 women of reproductive age (between 15 and 49). The use of family planning was estimated at a staggering 7.9% among women of reproductive age, a considerable drop from the already low 16.9% reported at baseline. Females most commonly used pills (39%) or intrauterine devices (IUDs; 39%) as family planning methods. Only 7% used condoms whereas 3% reported not knowing the available methods. Similar to the baseline findings, family planning was significantly (p=0.01) more common among displaced women (10%) than women living in host populations (5.8%). The pregnancy prevalence at baseline was 9.4%. At the time of the assessment, 10.3% of women reported being currently pregnant, 16% of which were unplanned pregnancies. Overall, family planning methods were unsuccessful in 4% of cases. Among those women who reported being currently pregnant, 22% had already delivered a child in the past 24 months. Based on this information, the estimated crude birth rate in east Daraa was 21.03 births/1000 people, a slightly lower estimate than the 25.7 births/1000 people observed at baseline. The average gestational age for current pregnancies was 20.2 weeks and 21.8% of women reported not receiving services related to this pregnancy. The results indicate that 25% of currently pregnant women are planning to have home deliveries, essentially due to cost concerns (36%) and previous positive experiences (44%). In the event of medical emergencies, 44% of pregnant women reported no access to transportation while 16% reported not knowing if they would have access. The majority (78.2%) of currently pregnant women reported receiving antenatal care (ANC). Among those who had received ANC, 62% received this care at private doctors' clinics, 20.3% visited private midwives, while the remaining visited non-communicable disease clinics in various health facilities. Subsequently, 74.7% reported having to pay for these ANC services. Among the women of reproductive age, 76% did not have a single Tetanus vaccine throughout their lives. This is a reflection of the 2008 Syria MoH policy deeming Tetanus as an unnecessary vaccine.

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MSF teams during households' visits.

Within the last 24 months, 14.6% of women between the ages of 15 and 49 reported being pregnant. Among these women, 66% had normal vaginal deliveries, 24.4% had caesarean sections, 7.7% reported abortions and/or miscarriages, and 1.9% had stillbirths. Only 83.3% of these pregnant women received ANC during the past two years. The deliveries were assisted by midwives in 60% of pregnancies and medical doctors in only 31% of pregnancies. Additionally, they were home deliveries in 29% of pregnancies.

SUMMARY & RECOMMENDATIONS

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MSF teams during households' visits, notice the battery setup used to get electricity behind the old man.

The ongoing crisis in Syria has clearly taken its toll on populations, both in terms of demographics and needs. Displacement is a hallmark of humanitarian emergencies with inter-sectorial ramifications that often require policy-guided solutions and timely and appropriate humanitarian response (Mowafi, 2011; Cernea, 1997). In east Daraa, displacement is mediating disparities extending beyond health and socioeconomic issues whereby displaced people are living in relatively poorer conditions with limited access to basic services. The violence and turmoil at the core of this displacement are also suspected to drive the privatisation of care in this area, effectively adding financial strain to an already saturated community with gaps and needs. This is nothing but a confirmation of the reported suffering and breakdown of livelihood due to the destruction of health systems in Syria (Sharara, 2014). There seems to be a silver lining, however, amid this volatile context.

With the crisis in the middle of its seventh year, there is an evident process of community adaptation, especially when compared to the findings observed at baseline almost one year earlier. Generally, there is an inverse relationship between family size on the one hand, and family resources and child education on the other (Downey, 1995). The drop in average household size in the area may indicate a decrease in nuclear family sizes and ultimately better lifestyles, education and allocation of resources. The result of multiple surveys recently conducted by different organisations in the south report an increase in standard accepted household size to six household members, but this increase seems to be more specific to west Daraa and Quneitra. The decrease in household size in east Daraa is also paralleled by a drop in average household resettlement in that area. Additionally, the higher proportion (compared to baseline) of female respondents representing the

household at the time of interview, coupled with the low mortality rate at household level, potentially indicates a growing stability and improved living conditions in east Daraa. The unavailability of male heads of households at the time of the interview could be due to their growing return to routine daily professions and chores.

Healthcare is generally received whenever needed and sought in east Daraa, but it was more likely to be sought in the eastern part of east Daraa in general, and Busra city in particular. This either indicates better service provision in the eastern part of east Daraa (Busra hospital is the only hospital in Daraa fully supported by one INGO) or a general underreporting of health needs in the western part of east Daraa. Regardless of the location of households, health needs that required hospital care were predominantly met at Busra Hospital, further cementing the operational value of this hospital in east Daraa.

As was the case in the baseline assessment, the prevalence of pregnancies among women of reproductive age was found to be slightly higher than the normal expected rate in similar populations. This estimate could potentially also be higher because women in their first or second trimesters might not yet be aware of being pregnant and thus, may not report it. It could also be argued that in a conservative community such as this one, women who are single or widowed should be excluded from these calculations (although they may fall under the reproductive age category) inflating the estimation even further. Coupled with the high rate of unplanned pregnancies, this reflects a gap in sexual and reproductive health services in general, and family planning in particular. In fact, the already low use of family planning at baseline has now reportedly halved in east Daraa. The promotion of family planning in emergencies has the potential to reduce child death, poverty as well as hunger (Cleland, 2006). There needs to be greater commitment from humanitarian organisations to actively support making these services available and free of charge, and seek better awareness through community engagement that ultimately leads to favourable reproductive health outcomes. These initiatives should find encouragement in the clear efficacy of family planning methods, whereby pregnancies have reportedly occurred despite proper planning on very rare occasions, and only when the methods used were pills and withdrawal instead of the favoured intrauterine devices (d'Arcangues, 2007). Among pregnant women, the assessment found a high reliance on midwives for both consultations and deliveries. This is consistent with the literature that highlights the role of midwives in orienting women towards informed choices and protective gatekeeping (Levy, 2006). Different factors and concerns ranging from money and transportation to culture and traditions are often key determinants of the place of delivery across communities (Mrisho, 2007). Despite primarily reporting cost concerns surrounding sexual and reproductive health services as well as actual deliveries, women in east Daraa still most commonly resorted to private clinicians when seeking these services. This could be a reflection of the high security concerns surrounding public hospitals and health facilities being consistently targeted across Syria.

Although children are generally receiving different types of vaccine antigens, this coverage is on several levels partial rather than comprehensive. In fact, the coverage for all antigens was found to be in poor synchrony with both the required amount of dosages and the immunisation schedule. While specific coverage did not coincide and fall in the expected age groups defined by the immunisation schedule, the oldest age group (above 18 months) almost always exhibited an increase in antigen coverage. There is a real concern however, with regard to the completeness of the acquired immunity. The multiple dosages of any specific antigen are imperative for the immune system to develop proper long-lasting memory cells (Banatvala, 2000). There is an alarming proportion of children above 18 months of age (age after which the probability of routine vaccination significantly drops) who have not received the minimum required dosages of different vaccine antigens, highlighting an increased susceptibility to contract and spread infections as they grow older. The high single dose coverage observed in east Daraa reflects an artifactual immunity. Furthermore, these rates are generally lower than those observed at baseline, possibly indicating the rise of a new cohort of children who are yet to be targeted through vaccination campaigns. These findings reinforce the need to advocate for routine and catch-up campaigns targeting both the new cohort of children as well as older children with partial immunity.

STUDY LIMITATIONS

This is a cross-sectional study that provides a snapshot of the health situation across east Daraa. Like every other cross-sectional study, there is a temporal bias that limits our ability to determine whether the outcome or the exposure came first. Due to the volatile context as well as access barriers, there are no true population figures or household listings available. Although robust standard error techniques were used, this still has implications on the precision of the estimates.

The assessment was conducted in a culturally sensitive setting which limited our ability to measure certain outcomes. This was particularly true for the module of sexual and reproductive health where we failed to assess subjects such as sexual violence and unwanted pregnancies. Additionally, we failed to capture detailed diagnostic information at times because of the absence of technically trained enumerators. This was true for the mental health module where it was not possible to report information on specific illnesses.

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One of the toilets types that are being used by some households in Daraa.

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