

**SCOPE AND CHALLENGES OF BHUTANESE TRADITIONAL MEDICINE**  
**“Ancient Science of Healing for 21st Century Healthcare Needs”**  
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**Background**

Traditional medical systems or alternative medicines in various forms have been in practice for many centuries around the world. Although there has been a decline in the use of alternative medicine in some countries, there has been an increasing use of complimentary and alternative medicines in many developed and underdeveloped countries. In some Asian and African countries, 80% of the populations depend on traditional medicine for primary health care. In many developed countries, 70% to 80% of the population has used some form of alternative or complementary medicines according to the WHO Fact Sheet. Bhutan in the past was known as the sMenjong- rGyal-khab, meaning the land of medicinal plants due to its rich medicinal flora and fauna. Today it is one of the tenth biodiversity hotspots in the world with huge natural medicinal resources. The availability of rich biodiversity coupled with the great importance Bhutanese communities paid to living in harmony with nature ensured the survival of gSo-ba-rig-pa, the Traditional Medicine System practiced in Bhutan. It is a combination of science, philosophy and religion that blend culture and tradition and epitomizes the holistic healthcare approach in which health and spirituality are inseparable.

The traditional medicine system was formally introduced as a part of the national health care system in 1967. The integrated approach of Bhutan’s healthcare helped the explosion of access to Traditional Medicine. Today, it is available in all the major hospitals around the country under the same roof with the allopathic medicine. In addition there is the National Traditional Medicine Hospital (NTMH) which serves as the referral hospital for the traditional medicine services in the country. The healthcare system in Bhutan encourages mutual consultation, treatment and cross referrals of patients through integrated health policy. Further, the healthcare system empowers the patients and provides them the choice of treatments within the overall framework of national healthcare. Immense progress has been made in terms of human resources development, production of traditional medicines and provision of traditional medical services in the country. However, traditional medicine in Bhutan remained static with no investments for infrastructure development, human resource development, scientific research and lack of service innovations. With the growing number of patients using traditional medicines and the demand for quality services, there is a need to further strengthen the existing facilities and systems to improve the quality of traditional medicine services.

The availability of Traditional Medicine Services in the National Healthcare System is a very unique and important feature of Bhutanese Healthcare. This provides a space within the national healthcare system for Traditional medicine to evolve and thrive in order to provide optimal and sustainable healthcare benefits to the people. In addition to providing effective and sustainable healthcare, traditional medicine can also open huge opportunities in the areas of drug research and development, and huge other commercial opportunities. For instance herbal treatments are the most popular form of traditional medicine, and are highly lucrative in the international market place. Annual revenues in Western Europe reached US\$ 5 billion in 2003-2004 and in China sales of products totaled US\$ 14 billion in 2005 (WHO Fact Sheet on Traditional Medicine). Bhutanese traditional medicine has huge scope and opportunities. However, it faces a number of challenges that have to be addressed in order that it continues

to be relevant and useful for providing primary healthcare needs to the people. Some of the important opportunities and challenges are discussed below.

## **Scope of Bhutanese Traditional Medicine**

### ***i. Clear National policy and Strong Political Commitment***

The national policy for traditional medicine is to preserve and promote the unique system of medicine that is based on rich culture and tradition through capacity building and establishing an effective system within the framework of national healthcare delivery system. This policy provides a strong framework within which the traditional medicines can be developed. Bhutan 2020: A Vision for Peace, Prosperity and Happiness clearly states the importance of traditional medicine: *We must continue to provide a place for traditional medicine in our system of health care. Traditional medicine embodies knowledge that has been accumulated over centuries and which draws upon the nation's rich bio-diversity and of plants with proven medical qualities. As these qualities become substantiated by scientific research, there is a growing need to integrate more effectively traditional medicine with the modern system of health care. The maintenance of traditional medicine not only adds dimensions to the nation's system of health care, but provides an alternative for those who seek one. It should also be regarded as a conscious decision to conserve a part of our rich and varied cultural heritage.*

As clearly highlighted in the policy documents, strengthening of traditional medicine and integration with modern health care system is considered as an important policy objective of the health sector. There is a clear vision and policy direction creating a favourable environment in which the full potential of the traditional medicine can be harnessed and used.

### ***ii. Holistic healthcare approach***

The traditional medicine with its unique philosophy and approach has a holistic approach in the treatment of human suffering and diseases. It not only considers in treating the disease and its causes but also considers the interdependency of man and nature and the spiritual component which are considered in the treatment. This system of healthcare is becoming meaningful in today's world where the human suffering has not ceased in spite of the highly advanced medical technologies and medicines.

### ***iii. Preservation of Culture and identity***

The traditional medicine is very much linked with Buddhist philosophy and therefore embedded in the Bhutanese culture and tradition. Some components of traditional medicine are being practiced by the religious community and different people in the remote communities. So it is a very important part of our culture and tradition. Therefore, it not only provides a choice of treatment to the people but also promotes the identity of the Bhutanese people. The policy for traditional medicine is to preserve and promote this unique system which is part of our cultural heritage by establishing an effective system within the framework of national healthcare delivery system.

### ***iv. Sustainable management of natural resources***

Evolving over a long period of time based on necessities and experiences, traditional medical knowledge has played an important role in natural resource conservation. Through the provision of traditional medicine care, awareness and focus on medicinal plants is promoted with development activities geared towards their sustainable management. Community based sustainable management of medicinal plants are established and some species are

domesticated for cultivation in collaboration with the Medicinal and Aromatic Plants Program under the Ministry of Agriculture. Enrichment activities are carried out for the rare and endangered species. Farmers/ collectors are provided training on sustainable collection and post harvest care to minimize wastages. All these activities collectively promote sustainable harvesting while ensuring the quality of the medicinal plants. Thus, the provision of traditional medicine helps in the conservation and management of the natural resources.

***v. Integration of modern and traditional systems in the national healthcare***

Today, all the traditional medicine units in the 20 Dzongkhags are integrated with the allopathic medical system. The delivery of services is under the same roof. The distribution and supply of traditional medicines are done through the Drugs, Vaccines and Equipment Division (DVED) within the same system. Meetings are held between the Doctors and Drungthos on a regular basis which has promoted a sense of understanding amongst the policy makers and the professionals from both sides that it is in the interest of both the systems to work together in the healthcare delivery. This integration approach also promotes the more holistic approach to health and wellbeing and gives a unique feature to the Bhutanese healthcare system. The Essential Drug Program implemented for allopathic medicine is also replicated for the traditional medicine and this has enormously been successful in making the delivery of traditional medicine services very effective and sustainable. The true integration of the two medical systems will go a long way in the effective delivery of services. There is immense potential for the systems to compliment each other if true spirit of integration is implemented.

***vi. Local production of Traditional medicines and manpower***

Unlike allopathic drugs, traditional medicine in Bhutan is purely an indigenous product. The raw materials, the processing know-how, and the human resource capacity are all available in the country. The preparations and production process are purely natural and no chemicals are used. This makes the traditional medicine the most sustainable and reliable healthcare as all the resources are available in the country and we have direct control over the whole chain of activities from the collection of raw materials at the source to the delivery of services and medicines to the patients. The traditional medicines required for the healthcare are produced within the country using modern science and technology. To improve patient compliance, suitable dosage forms such as tablet, capsule, pills, powder, syrup, ointment, medicated oil, fermented mix and hot compression have been devised. As most of the medicinal raw materials are available within the country and the human resources required for this sector are trained in the country, the traditional medicine system is one of the most sustainable systems of healthcare in Bhutan.

***vii. Patient empowerment and choice of services.***

The integrated health policy empowers the patients by providing them the choice of treatments. The national healthcare system provides both traditional medicine and allopathic medicine from the same service centre under one roof in all the 19 districts. In Thimphu, the National Traditional Medicine Hospital works very closely with the Jigme Dorji Wangchuk National Referral Hospital (JDWNRH). This allows cross referrals between the two systems and presents huge opportunities for the systems to compliment each other in the best interest of the patients. The popularity and awareness of Traditional medicine in Bhutan is showing a positive trend. For instance the number of patients seeking traditional medicine services is growing every year. This is clear from the patient record at NTMH which treated 40,196 patients in 2009. This increase in trend is observed in all the indigenous units around the country. Further, a survey study conducted by National Institute of Traditional Medicine

(NITM) in 2008 found that the traditional medicine services were sought by all age groups and by all communities with all backgrounds.

The presence of traditional medicine in the national healthcare enriches the system with wider dimension of choice for the patients. However, the choice must be made an informed choice and the effective integration will ensure that the two systems do not become competitors at the cost of the patients, rather compliment each other in fulfilling the healthcare needs of the patients.

### ***viii. Accessibility of Traditional Medicine Services***

The integration policy contributed to the effective expansion of Traditional medicine accessibility to all sections of our society at no extra cost as it is made available from the same service centres as that of the allopathic medicine services. Although the traditional medicine was available to only the rich and influential families in the past, it is today conveniently available to everyone in all the major hospitals and even in some of the basic health units (BHUs). There are now 37 Traditional Medicine Units in hospitals around the country and the NTMH at Thimphu.

The NTMH in Thimphu provides a range of services such as Acupressure with gold and silver needles, bloodletting, moxabustion, herbal bath, steam bath and application, nasal irrigation, massage with medicated oils etc. Many people seek traditional medicine treatments for chronic disease like sinusitis, arthritis, asthma, rheumatism, liver problems and diseases related to the digestive system and nervous system. The reason why traditional medicine is particularly good for such chronic diseases has to do with its holistic, rounded and profound approach to the treatment of human being.

### ***ix. Opportunities for Traditional Medicine professionals***

Despite limited resources and expertise, most of the professionals required in the delivery of traditional medicine services are trained adequately from the National Institute of Traditional Medicine at much lower cost and as per the requirement of the national healthcare system. This was made possible by the farsighted vision of His Majesty the fourth Druk Gyalpo in 1978 when His Majesty commanded the establishment of a training centre for the Drungtshos. National Institute of Traditional Medicine (NITM) is now able to train all the traditional medicine health professionals required by the Ministry of Health.

Currently, Ministry of Health is the only employing agency for the NITM graduates but this is expected to change in the future. The rapid socio-economic and political development of the country, the population growth and demographic changes will spur the need for more traditional medical practitioners in the country. There is also a growth in popularity world wide for the alternative medicine and our system of traditional medicine is one of the popular alternatives. Therefore, there is great scope to increase the intake of students to meet the growing demands.

The possible change of policies on privatization and private practice in the healthcare system in ensuring sustainable healthcare delivery in future by the Government might create more demand for quality traditional medical practitioners. Further, the development of health and wellness centers in Bhutan with Government policy specifically identifying high end health and wellness centers in their manifesto would create huge employment opportunities for the NITM graduates.

#### ***x. Health and Wellness Centers***

Bhutan being one of the 10 global hotspots of biodiversity, it is visited by people from all walks of life from every corner of the world. For centuries Bhutan has been known as the land of medicinal plants and is home to many exotic and endangered species of medicinal plants. Bhutan has many medicinal streams (men-chus) and hot springs (tsha-chus) which are frequented by hundreds of people to reap benefits from their medicinal properties.

The country's noble development philosophy of Gross National Happiness has also raised the interests of many people around the globe. All these make Bhutan a unique destination for health tourism. Understanding the potentials of immense economic benefits, the Government has identified Health tourism as one of the priorities in the 10FYP. This offers huge opportunity for traditional medicine as many new herbal products for spas in hotels and resorts in the country will have to be developed. However, there is limited capacity at present and need to be developed with technical assistance and collaborations. Most importantly investment is needed in the development of herbal health products and technologies. Wherever possible collaboration with external agencies with specialized technologies appropriate to us must be encouraged and developed for bringing down the cost of product research and development.

#### ***xi. Scope for Research and Development***

Traditional medicine has vast knowledge and wisdom. The research on traditional medicine has great potential for discovering new drugs and understanding new mechanisms of drug actions like additive and synergistic effects of the multi-ingredient compounds. Research has shown that traditional medicine formulations are not just hypothetical and theoretical assumptions, but founded on empirical based sciences. In fact, many drugs that are used today in treating life threatening diseases have been discovered through research starting from the indigenous knowledge and practices. Even in our context a screening of herbal plant used in the Bhutanese traditional medicine was found to be active against malarial parasite.

Today, the research in traditional medicine has become increasingly important as the drug regulatory authorities in different countries are introducing stringent norms and mechanism which may even threaten the existence of traditional medicine system. Therefore, there is an immediate need to do lot of research to improve scientific evidence and convince the scientific community on the empirical basis of Traditional medicine.

### **Challenges of Traditional Medicine**

While the Bhutanese traditional medicine has immense opportunities under the current system, increasingly it is facing a number of challenges that if not addressed will adversely impact its very existence. However, the challenges must be turned into opportunities by addressing them strategically. The following are some of the challenges facing traditional medicine today.

#### ***i. Sustainability of raw materials***

With the increased access of health services, there will be an increased demand for the traditional medicine services resulting in increased demand for the medicines. Unless proper collection methods and sustainable harvesting techniques are introduced there is a very real possibility that the medicinal plants will become scarce and extinct. The relevant sectors must work in coordination to ensure the sustainable collection of the medicinal resources. The impact of climate change will also be felt in traditional medicine as the change will result in habitat loss for many medicinal plant species. Mitigation measures must be taken to prepare

for such eventualities and address the issue of raw material sustainability for the production of traditional medicines. In the long-term, sustainability is essential and farmers are being encouraged in sustainable collection and cultivation of medicinal herbs.

#### ***ii. Use of animal products in traditional medicines***

The sourcing of animal parts used in the production of traditional medicines is becoming more difficult every year. Further, some of the animals that are used in the production of medicines are on the international endangered species list and banned by law to use them. To address this issue there is a need to carry out research on plant substitution for the animal parts used as described in the traditional texts.

#### ***iii. Research in traditional medicines***

Research in traditional medicine is resource intensive, time consuming and complex due to their multi-ingredient formulations. However, medicine and natural resource based research presents a great potential. Building leadership in research and drug development is resource and knowledge intensive activity and must be accorded top priority. The capacity building in research must be given importance. Only investment in the research of Traditional medicine will result in dynamism of this system and innovations that will make it relevant to serve our society for many centuries in the future. There is a need to establish institutional linkages with reputed institutes and universities abroad for collaboration in traditional medicine, especially in carrying out scientific research for new drug development and discovery. There is a need for clear directives and policy from the authorities on collaborative research and benefits.

For any drug research, the core component is the pre-clinical and clinical studies. Such studies will tell us quantitatively how effective our formulations are. It will also help us to explain the probable mechanism of action. Without accruing proper preclinical data with accepted protocols, we cannot move on to clinical phase of studies and without clinical data, population willing to accept our formulation will dwindle with time.

#### ***iv. Documentation of scientific evidence***

Although the traditional medicine has been practiced for centuries and its efficacy and safety established over centuries, little documentation is available on evidence of therapeutic claims including the properties of many formulations used in the system. There is an overwhelming difficulty in defining quality and efficacy of traditional remedies due to their complex and multiingredient nature. This demands that there is need for serious scientific research to improve scientific evidence. There is a danger of traditional medicine losing ground to modern allopathic medicine due to its limited scientific evidence and documentation. Unless appropriate measures are adopted there is a risk of losing its scope over time as the younger generation is not well informed on its benefits, opportunities and its values.

#### ***v. Patenting and IPR issues***

It is almost impossible to patent the traditional medicines as the knowledge belongs to the community. Patenting requires infrastructure and legal framework and facilities which will incur huge financial cost. Hence there is a risk of losing its knowledge, significance and its role in our healthcare with more pressure and western influence. Administration and management of Traditional medicine Services ITMS is not clearly reflected in the overall organizational chart of the Ministry of Health. Despite its varied scope and challenges, traditional medicine administration and management is at this moment very fragmented and its authority very limited to effect any meaningful change in harnessing the potential of our

traditional medicine. For instance NITM is functioning under the Royal University of Bhutan (RUB), NTMH and PRU are functioning under the Department of Medical Services with not much scope for organizational growth and development. Therefore, the management and administration setup for traditional medicine services must be allowed for organizational growths and expansion by empowering them with certain degree of autonomy to bring about the desired positive change that will encourage innovation, research and new ideas that will make traditional medicine dynamic to adopt in the changing environment. There is a strong need for a management and administrative entity that has the authority and the mandate to solely focus on traditional medicine in the country. There is a general feeling that ITMS is becoming an orphan organization that is not getting sufficient focus and support from its parent organization.

#### ***vii. Investment in Infrastructure and HRD***

The Royal Government of Bhutan made notable investment in traditional medicine encompassing its development in research, patient care, hospital infrastructure, HRD and service delivery. However, there is immediate need in many areas where substantial investment has to be made for the traditional medicine to continue its positive growth and development. Ideally the existing hospital must be expanded to enable expansion of specialized services with inpatient facilities. There must be continuous and sustained investment support in the human resource development and capacity building. The manufacturing and production of traditional medicines must be done as per the Good Manufacturing Practice principles (GMP) for quality and efficacy. Similarly, capacity building in the areas of drug research and bio-assays must be developed to enable scientific validation of traditional medicines and harness its potentials.

#### ***Conclusion***

Traditional medicine is one of the most sustainable methods of health care delivery system as all the medicines required are produced within the country and most of the human resources are also developed in the country except in certain specialized areas. Therefore, it is very important that this system of medicine be further promoted through strengthening of the existing programs and by introducing new programs and services.

The potential of Traditional medicine for health benefits, economic opportunities, professional development and technology generation is immense. However, the potential can only be realized with an enabling environment and clear policy directives on Traditional medicines. There is an urgent need to make fundamental changes in the organizational setup of Traditional medicine services for future growth and benefits. There is also a need for more investments in all areas of Traditional medicine with special emphasis on research and development. The potential of traditional medicine must be recognized and enabling environment with sufficient investments must be made to harness its full potential. The challenges facing traditional medicine services must be addressed to convert those challenges into opportunities.

The development of traditional medicine sector fits well with the government's policy of creating green economy and it has the potential to create high tech, low carbon industries with immense commercial opportunities. However, as stated earlier there needs to be clear recognition and real vision by the leadership to realize the immense potential of our traditional medicine. It should be given due support and attention for it to continue playing an important role in our national healthcare system.

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