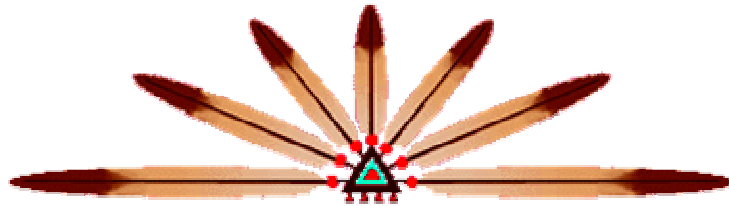


# TRADITIONAL MEDICINE FOR CANADA'S FIRST PEOPLES

*Raymond Obomsawin Ph.D.*

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# TRADITIONAL MEDICINE FOR CANADA'S FIRST PEOPLES

By: *Raymond Obomsawin* Ph.D.

*Years ago there were no drugs and we used herbs. In our way of life we depended on traditional medicine, and we helped ourselves... Today, modern medicine and doctors have taken over.*

Stoney Creek Nation Elder, British Columbia

## I. INTRODUCTION

When the first explorers reached the shores of North America it is estimated that there were over 2,000 indigenous tribes with over one million inhabitants stretching from the Atlantic to the Pacific oceans. It did not take the early settlers very long to become impressed with the advanced therapeutic knowledge of their new found neighbors, for traditional healers were highly conversant with a wide diversity of plant medicine usages and other elements of nature-based preventatives and therapeutics.<sup>1</sup>

Traditional healers were thought of as highly knowledgeable and inspired individuals. When necessary they administered to their patients innocent remedies that as a rule were devoid of adverse side-effects. In most cases recoveries were rapid, and did not evince the acute or chronic adverse effects associated with modern synthetic pharmaceuticals. The reliance was on the created organic alkaloids, phytochemical properties and synergistic action of whole plants and a corresponding understanding of the requisites of human physiology. The goal was to attain individual bio-chemical balance as a means of restoring wellness, and it was normatively achieved.<sup>2</sup> In addition to herbal treatments, other therapeutic methods and practices were practiced such as sweat baths, fasting, massage and special diets, the use of enemas, hydrotherapy, as well as mud, clay and charcoal poultices.<sup>3</sup> There was also evidence of adeptness in the surgical care of wounds and fractures. Traditional healers ably employed measures for handling hemorrhage and asphyxia, and even practiced mouth-to-mouth resuscitation.<sup>4</sup> Further preventive and therapeutic practices included daily water bathing and the abundant drinking of water to ameliorate fever (practices which were commonly prohibited to their fevered patients by Euro-North American medical practitioners in the 19th century), deep breathing, physical and spiritual exercises, as well as special geriatric and child rearing methods.



Since this traditional therapeutic system was based upon an intimate knowledge of the natural world it fulfilled the criteria for a truly effective and non-disabling healing system. Traditional remedies were essentially simple and effective with toxicity being totally absent, or in exceptional cases negligible. It is the purpose of this paper to provide evidence as to why viable evidence-based traditional approaches to health care, as dynamic and adaptive systems, should continue to be progressively recognized, and pro-actively supported in modern health care systems. This view does not disallow, but actually encourages that traditional healing approaches should incorporate the knowledge and practices afforded by appropriate (i.e. genuinely helpful & non-disabling) western medical methods and technologies.



Traditional Indigenous approaches to healing are based in a world-view that seeks to take into account in an integrated manner the mental, social, spiritual, physical and ecological dimensions of health and well being. Central importance is placed upon the concept of maintaining healthful balance, within the individual and between the individual, society and the natural world. Imbalance and breakdown arises with the breaching of sacred natural laws and the inter-connectedness of life, inevitably resulting in discomfort and disease.<sup>5</sup> Not unlike other elements of indigenous knowledge, traditional medicine, as a rule, does not function as a static or closed system. It is highly adaptive, and in socio-political regions where it has been able to survive it has attuned its knowledge base and practices to changing times and circumstances, including the evolution of beneficial technologies.

Traditional health systems have well thought-out frameworks for classifying plants, animals, landscapes and climatic conditions relative to their effects on health and disease. Across varied Indigenous cultures these taxonomies share much in common with one another, and they represent culturally relevant empirical frameworks for assessing the uses of plants for both food and medicine. Indeed in virtually all nature-based Indigenous cultures food and medicine are generally viewed as interchangeable. Diet is highly regarded as the primary basis for sustaining and/or restoring health and well-being. Consequently, foods are considered and oft times chosen for their distinctive medicinal or healing values. Traditional taxonomies generally diverge significantly from established western assumptions, classification frameworks and systems.<sup>6</sup>



This is of special importance when considering Indigenous knowledge and traditional healing modalities contextual to dominant jurisprudence and regulatory systems.

Traditional interpretations of illness by Indigenous healers frequently related the origins of disease to the natural, social and environmental context of the sufferer rather than to infections by bacteria or viruses invisible to the naked eye. Although traditional healers would at times attribute certain types of illnesses to supernatural causes (i.e. the influence of



unseen intelligent spirit entities) the majority of diseases were in fact attributed to simple natural causes. While judiciously balanced perceptions about the role of simple (i.e. uncomplicated) natural factors in disease causation and cure are easy to dismiss as backward or simplistic, western science is itself increasingly acknowledging and verifying the great significance of simple lifestyle and environmental factors such as sound nutrition, exercise, clean air and water, positive mental attitudes, and abstention from toxic drugs as the primal determinants of health. There has also been an increased realization in the health sciences field, that the role of micro-organisms is only an associative factor in the onset of infectious disease. Finally, despite its materialist bent, there is also a growing recognition, in the realm of rational scientific inquiry, of the “realities” of metaphysical phenomena, i.e. there are unseen intelligences (some beneficial, others antagonistic) that have interacted with humanity throughout recorded history.

## II. SYSTEMATIC DESTRUCTION & SUPPRESSION OF TRADITIONAL MEDICINE

In her examination of how Aboriginal traditional medicine in Canada was historically displaced by the now dominant medical system, Dee Letendre makes the following observation;

*As large numbers of Europeans began to settle in North America, the social and political structure of society began to change. With the settlers gaining control over the land base and all of its resources, Aboriginal people were forced to adjust from a lifestyle that was governed by laws of nature to a lifestyle governed by economy... Similar to many indigenous nations of the world, the Aboriginal people of Canada... [were progressively] coerced into abandoning their traditional ideologies and practices in relation to health care. As the European settlers became the predominant population of Canada, their health care systems assumed the right to declare what was “acceptable” practice for all of society. Blatant disregard, and perhaps true ignorance, for the consequences that this major shift in health ideologies would impose on the Aboriginal population of Canada resulted in an almost complete loss of Aboriginal traditional medicine... This loss of traditional medicine has resulted in devastating consequences for the Aboriginal people as evidenced by the inappropriate attempts and subsequent failures of modern medicine to improve the health status of the Aboriginal community... The federal health care system’s failure to adequately meet the health needs of Canada’s Aboriginal population is obvious when statistics reveal the higher death rates that Aboriginal people experience in almost all areas of health.<sup>7</sup>*

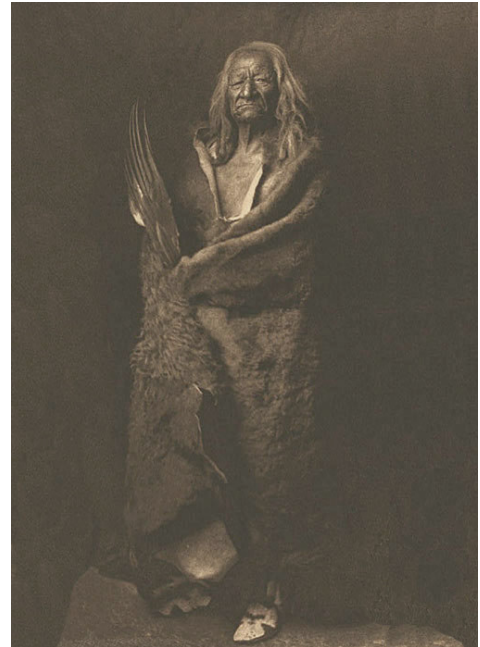


Simultaneous with loss of culture and the historical suppression of traditional healers, therapies, and practices, came a growing deterioration in the health status of North America’s first peoples. This was largely due to the loss of traditional homelands, livelihoods, and the widespread adoption of the deleterious foods and drinks of commercial trade. Historically this transition to dependency on a foreign culture, including its goods and

“healing” systems was heavily influenced by a spirit of intolerance and arrogance on the part of increasingly dominant colonial communities. In fact, in time policies were adopted and laws were established to systematically destroy Aboriginal knowledge and culture systems. It has not been until recent years that there has come an increased recognition by the scientific establishment that traditional healers were highly gifted persons, subject to years of exhaustive training, and whose understanding of nature and the workings of the human body-mind complex has in some respects surpassed that which western science has produced.<sup>8</sup>

### III. NATURE DERIVED KEYS TO HEALTH RESTORATION

In the vast majority of cases where one observes significant health problems among post-colonial Indigenous populations, whether of an infectious or degenerative nature, one will frequently find conditions of socio-economic impoverishment. These poverty-rooted disease conditions can be traced to the historical dispossession of traditional knowledge, livelihoods, lands, and lifestyle patterns such as increasing reliance upon the highly debilitating refined foods of commerce. General socioeconomic improvements, restoration of lands, the development of and reliance upon organic family and community based gardens, the growing and/or harvesting of traditional plant foods, the availability of potable water, enhanced hygienic conditions, the revitalization of practical culture-based knowledge systems, including therapeutic fasting (a common traditional preventive and therapeutic practice) and the appropriate use of simple (non-toxic) plant medicines are the basic uncultured requisites for both health and healing.



If the critical elements derived from natural world, fresh air, pure water, sound nutrition, healing plants, sunshine, exercise, and rest were employed both preventatively and therapeutically, as they should be, it would not only help resolve the serious health problem of Canada's first peoples, but would literally revolutionize for the better the health-care system that serves them. Scientific discoveries about the richness and complexity of nature reveal the poverty of our usual approaches to health, especially our efforts to deal externally, forcefully, and invasively with systems whose delicate balance can only be corrected if the inner physician is recruited. Furthermore, it is consistent and sound reason to believe that the very same measures which will effectively sustain health will also be efficacious in restoring health. When this rule or standard is applied on a practical basis in health care, it means that the best preventatives to disease are also the best restoratives from disease, whatever nature it may take. Despite what the medical establishment would have us believe, the rules for maintaining and restoring health are neither mystical nor complex, they are rather commonsense. Prevention and cure is both a familial and community endeavor and should not be usurped and mystified by a scientific elite whose specialty is disease, and not health.

#### IV. THE GLOBAL PICTURE

The recent historic picture of what has been transpiring on a global scale in the area of traditional medicine remains of the utmost importance for the Aboriginal peoples, governmental bodies, and scholastic institutions in Canada to consider. It is important to note that even in the 21st century on a worldwide basis, indigenous healers continue to be the primary source of health care for the vast majority of the world's rural populations. In fact at the outset of the new millennium the **World Health Organization (WHO)** estimated that the majority of the populations of most countries were still relying primarily upon indigenous or traditional forms of medicine for meeting everyday health care needs. In some countries as many as 80 to 90% of the population fall into this category.<sup>9</sup> The most common reasons for persons choosing to employ traditional medicine are that it:

- ▶ is more affordable,
- ▶ more closely corresponds to the patient's values or beliefs;
- ▶ is less paternalistic than is allopathic medicine; and
- ▶ is effective.

To afford an example of the negative attitudes that prevailed toward traditional medicine as recently as the last quarter of the 20th century we can turn to the assertion of the former Ghanaian head of the **Department of Medicine** at the **University of Ghana Medical School**. He wrote that "*indigenous or traditional medicine...is fundamentally based on primitive theories which over the years have been condoned by ignorance, sanctioned by superstition and sustained by belief in magic and witchcraft.*"<sup>10</sup> In fact, throughout most of the 20th century it was the norm in all regions of the world that traditional healers and their treatments were generally looked down upon by governments, scholastic institutions and medical doctors. It was assumed that such practices would either fade away, or simply be totally displaced by "*superior*" high technology medicine. Thus, the unwritten policy of most governments was to simply ignore indigenous healers in expectation that the spread of modern medical institutions and services would lead to their marginalization, followed by outright disappearance. The well organized and politically powerful system of allopathic medicine played a pivotal role in openly opposing any initiatives that would result in official recognition of traditional medicine, or a shift of socio-economic or political power to Indigenous healers.

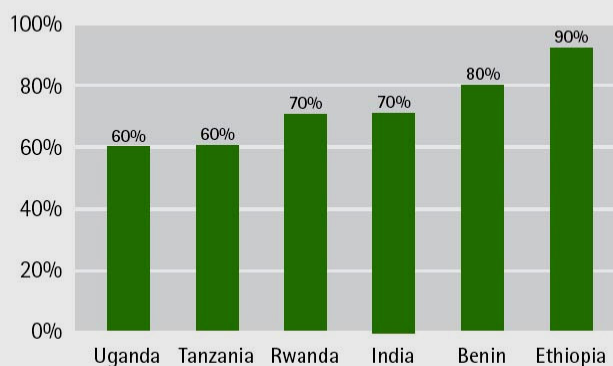


Initially in the industrialized nations and then more universally, there was an aggressively pursued goal to displace traditional health knowledge and practice systems, with commercially marketed western pharmaceuticals. Commercially subsidized and influenced university-based medical curricula functioned to shift the focus and faith of medical practitioners (and in turn those they practiced upon) from traditional plant medicines, towards what is considered a modernized pharmacopoeia. This public faith has received a continuing round of transfusions through the mediums of high finance mass advertising, and tightly controlled media reporting. It is here worth noting that approximately 75% of modern commercial pharmaceuticals are strictly synthetic chemical substances,<sup>11</sup> that without exception, bear toxic and

thus harmful side effects. It is widely acknowledged that the sheer quantity of and emphases on questionable synthetic drugs, stems primarily from the fact that synthetic agents are far easier to patent, which obviously ensures greater profitability for the shareholders of drug companies. A global research survey conducted in the early 1980s covering the nations of Asia, Africa and the Americas South found that up to this point only two countries had actually taken steps to formally incorporate traditional medicine and practitioners into their national health care system. Although at the time of this study, in post-colonial Africa no such recognition measures had been established, it is of interest that indigenous healers had already organized associations in 23 different countries on the continent in order to defend their right to practice. In addition to seeking to reverse the negative image held by scholastic and governmental institutions, these associations played an effective role in providing their membership with practical training opportunities, both traditional and conventional, to strengthen their skills in health services delivery.<sup>12</sup>

With reference to the Pan-African experience that was occurring in the 1980s Warren observed that there was “*considerable sharing of indigenous health knowledge among healers across ethnic and national boundaries*”. He also reported that “*from national census data, it is apparent that indigenous healers outnumber biomedical personnel in many African countries by at least one hundred to one.*” Despite this, the rule at this period in history was that such practitioners were being virtually ignored as a public resource by virtually all national health ministries on the continent.<sup>13</sup>

Use of TM for primary health care is extensive in some developing countries



Sources: compiled from government reports to World Health Organization.

Partly in response to the intransigence of establishment interests in opposing traditional medicine an historic and landmark international seminar on Another Development in Pharmaceuticals was held in the mid 1980s, under sponsorship of the **Dag Hammarskjöld Foundation** in Uppsala, Sweden. This gathering included both public, non-governmental and voluntary sector representation from Europe, Africa, Asia, and the South Pacific. What follows is a synthesis of the key observations and recommendations arrived at.

- ▶ The pharmaceutical industry has evolved and been sustained, in part, by encouraging the vision of human health problems as being solvable only by technological means. A contrived international “*pill-popping culture*” may be in the short-term economic interests of the drug industry, however it effectually undermines the vital long term interest of attaining “*indigenous*”, and “*self-reliant*” health development.
- ▶ There has been too great a tendency to dismiss traditional medicine as unscientific and superstitious, while accepting unquestioningly all that is new. This is true despite the fact that traditional forms of medicine oft-times “*yield better results*” than those which can be obtained by the use of “*modern pharmaceuticals*”.



- ▶ Perhaps more important than the actual nature of traditional remedies, was the holistic perception of the nature of illness and the healing process. This view often led to the use of therapies which enhanced the healing process through treating the whole being, rather than the specialized “*targeting*” of specific symptoms.
- ▶ Medical policies and practices must be “*ecologically sound*”, viz. avoiding the “*unnecessary pollution of patients’ bodies with toxic chemicals*”. The pharmaceuticals market should be replaced by programs and therapies for better health. The crisis will be solved only by a fundamental change both in the training of health workers, and in the thinking of a community which has “*been seduced into believing that every ill can be solved by a little pill*”.
- ▶ Both the mystique of professional monopolies of expertise and transnational corporation monopolies of technology, which in concert deny health and well-being to the impoverished, “*must be shattered*”. Medicine should be “*endogenous*” that is primarily derived from the cultural, human and material resources available to local communities and societies.<sup>14</sup>

Fortunately in recent decades the concepts as embodied in these poignant observations have been gradually sinking into the consciousness of informed and thinking people everywhere. In the last ten to fifteen year period in virtually all regions of the world the condescending mind-set of negativism and skepticism towards traditional medicine is being progressively displaced by an attitude of growing respect for and recognition of its importance. This is in part due to the fact that numerous ethno-medical studies conducted in recent decades have afforded accumulating solid evidence that many of the worlds remaining Indigenous health delivery systems are complex, rational and appropriate to local peoples and socio-economic environments. As well, they exist and operate in local communities in ways which usually require negligible recurrent costs to regional and national ministries of health. Another important factor is that traditional medicine practitioners throughout the world are not only found in remote communities, but are also common to urban centers, where they attend mostly the poor who cannot afford conventional western treatments. These healers include traditional midwives, herbalists, and spiritual healers who handle a variety of both physiological and psycho-social disorders.<sup>15</sup>

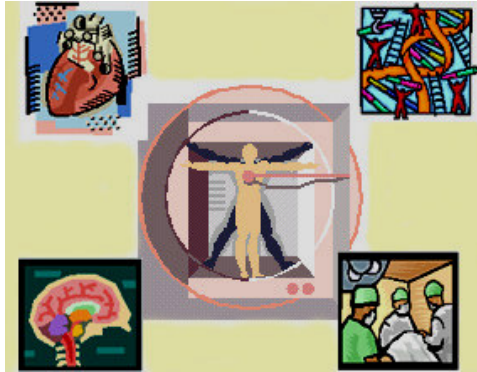
The **World Health Organization**’s 2001 worldwide review of traditional medicine and complementary/alternative medicine led to the observation that:

*Traditional and complementary/alternative medicine has demonstrated efficacy in areas such as mental health, disease prevention, treatment of non-communicable diseases, and improvement of the quality of life for persons living with chronic diseases as well as for the ageing population. Although further research, clinical trials, and evaluations are needed, traditional and complementary/alternative medicine has shown great potential to meet a broad spectrum of health care needs.*<sup>16</sup>

## V. IS TRADITIONAL MEDICINE REALLY ESSENTIAL IN THE MODERN WORLD?

In stating the case for traditional nature based approaches to healing and medicine, we must first briefly consider whether such approaches are really essential to the welfare of humanity. In other

words, if “modern” medicine is truly meeting human health needs in a cost-effective and sustainable manner, than alternatives to this system become redundant and thus unnecessary. It is true that the highly specialized and techno-centric approach to medicine and healing as has evolved in the West, commonly referred to as selective allopathic medicine, has achieved a remarkable capacity to monitor, control and manipulate the psycho-physical complex of the



human organism. However, as earlier noted on various counts it has evidenced some very impracticable and inimical elements. Time and space will not be given to describe the documented significant drops in death rates in a number of countries due to allopathic physicians going on strike,<sup>17</sup> and the well documented massive annual death toll in the several hundreds of thousands being officially ascribed to iatrogenesis (physician induced sickness and death).<sup>18</sup> Instead, we will briefly consider this system relative to its impact on the first peoples of Canada.

As the 20th century drew to its close Commissioners to the **Royal Commission on Aboriginal Peoples** in Canada raised the following concerns.

*We are deeply troubled by the evidence of continuing physical, mental and emotional ill health and social breakdown among Aboriginal people. Trends in the data on health and social conditions lead us to a stark conclusion: despite the extension of medical and social services... to every Aboriginal community, and despite the large sums [billions] spent by Canadian governments to provide these services, Aboriginal people still suffer from unacceptable rates of illness and distress. The term ‘crisis’ is not an exaggeration here.*<sup>19</sup>

The more salient problems associated with “modern” medicine follow:

- i. Its indiscriminate and aggressive dispossession of local health and medical knowledge accumulated by trial and error over many centuries and in some cases millennia;
- ii. its systematic displacement of the potential for genuine local control and familial participation in the key processes of prevention and cure;
- iii. its admitted incapacity to reverse some infectious, and all degenerative and autoimmune diseases; and
- iv. its swelling wake of (largely unmonitored and uncompensated) iatrogenic problems due to its chosen methods of prevention and cure.

Given such discomfoting observations, it is not difficult to envisage that in many respects colonized Indigenous peoples who are now under the domination of historically alien cultures, would have fared much better health-wise if they had been permitted to rely primarily upon their own culture-based knowledge and health practice systems. Indeed, the increasing global recognition of the value and relevancy of traditional medicine has in part arisen from a growing

awareness of the practical limitations, high costs, and iatrogenic features incidental to conventional selective medicine, with such knowledge being the most prevalent in the industrialized countries, where it has been the most widely practiced. An important element in the worldwide trend toward traditional medicine (elements of which have been embodied in “alternative” medicine) has been the prominent reemergence of an integrated science termed



Yunnan Prov. China, IFAD - L. Dematteis

“ethno-pharmacology”. Although its central focus is on traditional pharmacognosy (naturally derived plant medicines), it is necessarily interdisciplinary in scope encompassing the functional co-relationship and integration of scientific data in the areas of cultural anthropology, archaeology, linguistics, history, botany, toxicology, chemical physics, and bio-chemistry. Furthermore, it entails both the preventive and therapeutic dimensions of medicine.<sup>20</sup>

The human experimentation with and exploration of plant medicines has evolved among Indigenous populations over the millennia to what is a current usage of approximately 20,000 plant species, which remarkably, according to scientists Phillipson and Anderson, of the *School of Pharmacy* on London, still “form the major sources of medicine for the population of the majority of the World.”<sup>21</sup> This, inter alia, has led Pharmacological researchers such as de Smet and Rivier, to “deplore the commonly held belief that the study of traditional agents is nothing but an evaluation of outdated exotica, which cannot be relevant for western medicine”.<sup>22</sup> This conclusion is backed by Labadie, who has conducted extensive research on traditional plant medicine at the **State University of Utrecht** in the Netherlands. He confirms that although traditional pharmacognosy in general represents a still poorly explored field of research, there is nonetheless a compelling basis for recognizing “the international relevancy of research and development in the field of traditional drugs”.<sup>23</sup>

To afford some idea as to how little is actually known about plants as sources of medicine and food in western science systems, M. Balick, Director of the **New York Institute of Economic Botany** in the early 1990s observed that only 1,100 of the earth's 265,000 species of plants had to that time been thoroughly studied by western scientists, but as many as 40,000 may well have medicinal or undiscovered nutritional value for humans.<sup>24</sup> So it is that out of over a quarter of a million plant species, each of which contains complex and dynamic biological compounds, a mere fraction of one percent (1%) have been adequately investigated by western science. This meager understanding of plants is particularly acute in the tropical regions. As an example, with regard to the nation of Brazil, which has likely more species of flowering plants than any nation on earth (approximately 55,000), noted plant chemist Otto Gottlieb referring to modern science wrote that “nothing at all is known about 99.6 percent of our flora”.<sup>25</sup>

This paucity of knowledge in western science is equally true of other regions of the world. In contrast if we take Southeast Asia as an example, it is now estimated by experts that Indigenous

traditional healers in this region utilize some 6,500 healing plants. Whereas, on a worldwide basis, more than 3,000 different plants are employed by traditional healers to influence and control fertility alone. It is thus being increasingly acknowledged that ethno-botanical research, the utilization of plant foods and medicines by indigenous peoples, remains as the most effective and timely means for ascertaining the potential value of literally thousands of plants that still remain totally unknown to the contemporary science.<sup>26</sup>

**University of Messina** pharmaco-biologist Anna de Pasquale in conducting a detailed historical review of plant derived medicine, which she has coined "*The Oldest Modern Science*", came to the conclusion that the reexamination of nature in the quest for new therapeutic means has led to remarkable results. The study of ancient official botanical medicines, which had fallen into disuse, has brought to light a rediscovery of various therapeutic agents used for millennia. Ethnopharmacology thus represents a millenarian precursor of much that is considered valuable in the "*modern*" health and medical sciences fields. As a distinctive system, is still alive and vital and clearly it has its own place in the future of man. "*It possesses all the premises to enable it to give a substantial contribution to a more efficacious and rational research of medicaments.*"<sup>27</sup>

Interestingly an analysis was carried out on 119 drugs employed in modern medicine containing active ingredients known to be plant-derived. This was done in order to ascertain how many likely were discovered and put into use for similar purposes as found in the belief and practices of traditional medicine. In other words, what correlation, if any, existed between the standard medical usage of the 119 drugs and the alleged uses of the plants by traditional healers? It was determined that 74% of the 119 chemical compounds being used as drugs, had either the same or related use as the plants from which they were derived.<sup>28</sup>

Anne McIlroy's article Medical Secrets of the Forest published in the February 18, 1991 issue of The Toronto Star, alludes to a renewed interest of a "*limited number*" of western scientists in the "*enormous*" potential of traditional plant medicines. Such interest has of course taken on much greater urgency as the forests, and the elders who've retained this knowledge appear to face impending extinction. One noteworthy example where this renewed interest has richly paid off is found in the rosy periwinkle, which now furnishes western medicine with vincristine and vinblastine which has been used to attain an 80 percent recovery level for the once fatal condition of childhood leukemia, and much greater effectiveness in treating Hodgkin's disease.



In going back several decades to the historic 1978 **Alma Ata Conference on Primary Health Care**, we find pragmatic approval given at a political level by most nations of the world, to the recommendation that essential drugs and biologicals be locally produced and distributed "*at the lowest feasible cost*". In concert with this recommendation, the Conference recognized the need to curb the growing over-dependency on medical drugs. It was further affirmed that "*proved*



*traditional remedies be incorporated in primary health care, including the establishment of effective 'supply systems'".*<sup>29</sup> The importance of local servicing of medical need is recognized in the **Alma-Ata Declaration**'s recommendation on drugs, partly in the provisions on local manufacture and use of "*indigenous remedies*".<sup>30</sup>

From within the **World Health Organization**, Bannerman played a vital leadership role in encouraging a renewed reliance upon "*well known and tested plant medicines in primary health care*". During his tenure he was pleased to observe a growing interest on the part of Developing World governmental and research institutions in Africa, Asia, and Latin America with respect to the possibilities of further developing and re-utilizing their own medicinal plant resources. He forcibly argued that:

*...medicinal plants are generally locally available and relatively cheap, and there is every virtue in exploiting such local and traditional remedies when they have been tested and proven to be non-toxic, safe, inexpensive and culturally acceptable to the community... There are many records of traditional therapies employing herbal medicines that are said to be effective against common ailments and usually without any side-effects... The cultivation of medicinal plants and herbs can also be linked with the production of vegetables and fruit with high nutritive value that should be of particular benefit to mothers and children.*

As well, Bannerman advocated that community health workers should be afforded with a working knowledge of the therapeutic value of local medicinal plants, including their identification, cultivation, collection, preparation, and therapeutic application. He maintained that provisions for such training and practice represent a fundamental strategy in the strengthening of local and community self-reliance in health care.<sup>31</sup>

To this day there are some who still cling to the position that before traditional plant medicines can be employed there must be extensive and detailed testing of each specific medicine,



Bolivia, IFAD – F. Mattioli

extraction and refinement of the active ingredients, followed by official recognition and approval. However, there are some basic reasons why this conventional drug development methodology is not only impracticable, but as well unnecessary and even harmful. It is not unreasonable to conclude that the conventional methodology of identifying, extracting, and purifying "*active ingredient*" alkaloids or other substances from plant medicines is in fact a blunderous attempt by science to try and improve upon the infinitely wise design embodied in the original creation. Complementary and neutralizing substances are found in the whole plants that substantively mitigate, and oft times fully eliminate any toxicological effects of the known "*active ingredients*". There is also reason to believe that poisonous plants are clearly post-creation hybridized aberrations.

A significant number of plant medicines have been used successfully for centuries, and in some cases millennia. Where there has been a long and established history of efficacy, no apparent adverse side effects, and social acceptance, the only common sense response is to fully permit and encourage continued usage. Researchers such as de Smet and Rivier forcefully maintain that the endorsement of and reliance upon traditional plant medicines in the underdeveloped regions of the world, cannot and should not be made conditional upon the full assemblage and weighing of “*chemical, pharmacological, clinical and toxicological evidence*”, as such requirements “*would be untenable in the developing countries... where western alternatives for traditional therapies may be unavailable, unpayable or socially unacceptable*”. Consequently, the most practical course recommended, as a means of attaining more “*immediate health care improvement*” is to conduct simple assays on a series of traditional plant medicines, rather than undertake costly and detailed chemical, clinical and toxicological studies of each and every particular medicine.<sup>32</sup> As an added and important point, throughout the world such “*simple assays*”, as well as some very sophisticated pharmacological and clinical studies, already exist on a number of traditional plant medicines, with the former primarily found in the bio-ethnographic, and the latter in the bio-science literature.

In my own experience, while conducting a primary health care evaluation mission in Northeast Thailand, in the company of UNICEF officer Dr. Supote Prasertsri, I visited the **Reanunakorn District Health Centre** to examine its experimental traditional plant medicine program. Program Director Pradit Tongyus, who also then directed the Center's health, mental health, nutrition and sanitation services, explained why he was inspired to establish the program. His son had previously developed a serious urinary infection which failed to respond to regular antibiotic treatments throughout 10 days of hospitalization. Upon turning to the use of a known local plant medicine, virtually all symptoms of infection subsided within a 10 hour period. He went on to describe various local plant medicines which had proven to be non-toxic and highly efficacious in the remediation of a wide range of conditions such as: burns; herpes simplex; snake and scorpion bites, kidney stones, ulcers, and high blood pressure. Indeed, such reputable attestations exist worldwide, and only await honest inquiry and further clinical confirmation.



## VI. SUCCESSFUL INTEGRATION OF INDIGENOUS & WESTERN MEDICINE?

Aboriginal culture takes the view that good health is a sacred gift from the Creator to be respected and nurtured because of a high appreciation of its value. Furthermore, the traditional Aboriginal view is that sickness is a message from the Creator to help us to re-orient our life toward the laws as established in the creation. This view is far closer to the naturopathic than to the allopathic model of healing. The idea that sickness represents an effort of nature to aid us in making things right in our body-mind system is a totally foreign concept to allopathy which seeks to make war against all forms of sickness. This multi-billion dollar high-tech war effort employs an armamentarium that is invasive and highly lethal in “*combating*” various diseases,

when in actuality it's obviously warring upon the human constitution. Also the idea that it's necessary to chemically poison the sick with toxic drugs, but not the well, doesn't make much sense to traditional Aboriginal wisdom. The question would logically be asked, is a headache really an aspirin deficiency? Also, *"seeking a treatment that induces illness, such as the side effects of immunization..., in order to prevent illness is incomprehensible to the traditional way of thinking."* With such polarized views it's hard to conceive how the two systems could really be effectively integrated.<sup>33</sup>

There is also the issue of sizable power differentials. Historically, the Aboriginal population of Canada has been placed in the position of subjection to the Canadian government and the issue of how the health needs and problems of the Aboriginal population will be treated is no exception.

*Reinforcing who has the power, western society's demand for the scientific basis of medical care, and the systematic recording of knowledge is in direct opposition to the philosophies of traditional medicine. Notwithstanding that traditional medicine is the product of a myriad of generations gathering knowledge, the custom of traditional medicine's oral transmission and guarding of its science only reinforces western medicine's resolve to dominate this system. Furthermore, the complex structure of today's economic and political climate emphasizes that accountability be outlined in measurable terms. Again, traditional medicine is placed in a position of subjection when the adequacy of these measures is set up by the western medicine philosophies that represent **Health Canada**.*<sup>34</sup>

Despite these obvious concerns and limitations, there have been a few notable examples of effective cooperation between indigenous and allopathic western medicine. One instructive model for this is found in the **Ametra Project**. The term ametra means the application of traditional medicine. The Project works among the Shipibo-Conibo people in the rainforests of Eastern Peru. One of the key objectives of the Project has been to employ and investigate the relative efficacy of traditional methods of healing. The Project team worked to bring Shipibo-Conibo village health workers and university store pharmacologist together to examine and put to test various traditional plant remedies as recommended by their traditional healers. Once the relative efficacy, safety and methods of use for a particular medicine is documented, this information is then incorporated into health care training course materials which are being used educationally in various Indigenous communities. In taking this approach village health workers are exposed not only to the ideas and medicaments as recommended by federal Health Ministry physicians, but as well to the therapeutic recommendations of their own traditional healers. They can then make an informed choice as to what course to pursue in treatment. This overall approach has generated:



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- *an enhanced level of respect by local communities for their own culture based knowledge and practice systems;*

- *greater appreciation by the central health ministry for the relevance and value of traditional botanical medicine in primary health care programs; and*
- *a more cost effective response to meeting the basic health service needs of the local people being served.* <sup>35</sup>

In 1987 the **Ametra Project** group established an **Ethnobiological Center** in an area of undisturbed forest by the Tambopata River in Madre de Dios. Through courses conducted in the villages, written materials and programs on locally operated indigenous radio channels, the Project has been making people much more aware of the strength of their own traditional medicines. It is also making them conscious of the necessity to protect their lands and lakes from unwelcome polluters, and has helped them to avoid non-compatible, foreign techniques in order to survive. The Shipibo-Conibo are significantly reinforcing their own ethnic identity in this way. Indeed, the successes of the Project have continued into the new millennium, and over its many years of operation have spread to other indigenous peoples in Peru. <sup>36</sup>

## VII. WESTERN PACIFIC REGIONAL INITIATIVE ON TRADITIONAL MEDICINE

It appears that the **World Health Organization's** *Western Pacific Region* has taken the most advanced steps of any region in the world for ensuring the official recognition, protection and utilization of traditional medicine systems. This Region encompasses 37 countries and has a total population of 1.7 billion people.

In the year 2001 the **WHO's** Regional Director (RD) for the Western Pacific reported on the rapid growth of countries in the region that are bringing traditional medicine into their formal health care systems. He stated that there were already 14 countries and areas in the Region that had accorded official recognition to traditional medicine and its practice. *"This is in contrast to a few years ago, when only four countries (China, Japan, The Republic of Korea and Viet Nam) officially recognized the role of traditional medicine in formal health care systems."* <sup>37</sup>



Very soon after issuance of the RD's report, a *Regional Strategy on Traditional Medicine* was formally adopted by the **WHO Regional Committee for the western Pacific** at its fifty-second session in Brunei in September 2001. At this meeting it was affirmed that:

*The wealth of accumulated clinical experience and knowledge within traditional medicine deserves to be acknowledged and combined with methodologically sound research into the extent and limitations of traditional practice. Patients, governments, traditional practitioners and practitioners of modern medicine all stand to benefit from evidence-based practice of traditional medicine.* <sup>38</sup>



The **WHO Regional Office for the Western Pacific** and a number of countries have since been implementing the regional strategy. A national capacity to formulate a policy and program to support the proper use of traditional medicine, and its incorporation into national health services has increased in several countries in the region. This means governments have either recently developed or reaffirmed government policy on traditional medicine and as a result, national traditional medicine programs in these countries have become more active.

Additionally, the Region now has in place a comprehensive and systematic *Traditional Medicine Program*. The Program addresses issues related to traditional medicine, including:

Legislation;	Laboratory and clinical research to evaluate
Regulations;	safety and efficacy;
Education for conventional health workers;	Monitoring of adverse reactions;
Special training for traditional healers;	Standardization; and
Information collection and sharing;	Organization of community-based,
Conservation of resources;	activities.

The **WHO** has provided support to the **Association of Philippine Medical Colleges**, and the **Philippine Institute of Traditional and Alternative Health Care**, the implementing agency of the government for the traditional medicine program, to develop a curriculum on traditional and alternative health care and to work for its integration into national health care delivery.

There has also been recently established a **Western Pacific Regional Forum for the Harmonization of Herbal Medicine** which will provide a venue for the sharing of information, coordination of efforts, transferal of expertise and technology, and the achieving of consensus on quality control and standards of plant medicines. The establishment of the Forum is a milestone on the road to managing and improving the quality of herbal medicines in the Region. However, the considerable variety of traditional systems of medicine and of the sheer scope of remedies being used means that the process of standardizing traditional medicine will take several years.<sup>39</sup>

## **VIII. RECENT ENCOURAGING DEVELOPMENTS IN CANADA**

In the year 2001 Canada's **Ministerial Advisory Council on Rural Health** was established in order to provide independent advice to the federal Minister of Health on how the Canadian government can maintain and improve the health of remote and Aboriginal communities. The Council represents a broad range of disciplines and expertise on diverse remote, northern and Aboriginal concerns. At its inaugural meeting the Council identified the health of Canada's Aboriginal peoples a one of the four priority areas on which to focus its work. Its primary report was issued in 2002 and specifically addressed the issue of integrating traditional knowledge, medicine and healing practices into the health care system of Aboriginal peoples.

The Council observed that Aboriginal cultures have a rich heritage of traditional medicine, which includes traditional knowledge, and medicinal remedies and healing practices. It expressed that *"Traditional medicine is based on a holistic approach that goes far beyond the western biomedical focus on physical health, and includes mental, emotional and spiritual well-being. This view of health is a prototype for healthy communities in all rural, remote and northern communities."* In delineating some of the *"fundamental differences"* that exist between

traditional and western medicine it observed that western medicine is based on a disease model whereas traditional medicine is based on wellness. western medicine is highly structured and formalized with strict licensing, standardized care practices and documentation of knowledge. In contrast, traditional medicine is less formal with a metaphysical base, informal training system, no uniform standardization in care practices, and has historically relied on the oral transmission of knowledge.

It was also noted that the provinces of Ontario, British Columbia and Manitoba have established Aboriginal health and wellness centres that are taking some initial steps in seeking to combine traditional and western medicine in health care services for Aboriginal peoples. A preliminary scan identified that 14 such centres were currently in operation. These centres have annual budgets ranging between \$2 and \$4 million depending on the size of the community that they serve. They are funded primarily by the provinces, with limited federal funding. These centres



are offering basic primary health care services and community programs for chronic diseases, prenatal and postnatal child care, health care training and community capacity building. They've also introduced some traditional services such as ceremonies, consultations with traditional healers, talking circles and community feasts. Typically, these centres employ a mix of physicians, nurse-practitioners, elders, nutritionists, mental health educators and health promotion staff to deliver both western and traditional medicine.

Traditional medicine has to a limited degree also been included in some **Health Canada** programs offered through the **First Nations and Inuit Health Branch**. The *Mental Health Program* supports ceremonies such as sweat lodges for use in addiction treatment. The *Aboriginal Diabetes Initiative* includes support for communities to incorporate traditional practices and beliefs into local diabetes prevention programs. The non-insured health benefits program covers transportation, meals and accommodation for eligible clients who must travel to consult a traditional healer.

It was the Council's view that the integration of traditional medicine into current health care services for Aboriginal people should be greatly expanded as this would serve to measurably strengthen the quality of health care services in Aboriginal communities. It would also address the needs of Aboriginal people in a holistic manner and preserve ancestral traditions of healing.

*The Council firmly believes that traditional medicine must be integrated into the current health care system so that all Aboriginal people, First Nations, Inuit and Métis people, have the choice of being able to obtain access to traditional medicine... Many inequalities in the health status of First Nations, Inuit and Métis people can be attributed to the erosion of Aboriginal culture and the loss of traditional knowledge, medicine and healing practices. Weakening of traditional medicine began with the first missionary contact and continued with the*

*dispossession of Aboriginal people from the land.... Today there is an imminent danger of losing valuable knowledge. For example, among First Nations communities, the custom of elders passing on traditional knowledge to children has been weakened and, as elders die, valuable information is being lost...Traditional medicine must be preserved for the benefit of future generations. Although the federal government cannot control the transmission of traditional knowledge, it can influence the acceptance of traditional practices by recognizing and supporting organizations working to preserve traditional medicine.*<sup>40</sup>

It backed this view by making the following three recommendations:

**Recommendation 1)** That **Health Canada** work with First Nations and Inuit partners as part of the *First Nations and Inuit Health System Renewal* process, to fully integrate traditional medicine into the current health care system for First Nations and Inuit people and ensure new services embrace traditional and western medicine.

**Recommendation 2)** That the Minister of Health work with provincial and territorial colleagues and Aboriginal partners to establish Aboriginal health and wellness centres in their respective health care systems so that all Aboriginal people including Métis and non-status Indians can obtain access to traditional medicine.

**Recommendation 3)** That **Health Canada** recognize the immediacy of the need to preserve traditional medicine, and ensure that efforts currently being undertaken by national Aboriginal organizations and research institutes are adequately funded.<sup>41</sup>

## **IX. TOWARDS A FULLY VIABLE TRADITIONAL MEDICINE SYSTEM**

Although in recent years we see evidence of varying degrees of interest in and support of Aboriginal peoples practicing their own forms of traditional medicine in Canada, to this date there is been no official strategy, enabling policy, or funding framework earmarked for this purpose. In light of the considerable knowledge losses in this field that have already occurred historically, today the task of establishing a viable alternative system in which traditional medicine becomes central and not merely adjunctive, is a formidable one. There is also the issue of whether it is apropos and even desirable for a revitalized Aboriginal traditional medicine system to remain subject to the policies and regulations that **Health Canada** and provincial/territorial governments may seek to impose, and the legitimization that society at large could demand.

It seems evident that if there is any real hope for the establishment of a working primary traditional medicine system in Canada, a few vital prerequisites must initially be met. Firstly, it is only realistic to accept the reality that when one healing system dominates and controls an alternate system, the latter suffers and never realizes its true value and potential. Consequently, Aboriginal peoples must be afforded genuine self-governing and regulatory authority over all aspects of their own health care system if it is to genuinely succeed. Secondly, a well conceived, financially endowed, and widely accepted Aboriginal research and training **Traditional Medicine Institute**, dedicated solely to the purpose of establishing a viable nationwide traditional medicine system is essential. In this regard developing world experience is clear that

this Institute and the health care system that it spawns would entail critical advance planning by all concerned parties, and ultimately a major level of investment. A minimal commitment and underinvestment would clearly create the risk of undercutting high standards of traditional medicine practice, handicapping delivery of services, and weakening health outcomes.<sup>42</sup>

Such an Institute would not only seek to restore those elements of Aboriginal traditional medicine that have been lost, but would also garner healing knowledge from multiple traditional knowledge systems globally. It would also explore alternative healing methods that are consonant with Aboriginal culture, and hold a track record of success, posing no dangers to patients. It would also incorporate positive diagnostic and non-disabling elements of conventional medicine. Assuming this were to actually happen, it would take some time before a full transition could be effected. It also is probable that there will be some Aboriginal health authorities who may feel more comfortable maintaining the status quo, thereby taking a watch and see attitude until such time as a number of successful local transitions have occurred, and the traditional practice system begins to show its true efficacy across the country.

Although in many cases traditional healers are reluctant to share their knowledge openly, circumstances have changed to a state of great crisis, and equivalent opportunity. It is thus of the highest importance that traditional healers fully appreciate the potentially grave losses that could occur for future generations among their own people, if they and other healers hide the knowledge that they've retained, and not share it more freely. If true knowledge is a gift from the Creator, than it should clearly be used to benefit all of His children. A regulatory protocol could be established that would prevent the unfair or undesirable exploitation of this knowledge by outside commercial interests. In this day and age there is no good reason why traditional medicine knowledge could not be more fully shared between Aboriginal healers in North America and throughout the world. Additionally, over many decades of effort globally, ethno-botanists and ethno-pharmacologist have already amassed a large body of useful information on useful plant medicines. While their methodologies have at times been flawed, why ignore or minimize what is valuable in their work?

It is also vital that Canadian society in general take a greater interest in cooperatively exploring what is still a vastly untapped reservoir of vital experiential knowledge, methods, and insights, about healing and healing plants which may tragically perish with the older generation of increasingly marginalized and threatened Aboriginal societies in all world regions. This research effort could be a key secondary and complementary task of the proposed **Traditional Medicine Institute**. This research would not be done exploitatively, but rather be designed to ensure that there is a fair exchange and profit for any of the sharers of their knowledge, and in turn could potentially benefit the health all peoples and communities in Canada. Such an effort may also help the now dominant medical system to become more aware of this field, and more inclined to focus its resources and talents on achieving sustainable health and wellness for all.





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## KEY ONLINE INFORMATION SOURCES

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This site makes freely available various herbal manuals that are downloadable in either HTML or PDF formats. This is offered by the now retired head of the **Southwest School of Botanical Medicine**. <http://www.swsbm.com/ManualsMM/MansMM.html>

This site provides a free online searchable directory of approximately 2,000 plant medicines using either common or scientific names. The herbs listed at this site include but are not confined to North America. [http://www.holisticonline.com/Herbal-Med/Hol\\_Herb\\_Directory\\_Index.htm](http://www.holisticonline.com/Herbal-Med/Hol_Herb_Directory_Index.htm) Also offered at this site are searchable herbal treatment options for a variety of common health problems [http://www.holisticonline.com/Herbal-Med/Hol\\_Herb\\_for\\_diseases.htm](http://www.holisticonline.com/Herbal-Med/Hol_Herb_for_diseases.htm)

This site provides a free online searchable directory of over 800 medicinal and culinary herbs based on the book *A Modern Herbal* first published in 1931. The descriptions include when applicable medicinal usages. The herbs listed at this site include but are not confined to North America. <http://www.botanical.com/botanical/mgmh/comindx.html>

The **Herb-Med** site provides medicinal information on 207 plant medicines. There is a small fee of \$5.95 which is required to obtain 24 hour full access to the listing information provided. <http://www.herbmed.org/herbs/herblist.htm>

The **Wild Rose College of Natural Healing** web site offers a free online searchable encyclopedia of treatment protocols for a wide diversity of health problems combining lifestyle measures and herbal medicine treatments. [http://www.wrc.net/wrcnet\\_content/encyclopedia.aspx](http://www.wrc.net/wrcnet_content/encyclopedia.aspx) The College which is based in the Calgary, Alberta area offers among other options a “*Clinical Herbalist (Cl.H.) Diploma*” program involving three years of in-class course work, plus 66 hours of elective course work, 300 hours in clinical practicum, and two thesis projects. Its catalog is available at: [http://www.wrc.net/wrcnet\\_content/college/WinterSpring2007.pdf](http://www.wrc.net/wrcnet_content/college/WinterSpring2007.pdf)

**North American Institute of Medical Herbalism**, This is a Colorado, USA based training center offering courses in plant medicine usage, and the Institute also publishes a periodical journal on this subject. <http://naimh.com/>

**New Mexico College of Natural Healing** offers a 600 hour study program in Herbal Medicine. <http://www.zianet.com/nmcnh/herbal.htm>

## ANNEX I.

# MILESTONE WORLD HEALTH ORGANIZATION INTERNATIONAL SURVEY ON TRADITIONAL MEDICINE

### Introduction

Early in this decade, the **World Health Organization (WHO)** decided to conduct a global survey on National Policies on Traditional Medicine and Complementary Alternative Medicine (TM/CAM) and the Regulation of Herbal Medicines and store the results in a global database. In 2001, the **WHO** developed a *Global Survey* questionnaire which was subsequently administered in all regions of the world. Responses were provided by 141 countries, of the **WHO**'s 191 member states. The global survey results were published in the year 2005. For purposes of this survey the following definitions were employed by the **WHO**.

- ▶ *Allopathic medicine*: refers to the broad category of medical practice that is dominant in the industrialized countries and is sometimes referred to western medicine, biomedicine, scientific medicine, or modern medicine.
- ▶ *Traditional medicine TM*: is the sum total of knowledge, skills and practices based on the theories, beliefs and experiences indigenous to different cultures, whether explicable or not, used in the maintenance of health as well as in prevention, diagnosis, improvement or treatment of physical and mental illnesses.
- ▶ *Herbal medicine*: plant derived material or preparations with therapeutic or other Human health benefits, which contain either raw or processed ingredients from one or more plants. In some traditions, material of inorganic or animal origin may also be present.
- ▶ *Complementary/alternative medicine (CAM)*: often refers to a broad set of health care practices that are not part of a country's own tradition and are not integrated into the dominant health care system. Other terms sometimes used to describe these health care practices include "*natural medicine*", "*non-conventional medicine*" and "*holistic medicine*".

### National Policies on Traditional & Complementary/Alternative Medicine

A national policy on TM/CAM commonly includes some of the following key elements:

- A legally accepted definition of TM/CAM;
- Provisions for the creation of laws and regulations; and
- Consideration of intellectual property issues.

Individual national policies may further describe the main strategies proposed by the government for achieving the objectives of the policy.

In line with the history already covered, only five countries reported having a national policy on traditional or alternative medicine before the year 1990. However by the time of the *Global*



Survey 45 of respondent countries reported having established a policy on TM/CAM. Of those countries which currently do not have a national policy, 51 indicated that such policies are currently under development. This means that in all 96 countries (88%) either currently have, or will soon have national policies in place. In all 40 countries reported that they had sponsored a national program on TM/CAM, while 75 countries (53%) reported having a national office in charge of TM/CAM. In most of these countries, the national office is located within the Ministry of Health. Sixty one (61) countries reported that they had established expert committees for TM/CAM, and 58 countries indicated that they had at least one national institute on TM, CAM, or herbal medicines.

## Regulation of Herbal Medicines

Before the year 1988, there were only 14 countries with regulations relating to herbal medicines, but by the year 2003 the figure had increased to 53 countries having established laws and/or regulations. Of those countries without current laws or regulations, 42 declared that regulations were in the process of being developed. This means that in all 95 countries (86%) either currently have, or will soon have regulations in place. These results show that a rapidly growing number of countries are engaging in the regulation of herbal medicines.

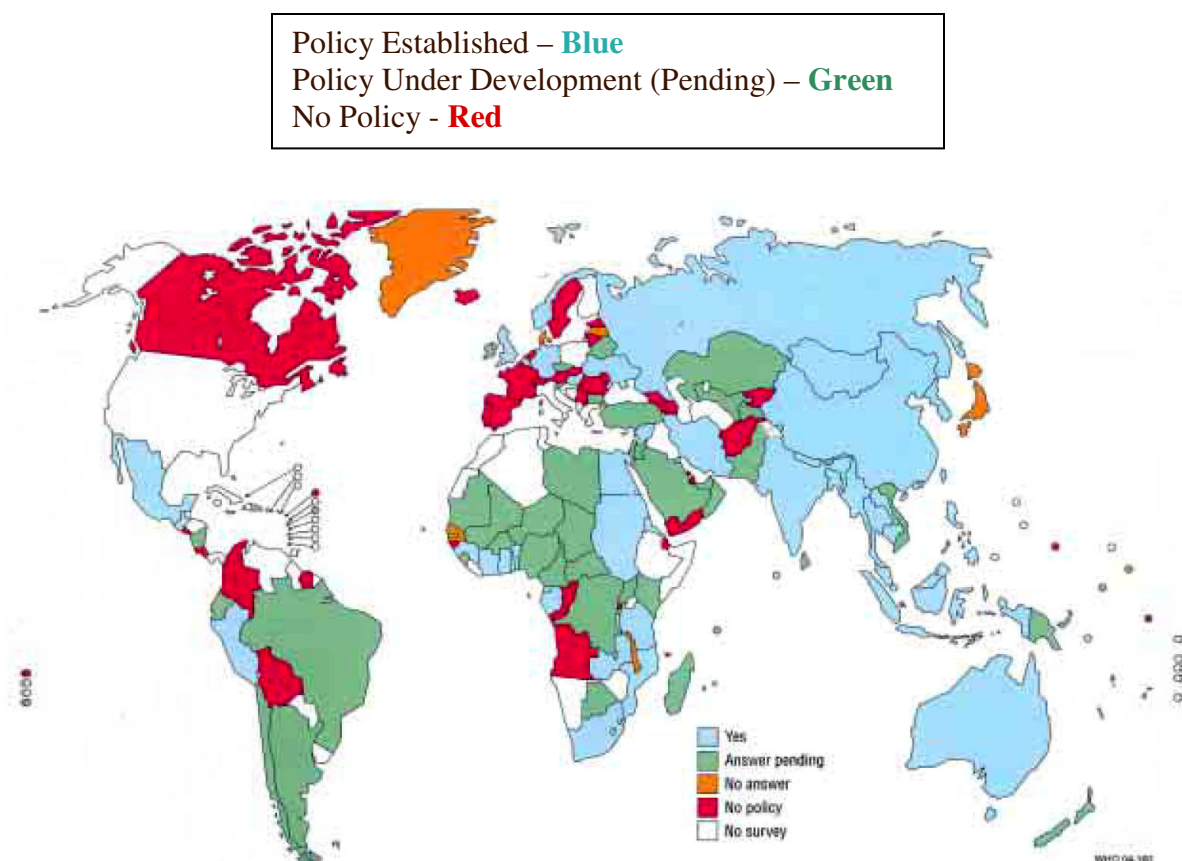
The questions about the regulatory status of herbal medicines also show, interestingly, that in most countries (97 out of 142 respondents) herbal medicines are sold as over-the-counter medicines, in contrast to 50 countries where herbal medicines are also sold as prescription medicines. Medical claims, health claims and nutrients contents claims are the most common types of claims with which herbal medicines may legally be sold (90 countries allow medical claims, 62 allow health claims and 49 allow nutrient content claims).

In total 86 countries (61%) have established a registration system for herbal medicines, of which 17 have at least 1000 or more registered herbal medicines. Judging from these findings, many countries are giving the issue of regulating herbal medicines careful consideration. **Table I** below provides an overview of the global survey results for the African, Americas, Eastern Mediterranean, European, Southeast Asian, and West Pacific regions respectively.

**TABLE I** Survey return on selected topics, with regional breakdown

	Survey response	Survey % (141)	Global % (191)	AFRO <sup>1</sup>	AMRO	EMRO	EURO	SEARO	WPRO
National policy on TM/CAM	135	96%	71%	35	18	16	36	10	20
Law or regulation on TM/CAM	138	98%	72%	36	18	16	36	10	22
National programme on TM/CAM	133	94%	70%	35	18	16	35	9	20
National office for TM/CAM	136	96%	71%	35	18	16	36	10	21
Expert committee on TM/CAM	133	94%	70%	35	18	15	35	9	21
National research institute on TM, CAM or herbal medicines	135	96%	71%	34	18	16	35	10	22
Law or regulation on herbal medicines	140	99%	73%	36	18	16	38	10	22
Registration of herbal medicines	139	99%	73%	36	18	16	38	10	21

## World Map of WHO Member State Policies on TM/CAM



### Findings in the Americas Region

Only 18 of the 35 countries of the **WHO** Region of the Americas responded to the *Global Survey*. **Table II** summarizes the figures for development of national policies and regulations of TM/CAM and herbal medicines in this Region with comparative figures for all the responding countries and the global percentages.

#### Region of the Americas: positive responses

**TABLE II**

	Member States in the Americas Region responding positively with the following	Regional survey % that responded positively (18)	Global survey % that responded positively (141)
National policy on TM/CAM	3	17%	32%
Law or regulation on TM/CAM	6	33%	38%
National programme on TM/CAM	4	22%	28%
National office for TM/CAM	8	44%	53%
Expert committee on TM/CAM	9	50%	43%
National research institute on TM, CAM or herbal medicines	7	39%	41%
Law or regulation on herbal medicines	13	72%	65%
Registration of herbal medicines	13	72%	61%

In  
the

**WHO** Region of the Americas, there are considerable differences in the kinds of policies and regulations that have been developed. Many countries have regulation and registration systems for herbal medicines, yet the number of countries developing similar laws, regulations or national policies on TM/CAM is relatively small. However, the number of countries having expert committees, national research institutes and national offices is much higher, which may mean that such policies and regulations are being developed, or will be in the future.

## **Findings in Canada**

Canada as yet has no national policy, laws or regulations or national program pertaining to Traditional Medicine/Complementary Alternative Medicine. No national laws or regulations apply to any health disciplines, as power in these areas lies entirely with the provinces and territories. Nonetheless, a national office exists in **Health Canada** called the **Natural Health Products Directorate** within the **Health Products and Food Branch**. It was established in 1999. The Directorate acts as the regulating authority for natural health products for sale in Canada. Its role is to ensure that Canadians have ready access to natural health products that are safe, effective and of high quality while respecting freedom of choice and philosophical and cultural diversity. The Directorate also fulfills the functions of an expert committee, and a national research institute.

A Canadian Medical Association Journal article in discussing this new regulatory office quotes a key member of its transition (implementation) team who states that 90% of natural health products present little risk. Although it is not financially possible for the government to establish valid efficacy data for all of the natural health products currently in use, he suggests that the *“most appropriate research for the majority of natural products will be to look at patient results and outcomes through use of these products and their protocols.”* However the principle focus will be on monitoring safety. He further states that after products are assessed for posing a potentially high or low risk, they would then be slotted into 1 of 3 *“categories of claim”*: i ) structure/function claims (in cases where the product alters the structure/function of the body); ii) disease claims (in cases where the product would prevent a disease); and iii) disease-treatment claims (for cases in which the product would be used to treat a disease). The higher the category of claim, the greater the need for clinical evidence.

This planned regulation of herbal medicines was first introduced within Canada in the year 2003 in separate regulatory laws within the *Food and Drugs Act*. Herbal medicines are regulated as over the counter medicines, self-medication, dietary supplements, and as natural health products. By law, medical, health, nutrient content and structure/function claims may be made about herbal medicines.

Although in Canada no national pharmacopoeia exists, national monographs are under development. In place of a national pharmacopoeia and national monographs, the following sources have been routinely used by health care practitioners:

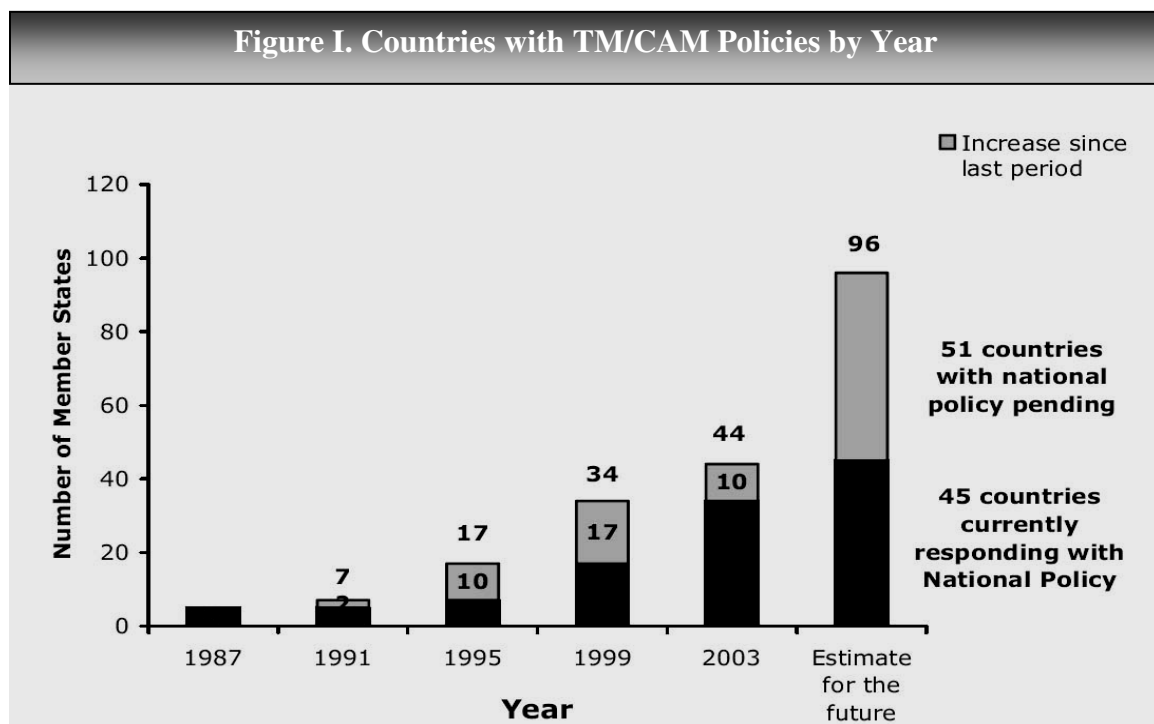
- Compendium of Pharmaceuticals and Specialties;
- Canadian Drug Reference for Health Professionals;
- Compendium of Non-Prescription Products (CNP);
- United States Pharmacopoeia, Herbal Medicines;

- Expanded Commission E Monographs;
- **ESCOP** Monographs;
- **WHO** Monographs;
- Pharmacopoeia of the People's Republic of China;
- **PDR** for Herbal Medicines; and
- British Herbal Compendium, and British Herbal Pharmacopoeia.

Special GMP rules are required for manufacturing of herbal medicines; these are enforced by submitting to inspection to ensure the granting of a site license to manufacturers, importers and labelers. To market a herbal product, the manufacturer, importer or labeler must have both a site license and a product license. Special requirements for safety assessment include special requirements of traditional use with out demonstrated harmful effects and reference to documented scientific research on similar products. Requirements for safety assessment are enforced by the need for a product license that is conditional on providing satisfactory evidence of compliance with the safety requirements laid down in the regulations. Under the current system of herbal registration, over 10,000 herbal medicines were registered. A new system was due to come into effect in 2004. No herbal medicines are included on an essential drug list. A post marketing surveillance system that includes monitoring of adverse effects of herbal medicines was established in 1965 and is the same as for conventional pharmaceuticals.

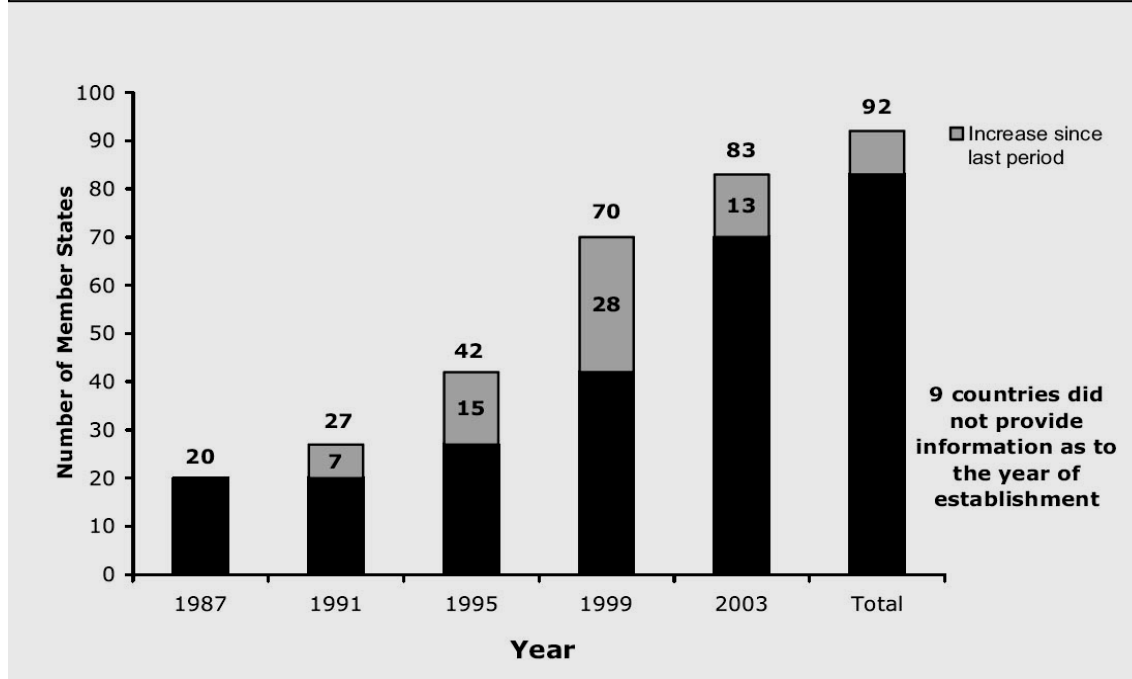
In Canada, herbal medicines are sold in pharmacies as over the counter medicines, in special outlets, by licensed and unlicensed practitioners and in multi-level marketing. Annual market sales based on a market survey of herbal medicines and vitamins for Canada in 1999 was \$937million Canadian (i.e. US \$715 million of which herbs alone accounted for US \$380 million). For the years 2000 and 2001 herbal medicine sales equaled approximately US \$400 million for each year.

Selected **Figures** follow, taken from **WHO Global Survey**, renumbered with title modifications.

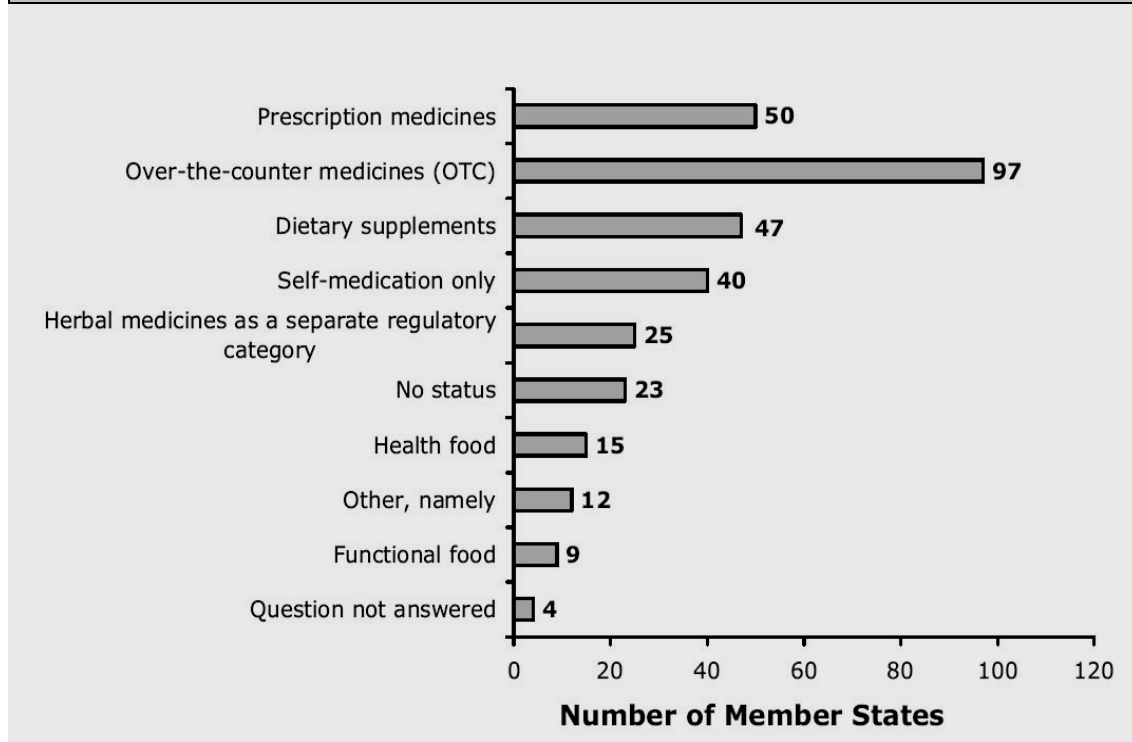




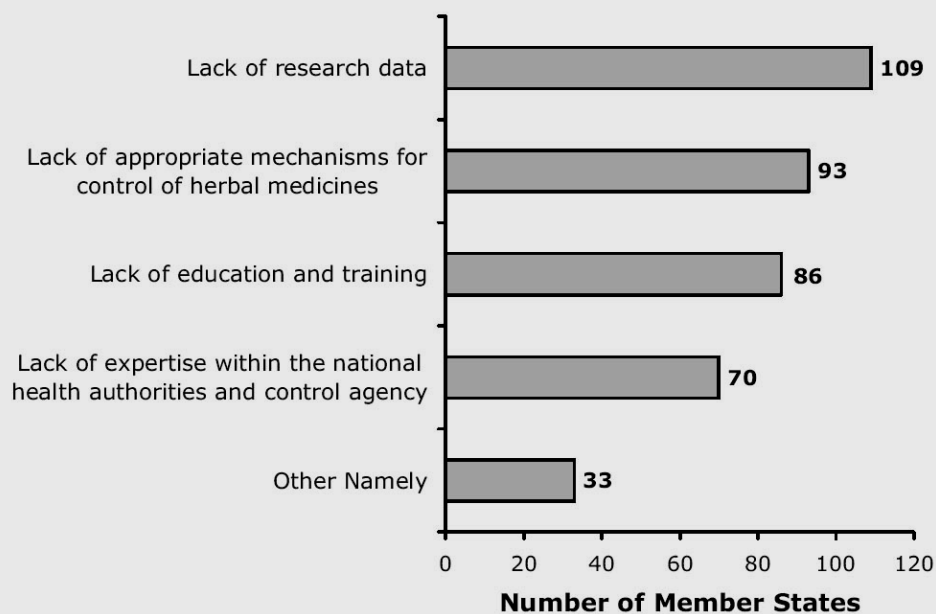
**Figure II. Countries with Laws/Regulations on Herbal Medicines by Year**



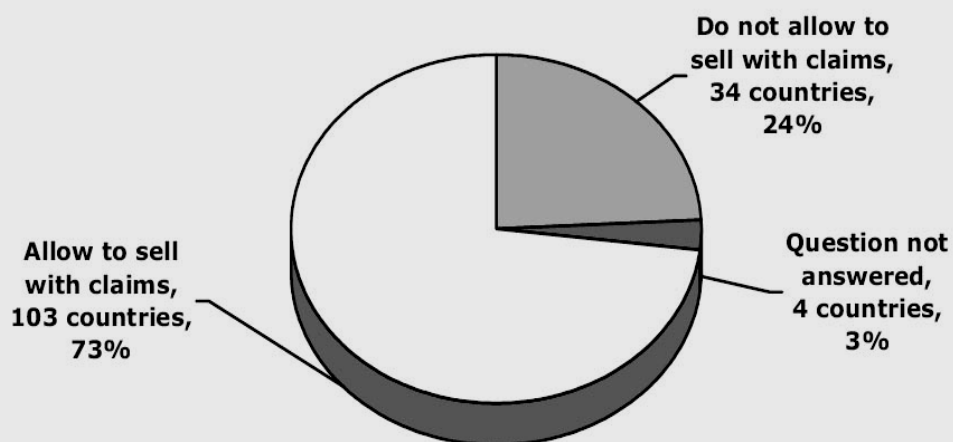
**Figure III. Regulatory Status of Herbal Medicines**



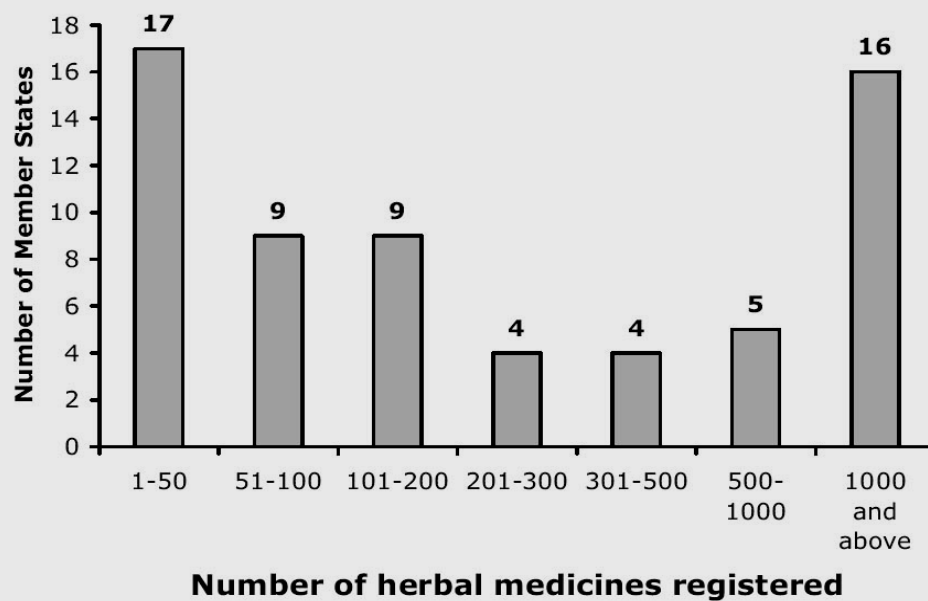
**Figure IV. Key Difficulties Regarding Regulatory Issues for Herbal Medicines**



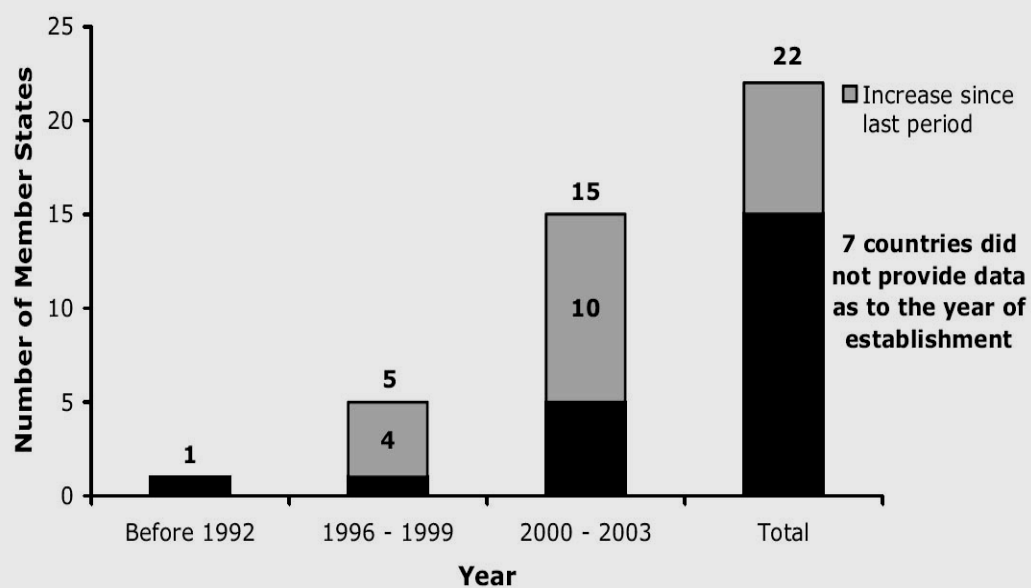
**Figure V. Countries that Allow Sale of Herbal Medicines with Claims**



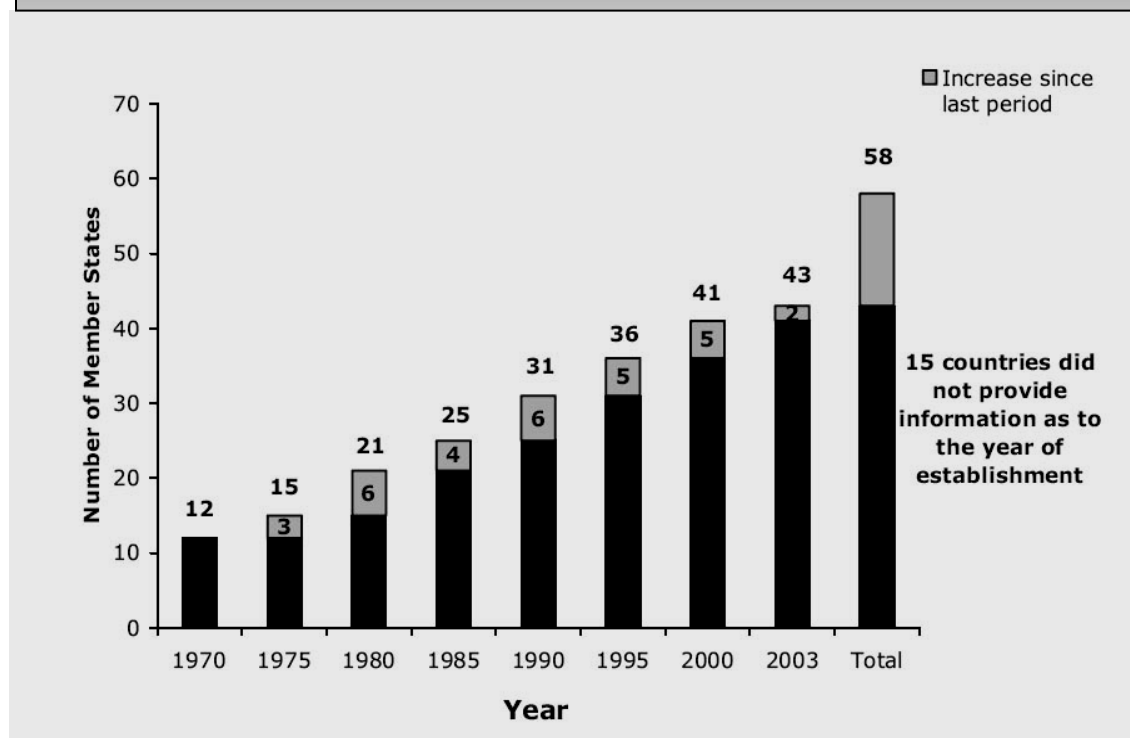
**Figure VI. Countries Registering Herbal Medicines & Number Registered**



**Figure VII. Countries with Herbal Medicines on Essential Drug List by Year**



**Figure VIII. Countries with National Research Institute on TM/CM by Year**



**Sources:**

National Policy on Traditional Medicine and Regulation of Herbal Medicines, Report of a **WHO Global Survey**, **World Health Organization**, Geneva, May 2005; and

Barbara Sibbald, *New federal office will spend millions to regulate herbal remedies, vitamins*, *Canadian Medical Association Journal*, Vol. 160, No. 9, May 4, 1999, pp. 1,355-1,357.



## ANNEX II

### BRIEF OVERVIEW ON ABORIGINAL MIDWIFERY PRACTICE IN CANADA

#### INTRODUCTION

The knowledge and practice traditional midwifery of Canada's first peoples was passed from one generation to the next and was regarded as an important conveyor of cultural knowledge and identity. It was an indispensable feature of traditional life, and accorded Aboriginal woman a source of recognition and esteem. In their well written overview on the recent resurgence of Aboriginal midwifery in Canada as a blending of traditional and modern forms, Caroll and Benoit incisively note that:

*Aboriginal women in Canada have for many centuries faced social, political and cultural changes that have negatively affected their health, cultural identity, social structures and traditional values. Years of acculturation and assimilation have led to the decline of traditional midwifery practice in many parts of the country... More recently, however, new government legislation, political rethinking and historical interest in the cultural role of traditional Aboriginal midwives have afforded legitimacy to a model that blends ancient traditions and modern techniques, enabling women to bring childbirth back to their communities.*



It was further observed that in pre-Columbian times, the role of a woman as helper and midwife was assumed to be the Creator's special work and midwifery was viewed as a calling to a profession. Traditional Aboriginal midwives were considered as fundamental in the childbirth process and in passing ethical values from one generation to the next. Elders can recall that pregnancy and childbirth took place on a closely knit basis linking the midwife to the birthing woman, the infant, the husband and father, the extended family, and the entire community.

However in the post-contact era there were a number of notable historical events that led to the termination of Aboriginal midwifery and to loss of the right for midwives to assist with birth within their traditional territories. Colonialism, the impositions of western medicine, the residential school system, and government legislation in favor of patriarchy and other paternalistic policies served to alter the socio-economic and traditional ways of Aboriginal people and undermined many of their long-standing healing traditions. The combined impact of these forces, in addition to major deterioration in health status, played havoc on Aboriginal cultures and undermined the previous balance and harmony within their communities.

In recent years Canada has faced a shortage of maternity care providers that grows more acute every year. This shortage is felt most acutely in rural and remote communities and has fostered an increased acceptance of midwives as appropriate care providers for low risk pregnancies. For Aboriginal communities, this situation has provided greater opportunity for the restoration of midwifery and community-based births. Indeed, current efforts are underway in different regions of Canada to revive traditional midwifery in Aboriginal communities. Despite the obvious need it has proven to be a difficult task. Many of the older practices have been lost and few Aboriginal midwives are left to pass along what survives of their indigenous knowledge. Nonetheless, an examination of some of the emerging forms of Aboriginal midwifery indicates that these new initiatives are attempting to blend both traditional and modern forms of midwifery in order to create innovative models that focus on culturally relevant, community-based care.

## **REGULATION AND ACCREDITATION**

The regulation and support of midwifery in Canada is very much a patchwork situation.

- ▶ Midwifery as a regulated, publicly funded profession
- ▶ Midwifery as regulated but not publicly funded
- ▶ Midwifery as funded but unregulated
- ▶ Midwifery as unregulated and non-funded

Specific midwifery legislation exists in only three provinces: Quebec, Ontario, and Manitoba and the Northwest Territories. The profession is regulated under other legislation in Newfoundland and Labrador, Saskatchewan, Alberta, and British Columbia. In the Northwest Territories, Nunavut, Yukon, Prince Edward Island, New Brunswick, and Nova Scotia, midwives work without any applicable legislation

In Canada, some Aboriginal midwives want to be exempt from midwifery regulations for reasons of culture and self-determination. (In a few regions of Canada Aboriginal midwives are in fact being accorded exemption from provincial regulations.) These midwives maintain that Aboriginal culture, with its effective healing and life-cycle traditions and knowledge, should be freely practiced and protected through Aboriginal midwifery. The sacredness and safety of the birth experience is of primary concern. Some Aboriginal midwives and pregnant women also perceive that the medicalization of childbirth as yet another manifestation of unnecessary interference and control by the dominant society, i.e. a new form of colonialism.

Other Aboriginal midwives prefer to work within the College of Midwifery of their respective province, as is the case in Manitoba and British Columbia. These midwives believe that by integrating contemporary midwifery and traditional best practices, they are able to provide the best quality care possible to Aboriginal women. They also enjoy the flexibility, portability and financial rewards of being part of an accredited health profession.

## **MANITOBA**

The *Aboriginal Midwifery Education Program* operated from January of 2005 to September of 2006 to consult with Aboriginal people living in northern Manitoba on the development of a

baccalaureate program in Aboriginal midwifery, and to use this information to design the curriculum and supports required to implement such a program. Funds for the Program were provided to the **Government of Manitoba** by **Health Canada**. The Program has led to the establishment of a 4-year baccalaureate program in Aboriginal midwifery now being offered by the **University College of the North** with campus locations in The Pas and Thompson and regional centres in ten other communities in northern Manitoba. The Program is called the *kanáci otinawáwasowin* (meaning “*sacred midwifery*” in the Cree language). It is comprised of 26 course outlines, including learning outcomes and recommended resources, for a total of 122 credit hours which may be completed in four years. It is based on northern Aboriginal culture, reflects Aboriginal ways of knowing and learning, uses adult principles of learning and employs a mentorship model of learning and instruction. Nine students have already been accepted into the Program out of a total of 22 applicants. All students are of Aboriginal ancestry.

Aboriginal communities in northern Manitoba are finally witnessing the return of midwifery, and eventually births, to their communities. For the first time in many years two midwives will be located in the Norway House Cree Nation to provide instruction for enrolled students and to provide midwifery care to residents of the community. A similar experience is occurring with the communities of Moose Lake and Opaskwayak Cree Nation which are situated near The Pas and which will benefit from the presence of the college training program.

Another positive note is the fact that the government of Manitoba has recently passed legislation granting midwives the option to attain accreditation not only through formal education, but apprenticeship methods as well.

## QUEBEC

The **Innuulitsivik Health Centre**, located in Puvirnitq in northern Quebec, established in 1986 houses one of the oldest and best known Aboriginal midwifery initiatives in Canada. The Centre serves the seven Hudson Bay coast communities, with a population totaling roughly 5,500. Inuulitsivik maintains a community health centre in each village, a small 25 bed general hospital in Puvirnitq and a mental health centre in Inukjuak. There are currently about 200 births per year taking place in three birthing centres in the three largest villages: Puvirnitq (pop. 1403), Inukjuak (1439), and most recently in Salluit (1,108). All of the communities are remote fly-in villages, with transfer for tertiary care many miles south in Montreal.

This midwifery service actually began in 1986 in Puvirnitq. The opening of the Maternity was supported through community-based organizing by Inuit women and growing activism for Inuit cultural revival and self-governance.

As in many other northern Canadian communities, women and the local community had concerns about the policy of evacuating all pregnant women to southern hospitals to give birth, which had become the accepted “*standard of care*” in the mid 1970s. This policy involved women being flown south at 36 weeks into their pregnancy or earlier and spending weeks and sometimes months away from home. This has led to an increase in small, premature infants, as



well as maternal and newborn complications, even though the majority of women have come to maternity centers with a good standard of care. Postpartum depression is also more likely in women experiencing high stress and low support during the perinatal period, and the ability to successfully establish breastfeeding may be compromised. Furthermore, family relations are strained and paternal attachment during the critical first week is negatively impacted. Lastly communities and extended families are denied the opportunity to celebrate birth.

In the year 1999, Quebec legalized midwifery as an autonomous profession. While this was a major political breakthrough for non-Aboriginal midwives, the post-legislative situation for Aboriginal midwives in the province is still unclear and not totally secure. The new midwifery legislation contains two clauses that effect Aboriginal midwives directly. The first recognizes the five midwives who work at the **Inuulitsivik Maternity Centre** by including them in the **Québec Order of Midwives**, provided they restrict their practice to the Nunavik territories. The second states that band/community councils are able to negotiate with **Quebec Ministry of Health** specific arrangements for the practice of traditional midwifery. Additionally, the Quebec law recognizes only one training program, the one established at the **University of Québec** at Trois-Rivières. Aboriginal midwives currently in training at Inuulitsivik are thus unable to apply for a midwifery license. On a more positive note, the **Nunavik Midwifery Working Group** is exploring how the current provincial law might be reinterpreted or amended so that the apprenticeship model of educating Aboriginal midwives is given due recognition.

### THE LEWIROK WAS MIDWIFERY PROGRAM

The Mohawk word for midwife is lewirokwas (ya-wee-lo-gwas) which means “*pulling the baby out of the earth.*” The Mohawk Nation at Akwesasne operates this program on their reserve territory which straddles Quebec, Ontario and New York State. It is currently set up to educate and train Aboriginal midwives, and focuses on empowerment of women during pregnancy and childbirth, and to build on the existing knowledge base about Aboriginal midwifery and Aboriginal healing practices. Because of the program, more Mohawk women have begun using the birthing stool, smudging, and other traditional birthing practices. The program trains Mohawk midwives at Akwesasne and in other Mohawk communities.

### NUNAVUT

Another well known community-based birthing centre arrangement is available to Aboriginal women residing in the central Arctic region of Rankin Inlet, Nunavut. In 1995, its status changed from a pilot project to what is today a full scale program with a staff of four midwives, two Inuit maternity workers, and a clerk interpreter. While the **Rankin Inlet Birthing Centre** is currently functioning outside Territorial legislation, its long-term survival seems promising. The Centre is now housed in the newly constructed **Kivalliq Regional Health Centre**. Previously, expectant mothers visited the birthing centre for pre- and post-natal care, but had to go to the old health centre for deliveries.

### ONTARIO

**Tsi Non:we Ionnakeratstha Ona:grahsta'** . “Tsi Non:we Ionnakeratstha” is a Mohawk phrase meaning “*the place they will be born;*” “Ona:grahsta” is a Cayuga word meaning “*a birthing place.*” The Centre was established in 1996 and is located on the Six Nations Reserve of the



Grand River, It is partly funded by the Ontario Ministry of Health, and provides pre-conception services, pre and post-natal care, and birthing services to women with low risk pregnancies, including services to both Aboriginal and non-Aboriginal women in the southwest Ontario area. Services are provided by traditional Aboriginal midwives, and incorporate traditional midwifery practices. As required, referrals are made to and medical back-up is available from local obstetricians and hospitals. The centre also offers Aboriginal midwifery training to woman from the Six Nations Reserve. Aboriginal midwives are exempt from the provincial midwifery law, and can practice on-and off-reserve as long as they provide services to Aboriginal families.

## **BRITISH COLUMBIA**

Aboriginal women in BC have taken a somewhat different path, seeking to work within the current midwifery legislation to establish a **Committee on Aboriginal Midwifery** under the umbrella of the **College of Midwives of BC**. The amended bylaws (last amended March 2, 2006) of the College state:

20. (1) A committee on aboriginal midwifery shall consist of at least three (3) aboriginal persons appointed by the board.

(2) A committee on aboriginal midwifery may recommend bylaws to the board regarding the following matters:

- (a) a class of traditional aboriginal midwives and classes of aboriginal midwives;
- (b) requirements for the registration of traditional aboriginal midwives and aboriginal midwives;
- (c) standards, limits or conditions for the practice of midwifery by aboriginal midwives;
- (d) standards of professional ethics for aboriginal midwives;
- (e) standards of education for aboriginal midwives;
- (f) requirements for continuing education for aboriginal midwives; and
- (g) procedures to be followed by the committee.

(3) The committee on aboriginal midwifery may nominate a person to fill a position on each committee of the board.

(4) Where a recommendation by the committee made under subsection (2) is not accepted by the board regarding a proposed bylaw, the matter may be referred to the Minister jointly by the board and the committee on aboriginal midwifery.

To date, no specific initiatives have been developed in the province, although the legislation authorizes the establishment of such a Committee. The College is currently looking at defining terms within the legislation, and to engage in further community consultations.

## **OTHER AREAS OF CANADA**

The situation of Aboriginal midwifery in the other provinces is in flux. The fact that, to date, two provinces - Alberta and Saskatchewan - have chosen to legalize but not publicly fund midwifery services is a reason for concern. Given Aboriginal women's relative economic marginalization, very few can afford to purchase midwifery services on the market, even if those services are culturally appropriate and sensitive to their needs and concerns.

As evidenced by the various initiatives underway in BC and across the country, the opportunity to interface traditional Aboriginal ways of knowing with modern science is a formidable challenge, but not an impossible task. In reclaiming control over birth, these communities have begun the process of restoring balance and harmony among their people, while at the same time ensuring health and safety for Aboriginal mothers and babies.

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## **ANNEX III**

### **TRADITIONAL PLANT MEDICINE USAGE: SAMPLING OF USES BY NORTH AMERICAN TRIBAL PEOPLES**

This Annex provides a modest cross-sampling of how various North American tribal peoples traditionally employed locally available plant medicines in the treatment of various ailments, as contraceptives, and to support mothers in the birthing process. Some of these uses were experimental adaptations well after the post contact period when newly developed degenerative conditions came into being such as diabetes and heart disease. Common or folk names are used for each specific plant medicine.

#### **Asthma**

Skunk Cabbage.

This plant was used to stimulate the removal of phlegm in asthma. The rootstock was official in the U.S. Pharmacopoeia from 1820 to 1882 when it was used in respiratory and nervous disorders and in rheumatism and dropsy.

#### **Backache**

Arnica.

A tea of arnica roots was used for treating back pains. The Dispensary of the United States (22nd edition) states this drug can be dangerous if taken internally and that it has caused severe and even fatal poisoning. Also used as a wash to treat sprains and bruises.

Gentian.

The roots of this plant were steeped in hot water and the hot fluid applied on aching backs.

Horsemint.

It was the practice to crush and steep fresh horsemint leaves in cold water and drink the infusion to allay back pain. Various tribes also used horsemint for fever, inflammation, and chills.

#### **Bronchitis**

Creosote Bush.

A tea of the leaves was used for bronchial and other respiratory problems.

Pleurisy Root.

A tea of the boiled roots was used as a remedy for pneumonia and was later employed to promote the expulsion of phlegm,

Wormwood.

A tea of the boiled leaves was used to treat bronchitis.

#### **Burns**

Yellow-Spined Thistle.

Yellow-spined thistle blossoms were boiled and the resulting liquid was applied to burns and skin sores.

## **Childbirth**

### *To Speed Childbirth:*

Partridgeberry.

A tea was made of the boiled leaves. Frequent doses of the tea were taken in the few weeks preceding the expected date of delivery.

Blue Cohosh.

To promote a rapid delivery, an infusion of the root in warm water was drunk as a tea for several weeks prior to the expected delivery date.

### *To Speed Delivery of the Placenta:*

American Licorice.

A tea was made from the boiled roots.

Broom Snakeweed.

Women drank a tea of the whole plant to promote the expulsion of the placenta.

### *To Stop Post-Partum Hemorrhage:*

Buckwheat.

Women were given an infusion of the entire buckwheat plant to stop bleeding.

Black western Chokecherry.

Women were given a drink of the berry juice to stop bleeding.

Smooth Upland Sumac.

The smooth upland sumac fruits were boiled and the liquid applied as an external wash to stop bleeding.

### *To relieve the Pain of Childbirth:*

Wild Black Cherry.

Women were given a tea of the inner bark to relieve pain in the early stages.

## **Colds**

Boneset.

Boneset tea was one of the most frequently used home remedies during the 1800s. It was used to reduce fever; stomachache; body pain; and to alleviate fever and colds.

## **Colic**

Catnip.

A tea was made of catnip leaves for infant colic.

## **Contraceptives**

Indian Paintbrush.

Women drank a tea of the whole Indian paintbrush to “*dry up the menstrual flow.*”

Blue Cohosh.

Women drank a strong decoction of the powdered blue cohosh root to promote parturition and menstruation.

Dogbane.

This plant was used by many tribes as a contraceptive, a tea from the boiled roots of the plant was drunk once a week.

Milkweed.

Women drank a tea prepared of the whole plant after childbirth.

American Mistletoe.

A tea of the leaves was drunk to induce abortion or to prevent conception.

Antelope Sage.

To prevent conception, women drank one cup of a decoction of boiled antelope sage root during menstruation.

Stoneseed.

Drinking a cold water infusion of stoneseed roots everyday for six months was done to ensure permanent sterility.

## **Coughs**

Aspen.

An infusion of the inner bark was used as a remedy for coughs.

Wild Cherry.

A tea of the bark of wild cherry was used for coughs and colds, and also for diarrhea, and lung troubles.

White Pine.

The inner bark was used as a tea for colds and coughs.

Sarsaparilla.

The pulverized dried sarsaparilla roots were combined with sweet flag roots in warm water and the resulting dark liquid as a cough remedy.

## **Diabetes**

Wild Carrot.

The blossoms of this wild species were steeped in warm water when they were in full bloom and the drink used for diabetes.

Devil's Club.

A tea made of the root bark was used to offset the effects of diabetes.

## **Diarrhea**

Blackcherry.

A tea of blackberry roots was the most frequently used remedy for diarrhea in some areas.

Wild Black Cherry.

The ripe wild black cherry was permitted to ferment naturally in a jar about one year, then the juice used to cure dysentery.



Dogwood.

The inner bark of the dogwood was boiled and the warm solution passed into the rectum with a rectal syringe made from the bladder of a small mammal and the hollow bone of a bird.

Geranium.

The entire geranium plant was boiled and the tea used for diarrhea.

White Oak.

The bark of the white oak was boiled and the liquid swallowed for bleeding piles and diarrhea.

Black Raspberry.

The root bark of black raspberry was boiled the liquid swallowed for dysentery.

Star Grass.

A tea of star grass leaves was used for dysentery.

## **Digestive Disorders**

Dandelion.

A tea of the roots was drunk for heartburn, and for a general tonic.

Yellow Root.

A tea from the root was used as a stomach ache remedy.

## **Fevers**

Dogwood.

The inner bark was boiled the water, and the tea used to reduce fevers.

Willow.

The inner root bark was boiled, then strong doses of the resulting tea was drank to induce sweating in cases of chills and fever. In southern N. America fever remedies were maded from the bark of the red willow, while some tribes plunged into willow root baths for the same purpose.

Feverwort.

A decoction of the coarse, leafy, perennial herb was used to cure fevers.

## **Headache**

Pennyroyal.

Pennyroyal leaves were boiled in water and the tea used to cure headaches.

## **Heart and Circulatory Problems**

Green Hellebore.

The green hellebore was used to releave body pains.

American Hemp and Dogbane.

Used as a heart medicine, the fruit was boiled when it was still green, and the resulting decoction drunk. It was also used for kidney problems and for dropsy.

## **Hemorrhoids**

White Oak.

Piles were treated by squirting an infusion of the scraped inner bark of oak into the rectum with a syringe made from an animal bladder and the hollow bone of a bird.

## **Inflammations and Swellings**

Witch Hazel.

The leaves were boiled and the liquid rubbed on the legs of tribesmen who were participating in sporting games. A decoction of the boiled twigs was used to cure aching backs, while steam derived by placing the twigs in water with hot rocks was a favorite treatment for muscle aches.

## **Influenza**

Native Hemlock (as opposed Poison Hemlock of Socrates fame).

A tea was prepared from the inner bark and drank to relieve cold symptoms. A similar tea was used to induce sweating and relieve colds and feverish conditions.

## **Insect Bites and Stings**

Fendler Bladderpod.

A tea was made from this plant and used it to treat spider bites.

Purple Coneflower.

This plant was employed as a universal application for the bites and stings of all crawling, flying, or leaping bugs. Between June and September, the bristly stemmed plant, which grows in dry, open woods and on prairies, bears a striking purplish flower.

Stiff Goldenrod.

The flowers were ground into a lotion and applied to bee stings.

Trumpet Honeysuckle.

The leaves were ground by chewing and then applied to bees stings.

Wild Onion and Garlic.

The crushed bulbs of wild onions and garlic was applied to bites and stings.

Saltbush.

The stems were chewed and the pulpy mash placed on areas of swelling caused by ant, bee and wasp bites. The dried, powdered roots and flowers were mixed with saliva and applied to ant bites.

Broom Snakeweed.

The stem was chewed and the resin applied to insect bites and stings of all kinds.

Tobacco.

A favorite remedy for bee stings was the application of wet tobacco leaves.

## **Insect Repellents and Insecticides**

Goldenseal.

The large rootstock was pounded and mixed with bear fat and applied to the body as an insect repellent. This plant was also used as a tonic, stimulant, and astringent.

## **Rheumatism**

Pokeweed.

A tea of the boiled berries was used to cure rheumatism. The dried root was also used to allay inflammation.

Bloodroot.

A tea of the root was used as a favorite rheumatism remedy.

## **Sedatives**

Wild Black Cherry.

A sedative tea is made of the root bark.

Hops.

A sedative medicine was prepared from the conelike strobiles and sometimes the blossoms were heated and applied for toothaches. A tea made of the steeped strobiles was used to relieve pains of the digestive organs.

Wild Lettuce.

This wild species was used for sedative purposes, especially in nervous complaints.

## **Thrush**

Geranium.

The geranium root was boiled together with wild grape, and the liquid used to rinse the mouths of children affected with thrush.

Persimmon.

The bark was stripped from a tree and boiled in water, and the resulting dark liquid used as a mouth rinse.

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This information was adapted from:

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