

## RECENT ADVANCES IN AYURVEDA

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College, Nagpur.**ABSTRACT**

In *Sanskrit Ayurveda* means the science of life. *Ayurvedic* knowledge originated in India 5000 years ago and is often called the mother of all healing as *Ayurveda* is the oldest Medical System which comprises thousand of medical concepts and hypothesis. Government of India has recognized some of the principle and therapeutics of *Ayurveda* as a mode of interventions to some of the community health problems. Every sector realizes that *Ayurveda* has the ability to revolutionize the modern Healthcare ecosystem and make the future Medical System more sustainable because it treats or cure the patient whole. But now a day's Globalization, Patent, Intellectual Property Rights issues,

Biopiracy are becoming major challenges in the indigenous traditional Medical Systems like *Ayurveda* to overcome this Government launch Research Development and application of information technology in order to update it in terms of its understanding and application to the present need of the people.

This review article highlights how the advancements have been taken in the different fields of *Ayurveda* over the decades till the current scenario.

**KEYWORD:** Ayurveda, AYUSH, Related Sectors, Advances in Ayurveda.

**INTRODUCTION**

*Ayurveda* is a considered as one of the oldest of the traditional system of medicine accepted worldwide that has survived and flourished from ages till date(*Anadi*)<sup>[1]</sup> called Science of life.<sup>[2]</sup> From many centuries *Ayurveda* has existence Among us but recently due to fear of toxicity produces due to synthetic drugs and the high cost of healthcare are causing an

increasing in large number of people to seek alternatives particularly with respect to the prevention and management of chronic, non communicable and systemic diseases.

Peoples have started to realize its true potential in the past few years more than ever. the government has undertaken and encouraged several initiatives in the area of traditional medicine within the country and the department of AYUSH in the Ministry of Health has been creating support programs with science and technology Agencies including CSIR(Council of Scientific and Industrial Research, ICMR( Indian council of Medical Research) ,DBT (department of biotechnology).

Main objective of this study was to assess the recent advances in *Ayurveda* and role and contribution of *Ayurveda* in every sector. The recent advances in the field of *Ayurveda* have motivated many researchers to look at the basic elements used to explore *Ayurvedic* field of research.

Recent advances in *Ayurveda* can be broadly classified into –

- 1) Government Policy Sector
- 2) Public Health Sector
- 3) Ayurveda Industry Sector
- 4) Academic Sector

### **1) Government Policy Sector**

In order to focus attention for the growth and development of *Ayurveda* and other system of Indian Medicine, Government of India established department of ‘Indian system of medicine and Homeopathy’ (ISM&H) in March 1995. It was renamed as department of *Ayurveda*, Yoga and Naturopathy, Unani, Siddha, homeopathy with an acronym as ‘**AYUSH**’ in November 2003.

In 2014, a conscious decision was taken to upgrade the department to full-fledged Ministry of AYUSH with independent minister and mandate for systematic development in on spheres of Indian Medicine. The ministry is responsible for policy formulation, planning implementation of schemes and programs for augmenting the domains quality and outcomes of AYUSH sector in inclusive terms.

The development of AYUSH under Ministry of Health and Family Welfare promotes and propagates Indian system of medicine and of medicine and Homeopathy.

**Objectives of the Ministry of AYUSH includes<sup>[3]</sup>**

1. Up gradation of educational standards of teaching and training Institutions.
2. Strengthening of research and development Institution and time bound execution of prioritized research programs
3. Implementations of scheme for promotion, cultivation, conservation, sustainable development and resource augmentation of medical plants used in AYUSH systems.
4. Standardsization and quality control of drugs as per Global Trends.
5. Mainstreaming and Integration of AYUSH services in the National Health delivery network.
6. Awareness building and propagation of AYUSH through information, education and communication.

Government policies and initiatives undertaken for development of *Ayurveda*-

- **International Yoga Day**- Celebrated annually on 21st June since 2015.
- **World Ayurveda day** -Ministry of AYUSH decided to observe it on Dhanvantari Jayanti annually.

Ayurveda day is Global initiative to promote and preserve the health Science of Ayurveda with enthusiastic participation from over 75+ countries around the world.

Due to Covid -19 Pandemic Government decided the Theme of 2020 – “*Ayurveda* for COVID”.

- **National Dhanvantari Ayurved Award**

To enhance the interest of people in *Ayurveda* Academic Sector, government has decided that on National *Ayurveda* day Ministry of AYUSH facilitates 3-4 *Ayurveda* experts with the National *Dhanvantari Ayurveda* Award.

- **Centre of Excellence (COE)**

Ministry of AYUSH has decided to promote reputed *Ayurvedic* centers (e.g. AIIA, New Delhi) in drug development and Research education to enhance their functions and facilities to the level of excellence.<sup>[4]</sup>

In Jaipur National Institute of *Ayurveda* promote to develop as a Centre of Excellence also in Maharashtra Podar Ayurved Mahavidyalaya is under development as a Centre of Excellence.

There are 6 regional centres in India – 1) Mumbai 2) Delhi 3) Kolkata 4) Lucknow 5) Pondicherry 6) Chandigarh.

### **Traditional Knowledge Digital Library (TKDL)**

Deals with the documentation of existing knowledge on Ayurvedic systems of medicine. It is implemented to safeguard the sovereignty of traditional Ayurveda knowledge to protect them from being misused in patenting or non-patentable inventions. Patent compatible format in various language viz. translations of *Sanskrit shlokas* (verses) into not only Hindi but also English, French, German, Spanish, Japanese.

In short TKDL is an original proprietary database, which is fully protected under National and international laws of Intellectual Property Rights (IPR).<sup>[5]</sup>

- **Pharmacovigilance Centre-** Mainly concerned with the detection, assessment, understanding and prevention of ADR's<sup>[6]</sup>
- **Central Council for Research in Ayurvedic Sciences(CCRAS)-** Main activity of the Council includes clinical research, drug research and literary research in Ayurvedic Sciences.
- **Good Clinical Practice (GCP) guidelines-** clinical trials in Ayurveda guided by the principle of "Good Clinical Practice ".

Safety and therapeutic efficacy of the ASU drugs can be readdressed for assure their quality. These guidelines have been prepared by a comprehensive consultative process and are fine-tuned to the best interest of *Ayurveda*. Main purposes for this is to develop methodologies for research and evaluation to improve the quality and value of research, to help promote a better understanding of ASU Medicine and other traditional medicine.<sup>[7]</sup>

### **2) Public Health Sector**

From an alternative method of Healthcare, *Ayurveda* is unwaveringly moving towards center stage owing to the challenging concerns faced globally in regards to the modern Healthcare system.

- **Arogyavardhini Kendra-** The Maharashtra Government for strengthening the primary health facilities, converted Primary Health centers (PHC) and public Primary Health center into health Wellness Centre (Arogyavardhini Kendra) step by step for taking preventive and persuasive health services to the common people in the state.<sup>[8]</sup>

- **Panchkarma Centre** - *Ayurveda* aims at finding the root cause of a disease and then eradicating it completely from body by the means of *Shodan Panchkarma* which helps in removing the toxins deposited in the body.
- **Rejuvenation Centre** - *Ayurveda* has gained a lot of global attraction. Being one of the main features of tourism attraction especially down south. Rejuvenation means *Rasayana* which revitalize the human body, equipping it to retain and maintain health. Today due to *Ayurveda* India has a several pull factor like excellent medical treatment at low cost, easy accessibility due to this many *Ayurvedic* centers are on rise today.
- **School Yoga Program**- in recent years, *Yoga* programs in childhood have been implemented in schools to promote the development for children. starting *Yoga* early on in life promoted positive effects on the development of motor and physical parameters of a children especially on balance strength and flexibility and also on mind.<sup>[9]</sup>
- **Nutritional Program**- Government of India started the ‘**Suposhanam Community Nutrition Programme**’ to prevent maternal and child mortality, Fight malnutrition, stunting wasting, anaemia and disease prevention vaccine. Suposhanam Community Nutrition Programme includes *Annaprashansanskar*, Balbhoj etc.<sup>[10]</sup>

- **ASHA Kit**

Therapeutics has been proposed and many are being used for the management of common community health problem. Some of the drugs have been included in ASHA Kit for the management of health problems at the first hand at village level. One of the Ayurvedic product known as *Punarnavadi Mandoor* has been included in the ASHA Kit for the management of Anemia at the community level.<sup>[11]</sup>

Since and early rise in **covid-19 cases**, consumer interest and demand for *kadha* has been on a steady rise to keep the immune system strong and ward off infection. Natural Herbs used in *kadha* is turmeric, *Giloy*, black pepper, *Tulsi*, Ginger etc have an anti-inflammatory properties which can help to boost the immune system.

**Covid 19** has proven to be a blessing in disguise for the Ayurvedic field as India continuous to demonstrate the potential of AYUSH to the world against this pandemic. Kerala is one of the major state that have been successful in decreasing the spread of Corona virus by adapting Ayurvedic methods.<sup>[12]</sup>

Inclusion of seven Ayurvedic medicine in the **RCH programme**

1) Saubhagya Sunthi 2) Ksheerbala Taila 3) Bal Rasayana 4) Ayushgutti 5) Ark Pudhina 6) Ark Ajawain 7) Punarnavadi Mandoora.

### 3) Pharmacy Sector

Now a day's top most priority should be given to the provision of traditional health services, creation of general awareness of herbal medicine and their popularization and also increases the projects on promotion of cultivation of judiciously selected species of medicinal plants.

### Ayurveda Industry Sector

For globalizing the system and its products, the ministry of AYUSH has focused its attention on standardization and quality control of *Ayurvedic* drugs.

Good Manufacturing Practices (GMP) has been notified under 'Schedule T' of the drugs and cosmetics rule, 1945.

All the measures have been introduced to give greater impetus to consumer awareness, consumer and doctor benefit acceptance in the globalized market and to ensure safety which is of utmost concern while using *Ayurveda* medicines.<sup>[13]</sup>

### Initiatives to promote Ayurvedic drug industry

Initiatives are taken up by Department of Science and technology to start the Drugs and Pharmaceutical Research Program (DPRP) for promotion of industry- institutional collaboration in the development of new drugs in pharmaceutical sector pharmacy courses like B. Pharm (*Ayurveda*) and M. Pharm (*Ayurveda*) in different parts of the country. Research regarding process validation and biological evaluation of formulations is made a major thrust area.

Pharmaceutical Export Promotion Council (Pharmexcil) constituted a National committee in the field of *Ayurvedic* medicine to guide the industry to March ahead with basic objectives of promoting ASU drugs globally.

Legally *Ayurvedic* medicines can be manufactured under license from the formulae or the raw materials of plant, animal, mineral or marine origin.

WHO has been collaborating with the Government of India in promoting and strengthening activities in standardization, quality control and use of traditional medicines? the WHO,

India, in collaboration with the central drugs standard control organization (CDSCO), the department of AYUSH, Ministry of health and Family welfare, National medicinal plants board and other organizations in the area of Essential Drugs and Medicines (EDM) addresses the issues of access, quality, safety and rational uses of medicines. Traditional practices that have existed for thousands of years, as has been realized, should exist today collaterally with modern medicine.<sup>[14]</sup>

Quality can be checked by three stages of standardization-

- 1) Raw material standardization
- 2) In process standardization
- 3) Finished product standardization

1) Raw materials standardization- (Analysis done by quality control department) which includes-

- a) Nomenclature
- b) Drug collection and storage
- c) Identification of foreign matter
- d) Organoleptic tests
- e) Microscopic studies
- f) Physical analysis include

Moisture content

Ash value

Water extract

Chromatography- e.g. TLC, HPTLC (molecular level)

Contamination

2) In process standardization- Involve 2 methods include

- a) Include formation of drugs by standard process.
- b) Process testing, which include testing of quality of newly formed drug .

3) Finished product standardization

- a) Tablet - hardness of tablet, disintegration time, dissolution time, available in sugar coated capsule form
- b) *Aasav/ Arishta*- sugar%, alcohol%, PH value (acidic), viscosity, specific gravity



- c) Ghruta/Taila- pH value, saponification value, acid value, refractive index, viscosity.
- d) Swarasa- available in the form of energy drinks.
- e) Kwatha/ Kadha- available as a Ghanvati.<sup>[15]</sup>

With further progress in Medical Science, especially in Pharmacology and phytochemistry, researchers have started refining the entire concept of isolating and characterizing the 'active principles' (secondary metabolites of plants). Intensive and extensive Pharmacological screening, clinical evaluation, improvement of Pharmacy and therapeutic confirmation of drugs have started receiving greater commitment and concern. Pharmacognosy gained ground to prevent adulteration and ensure quality control.<sup>[16]</sup>

A database jointly owned by the Council of scientific and Industrial Research (CSIR) and India's ministry of Health and Family Welfare, has been set up to dissuade foreign companies from patenting traditional medicines.<sup>[17]</sup>

#### 4) Academic sector

Education policy of Ayurveda -The educational system and professional practice of *Ayurveda* are controlled by the central Council of Indian Medicine (CCIM) which is a statutory body set up under the provisions of Indian Medicine Central Council (IMCC) Act, 1970.

The central government has adopted stringent regulatory provisions for granting permission to establish new colleges, increase in admission capacity in any course of study or training and for starting a higher or new course of study in existing *Ayurveda* colleges and to maintain uniform standard of education across the country. There are 400+ *Ayurveda* colleges including 117 with postgraduate's courses of study both in public and private sectors.

- Research Universities- Many universities developed to work on various areas of research for the development and promotion of *Ayurveda*.
- Change of syllabus- Periodical review of subject is done to facilitate inclusion of recent scientific advancements.

#### DISCUSSION

There has been a gradual shift in people's sentiment towards adopting natural medicine and Healthcare practices. Everyday more and more people are inclined towards herbal remedies.



It would not be a surprise if *Ayurveda* achieves a global forefront in the upcoming years as people would become more aware of its potential.

Many of the principles described in the classical texts of *Ayurveda* and other system of medicine such as a *Yoga* and Naturopathy are being utilized and many of them are proposed in the state program implementation and planning (PIP).

WHO contribution in global acceptance of *Ayurveda* reflected in this paper reveals worldwide usage of *Ayurveda* medicines opportunities and challenges with Global perspective of wearing medicine and gold time for the modernization presented in this concept.

## CONCLUSION

*Ayurveda* needs more research in various departments, highlighting one among them is the area of Diagnostic principal so that the Ayurvedic diagnosis can be made more pinpointed leading to more effective treatment Strategies. Some people thinks that *Ayurveda* is lagging behind but the role of *Ayurveda* in management of Covid-19 changes the viewpoint of this people towards *Ayurveda*.

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