# Major Health Problems in Refugee Camps: An International E-Gov Partnership for Effective Response

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## ABSTRACT

**Keywords:** E-Government Systems; Health Information Systems; Covid-19 Pandemic; Refugee Camp; Ukraine-Russia War

**Abbreviations:** HIS: Health Information System; UNHCR: United Nations High Commissioner for Refugees; SIS: Schengen Information System; VIS: Visa Information System; EIS: Europol Information System; ETIAS: European Travel Authorization and Information System; WHO: World Health Organization; SCBeG: Smart Cross-border e-GOV Systems; REMOGO: Refugee Mobility e-Government system

## Introduction

In recent years, the growing geopolitical instability created in the Middle East and North Africa has been a milestone for the large influx of refugees oriented towards European countries, mainly the geographically closest ones, Spain, Italy and Greece. The war in Syria and the migration flows from Turkey turned Greece into a host country for immigrants, with the phenomenon taking on large dimensions in the years 2015-2016, thus signaling a radical change. Undoubtedly, the rigidity of European institutions intensifies the difficulty of dealing with the massive influx of refugees to Mediterranean countries and EU members, foreshadowing that the collapse of European borders is just around the corner. The multifaceted refugee crisis threatens the cohesion of European territories and requires a reorganization of European politics, which remains in suffocating contexts in a dilemma among humanitarianism and border security [1]. However, two crucial parameters are added as well to the complex issue of immigration.

Russia's invasion in Ukraine and the ongoing COVID-19 pandemic. It is estimated that more than 7,5 million people have already left Ukraine (data recorded on the 30th of September) since the beginning of Russia's invasion on February 24th, (Figure 1), while on the one hand, the EU expects up to 10 million people to be forced to migrate due to the ongoing situation in Ukraine and on the other hand, due to the partial mobilization declared by the Russian President at the end of September 2022 [1].

It is obvious that the ongoing migration crisis, VAI: Validation-Authentication-Identification due to the Russian-Ukrainian conflict, has a negative impact on human rights, where there are at stake citizens' lives, access to health care, infrastructure and food supplies [2]. The crisis in Ukraine, combined with the ongoing COVID-19 pandemic, threatens global health security and other factors that jeopardize the well-being and adequate health care currently available in refugee camps, as overcrowding, the burden

on sanitation facilities and the re-emergence of extinct diseases endangers the proper functioning of existing camps worldwide. Despite a comprehensive routine health information system (HIS) run by the United Nations High Commissioner for Refugees (UNHCR) collecting essential public health data from camps, little has been published about epidemics in refugee camps [3]. However, the COVID-19 pandemic, which has drastically changed the state of global health, combined with the Russia-Ukraine conflict, (Figure 2)

has created a double burden on the health care system and concern for residents around the world, apparently also in refugee camps [4, 5]. All people, including refugees, have the fundamental human right to healthcare. Compared to citizens, refugees face more obstacles and difficulties in getting access to quality healthcare services. However, government responses have usually fallen short in considering the unique needs and vulnerabilities of the migrants and refugees residing within their borders.



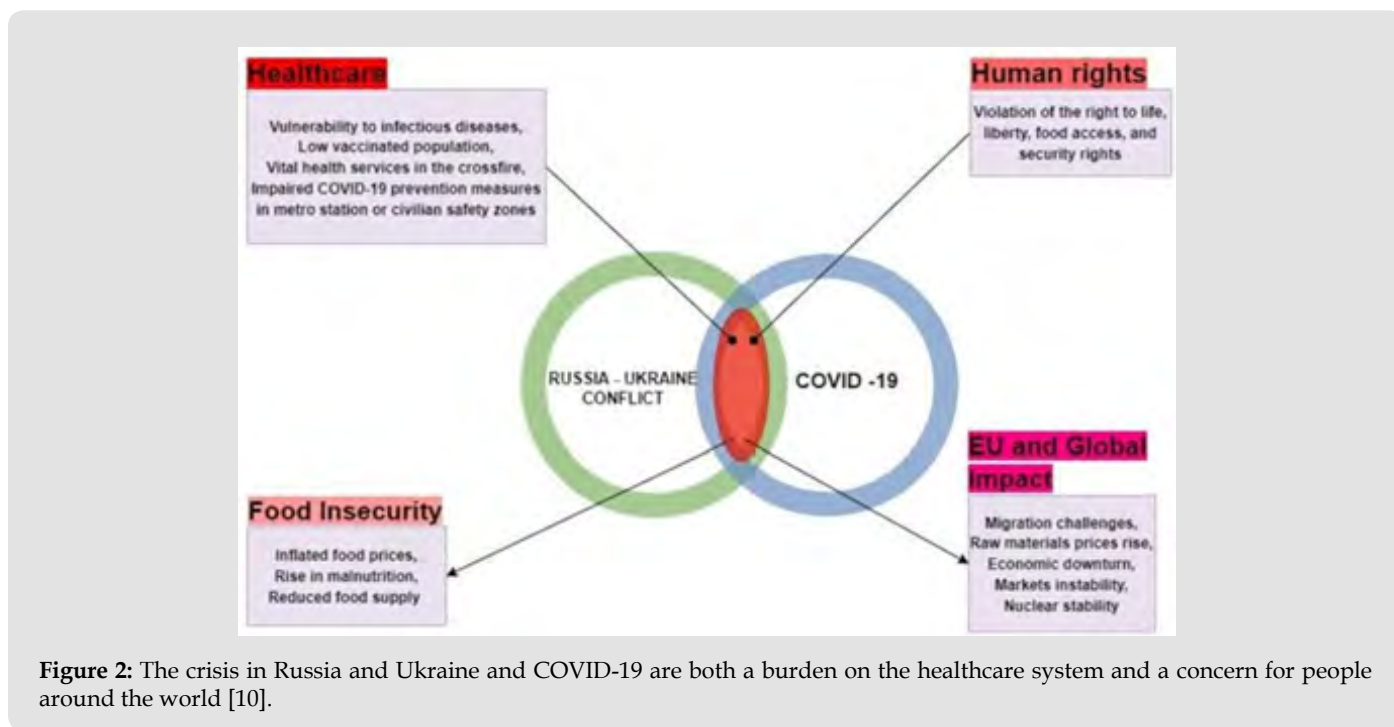**Figure 1:** Refugee status in Ukraine.



**Figure 2:** The crisis in Russia and Ukraine and COVID-19 are both a burden on the healthcare system and a concern for people around the world [10].

During the Covid-19 pandemic, there are four crucial gaps in the national and international health responses: [3]. The needs of refugees in camps and detention facilities are not adequately considered; [6] there is insufficient public health information; [7] there is a lack of inclusive access to health and mental health services; and [2] refugees are not included in decision-making processes. Faced with unprecedented challenges, the EU, through important actions and initiatives, has implemented IT systems for the faster processing of asylum applications, the issuance of residence permits, security and the promotion of cross-border health. The most important of these implementations are: European Asylum Dactyloscopy (Eurodac), Visa Information System (VIS), Schengen Information System (SIS), European Travel Authorisation and Information System (ETIAS) and Europol Information System (EIS). However, a smart system, pioneered by Sideridis, et al. [6], could make a beneficial contribution to the management of incoming refugees and migrants at the EU borders [6]. Of course, Remo Go should be seen as part of a comprehensive plan to address refugee settlement and mobility in a problem that inherently requires urgent attention as it will add maximum value and impact if the European Commission decides to adopt it and takes appropriate steps in implementing it [5].

This paper attempts to document the major issues encountered in refugee camps while proposing an international e-Gov partnership for an effective response to address the health challenges faced by the ever-increasing refugee population.

## Problem Statement

WHO aims to ensure the rights of healthcare to migrants and refugees and achieve universal healthcare coverage? The World Health Organization (WHO) offers global leadership, advocacy, coordination, and policy on health and migration through the Health and Migration Programme, in partnership with regional and national offices. As part of the United Nations Network on Migration, it also works with UN agencies, other international stakeholders, and other organizations to promote global multilateral action and collaboration. It also establishes norms and standards to aid in decision-making, keeps an eye on trends, improves health information systems, and promotes tools and strategies, especially in refugee camps. Chronic conditions like cancer and diabetes are progressively overtaking infectious illnesses like cholera and COVID-19 as the most important health concerns for those who have been displaced, even though these conditions are still a huge problem in refugee settings like camps and borders. It is obvious that such chronic sanitary problems are particularly difficult to deal with, especially today, when due to the fragile geopolitical landscape, the existing refugee camps are overwhelmed daily by refugees, who strain the sanitation facilities. However, some of the refugees may need special treatment due to any mental illnesses, which the health professionals in the camp would be wise to be aware of. Of course, this would be possible if the respective refugee/immigrant held a complete medical file.

Smart Cross-border e-GOV Systems (SCBeG) could contribute to the aforementioned problem, which, combining emerging technologies such as cloud computing, artificial intelligence, and big data, could provide valuable information on newly arriving refugees, providing all the necessary information, including the complete medical file, whenever possible. One such REfugee MObility e-GOvernment system, (REMOGO) is presented in brief in the next section.

## Proposed Smart Cross Border E-Gov System



**Figure 3:** Control Procedure of the REMOGO System [6].

The aim of the project is, through the REMOGO system, to better manage and distribute legal refugees in EU countries. Also, the REMOGO system can manage and identify refugees' personal data and, through the Cross Data Examinations, determine whether an applicant is eligible for asylum and issue at the same time a smart card (Figure 3). REMOGO is a web Application, with a user-friendly environment that can be hosted on any server, even on the eIDAS node of Greece. In more detail, legal refugees (refugees coming from war-torn areas) are recorded from the initial registration points (hotspots) and then registered on the platform, which, based on a rule-based system, will distribute the refugees, taking into account important parameters – rules in the EU countries. The proposed intelligent system has a multitude of functions (Figure 4), such as recording the details of the refugees, entering a complete medical file (with the required parameterization), managing the hosted hotspots and automated smart card issuance [6]. Its architecture resembles that of a smart cross-border e-government model, and it incorporates a decision-support system made up of three structural building pieces. the I/O, Processing, and Validation-Authentication-Identification (VAI) blocks. The platforms also created by the STORK 2.0 project [8] are a crucial component of the system as they provide identification and verification models for a general competence in authentication of sensitive and personal data (similar to the medical files involved).
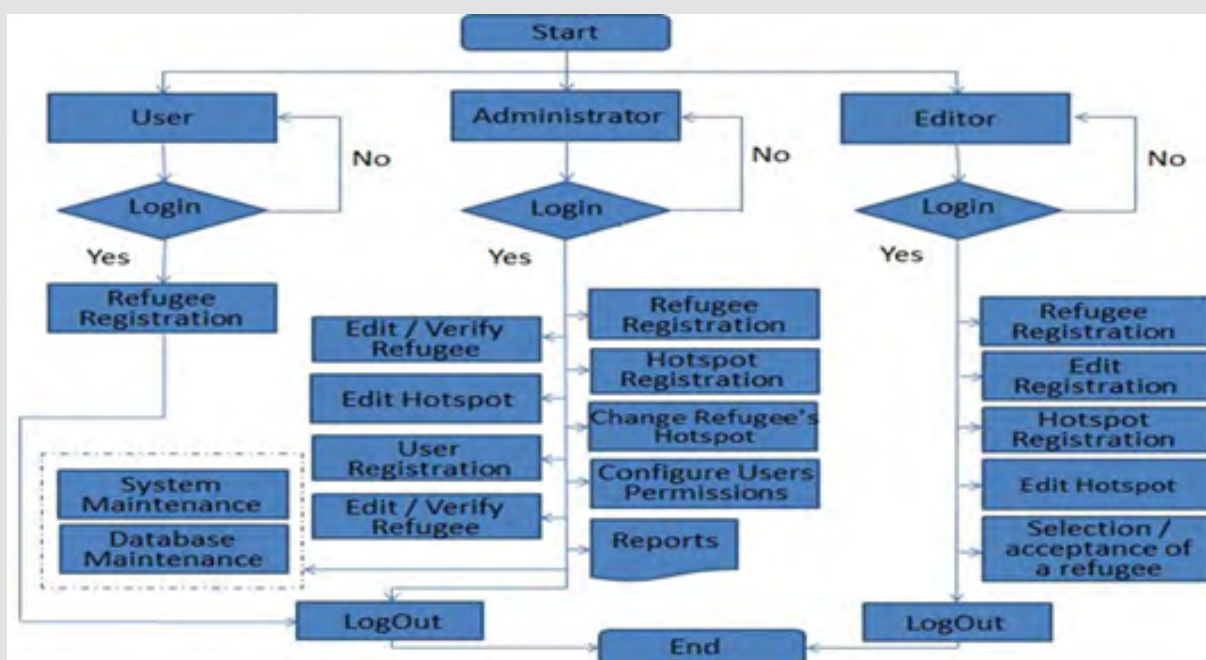


**Figure 4:** REMOGO System Flow Chart [11].

# Discussion

The implementation of the eIDAS authentication platform in cross-border transactions and applications is the foundation of the proposed Cross Border e-Government system, which is briefly outlined above. The proposed intelligent REMOGO system, taking advantage of the innovative technological features and ready-made platforms of STORK 2.0 [9-12] can contribute beneficially to the effective management of refugees within the refugee camps, so that health professionals, having the medical file of each refugee, provides timely and effectively the right treatment for ailing refugees to prevent unpredictable complications such as the COVID-19 pandemic.

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