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Migrants and Growing Global Health Security Challenges after COVID-19 Outbreak

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Abstract *Migrants and prevailing infectious diseases have become a more complex global challenge in the twenty-first century. Migration is a multi-faceted sociocultural phenomenon that impact has increased dramatically in the field of health and epidemic diseases. The global mobility of a person is a fundamental dynamic in the emergence of infectious diseases such as Coronavirus, TB, HIV / AIDS, Malaria, SARS and Ebola. Population mobility and growing circulatation of migrats poses global health security challenges. The comprehensive health policy is a base for combating infectious diseases at global level. The prime aim of this paper is to capture the gaps to manage health problems which are associated with migrants. So, this study shows, how surveillance, monitoring, early warning can combat the serious health threats of migrants. The preparedness, planning and coordination policies, can tackle the emergency in large occurrence of infectious diseases mainly COVID-19.*

Key Words: Migrants, Infectious Diseases, Surveillance, Health Security, Monitoring, Early Warning COVID-19

Introduction

The global situation in connection with the coronavirus outbreak is very dynamic. Currently, the COVID-19 pandemic is fueling prejudices against migrants and blaming them for the rapid spread of the virus.Population migration is the process of moving a person or a group of people travelling to a new country usually with the aim of work and living temporarily or permanently. Migration can create real opportunities for individuals but often leads to conditions and circumstances that also increase risk and vulnerability to HIV, COVID-19 and other infectious diseases. Migration of the population and globalization has increased the risk of spreading infectious diseases worldwide (Arguin, Marano, & Freedman, 2009). The COVID-19 pandemic and other infectious diseases outbreaks have shown the intensified importance of public health surveillance, particularly early warning mechanisms, which permit these incidences to be quickly detected.

The importations of infectious diseases are not a new problem in the world. Infectious diseases have influenced people's lives in the past and these diseases also affect in the contemporary modern globalized world (Saker, Lee, & Cannito, 2007). Infectious diseases are spread not only by human migration but also by the movement of animals, which are often carriers of some diseases (Keeling & Rohani, 2011). The cross-border dissemination of health

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risks is not a new phenomenon, since for centuries trade, wars, migration and colonization have brought people and diseases of remote regions. The smallpox or others and infectious disease has produced the highest threat to human lives and also increases troubles and the number of deaths in the entire human history (Bazin & Jenner, 2000). In the 14th century, an increase in the intensity of trade and economics played a significant role in the development of the plague pandemic ("black death") particularly in the countries of Europe and Asia (Campbell & Hughes, 1995).

In the modern era, various political and social conflicts are taking place in many countries all around the world, such as natural disasters and climate change. Environmental changes and natural outbreaks have always been major drivers of migration. Theses disasters often lead to a significant decrease in the standard of living of the population as well as worsening for public health because provoke mass migration of the population (Homer-Dixon, 1996). Presently, it is assessed that over 200 million people (2% of the world's population) live outside of their birth country (Schenker, 2010).

In the 20th century, the mass tourist movements and the rise of current world trade exchange have enhanced the emergence and re-emergence of certain infectious diseases in the last decade. The process of globalization has a far-reaching impact on health policy issues. New technologies and open markets have increased the mobility of goods, people and services, but also created different challenges for health protection (Kickbusch, Maag, & Saan, 2005).

- Most migration is south-south, mostly labour and students, some refugees
- International migrants are highly heterogeneous, most are very healthy
- Risk of ID depends on sender country incidence, type of migrant, route of migration, access to care and other host country factors

The increasing trade and travel traffic is facilitating the spread of health risks across national and continental borders. International aviation and travel traffic and trade relationships mean that new infections can reach almost any part of the world within a few hours and days. Dengue fever related to migration from Latin America also appears in Spain (Brea, 2003). In 2006, the prevalence rates of HIV and TB in Portugal were causes of the increase of immigrants in Latin America and Africa.

Globalization not only offerings health policy with novel challenges, it also offers many novel opportunities and promising solutions. As, increased mobility and communication processes have postulated good impact and made access to medicines, knowledge, technologies sharing research significantly easier. Medicines can be transported cheaper and faster (Cowhey & Aronson, 2012). New pharmaceutical production sites are emerging in developing countries. The stronger international network has helped to anchor health issues as an integral part of the international agenda. The migration process involves different phases (pre-departure, destination and integration, return travel and transit) in which the health of migrants can be affected.

The current mass migration creates new opportunities for the spread of new infectious diseases. Due to the large differences in the prevalence of infectious diseases in a world where the number of migrants or tourists is constantly increasing, the elimination of some infectious diseases is almost impossible. The diseases of travellers, immigrants and refugees constitute one of the target areas on which it will be necessary to act within the strategy for the prevention of infectious diseases for the immediate future. Development in the health sector is essential because the health of migrants bridges human rights, public health, and also

- Migrants are human beings and they also have a right to health
- Migrant-inclusive health systems improve global and public health outcomes
- Healthy migrants also contribute to sustainable development outcomes

Almost, 37 million people presently are living with HIV Infectious. However, it is estimated that deaths annually from HIV/AIDS has declined from 2 million in 2005 consequently, it decreases 1.1 million in 2015. However, AIDS still ranks sixth of the global

causes of death but it has ranked first in Sub-Saharan Africa. Infectious diseases are the first cause of mortality in low - income countries, representing 45% of total deaths. Following are prominent barriers to migrants to access HIV prevention, care and treatment

- Stigma, lack of information and discrimination at individual and structural levels
- Cultural barriers, language barriers, lack of migrant-sensitive attitude and anti-migrant sentiment
- Policies in which some migrant groups, mainly undocumented migrants, are unable to access
- Economic austerity leading some migrant-friendly HIV programmes to be cut

Six infectious diseases were responsible for the majority of these deaths at all ages: acute respiratory infections (3.5 million), diarrheal diseases (2.2 million), malaria (1.1 million), AIDS (2.3 million), tuberculosis (1.5 million) and measles (0.9 million).

Epidemics can have severe economic consequences in a short period of time and for a long time. Pathogens that are spread from animals to humans and food-borne infections cause thousands of occurrences every year. Globalization also stimulates global harmonization of consumption and living habits. This is accompanied by the spread of non-communicable chronic diseases, especially in the new middle class in many emerging and developing countries. Unnecessary deaths as a outcome of infectious diseases and, gradually, chronic non-communicable diseases are also disturbing development opportunities and economic growth as well as increasing political and social stability of whole regions. These infectious diseases are a main cause of poverty and inequality.

The most common immigrants in developed countries are migrants from developing countries, where there is a high risk of transmission of some infectious diseases from their country of origin to their country of destination. For example, Western European countries can receive a large number of immigrants each year, coming mainly from developing countries in North Africa or Asia has a high incidence of infectious diseases.

The consequences of climate change associated with globalization represent another new health policy challenge. Tuberculosis (TB) remains a major threat worldwide. In developing countries, peace and prevalence are several orders of magnitude higher than in developed nations of the world. In many developing countries has outstretched to epidemic ratio, with a world population of third part being infected. Worldwide 2-3 million deaths occur due to result of 8 million new case of tuberculosis appeared, building TB infectious disease from all the leading diseases. Infectious diseases are a momentous burden on the global economy and above all on public health. They are also the second leading source of death in the world. For the most serious infectious diseases are already over a long period to considered COVID-19, TB or HIV / AIDS. The problem associated with infectious diseases is addressed by a number of studies and world organizations, such as UNICEF and World Health Organization (WHO).

According to the World Health Organization (2015), the Chinese government in China increased surveillance of infectious diseases after the occurrence of severe acute respiratory syndrome (SARS) in 2003. According to the Infectious Disease Prevention and Control Act in China, 39 reported infectious diseases fall into three groups. The World Health Organization (2015) calls these three groups the letters A, B and C. They are classified according to the level of the epidemic and the potential threat to the population. There are a total of 28 infectious diseases in groups A and B, with a high risk of outbreaks of diseases that spread rapidly after the onset of a particular disease. The mortality and morbidity of diseases be appropriate to groups A and B are published by various countries. Group C includes less life-threatening infectious diseases. If these infectious diseases break out, they are less epidemiologically less serious. These diseases must only be reported if there are any actual outbreaks in the country. The prevalence and incidence rates are the basic indicators used to monitor morbidity levels. The term incidence indicates the proportion of the sum of new cases of the disease among the

population. Pathogens are reproduce, invisible within the sufferer and can noticeable in communicable, harming and lethal symptoms. Nearly a dozen microorganisms' intentionally convert into agent by using viruses, bacteria or toxins these can cause mass casualties.

One of the effects on the spread of infectious diseases is migration. In many developed countries, some infectious diseases have been reduced and occur at least in that developed country. This is mainly due to the advanced health care there. In developing countries, on the other hand, the prevalence and incidence rates of infectious diseases are several times higher. These diseases are therefore still a major problem, especially in developing countries. The whole world worried about public health because of the increasing danger from Africa in the form of Ebola. Despite strict measures, this infectious disease has resulted in several deaths in Europe and North America.

During the peak of the Ebola outbreak, strong emphasis was placed on the exchange of information, while the impulse to discuss and coordinate the response was less significant. The main conclusion from the outbreak of this epidemic is that there is scope for improving the implementation of the provisions whereby States are to coordinate their national responses. As regards shortcomings, several respondents reported incomplete implementation of the basic capacities of international health regulations. Preparedness planning and response activities involving other sectors that would cover other communicable diseases other than food, zoonotic and water threats or antimicrobial resistance were reported inconsistently.

Social inequalities, mobility and health

The impact of the social environment on health has also been found in immigrants. In the early years of their migration, immigrants have a morbidity pattern that is very similar to that of their country of origin (Diaz et al., 2015). But as the years go by, the morbidity model is getting closer to the host country model. So, as societies change and the presence of certain social factors changes, so do morbidity patterns. Migrants are a multi-ethnic group facing an increased risk of social exclusion. Equal access for immigrants to the health system is crucial for their integration into the host society, preventing inequalities, but also safeguarding public health. People with lower education, lower occupation or income, live less and suffer from infectious diseases and high prevalence crafts health problems. The impact of these variables on health starts at an early age and continues throughout a person's life.

Inequalities persist between indigenous and certain groups of immigrants, both in terms of health status and health services access. Immigrants appear to be vulnerable to communicable diseases as HIV / AIDS, tuberculosis or hepatitis, which affects overall health. This may be due to a mixture of environmental and socio-economic conditions in their countries of origin, the procedure of moving to another country and the process of adapting them to the new environment of their host country. It also appears that inequalities in health within a country are related to the general health of the population.

WHO does not recommend routine screening for diseases in refugee and migrant populations, as there is no data clearly demonstrating its value (or cost-effectiveness). In addition, this control can cause anxiety for some refugees and for the community at large. However, WHO strongly recommends that medical examinations be offered and performed so that all refugees and migrants in need of health protection have access to health care. These examinations should be carried out to detect communicable and non-communicable diseases, while respecting the human rights and dignity of refugees and migrants.

International Health Regulations (IHR)

The revised IHR have been force in 2005 that is an instrument to protect against the spread of all health threats on a global scale and to limit their effects, they are supposed to monitor infectious diseases and achieve the possible highest level of health safety. All countries that have signed it are obliged to maintain the core capacities necessary to prevent, detect and contain international health threats (Fidler, 1997). IHR also serves as a legal

basis for important health documents relating to international travel and transport, as well as the health protection of the users of international airports, land border crossings and ports. The IHR essential capacities are to control the spread of the disease while minimizing the negative effects of restrictions on trade and movement of people. The revised IHR are aimed to "prevent, protect against, control and provide a public health response to the international spread of disease in ways that are commensurate with and restricted to public health risks, and which avoid unnecessary interference with international traffic and trade" In order to avoid the migration crisis, states are obliged to take migrants into account in their national anti-pandemic strategies, and not only as victims, but also as persons capable of fighting the spread of the coronavirus. The IHR is designed to control, prevent and counter the hazards of emerging infectious diseases (Taylor, 1996). The IHR after the COVID-19 outbreak, has review the position of application of the relevant recommendations of prior IHR Review Committees, and eventually make practical recommendations to the General Director on the process of modifications.

Surveillance System

One of the first decisions that most of the world's countries made to contain the COVID-19 pandemic was to close land, air and sea borders to prevent the virus from continuing to spread through their region due to the arrival of infected people from abroad. The infectious disease watch and surveillance system is based on the collection of information aimed at describing a health problem, detecting epidemics or abnormal increases in cases, alerting the health authority, and helping management and finally to assess the effectiveness of the measures (Romaguera, German, Klaucke, Teutsch, & Churchill, 2000). In a mobile world, migrants and travellers are hazards for the public health system so with a view to preventing and controlling infectious diseases has great importance, whether these are imported or whether they occur. Surveillance is defined as the "ongoing, systematic collection, analysis, and interpretation of health-related data essential to the planning, implementation, and evaluation of public health practice, closely integrated with the timely dissemination of these data to those responsible for prevention and control" (Phung, Young, & Greenfield, 2001).

However, in 1950, the term 'surveillance' was narrow in public health practice to inspecting relations of persons with severe contagious diseases for instance smallpox, so as to detect early symptoms thus that rapid isolation could be established (Liu et al., 2016). In recent years, the number of natural disasters caused not only by the weather but also regularly has been increasing human activity. These disasters have an impact on the society around the world; they lead loss of human life and the destruction of social and economic infrastructure. At the same time with the increasing number of natural threats, the area of crisis controlling is developing worldwide. An integral part of crisis controlling is the area of early warnings, which with its products to seek alert the impending threat of disaster and mitigate its consequences (Henning, 2004). Developing migrant-sensitive programs & services

- Integrate HIV treatment and prevention as a larger health delivery perception to address problems of racism, stigma and discrimination
- Health care reporting that contains migrants, i.e. health insurance
- Trained clinicians/providers along linguistic capacity and cultural sensitivity to work with migrants
- Sensitivity to potential stigma introduced by enlarged targeting or visibility of migrants
- Incorporate migrant health services with social chains (i.e. transport, housing, income)

Timely systems warnings and readiness are highly recognized as a good investment in the protection of life and property. WHO supports the development of health policies that take into account the needs of refugees and migrants; strengthening health systems to promote equitable access to services; the establishment of health information systems to assess the health of migrants; exchange of information on best practices; better awareness and training of health service providers and health professionals in the cultural and gender

aspects of migrant health; and promoting multilateral cooperation among countries.

Gaps in Disease Surveillance Systems and challenges of migration

Traditionally, surveillance of infectious diseases rests before all about a passive disease reporting system. The epidemiological reporting and monitoring system set up in healthcare structures taking care of migrant populations. Monitoring migrant health

- Partnerships in migration and HIV
- Cross-fertilisation of advanced methods that address bigger migrant health problems
- Standardising reporting & monitoring tools (UNGASS, WHO, Dublin)
- Commitment of migrants and community in the response
- Detention supplement and monitoring data and share surveillance including behavioural facets
- "Data for action": use the data to target treatment and prevention services
- Sharing of data across jurisdictions, e.g., across regional, federal, provincial and state governments
- Improve monitoring and follow-up apparatuses;

Most countries have established under the form of law or regulation a list of diseases which must be obligatorily reported by the medical community and other health professionals. The precision and completeness of the declaration may vary from a few more than 90% for certain diseases in developed countries. Good rates lower reporting are generally seen in the developing countries development. Traditional disease reporting systems depend on their quality

- On the recognition and confirmation of the disease by a health professional
- From the deadline for reporting the case (s) of illness to local public health authorities

In fact, we don't always realize that current notification systems do not always provide an accurate and reliable picture of the real situation of an infectious disease. Most of the delays observed between infection initial and possible notification of the disease are linked to epidemiology and history natural agents specific to this disease (Vourli et al., 2017). The time that elapses between the moment of infection and the onset of the first signs or symptoms of the disease (period incubation) varies from one infectious agent to another. However, for most infections acute, the incubation period is usually a few days or even a week at most. Depending on the course of the disease, the clinical picture may present under a very moderate form, even non-existent, to a serious way likely to lead to death. Therefore, for each particular infectious agent, only a variable percentage of infected and sick people will seek medical care. Finally, it can flow between a day and a few weeks between the time of consultation in a practice medical or healthcare facility and when the diagnosis made. So the cases diagnosed and confirmed reportable disease may not be brought to the knowledge of local health authorities for one or more weeks after onset of infection.

Early Detection

Detection, early detection and verification of epidemics of emerging diseases require detection and vigilance of early "signals" of an epidemic or signals of rare or unusual diseases. Detection is the act of defining the presence,existence, or features of outbreaks that permit response (Dato, Wagner, Allswede, Aryel, & Fapohunda, 2001). The usual approach would be to keep the current passive reporting system and to continuously urge healthcare professionals to do what has always been asked of them - promptly notify all reportable disease cases as well as all disease cases unusual. Even in situations where these guidelines are followed, this system does not generally significantly reduce the time difference between the onset of infection and the time of diagnosis and notification of the disease. The development of more monitoring systems is sensitive, so instead of waiting to be notified of diseases that sometimes cause several weeks before being diagnosed and then declared, on the contrary, systematically and carefully research the earliest signals and make immediately necessary to start the verification process.

Improving surveillance systems

Such strengthened or improved surveillance systems could quickly be developed on the model of annual influenza surveillance systems, the main objective is the early and early warning of an epidemic and not the notification of all cases of influenza diagnosed. Threrefore U.S. during the initial implementation stages of the COVID-19 national vaccination program utilizing a spontaneous reporting system which is the Vaccine Adverse Event Reporting System (VAERS) for the Safety monitoring (Gee et al., 2021). Influenza surveillance systems use the concept of sentinel surveillance, which consists of systematically collecting in defined subgroups of the data population that may be useful or relevant to early detect and respond to a possible public health problem.

Since 2004, for the real-time monitoring Italy has a rapid mortality surveillance system (SiSMG) (Michelozzi, de'Donato, Scortichini, De Sario, et al., 2020). After the COVID-19 outbreak (SiSMG) was a valuable tool of Italian rapid mortality surveillance system for detecting the number of deaths per day separated categories such as in age and gender (Michelozzi, de'Donato, Scortichini, Pezzotti, et al., 2020).

Influenza surveillance systems include:

1. Systematic collection and analysis of data on truancy. A sudden increase in acute respiratory conditions can be the first visible sign of an influenza epidemic. Besides, many influenza surveillance systems also collect data from absenteeism from large employers, such as government offices, etc.
2. Weekly sample collection from patients hospitalized for "Influenza-like illness" for laboratory testing by officers responsible for the flu or any other respiratory illness.
3. Systematic collection and analysis of the daily, or weekly, number of outpatient clinics for "flu-like illnesses" in clinics and sentinel hospitals.
4. Systematic collection and analysis of the number of deaths related to influenza or to pneumonia in sentinel populations or cities.
5. Systematic collection and analysis of sales data daily or weekly, prescription or non-prescription, medications intended to treat acute respiratory conditions.

This systematic surveillance systems public health which is essentially based on the passive notification of cases of illness confirmed. The surveillance system American may have received notification of about 50 cases, or 5% of cases. The infection diseases notification of the case - it is clear that there are many potential sources of earlier signals in the event epidemic.

In the countries of origin and destination of refugees and migrants, social, economic and political factors influence the danger of infection with the hepatitis and HIV viruses. These contain social, marital separation, poverty and language barriers, cultural norms, poor living conditions and abusive working environments, containing sexual violence. Stress and segregation can reassure migrants to adopt risky behaviors, which rises the probability of infection. Regardless this so the system used to improve or strengthen the early detection of outbreaks or the unusual occurrence of specific diseases, it should be noted at how important it is to "investigate" and check all signals as soon as possible, so that the surrounding populations can warned of the epidemic and that appropriate sanitary measures are taken immediately to prevent and combat the spread of the epidemic.

Refugee and migrant women can be particularly vulnerable. Some countries of Europe does not provide HIV treatment services to people whose legal status is uncertain, and refugees and migrants may therefore be affected. WHO supports policies that should guarantee HIV testing, prevention and treatment services, regardless of the legal status of patients. WHO should also develop a reference guide for surveillance that can be adapted or modified to fit perfectly, not only with diseases specific to each region or country but also technically, with the capacities of national and/or local laboratories.

Population mobility and migration are constantly increasing in the global world. But, current occurance of COVID-19 is exacerbating xenophobia and racism worldwide. Ethnically and culturally diverse communities of migrants

are highly increasing the threat of infectious diseases. International migration is an evolutionary process that contributes to socio-economic and institutional changes in the country of destination. The population in developing countries is most exposed to the so-called traditional risks of poverty, such as malnutrition, unprotected sex, poor drinking water, and poor hygiene.

The present health system is unplanned to deal with the crucial concerns which are facing the current public health system. So, the migrant's health challenges can be overcome while strengthening the surveillance because epidemiology can play a main role in readiness and also gives an early warning which is a substantial factor in reducing the threats infectious disease among migrants. In order to promote and protect to addressing the challenges of migrant's health, it is necessary to raise awareness among immigrants about infectious disease threats and also give awareness for adopting healthy lifestyles.

Conclusions

There are many microbial threats in the world that continue to challenge public health, such as the SARS or COVID-19. As, national and international policies have numerous gaps in capabilities for countering infectious disease. Additionally, travels of people and international population migration have repeatedly contributed to the emergence of epidemics of dangerous infectious diseases. Consequently, health policies of migrant need new dimension for preparedness of public health infrastructure which prevents infectious disease threats. The study concludes that conducting surveys on the use of health services by foreigners will contribute to the collection of relevant statistical data and a better assessment of needs. Consequently, prevention interventions are absolutely necessary, with the aim of informing migrants more systematically and focusing on migrant's health. Interventions should employ culturally sensitized persons, as well as culturally appropriate material and all guidelines of the pathogen in the language of immigrants is an appropriate policy for preventing dangerous infectious diseases. That is, it is a key prerequisite for an effective prevention policy or involvement of the immigrant community itself. The ultimate goal of interventions should be to fully integrate specific actions into the existing national health system and smoothly integrate migrants. Educational programs, awareness campaign and seminars on disease knowledge and prevention should be conducted so that immigrants keeps themselves updated. In the end, the most emerging policy instrument for preventing dangerous infectious diseases are effective policies that improve immigrants living conditions and also raise their standard of living in the host countries.

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