

PRIN – COMPLETE REVIEWER

History and Development of Medical Technology in the Philippines

SPANISH OCCUPATION – 16TH CENTURY

- Spain occupied Luzon and made Manila the capital.
- Hospital Real (1565): First Spanish hospital, founded in Cebu and later moved to Manila for military patients.
- Religious orders: Spread Catholicism and established hospitals and schools.

EARLY HOSPITALS – SPANISH OCCUPATION

- San Lazaro Hospital (1577) – for the poor and lepers; run by the Franciscans.
- Hospital de San Juan de Dios (1596) – for poor Spaniards.
- Hospital de San Jose, Cavite (1641).
- Hospital de Naturales.
- Hospital de la Misericordia.
- Hospital de San Pedro Martir.
- Hospital de San Gabriel.

UNIVERSITY OF SANTO TOMAS (UST)

- Founded by the Dominicans in 1611.
- Established the Philippines' first faculties of Medicine and Pharmacy in 1871.

SCIENTIFIC AND MEDICAL JOURNALS

- Boletín de medicina de Manila (1886)
- Revista farmaceutica de Filipinas (1893)
- Crónicas de ciencias medicas (1895)

SPANISH HEALTH DEVELOPMENTS

- 1806: Central Board of Vaccination began producing and distributing vaccines.
- 1876: Médicos titulares (provincial medical officers) were appointed.
- 1883: Board of Health and Charity was established; expanded in 1886.
- 1887: Laboratorio Municipal de Manila was established for testing food, water, and clinical samples.
- Healthcare services were rarely used, mainly during disease outbreaks.

GEN. ANTONIO LUNA

- 1894: Worked as a chemical expert at the Laboratorio Municipal de Manila.
- Pioneered environmental studies, water testing, and forensic science.

END OF SPANISH COLONIAL RULE

- Modern structures were emerging by the end of Spanish colonial rule.
- Spanish authorities began applying new knowledge about microbial causes of disease.

- After the Spanish-American War (1898), Spain ceded ownership of the Philippines to the US.
- The 1896 Philippine Revolution was not recognized by Spain and the US, leading to the Philippine-American War (1899–1902).
- The war caused the Spanish health system to break down completely.

AMERICAN OCCUPATION

- August 1898: Lt. Col. Henry Lippincott converted the military hospital into the First Reserve Hospital after the fall of Manila.
- Charles R. MacVay III contracted typhoid fever and died about 2 months after starting his work.
- Richard P. Strong performed autopsies and made cultures of blood, feces, and urine.
- July 1901: Philippine Commission established the Bureau of Government Laboratories through Act No. 156.
- Initially consisted of biological and chemical sections, a science library, and a serum laboratory for vaccine production.
- Biological laboratory: investigated causes, pathology, diagnosis, and control of diseases.
- Chemical laboratory: investigated food, drugs, plants, and mineral resources.

PAUL C. FREER

- First director of the Bureau.
- 1904: An equipped laboratory was built with microscopes, incubators, sterilizers, microtomes, glassware, stains, chemicals, and small animals.
- Ground floor: A room was used for preparing culture media, with steam provided for sterilizers and autoclaves.
- The building was destroyed during World War II.
- The site is now occupied by UP Manila – National Institutes of Health.

1905 – BUREAU OF SCIENCE

- Bureau of Science was created.
- Worked with the Army Board to study tropical diseases until it was disbanded in 1914.
- Became an active center for scientific instruction and research.
- Management was transferred to the American civil regime.

LABORATORY WORK

- Examined about 100 samples of body fluids and excretions daily.
- 1909: Received 701 blood, 900 urine, and 7,000+ fecal specimens.
- Studied: Cholera, Malaria, Tuberculosis, Leprosy, Dysentery, and Enteric fever.

BUREAU OF HEALTH / EDDIE GUY

- Civilian Board of Health was changed to the Bureau of Health.
- 1899: Board of Health started a municipal laboratory under W. V. Calvert.
- Worked on urinalysis in poisoning cases, drinking water analysis, and detection of harmful adulterations in food and drinks.
- Eddie Guy: First commissioner of the Board of Health.
- Added a Bacteriological Department to the municipal laboratory.
- 1915: Bureau was reorganized as the Philippine Health Service.
- 1933: Reverted to the Bureau of Health.
- 1940: Bureau of Health was reorganized as the Department of Public Health and Welfare.

- During this period, the Philippines was in the lead in public health.

UP COLLEGE OF PUBLIC HEALTH

- June 1927: Formally opened with the Certificate in Public Health Program.
- Aimed to provide formal training for medical officers in the Philippine Health Service.
- Originally called the School of Sanitation and Public Health.

JAPANESE OCCUPATION

- December 8, 1941: Surprise attack of Japan; just 10 hours after the attack on Pearl Harbor.

FUNCTIONS OF MT DURING THE TIME

- Routine water analysis.
- Special examination of meat, food, and dairy supplies.
- Investigation of epidemics and epizootics.
- Distribution of special reagents, solutions, culture media, and diagnostic biologicals not provided through routine channels.
- Performed serological, bacteriological, pathological, and chemical examinations for US Army medical units.
- Conducted post-mortem examinations.
- Collected and preserved pathological specimens of historical or educational value.

WORLD WAR II – MEDICAL LABORATORIES

- June 18, 1942: First laboratory unit deployed in the SWPA, arriving in Australia.
- Provided theater-wide laboratory services and sent mobile units and advance sections to New Guinea.
- Oct. 20, 1944: US forces landed in Leyte and successfully occupied the Philippine Islands.
- SWPA laboratories included the 3rd, 5th, and 8th Medical Laboratories and the 19th Medical General Laboratory.
- Nov. 12, 1944: The 27th Medical Laboratory joined the 19th Medical General Laboratory in Leyte and set up in Tacloban.
- 3rd Medical Laboratory and 363rd Medical Composite Detachment operated on Leyte.
- Jan. 9, 1945: US forces invaded Lingayen Gulf; the 26th Medical Laboratory arrived 12 days later.
- The 26th Medical Laboratory was the only lab unit in Luzon for the next 6 months.

1944–1945 – POSTWAR TRAINING

- 1944: Training of high school graduates started.
- June 1945: The 6th US Army, including personnel of the 26th Medical Laboratory, left the Philippines.
- The laboratory was endorsed to the Department of Health but was neglected.
- Dr. Alfredo Pio de Roda preserved the remnants of the 26th Medical Laboratory.
- Dr. Mariano Icasiano helped organize a new laboratory at Quiricada Street, Sta. Cruz, Manila. This became the Manila Public Health Laboratory.
- Training was conducted with Dr. Prudencio Sta. Ana.
- Trainees were mostly high school and paramedical graduates.
- There was no fixed training period and no certificates were issued.
- Dr. de Roda instructed Dr. Sta. Ana to prepare a 6-month formal syllabus.
- Dr. Tirso Briones later joined Dr. de Roda and Dr. Sta. Ana.

- 1954: A formal 4-year BS Medical Technology course was approved by the Bureau of Private Education.

MANILA SANITARIUM AND HOSPITAL (MSH)

- 1954: MSH became the first school of Medical Technology.
- Led by Mrs. Willa Hedrick, wife of Dr. Elvin Hedrick.
- The hospital started medical internship and residency training in Loma Linda University, California, USA.
- MSH School of Medical Technology was later absorbed by Philippine Union College (PUC) in Baesa, Caloocan City.
- Jesse Umali was the first graduate; later became an OB-gynecologist in the US.
- Dr. Antonio Gabriel and Dr. Gustavo Reyes offered Medical Technology as an elective for 4th- and 5th-year Pharmacy students at UST.
- Rev. Fr. Lorenzo Rodriguez later offered Medical Technology as a course at UST.
- June 17, 1957: A temporary permit was issued.

1961–1974 – RECOGNITION AND PROGRAMS

- June 14, 1961: Full recognition for the BS Medical Technology course was given to UST.
- More than 120 schools now offer Medical Technology programs in the Philippines.
- UP: Offers a similar program under BS Public Health.
- Postgraduate: UST, Philippine Women's University, University of San Agustin, and LPU offer MS Medical Technology.
- UP: Offers MS Public Health as a similar postgraduate degree.
- 1970: Lyceum of Batangas offered the BS Medical Technology program.
- August 20, 1974: Full recognition was given to Lyceum of Batangas by the Department of Education.
- Government Recognition No. 138, S. 1974.
- Julian Yballe – Director of Private Schools.
- Jose Manuel – Secretary of Education.

PROGRAMS

- BS Medical Technology

• AHSE (1998–2006)

- BS Medical Laboratory Science (2006–2011)
- BS Medical Laboratory Science (2012)
- Diploma in Phlebotomy (2012)

HISTORICAL MILESTONES IN MEDICAL TECHNOLOGY

- Anton van Leeuwenhoek – Father of Microbiology; improved the microscope.
- Edward Jenner (1796) – Discovered vaccination for smallpox; contributed to Immunology.
- Louis Pasteur (1857) – Successfully produced immunity in rabbits.
- Gregor Mendel (1866) – Established the laws of inherited characteristics through plant studies.
- Joseph Lister (1870) – Demonstrated that surgical infections are caused by airborne organisms.
- Marie François Xavier Bichat (1800) – Identified organs by their types of tissues; founded Histology.
- Agostino Bassi (1835) – Produced disease in worms by injecting organic material; beginning of Bacteriology.

- Robert Koch (1877) – Presented the first pictures of bacilli (anthrax) and later tubercle bacilli.
- Elie Metchnikoff (1886) – Described phagocytes in blood and their role in fighting infection.
- Ernst von Bergmann (1886) – Introduced steam sterilization in surgery.
- Karl Landsteiner (1902) – Identified and named the ABO blood groups.
- August von Wassermann (1906) – Developed immunologic tests for syphilis.
- Howard Ricketts (1906) – Discovered rickettsiae, microorganisms between bacteria and viruses.
- Hans Fischer (1929) – Worked out the structure of hemoglobin.
- Jonas Salk (1954) – Developed the polio vaccine.
- James Westgard (1973) – Introduced Westgard control rules for clinical laboratory quality control.