

# Colonial Adaptations in Tropical Asia: Spanish Medicine in the Philippines in the Seventeenth and Eighteenth Centuries

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## Introduction

The extent and sophistication of medical and pharmaceutical activities in the Philippine Islands in the seventeenth and eighteenth centuries were limited in scope due to certain physical factors and realities. The availability of medical supplies was dependent on the annual Manila-Acapulco Galleon Trade in which supplies were requested from Manila and filled in by the viceroy of Mexico.<sup>1)</sup> Certified physicians, surgeons, and pharmacists were limited to Manila as most were attached to the *Cuerpo Sanidad Militar*<sup>2)</sup> for the service of the insular government.<sup>3)</sup>

It was in this imposing reality of limited medical resources that the religious missionaries stepped in to fill in the void by serving as infirmarians, founding hospitals, and surveying the availability of herbal medicines and cures local to the islands. The friars were thus left to their dedication and diligence to survey the countryside for available cures, which were oftentimes practiced by the local *curanderos* or *mediquillos*.<sup>4)</sup> As such, the disciplines of “medicine” and “pharmacy,” though were developing as distinct sciences in Europe, became fused professions in practice in the Philippines. As such, the conceptual scope of this paper, “medical-pharmaceutical” is taken together because the religious missionaries and parish priests, in addition to their spiritual duties, ventured into this unavoidably inseparable line of work. Other than extensive pharmaceutical studies and work made by these missionaries, the friars also explored other available means of curing diseases and disabilities in such places as hot springs.

This paper thus explores the medical-pharmaceutical activities of dedicated missionaries, which in the seventeenth and eighteenth centuries, were the primary source of medical, surgical, and pharmaceutical science outside Manila. Why did the friars venture into medicine and pharmacy, and what was the existing state of public health and medicine during the period? This paper also outlines the prevailing discoveries and research made by the friars, and at the same time surveys the public health landscape of those centuries, a period when the Philippines was practically isolated from European medical and pharmaceutical science.

## Health Care during the Period: An Overview

The arrival of the of the Spanish colonisers in the Philippine Islands proved to be a public health disaster on their part given their inability to acclimatise to the tropical conditions.<sup>5)</sup> Diseases arising from what these Europeans perceived as oppres-

sive tropical climate and virtually alien ecological landscape plagued the ranks of the Spanish civil and military personnel assigned to the islands. Unfortunately, medical facilities and resources were limited to Manila as medical, surgical, and pharmaceutical needs depended on overseas supply transactions, specifically from New Spain. To make matters worse, the local population suffered from different kinds of ailments with which the Spaniards could offer abundant spiritual consolation but only limited physical respite. In this reality, alternative solutions had to be sought out.<sup>6)</sup>

Within the area of Manila and its surrounding districts, the Spanish missionaries, primarily the Franciscans, founded hospitals catered to the local population as the established royal hospitals in Manila and Cavite were solely reserved for Spanish patients (see Table 1).<sup>7)</sup> The Dominicans, having been charged with the conversion of the Chinese, founded a hospital for the use of the Chinese patients in the Parian district.<sup>8)</sup> The Franciscans also established hospitals in Laguna and in Nueva Caceres to cater to the needs of ailing Filipino patients (see Table 1).<sup>9)</sup>

The provincial health care system though of the early Filipinos for the most part of the early Spanish colonial period revolved and depended upon the ability of the local *curandero* or *matanda* to provide the necessary cure for ailing patients.<sup>10)</sup> At times, such cures proved effective enough. For the most part though, the therapeutic process involved supernatural invocations, which definitely incurred the disapproval of the religious missionaries. Nonetheless, the *padres* from the different religious orders sought an unofficial alliance with these local practitioners, learning from their arts, while officially condemning these *mediquillos* as superstitious quacks.

It was not long before the friars themselves mastered the herbal science they needed in order to apply such knowledge into practice as physicians to the people suffering from various diseases and/or disabilities. Other than botanical cures, the friars also utilised natural hydrotherapy and rudimentary surgery for their patients, although it must be understood that they were primarily spiritual ministers and not lay or secular-trained scientists or medical practitioners. For the most part of the seventeenth and eighteenth centuries, local medicine revolved around the parish priests and the local therapists.

### **Imported Drugs and Medicines**

The prevailing knowledge on medical and pharmaceutical science during the period depended on European-trained physicians and pharmacists who were mostly concentrated in Manila. Their knowledge thus required formulations obtainable from Europe or at least from Latin America. The geographic expanse of the Philippines from the west proved to be the greatest challenge that initially beset western-educated medical practitioners in the islands.

### **Drugs and Medicines Imported from Mexico**

Drugs and medicines were primarily imported from Mexico through the galleon trade. Ostwald C. Sales (2005) discusses amply in his article how drugs and medicine supplies were procured.<sup>11)</sup> The governor, as vice royal patron compiles the procurement lists sent by the religious, and sends these documents to the viceroy who

Table 1. Early Major Spanish Hospitals in the Philippines

<b>Hospital</b>	<b>LifeSpan</b>	<b>Administrators</b>	<b>Patients</b>	<b>Location</b>
<i>Hospital Real de Españoles</i> [Royal Spanish Hospital]	1577–1898	Franciscans (1577–1636, 1644–1704) lay or government (1636–1644, 1704–1898)	Spanish soldiers, sailors, and civilians	Manila
<i>Hospital de los Indios Naturales</i> [Hospital of Native Indians]/ <i>Hospital de Santa Ana</i> [St. Anne Hospital]	1578–1603 1603–present	Franciscans	Natives and foreigners who could not afford medical services at home	Manila
<i>Hospital de la Misericordia</i> [Mercy Hospital]/ <i>Hospital de San Juan de Dios</i> [St. John of God Hospital]	1578–1656 1656–present	Brotherhood of the Misericordia (1578–1656) B. San Juan de Dios (1656–1865) Daughters of Charity (1865–present)	Natives and foreigners who could not afford medical services at home	Manila
<i>Hospital de los Indios Naturales</i> [Hospital of Native Indians]/ <i>Hospital de San Lazaro</i> [Hospital of St. Lazarus]	1578–1603 1603–present	Franciscans (1578–1899)	leprosy patients	Manila
<i>Hospital del Espiritu Santo</i> [Holy Spirit Hospital]	1591–1662	Franciscans (1591–1636, 1640–1662) lay or government (1636–1640)	sailors, marines, ship-builders, carpenters, etc.	Cavite
<i>Hospital de Santiago</i> [St. James' Hospital]/ <i>Hospital de San Lazaro</i> [Hospital of St. Lazarus]	1611–1691 1873–present	Franciscans (1611–1691) lay or government (1873–present)	anyone	Naga
<i>Hospital de San Pedro Martir</i> [St. Peter the Martyr Hospital]/ <i>Hospital de San Gabriel</i> [St. Gabriel Hospital]	1587–1599 1599–1774	Dominicans (1587–1774)	Chinese	Manila Binondo
<i>Hospital de Nuestra Señora de las Aguas Santas de Mainit</i> [Our Lady of the Holy Waters Hospital]	1597–1727 1877–present	Franciscans (1597–1727) lay or government (1877–present)	selected patients determined to need baths as therapy	Laguna

Fernandez, *History of the Church in the Philippines, 1521–1898*, 64–68; Gutierrez, *The Archdiocese of Manila*, vol. I, 162–170; Sales, “Las Actividades Medicas,” 181; Pardo, “Informe que La Provincia Hizo al Rey Nuestro Señor al Parecer el Año de 1760, y se Encontro entro Otros Papeles de este Hospital, que Liberto el P. Presidente Fr. Ignacio Jauregui el Año de la Guerra. En San Gabriel hay un Traslado,” 516–517; Juan O. Mesquida, “The Misericordia of Manila: Founder and Patron of the Hospital de San Juan de Dios,” Angel Aparicio, O.P. ed., *Proceedings first International Conference on the History of Medicine in the Philippines*, (Manila: Miguel de Benavides Library, University of Santo Tomas, 2008), 88–92.

responds by fitting in boxes labelled as “drugs and medicines” as part of the return cargo of the galleon ships.<sup>12)</sup> Upon arrival in Manila, these supplies are appropriated among the religious who requested them in the first place.

Juan Maldonado de Puga (1742) reported that beginning from 1619, the Franciscans in charge of the Cavite hospital normally requested the following as medical

supplies.

a dozen blankets, a dozen cupping-glasses, two syringes, two pairs of Castilian scissors, two clasp knives, six lancets, two scarifiers; some wool for mattresses; two books, one entitled *De Medicina* [Of Medicine], by the author Barrios, and the other by Dioscorides; four arrobas of Castilian wine; a barrel of raisins and almonds; and half an arroba of Rosado sugar...<sup>13)</sup>

Such a procurement list can be confirmed from the complaint of Governor-General, Don Sebastian Hurtado de Corcuera against the Franciscans in his 1636 report to the king.<sup>14)</sup> The last part of procurement list appertains to the pharmaceutical supplies used in the missionary hospitals. One may wonder how these desserts were used as medicines. Sales (2005) clarifies the matter from his research in re-classifying the typical pharmaceutical cargoes sent from Acapulco into: grapes, oils, ointments, jams, and various medicines.<sup>15)</sup> It is quite certain that the wines were used by the priests for the masses offered, but these same wines may have also been used as medicines. The confectionaries and preserved fruits were apparently re-processed: grapes, peaches, raisins, jams, and sugars into various syrups, and almonds into oils and ointments.<sup>16)</sup> It is also worth noting that various medicinal preparations were made out of the simple ingredients procured from Mexico. Final-form drugs were also procured in the form of powders and pills.<sup>17)</sup>

However, it is doubtful whether such supplies sufficiently covered hospital patients. In 1594, Col. Hernando de los Rios (1594), steward of the Royal Spanish Hospital, presented the testimony of Fray Diego Muñoz, O.S.A. (1594) before an investigation initiated by Don Gomez Perez Dasmariñas.<sup>18)</sup> Fray Muñoz, O.S.A. (1594) stated that “since so many sick persons are treated in the said hospital, many drugs must necessarily be used which are not products of this country and which must be brought from Nueva España [New Spain or Mexico] and other regions.”<sup>19)</sup> Not surprisingly, the limited amount normally procured and the lack of systematic auditing eventually caused perennial problems. In 1636 for example, Don Sebastian Hurtado de Corcuera openly accused the Franciscans of graft relating to medical supplies and disenfranchised these religious from the royal hospitals for a time (see Table 1).<sup>20)</sup> Apart from these types of problems, the overseas transactions continued, as other sources of medicines were sought.

### **Drugs and Medicines Imported from Mainland Asia**

One cannot ignore the role of regional trade with China and Southeast Asian neighbours in the importation of Chinese remedies and other Asian medicines. From the report of Don Juan Grau y Monfalcon (1637), he stated that “valuable drugs” were obtained from the king of Cambodia in 1600.<sup>21)</sup> From this, it is not difficult to surmise that similar transactions involving the importation of drugs and medical supplies with developed neighbouring Southeast Asian polities such as Siam and Viet Nam transpired at certain times.

Aside from such transactions, it is most likely that the Chinese, age-old apothecaries in Asia, were tapped to augment the medical needs.<sup>22)</sup> Domingo de Salazar,

O.P., Bishop of Manila, reported in 1590 that the Chinese in the Parian<sup>23)</sup> had numerous shops advertising doctors and apothecaries.<sup>24)</sup> He even added that a Chinese convert, a physician and herbalist was hired by the Dominicans into the Chinese hospital.<sup>25)</sup> From Bishop Salazar's report, it may be inferred that at least in the Dominican hospital in the Parian, Chinese drugs and medicines may have most likely been used. In general though, the purchase and usage of Chinese medicines depended upon the volition of individual patients, be they Spanish, Filipino, or Chinese, as there are no conclusive reports of their widespread usage in the other hospitals in and around Manila.

### **Friar Works on Local Remedies**

Recognising the overwhelming reality of the lack of medical and pharmaceutical supplies and professionals, many religious missionaries thus surveyed the countryside cataloguing the botanical landscape with the objective of discovering and using alternative cures. The painful reality of the lack of medical supplies was felt in the rural areas, among numerous patients who did not possess the ability to travel to the metropolis to seek the aid of Spanish physicians.<sup>26)</sup> The easiest recourse for the poor patients was to seek traditional therapy provided by the local *matanda*<sup>27)</sup> or the *mediquillo*, who from the point of view of the Spaniards, were inaccurate therapists, and at times opportunists and scallywags.<sup>28)</sup> It is from these same *curanderos* and with the desire to aid the impoverished sick, with which the friars would develop a state-of-the-art medical and pharmaceutical science unique to the islands during the period.

### **Curandero Art becomes Missionary Medicine**

Fr. Pedro Chirino, S.J. (1604) indirectly attested to the wealth of pharmaceutical resources available in the islands when he stated that it was "the very desire to secure drugs that caused the Spaniards, or Castilians, to discover and settle the Filipinas."<sup>29)</sup> Medicinal plants were known to be abundant in the Philippine islands, but their proper usage was originally a mystery wielded by the local traditional healers. The Spaniards used the umbrella term "*curandero*" to refer to the local traditional healers who used herbology, hydrotherapy, massage therapy, and divination as methods to cure ailing patients. They were sometimes interchangeably referred to as *mediquillos*, a generic term applied to individuals who had a trickling of western medical training and experience, could prescribe medicines, but devoid of the supernatural healing feature.<sup>30)</sup> The apparent need of the friars to learn the healing arts went to certain extents as necessitated. In Leyte, Fr. Cristobal Enriquez, S.J. studied from the local practitioners by generously paying them, short of bribing them.<sup>31)</sup> For the time being, the parish priests became interns and partners of the *curanderos*, *herbolarios*, *matandas*, and/or *mediquillos* in the quest to provide alternative healing solutions to suffering patients in the rural areas.

The missionaries, and later the parish priests, recognised the potency of the *curanderos'* art of healing in most areas except the supernatural part. In his missionary journeys, Fr. Francisco Ignacio Alcina, S.J. (1669) had resigned to the conclusion that certain supernatural abilities wielded by some local individuals were most likely

the result of pacts with the devil.<sup>32)</sup> Nonetheless, it is the same Father Alcina, S.J. (1669) who forged a friendly relationship and understanding with the local herbalists to study the medicinal qualities of various plants in the Samar and Leyte islands.<sup>33)</sup> In at least three chapters of his book on the history of the Visayan peoples, he was able to identify and characterise the therapeutic as well as the poisonous qualities of trees and plants. From this account, the methods and sources of the religious' studies of the medicinal qualities of various plants become clear. The friars did not necessarily supplant the *curandero*, but rather secularised their healing arts for these to become palatable to the ecclesiastical authorities and thereby proceed unquestionably, with the motive of filling in the gap made by the lack of medical professionals and supplies. Jose P. Bantug (1951) and Sixto de los Angeles (1935) identify this period in the development of local indigenous medicine as the "empiric period" with the evolution from the mythical and supernatural aspect of healing.<sup>34)</sup>

### **Botany and Herbal Medicine**

The most accepted aspect of traditional indigenous healing arts was herbal therapy or opotherapy. From this, the *padres* explored the tropical botanical landscape. The first recorded missionary to identify and record the medicinal qualities of plants was Fr. Blas de la Madre de Dios, O.F.M., who in 1611, recorded them in his *Flora de Filipinas* [Philippine Plants] and later *Tratado de Medicina Domestica* [Treatise on Domestic Medicine], based on his studies and works in Cagayan.<sup>35)</sup> Given the Franciscans' preponderant affinity towards health care, Father De la Madre de Dios, O.F.M.'s pioneering initiative served as a guide post for other religious orders also working to catalogue the medicinal properties of various plants and minerals. Fr. Jose de Valencia, O.F.M. followed up from the work of Father De la Madre de Dios, O.F.M. along similar botanical lines.<sup>36)</sup>

From this point, the friars' works of studying and compiling the botanical and pharmaceutical properties of herbal plants blurred the distinction between the sciences of botany, pharmacology, and medicine. The friars, primarily serving as spiritual ministers also became doctors of the body as the priest-botanists also doubled as physician-pharmacists and at times surgeons. Such a reality existed in far-flung rural areas where afflicted patients had no access to Spanish medicine, and most likely, discredited the efficacy of the local *curandero* or *mediquillo*. A Recollect priest, Fr. Miguel Aganduru, tried to answer the call of charity as early as the 1620s by writing the 142-page *Manual de Medicinas Caseras para Consuelo de los Pobres Indios* [Medical Manual to aid the Poor Indians] with the intention of helping ill patients, ordinary Filipinos (assuming they could read Spanish) who could not afford Spanish medicine.<sup>37)</sup> In most cases though, priests-botanists-physicians were originally untrained in the natural sciences, but their conviction to aid those in need is already a testament to their accomplishments.<sup>38)</sup>

However, not all of the missionary friars assigned to the Philippines were originally untrained in the natural sciences. Bro. Georg Joseph Kamel, S.J., a Moravian Jesuit missionary sent to the Philippines in 1688 had a prior training as an infirmarian and pharmacist in Bohemia.<sup>39)</sup> Unlike the other European-trained physicians and pharmacists sent to Manila, Brother Kamel, S.J. did not reject traditional

medicine in the Philippines, and used this indigenous wisdom to improve his career as pharmacist and physician, even becoming a botanist. He recognised the futility of limited western medicine and resorted to studying the botanical landscape, and later mastering the local pharmacopoeia. Fusing his prior medical training, pharmaceutical skills, and botanical curiosity, Brother Kamel, S.J. shortly became the authority on indigenous medicine from his small clinic in the *Universidad de Manila* [University of Manila].<sup>40)</sup> His charitable work as a physician-pharmacist became renowned all over the Philippines as his volumes of botanical research sent from the Philippines circulated among the scientific circles in England and stirred the intellectual curiosity of the western Europeans.<sup>41)</sup>

Such dedication and sheer genius, badly needed in the Philippines, was almost beyond compare as admitted by his successor, Fr. Paul Klein, S.J.<sup>42)</sup> However, Father Klein, S.J. also went beyond the limits required of him, for in 1712 he also published his own pharmaceutical tracts, but the intended readers were not the Europeans but the ordinary Filipinos in remote areas. His work, entitled *Remedios faciles para diferentes enfermedades por el P. Pablo Clain de la Compania de Jesus para el alivio, y Socorro de las PP. Ministros Evangelicos de las Doctrinas de los Naturales* [Easy Remedies for Different Illnesses by Fr. Paul Klein, S.J., to Assist Ministers Evangelising the Natives] was finished in 1708 and copies were circulated widely before it was officially published.<sup>43)</sup> The difference in Father Klein, S.J.'s work was that it served as a manual of medicine meant to be accessible and comprehensible, similar to the objective in the 1620s of Father Aganduru. Another was that, Father Klein, S.J. also ventured into the then futile science of surgery, somehow deviating from the usual herbal therapeutics championed by his predecessors.<sup>44)</sup>

The very idea that knowledge accumulated by the religious missionaries in their botanical and pharmaceutical explorations must be shared to everyone thus became the dictum of the eighteenth century. A Dominican priest, Fr. Fernando de Santa Maria, O.P., published a work of more than thirty years (1730–1768), *Manual de Medicinas Caseras para Consuelo de los Pobres Indios en las Provincias y Pueblos donde no hay Medicina, ni Botica* [Domestic Medicines to aid the poor Indians in the provinces and towns with neither physicians nor pharmacies].<sup>45)</sup> From the title itself, Father De Sta. Maria, O.P. directly expressed his intention that such a manual of medicine was meant to serve the needs of the Filipinos. Nonetheless, the work became accessible and erstwhile medical manual of religious missionaries and parish priests who were plagued with the reality of afflictions in their respective communities. Such a manual was republished with three editions that Father De Sta. Maria, O.P.'s work persisted until well into the next century, despite a number of criticisms.<sup>46)</sup>

Similar works on Philippine pharmacopoeia included the works of Fr. Juan de Vergara, O.P., “Tratado sobre medicinas caseras,” Fr. Ignacio Mercado, O.S.A., *Libro de Medicinas* [Book of Medicines], Fr. Juan Biso, O.S.A., “Tratado de Arboles y Hierbas de Indias,” Fr. Antonio Llanos, O.S.A, *La Medicina Domestica* [Domestic Medicine], and Fr. Rodrigo de San Miguel, O.R.S.A., *Manual de Medicina Domestica* [Manual on Domestic Medicine], all containing similar themes revolving around indigenous medicine (see Table 2).<sup>47)</sup> However, it was Fr. Manuel Vilches, O.R.S.A. who actually credited the actual source of his medical research in his *Manual del*



Table 2. Religious Missionaries' Contributions to Medicine and Pharmacy

Religious	Location	Contributions, Publications, and/or Works
<b>Franciscans</b>		
Blas de la Madre de Dios	Cagayan	<i>Flora de Filipinas</i> [Philippine Plants] <i>Tratado de Medicina Domestica</i> [Treatise on Domestic Medicine]
Jose de Valencia		"Flora Filipina, en la que con minuciosidad se describen las hierbas y raices, sus figures, sitios en donde se desarrollan y sus virtude medicinales" [Philippine Plants: Simple Ways to Identify, Describe, Obtain, and Develop Herbs and Roots]
Sn. Pedro Bautista	Laguna	popularised curative powers of natural springs
<b>Jesuits</b>		
Francisco Ignacio Alcina	Samar-Leyte	<i>Historia Natural del Sitio, Fertilidad y Calidad de las Islas o Indios de Bisayas</i> [Natural History of the Place, Fertility, and Quality of the Visayan Natives and their Islands]
Georg Joseph Kamel / Jorge Camel	Manila	<i>Herbarium aliarumque stirpium in insula Luzone Philipinarum primaria nacentium a Rdo. Patre Georgio Josepho Camello observatarum et descripturum Syllabus</i> [Observations and Descriptions of Herbal Plants in Luzon Island, Philippines by Rev. Fr. Georg Joseph Camel]
Paul Klein / Pablo Clain	Manila	<i>Remedios Faciles para Diferentes Enfermedades por el P. Pablo Clain de la Compania de Jesus para el alivio, y Socorro de las PP. Ministros Evangelicos de las Doctrinas de los Naturales</i> [Easy Remedies for Different Illnesses by Fr. Paul Klein, S.J., to Assist Ministers Evangelising the Natives]
Juan Delgado		<i>Historia General Sacro-profana, Politica y Natural de las Islas del Poniente Llamadas Filipinas</i> [General, Sacred and Secular, Political, and Natural History of Western Philippines]
Cristobal Enriquez	Leyte	served as roving physician
Tomas de Montoya		served as apothecary and physician
<b>Dominicans</b>		
Fernando de Sta. Maria	Pangasinan, Cavite Laguna	<i>Medicinas caseras para consuelo de los pobres Indios en las provincias y pueblos donde no hay medicos ni botica</i> [Domestic Medicines to aid the poor Indians in the provinces and towns with neither physicians nor pharmacies]
Juan de Vergara	Pangasinan	"Tratado sobre medicinas caseras" [Treatise on Domestic Medicine]
Zarpain		treatise on psychology and physiology
<b>Augustinians</b>		
Manuel Blanco		<i>Ang Mahusay na Paraan nang Pag-gamot sa Maysaquit ayon sa Aral ni Tissot</i> [Effective Medical Techniques to Cure the Sick according to the Teachings of Tissot]
Juan Tombo	Laguna	medicinal springs in Sibul, Laguna
Francisco Arriola	Laguna	medicinal springs in Sibul, Laguna
Ignacio Mercado	Parañaque	<i>Libro de Medicinas</i> [Book of Medicines]
Juan Bisó		"Tratado de Arboles y Hierbas de Indias" [Treatise on the Trees and Herbs of the Indies]
Joaquin Calvo	Bulacan	treatise on plants (missing)
Julian Bermejo	Boljoon [Iloilo]	<i>Instrucciones para las Parteras, a fin de evitar los abortos y que los niños mueran sin el bautismo</i> [Instructions for Midwives to prevent abortion and death of unbaptised babies]
Jose Vazquez	Ilocos Sur	medicinal springs as cure for diabetes
E. Diaz	Cebu	sulphuric waters of Sibonga, Cebu
M. Alvarez	Cebu	sulphuric waters of Mainit, Cebu
Mariano Gil	Bulacan	medicinal waters of Minuya, Norzagaray
Alejandro Cacho	Nueva Ecija	treatise on the medicinal herbs of the Buhay mountains
Antonio Llanos		<i>La Medicina Domestica</i> [Domestic Medicine]
Celestino Fernandez Villar	Panay	3 <sup>rd</sup> edition of Blanco's <i>Flora de Filipinas</i> [Philippine Plants]
<b>Recollects</b>		
Miguel Aganduru		<i>Manual de Medicina caseras para consuelo de los pobres Indios</i> [Medical Manual to aid the poor Indians]
Manuel Vilches		<i>Manual del Mediquillo Visaya</i> [Manual of the Visayan Mediquillo]
Gregorio Sanz	Cebu	<i>Embriologia Sagrada</i> [Sacred Embryology]
Fernando Cuenca	Negros	water treatment
Rodrigo de San Miguel		<i>Manual de Medicina Domestica</i> [Manual on Domestic Medicine]

Fernandez, *History of the Church in the Philippines*, 1521–1898, 397–403; Bantug, *A Short History of Medicine in the Philippines* 11–16; Evergisto Bazaco, O.P. *The Church of the Philippines* (Manila: Santo Tomas Press, 1938), 128–133.



*Mediquillo Visaya* [Manual of the Visayan *Mediquillo*].<sup>48)</sup> After all, the priests' knowledge of medical science in the Philippines was based both on experience<sup>49)</sup> and on the collaboration of the *curanderos* or *mediquillos* from whom much ought to be credited.

## Hydrotherapy

Other than herbal medicine, the religious also had an overwhelming affinity towards the curative properties of natural baths in the islands. To much extent, it was the Franciscans and the Augustinians who popularised the use of natural springs, tapping its therapeutic properties for the cure of certain afflictions and diseases. The Franciscans even built a hospital, the *Hospital de Nuestra Señora de las Aguas Santas de Mainit* [Our lady of the Holy Waters Hospital] on top of the hot springs in Los Baños, Laguna.

The construction and development of such and similar edifices all over the islands had precedents from the initial observations that the Spaniards made of the bathing activities of the early Filipinos. Particularly from the community in Laguna, Fr. Diego de Bobadilla, S.J. (1640) observed that the people there “bathe also during their sicknesses, and have for that purpose springs of hot water, especially at the shore of Laguna de Bay.”<sup>50)</sup> From such similar observations, the Augustinian missionaries, Frs. Juan Tombo and Francisco Arriola investigated, proved, and recommended the therapeutic properties of springs in Los Baños, Laguna.<sup>51)</sup> It was the Franciscan missionary, St. Peter Baptist, who popularised its usage sometime in the 1590s.<sup>52)</sup> The Franciscans, being at that time the expert hospitaliers, pushed for the construction of a hospital to tap the therapeutic properties of the sulphur water baths at Mainit, Los Baños, Laguna.<sup>53)</sup> The construction of the hospital saw fruition with the initiatives of Fr. Pablo de Jesus, O.F.M., and later under the administration of a physician and surgeon, Fray Diego de Santa Maria, O.F.M.<sup>54)</sup>

From this point, the religious hospitaliers determined the use of hydrotherapy for patients under their care. However, it is rather the initial required precedents for such a therapy are rather oblivious given that seventeenth-century diagnosis is rather different from today's modern scientific basis. For one, patients had to prove to be of “phlegmatic temperament” and suffering from such illnesses determined to have arisen from humidity and “fiber compression” in order to avail of the facility's spas with all its steam baths and pools flowing with hot and cold waters.<sup>55)</sup> Another, according to the 1742 report of Juan Maldonado de Puga, was that the baths were also utilised for the recovery of convalescent soldiers suffering from venereal diseases.<sup>56)</sup>

Many people were cured from possibly many more diseases in using this natural thermal facility, that similar establishments were tapped in other places that had similar sulphuric waters or natural hot springs. Similar facilities were constructed: at the five springs in Lemery, Batangas, at San Guillermo, Ilocos, where it was reputed to cure diabetes, at Norzagaray, Bulacan, and at the sulphuric waters Sibunga, Cebu (see Table 2).<sup>57)</sup>

## Obstetrics

One of the most important preoccupations in the field of medicine at those times was the reality of childbearing fatalities. Unlike in China though where midwifery was strictly left in the hands of women, childbearing in the islands was also open to the attention and skills of the *mediquillos* and the parish priests, aside from the traditional *matronas*<sup>58</sup>. Caesarian operation was not yet fully developed that childbirth that could not be done through regular deliveries ended often ended in maternal and/or natal fatalities. Complications and the resulting fatalities during childbirth became a serious concern for the priests who valued the primacy of human life and grieved at the loss of another Christian, ergo tribute to the state.

In such cases though, the priests tried to develop the then highly fatal surgical methods. The earliest recorded attempt to try to alleviate this problem was late in the eighteenth century with Fr. Julian Bermejo, O.S.A.'s *Instrucciones para las Parteras, a fin de evitar los abortos y que los niños mueran sin el bautismo* [Instructions for Midwives to prevent abortion and death of unbaptised babies]. However, such a dangerous science that was often the *matrona's* turf, required so much research that the more formalised childbearing manual, Fr. Gregorio Sanz, O.R.S.A.'s much lauded *Embriología Sagrada* [Sacred Embryology], was published much later in 1865. Nonetheless, the manual produced by Fr. Sanz, O.R.S.A. was the product of centuries of progress from the experiences of the priests, *mediquillos*, and *matronas* unconsciously collaborating with each other to develop the medical and surgical science of obstetrics.

## General Surgery

Originally, seventeenth-century surgeons were normally attached to the military service since they were primarily charged with procedures arising from battle wounds at sea and on land. Since the surgeons' art revolved around amputations and mutilations of all types, the development and popularity of surgical science did not see much following. Jean Mallat (1846), from his travels in the Philippines, observed that as far late as the early 1800s, surgery was a "useless science" and did "not exist where there are [sic] no Spanish operators."<sup>59</sup> The *curanderos* did see the need or use for surgery, so did the missionaries and priests. For the *curanderos*, even appendicitis, which would have required a simple appendectomy, involved the simple intake of water-treated fresh chicken gizzards for three consecutive Friday mornings.<sup>60</sup>

As such, surgery became the monopoly of Spanish military doctors whose skills were tapped only when summoned by western-oriented officials in Manila. Otherwise, they could not be found in abundance in the Philippines. The famous case involving an elective surgery happened in 1675 when the then governor of the islands, Don Manuel de Leon sought the skills of the military surgeon, Don Juan Ventura Sarra.<sup>61</sup> Don Manuel de Leon, already an old man, was suffering from debilitation caused by excessive corpulence or obesity, and he was operated on by the military surgeon by removing lumps and lumps of lipids from his abdominal cavities.<sup>62</sup> The governor recovered for quite sometime and was able deliver his duties for a time. Unfortunately, the lack of advanced knowledge in such matters as bacterial infections and post-operation complications eventually led to the governor's demise, a

few weeks later. An almost similar operation involved the same surgeon operating on Don Juan Vargas Hurtado in 1682, this time on the removal of what was understood as an abscess in the governor's hip.<sup>63)</sup> Don Hurtado was lucky to have survived longer than his predecessor did.

Both surgical cases illustrate the futility of surgical operations in those times that often times, surgical patients whose operation involved parts of the body other than the limbs and extremities, ended up dead in a short while. This is not to mention the possible excruciating pain suffered by the patients that such a science was not at all popular in the medical field then.

### **Common Diseases and Cures: An Overview**

It is rather impossible to accurately and exhaustively list down all of the afflictions and cures during the first half of the Spanish colonial period. More often than not, patients referred to the missionary hospitals or to the infirmaries in the rural areas were misdiagnosed due to the conflicting nature of symptoms and the limitations in conducting differential diagnoses. The *curanderos* for their part, had an entirely different basis for understanding diseases heavily dependent on the natural and at times supernatural balance, and had nothing to do with modern notions of bacterial, viral, and other pathogenic infestations. The lack of sophisticated diagnostic techniques back then and the standard of health and medicine followed, limits or hinders the possibility of properly identifying the accurate infirmities then.

### **Reported Pathological Afflictions**

From reported symptoms though, it may be possible to identify these afflictions. An Englishman travelling in the 1820s noted the prevalence of fever and diarrhoea common among patients.<sup>64)</sup> This traveller even went to the extent of blaming the local inhabitants' diet of pork as the leading cause of what he claimed as "dysentery" or simple diarrhoea to be more precise.<sup>65)</sup> Nevertheless, the general inability of the Spaniards to adjust to the islands' tropical climate and topography, as reported by many governors, plagued the ranks of the officials and partly prompted the religious to take the initiative to found hospitals and discover indigenous cures.

On the part of the Filipinos, similar symptoms were normally reported. However, the indigenous concept of health and disease is rather unique but nonetheless shared the plane of prevailing Chinese and European concepts. Indigenous principles depended on the necessity of balance in nature and that many diseases were airborne.<sup>66)</sup> This was compounded by the prevailing Chinese belief in the balance between hot and cold.<sup>67)</sup> Thus, for the longest time, the naturalistic concept of "pasma"<sup>68)</sup> became a household diagnosis. Added to this were the traces of mystical beliefs on illness causation such as "nausog"<sup>69)</sup> and personalistic sorcery<sup>70)</sup> became common in remote rural areas.

In Fr. Manuel Blanco, O.S.A.'s (1916) treatise based on the lectures of the French physician Jan Andre Tissot, *Ang Mahusay na Paraan nang Pag-gamot sa Manga Maysa-quit ayon sa Aral ni Tissot* [Effective Medical Techniques to Cure the Sick based on the Teachings of Tissot], he enumerates nine possible causes of diseases, the fourth, fifth, and sixth originating from the imbalance of hot and cold conditions, beverages, and

climate.<sup>71)</sup> Father Blanco O.S.A.'s (1916) work, though published sometime in the nineteenth century, reflects the prevailing beliefs in the previous centuries. In this work also, the Augustinian directly expressed the idea that poverty is a general cause of disease. In the first chapter of the book, the priest aimed to present the common conditions of farmers in the countryside, which, he claimed were the natural victims of disease due primarily to stress and malnutrition.<sup>72)</sup> With this, an attempt to identify accurately the prognosis of patients suffering from diseases in the countryside becomes rather futile.

However, certain diseases have been identified with some accuracy. Leprosy was recognised then as one of the most dreaded diseases. Its origin and spread in the Philippines is not well documented, but the first recorded presence happened in 1632 when 130 Japanese leprosy patients were exiled from Japan and received at the San Lazaro Hospital.<sup>73)</sup> Yet the mere fact that San Lazaro Hospital, an institution founded solely for leprosy patients was established in 1578 gives the idea that leprosy has already been present in the Philippines long before. Other than leprosy, the following ailments and diseases are listed in the index of Blair and Robertson's *The Philippine Islands* (1903): cholera, influenza, smallpox, beri-beri, dysentery, bubonic plague, scurvy, rheumatism, asthma, syphilis, tetanus, toothache, and ulcers.<sup>74)</sup> Identifying and characterising at least one of these diseases during the Spanish colonial period may take an entirely different work, but for this survey, the idea that such afflictions plagued the people during those times suffices.

### **Debated Herbs and Mundane Remedies**

The cures on the other hand, similarly cannot be sufficiently accounted for due to conflicting opinions by medical experts regarding the authentic therapeutic qualities of plants alleged by the missionaries and friars as medicinal. Nonetheless, a relatively exhaustive list was produced in the thesis of Maria Mercedes G. Planta (1999), and the author herself admits the greater possibility of more plants still to be included and of the still imperfect pharmacopoeia of catalogued herbs and minerals.<sup>75)</sup>

Among the hundreds and possibly thousands of identified medicinal plants and properties of certain trees, plants, and minerals, the usefulness of coconut products, particularly virgin coconut oil, tops the list. In the alleged 1628 cholera epidemic, shavings of manunggal bark mixed in coconut oil were reported by Father. Colin, S.J. to have relieved the suffering of the patients.<sup>76)</sup> Father Blanco, O.S.A., in his medical manual claimed to have been based on the teachings of the eighteenth-century French physician Simon Andre Tissot, mentioned different usages for coconut derivations. Coconut's wide medicinal usage was well known among the people.<sup>77)</sup> The uses ranged from being a purgative, diuretic, painkiller, hair grower, to being antidote to more severe cases of poisoning and debilitation. Other than the famous coconut products, chocolate, milk, and tuba wine were also reported as potent medicines.<sup>78)</sup>

### **Conclusion**

Indeed, the history of medicine in the Philippines during the seventeenth and eighteenth centuries is a complicated development that recognised the seemingly

endless limitations that beset the Spanish colonial administrators. The tropical climate and topography played a defining role in the pathologic and epidemiologic state of medical and surgical cases. Spanish officials and missionaries originally relied on transhipped drugs and medicines for supplies, but it proved futile in the long run. Thus, collaboration with a group of local therapeutic specialists previously dismissed as charlatans became the key for the friars to play their role both as spiritual and physical doctors in far-flung missions.

The two centuries surveyed was a rather benign period in the development of medical science in the Philippines. The friars undeniably contributed extensively to enable local peoples to avail of efficacious and inexpensive medical care in places beyond the reach of western physicians and surgeons. For the time being, the religious' strategy worked for the benefit of everyone, though admittedly, their art and science was an imperfect though developing one. It is impossible to encapsulate hundreds of years' worth of development in diagnosis and therapy, yet certain traditional ones are still identifiable and recognisable.

The beginning of the nineteenth century was the start of new challenges in the medical field. The end of the galleon trade in the 1820s and the opening of the Suez Canal, a few decades later, was also the start of opening the islands to western medical science as new players in the form of the *vacunadores*<sup>79)</sup> and later the *medico titulares*<sup>80)</sup> slowly entered the scene. Filipinos would eventually see the establishment of local institutions for medical and pharmaceutical science in a world giving way to secular western science.

#### Notes

- 1) Ostwald C. Sales, "Las Actividades Medicas en las filipinas durante la Primera Mitad del Siglo XVII," *Perspectivas LatinoAmericanas*, Numero 2 (2005), 168.
- 2) Military Sanitary Corps.
- 3) Pablo Fernandez, O.P., *History of the Church in the Philippines, 1521-1898* (San Juan: Life Today Publications, 1988), 396, citing J. Valinau, "La Universidad de Manila," *La Politica de España en filipinas* (1891), 63.
- 4) Local herbalists often dismissed as quacks by the Spanish authorities.
- 5) Sales, "Las Actividades Medicas," 168.
- 6) Jose P. Bantug, *A Short History of Medicine in the Philippines during the Spanish Regime, 1565-1898* (Manila and Quezon City: Colegio Medico-Farmaceutico de filipinas, Incorporated and University of the Philippines Press, Incorporated, 1953), 11.
- 7) Antonio de Morga, "Events in the filipinas Islands," Emma H. Blair and James A. Robertson (eds and anns.) *The Philippine Islands, 1493-1898*, vol. 16, (Cleveland: 1903, Manila: Bank of the Philippine Islands CD Rom Edition, 2000), 143; "Early Franciscan Missions," *The Philippine Islands, 1493-1898*, vol. 35, 287-291.
- 8) Felipe Pardo, O.P. "Informe que La Provincia Hizo al Rey Nuestro Señor al Parecer el Año de 1760, y se Encontro entre Otros Papeles de este Hospital, que Liberto el P. Presidente Fr. Ignacio Jauregui el Año de la Guerra. En San Gabriel hay un Traslado," Pablo Fernandez, O.P. and Jose S. Arcilla, S.J. (eds and trans), *Philippiniana Sacra* (Third Trimester, 1974), 514-515; Domingo de Salazar, O.P., "The Chinese and the Parian at Manila," *The Philippine Islands, 1493-1898*, vol. 7, 237.
- 9) "Early Franciscan Missions," 287-291; Fernandez, *History of the Church in the Philippines, 1521-1898*, 64-68; Lucio Gutierrez, O.P. *The Archdiocese of Manila: A Pilgrimage in Time, 1565-1999*, vol. I, Crisostomo A. Yalung, D.D. ed., (Manila: The Roman Catholic Archbishop of Manila, 1999), 162-170.

- 10) Jean Mallat, "Educational Institutions and Conditions," *The Philippine Islands, 1493-1898*, vol. 45, 288-289.
- 11) Sales, "Las Actividades Medicas," 173-174.
- 12) Ibid.
- 13) Juan Maldonado de Puga, "The Order of St. John of God," *The Philippine Islands, 1493-1898*, vol. 47, 166-167.
- 14) Sebastian M. Hurtado de Corcuera, et al., "Hospitals and Hospital Contributions," *The Philippine Islands, 1493-1898*, vol. 26, 292-295.
- 15) Sales, "Las Actividades Medicas," 174.
- 16) Ibid.
- 17) Ibid.
- 18) Hernando de los Rios, "Investigation of the Hospital," *The Philippine Islands, 1493-1898*, vol. 9, 91.
- 19) Ibid., 93.
- 20) Sebastian, M. Hurtado de Corcuera, et al., "Hospitals and Hospital Contributions," *The Philippine Islands, 1493-1898*, vol. 26, 292-295.
- 21) Juan Grau y Monfalcon, "Grau y Monfalcon's Memorial of 1637," *The Philippine Islands, 1493-1898*, vol. 27, 114.
- 22) Jean Mallat, *The Philippines: History, Geography, Customs, Agriculture, Industry and Commerce of the Spanish Colonies in Oceania*, Pura Santillan-Castrencia and Linas S. Castrencia trans., (Manila: National Historical Institute, 1994), 296.
- 23) Local Chinese migrant community residing around the Intramuros area, Manila.
- 24) Salazar, "The Chinese and the Parian in Manila," 225.
- 25) Ibid., 237.
- 26) Fernandez, *History of the Church in the Philippines, 1521-1898*, 396, citing Murillo Velarde, S.J., 171.
- 27) Roughly translated as "old man," or a community elder who practices indigenous medicine in the countryside.
- 28) Mallat, *The Philippines*, 287-288.
- 29) Pedro Chirino, S.J., "Relacion de las Islas Filipinas," *The Philippine Islands, 1493-1898*, vol. 12, 178.
- 30) Reynaldo C. Ileto, "Outlines of a Non-Linear Emplotment of Philippine History," *Reflections on Development in Southeast Asia*, Lim Teck Ghee ed., (Singapore: Institute of Southeast Asian Studies, 1988), 138.
- 31) Fernandez, *History of the Church in the Philippines, 1521-1898*, 401.
- 32) Francisco I. Alcina, S.J., "Capitulo 26: Breve Resumen de las Raices, Hojas o Plantas Medicinales mas Conocidas, etc.," Cantius Koback, O.F.M. and Lucio Gutierrez, O.P. (eds. and trans.) *Philippiniana Sacra* (first Trimester, 1997), 114-115.
- 33) Ibid., 98.
- 34) Bantug, *A Short History of Medicine in the Philippines*, 10; Sixto De los Angeles, "El Folklore Medico en Filipinas" (Madrid: Typescript, 1935), 93; The first period was "mythical," followed by the supernatural or "superstitious" phase—Bantug, 2, 6.
- 35) "Early Franciscan Missions," 317-318; Bantug, *A Short History of Medicine in the Philippines*, 11; Fernandez, *History of the Church in the Philippines, 1521-1898*, 400-401; Warwick Anderson, "Science in the Philippines," *Philippine Studies* (Third Quarter. 2007), 290.
- 36) Bantug, *A Short History of Medicine in the Philippines*, 11.
- 37) Fernandez, *History of the Church in the Philippines, 1521-1898*, 402.
- 38) Bantug, *A Short History of Medicine in the Philippines*, 11; Fernandez, *History of the Church in the Philippines 1521-1898*, 399.
- 39) Leo A. Cullum, S.J. "Georg Joseph Kamel: Philippine Botanist, Physician, Pharmacist," *The Philippine Studies Journal* (Second Quarter, 1956), 322.
- 40) Ibid., 324-325.
- 41) Cullum, S.J., "Georg Joseph Kamel," 327-329.
- 42) Ibid., 328.
- 43) Bantug, *A Short History of Medicine in the Philippines* 11.



- 44) Ibid., 12.
- 45) Arsenio E. Manuel, *Dictionary of Philippine Biography*, vol. 4 (Manila: Filipiniana Publication, 1955), 462.
- 46) Ibid., 462–463.
- 47) Fernandez, *History of the Church in the Philippines, 1521–1898*, 398–403.
- 48) Ibid., 402.
- 49) “Early Franciscan Missions,” 290.
- 50) Diego de Bobadilla, S.J., “Relation of the Filipinas Islands,” *The Philippine Islands, 1493–1898*, vol. 29, 288.
- 51) Fernandez, *History of the Church in the Philippines, 1521–1898*, 397.
- 52) Ibid., 66, 397; Gutierrez, *The Archdiocese of Manila*, vol. I, 167; Pedro Hurtado Desquivel, “Letter from Audiencia to Felipe III on the Confraternity of La Misericordia,” *The Philippine Islands, 1493–1898*, vol. 14, 211.
- 53) Sales, “Las Actividades Medicas,” 171; Fernandez, *History of the Church in the Philippines, 1521–1898*, 66; Juan Francisco de San Antonio, O.S.F., “The Religious Estate in the Philippines,” *The Philippine Islands, 1493–1898*, vol. 28, 147.
- 54) Sales, “Las Actividades Medicas,” 171.
- 55) Ibid.
- 56) Maldonado de Puga, “Order of St. John of God,” 227.
- 57) Fernandez, *History of the Church in the Philippines, 1521–1898*, 397.
- 58) Midwife.
- 59) Mallat, “Educational Institutions and Conditions,” 289.
- 60) Bantug, *A Short History of Medicine in the Philippines*, 21.
- 61) Casimiro Diaz, O.S.A., “Augustinians in the Philippines, 1670–1694,” *The Philippine Islands, 1493–1898*, vol. 28, 157–158.
- 62) Ibid., 157.
- 63) Ibid., 158.
- 64) “Remarks on the Philippine Islands and their Capital,” *The Philippine Islands, 1493–1898*, vol. 51, 77.
- 65) Ibid., 78.
- 66) Mallat, *The Philippines*, 295.
- 67) Ibid.
- 68) “Pasma” is still a prevailing illness-causation belief among Filipinos today, roughly described as a malady caused by imbalance of hot and cold factors in the body. See Michael L. Tan, *Revisiting Usog, Pasma, Kulam*, Student edition, (Quezon City: The University of the Philippines Press, 2008), 92–96.
- 69) “Usog” on the other is believed to be any illness caused by mystical forces or energies. See Tan, *Revisiting Usog, Pasma, Kulam*, 29–35.
- 70) Supernatural attacks or sorcery is quite common even in western lore. Sometimes, this category of illness causation includes attacks by preternatural creatures as vampires, witches, ghosts, etc. Equally significant is the abundance of healers supposed to fight sorcery and preternatural malice. See Tan, *Revisiting Usog, Pasma, Kulam*, 55–75.
- 71) Manuel Blanco, O.S.A., *Ang Mahusay na Paraan nang Pag-Gamot sa manga Maysaquit ayon sa Aral ni Tissot*, Second edition, (Manila: Libreria y Papeleria de J. Martinez, 1916), 35–36.
- 72) Ibid.
- 73) Fernandez, *History of the Church in the Philippines, 1521–1898*, 68.
- 74) *The Philippine Islands, 1493–1898*, vol. 54, 296.
- 75) Maria Mercedes G. Planta, “Traditional Medicine and Pharmacopoeia in the Colonial Philippines, 16th to the 19th Centuries” (M.A. thesis, University of the Philippines, 1999).
- 76) Bantug, *A Short History of Medicine in the Philippines*, 24.
- 77) Sales, “Las Actividades Medicas,” 176.
- 78) Nicolas Norton Nicols, “Commerce of the Philipinas Islands, 1759,” *The Philippine Islands, 1493–1898*, vol. 47, 274; “Early Franciscan Missions,” 287; Francisco Colin, S.J. “Native Races and their

Customs, 1667," *The Philippine Islands, 1493-1898*, vol. 40, 266.

79) Vaccinator.

80) Licensed physician.