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International Health Agencies: Role in Pandemic Occurrence

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1. Introduction

Health and disease have no political or geographical boundaries.

- Disease in any part of the world is a constant threat to other parts.
- History is replete with plague and cholera, along trade routes.
- In order to protect against the spread of the disease from one country to another, many attempts were made in the past by individual rulers and state the barriers against infection

Main Objective of International Health Organisation or Agencies are:

- Control and management of epidemics and communicable diseases affecting more than one country – includes excludes exchange of information on incidence of epidemic diseases and existing for uniformity in quarantine regulation procedure
- Exchange of health information and experience at international level.
- International standardization of preparation vital statistics and banned drugs etc.
- Coordinated combined research and assistance to research programmes on specific problems common to many nation
- Helping and assisting underdeveloped countries in training the health staff medical planning so as to manage and the control the epidemics
- International health in case of disasters and also consideration for control of drug addiction.

2. Glossary

International Health: also called geographic health or global health, is a field of health care, usually with emphasis dealing with health across regional or national boundaries. •Quarantine: is used to separateand restrict the movement of well persons who may have been exposed to a communicable disease to see if they become ill. The word comes from italian quarantena meaning forty day period.

World Health Organization WHO:

- Established April 7, 1948
- HQ: Geneva
- Mandate: Steward for Global Public Health
- Governance: World Health Assembly – each member - state is a member with equal voting rights
- Executive Board: 34 members elected for 3 years by the WHA to run day - to - day operations of the WHO
- Director General: the Chief Executive elected by the EB and endorsed by the WHA

Role and Responsibility Of Who During Pandemic

During the pandemic, WHO continuously monitored the evolution of the pandemic, and developed guidance for Member States to put in place appropriate measures including enhanced surveillance and active monitoring, assessment of the pandemic characteristics, and recommendations on appropriate measures including medical and non - medical interventions.

WHO's risk assessments were balanced, independent and transparent. Daily updates, weekly surveillance overviews and guidance from WHO provided the basis for evidence - based decisions by the Member States, especially those with fewer resources to perform their own risk assessments.

UNICEF (United Nations Children's Fund)

- Established in 1946 with headquarter at New York.
- South east Asia region covers India.

Function

- UNICEF works in close collaboration with WHO & other UN agencies.
- Child nutrition & health
- Family & child welfare
- Education

UNDP (United Nation Development Program)

Established in 1966. OBJECTIVES To help poorer nations develop their human & natural resources more fully. It covers every social & economic sector - agriculture, industry, education, science, health & manpower.

UNFPA (United Nation Fund For Populations Activity)

UNFPA has been providing assistance to India since 1974.

Objectives

- Intensive development of health & family welfare.
- Improvement of rural health services.
- To develop national capability for introduction of innovative approaches to family planning.

FAO (Food And Agriculutural Organzation)

It was formed in 1945.

Aim

- To help nation wise living standard.
- To improve nutrition o the people of all countries.
- To increase the efficacy of farming, forestry & fisheries.

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- To better the condition of rural people & widen oppertunities of all people for productive work.

ILO (International Labor Organization)
In 1919. ILO was established.

Aim
- To improve the working & living conditions of working population all over the world.
- WORLD BANK PURPOSE TO develop less develop countries raise their living standard.

International Red Cross And Red Crescent Movement
World's largest humanitarian network with presence and activities in almost every country. The movement incorporates the Geneva based international committee of red cross and the international federation of red cross and red crescent societies as well as national societies in 178 countries Immediate and long term needs and include programme and services address:
- Emergency shelter food and medicine
- Water sanitation
- Restoring family contact for disaster victims
- Disaster preparedness
- Community based health and activities
- First aid training and activities
- HIV /AIDS prevention
- Blood donor recruitment, collection and
- Youth recruitment and volunteer activities Promotion of humanitarian values is an intrinsic part of all red cross and red crescent activities.

Pandemics
Pandemics are large - scale outbreaks of infectious disease that can greatly increase morbidity and mortality over a wide geographic area and cause significant economic, social, and political disruption.

Risks
- Pandemics have occurred throughout history and appear to be increasing in frequency, particularly because of the increasing emergence of viral disease from animals.
- Pandemic risk is driven by the combined effects of spark risk (*where* a pandemic is likely to arise) and spread risk (*how likely* it is to diffuse broadly through human populations).
- Some geographic regions with high spark risk, including Central and West Africa, lag behind the rest of the globe in pandemic preparedness.
- Probabilistic modeling and analytical tools such as exceedance probability (EP) curves are valuable for assessing pandemic risk and estimating the potential burden of pandemics.
- Influenza is the most likely pathogen to cause a severe pandemic. EP analysis indicates that in any given year, a 1 percent probability exists of an influenza pandemic that causes nearly 6 million pneumonia and influenza deaths or more globally.

Impacts
- Pandemics can cause significant, widespread increases in morbidity and mortality and have disproportionately higher mortality impacts on LMICs.
- Pandemics can cause economic damage through multiple channels, including short - term fiscal shocks and longer - term negative shocks to economic growth.
- Individual behavioral changes, such as fear - induced aversion to workplaces and other public gathering places, are a primary cause of negative shocks to economic growth during pandemics.
- Some pandemic mitigation measures can cause significant social and economic disruption.
- In countries with weak institutions and legacies of political instability, pandemics can increase political stresses and tensions. In these contexts, outbreak response measures such as quarantines have sparked violence and tension between states and citizens.

Mitigation
- Pathogens with pandemic potential vary widely in the resources, capacities, and strategies required for mitigation. However, there are also common prerequisites for effective preparedness and response.
- The most cost - effective strategies for increasing pandemic preparedness, especially in resource - constrained settings, consist of investing to strengthen core public health infrastructure, including water and sanitation systems; increasing situational awareness; and rapidly extinguishing sparks that could lead to pandemics.
- Once a pandemic has started, a coordinated response should be implemented focusing on maintenance of situational awareness, public health messaging, reduction of transmission, and care for and treatment of the ill.
- Successful contingency planning and response require surge capacity—the ability to scale up the delivery of health interventions proportionately for the severity of the event, the pathogen, and the population at risk.
- For many poorly prepared countries, surge capacity likely will be delivered by foreign aid providers. This is a tenable strategy during localized outbreaks, but global surge capacity has limits that likely will be reached during a full - scale global pandemic as higher - capacity states focus on their own populations.
- Risk transfer mechanisms, such as risk pooling and sovereign - level catastrophe insurance, provide a viable option for managing pandemic risk.

Knowledge Gaps
- Spending and costs specifically associated with pandemic preparedness and response efforts are poorly tracked.
- There is no widely accepted, consistent methodology for estimating the economic impacts of pandemics.
- Most data regarding the impacts of pandemics and the benefits and costs of mitigation measures come from high - income countries (HICs), leading to biases and potential blind spots regarding the risks, consequences, and optimal interventions specific to LMICs

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Consequences of Pandemics

Health Impacts

The availability of health care workers also decreases during a pandemic because of illness, deaths, and fear - driven absenteeism. Viral hemorrhagic fevers such as Ebola take an especially severe toll on health care workers, who face significant exposure to infectious material:

- *During the first Ebola outbreak* in the Democratic Republic of Congo in 1976 (then called Zaire), the Yambuku Mission Hospital—at the epicenter of the outbreak—was closed because 11 out of the 17 staff members had died of the disease (WHO 1978).
- *During the Kikwit Ebola outbreak in 1995* in the same country, 24 percent of cases occurred among known or possible health care workers (Rosello and others 2015).
- *During the 2014 West Africa Ebola epidemic*, health care workers experienced high mortality rates: 8 percent of doctors, nurses, and midwives succumbed to Ebola in Liberia, 7 percent in Sierra Leone, and 1 percent in Guinea (Evans, Goldstein, and Popova 2015).

Economic Impacts

Pandemics can cause acute, short - term fiscal shocks as well as longer - term damage to economic growth. Early - phase public health efforts to contain or limit outbreaks (such as tracing contacts, implementing quarantines, and isolating infectious cases) entail significant human resource and staffing costs. As an outbreak grows, new facilities may need to be constructed to manage additional infectious cases; this, along with increasing demand for consumables (medical supplies, personal protective equipment, and drugs) can greatly increase health system expenditures.

Social and Political Impacts

Evidence suggests that epidemics and pandemics can have significant social and political consequences, creating clashes between states and citizens, eroding state capacity, driving population displacement, and heightening social tension and discrimination.

Severe premodern pandemics have been associated with significant social and political upheaval, driven by large mortality shocks and the resulting demographic shifts.

Trends Affecting Pandemic Risk

In recent decades, several trends have affected pandemic probability, preparedness, and mitigation capacity. Various factors—population growth, increasing urbanization, greater demand for animal protein, greater travel and connectivity between population centers, habitat loss, climate change, and increased interactions at the human - animal interface—affect the likelihood of pandemic events by increasing either the probability of a spark event or the potential spread of a pathogen.

Pandemic Preparedness and Response Activities, by Time Period

Pre- pandemic period (before a pandemic starts)

- Stockpile building
- Continuity planning
- Public health workforce training
- Simulation exercises
- Risk transfer mechanism set - up
- Situational awareness[a]

Spark period (as a pandemic starts)

- Initial outbreak detection
- Pathogen characterization or laboratory confirmation
- Risk communication and community engagement
- Animal disease control
- Contact tracing, quarantine, and isolation
- Situational awareness[a]

Spread period (after a pandemic starts)

- Global pandemic declaration
- Risk communications
- Contact tracing, quarantine, and isolation
- Social distancing
- Stockpile deployment
- Vaccine or antiviral administration
- Care and treatment
- Situational awareness

Roles and Responsibility of International Health Agencies

Disaster management is a core function of public health law. National laws and emergency plans must take account of international obligations for the management of public health emergencies, including the International Health Regulations (2005) (IHR).

The purpose of the IHR is to prevent and manage the public health risks arising from the international spread of disease, while avoiding "unnecessary interference with international traffic and trade". ·

Important obligations that arise under the revised IHR include the following: · Each country is required to establish a National IHR Focal Point accessible at all times for communications with WHO. ·

Each country must develop and maintain the capacity to assess health risks within its territory and to notify WHO of all events that may constitute a public health emergency of international concern.

The International Health Regulations (2005)

- The legal obligation imposed on each country to notify WHO of events that may constitute a "public health emergency of international concern within its territory"
- The obligation of countries to "develop, strengthen and maintain" their national capacities to detect, assess, report and respond effectively to public health risks and emergencies
- The ability of the WHO Director - General to make non - binding, temporary recommendations to countries in whose territory a public health emergency of international concern has arisen.

International Health Emergency Health Plan

- Expand the health care or disaster management workforce by co - opting personnel from other agencies and jurisdictions under a unified command structure.

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- Seize property in order to establish emergency response centres and to ensure the availability and rapid distribution of pharmaceuticals and supplies.
- Conduct surveillance and mandate vaccinations, treatment, isolation or quarantine of infected or potentially infected individuals.

Emergency Health Work Force

1) Protection of individuals.
2) Licensing and appointment of health personnel. During a state of public health emergency, the state or local public health agency is authorized:
   a) Health care providers. To require in - state health care providers to assist in the performance of vaccination, treatment, examination, testing, decontamination, quarantine, or isolation of any individual as a condition of licensure, authorization, or the ability to continue to function as a health care provider in this state.
   b) Health care providers from other jurisdictions. To appoint and prescribe the duties of out - ofstate emergency health care providers (with proof of current licensure in their state) as may be reasonable and necessary to respond to the public health emergency.
3) The appointment of out - of - state emergency health care providers shall not exceed the termination of the declaration of a state of public health emergency. The state or local public health agency may terminate the out - of - state appointments at any time or for any reason provided that any such termination will not jeopardize the health, safety, and welfare of the people of this state.
4) The state public health agency may waive any or all licensing requirements, permits, or fees required by state code and applicable orders, rules, or regulations for health care providers from other jurisdictions to practice in this state
5) Any out - of - state emergency health care provider appointed pursuant to this Section shall not be held liable for any civil damages as a result of medical care or treatment related to the response to the public health emergency unless such damages result from providing, or failing to provide, medical care or treatment in the event of gross negligence or willful misconduct.

Control of premises, facilities and supplies

Management of property.

1) **Emergency Measures Concerning Facilities and Materials**. During a state of public health emergency, the state or local public health agency is authorized:
2) **Close facilities.** To close, direct, and compel the evacuation of, or decontaminate or cause to be decontaminated any facility of which it has reasonable cause to believe that it may endanger the public's health.
3) **Use of materials and facilities**. To procure, by condemnation or otherwise, construct, lease, transport, store, maintain, renovate, or distribute materials and facilities as may be reasonable and necessary to respond to the public health emergency, with the right to take immediate possession thereof. Such materials and facilities include communication devices, carriers, real estate, fuels, food, and clothing.
4) **Use of health care facilities**. To require a health care facility to provide services or the use of its facility if such services or use are reasonable and necessary to respond to the public health emergency as a condition of licensure, authorization or the ability to continue doing business in the state as a health care facility. The use of the health care facility may include transferring the management and supervision of the health care facility to the state or local public health agency for a limited period of time
5) **Destruction of materials.** To decontaminate or cause to be decontaminated, or destroy, any material of which it has reasonable cause to believe that it may endanger the public's health.
6) **Control of materials.** To inspect, control, restrict, and regulate by rationing and using quotas, prohibitions on shipments, allocation, or other means, the use, sale, dispensing, distribution, or transportation of food, fuel, clothing and other commodities, as may be reasonable and necessary to respond to the public health emergency.
7) Control of Health Care Supplies.
   a) **Procurement**. During a state of public health emergency, the state or local public health agency may purchase and distribute anti - toxins, serums, vaccines, immunizing agents, antibiotics, antidotes, and other pharmaceutical agents, medical supplies, or personal protective equipment to prepare for or control a public health emergency.
   b) **Rationing**. Where a state of public health emergency results in a state - wide or regional shortage or threatened shortage of any product under subsection (1), whether or not such product has been purchased by the agency, the agency may control, restrict, and regulate by rationing and using quotas, prohibitions on shipments, allocation, or other means, the use, sale, dispensing, distribution, or transportation of the relevant product. In making rationing or other supply and distribution decisions, the agency may give preference to health care providers, disaster response personnel, and mortuary staff.
   c) **Distribution.** During a state of public health emergency, the agency may store or distribute any anti - toxins, serums, vaccines, immunizing agents, antibiotics, antidotes, and other pharmaceutical agents, personal protective equipment, or medical supplies located within the state as may be reasonable and necessary to respond to the public health emergency, with the right to take immediate possession.

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