



# OVERVIEW OF INFLUENZA (FLU) IN OLDER ADULTS

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# FLU: DO WE NEED TO APPROACH OLDER ADULTS DIFFERENTLY?

**Senior citizens=>65years**

- Now and future of aging
- Elderly characteristics
- Flu definition
- Flu outbreak history - epidemiology
- Flu burden: aging
- Flu vaccine coverage





# ELDERLY FUTURE

- The world is ageing rapidly. According to United Nations population projections:
- Between 1974 and 2024 (50yrs), the worldwide share of people aged 65 almost doubled – increasing from 5.5% per cent to 10.3%.
- **Between 2024 and 2074 (40yrs)**, this number will double again, increasing to 20.7%.
- During the same time, the number of persons aged **80 and above** is projected to more than triple.
- Developed countries have the highest share of older persons, **developing countries** are often witnessing a rapid rate of population ageing, leaving many ill prepared for the new realities.



# The Growth of Aging Population in Iran: An Achievement or a Challenge?

Bakhtiar Pirooz, Amjad Mohamadi-Bolbanabad & Azad Shokri

Pages 711-714 | Published online: 10 Apr 2024

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## An Achievement or a Challenge?

- **Mean age: 32 yrs**
- **Elderly rate:**
  - ❖ **2016: 9/5%      2024: 11%**
  - ❖ **2030: 15%**
  - ❖ **2050: 30% doubling time 20y**



# WORLD POPULATION AGEING 2019 HIGHLIGHTS:

## BUILD A LARGER, STRONGER AGING SERVICES WORKFORCE



### The world is ageing rapidly & need infrastructure

- Policy implications for achieving the **Sustainable Development Goals**
  - A.** Population ageing seen from a **conventional perspective/health**: the old-age dependency ratio
  - B.** Measuring population ageing considering remaining years to live: The prospective **old-age dependency** ratio
  - C.** Measuring population ageing from an **economic perspective**: The economic old age dependency ratio
  - D.** How does population ageing affect **assets, transfers and work**?



# INTRODUCTION:



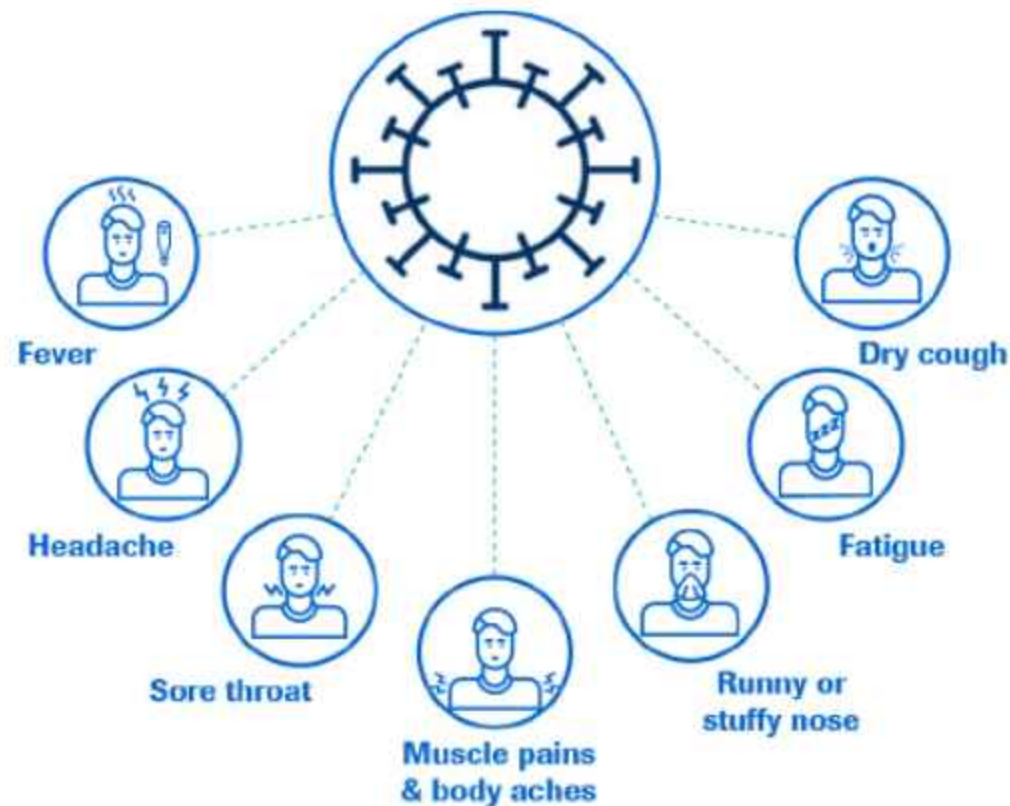
## WHO definition of flu:

Major acute respiratory viral infection caused by influenza A (adult & child) or B viruses

- **Seasonal outbreaks**
- **Affect 2–10% population a year**

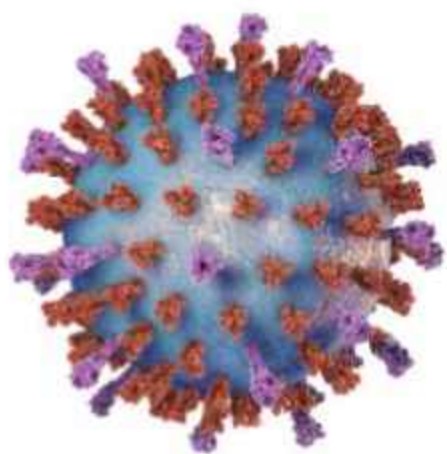
Seasonal influenza is an acute respiratory infection caused by different types and subtypes of influenza viruses.

## SYMPTOMS OF INFLUENZA





# ANNUAL SEASONAL FLU OUTBREAKS CAUSED BY INFLUENZA A AND B VIRUS INFECTIONS



INFLUENZA-A



INFLUENZA-B

The most seasonal flu epidemics

## ▪ Origins of influenza:

**When did the influenza virus first infect humans?** Some scientists hypothesize that humans probably acquired influenza when they began **domesticating animals like birds and pigs**. The rise of agriculture and permanent settlements provided ideal conditions to trigger a flu epidemic.

The regions of North America, Europe, East Asia, and South Africa have higher influenza activity during the **winter**.

In tropical and subtropical regions, the influenza pattern is less predictable and can occur **year-round, often with multiple peaks**.

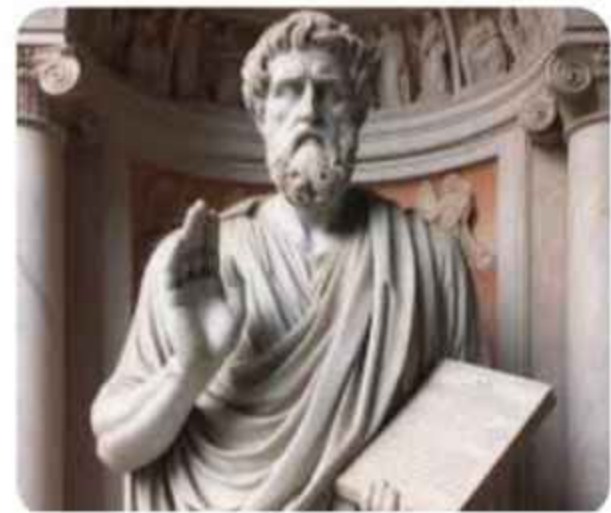




## 412BC -Early evidence of influenza

**While the flu has most likely been around for ages, no definitive historical records exist.**

In his sixth book of “Epidemics,” the Greek physician **Hippocrates** describes a highly contagious disease with flu-like symptoms. Modern doctors believe this may be the first reference of influenza (412BC).





# FLU HISTORY: INFLUENZA TERM & FIRST PANDEMIC



- 14<sup>th</sup> century- 1357 “La influenza” is coined:

La influenza comes from Italian, meaning "**visitation**" or "**influence**." epidemic in Florence, Italy “influenza di freddo,” which translates to “cold influence.”

Many astrologers in the Middle Ages believed that the **periodic return of the disease** was related to the "influence of heavenly bodies" or "influenza di stelle," meaning "influence of the stars.”

- 16<sup>th</sup> century-1538 “The first flu pandemic”:

Most epidemiologists agree that the 1580 influenza outbreak is the earliest recorded flu pandemic. It began in Asia during the summer before spreading to Africa, Europe, and eventually across the seas to the Americas. While the total death toll is unknown, it killed 8,000 people in Rome.



# FLU HISTORY



## 18<sup>th</sup> century



- **1729 “The first influenza pandemic”**: t from Russia to Europe within 6-m -3 years.
- **1781**: China, spread to Russia, eventually reaching Europe and North America over the next year. 30,000 every day in St. Petersburg.

## 19<sup>th</sup> century

- **1830**: ships from China to the Philippines, India and Indonesia. After crossing Russia to Europe, it eventually reached North America. Mortality rate was low, impacted 20%–25% population.
- **1889: “First modern flu pandemic”**:
  - deadliest pandemics in history, the so-called Russian Flu
  - **infected 40% of the world’s population** and **killed about 1 million** people. Rapidly spread around the whole world due to the modern transport infrastructure of railroads and transatlantic sea travel.

