



مركز الملك سلمان  
للإغاثة والأعمال الإنسانية  
**KING SALMAN**  
HUMANITARIAN AID & RELIEF CENTRE



**World Health  
Organization**  
Yemen

## Impact in Action

## Stories of Health, Hope, and Resilience in Yemen



*Brought to you by the partnership of the King Salman Humanitarian Aid and Relief Centre and the World Health Organization*



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# Summary

The ongoing crisis in Yemen has affected the lives of a population already living in the most vulnerable country in the Middle East. In the last nine years, the conflict which is characterized by violence, economic decline, and disruption in public services, has left two thirds of the population, a staggering 21 million people, facing extremely precarious conditions. Outbreaks of preventable diseases such as malaria and cholera are widespread, and with the health system functioning at 46 percent capacity, Yemenis struggling from lack of access to water, health and sanitation, protection, and education, are further impacted by a lack of access to basic healthcare services.

In response, the King Salman Humanitarian Aid and Relief Centre (KSrelief) and WHO began cultivating a partnership in 2016 to provide humanitarian health assistance to the most vulnerable Yemenis in urgent need of life-saving support.

**With an overall contribution of US\$ 325 million from 2016 to 2022, KSrelief has enabled WHO to reach over 52 million crisis-affected beneficiaries** with access to multiple health services, including: malnutrition screening and treatment; malaria, cholera, and COVID-19 surveillance and treatment; life-saving oxygen therapy; life-saving water; and rehabilitation and equipping of health facilities (HFs).

This report consolidates the impact that generous contributions of KSrelief have had throughout the past several years on Yemen's most vulnerable. Stories told depict the importance and value of the partnership between KSrelief and WHO in aiding immediate humanitarian health needs, and supporting system strengthening in Yemen.



**US\$ 325M**  
in funding



**52M**  
beneficiaries reached



**22**  
governorates

# Essential Health Services

A physician delivers life-saving medical care to a baby at a health facility in Yemen.

Since the start of the conflict, over three quarters of Yemen's population have been estimated to require but lack access to health assistance. Importantly, maternal and child mortality rates have increased significantly, with the latest estimates indicating six newborns and one mother dying every two hours. Lack of access to adequate healthcare services are compounded by excess strain on the less than half of the country's facilities that continue to function. Interrupted service provision has been attributed to shortages in qualified healthcare staff, insufficient equipment and medical supplies, and an inability to meet operational costs needed for fuel and water.

To sustain and expand essential health services reaching the most vulnerable Yemenis residing in remote areas, WHO and KSrelief provided healthcare facilities with CT and MRI machines, distributed fuel and water to healthcare facilities, conducted capacity-building of healthcare staff, facilitated access to and availability of reproductive and maternal health services, and led Health Cluster coordination. This support has preserved the functionality of the country's fragile health system, and contributed to sustained access to services available so that patients no longer had to travel long distances to receive care.



**US\$ 31.7M**  
in funding



**1.9M**  
beneficiaries reached



**20**  
governorates

## KSrelief: Strengthening Yemen's health system



**1.22M**

litres of fuel distributed to 249 HF's



**3,344**

oxygen cylinders refilled



**42**

HF's supported with RMNCH medication and medical supplies



**6.7M**

litres of water distributed to 9 HF's



**19**

HF's supplied with oxygen and medication



**27**

dialysis HF's supported with essential medications



**12**

HF's rehabilitated or maintained



**1,000**

health workers in 28HF's trained to improve quality of care



**6**

imaging scanners procured and distributed

**2** MRIs  
**4** CTs

## Saving Hamza:

### The vital role of medical equipment in igniting the transition from despair to health and hope

WHO provides essential health services as part of humanitarian health interventions implemented in Yemen. Generous contributions from KSrelief in support of these activities enabled WHO to distribute vital medical equipment and supplies to healthcare facilities, and to purchase and distribute 4 Computed Tomography (CT) and Magnetic Resonance Imaging (MRI) scanners in support of improving diagnostics and treatment of urgent cases suffering various ailments in vulnerable and priority districts.

The availability of a CT scanner in a medical facility nearby was crucial to saving 8-month-old Hamza's life, who arrived to the hospital in his mother's arms, unconscious and suffering from convulsions and pallor after having fallen from a height of 3 meters.

The medical team conducted a clinical examination and a brain CT scan, which depicted a large epidural hemorrhage. As a result, Hamza was rushed into surgery to stop the severe bleeding in his brain. The surgery was successful, and Hamza's life was saved. Hamza's mom has expressed her gratitude and appreciation upon her son's recovery."



"The first day in the hospital was the scariest. I was shocked and couldn't believe what had happened. Today, I thank God, KSrelief, and WHO for making it possible for my Hamza to survive this horrific accident."

**-Hamza's mom**



# Malaria



Team members working in support of the Insecticide Residue Spraying (IRS) campaign.

The situation for humanitarian health has worsened with the rise in the number of climate-induced events in Yemen, such as heavy rainfall which leads to flash floods that devastates communities and places them at even greater risk of contracting preventable infectious diseases such as malaria, diphtheria and cholera. An estimated one million people are infected with malaria on an annual basis in Yemen, with 19 million people living in areas at risk for transmission.

KSrelief's longstanding partnership with WHO has enabled the establishment of the Malaria Control and Prevention Project which supports national malaria response efforts to control and prevent its spread, including through surveillance, vector control, and technical assistance. This has been integral to reducing strain on the healthcare system, allowing for the control of millions of mosquito-borne disease outbreaks, and for protecting millions of people at-risk of contracting malaria.



**US\$ 10.5M**  
in funding



**3.1M**  
beneficiaries reached



**11**  
governorates

## KSrelief: Fighting malaria in Yemen

**1M**  
malaria RDTs distributed

**1.6M**  
people protected via  
Insecticide Residue  
Spraying

**3M**  
mosquito-borne disease  
outbreaks controlled through  
vector control campaigns

**685,000**  
Long-lasting insecticidal  
nets distributed

**852**  
health workers trained in  
malaria and dengue case  
management

**127,000**  
households reached in  
remote areas

**10**  
epidemics contained within  
two weeks

**201,000**  
confirmed and treated  
malaria cases

**15**  
malaria units supported

## Building stronger health systems via support to public health laboratories

Essential to the continuity of any health system is the uninterrupted functionality of its public health laboratories, which enable delivery of essential services including disease surveillance, diagnostics, and outbreak response and prevention. In Yemen, where the healthcare system is under significant strain, the partnership between WHO and KSrelief has allowed for the provision of essential laboratory equipment and capacity-building for laboratory technicians, facilitating the identification and implementation of diseases and effective interventions that improve public health outcomes for a range of infectious illnesses, including blood disorders, cholera, malaria, and COVID-19.

Diana, a medical laboratory assistant working in Yemen's public health laboratories since 2011, notes that a major challenge for the laboratory is the lack of public awareness about communicable diseases, which contributes to their emergence and spread.

“Before receiving support to the laboratory's operations, service provision since I began working here was intermittent, and there were times where we could not carry out examinations or provide any services at all. However, since we began receiving support, our services have continued with barely any interruptions. This helps us provide services despite challenges we face daily.”

Also expressing a difference given the support of WHO, is Dr. Ismail, a doctor who works to treat thalassemia and other genetic blood disorders in Yemen. He notes, “We used to only able to provide a limited number of medical laboratory tests – but now, we have been able to increase the number of tests provided, and as a result, treat a higher number of patients suffering from illnesses such as thalassemia, and decrease the death rate. The supplies that we have vary from essential medicines that treat thalassemia, to laboratory solutions and other medical supplies that support the sustainability of healthcare services for patients.”



# COVID-19 Response

Health workers provide critical care to patients severely affected by COVID-19.

WHO's partnership with KSrelief on pandemic-related efforts promoted a shift from the hopelessness deeply felt by Yemenis. With the health system already on the verge of collapse given the lack of available qualified staff, and little access to the resources required to prevent illness and deliver effective treatment, the onset of the COVID-19 pandemic meant that Yemen experienced one of the highest case fatality rates globally. As the pandemic evolved, a lack of accurate data and inadequate testing further hindered the system's capacity to meet the needs of those most vulnerable.

Early pandemic response aimed to ensure proper country-level coordination between sectors, clear risk communication and infection prevention measures, and that points of entry were equipped for surveillance and tracking of suspected cases.

Funding from KSrelief addressed critical gaps in implemented planning and response interventions, including through the capacity-building of rapid response teams, equipping isolation units treating severe cases, and reaching communities with awareness messaging.



**US\$ 13M**  
in funding



**17.6M**  
beneficiaries reached



**22**  
governorates

## KSrelief: Responding to the pandemic



**2.5M**  
vaccines administered



**44**  
triage facilities supported



**28**  
isolation units supported  
with medications and  
equipment



**19**  
COVID-19 isolation units  
rehabilitated



**43**  
centers provided with PPE

**28** isolation units  
**12** labs  
**3** points of entry



**50**  
healthcare staff from  
10 governorates were  
provided ToT training on  
ICU case management



**1,473**  
healthcare workers trained  
on IPC protocols



**39,500**  
COVID19- cases treated in  
supported IUs



**18**  
TV episodes produced  
and broadcasted on TV  
channels



## Empowering communities: Combatting misinformation and expanding access to COVID-19 vaccines

In Yemen, not unlike other countries, widespread misinformation about the COVID-19 pandemic and COVID-19 vaccines posed a major public health threat.

To combat misinformation and arm Yemenis with accurate science-based information regarding the virus and the vaccine, WHO, with support from KSrelief, trained more than 1000 health workers and community volunteers to deliver awareness messaging to community members. WHO was also able to expand COVID-19 vaccination sites to 1,400 locations across Yemen to immunize the most vulnerable.

KSrelief's support to these efforts allowed for health educators and vaccinators to build and maintain trust with community members during campaigns, via ensuring clear and open communication channels.

Nurse Lubna who works in a hospital administering COVID-19 vaccines, is exemplary of the positive impacts felt by communities as a result of implemented COVID-19 awareness and vaccination campaigns. After attending training workshops, Lubna heard rumors circulating in her community about the vaccines, most of which she identified as false and fear-based, and was able to confidently address them with accurate information: "In the training, I didn't just learn how to properly administer COVID-19 vaccines. I also learned how to counter false and harmful rumors with facts and information."

Importantly, engaging community members as advocates has encouraged people to lead by example, as explained by Lubna: "I also took the vaccine myself in front of my community members, to convince them about the importance of getting vaccinated."



# Nutrition



A treating physician preparing a malnourished child's therapeutic milk dose.

Malnutrition rates in Yemen are among the highest in the world, with over two million children under the age of 5 and one million pregnant or breastfeeding women requiring treatment for acute malnutrition. 45 per cent of the mortality rate in children under 5 years is attributed to undernutrition, with key drivers including unstable living conditions, lack of access to primary healthcare services, poor infant and young child feeding (IYCF) practices, and food insecurity.

To reduce mortality rates in children under 5, WHO in partnership with KSrelief, extended life-saving support via nutrition interventions.

Implemented interventions include: rehabilitating and supporting operational capacities of therapeutic feeding centres (TFCs), paediatric units, and intensive care units; supporting severe acute malnutrition (SAM) case management; enhancing community knowledge on malnutrition prevention and treatment; and distributing SAM kits and admissions kits. Additionally, as part of climate resilience and the transition towards renewable energy, WHO also installed solar systems in TFCs and pediatric wards in priority districts.



**US\$ 12.39M**  
in funding



**1.8M**  
beneficiaries reached



**22**  
governorates

## KSrelief: Saving children from starvation



**29,578**  
cases of severe acute malnutrition treated



**109**  
solar power systems installed in 84 TFCs and 25 paediatric wards



**224**  
transportation costs covered for children's caregivers



**30**  
TFCs provided with computers and IT devices



**35**  
TFCs furnished and equipped with supplies



**41**  
workshops conducted, reaching 1,700 beneficiaries



**4,464**  
kits distributed to health facilities



**2**  
phase health radio campaigns implemented

**4,200** SAM kits | **264** admission kits



## Nourishing hope in Yemen: Um Salim's story

Hunger and malnutrition experienced in Yemen are among the most severe in the world. 46 percent of children are estimated to suffer from chronic stunting as a result of malnutrition, which can impede their mental and physical development, and increase their vulnerability to chronic diseases in adulthood. The well-being of parents who are unable to provide for their children is also affected, through post-traumatic stress, depression and anxiety.

To alleviate this all-encompassing suffering, WHO in partnership with KSrelief, provides emergency therapeutic feeding and medical care to children suffering from malnutrition with medical complications. This support, extended via eight therapeutic feeding centers in tertiary teaching hospitals throughout Yemen, includes rehabilitation and provision of equipment, case management, and building community knowledge on healthy feeding patterns and on when parents should seek medical help for their children.

Um Salim and her family are beneficiaries of implemented nutrition interventions. As a mother of two young children for whom she struggles to provide sufficient meals on most days, Um Salim is no stranger to impacts felt and seen affecting her children's health as well as her own well-being. When her youngest child, a small boy, showed signs of malnutrition, including severe wasting and swelling, Um Salim brought him to a WHO-supported therapeutic feeding center.

"My heart was breaking when I first brought my baby here [to the center]. He was so thin and so small. Now, after having received the necessary emergency care he needed, I can see that he is doing so much better. I am so grateful. I have also had discussions with the medical staff and they have taught me about the things I can do to help both of my children thrive with the proper nutrition they need to grow."

# Oxygen stations and supply

Oxygen tanks lined up at a health facility in Yemen.

Throughout the conflict, Yemen has faced challenges with availability of equipment and medicines that are vital to providing adequate emergency healthcare services to patients. Medical oxygen is one of the most important resources enabling provision of life-saving medical care, and is among the resources that has not been readily available due to high associated costs, lacking infrastructure, and logistical barriers.

To remedy this issue and ensure health facilities are able to provide quality care, including for trauma surgeries, resuscitation, critical care, and COVID-19 case management, WHO, with support from KSrelief, established oxygen stations in hospitals in priority areas throughout the country. Sustaining a continuous supply of oxygen to these healthcare facilities has benefitted over 6 million patients.



**US\$ 1.44M**  
in funding



**6.3M**  
beneficiaries reached



**11**  
governorates

## KSrelief: Providing life-saving oxygen to millions of Yemenis



**11**  
oxygen stations installed



**1,000**  
admissions supported  
on a monthly basis



**12,900**  
medical consultations  
provided on a monthly  
basis



Technical and hospital  
personnel trained to  
maintain oxygen stations



**1,360**  
surgeries supported on  
a monthly basis



**25%**  
of all IDPs in Yemen  
reached

# Water, sanitation, and hygiene services

A child accesses clean water and fills her jerry can.

Yemen is one of the most water-scarce countries in the world, and challenges faced during the conflict have left over 15 million people without access to adequate water, sanitation and hygiene services.

With KSrelief's continued commitment to supporting Yemen's most vulnerable communities, WHO provided support with water trucking, water quality monitoring, and rehabilitation of maintenance and WASH services in health facilities.

As a result, over 1 million people have been provided with the opportunity to access better health outcomes, significantly reducing their vulnerability to contracting WASH-related illness, decreasing the risk of disease transmission, and ensuring infection prevention and control in high-risk areas throughout the country.



**US\$ 6.5M**  
in funding



**1.43M**  
beneficiaries reached



**22**  
governorates

## KSrelief: Increasing access to life-saving WASH services

**45**  
HF's rehabilitated

**3**  
regional water quality testing labs in Aden, Taiz, and Mukala

**280**  
HF's provided with WASH supplies

**109M**  
litres of water provided to 179 HF's

**65**  
healthcare workers trained on water quality monitoring and surveillance

**25**  
medical incinerators established in healthcare facilities in 14 governorates



## Overcoming obstacles: The journey to access maternal and reproductive health services

As a result of the crisis, Yemenis' access to adequate healthcare services throughout the country has been a key issue of concern. Ensuring support for maternal and newborn health services is essential, given that only 45 percent of births in Yemen are assisted by a trained provider, with less than one third of these deliveries taking place at a health facility. The situation is particularly dire in rural areas, where access to health facilities is limited, as well as in areas affected by conflict, where many facilities have either been partially or fully destroyed.

In fact, over 42 percent of Yemenis face a minimum one-hour commute to reach their nearest functional healthcare facility. Some families pool their resources to share a rented vehicle, while others are forced to hitchhike. During these trips, roads traveled through can be rough and dangerous, and may pose threats of violence for women and girls. Given the immensity of risks, some resort to not seeking out healthcare services at all.

Encompassing WHO's efforts to ensure isolated communities' enhanced access to urgent healthcare services, is the coverage of vulnerable patients' transportation costs to and from health facilities, and ensuring free provision of healthcare services, as this is so often a deterrent for health-seeking behaviours.

Haneen, a mother of two, and pregnant with her third, lives these challenges on a daily basis. "Transportation to reach the hospital is challenging. Sometimes, we hitchhike, and others, there is simply no way to get here. However, I am so grateful for the services available, including exams, sonograms, and medications as they are provided for free. Without this support, I would not be able to afford any care for myself or my family."

# Cholera

A woman receiving the cholera vaccine during a community vaccination campaign.

A lack of availability of clean water and proper sanitation services, combined with rising malnutrition and poor access to healthcare facilities ripened conditions for an outbreak of cholera in 2016. The outbreak rapidly spread throughout the country at an unprecedented rate, and in mere months, given nearly 5,000 cases recorded daily in 2017 and a high case mortality rate, became the worst ever recorded globally. By the end of 2022, more than 2.5 million cases had been recorded.

WHO's partnership with KSrelief has supported WHO to continue leading Health Cluster coordination, and provision of surveillance, prevention, treatment and response services, to mitigate impacts of the outbreak, reaching a total of 14 million people.

From support to the upgrading of the electronic Integrated Disease Early Warning System (eIDEWS) to a real-time platform, to establishing Diarrhea Treatment Centres (DTCs) and Oral Rehydration Centers (ORCs), and oral cholera vaccination campaigns, interventions activities saw a marked decline in the prevalence of cases, including a 62% reduction in reported suspected cases, and a 94% reduction in cholera-related deaths.

This support has preserved the functionality of the country's fragile health system, and contributed to sustained access to services given that patients no longer had to travel long distances to receive essential healthcare.



**US\$ 47.9M**  
in funding



**14M**  
beneficiaries reached



**22**  
governorates

## KSrelief: Controlling cholera in Yemen



**30**  
DTCs established and supported in high-risk districts



**268,764**  
jerry cans distributed



**25**  
EOCs activated across the country, providing real-time data to over 100 health partners



**65**  
ORCs established and supported in high-risk districts



**Advocacy**  
1 inter-sectoral task force established to manage cholera outbreak efforts



**3,894**  
incentivized healthcare workers



**145**  
HF trucks provided with water trucking, including 83 DTCs and 62 ORCs



**10.8M**  
oral rehydration solutions administered



Capacity-building of RRTs on outbreak investigation, disease surveillance, and case finding

## Transforming the health system: Strengthening healthcare and saving lives

Yemen's economy and its health system sit among the least developed in the world. As a result, the country is continuously combatting high risk of the spread of infectious disease. With under-served and over-stretched health facilities, vulnerable Yemenis struggle to access key health messaging and care.

To support health system strengthening, WHO is helping enhance public access to secondary care services, including through improving reproductive and maternal health services, increasing access to treatment of non-communicable diseases, and enhancing epidemic surveillance, prevention and response. Doctors working in health facilities throughout the country are first to note the positive impacts felt in their work.

Dr. Nahed, Chief of the Molecular Biology Unit at the laboratory that detected Yemen's first COVID-19 case in 2020, noted that her team has reduced the detection time for disease outbreaks from several days to three hours: "WHO has been the main supporter of this unit from day one! We receive everything from capacity-building to medical solutions and equipment, allowing us to provide vital healthcare services to patients in a timely manner, and at no cost to the patients."

Dr. Zahr, a nephrologist and internal medicine specialist, also weighed in, noting that vulnerable households struggle between deciding whether to channel their resources to obtain medical treatment or their next meal. "This is deeply felt by patients requiring dialysis medications, which can cost around US\$ 540 on a monthly basis. Despite the high cost of consumable items, we are able to provide exams and medications for free."

Dr. Awadh, a doctor working in the health facility that supports maternal and reproductive health, has also directly felt the impact of this support, which was made possible through funding from KSrelief: "Overall, general health has improved, and mortality among mothers and children has been reduced to less than one percent. This is a huge accomplishment as previously, we could only meet about one-fifth of overall healthcare needs. Now we provide services to all patients, including internally displaced populations. This has made a world of a difference, and patients' gratitude is very palpable to the medical team."





# Thank you

**The partnership between KSrelief and WHO has been cultivated based on joint dedication to the delivery of humanitarian health assistance to the most vulnerable communities in Yemen.**

**Thank you to KSrelief for your partnership, which has directly alleviated Yemenis' suffering, and contributed to the delivery of better health outcomes for millions.**



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