

HERBAL AND TRADITIONAL MEDICINE: NATIONAL PERSPECTIVES AND POLICIES IN INDONESIA *(Obat Herbal dan Tradisional: Perspektif dan Kebijakan Nasional di Indonesia)*

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Abstrak

Bersamaan dengan kecenderungan global untuk kembali ke alam, penggunaan obat tradisional di Indonesia cenderung meningkat, tidak terbatas pada kelompok orang kurang mampu di daerah pinggiran kota, tetapi juga meluas penggunaannya oleh berbagai kelas di dalam masyarakat. Hal ini menyebabkan industri obat bahan alam terus meningkat, baik jumlah maupun produktivitasnya. Meskipun demikian masih terdapat kendala dalam mengintegrasikan penggunaan obat tradisional dan obat herbal ke dalam sistem pelayanan kesehatan formal. Untuk memperbaiki citra dan penampilan obat tradisional, pemerintah telah berupaya meningkatkan pengawasan kualitas dan khasiat obat tradisional melalui prosedur registrasi sebelum obat dipasarkan. Saat ini terdapat 3 macam obat tumbuhan terregistrasi yang beredar yaitu jamu, obat herbal terstandar dan fitofarmaka.

Kata kunci: Obat tradisional, obat herbal, fitofarmaka.

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INTRODUCTION

The use of herbal medicines has expanded globally and has gained wide popularity. Herbal medicines, the most part of it still in the form of traditional medicine, is now become an important part of human healthy care, not only in the developing countries but also in many developed countries as well. By traditional medicine we refer to the medicines which usages are based on empirical knowledge, beliefs and experiences indigenous to different ethnic cultures, used in the maintenance of good health, as well as in the prevention, diagnosis, improvement or treatment of physical and mental illnesses. While herbal medicines are natural medicines, which made from plant or plant's part. Most of traditional medicines are herbal, although some of it is animal-origin (1).

The knowledge of traditional medicines are handed down from generation to generation over centuries in different communities, and some have been crystallized and have even led to the discoveries and development of a large number of drugs that are now used regularly as well-trusted therapeutics agents. A few very good examples are vincristine and vinblastine for cancer, morphine for pain, digitalis for heart failure, colchicines for acute attacks of gout, and artemisinin for drug-resistant malaria. We now also have very good prospects for finding some herbal formulations for life-threatening diseases such as cancer and HIV.

Herbal and traditional medicines has not only continued to be used as primary health care for the poor in developing countries, it has also been used in countries where conventional medicines is predominant in the national health care system. Herbal and traditional medicines co-exist at various levels in the communities and play very important role in providing health care for the people. In developed countries like Germany and USA, the use and popularity of herbal medicines, shows tendency of increasing, especially because of global trend "Back to Nature" toward revaluation of the use of medicinal plants in primary health care. In 1995, The National Institute of health of the USA has recommended that complementary or alternative medicine therapy should be included in the medical and nursing curricula. A survey done in 1998 found that out of 125 medical schools in US, 75 of them offered some form of education on complementary or alternative therapy. Therefore, the time is long past when traditional medicine was a non-issue in medicine in West (1)

Indonesian Herbal and Traditional Medicines

Since ancient time, Indonesia use traditional medicines, either for preventive or curative purpose. Most of the traditional medicines recognized and used in Indonesia are herbal mixtures. There are 300 ethnic groups with variation of traditions, customs as well as beliefs in health care using biological

resources following traditional practices. The use of medicinal plants base on their botanical ethnographical virtues is different for each ethnic characteristic, social culture, perceptions and beliefs. Each ethnic group has a traditional inventory record of plants, their benefits, indication and traditional prescription. The traditional knowledge and perception differ from one ethnic group to another. The concept of cause of disease and its treatment are different in each ethnic culture, and it is implemented in the difference of traditional medicines and traditional method of healing. Due to different ethnic groups' language, a traditional medicine in Indonesia has several different names. In Java, it is called *Jamu*, the name that become more and more popular and now it is known almost in all areas of Indonesia.

Herbal medicines industries in Indonesia shows increasing tendency. Up to the end of 2002 there are a total of 1,012 herbal medicine industries in Indonesia, consist of 105 large scale industries and 907 are categorized as small scale industries. This number is still growing, as it can be observed that some modern pharmaceutical industry jumped into develop and producing herbal medicines. According to National Agency of Drug and Food Control, 9,737 items of herbal medicine products has been registered in Indonesia in 2003, including 1,039 items of imported products. Beside the registered products, there are other several kinds of herbal medicines recognized in Indonesia, e.g. *Jamu Gendong* (Padded *Jamu*) and Herbs Decoctions which usually home-prepared for self-medication. The last two kinds of herbal medicines are not compulsory to register (2).

Most of Indonesian herbal medicines are sold in domestic markets, especially for self-medication. However, some products as well as raw materials are exported to foreign countries. Export values of raw material achieves US\$ 20 millions per year, while for finish product is still low, around US\$ 5 millions per year (3).

Indonesian Natural Resources for Traditional / Herbal Medicines

As tropical country which recognized as The Second Mega Biodiversity, Indonesia has abundant and overwhelming natural resources for herbal medicines. There are more than 30,000 species of flowering plants grow in Indonesia's tropical rainforest and about 1,000 species has been recognized to have medicinal potentials. This does not include marine organisms, which has been widely recognized as a very rich source of medicinal compounds. More than 280 species have been recorded as plant usually used in traditional medicine and more than 180 species are used by local industries for herbal medicine products.

Unfortunately, most of the herbs or plants used as raw material for traditional medicines are collected from wild stocks that are in vanishing supply due to over-exploitation and habitat-loss caused by improper logging and extensification of agriculture. The pressure on wild stocks of medicinal plants can be minimized if suitable propagation and cultivation techniques can be developed that allow cultivation of the respective plants under field conditions.

National Policy

Though formally not accepted by the conventional health providers, Indonesian herbal medicines are continuously developed and its utilization keep increased. The government gives strong support for development and proper utilization of Indonesian traditional medicines. **In 1998 the Ministry of Health of Indonesia, Prof. Dr. F.A. Moeloek launched the movement of "Back to Nature, Use Indonesian Traditional Medicine" to support and proper the utilization and development of Indonesian traditional medicines for health care services.**

Until several years ago, the utilization of traditional medicines in Indonesia is empirical, generally based on the experiences inherited from generation to generation. The validity of the most traditional medicine efficacy had not yet been proved scientifically. However, since the last decade there has been a growing need and demand of the necessity to scientifically prove the efficacy of traditional medicines because of the demand to integrate it in the National Health Care System. A comprehensive policy as a framework document, particularly National Policy of Indigenous Traditional Medicines, is in process.

Indonesian Health Law has considered traditional medicines as an integral part of Health Care System, but has not integrated into existing health care services yet. **Article 11 of Basic Health Law 1961**, stated: **"Indigenous Traditional Medicines of Indonesia (*Obat Asli Indonesia*) should be studied and utilize as good as possible"**. This provision was launched long before WHO calling at Alma Ata Conference (1970) to mobilized traditional healers in every member country. This provision gives legal base to the effort of conducting researchers, developments and utilization of Indonesian Traditional Medicines. This means that the government should proper research on Indonesian traditional medicines and provides funding and regulations, as well as guidance and counseling and proper control to the studies conducted on Indonesian traditional medicines. The government also has obligation to regulate and control the production and distribution of Indonesian traditional medicines, as well as provide guidance and control to its use in all

level of societies, in order to assure the safe, useful, effective and efficient use of Indonesian traditional medicines.

Based on these provisions the government establishes other provisions in Pharmacy Law No. 7, 1963. It stated that the government provides guidelines on the development as well as the control of the effort on utilizing Indonesian traditional medicines. **It also stated that Minister of Health should make effort on the researches dealing with the production, utilization and the efficacy of Indonesian traditional medicines, their standardization, and the effort of searching the new sources of Indonesian traditional medicines.**

The 1992 National Health System of Indonesia empowers the government to supervise the traditional medicines for safety and efficacy, and support its development and improvement. It is stipulated that alternative treatment which cover traditional methods, traditional drugs and traditional healers need to be promoted and controlled to be safe and effective alternatives for use as therapy and health care to increase the community health. It is also stated that traditional medicines which are efficient and effective utilization in health services. Hence, those found safe and efficacious are to be adopted in Primary Health Care Program. The 1993 Board Outline of State Policy stated that traditional medicines which are medically approved needs to be developed throughout the country in order to attain equity in health care. Traditional medicines inherited from ancient culture should be explored, investigated and developed, including the cultivation of medicinal plants, which has been scientifically proven.

The National Agency of Drug and Food Control has establish vision on Indonesian traditional medicine as follows: "Indonesian traditional medicines should be optimally utilize for the improvement of the health care people, through self medication as well as health care services". As one implementation, for the quality, safety and efficacy concern, Indonesian traditional medicines product should be registered prior to marketing. National Agency of Drug and Food Control also provide regulation such as Good Manufacturing Practice for Herbal Medicines, registration of herbal and so on. At this moment, Indonesia is developing three schemes of herbal medicines. The first scheme is jamu or herbal mixtures that has been used empirically as medicines for self-medication. This type of herbal medicines has been used since ancient time and it formulation usually handed down from generation to generation without significance development and usually have no scientific evidence to support its efficacy. The second scheme is the standardized natural extract, the extract of herbs or animal origin, which should be standardized and

preclinical trial as evidence for its efficacy prior to utilization. The third scheme is phytopharmaca, a kind of herbal medicine product that consists of a single or mixture of herbal extracts having clinical trial data to support its therapeutic use (4).

Utilization of Herbal and traditional Medicines in Health Care Services

In Indonesia, a traditional medicine has been widely used since long time ago, and it shows a tendency of increasing. According to National Survey, in 1999 there is 20.5% of Indonesian people use traditional medicines as self medication and this number is increased to 31.7% in 2001. They either used traditional medicines produced by industries or self-made or derived from traditional practitioners. National Agency of Drug and Food Control has recognized three groups of principal reasons of people using traditional medicines, i.e. for maintenance of their good health, for curing terminal illness, and for trivial symptoms or self limiting diseases used by rural people or people living in remote area far from health facilities.

Despite its long history and wide utilization, conventional health providers do not formally accept the traditional medicines. Although Indonesian Health Law has considered traditional medicines as an integral part of Health Care System, it still not integrated into existing health care services yet. The main reason that is usually presented is lack of scientifically proven data and evident according to its efficacy and safety.

This is worsened by the lack of knowledge and understanding of the conventional health providers about traditional medicines, due to, one but not only, the absence of traditional medicines knowledge in medical school curriculum. Usage of traditional medicines in Indonesia, in most cases is still based on experience and tradition rather than on vigorous pharmacological evaluation and unequivocally clinical trial. According to Indonesian Medical Association statement, the conventional medical doctors will accept herbal medicines if its safety and efficacy has been proved scientifically. This is one of some obstacles or challenges that should be overcome in order to develop the usage of herbal medicines in Indonesia. Despite the fact, it is well known that many physicians now prescribe herbal medicines or food supplement which are proved only by pre-clinical trial for treatment of chronic diseases such as viral infection and cancer.

In the last five years there are tendency of increasing number of conventional medical doctors that are interested in using herbal and traditional or complementary and alternative medicines. They form an association namely The Indonesian

Complementary and Alternative Medical Doctor Association.

Challenges in Development of Herbal and Traditional Medicines in Indonesia

As indicated above, there are many problems and challenges that should be overcome in order to make the traditional medicines widely accepted and formally integrated in existing health care services in Indonesia. While the regulation and the government or the nation itself fully support the integration of Indonesian traditional medicines in health care system as stipulated in the 1992 National Health System of Indonesia (Alternative treatment which cover traditional methods, traditional drugs and traditional healers, need to be promoted and controlled to be a safe and effective alternatives for use as therapy and health care to increase the community health), the acceptance of conventional health providers including the medical doctors to traditional medicines, is still low. The main reason is lack of scientific data to support its efficacy and safety. These make sense, because modern health providers always insist evident-base medicines or scientific-base medicines. In addition, most of traditional medicines still cannot provide it. The other crucial factor for this unacceptance is the unawareness and lack of knowledge and understanding of the conventional health providers about traditional medicines, due to, one but not only, the absence of traditional medicines knowledge in medical school curriculum.

The other reason is related to the first reason indicated above. It cannot be denied that even though there are increasing numbers of researchers has been done or still going on to provide scientific data to the efficacy and safety of traditional medicines usage, most of traditional medicines or herbal medicines in Indonesia are used without enough supported data. Lacking of scientific data is one main obstacle in development and improvement of traditional medicines. However, it is realized now that systematic approach of researchers should be done to gather as much scientific data to support the development of traditional medicines. Indonesian researchers in coordination of National Agency of Drug and Food Control are conducting research focus on nine most promising medicinal plants in Indonesia.

The other challenge is lack of standard, for either raw material or simplisia, or extract. The scientific data on Indonesian medicinal plants are minimum, in the botanical, pharmacognosy or pharmacological aspect. The quality of raw materials supplied is inconsistent in quality due to the lack of standard for each simplisia or extract use in our traditional medicines.

Research of Medicinal Plants and Traditional Medicines in Indonesia

Due to the need of evident-base medicines, as one condition to be acceptable to most conventional health providers, research concerning the quality, efficacy and safety of herbal and traditional medicines should be conducted systematically. For the time being, there are increasing numbers of researches that have been conducted in order to raise the traditional medicine as an evident-base medicine. Indonesian researchers under coordination of National Agency of Drug and Food Control, is focusing research and development of 9 plant species considered as the most promising medicinal plants, i.e. *Eugenia polyantha*, *Andrographis paniculata*, *Curcuma domestica*, *Curcuma xanthorrhiza*, *Guazuma ulmifolia*, *Piper retrofractum*, *Morinda citrifolia*, *Psidium guajava* and *Zingiber officinale*. It is intended to gain as much scientific data including the clinical trial data of those nine promising medicinal plants to support its usage (2).

Besides those nine plants, there are numerous researches conducted in many research centers concerning the biology, pharmacognosy or pharmacological aspect of various other medicinal plants. Some industries have also done clinical trials for some of their herbal medicine product in order to provide an evident-base and scientific-base data.

CONCLUSION

Usage of herbal and traditional medicine in Indonesia can be traced back since ancient times and showed increasing tendency. Although the government fully support the herbal and traditional medicines usages and development, the integration of traditional or herbal medicines into Health care System in Indonesia still face many obstacle and challenges. Some of the challenges are low acceptability of traditional or herbal medicines to most of conventional health providers. The other challenges are lack of scientific data to support its efficacy and safety, and lack of standards either for simplisia or extracts of medicinal plants as raw materials for herbal and traditional medicines. Cultivation of selected medicinal plants should be encouraged to minimize the vanishing tendency of wild stock and the coordination among researchers, industries and the government should be establish due to efficacy and affectivity.

Besides obstacle, there are many supporting factors for herbal and traditional medicines' development in Indonesia. The rich Indonesian tropical rain forest, the abundant medicinal plants species and culture and knowledge of traditional medicines in various ethnic groups are great positive factor in developing herbal and traditional medicines

in Indonesia. More over, the big population of Indonesia is a prospective market for herbal and traditional medicines besides the global market.

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