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Editorial

The journey with COVID-19: Initiatives by Ministry of AYUSH



The outbreak of the COVID-19 pandemic challenged the healthcare systems globally. Worldwide, researchers and clinicians are struggling with this crisis. The pandemic has accentuated the need to strengthen health systems and accelerate research and development (R&D) programmes. The Ministry of Health and Family Welfare (MoHFW), Government of India took rapid measures in the control, prevention, and treatment of COVID-19 by issuing several advisories and guidelines. A well-organized public health and hygiene awareness campaign promoting use of mask, physical distancing, hand-washing as well as effective sanitization, lockdowns, quarantine and epidemiological monitoring has immensely helped in controlling the disease spread, and reducing the morbidity and mortality as compared to several other countries. One more possible cause for lower rates of morbidity and mortality in India could be the use of immunity promoting interventions from the ancient traditional systems of medicine involving Ayurveda, Yoga & Naturopathy, Unani, Siddha, Sowa Rigpa, and Homeopathy (AYUSH) and several home remedies based on traditional knowledge.

Admittedly, strengths of modern medicine in managing the symptomatic treatment and critical care of COVID-19 have helped tremendously. However, modern medicine has limitations in providing a better immunological and mental status for effective prophylaxis and prevention as well as promoting well-being with improved quality of life. The approach of AYUSH systems for strengthening host defence may be useful as an effective, safer, accessible, and affordable prophylaxis in management of COVID-19. Hence, use of AYUSH systems has increased globally during the pandemic.

The Ministry of AYUSH (MoA), Government of India has undertaken several R&D and public health initiatives to harness the potential of AYUSH systems to contain the impact of the COVID-19 pandemic. These initiatives aim at creating public awareness regarding measures to improve immunity and mitigate the impact of the pandemic. They also provide guidelines to AYUSH stakeholders to address this pandemic scenario effectively. The year 2020 has been a challenging period that made the healthcare researchers and stakeholders wiser than before [1]. An overview of the experiences, challenges, and success stories of the MoA during the COVID-19 pandemic is provided in this editorial.

1. Guidelines and advisories

The MoA issued various guidelines and advisories to improve immunity and advised simple home remedies easily accessible to the general public. It also recommended a set of self-care guidelines

duly vetted by eminent Ayurveda experts for preventive health measures, with special reference to respiratory health and enhancing immunity.

The treatment recommended by the practitioners of AYUSH systems may vary across the country. However, in times of a public health emergency like COVID-19, it is essential to have a considerable degree of uniformity in the management of the disease. Hence, guidelines for registered practitioners of respective AYUSH systems were prepared by the MoA through concerned team of experts to address the issue [2]. Considering the urgent need for delivering healthcare services to the public during lockdown period, the Ministry also published 'Telemedicine Practice Guidelines' for AYUSH practitioners. The Ministry also issued an order to prevent dissemination of misleading information about AYUSH interventions and advertising claims for COVID-19.

Apart from guidelines and advisories, the MoA also launched campaigns such as 'AYUSH for Immunity' to disseminate the health promotion messages in the general public and set-up an AYUSH COVID-19 Dashboard to furnish the details of guidelines related to AYUSH measures for improving immunity, official communications, research undertaken on COVID-19, measures for prophylaxis and management. The National Repository on AYUSH COVID-19 clinical and other R&D initiatives have been developed to disseminate information related to AYUSH R&D initiatives, COVID-19 related AYUSH clinical trials and scientific publications and is available on the AYUSH Research Portal of the MoA.

The efforts by the MoA led to a cascade effect and several State Governments issued guidelines regarding prophylaxis and management of asymptomatic and mild cases through AYUSH modalities and conduction of research studies on COVID-19. The MoA also issued directives to all State/UT licensing authorities and drug controllers of AYUSH to expedite the process of approval/license/license renewal for manufacturing of ASU immunity-boosting healthcare products and sanitizers.

2. Mobilization of human resources

The MoA envisioned maximum stakeholder mobilization and encouraged the AYUSH institutes across the country for optimum utilization of available infrastructure and staff to combat the COVID-19 pandemic. As a result, several AYUSH hospitals in different regions of the country were designated as quarantine and COVID care centres by the respective State Governments. The Hon'ble Prime Minister of India, Shri Narendra Modi also addressed the AYUSH stakeholders to provide their services in this crisis situation. Total 8,32,445 AYUSH practitioners, paramedic staff and

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students responded to the appeal and enlisted themselves as COVID warriors on the Government portal to offer their services for clinical management, surveillance and management of COVID isolation centres and quarantine wards. Training on 'COVID-19 Preparedness, Response and Containment' was provided to the AYUSH stakeholders to develop master trainers across the states. Total 1,75,603 AYUSH stakeholders trained through iGOT platform in collaboration with MoHFW across the country and these master trainers have further trained the AYUSH personnel including AYUSH students. Further, a force of over 37,000 AYUSH staff was deployed for COVID-19 related healthcare services.

3. AYUSH interventions for COVID-19

The MoA constituted an interdisciplinary AYUSH R&D Task Force consisting of scientists from premier organizations and research institutions. The Task Force formulated and designed clinical research protocols for prophylactic and add-on intervention studies on COVID-19 and constituted seven working groups to deal with various aspects of clinical research. It also drafted the guidelines for AYUSH clinical studies in COVID-19 covering various aspects of clinical trial protocols.

The Task Force reviewed research proposals received from the screening committees of Research Councils under the MoA and proactively explored the possibilities for research based on the available leads. The Task Force has recommended over 100 clinical, pre-clinical and epidemiological studies with help of national councils and research institutes. The MoA has constituted a Project Management Unit to coordinate these studies and provide technical assistance throughout all phases of the studies conducted at different centres. The core outcomes of the interim analysis of these studies demonstrated good prophylaxis against COVID-19, early clinical recovery and achieving early negative RT-PCR results, reduction in the duration of hospital stay, prevention in further progress to severe stage and complications, and improvement in quality of life. Further, pre-clinical studies have been undertaken in collaboration with Department of Biotechnology (DBT) and Indian Council of Medical Research (ICMR) institutes to explore the anti-inflammatory, immunomodulatory and anti-viral properties of different AYUSH interventions. The interim outcomes of these studies are encouraging.

The MoA collaborated with several research organizations to encourage, promote and advance evidence-based research on AYUSH systems. The MoA signed Memorandum of Understanding with Council of Scientific and Industrial Research (CSIR) and DBT institutes such as Institute of Genomics and Integrative Biology, New Delhi; Indian Institute of Integrative Medicine, Jammu; Regional Centre for Biotechnology, Faridabad; and Translational Health Science and Technology Institute, Faridabad; All India Institute of Medical Sciences (AIIMS), New Delhi; AIIMS, Jodhpur; King George Medical University, Lucknow; Institute of Medical Sciences, Banaras Hindu University, Varanasi; Government Medical College, Nagpur; Datta Meghe Institute of Medical Sciences, Wardha; King Edward Memorial Hospital, Mumbai; National Institute of Pharmaceutical Education and Research, Kolkata; different Employee State Insurance Scheme hospitals; and ICMR-National Institute of Nutrition, Hyderabad.

The MoA also worked on an online mechanism for crowd-sourcing of scientific evidence-based solutions from the AYUSH systems to combat the pandemic. It modified the existing extramural research scheme to support short-term research projects for evaluating the impact of AYUSH interventions in the prophylaxis and management of COVID-19. The MoA issued a gazette

notification to facilitate undertaking of research on COVID-19 through AYUSH systems with a view to generate scientific evidence especially for prophylactic measures and interventions for the quarantine, asymptomatic and symptomatic cases of COVID-19. It also constituted an advisory panel to provide inputs and suggestions for finalization of the manuscripts related to the outcomes of the COVID-19 research studies for publication in indexed medical journals of high repute.

The MoA has constituted a core group of experts to identify and propose formulations for prophylaxis, management of COVID-19, and post-COVID care. The interventions shortlisted for drug development and commercialization are based on classical Ayurveda principles, and have substantial experimental and clinical leads on efficacy and safety from the COVID-19 studies undertaken by the MoA.

The MoA has developed and launched the 'AYUSH Sanjivani' mobile application to generate data on acceptance and usage of AYUSH advocacies and measures among the general population and its impact in prevention of COVID-19. A cross-sectional analysis of the data generated through this application was performed to evaluate the pattern and extent of utilization of AYUSH-based measures, benefits obtained, association between the use of AYUSH-based measures and incidence of COVID-19, symptomatic status, and duration of use of AYUSH measures. The findings of this study highlight that a good proportion of the representative population has utilized AYUSH measures across different regions of the country, during the COVID-19 pandemic and have considerable benefits in terms of general well-being and reduced incidence of COVID-19.

4. National Clinical Management Protocol

The MoA constituted an Interdisciplinary Committee under the chairmanship of Dr VM Katoch, former Director-General, ICMR for Integration of Ayurveda and Yoga Interventions in the 'National Clinical Management Protocol: COVID-19'. The Committee formulated its recommendations based on the interim trends of ongoing and completed AYUSH studies on COVID-19 and experimental and clinical published data indicating potential benefits and safety of AYUSH interventions. Based on the Committee's report and NITI Aayog and ICMR recommendations, the MoA issued the 'National Clinical Management Protocol: COVID-19' for Ayurveda and Yoga to enable uniform clinical management of this pandemic. The Ayurveda protocol incorporates guidelines for prophylaxis, management of asymptomatic and mild COVID-19 cases and post-COVID management. The Yoga protocol is for the primary prevention from COVID-19 and post-COVID care by improving the respiratory and cardiac efficiency, reducing stress and anxiety, and enhancing immunity.

5. AYUSH industry

AYUSH pharmaceutical industry witnessed significant growth during the pandemic especially for immunity and wellness products. The revenue of prominent AYUSH pharmaceutical companies increased considerably with the Indian Medicines Pharmaceuticals Corporation Limited, a government enterprise registering sales of INR 696 million upto August 2020 as compared to last year's INR 267.3 million. The medicines advised by MoA guidelines such as *Ayush Kwath* and *Siddha* formulation *Kabasura Kudineer*, were launched by several pharmaceutical companies during this pandemic. The sales of Ayurvedic medicines for boosting immunity such as *Guduchi ghan Vati*, *Anu Taila*, *Mahasudarshan Ghan Vati*, *Ashwagandha*, *Tulsi*, etc. have grown by 400% during the COVID-19

period. Ayurvedic medicines for respiratory problems such as *Tribhuvankirti Rasa*, *Mahalaxmi Vilas Rasa*, *Laghmalini Vasant Rasa*, *Suvarnamalini Vasant Rasa* and those mentioned in the MoA's guidelines for practitioners have also seen growth in sales. A consumer market research group reported 283% growth in the sales of *Chyawanprash* across the industry between April–June 2020. Moreover, the income of farmers who cultivated medicinal plants have also increased during this period as suggested by the National Medicinal Plants Board (NMPB), Government of India. The NMPB marketing report indicates 3-fold increase in the price of herbal raw materials in a short span of eight months.

The export of herbal products has also substantially increased in the global market. The Spices Board, Ministry of Commerce and Industry, Government of India, registered more than two-fold increase in the export of spices during the COVID-19 period indicating the use of spices as prophylaxis against COVID-19. A consortium named Forum of Assessment of AYUSH Market Size (FAAMS) is made comprising of Confederation of Indian Industry (CII), Federation of Indian Chambers of Commerce & Industry (FICCI), Ayurvedic Drug Manufacturers Association (ADMA), Association of Manufacturers of Ayurveda Medicines (AMAM), the Association of Herbal and Nutraceutical Manufacturers of India (AHNMI), Research and Information System (RIS), Invest India and National Medicinal Plants Board (NMPB), ministry of AYUSH to generate tangible information of Commerce in AYUSH sector. The report of FAAMS is expected to be released in April 2021. This will also help us to know the commerce during COVID 19 in AYUSH sector in a better way.

6. AYUSH for addressing global challenge

The proactive initiatives taken by the MoA contributed in creating awareness in the society regarding improving immunity and health through simple AYUSH measures during the alarming situation of the COVID-19 pandemic. The contributions of the AYUSH systems in maintaining health and improving immunity have been recognized globally as well. Proactive initiatives, mutual understanding between organizations, successful conduction of integrative research, and active participation of the private and public stakeholders in effective implementation of initiatives, and the widespread acceptance of AYUSH measures by general public largely helped in the combating this crisis.

The COVID-19 challenge is not over. The experiences and challenges encountered so far are important to address the second wave of the pandemic. The MoA is committed for evidence-based integration of AYUSH systems for public health delivery system in the best interest of people. Let's join hands to address the public health challenge in the spirit of 'nation first'.

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