

Mapping Dental Services
in Northern and Western
Aleppo Governorate
August -2017

Syrian crisis
August-2017
Assessment of dental care services
Syria – (10 sub districts in Northern and Eastern Aleppo governorate)
Data collected by “*Trust Consultancy & Development*”

White Smile Organization
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For any more details, please contact im@whitesmilengo.org

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Clarification

The information in this report provides an overview of the situation of dental care in the covered area, and should be read in integration with other humanitarian needs information and reports.

White Smile is a Syrian non-governmental organization, specialized in the provision of dental care services and in advocating for the integration of dental care into the broader humanitarian health response in Syria.

The White Smile mission is to inspire, encourage, facilitate and promote quality oral care with the goal to prevent and alleviate human suffering, and thereby contribute to maintaining human dignity. White Smile’s activities are guided by the ethics of health profession and also by the four humanitarian principles: humanity, neutrality, impartiality and independence.

White Smile seeks to sustain oral care services by empowering the local community. train more dentists, develop the capabilities of current dental staff, represent their aspirations and influence legislation and dental care policies at all levels.

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Abbreviations

KII	Key informant interview
HH	Household
HeRAMS	Health Resources and Services Availability Monitoring
DALYs	Disability Adjusted Life Years DALYs
WHO	World Health Organization
FDI	International Dental Federation
WS	White Smile Organization
Trust	Trust Consultancy & Development
IDPs	Internally-displaced people
NGO	Non-governmental organization
PHC	Primary healthcare center

Syria Administrative division

The administrative division in Syria depends on five administrative levels

- Governorates** : Syria consists of 14 governorates
- Districts** : Each governorate is divided into districts and the total number of these districts in all Syria is 62.
- Sub-districts** : Each district is divided into sub-districts and the total number of these sub-districts in all Syria is 272.
- Communities** : Each Sub-district consist of communities and the total number of these communities in all Syria is 6522.
- Neighborhoods** : The main communities (Capitals of governorates) are divided into neighborhoods, major 13 communities are divided to 456 neighborhoods.

EXECUTIVE SUMMARY

This document outlines the findings of the August 2017 needs assessment of dental care services in Western and Northern Aleppo, Syria. The results of this study aim to guide White Smile (WS) and other health care professionals to develop better programs that will provide dental relief and promote oral care in the region. This assessment has employed a mixed-method approach of quantitative and qualitative data collection, including secondary data review, semi-structured Key Informant Interviews (KIs), and HH survey questionnaires with targeted groups. The profile of the present dental services and needs of the affected population, as well as the related factors that influence service provision for the affected population were analyzed through the perspectives of households and local community representatives.

Key Findings

Oral Health Status

- Most of surveyed participants (73%) weren't satisfied with their current dental and oral health.
- Dental pain, cavities and dental fillings are the most common dental problems reported by most surveyed participants.
- Most of the surveyed participants (86%) expressed that it is important for them to visit the dentist regularly.
- (77%) of surveyed participants would "definitely" visit a free dental clinic if available.

Oral Education status

- 94% of surveyed participants did not witness any oral awareness campaigns in their areas.

Mapping existing services

- Primary health centers are available in 24 out of 32 communities. But only 7 out of those include dental clinics.
- From these 7 clinics, 1 clinic is completely inactive, and 6 charity dental clinics services are operational in 6 communities out of 32 (19%). Only 4 of these charity dental clinics are fully supported by 3 health NGO partners, while the 2 other charity clinics are running on voluntary basis and upon availability of dental supplies.
- 15 private dental clinics are available in 17 communities (59%).

Access for dental services

- While 15 private dental clinics are available in 17 communities (59%), their utility is limited as (72%) of the surveyed participants stated that they can't afford the treatment fees.
- Access should also be considered as an important challenge for receiving dental care.
- (42%) of survey participants stated that no public transportation is available for them to reach dental clinics, or that the clinics are very far from their location (39%). It was also mentioned that even if they can reach clinics, the opening hours were not suitable (29%) for their travel circumstances.
- Almost all key informants expressed that there is a gap in specialized dental care areas, such as in prosthodontics, orthodontics, periodontology and in maxillofacial surgery.

- In all of the available clinics, there was no clear prioritization criteria or special facilitation for vulnerable groups (including women, children, elderly men and women, and people with physical disabilities).
- participants commonly complained about crowded clinics, as 47 surveyed participants (9%) and 9 key informants (31%) reported waiting for long times until they were seen by the dentists. Some participants even reported waiting for days until they had the chance to meet the dentist, while others didn't continue treatment due to this barrier.
- Access of children for dental visits:
 - 62% of those who have children would take them to the dentist only when the children experience pain.
 - 37% have never taken their children to the dentist.
 - Only 1% of parents mentioned that they would take their children for regular check-ups once every 6 months.

Frequency of dental visits

- 84% percent of participants need to see a dentist at the present time, with 51% are in need to see a dentist "immediately"
- 56% of participants reported visiting the dentist <6 months ago, 20% between 6-12 months, 12% between 1-2 years, 8% over 3 years ago, and 4% of participants reported they have never visited the dentist.
-

Coping mechanisms

- (28%) of the asked participants use pain-killers when access to dental care is not available.
- (3%) mentioned the usage of traditional medicine to ease dental pain, for example rinsing mouth with salt water and chewing clove buds.
- (9%) would postpone the treatment as much as they can bear the pain, once the pain is unbearable, they would consider seeing a private dentist (4%).
- taking loans (5%), or savings (1%) were also mentioned ways to make treatments affordable.
- (1%) would divide the treatment into multiple affordable phases.
- (1%) would have tooth extractions if they cannot find any other solution.

Key Recommendations

To anticipate and prevent oral diseases we recommend:

- Conducting dental awareness campaigns to promote healthy lifestyles and reduce risk factors to oral health that arise from environmental, economic, social and behavioral causes.

To address the need for providing oral care we recommend:

- Increasing access to dental services that meet the needs of most reported dental issues (dental pain, cavities, and dental fillings) by prioritizing the establishment of at least 10 dental clinics. This is in order to provide free dental services to most in-need populations. According to the selected criteria, the most ten communities in-need for dental services (sorted by priority) are: Azaz, Daret Azza, Atareb, Tqad, Sheikh Ali, Batbu, Jeineh, Anadan, Kafr Hallab, and Tuwama communities.

- providing access to treatment which are more inclusive to vulnerable groups such as individuals with disabilities.

To improve the quality of provided service we recommend:

- Drafting standard policies and procedures in oral health, based on international oral health programs, to promote dental treatment effectively, with focus on sterilization and infection control in areas where basic services such as water safety are compromised.
- Increasing efforts to address other gaps in providing specialized dental equipment and dental labs.

BACKGROUND

Oral diseases are major public health problems. Untreated tooth decay is now known to be the most prevalent of the 291 conditions (studied between 1990 and 2010) within the frame of the international Global Burden of Disease Study. Severe periodontitis, which is estimated to affect between 5 and 20 percent of populations globally, was found to be the sixth most common condition. Oral cancer is among the 10 most common cancers in the world¹. Globally, oral conditions accounted for 15 million DALYs (Disability Adjusted Life Years) in 2010. This is an average health loss of 224 years per 100,000 people¹.

The impact of oral diseases on individuals and communities, as a result of pain and suffering, causes impairment of function and reduced quality of life. Poor oral health may have a profound effect on general health, and several oral diseases are related to chronic diseases. While the correlation between oral diseases and Non-Communicable Diseases is primarily a result of common risk factors, many general disease conditions also have oral manifestations that increase risk of oral disease which in turn is an added risk factor in a number of general health conditions¹. Periodontitis may affect the course and pathogenesis of a number of systemic diseases, such as cardiovascular disease, bacterial pneumonia, diabetes mellitus, and low birth weight. Infective endocarditis is a serious and often fatal systemic disease that has been associated with dental diseases and treatment. There are over 1,000 case reports associating dental procedures or disease with the onset of endocarditis².

The experience of pain, problems with eating, chewing, smiling and communication due to missing, discolored or damaged teeth have a major impact on people's daily lives and well-being. Furthermore, oral diseases restrict activities at school, work, and at home causing millions of school and work hours to be lost each year throughout the world. This makes oral diseases one of the major public health problems worldwide³.

Key facts

- Worldwide, 60–90% of school children and nearly 100% adults have dental cavities⁴.
- Dental cavities can be prevented by maintaining a constant low level of fluoride in the oral cavity⁴.
- Severe periodontal (gum) disease, which may result in tooth loss, is found in 15–20% of middle-aged (35–44 years) adults⁴.
- Globally, about 30% of people aged 65–74 have no natural teeth⁴.
- Oral diseases in children and adults is higher among poor and disadvantaged population groups⁴.
- Risk factors for oral diseases include having an unhealthy diet, tobacco use, harmful alcohol use, poor oral hygiene, and social determinants.⁴

Oral health situation before 2011

With a population number at 4,045,160 inhabitant, Aleppo was considered to be the most populated governorate in Syria⁵. It was not surprising therefore to see that Aleppo governorate have a high number of dental practitioners.

According to the Syrian statistical collection of the same year, the number of registered dentists in Aleppo governorate reached 3,066⁶. which would also represent 21% of the overall 14,500 dentist registered by the Syrian ministry of health till 2010. The dentist to population ratio in Aleppo governorate was 1:1528 in 2010⁶.

Comparing this ratio with data WHO⁷ and FDI¹ stating that In Africa, the dentist to population ratio is approximately 1:150000 against about 1:2000 in most industrialized countries. We can safely say that Aleppo had a satisfying number of oral care providers.

Moreover, Aleppo and Damascus included more than 50% of registered specialists in the different branches of dentistry (mainly orthodontics and Maxillofacial surgery).

Having these numbers in mind, it is interesting to notice that the presented oral care services in public PHCs in Aleppo governorate in 2010 was 234,512 treatments⁸. the number is considerably small when compared with the number of population and the number of dental practitioners. However, it important to notice that treatments provided in private practice was not included.

Table , Syrian Statistical Collection: distribution of services by health centres according to its nature and organized by Governorate. Statistics from 2010

Governorate	Nurses	Midwives	Pharmacists		Dentists		Physicians	
			Average Persons/Pharmacist	No	Average Persons/Dentist	No	Average Persons/Physician	No
Damascus	5,685	697	557	3,097	643	2,683	372	4,635
Aleppo	4,163	1,040	1,451	3,229	1,528	3,066	790	5,929
Rural Damascus	1,742	205	1,227	2,271	1,095	2,467	861	3,138
Homs	3,597	718	1,011	1,725	1,143	1,526	589	2,961
Hama	2,648	299	1,347	1,169	1,295	1,216	708	2,225
Lattakia	3,771	514	1,017	967	764	1,286	563	1,746
Idleb	1,694	367	1,860	777	2,839	509	1,186	1,218
Al-Hasakeh	1,037	502	2,116	690	3,493	418	1,166	1,252
Deir-ez-Zor	2,035	491	1,707	693	2,539	466	1,184	999
Tartous	2,920	379	1,194	653	893	873	184	4,228
Al-Rakka	883	203	2,031	448	2,853	319	1,095	831
Daraa	1,514	238	1,723	571	2,025	486	1,042	944
Al-Sweida	1,971	419	1,367	264	965	374	519	695
Al-Quneitra	299	22			288	295	216	393

Comparing numbers of dentists and numbers of service provided in public centers, we can conclude that most of the dental services were provided in private practice.

But the affordability and availability of private dental care would suggest that inequalities in provision of dental treatment would appear due to economic and social factors. Therefore, people living in deprived or small rural communities, disabled individuals, and elderly people did not consider taking treatments in private dental clinics.

Current context of oral health

The contrast between the pre-crisis situation and the current situation is evident. before the crisis started in Syrian, dentists and accompanying services were available at the majority of primary

health care centers (PHCs). However, at the present the health structure is fragmented and many health facilities are missing at various levels. While many PHCs still exist, they do not provide all of the recommended essential health services. Despite being part of the Essential Health Services Package (EHSP), adopted by the Gaziantep Health Cluster in September 2016, the inclusions of dental services at the PHC level remained significantly compromised and a major gap. Pre-crisis Syria had a robust private practice as well, however, as the war has lasted for more than 6 years, access of Syrians to healthcare has gradually deteriorated. Hundreds of health care centers (including dental clinics) have been destroyed or closed as a result of the strikes from the different parties involved in the war and at least 814 health care providers were killed in Syria since 2011⁹⁻¹¹. Consequently, thousands of highly qualified health care professionals (including dental professionals from all dental specialties) have left Syria.



Recurrent attacks have damaged the electrical and water infrastructure, leaving the residents without electricity or access to the public water network. The absence of treated water with fluoride and the lack of personal hygiene has decreased the resistance against caries among children. Consequently, White Smile dentists reported unusual numbers and generalized carious lesions especially among children.

Moreover, the course and severity of humanitarian needs in Syria emergency response was not prioritizing oral care at any stage in the last 6 years. The humanitarian needs overview as well as the humanitarian response plan (the two-main strategic framework of the humanitarian intervention) were always prioritizing other pressing issues such as the protection of health workers and health facilities, trauma care, provision of medical supplies, providing equipment to besieged areas, surveillance, and intervention against outbreaks of communicable diseases¹². White Smile has raised concerns regarding the gap of information about dental services provided during this humanitarian crisis, and asked for the inclusion of these data collection in needs assessments conducted by health partners, such as the Multispectral needs assessments and

HeRAMS. The lack of prioritization, partially derived from the lack of data, has led to a limited financial support from governmental and non-governmental organizations for dental initiatives. As this humanitarian crisis worsens there is a desperate need for action from the dental community to build more awareness and strengthen efforts in mitigating the tragic medical and dental consequences¹³.

Taken all these aspects together, there is very little data about the current status of oral care in Syria after 2011. Therefore, efforts have been made in order to raise awareness about the gravity of the situation. such as those of Dr. Saltaji and col. Who have mentioned in a letter addressed to the British dental association, that the " *Reported adverse consequences of the war among the Syrians include decreased oral hygiene and increased periodontal diseases including chronic generalized gingivitis and periodontitis. When they were asked why they do not brush their teeth, most patients reported that they would rather buy food for their children than buying a toothbrush and toothpaste. The rate of dental caries and odontogenic infections, including acute periapical abscesses and even orofacial infections, have increased. Traumatic injuries in the maxillofacial and temporomandibular regions, including both boney and soft-tissue injuries, have immensely increased in incidence and severity. This includes amputations, facial lacerations and fractured bones (temporomandibular joint, maxillary, mandibular and nasal), as well as injuries to the teeth and surrounding dental structures. Some of these problems were the result of poor treatments that were performed inside Syria because of either a lack of proper dental/medical materials and supplies or the unavailability of expert surgeons/specialists or both.*"

Everyone has the right to health. The right to health can be assured only if the health interventions are designed to meet minimum standards of need. The Sphere Health systems standard saided that "People should have access to free primary healthcare services for the duration of the disaster"¹⁴. Therefore, we are we are conducting this assessment in order to be able to properly design such an intervention to provide oral care based on an evidence based approach.

Purpose of Assessment

In light of this lack of information and the minimal consensus for minimal oral health services required in crisis, the objectives of this needs assessment are the following:

- Mapping of existing primary health care centers and identifying those in which dental care services can be integrated. This will be done in line with recommendation from the health directorate and the health cluster.
- Assessing local response capacity: determine the availability of dental care services in NGOs and health directorate supported health facilities, as well as conducting a mapping of services provided by private practitioners.
- Quantifying needs and gaps of dental care among IDPs and host populations in western and northern rural Aleppo.
- Identifying populations (in the targeted locations) who are most in need of humanitarian support, including identification of locations with high density of vulnerable groups and IDPs.
- Assessing coping mechanisms of the affected population.
- Documenting of immediate and long-term needs of the affected populations in terms of dental treatment.
- Establishing criteria for determining when integration at the PHC Center is feasible or when integration within the broader PHC system is the alternative.

METHODOLOGY

Approach

Trust Consultancy was hired by White Smile organization to conduct data collection. Trust Consultancy applied both qualitative and quantitative data collection methods and used core data collection processes. These processes included: secondary data review, household surveys, and semi-structured KIs with targeted groups.

Sampling technique

Number of the overall population in the targeted 3 districts, was 426,598 individuals. These were distributed over 283 communities, as per the HNO 2017 numbers (See table A2 for details) ¹⁵.

Based on our understanding of services delivery in rural communities in Syria, one can identify communities that are 5000 individuals or greater (core communities) in the assessed locations. These core communities provided services for smaller communities that surrounds them. Such services included health and education. We therefore, chose these core communities in Northern and Eastern Aleppo (total of 32 communities) to conduct our assessments, as those will be the more likely places where dental clinics will be needed and more easily accessed.

In each one of those communities we conducted about 16 surveys and one KI interview, the total number of individuals surveyed were 540 adults (Sample size = 0,001). Full table of communities, numbers of surveys, and KIs interviews is shown in Table A1 in Annexes.

The objectives for employing these diverse tools were as following:

1. To generate an accurate profile of the present dental services and needs of the affected populations.
2. To identify related factors that influence services provision for the affected populations and to provide data analysis of the priority needs of the assessed communities.

The assessment questionnaire was designed in consultation and with the dental team in White Smile organization.

Household Surveys: The Trust Consultancy needs assessment team conducted household surveys with host community members and IDPs. Simple random sampling was employed to determine the sample size of the respondents. 14 enumerators were trained and they conducted a total of 540 household survey, covering both urban and rural areas of 32 core communities with population more than 5,000. These communities were distributed over 7 sub-districts of Western and Northern rural Aleppo. Table A2 in Annexes demonstrates the number of surveys conducted in each location disaggregated by population group.

Semi-Structured Key Informant Interviews: Semi-structured Key Informant Interviews were conducted in the aforementioned communities in western and northern rural Aleppo (see Table 1). Twenty-nine participants comprised of members of local councils, health directorates, health facilities, and dental clinics were interviewed in July 2017.

Interview guides were developed to gather additional contextual and/or macro-level information that may provide a deeper insight into the circumstances of the affected population beyond the

household level impacts. Enumerators sought additional information regarding official quantitative information on the number of affected people, current displacement patterns, and projections of displacement patterns, as well as identifying efforts/challenges to provide dental care services.

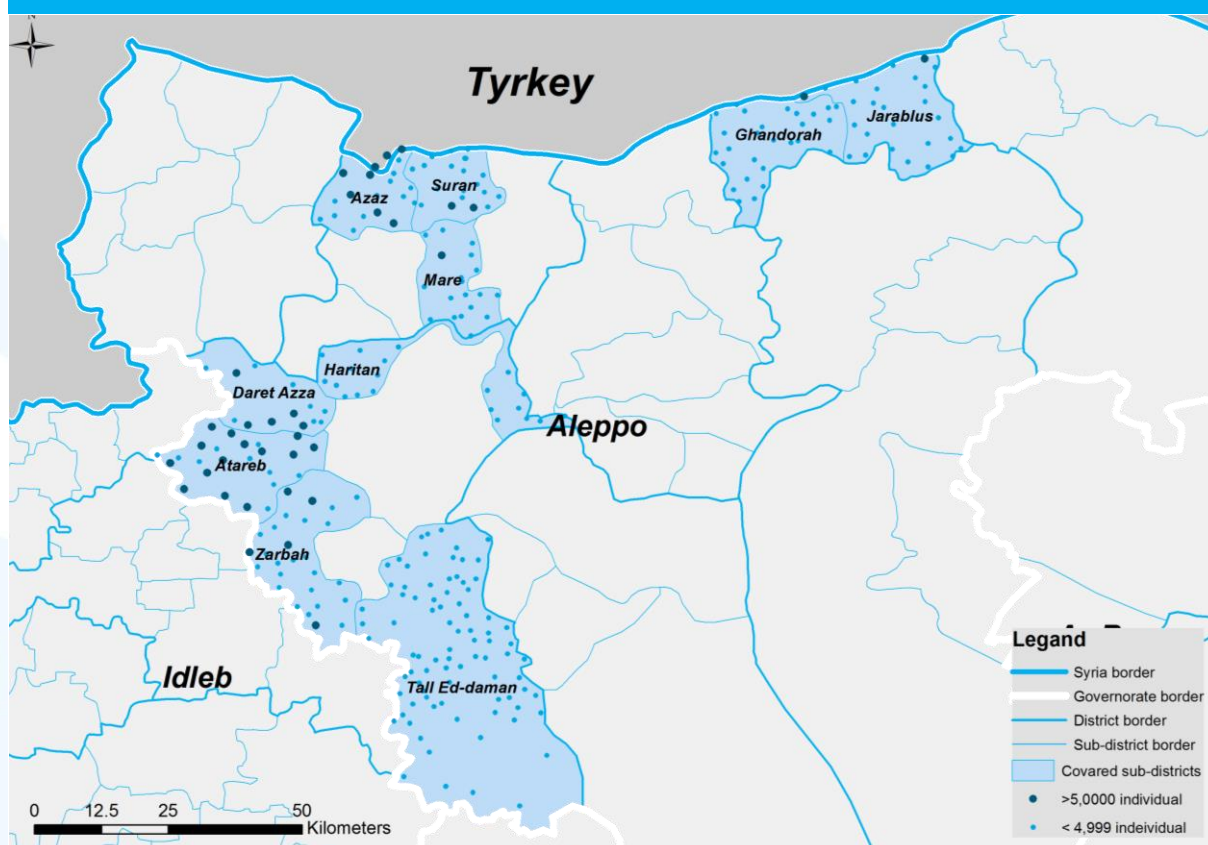
Data collection/data cleaning

Data were collected and cleaned by an IM expert, visualizations and tables were generated. The data was collected in a disaggregated manner by key qualifiers including age, gender, and location.

Data analysis

Data analysis was then made by 2 dentists, to interpret the demonstrated results and provide recommendations.

Map 1, Geographical Coverage, and assessed communities



LIMITATIONS AND CHALLENGES

- Jazraya (Aleppo/Jebel Saman/Zarbah) was among the targeted communities, but the field team couldn't conduct the visits due to the security situation.
- The field team couldn't conduct KIs in 3 communities (Talil Elsham, Maarin, and Ehteimlat) because they couldn't find any key informant in the targeted communities during the 3 days of visits.
- Managing field teams remotely from Turkey was challenging due to limited communication channels (especially communication through internet).
- Lack of common definitions across the population, as people could answer different questions according to their understanding, which is different from one to another. Trust Consultancy team tried to avoid this by including clear definitions for all questions in the survey.

FINDINGS

Demographics

In the survey conducted in Western and Northern rural Aleppo, 540 respondents participated, with 67% from Jabel Saman district, 30% from Azaz district, and 3% from Jarablus district. In terms of gender distribution, the survey almost included the same number of female and male respondents (49.4% females and 50.6% males):

- Jabel Saman: 52% females and 48% males.
- Azaz: 44% females and 56% males.
- Jarablus: 38% females and 62% males.

Figure 1, HH Survey per District

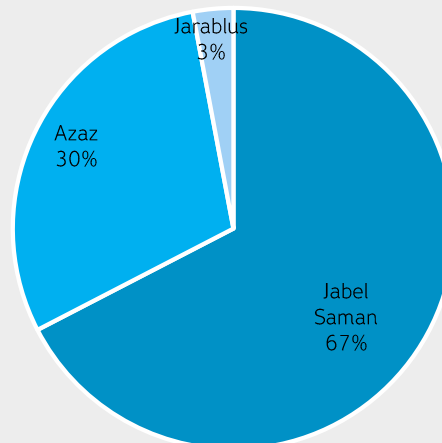
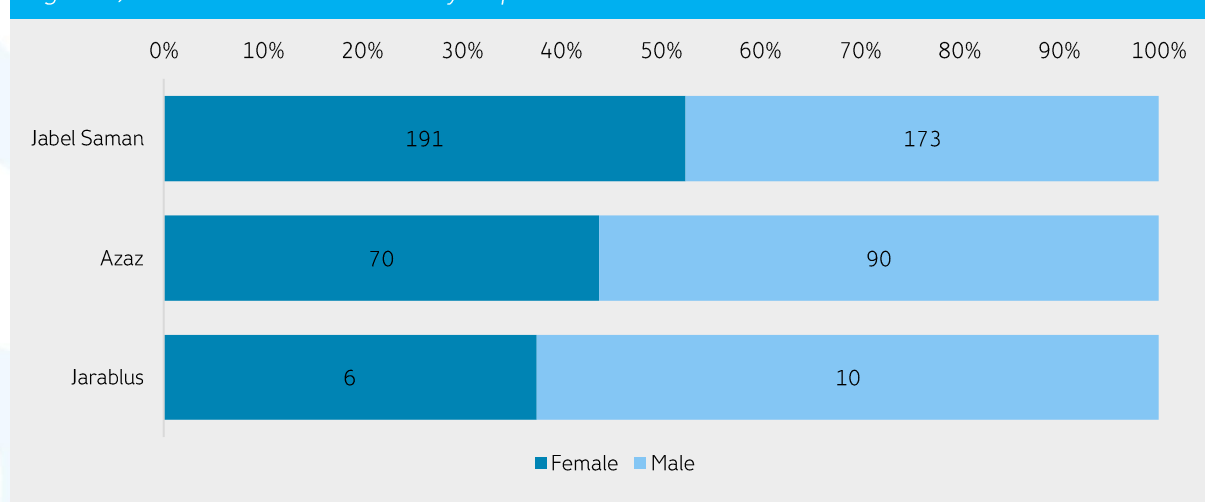


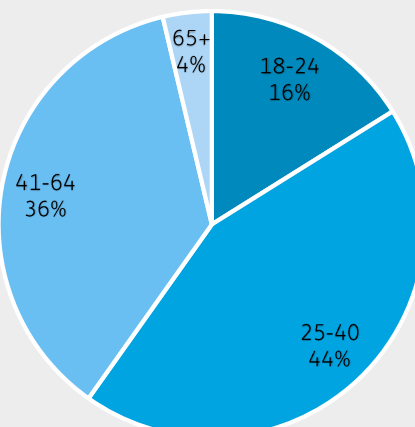
Figure 2, Gender breakdown of survey respondents



The respondents were between the 18 and 80 age criteria. The age categories were distributed as follow: 18-24 year of age (87; 16%), 25-40 years (236; 44%), 41-64 years (197; 36%), and 65+ (20; 4%).

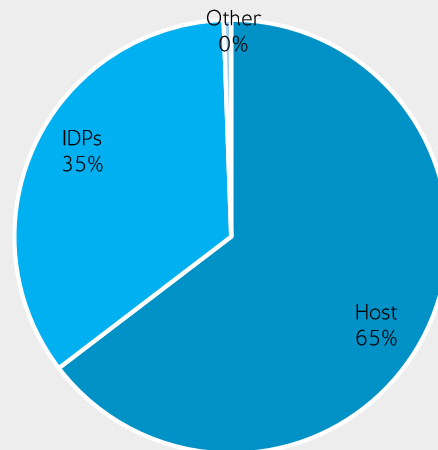
28 out of 29 Key Informants were males, with only one female interviewed in Bab Alsalameh. The key informants were between the ages 23 to 60 years old.

Figure 3, Age groups of survey respondents



65% of surveyed respondents were from host communities, and 35% were internally-displaced persons (IDPs). With regard to the level of education, 29% of respondents completed elementary school only, 31% completed intermediate school, 15% completed high school, 13% were university graduates or university students, and 12% did not receive any education previously. When asked about how many people live with the respondent in the same household, the range was from 1 to 20, with an average of 6.7 members per household.

Figure 4, Residence status of survey participants



64% of surveyed respondents (343 out of 540) fell in the vulnerable population criteria, while 36% didn't. Of these 343, the vulnerability type included the following:

- Physical disability (20%)
- Elderly headed household (19%)
- More than 6 members in family (76%)
- Female headed household (13%)
- Child headed household (2%)
- Other (4%)

Figure 5, Level of education

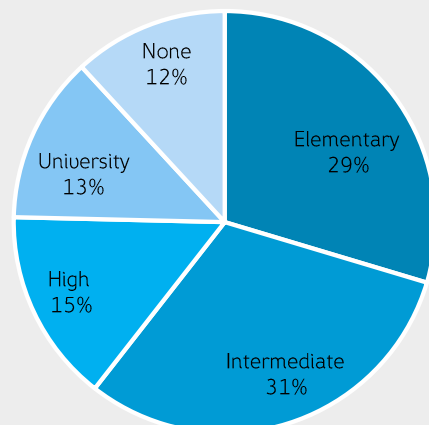
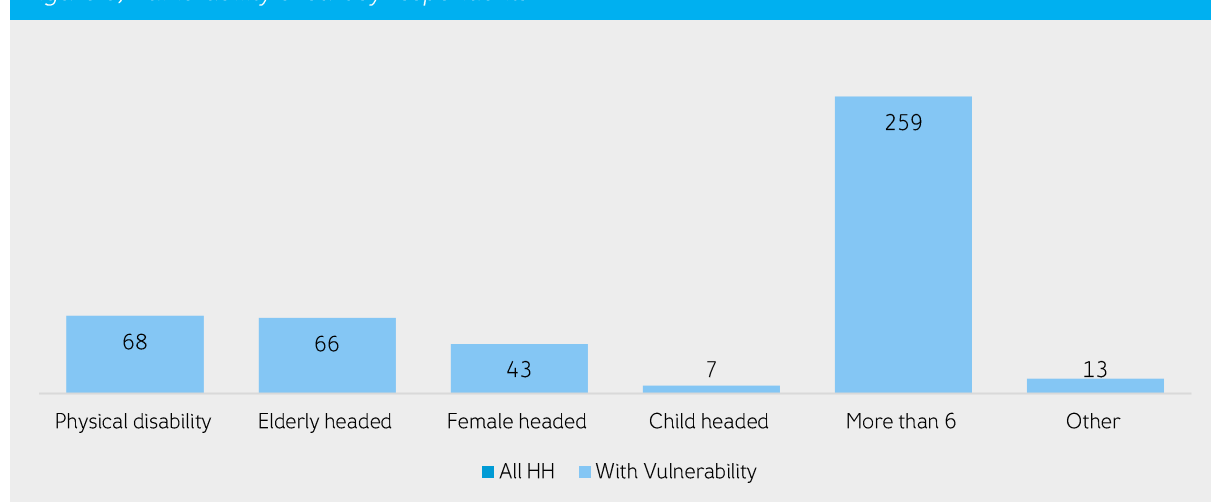


Figure 6, Vulnerability of survey respondents



Perceived Oral Health Status

When participants were asked about their satisfaction with their dental and oral health, 43% reported poor, 30% fair, 22% good, 5% very good and only 3 (almost 0%) felt they had excellent oral health.

Dental History

Participants were asked if they have any dental pain. 64% of them responded “sometimes”, 23% “always”, and 13% reported “never” experiencing dental pain before. Several questions were asked to assess the status of participants’ dental tissues. 33% of people reported having bleeding gums “sometimes”, 58% “never”, while 9% reported “always” having bleeding gums. 31% reported having swelling cheek /gums “sometimes”, 64% “never”, while 5% reported “always” having swelling cheek /gums.

Figure 7, Participants satisfaction with their oral health

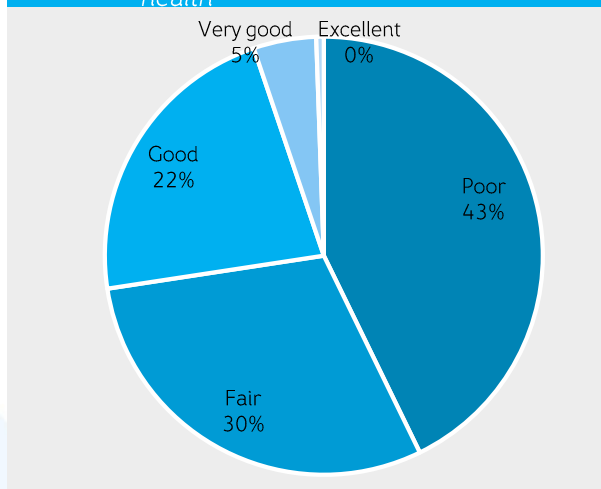
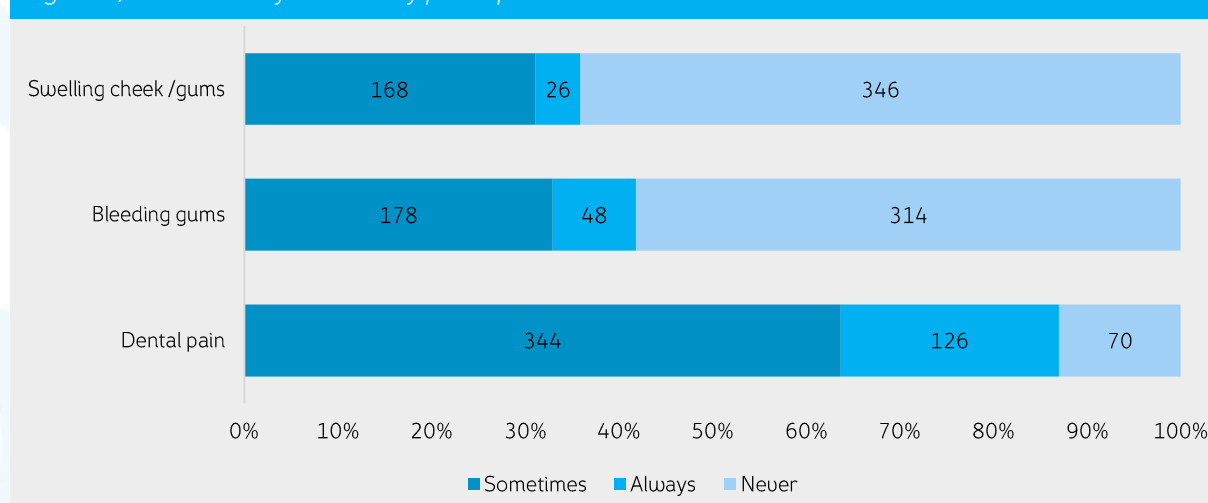
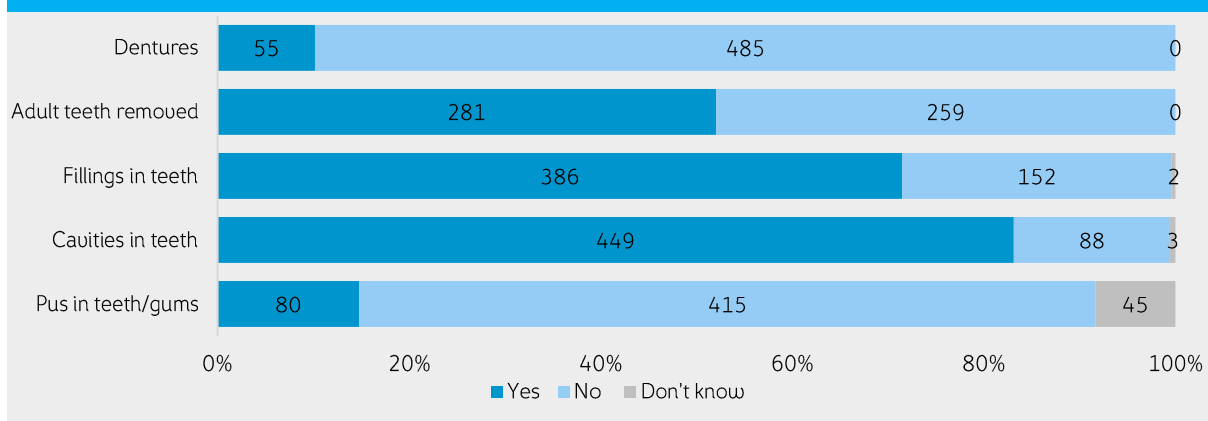


Figure 8, Dental history 1 of survey participants



15% of people reported having pus in teeth /gums “yes”, 77% “no”, while 8% didn't know. 83% of people reported having cavities in their teeth “yes”, 16% “no”, while 1% didn't know. 71% of people reported having fillings in their teeth “yes”, 28% “no”, while 1% didn't know. 52% of people reported having adult teeth removed “yes”, and 48% “no”. 10% of people reported having dentures “yes”, and 90% “no”.

Figure 9, Dental history 2 of survey participants



Frequency of visits

56% of participants reported visiting the dentist in the past 6 months, 20% visited the dentist in the past 6-12 months, 12% didn't see the dentist in the past 1-2 years, 8% did not visit the dentist for the past 3 years, and 4% of participants reported they have never visited the dentist before.

When asked about how often they usually take their children to the dentist, 62% of those who have children responded that they take their children to dentist when they experience pain, 1% every 6 months, and 37% have never taken their children to the dentist.

84% percent of participants mentioned that they need to see the dentist at the present time, with 51% need to see a dentist "immediately", 31% between 1-3 months from now, 11% would wait for 3-6 months before seeing the dentist, and 7% did not identify a specific time.

Importance of Oral Health

Most of surveyed participants (86%) expressed that it is important for them to visit the dentist regularly. Additionally, participants were asked how likely they or their child would visit a free dental clinic if it was available. Possible responses were: definitely; likely; unsure; and not likely. 77% answered they "definitely" would, 18% would "likely" go, 4% were "unsure", and only 1% were "not likely".

Figure 10, Survey participants' last visit to the dentist

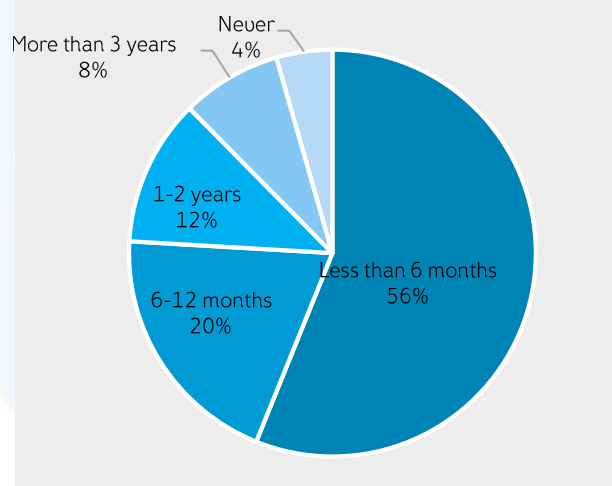


Figure 11, When survey participants take their children to dentist

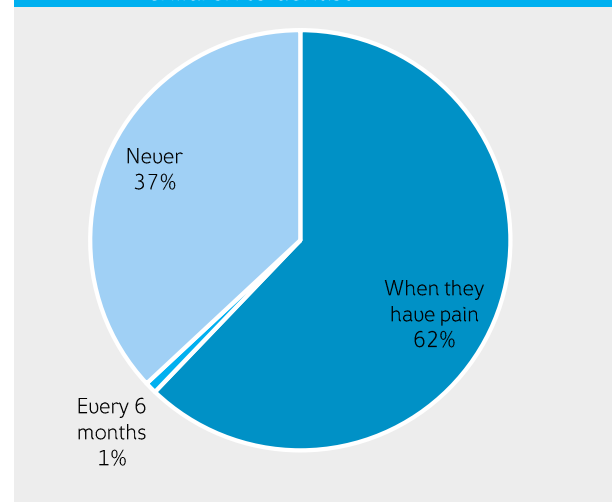
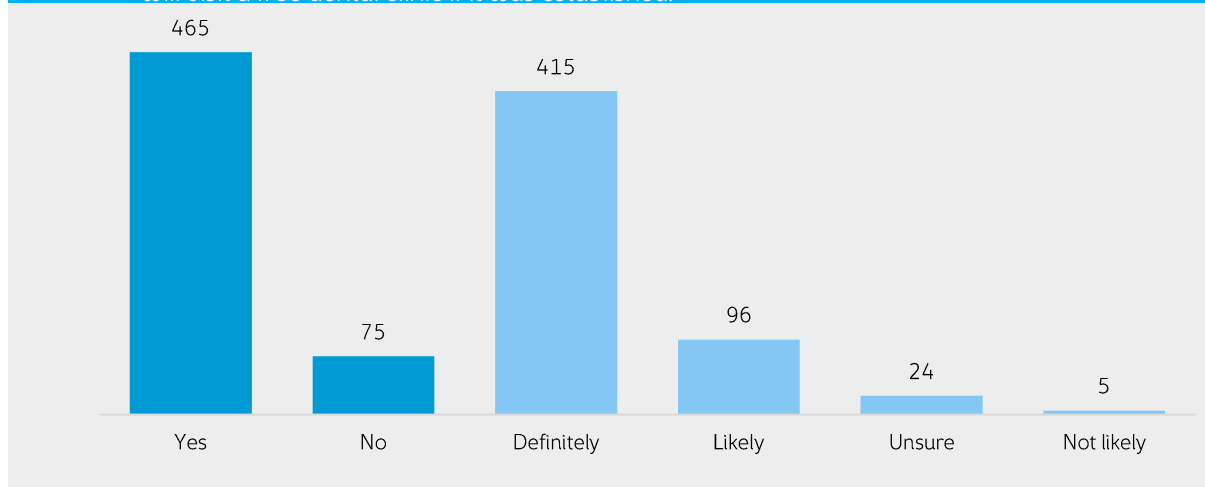




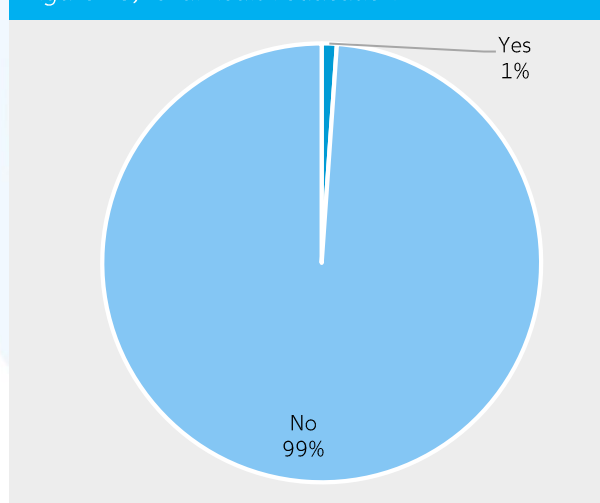
Figure 12, importance of visiting the dentist regularly (yes or no) / How likely participants or their child will visit a free dental clinic if it was established.



Oral health education

Only 6 surveyed participants (1%) and 2 key informants (7%) confirmed conducting dental awareness campaigns. Almost all of those who confirmed reported conducting these campaigns in schools and addressing general topics like dental diseases, oral hygiene and prevention. One Key informant, the Manager of Medical Office in the Local Council of Hoteh, confirmed conducting these campaigns by the local council itself. However, 6 surveyed respondents also mentioned conducting awareness campaigns in Batbu, Atareb, Daret Azza, Kafr Naha, and Shamarin.

Figure 13, Oral health education



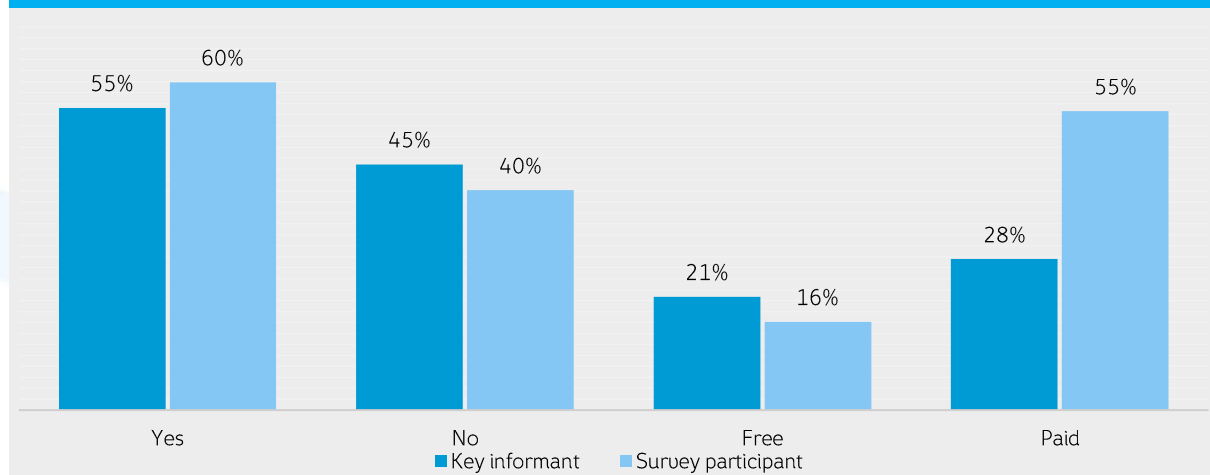
Mapping existed Dental Services

Several questions were asked in order to map existing dental services, their location, and if they are private or free of charge. It was important for us to assess if the local populations were aware of the locations of clinics in their communities, as this will be an indicator of the utility of these clinics for them.

When asked if dental services are available in the area, 60% of surveyed participants and 16 key informants (55%) confirmed their availability. However, only 16% of surveyed participants and 6 key informants (21%) reported availability of free dental services.

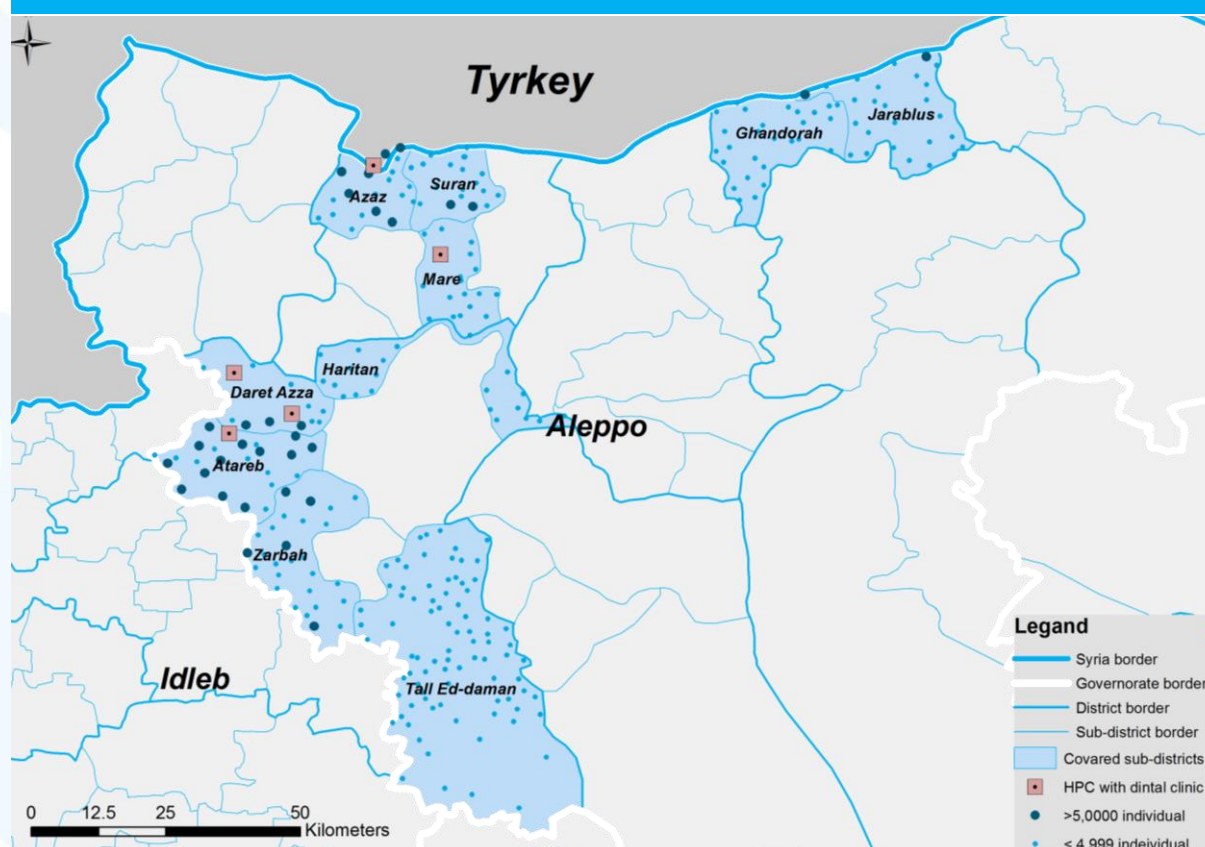
As expected, private dentists tend to concentrate in bigger urban areas (Azaz, Atareb, and Daret Azza in our case), leaving smaller communities relatively underserved. Oral healthcare is often not integrated into the primary healthcare system (see Table A1 in Annexes).

Figure 14, Availability of dental services



The key informants provided information about the health facilities that included dental clinics and if these clinics are fully supported or not. Only Al-Reih Al-Morsalah hospital in Daret Azza included a dental clinic that was not fully supported, thus provided low cost treatments. The other 5 dental clinics in the visited health facilities were fully supported by 3 partners.

Map 2, Health facilities with dental clinic availability



More details about this facilities in table hereunder.

Table 2, Health facilities with dental clinic availability

District	Sub-district	Community	Name of health facilities that include dental clinic	dental clinic support
Jebel Saman	Daret Azza	Daret Azza	Al-Reih Al-Morsalah hospital	Partially supported
		Anjara	QRCS Health Center	Supported
		Sahara	Sahara health center	Supported
		Shamarin	Al-Nour PHC	Supported
		Bab Alsalameh	QRCS Health Center	Supported
	Mare'	Mare'	Mare' Health Center	Supported

Additional Findings from Key Informants

After analyzing data provided from the health cluster, and based on information collected about the locations of private clinics, the White Smile team conducted a second visit to the health centers and private clinics, seeking additional information and more in-depth understanding about the nature of their services.

- Dental equipment is not available in any of the PHCs where services were not provided. Therefore, provision of dental equipment would be a great help to provide fully functional dental clinics in these PHCs.
- All of working clinics (private and charity) are equipped with dental chairs, air compressor units, light-curing devices, and amalgam vibrators.
- All 4 working charity clinics, and 5 of the private clinics, (in total 42%) are not equipped with ultrasound scalers.
- Only 2 private clinics (10%) in Hur, and Kafr Karmin are equipped with dental x-ray devices.
- Panoramic x-rays centers are only available in 3 communities (Atareb, center Azaz, and Soran).
- Dental labs are only available in 2 communities (Atareb and Azaz).
- There are 3 only dental material providers available in the area. However, their supply is limited and not all necessary dental material/equipment is available at their stores. Equipment maintenance is also a problem, if any spare part is needed, there would be a waiting time of at least 6 weeks until the missing parts are brought from Turkey.
- While private and charity clinics (to a different extent in different communities) are managing to obtain water (weather from local wells, or from far locations using water trucks); the quality of water is not always assessed. The clinics are mostly relying on wells and not on water grids. 30% of the assessed clinics reported that they receive water occasionally through pipelines.
- Similar results were found regarding electricity needed to run the dental equipment. Electrical power is expensively generated from diesel in (90%) of the assessed clinics, while the other 10% are using a mix of generators and electricity coming from the grid when it is available. Electricity provided by neighborhood Diesel generators are unstable and often cause malfunctions in the electronic controllers in dental chairs or in wet sterilizers. These electricity problems have added a significant increase to the treatment fees.

- As a consequence of the lack of electricity and water, none of working clinics (private and charity) are in possession of steam sterilizers. This is because they would require more stable power lines with high wattage capacity.

Challenges in receiving oral care

When asked if they face any difficulties or barriers when they need to go to a dentist, 56% of survey respondents said "yes" and 44% said "no". The main reasons for not visiting a dentist were as following:

- Can't afford it (72%).
- No transportation available (45%).
- Distance is not suitable (39%).
- Clinic hours aren't suitable (29%).
- Other (20%).
- Don't know where to go (5%).

Many participants reported a combination (more than one) of the aforementioned factors.

Among other difficulties, participants commonly mentioned crowded clinics, as per 47 of surveyed participants (9%) and 9 key informants (31%) reported waiting for long times when people need to visit the dentist. Some participants even reported waiting for days until they had the chance to meet the dentist, while others didn't continue treatment due to this barrier. Participants also mentioned additional difficulties such as lack of advanced dental services, lack of dental amenities like laboratories and panoramic x-ray, lack of sterilization, and unprofessional dentists.

When they have to travel other areas for treatment, surveyed participants would use general transportation (40%), private transportation (56%), or even walk (4%). The time needed for them to travel from their homes to the clinics ranged between 15-30 minutes (43%), 30-45 minutes (25%), less than 15 minutes (13%), more than hour (9%), or 45-60 minutes (10%).

Figure 15, Survey participants who face difficulties

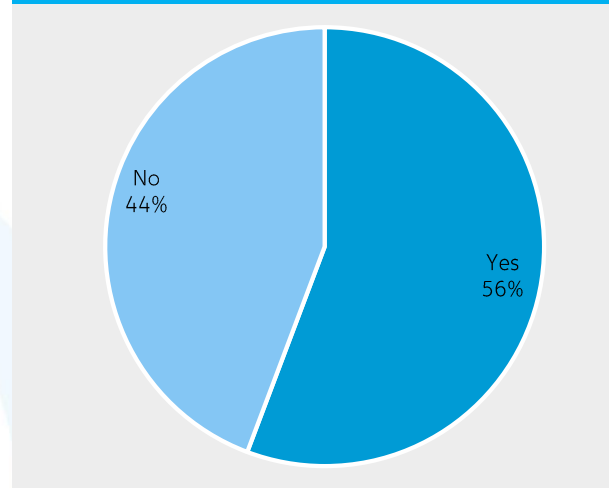
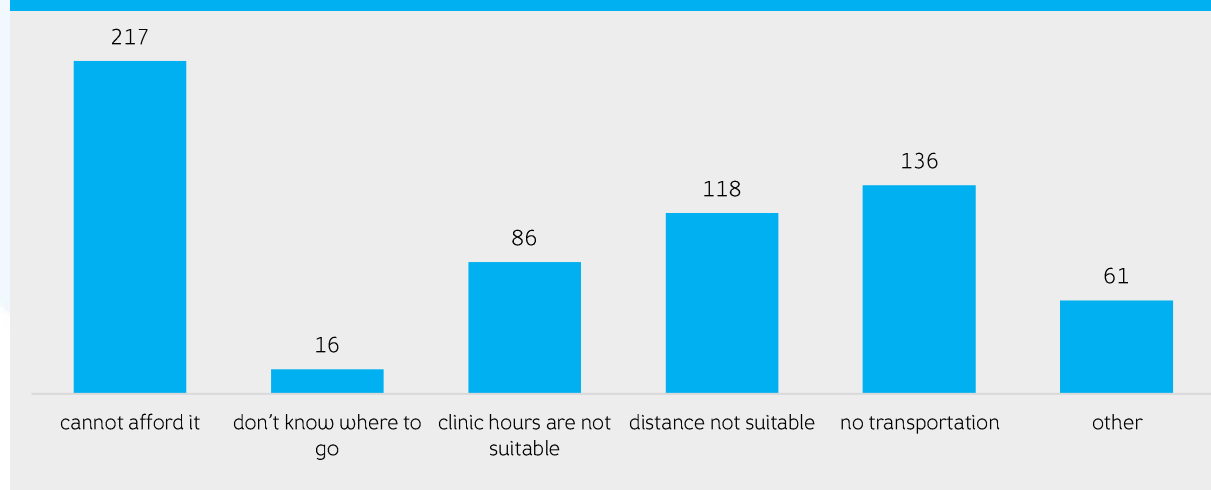


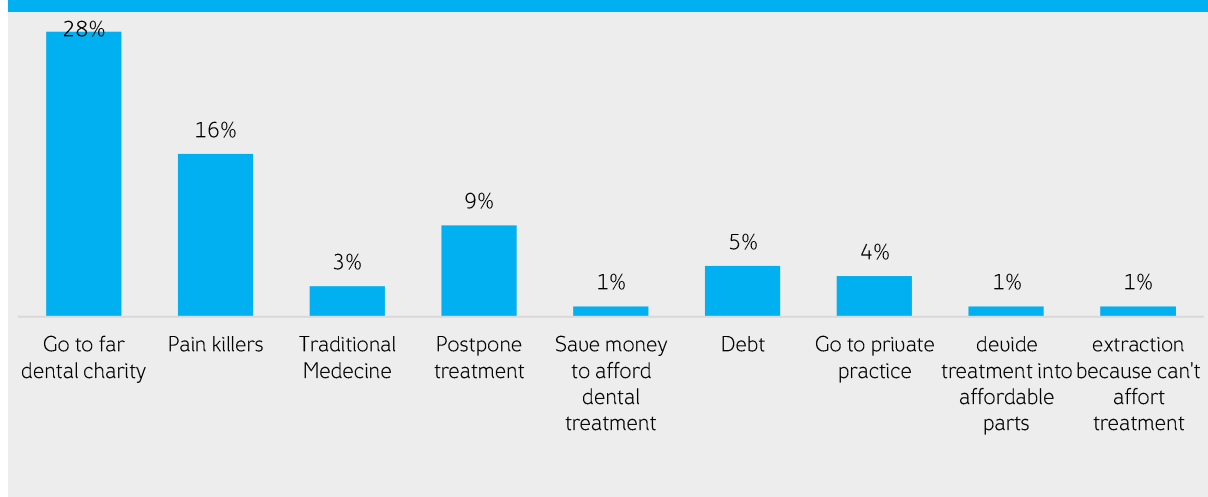
Figure 16, Difficulties and barriers faced by survey participants



Coping mechanisms

In order to overcome these difficulties and barriers, participants said they would rely on pain-killers (28%) usually available for free in PHCs, with all the risk of over use and uncontrolled administration of these drugs for long-term. Some participants (3%) mentioned the usage of traditional medicine (mouth rinse with warm salt water or chewing clove buds). Some would try to postpone the treatment (9%) as much as they can bear the pain, once the pain becomes unbearable, they would consider go to a private dentist (4%). However, in order to do so, they have to take loans (5%), or are forced to make saving from their households to afford the treatment (1%). In some cases, people would prefer to have tooth extractions (1%) if they cannot afford a more expensive treatment, or they would divide the treatment into multiple affordable phases (1%). Key informants confirmed these difficulties, and also the ways patients are dealing with them.

Figure 17, Coping mechanisms by locals



GAP ANALYSIS AND PRIORITIZATION

In October 2016, the health cluster in Gaziantep/Turkey, drafted an essential package of health services for northern Syria. It defined 4 levels for providing health services as shown in the table below:

Primary Health Care Level	Type of Primary Health Care Service	Population Coverage
1	Mobile clinic for primary health care	500 – 10,000
2	primary health care unit	3,000 – 10,000
3	primary health care center	10,000 – 30,000
4	primary health care comprehensive center	30,000 – 50,000

According to this essential package of services, levels 2,3, and 4 should have a dentist among the staff and provide dental services. This is the main criteria in determining if further dental services are needed in the community or not: **one free dental clinic for every 10,000 of population.**

Beside this criterion, almost all key informants expressed that, if dental services are available, only general services are provided, with gaps in more advanced services like fixed and removable prosthodontics, orthodontics, periodontology and maxillofacial surgery.

Additionally, the following needs were identified: dental clinics, qualified dentists, dental equipment and supplies, and additional amenities like dental lab and panoramic x-ray.

Prioritization criteria

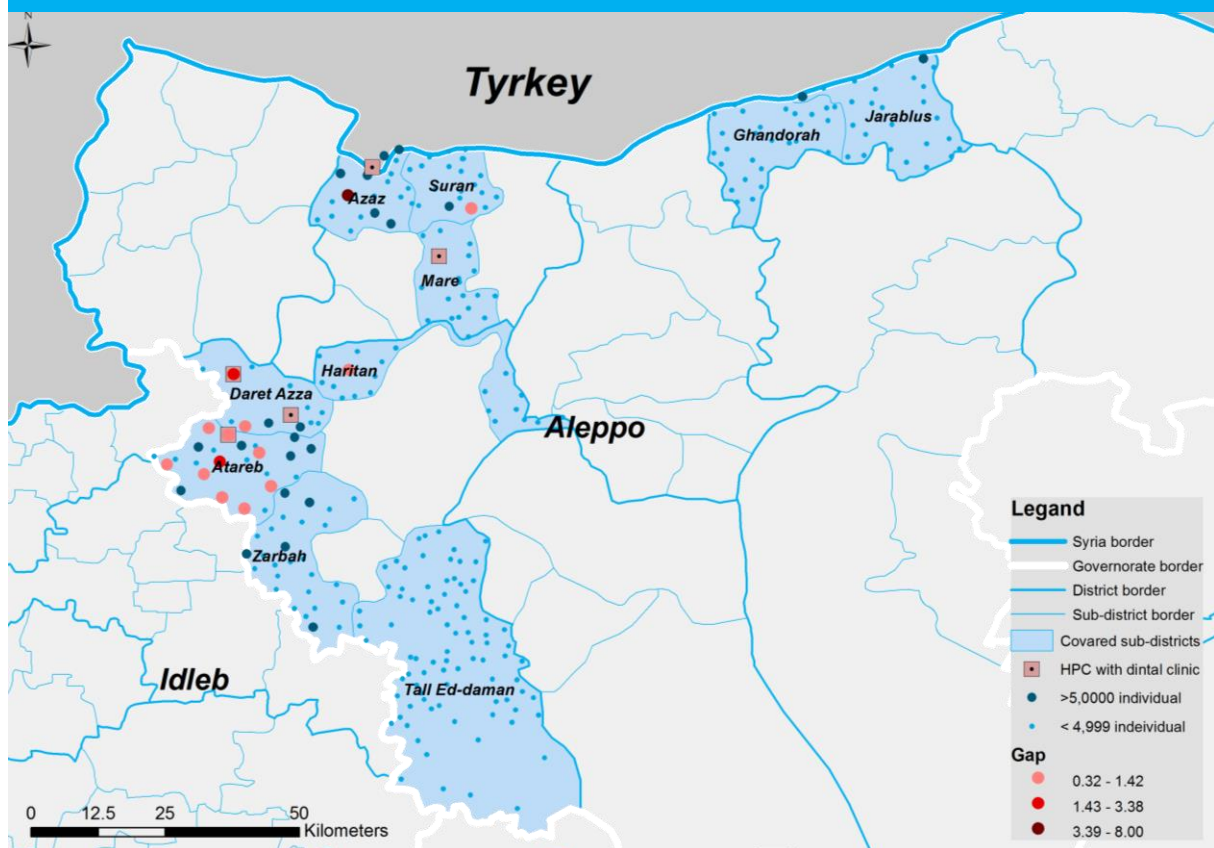
The following suggested prioritization criteria were taken into consideration:

- Dental services to be integrated in PHCs: it would be better to include any new dental clinic in the already existing PHC, as this will integrate with the existing services and provide access to the other services provided in the PHCs (such as free medications). It will also make referrals from general practitioners much easier.
- Minimal needed coverage will be determined: ($\# \text{ population} / 10,000$ as per the standard suggested by the health cluster), while giving double weight to the IDPs, since IDPs are considered more vulnerable.
- Actual coverage by paid dental services that are still covering a certain percentage of the population.
- The gap size equals the difference between minimal needed coverage and the actual coverage.

The table below shows the most in-need communities, ordered according to the above mentioned criteria:

Communi ty	Code	Pop Data	IDPs %	Absence Dental Service	HPC Availability (no Dental charity)	Actual coverage with paid clinics	Minimal needed	Gap	Priority
Azaz	C1564	65590	53%	94%	yes	2.00	10.00	8.00	1
Daret Azza	C1139	43305	24%	100%	yes	2.00	5.38	3.38	2
Atareb	C1022	27233	53%	89%	yes	2.00	4.17	2.17	3
Tqad	C1143	8032	77%	75%	yes	0	1.42	1.42	4
Sheikh Ali	C1031	8500	50%	50%	yes	0	1.28	1.28	5
Batbu	C1025	8022	41%	73%	yes	0	1.13	1.13	6
Jeineh	C1032	7093	45%	94%	yes	0	1.03	1.03	7
Anadan	C1121	6000	70%	50%	yes	0	1.02	1.02	8
Tuwama	C1020	7099	39%	100%	yes	0	0.99	0.99	9
Sahara	C1023	6841	39%	88%	yes	0	0.95	0.95	10
Kafr Thoran	C1041	6896	34%	100%	yes	0	0.92	0.92	11
Kafr Taal	C1037	6026	36%	100%	yes	0	0.82	0.82	12
Kafr Aleppo	C1039	6655	22%	100%	yes	0	0.81	0.81	13
Ehteimlat	C1667	11557	14%	94%	yes	1.00	1.32	0.32	14
Hur	C1140	3739	69%	100%	yes	1.00	0.63	-0.37	
Suran	C1197	10000	22%	100%	yes	2.00	1.22	-0.78	
Kafr Karmin	C1035	8022	48%	100%	yes	2.00	1.18	-0.82	

Map 3, Most 10 in need communities



RECOMMENDATIONS

Access to oral care

The WHO Oral Health Program supports the development of oral health services that match the needs of the population⁷. As a result, and according to the needs assessment's findings, it's recommended that the following should be done in order to accommodate for the dental care needs:

- Establishment of dental clinics to provide free dental services to the most in-need populations. According to the selected criteria, the most ten communities in-need for dental services are: Azaz, Daret Azza, Atareb, Tqad, Sheikh Ali, Batbu, Jeineh, Anadan, Kafr Hallab, and Tuwama. (sorted by priority)
- Establishment of clear inclusiveness mechanisms to vulnerable groups such as persons with disabilities.
- Provision of dental services that can solve the most reported dental problems such as: dental pain, cavities and dental fillings. In addition, other gaps in needed general and specialized dental services must be filled.

Prevention

The significant role of socio-behavioral and environmental factors in oral disease and health has been shown in numerous epidemiological surveys¹⁶. Due to the shortage of treatments of dental diseases in the studied communities, the mediocre perception of oral health, and the quasi absence of oral health education sessions, we suggest that we should be investing in programs for promoting oral health (proven to have high value for money) by:

- Conducting dental awareness campaigns to promote healthy lifestyles and reduce risk factors to oral health that arise from environmental, economic, social and behavioral causes.
- designing preventive programs and educational contents based on children's perspective suffering from dental caries is also necessary.

Quality of service

While the principles of infection prevention and control are the same globally, approaches taken in developing and developed countries show wide variation with infection prevention and control in oral health-care facilities¹⁷. These issues are very pressing in Syria where the war has severely damaged the health system.

our study has indicated some shortcomings with regard to infection prevention and control knowledge as well as education in oral health-care facilities. lack of quality dental materials at an affordable price and insufficient investment in proper dental equipment such as sterilizers, x-ray machines, and the questionable quality of water, electricity and other amenities provided to the clinics. This should be addressed by:

- Drafting standard policy and procedures in oral health, based on international oral health programs, to promote dental treatment in crisis zones effectively. This should be done with focus on sterilization and infection control in areas where basic services such as water

safety are compromised. efforts should be made to address other gap in specialized dental equipment, and dental labs.



ANNEXES

Tool 1: Household Dental Care Survey

A - Survey information

A01 - Governorate:

A02 - District:

A03 - Sub-District:

A04 - Community:

A05 - Name of Trust researcher:

A06 - Date:

B - Introduction

Hello. My name is _____, and I work with Trust, an independent M&E company. I would like to ask you some questions about dental care status and services. We will share the information with White Smile Organization that will use the information to assess the needs of dental care.

It should take about 10 – 20 minutes. It is voluntary so you have the choice to participate or not. It will be completely confidential and the information you give us will not be shared with anyone else. If you feel uncomfortable at any time or it is taking too much of your time, please feel free to tell me. We can stop and you can leave at any time.

B01 - Do you agree to be interviewed?

☐ Yes

☐ No

C - Demographic characteristics of participants:

C01 - Gender: (select one)

☐ Male

☐ Female

C02 - Age (above 18): (enter number of years)

C03 - Residence Status? (select one)

☐ Host community

☐ IDP

☐ Other: please specify

C04 - Highest level of education: (select one)

☐ Primary

☐ Intermediate

☐ Secondary

☐ University

☐ None

C05 - How many people do you live with in your household? (Enter number)

C06 - Do any members of your household suffer from any vulnerability? (select one)

☐ Yes

☐ No

C07 - If yes, what type of vulnerability? (select many)

☐ Female headed household

☐ Elderly headed household

☐ Child headed household

☐ More than 6 members in family

☐ Physical disability

☐ Other: please specify

D - Perceived oral health status:

D01 - How satisfied are you with your oral health status? (select one)

☐ Excellent

☐ very good

☐ good

☐ fair

☐ poor

D02 - How would you rate your dental health care? (select one)

☐ Excellent

☐ very good

☐ good

☐ fair

☐ poor

E - Dental history of participants:

E01 Do you have any dental pain? (select one)

☐ Always

☐ Sometimes

☐ never

E02 - Do you have bleeding gums? (select one)

- ☐ Always
☐ never
- E03 - Do you have swelling cheek /gums? (select one)
- ☐ Always
☐ never
- E04 - Do you currently have pus in teeth/gums? (select one)
- ☐ Yes
☐ don't know
- E05 - Do you currently have cavities in your teeth? (select one)
- ☐ Yes
☐ don't know
- E06 - Do you currently have fillings in your teeth? (select one)
- ☐ Yes
☐ don't know
- E07 - Do you currently have any adult teeth removed? (select one)
- ☐ Yes
☐ don't know
- E08 - Do you currently have dentures? (select one)
- ☐ Yes
☐ No

F - Access and utilization of dental services in survey respondents:

- F01 - Are dental awareness campaigns available in the area? (select one)
- ☐ Yes
☐ No
- F02 - If yes, where they are conducted? (select many)
- ☐ At schools
☐ At dental clinics
☐ Community sessions
☐ At health facilities
☐ Household visits
☐ Other: please specify
- F03 - If yes, what topics are covered in these campaigns? (select many)
- ☐ Children Teeth
☐ Dentures
☐ Root canal
☐ Gum disease
☐ Don't know
☐ Tooth decay
☐ Sensitive teeth
☐ Wisdom teeth
☐ Oral hygiene
☐ Other: please specify
- F04 - Are dental services available in the area? (select one)
- ☐ Yes
☐ don't know
☐ No
- F05 - If yes, is it free or paid? (select one)
- ☐ Free
☐ Paid
- F06 - If yes, to whom are the services offered? (select many)
- ☐ Women
☐ Children
☐ People with physical disability
☐ Men
☐ Elderly
☐ Other: please specify
- F07 - Please mention all dental clinics and PHCs you know and their locations. (write text)
- F08 - Where can you go to see a dentist? (select many)
- ☐ in the area
☐ in other area
☐ other: please specify
- F09 - If you would go to other area, how would you go? (select many)
- ☐ Walking
☐ general transportation
☐ private transportation
☐ other: please specify
- F10 - If you would go to other area, how much time do you need to arrive? (select one)
- ☐ less than 15 minutes
☐ 30-45 minutes
☐ More than 1 hour
☐ 15-30 minutes
☐ 45-60 minutes

F11 - Do you face any difficulties or barriers when you need to go to a dentist? (select one)

- ☐ yes ☐ no

F12 - If yes, what are they? (select many)

- ☐ cannot afford it ☐ don't know where to go
☐ clinic hours are not suitable ☐ distance not suitable
☐ no transportation ☐ other: please specify

F13 - What do you do to overcome these difficulties or barriers? (enter text)

F14 - When was the last time you visited a dentist? (select one)

- ☐ less than 6 months ☐ 6-12 months
☐ 1-2 years ☐ more than 3 years
☐ never ☐ other: please specify

F15 - Do you take your children to dentist? (select one)

- ☐ Yes ☐ No
☐ no children

F16 - If yes, how often do you usually take your children to dentist? (select one)

- ☐ when they have pain ☐ every 6 months
☐ every year ☐ other: please specify

F17 - Do you need to see a dentist? (select one)

- ☐ Yes ☐ no

F18 - If yes, when? (select one)

- ☐ immediately ☐ 1-3 months from now
☐ between 3-6 months ☐ other: please specify

G - Importance of oral health:

G01 - Is it important for you to visit the dentist regularly? (select one)

- ☐ Yes ☐ no

G02 - If a dental clinic is established, how likely you or your children are to visit the clinic for treatment? (select one)

- ☐ Definitely ☐ Likely
☐ Unsure ☐ not likely

G03 - Would you like to add anything else? (select one)

- ☐ Yes ☐ No

G04 - If yes, please comment.

H - End of Survey

"Thank you for your time and willingness to share information with us. We have asked you a lot of questions and you have provided us with very valuable information. Please remember that all the information provided will be kept anonymous. We will share this information with White Smile to help them assess the needs for their future projects. We will not share any of your personal information with anyone else."

Tool 2: KII Guide

A - Survey information

A01 - Governorate:

A02 - District:

A03 - Sub-District:

A04 - Community:

A05 - Name of Trust researcher:

A06 - Date:

B - Introduction

Hello. My name is _____, and I work with Trust, an independent M&E company. I would like to ask you some questions about dental care status and services. We will share the information with White Smile Organization that will use the information to assess the needs of dental care.

The interview will last about 30 minutes. You can leave at any time, but it would be very helpful if you stay until the end. You will not receive any compensation or payment for participating in this interview. This interview will not be used to gather information about any person specifically. Please be assured that everything we discuss during this interview will be kept in strict confidence and your real name will not appear in any of our results. As such, please make every effort to be open and honest when responding to the questions

B01 - Do you agree to be interviewed?

☐ Yes

☐ No

B02 - Interview Start Time:

C - Interviewee Profile

We would like to start by asking a little bit of information about you.

C01 - Name (Optional):

C02 - Gender:

☐ Male

☐ Female

C03 - Age:

C04 - Category: staff of:

☐ health directorate

☐ health facility

☐ Other, please specify.

☐ local council

☐ dental clinic

C05 - Role/Position:

C06 - Date started working at the position:

C07 - Qualification:

D - Interview Questions

D01 - How can you describe the area regarding?

❖ Population

❖ IDPs

❖ Vulnerable groups (women, children, elderly, people with physical disability)

❖ Poverty

D02 - What are the available dental care providers?

❖ What are they?

❖ How many?

❖ Are they supported?

❖ To whom the services are provided? (Women, men, children, elderly, people with physical activity...)

❖ Are they free or paid?

❖ How far?

D03 - What are the available health centers?

❖ What are they?

❖ How many?

❖ Do they include dental clinics?

❖ To whom the services are provided? (Women, men, children, elderly, people with physical activity...)

❖ Are they free or paid?

❖ How far?

D04 - What are the current provided dental services? (fillings, extractions, root canal, prevention, dentures, orthodontics, bridges and crowns, gum diseases, maxillofacial surgeries, ...)

❖ What are the gaps in provided services?

D05 - Are dental awareness campaigns available in the area?

❖ Where and how they are conducted?

❖ What topics are addressed?

D06 - How do people access these dental care centers?

❖ What are access difficulties and barriers?

❖ What people do to overcome these difficulties and barriers?

D07 - What are the most important needs regarding dental care in your area?

☐ Dental clinics?

☐ Dentists?

☐ Dental equipment?

☐ Dental supplies?

☐ Other?

D08 - How can you receive dental supplies on a regular basis?

❖ From where?

❖ Are there any access limitations?

❖ What can you do to overcome these limitations?

D09 - Are electricity, water, dental laboratories, panoramic x-ray, and other necessary amenities available?

❖ Please describe each item in detail.

D10 - Is there anything you would like to add?

H - End of Survey

"Thank you for your time and willingness to share information with us. We have asked you a lot of questions and you have provided us with very valuable information. Please remember that all the information provided will be kept anonymous. We will share this information with White Smile to help them assess the needs for their future projects. We will not share any of your personal information with anyone else."

H01 - Interview End Time:

Table A1, Communities, Population and IDP in Targeted Area

Index	Governorate	Districts	Districts P-Code	Sub-districts	Sub-districts P-Code	Communities	Communities P-Code	Population HNO 2017	IDPs HNO 2017	IDPs/Population
1	Aleppo	A'zaz	SY0204	A'zaz	SY020400	Azaz	C1564	70,000	41,000	59%
2	Aleppo	A'zaz	SY0204	A'zaz	SY020400	Salama	C1561	45,630	45,630	100%
3	Aleppo	A'zaz	SY0204	A'zaz	SY020400	Shamarin	C1566	45,270	43,670	96%
4	Aleppo	Jebel	SY0200	Daret Azza	SY020004	Daret Azza	C1139	38,000	13,000	34%
5	Aleppo	Jebel	SY0200	Atareb	SY020001	Kafr Naha	C1034	16,000	11,000	69%
6	Aleppo	Jebel	SY0200	Haritan	SY020003	Haritan	C1130	15,440	3,000	19%
7	Aleppo	A'zaz	SY0204	A'zaz	SY020400	Bab	C6669	15,000	5,500	37%
8	Aleppo	Jebel	SY0200	Atareb	SY020001	Atareb	C1022	12,400	2,730	22%
9	Aleppo	Jebel	SY0200	Atareb	SY020001	Abin Samaan	C1026	12,000	7,000	58%
10	Aleppo	A'zaz	SY0204	A'zaz	SY020400	Talil Elsham	C1559	11,000	10,540	96%
11	Aleppo	A'zaz	SY0204	Mare'	SY020403	Mare'	C1643	10,000	430	4%
12	Aleppo	Jebel	SY0200	Daret Azza	SY020004	Anjara	C1144	9,600	4,300	45%
13	Aleppo	Jarablus	SY0208	Ghandora	SY020801	Ghandorah	C2250	9,198	8,060	88%
14	Aleppo	Jebel	SY0200	Atareb	SY020001	Batbu	C1025	8,200	3,300	40%
15	Aleppo	Jebel	SY0200	Atareb	SY020001	Abzemo	C1030	8,000	2,500	31%
16	Aleppo	Jebel	SY0200	Atareb	SY020001	Kafr Karmin	C1035	7,000	3,000	43%
17	Aleppo	Jebel	SY0200	Atareb	SY020001	Jeineh	C1032	7,000	1,500	21%
18	Aleppo	Jebel	SY0200	Atareb	SY020001	Big Orm	C1029	6,700	3,300	49%
19	Aleppo	Jebel	SY0200	Zarbah	SY020005	Hazra	C1168	6,500	2,800	43%
20	Aleppo	Jebel	SY0200	Daret Azza	SY020004	Hoteh	C1146	6,300	4,500	71%
21	Aleppo	Jebel	SY0200	Atareb	SY020001	Tuwama	C1020	6,300	2,100	33%
22	Aleppo	Jebel	SY0200	Atareb	SY020001	Kafr Thoran	C1041	6,200	1,800	29%
23	Aleppo	Jebel	SY0200	Atareb	SY020001	Oweijel	C1024	6,100	3,945	65%
24	Aleppo	Jebel	SY0200	Atareb	SY020001	Sahara	C1023	6,000	2,000	33%
25	Aleppo	Jebel	SY0200	Atareb	SY020001	Kafr Aleppo	C1039	6,000	2,400	40%
26	Aleppo	A'zaz	SY0204	A'zaz	SY020400	Maarin	C1574	5,900	5,255	89%
27	Aleppo	Jebel	SY0200	Daret Azza	SY020004	Hur	C1140	5,800	2,100	36%
28	Aleppo	A'zaz	SY0204	Suran	SY020405	Ehteimlat	C1667	5,560	480	9%
29	Aleppo	Jebel	SY0200	Daret Azza	SY020004	Tqad	C1143	5,400	3,600	67%
30	Aleppo	Jebel	SY0200	Atareb	SY020001	Kafr Taal	C1037	5,200	1,500	29%
31	Aleppo	Jebel	SY0200	Atareb	SY020001	Maaret Atarib	C1038	5,200	2,500	48%
32	Aleppo	A'zaz	SY0204	Suran	SY020405	Suran	C1664	5,100	820	16%
33	Aleppo	A'zaz	SY0204	A'zaz	SY020400	Kafr Kalbein	C1568	5,100	3,900	76%
34	Aleppo	A'zaz	SY0204	A'zaz	SY020400	Kaljibrin	C1575	5,000	3,800	76%
35	Aleppo	Jebel	SY0200	Atareb	SY020001	Sheikh Ali	C1031	4,700	2,000	43%
36	Aleppo	Jebel	SY0200	Atareb	SY020001	Western Kafr	C1040	4,500	1,900	42%
37	Aleppo	Jebel	SY0200	Atareb	SY020001	Kafr Naseh	C1036	4,400	1,800	41%
38	Aleppo	Jebel	SY0200	Zarbah	SY020005	Jeb Kas	C1166	4,000	370	9%
39	Aleppo	Jebel	SY0200	Zarbah	SY020005	Abad	C1160	4,000	370	9%
40	Aleppo	Jarablus	SY0208	Jarablus	SY020800	Jarablus	C2227	3,800	1,900	50%
41	Aleppo	Jebel	SY0200	Zarbah	SY020005	Tal Heddiyah	C1158	3,700	-	0%
42	Aleppo	Jebel	SY0200	Zarbah	SY020005	Zmar	C1156	3,600	-	0%
43	Aleppo	Jebel	SY0200	Daret Azza	SY020004	Bsartun	C1147	3,500	2,460	70%
44	Aleppo	Jebel	SY0200	Atareb	SY020001	Kafr Amma	C1033	3,500	1,800	51%
45	Aleppo	Jebel	SY0200	Zarbah	SY020005	Kusniya	C1175	3,500	-	0%
46	Aleppo	Jebel	SY0200	Zarbah	SY020005	Hawir Elis	C1172	3,400	-	0%
47	Aleppo	A'zaz	SY0204	A'zaz	SY020400	Tatiyah	C1558	3,315	3,315	100%
48	Aleppo	Jebel	SY0200	Daret Azza	SY020004	Arhab	C1142	3,210	1,395	43%
49	Aleppo	Jebel	SY0200	Atareb	SY020001	Babka	C1021	3,100	800	26%
50	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Shweihet	C1077	3,100	280	9%
51	Aleppo	Jebel	SY0200	Daret Azza	SY020004	Zarzita	C1138	3,000	1,750	58%
52	Aleppo	Jarablus	SY0208	Jarablus	SY020800	Jamel	C2224	3,000	1,200	40%
53	Aleppo	Jebel	SY0200	Daret Azza	SY020004	Qabtun	C1150	2,610	833	32%
54	Aleppo	A'zaz	SY0204	A'zaz	SY020400	Nayara	C1573	2,600	2,000	77%
55	Aleppo	Jebel	SY0200	Haritan	SY020003	Kafr Hamra	C1134	2,600	1,640	63%
56	Aleppo	Jebel	SY0200	Zarbah	SY020005	Bawabiyeh	C1169	2,500	-	0%
57	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Numaniyeh	C1054	2,500	-	0%
58	Aleppo	Jebel	SY0200	Atareb	SY020001	Tadil	C1028	2,400	1,060	44%
59	Aleppo	Jebel	SY0200	Zarbah	SY020005	Talafeh	C1165	2,400	230	10%
60	Aleppo	Jebel	SY0200	Daret Azza	SY020004	Majbineh	C1148	2,400	1,600	67%
61	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Abu	C6329	2,400	220	9%
62	Aleppo	Jebel	SY0200	Zarbah	SY020005	Tal Allush	C1171	2,300	-	0%
63	Aleppo	Jebel	SY0200	Zarbah	SY020005	Sheikh Ahmed	C1155	2,120	715	34%
64	Aleppo	Jebel	SY0200	Zarbah	SY020005	Rasim Sahrj	C6392	2,000	190	10%
65	Aleppo	Jebel	SY0200	Atareb	SY020001	Little Orm	C1027	1,900	770	41%
66	Aleppo	A'zaz	SY0204	Suran	SY020405	Dweibeq	C1659	1,900	-	0%
67	Aleppo	Jarablus	SY0208	Ghandora	SY020801	Sweida -	C2259	1,900	590	31%
68	Aleppo	Jebel	SY0200	Zarbah	SY020005	Rasm Eliss	C1162	1,900	-	0%

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69	Aleppo	Jebel	SY0200	Atareb	SY020001	Qanater	C1019	1,800	420	23%
70	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Hazani	C1104	1,800	160	9%
71	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Big Bayaa	C1081	1,800	160	9%
72	Aleppo	Jebel	SY0200	Zarbah	SY020005	Um Atba	C1159	1,800	-	0%
73	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Rasm	C1094	1,800	160	9%
74	Aleppo	A'zaz	SY0204	A'zaz	SY020400	Krum	C1565	1,720	1,193	69%
75	Aleppo	Jarablus	SY0208	Jarablus	SY020800	Marma Elhajar	C2238	1,700	640	38%
76	Aleppo	Jebel	SY0200	Zarbah	SY020005	Big	C1157	1,700	170	10%
77	Aleppo	Jarablus	SY0208	Jarablus	SY020800	Halawanji	C2214	1,600	610	38%
78	Aleppo	A'zaz	SY0204	Suran	SY020405	Zayzafun -	C1658	1,575	1,015	64%
79	Aleppo	Jarablus	SY0208	Jarablus	SY020800	Tal Elamara	C2213	1,500	570	38%
80	Aleppo	A'zaz	SY0204	Suran	SY020405	Kafr Barja	C1671	1,500	1,450	97%
81	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Hamidiyet Al-	C6430	1,500	140	9%
82	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Majas	C1108	1,500	200	13%
83	Aleppo	A'zaz	SY0204	A'zaz	SY020400	Manaq	C1569	1,400	-	0%
84	Aleppo	Jarablus	SY0208	Jarablus	SY020800	Himar	C2229	1,400	530	38%
85	Aleppo	Jarablus	SY0208	Jarablus	SY020800	Sreisat	C2230	1,400	540	39%
86	Aleppo	Jebel	SY0200	Daret Azza	SY020004	Bshantara	C1141	1,400	700	50%
87	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Hmeidi	C1059	1,400	-	0%
88	Aleppo	A'zaz	SY0204	Suran	SY020405	Rael	C1665	1,400	875	63%
89	Aleppo	Jarablus	SY0208	Jarablus	SY020800	Halawaniyeh	C2219	1,400	530	38%
90	Aleppo	Jebel	SY0200	Zarbah	SY020005	Arada	C1164	1,395	625	45%
91	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Um Elkaramel	C1065	1,300	120	9%
92	Aleppo	Jebel	SY0200	Daret Azza	SY020004	Bishqatine	C1145	1,300	600	46%
93	Aleppo	Jarablus	SY0208	Jarablus	SY020800	Thahr	C2221	1,300	500	38%
94	Aleppo	Jarablus	SY0208	Jarablus	SY020800	Upper Um	C2225	1,300	510	39%
95	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Um Elhoteh	C1056	1,300	120	9%
96	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Big Madayen	C1111	1,200	110	9%
97	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Rajm Omeirat	C1068	1,200	110	9%
98	Aleppo	Jebel	SY0200	Haritan	SY020003	Yaqed Eladas	C1132	1,200	420	35%
99	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Wadi Eldibis	C1103	1,200	110	9%
100	Aleppo	Jarablus	SY0208	Ghandora	SY020801	Ghanameh	C2266	1,100	370	34%
101	Aleppo	Jarablus	SY0208	Jarablus	SY020800	Treikhem	C2222	1,100	430	39%
102	Aleppo	Jarablus	SY0208	Jarablus	SY020800	Dabis	C2217	1,100	440	40%
103	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Um Aj	C1095	1,100	110	10%
104	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Tal Aqareb	C1071	1,050	297	28%
105	Aleppo	A'zaz	SY0204	A'zaz	SY020400	Shmarekh	C1557	1,000	760	76%
106	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Masih	C1110	1,000	549	55%
107	Aleppo	A'zaz	SY0204	Suran	SY020405	Mreigel	C1670	1,000	-	0%
108	Aleppo	Jebel	SY0200	Haritan	SY020003	Kafr Bssin	C1135	1,000	250	25%
109	Aleppo	Jarablus	SY0208	Ghandora	SY020801	Qubbet	C2263	1,000	330	33%
110	Aleppo	Jebel	SY0200	Haritan	SY020003	Hayyan	C1127	1,000	210	21%
111	Aleppo	A'zaz	SY0204	Suran	SY020405	Shweirin	C1660	1,000	-	0%
112	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Ghaytal -	C1119	1,000	90	9%
113	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Um Tmakh	C1055	1,000	90	9%
114	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Big Bweideh	C1082	1,000	-	0%
115	Aleppo	Jarablus	SY0208	Ghandora	SY020801	Sheib	C2253	970	300	31%
116	Aleppo	Jarablus	SY0208	Ghandora	SY020801	Little Arab	C2256	950	300	32%
117	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Shweihet Elbu	C1088	950	130	14%
118	Aleppo	Jarablus	SY0208	Ghandora	SY020801	Sabuniyeh	C2255	945	393	42%
119	Aleppo	Jarablus	SY0208	Jarablus	SY020800	Mazaalah	C2240	930	350	38%
120	Aleppo	Jarablus	SY0208	Jarablus	SY020800	Qandariya	C2241	930	350	38%
121	Aleppo	Jarablus	SY0208	Jarablus	SY020800	Maghayer -	C2218	920	350	38%
122	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Tall Ed-	C1058	900	160	18%
123	Aleppo	Jarablus	SY0208	Ghandora	SY020801	Hajar Elabyad	C2249	890	380	43%
124	Aleppo	Jebel	SY0200	Haritan	SY020003	Maaret Elartiq	C1136	850	235	28%
125	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Wadi Elsonue	C1102	830	-	0%
126	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Littler Bayaa	C1098	825	215	26%
127	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Tal Sabha	C1070	820	80	10%
128	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Gharirifeh	C6328	820	80	10%
129	Aleppo	Jebel	SY0200	Haritan	SY020003	Babis	C6331	820	170	21%
130	Aleppo	Jarablus	SY0208	Jarablus	SY020800	Hjeileh -	C2215	780	300	38%
131	Aleppo	Jebel	SY0200	Atareb	SY020001	Halazon	C6424	750	50	7%
132	Aleppo	Jarablus	SY0208	Jarablus	SY020800	Lower Bir	C2216	750	290	39%
133	Aleppo	A'zaz	SY0204	Mare'	SY020403	Maratet Um	C1641	738	160	22%
134	Aleppo	Jarablus	SY0208	Ghandora	SY020801	Sheineh	C2248	730	230	32%
135	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Jafr Mansur	C1097	730	70	10%
136	Aleppo	Jebel	SY0200	Haritan	SY020003	Andan	C1121	720	-	0%
137	Aleppo	Jarablus	SY0208	Jarablus	SY020800	Zoghra	C2220	710	270	38%
138	Aleppo	Jarablus	SY0208	Ghandora	SY020801	Ghassaniyeh -	C2251	710	220	31%
139	Aleppo	Jarablus	SY0208	Ghandora	SY020801	Kuliyeh	C2247	700	220	31%
140	Aleppo	Jarablus	SY0208	Ghandora	SY020801	Tal Elhajar -	C2244	700	220	31%
141	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Kulet	C1116	675	180	27%

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142	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Jeb Elkhaifi	C1047	670	135	20%
143	Aleppo	Jarablus	SY0208	Ghandora	SY020801	Thaheriya	C2257	670	290	43%
144	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Hamidiyeh	C1099	670	60	9%
145	Aleppo	Jarablus	SY0208	Jarablus	SY020800	Hadra - Big	C2231	660	310	47%
146	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Jeb Eleis	C1049	650	160	25%
147	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Arjel	C1057	650	60	9%
148	Aleppo	A'zaz	SY0204	Mare'	SY020403	Saed - Qlsroj	C1630	650	100	15%
149	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Tal Ahmar	C1066	630	70	11%
150	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Andan	C1074	620	255	41%
151	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Um Gobar	C1091	610	60	10%
152	Aleppo	Jarablus	SY0208	Ghandora	SY020801	Hfeira	C2243	610	190	31%
153	Aleppo	Jarablus	SY0208	Ghandora	SY020801	Shahid	C2261	610	190	31%
154	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Hayyaniyeh	C1075	600	60	10%
155	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Tarfawi	C1078	600	60	10%
156	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Sayah - Sayah	C1052	580	60	10%
157	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Um Tinet	C1069	570	120	21%
158	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Eliyeh	C1045	570	50	9%
159	Aleppo	Jarablus	SY0208	Jarablus	SY020800	Yusef Elbeik	C2236	560	470	84%
160	Aleppo	Jarablus	SY0208	Ghandora	SY020801	Forsan -	C2252	540	170	31%
161	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Mintar	C1089	540	-	0%
162	Aleppo	Jarablus	SY0208	Ghandora	SY020801	Qadi Jرابلس	C2254	540	170	31%
163	Aleppo	Jarablus	SY0208	Ghandora	SY020801	Tal Ali -	C2245	540	170	31%
164	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Establat	C1051	530	50	9%
165	Aleppo	Jarablus	SY0208	Ghandora	SY020801	Tal Aghbar -	C2260	530	250	47%
166	Aleppo	Jarablus	SY0208	Jarablus	SY020800	Mahsana -	C2232	520	200	38%
167	Aleppo	Jarablus	SY0208	Ghandora	SY020801	Arab Azzah	C2242	520	160	31%
168	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Aabad	C1043	510	135	26%
169	Aleppo	Jarablus	SY0208	Ghandora	SY020801	Lilawa	C2268	500	160	32%
170	Aleppo	Jarablus	SY0208	Ghandora	SY020801	Big Qantara	C2267	500	190	38%
171	Aleppo	A'zaz	SY0204	Mare'	SY020403	Kafr Elward	C1642	490	30	6%
172	Aleppo	A'zaz	SY0204	Mare'	SY020403	Tal Madeeq	C1635	480	90	19%
173	Aleppo	Jarablus	SY0208	Ghandora	SY020801	Bilis	C2246	470	260	55%
174	Aleppo	A'zaz	SY0204	Mare'	SY020403	Hiwar Elnahr	C1636	451	185	41%
175	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Qaree	C1109	450	40	9%
176	Aleppo	Jarablus	SY0208	Ghandora	SY020801	Jeb Eldam	C2262	450	140	31%
177	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Um Irein	C1064	439	192	44%
178	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Um Elamad	C1053	420	40	10%
179	Aleppo	Jarablus	SY0208	Jarablus	SY020800	Um Sosa	C2228	420	160	38%
180	Aleppo	Jarablus	SY0208	Ghandora	SY020801	Big Mortafaa	C2265	420	180	43%
181	Aleppo	A'zaz	SY0204	Mare'	SY020403	Asanbal	C1629	410	-	0%
182	Aleppo	A'zaz	SY0204	Suran	SY020405	Thaheriya	C1666	400	-	0%
183	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Um Graf	C1087	400	40	10%
184	Aleppo	A'zaz	SY0204	Mare'	SY020403	Qaramel	C1639	400	90	23%
185	Aleppo	Jarablus	SY0208	Ghandora	SY020801	Hmeireh -	C2258	380	150	39%
186	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Maqat Elzaydi	C1114	380	40	11%
187	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Tal Hawasid -	C1062	370	40	11%
188	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Rasm Eljahsh	C1042	360	70	19%
189	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Mansura	C1080	350	40	11%
190	Aleppo	A'zaz	SY0204	Suran	SY020405	Odaya	C1668	330	-	0%
191	Aleppo	Jarablus	SY0208	Ghandora	SY020801	Big Nabgha	C2264	330	110	33%
192	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Tal Masih	C1050	310	55	18%
193	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Mashrafet	C1117	300	-	0%
194	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Um Wadi	C1096	300	30	10%
195	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Sheikh Castle	C1120	290	30	10%
196	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Bakat	C6326	273	180	66%
197	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Mashrafet	C1113	270	30	11%
198	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Nuwara	C1101	260	50	19%
199	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Batha	C1072	240	135	56%
200	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Ballas	C1076	240	-	0%
201	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Hilwiyyeh	C1092	220	70	32%
202	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Mashrafet	C6327	220	45	20%
203	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Western	C1093	210	-	0%
204	Aleppo	A'zaz	SY0204	Mare'	SY020403	Alsayed Ali	C1633	200	90	45%
205	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Ein Elgharf	C6330	180	80	44%
206	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Batranah	C1044	180	-	0%
207	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Anu Mreir	C1086	150	100	67%
208	Aleppo	A'zaz	SY0204	Mare'	SY020403	Hissiyeh	C1637	140	-	0%
209	Aleppo	A'zaz	SY0204	Mare'	SY020403	Hosniyeh -	C1634	130	-	0%
210	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Mashrafet	C1107	120	-	0%
211	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Um Qrun -	C1084	110	40	36%
212	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Big Oweinat	C1067	90	-	0%
213	Aleppo	Jebel	SY0200	Zarbah	SY020005	Zarbah	C1170	75	-	0%
214	Aleppo	A'zaz	SY0204	Mare'	SY020403	Wahshiyeh	C1644	50	-	0%

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215	Aleppo	A'zaz	SY0204	A'zaz	SY020400	Al-Malikeyyeh	C1563	40	-	0%
216	Aleppo	Jarablus	SY0208	Jarablus	SY020800	Lower Jrables	C2226			
217	Aleppo	Jarablus	SY0208	Jarablus	SY020800	Big Majra	C2235			
218	Aleppo	Jarablus	SY0208	Jarablus	SY020800	Qirata	C2237			
219	Aleppo	A'zaz	SY0204	Suran	SY020405	Kafra	C1672			
220	Aleppo	A'zaz	SY0204	A'zaz	SY020400	Yahmul	C1571			
221	Aleppo	A'zaz	SY0204	Suran	SY020405	Hiwar Kalas	C1661			
222	Aleppo	A'zaz	SY0204	A'zaz	SY020400	Jarez	C1562			
223	Aleppo	Jarablus	SY0208	Jarablus	SY020800	Little Majra	C2239			
224	Aleppo	Jebel	SY0200	Zarbah	SY020005	Kassibeh	C1176			
225	Aleppo	A'zaz	SY0204	Suran	SY020405	Baraghideh	C1663			
226	Aleppo	A'zaz	SY0204	Suran	SY020405	Albil	C1669			
227	Aleppo	Jarablus	SY0208	Jarablus	SY020800	Lower Um	C2223			
228	Aleppo	Jebel	SY0200	Zarbah	SY020005	Tal Mamu	C1173			
229	Aleppo	Jebel	SY0200	Zarbah	SY020005	Tal Bajer	C1161			
230	Aleppo	A'zaz	SY0204	A'zaz	SY020400	Niddeh	C1572			
231	Aleppo	A'zaz	SY0204	A'zaz	SY020400	Ferziyeh	C1560			
232	Aleppo	Jebel	SY0200	Zarbah	SY020005	Qamari	C1174			
233	Aleppo	Jebel	SY0200	Zarbah	SY020005	Zyare	C1151			
234	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Oleis	C1073			
235	Aleppo	A'zaz	SY0204	Suran	SY020405	Kafrshush	C1673			
236	Aleppo	A'zaz	SY0204	Suran	SY020405	Yarobiyeh	C1657			
237	Aleppo	Jebel	SY0200	Zarbah	SY020005	Barqum	C1153			
238	Aleppo	Jebel	SY0200	Daret Azza	SY020004	Kafrantin	C1149			
239	Aleppo	A'zaz	SY0204	Mare'	SY020403	Tlaline	C1632			
240	Aleppo	A'zaz	SY0204	Suran	SY020405	Jdideh	C1662			
241	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Tabara	C1046			
242	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Abu Rweil	C1048			
243	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Tal Hattabat	C1060			
244	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Deir Saliba	C1061			
245	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Burda	C1063			
246	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Saeebiyeh	C1079			
247	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Rasm Elsafta	C1083			
248	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Sfira	C1085			
249	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Eastern	C1090			
250	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Little Bweideh	C1100			
251	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Marhamiya	C1105			
252	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Kafr Eibesh	C1106			
253	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Kafr Obeid	C1112			
254	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Hober	C1115			
255	Aleppo	Jebel	SY0200	Tall Ed-	SY020002	Mreiqes	C1118			
256	Aleppo	Jebel	SY0200	Haritan	SY020003	Tiyara	C1122			
257	Aleppo	Jebel	SY0200	Haritan	SY020003	Jeb Ghabsheh	C1123			
258	Aleppo	Jebel	SY0200	Haritan	SY020003	Sifa	C1124			
259	Aleppo	Jebel	SY0200	Haritan	SY020003	Bashkwi	C1125			
260	Aleppo	Jebel	SY0200	Haritan	SY020003	Tamura	C1126			
261	Aleppo	Jebel	SY0200	Haritan	SY020003	Sheikh Zayat	C1128			
262	Aleppo	Jebel	SY0200	Haritan	SY020003	Shamer	C1129			
263	Aleppo	Jebel	SY0200	Haritan	SY020003	Afrin	C1131			
264	Aleppo	Jebel	SY0200	Haritan	SY020003	Muqbia	C1133			
265	Aleppo	Jebel	SY0200	Haritan	SY020003	Fah	C1137			
266	Aleppo	Jebel	SY0200	Zarbah	SY020005	Hmeira	C1152			
267	Aleppo	Jebel	SY0200	Zarbah	SY020005	Berna	C1154			
268	Aleppo	Jebel	SY0200	Zarbah	SY020005	Banes	C1163			
269	Aleppo	Jebel	SY0200	Zarbah	SY020005	Zeitan	C1167			
270	Aleppo	A'zaz	SY0204	A'zaz	SY020400	Sijraz	C1556			
271	Aleppo	A'zaz	SY0204	A'zaz	SY020400	Kafr Khasher	C1567			
272	Aleppo	A'zaz	SY0204	A'zaz	SY020400	Maraanaz	C1570			
273	Aleppo	A'zaz	SY0204	Mare'	SY020403	Harbal	C1631			
274	Aleppo	A'zaz	SY0204	Mare'	SY020403	Telqraq	C1638			
275	Aleppo	A'zaz	SY0204	Mare'	SY020403	Fafin	C1640			
276	Aleppo	Jebel	SY0200	Haritan	SY020003	Naqqarin	C6332			
277	Aleppo	A'zaz	SY0204	Suran	SY020405	Qazal	C6421			
278	Aleppo	A'zaz	SY0204	Suran	SY020405	Harjalah	C6422			
279	Aleppo	A'zaz	SY0204	Suran	SY020405	Dalha	C6423			
280	Aleppo	A'zaz	SY0204	Mare'	SY020403	Tal Maled	C6418			
281	Aleppo	A'zaz	SY0204	Mare'	SY020403	Sandaf	C6419			
282	Aleppo	A'zaz	SY0204	Mare'	SY020403	Em Al-Qura	C6420			
283	Aleppo	Jebel	SY0200	Haritan	SY020003	Tal Msebin	C6425			
1 Governorate		3 Districts		10 Sub-districts		283 Communities		653,284	314,252	48%

Table A2, Number of HH Survey and KIIs Interview

District	Sub-district	Community	Population estimates ²⁴	IDPs estimates ²⁵	HH Survey	KIIs interview
Jebel Saman	Daret Azza	Daret Azza	38,000	13,000	17	1 (admin. manager of hospital)
		Anjara	9,600	4,300	16	1 (manager of health center)
		Hoteh	6,300	4,500	20	1 (member of Local council)
		Hur	5,800	2,100	17	1 (manager of health center)
		Tqad	5,400	3,600	16	1 (member of Local council)
	Atareb	Kafr Naha	16,000	11,000	16	1 (pharmacist)
		Atareb	12,400	2,730	18	1 (nurse)
		Abin Samaan	12,000	7,000	18	1 (manager at health center)
		Batbu	8,200	3,300	15	1 (lab staff in private lab)
		Abzemo	8,000	2,500	16	1 (member of Local council)
		Kafr Karmin	7,000	3,000	19	1 (manager of health center)
		Jeineh	7,000	1,500	18	1 (manager of health center)
		Big Orm	6,700	3,300	19	1 (admin in local health NGO)
		Tuwama	6,300	2,100	15	1 (member of Local council)
		Kafr Thoran	6,200	1,800	16	1 (nurse at referral system)
		Oweijel	6,100	3,945	19	1 (member of Local council)
		Kafr Aleppo	6,000	2,400	21	1 (member of Local council)
		Sahara	6,000	2,000	17	1 (manager of health center)
		Maaret Atarib	5,200	2,500	19	1 (member of education office)
		Kafr Taal	5,200	1,500	16	1 (manager of health center)
	Haritan	Haritan	15,440	3,000	16	1 (manager of health center)
A'zaz	A'zaz	Azaz	70,000	41,000	17	1 (dentist)
		Salama	45,630	45,630	15	1 (logistic manager at hospital)
		Shamarin	45,270	43,670	16	1 (dentist at PHC)
		Bab Alsalamah	15,000	5,500	17	1 (nurse)
		Talil Elsham	11,000	10,540	15	0
		Maarin	5,900	5,255	16	0
		Kafr Kalbein	5,100	3,900	16	1 (pharmacist)
	Mare'	Mare'	10,000	430	16	1 (dentist at health center)
	Suran	Ehteimlat	5,560	480	16	0
		Suran	5,100	820	16	1 (manager of health center)
Jarablus	Ghandorah	Ghandorah	9,198	8,060	16	1 (doctor at health center)
3 Districts	7 Sub-districts	32 Communities	426,598	246,360	540	29 KIIs

Table A3, Availability of Dental Services

Geographical Coverage			Availability of free dental services		Availability of paid dental services	
District	Sub-district	Community	>50 % of Survey	Klls	>50 % of Survey	Klls
Jebel Saman	Daret Azza	DaretAzza	✗	✗	✓	✓
		Anjara	✓	✓	✓	✓
		Hoteh	✗	✗	✓	✗
		Hur	✗	✗	✓	✓
		Tqad	✗	✗	✓	✓
	Atareb	KafrNaha	✗	✗	✗	✗
		Atareb	✗	✗	✓	✓
		AbinSamaan	✗	✗	✗	✗
		Batbu	✗	✗	✓	✓
		Abzemo	✗	✗	✗	✓
		Kafr Karmin	✗	✗	✓	✓
		Jeineh	✗	✗	✓	✗
		Big Orm	✗	✗	✓	✓
		Tuwama	✗	✗	✗	✗
		Kafr Thoran	✗	✗	✗	✗
		Oweijel	✗	✗	✗	✗
		Kafr Aleppo	✗	✗	✗	✗
		Sahara	✓	✓	✓	✓
		Maaret Atarib	✗	✗	✗	✗
		Kafr Taal	✗	✗	✗	✗
	Haritan	Haritan	✗	✗	✗	✗
A'zaz	A'zaz	Azaz	✓	✓	✓	✓
		Salama	✗	✗	✓	✓
		Shamarin	✓	✓	✗	✗
		Bab Alsalamah	✓	✓	✗	✗
		Talil Elsham	✗	NA	✓	NA
		Maarin	✗	NA	✓	NA
		Kafr Kalbein	✗	✗	✗	✗
	Mare'	Mare'	✓	✓	✓	✓
	Suran	Ehteimlat	✗	NA	✓	NA
		Suran	✗	✗	✓	✓
Jarablus	Ghandorah	Ghandorah	✗	✗	✓	✓
3 Districts	7 Sub-districts	32 Communities	79% Notavailable	79% Notavailable	41% Notavailable	48% Notavailable

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Mapping Dental Services

in Northern and Western

Aleppo Governorate

August -2017

White Smile Organization

Turkey-Gaziantep

2013-2017

White Smile is a Syrian non-governmental organization, specialized in the provision of dental care services and advocating for integration of dental care into the broader humanitarian health response in Syria.

The White Smile mission is to inspire, encourage, facilitate, and promote quality oral care with the goal to prevent and alleviate human suffering, and thereby contribute to maintaining human dignity. White Smile's activities are guided by the ethics of health profession and also by the four humanitarian principles: humanity, neutrality, impartiality and independence.

White Smile seeks to sustain oral care services by empowering the local community, train more dentists, develop the capabilities of current dental staff, represent their aspirations and influence legislation and dental care policies at all levels.

www.whitesmilengo.org
info@whitesmilengo.org

Budak Mh. G. Muhtar Paşa Blv. 31 NL.
SK. No.42 Yasem İş Merkezi Kat: 5/Ofis
:510 - 27090 Şehitkamil Gaziantep
Türkiye

