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Indigenous Approach to One Health Framework: Integration of Sustainable Solution

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Introduction

In an era marked by unprecedented health challenges and ecological crises, the boundaries between human, animal, and environmental health have become increasingly blurred. Infectious diseases, antimicrobial resistance, climate change, and biodiversity loss underscore the intricate interconnections among these domains, transcending national borders and disciplinary boundaries. In response, the One Health framework has emerged as a visionary approach, recognizing the inextricable links between the health of humans, animals, and ecosystems. By advocating for interdisciplinary collaboration, holistic strategies, and proactive interventions, One Health aims to safeguard public health, preserve biodiversity, and promote environmental sustainability. One Health is a collaborative, multi-sectoral, and transdisciplinary approach working at the local, regional, national, and global levels with the goal of achieving optimal health outcomes recognizing the interconnection between people, animals, plants, and their shared environment.

India has a rich heritage of traditional medicinal systems especially 'Ayurveda'. Ayurveda is derived from 'Ayur' means '***Life***' and 'Veda' means '***Knowledge***'; that means '***knowledge of life'***. Acharaya Charka is considered as the Father of Ayurveda. According to him, "One should behave like kith and kin to all living beings".[1] Ayurveda has constantly emphasized all through these centuries that we humans, collectively and individually, should learn to live in harmony with ourselves, with nature and all its beings. Linking these concepts together, Charka's declaration aligns closely with the One Health framework, which emphasizes the interconnectedness of human health with that of animals and the environment. Ayurveda long-standing emphasis on living in harmony with all living beings mirrors the One Health approach, highlighting the need for balance and respect among humans, animals, and the environment for the benefit of all.

India has also recognized the importance of the One Health approach and has taken various initiatives to address threats related to zoonotic diseases, neglected tropical diseases, and antimicrobial resistance. According to the Global Research on Anti-microbial Resistance study's findings, almost five million people died from drug-resultant's bacterial infections in 2019, making AMR the world's leading cause of mortality. The misuse and overuse of antimicrobials in veterinary, human, and agriculture have accelerated AMR. Holistic efforts are required to address such issues related to One Health. National Health Policy 2017 (NHP 2017) supports these holistic efforts through its emphasize on 'Pluralism', which enables patient to have access to Ayush care providers and also ensure Government support in research and supervision to develop and enrich their contribution to meeting the national health goals and objectives through integrative practices. The Ayush systems, which encompass traditional Indian medicine and practices, can contribute significantly to the One Health approach. Ayurveda believes that all that exists in the universe also exist in an individual, for instance, *Loka Purusha Samayata Siddhanta*, given by Acharya Charka. It recognizes the interconnectedness of all living things and their environments and the importance of maintaining balance and harmony.

This philosophy may help prevent environmental harm in the current scenario and it is covers the broad domains include environmental health, veterinary science, and plant science. It can be possible to manage creating an ecosystem between humans, animals, and environment through Ayurveda, Pashuayurveda (Ayurvedic Veterinary Science), and Vrikshayurveda (Ayurveda science of Plant life).

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This demonstrates that the One Health approach has conceptual similarities to the approaches used in Ayurveda and the Ayush systems, and these systems can contribute significantly to the One Health approach. The widespread availability of Ayush infrastructure and human resources adds to its potential impact.

One Health

One Health is not a new concept, but it has received renewed attention and evolved over the past decade because of the increased frequency and severity of threats linking the health of humans, animals, plants and the environment. One Health calls for a holistic and systems-based approach that recognizes the interconnection between the health of humans, animals, plants and the environment. To address these issues in a coordinated manner, the World Health Organisation (WHO), the World Organisation for Animal Health (WOAH), the United Nations Environment Programme (UNEP), and the Food and Agriculture Organisation of the United Nations (FAO) have worked together to develop a One Health Joint Plan of Action. The Quadripartite on One Health Joint Plan of Action define One Health as:[2]

One Health is an integrated, unifying approach that aims to sustainably balance and optimize the health of humans, animals, plants and ecosystems. It recognizes the health of humans, domestic and wild animals, plants and the wider environment (including ecosystems) are closely linked and interdependent.

The approach mobilizes multiple sectors, disciplines and communities at varying levels of society to work together to foster well-being and tackle threats to health and ecosystems, while addressing the collective need for clean water, energy and air, safe and nutritious food, taking action on climate change, and contributing to sustainable development.

One Health is a multi-sectoral, interdisciplinary, and collaborative approach to attain optimal health for animals, the environment, and humans (CDCP, 2020). One Health can provide a framework for national authorities to understand and implement it for improved connectivity and collaboration among various stakeholders. [3]

World Bank describes One Health as: a framework for enhanced collaboration in areas of common interests (intersections), with initial concentration on zoonotic diseases that will reduce risk, improve public health globally and support poverty alleviation and economic growth in developing countries. [4]

One Health, broadly, can also be defined as “the collaborative efforts of multiple disciplines working locally, nationally, and globally to attain optimal health for people, animals, and our environment.[5]

The One Health concept acknowledges the interdependence of human, animal, and environmental health and the potential consequences of resolving problems in one domain on other. Numerous variables, including population expansion, climate change, globalization, urbanization, industrialization, and the mobility of people and animals, have altered the relationships between humans, animals, and the environment. As a result, this approach has drawn more attention in recent years. The rise and resurgence of pandemics such as COVID-19 and zoonotic diseases have also added to the growing emphasis on One Health, which attempts to tackle the complex health problems of our day. A concerted endeavour encompassing various fields and domains, such as veterinary medicine, public health, and the environment, is imperative to tackle the concerns associated with One Health. These include but are not limited to food safety and nutrition, zoonotic disease prevention, neglected tropical diseases, laboratory services, disease surveillance, climate resilience, and antimicrobial resistance (AMR).

AMR, one of the top 10 global public health dangers to humanity according to the WHO, is one of the One Health-related threats that is still on the rise. The results of the Global Research on Antimicrobial Resistance research show that drug-resistant bacterial infections claimed the lives of about five million people in 2019, making AMR the leading cause of death worldwide. AMR has increased due to the abuse and overuse of

antibiotics in human, veterinary, and agricultural settings. To solve such health related challenges, holistic approaches are needed.

Why One Health?

Health challenges are on rise with the increasing urbanization, pollution size and unsustainable exploitation of natural resources. This has lead to increase the risk of infectious diseases due to poor sanitation and pollution. The importance of the One Health can also be understood by the following:

Emerging Infectious Diseases*:* Infectious diseases are among the most significant health and security challenges the global community is facing. In low-income countries, infectious diseases account for more than 60 per cent of the human disease burden and are the major cause of animal disease, creating a considerable threat to the well-being of both human and animal populations. Emerging infectious diseases may be novel or an evolution of existing pathogens that emerge or re-emerge from humans or animals. Many have the potential to create deadly epidemics or pandemics, as demonstrated by COVID-19. Epidemics or pandemics may occur directly in the populations in which they emerge or following a spillover event, with subsequent amplification and spread in the recipient host population (other than in the case of a dead-end spillover).

Trade in domestic animals, wildlife and their products, as well as human travel, can facilitate the spread of locally emergent diseases over long distances, even between countries, resulting in wider dissemination and impact.

Most emerging infectious diseases in humans (more than 60 per cent) are of zoonotic or animal origin, with the majority of these (around 70 per cent) originating in wildlife. These threats are significantly increasing in frequency and severity over time, with tremendous long-term impacts. The COVID-19 pandemic is the latest example of a major disease of probable animal origin. There have been many others, including Severe Acute Respiratory Syndrome (SARS), Nipah virus disease, zoonotic influenza (H5N1, H7N9, 2009 H1N1 influenza pandemic), arbovirus diseases (such as Zika virus disease, yellow fever and Chikungunya), Ebola virus disease, plague and Middle East Respiratory Syndrome (MERS-CoV).

WHO's 2018 Research and Development Blueprint states that the biggest risk lies in the emergence of an unknown "Disease X", which may strike at any time.[6] In 2019, disease X became COVID-19. There is a high degree of certainty that the world will continue to face new disease threats, driven by factors such as continued population expansion, urbanization, increased transport, land-use change, climate change, intensification of food systems and habitat loss.

Emerging infectious diseases affecting humans, as well as domestic animals or wildlife, threaten global health security, contribute to food insecurity and weigh on national economies and government resources. The effects of these diseases also have wider reaching negative impacts on animal health and welfare, for example, affecting other disease-control efforts through the diversion of resources or through the collapse of markets and trade, with knock-on effects on animal production units and the conservation of wild animal populations.

Endemic Zoonotic, Neglected Tropical and Vector-borne Diseases: In contrast to epidemic- and pandemic-prone zoonotic diseases, endemic zoonoses (including those that are vector-borne) constitute a constant social and economic burden. They usually do not spread fast or widely and mostly afflict human populations living near their animals. In endemic areas, they perpetuate poverty by damaging not only human health, but also the health and welfare of domestic and wild animals, affecting livelihoods and food security.

Endemic zoonoses are frequently characterized as 'neglected zoonotic diseases (NZDs)', as they mainly affect poor and marginalized populations, particularly in low-income countries. Despite their persistent circulation, they are rarely targeted by formal surveillance systems, so their incidence and burden are greatly underestimated. This, in turn, leads to neglect by policymakers and funding agencies. This group includes some

notorious diseases, such as rabies, anthrax, brucellosis, bovine tuberculosis, cysticercosis, leptospirosis and echinococcosis.

WHO has further classified a subgroup of 20 diseases that are mainly prevalent in tropical areas as neglected tropical diseases [7]. They threaten the health and livelihood of more than a billion humans.[8]

Many endemic zoonoses are transmitted by vectors such as mosquitoes, midges, sand flies, fleas and ticks, have animal reservoirs and are associated with complex transmission cycles. They cause disease impact in diverse contexts around the world, spanning the whole continuum from low-income to high-income countries. Examples are Japanese encephalitis, West Nile virus infection, Dengue fever, African trypanosomiasis (sleeping sickness), Lyme disease and Rift Valley fever. The epidemiology of vector-borne diseases is traditionally associated with environmental conditions, complicated by anthropological factors, which makes their control challenging.

***Food and Water Safety Hazards*:** Foodborne hazards have taken on new dimensions, with complex food safety challenges emerging around the globe. Hazards, including zoonotic and non-zoonotic pathogens and chemical contaminants, can enter the food chain at any point, from prior to harvest to the time of consumption.

Foodborne[9] and waterborne[10] diseases are caused when unsafe levels of pathogens, chemical contaminants and other toxins are ingested from food or water. Unsafe food is estimated to cause 600 million cases of foodborne illnesses in humans and more than 400,000 deaths annually around the world.[11] The total productivity loss associated with food borne diseases in low- and middle-income countries (LMICs) is estimated to cost USD 95 billion per year, while the annual cost of treating food borne illnesses is estimated at USD 15 billion.

Waterborne diseases are estimated to cause over 4 billion cases of diarrheal illness and nearly 2 million deaths each year around the globe. In addition to long-standing food borne bacterial pathogens such as *Salmonella*, new pathogens are emerging, and many kinds of food have been associated with the transmission of disease. Pathogens and other hazards may contaminate food in the processing environment (*Listeria monocytogenes*, for example, or unsafe levels of food additives) or through food workers (norovirus, for instance). Chemical contaminants may also enter the food chain prior to harvest – for example, veterinary drug residues in animals and pesticides on plants or heavy metals through the pollution of air, water and soil – thereby affecting human and animal health.

Food and water contamination are not just public health issues, but affect animals too. For example, the poisoning of birds of prey can occur through pesticides used in food systems. Livestock can be exposed to hazards in feed and water. The contamination of water, for instance, may cause botulism and salmonellosis and the concentration of heavy metals and pesticides may cause productivity losses.

A critical aspect related to the contamination of water, the environment and food is the cross-sectoral management (or lack thereof) of waste, which spans a wide range of materials, such as human and animal fecal matter, the carcasses of animals that have succumbed to disease or accidents, and waste from the food chain (such as condemned food products, milk that cannot be used because of drug withdrawal times, and byproducts that do not have a market or use). The problem is exacerbated by the lack of health care integration in water, sanitation and hygiene (WASH) management efforts.

Antimicrobial Resistance: Antimicrobial resistance (AMR) is recognized as a leading cause of death around the world, with the highest burdens in low-resource settings. An estimated 4.95 million human deaths were associated with bacterial AMR in 2019, including 1.27 million deaths attributable to bacterial AMR.[12]. AMR also threatens the health of animals and plants grown for food, with effects on food security, food safety and the environment.

Antimicrobials play a crucial role in the health of humans, animals and plants, as well as in food safety and food security. However, AMR is an ever-increasing and widespread threat, driven by the overuse and misuse of antimicrobials in the human, animal and plant sectors. There are many social and environmental factors that accelerate the emergence and spread of resistant genes and pathogens among and between humans, animals and the environment. These include insufficient access to health services, inadequate production and housing, a lack of clean water, poor sanitation, waste management and hygiene, insufficient regulatory frameworks, and a lack of awareness and education about the risks of AMR and the appropriate use of antimicrobials.

Health Challenges Require Holistic and Sustainable Solutions: The complexity and interconnectedness of the health challenges threatening humans, animals, plants and the environment, where they coexist, require holistic, integrated solutions with a systemic approach that incorporates wider structural factors, as well as systemic prevention measures integrating the health of humans, animals, plants and the environment.

This shift requires the embrace of One Health to move beyond the siloed approaches still adopted by many sectors. This will enable and institutionalize inter sectoral science based knowledge sharing, intelligence gathering and response planning at all levels of the relevant organizations and ensure that there are protocols for the intersectoral alert and management of threats, as well as joint decision processes for sustainable and holistic solutions.

One Health is predicated on a systemic understanding of the interdependencies between the health of humans, animals, plants and the environment and how these can manifest as health threats. It enables better understanding of the root causes and drivers of disease emergence, spread and persistence, as well as the impacts of biodiversity loss and environmental degradation. This is supported by conceptualizing challenges on a wider scale and the associated sharing and integration of data and knowledge across multiple stakeholders and disciplines.

One Health provides a more comprehensive assessment of health challenges, thereby facilitating the development of appropriate prevention and management strategies and inclusive evidence-based policies to strengthen and develop sustainable health systems and ecosystems. These, in turn, help to build social, ecological and economic resilience. This thinking clearly indicates the value of integrating knowledge and perspectives from many players into parts of the system working towards positive outcomes for humans, animals, plants and ecosystems, while increasing investment in developing health systems underpinned by prevention, early detection, preparedness and coordinated cross-sectoral timely response to reduce the risk of disease emergence and future pandemics. Healthy and sustainable agrifood systems are an integral part of the One Health vision for a better future. Livestock and fish food systems, in particular, require targeted attention and integrated policies given the multiple effects that the growing demand for protein has on the animal production sector and associated systems (for example, deforestation for the production of animal feed, the increasing scale and density of animals, disease emergence and land-use change). One Health is a powerful approach that can enable the achievement of health for humans, animals, plants and the environment, as well as food and water security and safety. It can, therefore, help pave the way to achieving the SDGs, including those on poverty, hunger, health and well-being, inequality, clean water and sanitation, work and economic growth, sustainable and responsible consumption and production, and partnerships.

Indigenous Approach to One Health Framework

The One Health concept can benefit greatly from the integration of traditional Indian medicine and practices, or Ayush systems. According to Ayurveda, everything that exists in the universe—such as Acharya Charaka's "Loka Purusha Samayata Siddhanta"[13]—also exists in each individual. It acknowledges the interdependence of all living things and their surroundings as well as the significance of preserving harmony and balance. In the current Anthropocene era, this concept might aid in preventing environmental harm. Plant science, veterinary medicine, and environmental health

are further broad areas of its application. Ayurveda, Pashuayurveda (Ayurvedic Veterinary Science), and Vrikshayurveda (Ayurveda science of Plant life) may create an ecosystem between humans, animals, and the environment. This shows that the Ayurvedic and Ayush systems can make substantial contributions to the One Health approach, and that the One Health approach shares conceptual parallels with these systems. Its potential impact is increased by the fact that Ayush infrastructure and human resources are widely available. The efficacious involvement of Ayush in mitigating the COVID-19 pandemic underscores the significance of cooperative endeavours in tackling worldwide health concerns. Policies that facilitate Ayush's integration and cooperation within the One Health concept are already in place, and it ought to be taken into consideration as a possible collaborator in resolving this concerns.[14]

In the realm of One Health, the indigenous approach offers a unique and holistic perspective. Ayush systems, deeply rooted in traditional knowledge, play a vital role in addressing zoonotic and tropical diseases. Understanding their importance within the One Health framework is crucial. This study explores the significance of indigenous practices, highlighting their potential in enhancing overall health outcomes and fostering sustainable solutions.

Integrating AYUSH Systems in Addressing Health Challenges: Zoonotic Diseases, NCDs, AMR, and Food Safety

The AYUSH systems, encompassing Ayurveda, Yoga, Unani, Siddha, and Homeopathy, play a crucial role in managing and preventing a range of health issues, from zoonotic and tropical diseases to non-communicable diseases (NCDs), antimicrobial resistance (AMR), and food safety.

1. **Zoonotic and Tropical Diseases**: AYUSH systems offer preventive measures, dietary recommendations, and therapeutic interventions, extending their benefits to plant, animal, and environmental health. Initiatives such as Pashuayurveda provide herbal therapies for animal ailments, contributing to the management of zoonotic diseases. The integration of AYUSH practices has shown promise in addressing One Health-related issues, as demonstrated during the COVID-19 pandemic.
2. **Non-communicable Diseases (NCDs)**: AYUSH systems contribute significantly to the management and prevention of NCDs such as diabetes, heart disease, and cancer. The 12th Five-Year Plan for Health in India emphasizes mainstreaming AYUSH systems in areas like preventive health care and chronic disease management. The National Programme for Prevention and Control of Cancers, Diabetes, Cardiovascular Diseases, and Stroke (NPCDCS) incorporates AYUSH interventions to promote lifestyle behaviors and early screening.
3. **Antimicrobial Resistance (AMR)**: With India facing a high burden of bacterial infections and related deaths, AYUSH systems offer alternative solutions to antibiotics through remedies like Rasaushadhi and environmental decontamination methods. Pashuayurveda contributes to reducing AMR by providing alternative treatments for animal diseases, which helps decrease antibiotic use and residue in food products.
4. **Food Safety and Environmental Health**: AYUSH principles advocate for traditional methods in food preparation, water purification, and sustainable agriculture. Ayurveda's dietary guidelines and Vrikshayurveda's sustainable farming practices help in enhancing food safety and environmental health. The promotion of natural farming techniques, rooted in traditional knowledge, aligns with modern initiatives like Bharatiya Prakritik Krishi Paddhati (BPKP), contributing to safer food production and reduced environmental impact.

By integrating evidence-based AYUSH interventions into national health programs and encouraging AYUSH-based lifestyles, India can improve health outcomes and address a range of public health challenges effectively.

Sustainability of Indigenous Health Practices

The relevance of indigenous approaches to the One Health framework lies in their ability to offer holistic, context-specific solutions to health challenges while promoting resilience and sustainability. These approaches emphasize

preventive healthcare, community engagement, and environmental stewardship, aligning closely with the core principles of One Health. Moreover, by integrating indigenous practices, the One Health framework becomes more culturally sensitive and responsive, fostering greater trust and collaboration among diverse stakeholders.

To ensure the sustainability of indigenous approaches within the One Health framework, several measures are recommended. First, there is a need for increased research and documentation to validate the efficacy and safety of indigenous practices, bridging the gap between traditional knowledge and modern science. Second, efforts should be made to strengthen institutional support and capacity-building initiatives for practitioners of indigenous systems, ensuring their recognition and integration into mainstream healthcare systems. Third, community engagement and empowerment are essential for preserving and revitalizing indigenous knowledge, fostering intergenerational learning and knowledge transmission. Finally, policy frameworks should be developed to safeguard the rights and interests of indigenous communities, promoting equity and social justice within the One Health paradigm.

In essence, the integration of indigenous approaches into the One Health framework represents a paradigm shift towards a more inclusive, culturally responsive approach to global health. By harnessing the collective wisdom of diverse healthcare traditions, we can address health challenges more effectively and build a more resilient, sustainable future for generations to come.[15]

Integrating Mythology with Ayurvedic and Modern Health Practices

In the realm of health and medicine, the integration of mythology with Ayurvedic and modern practices offers a rich tapestry of understanding that bridges ancient wisdom with contemporary science. Ayurveda, one of the oldest and most comprehensive systems of traditional medicine, is deeply rooted in ancient Indian mythology, which imbues its practices with profound symbolic and philosophical significance. This integration is not merely an academic exercise but a dynamic interaction that enhances both the spiritual and scientific dimensions of healing.

The Mythological Foundations of Ayurveda: *At the heart of Ayurveda lie mythological figures and narratives that frame its principles and practices. Figures such as Lord Dhanvantari and Sage Bharadwaja are central to the mythology of Ayurveda. Lord Dhanvantari, revered as the divine physician, emerged from the cosmic ocean with the nectar of immortality, symbolizing the birth of Ayurvedic medicine. His role in organizing and disseminating Ayurvedic knowledge reflects the divine origins and holistic nature of this medical system. Similarly, Sage Bharadwaja's quest for Ayurvedic wisdom from Lord Indra underscores the divine transmission of this knowledge and its importance in human health.*

These mythological stories do more than enrich the cultural context of Ayurveda; they provide foundational concepts that influence its therapeutic approaches and philosophical underpinnings. The sacred narratives serve as metaphors for understanding health, disease, and the path to wellness, illustrating the interconnectedness of physical, mental, and spiritual health.

Ancient Medical Practices and Mythological Influences: *The practical applications of Ayurveda are deeply intertwined with its mythological roots. The pioneering work of Sushruta, the father of surgery, is a prime example of how ancient medical practices were informed by mythological and cultural contexts. Sushruta's detailed descriptions of surgical procedures and his innovative approaches to pain management and reconstructive surgery are interlaced with mythological references, such as the symbolic significance of Lord Ganesha's elephant head transplant.*

Charaka, another luminary in Ayurvedic history, emphasized a holistic approach to medicine that reflects the mythological belief in balance and harmony. His comprehensive text, the *Charaka Samhita*, integrates dietary, lifestyle, and therapeutic practices with a deep understanding of human anatomy and physiology, showcasing how mythological concepts underpin scientific inquiry and medical practice.

Folktales, Epics, and Health Insights: *Indian folktales and epics provide additional layers of understanding to the integration of mythology and health. Stories like "King Vikram and Betaal" and "The Legend of Prince Dhruva" offer allegorical insights into psychological and emotional health, reflecting the internal struggles and healing processes*

individuals face. The Mahabharata, *with its philosophical and moral teachings, also integrates Ayurvedic principles and psychosomatic understanding, demonstrating how mythological narratives convey complex concepts of health and well-being.*

These narratives not only serve as cultural artifacts but also offer timeless wisdom on dealing with mental health challenges, emotional distress, and the quest for balance. They provide a symbolic framework for understanding and addressing psychological issues, enriching contemporary therapeutic practices with a deeper cultural and spiritual perspective.

Modern Applications and Global Integration: *The relevance of integrating mythology with modern health practices extends to contemporary medicine as well. Ayurveda's principles continue to influence modern clinical practices, from the use of herbal remedies to holistic approaches to health and well-being. The World Health Organization's recognition of traditional medicine systems like Ayurveda highlights their global significance and the potential for integrating ancient wisdom into modern health paradigms.*

Moreover, the application of mythological narratives in modern therapeutic settings can enhance the patient-provider relationship, offering psychological and cultural insights that foster empathy and holistic care. By incorporating symbolic frameworks and ancient wisdom, healthcare practitioners can address not only the physical but also the emotional and spiritual dimensions of healing, leading to more comprehensive and compassionate care.

Integrating mythology with Ayurvedic and modern health practices represents a convergence of ancient wisdom and contemporary science. This synthesis provides a richer understanding of health and healing, blending the symbolic and philosophical insights of mythology with the empirical approaches of modern medicine. As we explore and embrace this integration, we gain valuable perspectives that enhance our ability to address the complex and multifaceted nature of human health, ultimately contributing to a more holistic and empathetic approach to care.

Conclusion

One health framework is the need of the hour for sustainable and holistic development of the human beings and the environment. This has been recognized by the international agencies and nations after the outbreak of pandemics, especially Covid-19. However, when we go into the history of Indian culture, we find that holistic approach to the health was the integral part of the Indian culture. Environment and animals were treated as human beings and protected and preserved. On festivals special importance is given to them. They are worshiped as gods or given importance in religious rituals similar to gods. But, due to impact of western culture and blind race of materialistic development and so called modernization, we forget the importance of ecology and environment which resulted into pollution, environmental degradation and pandemics. We need to go back to adopt the same holistic approved which in modern terms called One Health with the help of modern science and technology while overcoming the challenges and limitations of our nation and the modern world.

Traditional medicine in India has a long history and is strictly controlled. It offers a chance to present an integrative strategy for addressing the particular difficulties of the twenty-first century. However, in order to fully incorporate Ayush systems into the One Health approach, high impact research will need to be carried out in order to confirm the efficacy and safety of Ayush interventions, set rules and regulations for their safe and proper use, incorporate Ayush practices into mainstream medical care, and remove adoption barriers. In order to guarantee that the integration of Ayush systems is inclusive and sensitive to the requirements of varied populations, engagement with a broad spectrum of stakeholders—including healthcare practitioners, legislators, researchers, and community members—is also essential.

Way forward

The role of traditional or indigenous healthcare system is immense and its potential can be utilized in the One Heath frame work by taking care of some of the issues of the infrastructure and administration. Some the issues are:

1. First and foremost thing is the research infrastructure has to be developed and new high impact research should be done in the field of Ayush in mitigation of NCDs, AMR and zoonotic diseases. Research will increase the confidence among the healthcare providers and as well the public in the traditional methods of health care. Along with this, awareness campaigns should be done about the potential of traditional medicines and methods of Ayush in prevention and mitigation of disease.
2. To increase the credibility and assure the quality of Ayush system and develop the confidence among the healthcare providers strict compliance with the standards of production, labelling and distribution of Ayush products should be done.
3. Government should integrate the Ayush system in the National Programs of healthcare and with the mainstream healthcare system.
4. A mechanism should be developed for the collaboration of Ayush system and the modern healthcare system.
5. Vrikshayurveda and Pashuayurveda should be explored and practices of Ayush Veterinary medicines should be formalized.
6. Ayush based dietary regimens and lifestyle should be promoted.
7. Traditional ways of air and water purification, and diet preparation should be promoted.
8. Government should introduce proper guidelines and policies to ensure the integration of Ayush system into the One Health approach.

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