Introduction

For several weeks now, reports describe massive population displacement from Ukraine to countries and territories in Europe and other continents (1, 2). The current priority public health concerns for Ukraine highlighted by the World Health Organization (WHO) are conflict related trauma and injuries, exacerbated by lack of access to health facilities by patients and health staff due to insecurity and lack of access to lifesaving medicines, vaccines, and supplies; excess morbidity and death from illnesses due to disruption in essential services for non-communicable diseases (cardiovascular, diabetes, cancer, etc.) and acute maternal, newborn, and child illnesses. In addition, there is a risk of increase of communicable diseases such as COVID-19, influenza, measles, polio, diphtheria, neonatal and non-neonatal tetanus, tuberculosis, HIV, and diarrheal diseases, including cholera, due to widespread destruction of critical infrastructure, which has caused a lack of access to medical care and medicines, safe water, sanitation, and hygiene, as well as population displacement, crowding, and inadequate vaccination coverage. Furthermore, mental and psychosocial health, due to the significant stress caused by the conflict and two consecutive years of the COVID-19 pandemic (1, 2).

The majority of displaced population from Ukraine are women, children, and older adults. Population displacement is a risk factor for communicable diseases and vaccine-preventable diseases, among others (1, 2, 3).

There are reports that pets, such as cats or dogs, are accompanying the displaced population and some countries have eased the process for non-commercial movement of pet animals in the context of the crisis in Ukraine. Nonetheless, it should be noted that rabies remains endemic in Ukraine among wild animals, as well as in dogs and cats (3).

In Ukraine, during the last 4 years, cases of diphtheria, measles, rubella, meningococcal disease, pertussis, circulating vaccine-derived poliovirus type 2 (2 cases reported in 2021), among others have been reported. The vaccination coverage of the aforementioned diseases, for 2020, was below 90% nationally. As of 23 February 2022, vaccination coverage against COVID-19 with complete doses was 35% (3) and 1.5% of the population had received an additional booster dose. A nationwide polio vaccination campaign had begun in February 2022 but has since been suspended due to the ongoing conflict.

All of the above may lead to excess morbidity and mortality among displaced population. Therefore, the host countries should give priority to providing health services to this population, in addition to strengthening and adapting their early warning and response systems.
In the Region of the Americas, countries such as Argentina (4), Brazil (5), Canada (6), Colombia (7, 8) Ecuador (9, 10, 11), United States (12), Mexico (13), Peru (14, 15), and the Dominican Republic (16), among others, are taking actions repatriate their nationals from Ukraine.

**Recommendations for national authorities**

In light of the population displacement to countries and territories in the Region of the Americas and in the context of the COVID-19 pandemic PAHO/WHO recommends Member States carry out the following preparedness and response actions:

1. **Strengthen coordination mechanisms within and outside the health sector**

   The timely exchange of information is central to coordinate, alert, and make decisions related to assistance for the displaced population; accordingly, the following should be maintained or strengthened:

   - **The coordination of the health sector with other sectors**, such as: national risk and emergency management systems, animal health, migration, international relations, among others.

   - **Coordination with other agencies of the United Nations system**, such as the International Organization for Migration (IOM), the Office of the United Nations High Commissioner for Refugees (UNHCR), among others.

   - **The activation of national multidisciplinary teams and emergency/crisis room**, to monitor assistance to the displaced population, public health risk events, risk assessment, and the implementation of interventions.

   - **Coordination with other sectors to identify the most common languages or dialects of the displaced population**, to facilitate communication during comprehensive humanitarian assistance, before, during, and after arrival in the host country.

2. **Strengthen and adapt the surveillance and response system**

   PAHO/WHO reiterates to Member States that the national surveillance system of countries and territories should be adapted for the rapid detection and early warning of public health events that affect the displaced population and require an immediate response. To this end, the implementation of an early warning and response system (EWARS) is recommended (17, 18).

   It is important that EWARS be sufficiently sensitive and involve other sectors to detect and respond quickly to signals from formal and informal sources, within and outside the health sector.

   **Syndromic surveillance and community surveillance** can be key strategies to detecting public health risk events, triggering timely prevention and control measures, as well as to monitor trends and effectiveness in the application of public health measures.

3. **Implement strategies to facilitate access to health care and access to health services for the repatriated and refugee population**

   There are several risk factors to which the displaced population could have been exposed, this includes, but is not limited to: stress, malnutrition, overcrowding, physical and psychological violence, sexual violence, exposure to communicable diseases, interruption of
vaccination schedules in children under 5 years of age, interruption of treatment and/or monitoring of chronic non-communicable diseases and communicable diseases (e.g., Tuberculosis, diabetes, mental illness, among others), exposure to biological, chemical, or radioactive elements, among others.

Before departure to the host country, the following is recommended:

- Guide the team in charge of repatriation or migration on the procedures to follow upon arrival in the host country.
- Identify those with urgent medical care needs and provide immediate medical support in accordance with the care protocols of the host country.
- The aircraft used for transportation of displaced population should be equipped with first aid kits, medications, and medical supplies that may be needed, including: antiemetics, antipyretics, acetylsalicylic acid (ASA), anxiolytics, antihypertensives, glucose, insulin, among others; pediatric presentation of these drugs should be considered.

Upon arrival to the host country, strategies to facilitate access of the displaced population to comprehensive healthcare services should be implemented, and include:

- Implement a rapid registration and triage system at critical entry points. Triage teams should:
  - Implement use of a questionnaire seeking core details such as:
    - Demographic data: complete name, age, place of origin, and place traveled through prior to arrival.
    - Health conditions: comorbidities and medication for chronic use discontinued during transit, allergies, pregnancy, exposure to biological, chemical or radioactive agents.
    - Vaccination history.
  - Verify COVID-19 vaccination status.
  - Verify vaccination status of children under 5 years of age in relation to the schedule of the vaccination program in the host country. PAHO/WHO emphasizes the specific recommendations for the prevention of polio, measles, and rubella outbreaks, in the section titled, Reducing the risk of vaccine-preventable diseases in humanitarian emergencies of the immunization bulletin, published in September 2021, available at: https://bit.ly/3tUjwSu
  - Verify the tetanus vaccination status in all persons over 5 years of age due to the high risk of previous puncture-type penetrating injury.
  - Identify persons with symptoms and/or signs of COVID-19: These individuals should be tested for SARS-CoV-2 at the point of entry. Regardless of the result and vaccination status, the person should be in isolation for a period of 10 days (from the onset of symptoms) in their home or assigned shelter, following the general recommendations contained in the COVID-19 Epidemiological Alerts and Updates available at: https://bit.ly/3I4ap6L.
Identify persons who meet the definition of a suspected case of a notifiable disease: when this occurs, the case must be notified to the epidemiological surveillance system, in accordance with the guidelines of the host country and the International Health Regulations (IHR 2005), available at: https://bit.ly/3KFhz3i

Collect stool samples from everyone under 5 years of age, regardless of health status, in order to investigate the circulation of poliovirus among the displaced population.

Identify in a timely manner the occurrence of diarrheal diseases given the high risk of previous exposure to environments without adequate sanitation. When a case is identified, initiate hydration and appropriate management in accordance with national protocols.

Identify the occurrence of respiratory viral diseases (non-COVID-19), primarily influenza and respiratory syncytial virus, especially in the following groups: a) children, b) older adults, c) people with comorbidities, d) immunocompromised people, and e) pregnant women. If a case is identified, initiate case management in accordance with national protocols.

Identify pregnant or postpartum women and refer them to designated health services so that they can continue their prenatal care and detect possible risks. Pre and postnatal care should be carried out in accordance with the national protocols.

Identify pregnant or postpartum women and refer them to designated health services so that they can continue their prenatal care and detect possible risks. Pre and postnatal care should be carried out in accordance with the national protocols.

Guarantee access to essential medicines, vaccines and supplies to meet the needs of the displaced population, in accordance with the national protocols.

Implement multidisciplinary mobile health teams to provide immediate attention to the displaced population, these may be at points of entry or other places of gathering of the displaced population. The health teams, among other activities, should prioritize the following:

Verify and complete immunization schedules, according to the national immunization guidelines, this applies to routine vaccination and COVID-19 vaccination, taking into account the WHO COVID-19 immunization in refugees and migrants: principles and key considerations: interim guidance, available at: https://bit.ly/3vQzkIJ

Provide treatment of chronic non-communicable diseases and communicable diseases (Tuberculosis, cardiovascular diseases, diabetes, among others), in accordance with the national protocols.

Provide treatment for acute maternal, neonatal and child illnesses, among others, in accordance with the national protocols.

Notify the epidemiological surveillance system of any suspected case of a notifiable disease in accordance with the guidelines of the host country and the International Health Regulations (IHR 2005), available at: https://bit.ly/3KFhz3i

Monitor the health situation of the displaced population for a give period, in order to provide them with timely care and identify events that may constitute a risk to public health.
- Have mental health professionals available to assess and provide care for the displaced population. PAHO/WHO recalls the recommendations in the Practical Guide for Mental Health in Disasters Situations, available at: https://bit.ly/3J6nBcE

- Establish a toll-free consultation and health reporting hotline for the displaced population.

- Establish mechanisms for the prevention and protection against sexual exploitation and abuse and sexual harassment of the displaced population. Provide post-exposure prophylaxis for victims of sexual abuse, in accordance with the protocols of the host country.

4. Preventive measures for shelters

If shelters are set up, PAHO/WHO reiterates the recommendations on prevention measures for shelters described in:


References


2. WHO. Public Health Situation Analysis (PHSA) – Short Form. 3 March 2022. Available at: https://bit.ly/37iruxg


7. Colombiano. Asistencia a colombianos en Ucrania. 6 March 2022. Available at: https://bit.ly/3CwUtJm


9. Ecuador. Se gestiona un tercer vuelo humanitario para más compatriotas que huyeron de la guerra. 7 March 2022. Available at: https://bit.ly/3J0ZNXX


20. UNHCR. Ukraine Emergency. 8 March 2022. Available at: https://bit.ly/3MBE22Q


26. UNHCR. Ukraine Situation: Supplementary Appeal 2022, 9 March 2022. Available at: https://bit.ly/3C1x0oF


