

Health of Displaced Albanian Kosovars in the Former Yugoslav Republic of Macedonia: Fitness to Travel and Health Outcomes Assessment

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Abbreviations:

FYROM = Former Yugoslav Republic of Macedonia
HEP = humanitarian evacuation programme
IOM = International Organization for Migration
NGO = non-governmental organisation
UNHCR = United Nations High Commissioner for Refugees

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Abstract

Introduction: During the 1999 conflict in Kosovo, an estimated 850,000 people were displaced from Kosovo. Many thousands of these people arrived in the Former Yugoslav Republic of Macedonia (FYROM), for whom a humanitarian evacuation programme (HEP) was conducted by the United Nations High Commissioner for Refugees (UNHCR) and the International Organization for Migration (IOM). More than 91,000 people were moved to third countries under this programme.

Methods: A health assessment tool was designed, validated, and implemented to document the health status of the refugees prior to departure. The IOM evaluated 41,652 pre-travel "fitness to travel" medical assessments for refugees transported by the Organization. A colour coding system for fitness-to-travel was used to clearly identify refugees to the receiving health authorities according to their health condition at the time of departure.

Results: A total of 41,652 fitness-to-travel assessments were performed between 05 April and 25 June 1999, and were entered into a database. There were 21,923 females and 19,566 males. The average age was 25.3 years (women, 26 years; men, 24.3 years). Of these assessments, 4,647 (11.2%) individuals who were deemed fit-to-travel required medical assessment at the host destination, and of those 1,204 required urgent care. The majority of health complaints were acute respiratory tract infections and hypertension.

Conclusions: A rapid and efficient system for fitness-to-travel was created to assist in the management of health issues related to the urgent and mass movement of refugees. The collected health information was of use to health-care planners during the crisis and for those responsible for the health-care of newly arrived refugees. The lessons learned have implications for future similar operations and for the development of research and education programs for both the refugees and the host recipient nations.

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Introduction

Following civil conflicts or natural disasters forcing populations into destitution and dependency, the international community often is called upon to provide aid and to facilitate return to normal life. The 1999 crisis in Kosovo, resulted in the mass displacement of hundreds of

thousands of ethnic Albanian Kosovars, as well as Serbs, Croats, Montenegrins, and others living in the conflict areas. They were displaced both internally within their own nations and externally to neighbouring countries where they sought safe haven.¹

During the crisis, the United Nations High Commissioner for Refugees (UNHCR)² estimated that as of 01 June 1999, the number of Albanian Kosovar refugees in the countries bordering Kosovo was: Albania, 444,000; Former Yugoslav Republic of Macedonia (FYROM), 245,000; Montenegro, 70,000; and Bosnia-Herzegovina, 21,700.

Due to the political and cultural nature of the Former Yugoslav Republic of Macedonia (FYROM), the majority of 'Albanian' Kosovars arriving at the border areas of the FYROM were transported directly to refugee camps or housed in the local community. Beginning on 05 April 1999, the United Nations sanctioned an international effort to address the urgent needs of the refugees, and to reduce the physical stress of the refugees on the resources within the FYROM. At the request of UNHCR, the International Organization for Migration (IOM), in conjunction with the UNHCR and concerned governments, implemented a voluntary humanitarian evacuation program (HEP) for Albanian Kosovar refugees in the FYROM.

It is a goal during IOM-facilitated migrant movements, to ensure that individuals are moved in a safe manner.³ To accomplish this task and to ensure that travel and transportation are not affected adversely by medically unstable or ill migrants, the IOM performs a "fitness-to-travel" assessment. In the context of the operational delivery of the HEP from FYROM, fitness-to-travel was defined as the absence of any medical, surgical, obstetrical, or other health condition for which transportation itself would be a risk factor for loss of function or loss of life. Along with other program criteria, this definition distinguishes the HEP from other migrant movement programs such as medical evacuation, pre-departure immigration health screening, or programs designed for security or legal protection of individuals or groups of people. Although these other programs also were conducted in FYROM, they will not be discussed as part of this paper. The HEP was conducted as an urgent program due to the unstable conditions in the conflict zone and the cultural and political situation in the FYROM. An IOM fitness-to-travel assessment was designed especially for this situation to deal with the management and medical referral consequences inherent in the rapid movement of large numbers of people.

Another purpose of the health information gathered by the IOM Medical Teams was to provide a profile of the demographics of the refugee population, and an overview of their health status prior to their humanitarian evacuation. Given the rapidly evolving nature of the crisis in Kosovo, these data could have been used as an important component of the information needed for humanitarian aid planning, and for those providing emergency services. In addition the gathered baseline, health information was intended to be useful for the countries that received refugees through the HEP, and that provided housing and medical services for the refugees after their arrival for a period that was undetermined at that time. Due to the uncertain duration of this period of safe haven, which for some recipient countries included the possibility of permanent re-settlement, current health data that could be used

for acute, medium-term, and long-term health-care services planning was gathered and analysed.

Methods

Population Selection

Individuals wishing to be evacuated were self-referred. The HEP announcement by UNHCR was distributed widely through the camps and refugee populations by flyers, billboards, refugee-non-governmental organisation (NGO) meetings, and word of mouth. The selection criteria for evacuation were established by the UNHCR. The prime criteria were that the HEP had to be voluntary, and preservation of family unity was to be ensured. Refugees being transported by IOM under the auspices of the HEP were referred to the IOM Medical Teams for assessment prior to departure from FYROM. Prior to the fitness to travel assessment, all refugees were informed of the purpose of the assessment, how the information was to be used to protect their health during transportation, and to promote health at the destination.

Fitness-to-Travel Assessment

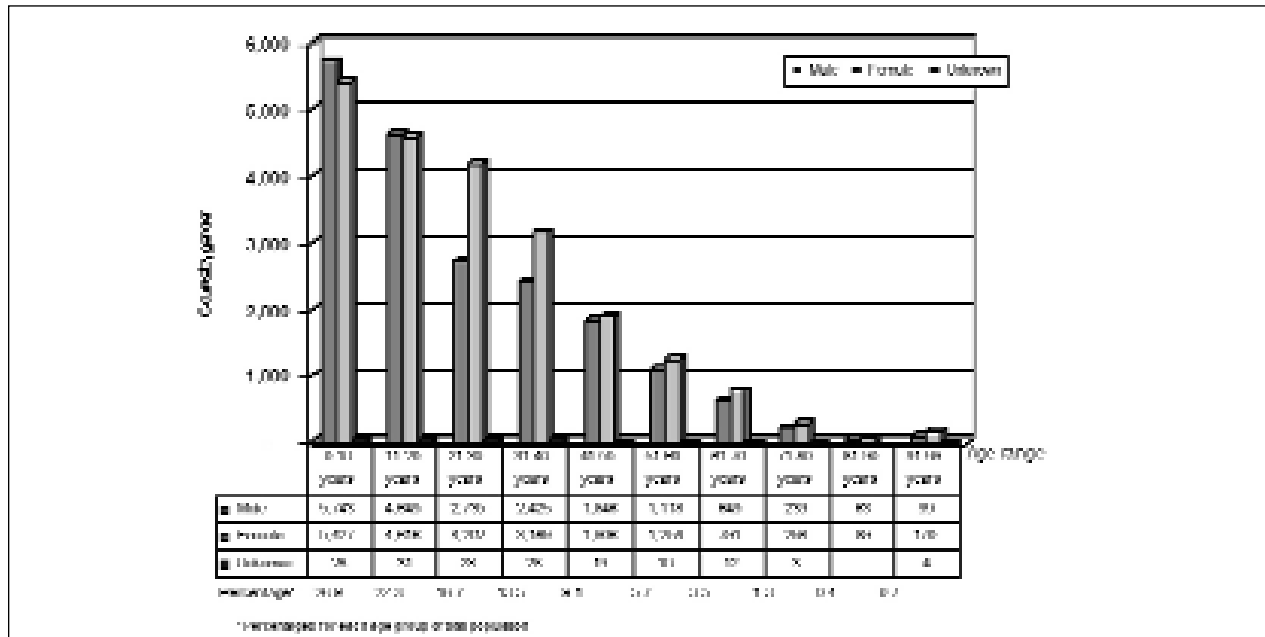
A fitness-for-travel assessment form was designed based on medical history and physical criteria. Content validation was done by two experienced clinicians associated with the HEP. Field validation, implementation, and medical supervision were provided by another medical member of the IOM Medical Team located in the FYROM. The assessment form was used for all humanitarian evacuations from Macedonia by the IOM. The pre-travel assessment was performed by IOM teams of culturally appropriate physicians and nurses in the field of operations or refugee camp using the language of the refugee. The assessment was done on the day of travel, or with selected flights within 48 hours prior to an expected movement.

Data collected included the refugee's name, date of birth, and date of displacement. Unique identifier numbers were used to link to the individual and to the family unit. Subjective health complaints were recorded, and specific health questions were asked related to the respiratory, gastrointestinal, neurological systems, and the mobility and ambulatory capability of the individual. Targeted questions focused on the reproductive health of female refugees, current use of medical treatments, and the presence of fever. Within each of these health domains, more specific diagnoses were recorded based on the history and physical examination.

Assigned Transport-Related Health Outcomes —1) fit to travel with no health restrictions (designated class "green"); 2) fit to travel, but requiring non-urgent medical assessment upon arrival at destination (designated class "yellow"); and 3) fit to travel, but requiring urgent medical care upon arrival (designated class "red"). Refugees who were deemed not fit to travel at the time of assessment were referred to local, health-care facilities within the refugee camp for more detailed medical assessment and management.⁴ These cases primarily were infants with fever >39°C, gravid females of >34 weeks, and those with suspected or uncontrolled psychiatric disorders. Most of these

Summary by Gender	Total		Green		Yellow		Red		No recorded conclusion
	n	(%)	n	(%)	n	(%)	n	(%)	
Female	21,923	(52.6)	18,935	(86.4)	2,266	(10.3)	712	(3.2)	10
Male	19,566	(47.0)	17,905	(91.5)	1,163	(5.9)	488	(2.5)	10
unknown	163	(0.4)	145	(89.0)	14	(8.6)	4	(2.4)	-
Total	41,652	(100)	36,985	(88.8)	3,443	(8.3)	1 204	(2.9)	20

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Table 1—Gender-specific Fitness-to-Travel Colour Code Summary (n = number)

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Figure 1—Humanitarian evacuations from the Former Yugoslav Republic of Macedonia: Distribution of refugees assessed by age group and gender

individuals were allowed to travel to their designated destination following medical assessment and stabilisation.

A copy of the "fitness-to-travel" assessment form with the colour-coded classification (see Appendix) was carried by the refugees to their host destination. The refugees with designated health status yellow or red also were given a colour-coded card containing principal health information for presentation to medical personnel at the destination. For several of the destinations, all red and yellow designations were communicated by facsimile to the host destination site prior to the departure of the refugees to ensure local preparedness to receive ill individuals or those with significant medical conditions requiring follow-up on arrival. The colour coding was designed to facilitate the initial, visual triage of refugees into the appropriate health assessment process on arrival at the host destination.

On arrival, detailed medical examination and follow-up was undertaken according to local practices by national medical authorities.⁵ The results of the more detailed investigations are beginning to be reported.⁶

Data Management and Analysis

An electronic database was created in MS-Access to gather all the demographic and health assessment data collected

by the IOM Medical Teams. This allowed for electronic transmission of data from the field of operations, as well as confirmation of the data and data analysis.

Results

During this period, an estimated 91,000 Kosovar Albanian refugees left the FYROM. Approximately, 20,000 Kosovar refugees were estimated to have left the FYROM during the HEP unassisted by UNHCR or IOM. The data from 41,652 refugee assessments (58.7%) of the approximately 71,000 refugees moved by IOM under the HEP, representing approximately 17% of all the Albanian Kosovars estimated to have entered the FYROM, were analyzed. The remaining refugees moved under the UNHCR-IOM HEP were not assessed by IOM for fitness-to-travel. Their health assessments were performed by the receiving countries on arrival of the refugees.

Females accounted for 21,923 (52.6%) and males for 19,566 (46.9%), or by proportion there were 1.12 females/males assessed. Gender was not recorded for 163 people (0.4%). The age and gender distributions are in Figure 1. The average of the ages for women and men were 26.0 years and 24.3 years, respectively, and 49.2% were under the age of 20 years. In this age cohort, males (10,392)

Health Complaint (cases)	Total Cases	Female		Average Age years	Male		Average Age years
		n	(%)		n	(%)	
Chest	3,060	1,887	(61.7)	49	1,159	(37.9)	42
Gastrointestinal	733	359	(49.0)	34	372	(50.8)	30
Neurological	973	496	(51.0)	41	468	(49.0)	37
Ambulatory	572	278	(48.6)	45	293	(51.2)	42
Treatment	1,929	1,216	(63.0)	50	702	(36.4)	44
Reproductive	777	735	(94.6)	29	40	(5.1)	-
Other	923	524	(56.8)	45	395	(42.8)	40
Current fever	135	68	(50.3)	11	66	(48.9)	9
Total ^a	9,058	5,563	(61.4)		3,495	(38.6)	

^a The sum of the rows does not include non-specified genders, and the sum of the columns includes individuals with more than one complaint.

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Table 2—Humanitarian evacuations from the Former Yugoslav Republic of Macedonia: health complaints by gender and average of ages

slightly outnumbered females (10,043) for a male to female ratio = 1.03. In the 21 to 40 years of age cohort, there were 5,160 males and 7,371 females (male:female ratio = 0.7). The 21 to 40 years of age group comprised 30.2% of the assessments. Cumulatively, the under 41 years of age group represented 79.4% of this population. In the 41 year-old and over population, the male (4,014) to female (4,508) representation also was slightly higher for women (male:female ratio = 0.89). There was an almost linear decline in individuals assessed by decade of age to the age of 90 years.

The distribution of health assessment by colour-coding pre-departure triage system was 36,985 green (88.8%), 3,443 yellow (8.3%), and 1,204 red (2.9%). Twenty individuals travelled without receiving a recorded code. Within the green code, there were 18,935 females and 17,905 males. More women than men were assessed yellow and red codes: 2,266 women versus 1,163 men had yellow codes, and 712 women versus 488 men had red codes. Gender specific distribution of health coding also is in Table 1. As there were more women in the HEP, these observed differences in yellow code (by adjusted proportions 1.25 more women than men), and red codes (by adjusted proportions 1.12 more women than men) still were significant. The average of the ages was 43.2 years for those with yellow codes, and was 43.8 years for those with red codes. In the latter category, women (47.7 years) were slightly older than were the men (41.2 years).

Chest ailments were most common among refugees requiring non-urgent medical care upon arrival (1,732 of 3,443 yellow codes, 50.3%) (Table 2). This was followed by non-urgent, reproductive health-related conditions, e.g., pregnancy (563 of 3,443 yellow codes, 16.4%), which explained why women outnumbered men in the yellow category. A total of 688 women were pregnant at the time of assessment, comprising 6.5% of the women aged 15–45 years.

Similarly, the majority of the refugees requiring urgent care upon arrival suffered from chest ailments (665 of 1,204 red codes, 55.2%). Almost half of this population had been receiving treatment for their health problems either prior to entering the FYROM, or were started on therapy by one of the medical NGOs in the refugee camps.

Ninety-one women received red code classification due to reproductive issues at the time of assessment (7.6% of 1,204 red codes).

One in-flight fatality occurred during the HEP. This death was the result of an acute cardiovascular event in an elderly individual who had received a red coding during the pre-departure screening and who was accompanied during the flight by a specialist-level medical escort. Other in-flight medical events were of a minor nature, and most commonly were related to dehydration, motion sickness, and fever.

Of the 41,652 individuals evaluated, 6,122 (14.7%) had a health complaint documented in the general health review. Table 2 contains the gender by health complaint data. Female refugees reported >60% of health complaints, but due to their greater representation in the assessed population, this was only slightly greater than expected (adjusted proportion of complaints from females = 1.06). The majority of these complaints were chest ailments (3,060). Females (1,887) outnumbered males (1,159) in the chest complaint category. When adjusted for the population representation, females were 1.17 times more likely to have a chest complaint than a male. Cardiovascular complaints were the most common (67.4%) of the 3,060 chest ailments, including mainly hypertension (1,728) and, to a lesser degree, angina (91), and other non-specific complaints (242). Among the refugees with cardiovascular complaints, 88.6% were >41 years of age. Hypertension was diagnosed in more women (1,222) than men (498), which again by adjusted proportions (1.34 women/men) was significant even when age distribution for chest complaints was considered.

In the respiratory complaint category (999 cases or 32.6% of the chest ailments), upper respiratory tract complaints were most common (627), followed by cough (210), and bronchitis and pneumonia (162). Most of the refugees with respiratory complaints (55.3%) were <20 years of age.

The other health categories were less frequently recorded. Few people (1.8%) had gastrointestinal complaints (359 females and 372 males). Diarrhoea was reported by 240 individuals, non-specific abdominal complaints by 433 individuals, and 61 persons complained of abdominal pain. Only 973 persons (2.3%) complained of a neurological problem, of whom 137 had a cognitive mental disorder,

131 seizure disorder, 14 stroke, and the other 691 had non-specific disorders including visual impairment and headaches. Diabetes was reported in 285 refugees, renal disease in 226, anaemia in 82, and other non-specific complaints were present in an additional 338 individuals.

Only 4.6% of refugees were receiving treatment at the time of travel: 1 216 females and 702 males. For these people, hypertension and diabetes were the most frequently recorded diagnoses. One-hundred, thirty-three refugees were taking antibiotics at the time of evacuation. Treatment often had been initiated or recommenced in the camp healthcare facilities. Seven-hundred, seventy-seven refugees complained of reproductive health issues (females = 735, males = 40). Of these, 688 or 6.5% of the women of childbearing age were pregnant or were recently postpartum. Current fever was a rare complaint, present in only 135 refugees. Ambulatory problems, which were mainly rheumatological syndromes, affected 572 people. Traumatic injuries were documented in 199 refugees, with one injury classified as recent war-related trauma.

In summary, this selected refugee population was predominantly young and healthy on both fitness-to-travel criteria and health review. Slightly more females were assessed than males. By adjusted proportions, more women than men required follow-up care upon arrival. Chest ailments, including chronic cardiovascular conditions (hypertension, dysrhythmias) and non-specific upper respiratory tract illnesses or coughs, were the most common findings. Chronic complaints, such as hypertension, diabetes, and renal disease, were the most common reasons to be on medical treatment in this population. Pregnancy also was a frequent finding in the reproductive-age female population. Proportionally, females reported more health complaints than did the males even when excluding reproductive health status. The colour coding triage of the refugees undergoing humanitarian evacuation allowed for an indirect measurement of the acuity and severity of the medical status of the refugee population in the FYROM. One in-flight death did occur during the HEP. This event involved a refugee assessed a red code and accompanied by a medical escort. The death was due to an unexpected cardiovascular event.

Discussion

Health considerations related to mobility for an individual or for populations can be considered in three phases: 1) health status and health determinants related to the pre-mobile period; 2) the period of travel; and 3) post-arrival period. The results of the transportation health issues associated with an urgent, international humanitarian evacuation program of a refugee population under difficult circumstances have been assessed and analyzed. This paper provides insight into a component of the travel phase for this specific vulnerable population, which has not previously been assessed or reported.

The ability to provide on-site fitness-to-travel assessments is essential for the protection and preservation of the health of the refugees related to intended travel, to support the need for expedient transportation (e.g., the provision of pre-travel medical care or medical evacuation), in-transit medical support (e.g., medical escort, and supportive care),

and post-arrival medical care in the receiving country. Accessibility to medical services in these situations can be extremely constrained by the circumstances of transportation, and medical care may not be easily available once transit has been initiated. The provision of fitness-to-travel, colour-coding, and available health data on the transported refugees facilitated health-care delivery at the point of arrival at the host destinations (personal communication from receiving medical co-ordinators).

Due to the nature of the refugee population and the HEP in the FYROM, there are limitations to the generalization of this analysis. Firstly, although the refugees "volunteered" for the program, there may have been non-volitional pressures related to political, cultural, and military activities that would make the population in the FYROM different from other refugee populations in other parts of the Balkans. These differences may have been reflected in the population presenting for assessment and evacuation, and may not have reflected the population in the refugee camps nor the original population in Kosovo. Secondly, the refugees "self-selected" for the HEP may not have similar health characteristics as did the other refugees in the FYROM. In addition, the pressing political need to move refugees out of the area constrained the available time for medical assessment. Several conditions, including psychosocial illness or clinically asymptomatic disease, could not be evaluated under these circumstances. However, most of the individuals moved under the auspices of the HEP, had detailed, and in some cases long-term access to medical care at their evacuation destination allowing for the diagnosis and management of these other conditions. These limitations in the generalizability of these data are relevant only to "pre-travel" health comparisons within this population. Due to the size of this assessment, these data accurately reflects the health status of this population during the transit phase, and reflects the sum of the pre-travel and transit period health-status and health determinants in the post-arrival phase for this population. The presence of asymptomatic or complex, stable illnesses, was not intended to be detected by the fitness-to-travel assessment, and did not affect transportation during the HEP.

These results have importance for health providers, associated agencies, and governments assisting refugees from Kosovo. The ability to characterise the acute healthcare needs and to communicate these to the recipient countries facilitated the provision of humanitarian health-care at arrival in the host countries. The medium- and long-term health-care needs of the refugees, based on their current assessment, was better defined, which add to the benefits of health care planning for this population.⁷

Several specific issues relevant to this mobile population and personal and public health require additional examination. For example, of 2,061 known heart complaints, hypertension occurred in 1,728 people. The etiology of the hypertension and the long-term health implications may be of interest to the receiving host nations. The Balkans region is endemic for Hantavirus, and the role of this emerging infection in hypertension and renal disease (226 cases) will be an important follow-up issue.⁸ Similarly,

bronchitis (162 cases), cough (210 cases), and other respiratory complaints (627 cases) were noted in 999 individuals. Given the nature of a HEP, screening for respiratory diseases of public health interest (e.g., tuberculosis) could not be done prior to transportation. This disease and other transmissible respiratory infections also are of personal and public health interest related to this mobile population.⁹ There also existed health issues for special hosts, e.g., 6.5% of the women of child-bearing age were pregnant during this assessment. Pre-natal screening, vaccine preventable infections, and other maternal-child health concerns were important follow-up issues identified in this population.

Conclusions

The IOM evaluates travel and transport-related health

assessment data in order to improve the medical management and support of relocating populations. The analysis and evaluation of the health characteristics of these groups assist in the recognition and detection of evolving trends in morbidity and disease prevalence and early appreciation of outbreaks in this population.¹⁰ In addition, analysis of this information facilitates the planning and provision of appropriate research, education, and health-care services to deal with the health issues related to mass migrations. The information and lessons learned from the capture and analysis of health information collected during the rapid screening for departing populations in complex emergencies may be of future benefit for the immediate health care of newly arrived refugees should similar operations be needed in the future.

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