MEDAIR   SWISS SOLIDARITY   tearfund   CANADA   Canada

HEALTH & WASH KPC SURVEYS: KNOWLEDGE, PRACTICE AND COVERAGE

2016-2017 Comparison report

Contents

INTRODUCTION

This report was prepared based on the 2016 and 2017 Knowledge, Practices and Coverage survey reports, and should be read in conjunction with them. They can be made available on request.

METHODOLOGY

Survey Preparation and Data Collection[1]

For the 2016 and both 2017 KPC Surveys, the Medair M&E team calculated sample size requirements and built a sampling frame using a stratified cluster design (30 clusters within the vulnerable Lebanese population and 30 clusters within the Syrian refugee population), to achieve 95% confidence interval point estimates with an acceptable degree of precision. During the second part of the consultancy, three datasets were looked at in order to compare health related behaviors and indicators:

- The 2017 KPC Survey in the Bekaa area: 792 respondents (400 Lebanese and 392 Syrians)
- The 2017 KPC Survey in Medair's Area of Intervention (AOI): 780 respondents (395 Lebanese and 385 Syrians)
- The 2016 KPC Survey in Medair's AOI: 752 respondents (385 Lebanese and 367 Syrians)

This enables both geographical and historical comparison with the previous year.

Data Analysis

Data Cleaning

The three sets of data were cleaned and matched before the analysis. In some cases, columns were added to facilitate the analysis and match the indicators to report on. A few data entries were removed from the dataset: when no female was present in the household, when women did not consent to participate in the survey, when there was no child under 5 in the household and when the discrepancies between cluster, cadaster or respondent type could not be resolved.

Sampling Weights

Sampling weights were calculated for the 2016 dataset in order to match the method used to define weights in the 2017 datasets. The weights take into account the total population, the cadaster population in which the cluster interviews were conducted and the number of interviews of each cluster.

Software

The data was analyzed with the complex samples toolkit in SPSS using clusters and population weights. Most of the data being categorical variables, the chi-square test of independence was used to determine statistical difference between the two groups: vulnerable Lebanese and Syrian refugees.

For frequency calculations, the following measures were included: percentage, unweighted count, standard error, 95% confidence interval[2] and design effect. Some additional cross tabulations were

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[1] For the study design, the questionnaire design, the sample size and sampling frame, the enumerator selection and training, the data entry fieldwork and the selection of participants, please refer to the main 2016 and 2017 reports for more details.

[2] Since most of the variables are binomial and the estimates are percentages, constrained between 0 and 100, the confidence intervals are not symmetric and were calculated using a logarithm transformation. For more information, see: http://www-01.ibm.com/support/docview.wss?uid=swg21480661

used to confirm statistically significant differences with the chi-square in most cases, p-values and odds ratio. In order to be able to compare the 2016 and 2017 datasets, the 2016 data was re-analyzed and the indicators' point estimates changed. However, the majority of the results presented in the 2016 report were still within the confidence intervals newly calculated. All the working files are available upon request: datasets, sampling weights calculations, analysis scripts, complex samples plans and outputs.

OBJECTIVES

This following commentary aims to report on all statistically significant differences between 2016 and 2017 that could indicate potential trends in the two populations of interest (Syrian refugees and vulnerable Lebanese) within Medair's Area of Intervention (AOI).

- The AOI is defined as the area within a 5km radius of social development centers (SDCs, which offer primary and reproductive health care services) Medair supports[3].
- The statistically significant difference was determined by looking at odds ratio[4] when available for 2x2 tables and non-overlapping confidence intervals otherwise for questions with a categorical response.
- The wording used attempts to reflect the results in the tables below: "overall" means there is a statistical difference for the combined population between 2016 and 2017; "overall, for Lebanese and Syrians" means that even when it is broken down by nationality, the statistical difference remains and "overall, and especially for Lebanese" means that the statistical difference is only within the Lebanese subgroup and not the Syrian subgroup, on top of the combined data.

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[3] In the 2017 survey these included Talia, Rafid, Brital, Kfarzabad, Marj, Kabelias, and Joub Janine SDCs. The 2016 survey also covered Kawkaba, Chaat, and Nabishit SDCs, which at the time were also covered by Medair. These health facilities are located within the districts of Baalbek, Rachaya, West Bekaa, and Zahle, in the Bekaa Valley

[4] "The 95% confidence interval (CI) is used to estimate the precision of the OR. […] In practice, the 95% CI is often used as a proxy for the presence of statistical significance if it does not overlap the null value (e.g. OR=1)."
Retrieved from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2938757/

COMMENTARY ON TRENDS

Summary table of indicators 2016-2017

Topic	Indicator	AOI (2016)	AOI (2017)	Bekaa (2017)	Statistical Difference
Health care access general	% of residents in catchment area of SDCs who went to a health facility when they needed medical services (measured by survey)	**90.6%** [87.0, 93.3]	**92.5%** [88.8, 95.0]	**88.8%** [84.6, 92.0][5]	No
Knowledge about NCD prevention	% of women who know 2 or more ways to reduce the risk of NCDs	**LEB: 60.6%** [52.2, 68.5] **SYR: 29.3%** [23.3, 36.1]	**LEB: 65.4%** [59.1, 71.2] **SYR: 51.8%** [43.8, 59.8]	**LEB: 73.5%** [66.8, 79.2] **SYR: 57.2%** [50.8,63.4]	Yes for SYR between 2016 and 2017 in AOI
ORS and zinc for diarrhea	% of children under 5 years with diarrhea receiving ORS or zinc supplementation	**ORS or Zinc:** **LEB: 22.0%** [14.0, 32.8] **SYR: 40.9%** [29.6, 53.2] ORS: 23.9% [18.1, 31.0] Zinc: 8.0% [4.8, 13.1]	**ORS or Zinc:** **65.0%** [54.1, 74.6] ORS: 34.8% [26.7, 44.0] Zinc: 34.0% [27.1, 41.8]	**ORS or Zinc:** **71.1%** [62.9, 78.1] ORS: 45.3% [37.9, 52.9] Zinc: 29.9% [22.1, 39.1]	Yes for ORS or Zinc between 2016 and 2017 in AOI Yes for zinc between 2016 and 2017 in AOI
Health care seeking for children with ARI	% of children under 5 with fast or difficult breathing for whom advice or treatment was sought from an appropriate health facility or provider[6]	**55.6%** [47.8, 63.2]	**59.7%** [52.0, 67.0]	**53.2%** [46.1, 60.1]	No
Exclusive BF	% of infants 0-6 months who are exclusively breastfed[7]	**46.8%** [34.2, 59.8]	**19.2%** [12.2, 28.7]	**25.3%** [15.9, 37.8]	See note 5 about the yearly difference
Measles vaccination coverage	% of children aged 6 months- 5 years[8] who are vaccinated for measles in clinics coverage area Note: Vaccination activities at the same time.	**Including recall:** 71.3% [66.0, 76.0] Partial[9]: LEB: 50.9% [43.3, 58.4] SYR: 33.7% [27.5, 40.5] <u>Full:</u> LEB: 39.8% [32.1, 48.1] SYR: 19.8% [15.8, 24.4]	**Including recall:** **LEB: 79.1%** [72.6, 84.5] **SYR: 61.2%** [55.1, 67.0] Partial: LEB: 51.3% [43.3, 59.2] SYR: 33.2% [25.4, 42.0] <u>Full:</u> LEB: 32.5% [26.3, 39.3] SYR: 11.9% [7.8, 18.2]	**Including recall:** **LEB: 80.5%** [73.4, 86.1] **SYR: 67.9%** [60.7, 74.2] Partial: 45.8% [39.6, 52.1] <u>Full:</u> 27.3% [22.6, 32.6]	No

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[5] Note for the Bekaa 2017 indicator, the persons interviewed were not necessarily in an SDCs' catchment area

[6] List of appropriate health facilities: hospital, health center, clinic, community health workers

[7] This indicator was reconstructed based on a combination of questions and measured differently between 2016 and 2017

[8] The survey asks vaccination questions to mothers about their youngest child between 1 and 5 years old

[9] The partial indicator includes even one dose of MMR: "The MMR vaccine is very safe and effective. Two doses of MMR vaccine are about 97% effective at preventing measles; one dose is about 93% effective." (CDC, www.cdc.gov/measles/vaccination.html)

Fully immunized children[10]	% of children age 12-23 months who received age appropriate vaccination at time of survey	**Children 1-2 years** **10.7%** [6.8, 16.4] Children 1-5 years LEB: 27.1% [20.9, 34.5] SYR: 11.6% [7.0, 17.2]	**Children 1-2 years** **6.8%** [4.0, 11.3] Children 1-5 years LEB: 22.1% [16.5, 28.9] SYR: 8.3% [4.6, 14.6]	**Children 1-2 years** **8.1%** [5.1, 12.6] Children 1-5 years LEB: 24.5% [18.1, 32.2] SYR: 11.6% [7.7, 17.1]	No
Health care access RH and PSS	% of mothers of children under 5 who report accessing RH or PSS support services[11] in the 6 months prior to the survey	<u>RH:</u> **50.1%** [44.7, 55.5] <u>PSS:</u> **39.4%** [34.5, 44.3]	<u>RH:</u> **54.8%** [49.8, 59.7]	<u>RH:</u> LEB: **39.7%** [33.8, 45.9] SYR: **58.3%** [51.7,64.7]	Yes for RH between AOI and Bekaa in 2017
FP and PSS discussion with health provider	% of mothers of children under 5 who report discussing FP or PSS[12] with a trained service provider in the 12 months preceding the survey	<u>FP:</u> **28.8%** [23.6, 34.6]	<u>FP:</u> **23.2%** [18.2, 29.0]	<u>FP:</u> **21.9%** [18.3, 25.9]	No
ANC visits	% of mothers of children under two years of age who had 4 comprehensive antenatal visits when they were pregnant with their youngest child	**LEB: 74.2%** [63.3, 82.8] **SYR: 41.9%** [32.4, 52.1]	**LEB: 67.4%** [58.4, 75.3] **SYR: 47.6%** [40.7, 54.6]	**LEB: 72.8%** [62.3, 81.3] **SYR: 54.6%** [46.0, 62.9]	No
PNC visits	% of mothers of children under two years of age who received a post-partum visit from an appropriate trained health worker within two weeks after birth of their youngest child after discharge from health facility[13]	**LEB: 86.9%** [80.4, 91.5] **SYR: 63.5%** [56.2, 70.3]	**LEB: 78.2%** [70.8, 84.2] **SYR: 62.4%** [55.4, 60.0]	**69.8%** [63.7, 75.2]	No
Use of modern FP methods	% of mothers of children 0-23 months who are using a modern contraceptive method.[14]	**27.3%** [22.3, 32.8]	**26.9%** [21.8, 32.7]	**25.8%** [21.5, 30.6]	No

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[10] This indicator has been changed and more complex in 2017 since it includes data collection of the boosters as well, which was not the case in 2016. A large percentage of children are deemed not fully vaccinated because cards could not be copied (42.5% for Bekaa 2017, 41.8% for Medair's AOI in 2017 and 42.5% for Medair's AOI in 2016).

[11] The data from the PSS section in 2017 cannot be interpreted due to a constraint error. However, respondents were asked about comfort level with such services: vulnerable Lebanese were 1.6 times more likely to report being comfortable with accessing psychosocial support services (61.5%, n=218) than Syrian refugees (50.2%, n=184); pvalue=0.047.

[12] No question was asked in the PSS module enabling to report on discussions with trained service providers in the past year in 2016 or 2017.

[13] This indicator was reconstructed based on a combination of questions and measured differently between 2016 and 2017

[14] The percentage of mothers of children 0-23 months who are using a modern contraceptive method out of those who want to delay pregnancies is much higher (63.2% in the Bekaa area in 2017)

Health-Seeking Behaviors
Types of Health Facilities Visited in the Past Year

Overall, for Lebanese and Syrians, the percentage of those who reported having needed to seek health services in the previous year decreased within Medair's AOI from 83.7% to 68.8%.

Overall, for Lebanese and Syrians, the percentage who went to SDCs increased from 23.5% in 2016 to 40.9% in 2017. Additionally, the percentage of Syrians going to a health facility (SDCs, health centers, private clinics or hospitals) increased from 11.6% in 2016 to 36.8% in 2017. These improvements may be due to the increased promotion of available services and medicine in SDCs.

Overall, and especially for Lebanese, the percentage of those going to private clinics decreased by 8.5% between 2016 and 2017.

Health Contacts and Sources of Health Information

Overall, and especially for Syrian refugees, the contact with health staff, community health workers and health educators all improved as fewer respondents mentioned never having contact with health staff in the previous month.

Overall, for Lebanese and Syrians, the percentage of respondents who reported that their preferred source of information or advice on health and nutrition were doctors increased from 37.1% to 58.1% and the percentage of those who reported that it was community health workers decreased from 6.8% to 1.9% between 2016 and 2017. Overall, and especially for Syrian refugees, more respondents reported in 2017 that their preferred source of information was their husband (6.6% increase) or their sister (5.6% increase), compared to 2016.

Overall, for Syrians and Lebanese, fewer respondents reported getting advice or information from the television in 2017 (19.1% decrease) than in 2016. Overall, and especially for Lebanese, less respondents reported getting advice or information from the internet in 2017 (8.9% decrease) than in 2016.

Overall, for Syrians and Lebanese, fewer respondents reported not getting advice or information from any sources in 2017 (13.3% decrease), compared to 2016.

Overall, for Syrians and Lebanese, more respondents in 2017 reported that SMS was a source of the health messages they received in the previous month, compared to 2016. More Lebanese and Syrians also reported that they had received health messages from the previous month from the internet in 2017 (LEB: 59.1% and SYR: 16.2%). There seems to be a difference and potential conflicting data regarding the place and importance of the internet and SMS as a source for information about health behaviors, which should be looked at in further qualitative research, with special attention to the appropriate media channels for Lebanese and Syrians and ways in which they may differ.

Child Health
Signs of Child Illness

Overall, and especially for Lebanese, fewer respondents reported that their child under 5 was sick in the past two weeks in 2017 than in 2016 (11.1% decrease), whether with diarrhea (8.8% decrease), cough (9.9% decrease), difficulty breathing (14.1% decrease) or fever (11.0% decrease).

Diarrhea

Overall, the percentage of respondents who reported treating their child two days after they first noticed their diarrhea increased from 6.5% in 2016 to 16.4% in 2017, while the percentage of same day treatment decreased. This is in line with the recommendations that during the first day, parents should monitor the frequency of diarrhea and other signs related to hyperthermia and dehydration to start appropriate treatment if needed within the next 2 days maximum.

Overall, what is given to treat children with diarrhea improved:

- **The percentage of Lebanese who reported giving nothing to treat diarrhea decreased from 12.8% in 2016 to 0.5% in 2017.**
- **Overall, for Syrians and Lebanese, the use of zinc to treat diarrhea increased from 8.0% in 2016 to 34.0% in 2017. The use of zinc or ORS to treat diarrhea doubled from 31.3% in 2016 to 65.0% in 2017.**
- Overall, and especially for Syrians refugees, the use of home remedies decreased by half from 11.2% in 2016 to 5.2% in 2017.
- Overall, and especially for Lebanese, the use of injections, which is not in typical protocols to treat diarrhea, increased from 4.5% in 2016 to 16.9% in 2017.

Overall, and especially for Syrians, the percentage who sought advice or treatment for their child's diarrhea in a health facility increased from 46.9% to 64.6%. These improvements may be due to the focus of community health volunteers (CHVs) on advice to reduce further complication linked to dehydration during health promotion sessions on diarrhea as well as the focus of Medair's staff to ensure that guidelines for diarrhea treatment and care were followed during consultations in SDCs.

When asked about the amount of liquids given to the child who had diarrhea compared to usual times:

- The percentage of Syrians who were breastfeeding their child and reported giving more breastmilk during diarrhea increased from 0.4% in 2016 to 10.2% in 2017.
  Overall, and especially for Syrians, the percentage of respondents not breastfeeding their child and who reported giving more fluids during diarrhea dropped from 21.0% in 2016 to 5.0% in 2017.

Medair CHVs focused on ensuring the misconception around reducing breastfeeding when a baby has diarrhea was debunked. Additional focus should be placed on ensuring that caregivers know that all children who experience diarrhea should be offer the same amount or more fluids while they are sick.

Acute Respiratory Infection (ARI)

For Lebanese, the use of cough drops to treat children who had a cough or difficulty breathing increased by 16.9% up to 77.7% in 2017. Overall, and especially for Lebanese, the use of antihistamines to treat children with cough or difficulty breathing has decreased by 13.5% to 6.5% in 2017. Though this data indicates some trends about home treatment of coughs by parents, Medair should focus future interventions and monitoring and evaluation efforts on understanding the prevalence of and care for children under 5 with symptoms of pneumonia.

Vaccinations

Out of the Syrian refugees who reported not having a vaccination card for their child, those who reported ever having a card decreased from 41.8% in 2016 to 16.6% in 2017.

For Syrian respondents who allowed the enumerators to copy their child's vaccination card, the percentage of children with the Penta vaccine (whether the first, second or third dose) increased between 2016 and 2017.

Reproductive Health

Access to Reproductive Health Services

The percentage of Syrians who reported that post-natal care (PNC) services were available in their community increased from 37.2% in 2016 to 53.7% in 2017. This improvement may be linked to the increased promotion by CHVs and as well as referrals from community midwives.

Overall, and especially for Syrians, the percentage of respondents who reported not knowing whether reproductive health services were available in their community decreased from 6.4% in 2016 to 3.4% in 2017.

Overall, for Lebanese and Syrians, the percentage of respondents who reported that reproductive health services were available in social development centers (SDCs) increased from 15.7% in 2016 to 34.9% in 2017. However, overall and especially for Lebanese, the percentage of respondents who reported that such services were available at health centers generally decreased from 21.9% in 2016 to 15.7% in 2017.

Overall, for Lebanese and Syrians, the percentage of respondents who reported being comfortable with accessing reproductive health services decreased from 94.3% in 2016 to 86.5% in 2017.

When asked in which country Syrian refugees accessed reproductive health services, there was over a ten percent increase in the access to those services in Lebanon between 2016 and 2017 (13.1% for ante-natal care (ANC), 14.0% for delivery and 21.6% for PNC).

Antenatal Care (ANC)

Overall, and especially for Lebanese, the percentage of respondents who reported seeing anyone for ANC during their last pregnancy decreased from 91.4% in 2016 to 83.6% in 2017.

Overall, for Lebanese and Syrians, the percentage of respondents who reported that their ANC took place in their residence increased from 3.3% in 2016 to 28.0% in 2017, whereas the percentage who reported that their ANC took place in private clinics decreased from 57.2% in 2016 to 36.3% in 2017. Taking into account that Medair's community midwives only visit Syrian households in their residence, there would be value in understanding the reasons behind such an increase being also reported within vulnerable Lebanese communities, and understanding what types of services Lebanese women classify as ANC services.

The percentage of Syrians who reported that their first ANC visit happened within the first month of their pregnancy increased from 28.7% in 2016 to 43.4% in 2017 and the percentage of Syrians who reported that their last ANC visit happened during the ninth month of their pregnancy decreased from 86.2% in 2016 to 71.9% in 2017.

The percentage of vulnerable Lebanese who reported not having received any ANC during the pregnancy of their youngest child increased from 3.9% in 2016 to 14.9% in 2017.

Giving Birth in a Health Facility

Overall, and especially for Syrians, the percentage of respondents who reported transportation as the reason they had not delivered in a hospital increased from 2.0% in 2016 to 23.7% in 2017. Part of this change can potentially be explained by the increasing financial burden on Syrian refugee households: VaSyR 2017 reports that "the economic vulnerability has worsened, with more than half of refugees living in extreme poverty".

Overall, and especially for Lebanese, the percentage of respondents who reported having been assisted by nurses during their last delivery decreased from 38.1% in 2016 to 21.7% in 2017.

Postnatal Care (PNC)[15]

Overall, for Lebanese and Syrians and between 2016 and 2017, the percentage of responses regarding the place in which they received post-partum care increased at their residence from 8.4% to 59.1% and decreased in private clinics from 53.3% to 13.4%.

Overall, and especially for Syrians, the percentage of those who reported having received their post-partum care in a hospital decreased from 27.2% in 2016 to 13.7% in 2017.

Family Planning/Child Spacing

Overall between 2016 and 2017, for both Lebanese and Syrians, respondents reported an increase in their knowledge about the risks linked to not spacing births (15.2% increase for the baby being born too small, 8.3% increase for the baby being born early and 14.4% decrease for those who did not know of any risks).

Overall, and especially for Syrians, the percentage of those not receiving family planning services decreased from 7.5% in 2016 to 2.6% in 2017.

Family Health
Non-communicable Disease (NCDs)

Overall, the knowledge around NCDs improved between 2016 and 2017. This may be linked to efforts made to increase beneficiaries' knowledge about NCDs, especially around the SDC in Brital and its NCD program:

- About twice as many Syrians mentioned reducing stress (from 11.8% in 2016 to 26.8% in 2017) as way to reduce the risk of NCDs and the percentage of Syrians who mentioned exercise to reduce the risk of NCDs increased from 0.7% in 2016 to 4.9% in 2017.
- Overall, for Syrians and Lebanese, the percentage of respondents who reported that stopping smoking can help reduce the risk of NCDs increased from 4.0% in 2016 to 12.3% in 2017. Similarly, the percentage of respondents who reported not knowing any method of preventing NCDs decreased from 29.6% in 2016 to 13.0% in 2017.
- Overall, and especially for Syrians, the percentage of respondents who reported that reducing sugar intake can help reduce the risk of NCDs increased from 44.3% in 2016 to 57.8% in 2017.

Psychosocial Support Services

Overall, and for both Lebanese and Syrians, the percentage of respondents who reported that there were no psychosocial support services available in their community decreased from 64.6% in 2016 to 28.2% in 2017. This might be due to the fact that a *'do not know'* option was added in the 2017 choices and was not in the 2016 survey: in 2017, 71.3% of respondents reported either not knowing any services or that they were unavailable.

Overall, for Syrians and Lebanese, the percentage of respondents who reported that psychosocial support services could be accessed in specialized hospitals decreased from 14.7% in 2016 to 4.7% in 2017.

Overall, for Syrians and Lebanese, the percentage of respondents who reported being comfortable with accessing psychosocial support services decreased from 82.7% in 2016 to 59.2% in 2017.

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[15] All information about PNC should be explored further (particularly beneficiaries' understanding of what postnatal care consists of) as the questions within this section changed between 2016 and 2017.

Detailed tables of statistically significant differences[16] between 2016 & 2017

Table 1 – Health Seeking Behaviors

Question	Answer	2016	2017	Trend
In the last year, have you or your child/children needed medical services?	Yes	83.7% [79.8, 87.0] LEB: 81.5% [76.1, 85.9] SYR: 86.4% [80.4, 90.8]	68.8% [62.7, 74.3] LEB: 62.7% [54.0, 70.6] SYR: 73.5% [65.3, 80.3]	Decreased - 14.9%
Which health facility did you go to? (asked if reported going to a health facility when they needed the medical services)	SDC	23.5% [18.1, 29.9] LEB: 14.9% [10.0, 21.7] SYR: 33.2% [25.1, 42.3]	40.9% [35.7, 46.2] LEB: 31.2% [23.4, 40.4] SYR: 47.1% [42.3, 51.9]	Increased + 17.4%
	Private clinic	29.1% [23.0, 36.1] LEB: 43.6% [36.2, 51.3]	20.6% [16.3, 25.8] LEB: 30.7% [24.6, 37.5]	Decreased - 8.5%
	Health Facility	SYR: 11.6% [5.6, 22.7]	SYR: 36.8% [22.3, 54.1]	Improved + 25.2%
During the last month how often have you come in contact with each of the following?	No contact with health staff	80.7% [75.3, 85.1] SYR: 90.7% [86.7, 93.6]	72.5% [68.6, 76.1] SYR: 75.9% [71.0, 80.2]	Improved - 8.2%
	No contact with community health workers	91.3% [88.0, 93.7] SYR: 92.8% [88.9, 95.3]	78.5% [73.8, 82.5] SYR: 77.4% [71.1, 82.7]	Improved - 12.8%
	No contact with health educator	95.4% [92.9, 97.1]SYR: 96.4% [91.7, 98.5]	86.8% [82.9, 90.0]SYR: 84.7% [79.1, 89.1]	Improved - 8.6%
Where do you prefer to get general information or advice on health or nutrition?	Doctor	37.1% [31.0, 43.7] LEB: 47.3% [39.1, 55.6] SYR: 24.8% [18.5, 32.4]	58.1 % [52.1, 63.8] LEB: 67.8% [61.5, 73.5] SYR: 50.7% [42.9, 58.5]	Increased + 21.0%
	Community health workers	6.8% [4.9, 9.2] LEB: 5.4% [3.4, 8.5] SYR: 8.4% [5.4, 12.7]	1.9% [1.0, 3.6] LEB: 1.5 % [0.6, 3.4] SYR: 2.2% [0.9, 5.3]	Decreased - 4.9%
	Husband	8.3% [6.5, 10.5] SYR: 4.8% [2.8, 8.2]	14.9% [11.6, 19.0] SYR: 15.7% [10.8, 22.5]	Increased + 6.6%
	Sister	6.7% [4.8, 9.3] SYR: 4.3% [2.4, 7.6]	12.3% [9.6, 15.6] SYR: 11.4% [8.2, 15.7]	Increased + 5.6%
	No one	17.5% [12.8, 23.4] LEB: 11.8% [7.3, 18.6] SYR: 24.3% [16.6, 34.1]	4.2% [2.5, 7.0] LEB: 3.1% [1.2, 8.0] SYR: 5.1% [2.8, 9.0]	Improved - 13.3%
	Television	22.8% [17.8, 28.8] LEB: 33.7% [27.7, 40.2] SYR: 9.8% [6.6, 14.2]	3.7% [2.1, 6.5] LEB: 6.6% [3.5, 12.2] SYR: 1.5% [0.7, 3.4]	Decreased - 19.1%
	Internet	17.4% [12.8, 23.3] LEB: 28.0% [21.9, 34.9]	8.5% [5.7, 12.6] LEB: 13.1% [7.9, 21.1]	Decreased - 8.9%
In the past month, have you received any health messages from the following?	Internet	LEB: 48.2% [41.8, 54.7] SYR: 7.8% [4.7, 12.5]	LEB: 59.1% [51.5, 66.3] SYR: 16.2% [13.0, 19.9]	Increased LEB: + 10.9% SYR: + 8.4%
	SMS	29.9% [23.1, 37.8] LEB: 14.0% [9.4, 20.2] SYR: 7.2% [4.0, 12.5]	34.7% [27.6, 42.5] LEB: 34.4% [26.8, 43.0] SYR: 15.5% [10.5, 22.4]	Increased + 4.8%
What services did you receive from Medair?	Transportation voucher	30.5% [16.8, 48.9] LEB: 20.4% [7.0, 46.7] SYR: 34.1% [16.6, 57.4]	4.5% [1.6, 11.8] LEB: 0.0% SYR: 5.3% [2.0, 13.7]	Decreased - 26.0%

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[16] As mentioned above, the statistically significant difference was determined by looking at odds ratio for 2x2 tables and non-overlapping confidence intervals otherwise for questions with a categorical response. "The 95% CI is used to estimate the precision of the OR. [...] In practice, the 95% CI is often used as a proxy for the presence of statistical significance if it does not overlap the null value (e.g. OR=1)."

Table 2 – Child Health

Question	Answer	2016	2017	Trend
Did any of your children under the age of 5 experience any of the following in the past two weeks?	Diarrhea	37.8% [33.8, 41.9] LEB: 35.1% [30.4, 40.1]	29.0% [23.7, 34.9] LEB: 23.3% [17.5, 30.3]	Decreased - 8.8%
	Cough	68.5% [62.9, 73.7] LEB: 69.4% [62.3, 75.7]	58.6% [53.4, 63.7] LEB: 52.7% [46.7, 58.7]	Decreased - 9.9%
	Difficulty Breathing	41.5% [35.5, 47.9] LEB: 40.9% [34.3, 47.8]	27.4% [22.1, 33.3] LEB: 22.5% [15.8, 31.0]	Decreased - 14.1%
	Cough or difficulty breathing	72.2% [66.6, 77.1] LEB: 73.1% [65.7, 79.4]	63.3% [57.7, 68.5] LEB: 56.2% [50.1, 62.2]	Decreased - 8.9%
	Cough and difficulty breathing	37.9% [31.7, 44.6] LEB: 37.3% [30.8, 44.3] SYR: 38.7% [27.7, 51.0]	22.5% [17.6, 28.2] LEB: 19.0% [12.5, 27.7] SYR: 25.1% [18.7, 32.9]	Decreased - 15.4%
	Fever	57.9% [53.0, 62.6] LEB: 53.0% [47.9, 57.9]	46.9% [41.2, 52.7] LEB: 37.1% [31.2, 43.3]	Decreased - 11.0%
	Any sickness	85.1% [81.2, 88.3] LEB: 85.2% [80.7, 88.8]	74.0% [69.4, 78.2] LEB: 67.4% [62.1, 72.2]	Decreased - 11.1%
How long after you noticed the child's diarrhea, did you give treatment?	Two days	6.5% [3.9, 10.4]	16.4% [11.4, 23.1]	Increased + 9.9%
What was given to treat the diarrhea?	Nothing	LEB: 12.8% [7.4, 21.3]	LEB: 0.5% [0.1, 2.4]	Improved - 12.3%
	Zinc	8.0% [4.8, 13.1] LEB: 6.1% [3.2, 11.3] SYR: 9.9% [4.8, 19.3]	34.0% [27.1, 41.8] LEB: 30.4% [19.9, 43.4] SYR: 36.0% [27.3, 45.7]	Increased + 26.0%
	Injection	4.5% [2.5, 8.2] LEB: 4.2% [1.7, 9.9]	16.9% [10.0, 27.0] LEB: 24.4% [10.6, 46.6]	Increased + 12.4%
	Home remedies	11.2% [7.5, 16.4] SYR: 13.5% [7.8, 22.3]	5.2% [2.7, 9.8] SYR: 3.6% [1.3, 9.7]	Decreased - 6.0%
	ORS or Zinc	31.3% [23.6, 40.3] LEB: 22.0% [14.0, 32.8] SYR: 40.9% [29.6, 53.2]	65.0% [54.1, 74.6] LEB: 56.8% [40.1, 72.0] SYR: 69.5% [55.2, 80.8]	Improved + 33.7%
When your child had diarrhea, where did you first go for advice or treatment?	Health facility	46.9% [39.0, 55.0] SYR: 38.5% [27.7, 50.5]	64.6% [56.0, 72.3] SYR: 64.9% [54.6, 73.9]	Improved + 17.7%
When the child had diarrhea, did you breastfeed him/her less than usual, the same amount, or more than usual?	Breastfed + More	SYR: 0.4% [0.1, 2.9]	SYR: 10.2% [3.5, 26.6]	Improved SYR: + 9.8%
When the child had diarrhea, was she/he offered less than usual to drink, about the same amount, or more than usual to drink?	Non breastfed + More	21.0% [15.3, 28.1] SYR: 23.7% [15.5, 34.4]	5.0% [1.7, 13.4] SYR: 2.0% [0.3, 14.1]	Worsened - 16.0%
What was given to treat the child's cough or fast breathing?	Cough drops	LEB: 60.8% [53.1, 67.9]	LEB: 77.7% [68.6, 84.7]	Increased + 16.9%
	Anti Histamines	20.0% [15.1, 26.0] LEB: 27.1% [20.7, 34.6]	6.5% [4.1, 10.2] LEB: 8.4% [4.8, 14.3]	Decreased - 13.5%
Did you ever have a vaccination card for your child?	Yes (asked if no card)	SYR: 41.8% [26.0, 59.5]	SYR: 16.6% [8.3, 30.4]	Decreased SYR: - 25.2%
May I copy the information from the vaccination card?	Penta1 + Received	SYR: 71.4% [61.1, 79.8]	SYR: 87.1% [81.0, 91.5]	Increased SYR: + 15.7%
	Penta2 + Received	SYR: 62.0% [47.5, 74.5]	SYR: 81.4% [74.9, 86.5]	Increased SYR: + 19.4%
	Penta3 + Received	SYR: 51.8% [39.5, 63.9]	SYR: 71.7% [62.4, 79.5]	Increased SYR: + 19.9%

Table 3 – Reproductive Health

Question	Answer	2016	2017	Trend
What types of services are available for reproductive health in your community?	PNC	SYR: 37.2% [31.3, 43.4]	SYR: 53.7% [44.4, 62.8]	Improved SYR: + 16.5%
	Do not know	6.4% [4.5, 9.2] SYR: 10.4% [7.3, 14.7]	3.4% [2.3, 4.9] SYR: 3.6% [2.3, 5.8]	Improved - 3.0%
Where can you access reproductive health services in your community?	SDC	15.7% [11.2, 21.6] LEB: 6.8% [4.1, 11.1] SYR: 26.4% [19.0, 35.5]	34.9% [28.8, 41.6] LEB: 19.8% [14.9, 25.8] SYR: 46.8% [39.8, 53.9]	Increased + 19.2%
	Health center	21.9% [18.1, 26.3] LEB: 17.9% [13.6, 23.2]	15.7% [12.2, 20.1] LEB: 9.0% [5.9, 13.5]	Decreased - 6.2%
For any type of reproductive healthcare needs, would you feel comfortable accessing one of these services?	Yes	94.3% [91.0, 96.0] LEB: 94.7% [91.5, 96.7] SYR: 93.9% [89.7, 96.4]	86.5% [82.7, 89.6] LEB: 89.1% [84.2, 92.6] SYR: 84.5% [79.0, 88.9]	Decreased - 7.8%
Where did you access those services? (asked if any RH services sought in past 6months)	SDC	17.6% [11.2, 26.5] LEB: 4.8% [2.2, 10.0]	38.2% [29.8, 47.2] LEB: 19.9% [12.6, 30.1]	Increased + 20.6%
Where did you access those services? (asked to Syrian refugees)	ANC + Leb	SYR: 66.6% [59.0, 73.5]	SYR: 79.7% [75.2, 83.7]	Increased SYR: + 13.1%
	Delivery + Leb	SYR: 68.1% [61.3, 74.2]	SYR: 82.1% [77.6, 85.8]	Increased SYR: + 14.0%
	PNC + Leb	SYR: 57.2% [52.4, 61.8]	SYR: 78.8% [71.9, 84.3]	Increased SYR: + 21.6%
During your pregnancy with your youngest child, did you see anyone for antenatal care?	Yes	91.4% [87.6, 94.2] LEB: 96.0% [93.0, 97.8]	83.6% [79.7, 86.8] LEB: 84.7% [79.5, 88.7]	Decreased - 7.8%
During your pregnancy with your youngest child, where did you receive antenatal care?	Your residence	3.3% [2.0, 5.5] LEB: 0% SYR: 7.6% [5.0, 11.3]	28.0% [22.4, 34.4] LEB: 25.7% [18.5, 34.0] SYR: 29.9% [21.8, 39.3]	Increased + 24.7%
	Private clinic	57.3% [50.0, 64.3] LEB: 74.9% [69.7, 79.5] SYR: 34.1% [27.6, 41.2]	36.3% [29.7, 43.4] LEB: 51.7% [43.1, 60.2] SYR: 24.2% [18.1,31.6]	Decreased - 21.0%
During your pregnancy with your youngest child, how many months pregnant were you when you received antenatal care?	First ANC +1st month	SYR: 28.7% [22.2, 36.2]	SYR: 43.4% [38.4, 48.5]	Increased SYR: + 14.7%
	Last ANC +9th month	SYR: 86.2% [80.6, 90.3]	SYR: 71.9% [62.6, 79.7]	Decreased SYR: - 14.3%
During your pregnancy with your youngest child, how many times did you receive ANC?	No ANC	LEB: 3.9% [2.1, 6.9]	LEB: 14.9% [11.0, 19.8]	Worsened LEB: + 11.0%
What was the reason that you did not deliver in a hospital or clinic?	Transport	2.0% [0.5, 8.2] SYR: 2.2% [0.5, 9.0]	23.7% [11.1, 43.4] SYR: 33.1% [16.8, 54.8]	Increased + 21.7%
Who assisted with the delivery of your youngest child?	Nurse	38.1% [31.4, 45.2] LEB: 52.4% [44.4, 60.2]	21.7% [16.6, 27.9] LEB: 21.8% [14.2, 31.8]	Decreased - 16.4%
After giving birth with your youngest child, where did you receive post-partum care?	Your residence	8.4% [5.0, 13.8] LEB: 4.8% [1.9, 11.6] SYR: 15.5% [8.7, 26.1]	59.1% [52.1, 65.8] LEB: 50.5% [41.4, 59.6] SYR: 65.6% [56.0, 74.0]	Increased + 50.7%
	Hospital	27.2% [20.8, 34.7] SYR: 34.1% [22.5, 48.0]	13.7% [11.0, 16.9] SYR: 10.8% [8.3, 13.9]	Decreased - 13.5%
	Private clinic	53.3% [45.5, 60.9] LEB: 63.2% [55.1, 70.6] SYR: 33.3% [23.5,	13.4% [9.8, 17.9] LEB: 21.8% [16.4, 28.5] SYR: 7.0% [4.2, 11.5]	Decreased - 39.9%

Question	Answer	2016	2017	Trend
		44.7]		
What are the risks of getting pregnant too soon after the birth of a child?	Baby born too small	6.2% [4.2, 9.2] LEB: 9.4% [6.5, 13.5] SYR: 2.3% [0.8, 6.1]	21.4% [17.5, 25.9] LEB: 26.3% [20.6, 33.0] SYR: 17.6% [13.0, 23.5]	Improved + 15.2%
	Baby born too early	6.1% [4.1, 9.2] LEB: 8.0% [4.9, 12.8] SYR: 3.8% [2.0, 7.4]	14.4% [11.0, 18.6] LEB: 18.9% [13.3, 26.1] SYR: 11.0% [7.6, 15.7]	Improved + 8.3%
	Do not know	21.9% [15.5, 29.9] LEB: 16.6% [9.6, 27.1] SYR: 28.5% [18.4, 41.3]	7.5% [5.3, 10.5] LEB: 5.0% [3.0, 8.1] SYR: 9.4% [6.2, 14.1]	Improved - 14.4%
If you are using a method, which method are you using to delay/avoid getting pregnant?	No FP	7.5% [5.6, 9.9] SYR: 9.0% [5.9, 13.5]	2.6% [1.6, 4.3] SYR: 2.3% [1.0, 5.2]	Improved - 4.9%

Table 4 – Family Health

Question	Answer	2016	2017	Trend
How do you think people can reduce the risk of getting these diseases?	Reduce sugar	44.3% [37.9, 50.9] SYR: 32.5% [24.8, 41.4]	57.8% [52.9, 62.6] SYR: 54.1% [47.5, 60.5]	Improved + 13.5%
	Reduce stress	SYR: 11.8% [7.2, 18.9]	SYR: 26.8% [20.1, 34.6]	Improved SYR: + 15.0%
	Stop smoking	4.0% [2.5, 6.4] LEB: 7.2% [4.8, 10.6] SYR: 0.2% [0.1, 1.0]	12.3% [9.3, 16.0] LEB: 14.5% [10.6, 19.4] SYR: 10.6% [6.7, 16.2]	Improved + 8.3%
	Exercise	SYR: 0.7% [0.2, 2.4]	SYR: 4.9% [3.0, 7.8]	Improved SYR: + 4.2%
	Do not know	29.6% [23.1, 37.1] LEB: 13.9% [9.3, 20.2] SYR: 48.7% [40.7, 56.8]	13.0% [9.9, 16.8] LEB: 6.7% [4.3, 10.3] SYR: 17.8% [13.6, 22.9]	Improved - 16.6%
	Number of methods known=0	35.5% [28.1, 43.5] SYR: 55.5% [46.4, 64.3]	23.9% [19.8, 28.5] SYR: 29.6% [24.3, 35.4]	Improved - 11.6%
What types of support services are available in your community for someone who feels very sad, stressed, lonely, under pressure or affected by trauma?	No services*	64.6% [59.7, 69.3] LEB: 60.7% [55.4, 65.8] SYR: 69.4% [61.0, 76.6]	28.2% [22.6, 34.6] LEB: 28.7% [21.1, 37.7] SYR: 27.8% [20.2, 37.0]	Decreased - 36.4%
Where can you access this type of support services in your community?	Specialized hospital	14.7% [11.2, 19.2] LEB: 22.4% [18.0, 27.7] SYR: 5.4% [2.8, 10.3]	4.7% [2.8, 7.9] LEB: 9.4% [5.6, 15.2] SYR: 1.1% [0.4, 3.2]	Decreased - 10.0%
	Other clinic*	18.6% [14.2, 24.0] SYR: 12.9% [8.4, 19.4]	9.1% [6.2, 13.1] SYR: 2.8% [1.3, 5.9]	Decreased - 9.5%
If you or someone you care for felt very sad, stressed, lonely, under pressure or affected by trauma, would you feel comfortable accessing one of the support services in your community?	Yes	82.7% [77.8, 86.8] LEB: 84.6% [78.2, 89.4] SYR: 80.4% [72.3, 86.6]	59.2% [51.5, 66.4] LEB: 62.3% [52.9, 70.9] SYR: 56.5% [45.0, 67.4]	Worsened - 23.5%

* A 'Do not know' option was added in the 2017 survey (43.1% for the availability and 66.4% for the location of PSS services) that did not exist in the 2016 survey, which may skew the results and explain the decrease in those responses.

FURTHER RESEARCH

This section identifies areas for further research, especially qualitative explorations through focus groups discussions or key informant interviews to understand better some of the trends reported in the *Commentary on trends* document of this report. There are also some recommendations about examining clinic data in conjunction with the information from the survey. This could in theory inform the updating of either a theory of change or a causal tree analysis to improve the health of Syrian refugees and vulnerable Lebanese in the Bekaa Valley.

Health-Seeking Behaviors
- Determine the knowledge of host and refugee communities around the health facilities available and their differences: Social Development Centers (SDCs), health centers, public or private hospitals, clinics.
- Determine which sources of information have an effect on health behaviors of refugee and host communities in Lebanon. Indeed, there seems to be a contradiction regarding the place and importance of the internet in disseminating advice or messages on health behaviors: fewer respondents reported getting advice or information from the internet but more respondents reported that they had received health messages from the internet in the month prior to the survey in 2017.

Child Health
- Determine the knowledge of host and refugee communities about the signs and treatment methods and appropriate care seeking behavior for children at risk of Acute Respiratory Infections (ARI): combination of coughing and difficulty breathing in children.
- Explore further practices, knowledge as well as barriers of both communities regarding children's vaccination.
- Explore patterns and trends in routine immunization in the SDC clinical data. Consider improved referral or reminder systems.

Reproductive Health
- Determine what are the causes behind respondents being less comfortable with accessing reproductive health services (7.8% decrease)
- Explore barriers to giving birth at a health facility, and respondents' concerns around transportation.
- Explore further practices and barriers around ante-natal care in both host and refugee communities:
  o Determine reasons behind less respondents reporting to have seen someone for ANC during their last pregnancy (7.8% decrease)
  o Determine reasons and practices for ANC happening in respondent's homes (24.7% increase between 2016 and 2017) especially for vulnerable Lebanese households, since Medair's community midwives only visit Syrian households in their residence for ANC, and understand what respondents consider to be ANC and who provides it at residences.
- Explore further practices and barriers around post-natal care in both host and refugee communities, especially since some of the questions in the PNC modules changed between 2016 and 2017:
  o Determine knowledge and practices and explore reasons for the reported increase of PNC services available in the community (16.5% increase)
  o Determine reasons and practices for PNC happening in respondent's homes (50.7% increase between 2016 and 2017), and understand what respondents consider to be PNC and who provides it at residences.

      o   Determine frequency and timeframe of PNC checks when the delivery happens at a hospital or at home.

Family Health

- Explore further which services are considered to be psychosocial support services by the host and refugee communities: for example, specialized hospitals were less reported in 2017 (10.0% decrease)
- Determine what are the causes behind respondents being less comfortable with accessing psychosocial support services (23.5% decrease)