COVID-19 Knowledge, Attitudes and Practices (KAP) Survey
August - September 2020 (Round 4)
Northwest Syria Analysis

CONTEXT

As of 1 October, 1,072 people have tested positive for COVID-19 in Northwest Syria (NWS), including 6 fatalities.[1] Reports from the United Nations Office for the Coordination of Humanitarian Affairs (OCHA) indicate that 16% of all cases in NWS (172 respondents) are health care workers.[1] In addition, the report indicates that short term closures and limitations on the number of people allowed to cross at international and internal crossing points have hindered access by humanitarian workers to support the response to existing needs and COVID-19 in vulnerable areas.

The Humanitarian Needs Assessment Programme's (HNAP) twenty-first round of its COVID-19 Rapid Assessment Rapid Assessment, conducted on October 7, showed that total curfews, partial curfews, and community lockdowns were not implemented in almost all areas controlled by non-state and Turkish-backed armed forces. According to the report, mandatory mask wearing was practiced by less than 60% of the communities, while the presence of social distancing in public spaces was less than 20% in most communities as well. Additionally, 84% of the communities did not close public spaces, and 80% did not prohibit large social gathering like funerals and weddings.[2]

In April 2020, REACH began a series of monthly knowledge, attitudes, and practices (KAP) surveys with the goal of informing the communications response to the threat of COVID-19 in northwest Syria. REACH observed high levels of COVID-19 knowledge among survey respondents in the first round of data collection, which was conducted in late April as communication efforts and curfews were well under way. Greater wariness of COVID-19 was seen among attitudes and practices responses, especially among female respondents. In the second round and third rounds of data collection, which were conducted in late May and late June respectively, knowledge remained high while attitudes and practices had shifted to less cautious in relation to COVID-19 among both female and male respondents.[3] The fourth round of data collection began as a reset of the panel study, with new respondents, and an updated questionnaire, that was designed in consultation with a public health expert. The data indicated that knowledge of preventive practices remained fairly high, and attitudes reflected a higher degree of concern regarding potential COVID-19 infection. However, preventive practices such as social distancing (<22%) and wearing masks remain low (<30% in all situations).

Descriptive statistics for all four survey rounds are available here, and include each specific KAP indicator, disaggregated by governorate, sex, and rural/urban population. The present factsheet is the third in-depth analysis of changes in knowledge, attitudes, and practices among cohorts of respondents in northwest Syria.

METHODOLOGY

REACH conducted a fourth KAP survey in northwest Syria from 25 August to 17 September 2020. A total of 1854 individual interviews were collected using non-probability sampling (Aleppo: 1118 interviews; Idleb: 736 interviews). An in-depth explanation of the methodology of this survey can be found here.

As in previous rounds of data collection, the sample was calibrated against an existing household survey to increase its representativeness. More information about the particulars of this calibration can be found in Appendix B at the end of this factsheet.

Results are framed through a Risk Communication and Community Engagement (RCCE) Action Plan which was developed by the United Nations International Children's Emergency Fund (UNICEF) for the northwest Syria COVID-19 response. The action plan includes source, message, channels, and target audience to guide messaging campaigns in northwest Syria. This action plan was examined to see where KAP survey data could inform messaging efforts, and as such messages are presented with corresponding analysis results.

HEAT MAP OF WEIGHTED SURVEY AREAS
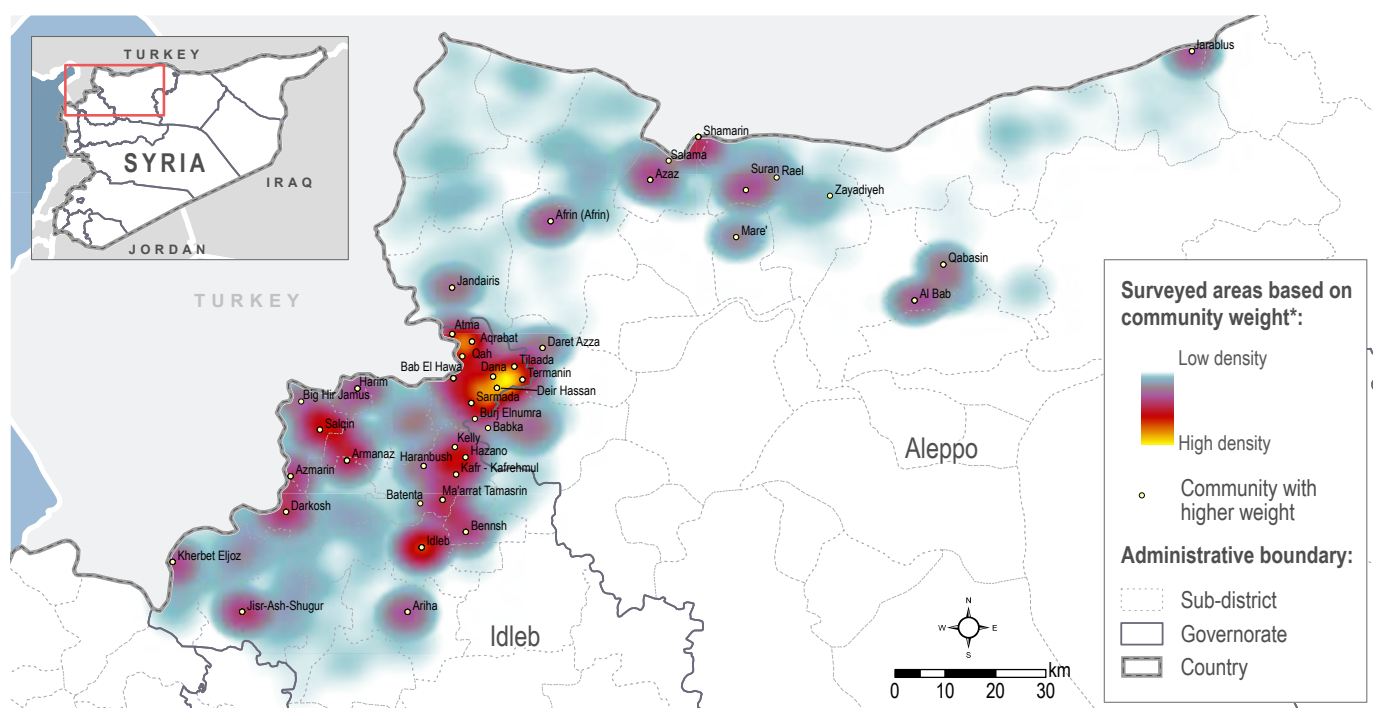
* This heat map displays the relative density of surveys, using a color scheme ranging from cool (low density) to hot (high density). For this heat map, a weight generated from a generalized regression estimator was applied, and densities represent the weighted survey population. Applying a weight means that survey responses were adjusted to match the proportions of a pre-existing, representative dataset so that the survey more accurately represents the population of interest.

LIMITATIONS

Due to the methodology used, findings are not statistically representative and should only be considered as indicative of the situation in assessed areas. The rapidly evolving context in the assessed areas, especially with regards to the COVID-19 situation, also means that findings are only indicative of the situation at the time the data was collected (25 August to 17 September 2020). It should be noted that additional data was collected on September 16-17 in order to obtain a sample sufficient for calibration.

⚙ RESULTS BY RCCE ACTION PLAN MESSAGE[4]

Message: Wear a face mask when in contact with other people.

• **Recommendation: Target men and women with messaging about the importance of wearing a face mask in public places. Explore reasons why masks are not being worn by those who have it, and make masks more accessible for those who do not have access.**

• The proportion of respondents who mentioned wearing a mask as a preventive measure (80%) was relatively high, while the actual proportion of respondents who wore masks in different scenarios was low (<61% in all situations).

• The proportion of respondents who reported that they did not have a mask was 47%, and of the proportion who did not have masks, 40% did not use alternatives such as homemade masks or scarves.

• 62% of respondents mentioned they face barriers in taking preventive measures, the most significant of which is the lack of money to buy protective items.

Message: Maintain social distancing.

• **Recommendation: Focus messaging on preventive measures to reduce transmission in public spaces, targeting men in specific (e.g. wear a mask when you leave, maintain distance with other people even when out, and avoid large social gatherings).**

• Both men and women were equally likely to believe that one can take preventive measured to reduce the chance of getting COVID-19 (94% vs. 94%). However, men reported taking measures against COVID-19 at a lower rate than women (63% vs. 65%).

• Men are more likely to leave the house to go to work (86% vs. 41%), visit friends (87% vs. 81%), and attend large gatherings as opposed to women (84% vs. 22%).

Message: If you have fever, cough, and difficulty breathing, share information with your health provider and seek medical assistance.

• **Recommendation: Increase messaging around the possibility of asymptomatic viral infections.**

• The proportion of respondents with knowledge of whether COVID-19 symptoms will always manifest was low, with 47% reporting that all infected cases show symptoms, while 49% reported that not all cases show symptoms and 4% reported that they do not know.

• Respondents identified that fever, cough, and sneezing were the main symptoms, although, difficulty breathing was a less known symptom.

Message: Stigma can be heightened by insufficient knowledge about how COVID-19 is transmitted and treated, and how to prevent infection.

• **Recommendation: Highlight messaging on how much more effectively the virus can spread through contact with infected surfaces, and not just through contact with infected persons**

• Based on the survey, the group most likely to face discrimination related to COVID-19 is COVID-positive persons, indicating insufficient knowledge of COVID-19 transmission.

• Many respondents reported that COVID-19 can be transmitted through contact with infected people, and then through the air (83%, and 82%). Physical contact with contaminated objects was reported as the third most likely way to get infected by COVID-19 by 54% of the respondents.

Message: Addressing myths can lead to the takeup of proven preventative measures.

• **Recommendation: All populations should be targeted through social media messaging and healthworkers on proven prevention measures about the dangers of trusting common myths, such as drinking boiled herbs and exposing oneself to the sun.**

• The most popular myth respondents had heard for transmission prevention was drinking boiled herbs such as anise (reported by 55% of respondents), followed by exposing oneself to sun or high temperatures (reported by 33% of respondents).

• Social media is the most common source of receiving COVID-19 information, as reported by 96% of the respondents. However, the most trusted source of information was health workers at health facilities (59%).

Message: Respondents believe the elderly and those with pre-existing conditions are most at risk of COVID-19.

• **Recommendation: Provide intensive messaging on the severity of COVID-19 for all age groups, and encourage people to stay home if sick**

• Most respondents believed that the elderly were most at risk of contracting COVID-19 (73%), and that "everyone" was less likely (22%) to be at risk of contract COVID-19.

• 55% of respondents reported that they believe that their employers are flexible with regard to COVID-19.

• 12% reported that they would still go to work even while sick.

Scenarios measure perceptions of respondents in response to different hypothetical situations. As such, they should be interpreted as perceptions only, and not as certain outcomes. The following messages are based on the results of the vignette scenarios, which are hypothetical situations introduced in the methodology section above and further described in Appendix B below.

Key findings for risk and behavior change communication:

• Encouraging everyone to wear their masks, increases the likelihood that more people will abide by mask-wearing regulations. When people see their neighbours wearing masks, they are more likely to wear a mask themselves. Mandating mask wearing through a fine and at business premises also encourages people to wear mask.

• People are less likely to leave the house if they thing they are getting a cold or falling sick.

• Young people were the most likely to wear masks and leave their house, regardless of the proposed scenario. Overall, age was a more important determinant of movement than gender.

Scenario 1

Scenario 1 asked respondents about the likelihood that individuals would wear a mask based on different contexts in the next week, varying age (24 years old vs. 58 years old) and gender (male / female). The contexts were: required by authorities under a fine, worn by the majority of neighbours, and required by business owners upon entering their premises. A sample scenario went as follows: "Imagine that a woman is 24 years old and owns a mask, how likely is she to wear it next time she leaves the house if it was required by authorities under a fine? Within the space of a week, how likely is she to leave her house to visit family or friends?"

Results

The model suggests that younger people are two percentage points more likely to wear mask when leaving the house than older people, regardless of the context.

There were no significant differences between men and women when looking at the likelihood of whether they would wear a mask.

Compared to a scenario in which masks were worn by the majority of neighbours, a person was 20 percentage points more likely to wear a mask if required by authorities under a fine. People were 18 percentage points more likely to wear a mask if required by business owners than if worn by neighbours and two percentage points more likely to wear a mask if required by authorities than if it was required by businesses on their premises.

Average marginal effects indicated that people were 19 percentage

points more likely to wear a mask if worn by neighbours (p value: 0.00; 95% CI: -0.24, -0.15).

The effect of other contexts (required to wear a mask under a fine and required by business owners on their premises) was not substantially different when comparing one context to the other.

Therefore, results from the experiment show that neighbours wearing a mask is more likely than other contexts in influencing behavior of people considering whether or not to wear a mask.

Scenario 2

Scenario 2 looked at the likelihood that individuals would leave their house in the next week based on the status of their health (healthy, or feel like they are getting a cold), age (22 years old / 57 years old), and gender (male / female). A sample scenario went as follows: "Imagine that A man is 47. He feels like he might be getting a cold. During the week, how likely is he to leave the house to visit family or friends?"

Results

The model suggests that younger people are five percentage points more likely than older people to leave the house in the next week, regardless of the status of their health.

The feeling of catching a cold deterred people from leaving their house by 46 percentage more than if they were healthy. Further, average marginal effects indicated that the likelihood that someone would leave their house if they had a cold was 46 percentage points less than if they were healthy (p value: 0.000; CI: -0.50, -0.42)

More information on modeling methodology is available in Appendix B; summary probability and average marginal effect tables for both vignettes can be found in Appendix A.

Endnotes

The complete northwest Syria KAP dataset is available here.

1.Syrian Arab Republic: COVID-19 Response Update No. 11 - 7 October 2020 - World Health Organization (WHO) and the Office for the Coordination of Humanitarian Affairs (OCHA), in collaboration with humanitarian partners,
https://reliefweb.int/sites/reliefweb.int/files/resources/finala_covid_response_update_no._11_.pdf
2. Humanitarian Needs Assessment Programme. COVID-19 Rapid Assessment: Non-State & Turkish-Backed Armed Forces Controlled Areas. Round 21,7 October 2020,
https://www.humanitarianresponse.info/sites/www.humanitarianresponse.info/files/assessments/covid-19_rapid_assessment_21-nsag_7_october.pdf
3. REACH, COVID-19 Knowledge, Attitudes and Practices (KAP) Survey Northwest Syria Descriptive Statistics - Rounds 2 and 3 Factsheet,
https://www.reachresourcecentre.info/country/syria/cycle/28886/#cycle-28886
4. Respondents could select multiple answers so total may be greater than 100%.

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Appendix A - Results Tables

Vignette 1

Table 1: Model Predicted Probabilities - Vignette 1

Gender	Age	Context	Probability
Male	Younger	Required by authorities under a fine	.9439303
Female	Younger	Required by authorities under a fine	.9408665
Male	Younger	Worn by the majority of neighbours	.7217533
Female	Younger	Worn by the majority of neighbours	.7102754
Male	Younger	Required by business owners upon entering their premises	.8991337
Female	Younger	Required by business owners upon entering their premises	.8938972
Male	Older	Required by authorities under a fine	.8880397
Female	Older	Required by authorities under a fine	.8823026
Male	Older	Worn by the majority of neighbours	.7256607
Female	Older	Worn by the majority of neighbours	.7154806
Male	Older	Required by business owners upon entering their premises	.898483
Female	Older	Required by business owners upon entering their premises	.8932168

Table 2: Average Marginal Effects - Vignette 1

Factor	AME	SE	z	p	Lower	Upper
Age -older vs. younger	-.0155602	.0190275	-0.82	0.413	-.0528535	.02173
Context -Worn by neighbours	-.1937285	.024634	-7.86	0.000	-.2420102	-.145446
Context -Required by businesses	-.0199897	.0192144	-1.04	0.298	-.0576492	.017669
Gender - female vs. male	-.0068847	.0191368	-0.36	0.719	-.0443922	.030622

Table 3: Predicted Probabilities - Vignette 1

Factor	Probability
Gender	
Male	.8502446
Female	.8433599
Age	
Younger	.8534849
Older	.8379246
Context	
Required by authorities under a fine	.915748
Worn by the majority of neighbours	.7220195
Required by business owners upon entering their premises	.8957582

Vignette 2

Table 1: Model Predicted Probabilities - Vignette 2

Gender	Age	Condition	Probability
Male	Younger	Good health	.9299991
Male	Older	Good health	.8849649
Male	Younger	Cold	.4820462
Male	Older	Cold	.4354237
Female	Younger	Good health	.92162
Female	Older	Good health	.8719377
Female	Younger	Cold	.4516623
Female	Older	Cold	.4056769

Table 2: Average Marginal Effects - Vignette 2

Factor	AME	SE	z	p	Lower	Upper
Age - older vs. younger	-.0467765	.0190273	-2.46	0.014	-.0840693	-.009483
Condition- good health vs. cold	-.4581306	.0192406	-23.81	0.000	-.4958415	-.420419
Gender - female vs. male	-.0202544	.0190423	-1.06	0.287	-.0575767	.017067

Table 3: Predicted Probabilities - Vignette 2

Factor	Probability
Gender	
Male	.6858915
Female	.665637
Age	
Younger	.7013415
Older	.654565
Condition	
Perfect Health	.9002559
Cold	.4421253

Appendix B - Methodology

Calibration Methodology

Respondents for the survey were recruited through a nonprobability sample. The survey was then calibrated using a generalized regression estimator. Calibration increases the weight of some respondents and decreases the weight of other respondents in reference to a pre-existing, representative dataset so that the survey more accurately represents the population of interest.

The survey was calibrated on four variables: gender, age, governorate, and community size. Several other variables, namely shelter status and number of household members working, were considered but the survey proportions for these variables were judged acceptable.

Three categories for age were utilized: 18 – 34, 35 – 59, and 60 and older. Communities were categorized as large (> 20,000 inhabitants), medium (20,000 – 2,000 inhabitants), and small (<2,000 inhabitants). Estimates for gender and age were taken from an unpublished representative survey for NWS. Population estimates were taken from HNAP's February Mobility and Needs Monitoring, which is availble upon request from HNAP.

After calibration, the survey proportions for the calibration variables (gender, age, governorate, and community size) exactly matched the estimated population proportions. Proportions were also compared to several benchmark variables: proportions for marital status and displacement status (internally displaced person (IDP) vs. host community) were within three percentage point of population estimates and proportions for chronic illness were within five percentage points. The code for the calibration is available upon request.[1]

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[1]. For background information on using generalized regression estimators to calibrate survey data see Thomas Lumley, Complex Surveys: A Guide to Analysis Using R, p. 135 – 65. For an overview of approaches to weighing nonprobability samples see Carina Cornesse et.al., "A Review of Conceptual Approaches and Empirical Evidence on Probability and Nonprobability Sample Survey Research," Journal of Survey Statistics and Methodology, February 2020, p. 4–36. For a less technical introduction see Andrew Mercer, Arnold Lau, and Courtney Kennedy, "For Weighing Online Opt-in Samples, What Matters Most?" Pew Research Center, January 2018.

Analysis Methodology

Similar to the survey in round 3, an experimental section of vignettes was also included. Vignettes are very short, hypothetical scenarios which were presented to respondents to gauge their responses to various COVID-19 situations. Each respondent was randomly assigned to answer one scenario for two different types of vignettes.

Analysis was conducted using proportion tests of significance between weighted samples for each round. Regressions were also run looking at significant predictors for outcomes. These statistical tests were considered exploratory and contextual; while the results informed the factsheet, they are not presented numerically. Because the vignettes section of the survey was a randomized experiment, these results are presented as a series of regressions and average marginal effects, that were calculated using STATA 16.0.

Factorial survey experiments (vignette experiments) are a well-established method of inferring causal relationships between factors (expressed as variations in vignettes) and respondents perceptions or judgments. In a context where respondents' answers are likely to be influenced by social desirability bias (i.e. respondents might be tempted to over-report their likelihood of practicing social distancing), factorial experiments minimize bias by inquiring about the action of a hypothetical individual instead of the action of the respondent.[2]

The results of the factorial survey experiments were estimated with logistic regression models. The independent variables for vignette 1 were gender of the character in the vignette (female vs. male), context in which people were required to wear a mask (required by authorities under a fine, worn by the majority of neighbours, required by business owners upon entering their premises), and age of the character in the vignette (older, i.e. 58 years old in the vignette vs. younger, i.e. younger than 24 years old in the vignette). The independent variables for vignette 2 were gender of the character in the vignette (female vs. male), type of health in the vignette (good health vs. feeling like they have a cold), and age of the character in the vignette (older, i.e. 47 years old in the vignette vs. younger, i.e. 22 yrs old in the vignette). The dependent variable in vignette 1 was the respondent's response as to how likely the character was to wear a mask, while in vignette 2 it was the respondent's response as to how likely the character was to leave the house to visit family/friends within the space of a week. Responses were binned into very likely/likely vs. neutral/unlikely/very unlikely. Logistic regressions represent the log odds that the respondent selected very likely/likely as their response compared to the log odds that the respondent selected neutral, unlikely, or very unlikely as their response, controlling for each independent variable.

The average marginal effects (AME) were then estimated for all independent variables. For a binary, independent variable such as gender, the AME approximates the difference between the average predicted probability for all combinations of independent variables that include female (e.g. predicted probability for 25 yr. old female in a scenario where there is no curfew, predicted probability for 55 yr. old female in a scenario where there is a flexible curfew, etc.) and the average predicted probability for all combinations of independent variables that include male.

Logistic regressions fitted for data collected by two separate data collection teams working on NES and one data collection tea`m in NWS to ensure that results were comparable. Receiver operating characteristic (ROC) curves were examined for all logistic regressions and area under the curve (AUC) was calculated. Goodness-of-fit testing was also conducted, and logistic regressions with interactions for all independent variables were examined, but the inclusion of interactions had no significant effect on AME.

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[2]. Ulf Liebe et. al provide an overview of the use of factorial experiments in development contexts in "Using Factorial Survey Experiments to Measure Attitudes, Social Norms, and Fairness Concerns in Developing Countries," Sociological Methods & Research, October 2017. For an example from the Syrian context, see The World Bank's "The Mobility of Displaced Syrians: An Economic and Social Analysis" pages 221 – 225.