Pandemic Influenza:

CHARACTERISTICS & CHALLENGES

A pandemic is a global disease outbreak. An influenza pandemic occurs when a new influenza virus emerges for which there is little or no immunity in the human population, begins to cause serious illness and then spreads easily person-to-person worldwide.

Historically, the 20th century saw three pandemics of influenza:

- 1918 influenza pandemic caused at least 500,000 U.S. deaths and up to 50 million deaths worldwide
- 1957 influenza pandemic caused at least 70,000 U.S. deaths and 1-2 million deaths worldwide
- 1968 influenza pandemic caused about 34,000 U.S. deaths and 700,000 deaths worldwide

Characteristics and Challenges in a Pandemic:

1. There Will Be Rapid Worldwide Spread
   - When a pandemic influenza virus emerges, its global spread is considered inevitable.
   - Preparedness activities should assume that the entire world population would be susceptible.
   - Countries might, through measures such as border closures and travel restrictions, delay arrival of the virus, but cannot stop it.

2. Health Care Systems Will Be Overloaded
   - Most people have little or no immunity to a pandemic virus. Infection and illness rates soar. A substantial percentage of the world’s population will require some form of medical care.
   - Nations unlikely to have the staff, facilities, equipment and hospital beds needed to cope with large numbers of people who suddenly fall ill.
   - Death rates are high, largely determined by four factors: the number of people who become infected, the virulence of the virus, the underlying characteristics and vulnerability of affected populations and the effectiveness of preventive measures.
   - Past pandemics have spread globally in two and sometimes three waves.

3. Medical Supplies Will Be Inadequate
   - The need for vaccine is likely to outstrip supply.
   - The need for antiviral drugs is also likely to be inadequate early in a pandemic.
   - A pandemic can create a shortage of hospital beds, ventilators and other supplies. Surge capacity at non-traditional sites such as schools may be created to cope with demand
   - Difficult decisions will need to be made regarding who gets antiviral drugs and vaccines.

4. There Will Be Economic and Social Disruption
   - Travel bans, closings of schools and businesses and cancellations of events could have major impact on communities and citizens.
   - Care for sick family members and fear of exposure can result in significant worker absenteeism.

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