THE EXCITING JOURNEY FROM FLU VIRUS TO VACCINE

INFLUENZA

5-10% adults and 20-30% children worldwide are affected.

Viruses change constantly.

START OF THE FLU VACCINE PRODUCTION

NORTH: FEBRUARY

SOUTH: SEPTEMBER

NATIONAL INFLUENZA CENTERS FROM OVER 100 COUNTRIES SEND VIRUS SAMPLES TO "6 WHO" COLLABORATING CENTERS.

A STRAIN FROM A HUMAN PATHOGEN IS IDENTIFIED, BEFORE MANUFACTURING STARTS.

MORE THAN 90% OF THE WORLD VOLUME OF INFLUENZA VACCINES IS PRODUCED IN 6645, BUT OTHER APPROACHES ARE ALSO USED, E6 CELL CULTURE AND RECOMBINANT TECHNOLOGY.

WHO GLOBAL INFLUENZA SURVEILLANCE AND RESPONSE SYSTEM (GISRS)

FLU VACCINE MANUFACTURERS

COLD CHAIN WITH 4°C

MANUFACTURERS, GOVERNMENTS, INTERNATIONAL ORGANIZATIONS, AND CIVIL SOCIETY

QUALITY CONTROL

POULTRY FARMS

QUALITY RELEASE

Egg Reception

Incubation

Harvest

Antigen Storage

Antigen Extraction

Formulation

TAKES 7 TO 10 DAYS FOR EACH SINGLE STRAIN BATCH FROM INOCULATION TO ANTIGEN STORAGE

IN MOST CASES THE VIRUS IS KILLED BY A CHEMICAL PROCESS AND THEN PURIFIED. SOME MANUFACTURERS USE WEAK VERSIONS OF THE VIRUS THAT CAN'T CAUSE INFECTION. IN BOTH CASES, VACCINE SAFETY HAS BEEN DOCUMENTED.

NORTH: AUGUST

SOUTH: MARCH

QUALITY CONTROL

QUALITY RELEASE

QUALITY CONTROL

QUALITY RELEASE

QUALITY CONTROL

QUALITY RELEASE

QUALITY CONTROL

QUALITY CONTROL

QUALITY CONTROL

QUALITY CONTROL

QUALITY CONTROL

FORMULATION

INOCULATION

ANTIGEN STORAGE

ANTIGEN EXTRACTION

FORMULATION

FILLING VIALS AND SYRINGES

VISUAL INSPECTION

PACKAGING

RELEASED BY HEALTH AUTHORITIES

Distribution

START OF THE FLU SEASON

NORTH: CIRCA OCTOBER

SOUTH: CIRCA MAY

INTERNATIONAL FEDERATION OF PHARMACEUTICAL MANUFACTURERS & ASSOCIATIONS

IFPMA

HIGH PRIORITY GROUPS FOR FLU VACCINATION:

- CHILDREN AGED 6-23 MONTHS
- PREGNANT WOMEN
- ELDERLY
- HEALTHCARE WORKERS
- INDIVIDUALS WITH SPECIFIC CHRONIC MEDICAL CONDITIONS

1. WHO/UNICEF INFLUENZA VACCINES, NOVEMBER 2010