

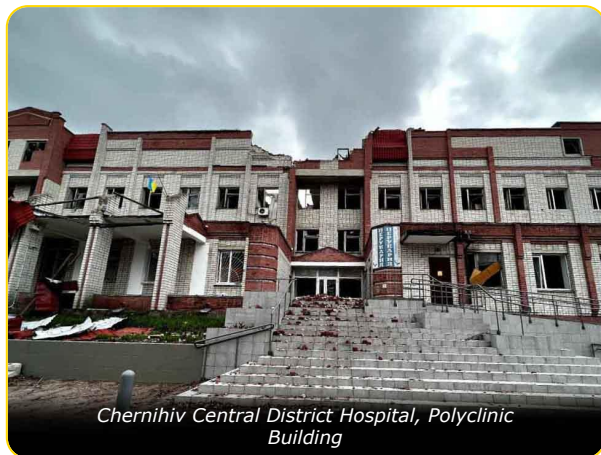


UA BROKERS without borders

STRENGTHENING THE HEALTHCARE FACILITIES'
INFRASTRUCTURE CAPABILITIES IN UKRAINE
DURING THE WINTER PERIOD OF 2022-2023

IMPACT REPORT

October 2022 - June 2023



I will never forget the severe cold when you couldn't get warm. Blankets, sweaters, layers of clothing... that's all you could do when there was no electricity and heating. Patients were covered up with blankets.

*Chernihiv Central District Hospital.
Pulmonologist, Head of the COVID
Department - Ivan Telnov*

Back in the summer of 2022, it became evident that the **winter of 2022/2023 would be the most challenging** in Ukraine's recent history. We started to receive requests for assistance in preparing for the winter season from the medical institutions from around the country.

This became one of the organization's top priorities. Our goal was to provide hospitals with essential equipment such as **generators, heaters, and boilers**, as well as to assist the institutions with the **insulation** of the facilities.

PROJECT SCALE



\$4.20M - total funds attracted



335 healthcare facilities serving **14 million** patients



23 regions and the city of Kyiv



6158 heating appliances



155 generators, **30** power stations and **106** UPS



insulation for **44** hospitals



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PROGRAM'S BACKGROUND



The winter of 2022-2023 posed a number of challenges on the healthcare sector in Ukraine:

- **Issues with electricity, heating, and water supply.** The capacities of the available generators could only support the operations of surgical and intensive care units. The instability of the electrical grid led to the malfunction of expensive medical equipment. Insufficient hot water supply, and sometimes complete absence of water, impeded the work conditions of healthcare professionals and patients comfort;
- **Ongoing attacks on medical infrastructure.** According to WHO data, in 2022, there were over **819 attacks** on medical facilities in Ukraine. According to the Ministry of Health, during the year of the war, **174 medical institutions were destroyed**, and an additional 1106 suffered significant damages;
- **Air raid sirens and work in bomb shelters.** From October 15th to April 8th, 2023, there were **3267** air raid sirens recorded, with an average duration of approximately 1 hour each. Hospital bomb shelters were in dire need of equipment and repairs. Doctors were conducting surgical procedures in the shelters, and in many hospitals, departments for immobile patients were permanently relocated to the shelters;
- **Patient migration.** In December 2022, Ukraine already had **4.9 million internally displaced people** registered. People who moved to other regions of Ukraine were looking for opportunities to access medical services, which, in turn, put additional strain on the workload of hospitals in the regions;
- **Deoccupation.** The healthcare facilities in the newly liberated territories of the Kharkiv, Mykolaiv, and Kherson regions required urgent restoration and replacement of looted or damaged equipment;
- **Medical workforce drain.** More than 10,000 healthcare professionals have relocated to other regions within the country or abroad, with some joining the ranks of the Armed Forces.

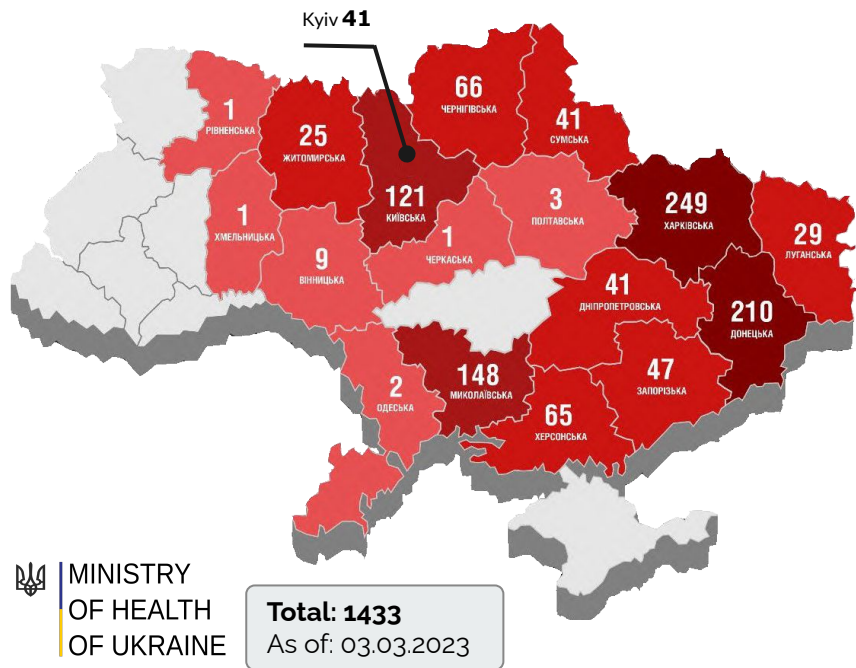


Kryvyi Rih Multiprofile Hospital for Psychiatric Care of Dnipropetrovsk Regional Council



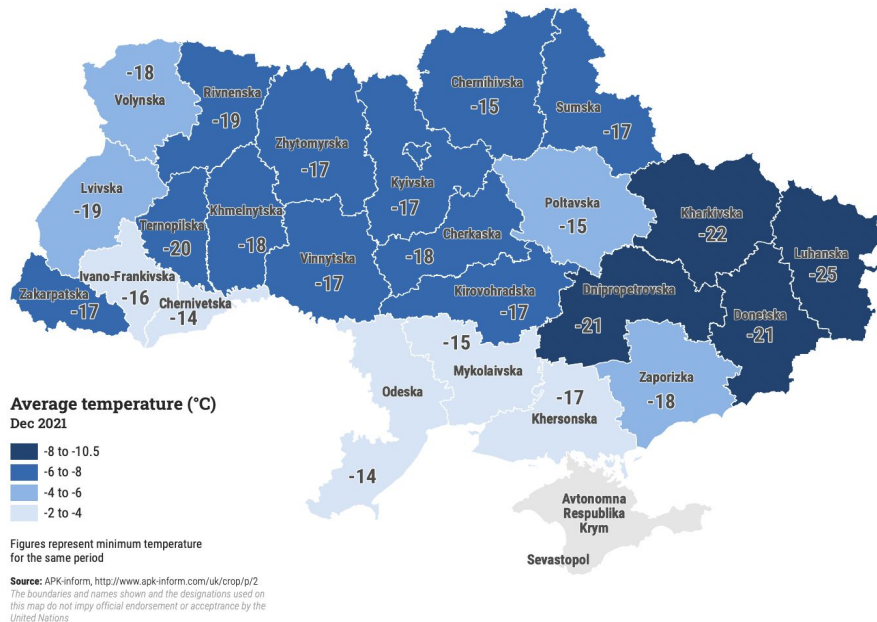
City Clinical Hospital named after O.S. Luchansky, Kherson

The map of damaged and destroyed medical facilities across Ukraine since February 2022



MINISTRY OF HEALTH OF UKRAINE

Ukraine's average winter temperatures





Shelling of critical infrastructure, widespread power outages, water and gas shortages throughout the country have destabilized the healthcare sector and hindered the provision of proper care to patients. This situation only worsened during the winter season of 2022/23.

Multiple hospitals reported the absence of functioning backup generators, equipment loss and damage due to looting during occupation, the lack of central water supply and heating, issues with shelters equipment, and broken windows.

Key goals of the project:

- equip hospitals with alternative power sources (**generators, charging stations, UPS**) to ensure uninterrupted provision of essential services during electricity disruptions;
- provide hospitals with essential equipment such as **heaters** and **boilers** to maintain adequate temperatures within core facilities and shelters **during the winter season**, as well as to ensure access to hot water;
- reduce electricity consumption in hospital buildings and increase indoor temperature by replacing old or damaged windows and covering broken **windows** with **OSB boards** in frontline hospitals .





Hospitals must have access to two independent power lines and should be partially equipped with backup diesel generators. Due to increasingly frequent outages and stranded electrical grid in winter, more back up generators were needed to support high number of appliances.

1



**ALTERNATIVE
ENERGY BACKUP
SOLUTION**

2



**INSULATION,
FACILITIES
READINESS**

Facilities required better insulation of walls and facades, replacement and/or insulation of windows, additional wiring and electrical grid inspection.

Warm blankets and warm clothes for doctors and patients are a necessity once temperatures drop.

3



**BLANKETS, WARM
CLOTHES ETC**

4



**ADEQUATE
HEATING
APPLIANCES**

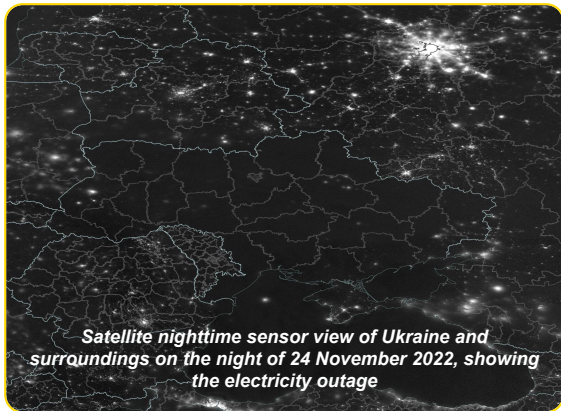
In view of stranded central heating capacity, hospitals required additional heating appliances to maintain adequate room temperature.



The "Strengthening Healthcare Infrastructure in Ukraine during the Winter Period 2022-2023" program has become the largest one in our portfolio so far. Our team has successfully executed all stages of the humanitarian process, starting from the needs assessment, methodology development, fundraising, procurement, logistics, and concluding with monitoring and evaluation. The program was implemented thanks to the support of our partners:



OVERVIEW OF ASSISTANCE PROVIDED



Surgical procedures in partial darkness

During the power outage caused by the massive strikes of the Russian Federation on November 23-24, 2022, when darkness covered the entire territory of Ukraine as recorded by NASA satellites, Lviv doctors **performed emergency surgeries** on an 11-year-old girl and a teenager named Kostya. Simultaneously, in Dnipro, doctors conducted a **unique heart surgery** during a complete blackout.



This winter will be about survival.

Continued attacks on health and energy infrastructure mean hundreds of hospitals and health-care facilities are no longer fully operational...

Maternity wards need incubators; blood banks need refrigerators; intensive care beds need ventilators; and **all require energy...**

Statement by Dr Hans Henri P. Kluge, WHO Regional Director for Europe. 21 November 2022



In Ukraine in 2020, during the second stage of healthcare reform, all institutions contracting with the National Health Service of Ukraine (NHSU) were required to have an alternative power source: **diesel or gasoline generators**. However, the **full-scale invasion** and **power outages revealed** that these generators were insufficient for proper functioning, and some hospitals still had outdated generators from the 1960s-1970s.

Critical medical equipment that saves patients' lives is connected to the power supply system in hospitals. Therefore, it was necessary to **increase capacity and establish backup power sources** in each institution to ensure they could operate autonomously.

Results:



23 hospitals received **56** mobile generators



74 hospitals received **99** powerful generators*

Mykolaiv Regional Emergency Medical and Disaster Medicine Center received **30** power stations



19 hospitals received **106** UPS (uninterruptible power supply)

**85 pcs. - as part of the support for the distribution of generators purchased by IOM*



Kitsman Multidisciplinary Intensive Care Hospital



Kryvyi Rih Multidisciplinary Hospital for Psychiatric Care

According to the United Nations, as a result of attacks on Ukraine's energy infrastructure in 2022, **approximately 16 million people** in Ukraine needed assistance with **water supply**.

Due to **significant damage to critical infrastructure**, hospitals experienced constant disruptions in electricity supply, interruptions in water supply, and sewage system failures. Since most hospitals rely on the municipal centralized water supply system, which is heavily affected by missile strikes, patients and staff could be left without water for extended periods. For instance, on October 31st, as a result of another attack, an energy facility near Kyiv was damaged, leading to a lack of water supply for 80% of the capital's consumers.

Due to **shelling of critical infrastructure** in some frontline areas, centralized water supply was completely halted.

When centralized hot water supply is absent, boiler houses are destroyed, damaged by shelling, or operate intermittently, **boilers** become the best alternative.

Results:



247 hospitals received **3011** boilers

3 hospitals of the Mykolaiv region received **23** thermo pots



The absence of heating in homes and businesses is mostly associated with discomfort, whereas the lack of heat in a medical facility poses serious consequences. **Heaters** serve as an emergency alternative to central heating.

Convector and oil heaters are particularly valuable for hospitals, the buildings of which have been damaged due to enemy attacks. This equipment is also frequently used in bomb shelters and children's wards in hospitals.

Due to inadequate building insulation and a shortened central heating season, many hospitals rely on these heaters during the transitional seasons to maintain a comfortable temperature in wards and treatment rooms.

In situations where rapid heating of a space is required, such as in operating rooms and shelters, **UFO** heaters have proven to be especially useful.

Results:



126 hospitals received **1787** convector heaters

61 hospitals received **583** oil heaters

96 hospitals received **754** UFO heaters



1043 attacks on health care system



438 attacks damaged or destroyed hospitals



535 attacks on other health infrastructure



According to the Ministry of Health, over the course of more than a year of full-scale war, approximately **1433 healthcare facilities and other healthcare infrastructure** have been damaged.

More than **438 attacks** have resulted in damage to nearly every **10th hospital**. A total of **177 healthcare facilities** were completely destroyed. After these attacks, vital healthcare institutions had to rely on improvised solutions, such as cardboard, plastic sheets, plywood, or other materials that cannot provide proper insulation and lead to significant heat loss. In a country where winters can be long and severe, with an average temperature ranging **from -6 to -10°C**, this is a serious problem.

Many facilities also require the replacement of old wooden windows due to natural wear and tear of the structure and very low thermal and sound insulation performance.

Results:



26 hospitals received replacement of **1972** windows



18 hospitals were provided with **1800** OSB boards to cover the broken windows



Primary Health and Sanitary Care Center" of Toretsk City



Damaged by shelling maternity hospital in Kherson / Telegram / Kirill Timoshenko

HOSPITAL STORIES

Dergachi is a small city located just **38 km away from the Russian border**, with a population of approximately 18,000.

During the 2022 Russian invasion of Ukraine, the **city was heavily shelled**, causing casualties among its residents and the **city's infrastructure has been severely damaged**.

Dergachi Central Hospital, despite being targeted by shelling on multiple occasions, continues to provide essential medical care to its citizens.

To survive blackouts and overcome low winter temperatures, the hospital needed generators, as well as heaters and boilers. Initially, we managed to supply the hospital with **two 5-kilowatt generators**.

Later, the hospital received **10 heaters** and **10 boilers**, as well as **UPS** (6 kW - 2 units, 10 kW - 1 unit) to ensure uninterrupted operation of medical equipment such as respirators, defibrillators, and other life support devices.



PROJECT DELIVERED IN
PARTNERSHIP WITH:



Located within 10 km to the border with Russia, the city has gone through **occupation, de-occupation and continuous shelling**. Before the occupation, the town had a population of almost 20,000, but after the occupation, less than 3,500 people remained. The staff of the Vovchansk Central District Hospital continues providing medical care to those that remain in the town.

As a result of shelling, the hospital's infrastructure was compromised, leaving the medical staff **without access to vital resources such as electricity, gas, and hot water**. Furthermore, the building's windows were broken and are now covered with plywood boards.

Delivering generator and other equipment to the hospital was a challenging endeavor, involving the need to protect the equipment from the shelling and navigate the damaged roads in the area. The mission was a success and helped ensure the **continued provision of essential medical services in this conflict-affected region**.



PROJECT DELIVERED IN
PARTNERSHIP WITH:



The **Chernihiv Regional Hospital** is a super-cluster healthcare institution with highly qualified specialists, a wide range of services, modern equipment, and **800** beds.

During the early stages of the war, the hospital suffered significant damage, with many windows shattered and heating systems developing cracks in some areas. Nevertheless, the hospital immediately began receiving wounded patients. Dr. Ivan Telnov, a pulmonologist and head of the COVID department, recalls, ***"The scariest day for me - and there were several - was when the first wounded were brought in. Another one was when more than 40-50 people were brought in within an hour."***

One of the challenges the hospital faced was the **cold**. After the shelling of the city's critical infrastructure in March 2022, the supply of thermal energy was cut off. The long-term absence of heating had a negative impact on the hospital's operations, and 350 patients were concentrated in one surgical building, where the temperature dropped to **+10 to +12 °C**.

Thanks to the International Organization for Migration (IOM), the hospital received and installed **30 boilers** and **46 convectors**. Additionally, **319 windows** were replaced.

PROJECT DELIVERED IN
PARTNERSHIP WITH:

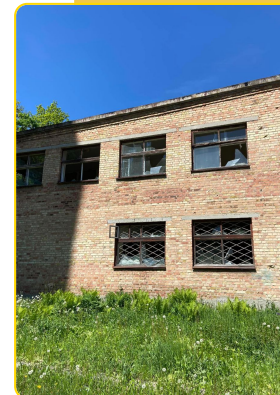


The **Kyiv Regional Center for Mental Health** is a specialized institution that provides inpatient and outpatient care to individuals with mental disorders.

Like much of the Bucha community, the center endured **air strikes, rocket shelling, and occupation**. On February 25, an urgent evacuation took place, relocating **62 patients** (50 adults and 12 children) along with staff to the Borodyanka Psychoneurological Boarding House. Later, the patients were transferred to the Zhytomyr Regional Psychiatric Hospital.

The enemy seized control of the center. The facility suffered acts of **vandalism, doors were broken, furniture was damaged**, computer equipment, valuable medical devices, and medications were looted and destroyed. An explosive wave shattered all windows, and the facility's premises were mined.

Following the liberation of Vorzel and demining operations, the **center resumed outpatient care for patients**, and on May 16, it admitted its first patients for inpatient treatment. Our organization contributed to the replacement of windows at the center, with a total of **53 windows** being replaced.



PROJECT DELIVERED IN
PARTNERSHIP WITH:



In early March 2022, Russian forces entered Voznesensk (Mykolaiv Region). The **Voznesensk Multiprofile Hospital** continued to operate throughout this period, and its staff worked tirelessly for a month without leaving their workplaces. In the first few days of the war, the hospital received 260 injured individuals.

During the first year of the war, the hospital faced **several challenges**:

- Closed pharmacies and a shortage of medications;
- Problems with ambulance access to the hospital due to a destroyed bridge;
- High patient load due to the influx of wounded individuals;
- Ongoing shelling.

In the winter of 2022-2023, the hospital also experienced frequent power outages, broken windows, and cold temperatures. In some departments, the **temperature dropped to +15 degrees Celsius**, especially in the maternity ward. The hospital relied on heaters and blankets (220 blankets were provided in partnership with the IOM).

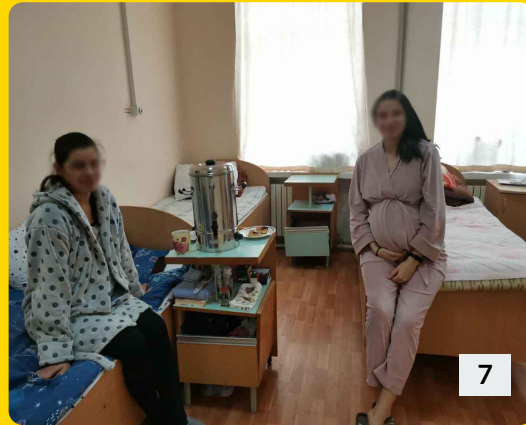
Autumn 2022, during shelling in the Mykolaiv region, one of the shells exploded near the Voznesensk Hospital. The blast wave and debris shattered windows. Additionally, damage occurred to the transformer substation, electrical networks, and gas pipelines. Thanks to a partnership with the IOM, **117 windows** were replaced.

PROJECT DELIVERED IN
PARTNERSHIP WITH:





1 - Primary Health and Sanitary Care Center of Toretsk City (Donetsk region); **2** - Chernivtsi Emergency Medical Hospital; **3** - Belozersk Central District Hospital (Mykolaiv region); **4** - Novobuzka multidisciplinary hospital (Mykolaiv region); **5** - Mykolaiv Regional Oncology Dispensary; **6** - Kyiv Regional Oncology Dispensary; **7** - Kitsman Multiprofile Intensive Care Hospital (Chernivtsi region); **8** - Velykopysarivska Hospital (Sumy region)



1 - Lyubashiv multidisciplinary intensive care hospital (Odesa region); **2** - Mykolaiv Regional Children's Clinical Hospital; **3** - Kherson Phthisiopulmonology Medical Center; **4** - Kryvyi Rih multidisciplinary psychiatric care hospital (Dnipropetrovsk region); **5** - Sosnytsky center of primary health care (Chernihiv region); **6-7**- Maternity Hospital No. 1, Mykolaiv; **8** - Mykolaiv Regional Center for Emergency Medical Aid and Disaster Medicine