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Review

Integration of complementary and traditional medicines in public health care systems: Challenges and methodology

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Complementary and traditional medicines (CTM) are an important tool for empowering and enriching the capacity and quality of public health systems. It provides more comprehensive approach to health systems, preserves cultural diversity and facilitate human development, and has claimed, despite all the tremendous advancements in modern medicine, an increasing share of the public's awareness and the agenda of medical researchers. Socioeconomic dimensions, priority disease management, Intellectual Property Rights, Research and Development and affiliated systems are major influencing features for the development of policies related to CTM. Common challenges includes recognition, regulatory status, educational standards, assessment of efficacy, quality control and safety monitoring related to traditional medicine, ecological obligation; value addition and intercultural approach can be overcome by adopting World Health Organization (WHO) traditional medicine strategy in contexts to maximize the contribution and integration of CTM to health care systems globally. A corrective, promotive and science based policy needs to be initiated for CTM to fully realize and materialize its potential and contribute more meaningfully to integrative health services. Setting up of a permanent commission on traditional medicines (TRM), issuing policy statement, recognizing the historical role of complementary and traditional medicines in providing health care, mobilization of resources for the development of CTM, training of health workers at the community level in using TCM to treat common diseases and establishment of institution which deals with necessary measures to protect intellectual property and include efforts to link with internationally accepted International Patent Classification system will help integrate TCM into main health care system.

Key words: Complementary and traditional medicines (CTM), policy, integration, quality control, Intellectual property rights, public health.

INTRODUCTION

Complementary and traditional medicines (CTM) are an important tool for empowering and enriching the capacity and quality of public health systems. CTM provides more comprehensive approach to health systems, preserve cultural diversity and facilitate human development (Pellizzoli and Dario, 2008). According to World Health Organization (WHO) “Traditional medicine refers to the indigenous health practices, approaches, knowledge and beliefs incorporating plant, animal and mineral based medicines, spiritual therapies, manual techniques and exercises, applied singularly or in combination to treat, diagnose and prevent illnesses or maintain well-being.” Based on this broad definition, National Centre for Complementary and Alternative Medicine (NCCTM)

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classifies CTM therapies into five broad groups such as (Chinese medicine, Ayurveda); mind-body medicine; biologically based practices (herbs, food, vitamins); manipulative and body based practices (chiropractic, osteopathy) and energy medicine (bio field therapies). Another approach called “integrated medicine” refered to evidence based management consist of both conventional medicine and alternative medicine and often considered best strategy for promotion of CTM. It reveals understanding related to benefits and limitations of allopathic medicine. Although CTM have different definitions but all are directing the same objective, with different aspects. Therefore, they are not readily integrated into the dominant health care model (Bishop et al., 2008; Payyappallimana, 2010).

In the first decade of the 21st century, there are huge advances in human well-being along with intense deprivation; specifically inequities in availability, accessibility and affordability of health care have increased between, as well as within populations the world over. United Nations Human Rights Commission and the World Health Organization have acknowledged the human right, to access appropriate healthcare (WHO, 2001). Diversity, flexibility, easy accessibility, broad acceptance in developing countries and increasing popularity in developed countries, relative low cost, relative low side effects and rising economic importance are some of the encouraging features of traditional medicine. Almost half the population in many industrialized countries now regularly use some form of CTM (United States, 42%; Australia, 48%; France, 49%; Canada, 70%), and considerable use exists in many developing countries (China, 40%; Chile, 71%; Colombia, 40%; up to 80% in African countries, Pakistan, 50%).

The increasing popularity reflects changing needs and values in modern society, includes a rise in prevalence of chronic diseases, an increase in public access to worldwide health information and concerns about the adverse effect and high cost of conventional health care. All these aspects are fuelling the search with an increased evidence-based approach for CTM that can lead to the prevention and management of illness. Therefore, over the past decade, interest has been building for a policy framework for CTM within national health care systems, and some guidelines have been created, as there are many factors like the socio-cultural and personal (health status, belief, attitude, motivation, etc.) still lacking comprehensive theoretical model to account for the increased use of alternative forms of health care (WHO, 2001; Bodeker and Kronenberg, 2002; Watt et al., 2008; Shaikh et al., 2009). However, there has been lack of concerted efforts for proper utilization of complementary and traditional medicines in the health care system.

Today, CTM play an important role in health sector reform globally. Hence, the safety, efficacy and quality control have become important concerns. Evaluation of CTM treatment is very difficult as it consist of more complex approach (focuses on the overall condition of the individual patient, rather than disease). Therapies and theories of CTM also differ from country to country and region to region. Therefore, there is a critical need to mainstream traditional medicine into public health care to achieve the objective of improved access to healthcare facilities (Payyappallimana, 2010). In this background, the article is an overview of CTM, various vital aspects that act as a tool for policy measures their role in primary health care and major contemporary challenges for integration of CTM into public health systems.

Development and integration of CTM

Payyappallimana (2010) had reported that the development of CTM has been influenced by the different cultural and historic conditions (from which they initially originated). So, various perspectives exist regarding integration of traditional medicine with conventional health sector. Bodeker and Kronenberg (2002) has mentioned the following considerations regarding CTM.

Social, cultural and economic dimensions

Social, cultural, and political values along with socio-economic factors, influence CTM. The uses of traditional medicine alongside or even in place of conventional medicine in their cultures prevail specifically in ethnic minorities. Factors including affordability, availability, cultural familiarity of traditional medicine and family influence contribute to the continued use of traditional medicines in developing countries. In few countries, such as China, Korea, and Vietnam, insurance fully covers CTM treatment and products. Additionally, as growing CTM markets lead to new economic possibilities, research and business interests may shift from providing affordable health care to developing products that can be marketed (Bodeker and Kronenberg, 2002).

Priority disease management

The public in the management of chronic conditions, such as chronic pain and arthritis, and more life threatening diseases (heart disease, cancer, and HIV related illness) uses CTM, being cost effective. In poorer countries, the search for effective and affordable treatments for epidemic diseases such as malaria and opportunistic infections associated with AIDS is driving renewed interest in traditional medicine (Bodeker and Kronenberg, 2002).

Intellectual property rights (IPRs)

International law does not allow the exploitation of traditional medical knowledge for CTM development without

the consent of customary knowledge. State parties are required to “respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities which encourage the equitable sharing of the benefits resulted from the utilization of knowledge, innovations and practices.” Contracting parties should “encourage and develop models of co-operation for the development and use of traditional and indigenous technologies.” Until recently, the Convention on Biological Diversity competed for influence with the more powerful Trade Related Aspects of Intellectual Property Systems (TRIPS) of the World Trade Organization (WTO). In early 2002, the WTO started a process to harmonize TRIPS and the Convention on Biological Diversity (CBD) to make sure there is sufficient protection for indigenous intellectual and cultural property rights involving implications for patenting (Patwardhan et al., 2005).

Research and development

Therapeutic natural products extracts having structural and chemical diversity are sources of supreme importance. A current review on national pharmacopoeias from several countries reveals that pharmacological screening of only 6% of the total plant species discovered from at least 120 distinct chemical substances from different plants have utility as life saving drugs. Chinese medicine is successful in crossing philosophical barriers through constant reworking of the basic system. India has world-class expertise and facilities for organic synthesis, isolation and structure elucidation, biological screening, toxicological testing and pharmacokinetics, and supplemented by the Industry participation for agro-technology involving cultivation of medicinal plants. Development of natural product libraries, identification of proper targets and their proper validation and optimization is of paramount importance. Along all these, there is need for controlled clinical research to confirm claimed effectiveness and safety. Analysis of most frequently used plant based therapies in Ayurvedic system showed that 43% of them have been tested on humans, and 62% have been subjected to animal studies. Reported botanical standards are deficient in quality. Therefore, there is requirement of new analytical approaches like Herboprint, three-dimensional high powered liquid chromatography (HPLC) and attempt to develop tools for activity-based standardization of botanicals (Malik et al. 2010, 2011; Patwardhan et al., 2005).

Affiliated systems

There are many other supporting industries which play important roles in trade of traditional medicine rather than drug manufacturer. Supporting system covers collectors, breeders, dealers of the plant materials, processing, manufacturing industry, practitioners of traditional medicine and finally the consumers. However, this area is badly neglected. Like China and India, Good Agricultural and Collection Practices (GACP) and Field Collection Practices (FCP) should be followed to ensure harvesting, cutting, drying, processing, transportation and storage of correct raw materials. Selection of the correct germplasm using modern DNA fingerprinting and chemo profiling techniques is also a main concern for indigenous innovation (Patwardhan et al., 2005).

CTM POLICIES AND INTEGRATION INTO PUBLIC HEATH CARE SYSTEMS

The WHO global surveys of national health policies on CTM in 2002 revealed 68% of surveyed countries either had an established national CTM policy or were in the process. Only 25 of the 191 WHO member states have national policies on CTM. Recognizing and resolving contradictions between old health policies and current practice leads to appropriate partnerships and cooperation among public health professionals, which is of urgent importance. Such initiatives could improve public health quality.

The newest WHO policy on CTM focuses on regulation, safety and efficacy (Loizzo and Blackhall, 1998; Bodeker and Kronenberg, 2002; Knox et al., 2009; Payyappallimana, 2010). There is need of concerted efforts by public health professionals to develop a comprehensive and targeted public health research agenda, and to set policy priorities, to concentrate on the public health dimensions for the use of CTM (Bodeker and Kronenberg, 2002). Standardization, institutionalization and globalization of CTM are important issues for consideration in the setting of national and international public health research priorities, which includes operating principles that sufficiently fit the CTM in health care system (Bodeker and Kronenberg, 2002).

Development of CTM policies at Government level

Several countries are developing CTM policies by introducing regulation, education, public financing and research funding. National Centre for Complementary and Alternative Medicine (NCCTM) classifies CTM therapies based on the clinical approach into five broad groups as complete medical systems. European Union has also taken active measures to encourage use of CTM. Similarly, a White House Commission on alternative medicine is created to set legislative and administrative recommendations to maximize benefits of CTM (Bishop et al., 2008; Payyappallimana, 2010). China has used science-based approaches and successful in integrating CTM in the national health care system and hospitals by providing CTM practicing to 200 million

outpatients and almost 3 million in-patients annually. India has also developed integration between CTM and public health care successfully. Considering these practically successful models, the following steps are recommended for achieving the goal in developing and aspiring countries (Hussain et al., 2012).

1. Setting up of a permanent commission on TRM and issue of a policy statement by the commission recognizing the historical role of complementary and traditional medicines in providing health care.
2. Government should express support and encouragement for the development of institution/department to promote CTM indigenous systems and also facilities for public-sector to mobilize resources for the development of traditional medicine, especially for primary health care.
3. Policy development should be priority based, including education, standardization of drugs, and enhancement of availability of raw materials, research, information, communication and involvement in the national system for delivering health care. Programs should include training health workers at the community level in using traditional medical methods to treat common and recently defined diseases.
4. The government should establish new drug testing laboratories for CTM and upgrade existing laboratories to assist high quality evidence to licensing authorities for the safety and quality. It should also set up quality control parameters for selected traditional medicines and develop a system of quality assurance for traditional medicines with regulatory support and mechanism for its implementation in collection of data on manufacturers and medicines available in the market and promotion of rational use of traditional medicines.
5. A shortage of funds is noticeable and should allocate considerable amount of fund from the total health budget of the nations.
6. There should be establishment of institution which deals with necessary measures to protect IP and include efforts to link with internationally accepted International Patent Classification system.

A corrective and promotive policy needs to be initiated for CTM to fully realize and materialize its potential and contribute more meaningfully to integrative health services which are capable of strong link between research and industry (Patwardhan et al., 2005).

Regulation of CTM policies

Regulation of practitioners, guidelines for licensing, establishment of standards of practice and self-regulation have only recently been considered in industrialized countries (Bodeker and Kronenberg, 2002). The interaction of politics and science in the arena of health care, one of the most worthwhile industries in the US, has played a significant role in the recent development of alternative medicine. In October, 1991, the US Congress instructed the National Institutes of Health (NIH) and established The Office of Unconventional Medical Practices and in particular the Food and Drug Administration (FDA). FDA regulations were designed for conventional drugs and plans are not applicable for alternative medicine products. Many contemporary remedies are usually beyond the regulatory responsibility of the FDA, although 'dietary supplements' masked the remedies of CTM but regulation of CTM practitioners varies widely. In most countries, only registered health professionals may practice, but in the UK, practice is virtually unregulated, except for osteopathic and chiropractic. The General Osteopathy Council and the General Chiropractic Council have been established by the act of parliamentary and statutory self-regulation status. A small number of other disciplines, such as acupuncture, herbal medicine and homeopathy, have a single main regulatory body and are working towards statutory self-regulation. Belgium's parliament has recently lined the way for recognition of four types of complementary medicine, viz. acupuncture, homeopathy, osteopathy and chiropractic. In India and Pakistan, there are more than 500,000 Ayurvedic, 50,000 Unani practitioners and 100,000 and 83,000, respectively homeopathic physicians (Pal, 2002; Shaikh et al., 2009).

Major challenges

According to United Nations Educational, Scientific and Cultural Organization/World Intellectual Property Organization (UNESCO/WIPO) (1999), WHO (2002), Burgland (2005), Shankar et al. (2007) and Wang and Chan (2010), countries face major challenges in the recognition, development, implementation, regulation of complementary and traditional medicines system and its integration into public health care sector. These challenges include major issues related to;

i. Recognition;
ii. Regulatory status;
iii. Educational standards;
iv. Assessment of safety and efficacy of CTM;
v. Sustainability and integration challenges;
vi. Quality control;
vii. Safety monitoring and lack of knowledge about TM/CTM within national drug regulatory authorities;
viii. Ecological obligation;
ix. Value addition;
x. Inter-cultural approach.

Recognition

It is necessary that TRM are recognized, respected and endorsed by governments for full actualization of their potential. The WHO has defined three types of health systems to describe the degree to which TCAM is an

officially recognized element of healthcare: the integrative system, the inclusive system and the tolerant system (WHO, 2002). Integration is currently being practiced in China, the Koreas, Vietnam and supported by Australia (Cohen, 2004). China, India, Canada, Nigeria, Mali and UK among others, provide governmental support to strengthen training, research and the use of TRM in their national healthcare strategies (Patwardhan et al., 2005, 2006). Similar practices are also observed in other parts of the world, including the European Union (EU) and the Americas. The WHO Global Atlas of traditional, complementary and alternative medicine (TM/CAM) remains an excellent information and reference resource

Regulatory status

The WHO survey has identified a lack of knowledge within national drug authorities as impediments to the challenging task of updating and developing national CTM policies (Payyappallimana, 2010). Most manufactured drugs were developed from medicinal plants. The influence of culture and history on the use of herbal medicines differs from country to country and region to region, and also in modern societies. Therefore, there are great differences between member states in the definition and categorization of herbal medicines. A single medicinal plant can be defined as a food, functional food, dietary supplement or herbal medicine in different countries, depending upon regulation or policy of each country. It is quiet difficult for CTM practitioners to keep their prescriptions and methods as trade secrets. In 1993, the Chinese government issued the regulations for the protection of traditional chinese medicines, and still provides administrative protection to certain manufacturing practices. Major pharmaceutical companies using modern technologies, are developing new drugs and improved formulations from many Chinese herbs. These companies rely on patent to protect their intellectual properties. Still, there are challenges in patent applications for CTM-related products because of vast philosophical differences between CTM and Western medicine (Wang and Chan, 2010).

Educational standards

It is becoming important to educate medical students and registered medical practitioners about TCAM therapies (Brooks, 2004). Two important dimensions have been identified in traditional medicines education. The first one is to ensure that the knowledge, qualifications and training of traditional medicines practitioners are adequate. Secondly, there should be good understanding between traditional medicines practitioners and that of conventional or biomedicine practitioners. In many developing countries, informal, experiential learning by apprenticing with physicians continues to be the major trend. All of them have their own attendant issues. Little attention has been paid by allopathic students when it is integrated into their curriculum, a university level formal education for traditional medicines makes it difficult to transfer many of the experience based aspects of tradition in an institutional milieu. For example, pulse diagnosis or the understanding of vital points or certain non physical methods of treatments are seldom taught today. Recently, the Traditional Medicines, Department of Health System Governance and Service Delivery, World Health Organization (WHO, 2010), Geneva, Switzerland has developed benchmarks for training in Unani medicines, Ayurveda, Nuad Thai, TCMs, Naturopathy and Tuina.

Safety, efficacy and quality control issues of CTM

Physicians have a lawful interest in their patients' use of these therapies, particularly when there are known probable interactions with conventional medicine. However, up to 77% of patients do not disclose their use of CTM therapy to medical practitioners (Bishop et al., 2008). CTM remedies are popular among patients with chronic diseases such as cancer, AIDS, arthritis, asthma, diabetes, epilepsy, etc. All medicines can be toxic under specific state of affairs; there is always a risk that an adverse reaction will present a danger to patients with licensed medicines. However, regulations are expected to ensure that the risk is small and the pharmaceutical industries monitor the medicine's efficacy, safety and quality. No such global control over natural medicine or herbal medicine exists. The harm caused by unproven therapies or poor quality CTM is not only medical, but also societal by altering expenditure of funds, delaying public health measures and formation of laws. Complementary and alternative medicine offer more than physical and mental health care. The risks of missing serious conditions if complementary treatments are given to patients without definite analysis are of great concern.

Herbal medicines exhibit some uncanny characteristics, namely: the active principles are frequently unknown. Important parameters such as standardization, stability and quality control are feasible but not easy as the availability and quality of raw materials are frequently problematic. Well-controlled, double-blind clinical and toxicological studies to prove their efficacy and safety are rare (Adewunmi and Ojewole, 2004). There are difficulties in reviewing research in CTM because of the diversity at various levels involving different cultures. The level of evidence and appropriate methodological approaches in CTM research, including the feasibility and complexities of using randomized controlled trials, are still debatable issues (Watt et al., 2008). Therefore, sharing national experience and information is crucial. This makes it difficult to define the concept of herbal

medicines for the purposes of national drug regulation and also confuses patients and consumers.

The presence of side effects seems to be less frequent with herbal medicines, but well-controlled, randomized clinical trials have shown their existence but they are usually affordable than synthetic drugs. Also, the adverse reactions to herbal products are less reported because it is well known that patients avoid informing their doctors about usage. Furthermore, majority of these products are self-prescribed for both minor and chronic ailments. Some CTM contain toxic and potentially lethal constituents including aristolochic acids, pyrrolizidine alkaloids, benzophenanthrine alkaloids, lectins, viscotoxins, saponins, diterpenes, cyanogenetic glycosides and furanocoumarins which intensely affect the quality of the herbal products. Outstripping supply demand of good quality ingredients involves another issue of confusing nomenclature over plant species. Cases of nephropathy involving substitution of *Aristolochia fangchi* and *Stephania tetrandra*, and substitution of *Aristolochia manshuriensis* stem for the stem of *Clematis* and *Akebia* species have been documented. Recent report of the detectable amounts of aristolochic acid I and II in 24.0% of the TCM containing either *Aristolochia* or *Asarum* as an ingredient despite the fact that Food and Drug Administration (FDA) has advised industry to eradicate products in the market thought to contain aristolochic acid since 2001, but products are still present in the market. There is reported evidence of poisoning from traditional medicines, because the plants used have been misidentified in the form in which they are sold, or improperly prepared and administered by inefficiently trained personnel (Adewunmi and Ojewole, 2004).

Sustainability and integration challenges

Vital part of policy implementation is regulation of practice and practitioners for successful incorporation of CTM into national health care programs deals with a number of factors. Some countries have taken steps to achieve this. Asia has seen the most progress in incorporating traditional health systems into national health policy. In some Asian countries, such as China, this has been achieved through national policy. In others (India and South Korea), change has led to the politicization of the traditional medicine agenda. The House of Lords Committee on Complementary Medicine in Great Britain had suggested self-regulation for the formalization of the complementary professions. Osteopaths and chiropractors have been registered as official health professionals through an act of Parliament in Britain. The same principle is being applied to medical herbalists and acupuncturists, both of which are on course for registration in Britain. The Botanical Medicine Academy and the American Herbalists Guild are formulating a voluntary national examination for US practitioners of Western herbal medicine. The United States recently conferred greater national attention on the policy arena. The commission's mandate was to provide "legislative and administrative recommendations for assuring that public policy for increasing benefits to Americans of Complementary and Alternative Medicine" (Bodeker and Kronenberg, 2002).

Globalization

Public health challenges are global and beyond the domain of public health specialists. They are political, cross-sectoral as they are intimately linked to environment and development because the economic situation in one community can ripple and resonate around the world. Therefore, they are keys to national, regional and global security. Globalization has shrunk distances, broken down old barriers, and linked people together. It has also made problems half way around the world everyone's problem. Historically, disease in other places was seen as hindrance to exploration and a challenge to winning a war. Cholera and other diseases killed at least three times more population in the Crimean War (European Public Health Association, 2005). The healthcare systems of developing countries are complex in that they often accommodate indigenous (TM) western allopathic medicines and in theory at least, with 'globalized' CTM. Complementary and alternative medicine (CTM) has achieved an exponential growth over the last two decades in Western Industrialized countries studies which support principally strong trend of their usage outside mainstream medicine (Tovey et al., 2005). While there are WHO policy directives for integration of CTM at international level, national governments have been slow to respond. At the same time, the public finds appropriate ways to integrate various systems according to choice and requirement. Researchers have objection against contradictory attitude international bodies, national governments communities who are the ultimate beneficiaries. Thus, the contradiction between public choices and national policies is prominent. CTM which was backed through a consumer or community supported movement in the past is slowly obtaining state support in the form of proactive national policies (Payyappallimana, 2010).

Global markets, regulations and acceptance

The profit-making value of herbal medicines on the global market is high and increasing greatly (Adewunmi and Ojewole, 2004). The global pharmaceutical market was worth US $550 billion in 2004 and is expected to exceed US $900 billion by the year 2008. The herbal industry shares about US $62 billion with good growth potential. The World Bank reports trade in medicinal plants, botanical drug products and raw materials is growing at an annual growth rate between 5 and 15%. Within the

European community, botanical medicine represents an important share of the pharmaceutical market; the neutraceutical sector is also growing rapidly.

Presently, the United States is the largest market for Indian botanical products accounting for about 50% of the total exports. Japan, Hong Kong, Korea and Singapore are the major importer of CTM, taking 66% share of China's botanical drugs export. Globally, there have been concerted efforts to monitor quality and regulate the growing business of herbal drugs and traditional medicine. Health authorities and governments of various nations have taken an active interest in providing standardized botanical medications. United States Congress has fuelled rapid growth in the neutraceutical market with passage of the Dietary Supplement Health and Education Act in 1994. US Food and Drug Administration (FDA) has recently published the International Conference on Harmonization guidance Common Technical Document addressing concerns related to quality of medicines that also includes herbals. World Health Organization (WHO) is keen regarding traditional medicine and has been active in creating strategies, guidelines and standards of botanical medicines. The global scenario illustrates vividly both promise and challenges presented by the traditional medicines (Patwardhan et al., 2005).

Ecological obligation

The significance of this concern becomes evident in connection with the discussion of article 8 (j) of the Convention on Biological Diversity (1992), where it is implied that medicinal plants, blood samples from indigenous people and research conducted by foreigners into indigenous ways of life, supported by indigenous possessors of traditional knowledge, have led to patentable discoveries of benefit solely to those foreign researchers, with no economic return to indigenous people themselves.

The traditional medical knowledge of indigenous people throughout the world played an important role in identifying biological resources worthy of commercial exploitation. Knowledge about the way in which local people have used plants has always been important to collectors. Unfortunately, no international system has yet successfully designed and implemented a mechanism that provides for an effective legal protection to traditional knowledge holders' rights at the international level (UNESCO/WIPO, 1999; Burgland, 2005).

Value addition

The herbal materials are usually supplied in unprocessed form to the dealers. However, if the plants are processed into a consumer usable form, the value added product would fetch higher income as compared to the raw material.

Intercultural approach

In the encouragement of traditional and alternative medicines in the present-day context, it is essential to have an inter-cultural advance. As mentioned earlier, traditional medical knowledge in various countries have evolved within socio-cultural and historical context and their epistemic agenda, principles, concepts and practice are quite different from those of modern science (WHO, 2002; Shankar et al., 2007). While there is a current value in applying modern science and technology tools for creating objective and verifiable standards for traditional knowledge products and concepts, currently the approach to creating standards is one-sided because it does not adequately consult the available qualitative TCM standards and parameters. Furthermore, most therapies in traditional medicines involve both drug as well as non-drug interventions (Shankar et al., 2007) making it complex to develop appropriate methodology.

GUIDING PRINCIPLE FOR ACTION

The WHO traditional medicine strategy was developed in order to meet diverse challenges, having four primary objectives: frame policy; enhancing safety, efficacy and quality; ensure access; and promoting use based on reason. The resolution (WHA 56.31 on traditional medicine, at the 56th World Health Assembly in May, 2003) requested WHO to support member states by providing internationally acceptable guideline and scientific standard and evidence based information to support member states in developing policy and set of laws for traditional medicines. Additionally, the recommendations which emanates from the workshop on herbal medicines at the Eleventh International Conference of Drug Regulatory Authorities (ICDRA–Madrid, Spain, 16 to 19, February, 2004) affirmed the need of cooperation between regulatory agencies to make the best use of scientific possessions coupled to herbal medicines, and suggested the sharing of national experience and information. WHO is also requested to make possible these areas by providing updated monographs on medicinal plants and technical/regulatory guidance (WHO, 2001). The future of natural products will be more worthless and personalized based on wise use of earliest and modern therapeutics skills in a harmonizing manner, and discovered maximum payback to the public health (Jayaraj, 2010).

CONCLUSION

More or less, 80% of the world's inhabitants do not have access/right to use of modern medicine. It is this scenario that resulted in self healing and health promotion approach of CTM to persistent diseases. A more complete thought of the modes of action of herbal products

and improved methods of standardization of extracts will help in the stipulation of reliable information on the safety, efficacy and quality of herbal medicinal products. Properly conducted clinical trials will exterminate myths and ascertain proof of better curative properties as compared to conventional medicines. Development of legislative and governmental policies at state level, accomplishment and better cooperation between the professional, academic, scientific and research communities and practitioners of TCM are required to help the incorporation of CTM therapies into conservative Western medicine. Triumphant integration of CTM in public health reduces managerial barrier at national and international levels to bring health services to their maximal potential.

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