

MSF

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The Steady Bleed

MSF Briefs on the Collapse of Healthcare in War-torn Yemen

Report on the effect war and lack of access to healthcare is having on Yemeni civilians



Yemen © Benoit Finck / MSF

Background on the Current Situation in Yemen

The situation faced by Yemen's people today is epitomised by a multitude of problems related to the armed conflict that began on 26th March 2015.

Militarily, the fighting continues between the Hadi-led former government (now in exile and supported by a broad coalition of foreign countries and local resistance groups in Yemen), and the Houthi-led authorities now controlling many governorates of Yemen (and their fighters on the ground) on the other. In much of the northwest of the country, Coalition airstrikes are hitting densely populated civilian neighbourhoods, causing many casualties and damage to infrastructure. The fighting taking place in streets and villages of southern Yemen is causing yet more injuries.

On the political side, a weapons embargo imposed on the country has consequently made the entry of commercial goods into Yemen extremely challenging. This includes fuel, medicines and basic nutritional elements. Those items that do manage to get inside are often not properly distributed around the country by the authorities on the ground, creating a new black market economically inaccessible for many Yemenis. As a result of this *de facto* blockade caused by the embargo and lack of distribution throughout the country (hereinafter "blockade"), electricity, water and other public services are severely interrupted. Electricity is intermittent in most of the country, and its availability depends on the state of the power stations and whether the user has the economic means to own and maintain a generator. Lack of fuel means limited transportation services and paralysis of vehicles; water trucking and public garbage collection have all but stopped in Aden and parts of Sana'a. Yemen is a country with very little fertile land and few water resources. Many communities depend on water trucking, but the cost of this has now increased more than two-fold. Whether in the form of petrol, cooking gas or oil, the stark absence of fuel is greatly affecting everyday life.

One sector suffering greatly from the current situation is health. On the one hand, fuel, drugs, medical equipment and other imports are essential to be able to provide required health services in the country. However, additionally health infrastructure such as hospitals, health centres and ambulances are being damaged in the conflict, either by direct targeting or collateral damage. Such attacks are endangering patients and health staff. Many health practitioners have now fled Yemen, and many of the country's hospitals have already closed their doors, unable to operate in the current circumstances. The blockade and the on-going violence are severely crippling the capacity of the Yemeni healthcare structure to respond to both routine health needs as well as the emergency needs that have arisen as a result of the violence.

It is clear that Yemen was not without its social and economic problems and humanitarian needs prior to this conflict. Similarly, it must be acknowledged that Yemen's health sector had fundamental weaknesses before the current crisis. However, the incessant violence we are seeing today, coupled with the blockade, is deteriorating even further the country's health response and the living conditions of an already impoverished population. The humanitarian needs, including much-needed health support, are high in Yemen today; however, the insecurity, coupled with administrative hurdles related to the blockade, has made it very difficult for aid organisations to bring supplies into the country. This series of briefs, focusing on the country's crippled healthcare structure, describes the urgency of this situation as seen through MSF projects in the country.

Governorates where MSF works



Aden, Al-Dhale', Taiz, Sa'ada, Amran, Hajjah, Ibb and Sana'a

Overview of the Briefs in this Series

These briefs put together by MSF examine a series of concrete health-related problems facing Yemenis today, following over four months of conflict. Considered as a whole, the series demonstrates how the effect of the conflict on Yemen's healthcare structure is like a steady bleed that is leading to a complete breakdown of health services throughout the country.

It must be noted that the information in these briefs cannot be assumed as representative of the country as a whole. Besides geographical access constraints, obtaining humanitarian-related statistics and data in Yemen today is challenging. Many cases are under-reported as much fewer people are approaching health facilities than previously, due to insecurity or financial reasons. This series of briefs has thus been written up by MSF to the best of its ability based on the information available in the areas where it is present.

1. Treating the War - Wounded

Discusses the difficulties faced by hospitals in treating mass casualties following bombings and fighting, as well as constraints for patients in accessing emergency healthcare.

2. The Fuel Struggle: Accessing and Providing Healthcare Without It

Looks at all the different challenges faced by the health sector which are specifically related to the lack of fuel in the country.

3. Water and the Rupture of Public Services in Yemen

Examines the situation of water in the country since the beginning of the conflict and how the fighting and blockade is affecting people's access to it.

4. Healthcare and Assistance for Yemen's Scattered IDPs

Gives an overview of the situation faced by IDPs in areas where MSF has been monitoring, and health-related consequences.

5. Attacks on Medical Infrastructure and Personnel

Describes different kinds of direct or indirect damage carried out against medical buildings and activities, further limiting the response capacity of healthcare facilities.

6. Concerns for Children and their Healthcare Needs

Explains the current situation of children in the country and how they have been affected by the war in different ways, looking at some particular health issues relating to children.

7. Vaccinating Yemen and the Spread of Communicable Diseases

It is increasingly difficult to conduct vaccination campaigns in Yemen due to insecurity and the blockade. This section describes these problems and the associated risks.

8. Access to Healthcare for Chronic Patients in Yemen

Shows how access to what were relatively routine services has now become a big hurdle for many patients suffering from chronic illnesses, which can be fatal in some cases.

Brief 1

Treating the War-Wounded



Yemen @ Benoit Frick / MSF

Other briefs in this Yemen series: The Fuel Struggle: Accessing and Providing Healthcare Without It; Water and the Rupture of Public Services in Yemen; Healthcare and Assistance for Yemen's Scattered IDPs; Attacks on Medical Infrastructure and Personnel; Concerns for Children and their Healthcare Needs; Vaccinating Yemen and the Spread of Communicable Diseases; Access to Healthcare for Chronic Patients in Yemen.

The situation of war-wounded in Yemen

People wounded from the armed conflict are streaming into hospitals all over the country. Since March, MSF- supported hospitals have treated over 6700 war-wounded in Yemen¹, including 2714 in Aden and 1869 in Ta'iz. Sometimes doctors work up to 36 hours straight treating them, and the same is faced in ad-Dhale, Amran, Sana'a, and Hajjah governorates. Large influxes of wounded people result in chaotic situations in health structures and mass casualty plans are essential. Triage is conducted to categorise patients according to injury severity and the hospital's response capacity; however, health facilities and personnel are often unprepared and overwhelmed.

The emergency response capacity of Yemen's healthcare system was already weak prior to this conflict. However, the blockade and fighting have greatly exacerbated this, causing shortage in materials and staff. The targeting of ambulances and the fuel crisis mean that referral options are more limited than they were, and difficult to arrange.

One MSF doctor, Alba, recalled moments of dealing with mass casualties:

"Sometimes I get physically sick at what I see. One night we received 30 injured. 11 of them died, including 2 children and 3 babies. Some bodies were unrecognisable, they were in pieces. It is such a horrific scene for all those present. Sometimes a bomb strikes the same place minutes later, killing those who went to help. 4 bombs hit that place that night, destroying five houses. It is stressful hearing the bombs fall nearby but you need to keep cool and work."

Lack of drugs and medical equipment

Most trauma cases treated by Yemeni doctors after aerial bombing and street fighting are gunshot wounds, burns or blast injuries. Hospitals face dire shortages of essential items to respond effectively to these injuries. They particularly lack pain medication, antibiotics, vaccines and anaesthetic drugs, as well as wound and burn dressing materials, external fixators, blood transfusion materials and surgical equipment such as vascular surgery sets for specialised surgeries. Hospitals have no budget for these items, or cannot obtain them because of the imposed blockade. Where it can, MSF supports hospitals through donations and technical capacity, but many items are still desperately needed. Hospitals in Sana'a now prioritise treating the war-wounded at the expense of other departments, due to the frequent airstrikes.

¹ This figure is taken from mid-July 2015.

A doctor at al Thawra hospital said:

"We need chlorpromazine, anaesthetic substances for operations, and antibiotics. Also, many of the reagents and diagnostic tests in the laboratory for blood are not available. Not being able to do blood transfusions is a big problem, as many people that are brought need blood urgently!"

These shortages can be fatal. A doctor told how a patient anaesthetized for an operation had to be woken and transferred to another hospital as there were no reagents for blood transfusion. He died on the way. In a case in the north, a burn patient was referred to Sana'a, but insufficient supply of fluids on the way there caused kidney failure and he died before his arrival. In Ta'iz, MSF doctors reported that out of the 1869 war-wounded treated since the start of the conflict, 212 could not be saved.

Loss of specialized staff

Many people have fled Yemen, including highly trained and specialized medical staff. In places –especially in the south, where active fighting continues and movement in and out is limited– staff have not received their salaries for several months. Many experienced medical personnel remain and are working hard to respond to the current situation. In Sana'a, however, hundreds of nurses of Indian origin have now fled the country, leaving important gaps in the supervision of medical care that, due to budget constraints, cannot be easily filled. In Aden there is a severe need for surgeons, and local teams now have to rely solely on expatriate medical staff, which is difficult to bring in.

Severely reduced number of functioning health facilities

Many private hospitals in Yemen have now closed as people can no longer afford to pay for services, or because the facility was forced to provide free services to injured fighters, thus placed in difficult situations. For most other hospitals, however, the lack of electricity and water, coupled with the fore- mentioned lack of drugs, materials and staff, prevents them from being able to operate independently without the assistance of international NGOs. In Ta'iz, for example, over 15 major hospital structures have been closed down over past months due to the insecurity and lack of supplies, and in Aden almost all government hospitals closed down soon after the escalation of the conflict.

When fighting or bombing occurs in an area that has lost its main health facility, it is complicated to centralise the response efforts and ensure an adequate response. In northern Hajjah on 5th July, for example, a series of airstrikes hit a market place. The closest health centre was 36km away, but having reduced its services it could not treat most of the war wounds. Many patients thus had to be referred, which is now more complicated due to the fuel shortages and the closure of health facilities, and can cause unnecessary complications and preventable deaths. One man in Sana'a described this:

"I took my injured son to Haradh hospital, but they could not receive emergency cases. They referred him to Hajjah, but it lacked an emergency unit. We went to Sana'a's al- Gumhuri and were transferred to al- Thawra. We spent a whole day trying to reach a hospital! He spent six days in the ICU and survived, but was extremely lucky: none of his friends survived."

Medical staff often work in extremely difficult conditions. One al-Thawra doctor described how electricity cuts force medical staff to operate using mobile phone flashlights and prevent the ability to conduct proper sterilisation procedures. Overall, health facilities have reduced the number of types of cases they accept. In hospitals supported by MSF, these problems are alleviated; however, many other facilities are struggling to cope.

Brief 2

The Fuel Struggle: Accessing and Providing Healthcare Without It



Yemen © Zuhra Yassin / MSF

Other briefs in this Yemen series: Treating the War- Wounded; Water and the Rupture of Public Services in Yemen; Healthcare and Assistance for Yemen's Scattered IDPs; Attacks on Medical Infrastructure and Personnel; Concerns for Children and their Healthcare Needs; Vaccinating Yemen and the Spread of Communicable Diseases; Access to Healthcare for Chronic Patients in Yemen.

The situation of fuel in Yemen today

Fuel affects all walks of everyday life in Yemen. As described in the introduction to this series of briefs, the country's severe lack of fuel relates to the blockade and the fact that very little is able to get into the country. Moreover, according to many people who MSF spoke to, even the quantity of fuel that is being allowed in does not reach most of the population. Much of the country's fuel stock is being hoarded by the *de facto* authorities on the ground and distributed bit by bit on the black market at extortionate prices. Fuel should not become a luxury commodity – it affects many basic needs and most Yemenis cannot afford the high prices. Currently in Yemen where electricity is largely not available, people rely on fuel for many different needs. However, most people do not have access to generators and are plunged into an uncomfortable darkness every night as the sun goes down. Many people spend around 10 days on a waiting list for a gas cylinder so that they can cook. Some give up on the wait and go out of the city to seek affordable cooking gas. Driving through Yemen, lines of parked cars can be seen meandering down hills outside of villages, in queues of up to 3 km sometimes, waiting several days until the petrol station opens suddenly after obtaining some petrol. Village market streets are lined with young boys selling cylinders of cooking oil from the black market, economically out of reach for poorer communities such as IDPs. Frequent bouts of violence are breaking out at petrol stations, where armed groups regularly jump the queues and cause additional friction for those who wait for days for some petrol. Absurd as it may sound, queue-jumping has caused deaths at petrol stations in Sana'a. As one MSF staff member described:

"People started to fight for their turns in the long queues aggressively. Finally, after a long time, the gas station in my area opened last week. One day at 3:00 am, we woke to the sound of heavy gun shooting from my neighbour's house. His gas cylinder was in the long queue waiting to be filled up, just as ours was. My neighbour later explained that some strangers came and broke the lock of the gas station trying to fill their cylinders with gas without waiting in the queue, at which point someone else in the queue started shooting at them. My neighbour is concerned, as he needs the gas for his generator, which his father's oxygen machine relies on. He is worried for his father's health if this continues."

Providing and accessing healthcare with no fuel

Although the fuel shortage is affecting all sectors in Yemen today, one of the areas most affected is the health system. As was illustrated in the previous brief in this series, many hospitals have now reduced their general services due to a shortage of drugs, equipment and medication caused by the blockade. However, a critical need for hospitals in the absence of electricity is fuel.

Hospitals require fuel to operate their blood banks, medical equipment such as dialysis, oxygen or anaesthetic machines, ventilators for critical patients, laboratory devices, sterilisation equipment, as well as light to conduct operations and deal with the frequent night-time mass-casualties that are brought in. Fuel is needed for clean water sources for hygiene procedures to prevent infections or outbreaks of disease. The lack of fuel means that cold chains cannot properly store specialised medicines required for chronic patients, blood transfusions, or vaccines to protect the country from further outbreaks.

Besides the problem of basic maintenance of the facilities, there are other associated problems regarding people's access to healthcare. Ambulances –besides coming under attack due to the fighting, being stolen or being stopped at checkpoints,– often do not have the available fuel to pick up emergency cases or transfer patients to other health facilities for urgent treatment. Some alternatives are being sought, and a small number of petrol stations try to prioritise ambulances among the long queues waiting for petrol. Al Gumhuri hospital in Sana'a changed the engines of some of its ambulances to function on diesel instead of petrol, but these efforts still fail to meet the need for functioning ambulances.

Transport is also a serious problem for people seeking healthcare themselves. Overall, the number of regular consultations has greatly decreased, by 50% in some areas, because people are no longer taking the risk –or cannot afford the increased cost of transport due to the blockade– to approach health centres. People with motorbikes are changing their engines to run on cooking gas, which can be used in certain cases to bring people to health facilities although this dangerous method has already caused accidents and burns on many occasions. The injured, wounded or sick wait until they reach advanced phases of their health conditions before seeking help. This means that cases arrive at health centres in a much more complicated state, on a regular basis leading to deaths that could have been prevented. In Khamir (Amran governorate) this happened when a woman could not afford to go to the hospital to give birth, and her complications during childbirth were such that, when she finally managed to find transport to take her to the health centre, she died

on the way for loss of blood. In Ta'iz, the dialysis machines stopped functioning in one of the main hospitals, which led to the deaths of 3 people with kidney-failure who could not get their regular treatment. MSF has reported many more such cases in areas where it works, and it is clear that lack of fuel is causing unnecessary deaths in Yemen today.

The main hospitals in the country are almost entirely being maintained by a handful of aid organisations providing them with fuel, water and drugs without which they would not be able to respond to the country's health needs. Without this external support the healthcare in the country would have completely broken down by now, and the support of aid organisations cannot be a solution for this.

Brief 3

Water and the Rupture of Public Services in Yemen



Yemen © Matak Shahar / MSF

Other briefs in this Yemen series: Treating the War- Wounded; The Fuel Struggle: Accessing and Providing Healthcare Without It; Healthcare and Assistance for Yemen's Scattered IDPs; Attacks on Medical Infrastructure and Personnel; Concerns for Children and their Healthcare Needs; Vaccinating Yemen and the Spread of Communicable Diseases; Access to Healthcare for Chronic Patients in Yemen..

The situation of water in Yemen

Yemen is a country that has always had few water resources and much of the land is too dry for productive agricultural use. The little existing fertile land is largely used for cultivation of "Qat", the popular national stimulant plant. It is now necessary to dig up to 800m to find water sources, much deeper than other contexts where MSF works.

As a result, many communities get their water from trucks that depend on fuel to pump up the water. However, water pumping has become an extremely expensive endeavour. In the capital near the MSF office, 15 water trucks are parked, unable to move because of lack of fuel. Since March the cost of water trucking has doubled and filling a tank now costs between 8-10,000 Rials, or 10% of an average salary in the country, thus inaccessible for many Yemenis. People have therefore started to search for alternative sources, such as walking long distances to collect water, using water from communal sources like mosque ablution areas, or stealing water from open water tanks. As stated by Mr Ahmed, the head of a household in Sana'a:

"There is no drinking water in my neighbourhood. People cannot even find it in the supermarket. They started to boil the house water in order to be able to drink it. The water trucks are too expensive, and people are really suffering."

Access to water for IDP communities²

Most rural populations in Yemen struggle with the problem of water. For internally displaced persons (IDPs) the problem is compounded by lack of shelter and support networks, and other health and hygiene concerns. Often located in remote and dispersed gatherings, IDPs have to walk long distances to find water. MSF and a small handful of other organisations began providing water for thousands of IDPs in Hajjah and Amran governorates but the quantity is not enough, which is causing violence between IDPs queuing at water tanks. IDPs have started to drink water intended for washing, transporting it to their tents in dirty plastic containers. MSF has now increased the quantity of water distributed and is conducting close monitoring to ensure distribution is fair and adequate; however, IDP communities are scattered and equal access is difficult.

In terms of sanitation and hygiene, specialized agencies are currently not present and so small activities are carried out, but not always consistently. Near Khamir town (Amran governorate), IDPs were instructed by a local organization to dig their own latrines; however, the latrines they were given

² For more on the issue of IDPs, please see Brief no. 4 in this series.

to construct were not enough for their needs as each one was shared by several families totalling up to 30 people. MSF has been working on improving this situation, and there are now 232 latrines across these populations, which has reduced the ratio of latrine to IDP to an average of 1:12. Another issue facing the IDPs, however, is that these terrains can be extremely rocky and IDPs have trouble digging deep enough latrines for minimum hygienic standards. When the rain falls, therefore, the sewage floods all over the area. The situation is not much better in Khamir town, where IDPs have temporarily inhabited empty structures such as schools. Here the sewage systems often do not function and sewage flows freely out into areas where children frequently play, contributing to the risk of disease spread. MSF has installed or rehabilitated 5 septic tanks in these areas to manage the sewage and has distributed hygiene kits in all 21 IDP sites, but the situation of the IDPs living in such structures remains precarious.

Other utilities and public services

The problem of electricity is dire throughout Yemen today, due to damage caused to the country's power plants, either by design or as indirect damage. The general maintenance of these plants, or their repair when damaged, is difficult because of lack of civil servant salaries in many areas of public service, which has stalled services. Most of the country is now without light at night, but the most difficult time for Yemenis is during the day when the heat cannot be assuaged by ventilators or air conditioning because of lack of electricity. This is especially difficult for people living in warmer governorates such as Aden or areas around Haradh near the Saudi Arabian border, for the elderly or for people with particular medical conditions. In Aden's Krater neighbourhood, which has seen a lot of fighting over the past months, it is reported that 80% of the population has now left to go to a different part of Aden, in part due to the unbearable heat.

Garbage collection

Garbage collection has been on hold in much of Yemen. It would be no exaggeration to describe that garbage is strewn all over the country: it is a bizarre sight to be driving through the rural areas of north-western Yemen and seeing plastic bags and other rubbish all over the countryside, blown by the wind. In the villages and towns, garbage accumulates up to several metres high by the roadside. This causes health risks, including public health and environmental concerns, due to the fact that water sources can be contaminated and become a breeding ground for disease vectors such as mosquitoes.

Some small initiatives are being organized by individual neighbourhoods to clean the streets, but these are few and far between in a country where many people no longer receive salaries and the heat is stifling for much of the day. Until more fuel is allowed in and properly distributed to the people and services that need them, the garbage will accumulate, with all the public health concerns and psychological effects this entails.

The every day struggle due to lack of services and utilities

Apart from the direct effect of the conflict, the main problem impeding a normal Every Day for Yemenis is lack of fuel, which affects electricity, garbage collection and water, three tenets of normal living. People find ways to adapt to the new situation. Many now have just one hot meal a day because of limited cooking gas. Poorer people ask neighbours to not discard their cooking oil after use, so it can be reused. Walking long distances to find public water sources, piles of garbage accumulating in the streets, makeshift ovens at home to cook your own bread, and recycling the same cooking oil ten times.... These are the small things unseen to much of the rest of the world. They may not be a priority in a country living under constant bombardment and insecurity, where people are struggling to find food, water and access to adequate healthcare; however, it illustrates that things that much of the rest of the world can take for granted have become a struggle for Yemenis today.

Brief 4

Healthcare and Assistance for Yemen's Scattered IDPs



Yemen © Narciso Contreras / MSF

Other briefs in this Yemen series: Treating the War- Wounded; The Fuel Struggle: Accessing and Providing Healthcare Without It; Water and the Rupture of Public Services in Yemen; Attacks on Medical Infrastructure and Personnel; Concerns for Children and their Healthcare Needs; Vaccinating Yemen and the Spread of Communicable Diseases; Access to Healthcare for Chronic Patients in Yemen.

The situation of IDPs in Yemen today

Yemen has a new wave of internally displaced persons (IDPs) due to the insecurity affecting much of the western governorates. It should be noted that all of Yemen's population suffers as a result of the current situation, particularly since many were living in extremely poor conditions prior to the conflict. The number of IDPs has not reached the dimensions of some other emergency contexts; however, being forced to abandon their homes and support networks, and having very little assistance to meet their needs, they remain a vulnerable population of concern. Many have been displaced several times due to northern Yemen's conflicts over the past years and live precariously on almost nothing. In certain areas, displacement levels are higher. In Aden's conflict areas such as Krater, for example, 80% of their population have left due to the fighting and unbearable heat compounded by lack of electricity. In northern border zones, residents were warned by the Coalition to evacuate due to imminent airstrikes, and in fact most displacements are from areas around Saada where fear and insecurity is high. IDPs move down towards quieter areas in Amran governorate and along the western Hajjah and Hudeydah coastline.

It is extremely difficult to quantify the IDP populations, due to their remote locations and frequent movements. MSF has surveyed areas with higher IDP concentrations, such as Hajjah and Hudeydah governorates (over 13,000 IDPs) and Amran governorate (around 32,000 IDPs). Many stay with relatives or friends or are in remote areas, therefore not easily identified by aid organisations. Others take shelter in abandoned buildings such as schools that are not adequate for accommodation and lack basic infrastructure such as latrines and functioning sewage systems. However, thousands simply sleep in the open, in dispersed informal gatherings of several hundred families each. For many, this is not the first time since March that they have moved, as one woman told MSF in Hajjah:

"This is our third move; I'm tired. We live under the trees like this but need food and water! We brought nothing, except our IDs. Four months ago they bombed our camped home in Mazraq camp. Then we moved 36km to Heradh, and they bombed it. Then we came 30km to here. But we still do not know if we are safe."

The IDP influx places enormous stress on resources of struggling host communities, who suffer overcrowding and increased prices. A nurse in Khamir's al-Salame hospital stated:

"There is such a difference in the town now the IDPs have arrived. There is lots of tension, people are scared. Everything seems to be more expensive because of this high demand on commercial goods. Water used to cost 5,000 YER for a truck; now this has doubled. Ramadan was extremely difficult this year."

Meeting the basic needs: shelter, water and food

Shelter

Hundreds of families living out in the open have made makeshift dwellings with whatever materials they can find. In Hajjah, some IDPs have sold their old tents to buy food. In Khamir, IDPs received summer tents from local authorities, but they are not resistant to the regular storms and the materials are expected to quickly deteriorate.

Water and Sanitation

As described in the previous brief in this series, IDPs face serious water shortages. MSF and one other organization distribute water, but it is not enough to meet the minimum daily water needs in all these gatherings, and they are now starting to drink non-potable water intended for washing, transporting it in dirty plastic containers to reach their tents. Similarly, the number of latrines in new gatherings are not sufficient and public health and sanitation problems arise due to lack of sewage infrastructure.

Food

As stated by Saada IDP Mohamed, food is the main concern now for many IDPs:

"Our problem is food! We and our children are hungry. Only the Yemeni Red Crescent brought some sugar, rice, oil. Each night some of us beg for Ramadan leftovers in town and bring them; but it is degrading and not enough."

IDPs seem to get by on very little. However, lack of proper food, varied nutrients and clean water sources cause health risks. One woman in Hajjah had given birth in her tent two days prior and needed to breastfeed a 2-year-old son. But she had no milk for either child, explaining that her daily meals now consisted largely of bread and tea.

Access to health for IDP communities

Malnutrition

Cases of acute malnutrition among Khamir and Hajjah IDPs are being picked up by healthworkers in those areas. Since these are in health centres where children are already sick, they cannot be representative of the general population; however, the numbers have risen over the past months and supply of specialised nutrition supplement for malnourished children is not easily available.

Communicable and other diseases

The lack of clean water and sanitation in IDP gatherings contributes to increased risk of outbreaks, but also to risk of skin infections. A big concern is watery diarrhoea and dehydration among children, now frequent in areas such as Khamir and Qataba. Other risks are Malaria, Cholera and Dengue fever³.

Transportation to health facilities and late referrals

Access to healthcare is often difficult for IDPs. In Khamir (Amran) or Beni Hassan (Hajjah), MSF has mobile clinics or community health workers that regularly visit IDP gatherings and identify emergency cases. However, IDPs often leave it until the last minute to seek medical services, due to insecurity or high cost of transport. Increasingly, women are giving birth at home or in IDP tents, which increases the chance of fatalities from untreated childbirth complications.

One nurse at al-Salame hospital's paediatric ward in Khamir said that they get 25-35 cases of watery diarrhoea and dehydration every day, but sometimes too late:

"We had a 9-month old baby die of this last week. He had been brought way too late for us to be able to do anything. We asked why the family had waited: they had no transport to bring him earlier, they said."

³ More on these in the brief no. 7 in this series.

Brief 5

Attacks on the Medical Infrastructure and Personnel



Yemen © Yahya Ahab / MSF

Other briefs in this Yemen series: Treating the War- Wounded; The Fuel Struggle: Accessing and Providing Healthcare Without It; Water and the Rupture of Public Services in Yemen; Healthcare and Assistance for Yemen's Scattered IDPs; Concerns for Children and their Healthcare Needs; Vaccinating Yemen and the Spread of Communicable Diseases; Access to Healthcare for Chronic Patients in Yemen.

Attacks on healthcare in Yemen

Whether for routine health check-ups and mild conditions, chronic illnesses that require regular and specialised follow-up, or emergency treatment due to the violent effects of the war, it is becoming increasingly difficult for people to access the services they need. In the areas where MSF is working, it is seeing many cases of mass casualties, as well as an increase in health conditions such as malnutrition or watery diarrhoea and dehydration. Such conditions require urgent response by health facilities, and it is imperative that healthcare services be operational, unhindered and rapidly responsive. Despite this need, MSF has recorded numerous attacks on the medical centres and personnel that are preventing the country's healthcare practitioners from working effectively.

Direct targeting of hospitals

MSF has recorded several direct targeting on hospital infrastructure in the areas in which it works, such as Ta'iz, where a worryingly high number of incidents have been witnessed. Al-Thawra hospital was shelled on numerous occasions, including on 26th April, 1st, 2nd, 4th, 15th, 18th, 23rd, 24th and 31st May, as well as 1st, 9th and 24th June. There were gunshots on the burns centre on 10th May, and an anti-aircraft shell hit it on 14th May. Other sources have corroborated such incidents in the area, as well as other attacks affecting health facilities throughout the country. In Hajjah governorate, Haradh's public hospital was directly targeted by airstrikes on two occasions, on 25th June and 11th July, causing big damage to the hospital's main departments, as well as civilian injuries. Air strikes have created severe damage to medical infrastructure and caused casualties among medical personnel, patients and caretakers in the governorates of Hajjah, Sana'a and Maarib between May and June.

Indirect damage to hospitals in concentrated areas

Incidents of indirect damage to Yemen's health infrastructure have also been reported. This is particularly the case where there is high a concentration of civilian houses and infrastructure, including hospitals or health centres. The bombings on Nuqum mountain near Sana'a on 11th May had a large impact on surrounding residential areas, including hospitals such as al-Thawra hospital or al-Andalus health centre. In Ta'iz, al-Rawdah hospital was hit by mistake by an anti-aircraft bombshell on 11th June, causing destruction, and shelling affected Yemeni International Hospital on 22nd June, causing injuries. Ta'iz's al-Thawra suffered indirect damage on 27th April, 16th and 26th May, and got caught in crossfire

on 20th May. In Hajjah on 21st May, the hospital of Abs was near a shelled target, causing damage to the maternity ward and displacement of its staff. On 7th July, Haradh's German hospital suffered indirect damage from airstrikes targeting a nearby house, causing damage to the generators and buildings, as well as several casualties. Such attacks severely limit the capacity of Yemen's healthcare system to respond to the country's health needs.

Armed presence inside hospitals and snipers on roofs

MSF medical staff has repeatedly reported witnessed gunmen, or roof snipers, using hospital premises to conduct fighting. This has happened in places such as Aden, Hajjah and Ta'iz, and endangers the medical personnel and other civilians inside the hospital premises. Health centres and the staff and patients within them must be protected from the fighting and not be used militarily by any of the fighting sides.

Attacks on ambulances and obstacles preventing their movement

MSF staff in Hajjah governorate have recorded at least 2 incidences where ambulances were hit while transporting patients. One was in al Munzale (northern Hajjah) on 5th June when an ambulance transporting 2 wounded and 2 caretakers to the hospital, was shelled, and a medical staff was killed. On 26th June another ambulance was shelled using an RPG on the Hajjah-Sana'a road. It was transporting a small boy wounded in a bombing for treatment in Sana'a; he survived the incident but died the next day. In Ta'iz, an ambulance was caught in crossfire on 20th April, and ambulances were targeted, on 30th March in ad-Dhale and 20th April in Ta'iz. Several other reports have been collected on shooting of ambulances, or destruction to them in ad-Dhale, Aden, Ta'iz from March to June 2015. Besides direct attacks, ambulances are routinely stopped at checkpoints in the southern governorates and either lengthily stalled or prevented from passing, which can endanger the lives of patients within them being referred to health facilities.

Humanitarian Consequences

Incidents such as those mentioned in this brief have caused deaths and injuries of patients, caretakers and medical staff, as well as substantial damage to the hospitals' facilities. In Ta'iz's al-Thawra hospital for example, the attacks damaged the emergency room, medical wards, burns centre, dialysis machines and treatment stores, laboratories, gynaecological and obstetrics departments, as well as hospital infrastructure such as water pipes. Attacks on medical facilities create fear among medical personnel to work, and fear for patients in seeking healthcare. It can cause the hospitals to close down (as happened in Abs or Haradh), which is usually coupled with population displacement. Overall, these incidents prevent patients from accessing healthcare, and medical personnel from providing it.

Legal obligations⁴

Parties to the Yemeni conflict have obligations under international law to protect medical infrastructure and personnel. Disproportionate targeting of health facilities; endangering the lives of the wounded, civilians and health staff within the premises of a health facility; preventing the wounded from accessing healthcare treatment, and shooting at unarmed civilians and wounded persons are all blatant violations of these obligations. Such incidents cause damage, injuries, deaths and fear among the population, often forcing hospitals to stop operations and severely limiting capacity to provide healthcare at a time when populations most need it. Many must now travel further to reach care or treatment, which can complicate their medical condition or endanger them.

⁴ For a fuller briefing on the applicable legal framework and more on why these acts constitute violations of international law, a good point of reference is the International review of the Red Cross, Volume 95/ 889, Spring 2013. See <https://www.icrc.org/eng/resources/international-review/review-889-violence-against-health-care-1/review-889-all.pdf>

Brief 6

Concerns for Children and their Healthcare Needs



Yemen @ Matak Shahar / MSF

Other briefs in this Yemen series: Treating the War- Wounded; The Fuel Struggle: Accessing and Providing Healthcare Without It; Water and the Rupture of Public Services in Yemen; Healthcare and Assistance for Yemen's Scattered IDPs; Attacks on Medical Infrastructure and Personnel; Vaccinating Yemen and the Spread of Communicable Diseases; Access to Healthcare for Chronic Patients in Yemen.

Problems facing children in Yemen today

Children in Yemen today are facing a usual and unfortunate side effect of war, namely mental health effects of varying kinds. In the towns this can be caused by aerial strikes, stray bullets or witnessing street fights. In Sana'a, MSF picked up on several cases of families whose children were showing signs of psychological trauma. The symptoms were behavioural changes such as despondency and fear of loud sounds or fear of being alone. One family gave the account of changes in their 3-year old son:

"My son was very close one day to some rebounding bullets that entered our building. It was loud and created lots of fear as we did not know where to run. These events are especially scary because we are in the dark due to lack of electricity. My son is now scared to walk alone, and needs us to hold his hand constantly. He cries out at any loud sound and has less appetite than he used to, I am afraid he is losing lots of weight. The small pleasures he used to have, like his favourite chocolate bar, are gone since I cannot find it any more in the shops. My children are trying to make sense of the war and the shortages but they find it hard to understand."

In IDP communities many children have experienced air strikes in the place from which they fled. In Beni Hassan, MSF met one small child who has stopped talking since the attack that killed his two brothers, in Mazraq camp near Saada. He has abdominal pains and a bloated belly, which his mother says is due to his traumatic experience and constant fear.

In many areas of Yemen, children cannot play outside because of security constraints, and the country's schools have been non-operational for several months now. In the camps, children have nothing to do. They find places to play and improvise, such as in Beni Hassan where children pull a rock along on a string like a pet. However, the places they play are often not adequate, such as the schools where IDPs live in Khamir where raw sewage flows into a field where children play. In Sana'a, many children are now supporting their families by trying to find odd jobs that can bring some small amounts of money, such as cutting wood for fires or fetching water. There are reports that children are being recruited throughout the country as child soldiers and, effectively, throughout the country seemingly teenage boys are manning many of the checkpoints.

There is a severe lack of specialized services currently in Yemen, including mental health support, as well as support for disabilities. MSF teams met several disabled children in the IDP camps, but they have no support at all from local health services, which are focusing on emergency cases and run on a tight budget. In Yemen today, small children are robbed of their childhood and instead are forced to grow up quickly in order to deal with the situation they are confronted with, and their own suffering –like that of their families– is pushed to the side as there are no services to help them.

Risks of malnutrition

There were of course problems of malnourished children in Yemen before the current conflict;⁵ it is a country that has been struggling with food insecurity for decades. The problem is that this conflict, and all the consequences it entails, greatly exacerbates that situation in a country that does not have a strong mechanism in place to deal with it.

Many women in poorer communities who give birth are often lacking nutrients and sufficient food themselves, so they cannot give properly to their newborn baby. In Hajjah governorate, MSF met a 20- year old woman in al-Mangorah IDP gathering who had just given birth in her tent two days prior. Her mother had accompanied her through it, cutting the umbilical cord with a razor blade. The woman had wanted to go to the hospital but without money could not afford the transport. Still in discomfort following the birth, she described the situation:

"It was very difficult having to deliver by myself. My mother and my husband wanted to take me to the hospital but we could not afford the transportation fees. I tried to sell my only piece of gold jewellery but no one has money to buy gold these days. What I eat every day is basically bread and tea, so how can I get milk in my breasts to feed my 2 year-old child, let alone the newborn baby? I am still bleeding and my baby is hardly moving, I cannot reach the hospital to check his health or mine after the delivery."

⁵ See, e.g. a WFP information from 2014: <https://www.wfp.org/news/news-release/food-security-survey-shows-10-million-yemenis-still-struggle-food>

Today in Yemen, cases of malnutrition are picked up in the areas where MSF works and are referred to the nutrition programmes carried out in local health centres. But healthcare centres across the country do not always have a strong capacity to respond due to lack of funds, means or specialised staff, and support in this domain from the Ministry of Health (MoH) is not available. It is difficult for nutrition programmes to get the nutrition supplement for malnourished children without the help of international NGOs, due in large part to the blockade. In June, MSF supported activities to survey three IDP gatherings in Hajjah governorate for malnutrition. Out of 1,043 children, the percentage of those with global acute malnutrition (GAM) was recorded at 4.8% of them, 0.6% of which were considered "severe" cases of malnutrition. In July, tests were repeated in those communities, and out of 1611 children tested, the GAM was found to be 11.3% of children tested, 2% of which were considered "severe". Similar figures were found in other gatherings in Amran and Hajjah and Hudeydah governorates, illustrating that cases of malnutrition may be on the rise.

These figures cannot be reflective of the general population in Yemen; however, there is certainly a risk that the problem of malnutrition in Yemen will worsen, especially with the current conditions many populations are facing in the country and the severe lack of nutrition supplement available. MSF is highly concerned that this issue needs to be monitored.

Brief 7

Vaccinating Yemen and the Spread of Communicable Diseases



Yemen @ Agnes Mortanari / MSF

Other briefs in this Yemen series: Treating the War- Wounded; The Fuel Struggle: Accessing and Providing Healthcare Without It; Water and the Rupture of Public Services in Yemen; Healthcare and Assistance for Yemen's Scattered IDPs; Attacks on Medical Infrastructure and Personnel; Concerns for Children and their Healthcare Needs; Access to Healthcare for Chronic Patients in Yemen.

Conducting routine immunisation programmes in Yemen today

The routine vaccinations that Yemenis were able to benefit from, organised by the Ministry of Health (MoH), have largely been put on hold due to the conflict. Although MSF focuses on providing support for the war-wounded and strengthening the country's healthcare response, in the governorates where it works the inability to maintain regular immunization programmes has been raised. MSF is strengthening its surveillance in this regard and supporting activities where possible.

Prior to this conflict, Yemen's immunization coverage was generally never over 80% and some vaccines were not yet being administered or reported. However, vaccination coverage has increased steadily over recent years.⁶ Measles coverage, for example was at 75% in 2014 and rising annually, and similar figures are found for DTP vaccine (against diphtheria, whooping cough and tetanus) at 94%, Polio at 88% and BCG (against Tuberculosis) at 73%. Doses of Vitamin A were lower, but still at an estimated 59% coverage.

The immunization coverage since the start of the conflict, however, has been insufficient in many areas. In large part this is due to the fact that the MoH in Sana'a is facing severe challenges, as was described to MSF, including lack of funds. Several months into the war, the coverage levels attained in different areas depend on how much is available of the various resources needed to make a vaccination programme work:

- **A secure environment:** Due to the volatile nature of the conflict in many areas, access has been difficult since the start of the conflict, both for health teams conducting vaccinations and for families approaching health centres.
- **A reliable cold chain:** This is now almost impossible in a country whose functioning hospitals rely solely on generators and the fuel to run them. Even where vaccines are being administered, community health workers are doubtful of their effectiveness due to incorrect or inconsistent storage.
- **Transport to reach different areas of the programme:** Almost impossible now with the lack of fuel and affordable transport throughout the country.
- **Many communities that are mobile:** Some of the highest needs are among IDP communities; however, they are frequently moving, sometimes to several different locations within just a few months, in search of safety and security.

⁶ See WHO figures on Yemen: http://apps.who.int/immunization_monitoring/globalsummary/coverages?c=YEM.

Different governmental and non-governmental medical sources have estimated national coverage today at around 30- 50% in certain parts of the country, and in others coverage is considered as even lower. In areas not affected by fighting, such as Beni Hassan and Saada it has been possible to conduct some vaccinations, but outreach to more remote areas is difficult due to the above-mentioned factors. MSF has been supporting the Yemeni MoH in conducting vaccinations against measles and Polio, and administering Vitamin A doses in Amran governorate to IDP and host communities. However, in conflict areas such as Aden, Ta'iz ad-Dhale in the south, such activities are now almost impossible.

The situation of communicable diseases

The situation of diseases that are endemic in parts of Yemen, and for which there is a history in the country, are especially concerning today due to several factors relating to the nature of the current conflict. Relevant factors include the high movement of populations, use of unclean water sources by impoverished communities and IDPs, high concentrations of displaced people in small areas, and very little government capacity to respond to outbreaks, including proper testing capacity. Warmer zones are the areas most at risk.

For **Malaria**, western Yemen is an endemic zone and Malaria appears seasonally. Higher numbers have been reported since the start of the conflict, but this is likely due to people taking less preventative measures than previously. MSF has distributed mosquito nets in IDP communities; however, it is believed that – like tents – many of these may be sold in order to buy food. For Cholera, there have been some suspected cases in the south, and it is still considered a risk in the country, especially considering the poor water and hygiene standards faced by many communities.

Dengue fever is endemic in certain governorates of Yemen such as Hudeydah, Aden and Ta'iz, as well as Lahj, Shabwa and Hadramout. However, in some high- altitude areas such as Khamir, where MSF works, the Dengue mosquito does not thrive. Dengue being more of an urban virus than a rural one, concentrated populations or host communities with IDP influxes may be more at risk. Dengue is worrying for its infectiousness through the Dengue-carrying mosquito, which breeds in stagnant water sources (which can be caused in Yemen today by storing water in open containers due to the shortages), high population movements and concentrated gatherings, hot climates and accumulation of garbage, all of which are problems currently in the country. The Dengue mosquito is one that bites in the day, so unlike Malaria

mosquito nets cannot help in its prevention. There are said to be over 3,000 reported cases of Dengue since the start of the conflict,⁷ although the lack of proper testing capacity (including transportation of samples to a laboratory) and a likely underreporting of numbers mean that figures are difficult to ascertain.

The main concern at the moment for MSF teams is the spread of **watery diarrhoea and accompanying dehydration**, that is increasingly being seen in the hospitals where it is working in places such as Khamir (Amran) and Qataba (Hudeydah).

Compounding the situation of potential outbreak is the recurring problem of late referrals. There has been a sharp decline in people approaching clinics for consultations, and increasingly people delay seeking medical help, because of financial constraints or security fears. Cases all too often are showing up too late and unnecessary deaths are occurring too frequently in Yemen today.

⁷ http://www.emro.who.int/images/stories/yemen/WHO_Yemen_sitrep_no8_7_June_2015.pdf?ua=1&ua=1.

Brief 8

Access to Healthcare for Chronic Patients in Yemen



Yemen © MSF

Other briefs in this Yemen series: Treating the War- Wounded; The Fuel Struggle: Accessing and Providing Healthcare Without It; Water and the Rupture of Public Services in Yemen; Healthcare and Assistance for Yemen's Scattered IDPs; Attacks on Medical Infrastructure and Personnel; Concerns for Children and their Healthcare Needs; Vaccinating Yemen and the Spread of Communicable Diseases.

The situation of patients suffering from chronic conditions

Hospitals and healthcare centres throughout Yemen have stopped functioning entirely or partially, due to lack of resources or on-going security constraints due to the conflict. Some hospitals and parts of their associated support structure, such as ambulances, have also been directly or indirectly targeted in the fighting.⁸

Due to the blockade of commercial pharmaceutical drugs and materials entering the country, stocks of pharmacies and hospitals nation-wide are quickly being depleted and healthcare providers are facing huge shortages of all kinds of drugs. One of the direst needs is that of providing regular access to healthcare for patients suffering from chronic conditions such as kidney diseases, diabetes, hypertension and cancer. MSF has seen that the regular and consistent follow-up required for such cases is no longer available in much of the country. In some cases, patients find their medication on the black market –which cannot always be considered as reliable in terms of quality– or in limited pharmacy stocks (e.g. Sana'a). In some cases treatment stocks are depleted but patients are able to travel to try and find their medicines elsewhere (e.g. ad-Dhale governorate). In places in the south around Aden, which are under *de facto* siege currently, patients cannot leave and the stocks of such treatment in these areas are alarmingly reduced or already disrupted.

Hospitals are trying to provide treatment for such cases in Sana'a as well as the governorates of Hajjah, Saada, and Aden. In Sana'a, the main provider of treatment for Yemen's chronic patients, MSF teams have seen a substantial reduction in services by struggling hospitals. In May, Sana'a hospitals reported to MSF the numbers of patients suffering from various kinds of chronic illnesses. The following number of patients were being followed consistently by referral hospitals at the beginning of this conflict and had always been able to access their medication: 408 cases of haemophilia, 8750 cases of Epilepsy, 640 cases of Thalassaemia, 1904 cases of kidney transplants, and 1935 cases of renal failure patients. Treatment for renal failure - considered among the most severe of cases due to the short time that patients can survive without dialysis – has been reduced in many places to fewer weekly sessions per patient, often provoking severe and dangerous side effects.

⁸ See, e.g., brief no. 5 in this series: "Attacks on the Medical Infrastructure and Personnel", for more on different kinds of attacks taking place which target or damage the country's health infrastructure.

One of Sana'a's doctors told MSF:

"I am not sure how long this situation can continue, but it is clear that for us this is among the most important needs currently in our hospitals. Increasingly, we are seeing cases of chronic patients dying from lack of treatment. Hospitals have now decreased the amount of treatment sessions they are providing, in order to reach more people, but the physical reaction this can cause for some patients is horrible."

A 45 year-old kidney dialysis patient at al Thawra hospital in Sana'a confirmed this:

"I was forced to take just one session of kidney dialysis a week, instead of the required two or three, because of lack of fuel for electricity in the kidney dialysis department. I have been on this treatment for 2 years and this has never happened to me. The side effects have been awful and I keep having difficulty breathing and suffer from dizziness."

People are beginning to seek medicines in market stores; however, because electricity has largely not been functioning since the conflict started in March, the adequate storage of medicines is no longer reliable. In al-Thawra hospital in Ta'iz, MSF reported that three patients died when the dialysis machines stopped working on 6th May due to lack of fuel, and they could not get their treatment. Several bombings of al-Thawra on 15th and 24th May caused substantial damage to those dialysis machines, preventing their effective use.

In a case in Sana'a, a surviving 51 year-old diabetes patient told MSF:

"I used to get my Insulin for free from the central pharmacy at al Gumhuri hospital [subsidized by the MoH], but when the conflict broke out in March it very quickly became difficult for me to find it any more. From skipping doses, I started to suffer from dizziness, fatigue and felt numbness in my legs. The complications increased daily but the pharmacy kept telling me they had no stock of Insulin for any patients. I managed to buy Insulin elsewhere, but I can tell that its effectiveness is not the same as before – probably it was not properly stored, and it barely helps my condition. I also feel very depressed and stressed because now that I have to buy the Insulin I have very little left over to cover my family's needs."

Support from international aid organisations

The healthcare structure in Yemen remains functioning despite the fighting, and many experienced health practitioners are still present in their posts despite –in many cases– not having received their salary for several months. However, without the material, drugs and equipment they need in order to provide the healthcare that Yemenis so need, there is little they can do to prevent unnecessary suffering and deaths among people suffering from many kinds of conditions, chronic illnesses being but one illustration of the dire current problems.

Although much of MSF-supported activities is now focusing on areas such as treating the war-wounded, it is supporting hospitals as much as it can in stabilizing or managing cases of chronic patients that are coming to its hospitals, as is the case in Khamir for example in Amran governorate, or supporting Sana'a's hospitals with much-needed dialysis machines. However, few other international organisations are in place to support the MoH in providing such treatment, and the country's healthcare facilities are desperately in need of increased assistance in this regard.