





Prosthetic and Rehabilitation Program in Yemen

December 2024

C International Wars and Disaster's victims' protection Association - Alameen

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Chapter One: Humanitarian Context in Yemen









1.1 Humanitarian Context in Yemen

Yemen is now cited as a case study in the context of the relationship between war and disease, entering its tenth year of armed conflict since it erupted in 2014. The poorest Arab country faces a humanitarian crisis that is the worst in the world, with humanitarian needs remaining at extremely high levels across the Republic of Yemen, where over twenty million of the country's population relies on humanitarian assistance.

According to the 2024 Humanitarian Response Plan issued by the United Nations Office for the Coordination of Humanitarian Affairs-OCHA, approximately 18.2 million people (23% women, 54% children, and 15% with disabilities) will require humanitarian assistance and protection services in Yemen, representing over 55% of the total population (more than half the country).

Protection services are among the most pressing needs, with an estimated 16.4 million people in need of protection services, including those affected by landmines and explosive remnants of war.

Furthermore, the cholera epidemic remains a significant threat, targeting the most vulnerable groups such as internally displaced people (IDPs) and those with disabilities. Yemen also faces one of the highest recorded rates of malnutrition globally, with the situation continuing to deteriorate. Estimates indicate that nearly half of children under five suffer from varying degrees of stunting, affecting their life potential. This is attributed to a lack of funding for preventive services and the resurgence of measles due to hesitancy in vaccinating children and irregular food assistance, which increases the risks associated with deteriorating nutritional conditions.

The needs in the water, sanitation, and hygiene sector are estimated at around 17.4 million people, particularly in urban areas that have witnessed new waves of displacement, leading to resource depletion. Areas surrounding active frontline zones in governorates such as Al-Jawf, Al-Bayda, Al-Hudaydah, Hajjah, Marib, Shabwa, and Taiz face acute needs, with 5.1 million people (including 1.4 million IDPs) in need of water and sanitation services.









Approximately 7.5 million people, many of whom live in various displacement locations, live in inadequate shelter conditions, lacking basic health and educational services.

Climate change is likely to exacerbate the humanitarian situation in 2024, with the impact of natural disasters such as destructive seasonal floods and drought affecting livelihoods and services, forcing families to leave their homes and increasing existing vulnerabilities.

The lack of access to basic services and support increases various risks, including violence and exploitation, particularly for women, children, and other vulnerable populations. The ongoing conflict and economic deterioration have undermined people's access to health services. In 2023, the number of individuals in dire need of health services exceeded 17 million Yemenis, in addition to more than 8.6 million school-age children needing educational assistance.

In 2023, despite a 76% decrease in conflict-related displacement during the ceasefire from April to October, the number of casualties from landmines and explosive remnants of war increased by 160%, reflecting the ongoing risks even with reduced military attacks. Under this situation, Yemen remains trapped between the absence of official peace and the continuing repercussions of conflict.

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Basic services and the economy in Yemen continue to deteriorate due to the prolonged conflict, economic decline, and repeated natural disasters. According to the 2023 Humanitarian Needs Overview document issued by OCHA, over 80% of the population struggles to access food, safe drinking water, and adequate health services, while approximately 90% of the population lacks electricity provided by the government.

Moreover, the minimum cost of a food basket for families has risen by more than 50% within a year, increasing pressure on low-income families.

Public services and infrastructure have been significantly affected due to the cumulative effects of conflict and economic collapse. Simultaneously, public sector employees, including teachers and healthcare workers, have faced regular salary interruptions for several years.

After more than ten years of ongoing conflict, the need for continued humanitarian assistance remains critical to prevent the worsening of increasing needs. Concurrently, enhancing cooperation between humanitarian actors and sectors of development and peace gains increasing importance in providing more sustainable solutions, including rebuilding Yemen's fragile economy and restoring infrastructure devastated by years of conflict and decline.



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Chapter Two: Mines, Their Societal Implications, and the Impact on Individuals with Mobility Disabilities

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1.2 History of Mines in Yemen:

Yemen has suffered from the phenomenon of landmine planting since the outbreak of political and military conflicts in the 1960s, through the Central Region Wars and the events of 1994 and beyond. In the early 21st century, Yemen was the first Arab country to end the dismantling of its stockpile of anti-personnel mines. According to the Yemeni National Mine Action Center, Yemen, under its commitment to the Ottawa Treaty banning landmines, which prohibits their planting, manufacturing, and importing, managed to destroy its stockpile of mines by 2007, and was close to declaring itself free of mines.

However, with the escalation of the conflict between the Yemeni government and the rebel militias, the landmine planting phenomenon resurfaced significantly, especially with the onset of armed conflict in 2011 and its escalation in 2014 with (DFA) the Houthis' control over Sana'a. Since that time and until the announcement of a ceasefire in April 2022, Yemen has witnessed the planting of vast numbers of mines in conflict areas across various governorates, in addition to their spread in the Red Sea.

Today, Yemen is one of the most affected countries by the widespread planting of banned landmines, which have been laid extensively and indiscriminately in combat zones, particularly in Taiz, Saada, Al-Hudaydah, Marib, Abyan, Lahij, Al-Dhale, Al-Jawf, Al-Bayda, Sana'a, Shabwa, and other areas.

According to Yemeni government sources, the Houthi group (DFA) has planted two million landmines. A report published by The New York Times indicated that the Houthis (DFA) are responsible for planting most of the landmines and improvised explosive devices buried in Yemen. The Washington Institute confirmed the enormous scale of landmine use by the group, reflecting the severity of this threat to the country.

According to the "Masam" program for clearing Yemeni land from mines, Yemen is considered the largest country in the world to have its lands planted with mines since World War II, reflecting the scale of the humanitarian disaster facing the country amid the continued spread of mines and the lack of adequate efforts to document their locations and remove them.

Experts attribute the worsening of the problem to the absence of accurate maps documenting mine-laying locations, making demining operations extremely challenging and increasing the ongoing threat to civilian lives and infrastructure in affected areas.











2.2 Implications of Mines on Civilians:

Landmines and explosives pose a direct threat to the lives of civilians, especially children, who pay the price for the bloody conflicts. As of August 31, 2021, nearly 10,000 children were killed or injured as a result of the conflict in Yemen, according to figures verified by the United Nations. Some of these were victims of mine explosions.

Human Rights Watch confirmed that landmines planted by the Houthis are causing civilian deaths and pose a constant threat to their safety across different groups, including travelers, shepherds, farmers, women, children, and displaced persons.

Additionally, the impacts of mines are not limited to physical losses; they also cause psychological and social trauma among the victims, exacerbating their suffering and deeply affecting the community as a whole.

Yemeni families who rely on herding and agriculture face severe challenges, especially when the head of the family sustains a permanent disability due to a landmine explosion, leading to the loss of the primary breadwinner. This results in many farmers refraining from cultivating their land due to fears for their lives, leading to a decline in agricultural production and worsening living conditions for families and the community at large.

Health-wise, the country is experiencing an increase in neurological disorders and physical deformities that are difficult to treat, amid a lack of basic medical services, along with the absence of psychological and social support programs and specialized centers for prosthetic fitting.

According to the report issued by the Masam program, the total number of mines and unexploded ordnance removed since the start of the "Masam" project in June 2018 until the end of December 2024 has reached 476,432 mines, unexploded munitions/ordnance, and explosive device, which were planted haphazardly by the Houthi militias across various Yemeni governorates, covering a total area of 65,168,777 square meters since the project's inception.

Chapter Three: Mobility Disabilities and Persons with Special Needs in Yemen

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According to the Humanitarian Needs Overview document issued by OCHA for 2024, the number of disabled people in Yemen is estimated at 5 million, representing 15% (one in every seven individuals has some form of disability). The document also states that the actual number of people with disabilities is certainly much higher due to the effects of conflict, including the prevalence of landmines and explosive remnants of war.

In 2021, the Needs Assessment Unit (DNA-IRVD) of the IRVD identified over 12,000 new amputees across more than 13 Yemeni governorates, classifying them among those with mobility disabilities who require rehabilitation services. According to the UN Secretary-General's report on the protection of civilians in armed conflict (S/2021/423), the number of individuals with disabilities in Yemen exceeds 4.6 million people. In 2023, reports from the International Committee of the Red Cross (ICRC) indicated that at least 460,500 people in Yemen need mobility aids, while 153,500 others require prosthetics or orthotic devices.

According to the humanitarian overview issued by UN-OCHA, social services dedicated to people with disabilities in Yemen have ceased since 2015 due to the ongoing conflict. A recent study conducted by (Humanity and Inclusion) revealed a sharp decline in the number of local organizations providing services to people with disabilities in Yemen, with only a few remaining compared to over 300 organizations that operated in this field before the escalation of conflict. Amid the continued deterioration of the Yemeni economy, PWDs face increasing economic marginalization, making it difficult for them to find suitable opportunities to secure a stable income. Collectively, these conditions lead to social and economic exclusion, increasing their exposure to additional risks, including poverty, poor health and educational outcomes, and protection risks.



Casualties among civilians

Source: Civilian Impact Monitoring Project







Believing in our humanitarian responsibility and the urgent necessity to alleviate the suffering of communities affected by disasters and humanitarian crises, as well as recognizing the importance of humanitarian intervention to support individuals with amputations and those with mobility impairments through the provision of multi-sector life-saving humanitarian assistance, and in alignment with humanitarian response plans, the King Salman Center for Relief and Humanitarian Action has initiated support and funding for the largest humanitarian program in the region: the Prosthetics and Rehabilitation Program in the Republic of Yemen.

This program operates in four governorates (Mareb, Aden, Taiz, and Hadramout) to provide free specialized health services for individuals with mobility impairments through the implementing partner: the International Wars and Disasters Victims Association/ Al-Ameen, in full coordination with the Ministries of Planning and International Cooperation (MOPIC) and Public Health and Population (MoPHP).











Thus, the overall objective of the Prosthetic and Rehabilitation Program was established:

To localize and enhance the quality of prosthetic and rehabilitation services and assist people with special needs in engaging in social life while maintaining their continued performance within the community, and to elevate the capabilities of workers in prosthetic centers with the advance medical knowledge and modern technologies.



Chapter Four: Humanitarian Priorities for the Prosthetic and Rehabilitation Program in Yemen

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Classificatio Of Program Services According To The Humanitarian Response Plan

The services of the Prosthetic and Rehabilitation Program are classified as tertiary specialized health services. The importance of these services stems from their classification as priorities in the defined health sector activities: promoting comprehensive care for trauma and injuries through the provision of phased management for psychological trauma and care related to disabilities (WHO), working to provide life-saving humanitarian health assistance with a focus on the most vulnerable groups, ensuring access to life-saving services and high-quality humanitarian assistance, guaranteeing the prioritization of the most in need while considering age, gender, and disability, particularly targeting persons with disabilities who always require safe and dignified access to services, especially in humanitarian crises that place them in more vulnerable situations.

According to the Humanitarian Response Plans for 2023-2024, the first strategic objective is "to reduce morbidity and mortality rates among women, girls, boys, and men affected by the crisis through the provision of life-saving multi-sector humanitarian assistance," targeting more than 18.2 million individuals, including at least 2.7 million persons with disabilities. A specific objective under this is to respond to the victims of war trauma, including victims of landmines and explosive remnants of war, in accordance with the second specific objective of the first strategic goal: "1.2 ... and responding to war trauma victims, including landmines and explosive remnants of war, mental health, and psychosocial support through cross-sectoral responses among affected populations."

The program's activities achieve the third sector objective in the health sector of the humanitarian response plan, which is:

"Objective 1.3 of the sector group (Health Sector): to sustain the functions of the health system by providing operational costs (such as electricity, water, and oxygen), medicines, equipment, and medical supplies, rehabilitation, structural revitalization, capacity building, and financial support for healthcare workers, and referral between levels of care and providing advanced rehabilitation and trauma units and intensive care at the level of tertiary care to improve the resilience of the health system and people's ability to cope."







The Prosthetic and Rehabilitation Program in Yemen primarily targets patients with amputations, in addition to individuals with various mobility disabilities. The loss of limbs or the experience of a mobility disability significantly affects individuals' lives, both physically and psychologically, as these injuries limit their ability to perform basic daily activities, leading to a loss of independence in meeting their personal needs or supporting their families. It also contributes to psychological issues such as depression, feelings of isolation, and diminished capacity for social interaction and community integration.

Motor disabilities also pose a significant barrier to many young amputees completing their education, as they face challenges in adapting to the social and psychological difficulties associated with disability, leading to reluctance to continue their education/academic pursuits.

People with disabilities often experience stigma and discrimination and are disproportionately affected in conflict situations and natural disasters, facing unique challenges. These risks include: increased rates of family separation, including being left behind when families flee, loss of assistive devices and means of transportation, and difficulties accessing relevant information about humanitarian assistance and other forms of support.











This program aims to empower affected people to regain their independence and actively contribute to their communities by providing high-quality compensatory solutions that ensure a dignified and integrated life through a range of specialized services. The program offers these group of people the opportunity to reintegrate into society and engage in various activities independently, enhancing their economic, social, and psychological capacities.

The quality and integrated services of the Prosthetic and Rehabilitation Program in Yemen represent the first correct step toward reintegrating amputees and individuals with motor disabilities into society as contributing and productive members. Chapter Five: Objectives of the Prosthetic and Rehabilitation Program

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1.5 General Objective:

Localization and enhancement of prosthetic and rehabilitation services, assisting people with disabilities in their social integration and maintaining their ongoing participation within the community, while building the capacities of national staff in prosthetic centers through the latest medical knowledge and modern technologies.

2.5 Direct Objectives:

Direct Strategic Outcomes of the Program Projects:

1. To provide physical rehabilitation services for people with special needs and to follow up on their integration into community service.

2. To fit prosthetic and orthotic devices of various types and to provide functional rehabilitation services for prosthetic devices with continuous follow-up.

3. To develop the professional and scientific capacities of the medical and technical staff, preparing them to handle specialized cases through the presence of a prosthetic expert in the project to ensure the quality control of the services provided.

4. To reduce the emigration of specialized medical and technical personnel.









3.5 Immediate Strategic Outcomes of the Program Projects:

1.Providing of High-Quality Free Specialized Health Services: Offering high-quality free specialized health services in the field of prosthetics, orthotics and rehabilitation, along with physiotherapy services for individuals with mobility impairments across Yemen. 2.Rehabilitation of Amputees: Enabling amputees to regain their ability to work and actively participate in the community.

3.Building the capacities of Yemeni health national stuff to ensure the localization and sustainability of services through the training and qualification of technical personnel in the skills of manufacturing, producing, and fitting prosthetic devices. This will be achieved by integrating theoretical and practical training programs and applying modern techniques in prosthetic science throughout the project implementation periods, while continuously providing services to all beneficiaries to ensure the highest quality of care for individuals with mobility impairments and amputees. 4.Reducing the financial burden on government entities by minimizing the need for treatment outside Yemen and providing high-quality prosthetic fitting services to beneficiaries that meet international standards.

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Prosthetics and Rehabilitation Program in Yemen



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Chapter Six:

Framework and Operational Procedures for the Prosthetics and Rehabilitation program

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1.6 Criteria for Selecting and Classifying Beneficiaries in the Prosthetics and Rehabilitation Program in Yemen:

The selection of beneficiaries in the program is based on lists of amputee patients provided by health and population offices in the governorates. Priority is given to the following groups:

- Amputee patients resulting from direct war injuries, landmines, or explosive remnants of war across all age groups.
- Children under the age of 18, who suffer from mobility impairments caused by amputations or congenital deformities.
- Other groups, such as people injured in traffic accidents or those with various diseases.

Beneficiaries are classified into two main groups:

1. Trauma Cases:

A. War Injuries: Amputee patients resulting from direct injuries caused by landmines, explosive remnants of war, munitions, and others.

B. Other Accidents: people injured in car accidents, natural disasters, workplace accidents, burns, or frostbite.

2. Medical Cases:

A. Amputations Due to Medical Conditions: Amputee patients resulting from medical conditions such as diabetes, vascular diseases, or malignant tumors.

B. Congenital Deformities: Patients with congenital deformities such as congenital limb absence or those requiring orthopedic devices.

According to global statistics, the incidence of trauma cases increases in conflict and war zones and in developing countries, while the incidence of medical cases rises in developed and industrialized countries.







2.6 Departments of Prosthetics and Rehabilitation Program

The Prosthetics and Rehabilitation Program, through its four centers, provides quality free services aimed at improving the quality of life for amputee patients and those with mobility impairments. The program does not only focus on providing therapeutic and rehabilitative services but also places special emphasis on developing technical and medical staff through continuous training, ensuring their skills are aligned with the latest scientific advancements in the field of prosthetics and rehabilitation. These efforts not only enhance the quality of services provided but also support the localization of these vital services within the Yemeni community, bolstering its resilience against challenges.

Services Offered:

Prosthetics and Orthotics Department:

Provides services for the manufacturing and fitting of prosthetic and orthotic devices and training on their use. All services in this department are provided by qualified prosthetic technicians under the supervision of the technical manager—an expert in prosthetics.









Technical Rehabilitation (Maintenance) Department:

Offers technical rehabilitation and maintenance services for prosthetic and orthotic devices. All services in this department are provided by qualified prosthetic technicians under the supervision of the technical manager—an expert in prosthetics.



Rehabilitation and Physiotherapy Department:

Provides physical rehabilitation services for amputee patients and those with mobility impairments through various types of physiotherapy sessions supervised by a physical therapist who develops treatment plans and monitors their progress, overseeing the work of technicians. Additionally, psychological support services are provided by psychologists.

Outpatient Clinics (Medical and Technical Consultations):

Medical and technical consultations are provided in the orthopedic clinic and physiotherapy clinic, along with treatment planning, monitoring progress, and referrals through orthopedic and physiotherapy specialists.



Prosthetics and Rehabilitation Program in Yemen







3.6 Stages of Service Delivery in the Program:

1. Stage One: Identifying Target Beneficiaries:

This stage begins with collecting lists of injured individuals in coordination with the Ministry of Health and local health authorities, as well as social institutions, followed by analyzing the data of the beneficiary group and developing a communication plan to start inviting them for the next stage. Beneficiaries are invited according to a specified schedule to ensure effective and systematic service delivery.

2. Stage Two: Creating Beneficiary Files:

Files for each beneficiary are created during their first visit, where a technical and medical assessment is conducted by the technical committee for each case, and treatment plans are developed for eligible cases, taking into account several factors such as the health, psychological, and physical condition of the patient, the level and type of amputation, and the characteristics of the remaining limb, as well as the goals, expectations, needs, and individual needs of the patient, along with the environment, activities, profession, and hobbies of the patient to receive the designated service.

3. Stage Three: Rehabilitation and Preparation:

In this stage, rehabilitation services are provided to amputee patients before fitting the prosthesis to improve their health and psychological condition, alleviate phantom pain, swelling, infections, and scars, as well as strengthen muscles, increase flexibility, endurance, and balance, and enhance their ability to move and navigate. Patients are taught how to cope with their amputation and adapt to changes in their bodies and lives, preparing them for prosthetic use and training them on how to utilize and care for it.

4. Stage Four: Measurement and Manufacturing:

The beneficiary's file is reviewed to determine the final measurements for the prosthesis and the necessary materials based on their condition and needs, followed by initiating manufacturing and production processes, fitting, modification, and assembly.







5. Stage Five: Fitting, Delivery, and Training:

This stage encompasses the fitting of the prosthetic limb for the patient and providing training services on how to walk and properly use the device, ensuring quality service that helps improve the ability to move, navigate, and engage in daily, professional, and recreational activities, as well as reducing pain, swelling, pressure, and deformity in the remaining part of the limb, enhancing self-confidence, independence, and social integration, and improving aesthetic appearance while alleviating feelings of inadequacy or shame. This process includes:

- Initial Training: The patient is trained in how to correctly wear and remove the prosthetic device.
- Functional Training: The patient is taught how to use the prosthetic device in daily activities.
- Evaluation and Follow-Up: Regular evaluations of the patient's use of the prosthetic device are conducted to ensure correct usage and make adjustments if necessary.

6. Stage Six: Maintenance and Follow-Up

Maintenance and follow-up services after fitting the prosthetic device are essential to maintain its efficiency and function and prevent any issues or complications. This includes regular checks to ensure optimal functioning. Maintenance is crucial due to the natural wear of the prosthetic device resulting from continuous use and environmental factors, in addition to potential changes in the size, shape, or sensitivity of the residual limb. Maintenance may involve adjustments or changes in measurements, shape, weight, color, type, or replacement parts to ensure comfort, stability, and compatibility of the prosthetic device with the remaining part of the original limb.









4.6 Mechanism for Receiving Beneficiaries:

Prosthetics centers operate during specified hours on regular working days, with designated days for receiving measurement cases for amputee patients. Services are provided according to the following stages:

1. Creating files for each beneficiary.

2. Establishing a service program according to the service delivery stages.

3. Following the project's achievement plan, the technical manager, under the supervision of the project manager, determines the required number of prosthetics to be completed weekly.

4. The reception officer in the data department is directed to summon a specified number of target beneficiaries from the approved waiting list for the project or direct registration lists to:

- Create patient files and determine specific measurements for the amputated limb.
- Develop technical descriptions and complete the service delivery stages according to the designated timeline.

The estimated timeframe from the start of manufacturing to the production of the prosthesis is 2-4 working days, and training the beneficiary on the prosthesis and finalizing its acceptance takes approximately 3-5 working days to ensure the beneficiary fully accepts and relies on the prosthesis without any technical issues. However, some special cases (double amputations, pelvis amputations, paralysis cases, and spinal deformities) may require a longer timeframe, potentially exceeding 20 working days. For other cases needing physiotherapy and rehabilitation sessions for the amputated limb, the timeframe is determined based on the physical therapist's decision. Once the rehabilitation phase for the amputated limb is completed and it reaches an appropriate natural state, it is referred back to the prosthetics department for measurements and to initiate manufacturing, production, fitting, training, and final delivery stages.



Prosthetics and Rehabilitation Program in Yemen



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Chapter Seven: General Achievements of the Prosthetics and Rehabilitation Program in Yemen

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The Prosthetics and Rehabilitation Program, funded by KS Relief and implemented through IRVD-Alameen, in collaboration with the Therapeutic Medicine Sector of MOPHP, has had a significant positive impact on alleviating the suffering of the injured and amputees, particularly those affected by war and humanitarian crises since 2014. The program has contributed to providing high-quality services in prosthetic fitting and physiotherapy, thereby reducing the financial burdens on government entities, especially concerning the costs of treatment outside Yemen.

In full coordination with MOPHP, and Planning and MOPIC, the program has achieved significant milestones over the past years throughout Yemen. These achievements include the establishment and equipping of three specialized centers for prosthetic and rehabilitation services in the governorates of Aden, Taiz, and Hadramout by the end of 2020. The prosthetics and rehabilitation center in Marib has continued to operate under the Marib General Hospital, which was established with the support of KS Relief in 2017.

Furthermore, the program has contributed to training and localizing over 200 technical, medical, and administrative personnel across the country, thereby enhancing the sustainability and availability of these vital services for amputees in Yemen.



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1.7 Summary of Total Achievements

Total Achievements of the Prosthetics and Rehabilitation Program (2020-2024)

As of the end of December 2024, the total number of beneficiaries from all stages of the program across Yemen since the beginning of 2020 has reached 109,463 beneficiary who have received quality services amounting to 298,999 free services. This includes the manufacture and fitting of 10,851 prosthetic and orthotic devices. Additionally, the number of beneficiaries receiving rehabilitation services for amputees, including maintenance, physiotherapy, psychological support and physical & medical consultations—has reached 98,612 individuals.

According to program statistics, the percentage of female beneficiaries is 33%, while male beneficiaries ries 67%. Notably, the proportion of amputees due to medical conditions among beneficiaries is approximately 24%, while war-related injuries (such as landmines, explosive remnants of war, and ammunition) constitute approximately 76% of the total amputee patients benefiting from all program services.



Chapter Eight: Projects of the Prosthetics and Rehabilitation Program in Yemen

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8.1 Operation of the Prosthetics and Rehabilitation Center in Marib

The center is located within the Marib General Hospital and consists of three departments: the prosthetics department, the physiotherapy department, and the outpatient clinic. The center was established and equipped in 2017 with funding from KS Relief, in collaboration with MOPHP and with generous support from the Governor of Marib. The IRVD began operating the Prosthetics and Rehabilitation Center in Marib at the start of 2020 with support from KS Relief, providing prosthetic and orthotic services and physical rehabilitation for patients with mobility impairments from various types of injuries (amputations and spinal cord injuries) through qualified technical and medical workers in the field of rehabilitation for people with mobility impairments, and provide prosthetic devices to cover all patient needs.

Summary of Total Achievements - Prosthetics and Rehabilitation Center in Marib

From the beginning of 2020 to the end of December 2024, 60 months, the Prosthetics and Rehabilitation Project in Marib achieved significant success in providing quality and free services to beneficiaries. Approximately 2,655 prosthetic and orthotics devices of various types (hip disarticulation, above or through the knee, below the knee, through the ankle, through the shoulder, above or through the elbow, below the elbow, and through the wrist) were produced and fitted, alongside supportive, corrective, and cosmetic devices. The quality of the prosthetics was improved to enhance patient mobility and increase the functional capabilities of the prosthetic devices.

The number of limbs that received technical rehabilitation and maintenance services reached 3,570, while approximately 14,858 beneficiaries benefited from physiotherapy services. Additionally, 9,348 beneficiaries received medical and technical consultations (outpatient).

According to general statistics, the total number of services provided reached 91,340 services, reflecting the efforts made to meet the needs of beneficiary groups.

The technical proficiency level was enhanced through nine practical training stages under the supervision of a prosthetics expert, offering over 650 training hours, contributing to elevating the technical level of the technical staff and providing them with the latest techniques in the field of prosthetic manufacturing and fitting. Consequently, the quality of production was improved to align with increasing needs.

The project also contributed to localization of the national cadres, securing job opportunities for approximately 54 administrative, technical, and medical staff in Yemen, along with providing training opportunities for volunteers in the field of prosthetics and physiotherapy services.








According to statistics, female beneficiaries constituted 27%, while male beneficiaries made up 73%, with children under 18 accounting for 5,805 of the total beneficiaries.

In terms of injuries, the percentage of medical cases was 9%, while war injuries (landmines, explosive remnants of war, and munitions) constituted approximately 91% of total amputee patients. The center's services fundamentally address the needs of Marib governorate, in addition to Shabwa, Al-Jawf, and Al-Bayda governorates.



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2.8 Operation of the Prosthetics and Rehabilitation Center in Taiz:

On January 1, 2020, project activities commenced at the government prosthetics center located in Al-Thawra Hospital. Due to the building's inadequate infrastructure and limited space needed to accommodate the large number of beneficiaries, and following joint efforts that began in the first half of 2020 with MOPHP and the local authorities represented by the governor's office and the health affairs agent, an independent building was allocated by the Ministry of Health for the new prosthetics center in the Salah district of Al-Majaliya. The IRVD began renovating the building and establishing the infrastructure for electrical installations and departmental distributions, and the center was equipped with modern equipment and facilities planned according to the work plan. The project commenced its activities in the new location on September 16, 2020, the launch day was with the presence of representatives from MOPHP, GHO and KS Relief. The aim of operating the Prosthetics and Rehabilitation Center in Taiz, in Yemen, is to provide prosthetic limbs and physical rehabilitation for patients with mobility impairments from various types of injuries (amputations, spinal cord injuries) by employing qualified technical workers in the field of prosthetic services and physiotherapy to cover all patient needs.

Summary of Total Achievements - Prosthetics and Rehabilitation Center in Taiz

From the beginning of 2020 until the end of December 2024, 60 months, the Prosthetics and Rehabilitation Project in Taiz achieved significant success in providing quality and free services to beneficiaries. Approximately 4,215 prosthetic and orthotics devices of various types (hip disarticulation, above or through the knee, below the knee, through the ankle, through the shoulder, above or through the elbow, below the elbow, and through the wrist) were produced and fitted, along with supportive, corrective, and cosmetic devices. The quality of the prosthetics was improved to enhance patient mobility and increase the functional capabilities of the prosthetic devices.

The number of prosthetic limbs that received technical rehabilitation and maintenance services reached 3,223, while approximately 14,176 beneficiaries benefited from physiotherapy and psychological support services. Additionally, 9,544 beneficiaries received medical and technical consultations.



Overall statistics 01 / 01 / 2020 - 31 / 12 / 2024

According to general statistics, the total number of services provided reached 81,464 free services, reflecting the efforts made to meet the needs of beneficiary groups. The technical proficiency level was enhanced through six practical training stages under the supervision of a prosthetics expert, offering over 500 training hours, contributing to elevating the technical level of the technical staff and providing them with the latest techniques in the field of prosthetic manufacturing and fitting. Consequently, the quality of production was improved to align with increasing needs.

The project also contributed to localization of the national cadres, securing job opportunities for approximately 60 administrative, technical, and medical staff in Yemen, along with providing training opportunities for volunteers in the field of prosthetics and physiotherapy services. According to statistics, female beneficiaries constituted 36%, while male beneficiaries made up 64%, with children under 18 accounting for 11,897 of the total beneficiaries. In terms of injuries, the percentage of medical cases was 22%, while war injuries (landmines, explosive remnants of war, and munitions) constituted approximately 78% of total amputee patients. The center's services fundamentally address the needs of Taiz governorate, in addition to Al-Hudaydah and lbb governorates, with a specific activity within the project to receive patients from the western coast to provide them with all free services, covering all associated costs.











8.3. Operation of Prosthetics and Rehabilitation Center in Sayoun, Hadhramaut Governorate:

Based on a letter from the GHO in Hadhramaut Valley and Desert regarding the activation of the prosthetic program in the governorate, and after obtaining donor approval to fund the project, the organization began renovation and rehabilitation of the building on October 1, 2020, through contracting with an engineering company in coordination with GHO in Hadhramaut Valley and Desert. Following the completion of the renovation, the technical and logistical team began equipping the center's departments with the necessary equipment and machinery for the prosthetic workshop, in addition to modern equipment for the physiotherapy department. This center has become one of the most important quality health facilities in Hadhramaut Gover-

This center has become one of the most important quality health facilities in Hadhramaut Governorate, significantly contributing to meeting the needs of patients with motor disabilities in Hadhramaut and neighboring governorates.

The project "Preparation, Equipping, and Operation of the Prosthetic and Rehabilitation Center in Say'un (Phase One)" achieved important results represented in the establishment and preparation of a new center for manufacturing, installing, and maintaining prosthetics and providing physiotherapy by rehabilitating the building and equipping it with modern machinery and equipment specific to the prosthetics and physiotherapy departments.

The center provides prosthetic limbs and rehabilitation for patients with motor disabilities, including cases of amputation and spinal cord injuries, by employing trained workers in the field of prosthetic services. The center also includes a team of doctors and technicians specialized in physiotherapy and rehabilitation, along with physiotherapists, to ensure coverage of all needs for patients affected by these types of injuries.





From the beginning of 2021 until the end of December 2024, 48 months, the prosthetic and rehabilitation project in Say'un has achieved significant success in providing high-quality, free services to beneficiaries. Approximately 1,737 prosthetic and orthotics devices of various types (hip, above or below knee, below ankle, shoulder, above or below elbow, and wrist) have been produced and fitted, along with supportive, corrective, and cosmetic devices. The quality of prosthetics has been enhanced to improve patient mobility and increase the functional capability of the prosthetic limb.

The total number of prosthetics that received technical rehabilitation and maintenance services reached 1,113, while about 10,588 beneficiaries benefited from physiotherapy services. Additionally, 10,176 beneficiaries received medical and technical consultations.

According to general statistics, the total number of health services provided reached 78,944 free quality health services, reflecting the efforts made to meet the needs of the target groups. The level of technical competency has been enhanced through five practical training phases, supervised by a prosthetic expert, totaling over 450 training hours. This has contributed to raising the technical level of the technical staff and equipping them with the latest technologies in the field of prosthetic manufacturing and installation, thereby improving the quality of production to meet increasing needs.

The project has also contributed to local capacity building, securing job opportunities for approximately 45 administrative, technical, and medical staff in Yemen, along with providing training opportunities for volunteers in the field of prosthetics, orthotics and physiotherapy. According to the statistics, the percentage of female beneficiaries was 40%, while male beneficiaries constituted 60%. Children under 18 years old made up 7,641 of the total beneficiaries. In terms of injuries, the percentage of medical injuries was 73%, while war-related injuries (landmines, war remnants, and munitions) constituted approximately 27% of the total amputee patients. The center's services primarily cover the needs of Hadhramaut Governorate, in addition to the neighboring governorates of Shabwa and Al-Mahrah.



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8.4 Operation of Prosthetic and Rehabilitation Center in Aden:

Activities for the prosthetic and physiotherapy project began at the governmental prosthetic and physiotherapy center in Aden, Al-Mansura District, in early April 2020. The phase extended until the end of September 2020, achieving good success in implementing the planned activities according to the agreement approved with the Ministry of Planning and International Cooperation and MOPHP. Despite the health challenges resulting from the spread of the COVID-19 pandemic, the project successfully reached approximately 1,000 beneficiaries, including 300 beneficiaries who received prosthetic services. Funded by KS Relief to alleviate the suffering of those affected in Aden and surrounding areas, the prosthetic, orthotics and rehabilitation project continued into its third phase. The specific agreement for this phase was prepared with MOPIC and MOPHP, making it a qualitative step in the field of prosthetic services. This phase included the establishment and equipping of a comprehensive building dedicated to project activities. reflecting the level of support provided by the Kingdom of Saudi Arabia through KS Relief, and responding to the increasing needs of individuals with mobility disabilities. By early September 2020, coordination began with local authorities in Aden Governorate, and under the guidance of the governor and in collaboration with the director-general of the Public Health and Population Office, the designated building was received for preparation and equipping to become a prosthetic center providing comprehensive services that meet the needs of the residents of Aden Governorate and neighboring areas. The designated building was received from the management of the 22nd of May Surgical Center, an independent building allocated to become a comprehensive center for prosthetic and rehabilitation services. The IRVD commenced rehabilitation operations for the building, which included renovation of the infrastructure, renewal of plumbing and electrical installations, and complete maintenance of the structure. Equipment and supplies specific to the prosthetic workshop were installed, along with the latest devices and equipment designated for physical rehabilitation and therapy for patients.



Prosthetics and Rehabilitation Program in Yemen







With the completion of these preparations, the center commenced its activities and received its first batch of patients and beneficiaries on February 1, 2021. The center's departments were activated according to the approved operational mechanism, where the manufacturing and production of various types of prosthetic and orthotics devices under the project commenced, in parallel with providing technical rehabilitation services for amputee patients and physiotherapy services, ensuring comprehensive and integrated care for beneficiaries.

It is noteworthy that the inauguration of the prosthetic and rehabilitation center in Aden took place on March 18, 2021, with official attendance, including the MOPHP, Dr. Qassem Bahibeh, the governor's representative for martyrs and wounded affairs, the director-general of GHO in Aden, a member of from the Ministry of Health and representatives from KS Relief. The center's opening marked a qualitative shift in the health services provided to people with motor disabilities and special needs in Aden Governorate and neighboring governorates such as Lahij, Al-Dhale'e, Abyan, and the western coast.

It is worth mentioning that the project "Preparation, Equipping, and Operation of the Prosthetic and Rehabilitation Center in Aden" achieved remarkable results, including the establishment of a modern and specialized center for manufacturing, installing, and maintaining prosthetic devices and providing physiotherapy services. The building was rehabilitated and equipped with the latest necessary equipment and machinery, enabling the provision of customized prosthetic and orthotics devices and rehabilitation for patients with mobility disabilities of various types of injuries, including amputations and spinal cord injuries.

A qualified technical team was employed in the field of prosthetic manufacturing and development, in addition to doctors and physiotherapy specialists providing comprehensive services that meet all patient needs. Thanks to this effort, the project moved into its fourth phase in September 2021 and continued for a full year before transitioning to the fifth phase, reflecting a continued commitment to providing high-quality services and achieving sustainable humanitarian impact.









Summary of Achievements - Prosthetic and Rehabilitation Center in Aden:



From the beginning of 2020 until the end of December 2024, 57 months, the prosthetic and rehabilitation project in Aden has achieved significant success in providing high-quality, free services to beneficiaries. Approximately 2,244 prosthetic and orthotics devices of various types (hip, above or below knee, below ankle, shoulder, above or below elbow, and wrist) have been produced and fitted, along with supportive, corrective, and cosmetic devices. The quality of prosthetics has been enhanced to improve patient mobility and increase the functional capability of the prosthetic limb.

The total number of prosthetics that received technical rehabilitation and maintenance services reached 2,084, while about 9,813 beneficiaries benefited from psychological support and physiotherapy services. Additionally, 10,119 beneficiaries received medical and technical consultations. According to general statistics, the total number of health services provided reached 47,251 free quality health services, reflecting the efforts made to meet the needs of the target groups distinguished.

The level of technical competency has also been enhanced through seven practical training phases, supervised by a prosthetic expert, totaling over 500 training hours. This has contributed to raising the technical level of the technical staff and equipping them with the latest technologies in the field of prosthetic manufacturing and installation, thereby improving the quality of production to meet increasing needs.

The project has also contributed to local capacity building, securing job opportunities for approximately 48 administrative, technical, and medical staff in Yemen, along with providing training opportunities for volunteers in the field of prosthetics and physiotherapy. According to the statistics, the percentage of female beneficiaries was 31%, while male beneficiaries constituted 69%. Children under 18 years old made up 8,066 of the total beneficiaries.

In terms of injuries, the percentage of medical injuries was 29%, while war-related injuries (landmines, war remnants, and munitions) constituted approximately 71% of the total amputee patients. The center's services primarily cover the needs of Aden Governorate, in addition to the neighboring governorates of Lahij, Abyan, Al-Dhale'e, and part of the western coast and Al-Hudaydah.

Chapter Nine: A Lifeline for

Humanity... Four Years of Boundless Humanity

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Over the past 60 months, the Prosthetic and Rehabilitation Program in Yemen has embodied a pioneering humanitarian model, fully funded by the King Salman Humanitarian Aid and Relief Centre (KS Relief), in close coordination with the MOPIC, and under the supervision of the Therapeutic Medicine Sector at MoPHP. This program was implemented in collaboration with local authorities and health offices in the provinces, executed by the international wars and disasters victims' protection associations (IRVD/Alameen).

The program has successfully provided comprehensive rehabilitation services for individuals with mobility impairments within a humanitarian framework that ensures the quality and accessibility of health services, paying particular attention to the most vulnerable groups, regardless of age, gender, or type of disability. These services have become a critical part of the health priorities within the Republic of Yemen, especially amidst the ongoing humanitarian crisis.

Humanitarian Impact

The program has offered a glimmer of hope for people with mobility impairments by granting them the fundamental right to a dignified life, transforming them from individuals facing challenges into productive members of their communities. It has reintegrated amputees into daily life, helping them overcome psychological, social, and economic hardships. Furthermore, it has significantly alleviated the burden on government entities, particularly by reducing the need for overseas medical treatment at a time when there is an urgent need to strengthen health services within the country.

Sustainability and Capacity Building

In alignment with the vision of the Yemeni Ministry of Health, the program has committed to localizing prosthetic services through the training and empowerment of Yemeni caders. The integration of theoretical and practical training with the application of the latest technologies in prosthetic production has contributed to enhancing and sustaining the level of health services.

These efforts represent a comprehensive vision aimed at providing quality health services that guarantee a dignified and safe life for individuals with mobility impairments, laying a solid foundation for building a sustainable future that serves this vital segment of society.







Conclusion

This report serves as a document narrating the chapters of success stories from the Prosthetic and Rehabilitation Program, where the figures exceed mere statistics, becoming living testimonies of dreams realized and lives transformed for thousands who have suffered the impacts of conflict and accidents. Every achievement mentioned here reflects the collective efforts made to restore hope and dignity to those in dire need.

Thanks to the competence and dedication of the program's staff, prosthetic centers have become vibrant oases of hope, where determination merges with modern technologies to provide quality services to beneficiaries. With each achievement, new smiles have emerged, and lives have been renewed for those who once thought their journey had ended.

The journey of this program extends beyond immediate needs to build a sustainable future for the community through the development of local personnel, enhancing the quality of health services, and localizing innovative solutions. As we conclude this report, we acknowledge that our work is far from over. Ambitions are renewed with each new challenge, and our commitment to continuing these efforts is stronger than ever, aiming for more humanitarian achievements and creating a lasting positive impact on the lives of individuals and communities.

In closing, we extend our sincere gratitude and appreciation to the Government of the Kingdom of Saudi Arabia, represented by the King Salman Humanitarian Aid and Relief Centre (KS Relief), and to the Government of the Republic of Yemen, represented by the MOPIC and MOPHP, for their ongoing support and shared vision in implementing this program. We also commend the dedicated efforts of all staff from the International Relief for Victims of War and Disasters (IRVD) who contributed to the success of this exceptional humanitarian work.

Together, we build hope and make a difference.



Prosthetics and Rehabilitation Program in Yemen

November 2024