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Epidemics in Cuban Public Health History
First epidemics: XVI and XVII centuries

1521 First known epidemics:
  smallpox 1530, 1570, 1598
  measles 1598
not well defined epidemic 1603
  measles 1637
yellow fever 1649, 1452, 1658, 1677, 1693 (the highest mortality rate: 121, 72/1000)
XVIII Century

1727, 1730 measles
1730, 1770 smallpox
1738, 1742, 1761, 1764, 1782, 1794 yellow fever
1783 dengue
Epidemics in the XIX century

Small pox, yellow fever, malaria, typhoid fever were constant

Dengue, 1828
Cholera, 1833, 1857 and 1871
First Cuban medical journal
1840
CARLOS J. FINLAY AND BARRES

MOST IMPORTANT CUBAN EPIDEMIOLOGIST
FOUNDER OF THE CUBAN SANITARIAN SCHOOL

OPHTHALMOLOGIST

WORKED DURING THE CHOLERA EPIDEMIC OF 1867

DEVELOPED THE METAXENIC THEORY OF DISEASE TRANSMISSION (VECTOR TRANSMISSION).
PASTEUR: MICROBIOLOGY (France)
Foundation of a HISTOBACTERIOLOGICAL LABORATORY (1887) with the following profiles:

- **BACTERIOLOGY**
  - Serum therapy
  - INTRODUCED ANTIRABIC VACCINATION (1887)
  - anti diphtheria serum (1895)
YELLOW FEVER

FINLAY: Development of the Metaxenic Theory for disease transmission (Vector Transmission) 1881.
1894 Rules for eradication of the yellow fever

Verified by the IV Study Commission of the U.S. Army for yellow fever 1900.
After applying Finlay’s ideas for the eradication of the yellow fever, mortality rate became zero in 1902-1904.
The epidemics reappeared in 1905 and it was finally eradicated 1908
Epidemics of the XX century

- Yellow fever controlled since 1905
- Small pox controlled since 1923
- Bubonic plague 1912, controlled since 1914
- Poliomyelitis controlled since 1962
- Malaria controlled since 1967
- Chicken pox, Measles, German measles, Tiphoid fever, almost eradicated
- Influenza
- Hepatitis
- Dengue
- AIDS
1959: CUBAN REVOLUTION

- THE HEALTH SYSTEM WAS TRANSFORMED
- HEALTH PREVENTION AND PROMOTION
- GREAT ACHIEVEMENTS
1962 National Immunization Program

Hygiene and Epidemiology 1st Forum: development of new disease control programs epidemiological campaigns against malaria, poliomyelitis, etc.

Two large national immunization campaigns 1962
Phases of the program:

1. preparatory phase
2. Attack Phase
3. Consolidation phase
4. Maintenance Phase

Measures to prevent reintroduction.
Autoctonous malaria
CUBA 1962-1970

Thousands of cases

Fuente: Dirección Nacional de Estadísticas. MINSAP
• 1st Poliomyelitis Vaccination Campaign in two stages, with one-week and 6-week intervals between them

The campaign involved more than 100 000 health officials and was supported by community committees

2,216,022 children under 15th (86.0% coverage) were immunized
MORBILITY RATES FOR POLIOMYELITIS
CUBA, 1951-2000

TASA X 100,000 HAB.

FUENTE: DIR.NAC.DE ESTADISTICAS
• In October 1962 to February 1963
  1st Vaccination Campaign against Diphtheria, Tetanus, and Pertussis
  432,937 children under 6 were immunized with Triple Vaccine (DPT) (47.7% coverage)

  788,844 children under 10 were immunized with Duplex vaccine (DT) (50.6% coverage)

  1,185,428 children under 15 were immunized with Tetanic Toxoid vaccine (51.1% coverage)
• Fight against neonatal tetanus began in 1962. Vaccination of pregnant women with two doses of TT

• Intensified vaccination of newborn children with BCG in maternity hospitals

• Vaccination campaign against measles in 1971 for children from 6 months to 5 years old
• Rubella vaccination began in 1982 for girls in 7th, 8th and 9th grades

• After that, in the 7th grade as a long-term (20 years) to eradicate the congenital rubella syndrome
TASAS DE MORBILIDAD RATES FOR DIPHTERIA
CUBA 1962-2000

FUENTE: DIR.NAC.DE ESTADISTICAS
MORBILITY RATES FOR MEASLES
CUBA 1962-2000

TASA X 100,000 HAB.

FUENTE: DIR.NAC.DE ESTADISTICAS
MORBILITY RATES FOR RUBELLA
CUBA 1968-2000

TASA X 100,000 HAB.

FUENTE: DIR.NAC.DE ESTADISTICAS
MORBILITY RATES FOR PAROTIDITIS
CUBA 1968-2000

TASA X 100,000 HAB.

FUENTE: DIR.NAC.DE ESTADISTICAS
MORBILITY RATES FOR MENINGOENCEFALITIS POST-PAROTIDITIS
CUBA 1964-2000

TASA X 100,000 HAB.

FUENTE: DIR.NAC.DE ESTADISTICAS
MORBILITY RATES FOR NEONATAL TETANUS
CUBA 1964-2000

FUENTE: DIR.NAC.DE ESTADISTICAS
MORBILITY RATES FOR MENINGOCOCCAL DISEASE

CUBA 1962-2000

TASA X 100,000 HAB.

FUENTE: DIR. NAC. DE ESTADISTICAS
MORBILITY RATES FOR HEPATITIS B
under 15 years old
CUBA 1992-2000

TASA X 100,000 HAB.
Incidencia Varicela. Cuba

Tasas

Fuente: MINSAP
AIDS

1983 Measures to prevent spread if AIDS entered the country.
1986 first reported case.
1986 National Control Programme HIV - AIDS.
Sanatorium care regime
1993 outpatient care regime
2000 cumulative 3,200 cases with HIV and sick.
Deceased: 820
Incidencia SIDA. Cuba

Tasa


0 5 10 15 20 25 30 35 40 45 50

Fuente: DNE
MORBILITY AND MORTALITY RATES FOR TB. Cuba 1960-2012

Actualization of the program NCPT
MORBILITY RATES FOR PERTUSIS
CUBA 1962-2000

TASA X100 000 HAB.

FUENTE: DIR.NAC.DE ESTADISTICAS
Leprosy prevalence rates. Cuba, 1988-2012

Tasas x 10 000 hab

Tasas 5,6 4,2 2,9 2 1 0,8 0,7 0,6 0,6 0,5 0,5 0,4 0,4 0,2 0,2 0,2 0,2 0,2 0,3 0,3 0,3 0,3

1988 beginning MT

Eliminated as Public health Problem

Fuente: Registros DNE

*Meta para los países de la Región en el 2015
Incidencia Hepatitis. Cuba

Fuente: MINSAP
Infant mortality

- Rate x 1000

- 1958: 60
- 2012: 4.6

Rate 4.1, 2013